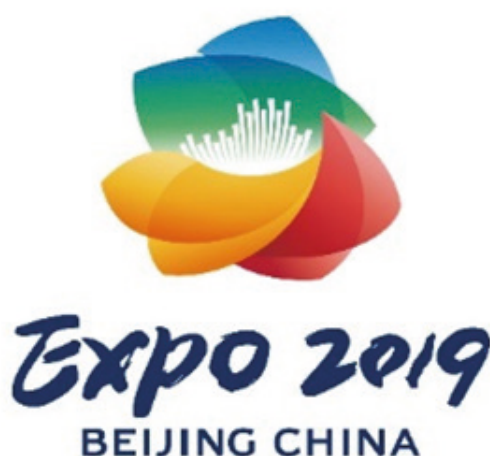


# **Summary on the International Horticultural Exhibition 2019, Beijing, China**



**China Flower Association  
&  
Beijing International Horticultural Exhibition  
Coordination Bureau**

**June, 2020**

## Contents

<b>Part I Organization</b> .....	5
Chapter II.....	9
Section 4 Beijing International Horticultural Exposition Coordination Bureau .....	9
Section 5 Yanqing District Preparatory Leading Group .....	14
Section 6 Operation Command System.....	17
Part II Application process (skip) .....	23
Part III Park Planning.....	23
Chapter I Planning Scheme .....	23
Section 1 Site selection.....	24
Section 2 Planning Process.....	31
Section 3 Master Plan of the Park .....	39
Section 4 Park Layout and Characteristics .....	58
Chapter II Eco-Expo.....	70
Section 1 Ecological Reservation .....	70
Section 2 Biodiversity .....	73
Section 3 Sponge Park.....	75
Section 4 Ecological Water Vein.....	76
Section 5 Green Building .....	77
Section VI. Renewable energy .....	80
Chapter III Sustainable World Horticulture .....	80
Section I Post-session utilization .....	80
Section 2 Low Carbon Lifestyle.....	82
Part IV Construction of the Park.....	83
Chapter 1 .....	84
Section 1 First Class Land Development .....	84
Section 2 Secondary Land Development.....	92
Chapter 2 venue construction.....	94
Section I China Pavilion .....	94
Section 2 International Pavilion .....	99
Section 3 Lifestyle Experience Hall.....	104
Section 4 Botanical Hall .....	108
Section 5 Gui You Theatre .....	119
Chapter 3 non-venue construction.....	123
Section 1 Landscape Construction .....	123
Section 2 Supporting and Infrastructure .....	129

Section 3 Construction of Exhibition Park .....	136
<b>Part V exhibition recruitment p. 158.....</b>	<b>157</b>
Chapter I Overall Recruitment Target.....	158
Chapter II Domestic recruitment work.....	159
Section 1 Work System .....	161
Section 2 Recruitment process .....	162
Section 3 Exhibitor Services.....	165
Chapter III Work of International Exhibitor Invitation.....	167
Section 1 Exhibitor Invitation Plan .....	169
Section 2 The recruitment process .....	176
Section 3 Exhibitor Services.....	179
Section IV. Assistance programmes.....	180
<b>Part VI Activities.....</b>	<b>183</b>
Chapter I Key Activities.....	184
Chapter II Daily Activities .....	184
Chapter III cultural activities.....	186
Section 1 International Competition and Professional Forum.....	186
Section II Gathering of World National Cultures and Brand Activities.....	187
Section 3 Science and Technology Activities .....	189
Chapter IV Pre-Conference Activities .....	191
Section 3 Countdown Activities .....	191
<b>Part VII Exhibition and Display .....</b>	<b>195</b>
Chapter I Overall Plan.....	196
Section 1 Basic Document.....	196
Section II. Preparatory work.....	200
Chapter II indoor exhibition hall and highlights .....	206
Section I China Pavilion .....	207
Section 2 International Pavilion .....	209
Section 3 Lifestyle Experience Hall .....	211
Section 4 Botanical Hall .....	212
Chapter III Exhibition Garden.....	216
Section 1 International Exhibition Garden .....	217
Chapter V Science and Technology Expo.....	217
Section 1 Infrastructure Construction .....	220
Section 2 5G Application and Display .....	221
Section 3 Wisdom World Garden .....	235

Section 4 Robot .....	244
Section 5 Internet of Things (IoT) .....	250
Part VIII Business and Ticketing.....	252
Chapter I Sponsorship.....	252
Section 1 Sponsorship, Investment Promotion and Fulfillment .....	252
Section 2 Global Partner .....	253
Section 3 Sponsors .....	256
Chapter II Franchising.....	258
Section 1 Licensed Commodities .....	258
Section 2 Commemorative Coin .....	260
Section 3 Commemorative Stamps .....	262
Chapter III Commercial management in the park.....	264
Chapter IV Ticketing.....	269
Section 1 Types and Pricing of Tickets .....	269
Section 2 Ticket Sales Channels .....	269
Part IX Operation Services.....	274
Chapter I Operation Team.....	275
Section 1 Venue Team.....	275
Section 2 Area Team.....	276
Chapter II Park operation.....	277
Section 1 Service Object .....	277
Section 2 Operation Mode .....	279
Chapter III Protocol Services.....	287
Section 1 Reception Work Mechanism.....	288
Section 2 Reception during the Preparatory Period.....	289
Section 3 Reception During the Session.....	289
Part X Promotion.....	295
Chapter I Promotion of the Expo.....	295
Section 1 Publicity Activities .....	295
Section 3 Social Publicity .....	304
Section 4 Official Website .....	305
Chapter II Works and Publications.....	313
Section I Publications .....	313
Section 2 Documentary Film.....	313

Section 3 Publicity Materials and Publicity Films .....	314
Part XI Volunteering.....	316
Chapter I Recruitment and Training.....	317
Section 1 Recruitment .....	317
Chapter II Operation Management.....	322
Chapter III Service Guarantee.....	326
Part XII Finance.....	330
Chapter I Budget Preparation, Revenue and Expenditure.....	331
Section 1 Budget Preparation .....	331
Section 2 Budget Management .....	334
Section 3 Financial Revenue and Expenditure .....	336
Chapter II Financial Management.....	337
Section 1 Accounting .....	338
Section 2 Management of Sponsorship Revenue .....	338
Section 3 Contract Management .....	341
Part XIII Safeguards.....	345
Chapter I traffic guarantee.....	346
Section 1 Park Traffic Management .....	346
Section 2 External Traffic Management of the Park .....	349
Chapter II safety guarantee.....	351
Section I. Security mechanisms .....	351
Section 2 Anti-terrorism and Anti-riot .....	353
Chapter III Supervision and Safeguard.....	354
Section 1 Supervision System.....	354
Section 2 Supervision Mechanism.....	356
Section 3 Peripheral Safeguard Supervision .....	358
Section 4 Supervision of Engineering Construction .....	360
Section 5 Audit Supervision .....	363

## Part I Organization

According to the nature of work, functions and levels, the organizations of Beijing Expo are divided into two categories, namely, the bidding organizations and the preparatory organizations. The bidding organization is a body set up to apply for hosting the 2019 World Horticultural Exposition in Beijing, including the Beijing World Horticultural Exposition Bid Committee and the Bid Executive Committee. The preparatory organization is set up for the preparation of the Expo, including the Preparatory Committee, the Organizing Committee, the Executive Committee, the Bureau of Beijing Expo Coordination and the Leading Group of Yanqing District. In addition, there are also working organizations involved in the three-level command system of the Expo at the municipal, on-site and park levels.

Under the leadership of the Organizing Committee, the Executive Committee of Beijing Expo will implement the relevant resolutions and decisions of the Organizing Committee and report regularly to the Organizing Committee to reflect the problems arising in the preparation process; To guide and coordinate the work of relevant units in Beijing; Organizing Committee hand over other matters.

The basic responsibilities of the Executive Committee of Beijing Expo include: organizing and implementing the work plan for the delegation of Beijing Expo to participate in the General Assembly of the Bureau of International Expositions and related meetings; Organize and compile the preparation strategy and action plan of Beijing Expo and submit relevant documents to the international community, and implement them after approval by the Organizing Committee; To organize and implement the work plan for the planning, construction and relocation of the Expo site; Under the guidance of relevant departments of the central government, organize the compilation of the total budget and investment and financing plan for Beijing Expo; According to the unified deployment of the Organizing Committee, we should formulate publicity plans and do a good job in publicity and promotion of Beijing Expo; Suggestions on improving the legal service system related to Beijing Expo, the development, transformation and protection of intellectual property value are put forward; To organize the implementation of the decisions and arrangements made by the Organizing Committee on the participation of various departments and regions in the preparations for the Beijing Expo.

The executive committee sets up a working leading group to organize and implement various decisions of the executive committee and formulate action plans; In accordance with the working rules, the Executive Committee will set up a working leading group in due course in accordance with the progress of its work to organize and implement the Executive Committee's arrangements for various

departments and districts to participate in the preparations for the Beijing Expo; Promote the smooth implementation of the preparation and organization work of the Expo Bureau, and undertake the tasks assigned by the Executive Committee. There are specific groups such as fund guarantee group, planning and construction group, news and propaganda group, large-scale activities group, exhibition invitation group, foreign affairs group, transportation guarantee group, environmental protection and ecological construction group, tourism exhibition industry development group, customs and inspection and quarantine group, health and food safety group, safety and emergency protection group. There are 15 working groups such as volunteer working group, communication and information work guarantee group and operation working group.

The Financial Guarantee Group is responsible for coordinating the construction, operation and guarantee fund arrangement of Beijing Expo, organizing the formulation and implementation of the financial guarantee plan, and coordinating the financial services related to Beijing Expo.

The Planning and Construction Team is responsible for the overall planning and construction of the infrastructure and supporting facilities of the Expo site and its surrounding areas, land use planning, coordination of park planning and pre-construction procedures, and promotion of relevant planning and construction work of the Expo site.

The News and Publicity Group is responsible for the overall promotion of the news and publicity work of the Beijing Expo, and the formulation of the news and publicity and public opinion management plan for the Beijing Expo; To coordinate and coordinate the publicity work of the Central Committee and the Beijing news media; Organize and carry out public opinion monitoring, public opinion guidance, public opinion disposal and crisis public relations of Beijing Expo; To be responsible for the registration and interview management of domestic and foreign media; To be responsible for the information management and media release of Beijing Expo.

The large-scale activity group is responsible for planning the opening ceremony, closing ceremony, China National Pavilion Day, Summit Forum and other major activities and cultural activities in the park, formulating the programme of activities and organizing and implementing them; Coordinate and implement the guarantee of foreign national activity days, domestic provincial and municipal activity weeks, enterprise activities and other activities.

The exhibition invitation team is responsible for formulating relevant policies and action plans for exhibition invitation and organizing their implementation in accordance with the goal of "two 100"; Organize domestic and foreign exhibition resources to promote the overall exhibition work of Beijing World Garden Expo.

The foreign affairs team is responsible for coordinating foreign-related matters of Beijing Expo in accordance with the foreign affairs activities and foreign affairs policies, and guiding the reception services for major foreign affairs of Beijing Expo.

The traffic guarantee group is responsible for formulating the external traffic organization plan of Beijing Expo and formulating the traffic guarantee scheme; Responsible for the construction and

renovation of Beijing-Tibet, Beijing-Xinjiang, Xingyan Expressway and Yankang Road, Baikang Road and Fukang Road around the park;To be responsible for the operation, organization and management of roads, buses, long-distance buses, taxis and other external transportation support for Beijing Expo;Responsible for parking around Beijing World Horticultural Exposition Park

Construction work of field and connection station;Coordinate and implement the increase of airport buses from Capital Airport to Beijing Expo;Coordinate the implementation of the extension of the suburban railway line S2;It is responsible for the planning and construction of signs along the road.

The environmental protection and ecological construction team is responsible for organizing the planning and implementation of relevant municipal appearance, environmental protection and water affairs of Beijing Expo;To urge the implementation of the responsibility of urban and rural environmental construction and environmental order renovation around Beijing Expo;To organize the formulation and supervise the implementation of pollution prevention and control plans for key areas and river valleys of Beijing Expo and environmental protection plans for drinking water sources.

The Tourism Exhibition Industry Development Group is responsible for putting forward the development plan and plan of the whole city's tourism exhibition industry in conjunction with the preparation of Beijing World Park Expo and organizing its implementation;Promote the construction and management of the public service system of tourism exhibition around the park;To organize and coordinate the construction and renovation of surrounding public service facilities, establish and improve the tourism distribution system, consultation service system and tourism public service information network system.

The Customs and Inspection and Quarantine Team shall be responsible for the supervision and administration of the means of transport, goods, passengers' luggage and postal articles related to the entry and exit of Beijing Expo, the implementation of entry-exit health and quarantine, infectious disease monitoring and health supervision, prevention and control of infectious diseases at ports, vaccination of entry-exit personnel and management of infectious disease monitoring and physical examination;Carry out inspection, quarantine, supervision and administration of entry plants and their products and other quarantine objects.

The hygiene and food safety group is responsible for the comprehensive supervision, organization and coordination of food safety during the preparation and holding of the Beijing Expo;To be responsible for the supervision and management of product quality and safety and the supervision and management of quality and safety in the production links of food and food-related products;To be responsible for health emergency work of Beijing World Horticultural Exposition;Responsible for the safety of public health, medical treatment and catering of Beijing Expo, and assume the responsibility of supervision and management.

The Safety and Emergency Management Team is responsible for the overall management of the safety and emergency management of the Beijing Expo;To formulate security, anti-terrorism, stability maintenance, comprehensive management, letters and visits, security inspection and fire control



management plans for Beijing Expo;To organize and implement the security work during the preparation and holding of the Expo;Responsible for the security of leaders and important foreign guests;To be responsible for the certificate management of Beijing Expo;To be responsible for the emergency management of Beijing Expo.

The volunteer working group is responsible for the recruitment, publicity, training, management and recognition of volunteers from the park, city and society of Beijing Expo;Implementing volunteer civilized action;Coordinate and implement volunteer guarantee.

The Communications and Informatization Work Guarantee Group is responsible for coordinating and promoting the informatization construction guarantee work of Beijing Expo, promoting the construction of Intelligent Expo and enhancing the experience of Expo sightseeing;Promote the work of science and technology Expo as a whole, and do a good job in the display and application of new technologies, new ideas and new achievements;Responsible for the construction of communication system and information system in the park and its surrounding areas.

The operation working group is responsible for the overall management of the preparations for the Expo site, parking lot, Expo Village and Yanqing District;Responsible for protocol reception, business operation, exhibition, visitor service, public service, ticketing management, property management and logistics support in Beijing Expo Park;Prepare the operation and management plan of the park, and do a good job in the operation and management of the park;Prepare the trial operation plan, take the lead in organizing and implementing the trial operation work;To be responsible for the comprehensive guarantee and atmosphere creation in Yanqing area of Beijing World Horticultural Exposition;Coordinate and assist in other areas of security work;Guarantee the operation funds of Beijing Expo;To be responsible for the comprehensive coordination and guarantee of the Beijing World Horticultural Exposition.

## Chapter II

### Section 4 Beijing International Horticultural Exposition Coordination Bureau

On March 11, 2014, the General Office of the Beijing Municipal People's Government decided to establish the Beijing International Horticultural Exposition Coordination Bureau (hereinafter referred to as the "Expo Bureau"). As the administrative body of the Executive Committee, the Expo Bureau is an independent enterprise legal person, authorized by the Executive Committee and the Municipal Government to undertake the daily work of the Executive Committee of Beijing Expo and exercise necessary management functions.

The main responsibilities of the Expo Bureau are: responsible for legal affairs related to the Beijing Expo; Organize and study the impact of Beijing Expo on regional economic and social development and other issues, and put forward policy recommendations; To be responsible for the organization and coordination of the planning, construction and operation of the Expo site; To be responsible for the coordination and promotion of the planning and construction of major infrastructure related to Beijing Expo; Organize and carry out exhibition and public publicity work; To be responsible for the coordination and management of the investment and financing of the Expo and the development of licensed products; To be responsible for liaison and coordination with the Bureau of International Expositions, the International Association of Horticultural Producers, the Liaison Group Office of the Organizing Committee of Beijing Expo, the Special Working Group of the Executive Committee of Beijing Expo, and the Preparatory Leading Group of Yanqing District; To supervise and implement the matters agreed by the Organizing Committee and undertake the daily work of the Executive Committee.

In the early stage, the Expo Bureau has set up six internal departments: Comprehensive Planning Department, Legal Affairs Department, Overall Planning Department, Publicity and Planning Department, Liaison and Coordination Department (Yanqing Work Department) and Human Resources Department. According to the specific progress of the preparations for Beijing Expo, with the approval of the Beijing Municipal Organizational Committee, the internal institutions of the Expo Bureau have been adjusted three times.

On February 9, 2015, the number of internal institutions of the Expo Bureau increased from 6 to 10. Among them, some functions of the Comprehensive Planning Department and the Liaison and Coordination Department (Yanqing Work Department) are integrated and offices are set up; Delineate part of the responsibilities of the General Planning Department and set up the Engineering

Department;The establishment of a horticulture department;Delineate part of the responsibilities of the publicity and planning department, set up the exhibition and market development department;Delineate part of the responsibilities of the Comprehensive Planning Department and set up the Finance (Audit) Department;Cancel the Liaison and Coordination Department (Yanqing Work Department).

On January 12, 2016, the number of internal agencies of the Expo Bureau increased from 10 to 11, and the exhibition and market development departments were set up as the exhibition department and the market development department.

In July 12, 2017, the number of internal institutions of the Expo Bureau increased from 11 to 21. Among them, the exhibition part is set up as the first exhibition part and the second exhibition part, the financial (audit) department is adjusted to the financial department and the audit department, and the protocol reception service department, the operation management department, the transportation and safety guarantee department, the tourist service and ticketing management department, volunteer management department and information department are added.

The office is responsible for the daily operation of documents and telecommunications, conference affairs, confidential, archives, information, reception and logistics;To undertake the organization, implementation and supervision of important matters;Responsible for external liaison and coordination and foreign affairs services.

The Ministry of Comprehensive Planning is responsible for the investigation and research of major issues and puts forward opinions and suggestions;To be responsible for the declaration of major project fund plans for Beijing Expo;To be responsible for the first-level land development of Beijing Expo;To be responsible for studying and formulating the overall plan, key work plan and overall promotion of the preparatory work for the Beijing World Horticultural Exposition.

The Legal Affairs Department is responsible for drafting and reviewing the legal documents of the Expo Bureau;To safeguard the rights and interests of the Beijing Expo logo and the Expo Bureau;Coordinate the protection of intellectual property rights and other rights and interests of all exhibitors;Participate in the drafting of relevant laws, regulations and documents for the preparation of Beijing International Horticultural Exposition, and the examination and approval of contracts;Provision of legal advice.

The General Planning Department shall be responsible for organizing, studying and formulating the general plans for the development of the Expo Site, the Expo Village and the Expo Site;In conjunction with the Beijing World Park Expo, organize research and formulate environmental, transportation and other infrastructure, related industrial development plans;To be responsible for the organization and coordination of the planning of the Expo site;To be responsible for the coordination and promotion of major infrastructure planning related to Beijing Expo;Organize research and formulate planning parameters for participants in Beijing Expo.

The Engineering Department is responsible for the planning, organization, coordination and management of the park's public landscape, infrastructure, venues and supporting facilities;To be

responsible for the coordination and promotion of major supporting infrastructure construction related to Beijing Expo;To be responsible for the operation and maintenance of the construction of Beijing Expo.

The Horticulture Department is responsible for drawing up the exhibition plan of the exhibition hall;To be responsible for the validation and implementation of technical regulations for the construction and exhibition of national, international organizations and domestic provinces, cities and enterprises;To be responsible for the evaluation of exhibition competitions of participating countries, international organizations and domestic provinces, cities and cities.

The Publicity and Planning Department is responsible for drawing up the overall plan for the publicity and promotion of Beijing Expo and organizing its implementation;Carry out public propaganda at home and abroad;To be responsible for the news management and information release of Beijing Expo;To be responsible for organizing and planning the publicity and promotion of Beijing Expo.

The Market Development Department is responsible for the organization, management and coordination of market development related to Beijing Expo;Responsible for the promotion, management and service of partners and senior sponsors;Responsible for the commercial operation of activities and projects;Responsible for the management of franchising.

The Human Resources Department shall be responsible for the adjustment of the internal structure of the Expo Bureau and the approval of the number of cadres;To be responsible for the secondment, recruitment, post appointment and removal, study and training, annual assessment and other work of the Expo Bureau staff;Carry out human resources management.

The first department is responsible for the work of soliciting exhibitors of national and international organizations;Take the lead in organizing the negotiation and contract signing of national and international organizations participating in the exhibition;To assist the General Representative of the Chinese Government in his work;Organize and coordinate to provide exhibition services for national and international exhibitors.

The second department is responsible for inviting exhibitors in domestic provinces, municipalities and enterprises;Take the lead in organizing domestic provinces, municipalities and enterprises to participate in negotiations and contract signing;Organize and coordinate to provide exhibition services for domestic provinces, municipalities and enterprises.

The Protocol and Reception Service Department is responsible for the preparation of the master plan and work programme for protocol services;Responsible for establishing and improving the protocol service system, the recruitment and training of protocol personnel;Responsible for VIP reception service at home and abroad.

The Operation Management Department is responsible for formulating and implementing the overall work plan for the park operation management and venue management;Responsible for the comprehensive coordination of public services and external municipal supporting services in the park;

To be responsible for the comprehensive management of all venues and exhibition gardens;Responsible for the preparation of the overall work programme for business services;To be responsible for the overall management of the commercial operation of the whole park;To be responsible for formulating the logistics operation plan of Beijing Expo;To be responsible for the coordination of logistics services such as customs clearance, transportation and handling of goods for Beijing Expo.

The Ministry of Traffic and Safety Guarantee is responsible for formulating and coordinating the implementation of the overall plan of road traffic operation and operation organization plan inside and outside the park;To be responsible for formulating and implementing the overall plan and phased plan for security work of Beijing Expo, emergency response plans and security guarantee plans for all kinds of emergencies inside and outside the park;Organize and implement all kinds of safety audits for Beijing Expo;Organize, design, make and manage all kinds of licenses,overall management of the security work of Beijing Expo.

The Tourist Service and Ticketing Management Department is responsible for formulating the overall plan for tourist services;Establish and improve the tourism service system;Accept complaints from tourists;Be responsible for making overall ticketing plan;Coordinate ticketing design and production, ticket sales and ticket management system integrated work.

The Volunteer Management Department is responsible for formulating the overall plan for the volunteer work at the Expo site;Responsible for overall coordination of the park volunteer recruitment, training, deployment, management, service, security, publicity and other work;Cooperate with relevant units to carry out volunteer related work.

The Ministry of Information Technology is responsible for the overall planning of the construction of the wisdom Expo;Responsible for coordinating and promoting the construction, implementation and landing of various special systems such as infrastructure, park management, public services, experience services and safety management of the Smart World Park;To be responsible for the construction, maintenance and technical services of the website, venues and the internal information system of the Bureau of Exposition, as well as the release of various information.

The Major Events Department is responsible for the planning and organization of major events of Beijing Expo;To be responsible for the planning, organization and implementation of the overall plan for the Beijing Expo Forum;Responsible for the opening ceremony, closing ceremony, China Pavilion Day, National Pavilion Day, domestic provinces, districts and municipalities activity day (week), as well as float parade, literary and artistic performances and other activities;Organize and coordinate activities and performances related to Beijing Expo.

The Party-Masses Work Department is responsible for the Party's organization, discipline inspection, propaganda, United front, mass and other related work of the Expo Bureau;To undertake the daily work of the Party Committee, Discipline Inspection Commission, Trade Union, Communist Youth League and Women's Federation of the Bureau;Responsible for the implementation of the daily work of the main responsibility of the Party conduct and clean government construction of the Bureau;It

is responsible for guiding the work of the Party and the masses in the branches of the Bureau.

Finance Department is responsible for the preparation and implementation of the annual budget;Responsible for project capital control, capital finance, asset management and other work;To be responsible for the management of the assistance fund and sponsorship income of Beijing Expo;Liaison with the implementation of fiscal and taxation policies.

The Audit Department shall be responsible for drawing up the project fund audit plan of Beijing Expo, formulating the implementation plan of audit supervision, and organizing the implementation;To be responsible for auditing and supervising the whole process of budget implementation, financial revenue and expenditure, major projects and major economic activities of various departments.

The World Horticultural Exposition Bureau shall have one director, who shall be concurrently served by one deputy director of the Executive Committee;Executive deputy director 1, full-time deputy director 3, chief economist 1, chief engineer 1;There are five part-time deputy directors, who are concurrently headed by relevant departments and units.

The staff of the Expo Bureau are composed of relevant departments, units and public recruitment. As of October 1, 2019, the Expo Bureau has 283 formal employees, of which 201 are seconded to 46 commissions, districts, counties, institutions and state-owned enterprises in the city, and 82 are open to the public.Personnel seconded by relevant departments and units to the Expo Bureau shall retain their personnel relations in the original units, and their personal treatment funds such as wages and benefits shall still be arranged in the budget of the original units. After the Beijing World Horticultural Exposition, the seconded personnel shall be properly placed by the original units within the total establishment and the number of posts in accordance with the administrative authority of cadres. Open recruitment to the public and Beijing Shiyuan Investment Development Co Ltd. (Hereinafter referred to as "Shiyuan Company")Labor contracts are signed and enterprise management is implemented. After the Beijing World Park Expo, social recruiters will be resettled through local transformation, priority recommendation of state-owned enterprises, self-employment, and non-renewal of contracts upon expiration.

## Section 5 Yanqing District Preparatory Leading Group

On July 13, 2013, the preparatory leading group of Yanqing County for Beijing World Horticultural Expo 2019 was established (in November 2015, Yanqing County was removed from the county and established as a district, and the preparatory leading group of Yanqing County was renamed as the Preparatory Leading Group of Yanqing District). As a deliberative and coordinating body, its main responsibilities are: to study, decide and coordinate the promotion of major issues related to Yanqing District in the agreed matters of the Organizing Committee and the Executive Committee; To study and consider the major issues and related policies of Yanqing District in the preparation and holding of the Beijing World Park Expo; To study and solve the major problems encountered by Yanqing District in the process of controlling illegal construction, land acquisition and demolition in Beijing Expo Park and planning and construction of related supporting facilities outside the park.

The preparatory leading group has an office (referred to as "Yanqing District Preparatory Office"), which is responsible for organizing and compiling the preparatory strategy, action plan and related planning of Yanqing District; To be responsible for the control of illegal construction, land acquisition, demolition and other related work in the Beijing Expo Site, and organize and coordinate the planning and construction of related supporting facilities outside the site; To be responsible for the liaison and coordination with the Expo Bureau, and organize and coordinate the work of relevant departments in the zone; Supervise and implement the agreed matters of the preparatory leading group of Yanqing District, and undertake the daily work of the preparatory leading group of Yanqing District.

Yanqing District Preparatory Office has five internal institutions, namely, Comprehensive Office, Planning and Coordination Office, Development Promotion Office, Publicity and Culture Office and Service Guarantee Office.

The Comprehensive Office is responsible for formulating the relevant preparatory work plan for Yanqing District of Beijing World Horticultural Expo, and writing the periodic and annual work summary and report; Organize and implement the relevant work items agreed by the preparatory leading group of Yanqing District; To be responsible for the communication and coordination with the Expo Bureau in daily affairs and the collection, review and post-conference report of the participating materials; To coordinate the matters that the members of the Preparatory Leading Group of Yanqing District need to report to the Preparatory Leading Group of Yanqing District concerning the work related to Beijing Expo; To organize and coordinate the external liaison, reception and foreign affairs services related to Beijing Expo; Responsible for Party affairs, discipline inspection and supervision, letters and visits to maintain stability, young women, logistics, archives and other daily affairs.

The Planning and Coordination Office is responsible for coordinating with the Expo Bureau in the preparation of the overall plan and special plan for the Expo site, and participating in the preparation of relevant supporting service facilities and infrastructure construction plans outside the Beijing Expo

site;Organize and compile the preparation strategy and action plan of Yanqing District for Beijing World Horticultural Exposition;Coordinate the implementation of the construction project plan of Beijing Expo and implement comprehensive project management;Responsible for organizing and formulating the exhibition planning and design scheme of Yanqing District Park.

The Development Promotion Office is responsible for organizing and compiling the comprehensive planning of modern horticultural industry cluster area (HBD), and promoting the modern horticultural industry cluster area (HBD) as a whole.Construction, coordination and promotion of horticultural industry projects;Meet the needs of horticultural exhibitions inside and outside the Beijing Expo Park, organize and implement the supply of horticultural materials for the Beijing Expo, and actively promote the localized supply of horticultural materials;Organize and build enterprise participation and service platform, participate in the formulation of industrial development support and investment promotion policies;To organize and implement the participation of Yanqing District in the exhibition and exhibition work of Beijing Expo;Participate in the post-expo planning and construction of the project database.

The Publicity and Culture Department is responsible for publicizing and promoting the Beijing Expo and its preparatory work;To organize, plan and implement cultural activities related to the theme of "Green Life and Beautiful Home" of Beijing Expo;Coordinate with the relevant departments of the zone to plan and organize the implementation of the project of improving the quality of citizens in Yanqing District related to Beijing Expo, promote the theme of "I contribute to the Expo" as a whole, and create a good atmosphere for the whole society to understand, support, participate in and contribute to Beijing Expo;Coordinate and coordinate the horticulture knowledge popularization and training work, and build information technology.

Establishment, maintenance and management, as well as related volunteer service activities;To be responsible for the collection, arrangement and filing of news, photos and audio-visual materials related to Beijing Expo.

The Service Guarantee Department is responsible for providing service guarantee for the construction and operation of the park and supervising and managing the work safety in the park;Cooperate with the Expo Bureau to do a good job in the recruitment and service guarantee of Beijing Expo;Coordinate and coordinate the pre-construction formalities related to Beijing Expo, and promote the innovation of project approval methods;Coordinating the relationship between the park and the surrounding villages and towns, participating in the formulation and coordination of the related work of controlling illegal construction, land acquisition and demolition, relocation and resettlement in the park;Coordinating traffic organization, security, emergency, public safety, medical and other services;To be responsible for the Preparatory Office of the Yanqing District for the Beijing World Horticultural Exposition (Preparatory Office of the Expo Management Committee)Financial management and the management of social donation and sponsorship funds and materials, and cooperate with the supervision and inspection of audit, finance and other departments.





## Section 6 Operation Command System

In order to build a centralized and unified operation command system with clear levels, smooth docking and efficient landing, and do a good job in the operation and management of the 2019 Beijing World Park Expo in an all-round way, under the framework of the "one belt and one road" forum, the World Park Expo and the Beijing Municipal Service Guarantee Leading Group of the Civilization Dialogue Conference (referred to as the "Municipal Leading Group") "one Bureau, two offices and eighteen groups", in conjunction with the Beijing World Park Expo Organizing Committee, The leadership mechanism of the Executive Committee and the actual work during the operation period should establish a three-tier command system of municipal, on-site and park.

### I. Municipal Command Level

Among the "one Bureau, two offices and eighteen groups" of the municipal leading group, the "one Bureau" is the Expo Bureau, and the "sixteen groups" are nine integration groups and seven separate groups respectively. Establish the secretarial group of the municipal leading group, coordinate the activities of the municipal leading group meetings as a whole, and provide guarantee services for the centralized investigation and inspection of municipal leading comrades. The municipal command level of Beijing Expo will be led by Vice Mayors Lu Yan and Wang Hong to carry out the specific work at the municipal level of Beijing Expo.

### II. On-site command layer

In order to strengthen the overall leadership and overall control of the operation of Beijing Expo, a "7 + 2" on-site command system was established under the city-level command system, with Wang Hong as the on-site commander-in-chief, Wang Jun and Deng Naiping as deputy commander-in-chief, and Zhou Jianping and Mu Peng as executive commanders. Among them, seven special working groups have frontline command centers in the park or Yanqing respectively, with the leading units of each group leading the work of each center, and the Expo Bureau arranges relevant leaders and staff to integrate into each group. Among the two groups of the Park Operation Working Group and the Yanqing Guarantee Working Group, the Park Operation Working Group has an operation command center in the park, which is led by the Expo Bureau and is responsible for directing and coordinating the operation of the park, and the six groups of the municipal command level which are closely related to the operation of the park have command seats in the operation command center. The leaders of each leading unit and the staff of the group are integrated into the working group of the park operation to carry out the work; The Yanqing Support Working Group has a territorial support Yanqing related security work. In addition, the project planning and construction group and the fund guarantee group in the municipal command level continue to work in accordance with the original model, and continue to do a good job

in the construction procedures and funds and other security work.

The Secretary Group of the Municipal Leading Group assists in coordinating the work of all groups and conveying work instructions, and the Expo Bureau comprehensively coordinates all operational work, manages six integration working groups, coordinates seven independent working groups and Yanqing safeguard working group horizontally, holds regular operational working meetings, solves problems arising in operation, and supervises the implementation of all work; At the same time, we should do a good job in submitting official information briefings to the municipal leading group, the organizing committee and the executive committee to ensure the smooth operation of the "7 + 2" on-site command system.

### III. Park Command Level

In order to strengthen the overall planning, special management and implementation of the specific work of Beijing Expo Bureau on the operation of the Park, and ensure the smooth holding of Beijing Expo, a Park Operation Working Group has been set up on the basis of considering the organizational structure and practical work of Beijing Expo Bureau, which is mainly responsible for the command, management, coordination and implementation of various operational affairs in the Park during the trial operation and operation period of Beijing Expo. Yu Bo was the group leader. Ye Dahua, Wu Gang, Wang Chuncheng, Lin Jinwen, Zhang Lannian, Mao Dongjun, Sun Lianhui, Pang Wei, Chen Weidong, Li Yi, Li Junhui, Zhang yuan, Huang Keying, Lu Guifu, Liu Ruicheng, Luo Ying and Wu Shijiang were deputy group leaders.

The Park Operations Working Group is responsible for the overall management of the preparations for the Beijing Expo Site and the Expo Village; Prepare the operation and management plan of the park and implement it well; Prepare the trial operation plan, take the lead in organizing and implementing the trial operation work; Responsible for protocol reception, commercial operation, exhibition and exhibition, exhibition services, tourist services, public services, ticketing management, property management, logistical support, news publicity, security services, transportation support, information support, infrastructure support, public landscape support, emergency management and other work in Beijing Expo Park; Do a good job in the guarantee of operating funds and comprehensive coordination of Beijing Expo; Complete other tasks assigned by the municipal leading group.

The park operation working group has 14 professional line management organizations and 10 venue area management organizations, forming a "block combination" network organizational structure. Among them, the professional line management organizations include the park guarantee special class, the park comprehensive management group, the park exhibition and exhibition group, the park exhibition and exhibition service group, and the park activity group. Park operation and emergency support group, park infrastructure and public landscape support group; The management organizations

of the venue area include China Pavilion, International Pavilion, Lifestyle Experience Pavilion, Guitang Theatre, Botanical Pavilion, Area a, Area B, Area C, Area D and Gate Area.

Park security special classes: responsible for docking with other headquarters of Beijing Expo, coordinating 12 park working groups and park market management offices, and doing a good job in the overall coordination of Beijing Expo operation; Responsible for conference management and document management during the operation of Beijing Expo, and service guarantee at the command level of the park. The leader in charge of the Expo Bureau is Zhou Jianping, and the group leader is Wen Fugui.

Integrated management team of the park: responsible for connecting with other 11 working groups of the park, special classes of park security and market management office of the park, and doing a good job in overall coordination of park operation; Responsible for the planning management, information management and quality management during the operation of Beijing Expo. The responsible leader of the Expo Bureau is Zhou Jianping, the docking leader of Yanqing District is Li Junhui, and the group leader is Lei Lei.

Park Exhibition Group: responsible for organizing the preparation of exhibition related programs, the implementation of the layout, replacement and withdrawal of the exhibition, and the daily maintenance and management of exhibits and exhibitions; Establish a competition evaluation committee, prepare international competition plans, carry out competition publicity management, on-site management, evaluation and reward, summary and evaluation, etc; To be responsible for the inspection, quarantine, supervision and administration of entry-exit plants, goods and other articles in the park. Wang Chuncheng is in charge of the leadership of the Expo Bureau, Liu Ruicheng is the docking leader of Yanqing District, and Shan Hongchen is the group leader.

Exhibitor Service Group: responsible for the organization, coordination and management of domestic and foreign exhibitors, assist in the operation of the exhibition garden and booth, and provide related security work; Establish a one-stop service platform to coordinate customs, inspection and quarantine, insurance, finance, logistics, security and other relevant departments to provide convenience and related necessary services for exhibitors. Wang Chuncheng is in charge of the leadership of the Expo Bureau, Wu Shijiang is the docking leader of Yanqing District, Jiao or Tong is the group leader, and Lu Feng is the deputy group leader.

Park Activity Group: responsible for the opening ceremony, closing ceremony, China Pavilion Day, Summit Forum and other major events and cultural activities in the park program formulation and organization and implementation; To coordinate and implement the venues and technical guarantees for major activities such as national day, honor day, provincial and municipal day and enterprise activities of exhibitors. Pang Wei is in charge of the Expo Bureau, Huang Keying is the docking leader of Yanqing District, and Ming Ziqi is the group leader.

Park Reception Group: responsible for formulating the corresponding reception service plan and work norms, standards and processes according to the level of guests; Responsible for domestic and

foreign guests in the park to visit the reception work. Li Yi is in charge of the Expo Bureau, Li Junhui is the docking leader of Yanqing District, and Shen Tianning is the group leader.

Tourist Service and Ticketing Management Group: responsible for the organization, implementation and management of tourist services, including inquiries, goods leasing, goods storage, lost and found, etc. Responsible for the printing, sales and management of tickets for Beijing Expo, as well as the operation, management and maintenance of on-site ticket sales, ticket inspection equipment and facilities; To coordinate relevant departments to do a good job in public health and medical rescue work in the park, and coordinate the provision of banking, insurance, meteorology and other public services. Wang Chuncheng is in charge of the Expo Bureau, Luo Ying is the docking leader of Yanqing District, and Liu Da is the group leader.

Park News and Publicity Team: responsible for publicity planning, information release and other work, production and retention of the park's important publicity materials, as well as the production of publicity materials for Beijing Expo; Responsible for news media registration, management and publicity content review, coordination and implementation of press reception, accommodation and other related procedures. Ye Dahua is in charge of the Expo Bureau, Huang Keying is the docking leader of Yanqing District, and Cui Yong is the group leader.

Park security traffic group: responsible for the park security inspection, logistics management, fire, letters and visits, maintenance of stability and anti-terrorism work; Be responsible for the dispatching, organization and management of the park traffic, and coordinate the dispatching of the external traffic of the park. The responsible leader of the Expo Bureau is Sun Lianhui, the docking leader of Yanqing District is Lv Guifu, and the group leader is Zhou Yongjie.

Park Volunteer Management Team: responsible for the operation and management of volunteers in the Expo Park, the placement and use of volunteers in the Expo Park, and the coordination and implementation of related security work in the Park Volunteer Park. Lin Jinwen is in charge of the Expo Bureau, Li Junhui is the docking leader of Yanqing District, and the leader is acting soldier.

Park market management office: responsible for the overall management of commercial park, do a good job in the park commercial business norms of supervision and inspection, to ensure food and catering safety; Responsible for the daily operation and management of licensed manufacturers, licensed retailers and operators in the park, and the operation supervision and management of the staff canteen in the park; To coordinate relevant departments to handle business procedures and carry out commercial law enforcement. Lin Jinwen is in charge of the Expo Bureau, Wu Shijiang is the docking leader of Yanqing District, and Fang Xihong is the group leader.

Park Communication and Informatization Guarantee Team: responsible for park communication and informatization guarantee, lease, distribution and training of park command communication tools, and display and application of new technologies, new concepts and new achievements. The responsible leader of the Expo Bureau is Mao Dongjun, the docking leader of Yanqing District is Luo Ying, and the group leader is Guo Ziliang.

Park Operation and Emergency Support Team: responsible for environmental sanitation management, property management, logistics support, emergency management and other work during the operation of Beijing World Horticultural Exposition, overall coordination of emergency management in the park, and handling of natural disasters, accident disasters, public health, social security and other emergencies in the park. The leader in charge of the Expo Bureau is Zhang Lannian, the docking leader of Yanqing District is Zhang yuan, the group leader is Yang Baoli, and the deputy group leaders are Shi Wenjun and Zhou Yongjie.

Park Infrastructure and Public Landscape Guarantee Team: responsible for the maintenance of infrastructure and public landscape of Beijing Expo Park, and ensuring the water supply, power supply and gas supply of the Park. The leaders in charge of the Expo Bureau are Wu Gang and Chen Weidong, the docking leader of Yanqing District is Wu Shijiang, the group leader is Shi Wenjun, and the deputy group leader is Liu Jianming.

China Pavilion: responsible for the overall operation organization and management of China Pavilion, as well as the operation guarantee work in the pavilion. The person in charge is Ye Dahua, and the executive person in charge is Yang Baoli.

International Pavilion: responsible for the organization and management of the overall operation of the International Pavilion, as well as the operation guarantee work in the Pavilion. The person in charge is Wang Chuncheng, and the person in charge of execution is Jiao or Tong.

Lifestyle Experience hall: responsible for the overall operation organization and management of Lifestyle Experience hall, as well as the operation guarantee work in the hall. The person in charge is Lin Jinwen, and the person in charge of execution is Shan Hongchen.

Gui You Theatre: Responsible for the overall operation organization and management of Gui You Theatre, as well as the operation guarantee work in the museum. The person in charge is Wu Gang, and the person in charge of execution is Ming Ziqi.

Botanical Hall: Responsible for the organization and management of the overall operation of the Botanical Hall, as well as the operation guarantee work in the hall. The person in charge is Zhang Lannian and the executive person in charge is Lu Hui.

Gate area: supervise and coordinate the operation guarantee work of gate area, coordinate the relevant working groups to do a good job of ticket inspection work in gate area. The leader in charge of the Expo Bureau is Wu Gang, and the film director is Zhou Yongji

## Part II Application process (skip)

### Part III Park Planning

"Scientific planning is the greatest benefit, planning mistakes are the greatest waste, and planning toss is the biggest taboo." Scientific planning is the leader and premise of all preparations for Beijing Expo. In order to run this worldwide horticultural event well, the planning and design team of Beijing World Horticultural Expo in 2019, adhering to the scientific attitude and dedication, with professional accomplishment and selfless dedication, fully draws on the successful experience of previous expos, and follows the working mode of "multi-sectoral cooperation, multi-disciplinary integration, multi-link linkage and multi-special support". The 2019 Beijing World Garden Expo will be a green window for China to the world. It not only conveys the green concept of "green water and green hills are Jinshan and Yinshan" to the world, but also shows the beauty of horticulture, ecology and humanities in China.

The Expo Bureau has organized 10 top planning and design units at home and abroad to mobilize high-end design resources at home and abroad to carry out the global collection of conceptual planning schemes for the park. In December 2014, a team of experts led by Academician Meng Zhaozhen and Academician Yin Weilun evaluated the application scheme and selected three winning schemes. On this basis, a joint team was set up to continue to optimize and improve the planning scheme. In the process of planning, not only well-known experts in professional fields such as Jiang Zehui, Meng Zhaozhen, Yin Weilun and Cui Kai were invited, but also experts who participated in the planning of Shanghai World Expo and Kunming World Garden Expo were invited to give guidance, and at the same time, they discussed and exchanged with cities that had held similar exhibitions.

Finally, after collecting plans in 2014, comprehensive plans in 2015, special plans in 2016, implementation plans in 2017, realization plans in 2018 and exhibition plans in 2019, planners of Beijing World Park Expo have carefully designed, measured with feet, worked out plans, adhered to plans and implemented plans, thus maintaining the authority and seriousness of park planning. Stick to a blueprint to the end, through unremitting efforts, the planning blueprint into a horticultural beauty.

## Chapter I Planning Scheme

The 2019 Beijing World Park Expo site is located in Yanqing District, an ecological conservation area in the northwest of Beijing, Tianjin and Hebei, about 74 kilometers away from Beijing and near the Badaling Great Wall. Guishui River winds through the park, which covers an area of 503 hectares. With the planning concept of "ecological priority, learning from nature, inheriting culture, openness and tolerance, scientific and technological wisdom, fashion diversity, innovative meeting and sustainable utilization", the park shows all things in the forest and the nature of mountains and



rivers. The spatial layout of core landscape area, landscape horticultural axis, world horticultural axis, Gui River ecological leisure belt, horticultural Lifestyle Experience belt, horticultural industry development belt, world horticultural exhibition area, Chinese horticultural exhibition area, education and future exhibition area, life horticulture exhibition area and natural ecological exhibition area are formed, as well as the main venues such as China Pavilion, International Pavilion, Lifestyle Experience Pavilion, Botanical Pavilion and Gui Xiang Theatre. Twelve sceneries of the World Garden have been formed, including "Yongning Zhansheng, Haituo Tianjing, Longqing Flower Street, Landscape Ode, Jiuzhou Flower Border, Wanfang Huatai, Baisong Yunping, Peer Square, Qiancui Liuyun, Silk Road Flower Rain, Rutin Lin Gai and Shiyi Flower Dance".



Figure 3-1 Schematic Diagram of the Planning Structure of the Campus

## Section 1 Site selection

2019 Beijing World Park Expo is located in the southwest of Yanqing District, about 74 kilometers from Beijing urban area, about 35 kilometers from Changping New Town, Huailai and Chicheng County, Hebei Province, adjacent to Yanqing New Town in the east, Guanting Reservoir in the west, across both sides of Guishui River, about 10 kilometers from Badaling Great Wall and Haituo Mountain.

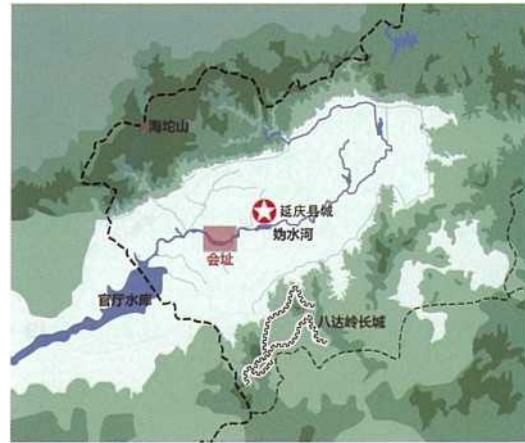
In terms of scope, the park is located along the Guishui River in Yanqing District, with a total area of 960 hectares. The park is divided into three parts: fenced area, non-fenced area and Expo Village. Among them, the area of fenced area is about 503 hectares, the area of non-fenced area is about 399 hectares, and the area of Shiyuan Village is about 58 hectares.

In terms of positioning, the 2019 Beijing World Park Expo is an important stage for the world to show the achievements of China's ecological civilization construction and promote international exchanges and cooperation in green industry, an important opportunity for promoting the concept of

It will show the new image of the capital of a big country in the new era.



### 3-2 Yanqing



3-3Region (Red square - EXP0 site)

## 1. Determining the Host Place

The site selection is the key to the successful bid and hosting of the 2019 Beijing World Park Expo. On March 7, 2012, after Beijing decided to bid for the 2019 World Horticultural Exposition (A1 category), the site selection planning work was carried out immediately.

On April 9, 2012, Beijing Municipal Bureau of Landscape and Greening held a mobilization meeting for 16 districts and counties to bid for the 2019 World Horticultural Exposition (A1 category), which introduced the purpose, significance and relevant regulations of Beijing's bidding, and mobilized all districts and counties to actively do a good job in site selection and bidding plan preparation according to their own economic and social development, so as to provide decision-making reference for the municipal government to determine the host site.

On April 30, 2012, the governments of Fengtai District, Fangshan District, Tongzhou District, Shunyi District, Changping District, Huairou District, Miyun County and Yanqing County submitted letters of commitment and a simplified version of the Bid Report to the Beijing Municipal Bureau of Landscape and Greening to recommend the venue for the Expo.

In the process of recommending the host city, Yanqing County has communicated actively with the leaders of Beijing Landscape and Greening Bureau, Beijing Municipal Government, the heads of relevant departments in Beijing, the personnel of China Flower Association and relevant experts for many times, and has collected a large number of opinions and suggestions on the compilation of the Bid Report, which has been changed several times, forming a total of intermediate process. Finally, the city of Beijing on Yanqing County as the world. The recognition of the venue of the garden fair.

Specific process: On the evening of April 19, 2012, the Yanqing County Party Committee and the county government held an emergency meeting, instructing the Yanqing County Landscape and Greening Bureau to set up a working group for the Expo and immediately start the bidding work. On April 20, the working group of Yanqing County Landscape and Greening Bureau was in place, and contacted eight planning units to hold a cooperation fair, and finally established cooperative relations with four units, namely, the State Forestry Administration Landscape Architecture and Architecture Planning and Design Institute, Beijing Great Wall Enterprise Strategic Research Institute, Beijing Zhonghongtian International Convention and Exhibition Co Ltd. ATKins Atkins Group requires four units to prepare letters of commitment and a simplified version of the bid report respectively. The results were reported on 28 April.

On April 21, 2012, the Expo Working Group of Yanqing County Landscape and Greening Bureau initially selected seven alternative plots. After discussion, the meeting decided that the site of the Expo will be 3 kilometers west of the county seat, centered on Gui River, covering a total area of 10000 mu.

From April 22 to 27, 2012, the working group of Yanqing County Landscape and Greening Bureau collected relevant information and verified relevant data, and timely docked with four planning units to share resources. On April 28, four planning units reported their achievements in the conference

room on the fifth floor of Yanqing County Government. The meeting decided that the Landscape Architecture and Architectural Planning and Design Institute of the State Forestry Administration and ATKins Group would revise and improve the "Brief Report on Bidding" according to the opinions of the leaders of Yanqing County and the advantages of other planning units, and submit the results before April 30.

On April 30, 2012, a total of eight district and county governments, including Yanqing County, submitted letters of commitment and a simplified version of the bid report to the Beijing Municipal Bureau of Landscape and Greening, recommending the venue for the Beijing Expo.

Later, in May 1H-20B, Li Zhijun, Secretary of the Yanqing County Party Committee, and Li Xianzhong, county governor, attached great importance to the bidding work, communicated with the leaders of the municipal government, the heads of relevant departments of the city, the personnel of the China Flower Association and relevant experts on many occasions, received the support of relevant leaders and experts, and collected a large number of opinions on the compilation of the domestic version of the bidding report. Hold a meeting at the first time after each communication. To convey the opinions and suggestions of leaders and experts in a timely manner, and to work overtime with the planning units to compile the domestic version of the bid report, forming a total of nearly 80 intermediate process versions. On May 19, 2012, Yanqing County completed the final version of the "Domestic Version of the Bid Report" submitted to the municipal government for approval.

In its report to the Beijing Municipal Government, the Beijing Municipal Bureau of Landscape and Greening wrote: "Taking into account various factors, we prefer Yanqing County, which is located in the ecological conservation and development zone, to be the site for Beijing's bid to host the 2019 World Horticultural Exposition (A1 category)."

On May 29, 2012, Beijing Mayor Guo Jinlong presided over a special meeting of Beijing Municipal Government, and Beijing Landscape and Greening Bureau reported on the work related to the bid for the 2019 World Horticultural Exposition (A1 category). The meeting agreed in principle with the request of Beijing Landscape and Greening Bureau, and agreed in principle that Yanqing County should be the host city.

On May 30, 2012, Comrade Liu Qi, Secretary of the Beijing Municipal Party Committee, chaired the 246 session of the Standing Committee of the Municipal Party Committee, and decided to suggest that the Beijing Municipal People's Government bid to host the 2019 World Horticultural Exposition on behalf of the State, with Yanqing County as the host city. It was noted that Yanqing County has unique geographical environment and climate advantages, the bid is solid, unique, conducive to the promotion of the bid into

"All relevant departments of the city should cooperate closely to form a joint force, actively support the bid and make every effort to win the bid.". This also marks the successful approval of Yanqing County's bid for the 2019 World Horticultural Exposition (A1 category) by the Beijing Municipal Government, and the successful completion of the first stage of the bid. On August 3, 2012, the State Council

approved Beijing's bid to host the 2019 World Horticultural Exposition.

## II. Yanqing Style

Yanqing County is located in the northwest of Beijing, the new version of the Beijing City Master Plan gives Yanqing the function of "important ecological conservation and regional ecological management cooperation area in the northwest of the capital, ecological civilization demonstration area, international cultural and sports tourism and leisure area, northwest Beijing science and technology innovation characteristic development area", and undertakes the important responsibility of conserving the capital ecology and serving the people of the capital.

When bidding for hosting the World Horticultural Exposition in 2012, Yanqing County not only has the necessary conditions for hosting the World Horticultural Exposition in terms of climate, geography, location, hydrology and historical heritage, but also is suitable for people to visit, meeting the strict requirements of the overall planning of the Expo site and the region.

The convenient transportation network is conducive to the rapid access of huge passenger flow. Beijing is the most important transportation hub in the country, with the largest international airport in Asia, intensive railway and highway network radiating all parts of the country. The Capital International Airport is 50 minutes drive from the park, and the Capital International Airport and the Second Capital Airport enter the expressway from the Sixth Ring Road to Yanqing, which can avoid the large traffic flow in the central city of Beijing. After the completion of the Beijing-Zhangjiakou Intercity High-speed Railway, it will take 30 minutes to go directly from Beijing urban area to the Expo site. The two expressways of Beijing-Tibet and Beijing-Xinjiang and the expressway planned to reach the park directly can fully guarantee the passenger flow of 45 minutes from the city center to the park. In addition, the first helicopter Badaling Airport in Yanqing can be used as a direct emergency traffic channel during the Beijing World Park Expo to give full play to the advantages of air traffic. Convenient transportation facilities can fully meet the traffic requirements of the 2019 World Horticultural Exposition.

A good horticultural foundation is conducive to the display of horticultural characteristics around the world. Horticulture is mainly divided into ornamental plant gardening, vegetable gardening and fruit tree gardening, Beijing has superior climate conditions, in these three areas have unique advantages. Especially in the flower industry, the planting area of the whole city is 64000 mu, with an annual output value of 14.100 million yuan; There are 252 enterprises directly engaged in flower production, with more than 30000 practitioners, 40 flower markets and 1500 flower retail stores, and the annual consumption of flowers reaches 10 billion yuan. Beijing has made a series of achievements in the breeding and introduction of new horticultural varieties, industrial research and promotion, and the application of modern horticultural facilities. In 2009, Beijing successfully held the 7th China Flower Expo, which gathered 37.40000 domestic fine flowers and 60000 foreign characteristic exhibits received a total of 1.8 million visitors in 10 days.

As an ecological conservation development area in Beijing, Yanqing has diverse topography of mountains, canyons, plains and lakes, and prominent advantages of plant diversity. After years of protection and development, the number of plant populations has increased significantly, for example, the number of higher plants in Yeyahu Wetland Nature Reserve has increased from 381 in 2005 to 420 in 2005; There are 328 varieties of open-field flowers in Yanqing County, with a planting area of 3333 hectares, which is the largest flower planting area in Beijing and an important breeding and production base; There are more than 260 kinds of vegetables with a total planting area of 3000 hectares. It is an important pollution-free vegetable production base in Beijing; There are 1051 kinds of fruit trees, with a planting area of 16000 hectares, and special fruits such as apples and grapes are well-known throughout the country.

It has profound humanistic connotations and is conducive to highlighting Chinese civilization. Beijing is a world-famous ancient capital and the first batch of national historical and cultural cities announced by the State Council. It has a history of more than 3000 years and a history of more than 850 years, has many scenic spots and cultural landscapes, and has six world cultural heritages. Among them, the Summer Palace is the largest and most complete imperial garden in China; The famous Badaling Great Wall is the essence of the Great Wall.

Yanqing, Beijing, has always been a place of integration of farming culture and nomadic culture, Central Plains culture and northern culture, Han culture and minority culture, and gradually formed eight major cultures, such as Yanhuang, Guichuan and the Great Wall. According to textual research, Shangbanquan Village and Xiabanquan Village, now located in Yanqing, Beijing, were the places where Emperor Yan and Emperor Huang fought five thousand years ago. The Battle of Sakaizumi opened the history of Chinese civilization and realized the first great reunification of the Chinese nation. The wild is the birthplace of the Chinese nation, the Chinese nation is the source of five thousand years of culture.

The Gui River, which runs through the Expo site, is the mother river of Yanqing in Beijing. With a history of 5,000 years, it is one of the oldest rivers in China. The ancient cliff dwelling and the Shanrong cultural relics in the Spring and Autumn Period are the evidence of Yanqing's strong cultural heritage. One of the oldest written characters in China, the character gui, which is unique to Yanqing, is also the source of Yanqing civilization. "Yi" is one of the oldest characters in China. It is said that Yao's daughter Ehuang and daughter Ying helped Shun to subdue the wild elephant, and later people called the place where Shun lived with the elephant as "Yi". Nowadays, the mother river of Yanqing in Beijing is named after "Yi". Gui River is rich in water and grass, open in terrain, and has lasted for thousands of years, which gave birth to the unique Guichuan culture.

The most magnificent and spectacular of the seven wonders of the world's Great Wall, the Badaling Great Wall, located in Yanqing, Beijing, has the highest international reputation and has received 483 heads of state and heads of state. The existing Great Wall in Yanqing has 179 kilometers of walls and 473 watchtowers, which is the longest preserved wall and the most complete defense

system of the Great Wall, showing a unique scene of different times and different functions of the Great Wall winding side by side. The history of Yan Huang accumulated for thousands of years, the national spirit condensed for thousands of years, and the horticultural civilization inherited for thousand years gathered at the foot of the Great Wall. There are also prehistoric natural geological heritage in Yanqing, such as dinosaur footprint fossils, silicified wood group, ice mortar and so on, which precipitate ancient imprints.

Remarkable green achievements are conducive to reflecting the achievements of China's scientific development. Yanqing is cold in winter and cool in summer, known as Beijing's "summer capital" reputation, ecological construction results are also very significant. Beijing's climate is a typical warm temperate semi-humid continental monsoon climate, with an annual average temperature of 10Y-12Y, a frost-free period of 180-200 days, and an annual average precipitation of 644 mm. It is one of the areas with the most rainfall in North China. The mild and neutral climate can meet the plant diversity of the Expo and the requirements of outdoor plant growth for cross-season holding.

Yanqing is a natural ecological park. Yanqing is located in the northwest of Beijing, the county seat is 74 kilometers away from the urban area, is a continental monsoon climate, is the transition zone between temperate and mid-temperate, semi-arid and semi-humid zone, excellent ecological environment, county topography is diverse, the average altitude of more than 500 meters. The advantages of biodiversity are prominent, with more than 3000 kinds of plants. The afforestation rate reached 65.8%, and the forest coverage rate was 57.8%. There are 12 national, municipal and county-level nature reserves, such as Songshan, Yudu Mountain and Yeyahu Lake, accounting for 26% of the county area. Wetland is 6667 hectares, accounting for 5% of the county area. The water quality is excellent, 93% of the surface water quality meets the national secondary standard, and all the groundwater meets the national drinking water standard. Yanqing air quality level two and higher than two weather reached 84%, for many years in the forefront of Beijing, is the ideal place for citizens to integrate into nature, relax, is the capital Beijing's backyard.

Beijing Yanqing is a well-known tourist county in China, with 24 A-level and above scenic spots such as Badaling Great Wall, Longqing Gorge, Kangxi Grassland, Baili Landscape Gallery and Four Seasons Flower Sea, with a tourist reception of 17.37 million in 2011.

Low-carbon lifestyle has become fashionable. The concept of low-carbon development has a profound impact on all areas of Yanqing, Beijing, and low-carbon production and lifestyle has become fashionable. When bidding for the World Garden Expo in 2012, Beijing Yanqing expects that in 2019, the utilization rate of new energy and renewable energy will reach 30%, the carbon emissions of energy consumption will reach the lowest level in the city, and renewable energy such as solar energy, wind energy and biomass energy will be widely used to become a national demonstration area for low-carbon life.

The new energy industry has made great progress. Actively apply the achievements of scientific and technological innovation, vigorously develop the new energy industry, with the Chinese Academy

of Sciences photothermal power generation as the representative, Beijing Yanqing gathered a number of new energy industry projects, become Beijing new energy and renewable energy industry base, also become the national circular economy development demonstration zone.

The unique location conditions are conducive to the coordinated development of the capital economic circle. The national "Twelfth Five-Year Plan" issued by the National Development and Reform Commission put forward "to build the capital economic circle". For this reason, Beijing's "Twelfth Five-Year Plan" put forward that. The urban agglomeration with the capital as the core and its vast areas are becoming one of the most dynamic areas in China. In the new stage of development, Beijing needs to be based on the functional positioning of the national capital, play its role, allocate resources and expand services in a larger area, change from focusing on functional agglomeration to focusing on both agglomeration, relaxation and radiation, and from focusing on unilateral security to two-way service win-win development, and more actively play a good role in radiation and driving regional cooperation to develop in depth. ”

As an important node connecting Beijing and Hebei in the capital economic circle and an economic corridor between Beijing and Shanxi, Inner Mongolia and other regions, Beijing Yanqing undertakes the important function of radiation of the capital and promoting the coordinated development of the northwest surrounding areas. The 2019 World Park Expo will be held in Yanqing, Beijing, which will play an important role in broadening the development space and promoting industrial development, so as to promote the coordinated development of Beijing, Hebei, Shanxi and Mongolia, realize the strong docking of superior resources, and plan the overall development of the capital and surrounding areas in a larger scope and spatial scale.

## Section 2 Planning Process

The overall planning process of Beijing Expo 2019 is roughly divided into three stages: the bidding stage, the comprehensive planning stage and the planning implementation stage.

### I. Bidding Stage (2014)

In 2014, the Beijing World Horticultural Exposition Coordination Bureau organized the site selection planning, traffic security planning and planning scheme collection.

#### (1) Site selection and planning of the park

On January 9, 2014, the Beijing Municipal Government's special meeting agreed in principle on the site selection scheme of the park planning, and incorporated the results of the site selection planning into the bid report. According to the application report, the park is located along the Guishui River in Yanqing County, with a total area of 960 hectares. Location Planning The west boundary of the park is



750-1000 meters away from Kangzhang Road, the north boundary of Guihe Forest Park is Yannong Road, the east boundary of Yanqing New Town is planned to be centralized construction land, and the south is Baikang Road.

## (2) Traffic Guarantee Planning

After the planning site selection was included in the bid report, the results of the traffic security planning were also included in the bid report, and the scale of passenger flow was predicted in this traffic planning, which promised to use Beijing-Zhangzhou Intercity High-speed Railway, Beijing-Tibet Expressway, Beijing-Xin Expressway and Xingyan Expressway as the main contact channels for external traffic, and improve the surrounding road network. It has become an important basis for subsequent planning and design.

Forecast of passenger flow scale. When declaring the 2019 Beijing World Garden Expo, it promised that the scale of passenger flow during the Expo period would reach 16 million. This plan predicts that the scale of passenger flow during the 2019 Beijing World Garden Expo will reach 25 million. Among them, the peak passenger flow will reach 240000, and the design daily passenger flow will reach 190000. Service facilities are built according to the designed daily passenger flow.



3-4. 2019 Beijing EXPO transport planning (4 highways close to External traffic guarantee). In order to ensure the promised passenger flow of 16 million people, on the basis of the current Beijing-Tibet Expressway, it is necessary to speed up the construction of Beijing-Zhangzhou Intercity Yanqing Branch Line, Xingyan Expressway and Beijing-Xinjiang Expressway (from Beijing). In order to achieve 25 million passenger flow scale, we must increase public transport efforts to achieve intensive travel; Setting up car parking lots in different circles to change the travel structure; Strengthen traffic demand management and reduce the difference between extreme peak day and weekday passenger flow. By adjusting the daily passenger flow distribution, the maximum passenger flow peak is not more than 240000 people, and all kinds of transportation facilities are designed according to the passenger flow scale of 190000 people.

Improve the road network around the park. New trunk road systems such as Xiyu Road, Fukang Road, Shengbai Street, Dongjiang Road and Shiyuan Road will be built around the park, and roads such as Baikang Road, Kangzhang Road, Yankang Road, Xiwai Street and Kanghe Road will be upgraded and transformed to form a network liaison line system between the park and the three peripheral expressways.

### (3) Collection of conceptual schemes

According to the solicitation procedure, the Beijing Expo Bureau has organized 10 top planning and design institutes at home and abroad to carry out the outline of the Beijing Expo site.

Global Call for conceptual planning proposals. Led by Academician Meng Zhaozhen and Academician Yin Weilun, an expert team composed of 17 experts, including China Association for the Promotion of Trade, China Flower Association, Garden, Planning, Municipal Administration, Architecture and Water Affairs, reviewed the application plan.

The expert team systematically studied and sorted out the 10 conceptual planning schemes collected, and deeply excavated and sorted out the highlights of each scheme. It includes exhibition research, case study, planning concept, site utilization, water utilization, park function zoning, park structure, horticultural design, exhibition mode innovation, sightseeing design, entrance and exit setting, park transportation organization, intelligent transportation design, service facilities planning, service facilities planning, vertical design, ecological design, horticultural town design and so on. After meeting utilization, etc. It draws sufficient nutrients and lays a solid foundation for the design of the comprehensive planning scheme of the park.

In December 2014, the expert group selected three winning schemes from 10 solicitation schemes. After that, we will further optimize and improve the planning scheme. The joint team of experts led by the Expo Bureau not only invites well-known experts in professional fields such as Jiang Zehui, Meng Zhaozhen, Yin Weilun and Cui Kai, but also invites experts who have participated in the planning of Shanghai World Expo and Kunming World Expo to give guidance, and also learns and exchanges with cities that have held similar exhibitions.

Finally, after the stages of scheme collection, technical consultation, scheme synthesis, expert demonstration, soliciting opinions of relevant committees and bureaus, joint meeting review, research of municipal and municipal thematic meetings, review of executive committee meetings, soliciting opinions of 37 ministries and commissions, and approval of the organizing committee, all procedures were completed in December 2015 and approved. The Comprehensive Planning and Surrounding Infrastructure Planning Plan of the World Horticultural Exposition Park in Beijing, China, 2019 is a programmatic document for the planning and construction of the Expo Park.



Figure 3-6 Conceptual Planning Scheme of Beijing Expo 2019- Winning Scheme B02



Figure 3-7 Conceptual Planning Plan of Beijing Expo 2019-Winning Plan B03



Figure 3-8 Conceptual Planning Plan of Beijing Expo 2019-Winning Plan B07

## **II. Integrated planning phase (2015)**

In 2015, in order to complete the "2019 Beijing World Horticultural Exposition Park Comprehensive Planning and Surrounding Infrastructure Planning Plan", the Beijing World Horticultural Exposition Coordination Bureau coordinated, Yanqing County coordinated, China Council for the Promotion of International Trade, China Flower Association guidance, advisory group, planning group, transportation group, construction group, landscape group, ecological greening group and water resources group. The exhibition group and other experts collectively studied, and the Beijing Institute of Planning and Design was in charge of the technology. With the participation of many planning and design units, such as the Chinese Academy of Architectural Sciences and the Beijing Municipal Academy, 25 major projects and 62 special projects have been carried out.

(The Comprehensive Planning and Surrounding Infrastructure Planning Plan of Beijing World Horticultural Exposition Park in 2019 is based on the collection of architectural schemes, regulatory detailed planning, cultural landscape research, multimedia introduction short films, horticultural town planning, non-fenced area planning and exhibition planning, architectural intention urban design, conceptual comprehensive planning and fenced area landscape planning. Planning and design of the Expo Village, science and technology special planning, road system planning within the Expo Site, traffic simulation, municipal special planning, Project planning, railway station connection planning and other topics of planning and research, the final summary.

On June 26, 2015, the Coordination Bureau of Beijing World Horticultural Exposition, Beijing Planning Committee, Land Bureau, Landscape and Greening Bureau and Yanqing County jointly submitted to the Beijing Municipal Government the Request for Consideration of the Comprehensive Planning and Surrounding Infrastructure Planning Plan of the Park of Beijing World Horticultural Exposition in 2019.

On August 5, 2015, the special meeting of the Beijing Municipal Government "studied and agreed in principle with the request of the Beijing World Horticultural Bureau for the preparations for the 2019 Beijing World Horticultural Exposition, which will be organized and implemented after revision and improvement according to the opinions of the meeting".

On October 24, 2015, the special meeting of the Beijing Municipal Committee heard and agreed in principle to the Comprehensive Plan for the Park and Surrounding Infrastructure Planning of the 2019 Beijing World Horticultural Exposition in China, and requested further revision and improvement, which should be submitted to the Executive Committee for consideration.

On December 4, 2015, the first Executive Committee of the 2019 Beijing World Horticultural Exposition was held, at which the Comprehensive Plan and Surrounding Infrastructure Planning Plan of the 2019 Beijing World Horticultural Exposition Park were agreed in principle, and construction was required to start in the first half of 2016.

(The Comprehensive Plan for the Park and the Surrounding Infrastructure Planning Plan for the

2019 Beijing World Horticultural Exposition successfully obtained the opinions of 37 member units of the relevant departments of Beijing and the Organizing Committee, and passed the deliberation of the relevant meetings of the Beijing Municipal Committee and the Municipal Government, and finally passed the deliberation of the Organizing Committee of the 2019 Beijing World Horticultural Exposition on December 23, 2015.

### III. Planning and Implementation Phase (2016)

More detailed planning and design work was completed in 2016, including the park control detailed planning, fence area master plan design and submission, special planning, engineering design and architectural design scheme. In March 2019, the regulatory detailed planning of the park and the regulatory detailed planning of the Expo Village were completed; In April, the general plan design of the fence area, the vertical planning of the park, the overall planting planning of the park, the planning of supporting service facilities in the park, and the request and submission of building plans were completed; In May, the master plan design of the enclosed area and the regulatory detailed planning of the Expo Village were submitted for approval; In June, it completed the road alignment in the park, the design and control guidelines of the exhibition park,



Park fire planning, traffic road design, municipal engineering design, public landscape engineering design, etc;In September, the planning of public safety and disaster prevention and avoidance, and the planning of green shade system in the park were completed;In December, we completed the planning of the soundscape system of the park, the design of the construction drawings of public welfare venues, the design of the construction drawings of commercial venues, the plan of construction drawings of Shiyuan Town, the planning and layout of supporting service facilities of public welfare parks, and the architectural design of supporting service facilities of commercial parks.

The planning and design of the park of Beijing Expo 2019 has been widely recognized by the society, and the comprehensive planning of the park has won the Outstanding Award of Planning Analysis (the highest award) of the International Association of Landscape Architects (IFLA) Asia Pacific Branch (IFLA) in 2017.In 2018, Beijing World Park Expo became a green ecological demonstration area in Beijing;In 2019, China Pavilion, International Pavilion and Lifestyle Experience Pavilion passed the three-star (the highest level) certification of green building evaluated by Green Building Evaluation Standard (GB/T 50378-2019), which is the first three-star green building project officially awarded the new national standard of green building in China.



3-9  
2017 IFLA



3-10  
2018 Beijing annual green award winner

### Section 3 Master Plan of the Park

Focusing on the planning objectives of the ecological civilization pilot demonstration area and the beautiful China exhibition area, the Beijing World Park Expo 2019 strives to highlight the five characteristics of "people-oriented, cultural diversity, scientific and technological innovation, ecological upgrading and industrial development". According to the existing landscape pattern and the characteristics of natural topography and geomorphology, and taking into account the exhibition demand, traffic streamline, municipal support, garden landscape and other factors, the overall structure layout of the park with "one center, two axes, three belts and multiple districts" is finally formed.

#### -Planning Concept

Guiding ideology. Implementing the strategic plan of the Eighteenth National Congress of the CPC on promoting the construction of ecological civilization;Implementing the development concept of innovation, coordination, green, open and sharing put forward by the Fifth Plenary Session of the Eighteenth Central Committee of the CPC;Implementing the spirit of General Secretary Xi Jinping's important speech on inspecting Beijing;Implementing the outline of Beijing-Tianjin-Hebei coordinated development plan;To implement the spirit of the first meeting of the Organizing Committee.

Planning objectives. Promote the concept of green development, highlight the achievements of ecological civilization, and promote the development of horticulture and green industry;Hold a session of unique, splendid and unforgettable Expo;Construction of ecological civilization pilot demonstration area and beautiful China exhibition area.

Planning concept. Ecology first, learn from nature. Fully respect the existing ecological and landscape environment, make full use of the existing landscape, forest and field texture, protect and upgrade the existing ecosystem, make the forest, water system and wetland three systems coexist harmoniously, and make rational layout, optimize space, meet function and save cost of the park

Inheritance of culture, openness and tolerance. Inherit the traditional excellent culture, fully display the Chinese garden art and horticultural culture of nearly 3000 years, carry forward the spirit of the times, and innovatively show the world the Chinese charm, Chinese style and Chinese style. A landscape horticultural axis with Oriental charm will be built on the west side of the park, and a world horticultural stage will be built on the east side, so that modern horticulture and rich and colorful world culture will be perfectly combined here.

Science and technology wisdom, fashion diversity. Using new varieties, new technology, new technology, horticulture and technology integration;On the basis of the new generation of Internet of Things, large-scale equipment collaborative control and other technologies, with massive data as the core, it provides a comprehensive means of wisdom to ensure the management, service and operation of Beijing Expo.



Innovation will be held, sustainable use. Promote the development of green industry in the park, and make full use of market mechanism to build a regional tourism development framework. After the meeting, the park will develop tourism, horticultural flower industry, pension leisure and vacation industry, and promote the development of green industry in Beijing, Tianjin and Hebei. Combining with the development of tourism resources with surrounding characteristics, the park will be built into a regional large-scale ecological park, a comprehensive development zone of horticultural industry and an important part of the regional tourism system in northern Beijing, and a complete tourism service system and a "four-season tourism" framework in spring, summer, autumn and winter in Yanqing will be constructed.

## II. Planning Features

The overall planning of Beijing World Horticultural Exposition takes into full consideration such factors as natural environment protection, meeting exhibition needs, rational layout of space, efficient and economical holding of the Expo, and overall planning of post-Expo utilization, so as to form the overall structural layout of "one center, two axes, three belts and multiple districts". Closely around the planning objectives of the ecological civilization pilot demonstration area and the beautiful China exhibition area, we strive to highlight the characteristics of five aspects.

One is to embody the people-oriented Expo. Beijing Expo highlights the experience of green shade tours, designs horticultural tree-shaded parking lots and under-forest waiting security inspection areas, and designs tree-shaded landscape boulevards along the main tour routes to provide various shade spaces. At the same time, the 8 km long Gui River ecological leisure belt is planned to form a natural forest oxygen bar, which solves the worries of visitors who have nowhere to rest quietly and nowhere to rest.

Second, the Expo reflects cultural diversity. The park planning is rooted in Chinese traditional culture, inherits the essence of horticulture for nearly 3000 years, and shows Chinese charm, Beijing characteristics and horticultural characteristics; Looking at the world's multi-cultures, with an open and inclusive attitude, it brings together the strengths of hundreds of countries, provides a stage for horticulture to blossom in the world, and meets the exhibition needs of not less than 100 official exhibitors (national and international organizations) and 100 unofficial exhibitors (domestic provinces, municipalities and domestic and foreign enterprises).

Third, the Expo reflects scientific and technological innovation. Give full play to the advantages of the Capital Science and Technology Innovation Center, stimulate the motive force of enterprise science and technology innovation, cooperate with Zhongguancun Industry Alliance, integrate intelligent terminal display, robot human-computer interaction, holographic projection, molecular breeding and other high-tech into the park planning, enrich the exhibition and display methods, provide unique and diverse interactive experience of participation, and realize tourism, learning and fun.

Combine with;The use of "Internet +", big data analysis and other advanced technology means to create a smart Expo.

Fourth, the Expo reflects the ecological improvement. In line with the principle of giving full play to the future ecological functions, the sponge park is constructed by adopting advanced technical means such as circular and economical ecological water system and ecological wetland purification;Scientific allocation of plant species and quantities to form a rich and diverse biological community, so that the park becomes the best place for citizens to get close to nature and experience green life.

Fifth, the Expo reflects the development of industry.Based on the utilization after the meeting, we should plan the development belt of horticultural industry, display the frontier technology and culture of flower, fruit, vegetable, tea, medicine and other industries, provide a high-quality platform for horticultural products trade and promotion, and effectively promote horticulture into the daily life of the public;Form a horticultural industry agglomeration area, combined with the function of relieving non-capital, to promote sports, culture, tourism and leisure, ecological agriculture and other functions to undertake;Create the annual Beijing Flower Show brand and build a kaleidoscope project.With the extensive participation of the masses in the ice and snow sports brought about by the successful bid for the Winter Olympic Games, we will create a new hot spot in the all-weather golden tourism belt in Northwest Beijing, and drive the green industries such as horticulture and tourism in Beijing, Tianjin and Hebei into a leapfrog development period.

In terms of planning mechanism, in order to speed up the planning and design of the park, on the basis of the previous collection of conceptual planning schemes, the planning and design work programme of Beijing World Horticultural Exposition 2019 was formulated, and it was considered by the Director's Office of Beijing World Horticultural Exposition Coordination Bureau.

The concept of planning work is supported by multi-sectoral cooperation, multi-disciplinary integration, multi-link linkage and multi-topic support. The working methods are coordinated by the government, led by experts, coordinated by many parties, participated by the citizens and planned scientifically. The specific ways are as a whole by the Beijing World Horticultural Exposition Coordination Bureau, with the cooperation of Yanqing County, the guidance of China Trade Promotion Association and Flower Association, the collective study of experts, the general technical responsibility of Beijing Planning Institute, and the participation of many planning and design units.

The planning and design work plan of Beijing Expo 2019 innovatively integrates planning project management with design industry supervision;The government promotes the integration of overall planning and expert technical checks;Pre-project planning and post-construction implementation are integrated. At the same time, we should promote progress through meetings, plan and organize scientifically, and refine the planning results in time.In 2015 alone, a total of 32 regular planning

meetings and 28 special meetings were organized throughout the year, regular meetings of planning and design units were organized weekly, special meetings of technical research were organized at any time, expert technical review meetings were organized at various stages, and major decision-making issues were reported to the Director-General's office.

### III. Comprehensive Planning

#### (1) Park Planning Zoning

Based on the needs of ecological protection, environmental improvement and post-conference utilization, the three major zones of fenced area, non-fenced area and Expo Village will be implemented. Among them, the fenced area covers an area of about 503 hectares, focusing on the display of world horticultural culture, horticultural science and technology and green ecological environment, the duration of the implementation of fee management; The non-fenced area covers an area of about 399 hectares, which is a green life and green industry experience area, showing the natural appearance of the village, and providing supporting facilities and traffic evacuation sites for the fenced area; The Expo Village covers an area of about 58 hectares, which is the office and accommodation supporting service area for exhibitors before and during the Expo. The command and management center and the traffic organization center.

#### (2) Functional structure of the park

Heart: that core landscape area, which is located in the center of the fence area, is the most important tour organization area in the park. Including Guitang Lake, Tiantian Mountain, Yongning Pavilion, China Pavilion, International Pavilion and Performing Arts Center.

Two shafts: a south-north landscape horticultural shaft and a nearly east-west world horticultural shaft are formed by taking the crown cap mountain and the sea two mountain as opposite sceneries;

Three belts: the ecological leisure belt along the Gui River, the horticultural Lifestyle Experience belt connecting the major venues in series, and the development belt of green horticultural science and technology industry;

Multiple areas: the fenced area is composed of the exhibition area of harmony and blooming (World Horticulture Exhibition Garden), the exhibition area of Shengshi Flower (China Horticulture Exhibition Garden), the spiritual home exhibition area (natural ecology exhibition garden), the living horticulture exhibition area (World Horticultural Town + Humanistic Horticultural Exhibition garden), and the education and future exhibition area (Horticultural Science and Technology Exhibition Garden + Children's Horticulture Garden); Flower ecological demonstration area, agricultural sightseeing experience area, green Lifestyle Experience area, ecological wetland experience area and life horticulture exhibition area in non-fence area.

#### (3) Overall design scheme of the park

The overall planning and design of the park presents the theme of "horticultural event, world stage".

1. Fenced area. There are 10 entrances in the fenced area, including 1 main entrance, 8 secondary entrances and 1 VIP entrance.

Five venues (including China Pavilion, International Pavilion, Botanical Pavilion, Lifestyle Experience Pavilion and Performing Arts Center) and a horticultural town are planned in the fence area. Among them, the China Pavilion is an indoor exhibition venue displaying the history of Chinese horticultural development, high-tech varieties and horticultural technology, with a construction area of about 20000 square meters; The International Pavilion is an international indoor exhibition venue with the theme of "Green Life, Beautiful Home", with a construction area of about 20000 square meters; The Botanical Museum is an international indoor exhibition hall focusing on the characteristic vegetation of various climatic zones and rare and endangered plants. Museum, with a construction area of about 20000 square meters; Lifestyle Experience Hall is an indoor exhibition hall which uses high-tech means to display the development history of world horticulture and the theme of horticulture changing life, with a construction area of about 20000 square meters; The performance center is a temporary building that can be closed for the opening and closing ceremonies of the Beijing World Garden Expo and various forms of performances, with a construction area of about 6000 square meters; Horticultural town is transformed and upgraded on the basis of the village cottages in Gujiaying Village, with a construction area of about 60000 square meters.



Figure 3-12 Aerial View of the Campus

The fenced area includes a core landscape area, two horticultural landscape axes, three horticultural landscape belts and five horticultural display areas.

Core landscape area: phoenix title peony, flower Gui River. The core landscape area is located in the center of the fence area, which is the most important tourist organization area in the park. The core landscape area includes China Pavilion, International Pavilion, Performing Arts Center, Lawn Theatre, Gui You Lake and other important landscape nodes. Tiantian Mountain and Yongning Pavilion add the finishing touch to form the landmark landscape of the core landscape area. The lawn theatre is on the edge of the oil lake, which builds a stage of the world of horticulture; Gui Oil Lake and Gui River series,

the formation of a continuous river.



Drawing 3-13 Plan plan of fenced area

Landscape gardening axis: an oriental verve landscape gardening poem. Landscape gardening axis is located in the west side of the core landscape area, with a total length of 1.2 kilometers, starting from the main entrance in the south and overlooking Guanmao Mountain in the north, with wind, elegance and song as the theme, composing a landscape gardening poem with oriental charm. Wind, that is, landscape farming, reflects the people's feelings with the national style of poetry; Ya, that is, mountains and rivers than Germany, to the natural analogy to the merits of human benevolence; Ode, that is, Ode to mountains and rivers, implies gratitude to nature, praise of nature. The mountains, rivers, forests, fields and lakes on the axis constitute the life community.

World horticulture axis: a colorful picture of the world. The World Horticultural Axis is located on the east side of the core landscape area, with a total length of 1.4 kilometers, south to Yankang Road, north to Guishui River, overlooking Haituo Mountain, expressing international customs through butterfly love flower concept and butterfly pavement of flowing lines, introducing flowers from various countries, and creating gorgeous international horticultural landscape; Extracting butterfly elements to show the design concept of flower leading butterfly dance; Raise part of the terrain, create layers of flowers overlapping the artistic conception of the picture; Increase interesting sketches, improve the rich and diverse functional needs.

Gui river ecological leisure belt: natural and wild ecological leisure water bank. The layout of Gui River ecological leisure belt is about 8 kilometers along the Gui River, which plans to protect the ecological water source, build landscape ecological network, strengthen the connectivity of ecological corridors, increase biological diversity, build the ecological chain of the whole habitat, enhance ecological security protection, and enhance the natural ecological environment while providing ornamental value.



Horticulture Lifestyle Experience belt: rich and colorful garden experience belt. The horticultural Lifestyle Experience belt links five major venues, a horticultural town, two secondary entrances and major functional exhibition gardens in series, with a total length of about 4 kilometers. Along the way, three landscape paragraphs are set up, which tell the stories of plant germination and growth, the spread of plants between East and West, and people, animals and plants in nature.

Horticulture Industry Development Zone: Green Technology Industry Development Zone. Horticultural industry development belt along the park and urban construction area junction layout, the total length of about 9 kilometers, along the way to set up enterprise exhibition garden, horticultural supermarket and plant greenhouse facilities, planning and implementation of market-oriented, international and thrifty innovation concept, aimed at promoting the development of horticultural industry.

Five major horticultural landscape exhibition areas: including Ronghe Blooming Exhibition Area (World Horticultural Exhibition Garden), Shengshi Flower Development Exhibition Area (China Horticultural Exhibition Garden), Spiritual Home Exhibition Area (Natural Ecological Exhibition Garden); Living Horticulture Exhibition Area, (World Horticultural Town + Humanistic Horticulture Exhibition Park); Education and Future Exhibition Area, (Horticultural Science and Technology Exhibition Garden + Children's Horticulture Show Garden).

## 2. Shiyuan Village

The park management center, Expo Hotel, apartment hotel, Expo Village apartment, leisure business belt, transportation hub, square and parking lot and central green space are located in the Expo Village.

The park management center undertakes the functions of the emergency command center and traffic command center of the park during the meeting; Expo Hotel, Apartment Hotel, Expo Village Apartments and Leisure Business Belt are used to meet the needs of exhibitors for office, accommodation and related services; Traffic hub, square and parking lot mainly serve the needs of traffic organization at the meeting time; The central green space is mainly reserved for the current forest land.

## 3. Unfenced area



3T4 图世园村规划平面



Drawing 3-15 Non-fenced Area Planning Plan

Non-fence area is an important landscape area to show the model of beautiful rural construction, on the natural ecological basis, the layout of flower ecological demonstration exhibition area, sightseeing agriculture experience area, green Lifestyle Experience area and ecological wetland experience area.

The village residential land of Dafengying Village, Xiaodafengying Village and Dalu Village will be retained in the non-fence area, and the village characteristics will be displayed after the meeting by improving the environmental quality, improving the living standard and promoting industrial upgrading.

#### (4) Construction scale of the park

Referring to the construction of various types of Expo sites in the past, in line with the principle of frugality in hosting the Expo and sustainable utilization after the Expo, the construction area of the fenced area is about 260000-350000 square meters, including 80000-120000 square meters of exhibition hall, including China Pavilion, International Pavilion, Lifestyle Experience Pavilion, Botanical Pavilion and Performing Arts Center. Undertake the indoor horticultural exhibition and Beijing World Horticultural Expo opening and closing ceremonies, performances and other functions; Supporting service facilities 80, 000 square meters, including gate area ticketing., catering, toilets, retail, medical services and other functions; Horticultural town of 50000-80000 square meters, closely linked to the theme of "Green Life Beautiful Home", mainly undertakes the horticultural function of displaying family life; The supporting commercial buildings of horticultural industry are 50000-70000 square meters, which mainly undertake the commercial transaction function of horticultural display products.

According to the requirements of international commitments, it is estimated that the number of official exhibitors (including national and international organizations) will be no less than 100, and the number of other exhibitors (domestic provinces, municipalities and autonomous regions) will be no less than 100. In order to meet the office and living needs of the staff of the participating countries and regions, the Expo Village has office, accommodation, hotel, emergency command center, transportation hub and other functions.

#### (5) Utilization of villages in the park

Li Siguanzhuang Village, located in the core landscape area, plans to relocate the village as a whole, resettle outside the park, arrange employment for villagers in the park, so that villagers can share the fruits of holding the grand event. Gujiaying Village is located on the south bank of Guishui River in the fenced area, and it is planned to relocate the villagers and upgrade their original site, including improving the level of facilities and the overall environmental quality, and embedding functions, as a horticultural village during the Beijing World Horticultural Expo, shaping the spatial characteristics of horticultural life, and interpreting the poetic feelings of Chinese countryside. Dafengying Village, Dalu Village and Xiaodafengying Village are located in the non-fence area, and plan to retain the original village site, improve the environmental quality, improve the living standard, promote industrial upgrading, and provide more employment options for villagers. The three villages will be built into a model for the linkage development of ecology, life and production, and a model for the construction of beautiful countryside.

#### (VI) post-conference Sustainable Utilization

After the meeting, the park will be transformed into a regional large-scale ecological park, an important part of the tourism system in the northwest of Beijing, Tianjin and Hebei, together with the Badaling Great Wall, Chongli and Chengde, to create a multi-day golden tour line. Strengthen the connection with Chongli, build the Winter Olympics tourism ring line, open up the northern tourism routes, extend to Hebei and Inner Mongolia, and work with Mulan paddock and Chengde to build the golden tourism ring line in northern Beijing, so that Yanqing urban area can complete the upgrading of tourism and become the tourism distribution center of Yanqing. At the same time, the establishment of the annual Beijing Flower Exhibition brand, together with the surrounding areas, has become a horticultural industry gathering area, undertaking horticultural scientific research, production, exhibition, trading and other functions. Practice the new operation and management mode, and reserve space for the Winter Olympics.

Horticultural towns will become the gathering place for designers to create and display; It has the functions of pension and leisure, and has become the most professional and comprehensive horticultural therapy experience place, attracting horticultural enthusiasts of different ages.

Botanical Museum will combine the utilization of existing geothermal resources, attract investment from enterprises, build exhibition greenhouses, and enrich Beijing's tourism resources in winter; As the main exhibition hall of Beijing Flower Exhibition, the China Pavilion retains the functions of forum, news release and exhibition; The International Pavilion will be built into a horticultural trading center in China, and a platform for research and development, cultivation and trading of horticultural products will be built; Lifestyle Experience Hall serves as a horticultural experience center for citizens' awareness of environmental protection.

#### (7) Special Planning of the Park



3-17 会后延庆旅游资源空间体系示



Fig. 3-18 Traffic Organization Plan for Fence Area

Reasonable organization of pedestrian, vehicle and freight traffic in the park, according to the needs of different tourists, organize "3 hours-7 hours-two days" three kinds of fine horticultural tour routes.

Set up special transportation tools in combination with horticultural display. For example, float parade is set up in the core area.

Shading facilities should be set up in the main traffic flow line and parking area according to the needs of humanization. For example, shading corridors should be set up along the horticultural Lifestyle Experience belt, and existing woodlands should be retained in Huannan Road to set up under-forest recreational areas.

## 2. Planning of supporting facilities

Through the construction of humanized, refined, intelligent and integrated service facilities with horticultural exhibition, it provides tourists with safe, comfortable, convenient and beautiful exhibition experience.

According to past experience and relevant norms, based on the spatial layout, function and construction scale, traffic organization and tourist volume during the exhibition period of Beijing World Garden Expo in 2019, we should take "quantitative on demand, moderate concentration", "taking into account the flat peak, flexible response", "convenient service, meeting the needs of passenger flow" and "intensive compound". The six principles of "giving consideration to operation after the overall planning meeting" and "highlighting characteristics and strengthening horticultural theme" are to scientifically calculate the demand for supporting service facilities and reserve flexibility to ensure the exhibition.

During the meeting, the operation went smoothly after the meeting.

As the reception scale and behavior characteristics of large-scale exhibitions, Beijing Expo fully understands the use needs of supporting service facilities. It is planned to carry out general service facilities such as catering and shopping, as well as consultation and guidance, medical rescue, etc. According to the standard of 190000 passenger flows per day. Toilet facilities are being planned with strong characteristics to take this need into account

Special, according to the peak passenger flow of 240000 people/day standard configuration and planning.

Centralized fixed facilities, decentralized fixed facilities and temporary facilities (including mobile supplementary facilities). Among them, centralized fixed facilities are distributed in four major venues (Botanical Hall, China Hall, International Hall, Lifestyle Experience Hall), horticultural towns and industrial belts, with a total construction area of 17000 square meters; Scattered fixed facilities: distributed in the scope of garden green space, with a total construction area of 17000 square meters; Temporary facilities: the total construction area is about 29,000 square meters.

### 3. Garden Planning



3-19 图 北京世园会客流空间分布



3-20 图展园布

According to the commitment to international organizations, "During the Beijing World Horticultural Exposition in 2019, the number of official exhibitors will be no less than 100 (including national and international organizations), and the number of unofficial exhibitors will be no less than 100 (including exhibitors from various provinces, regions and municipalities in China, enterprises and individuals at home and abroad)", and a world horticultural exhibition area (more than 50 international gardens) will be planned and set up. Chinese Horticulture Exhibition Area (34 Chinese Gardens) Horticulture industry development belt (5 enterprise exhibition gardens), education and future exhibition area (5 master gardens, children's gardens and enterprise gardens), life horticulture exhibition area (100 orchards, 100 grass gardens, 100 vegetable gardens, etc.), and reserved flexible

venues.



#### 4. Mountainous River System Planning



Figure 3-21 Vertical Planning

The planning inherits the Chinese traditional art of arranging mountains and waters, draws lessons from past experience and excellent garden practice, relies on Yanqing's excellent mountain and water pattern, makes full use of the vertical conditions, vegetation and hydrogeological resources of the park, and puts forward the overall ideas and principles of the vertical planning of Beijing World Park Expo: "fully respect the status quo", "borrow Jingyuan mountains and close to water", "pay attention to the landscape and culture". "Landscape and Qi vein are connected". It is planned to retain the existing trees and the original elevation of the site to the maximum extent, minimize the disturbance of the site, dig lakes and pile mountains locally, shape Tiantian Mountain and Guiyou Lake, form the core landscape, and introduce Haituo Mountain and Guanmao Mountain into the park with the help of Jingda Mountain and flood, so as to form a landscape level of internal and external linkage. The cultural context of the venue is organically integrated with the culture of Beijing World Horticultural Exposition, and the main lake "oil lake" revolves around the site story of "Shun Ju Gui You", telling the story of the Yao and Shun era in ancient times when "a hundred grains were ripe, the people were friendly, and the phoenix came to Xiang", and now, the horticultural event of "a hundred fruits and a thousand flowers, a thousand countries gathered together, singing wine, integration and celebration", ancient and modern dialogue, context inheritance. Tiantian Mountain, the main mountain, combines Chinese traditional landscape culture with Chinese horticulture and farming culture in the form of terraces, which embodies the characteristics of Beijing Expo and will become a valuable heritage of the Expo.

## 5. Planting Master Plan

Plant landscape and horticultural exhibition planning starts from the current situation of the site, protects the current vegetation community, closely revolves around the theme of "green life beautiful home", creates green shade space, and builds a beautiful home. Grasp the idea of "let horticulture merge into nature, let nature move the soul", express horticultural content by artistic means, and create a natural landscape horticultural garden. Efforts should be made to achieve the goal of "a new realm of world horticulture and a new code of ecological civilization". Show the world's top horticultural level with the latest horticultural plant materials. With the return of Chinese horticultural plants, it shows Chinese horticultural culture, and with high-tech horticulture exhibition, it leads the future development direction of horticulture.

### (1) Ecological Strategy

Make full use of the current vegetation resources to build a green ecological base. Retain big trees and forest belts, build an ecological security pattern, and retain nostalgic memories. There are about 50000 trees and 5 kilometers of boulevards in the park. It forms a large area of woodland landscape and green background, and provides a framework for shade sightseeing.

Make full use of native plants to enrich species diversity. Construct a stable plant community and create a green park with distinct seasons and outstanding characteristics. A total of 41932 trees were planted, 354545 shrubs were planted, 61522 square meters of biennial flowers, 210322 square meters of perennial flowers, 544935 square meters of rural land, and square metres of lawn.

Among them, there are more than 50 kinds of native trees, mainly *Pinus tabulaeformis*, *Sophora japonica* and *Acer truncatum*, etc. The background forest belt mainly adopts the multi-layer arrangement mode of arbor, shrub and grass, and takes Beijing native plant community as the criterion to construct the forest land landscape with the main tall native tree species, natural structure and outstanding characteristics of zonal community. The near-natural uneven-aged forest, near-natural mixed forest and near-natural multi-storey forest are constructed by using the planting methods of uneven-aged, multi-storey and mixed, thus forming the ecological forest landscape with rich and diverse species. There are about 25 kinds of native shrubs, mainly *Huang Yi*, *Xanthoceras sorbifolia*, clove and so on. Shrubs are mostly planted in large areas, planted on road edges and forest edges, forming a continuous and magnificent plant community, which provides large-scale landscape effect for tourists in the viewing period. A small number of groups are planted in flower border and characteristic gardens, serving as the background of ground cover flowers. Rural land is covered with water-saving and drought-tolerant native herbs such as *Carex*, *Zoysia* and *Potentilla*, forming an easy-to-maintain natural ecological landscape.

New and excellent plant varieties with good growth in Yanqing area should be selected appropriately. Adhere to the principle of suitable trees, implement the concept of increasing color and extending green, and show the latest and highest international horticultural level. More than 70 kinds of new excellent arbors are used in the park, among which, the tree with the highest survival rate and

vigorous growth is "Qiuyan", and the trees with good growth performance are "Jinye Fuye", "Jinye Ulmus", "Jinye Sophora" and "North American Crabapple".

## (2) Green Space

Construct green space from four strategies. Combining the overall planning structure and spatial characteristics, the background forest is constructed; Highlighting the experience of green shade tourism and establishing the shade system of main road squares; Deduct the theme of the exhibition area, shape the characteristic plant landscape style of each area; Display characteristic horticulture, highlight the theme of flower landscape. The overall formation of tree array axis command momentum, open flowers stretch space, the background of dense forest to build skeleton, sparse forest grassland to lay the background, horticultural garden touched the soul.

In the two-axis three-belt, main entrance square, exhibition hall entrance square and other planning shaded landscape Avenue and shaded distribution square. Appropriate selection of large size, early germination, large crown and dense shade of trees, the formation of the park green corridor, to meet the landscape requirements of shade tourism. Large-scale horticultural theme space is planned in combination with the gathering place of tourists in the park, the two axes and the exhibition areas.

Landscape horticultural axis, creating Baisong Yunping, Wanfanghuatai, Sophora Avenue, Ginkgo walkway, yuanbao Maple Forest and other shade space.

World horticultural axis, the world horticultural axis retains more than 60 trees such as Sophora japonica and Populus tomentosa, forming a 50-meter-long tree-lined Avenue, and planting color-leaved plants to create a characteristic landscape axis of summer shade and autumn dazzling color.

Gui River ecological leisure belt, to retain the status of Populus tomentosa forest, Salix forest, locust forest, the formation of green background and skeleton, to create ecological



Natural tree-lined spaces. A large number of crabapples are planted on both sides of the road to form a colorful tourist corridor.

Horticultural Lifestyle Experience belt, mainly choose Jinye elm, Jinye compound leaf machine and other golden leaves of large trees, forming a golden ribbon. Under the forest, mainly with cloves and other shade-tolerant flowering shrubs, to create a relaxed, bright and fragrant tourist corridor.

Horticultural industry experience belt, planting *Sophora japonica* and *Pinus tabulaeformis* trees to build a green skeleton, providing shade tours. Rose is planted on the edge of the road to form a colorful and romantic tourist corridor with city trees and city flowers in the shade.

In the core landscape area of Gui Bang Lake, the current situation of *Populus tomentosa* is retained, the scenic spot of Qingyangzhou is created, and the green space around the lake mainly chooses *yuanbaofeng*, *Yinhongzhi*, *Yinbaizhi* and *Jinye Ulmus*, which are configured in groups, creating color forests and waterfront flower border, and creating exquisite and tranquil waterfront landscape.



3-22 图总体种植规划

Chinese horticultural exhibition area, the public area of the garden is an important transportation hub of the garden, through the planting of *Acer truncatum*, *Ginkgo biloba* and other green corridors, providing green leisure space.

The World Horticultural Exhibition Area retains more than 110 individual trees, 12950 square meters of forest, and more than 300 meters of Avenue. Through the close combination of plants and pavement, it can not only meet the traffic needs but also ensure the shade demand, and create an

important green space for the exhibition garden hub.

In that live horticulture exhibition area, the current situation of Chinese white poplar forests, locust forest and other big trees are utilized, and the background forest belt of tea sticks, cloves, mountain peaches, Taiping flowers and other plants are planted to build a green background for fruit forests, vegetable gardens, flower fields and exhibition gardens, so as to create Chinese pastoral scenery.

The natural ecological exhibition area retains most of the current trees and shrubs as a whole. Combining with the current water system, the ecological and natural waterscape landscape is displayed.

### (3) Horticultural Display

With the goal of "a new realm of world horticulture and a new model of ecological civilization", Beijing Expo 2019 will build an international garden festival. It brings together all kinds of plant varieties that China has introduced to the world for more than 2000 years, focusing on the display and application of Chinese famous flowers, the display and application of world famous flowers, the spread of horticultural culture along the "one belt and one road", and the display and application of "colorful and green" plants. Horticultural plants are used as the carrier to embody the culture of national social etiquette, national culture, market flower and tree culture, diet and living culture, poetry and lyrics horticultural culture, horticultural industry culture and so on, while promoting the development of horticultural science and technology.

Landscape horticultural axis is characterized by Chinese traditional famous flowers, highlighting peony, peony and so on, mainly Beijing city flower rose, chrysanthemum, using the form of "flower field" to create a shocking flower landscape.

The world horticultural axis introduces flowers from various countries to create a gorgeous international horticultural landscape; Extract butterfly elements to show the design concept of "flower leading butterfly dance"; Raise part of the terrain, create layers of flowers overlapping the artistic conception of the picture.

The Jiuzhou Flower Border Scenic Spot in the core area of Youhu Lake shows the Chinese famous flower culture with the theme of peony, rose and other ten famous flowers in China, while the world Fanghua Scenic Spot shows the latest scientific and technological level of horticulture in the world with the theme of world famous flowers. The "one belt and one way" garden is dominated by the characteristic flowers of 65 countries along the line, showing the cultural integration and exchange between China and other countries in the world.

The core area of Tiantian Mountain will build a terraced flower field landscape of "five grains, abundant mountains and flowers" to inherit and display the ecological wisdom of farming civilization.

Through the four entrances of plum, orchid, bamboo and chrysanthemum and the characteristic flower configuration of the peer square, the Chinese horticultural exhibition area shows the long and strong flower culture of our country.

World horticultural exhibition area, the application of silver red machine, silver white machine,

North American crabapple, European clove, Japanese spirea, big leaf hydrangea and other introduced varieties, create a world horticultural atmosphere. It combines the international exhibition garden to create an international style and display the horticultural culture with world characteristics.



3-23

In the living horticulture exhibition area, the existing poplar shade effect is maintained, the wild interesting flowers of the combination of perennial flowers, mountain peach grass and pine cone chrysanthemum are increased, and the road landscape of natural flower belts is created.

Natural ecological exhibition area, mainly through the construction of wetland landscape, creates a return to nature leisure place, demonstrates the concept of ecological civilization construction.

#### (4) Project implementation

Relevant departments and design units of the Expo Bureau will conduct seedling research, and the Expo Bureau will coordinate with relevant departments and units of Yanqing District to organize seedling meetings and docking planting work. At the same time, we will introduce seedling service providers of Beijing World Horticultural Expo, such as local plant enterprises, new excellent plants, "increasing color and extending green" seedling research and development enterprises and scientific research institutions. Carry out various research projects to provide technical guarantee for the smooth construction of engineering enterprises and the later greening effect.

### Section 4 Park Layout and Characteristics

The final structural layout of the park planning is as follows: one center (core landscape area), two

axes (landscape horticulture axis, world horticulture axis), three belts (Gui River ecological leisure belt, horticultural Lifestyle Experience belt, horticultural industry development belt), and multiple areas (world horticulture exhibition area, Chinese Horticulture Exhibition area, education and future exhibition area, daily Horticulture Exhibition area, natural ecology exhibition area etc.).

Gui Lang Lake. Yao Oil Lake got its name from the allusion of "Yao and Shun governed Gui River and created the prosperous civilization of China". The idea of "fairyland on earth, Gui You Garden" is to use the original abandoned fish pond to create a landscape water surface, and to retain dozens of poplar trees in the center of the lake to form a lake island- "Qingyang Island".

Gui You Lake gathers the three major venues of China Pavilion, Gui Mei Theatre and International Pavilion as well as Tiantian Mountain Scenic Area, including three linear entrance spaces of Feifeng Valley, Qiancui Pool and Baihua Slope, which enter the lake area in three ways of "Lin Jin Dong Tian", "Shui Jin Dong Tian" and "Hua Jin Gong Tian", as well as five main areas of Jiuzhou Flower Border, Silk Road Flower Rain, Yiseitai, Hualin Fangdian and World Fanghua. At the same time, Gui You Lake also undertakes the ecological functions of rainwater collection, and practices the

Tiantian Mountain. Tiantian Mountain is the highest point of the park, 25 meters high, the mountain from the excavation of oil lake when the earthwork from the heap. The total area of Tianyuan is 12.22 hectares, consisting of Yongning Pavilion, Literati Garden and Flower Field on the top of the hill. The design takes "returning to nature" as the theme, and uses the gardening technique of Chinese classical gardens to create a prosperous era of "high pavilion facing Gui water, Rui Lake.

In line with the theme of Beijing World Horticultural Exposition, the design of Tianyuan Garden is mainly based on plant landscape, on the one hand, the origin of Chinese horticulture is traced back to flower field landscape; On the other hand, through the scenic spots of plum, orchid, bamboo, chrysanthemum and other plant themes, the poetry, painting, garden art and plant culture in Chinese traditional culture are integrated, and the characteristic plants are displayed in the poetic and picturesque space, so as to express their aspirations with trees and compared with flowers.

Yongning Pavilion. Yongning Pavilion is on both sides of the axis of landscape gardening, if Gui You Lake on the east side seems to be Penglai Wonderland facing the future, then Tiantian Mountain on the west side is like the Kunlun Hanging Nursery hidden in the depths of history, and Yongning Pavilion is the Jintai Jade Tower standing on the top of Kunlun Mountain. In the eyes of the Chinese people, a good garden should not only have mountains and waters, Qihua Yao grass, but also Qiong Lou Yu, Fang said perfect, set off in the green mountains and waters of the pavilions have long become the symbol of fairyland in the hearts of Chinese people.

Yongning Pavilion is a traditional Chinese pavilion building with a height of 27.6 meters and a total height of 52.6 meters, which is the commanding height of the park. Based on the historical fact that the establishment of Beijing capital began in the Liao and Jin Dynasties, Yongning Pavilion adopts the architectural style of the middle ancient times in China. On the basis of the comprehensive study of Liao, Jin and Song Dynasties' pavilions, according to Yingzao Fashi, the re-creation suitable for the characteristics of the project is carried out. According to the Chinese landscape style palace garden architectural tradition, using the "GaotaiGeyuan" type layout, the overall image can be summarized as: "Flower field scattered, heavy platform uneven, GaoGeGaoZhi, corridors around." According to the volume and trend of TianTian mountain, will be on the top of the mountain on the south side, fire engines can be from both sides of the east and west to reach the north side of the platform, and then through the veranda opening into the hospital. On the south side of the mountain, from the literati garden at the foot of the mountain along the stream, that is, to reach the starting point of the mountainside. Taiwan is divided into two levels, the low platform height of nearly 8 meters, T-shaped table, 40 meters deep into the north and south, visitors can along the steps on both sides to the table, here for a short stay for photography. The steps leading to the high platform are located at the north end of the low platform, with a height difference of nearly 7 meters. High Platform Square, 64 meters square. GaoGe stands in the center, surrounded by veranda tiger arch guard, Taiwan edge white stone guardrail. Four door tigers hang Haiyan, Heqing, Fengdiao and Yushun plaques respectively. Pavilions four sides, the courtyard four sides, a symbol of peace, peace and prosperity.

The architectural image of Yongning Pavilion originates from the systematic study of the pavilions in the middle ancient times, which embodies two key characteristics of the pavilion-style architecture, namely "building houses on the level" and "four a's and four a's". The main body of the pavilion has one underground floor, two bright floors above the ground and one dark floor, with a construction area of 2025 square meters. From top to bottom, the roof double eaves Xieshan cross ridge, "Yongning Pavilion" bucket plaque placed between the eaves on the south side, plaque 2.7 meters high. Two-story square plane, the hall of the body into the three face-wide depth, vice-step deep half of the circumference. The interior of the building is designed in the format of nine palaces. The surface width of the exposed room is 5.4 meters, and that of the secondary room is 3.6 meters. The central cross is an open space with doors on all sides leading to the outer corridor. The four corners are two staircases, a one-step elevator and a management room respectively. The indoor net height is 9.5 meters, and the plaque of "Qining Weiyong" is suspended in the air, with a length of 3.6 meters. Ceiling to fight chess, on the beam to support the Ping Gou, ceiling gilded, shiny. The corridor is 1.8 meters deep and sits flat on a wooden fence. The flat floor is about 37 meters higher than the main road of the park, where visitors can not only overlook the whole park, but also have a close view of the water and the mountains, which is the most beautiful place for the whole park. It is a dark layer below the flat seat, including exhibition space and equipment rooms. The base of the first floor is a 1.2-meter-high blue and white stone Xumizuo, and the edge of the platform is protected by a white stone single hook fence. 3. Corridor depth. 6 meters, covered with waist eaves, all sides add balanus type Baoxia.

The starting point of the landscape horticulture axis is the "ritual and music gate", which shows the etiquette and style of a big country. After entering the door, "Baisong Yunping" opens the picture scroll leading to the flower field and exhibition hall, inherits the previous gardening techniques (frame scenery, borrowing scenery, etc.) And organizes it into an unfolded scroll landscape picture scroll to reproduce the essence of traditional horticulture through the clipping and artistic processing of landscape elements.

Wanfanghuatai is located in the middle of the whole axis, inspired by Beijing Xiannongtan Guanguangtai, through which you can see the landscape of flower fields, and look far to the northeast at the China Pavilion, surrounded by flower beds and flower slopes, with rich spatial levels, and provide square space for rest and stay.

World Horticulture Axis. The world horticultural axis expresses a colorful picture of the world through the concept of butterfly love flowers and the butterfly pavement of flowing lines. Design concept: butterfly flowers, flowers of the world, from the introduction of butterflies, flowers, butterflies and phoenixes. Design strategy: introduce flowers from different countries to create a splendid international horticultural landscape; Extracting butterfly elements to show the design concept of flower leading butterfly dance; Raise part of the terrain, create layers of flowers overlapping the artistic conception of the picture; Increase interesting sketches, improve the rich and diverse functional needs.

总平面图



Fig. 3-29 Axis plan of world horticulture

### 3. three belts

Gui River ecological leisure belt. So far, the 2019 Beijing World Park Expo is the only one in the past World Park Expo that has a natural river running through the park. The Guishui River winds its way through the park to the west, with trees and flowers on both sides, birds singing, and distant mountains and water contrasting with each other, forming a landscape pattern of "surrounded by mountains on three sides and flowing in the water". In the planning, through the design optimization of the construction height and construction intensity of the riverside space and landscape corridor, with the help of Beijing World Garden Expo, the natural riverside landscape of the city is created, and a spiritual habitat home with the theme of waterfront leisure and the characteristics of natural horticulture is formed.





3-30 Bird's eye view of Tuguihe ecological leisure belt

Through the ecological management of Guishui River, 256,600 square meters of shallow water bay were piled up, and 36 aquatic plants were planted. 990,000 square meters, the construction of ecological floating island 1600 square meters; According to the height difference of the riverbank, natural revetment is built, the steep slope revetment on both sides of the current riverbank is combined with slope protection engineering measures to increase *Lespedeza bicolor*, *Vitex negundo* and other slope protection plants to control soil erosion, while the gentle slope revetment retains the current aquatic plants and ground cover plants such as reeds, cattails, *saccharides*, *Potentilla anserine*, etc. Reeds, cattails, wild green grass, wolf tail flowers, water celery and; At the same time, Based on the waterfront space of the original Gui River Forest Park, the landscape improvement with low development intensity was carried out to meet the needs of holding the Expo, and the viewing platform was set up at the excellent position of the viewing corridor, and the landscape trestle was built to comprehensively improve the water ecological environment of the park, so as to provide high-quality waterfront landscape for the results of Beijing Expo.

Along the south bank of the Gui River, we should strengthen the protection and restoration of the natural forms of water bodies such as pits, canals and functional wetlands, and maintain their natural circulation and ecological ways of purification; At the same time, we should optimize the planting design, improve the vegetation community with a single structure, increase local tree species such as Mongolian Dong, *Acer truncatum*, *Pinus tabulaeformis*, *Picea asperata*, *Juglans mandshurica*, *Lespedeza bicolor*, Xiaohua Shu, *Tripolar Spiraea*, *Clematis latifolia* and so on, improve the ecological function of the forest land, and take the riverside landscape of Guishui River as the carrier of green development. To restore the ecological environment, enhance the region, and build a good platform for the construction of ecological civilization to improve the regional ecological environment and landscape quality. At the same time, the design combines the needs of horticultural exhibition and



tourism experience, integrates the idea of multi-format, and reflects the planning concept of "ecological priority, learn from nature; innovative meeting, sustainable use". Give full play to the functions of ecological security, water conservation, tourism and leisure, and green product supply, embody the theme of "green life, beautiful home", and build a demonstration ecological Expo.

The north bank of the Gui River faces the core exhibition area of the Beijing Expo across the river, relying on the construction of the Beijing Expo, while fully retaining vegetation, enriching planting levels and supplementing and improving facilities. Create a pleasant scale of the sun lawn and waterfront trails, can be seen from time to time.

Water birds fly up from the reeds and feel the charm of nature; Taking advantage of the tall and straight advantages of the current poplar forest, it provides a good green background for the core exhibition area of Beijing World Garden Expo on the other side, and in the golden autumn season, they are more like a golden ribbon dancing on the bank of Gui He River, planting autumn leaf trees around poplar trees, such as silver red, silver white, *Acer truncatum*, red corymus, etc. Echo with poplar trees, forming a gorgeous autumn leaf landscape, with layers of forest. The falling leaves, together with the picturesque landscape, add luster to the park.

Gardening Lifestyle Experience belt. Horticultural Lifestyle Experience belt, in series with the main exhibition halls of the park, is characterized by the experience of smelling flowers and hearing birds' songs, so that tourists can feel the wonderful process of the growth of all things in nature, and cooperate with the establishment of characteristic leisure corridors and tree-lined walkways to create a pleasant tourist space.

Along the line from the Lifestyle Experience Hall to the International Hall, it focuses on the process of plant germination and growth, expresses the growth footprint of seeds by integrating landscape design techniques such as land sculpture, and shows the essential soil factors, wind factors and sunshine factors in the growth process. The soil factor display stand is used for displaying a growth substrate on which seeds depend for survival, the footprints of the seeds are unfolded, the seeds begin to germinate and take root, and then feel the sunlight factor; after the soil is broken, the seeds thrive under the moisture of the sunlight; and after the seeds are mature and influenced by the wind factor, wind media is used as one of spreading modes of the seeds to continue to multiply and complete the life cycle.

From the International Pavilion to the horticultural town along the line, focusing on the spread of plants, into the Belt and Road design ideas, the design is about 1. With the theme of "Silk Road Flower Rain", the 4-kilometer Silk Road Post tells stories about the spread and growth of seven native Chinese plants in the world, including: *Rhododendron* with a history of more than 1000 years, China rose which is said to have been planted since the Shennong era, *Hemerocallis* with 60% of the world's native species, *Chrysanthemum* introduced to Europe in the 17th century, symbolizing the king of flowers for national prosperity and wealth. Peony, which spread from Gansu to the Mediterranean peach tree, The lotus flower representing truth, goodness and beauty.

Along the route from the small gardening town to the Botanical Museum, the exhibition focuses on the close relationship between plants, animals and people, and the specimen wall with the theme of stems, leaves, flowers of native plants and common insects in North China shows the beauty of nature and regional biodiversity, and combines animal sculptures made of waste materials and other materials to create interesting landscape scenes with colorful cartoons. In addition to sightseeing, a comfortable sightseeing space is formed through the cloud-shaped shade corridor frame, while popularizing science, the harmonious relationship between plants, animals and people is described, and the scenery of "100 flowers among spring smoke" is formed.

Horticulture Industry Development Zone. Horticulture industry development zone is an industry development platform to display new horticultural varieties, new technologies and new techniques, provide horticultural products trade promotion, promote knowledge innovation, and reserve space for the use of Beijing Expo and regional industrial development.

In order to meet the function of supporting commercial services at the meeting, flower merchants'supermarkets are built in the development belt of horticultural industry, taking hills and valleys as the prototype, with the help of the curved roof outline deduced from the traditional roof truss shape, connecting in series the smooth and undulating ridge lines, forming a picture scroll of mountains and rivers overlapping and crisscrossing vertically and horizontally, creating a collection of experience and appreciation. To provide people with a close and pleasant, comfortable and pleasant green market. On the basis of satisfying the main commercial functions, we should increase the interest of sightseeing and integrate diversified entertainment and exhibition space. At the same time, skylight, greening and flowers fill every space and gap of the building, which not only enriches the commercial vitality, but also makes people experience the pleasure of green life and feel the strong traditional cultural atmosphere.

#### IV. Multiple Area

Horticulture town. Horticultural Town is located in the northwest of Beijing World Horticultural Expo Fence Area, adjacent to Guishui River, backed by Yongning Pavilion, winding paths and surrounded by flowers, covering an area of 8 hectares, with a total construction area of 64000 square meters on the ground and about 20000 square meters in the construction period. According to the requirements of the overall plan of Beijing World Horticultural Expo, the horticultural town closely adheres to the theme of "green life, beautiful home", and mainly undertakes the horticultural function of displaying family life. The construction of small towns follows the design concept of "respecting nature, industry leading, regional characteristics and saving resources", and creates five-in-one characteristic towns including industrial towns, beautiful towns, tourist towns, green towns and smart towns, so that residents can "see mountains, see water, remember homesickness" and realize the harmonious coexistence and sustainable development of man and nature. The North District of Horticultural Town is a reception service center, while the South District covers such areas as Theme Art Museum, Master Workshop, Longqing Flower Street, Wenchuang Center, Visitor Center, Original Township Resident Experience Hall, Trial Garden (Flower Field).

The buildings and landscapes in the horticultural town all show the simple and honest style of the original hometown, the theme art gallery inspired by the traditional Chinese stage, the master workshop continuing the quadrangle pattern, and the literary creation center with the intention of "mountain houses become each other". The front and back of the green brick and grey tile houses are the locust trees, maple trees, morning glory and cockscomb of my hometown, and the winding stream water. Nature and culture converge and merge.

World Horticulture Exhibition Area Public Area. The core axis of the International Garden tells the story of seeds and water as the idea of design and naming of scenic spots, from south to north, it is nurtured in the snow, broken out of the soil and fields. Water is the source of growth of all things, water brings nutrients for the development of seeds, but also provides a medium for the transmission of seeds. Water turns into ice and snow in winter to ensure the temperature needed for seed germination and gestation. Plants thrive under the nourishment of water, and water is needed for photosynthesis and transpiration. When plants get water to grow, they also conserve and protect water sources, reduce surface runoff and maintain ecological cycle.

Public area of Chinese horticulture exhibition area. The public space of Chinese horticultural exhibition area takes "the way of gentlemen-horticultural living room" as the design concept, takes "four gentlemen in flowers" as the cultural symbol to deduce, highlights the cultural characteristics, and creates a public landscape space with Chinese characteristics, such as big tree cover, natural leisure, clear orientation, both function and landscape. The core area of the public space also has a "peer square", meaning "with one heart and one mind, with the same direction; forge ahead, build a dream of China".



3-32 图中华园艺展示区平



3-33 图 自然生态展示区鸟

Natural and ecological exhibition area. This area is located in the north of Beijing World Horticultural Exposition Park, and the landscape is based on Guishui River Forest Park.

Renovation and upgrading of the leisure experience area, the overall layout along the Guishui River, is an important part of the park master plan "one center, two axes and three belts" Zhongguihe ecological leisure belt, with an area of about 113.86 hectares. The natural ecological exhibition area takes conforming to nature as its design principle, and provides tourists with abundant sightseeing activities and horticultural experience space such as riverside, wetland, forest and so on; Through habitat construction, the biodiversity in the site is enriched, and the habitat environment is reserved and constructed for waterfowl, fish and insects migrating and inhabiting along the Guishui River; Restore the current pond wetland purification function, create wetland purification exhibition area, wetland restoration area and natural wetland bird introduction area. Become a demonstration site of wetland science education in the park; Combining with the advantages of the site, the "fantastic light and shadow forest" night landscape, which integrates local culture and modern science and technology, is displayed to provide tourists with a new interactive extreme experience.

## Chapter II Eco-Expo

As a large-scale international event, Beijing Expo can fully display Chinese culture and Yanqing characteristics, promote regional coordinated development, and form a new model of ecological industry development. Reasonable ecological planning of Beijing World Park Expo can not only make full use of the current natural resources, renovate the current environment, but also restore the ecological environment, comprehensively implement the development strategy of ecological civilization, and build a demonstrative ecological World Park.

2019 Beijing World Park Expo will adhere to the ecological priority, green and low carbon: adhere to the ecological priority, effectively protect water resources, wetland resources and biodiversity, vigorously promote energy conservation and emission reduction, extensive use of solar energy, wind energy, biomass energy and other green energy and technology, to achieve the recycling of resources within the park.

### Section 1 Ecological Reservation

In order to respect the existing natural ecological environment of the park site, prevent constructive damage, avoid repetitive construction, save environmental resources, reduce investment, make the ecosystem circulate effectively and operate steadily, and improve the landscape of the park, the "Analysis and Research of Ecological Characteristics" and "Research of Current Ecological Retention" have been formed.

#### I. Overall Analysis and Evaluation of the Current Situation

The current ecological landscape mechanism is relatively good, there are large areas of woodland, water system, farmland and so on. Through the analysis of vegetation, water system, soil and biology, it is considered that the landscape richness of the park is relatively insufficient before planning, and the landscape ecological security pattern needs to be strengthened.

#### II. Overall strategy for ecological preservation

On the basis of the investigation and study of ecological environment information, the garden was delimited by planting ecological patches, corridors, matrix and other ecological concepts.

The status quo of the reserve area and the species types in the area are statistically studied. The scope

of the current reservation should ensure the integrity of the ecosystem of the whole park, so that the ecosystem of the whole park can operate effectively, and can achieve self-regulation, self-repair and self-improvement.

### III. Retain and Improve the Vegetation System

Current conditions: The existing vegetation in the park grows well and has a beautiful posture. The dense forest is mainly distributed in the Guishuihe Forest Park on the north side of the site, with poplar and apricot trees as the main trees, willow, pine, peach and other trees planted occasionally, supplemented by economic fruit forests; To the north by Mi

At the same time, there are beautiful roadside trees on some roads;The green belt of Guishui River is divided into landscape greening of Gui River Forest Park;There is a large area of Sanli River on both sides of the Guishui River, which has a natural wetland landscape, winding water, and mainly farmland crops.

Advantages: There are some woodland vegetation in the patch distribution of the park, which grows well and forms a certain ecological community relationship.

Deficiencies: On the one hand, the integrity of the ecosystem is not enough, the vegetation of the park is mainly distributed in sheets, lines and dots, which does not form a unified whole; on the other hand, the stability of the ecosystem is not enough, the vegetation of the park is mainly composed of plantations such as *Populus tomentosa* and *Sophora japonica*, which are single in form and lack in forest form, and a multi-level ecological community structure has not been formed. Wetland aquatic plants are mainly reeds, which have weak self-purification function and poor ecological benefits.

Retention strategy: to retain the status quo vegetation resources are not destroyed, to retain the status quo trees about 50, 000; Retaining the current vegetation community is not disturbed. Protect the current situation of big trees, ancient trees and famous trees from being cut down; The vegetation ecological system is improved, with 50000 new trees and about 130000 new shrubs.



3-34 retention



#### IV. Retaining and Constructing Ecological Water Vein

**Current Conditions:** The total water area of the park is 273.74 hectares, including Guishui River, Sanli River, fish ponds, canals and wetland. Weishui river is 189.2ha, with original vegetation. Sanli river lives to the north, with an area of 26.6ha with excellent water quality. The fish ponds in the park are mainly distributed on the west side of the site, with an area of 46 hectares; The area of the canal in the park is 11.94 hectares, and the length of the canal is 530 meters. The east side of the park is a sewage treatment plant, and there are many water lifting stations on both sides of the Guishui River for farmland irrigation.

**Advantages:** Water widely distributed, rich in types.

**Deficiency:** The water area ecosystem is not perfect, except Guishui River, other water systems



3-36 current water system

are mostly fish ponds and canals, which have not formed the overall water system vein and skeleton. Retention strategy: to protect the ecological water area is not reduced, ecological water system revetment is not damaged, ecological water system water quality is not polluted, construct wetland buffer zone, protect the wetlands on both sides of the Gui River, at the same time to create a waterfront species habitat environment, set up rain gardens, grass ditches and so on, establish agricultural non-point source pollution control zone.

#### V. Soil Conservation and Improvement

**Current conditions:** The current soil is mainly sandy soil, and there are some gravel soil on the Gui River revetment, which is characterized by rich minerals, moderate texture, loose and porous, but poor fertilizer stability, and the soil PH value is generally about 6-7.

**Advantages:** large area of thick soil, to provide a basis for plant growth.

**Deficiencies:** The current soil texture conditions are poor, most of the flowering shrub planting areas need to be improved.

Retention strategy: retaining pollution sources, avoiding soil from water, pesticides, fertilizers and other pollution; Determine the soil fertility and PH value, in different habitats arrangement of a number of sites, each habitat is not less than 5, take 0-20cm, 20-40cm two layers of soil, detection. At the same time, it protects and increases the natural fertility of the park, prevents soil erosion, increases artificial fertility, and improves the barren land artificially.

## Section 2 Biodiversity

Planning is based on the study of habitat selection of different organisms in the region, screening suitable target species, combining site characteristics and landscape function zoning, selecting suitable areas, following low-disturbance development strategy, enriching regional species by near-natural transformation, improving the stability of regional ecosystem, and increasing the interest of garden tours to achieve popular science. Create a vivid ecological landscape of the Expo and create a variety of biological habitats. To achieve the goal of low-disturbance development, near-natural transformation and enrichment of biodiversity, and to enhance the function of science popularization and education.

### I. Objectives and Basis of Habitat Creation

Objective 1: Conservation and optimization of critical habitats for species-low disturbance development. According to the survey results, the environmental quality background of the site status is good, we need to pay attention to the protection of *Lutraria trilineata*, *Heterodera longifolia* and other species which have high requirements for habitat quality and are rare in urban green space, some areas should implement low-disturbance development, and at the same time update the green space management mode.

Objective Two: Risk Avoidance of Plant Diseases and Insect Pests in a Single Plantation — Close-to-Nature Transformation. A large area of poplar forest in the site has the problems of single vegetation species, low biodiversity level and high risk of plant diseases and insect pests, so it is urgent to improve and enhance the self-repair ability of forest land through near-natural transformation to achieve sustainable development of the site.

Goal 3: Enrich biodiversity and enhance the function of science popularization and education. The good natural background and biodiversity of the area provide the potential of habitat construction for the site, and the space distance between the site and the exhibition garden and urban green space is the optimal choice of habitat construction site and biodiversity science popularization and education exhibition area.

### 2. create ideas.

First of all, combined with the local biological and site characteristics, investigate the existing biological communities, biological species and quantity. According to the survey results, the local common birds, fish, butterflies, dragonflies, bees and frogs and other organisms are selected as the target species for habitat construction, the protection area is designated not to be destroyed, human interference is prohibited, and through the optimization or transformation of plant configuration and main environmental factors, the target species are provided with places for foraging, shelter and reproduction to meet their habitat and survival environmental needs. So as to create diversified biological habitats, enrich biological communities and improve the biological circulation system.

分类		其他潜在
鸟类	陆禽、涉禽	喜鹊、伏岛队小味烟裹毛 8B 燕、家鸾、黄眉柳莺、成翺队 棕头滴雀、也胸白头科、狭掠鸟、是头豚木鸟、东方大 苇莺、戴胜、金翅雀、[编成白喉针见雨燕、红麻姬测、树麻雀、云皆、大斑豚木鸟、大山雀、燕雀
	夜潜、4 嘴蹄、白截、稚理、绿头鸭、鹊麻祀、斑	
蝴蝶		金牌蝶、卷带凤蝶、白指眼 L 黄构蚊蝶、型 k、m 蝶、东亚燕洵 I、贝酸蝴蝶蝶、东亚豆粉蝶、花弄蝶、柳紫内蛟蝶、灰蝶、多眼灰蝶、牧女珍眼蝶、舞眼蝶、煤、
蜻蜓		三叶黄竺、长叶鼻皿 小油
蜜蜂		



Fig. 3-38 Target species screening

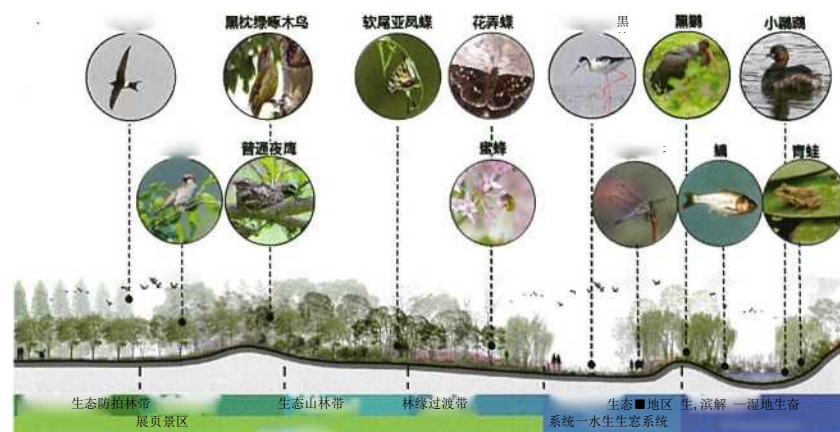


Fig. 3-39 Sketch Map of Habitat Creation Design

### 3. construction strategy

Rich bird habitat types: multi-level and multi-species vegetation community structure provides more suitable and richer habitat for local birds;

Popular science propaganda and education display area: through the corresponding popular science display mode, relying on the area created by forest gap, vividly, intuitively and vividly display the method, function, purpose and significance of forest gap creation to the public;

Improving the community structure of single plantation: Gradually changing the original community structure of single tree species of plantation into a near-natural woodland ecosystem in line with the local ecological environment

Modular demonstration of near-natural transformation: The area is used as a module demonstration site and monitoring point of how to open forest gaps for near-natural transformation of plantations, and long-term monitoring and effect demonstration are carried out.

Open the gap in the artificial forest to improve the quality of the area as a bird habitat. The poplars with poor growth quality in the area are preferentially selected for cutting; After harvesting, the area with larger space should be properly replanted with elm, ash, *Sophora japonica* and other seed trees to attract birds to feed; When managing the greening of parks, we should avoid cleaning up the fallen leaves on the green space.

### Section 3 Sponge Park

Part of the current rainwater in the park seeps naturally, and part of it is discharged into the Guishui River and Xipazi River in the form of surface runoff. In order to minimize the pollution load of surface runoff on surface river water, a green ecological rainwater system was adopted in regional construction, which minimized the disturbance to natural hydrological state.

Through the implementation of low-impact development measures, water quality protection and runoff pollution control strategies, natural and artificial measures are combined to maximize the natural accumulation, infiltration and purification of rainwater in the park under the premise of ensuring the safety of urban drainage and waterlogging prevention, and to build a "sponge park". At the same time, rainwater control and utilization measures were taken to reduce rainwater discharge, reduce runoff pollution, strengthen rainwater reuse, and set up sand basin and other primary filtration methods to ensure water quality. The total control rate of annual rainwater runoff in the planning park is not less than 90% (corresponding control design rainfall is 40.9 mm), the permeable pavement rate of non-municipal roads and squares is not less than 70%, and the return period adopts the standard of once in five years.

#### 1. Low impact development

According to the construction standard of sponge park and the implementation of low-impact development concept, the ecological rainwater control and utilization system is constructed: in the

whole project cycle, the maintenance and restoration of natural hydrological process and function of the site are paid attention to and emphasized, through making full use of the natural characteristics of the site and rational application of artificial technical measures, the peak value of rainwater runoff after development, The total amount of runoff and pollutant load are as close as possible to those before development. To achieve the control of rainwater runoff pollution, recharge groundwater, efficient use of rainwater resources and other multiple objectives. The main measures include: conserving the important natural resources (ditches, wetlands and ponds) in the site, and optimizing the design to make it have the functions of tourism and water catchment; Set up rainwater ecological treatment measures, so that pollutants contained in runoff can be fully pretreated. Adopt ecological ditches such as grass planting ditches to drain rainwater into the catchment terminal (water body) through different collection methods such as grass ditches, dry streams, gravel ditches and linear water collection ditches. Permeable pavement is adopted in pedestrian roads, squares and other parts to reduce the environmental impact caused by impermeable ground. Simultaneously, rainwater in that impervious ground area is prevented from directly entering the landscape water body, and natural infiltration is generated by utilizing the site characteristics to the maximum extent; Native plant material is used as the planting species of the ecological buffer filter belt; 100% of the park adopts ecological shoreline; Three-dimensional greening is adopted in the main venue buildings.

## II. Water Quality Assurance and Runoff Pollution Control

Through the measures of full control of internal pollution sources and full collection and treatment of sewage, the rainwater in the park has been upgraded from the surface water inferior V water quality standard to the surface water III water quality standard.

### Section 4 Ecological Water Vein

Under the guidance of the concept of respecting nature and conforming to nature, the ecological water vein adheres to the principle of minimum disturbance, preserves the existing fish ponds, canals and wetlands to the greatest extent, and combines with the new planning ideas and layout to rationally supplement the water area and location, so as to build a main water system in the park, which is "integrated into the landscape, controlled up and protected down, multi-effective composite, throughout the park". Water storage, purification, transmission, water supply and other functions in one.

Constructed wetland is the beginning and source of ecological water vein, through receiving reclaimed water from sewage treatment plant, after wetland purification treatment, the water quality of the park is not lower than the surface water KI water quality, maintaining the high-quality non-traditional water demand of the park, and ensuring the safety of non-traditional water sources. At the

same time, in order to build a human-water harmonious and high-quality ecological water system, the Special Plan for Rainwater and Sewage in the Expo Site was formulated, and research reports such as the General Plan for Water Resources Guarantee of the Expo Site, the Reuse of Rainwater in the Park and the Reuse of Sewage in the Park were completed.

Through the measures of water supply by quality, water-saving irrigation and strengthening the utilization of non-traditional water resources, a multi-saving water supply guarantee system is constructed. Low-impact development rainwater system, rainwater drainage system and drainage system should be coordinated to build a sponge-type rainwater management system. Taking full account of the distribution of buildings and topographic characteristics in the park, an economical and efficient sewage treatment system is constructed on the principle of combining decentralization with centralization. Combined with the construction of water supply, rainwater, sewage and reclaimed water system, through the regulation of water ecological chain, a comprehensive water environment and water ecological system with purification capacity is constructed.

"Ecological water vein" is composed of arteries and veins. Arteries are responsible for water circulation, including irrigation, landscape water supply, emergency water supply transmission, fire water supply and water transmission for special water needs, and are composed of water pipelines and pumping stations. Veins mainly refer to the relatively static visible water body in the region, which plays the role of water landscape effect, water regeneration and purification, water regulation and storage of sewage and rainwater process, seasonal irrigation water reserve, and winter characteristic water landscape platform. All functions of the "ecological water vein" are guaranteed by the intelligent control system of water resources.

The amount of sewage produced in the park is about 1.2 million cubic meters per year, and the amount of reclaimed water is about 4.25 million cubic meters per year. The sewage treatment rate is 100% and the reuse rate is 100%. The non-traditional water resources are used for toilet flushing, green irrigation (except for special exhibition plants), road sprinkling and landscape water body in the park, and the utilization rate of non-traditional water resources in the park is not less than 70%.

## Section 5 Green Building

We have formulated the Green Construction Index for the Expo and the Green Appropriate Technical Guidelines for the Expo 2019, and carried out the planning and architectural design of the park according to these index systems and technical routes, with 100% of the large public buildings (> 20,000 square meters) reaching the three-star standard for green (Expo) buildings.

### I. Formulating Green Construction Indicators for Exhibition Buildings of the World Horticultural



## Exposition

According to the principles of highlighting characteristics, adapting measures to local conditions, coordinating standards and encouraging innovation, combined with the national "Green Building Evaluation Standard", "Green Expo Building Evaluation Standard" and Beijing "Green Building Evaluation Standard", an index system consisting of 3 categories and 20 indicators is finally established.

### II. Formulation of the Guidelines on Green and Appropriate Technologies for Expo 2019

Based on the "people-oriented" construction requirements of Beijing World Horticultural Exposition, this paper proposes the composition of the "people-oriented" green concept demand, "humanized viewing" demand and "environmental and resource sustainability" demand, and carries out relevant research on green appropriate technology.

Aiming at the green demand of "humanized viewing", the paper innovatively introduces it and other advanced technologies into the research, and takes the problem as the guidance to develop a series of innovative scientific and technological means of service information symmetry, such as air quality information push, booking tickets, parking guidance, queuing distribution, dining guidance and so on, which will help to improve the scientific and technological innovation of Beijing Expo security service system.

Aiming at the green demand of environmental resource sustainability, this paper studies the appropriate green technologies, including renewable energy utilization, sponge city technology system, green transportation, low-energy building, energy consumption monitoring platform, waste management and treatment, air environment and acoustic environment, and provides the "people-oriented" green technology for Beijing World Garden Expo. Green technology guidelines appropriate to the concept.

#### 3. 100% Green (Expo) Building Samsung of Major Large Public Buildings

At the meeting, 100% of the large public buildings (> 20000 square meters) met the three-star standard of green (exposition) buildings, including the China Pavilion, the International Pavilion and the Lifestyle Experience Pavilion.

China Pavilion: 48000 square meters of land area, a total construction area of 23000 square meters. China Pavilion introduces underground wind technology, air cooling in summer and air heating in winter by using the heat storage capacity of shallow soil, which can greatly shorten the opening time of air conditioning and effectively reduce the energy consumption of buildings.



Fig. 3-41 Schematic diagram of China Pavilion design

International Pavilion: with a land area of 36000 square meters and a construction scale of 22000 square meters. The roof of the International Pavilion is composed of 94 umbrellas, which fall into the park like a sea of flowers. The design of the flower umbrella is not only beautiful, but also has the functions of shading, solar photovoltaic integration and rainwater collection, effectively improves the indoor lighting conditions, greatly improves the indoor natural lighting and light environment comfort, and can also achieve the goal of energy saving and water saving.



## Section VI. Renewable energy

In order to rationally plan the energy supply in the Expo Park in 2019 and take into account various forms of energy, the main types of renewable energy that can be used in the Expo Park in 2019 are solar energy, shallow geothermal energy, biomass energy and so on. Focusing on the technical feasibility of renewable energy application in Beijing World Park Expo, Based on the analysis of renewable energy resources, architectural features, application technology and economic benefits of Beijing Expo, the technical feasibility of renewable energy utilization in Beijing Expo is determined and the technical application scheme is put forward. Index of renewable energy substitution ratio of Beijing Expo Site: 100% for greenhouse, 60% for China Pavilion and 40% for International Pavilion

### I. Ground Source Heat Pump

Ground source heat pump is a high efficiency, energy saving, environmental protection and renewable resources, in winter as the heat source of heat pump heating. By means of cascade utilization, a small amount of high-grade energy (such as electric energy) is input to realize the transfer of low-grade heat energy to high-grade heat energy.

### Two, multi-energy complementary

The energy scheme of multi-energy complementarity is adopted in Beijing Expo Park. Among them, deep geothermal, shallow geothermal, water storage and peak-shaving gas-fired vacuum boiler technology are used for heating in winter, and shallow geothermal, water storage and peak-shaving electric refrigeration chiller technology are used for refrigeration in summer.

## Chapter III Sustainable World Horticulture

### Section I Post-session utilization

In order to implement the concept of "innovation and sustainable utilization", a series of post-event utilization planning and research work have been carried out, mainly considering four directions.

One is to create a good classroom of ecological civilization. On the basis of obtaining the "Beijing Green Ecological Civilization Demonstration Zone", the park will be further built into an educational experience base of ecological civilization and a display window of ecological civilization, providing a place for people from all walks of life to feel the natural power, traditional Chinese horticultural culture and the latest achievements of ecological civilization development. After the meeting, the China Pavilion can be transformed into a national eco-museum, and together with the Beijing Expo Park as a whole, it will become a good place for leisure and education. The Botanical Museum can continue to be one of the core venues of the Beijing World Horticultural Exposition to provide youth education base, exhibition and other external service functions.

The second is to build a new engine of green development. Relying on the horticultural industry belt, we will gather the frontier technologies and cultural elements of flower, fruit, medicine, vegetable and tea industries to build a world-class horticultural cultural functional area and promote the development of horticultural industry.

Third, the holding of the 2019 Beijing World Horticultural Exposition will help the Winter Olympics, and radiate the development of horticulture and tourism green industry in Yanqing New Town and the northwest of Beijing, Tianjin and Hebei. The construction of supporting service facilities and related venues in Beijing Expo Park will enhance service guarantee for the hosting of the 2022 Winter Olympic Games. The Expo Hotel will serve as an important carrier for the Winter Olympic Games and Yanqing tourism and leisure industry, and create a new Chinese-style international five-star horticultural theme resort hotel with Chinese characteristics and highlight the image of the Expo. The Expo Business Hotel will be built into a health hotel based on Yanqing, radiating Beijing, Tianjin, Hebei and surrounding areas. After the meeting, the security command center will transform some areas into hotels with distinctive features to provide necessary services for the Winter Olympics.

Fourth, to build a new landscape of eco-tourism. Based on the functional orientation of the ecological conservation area, the park will be developed into a leisure and recreational base for citizens, and a mature, integrated with Badaling and Zhangjiakou areas will be built.

As a beautiful town featuring horticulture, the cultural tourism industry dominated by horticulture has become a paradise for horticultural landscape creation, a gathering place for designers to create and display, a perfect paradise for professionals to create and start businesses here, a perfect paradise for relaxation, both vacation and pension functions, and the best place to experience horticultural health preservation, the most professional and comprehensive horticultural therapy experience.

Business matching will be transformed into theme business according to the change of the overall business thinking after the park meeting, which will cover theme catering, theme retail, entertainment and leisure.

## Section 2 Low Carbon Lifestyle

A large number of vegetation and green ecological corridors in Beijing Expo exhibition area have the functions of protecting ecological diversity and carbon sink, alleviating heat island effect, changing wind speed and direction, preventing wind and sand, and conserving water resources. Based on the Internet of Things technology, this paper studies the technology of real-time display and related data release of biodiversity information in the park, and carries out relevant data statistics of plant clusters and representative plant classification carbon sink function, and studies the real-time display platform of carbon sink and information promotion technology of plant exhibits carbon sink function.

Carbon sink statistics: the park is based on the technology of the Internet of Things, which is used for real-time display of the park's biodiversity and other information and related data release technology, and at the same time, the relevant data statistics is used for plant clusters and representative plant classification carbon sink function.

Green transportation: The transportation in the park adopts 100% green travel mode, and the main means of transportation are bicycles and electric ferries.

Personal "carbon footprint": The park introduces the international "carbon footprint" evaluation method with people as the unit, which can conduct real-time statistics according to the behavior of visitors in the park, study the information system and application of Beijing World Garden Expo visitors "carbon footprints", collect carbon emission data of visitors in transportation, catering and garbage, and establish data links between green planning and human behavior patterns. Calculate the carbon emissions generated by visitors' one-day viewing activities, describe the "carbon footprint", and calculate the carbon emissions generated by visitors' one-day viewing activities. Statistical ecological points, community evaluation through integral evaluation, personal carbon emission statistics to visitors, and provide carbon reduction behavior suggestions to guide people's low-carbon lifestyle. Statistics of carbon emissions from tourist transportation, catering and garbage are collected, and carbon reduction behavior suggestions are provided.

The establishment of carbon emission statistical model: the introduction of green design simulation demonstration technology in the park, the use of relevant information technology, Beijing World Horticultural Exposition building energy conservation, water resources utilization, renewable energy utilization, park transportation, landscape road lighting and other green building technology park principle simulation and dynamic display system, at the same time covering the park water quality monitoring and distribution of real-time display. And carry out relevant energy consumption and carbon emission reduction data display and release system.

## Part IV Construction of the Park

After the confirmation of the Comprehensive Planning and Surrounding Infrastructure Planning Scheme of the Expo Park of Beijing World Horticultural Exposition 2019, the statutory planning and submission for approval of the construction area of Beijing World Horticultural Exposition, the design and submission for approval of the venue architectural scheme, and the survey and design of the park project have been completed one after another, which provides a strong basic guarantee for the construction of the project. At the construction level, the two departments under the Expo Bureau, the Expo Company and the Ministry of Engineering, have completed most of the construction work of the park.

Closely around the core task of the construction of Beijing Expo Park, the Ministry of Engineering has been responsible for seven public welfare projects in the fence area, including the first and second phases of public greening landscape, park infrastructure projects, China Pavilion, International Pavilion, Lifestyle Experience Pavilion and external power supply, from project bidding, project construction and maintenance. All the construction projects were completed and put into use in April 2019.

The company has completed the planning, design and construction of a small town, an industrial belt (Phase I), supporting commercial services, a plant hall (Phase I), the Expo Hotel in the Expo Village, apartments for exhibitors, a comprehensive digital center, a comprehensive management center, municipal infrastructure and five temporary parking lots outside the Beijing Expo site.

## Chapter 1

### Section 1 First Class Land Development

In accordance with the requirements of relevant minutes and documents of the Beijing Municipal Government, based on the overall approval, the primary land development project of Beijing Expo 2019 is divided into 9 plots, including plots a, B, C, D, E, F, G, H and I, involving Yanqing Town Gujiaying, Lisiguanzhuang, Democracy Village, Democracy Street, Nanxinbao, Baiyanquan, The collective land of 8 villages in Dalu Village, Zhongtun and Kangzhuang Town is 373.64 hectares, the construction land area is 113.24 hectares, and the operational construction land area is 53.28 hectares.

#### - Preliminary procedure

In September 2015, after obtaining the approval of the Beijing Municipal Government, the company promoted the land development work by stages. C and F plots obtained the main authorization documents on September 21, 2015 and the project approval documents on November 11, 2015. The preliminary formalities of the other 6 plots in the enclosed area were completed by stages, and all the preliminary formalities of all plots were completed on July 28, 2016. The preliminary procedures for the Land Parcel I of Shiyuan Village were started late due to the control and planning of the Land Parcel, and the Authorized Approval was obtained on October 19, 2016, and the Project Approval was obtained on January 4, 2017.

#### II. Land Expropriation

Land expropriation is an important prerequisite for the construction of the park, and the relevant departments of Yanqing and local townships actively cooperate with the Expo Bureau and the Expo Company to promote land expropriation for the Beijing Expo. Li Siguanzhuang Village and Gujiaying Village have been reorganized into non-resettlement, while the other six villages have been partially requisitioned and transferred. According to the principle of "every levy must be transferred", land expropriation farmers can be properly resettled and enjoy various benefits such as employment, medical treatment and social security.

In August 2016, the land requisition work of Beijing Expo Park was officially launched. On September 1, 2016, the fenced area of Beijing Expo was closed and formally delivered to the Expo Bureau. In September 2016, all land requisition preparations, such as nail pile surveying and mapping, ownership review, survey and demarcation, were completed. At the end of December 2016, C, E and F plots completed the land requisition declaration and passed the examination of the land requisition five-person group meeting. At the end of February 2017, the company promoted the signing of land

requisition agreements and the publicity of land requisition for all villages. In May, it obtained the approval for land requisition for four plots (C, E, F and H), and completed the land requisition announcement. In June, it obtained the approval for land requisitioning for four plots (a, B, D and I).

By the end of the year, the land expropriation of the above eight plots will be completed. The completion of the land requisition for the eight plots marks that the first-level development of Beijing Expo has formally entered the stage of land supply, and the longest development cycle of the eight plots is 22 months and the shortest is 8 months, creating a "speed of Expo".

### III. Relocation and Resettlement

Demolition and evacuation of the fenced area is the basis of the preparations for the Beijing World Park Expo, and also an important opportunity to speed up the urbanization development of Yanqing County. On April 30, 2015, the Yanqing County Housing and Construction Commission, the Expo Office and the Yanqing Town Government jointly organized the first villagers' representative meeting of Gujiaying and Liguangzhuang Villages, which was attended by members of the two village committees and villagers' representatives. The meeting successfully completed the matters that need to be agreed, and the delegates voted, 100% agreed to the relocation of the village to support the holding of the Beijing World Park Expo, and agreed to carry out the demolition of the village by agreement. With this as a symbol, the demolition and evacuation work of Beijing Expo Park has entered a substantive stage of promotion, laying a solid foundation for the successful convening of the conference.

Under the unified leadership of Beijing Municipal Party Committee and Beijing Municipal Government, with the close cooperation of Expo Bureau and relevant departments of Beijing Municipality, Yanqing County Party Committee and County Government has made every effort to push forward the work. As of October 4, 2015, the signing of the agreement for the demolition and relocation of Gujiaying Village and Liguangzhuang Village in the fence area of Beijing World Horticultural Exposition has been successfully completed, which has laid a solid foundation for the construction of the fence area of Beijing World Horticultural Exposition and the in-depth promotion of various preparations.

The demolition and relocation of the enclosed area of Beijing Expo involves two villages, Gujiaying Village and Liguangzhuang Village, Yanqing Town, Yanqing County, with a total of 712 houses and 1034 households. The two villages cover an area of 39 hectares, including 25 hectares of residential land and 14 hectares of non-residential land. The residential building area of the two villages totals 211000 square meters, and the non-residential building area totals 28000 square meters. The agreed demolition rate of the two villages is 100%. Housing selection and resettlement work was officially launched on January 31, 2018, 2257 residential units, 46 commercial units, 708 underground storage units have been selected, 62 non-residential households have completed compensation work.

The aboveground property compensation work of Beijing World Park Expo involves 8 villages and public property compensation in Yanqing Town and Kangzhuang Town, 383 agreements have been signed, and the compensation amount is 202 million yuan. The whole demolition contract work is stable, safe and orderly, and the expected goal of sunshine demolition and harmonious demolition has been achieved.

In order to speed up the demolition progress of the fence area and strive for more time for the construction of the park, the demolition adopts the working mode of agreement demolition and license demolition.

In order to ensure that the villagers in the two villages can build new homes and live a happier new life, since the start of the demolition work of Beijing World Garden Expo, Yanqing has actively cooperated with the World Garden Company in land acquisition, fund payment, relocation housing construction and other links to ensure the interests of the relocated residents to the greatest extent.

In order to support the construction of Beijing Expo, the villagers of Li Siguanzhuang Village and Gujiaying Village obeyed the plan, abandoned their small families and considered the overall situation, left their homes and moved away from their homeland to make way for the site selection of Beijing Expo, leaving enough time for the subsequent construction of the park. The original sites of the two villages, as part of the stage of displaying the horticultural achievements of the whole country and even the whole world, show the new achievements of Yanqing's ecological civilization construction to the world. After the relocation of Gujiaying Village and Lisiguanzhuang Village as a whole, they will be resettled in the southeast side of Beijing Expo Site. It is close to the original village, which is conducive to resettlement, and villagers can witness the construction and development of the park. More importantly, some of them have become the builders of the park, some have become horticultural workers, and some have become escorts serving the construction of the park security, not only increasing income, but also personally participating in the construction of a better home.



4—1 2015.9.5, signing  
relocation agreement



4~2 Villager relocate

The construction of resettlement houses for Beijing Expo started in July 2016, covering a total area of 29 hectares and a total construction area of 430000 square meters. A total of 40 buildings, fully respecting the wishes of the relocated residents, are designed and constructed in four areas of 60, 75, 90 and 105 square meters, so as to effectively improve living conditions, while villagers can use idle houses for leasing, and effectively increase income.

In the whole process of demolition, we should adhere to the principles of openness, fairness and impartiality, adhere to the consistency of the policy of compensation and resettlement for demolition, measure it with a ruler to the end, practice the mass line, carry forward the style of "three strict and three solid", and solve difficulties and problems in time through a large number of patient and meticulous mass work, which has effectively promoted the smooth progress of the work.

Making scientific and reasonable demolition policy is an important prerequisite for the smooth progress of demolition. First, a large number of thorough investigations have been carried out in advance. Before starting the demolition work, a large number of thorough investigations were carried out in view of the economic development, population status, social conditions and public opinions, local customs and historical evolution of Gujiaying and Liguangzhuang villages. At the same time, the previous demolition policies were sorted out comprehensively, and compared with the policies of other districts and counties, so as to achieve a clear bottom number, clear situation and accurate figures. The second is to clarify the principles of demolition policy formulation. When formulating the demolition policy, we should not only take into account the historical continuity of Yanqing policy, ensure the legitimate rights and interests of villagers, ensure the implementation of the demolition policy, but also take into account the sustainability of Yanqing follow-up demolition, and reasonably control the cost of demolition. Third, we should absorb the reasonable opinions of the masses. This demolition first adopts the way of agreement demolition, in the process of formulating the agreement demolition policy, after two villagers' congresses, according to the actual situation, the reasonable opinions of the masses are absorbed to ensure the comprehensiveness of the policy. Fourth, scientifically determine the placement



policy of resettlement housing. Considering various factors as a whole, the basic policy of proportionally allocating resettlement houses on the basis of standard homestead area was determined, which effectively prevented villagers from temporarily building new and expanding houses, avoided short-term centralized immigration, at the same time, the illegal construction of villages was not recognized, and various measures were taken to effectively reduce the cost of demolition.

Open and transparent information is the fundamental guarantee for the realization of sunshine demolition. First, public bidding for service institutions. The Beijing World Horticultural Exposition project is a national project with high requirements and great difficulties. To this end, the front-line headquarters for public bidding, identified seven in the industry has a high level of technical ability and work, no bad business records of the service company, to undertake the project mapping, evaluation, demolition, demolition work, and require all staff to be listed on duty. Second, the masses participate in policy formulation. On the basis of full mobilization and in-depth communication, the demolition mode of agreement demolition linking up administrative license demolition is discussed and decided by the villagers' congress. In the process of investigation, the basic data statistics work and the collection of villagers' demands are carried out simultaneously, and the reasonable suggestions of villagers are absorbed as far as possible in the formulation of policies. After the demolition policy is formulated, it will be submitted to the villagers' Congress for final discussion and adoption. Third, the workflow is open and transparent. At the demolition work site, the demolition work flow and work discipline should be posted to restrict the behavior of demolition staff. Through posting policy documents, issuing propaganda brochures, broadcasting loudspeakers in villages, and answering by special persons, the demolition policy was made public to help villagers settle their own interest accounts. Fourth, it is widely subject to supervision by all parties. Measurement, evaluation, contract signing and other links are tracked by the audit company, and the front-line demolition headquarters announces the supervision telephone of the Discipline Commission and accepts the supervision of the masses.

Patient and meticulous mass work is the key to harmonious demolition. The Yanqing County Party Committee and Government have deeply realized that the demolition of Beijing Expo is highly concerned and sensitive to the society, and must fully follow the mass line, do a good job of mass work, exchange sincerity for understanding, exchange intimacy for support, achieve harmonious demolition, eliminate follow-up hidden dangers, which is of great significance to the follow-up preparation, operation and utilization of Beijing Expo. First, we should actively respond to the concerns of the masses and continue to publicize the policy of demolition and resettlement. In view of the vital interests of the masses, such as the identification of homestead, housing evaluation, compensation and resettlement, detailed question-and-answer propaganda materials were compiled and distributed to all farmers. Give full play to the propaganda function of village-level broadcasting, roll out and interpret the demolition policy in plain and easy-to-understand language, so that villagers can be well-known to all policies. Second, we should take the initiative to understand people's livelihood demands and try our best to solve the worries of the masses. In view of the masses' demands for pension, employment and

children's enrollment collected from each household, the relevant departments are instructed to solve them in time if they conform to the policy. At the same time, cadres with rich experience in human and social security, education committee, housing and planning departments are selected to form working groups to receive consultation from villagers on the spot and to study and solve the practical difficulties of villagers in a timely manner. Third, we should provide all-round services and exchange intimate services for understanding and support. Yanqing Town for each household has provided before the demolition of the family photo service, for the demolition of the farm tools inconvenient storage by the town unified storage management, to help mediate family disputes, necessary to provide legal aid, to help the elderly, disease, disability and other rental difficulties to coordinate the turnover of housing, for the removal of difficult villagers to provide timely removal services, through a series of intimate services, It has won the extensive understanding and support of villagers for the demolition of Beijing Expo. Fourth, Party members and cadres set an example to the masses as a model for signing contracts. Members of the two village committees, village Party members and villagers' representatives set an example, took the lead in signing contracts and played a leading role, and Liu Weimin, director of Li Siguanzhuang Village, took the lead in signing the first contract in the whole village, which played a good demonstration and driving role. Some Party members, cadres and the masses who have signed contracts take the initiative to do the work of relatives and friends who have not signed contracts, which has played a good role in promoting the signing.

The comprehensive implementation of the demolition process is an important guarantee for the smooth progress of demolition. The headquarters of land requisition, demolition and evacuation of Yanqing Expo Park believes that demolition is a systematic project, and the smooth demolition needs comprehensive measures. One is to implement the whole process of public opinion guidance. Publicity department timely release

Positive information guides public opinion and avoids distorting policies and facts. The second is to create a strong signing atmosphere. By hanging a series of propaganda slogans in the villages, such as "Support the demolition of the Expo and build a better home together", "Sign first, move first, choose houses early, move early, build early and benefit early", "Do your own accounts well, don't listen to rumors and don't be fooled", loudspeakers timely broadcast the signing situation, timely broadcast and post the concerns of the masses, etc to create a strong signing atmosphere in the two villages. Third, to ensure the order and security of villages. Arrange the police force to maintain the order of the contract signing and answering questions, and arrange the security to carry out safety inspection, timely talk and remind the individuals who attempt to organize in series in the village, dispel their intention of series, and ensure that the village is in good order during the contract signing period, without all kinds of security incidents. Fourthly, we should carry out all-round key work for some villagers. On the premise of adhering to the consistency of the demolition policy and ensuring the measurement of a ruler to the end, the main leaders of the county committee personally dispatched each peasant household who did not sign the contract in the middle and late stages of the reward period, held many special meetings, comprehensively studied the countermeasures, set up a special working group, and formulated targeted work in accordance with the principle of one household and one work programme. Eliminate their unrealistic expectations of compensation; At the same time, in view of their family and social relations, integrate all kinds of relevant social resources, carry out patient and meticulous persuasion and education work, and maximize the agreement to sign the demolition agreement. Fifth, effectively control the risk of social stability. In accordance with the requirements of implementing social stability risk assessment for major policy decisions, we timely carried out the social stability risk assessment for the relocation and evacuation of Beijing Expo Site, and took timely and targeted measures to control the risks, which played a very good role in ensuring the smooth progress of the relocation of the Expo Site.

As a major decision-making of Yanqing County, this project is a major decision-making matter directly related to the vital interests of the people, and involves a wide range of issues that easily lead to social stability risks. Beijing Engineering Consulting Company (hereinafter referred to as "Beijing Consulting Company") is entrusted by the Yanqing Preparatory Leading Group Office of Beijing International Horticultural Exposition to study and demonstrate the social stability risks that may arise during the implementation of this project. On the basis of site survey and opinions or suggestions of relevant commissions, bureaus and grass-roots units, the main risk factors, risk occurrence probability, consequence grade and mitigation measures of demolition, relocation and resettlement are demonstrated, and the Social Stability Risk Assessment Report of Land Expropriation, Demolition and Resettlement in the Fenced Area of the Expo is compiled.

The excellent style of work of cadres is the fundamental guarantee for the smooth progress of demolition. The headquarters of land requisition, demolition and evacuation of Yanqing Expo Park requires all demolition cadres to carry forward the good style of practicing the mass line and

implementing the "Three Stricts and Three Honests" and make every effort to promote the demolition work. First, the training and education of demolition cadres is solid. In order to ensure that the cadres take unified action and uniform caliber in the demolition work with excellent work style, the land expropriation and demolition sub-headquarters has conducted centralized training on the demolition policy for the demolition cadres, and invited the leaders of the county discipline inspection commission, the county procuratorate, the county court and other units to conduct clean government education on demolition. Second, the decision-making of land acquisition and demolition sub-headquarters does not stay overnight. After the signing of the contract, the two county leaders of the sub-headquarters of land expropriation and demolition and the main leaders of Yanqing Town, in line with the principle of decision-making without staying overnight, synthesized all kinds of new situations and information occurring every day, held timely meetings and studies in view of the psychological changes of the masses in different periods of demolition, worked overtime, made comprehensive judgments, and took targeted countermeasures and measures. Do everything possible to resolve contradictions, try to solve problems, to ensure the smooth progress of the agreement demolition. Third, the leaders of relevant units in Beijing should strengthen guidance. The relevant Deputy Secretaries-General of the Municipal Government, leaders of the Expo Bureau, the Municipal Housing and Construction Commission, the Development and Reform Commission, the Finance Bureau, the Land Administration, the Planning Commission and the Urban and Rural Affairs Office participated in the discussion of the demolition plan for many times, and dispatched the demolition permits for many times. Handling, with the demolition permit to promote the agreement demolition, for the demolition work in accordance with the law and orderly promotion provides a strong support.

On the basis of the successful completion of the two villages' residential demolition agreement, the two villages' non-residential land compensation work was started, and 38 non-residential demolitions with a total of 28000 square meters were completed. Start the land requisition of the two villages, complete a series of work related to land requisition in the fence area, and gain time for the construction of the fence area.

#### IV. Land Entering the Market

In terms of pre-work, except for Block G (which is only used as a temporary parking lot during the Beijing World Horticultural Exposition), the remaining 8 blocks have successively completed the evaluation or opinions of environmental assessment, traffic assessment, water assessment and non-covered ore certificate during the process of land requisition and demolition procedures, and completed the pre-work of archaeological exploration and excavation, topsoil stripping of tillage layer, cost audit and so on.

Eight plots of commercial land for the first-level development project of Beijing World Horticultural Exposition will be listed in two phases. Among them, the first phase of operational

projects is the key guarantee project of Beijing Expo, with a total land area of 41.91 hectares and a planned construction area of 407600 square meters. It took only more than one month to complete the preparations for land supply planning conditions, land price audit, on-site acceptance and ownership review, and listed on August 10, 2017, with a price of 3.9 billion yuan on September 13. The total land area of the second phase of the business project is 12.37 hectares, and the total construction area is 197900 square meters. In March 2018, through the first-level development cost review meeting of Beijing World Garden Expo, the principle of ground objects treatment was clarified, the acceptance of ground objects was realized and the relevant market entry fees were paid, which was officially listed on March 16, 2018 and completed on April 20, 2018.

## Section 2 Secondary Land Development

According to the principle of "quality, safety, progress and cost", the company strengthens the overall cost control of operational projects, audits the rationality and compliance of project bidding, contract and payment, strengthens the overall management of project site progress, quality, safety and civilized construction, and starts project early warning and "red light" in strict accordance with the construction schedule and progress. Mechanism, 11 construction projects have been accelerated and completed, including 9 operational supporting projects, 1 first-level development project and 1 agent construction project.

Shiyuan Company is mainly responsible for the horticultural town, industrial belt (Phase I), supporting business clothing and plant hall (Phase I) in the park. The planning, design and construction of Expo Hotel, apartments for exhibitors, comprehensive digital center, comprehensive management center, municipal infrastructure and five temporary parking lots outside the Expo site; The operation and management of the hotel, commercial and office projects invested and constructed by the company; At the meeting, the park's self-sustaining property management, the property management and operation guarantee of the Expo Village, and the expansion of property value-added services will be carried out.

The Engineering Department is mainly responsible for public welfare projects in the fenced area, including public greening landscape phase I, park infrastructure projects, China pavilion, International Pavilion, Lifestyle Experience Pavilion, Public Greening Landscape Phase II, External Power Supply and other seven construction work, from the three major links of project bidding, project construction, maintenance and so on, all construction projects were completed and delivered in April 2019.

At the end of 2015, on the basis of the comprehensive planning of the park, the collection of individual buildings in the exhibition hall of the park was launched in an all-round way, and many well-known architectural design institutions including academicians and national architects were invited to participate in the recruitment. As an important symbol of the park, the main venue building is a symbol of the times and culture. Based on the principles of high standard, high quality and high efficiency, the Beijing Municipal Commission of Urban Planning and the Beijing Municipal Bureau of Finance have started to solicit architectural design proposals for the major venues for the Expo by means of open solicitation, striving to create excellent venue buildings with Chinese, Beijing and horticultural characteristics, and to embody the first-class architectural design level in China.

The construction of venues in the park includes "four halls and one heart"-China Hall, International Hall, Lifestyle Experience Hall, Botanical Hall and Gui Mei Theatre of Performing Arts Center, and the architectural design scheme has attracted great attention from all sectors of society. On the basis of the completion of the public solicitation of architectural schemes, the Beijing Expo Bureau, together with the Beijing Municipal Planning and Land Commission and other relevant departments, has conducted many studies and jointly organized top experts in the industry to comment on the design schemes, and asked the design units to revise and improve them in accordance with the experts' opinions.

In May 2016, the Beijing World Horticultural Exposition Bureau and the Beijing Municipal Planning and Land Commission jointly submitted to the municipal government the "Request for the Municipal Government Symposium to Consider the Architectural Design Scheme of the Main Venues of the Beijing World Horticultural Exposition in 2019", which was examined and approved by the Beijing Municipal Government Symposium and the Municipal Committee Symposium, and in October 2016, the architectural scheme of the Chinese Pavilion was submitted. In December 2016, Vice Premier Wang Yang, Chairman of the Organizing Committee, finalized the plan of the China Pavilion, and completed the submission and confirmation of the proposed building of the Beijing Expo venue.

From 2016 to 2017, the Engineering Department of the Expo Bureau coordinated the design units to promote the design of the park project, and completed the construction drawing design of public landscape Phase I, Phase II, municipal infrastructure, China Pavilion, International Pavilion, Lifestyle Experience Pavilion and other construction projects. Project approval for the construction of a project to provide a prerequisite for the construction of: Public Green Landscape Phase I project approval investment of 179.147 million yuan; The investment of the park infrastructure project approval is 60 million 60 thousand and 20 thousand yuan; The approved investment amounts of China Pavilion, International Pavilion and Lifestyle Experience Pavilion are RMB 0.34027 billion yuan, 3.7554 billion yuan and 2.5647 billion yuan respectively; The investment of the second phase of the public greening landscape project in the park is 0.23842 billion yuan.

After that, complete the bidding work of the construction project, including the public green landscape phase I, park infrastructure project, China Pavilion, International Pavilion, Lifestyle Experience pavilion, public green landscape phase II, external power supply and other seven research

preparation units (1 case), bidding agency (1 case), the whole process of cost services (7 cases), water assessment and environmental assessment (10 cases), construction units (29 cases) Supervision unit (14 cases) A total of 62 tenders were invited; Among them, the construction project bidding control price amounted to 3.0086029 billion yuan, the winning bid amount was 2.9953956 billion yuan, and the general contractor completed the bidding of seven temporary projects.

## Chapter 2 venue construction

### Section I China Pavilion

The China Pavilion project covers an area of 48000 square meters, with a total floor area of 23000 square meters and a building height of 30 meters. Among them, the above-ground building area is 14902 square meters, and the underground building area is 8098 square meters. The project consists of sequence hall, exhibition hall, multi-functional hall, office, VIP reception, viewing platform, underground civil air defense warehouse, equipment room, outdoor terrace and so on.

China Pavilion is designed by China Architectural Design Institute Co Ltd constructed by Beijing World Horticultural Exposition Coordination Bureau, and constructed by Beijing Urban Construction Group Co Ltd. The conference session is responsible for displaying the horticultural achievements of 31 provinces, municipalities and Hong Kong, Macao and Taiwan. Construction started in August 2017 and completed acceptance on April 18, 2019.

#### — . Design concept

Inspired by the ancient Chinese wisdom, the design of the China Pavilion is dedicated to displaying the farming culture of terraced fields, most of the exhibition halls and ventilation systems in the venue are covered under terraces, using the thermal insulation properties of soil, which can be warm in winter and cool in summer. This method of earth-covered architecture also integrates architectural design and landscape design, and surrounds the main building in the colorful terraces. The middle part of the first floor of the building is overhead, and the overhead part is connected with Gui Lang Lake on the north side, so that people can directly reach the hydrophilic space of the landscape lake on the north side from the square.

Its architecture combines the beauty of terrace shape, the beauty of Chinese ancient architecture holding the moon arc and the beauty of beautiful mountains and rivers. As a whole, the building is in a "C" shape, enclosing the front square as a distribution space. Visitors first pass through the semi-enclosed front Plaza and queue up under the shade of trees to avoid exposure to the sun. After entering the exhibition hall, they visited the exhibition halls in turn along a single streamline, and finally guided to the north side of the artificial lake. The natural height difference of that site is utilize to enable the entrance and the exit to be positioned in different direction and at different elevations so as to avoid the crossing of people flows.

The internal space of the exhibition hall is open, with a high degree of suitability, which is convenient for flexible exhibition, and the utilization rate is 80%. The middle part is exhibition space, the edge is traffic space and auxiliary space, which coincides with the architectural space form of high in the middle and low in the edge.

In the section design, the main exhibition hall is 10 meters high, which mainly considers that the overhead space in the middle of the first floor is open to the park, and the audience can pass through the building to reach the hydrophilic space near the lake. In addition, the 10-meter floor height also takes into account the uncertainty of the size of the exhibits and the energy saving of the exhibition hall, so as to avoid the huge air conditioning energy consumption caused by the too tall exhibition hall.





Figure 4-5 Aerial view of China Pavilion

The facade design of the whole building is concise, atmospheric and unified. The huge roof truss rises from the terraced fields with flowers and trees, which is magnificent and stretching, inheriting the legacy of Han and Tang Dynasties, and opening the shape of prosperous times. The solar energy tile which can be partially opened is hidden in it, changing with the light and shadow, and the charm is vivid. The magnificent roof is a metaphor for the impression of traditional Chinese architecture. The ridge of the roof is slightly curved, forming a stretch and beautiful curve, like a delicate Ruyi, winding on the land of Yanqing, reflecting the majesty of the Great Wall.

The Chinese Pavilion fully taps the spirit of place and regional context, and abstracts the basic spatial pattern from the ancient cliff residence in Yanqing. The roof truss and the mountain-shaped building in it form an open space with rich layers and continuous flow. The building is surrounded by a green environment, and the surrounding greening continues the texture of terraced fields, which is unified with the main shape of the building and integrated with the Tiantian on the northwest side, reflecting the theme of farming civilization and horticultural culture. The center of the distribution square is the water courtyard, which brings good lighting to the underground part of the building. On both sides of the water courtyard are tree courtyards, which provide shade for the people waiting in line during the meeting, and in the hot summer, the pool can also provide spray to humidify and cool the people waiting outside. On the south side of the building, a diversion green island is set up in combination with the direction of people flow, and the ground pavement adopts streamline line shape, forming a unique square landscape, and the lamps and garbage bins adopt unique design to express the horticultural theme, which is in harmony with the overall style of the park.

## Two, architectural highlights

China Pavilion chooses building materials with good durability and mature production and processing technology. The roof truss is made of wood grain aluminum plate, which ensures the effect, saves the cost, and has self-cleaning property, which is convenient for later cleaning and maintenance. The terraced part of the building base uses gabion wall on the vertical surface, which not only has the natural ecological effect, but also reminds people of the Great Wall brick, reflecting the characteristics of Yanqing. At the same time, the use of advanced amorphous silicon thin film power generation, tunnel wind and other green building technology, become a green sustainable building.

The upper roof adopts double-layer enclosure, with photovoltaic solar panels and hollow laminated glass outside and ETFE film inside, which meets the energy-saving standard. Solar photovoltaic power generation system is installed on the south-facing roof curtain wall of the entrance hall, and the mode of "spontaneous self-use, surplus Internet access" is adopted to provide power for the normal operation of the China Pavilion. Hundreds of solar photovoltaic panels are arranged on the south roof to highlight the environmental protection principle.

Ideology and modernity. Integrate into the steel frame and green plant system, harmonious coexistence, complement each other. Solar photovoltaic panels are translucent golden yellow, the color has a slight difference in the same color system, sprinkling mottled spots in the exhibition hall, like a dream. ETFE film is installed under the inclined frame as plant insulation layer to adapt to the characteristics of long winter and cold climate in Yanqing, reduce building energy consumption, and achieve the goal of energy saving and emission reduction. The air layer between the curtain wall and the inner layer film is ventilated by opening the openable fan of the curtain wall in summer and transition seasons to prevent the condensation on the inner surface of the curtain wall. In winter, the fan can be closed and opened, and the middle air layer is kept closed, and an independent dehumidification ventilation system is set up to circulate and dehumidify the air in the air layer, so as to prevent condensation due to excessive humidity of the internal air.



Figure 4-6 Indoor view of China Pavilion

The lower part of the exhibition hall is reinforced concrete structure, the upper roof truss is steel structure, and the middle part is combined with elevator cylinder to set up dendritic steel support to solve the structural problem of large span in the middle.

The key point of the optimization of wind environment control in the outdoor site of the project is the control of wind speed in winter. The main body of the building adopts the surrounding layout to create a classical courtyard environment in the north, so as to achieve the effect of wind shelter in winter. In the transitional season and summer, it is emphasized that natural ventilation should be used in the indoor space of the ground exhibition, and special natural ventilation system should be used to meet the requirements of personnel comfort.

Most of the pavilions are placed under terraced fields, and passive housing technology is adopted to reduce the energy consumption of heating and cooling of buildings by using the moisture and heat insulation performance of large terraced buildings.

Another technical highlight is the introduction of tunnel wind technology, using the heat storage capacity of shallow soil, air cooling in summer, and air heating in winter using the heat storage capacity of shallow soil. In the transitional season, fresh air is directly used. The opening time of air conditioning is greatly shortened, and the energy consumption of buildings is effectively reduced. This project uses tunnel air to pretreat the fresh air in the exhibition area. The supply area of tunnel air is the exhibition space on the first floor, and its ventilation rate is the minimum fresh air rate of the area, and the total ventilation rate is  $5.06 \times 104 \text{ m}^3/\text{h}$ . And according to the classification of the fresh air system, the underground air system is divided.

In order to fully integrate with the concept of landscape architecture and highlight the demonstration effect of the project in low environmental impact and cascade utilization of natural water resources, a rainwater micro-irrigation system is set up to fully reduce the cost of micro-irrigation water. Rainwater collection system is set up on the roof, permeable pavement is used in the site, and rainwater storage tank is set up underground. Rainwater falling on the roof or ground enters the rainwater collection and storage tank after infiltration and rough filtration of terrace green space. The rainwater recovered and treated will be used for terrace irrigation and drip irrigation and micro-irrigation of exhibition plants to form ecological micro-cycle.

The architectural scheme takes full account of the various possibilities of post-conference utilization, flexible large space for flexible separation, transformation and utilization, good lighting under the second floor roof, high-end horticultural exhibitions can be held after the conference, horticultural creative workshops can also be held, and horticultural culture can be disseminated and popularized. The landscape view of the lakeside space is excellent, which can be transformed into landscape restaurants, teahouses, characteristic businesses, etc.

## Section 2 International Pavilion

The International Pavilion project covers an area of 36000 square meters and a building scale of 22000 square meters, of which the exhibition hall covers an area of 10754.3 square meters. The first floor of the underground is the registration hall and the front hall, the multi-functional hall, the warehouse and the logistics machine room area. The first floor is the international competition exhibition hall and the national and regional exhibition hall, and the second floor is the international organization exhibition hall and the international high-tech exhibition hall. The International Pavilion, together with the adjacent China Pavilion and the Performing Arts Center, stands around the lake and forms the core building complex of the park. During the Beijing World Horticultural Exposition, the International Pavilion undertakes the functions of indoor exhibitions of countries and international organizations around the world and international horticultural competitions. With the exhibition concept of "harmony and blooming", it shows the achievements and contributions of various countries and regions, international organizations and related international enterprises in horticulture.



Fig. 4-7 Aerial view of the International Hall

The International Pavilion was designed by Beijing Architectural Design and Research Institute, constructed by Beijing International Horticultural Exposition Coordination Bureau and constructed by Beijing Fifth Architectural Engineering Group. The session mainly undertakes the functions of indoor exhibitions and international competitions organized by countries (regions) and international organizations in the world. Construction started on August 15, 2017 and was completed and accepted on April 18, 2019.

The International Pavilion consists of 94 "umbrellas" clustered together, like a sea of flowers



falling in the park, "umbrellas" with rainwater pipes, photovoltaic film, so that the International Pavilion has photovoltaic power generation, night lighting, cool summer and other functions. When night falls, the projection lights on the leaves of the umbrellas will create a colorful night scene for the venue.

After the opening of the Beijing World Garden Expo, the International Pavilion has become one of the hottest "punch card" places, and tourists waiting to enter the park every day are lined up. The general layout of the International Pavilion is open and scattered, and the main direction for visitors to enter is the open outdoor square opposite to Gate 2 of the park. They enter the registration hall and front hall of the International Pavilion through the sunken courtyard, and then go up to the first floor and the second floor in turn. After the exhibition, they returned to the registration hall on the first floor underground and evacuated to the outdoor square on the first floor through two small sunken courtyards on the west side.

### I. Design Concept

The design concept of the International Pavilion is "sea of flowers", which fully conforms to the theme of Beijing Expo, and integrates with the surrounding landscape pattern in a low profile with the minimum interference to the environment. "Huahai" covers almost the whole land, from southwest to northeast for 229 meters (long axis direction), from northwest to southeast for 157.9 meters (short axis direction). The pavilion and outdoor public space are covered under this "sea of flowers", which naturally completes the transition from outdoor to indoor.



Figure 4-8 Construction Scene of International Hall

The design of the exhibition hall starts from the most adaptable and flexible rectangular large space, takes into account the land use, the relationship between the important public spaces in the north and south, the scale, traffic flow lines and other factors, and adopts two separate rectangular spaces to

integrate all the exhibition halls. The architectural layout adopts the general layout of north-south penetration, the four directions of the building facade are homogeneous, there is no obvious front and back, creating a relatively vague architectural world, which is skillfully integrated into the natural environment and properly coordinated with the China Pavilion and the Performing Arts Center.

Considering the climate of Beijing from April to October, the umbrella-shaped ceiling is like a huge urban sunshade, forming an open outdoor public space with a roof, providing a comfortable area for people to stay and rest. The space it defines Scope, not only can arrange the derivative functions such as fairs and exhibitions related to the exhibition at the meeting, but also can inject new content and vitality after the meeting for multi-functional utilization.

The outdoor square covered by the "flower umbrella" presents the pattern of "winding water flowing cup" through the change of paving material, which endows this modern building facing the world with a clear "Chinese nature" O

There are 94 "flower umbrellas" in the whole "flower sea", which are connected into a whole through columns, main beams and secondary structures. The overall structure of Huahai is a steel structure, each umbrella is a unit structure, composed of petal-like steel frame, which integrates rainwater collection, photovoltaic, lighting, shading and many other green technologies. Moreover, the modular unit member is convenient to process and effectively reduces the cost.

The roof of the exhibition hall is composed of umbrellas and glass skylights, which improves the indoor lighting conditions and greatly improves the comfort of indoor natural lighting and lighting environment. At dusk and at night, through the lighting design, people seem to be in a colorful sea of flowers. The architectural form and the space created by it convey the eternal memory and influence of the International Pavilion as an event building to the world in the most direct way.

## Two, architectural highlights

The International Pavilion has become a green and environmentally friendly building with low energy consumption by using sustainable technologies such as building shading, natural ventilation, solar photovoltaic power generation, evaporative cooling, drip irrigation technology and rainwater harvesting and utilization. The external facade adopts glass curtain wall, and skylights are designed on the top surface to ensure the natural lighting and permeability of the venue to the maximum extent. Umbrella column can collect roof rainwater, make it into the reservoir, when too much rainwater, will flow into the drainage ditch, for landscape water, green water, road washing and so on. New photovoltaic power generation materials are used above the umbrellas for the internal lighting, power and other energy needs of the whole building.

As that first waterproof Barry, the flower umbrella adopt the self-drainage mode of each flower umbrella unit. Rainwater falling on the umbrellas and roof skylights will be collected by the metal roof system into the roof gutter system, which will be discharged into the rainwater pipe in the column in

the center of each unit and be discharged downwards. The rainwater of the roof and the sunken courtyard is collected together and used for landscape water, greening water, road surface washing and the like.

Because the International Pavilion needs to display many kinds of plants, it needs to provide a large space and provide natural conditions such as light, heat and ventilation as far as possible, so it is designed with a large number of skylights and a large area of glass curtain wall to create a good growth environment for plants, but also to make the building more green and energy-saving. The flower center part is the natural lighting window, and the petals are the shading facilities on the natural lighting window. Through simulation, the plane layout is reasonable, the transparent area of the facade is sufficient, the area ratio of the natural lighting coefficient reaching the standard can reach 81.3%, and the area ratio of the natural lighting coefficient reaching the standard in the inner area of the exhibition hall can reach 75.9%. Moreover, the large-area flower umbrella arranged at the top also reasonably and effectively controls the outdoor glare. Reliable and suitable building envelope combined with efficient "petal" shading facilities can improve indoor thermal comfort and reduce energy consumption of air conditioning. Efficient external envelope structure can effectively reduce the indoor radiation heat in summer, greatly reduce the glare caused by direct sunlight, and improve the indoor light environment.

The inside of the exhibition hall is mainly ventilated by thermal pressure ventilation, supplemented by wind pressure ventilation, mainly through the metal strip on the outer curtain wall

Position of the opening fan for natural ventilation. Reduce energy consumption to the greatest extent, reduce indoor temperature, take away humid gas to ensure indoor personnel comfort, and can provide fresh, clean natural air.

Solar photovoltaic system is laid in the umbrella unit to make full use of renewable energy. The framework of the flower umbrella is a steel structure, which is also a recyclable material. It can be said that in the design process, the maximum use of a variety of green building technology.

94 "flower umbrellas" seem to be the same, but in fact each flower umbrella is different from the height to the radian, the highest "flower umbrella" is about 23 meters, the lowest one is about 17 meters. It is very difficult to install so many giant "umbrellas" in place during construction. The installation of a "flower umbrella" needs to go through eight steps, including the production of operating platform, the positioning of "flower umbrella" columns, the assembly of main beams, the assembly of secondary components, welding and the hoisting of "flower umbrellas", which is equivalent to the workload of a small steel structure.

"Flower Umbrella" is a pure steel structure composed of steel columns and cantilevered steel beams, the heaviest "Flower Umbrella" weighs 33.7 tons, the lightest can reach 25 tons, conventional tower cranes cannot complete the installation. In order to accurately hoist the "flower umbrella" to different locations, workers measured 5000 measurement points tens of thousands of times on the spot; There are 150000 welding points on the keel of "Flower Umbrella", and the welding time is close to

35000 hours.

Because of the special shape of "flower umbrella", the curtain wall aluminium plates that form the roof are different in shape and radian. About 21000 pieces of curtain wall aluminium plates are used in the construction of the International Pavilion. In order to fit the shape of each "flower umbrella", workers need to carry out secondary processing of prefabricated components and cut them into specific shapes before assembling. A "flower umbrella" curtain wall aluminum plate decoration requires an average of 100 workers.



Figure 4-9 Exterior view of the International Hall

In order to maximize the use of natural light and save the use of artificial light sources, the main body of the International Pavilion has laid a glass curtain wall with good light transmission performance, with a total area of 8000 square meters, exceeding 60% of the total area of the curtain wall. It is reported that this makes the International Pavilion compared with the same volume of steel structure buildings, energy consumption can be reduced by half.

In view of the climate characteristics of cold and snowy winter and easy freezing in Yanqing area, the top of each "flower umbrella" is also equipped with a snow melting cable, and each "flower umbrella" column is equipped with a rainwater pipeline, which is communicated with the underground water collection pool and the ground rainwater collection well, so that snow water or rainwater can be stored along the water pipe in the "flower umbrellas" column, and then used for garden irrigation and building daily operation. In addition, photovoltaic film is laid on the top of the "flower umbrella", which can provide auxiliary power supply for the night operation of the building through solar energy storage. With the shelter of "flower umbrella", people will not feel hot when they walk in the hall during the



day, and the soft light shines into the exhibition hall through the glass skylight shaped by "stars", which makes people seem to be under the stars. It integrates horticultural characteristics, blooms the four seas style and condenses Chinese ingenuity. Walking under this "sea of flowers", tourists from all over the world can experience the prosperous world horticultural culture in many dimensions through various scientific and technological means, such as dynamic projection of ground water system, large-scale perspective wall painting, digital window and so on, and can also enjoy the new flowers and excellent horticultural works from all over the world and appreciate the cultural charm of many nationalities.

### Section 3 Lifestyle Experience Hall

The living experience hall covers an area of 36000 square meters and a total building area of 21000 square meters, including 17987.70 square meters above ground and 3012.30 square meters below ground. The design relies on a current Liuyin Road to create a beautiful village belonging to the Lifestyle Experience museum. This "village" is closely related to the landscape pattern, climate conditions, cultural customs, even texture and taste.

The Lifestyle Experience Hall is designed by China Architectural Design Institute Co Ltd constructed by Beijing World Horticultural Exposition Coordination Bureau, constructed by Beijing Urban Construction Group Co Ltd. and supervised by Beijing Huajian Project Management Co Ltd. It undertakes the functions of historical and cultural exhibition, product experience and popular science education. Construction started in August 2017 and completed acceptance on April 18, 2019.

Lifestyle Experience Hall is not only an interesting paradise for experiencing horticultural products, but also a horticultural experience center for building up the awareness of environmental protection of the whole people. The architectural concept of the Lifestyle Experience Museum is "landscape and pastoral, diverse and integrated living villages", with the style of "pastoral market", and the crisscross architectural form integrates gardening and life. Here you can experience herbal culture, tea and coffee culture, understand the regional characteristics and industrial achievements of Yanqing, experience the interconnection of meteorology, aerospace and horticultural life, and design your own horticultural living space by yourself.

Mountains near water, fruit trees and wheat fields, streets and alleys, houses and families. Let the people in the city return to the countryside, experience the beautiful scenery of the countryside, and taste the fragrance of horticultural crops. The project is composed of seven single buildings, namely, 1 # main exhibition hall, 2 # multi-functional hall, 3 # branch exhibition hall, 4 # branch exhibition hall, 5 # branch pavilion, 6 # branch pavilion and 7 # staff restaurant. The main exhibition hall 1 # is located in the northeast of the site, with the largest volume and the highest height, and the remaining six small pavilions are evenly distributed around the west and south sides of the main exhibition hall. The

maximum number of floors of the building is two above ground and one underground.



Fig. 4-10 Bird's eye view of Lifestyle Experience Hall

The main flow line of the complex enters from the southwest corner of the plot, combining landscape and exhibition design to create a thematic cultural axis from southwest to northeast: wheat fields, seeds, irrigation and fruits. On the second floor of the main exhibition hall 1 #, four roof gardens with the theme of fruit, vegetable and medicinal tea are set up as outdoor exhibition venues to enrich the exhibition content and tourist space. In addition, the central and peripheral parts of the building complex are used as squares and crowd distribution space.

### I. Design Concept

The starting point of the design of Lifestyle Experience hall is to create a beautiful village and a lively market belonging to the Lifestyle Experience hall. Rich exhibits, wonderful experiences and happy crowds have become part of the exhibition. Tourists can happily experience the vividness and vitality of local horticultural culture and the essence of traditional Chinese culture. Therefore, the design from the planning layout, spatial form, functional organization, material texture, landscape pieces, atmosphere shaping and other aspects to this goal.

People feel the importance of the concept of ecological environmental protection here, so as to establish the concept of ecological priority; Feel the greatness of Chinese traditional horticultural culture, so as to be more confident in culture; Experience the wonder and ease of innovative technology, thus opening up a green and healthy life; Participating in happy exchanges will bring some enlightenment and change to our daily production and life more or less.

### 2. architectural highlights

Lifestyle Experience hall adopts grid network street layout, modular building units and tall and square internal space, which has strong variability and applicability in use, especially suitable for flexible adjustment according to the functional needs after the meeting. At the same time, in order to meet the needs of large span exhibition space, the prefabricated steel frame structure system is designed. Moreover, the steel structure is also a recyclable material, which achieves the purpose of green material saving.

The site was originally the site of Li Siguanzhuang Village, and a north-south Liuyin Road ran through the site, with 11 years old and about 15 meters high on both sides of the road, which added a lot of vitality to the site. The design relies on Liuyin Road and refers to the scale of traditional northern villages to establish a network of interwoven streets and alleys, with green bricks paving the ground and pleasant scale. The crowd of visitors to the park will naturally lead here, 16 27 meters square building modules, creating an open living settlement. In order to conform to the spatial situation of the whole park, the building volume is treated as a situation of high in the northeast and low in the southwest, opening up to the park, forming a spatial form of ups and downs, scattered. The periphery is surrounded by local landscapes such as fields, orchards, ponds and wetlands.

The building group is solid outside and weak inside: the external surface is made of thick and simple materials that can reflect the architectural characteristics of Yanqing area: stone cage walls built with stones from Gui River, lattice walls built with green bricks, wooden lattice walls, rammed earth walls built by old craftsmen on the spot, and gray tile roofs with some wonderful color differences. It's like a scene and fragment taken from a local village in Yanqing, which is very regional, but also very environmentally friendly and ecological. The interface in the group is transparent and open, and the glass curtain wall can be flexibly opened, so that the rich public display in the room can be integrated with the activities of people in the streets without obstruction. And more than one layer of that interface is wrapped by the prin glass. The glass surface simulates ethereal and flowing clouds through three-dimensional printing technology, which needs to present the internal exhibits and activities, and needs to obscure the components and equipment. The external surface is natural and local, and the internal interface is modern and full of artistic temperament, both of which are ingeniously combined, making people feel different beauty.

The oblique axis links the wheat field landscape, the main entrance square, the landscape atrium and the rest area in series, and gives meaning to these four spaces, forming a vivid landscape culture axis.

The front area of the building has the theme of "sowing seeds". An open wheat field, a ridge, a row, let visitors feel the four changes of crops, experience spring tillage and autumn harvest. The main entrance square, with the theme of "growth", is a fruit forest, which provides a shade for the tourists gathered and distributed in the square. The green brick paved ground, green grass will grow out from between the cracks. This square is the heart of the outdoor activities, will be held regularly for tourists happy festival activities, full of vitality.

The theme of the landscaped atrium is "Irrigation". In the space of 27 meters square, a ramp connecting the first floor and the second floor is set up, winding and winding. Tea fields and flowers are scattered on both sides of the ramp, and sunlight diffuses down through the grille from the side skylight, making the atrium colorful. A stream slowly flows down the ramp and converges into the landscape pool on the first floor. It is a set of automatic control can be recycled irrigation system for plants to provide water and nutrients. The walls around the atrium are mirrored glass, which maps this

beautiful space into a surreal scene without edge. The closing of the axis is a dining and rest area with the theme of "bumper harvest". The focal point of the space is a large, barn-shaped installation covered in fruit. A machine at the bottom of the barn shows the process of turning fruit into drinks.

The main pavilion is the largest indoor pavilion. Natural gardening, life gardening and wisdom gardening. The three can be flexibly divided in space, and the design is realized by the fabricated partition wall system. The exhibition highlights the experience and interaction, so that people can directly participate in the fruit, vegetable, medicine, tea, these traditional Chinese horticultural crops from planting and picking, processing and production, cultural promotion, trading and eating. For example, tea ceremony experience, tea picking dance, fruit wine making, Chinese medicine lecture hall, high-tech cultivation of organic vegetables and so on

Wait. Four aerial gardens with fruit, vegetable, medicine and tea as the theme are also set up on the partial roof of the main exhibition hall, in which people can experience the advanced technology of small greenhouse, intensive cultivation, miniature mountain forest and so on, at the same time, they can also feel the artistic conception beauty of Chinese farming culture.

Zhongchuang Museum is distributed in the west and south of the main exhibition hall with six single-storey independent units. They serve as supporting functions to provide services for tourists. There are restaurants, cafes, cinemas, bookstores, art galleries, workshops, multi-functional halls and reception rooms. Vibrant function, open and friendly interface, and pleasant scale of the street space together, to provide a comfortable public communication space.

#### Section 4 Botanical Hall

The Botanical Hall covers an area of 39000 square meters, the total construction area of the exhibition hall and supporting rooms of the project (Phase I) is 9669 NF, and the construction site is YQ00-0300-0004 land block of Phase I of Yanqing New Town World Horticultural Expo. It is constructed by Beijing Shiyuan Investment and Development Co Ltd. and designed by Beijing Architectural Design and Research Institute Co Ltd. In November 2015, Vanke Group signed a contract with Beijing World Garden Company to become a global strategic partner of Beijing World Garden Expo in 2019 to build and operate the "Botanical Museum" project. The plant hall adopts rainwater recycling system, high pressure spray cooling system, CFD light simulation and natural ventilation simulation.

The Botanical Museum was designed by Beijing Architectural Design and Research Institute Co Ltd constructed by Beijing Shiyuan Investment and Development Co Ltd. and constructed by Chifeng Hongji Construction (Group) Co Ltd. The conference session mainly undertakes the functions of plant greenhouse, science and technology service, popular science education, international exchange, tour

experience and so on. The project started on October 31, 2017 and was completed on April 18, 2019.



Fig. 4-11 Aerial view of the Botanical Garden

The first floor has teamlab digital exhibition hall and theme greenhouse, covering 880 square meters and 2850 square meters respectively, of which the theme greenhouse gathers 1001 species, 20000 kinds of precious plants. The second floor is the exhibition hall of X space. Various exhibitions, popular science education and salon forums were held one after another. The third floor is the brand exhibition hall, which shows the story behind the completion of the Botanical Museum. The natural bookstore, viewing platform and giraffe dead wood art installation are set up partially on the roof floor. From the first floor along the eastern part of the exhibition hall in the air plate rotary step road radial climbing on the second and third floors, you can enjoy the ultimate beauty of the greenhouse plant crown from high altitude.

### — Design concept

The architectural design concept of the Botanical Museum is "the rising horizon". The surface mechanism of the building is inspired by the plant root system, and the huge hanging root system spreads downward continuously, which directly presents the strong vitality of plants originally hidden underground to visitors, not only producing a strong visual impact, but also leading visitors to embark on a wonderful plant world journey starting from feeling the power of plant root system.

In addition, the roof design of the Botanical Museum is also a bright spot, the roof viewing platform has a natural bookstore, rest area art devices, stop and overlook, but also can be Guishui River, East Olympic Haituo venue, as well as China Pavilion, International Pavilion and other Beijing Expo Park beautiful scenery.

### 2. architectural highlights

The plant hall adopts rainwater recycling system, high pressure spray cooling system, CFD light simulation and natural ventilation simulation.

The structure type of the plant hall is steel frame system, and the foundation type is reinforced concrete raft foundation and reinforced concrete independent foundation. Botanical Museum has an underground floor of 1265 square meters, the ground floor of four 8404 square meters, the total area: 39000 square meters. The building height is 23.40 meters, and the seismic fortification intensity is eight degrees.



Fig. 4-12 Completion of main body capping on April 20, 2018

The facade decoration of the exterior wall of the building is mainly curtain wall; Large span open frame glass curtain wall system in west elevation and south elevation; The outside of the north elevation

and the north side of the west elevation is a fiber reinforced calcium silicate board;The east facade is made of rusty steel plate;And 3168 downward steel pipe and aluminum alloy root whiskers are arranged along that height of 15 meters of the circumference of the roof. The thickness of the basement roof is 220 mm;The thickness of the first layer to the fourth layer is 120 mm.

The interior wall decoration is mainly composed of emulsion paint;The wall surface of the toilet is a ceramic brick wall surface;Fire pump room, cold and heat source access room, communication room, network room, power distribution room and fire central control room are perlite sound-absorbing panels, 2F multi-functional hall is dark brown steel plate wall and soft package sound-absorbing panel wall;The four-storey corridor and 4F plant bookstore are bamboo and wood floors.

The floor is mainly decorated with cement solidification floor;The basement communication room, the basement network room and the first floor fire control room are anti-static floors;The toilet, tea room, elevator hall on the west side (from the first floor to the fourth floor), logistics and warehouse are all anti-skid floor tiles.

In terms of roof structure, the thermal insulation layer (hydrophobic Kuaizhu thermal insulation mortar), fine stone concrete leveling layer and the waterproof grade of the roof of this project are Grade I, and the fortification method is 4 thick copper composite base SBS modified asphalt rooting-resistant waterproof roll (copper composite base thickness 1.2) + 3 thick polyester base SBS modified asphalt waterproof roll.

In terms of fire protection equipment, the fire protection rating of the first floor underground is 1, the fire protection rating of the ground is 2, and the fire zones are separated by steel fire doors. The fire hydrant water supply system is provided with 2 sets of underground fire pump couplers, and the flow rate of each set is 10L/s;On the first underground floor, there is a 396m<sup>3</sup> fire pool, which contains 2h indoor fire hydrant fire extinguishing water and LH automatic sprinkler fire extinguishing agent fixed fire fighting bubble water;An 18-cubic-meter fire-fighting water tank is set up in the roof water tank room to ensure the pressure of the pipeline at ordinary times and the water consumption at the initial stage of fire.

Outdoor landscape part. The outdoor landscape project of Beijing World Horticultural Exposition Botanical Hall in 2019 covers an area of 39000 square meters, covering many aspects such as green land modeling, outdoor landscape seedling planting, outdoor landscape paving, outdoor landscape square, garden, theatre construction, installation of outdoor landscape furniture, roof greening construction, electrical engineering, water supply and drainage engineering, etc.

The outdoor landscape greening terrain area of the Botanical Museum is about 16973.5 square meters, accounting for about 90% of the total greening area, the terrain area and scope are relatively large, the total amount of earth fill reaches more than 40000, and the terrain is undulating, so as to form different microclimates. Greening terrain shape finishing 21035.5 square meters: including 2500 square meters of roof greening, with a variety of landscape flowers and ground cover combination planting;There are 13 kinds of arbors with 353 trees;There are more than 30 species of ground cover



and aquatic plants planted, with an area of about 18535.5 square meters.

The outdoor landscape water system of the Botanical Museum is divided into four parts: drought spray square, water feature garden, square reflection pool and ecological wetland. Among them, the area of drought spraying square is about 669 square meters, consisting of three drought spraying pools, each of which is composed of direct current, jade pillar and cold fog nozzles in different ways, bringing different visual effects to tourists; Waterscape garden water system area of about 514 square meters, set up crescent-shaped plunge pool, the surrounding stone belt, wooden platform and washed stone garden road together, plunge pool is equipped with a separate pump pit and water circulation system; Square reflection pool area of 461 square meters, the overall shape of crossbow, divided into a large and a small two pools, the bottom of the pool laid black gravel, equipped with an independent pump pit and water circulation system; The ecological wetland covers an area of 1960 square meters, mainly composed of artificial lakes and small islands in the lake, in which a variety of aquatic plants are planted, which reflect each other with the plants on the shore, forming a beautiful scenic line outside the botanical hall.

In the aspect of outdoor landscape lighting, 75 sets of courtyard lights are installed; 80 sets of tree lights; 205 sets of water view lamps; 231 sets of tortoise shell lamps;

Linear step lamp belt 1150 meters, distribution box 3.

The outdoor landscape pavement of Botanical Hall is divided into customized PC brick pavement, washed stone pavement, adhesive stone pavement, gravel pavement, bamboo and wood pavement, small stone pavement and granite pavement. Among them, the customized PC brick pavement area is the largest, which is the main pavement material for the outdoor landscape of the venue, with an area of about 9400 square meters, accounting for about 25% of the total area of the botanical hall and about 50% of the total pavement area.



Figure 4-13 Construction of outdoor landscape starts on May 20, 2018 and ends on March 20, 2019

The outdoor landscape of the Botanical Museum is divided into five parts: platform square, ladder garden, open-air theatre, rain garden and roof wooden platform. Among them, the area of the platform square is 1416.6 square meters, which is paved with bamboo and wood floors, and the platform is equipped with white marble stools and stainless steel railings, which can be used for tourists to rest and view, and the steps and cantilevered beams are equipped with light belts, which can illuminate the road for pedestrians at night. The terrace garden area is 1085.44 square meters, consisting of granite steps, benches and adhesive stone garden road. The open-air theatre covers an area of 880.6 square meters, mainly granite stools, supplemented by lawn laying, during which there are white wax, Sophora japonica and other trees for pedestrians to play and rest. The rain garden covers an area of 812 square meters, consisting of cultural stone wall and aquatic plant planting pool, surrounded by a wooden trestle road for viewing. Roof wooden platform area of 1200 square meters, composed of a number of circular combination, laying brown bamboo and wood floor, is the best place for the audience to stop and take

photos, to the east can have a bird's eye view of the National Pavilion, International Pavilion and other core venues, to the west can be Guishui River, Haituo Mountain panoramic view.

Greenhouse landscape part. The indoor landscape project of the Botanical Hall of Beijing World Horticultural Exposition 2019 covers an area of about 3000 square meters, mainly divided into five areas: "Survival in Adversity", "Plant War", "Long March of Ten Thousand Li", "Footprint of One Hundred Million Years" and "Transformation Area". Cover green space modeling, seedling planting, landscape pavement, landscape square, sketches, lamp installation, electrical engineering, water supply and drainage engineering and other aspects O

About 4500 cubic meters of earth are replaced for landscape greening in the greenhouse of the Botanical Garden, accounting for 90% of the total greening area.

Larger. Green terrain shape finishing 2600 square meters: 1001 kinds of convergence, more than 20,000 precious plants. It shows the diversity of the plant kingdom and the wisdom of plant survival and adaptation to the environment through mangroves, tropical rainforests, ferns, palm trees, pulpy plants, insectivorous plants, moss and so on.

In the aspect of landscape water system, there are two drainage wells, two waterfall circulating pumps, one insect-eating island circulating pump, one plant battle drainage well, two strong drainage wells and four strong drainage pumps in mangrove area;12 set of electromagnetic valves of that plant irrigation system, 5 set of water intake valves and 143 sets of root irrigator;Spray system outdoor rainproof cabinet 4 sets;Four filters and 689 high-pressure anti-drip nozzles.



Fig. 4-14 Greenhouse landscape construction starts on August 8, 2018 and completes on April 1, 2019

In the aspect of landscape lighting, 152 sets of spot lights, 142 sets of tortoise shell lights, 25 sets of underwater spotlights, 16 sets of underwater lights, 6 sets of spotlights, 3 sets of beam lights, 16 sets of wall washers, 45 sets of supplementary lights and 2 sets of touch screen controller modules are installed. There are 2 salt discharge layer control distribution boxes and 1 set of automatic control system.

In terms of landscape pavement, the landscape pavement of Botanical Museum can be divided into regular and irregular volcanic rock fragmentation pavement, sandstone pavement, Tingbu pavement, rock step installation, rockery and plastic stone floor construction.

The landscape sketches of the Botanical Museum include the arrangement of insect-eating island, whole stone stool, log seat, Jinping Gallery frame, thatched pavilion, hollow rusty steel plate retaining wall and rusty steel plate curtain wall mountain construction, dinosaur installation, ramp handrail installation, acrylic construction, etc.

Curtain wall section. The curtain wall opening fan is mainly installed in the upper and lower double layers of the west and south glass curtain walls of the greenhouse. All the opening windows of curtain wall 1 to curtain wall 5 on the east elevation of the greenhouse are opened electrically. Meanwhile, temperature, humidity, rain and snow are monitored. The opening windows are controlled by grading and zoning at ordinary times, and automatically closed in case of fire. The overall fire resistance limit of all curtain walls is N 1 hour. The glass panel adopts 8mm + 12Ar + 6mm LOW-E hollow fireproof glass, the keel and the keel of the opening part adopt steel profiles, the surface is treated with fluorocarbon spraying, and the coating thickness is not less than 35 | XM

The root system of the building is mainly distributed around the botanical hall and the lower end of the gray space on the east side, totaling 3168 roots, which are divided into three colors and distributed unevenly. The root fibril arrangement is divided into a regular area and a dense area. The root whiskers are mainly connected in two ways, namely, the aluminum root whisker adapter is welded on the keel, the aluminum hoop is connected with the adapter by bolts, the steel root whisker adapter is welded on the keel, and the steel hoop is respectively welded to the root whiskers and the adapter.

Fine decoration part. The function of the first floor sequence hall and consulting desk is to enter the teamlab exhibition hall for inquiry and queuing waiting area, with the introduction of the exhibition hall and projection; Wall surface: the curtain wall outer envelope structure is primed with putty and painted with gray art paint, the ground is artesian terrace ground, and the spotlights are projected to the exhibition wall surface (brief introduction of the exhibition hall, one for the east wall and one for the west wall); The external enclosure of doors and windows is curtain wall doors and windows, and the double wooden doors of stairwell lead to the escape direction of the sequence hall.

Teamlab exhibition hall on the first floor is designed and made by a Japanese professional exhibition team, covering the birth and reproduction of life, implying the endless life; The wall surface is made of light steel keel and the partition wall is painted with white emulsion paint. Silver mirror reflection is installed on part of the wall surface to enhance the image effect of exhibition. The ground

is a solidified terrace, and the lighting equipment is arranged on the top surface.

X space on the second floor, the function meets the needs of various large and medium-sized conferences and exhibitions, the south viewing platform is close to the greenhouse landscape, the north viewing platform overlooks Yongning Pavilion, the beautiful scenery is at a glance, and the west broadcasting room and management room are used as the service guarantee place of X space; The east and west sides of the wall surface are the inner wall surface of a 70 I-shaped steel structure externally hung with an extruded concrete plate, the south and north sides of the wall surface are 10mm-thick weather resistant steel plates, the ceiling is a 600mm-high glass fiber hanging sound-absorbing pendant, and the ground is a solidified terrace ground; On the north and south sides are the landing doors and windows of the external envelope curtain wall, on the east side are 12 double-open walnut solid wood doors, and on the west side are double-open solid wood doors leading to the public area.

Second floor vestibule: functions from the roof along a spiral staircase into one of the X space active lines.

Function of VIP room on the second floor: It has the function of meeting and talks, and the VIP room includes the pantry and the special toilet; Wall surface light steel keel partition wall brush dark texture gray art paint, ceiling for gypsum board, ground for curing floor ground; The ground of the mealroom and the sanitary wall is tiled, the ceiling is gypsum board, the external decorative board is walnut solid wood board, and the walnut solid wood single door is opened; Doors and windows: the outside is curtain wall landing doors and windows; The north side of the room is a hidden door, and the south side is a double-open solid wood door (white paint).

The function of the three-storey enterprise exhibition hall is to introduce Vanke Enterprise Culture and Botanical Museum, and to enter the room from the roof along the spiral staircase for tourists to stop and visit; Wall surface: white emulsion paint is painted on the light steel keel partition wall, the suspended ceiling is gypsum board suspended ceiling, and the ground is solidified terrace ground.

The four-story citic bookstore gives visitors a break, stops in the sea of knowledge with refreshments to bring a full range of satisfaction, at the same time, the part of the roof garden viewing and indoor tours important active line place; Wall surface: white emulsion paint is painted on the light steel keel partition walls on the east and west sides, transparent Villa doors are arranged on the curtain walls on the south and north sides, gypsum board ceiling is used as the suspended ceiling, and wooden floor is used as the ground; The east and west sides of doors and windows are Grade A fire doors, and the south and north sides are curtain wall landing transparent Villa doors.



Figure 4-15 Fine decoration construction starts on August 20, 2018 and is completed on April 5, 2019

The elevator hall on the east side allows visitors to take the elevator to the exhibition area on each floor, and the wall of the water heating well on the west side is decorated with hidden doors; Metope light steel keel partition wall brush beige yellow art paint, ceiling for gypsum board ceiling, the ground for the curing floor ground; Doors and windows: double open wooden door on the east side, open on the indoor side; The west side is the wall of the water heating and electric well, and the decorative hidden door (12 mm thick double-layer gypsum board lined with 18 mm thick flame retardant board).

The spiral staircase function is from the four-storey CITIC Bookstore along the spiral staircase to the three-storey enterprise exhibition hall; Heavy steel structure skeleton main body, wall surface for light steel keel partition brush white emulsion paint, handrail for 25 mm thick white artificial stone; The ground is 25 mm thick white artificial stone; The overall wall of the outer cylinder is painted with beige art paint.

ETFE membrane part. The ETFE membrane structure of the Botanical Museum is air pillow membrane structure, and the mould material is imported from Germany under the brand of Nowofol. The air supply system is supplied by a Germany imported elnic 400 type air supply machine, with an input voltage of 220 volts and an output power of 1.65 kilowatts.



Fig. 4-16 ETFE membrane construction started on June 6, 2018 and completed on October 21, 2018





## Section 5 Gui You Theatre

The Performing Arts Plaza project of Beijing World Horticultural Exposition 2019 is located in the northeast side of Gui Bang Lake and the north side of the International Pavilion in the core area of the park, facing the China Pavilion across the lake. The total construction area of the project is 6335 square meters, the building height is 20 meters, and the wingspan span of the main steel roof is about 120 meters X 115 meters.

Gui Mei theater by the Chinese Architectural Design Institute Co Ltd. Design, Beijing World Horticultural Exposition Affairs Coordination Bureau construction. Construction started on October 1, 2017 and completed on April 17, 2019.

During the exhibition, the Performing Arts Plaza will perform the opening and closing ceremonies of the Beijing World Garden Expo, and serve as the main stage for important national days, international forums and performing arts activities during the exhibition.

The performing arts Plaza looks like a butterfly about to fly, attracted by the spring scenery of the flourishing age and the green lake scenery, and stops at the edge of Gui You Lake, looking out at Yongning Pagoda, enjoying the scenery of the mountain and lake. The light and agile architectural shape is placed in the landscape pattern, which is integrated into nature and touches the soul. At night, Huaguang butterfly shadow, dance Qin Zheng column, share the prosperity of peace.

### I. Design Concept

The architecture of both refined and popular tastes, one by one, looks like a butterfly in the air, a ROC spreading its wings from both ends, and a person standing under a big tree, like a person or not, with sincere and elegant taste; Large-scale buildings are enough to support the development of national cultural events and the progress of popular elegant and popular culture.





4-17 Aerial view of Tuguiyou Theatre

When the night comes, ETFE film is like butterfly wings, and the white structural bones are illuminated by the light.

Splendid splendor.

Under the open and comfortable building-colorful sunshade roof, there are semi-open multi-functional stage, seating area and distributed rest activity platform, welcoming visitors from all directions to come, where people can freely listen to the wind, see the rain, smell the fragrance, enjoy flowers and tea, enjoy drama life, green and environmentally friendly, meeting people's functional needs.



## Project Scene in the Construction of Tuguiyou Theatre



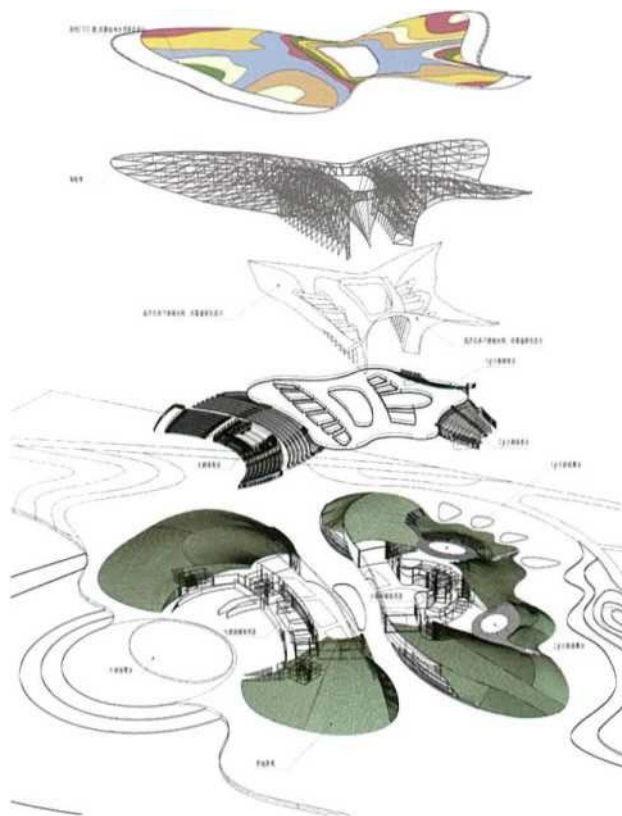
4T9 Photo: Night Scene of Kwai Po Theatre

Lightweight and beautiful architecture-radially arranged cantilevered structure has great rhythm and tension, like a pair of dance hand in hand balanced central balance ring and ground cable metal structure, both soft and rigid, challenging the gravity to show the beauty of force, but also showing the superb beauty of dynamic balance, ingeniously and interestingly interpreting architecture is solidified music.

Smart experience of the construction of a building as a garden of butterflies flying, people relax mood, heart blossom, let people fly dreams, wings fly, unusual experience to meet people's very poetic spiritual experience needs.

## II. Functional Layout

The north-south double-deck road system divides the performance center into east and west parts. A semi-outdoor grand theater is arranged near the lake on the west side, with the green mountains and waters of nature as the stage setting, and the roof steel structure is used to configure lighting equipment, which can hold the opening and closing ceremonies of Beijing Expo, national day and other activities. Two semi-outdoor small theatres are arranged on the east side, which can hold small conferences, small performances and other activities, and the semi-outdoor theatre without envelope structure can effectively save energy consumption and operating costs. Auxiliary rooms are arranged on the east and west sides of the lower carriageway, including public toilets, toilet rooms, machine



4-20 structure

rooms and VIP rooms, etc. The rear service rooms obtain natural ventilation and lighting through patios and outdoor courtyards.

The stage project is divided into two parts: the stage warehouse and the auxiliary room. The platform warehouse part is located between the lower part of the elliptical stage and the landscape water stack, and has the main functions of platform warehouse, lift platform foundation pit, led lift column foundation pit and maintenance emergency channel, and reserves temporary transfer space for actors facing the water stack side to go directly to the outside. The non-personnel parking area in the warehouse area is prohibited from stacking combustible goods, etc; The auxiliary room is located between the oval stage and the auditorium of the Grand Theater.

Under the driveway, the main functions are centralized distribution cabinet storage area for stage use, outdoor unit storage area for air conditioning, hydraulic pump room, temporary toilet, etc.

### Three, architectural highlights

The main steel structure of the Performing Arts Square is composed of 26 cotton steel trusses, and the maximum cantilever of the main body is 47 meters. The framework simulates the light and elegant wings of butterflies through the scattered height. The roof uses color ETFE color film, cantilever roof ceiling uses silver gray aluminum alloy wire hook flower net, in the sun, showing a colorful effect, shining in the lake.

Performing Arts Plaza highlights the concept of green, energy saving, environmental protection

and sustainable development, and adopts semi-outdoor architectural strategy for the main space of large and small theatres, which effectively solves the needs of shading, rain shelter and ventilation during the session, and also meets the comfort needs of the session;Auxiliary rooms adopt earth-covered building strategy, warm in winter and cool in summer, effectively reduce energy consumption, energy saving and environmental protection;The main body of the building adopts steel structure, and steel is used as the main material of the building, which can be recycled, thus realizing rapid and environmentally friendly assembly construction.

## Chapter 3 non-venue construction

### Section 1 Landscape Construction

#### 1. Yongning Pavilion

Yongning Pavilion is an antique building in Liao and Jin Dynasties, with a total height of 28.8 meters and a building area of 2025 square meters. It is designed by Beijing Garden and Ancient Architecture Design Research Institute Co Ltd constructed by Beijing World Horticultural Exposition Coordination Bureau, and supervised by China Consultative Engineering Construction Supervision Co Ltd. Construction started on December 20, 2017, the structure was capped in June 2018, and the whole project appeared in November of the same year. By April 1, 2019, the project was completed and accepted, and put into operation in that month. The function of Yongning Pavilion is to undertake the role of landscape construction and cultural characterization.

##### (1) Design concept

Yongning Pavilion is built on the Tiantian Mountain built by backfill, with an elevation of 514.35

meters, facing Gui River in the north, overlooking Yanshan Mountain and Gui Royal Lake, which is the commanding point and landmark of the whole park. Designers believe that a landmark building is necessary for the 503 hectares of Beijing Expo site, which conforms to the ancient Chinese custom of climbing high and looking far, and its existence can be used to overlook, identify the direction, measure the distance, and also mark the cultural spirit of a garden.

Digging lakes and piling mountains is a common method of gardening. The builders of the park use the traditional Chinese method of overlapping mountains and rivers to expand the abandoned fish ponds and create the lake landscape, which is named Gui Mei, about 100 mu. The earthwork produced by digging lakes, building mountains nearby and building Tiantian Mountain constitute a landscape combination of mountains and rivers. The southern slope of Tiantian Mountain is gentle, and the water at the foot of the mountain is clean, dotted with garden pavilions, which is the main entrance to Yongning Pavilion. The other three sides of the mountain are steep slopes, which are trimmed into terraces and flowers, showing the ecological wisdom of farming civilization.

As the "foundation" of Yongning Pavilion, it is necessary to ensure the stability of Tiantian Mountain. At the beginning of building the mountain, the construction team adopted the method of dynamic compaction combined with vibration compaction, the periphery of the mountain is rolled by vibration impact for five meters, and the interior is initially pressed by various equipment under their own weight, one layer for one meter. Five meters a mesa, and then 18 tons of heavy hammer dynamic compaction machine is used to re-compress the mesa.



According to the Chinese landscape style palace garden construction tradition, the Yongning Pavilion uses "the high platform pavilion courtyard" the type layout, the overall image may summarize is: The flower field is scattered, heavy Taiwan is uneven, the cloister encircles, the high pavilion stands aloft. Visitors from the literati garden at the foot of the mountain along the stream up the stairs, that is, to reach the starting point of the mountainside platform, along the ladder all the way 1: mountain, you can arrive at the top of the platform.

Yongning Pavilion is located in the center of the platform, 28.8 meters high from the high platform to the kiss beast, for the four-sided two-storey three-eave building, "Yongning Pavilion" bucket plaque placed between the eaves on the south side. Pavilions four sides, the courtyard four sides, a symbol of peace, peace and prosperity.

## (2) Architectural highlights

The project is divided into ten sub-projects, including foundation and foundation, main structure, building decoration and decoration, building roof, building water supply and drainage and heating, building electricity, ventilation and air conditioning, building energy conservation, elevator engineering and intelligent building.

The main construction contents are as follows: the foundation treatment adopts the CFG pile foundation construction (1941 pieces), the structure is reinforced concrete, the roofing adopts the traditional glazed tile construction of ancient architecture, the decoration of Chinese chess and rafter is processed by Korean pine, and the foundation uses the traditional one hemp and five ashes of ancient architecture (seaming ash, passing ash, pressing ash, middle ash and fine ash). There are 188 columns in the pavilion, which are reinforced concrete structure and decorated with oil. High platform 168 columns, using larch wood structure, a hemp five ash practice, with oil decoration veneer. (Including 120 corridors, 16 four-corner pavilions and 32 dooryards). The ground is paved with granite stone, totaling 4300 square meters, about 700 tons. Yongning Pavilion contains the main body of the pavilion, high platform surrounding corridors, low platform viewing platform, a total of 492 steps from top to bottom, including 188 steps of Yongning Pavilion main pavilion, 132 steps of high platform and 172 steps of low platform. The external stone facing is sorghum red granite, totaling 2100 square meters, about 176 tons. The railings are blue and white stone and traditional wooden railings, of which 710 meters are blue and white stone railings and 76 meters are traditional wooden railings. The suspended ceiling is made of flat ceiling, aluminum strip ceiling and paper gypsum board ceiling, totaling about 1550 square meters. The main body of the pavilion is equipped with one elevator and two stairs.

The first floor of Yongning Pavilion is mainly an exhibition hall, with toilets and equipment rooms attached. The basement contains 40 columns. The first floor is mainly the sightseeing hall, including 4 entrances and exits, 2 barrier-free ramps, 1 elevator in the lobby, 2 indoor stairs, the first floor Contains 60 cylinders. The interlayer of Yongning Pavilion mainly includes exhibition hall, air supply and exhaust room, and the interlayer includes 36 columns. The second floor of Yongning Pavilion is mainly a flat corridor, which is used for sightseeing of the whole Beijing Expo, including 1 elevator, 2



staircases, and 36 columns on the second floor. The top floor of Yongning Pavilion is mainly a water tank room, which has no sightseeing purpose and contains 16 pillars.

Yongning Pavilion Project has been awarded "Beijing Green Safety Site", "Building (Structure) Great Wall Cup Gold Award" and "Building (Completion) Great Wall Cup Gold Award" by Beijing Housing and Urban-Rural Construction Commission and Beijing Quality Engineering Evaluation Committee.

## II. Green Belt

The Engineering Department of the Expo Bureau is responsible for the greening construction of the park. Among them, the first and second phase of public greening construction cycle of 700 calendar days, a total of more than 100 kinds of trees planted 41000 trees;The planting area of various flowers is 970000 square meters;There are 470000 square meters of ground cover flowers, 607000 square meters of lawn pavement, 462000 square meters of garden pavement, 10110.12 meters of asphalt pavement and 80182.49 square meters in total area.

The project began its formal construction in early 2017. The project includes the world horticultural axis, enterprise exhibition area, international exhibition area, ecological water system paving area, warehousing management area, battery car parking area and four important landscape nodes such as No.2, No.3, No.4 and No.5 gate areas.



Figure 4-22 Survey before entering the site in the early state

In order to ensure the construction period, the project construction will be carried out throughout the year of 2017, the working face will be opened in 2018, and the whole park will enter the state of rush work in the final battle of 2019  $\pm$  half a year. Finally, all the work was successfully completed before the opening of the park. In the meantime, the project construction has gone through the stage of on-site land circulation, cultural exploration and geological exploration in the early stage, which



overlaps with the construction of pipeline corridor units and municipal construction of municipal units. The overall landscape project promotes the implementation progress of various tasks through the overall coordination and dispatch. Organize and hold the project scheduling meeting and design coordination meeting regularly during the construction process to solve some problems existing in the site, and reasonably arrange the construction with all construction unit work together.

There are many varieties and quantities of seedlings in Beijing World Horticultural Exposition project, which make it difficult to maintain. In order to ensure the construction quality and landscape effect, the Engineering Department, the Design Department and the supervision unit of the Expo Bureau regularly inspect the seedling source, and strictly supervise and accept the seedlings entering the site according to the drawings and construction specifications, so as to ensure the quality of seedlings and ensure the construction progress.

In terms of fund management, the construction unit reports the monthly progress payment every month, and the site person in charge, the site budget person in charge, the personnel of the supervision unit and the personnel of the whole process cost consultation unit conduct on-site project quantity review, and issue review opinions to effectively manage the state-owned investment funds.

In terms of site safety management, there are many construction enterprises in the park, and the construction scope of garden projects is large, in order to ensure construction safety, the whole park unifies the implementation of housing construction safety standards. The Engineering Department of the Expo Bureau requires that each garden construction section should be equipped with a full-time safety officer, and a safety inspection team should be set up to conduct on-site safety inspection and hidden danger investigation on all the garden projects every week. Through joint inspection by various units, the operation and management of tree hoisting, high-altitude operation, special work, deep foundation pit operation, on-site power consumption and green construction on the construction site are strengthened. No safety accident occurred in all projects, and the purpose of safety management was achieved.

## Section 2 Supporting and Infrastructure

### I. South District of Horticultural Town

This project is a public exhibition building, which is mainly used to provide exhibition, commercial and catering services for the park during the meeting. It is constructed by Beijing Shiyuan Investment Development Co Ltd. and designed by Tsinghua University Architectural Design and Research Institute Co Ltd. and China Architectural Design Institute Co Ltd. The southern part of the town is a low-rise building, with a total floor area of 11649 square meters, including 12 monomers and 22 sub-monomers, with the highest being 11.305 meters, two floors above ground, one floor underground, frame and shear wall structure above ground, independent foundation, strip foundation and raft foundation. The project started on July 20, 2018 and completed on March 20, 2019.

#### 2. North District of Horticultural Town (Reception Center)

This project is the reception service center of the park, which is constructed by Beijing Shiyuan Investment Development Co Ltd. and designed by Shanghai Modern Architectural Decoration Environment Design and Research Institute Co Ltd. The project includes reception service center A1 # to reception service center All #, reception service center basement project, with a total construction area of 25851.00 square meters, including 12 single buildings. The structure type is cast-in-place concrete frame structure, the underground first floor, the building height is 3.8 meters-7.0 meters. It has two floors on the ground and the height of the building is 3.85 meters-10 meters. The service life of the structure design is 50 years. The fire resistance rating of the building is Grade I, the structural safety rating is Grade II, and the seismic fortification intensity is 8. The project started on May 31, 2019 and was completed on April 18, 2019.

#### 3. Industrial Belt (Phase I)

Project overview: Located in the park area of the 2019 World Horticultural Exposition in Beijing, China, the project is a comprehensive auxiliary service project attached to the park area, providing related catering, shopping and other service auxiliary facilities and exchange platform for the park and industrial belt. The total construction area of the project is 10000 square meters, 8200 square meters above ground and 1800 square meters underground. There are two floors above ground and one underground. The building height is 10.8 meters, the highest point of the roof is 15.90 meters,  $\pm 0.00 =$

484.7 meters. The first underground floor is 5.1 meters, the first floor is 5.7 meters, and the second floor is 5.1 meters.

The structure is steel frame structure, and the basement is cast-in-place reinforced concrete structure. The basement part adopts natural foundation, and the non-basement part adopts CFG pile composite foundation. The foundation is raft foundation, and the foundation without basement is independent foundation. The steel beam and cast-in-place steel bar truss structure are used for the floor slab and the roof. The main building function is commerce, of which the first floor is an experiential flower theme supermarket, the second floor is a garden theme restaurant, and the first underground floor is a kitchen, equipment room and other auxiliary rooms.

#### IV. Public Landscape Supporting Buildings

The Engineering Department of Shiyuan Bureau is responsible for the construction of the public landscape supporting projects of Beijing Expo, including 7 gatehouse buildings, 3 restaurant buildings, 9 supporting service buildings (public toilets) and 1 gate structure (2 # gate). The landscape supporting buildings include two gate structures (1 # gate and 6 # gate), one functional building (music fountain control room) and one tourist building. A total of 24 single buildings, with a total floor area of 11767.51 square meters, started construction on March 9, 2018, organized five acceptance checks successively, completed the completion acceptance of the project by five parties on April 8, 2019, and handed over to the users one after another.

The project is designed by China Architectural Design and Research Institute Co Ltd Beijing Garden Ancient Architecture Design and Research Institute Co Ltd Beijing Landscape Xinyuan Landscape Design Institute Limited, China Zhongyuan International Engineering Limited, and Beijing Fifth Architectural Engineering Group Co Ltd. is responsible for the construction.

#### V. Expo Hotel and Exhibitor Apartment Project

Hyatt Regency Shiyuan Hotel: With a total floor area of 52995 square meters, including square meters of 33056 above ground and square meters of 19939 below ground, the hotel has 284 guest rooms, banquet hall, conference area, Chinese restaurant, all-day restaurant, swimming pool and fitness area and other service facilities, and is a five-star resort hotel with new Chinese style. The 283 spacious and comfortable guest rooms and suites are distributed among three buildings, and the independent balcony creates a leisure space for guests to enjoy the beautiful scenery of Yanqing. There are 1370 square meters of Pillarless ballroom and banquet lobby, six 67 square meters-138 square meters of flexible multi-functional conference rooms, open lawn and other banquet and conference venues, suitable for holding various scales of commercial or private events.

Haiyuan Haiquan Bay Business Hotel: Haiyuan Haiquan Bay Business Hotel is opposite to Gate

2 of the 2019 Beijing World Garden Exhibition Area, with a total floor area of 28559 square meters, of which the ground 13986 is square meters and the underground 14573 is square meters. There are 109 guest rooms, including self-service restaurants, special restaurants, conference rooms, water affinity zones and other service facilities, which is a four-star water affinity hotel. Among them, the hydrophilic area is divided into six parts, namely, the characteristic hall, Yaochi courtyard, children's hall, dry spring square, European spa hall, medicine bath hall. Set meetings, banquets and other forms of activities in one of the multi-function hall located on the second floor of the hotel, the maximum capacity of 100 people.

Beijing Longqing Hotel: Beijing Longqing Hotel is located in Yanqing District, known as the "Summer Capital" of Beijing, in the park of Beijing Yanqing 2019 International Horticultural Exposition, surrounded by mountains and rivers, rich in historical and cultural heritage, 20 minutes' drive to Badaling Great Wall and the main attractions of Yanqing, is a new leisure and exhibition destination.

Longqing Hotel Beijing Shiyuan is the first ancient hotel opened by Beijing Shiyuan Assets Operation and Management Co Ltd. in China, 78 spacious and comfortable guest rooms are distributed in the ancient buildings in the south of the Yangtze River, and the winding corridor connects the buildings as one, in which you can move to the strange scenery. The hotel takes the first official hall of Jiangnan "Five Phoenix Tower" as the core, aiming to provide guests with a unique wonderful experience.

4. Apartments for exhibitors: The total construction area is 43478 square meters, of which the ground 29263 is square meters and the underground 14215 is square meters. There are 3 residential buildings with 7 to 9 floors and 157 households. The accommodation needs of exhibitors will be met during the meeting and the apartments will be sold as commercial houses after the meeting.

## VI. Integrated Management Center and Integrated Digital Center Project

### (1) Integrated Management Center:

With a total construction area of 29790 square meters, including 16290 square meters on the ground and 13500 square meters underground, it will serve as the overall operation command, traffic control and security center of the park and the Expo Village, as well as the corresponding administrative office and accommodation functions, and will be transformed into a commercial and hotel project after the meeting.

### (2) Integrated Digital Center and Information Center:

Integrated digital center: with a total construction area of 13622 square meters, including 6000 square meters above ground and 7622 square meters underground, the integrated digital center will be responsible for major news release, communication support and other tasks, and will serve as the office of Beijing Shiyuan Investment and Development Co Ltd. after the meeting.

Press Center: a press center will be set up at the 2019 World Horticultural Exposition in Beijing, China, as the main place for information dissemination, public signal provision and registered journalists to work. The press center is located in the digital center of the Beijing Expo Management Center, using the first to third floors of the digital center. The spatial layout of the news center will be divided into ten functional areas, including comprehensive service area, media public work area, media special work area, press release area, MCR operation area, operation guarantee area, office area, horticultural interactive exhibition area, media catering and tea break area and off-site area.

Among them, the integrated service area is located on the first floor of the news center, including three service areas, namely, consultation desk, public service desk and booking desk. The information desk (A01) provides information consultation in Chinese and English, lost and found, goods borrowing, information distribution and other services. Reservation Desk (A02) provides media dedicated workshop, live broadcast room, interview room office equipment and facilities, public signal and satellite transmission, audio headphones, UAV shooting and other booking and rental services. The public service desk (A03) provides public services such as postal services and communications.

Horticultural Interactive Exhibition Area There are several horticultural interactive exhibition areas on the first and second floors of the press center, which display propaganda materials and interact with registered journalists.

The media dining area is located in the Haiquan Bay Hotel and provides free catering services for registered journalists during the opening ceremony (April 27 H-May 4). Tea break area (G01-G04) is located on the first floor to the third floor of the news center, providing free cold meal tea break service for journalists.

The off-site regional media gathering area is located at the main entrance of the news center, providing reporters with interview gathering and guidance services. Located on the first floor of the Press Centre is the Reservation Desk, which provides accreditation services for accredited journalists.

The exclusive media working area is located on the first floor and the third floor of the press center, including several exclusive media working rooms (C03-C15), and interview room (C01) and live broadcast room (C02) available for booking. The exclusive working rooms are equipped with power interface, broadband network interface, public signal, free telephone, multifunctional machine, notebook computer, television, Signal format converter, desks, chairs, lockers and other office facilities.

The live broadcasting room (41 square meters) is equipped with power supply, lighting, background board, furniture and other equipment and facilities.

The interview room (28 square meters) is equipped with power supply, lighting, background board, broadband network interface, furniture and other equipment and facilities.

The press release area is located on the first floor of the press center, including a press release hall (D01) with a capacity of 150 people and a VIP room (D02). The press release hall is equipped with sound, lighting, simultaneous interpretation system, conference table, media chairs and other equipment and facilities, and conference services such as table sign making and drinking water are provided.

The media public working area is located on the first to second floors of the news center (B01-B04), with 204 stations for free use by journalists, all of which are equipped with high-speed network interface, international standard power interface and 16-channel digital audio interface; Eighty-five of them are equipped with notebook computers with bilingual systems in Chinese and English.

The public working area is equipped with large led screen and high-definition TV, which can broadcast public signal pictures and all kinds of information and notifications in real time; At the same time, it is equipped with high-speed photocopiers, multi-functional machines, lockers and other equipment and facilities for free use by journalists.

MCR operation area is located on the second and third floors of the news center, including the master control room, satellite transmission room, public signal recording room and official photo center, which provide radio and television services such as public signal recording, transmission, satellite transmission and official photo services.

## VII. Infrastructure and Municipal Facilities Projects of the Expo Village

The Expo Village Infrastructure and Municipal Facilities Project of the 2019 Beijing International Horticultural Exposition is located in the Expo Village in the southwest of Yanqing New Town, Yanqing District, Beijing, with a total construction scale of 20994.34 meters, a total contract cost of 0.109878 billion yuan, a contract period of 387 calendar days, and a total of 14 individual projects.

This project is a "one meeting and three letters" project, including 7 municipal professional pipelines and 7 municipal roads in the Expo Village, which lays a solid foundation for other meeting guarantee projects and meeting operation work in the Expo Village. The construction mainly includes rainwater pipelines, sewage pipelines, water supply pipelines, reclaimed water pipelines, gas pipelines, thermal pipelines, power pipelines (buried), urban roads and ancillary projects. Construction of the project started in December 2017, in November 2018, seven municipal roads were open to traffic, and all of them were completed and put into operation by the end of April 2019.

## VIII. Temporary Parking Lot Project outside the Park

(-) P3 and P4 of temporary parking lot project outside the park

The temporary parking lot project outside the Beijing World Horticultural Exposition Park covers an area of 401826.71 square meters, with a total of 4969 parking spaces. In September 2018, the construction of P3, P4, P5, P6 parking lot and BH3 bus hub was started, and the earthwork, solidified soil construction, gravel paving and asphalt concrete paving were completed successively, which were successfully completed by the end of 2018 and formally operated in April 2019.

This project is the bid section of "Temporary Parking Lot Project P3 and P4 outside the Expo Site". The parking lots P3 and P4 are located in the south of Baikang Road, north of Shengbai Street and east of Yankang Road. P3 is a bus parking lot with 327 parking spaces, 30 passenger platforms, parking management rooms and temporary toilet locations reserved; Box-type substation facilities shall be arranged at appropriate locations within the green belt. P4 is a car parking lot with 2328 parking spaces, including 56 barrier-free parking spaces, which are located in the northwest side of P4, adjacent to Gate 6 of the park, with 40 charging pile parking spaces reserved, located in the northwest side of P4, adjacent to Gate 1 of the park; Parking management room and temporary toilet location reservation; Box-type substation facilities shall be arranged at appropriate locations within the green belt. The contract period is 45 days.

The construction contents of this project mainly include drainage pipeline, water supply pipeline, parking lot, road engineering, traffic engineering, lighting engineering, traffic monitoring system and greening engineering. Construction of Beijing Shiyuan Investment Development Co Ltd design of

Beijing Municipal Engineering Design and Research Institute Co Ltd supervision of Beijing Panshi Construction Supervision Co Ltd. and construction of Beijing Urban Construction Road and Bridge Construction Group Co.

(II) P5 Parking Lot of Beijing Expo Site

The P5 temporary parking lot project outside Beijing World Horticultural Exposition Park is located in the south of Baikang Road, north of Shengbai Street and east of Yankang Road, with a construction scale of 138290.64 square meters, a total contract cost of 26.73386637 million yuan and a construction period of 45 days. The construction contents of this project include parking lot engineering, temporary road engineering, traffic engineering, water supply and electricity supply. Drainage engineering, electrical engineering, greening and landscape engineering.

(III) Temporary parking lot projects BH3 and P6 outside the park

BH3 bus hub and P6 parking lot are located in the north of Baikang Road, south of the planned Fifth Road and west of Yankang Road. It covers an area of 52003.18 square meters, with 868 planned berths, including 59 parking spaces for big cars and 809 parking spaces for small cars, with a total contract cost of 9.820027 million yuan and a contract period of 45 calendar days.

The construction content of this project mainly includes the import and export of parking lot, parking lot pavement, water supply and drainage, strong and weak current pipeline, lighting, traffic, greening and ancillary facilities. The project is constructed by Beijing Shiyuan Investment and Development Co Ltd designed by Beijing Municipal Engineering Design and Research Institute Co Ltd managed by Beijing Guangxia Real Estate Development Company, supervised by Beijing Panshi Supervision Co Ltd. and constructed by Beijing Municipal Construction Group Co.



### Section 3 Construction of Exhibition Park

In order to ensure the smooth construction of the Expo Site, the Exhibitor Invitation Department of the Expo Bureau has prepared the Service Manual for Construction Period, Logistics Manual and other practical operation manuals, and stationed personnel in the Expo Site to supervise the construction and production. The Exhibitor Invitation Department, Planning Department and Engineering Department of the Expo Site cooperate to solve problems at any time. Entrusted by the Expo Bureau, Beijing Survey and Design Research Institute Co Ltd. undertook the preliminary geotechnical engineering survey of the China Garden Project and the International Garden Project of Beijing Expo.

#### 1. China Exhibition Garden Project

In April 2017, the Ministry of Planning, Engineering and Horticulture cooperated to organize provincial, regional and municipal surveys and claim plots. From May to July, the provinces, autonomous regions and municipalities completed the "Theme Statement" and the compilation of the design scheme of the exhibition hall and garden. On November 2, the expert evaluation meeting of provincial, regional and municipal plans for the 2019 Beijing World Horticultural Exposition was held in Yanqing, and the first batch of garden plans for the horticultural exhibitions of provinces, regions and municipalities in the China Horticultural Exhibition Area of the Beijing World Horticultural Exposition made their public debut. Xia Zhanyi, Deputy Director and Secretary-General of the Executive Committee of Beijing Expo, Member of the Party Group of Beijing Municipal Government, relevant leaders of the State Forestry Administration, China Council for the Promotion of International Trade, China Flower Association, Beijing Expo Bureau, Yanqing District, as well as relevant leaders and evaluation experts of participating provinces, autonomous regions and municipalities attended the conference. This review meeting marks the progress of the preparations for the China Exhibition Park, the outdoor exhibition area of the 2019 Beijing World Horticultural Expo, and has achieved phased results.

During the construction of the exhibition garden, we will coordinate the construction period of 31 provinces, municipalities, Hong Kong, Macao and Taiwan exhibition areas to ensure the construction safety of the Chinese exhibition garden. The Exhibitor Invitation Department II of the Expo Bureau, which is responsible for domestic exhibition services, has formulated the construction management measures for the exhibition garden, clarifying the main responsibilities of exhibitors and construction units for quality, safety and environmental protection. Weekly construction work meeting timely convey the latest instructions on safety production and environmental protection in urban areas. In the construction admission stage of the outdoor exhibition garden, the Exhibitor Invitation Department II,

together with the Yanqing Preparatory Office of Beijing International Horticultural Exposition, organized a training meeting on safety supervision, clarified the supervision requirements for all exhibitors, and answered the specific problems encountered by exhibitors in the construction operation. Joint Yanqing regulatory departments to establish a joint law enforcement service mechanism, regular on-site services, to minimize the impact on the construction of the exhibition garden, find problems and timely put forward rectification suggestions and urge implementation, to ensure the smooth and orderly progress of the construction of the exhibition garden. From the establishment of the mechanism in August 2018 to the opening of the garden, about 20 routine and joint inspections were organized, which laid a solid foundation for the green construction, civilized construction and safe construction of outdoor exhibition gardens.

Strengthen on-site coordination to ensure that the construction of the exhibition park is completed on schedule. In order to assist domestic exhibitors to complete the construction of outdoor exhibition gardens and further strengthen on-site coordination, the Expo Bureau will shift its focus of work forward and arrange special personnel to stay at the venue every day. In the process of exhibition garden construction, a series of problems, such as cross-operation between exhibition gardens and public areas, temporary occupation of sites, construction of electricity and water can not be guaranteed, and adjustment of gate area design scheme, have been solved.

In this regard, the work of the exhibition department includes:

First, actively coordinate the entry of materials, trees and construction machinery required by the Ministry of Traffic Security, the Ministry of Engineering and the Ministry of Horticulture for the construction of the exhibition garden. Tay. ZW? 2019 Beijing I Huayuan Club Chronicle BEIJING China — ... I — — ...

The market provides the transportation channel safeguard; According to incomplete statistics, from February to April 2019, there were more than 2000 times of five tasks, including coordinators, vehicles, objects, roads, equipment and facilities.

Two, we should actively increase the financial budget to lay temporary cables, rent generators and water trucks for exhibitors; At the same time, the second department of inviting exhibitors communicates with the planning and engineering departments, rationally allocates the water and electricity consumption of the park, increases the capacity of the exhibition park with large demand for electricity, cooperates with domestic exhibitors to complete the construction of water, electricity, roads and other infrastructure, and provides basic guarantee for the construction and operation of the exhibition park.

Thirdly, we should coordinate and adjust the original ground pavement scheme and transplant trees in some exhibition gates to ensure the exhibition effect of outdoor exhibition gardens. Fourth, organize on-site garbage cleaning to ensure that the park is clean and tidy. Through a great deal of coordination work, 51 outdoor exhibition parks in various provinces, municipalities, Hong Kong, Macao and Taiwan

regions and domestic enterprises completed the construction and exhibition work with high standards before the opening ceremony, and 34 exhibition stones were all in place in the peer square, which laid a solid foundation for the successful holding of major activities such as comprehensive drills, stress tests and opening ceremonies, and the brilliant appearance of Beijing Expo.

## II. International Garden Project

From June 25 to 26, 2018, the first International Conference of Exhibitors of Beijing World Garden Expo was held in Beijing, which further promoted the construction of the International Garden Pavilion. During the construction of the Expo Site, the Exhibitors Invitation Department of the Expo Bureau took the lead in setting up the International Exhibitors Service Site Command, which was staffed with experienced engineers and technicians and foreign language translators, and was stationed in the Expo Site to handle official business and assist international exhibitors in handling various construction procedures. In 2018, the Exhibitor Invitation Department of the Expo Bureau received 105 visits, consultations and explorations from national and international organizations, docking site selection and construction work, which effectively promoted the landing of the exhibition.

In accordance with the rules and policies of the Beijing Expo, the Exhibitor Invitation Department of the Expo Bureau, which is responsible for the service of foreign exhibitors, takes the lead in reviewing the design and construction plans of all international exhibitors' indoor and outdoor pavilions and exhibition gardens, and respects the design ideas and concepts of the plans as far as possible without violating the restrictive provisions. Let the unique horticultural and cultural achievements of international exhibitors be presented in Beijing Expo. The Expo Bureau has organized and reviewed the design schemes of 41 outdoor gardens and 18 indoor pavilions, with 198 feedback comments, which laid the foundation for the splendid appearance of the International Exhibition Garden pavilions with the close cooperation of all international exhibitors. During the Beijing World Garden Expo, Qatar, Japan, Germany, Turkey and other international exhibition parks became hot spots in the park, attracting a large number of tourists to visit.

The 2019 Beijing World Horticultural Exposition is the largest international horticultural exposition so far, with 110 countries and international organizations, more than 120 unofficial exhibitors, 31 provinces, municipalities and Hong Kong, Macao and Taiwan participating. Since its opening on April 28, 2019, a total of 3284 events have been held during the Beijing World Garden Expo, attracting 9.34 million Chinese and foreign visitors.

In terms of domestic exhibition, the 2019 Beijing World Park Expo is innovative and demonstrates the new achievements of China's ecological civilization construction. All provinces, autonomous regions, municipalities and regions of Hong Kong, Macao and Taiwan use the Beijing World Park Expo as a stage to display regional culture, tourism resources and special products, exchange successful experiences in the construction of ecological civilization, promote fruitful results of industrial development, and display their own bright business cards, so as to achieve the exhibition goal of "promoting industry, enriching the people and promoting development by meeting".

In terms of international exhibition invitation, in light of the objectives and actual situation of the 2019 Beijing World Horticultural Expo, the Organizing Committee of the Beijing World Horticultural Expo will provide 200 million yuan of assistance funds to eligible exhibitors to promote international horticultural exchanges. The source of funds is funded by the Beijing Municipal Government. After the meeting, the international participants generally believed that the professional and efficient preparation and operation of the Beijing World Horticultural Expo and the sound and perfect rules and regulations will leave a profound "Chinese mark" in the history of world horticulture and become the benchmark for the future A1 type of World Horticultural Expo.

## Chapter I Overall Recruitment Target

When bidding for the World Garden Expo in 2012, the "two 100" exhibition target was set, that is, no less than 100 official exhibitors, including countries and intergovernmental international organizations; There are no less than 100 unofficial exhibitors, including non-governmental international organizations, domestic and foreign enterprises, individual exhibitors and domestic provinces, autonomous regions and municipalities.

In terms of international exhibition invitation, at the second meeting of the Organizing Committee of the World Horticultural Bureau in December 2015, the General Plan for International Exhibition Invitation of the 2019 Beijing World Horticultural Exposition was considered and adopted. The overall plan identifies 163 key countries (regions), including 44 in Asia, 51 in Africa, 38 in Europe, 16 in the Americas and 14 in Oceania.

In terms of domestic exhibition invitation, since March 2017, the Expo Bureau has issued invitations to 31 inland provinces, municipalities, Hong Kong, Macao and Taiwan, major universities and scientific research institutes, as well as outstanding enterprises.

In June 2018, the Expo Bureau issued the Guidelines for Participation in the 2019 Beijing World Horticultural Exposition. It provides guidance for exhibitors from 19 aspects, such as exhibition procedures, garden construction, customs supervision and inspection and quarantine, accommodation and logistics services, competition and evaluation, and intellectual property protection.

It is an important guarantee for the smooth convening of the Beijing World Park Expo in 2019 to do a good job in exhibition and exhibition services. Exhibitor invitation and participation services include: introducing the Expo to China and other countries and regions, attracting exhibitors to participate in the Expo, and coordinating with all exhibitors to complete all the services such as the construction of pavilions, layout of exhibitions, performance activities and cultural exhibitions. The service system for soliciting exhibitors and participating in the Expo 2019 is divided into two major systems, namely the international and domestic systems. The first department is responsible for the service system for soliciting exhibitors and participating in the Expo 2019, while the second department is responsible for the service system for domestic exhibition.

In the end, more than 120 non-official exhibitors from 110 countries and international organizations, domestic provinces, municipalities, Hong Kong, Macao and Taiwan, enterprises, universities and scientific research institutes participated in the Beijing Expo, successfully completing the "double 100" exhibition target and setting the highest number of exhibitors at the Expo.

During the meeting, the exhibition departments took the initiative to raise service awareness, provided "one-to-one" exhibition services, completed 1230 visa residence applications, 4970 personnel and vehicle certificates, and coordinated 425 problems such as exhibition materials entering the park, business license application, personnel catering and accommodation. Arrange special personnel to

manage and maintain the exhibition area, ensure the best exhibition effect, give full play to the role of international platform, and promote the image display and resource promotion of provinces, districts and cities.

## Chapter II Domestic recruitment work

The 2019 Beijing World Park Expo has become another vivid practice of promoting the construction of ecological civilization in the new era in China, which has effectively promoted the transmission of the concept of green development to all corners of the world. During the whole exhibition period, the achievements of ecological civilization construction in 31 provinces, municipalities and Hong Kong, Macao and Taiwan were vividly displayed, and the latest horticultural new technologies, new products and new ideas of scientific research institutes and enterprises were vividly displayed. Follow the harmonious coexistence of man and nature, and build a community of human destiny.

In 2017, the Exhibitor Invitation Department II of the Expo Bureau was established to promote the domestic exhibitor invitation work in accordance with the overall preparation plan of the Beijing Expo, with the core of serving domestic exhibitors.

Domestic recruitment and exhibition services include introducing Beijing Expo to all regions of the country, inviting inland provinces, municipalities, Hong Kong, Macao and Taiwan regions and outstanding enterprises to participate in the Expo; To study and formulate the domestic work plan, establish the domestic exhibition invitation mechanism, and implement the domestic exhibition invitation objectives of Beijing Expo; To formulate various legal texts such as exhibition contracts, exhibition assistance contracts, exhibition guides, etc; To study and draft policies on exhibition assistance and methods for the management and use of assistance funds; Coordinate with the planning department to review the design scheme of the garden and exhibition hall submitted by domestic exhibitors; Coordinate and promote the construction of domestic exhibition parks and pavilions; To organize representatives of domestic provinces, municipalities, Hong Kong, Macao and Taiwan regions and enterprises to participate in the opening and closing ceremonies and hold various activities such as "provinces, municipalities and municipalities"; Reception of domestic and foreign dignitaries and leaders of exhibitors from provinces, municipalities, Hong Kong, Macao and Taiwan to attend the Beijing World Garden Expo; It has set up a "one-stop" exhibition service center and a "one-to-one" service guarantee team. Establish and improve the domestic exhibition service system, provide guidance, support and service guarantee for the pre-construction, in-session operation and post-session arrangement of domestic gardens and pavilions, coordinate and solve various problems such as personnel and vehicle certificate processing, maintenance and repair of gardens and pavilions, exhibition materials entry and exit, business license application, personnel catering, accommodation

and transportation arrangement of domestic provinces, municipalities, Hong Kong, Macao and Taiwan regions and exhibitors.

On March 3, 2017, the Exhibitor Invitation Department of the Expo Bureau, in the name of the Executive Committee of Beijing Expo 2019 and the Beijing Municipal Government, sent letters to invite 31 provinces, autonomous regions and municipalities to participate in the Beijing Expo 2019, and all 31 provinces, autonomous regions and municipalities gave feedback and clearly expressed their intention to participate in the Expo. On April 15, the Exhibitor Invitation Department of the Expo Bureau, in the name of the Liaison Group of the Organizing Committee of Beijing Expo 2019, issued an exhibition notice and work plan to 31 provinces, autonomous regions and municipalities in China, further clarifying the main departments and contacts of provinces, autonomous regions and municipalities participating in Beijing Expo 2019, and the exhibition work has entered a substantive stage.

On June 15, 2017, in the name of the Liaison Group of the Organizing Committee of the 2019 Beijing World Horticultural Expo, the Exhibitor Invitation Department of the World Horticultural Expo Bureau issued an invitation letter to the Hong Kong and Macao Special Administrative Region Government, which quickly and clearly expressed its participation in the exhibition, and identified the main responsible departments and contacts, and both sides established an effective communication mechanism. The Exhibitor Invitation Department of the World Horticultural Exposition Bureau, in the name of the Bureau of Beijing International Horticultural Exposition Coordination, has issued invitations to universities and scientific research institutes in China to participate in the Beijing World Horticultural Expo.

At the end of the exhibition, six units of China Academy of Agricultural and Forestry Sciences, China Media University, Beijing Forestry University, Beijing Agricultural College, Beijing Agricultural Vocational College and Beijing Academy of Agricultural and Forestry Sciences confirmed their participation. In March 2018, after several rounds of consultation, 17 enterprises confirmed their participation in the exhibition and signed exhibition contracts.

In early April 2018, with the coordination of the Beijing Taiwan Office and the consent of the National Taiwan Office, the Expo Bureau issued an invitation letter to the Taiwan Flower Association to represent Taiwan at the 2019 Beijing World Garden Expo. On April 10, the Taiwan Flower Association formally replied and agreed to participate in the exhibition. From May 19 to 22, at the invitation of the Expo Bureau, the relevant responsible persons of Taiwan Flower Association came to Beijing to consult on the construction of Taiwan Garden and survey the Expo site in Beijing in 2019, and identified the design unit, construction unit and supervision unit. From March 30 to December 4, the senior managers of Taiwan Flower Association came to Beijing again to survey the outdoor exhibition garden and examine the progress of the project and the quality of construction. The

participation of Taiwan marks the successful completion of all domestic exhibition recruitment tasks and the smooth entry into the stage of exhibition service. Through successful exhibition and service guarantee, all provinces, autonomous regions and municipalities in China, including Hong Kong, Macao and Taiwan, closely adhere to the theme of "Green Life and Beautiful Home" of the 2019 Beijing World Horticultural Expo, dig deeply into the regional horticultural culture, fully display the achievements of local ecological civilization construction and horticultural characteristics, and carry out exhibition garden design work, reflecting a higher design level.

## Section 1 Work System

In order to ensure the smooth development of the exhibition work of all provinces, municipalities, Hong Kong, Macao and Taiwan regions and enterprises, and to complete the exhibition service work in a better and more orderly manner, the Exhibitor Invitation Department of the Expo Bureau has established a perfect working system by formulating a series of plans and methods based on the actual domestic exhibition service of Beijing Expo.

In 2018, the Exhibitor Invitation Department completed the Work Program of One-to-One Service for Domestic Exhibitors of Beijing Expo 2019, which implemented the specific work content and requirements of One-to-One Service; Complete the Regular Meeting Plan for Exhibitors during the Construction Period of Beijing Expo 2019, which defines the principles, contents, forms, scope of application and organizational process of the regular meeting in order to ensure the high-quality, efficient and standardized completion of the outdoor exhibition garden on schedule; The Measures for the Construction Management of the Outdoor Exhibition Garden of Beijing Expo 2019 clearly define the contents and corresponding services to be performed by the exhibitors who are about to enter the construction site; The Measures for the Management of the Use of Sponsored Vehicles by Domestic Exhibitors put forward specific requirements for the use of sponsored vehicles provided by the Expo Bureau to provinces, autonomous regions and municipalities; The Joint Law Enforcement Program for Exhibition Services puts forward that the relevant units in Yanqing District should establish the organizational structure of joint law enforcement, determine the division of responsibilities among departments, improve the work content and formulate the service process. The Model Contract for Exhibitors clearly restricts the responsibilities and obligations of the enterprises participating in the Beijing Expo.

The establishment of cooperation system makes the exhibition service work of departments have



evidence to follow, the construction of exhibition parks of exhibitors in various provinces, districts and municipalities in China have rules to follow, and the exhibition activities of enterprises have terms and conditions. The whole system design is operable and easy to implement, which lays a solid foundation for the coordination of various affairs during the construction of the exhibition garden, and comprehensively guarantees the smooth progress of the exhibition work of various provinces, municipalities, Hong Kong, Macao and Taiwan regions and enterprises.

Before the opening of the Garden in 2019, to provide convenient conditions for domestic exhibitors, the Exhibitor Invitation Department, in light of the actual working characteristics of the operation period, compiled the "Measures for the Use of Accommodation for Domestic Exhibitors of Beijing Expo 2019", "Emergency Response and Disposal Plan for Domestic Exhibitor Services" and "Management Measures for Temporary Staff Entering the Garden during the Operation Period". It realizes the transition of domestic exhibition service from pre-construction to formal operation, solves the problems of accommodation management of domestic exhibitors, performers, temporary exhibition, plant and flower maintenance personnel, and provides convenient conditions for domestic exhibitors.

Before the end of 2017, the Expo Bureau organized the "Expert Review Meeting on the Design Scheme of the Chinese Exhibition Garden of the 2019 Beijing World Horticultural Expo" and the "Expert Review Meeting on the Design Scheme of the Provincial and Municipal Exhibition Garden of the Second Chinese Horticultural Exhibition Area of the 2019 Beijing World Horticultural Expo" to examine the design schemes of 51 outdoor exhibition gardens and 31 indoor exhibition areas of the Chinese Pavilion. The exhibition effect of outdoor exhibition garden and indoor exhibition area.

## Section 2 Recruitment process

In order to successfully carry out the exhibition work, the relevant departments of the Expo Bureau have visited inland provinces, municipalities and Hong Kong, Macao and Taiwan for many times to carry out the publicity and promotion work of the Beijing Expo.

In early September 2017, the Expo Bureau organized relevant leaders and staff to study and inspect the Ninth Flower Expo in Yinchuan, Ningxia, and used this platform to carry out targeted special publicity and promotion activities.

In September 2017, the World Horticultural Exposition Bureau went to Taiwan to attend the 69th Annual Conference of AIPH, visited the President and Secretary-General of AIPH, and fully exchanged with the head of Taiwan Flower Association on the participation of Taiwan Flower Association in Beijing World Horticultural Exposition in 2019 on behalf of Taiwan, and Taiwan Flower Association expressed its positive intention to participate in the exhibition.

On October 20, 2016, Zhou Jianping, Executive Deputy Director-General of the Bureau of

International Horticultural Expositions, and the Beijing Foreign Affairs Office jointly participated in the 21st Macao International Trade and Investment Fair, using this platform to promote the 2019 Beijing World Expo, inviting Macao enterprises and Portuguese-speaking countries to participate in the construction of the Beijing World Expo, and jointly deepening the economic and trade cooperation between Beijing and Macao, Portuguese-speaking countries, Cultural and creative industries and other fields of exchanges and cooperation.

In March 2018, Wu Gang, deputy director of the Expo Bureau, led a team to attend the Hong Kong Flower Show, taking this opportunity to publicize and promote the 2019 Beijing Expo, distributing more than 1000 publicity materials and materials, attracting many tourists to stop and visit the scene, with a warm atmosphere and remarkable publicity effect. The exhibition expanded the awareness and reputation of Beijing Expo, and effectively mobilized the enthusiasm of Hong Kong citizens to visit Beijing Expo in 2019. At the same time, with the opportunity of participating in the Hong Kong Flower Show, the delegation made extensive contacts and in-depth communication with the main participating departments of the Hong Kong and Macao Special Administrative Regions on the progress of the preparation of the Beijing Expo in 2019 and the construction of the exhibition parks in Hong Kong and Macao, and further confirmed the participation of Hong Kong and Macau in the Beijing Expo. It laid the foundation for the smooth development of the follow-up exhibition service work.

In August 2018, the second department of the Expo Bureau went to Xining City, Qinghai Province to participate in the exchange symposium of Qinghai Province participating in the Beijing Expo. Through in-depth exchanges with relevant departments in various places, on the one hand, we will further expand the influence of the 2019 Beijing World Horticultural Exposition, on the other hand, we will learn from the mature practices of other provinces and cities in organizing large-scale exhibition activities, horticultural competitions, operation and management, and accumulate work experience for comprehensively promoting the preparation of the 2019 Beijing World Horticultural Exposition.

In March 2019, at the invitation of the Organizing Committee of the Hong Kong Flower Show, a delegation of the World Horticultural Bureau visited the 2019 Hong Kong Flower Show in order to further promote the Beijing World Horticultural Expo to Hong Kong, China and overseas, and to learn from the experience of the operation and management of the Beijing World Horticultural Expo, which officially opened one and a half months later. In-depth exchanges were held with Hong Kong organizers on horticultural exhibition planning, publicity and marketing, traffic security, tourist services and ticketing management. In order to ensure the efficient and orderly participation of domestic exhibitors, and considering the characteristics of different periods of participation, the Exhibitor Invitation Department II of the Expo Bureau regularly holds consultations on the participation of provinces, autonomous regions and municipalities to effectively promote the participation, which will be held on June 5, 2017, March 30, July 31, December 5, 2018, March 1, 2019, On June 25, six provincial, regional

and municipal work consultations were regularly organized.

On June 5, 2017, the first meeting of provincial, regional and municipal participation in the Beijing World Horticultural Exposition was held in Yanqing. The convening of this conference means that the domestic participation in the Beijing World Park Expo has entered a substantive stage. Work consultation on March 30, 2018, organize the construction of provincial, regional and municipal parks, solve the doubts of provincial, regional and municipal parks, and effectively promote the construction of provincial and municipal exhibition parks and enterprise exhibition parks. On July 31, 2018, the working consultation was organized jointly with the State Forestry and Grass Bureau to clarify the tasks, standards and time of outdoor indoor exhibition, provincial and municipal day and peer square exhibition stone in various provinces, districts and cities, so as to promote the overall construction progress of China Exhibition Garden. On December 5, 2018, the working consultation fully exchanged and communicated on the problems existing in the construction of the exhibition garden, the exhibition hall layout and the operation of the exhibition period, collected and summarized the problems of domestic exhibition work, and proposed solutions. On March 1, 2019, the work consultation was held to deploy and mobilize the work arrangements related to the completion of the construction before the opening ceremony, the opening ceremony and the opening ceremony. On June 25, 2019, the working consultation summarized, analyzed and rectified the problems existing in the formal operation period.

With the help of the consultation platform, the organizers of Beijing Expo communicated with the participants from all provinces, autonomous regions and municipalities in depth, clarified the progress of work, identified and solved problems, and effectively enhanced mutual trust, mutual understanding and tacit understanding between the participants from provinces, autonomous regions and municipalities and the organizers of Beijing Expo.

### Section 3 Exhibitor Services

In order to fulfill the commitment of hosting the Expo and ensure the smooth participation of domestic exhibitors, the Expo Bureau has formed a professional team of 25 people, focusing on exhibition service and taking the first question responsibility system as the criterion, actively coordinating relevant departments of the Expo Bureau, the Preparatory Office of Yanqing District and one-to-one service units to help domestic exhibitors solve practical difficulties.

During the formal operation period, the provincial, regional and municipal exhibitors, exhibitions and the coordination of the entry and exit of materials and equipment for the activities personnel will be completed with high standards. With the park fully entered the stage of formal operation, domestic provinces, municipalities, Hong Kong, Macao and Taiwan and other exhibitors to the park exhibition, exhibition and other activities outside the day of temporary increase in demand for other cultural activities such as personnel rose rapidly, taking into account the existence of a certain cycle of work certificate certification, the Expo Bureau through timely communication, quickly defined the provinces and municipalities to participate in the exhibition exhibition and activities into the park a series of temporary arrangements, It solves the problem of temporary staff entering the park for domestic exhibitors.

To provide humanistic care for domestic exhibitors. From the perspective of convenience of domestic exhibition work, it provides working accommodation and sponsored cars for domestic exhibitors, effectively solves the problems of living and transportation of domestic exhibitors during the operation period, and organizes activities to console exhibitors in traditional festivals and summer holidays.

Do a good job in ensuring the exchange of exhibitors during the operation period. During the operation period, after three expert reviews, 31 provinces, municipalities and Hong Kong, Macao and Taiwan regions have accumulated 102 large-scale exhibitions, more than 200 small-scale exhibitions, more than 1000 vehicles and more than 4000 construction personnel.

During the operation period, the safety inspection, supervision and environmental hygiene guarantee of the exhibition garden should be done well. The Engineering Department, the Operation Management Department, the Second Recruitment and Exhibition Department of the World Horticultural Exposition Bureau and the main responsible units of relevant industries jointly carried out five safety patrols and inspections, and found more than 100 potential safety hazards, followed up and implemented rectification in time to ensure the overall safe, stable and orderly operation of the Chinese Horticultural Exhibition Area; In order to ensure the overall environment of Beijing Expo and the atmosphere of visitors, the Expo Bureau implemented a daily inspection system from the opening to the closing of the Expo, totaling 324 inspections. More than 150 problems of domestic waste and green waste have been solved in time.

Do a good job in the overall coordination of provincial and municipal days, provincial and municipal subordinate prefecture-level cities (leagues) theme activity days and enterprise activity days. As the construction of exhibition stands, the logistics transportation for the entry of activity facilities and equipment, and the rehearsal of activity personnel are all at night, there are often unexpected situations that logistics vehicles and personnel need to coordinate their entry, which the staff of the Expo Bureau actively coordinate and solve. During the formal operation period, 331 activities were coordinated in provinces, municipalities, Hong Kong, Macao and Taiwan, and municipalities (leagues). More than 100 publicity and promotion activities were held to assist more than 500 people and vehicles in and out of 24000 during the event.

China Pavilion Exhibition Service Group actively completes the exhibition service work of indoor exhibition areas in various provinces, districts and cities, and coordinates and implements 2431 reasonable needs of exhibitors in provinces, districts and cities during operation, so as to solve the problems of catering and daily drinking water for exhibitors in a timely manner; Straighten out all logistics reporting, certificate processing, temporary personnel into the park and other matters; Cooperate with important guests to do a good job of protocol reception; Carefully carry out the management of volunteers in the library. A total of 156 volunteer pre-job training and post management work have been completed, and 1972 volunteer services have been completed in the exhibition hall; More than 4000 times of garbage left by tourists were picked up. The exhibition service work has been carried out effectively, orderly and effectively, which has won the affirmation and praise of the exhibitors in various provinces and regions.

Organize representatives of domestic exhibitors to attend the opening and closing ceremonies, and cooperate with the central government, provinces, municipalities and leaders of Hong Kong, Macao and Taiwan in the reception work. The Expo Bureau invited representatives from 31 provinces, municipalities, Hong Kong, Macao, Taiwan and participating enterprises to participate in the opening and closing ceremonies, collected and produced about 500 guest certificates and 51 vehicle certificates, and communicated with the Beijing Municipal Administration of Organs Affairs on the agenda and reception details of the domestic guests to ensure their smooth participation in the opening and closing ceremonies.

During the construction period, the governments of all provinces, municipalities and Hong Kong, Macao and Taiwan regions attached great importance to the Beijing Expo, and the competent leaders of all provinces, municipalities and departments visited the site many times to guide the construction and exhibition work. The Office of the Expo Bureau, the Protocol Department, the Exhibition Department II and other relevant departments cooperate with each other to establish a rapid response mechanism and working procedures, formulate detailed reception plans, and scientifically plan reception routes, so as to make the reception work smooth, orderly and efficient.

During the construction period, the Expo Bureau organized 103 on-site reconnaissance and reception missions involving more than 1,660 people from various provinces, autonomous regions and

municipalities, Hong Kong, Macao, Taiwan regions and enterprises in China, including about 35 reconnaissance and reception missions led by provincial and ministerial-level leaders and department-bureau-level leaders, totaling 525 people. According to incomplete statistics, since 2019, more than 930 batches and more than 25000 people have been received from provinces, municipalities, Hong Kong, Macao and Taiwan to visit the park for investigation, supervision of exhibition leaders and cooperation with protocol reception.

### Chapter III Work of International Exhibitor Invitation

The 2019 Beijing World Horticultural Exposition is an A1 international horticultural exposition with the largest number of international exhibitors in history, with 114 countries and international organizations participating in the exposition, including major economies such as Russia, Britain, France, Germany, Japan, India and horticultural developed countries such as Belgium, Singapore and the Netherlands. The 2019 Beijing World Park Expo has been highly recognized by Bie and AIPH and widely praised by international exhibitors, promoting exchanges and practical cooperation between China and other countries and international organizations, further expanding the circle of friends and influence, and is a concrete practice of practicing Xi Jinping's thought of building ecological civilization and an important home diplomatic activity.

The 2019 Beijing World Park Expo bears the role of China's demonstration of ecological civilization construction, demonstration of beautiful homes, and leading the development of green industry. According to the requirements of the Organizing Committee, following the relevant regulations of the International Exhibition Bureau and the International Association of Horticultural Producers, focusing on the theme of "Green Life and Beautiful Home", with world vision, national height, professional level, innovative ideas, scientific design and meticulous implementation, the achievements of world flower horticulture development are fully displayed. It fully demonstrates the Chinese cultural tradition and the strategic idea of building a beautiful China, and fully demonstrates the fruitful achievements of the construction of ecological civilization in China.

At the 165th Plenary meeting of the International Exhibition Bureau, representatives of participating countries fully affirmed the theme of "Green Life and Beautiful Home", and expressed their hope to continue to deepen exchanges and cooperation with China and jointly build a beautiful home. The 64 participating countries along the "one belt and one road" all thanked China for its strong support for the participation of all countries, and highly recognized the green development concept of the Beijing World Garden Expo and its display, which injected strong impetus to promote the high

quality development of the "one belt and one road".

International exhibition invitation is an important part of the preparations for the 2019 Beijing World Park Expo and an important guarantee for the success of the Beijing World Park Expo. By carrying out effective international invitation work, more countries, international organizations and enterprises can participate in the 2019 Beijing World Park Expo, which is not only to fulfill the international commitments at the time of bidding, to reflect the need for China to be a responsible big country and to show the good image of a beautiful China, but also to enhance the international influence of the 2019 Beijing World Park Expo and to promote the vigorous development of the world horticultural industry. The impact is far-reaching.

The Expo Bureau specially set up an exhibition department to take charge of international exhibition and exhibition services.

International invitation and participation services include introducing Beijing Expo to various countries and international organizations around the world and inviting official exhibitors to participate in the Expo; To study and formulate the overall work plan for international exhibition invitation, establish the working mechanism for international exhibition invitation, and implement the objectives of international exhibition invitation for Beijing Expo; It connects with the Ministry of Foreign Affairs and the member units of the Organizing Committee of the China Council for the Promotion of Trade, the relevant ministries and commissions in Beijing, embassies and representative offices of international organizations in China. Multi-level, multi-channel and all-round international exhibition invitation work; To study and draft policies on exhibition assistance and methods for the management and use of assistance funds; To formulate various kinds of legal texts such as exhibition contracts, exhibition assistance contracts, exhibition guides, garden donation agreements, etc; To organize and review the design scheme of the exhibition garden and the exhibition hall submitted by the international exhibitors; Coordinate and promote the construction and construction of international exhibition parks and pavilions; To organize representatives of international exhibitors to attend the opening ceremony and hold various activities such as "National Day" and "Honor Day"; Reception of domestic and foreign dignitaries to visit the Beijing World Garden Expo; Provide all kinds of interpretation and translation services for Beijing Expo. Establish a "one-stop" exhibition service center and a "one-to-one" service guarantee team to provide guidance, support and service guarantee for the preparation, operation and arrangement of international exhibitors. In order to ensure the smooth development of international exhibition invitation, the Expo Bureau has studied and drafted a number of international exhibition service documents. In light of the actual situation of participation assistance for large-scale exhibitions such as the World Expo and the Kunming World Garden Expo in recent years, we should fully investigate the exhibitors and the specific contents and methods of assistance, and form participation assistance policies and programs. Including the principles of the use of aid funds, the identification of aid objects, the establishment of aid projects, the use and payment of funds, etc; At the same time, taking into account the overall diplomatic situation and the actual situation of some international exhibitors,

we should adjust the aid policy at the right time, encourage more countries, especially developing countries, to participate actively, and further expand the participation and influence of Beijing Expo.

To promulgate the Measures for the Management of the Use of Exhibition Assistance Funds and standardize the operation of assistance funds; To formulate legal texts such as exhibition contracts of recipient countries, non-recipient countries and international organizations, relevant exhibition assistance contracts and donation agreements for exhibition gardens.

Based on the provisions of the General Regulations and the Special Regulations, the Exhibition Guide, Service Manual, Logistics Manual, Insurance Manual and other documents are compiled to provide guidance and support for the rights and obligations of international exhibitors in exhibition, construction, exhibition, operation, organizational activities and personnel security.

## Section 1 Exhibitor Invitation Plan

In 2015, under the guidance of the China Council for the Promotion of Trade and the China Flower Association, through repeated consultations with the International Exhibition Bureau and the International Association of Horticultural Producers, and in-depth exploration with expert teams, on the basis of investigating the exhibition invitation work of similar activities in Kunming World Garden Expo and Shanghai World Garden Expo, the Bureau analyzed the past five A1-type Expo. According to the overall goal of the exhibition of the Expo in 2019, the potential exhibitors are classified and studied. According to the different objects, nature and process of exhibition invitation, the overall plan of international exhibition invitation for Beijing Expo 2019 has been formed.

In December 2015, the second meeting of the Organizing Committee of the World Horticultural Bureau deliberated and adopted the General Plan for International Exposition of the 2019 Beijing World Horticultural Exposition. The overall plan includes five parts: the purpose and significance of international exhibition invitation, the objectives and categories of international exhibition invitation, the work flow of international exhibition attraction, the working mechanism of international Exhibition invitation and the working plan of international exhibition invitation, as well as the annex "Functions and Operational Plan of the Leadership Mechanism of International Exhibition Invitation".

### I. International Exhibitors

When bidding for the World Garden Expo in 2012, the "two 100" exhibition target was set, that is, no less than 100 official exhibitors, including countries and intergovernmental international organizations; There are no less than 100 unofficial exhibitors, including non-governmental international organizations, domestic and foreign enterprises, individual exhibitors and domestic provinces, regions and municipalities.



According to the overall plan, Beijing Expo 2019 will invite all countries to participate in the exhibition, taking into account the development level of horticultural industry and diplomatic relations with China, 163 key countries (regions) will be identified according to the situation of participating in the first five A1 type Expo. Among them, 44 are in Asia, 51 in Africa, 38 in Europe, 16 in the Americas and 14 in Oceania.

Asia (44): Japan, Korea, Pakistan, India, Yemen, Nepal, Democratic People's Republic of Korea, Thailand, Indonesia, Vietnam, Bangladesh, Turkey, Cambodia, Sri Lanka, Malaysia, Philippines, Laos, Brunei, Bhutan, Afghanistan, Israel, Bahrain, Tajikistan, Singapore, Iran, Iraq, United Arab Emirates, Qatar, Myanmar, Palestine, Azerbaijan, Armenia, Kazakhstan, Uzbekistan, Lebanon, Oman, Mongolia, Turkmenistan, Kyrgyzstan, Syria, Jordan, Saudi Arabia, Kuwait, Georgia.

Africa (51): Kenya, Sudan, Mauritania, South Africa, Tanzania, Gabon, Burundi, Tunisia, Morocco, Guinea, Cameroon, Ethiopia, Egypt, Algeria, Togo, Equatorial Guinea, Nigeria, Benin, Zimbabwe, Madagascar, Djibouti, Gambia, Seychelles, Niger, Burkina Faso, Eritrea, Congo (Brazzaville), Congo (Kinshasa), Lesotho, Mali, Central African Republic, Côte d'Ivoire, Angola, Senegal, Namibia, Rwanda, Sierra Leone, Uganda, Mauritius, Mozambique, Guinea-Bissau, Liberia, Ghana, Libya, Chad, Zambia, South Sudan, Botswana, Malawi, Cape Verde, Comoros.

Europe (38): Bulgaria, Netherlands, Spain, Germany, Belgium, Slovakia, France, Italy, Hungary, Poland, Russia, Finland, Greece, Austria, Denmark, Switzerland, Sweden, Estonia, Ukraine, United Kingdom, Moldova, Czech Republic, Romania, Latvia, Croatia, Luxembourg, Albania, Lithuania, Montenegro, Belarus, Serbia, Ireland, Malta, Slovenia, Monaco, Portugal, Macedonia, Bosnia and Herzegovina.

Americas (16): Bolivia, Canada, Peru, Colombia, Chile, Mexico, Brazil, Ecuador, Cuba, Trinidad and Tobago, Argentina, Uruguay, Jamaica, Costa Rica, Venezuela.

Oceania (14): Australia, New Zealand, Samoa, Solomon Islands, Vanuatu, Tuvalu, Kiribati, Marshall Islands, Nauru, Fiji, Tonga, Palau, Papua New Guinea, Micronesia (Federated States of).

In addition to 163 key countries, 28 key intergovernmental international organizations have been identified according to the characteristics of international organizations and their relevance to the 2019 Beijing World Garden Expo. United Nations, League of Arab States, European Union, Association of Southeast Asian Nations, African Union, Community of Latin American and Caribbean States, United Nations Environment Programme, United Nations Framework Convention on Climate Change, UN-Habitat, World Trade Organization, World Intellectual Property Organization, World Meteorological Organization, World Tourism Organization, International Fund for Agricultural Development, United Nations Development Programme, World Food Programme, Food and Agriculture Organization of the United Nations, International Atomic Energy Agency, International Union for the Protection of New

Varieties of Plants, Center for International Forestry Research, United Nations High-level Political Forum on Sustainable Development, UNESCO, International Network for Bamboo and Rattan, Shanghai Cooperation Organization, Pacific Islands Forum, Caribbean Community, World Health Organization, World Organization for Animal Health, etc.

In addition, unofficial exhibitors include non-governmental international organizations such as the World Conservation Union, the Environmental Protection Association, the World Animal Conservation Foundation, international enterprises related to the World Garden Fair, friendly cities in Beijing, individual exhibitors, etc.

## II. Workflow of International Exhibitor Invitation

According to the guidelines of the International Exhibition Bureau and the International Association of Horticultural Producers, the General Plan for International Exposition of the 2019 Beijing World Horticultural Exposition in China defines the basic work flow of international exhibition invitation as follows:

The above work flow mainly aims at official exhibitors, while the work flow of international non-official exhibitors can be adjusted appropriately.

## III. Working Mechanism of International Exhibitor Invitation

### (1) Leadership Mechanism for Exhibitor Invitation Work

According to the requirements of the International Exhibition Bureau, official invitations should be issued by the leaders of the country and delivered through official diplomatic channels. Therefore, under the unified leadership of the Organizing Committee of the Expo Bureau, a "5 + 1" international exhibition invitation mechanism led by Beijing Municipality will be established, namely: the Ministry of Foreign Affairs, the State Forestry Administration, the China Council for the Promotion of International Trade, the China Flower Association, the Beijing Municipal Government and the Chief Representative of the Government of Beijing Expo 2019. The "5 + 1" Exhibitor Invitation Leadership Mechanism is jointly coordinated and organized by the general representative of the government and the municipal leaders in charge of the work of Beijing Expo, and its main responsibility is to make unified planning, guidance and implementation of the international exhibitor invitation work.

### (Two) promotion mechanism of exhibition work

As the specific implementation unit of the international exhibition invitation for the 2019 Beijing World Park Expo, the Expo Bureau, on behalf of the Beijing Municipal Government, undertakes the work of the relevant Secretariat, is responsible for formulating specific international exhibition invitation plans, and establishes a cross-sectoral exhibition invitation promotion mechanism in which the director in charge is responsible, the exhibition invitation department is in the lead, and the relevant

departments of the Bureau jointly participate. To coordinate and promote the work of international exhibition invitation, the specific tasks include:

1. To formulate the implementation plan and schedule of the exhibition solicitation work;
2. Regular meetings of international exhibitors are organized to carry out international exhibition invitation work on a large scale;
3. Organize lobbying communications and technical consultations with target participating countries;
4. Coordinate and formulate the caliber of the exhibition on the key problems encountered in the exhibition;
5. Coordinate with government departments to formulate relevant policies to support the invitation and participation of exhibitors;
6. Coordinate and solve the difficulties and problems encountered by the exhibitors in the exhibition.

#### Work Plan for International Exhibitor Invitation

##### (1) Establishing the Working Mechanism for International Exhibitors by December 2015

The Beijing International Horticultural Exposition Bureau will submit a list of suggestions to the liaison group of the organizing committee, and the liaison group will send a letter to solicit opinions. The Ministry of Foreign Affairs, the State Forestry Administration, the China Council for the Promotion of International Trade, the China Flower Association and the Beijing Municipal Government will determine the leading leaders and relevant departments and bureaus to specifically dock with the international exhibition invitation work.

##### (2) Appointment of the General Representative of the Government in the First Half of 2016

According to the provisions of the Convention on International Exhibitions and the General Regulations of the Expo 2019, the Chinese government shall appoint a general representative to communicate and contact with foreign governments and international organizations on behalf of the Chinese government on matters related to participation in the Expo 2019, and to be responsible for timely notifying the Bie of confirmation of participation and signing of Participation Contracts by participating countries.

##### (3) Invitation letters issued by classification in the first half of 2016

1. Invitation letters to countries with diplomatic relations are signed and issued by the Prime Minister and delivered by Chinese embassies and consulates abroad;
2. Countries with no diplomatic relations with China are invited by our mission to the United Nations;
3. Invitations to intergovernmental international organizations are issued by the Minister for Foreign Affairs;
4. Invitations to international non-governmental organizations are issued by the Beijing Municipal Government;

5. Invitation letters from enterprises and individuals are issued by Beijing Expo Bureau.

(4) From 2016 to 2018, we will comprehensively carry out the work of soliciting exhibitors.

1. According to the feedback from various countries after the invitation letter was issued, we should carry out all-round, multi-channel, multi-level and focused lobbying and communication.

(1) Include the 2019 Beijing World Park Expo in the discussion of foreign affairs activities of state leaders, and make full use of national diplomatic channels to invite countries to participate in the 2019 Beijing World Park Expo;

(2) Through the National People's Congress, the CPPCC and various mass organizations, we should do a good job in the docking and lobbying of international exhibitors, not only relying on official and semi-official channels, but also using public relations and commercial cooperation to promote the 2019 Beijing Expo through various channels;

(3) Make good use of global and regional international organizations such as the United Nations, the League of Arab States and the African Union to promote participation in exhibitions;

(4) to work closely with the International Bureau of Expositions and the International Association of Horticultural Producers to give full play to its influence in the member countries to promote the participation of the countries concerned. The International Exhibition Bureau has 169 member countries, the International Horticultural Producers Association has 22 member countries, through the annual International Exhibition Bureau and the International Horticultural Producers Association Plenary meeting, executive committee meeting, rules committee meeting to promote the 2019 Beijing Expo to representatives of member countries;

(5) Make good use of the platform of recent World Expo and World Horticultural Expo, seize the opportunities of World Horticultural Expo Milan, Italy, 2015, Antalya, Turkey, 2016 and Astana, Kazakhstan, 2017, on the one hand, strengthen communication and cooperation with organizers and learn from them; On the other hand, we should use these platforms to establish channels of communication with various exhibitors and promote international exhibition invitation.

2. Confirmation of participation by participating countries.

According to the experience of previous World Expositions and World Horticultural Expositions, the two years when the invitation letters are issued are the peak of confirming the participation, and also the important time window to do a good job in the exhibition solicitation work of Beijing World Horticultural Exposition in 2019. The overall plan determines that we should firmly grasp the key period of the exhibition lobbying work in 2016-2017, strive for more countries and international organizations to confirm the exhibition as soon as possible, and reserve time for exhibitors to participate in high-quality exhibitions. By the end of 2018, 100 countries and intergovernmental international organizations will strive to confirm their participation in the exhibition, and the exhibition work will be basically completed.

(5) From 2017 to 2018, the exhibition contract and assistance contract were signed.

After the official exhibitors confirmed their participation in the exhibition, the focus of their work was to transform the political will of the participating countries into their legal obligations, and the basic policy of this stage was "consolidating achievements, focusing on expansion, strengthening services and preventing retrogression".

On the basis of communication and consultation to achieve the three identified, so as to achieve the "Participation Contract" signed: First, to determine and appoint representatives of the exhibition area. As the person in charge of the exhibitor's exhibition affairs and signing the Exhibition Contract on behalf of the exhibitor; The second is to determine the theme of the exhibition. Assist the exhibitors to fully understand the theme meaning of the 2019 Beijing Expo, and assist the exhibitors to deduce the theme; The three is to determine the way and location of the exhibition. Negotiate to determine the exhibitors to participate in the exhibition garden or indoor exhibition, and determine the location and area of the exhibition area.

The Exhibition Contract solidifies and confirms the key information of the exhibitors, such as exhibition theme, exhibition mode, exhibition area location, commercial activities, time schedule and so on, in the form of legal texts. For the recipient exhibitors, the Aid Contract will be signed simultaneously.

(6) In 2017-2019, the exhibition service work will be launched in an all-round way.

Entering the stage of exhibition garden construction in 2017, after completing most of the exhibition work, the focus of work gradually shifted to the exhibition service work, to ensure the quality of exhibition, to ensure the smooth progress of garden construction and exhibition work. First, the important work content is to lead the work of the Steering Committee, unite and utilize the strength of friendly countries, reduce resistance in the work, and promote the construction of the park; Second, in order to facilitate the landing of exhibitors' exhibition plans, through the "Exhibition Guide", website, service hall and other means to provide comprehensive and thoughtful services for exhibitors; Third, around the landing of the exhibition plan, the work content of this stage involves the construction of the exhibition garden and exhibition area, exhibition, and the activities of exhibitors (focusing on the daily activities of exhibitors' halls), forums, commercial activities, customs clearance and inspection and quarantine of exhibits, personnel entry and exit, accommodation, logistics, security, public services, exhibition costs, the use of aid funds and so on.

Establish exhibition service team. After the exhibitors sign the exhibition contract, the organizer establishes a service team to provide one-to-one service to the official exhibitors, and is responsible for the construction, operation and management of the exhibition hall.

## Section 2 The recruitment process

The work of international exhibition solicitation is to achieve the goal of "two 100" exhibition solicitation as the core and gradually promote it.

### 1. Implementing the working mechanism and gradually promoting the work of international exhibition invitation

#### *(1) Finished issue invitation letter*

On July 8, 2016, Premier Li Keqiang issued an invitation letter on behalf of the Chinese Government, inviting 197 countries and international organizations to attend the Beijing World Garden Expo, and the international exhibition invitation work was officially launched.

On August 8, 2016, Foreign Minister Wang Yi issued an invitation letter for foreign exhibitors. The invitation letter proposes that the Chinese government appoints Wang Jinzhen as the general representative of the government of Beijing Expo 2019, representing the Chinese government to communicate and contact with governments and relevant international organizations on matters related to participation in the Expo.

On August 11, the Ministry of Foreign Affairs sent letters of invitation to 172 countries that have diplomatic relations with China and 23 countries that have not diplomatic relations with China through Chinese embassies and consulates and Chinese missions to the United Nations. On August 25, the Ministry of Foreign Affairs issued official invitations to 25 intergovernmental international organizations, and initiated the procedure of issuing invitations to international unofficial exhibitions. On September 1, the Cooperative Republic of Guyana officially confirmed its participation in the Beijing World Park Expo, becoming the first international participant to confirm its participation.

#### *(2) Convening the "5 + 1" mechanism meeting*

On February 1, 2016, the first working meeting of the international exhibition invitation mechanism of Beijing World Garden Expo was held, which launched the "5 + 1" working mechanism and clarified the division of responsibilities. On August 2, the second working meeting was held to establish a "5 + 1" international exhibition information feedback mechanism, establish a special report system, clarify the responsibilities of each member unit, integrate and process international exhibition information through multi-channels and multi-forms, and strengthen information liaison and communication among various departments.

#### *(3) Formation of working teams*

Based on the particularity of international exhibition work and the confidential requirements of foreign affairs work, international exhibition work needs a team with high political awareness, familiarity with foreign affairs work and relatively stable personnel. The Expo Bureau has introduced foreign language professionals from universities, social recruitment and cooperative units. At the same

time, the Ministry of Foreign Affairs has consulted on the recruitment of retired diplomats and the formation of an international exhibition team. The team has been trained in a large number of professional knowledge such as foreign affairs, consular protection, confidentiality, engineering, horticulture and so on, so as to make the team more competent.

## Two, increase international liaison.

In preparation for the Expo, the Exhibitor Invitation Department I of the Expo Bureau mobilized resources from all quarters to promote the Expo through main diplomatic channels and the mechanism of international invitation for exhibitors, including visits to embassies and consulates, high-level exchange of visits, work exchanges and global promotion. It paid 308 visits to embassies and consulates of 175 countries and representative offices of international organizations; It has received 240 visits, consultations, surveys and visits from 92 countries. He met with 244 ambassadors to China and officials above vice-ministers, held 79 national days, honor days and cultural and technological exchanges, and attracted more than 11000 international friends.

Through the spring and autumn meetings of the International Association of Horticultural Producers (AIPH), the annual meeting of the International Exhibition Bureau (Bie), the 16 + 1 Forum of Mayors of Capital Cities of China-Central and Eastern European Countries and other platforms to promote the Beijing World Park Expo, hold briefings for envoys, international non-governmental organizations, Shanghai Cooperation Organization, East African Community, International Bamboo and Rattan Organization Promotion Conference and other special promotion.

In March 2016, the Exhibitors' Department I of the Expo Bureau went to Canada to participate in the spring of 2016 AIPH, to report on the progress of preparations for the 2019 Beijing World Park Expo, and to carry out promotion and advance international exhibition related work.

From May 24 to June 2, 2016, the Chinese side organized a delegation to attend the Antalya International Horticultural Exposition in Turkey, and carried out publicity and promotion work for the Beijing International Horticultural Exposition. During the visit, they visited 49 national gardens and pavilions, as well as the Taipei Garden and the Hong Kong Garden, distributed publicity materials and exhibition brochures for the Beijing Expo, contacted 21 general representatives of national governments or heads of national exhibition areas, and introduced the basic situation of the Beijing Expo, which actively carried out exhibition invitation and promotion work.

On April 13, 2017, more than 100 envoys and representatives of international organizations from more than 80 countries and international organizations were invited to attend the briefing of envoys to China for the 2019 Beijing World Park Expo. The meeting showed the vivid practice and remarkable results of the Chinese government and Beijing Municipality in actively promoting the work of the Beijing Expo, and promoted the ambassadors of various countries to strengthen their work after the meeting and promote their participation in the Beijing Expo. This briefing is the first time that Beijing



Expo has promoted and appeared to foreign envoys, which plays a very important role in promoting the international exhibition work.

From June 25 to 26, 2018, the first international meeting of exhibitors was held in Beijing Hotel, with more than 180 delegates from 88 countries and international organizations invited to attend. The meeting introduced in detail the park planning, project progress, Yanqing territorial security and other preparatory work progress, and on the news publicity, activity organization, visa residence, quarantine clearance, admission construction, exhibition, commercial activities, exhibition services and other detailed explanation and put forward clear requirements for international exhibitors. This conference marks the transition of the international exhibition work of Beijing Expo from the stage of exhibition invitation to the stage of construction and exhibition arrangement, and plays a very important role in promoting the international exhibition invitation and exhibition work.

On August 14, 2018, 80 countries and 20 international organizations confirmed their participation in the Beijing World Garden Expo, and the international exhibition target of 100 international exhibitors was successfully achieved. In the end, the Beijing World Garden Expo attracted 110 countries and international organizations to participate in the exhibition, the most ever in the World Garden Expo, exceeding the international exhibition target of "100 official exhibitors".

On April 28, 2019, President Xi Jinping presided over the opening ceremony of the Beijing World Garden Expo, which was attended by 11 heads of state and representatives of 110 countries and international organizations.

During the Beijing World Park Expo in 2019, 86 countries and 24 international organizations participated in the exhibition, and many official exhibitors held National Day and International Organization Honor Day activities, focusing on the display of colorful garden vegetation, natural landscape and human customs, focusing on the promotion of distinctive superior industries, business environment and economic and trade platforms. It has promoted friendly exchanges among people of all countries and the development of bilateral economic and trade relations. •

On June 6, 2019, Hu Chunhua, Vice Premier of the State Council and Chairman of the Organizing Committee of Beijing International Horticultural Exposition, attended the opening ceremony at Gui You Theatre.

China National Pavilion Day and delivered a speech.

On October 9, 2019, Premier Li Keqiang of the State Council delivered a speech at the closing ceremony of the Beijing World Park Expo, proposing to continuously strengthen exchanges and cooperation in the field of ecological civilization and promote the sharing of achievements.

### Section 3 Exhibitor Services

From June 25 to 26, 2018, the first international meeting of exhibitors of the Beijing World Garden Expo was held in Beijing. Dimitri Cockentes, Deputy Secretary-General of the International Exhibition Bureau (Bie), Tim Blackcliffe, Secretary-General of the International Association of Horticultural Producers (AIPH), more than 180 representatives (including 37 general representatives and 14 ambassadors) from 82 countries and 6 international organizations, and leaders of relevant units of the state and Beijing attended the meeting. At the meeting, 20 international exhibitors signed the Exhibition Contract, organized on-site questions and answered questions on behalf of the participants, and carried out special promotion activities for unconfirmed participating countries and international organizations. Through conference announcements, on-site questions and on-the-spot visits, the conference introduced in detail the progress of preparatory work such as park planning, project progress and Yanqing territorial security to international exhibitors, and on news publicity, activity organization, visa residence, quarantine clearance, admission construction, exhibition and exhibition, commercial activities, etc. During the meeting, four special presentations were also organized for African countries, South Pacific island countries, Caribbean Community countries and Central American countries to explain in detail the policy of joint participation, and to reach basic agreement with various countries on the above issues, laying the foundation for the smooth progress of the next step.

Successfully organized representatives of international exhibitors to participate in the opening and closing ceremonies. 110 international exhibitors were invited to attend the opening and closing ceremonies, and international exchange delegations were received at the Beijing Expo; A total of 99 foreign visiting groups have received more than 1900 VIPs, including 11 heads of state groups, 49 officials at or above the ministerial level, such as Ghanaian Foreign Minister Bochiwei, Turkish Trade Minister Pekcan, 108 officials at the ambassadorial level, such as French Ambassador to China Li Xiang and German Ambassador to China Ge ce.

More than 100 National Day and Honor Day activities were successfully held. During the Expo, more than 100 national days, honor days and cultural and technological exchange activities were held, attracting more than 12000 international friends, and more than 20 foreign participants were organized to participate in the promotion activities of provinces, regions and cities in China, which promoted bilateral exchanges and pragmatic cooperation. Germany, the Netherlands, the Food and Agriculture Organization of the United Nations and other countries and international organizations expressed their

appreciation for the organization of the Beijing Expo and the support and cooperation given to international participants.

In particular, a professional team of 50 people will be set up to coordinate the international exhibition services in a one-to-many way according to the characteristics of various countries and international organizations and their exhibition scale, so as to provide convenient and efficient exhibition services for international exhibitors.

At the same time, Beijing Expo Bureau has also established an Expo Service Center with a total floor area of nearly 2,500 square meters, which includes service counters of inspection and quarantine, logistics and warehousing, industrial and commercial taxation, network communication and information consultation, etc. The service content covers many fields such as exhibition affairs handling, commercial service booking and information release, providing centralized and efficient "one-stop" service. During the preparation and holding of the World Horticultural Exposition in Beijing, the Exhibitors' Department I of the Expo Bureau actively cooperated with the operation and management of the International Horticultural Exhibitions, and completed the application for 1230 visa detention. 4970 passenger and vehicle certificates were processed, and 425 problems such as maintenance of exhibition halls, entry of exhibits and materials, application for business licenses, catering and accommodation of personnel were coordinated and solved.

In the process of international invitation and exhibition services, the first department of invitation of exhibitors of the Expo Bureau undertakes most of the translation and interpretation work in external liaison. Accumulated participation in international exhibitors exchange of mail 25361, telephone, fax and various off-site consultations accumulated 19854 times, drafting work negotiation sheet 254, coordinate and solve international exhibitors various problems more than 900 times; More than 720,000 words of foreign language have been translated and 840 hours of interpretation have been completed (534 hours for English, 136 hours for French, 30 hours for Spanish, 60 hours for Arabic, 48 hours for Russian and 32 hours for German). It has played an important role in the success of the Beijing International Horticultural Exposition.

#### Section IV. Assistance programmes

According to the tradition of the Expo, in order to encourage more countries, especially developing countries, to participate in the Expo, encourage participating countries to exhibit high-quality products and improve the quality of exhibition, the host country will provide a certain amount of financial assistance to developing countries. Beijing Expo also made a commitment to exhibition assistance in the General Regulations adopted by the 155th General Assembly of the Bureau of

International Expositions on June 11, 2014.

In order to achieve the goal of inviting no less than 100 countries and intergovernmental international organizations to the Beijing World Garden Expo, fulfill the bid commitment and let more countries and international organizations participate in the Beijing World Garden Expo, referring to the successful experience of similar exhibitions such as the 1999 Kunming World Garden Expo and the 2010 Shanghai World Expo, and combining with the objectives and actual situation of the 2019 Beijing World Park Expo. The Beijing Expo Organizing Committee will provide 200 million yuan of assistance to eligible participants, which will be funded by the Beijing Municipal Government.

Assistance for participation in Expo 2019 Beijing will be targeted at least developed countries, as identified in the latest Least Developed Countries Report of the United Nations Commission on Trade and Development; Low- and middle-income countries, according to the latest World Development Indicators of the World Bank; An international organization that is an official exhibitor.

In order to standardize and clarify the recipients, application procedures, use channels and payment methods of the aid funds, the Expo Bureau has formulated the Exhibition Assistance Program for the 2019 Beijing World Horticultural Exposition (hereinafter referred to as the Assistance Program).

In the aid plan, the Bureau of Coordination of Beijing World Horticultural Exposition, under the authorization of the Organizing Committee and the Executive Committee of Beijing World Horticultural Exposition, is specifically responsible for the formulation of the rules of participation assistance funds and the use and management of funds.

Under the assistance programme, any eligible developing country participating in the exhibition may apply to the organizer for participation assistance. The payment method of exhibition assistance funds is mainly transfer payment. Within the scope of aid funds, the recipient can only choose the supplier designated by the sponsor. After signing the Aid Contract, if it is really necessary for the recipient to adjust the aid projects and project amount, it may, with the approval of the organizer, make appropriate adjustments within the scope and conditions of the project stipulated by the organizer, but the total amount of aid to the recipient remains unchanged.

According to the Special Regulations No.2 of Beijing Expo, those who meet one of the following criteria belong to the recipients of exhibition assistance funds.

1. Category I: least developed countries, as identified in the Least Developed Countries Report of the United Nations Commission on Trade and Development;
2. Category II: Low- and middle-income countries, according to the World Bank's World Development Indicators.
3. International Organization

When judging whether a country is eligible for assistance according to its national income, it should be based on the national income data published by the World Bank one year before it signs the Exhibition Contract. After a country has signed the Participation Contract, its country classification will not change. In accordance with international practice, the organizers will provide assistance to

international organizations as official exhibitors, and the criteria for assistance will be implemented in accordance with the criteria for assistance to recipient countries.

For the exhibitors who meet the aid conditions, the amount of assistance for the construction of exhibition gardens shall not exceed 3 million yuan; Exhibitors who only participate in indoor exhibitions provide assistance not exceeding 2 million yuan. The organizer and the official exhibitors will sign the Assistance Contract on the basis of the assistance program determined by both sides. The Assistance Contract will serve as an important basis for the organizers to implement assistance to official exhibitors.

The **participation assistance funds** will be used mainly for the following items: consultation fees for official exhibitors to prepare participation plans; Expenses for design, layout and disassembly of the official exhibitor display area; Operating costs of the official exhibitor display area; Customs clearance, transportation, storage and insurance costs for official exhibitors and exhibits; The cost of communication and promotion of official exhibitors in China; Expenses incurred by official exhibitors in organizing relevant activities; Expenses for official exhibitors, VIPs and their spouses to attend relevant activities in Beijing; Expenses for some activities of the official exhibitors and press corps in Beijing; The cost of training official exhibitor staff on the operation of the pavilion; Expenses incurred by the official exhibitor's staff during the exhibition period.

## Part VI Activities

Focusing on the theme of "Green Life and Beautiful Home", the cultural activities of Beijing Expo are divided into pre-conference activities and in-session activities. Pre-conference activities include the collection of emblems, mascots and songs, as well as the countdown activities such as the two-year countdown, the one-year countdown, the 200-day countdown and the 100-day countdown, which serve the goal of inspiring morale and publicizing and promoting in the preparation of Beijing Expo. It shows the phased goals and tasks of the intensive and orderly progress of the preparations for the Beijing World Garden Expo.

A total of 3284 cultural activities were held during the Beijing World Garden Expo. Cultural activities during the session are divided into five sections: First, key activities, including the opening ceremony, opening activities, China Pavilion Day, closing ceremony, fully demonstrating the style of a big country, showing the style of a new era;The second is daily activities, including "National Day", "Honor Day", "Provincial Day" and flower car parade, which show the world's horticultural achievements and artistic essence.180 float parade performances, through ten "ecological floats" made of fresh plants, tell the Chinese cultural story of "one car, one story, ten cars and one long volume";Third, professional forums and international competitions, for the audience presented a tense, intense and beautiful flower festival;Fourthly, the gathering of world national folk culture and excellent brand cultural activities present various performances full of exotic customs and diverse forms for the audience every day.It fully demonstrates the pluralistic charm of art at home and abroad;Fifthly, the science and technology section "Light of Science and Technology Innovation Picture Scroll", including "Fantastic Light and Shadow Forest", "Music Fountain Performance", "Lighting Show Performance", "Resident Show Performance" and "Robot Performance" and other performances with scientific and technological content, gather the latest audio-visual technology, make full use of the natural landscape of the park, and through modern stage technology It presents a beautiful picture scroll to show the achievements of ecological civilization.

## Chapter I Key Activities

Opening and closing

## Chapter II Daily Activities

### I. "National Day""Honor Day"

In accordance with international practice, participating countries and international organizations can choose one day as the official celebration day to carry out activities during the Beijing World Garden Expo, which include garden visits, literary and artistic performances, exhibitions, tourism promotion, regional cultural activities, etc namely the "National Day" and "Honor Day" activities.

During the Beijing World Garden Expo, a total of 95 national days and 8 honor days were held. On the stage of Beijing World Horticultural Expo, all exhibitors show their own characteristics, appreciate the global plant and horticultural products, exchange development experience, explore the importance of harmonious coexistence between man and nature, build the foundation of ecological civilization, and take the road of green development together. At the same time, the Beijing Expo will make foreign participants and foreign tourists fully feel the achievements of China's horticultural culture and green development.

## II "Province, District and City Day"

"Provincial Day" refers to the three days selected by each of the provinces, autonomous regions, municipalities and regions of Hong Kong, Macao and Taiwan participating in the Expo, during which activities such as garden interaction, exhibition and display, literary and artistic performances, economic promotion and cultural exchanges with special features will be carried out through the Beijing Expo to comprehensively display the cultures of various regions and ethnic minorities and deepen exchanges and cooperation.

During the Expo, over 400 events were held daily at provincial, regional and municipal levels. All provinces, autonomous regions, municipalities as well as Hong Kong, Macao and Taiwan made full use of the Expo as a platform for international exchanges to present to the world a comprehensive and three-dimensional display of local and ethnic cultures as well as achievements in ecological conservation with different characteristics. At the same time, they grasped development opportunities of related industries to jointly seize opportunities and share resources. The goal of win-win cooperation.

## III. Float Parade

Float parade performances were held every day throughout the session, with a total of 180 performances and nearly 3 million visitors, aiming to highlight

The theme of green ecology of Beijing World Park Expo will set off the festive and warm atmosphere of the park and promote cultural exchanges and integration between China and foreign countries.

Ten elaborately built ecological floats (Chinese invitations, dream-driven era, Silk Road legend, happy year, Tianyu covenant, return of the king, happy panda, Beijing rhyme, peaceful Xiangyu, melting and blooming) are composed of professional actors from Russia, Ukraine, Cuba and art students from Beijing Geely University. It combines with the traditional cultural performances of all districts in Beijing, and carries out fixed-point and parade performances in the park.

The float parade tells the story of China with a long history, brilliant culture, rapid development of scientific and technological innovation, prosperous country, peaceful people, beautiful mountains and rivers, and people, and shows the broad mind and image of a big country with the responsibility of building a community of human destiny.

## IV. World Garden Summer Music and Food Festival

From July 18 to August 31, 2019, the "Summer Music and Food Festival of the World Garden" was held in the Horticultural Town of Beijing World Garden Expo Park. Every day from 18 to 22,



famous bands, musicians and dancers from home and abroad perform wonderful performances in the gardening town, visitors can enjoy rock, jazz, blues, folk songs and other music styles.

Horticultural towns introduce local delicacies and expand catering space. In addition to watching singing and dancing performances, tourists can also drink German beer and taste French delicacies, especially the popular barbecue and seafood snacks in summer.

## Chapter III cultural activities

In addition to key activities and daily activities, a series of special cultural activities held before and during the Expo make the Expo an important platform for multi-cultural exchanges and mutual learning.

### Section 1 International Competition and Professional Forum

#### I. International Competition

The international competitions of Beijing World Horticultural Exposition are mainly divided into four categories: outdoor garden competition, indoor exhibition area competition, indoor exhibit competition of provinces, autonomous regions and municipalities in China, and indoor flower and plant competition.

The indoor and outdoor garden exhibition area competition is evaluated three times by the general jury of the international competition of the 2019 Beijing World Horticultural Expo, which is composed of 11 well-known and influential flower horticulture experts at home and abroad. The jury graded each garden and exhibition area in turn from the aspects of overall effect, design coordination, theme deduction, innovation, plant material allocation and practical reference value. After each evaluation, the Beijing Expo International Competition Organizing Committee will collect and count the scoring results, and the final results will be sealed after the signature and confirmation of Tim Blackcliffe, chairman of the general jury, all judges and the supervisory committee, and the final evaluation results will be obtained after the three scoring summaries.

#### II. Professional Forum

The professional forum activities of Beijing Expo actively promote cultural exchanges of

horticultural science and technology products around the world, build a series of professional forum platforms, carry out various forum activities in the form of cooperation or grafting, and actively advocate the concept of green development. The series of forum activities include the Beijing International Friendship and Business Association Conference (2019).Meeting、 "My green life,"My Green Home "61 International Children's Forum, 2019 Beijing World Horticultural Expo Three-dimensional Greening Summit Forum, 71st AIPH Annual Conference, World Flower Congress, Science and Technology Cultural Tourism Wisdom Innovation Summit Forum, Beijing World Horticultural Expo International Forum on Enterprise Development, China-ASEAN International Oil Tea Industry Development Forum," Peer with the World "," Peer with the Motherland "and" Peer with Me ""Go with Yanqing" Yanqing Series Forum, Guizhou Ecological Home Construction and Rural Revitalization ForumWuhan City Sustainable Development Forum, 2019 World Flower Art Competition, etc.

## Section II Gathering of World National Cultures and Brand Activities

During the Beijing World Garden Expo, the world's national cultural gathering activities in the form of a monthly theme, in the park to create an all-weather, full-layout series of cultural carnival activities, a total of more than 850 performances.Including the "National Flower Blossom" cultural festival in May, the "Flower of the World" folk art gathering in June, the "Jingyun Dazzling" Beijing folk art gathering in July, the "Six Beijing" Beijing Brand Cultural Activities Exhibition in August, the September "Yanqing Characteristic Cultural Month" series of activities and the October "Dancing World Garden" National Day special activities week series.

The "National Flower Blossom" Cultural Festival invited Qiandongnan Song and Dance Troupe, Liangshan Song and Dance Troupe, Yulin Civil Art Research Institute,

Qinghai Yushu Tibetan Autonomous Prefecture Song and Dance Troupe, Beijing Kunqu Opera Theatre and other performance teams with local characteristics throughout the country performed more than 50 performances, while in Guiyou Theatre and Lawn Theatre, a series of excellent brand activities such as "China-Central and Eastern European Cultural and Art Carnival" and "My Dream" special large-scale public welfare performances were held.

"Flower of the World" invites 11 excellent performing groups from Chile, Mexico, Estonia, Korea,

Poland, Italy, Hungary and other countries to perform hundreds of wonderful performances for tourists in Guimeng Theatre, Lawn Theatre, Baiguo Garden and West African Garden. During this period, more than 20 excellent brand activities were held, such as the opening ceremony of the 11th Beijing Dragon Boat Festival and the China Bank of Traditional Chinese Medicine.

"Jingyun Dazzling Color" Beijing Folk Art Gathering Activity has launched about 150 performances with strong historical and cultural characteristics of Beijing, such as Charming Xicheng, Cultural East City, Science and Technology Haidian, and Chaoyang.

"Six Beijing" Beijing Brand Cultural Activities Exhibition invited excellent performing groups from 12 districts of Beijing, and conducted more than 100 folk art exhibitions with local characteristics. At the same time, about 76 brand activities entered the park, including the award ceremony of the 24th National Primary and Secondary School Students' Painting and Calligraphy Competition, the 8th International Youth Art Festival of "Happy Beijing", the 12th China International Youth Art Week International Band Festival Exhibition and Closing Ceremony, and the excellent popular science drama exhibition of the Capital Popular Science Theatre Troupe.

The "Yanqing Characteristic Culture Month" series with the theme of "Guishui Great Wall Gathering" was planned by Yanqing District, the host of Beijing World Park Expo, including 197 thematic performances such as the large-scale original opera "Guichuan Song", the children's opera "Guihe Fairy", which appealed to everyone to protect the ecological environment, and the "Guichuan Story Hall" which integrated traditional opera and story telling, in order to "enter the World Park and rush to the Winter Olympics". As the theme, it shows the excellent traditional culture of the host city to the people of the world. At the same time, the launching ceremony of the theme propaganda activities of "Civilized Tourism for China Plus One Travel Courtesy" in Beijing in 2019, the special performance of "Beijing Power" Beijing workers' literature and art, the opening ceremony of the theme activities day of "Green Water on the Earth, Green Mountains at the Foot of the Great Wall" Geopark, and Beijing Mid-Autumn Festival.

## Section 3 Science and Technology Activities

### I. Mirage Forest

With the Chinese traditional cultural classic Shanhai Jing as its creative theme, the Magic Light and Shadow Forest uses AR, big data, artificial intelligence, 5G and other frontier technologies to show the exotic flowers and plants of Shanhai Jing by means of virtual vision, human-computer interaction, new media art installations, sound, light, electricity and film. It leads tourists through time and space to open an interactive experience of fantastic light and shadow world.

In the fantastic light and shadow forest composed of ten interactive scenic spots, light and shadow can change with the behavior and action of tourists, inadvertently, there are mountains and seas giant animals riding the mountain wind, or magnificent divine animals passing by, or plants feeling the arrival of people, sending greetings with streamer.

During the Beijing World Garden Expo, the "Magic Light and Shadow Forest" will be displayed in the natural ecological exhibition area near Gate 5 of the park, starting at 7 P. M. every night and ending at 9 P. M. with a continuous rolling broadcast. During the Mid-Autumn Festival holiday on September 14, Magic Light and Shadow Forest, with an area of 6300 m<sup>2</sup> and a tour space of 1500 m<sup>2</sup>, ushered in a record of one and a half hours to accept 11052 visitors, and became a popular attraction of the night park of Beijing Expo.

### II. "Heart of the Expo" Lighting Show

The "Heart of the World Garden" light and shadow show uses three-dimensional light and shadow technology to re-arrange the opening ceremony of the Beijing World Garden Expo. The whole performance, without dancers, on the stage, shows how a seed becomes the whole nature by using modern light and shadow technology, and shows the concept of harmonious coexistence between man and nature.

At the performance site, with the change of color, the green of spring, the colorful of summer, the golden yellow of autumn, the crystal of winter, the cycle of four seasons and the natural scenery of life are all displayed through light and shadow. The trees around the oil lake are covered with a total length of 100000 meters of light belts, forming a special background; Opposite the stage is the park landmark Yongning Pavilion and China Pavilion, the real landscape with the sound of flowers, birds, insects and fish, to give tourists a "immersive" experience into the landscape.

"Heart of the World Garden" Lighting Show is staged every Sunday to Thursday night at Gui Swimming Theatre outside of holidays. Using the original facilities such as the opening ceremony screen, lighting, sound, lifting column and so on, we can create a shocking, technological and gorgeous aesthetic atmosphere. The performance is divided into four chapters: the roaming of the son of the earth, the blooming of the flower of life, the home of green life and your appearance in my heart. A total of 89 performances were performed.

### III Resident Performance of "Beautiful Home"

At the opening ceremony of Beijing World Park Expo in 2019, the high-tech garden scene light and shadow art performance was brilliant, and the opening "lake and mountain scenery" shocked Chinese and foreign audiences. In order to enable more audiences to enjoy the light and shadow feast of mountains, rivers, forests, fields and lakes, the Beijing World Garden Expo will perform "Beautiful Home" at Guiguoyou Theatre every Friday and Saturday evenings and major holidays from June 21 to September 21.

The "Beautiful Home" resident performance retains six programs of the opening ceremony literary and artistic performance, which lasts for 30 minutes. Part of the performances at the opening ceremony of the Beijing World Garden Expo were rehearsed, focusing on the theme of "Green Life, Beautiful Home", reflecting the harmonious coexistence of man and nature, highlighting the tension between nature and human life, and forming a wonderful landscape in which man and nature co-perform and nature and man co-shine. The total number of performances was 27.

### IV. Music Fountain Performance

The Music Fountain located in Gui Swimming Lake is closely embraced by the China Pavilion, Yongning Pavilion, Gui Mei Theatre and International Pavilion, with the help of modern technical devices, combined with the theme music of Beijing Expo, a series of performances are presented to tourists regularly every day. Sometimes the wave light scale patrol, sometimes the sky crashing waves, combined with the water curtain light and shadow changes, bring the park fresh and cool. It integrates with the lighting show and the resident show, showing more than 200 performances.

### V. Robot Performance

At the Beijing World Garden Expo, the robot, a new era of science and technology product, appeared in an interactive way, and the robot interactive performance was carried out in the exhibition hall on the first floor of the Lifestyle Experience Hall; Robots dressed as budding flowers and budding participate in the interactive performance of flower car greeting guests, and the interactive performance

of robots is integrated into the "Tianyu Covenant" of flower car; Robot collective square dance "Shiyuan family"; The robot in the horticultural exhibition hall identifies flowers and plants, and performs interactive flower arrangement with flower masters on the spot. Robots enter the Beijing World Garden Expo and approach tourists, reflecting the concept of combining science and technology with horticulture, service and art.

## Chapter IV Pre-Conference Activities

### Section 3 Countdown Activities

#### Two-year countdown to Beijing World Horticultural Exposition

On April 28, 2017, the opening of the countdown time plate for the second anniversary of the 2019 Beijing Expo and the launch of excellent songs for the Expo were held at Guancheng Square of Badaling Great Wall.

In the evening, the towering Badaling Great Wall looks magnificent against the sunset. The countdown board covered by red gauze curtain stands on one side of Guancheng Square. At about 17:00, the opening guests each took a bunch of six-color silk connected with peony flowers, and slowly pulled down the red gauze curtain. The countdown board in the shape of the emblem of Beijing Expo was officially unveiled. The 730-day countdown to the second anniversary on the countdown board was

clearly displayed in front of the audience. The countdown board to the second anniversary of Beijing Expo was officially unveiled. At the event, the top ten golden songs of Beijing Expo were released to the public.

## II. One-year Countdown Activities for Beijing Expo

A series of one-year countdown events for Beijing Expo include a main event and eight events, which further promote the upsurge of publicity and promotion of Beijing Expo and enhance its influence.

On April 28, 2018, the "New Era of Flowers"-the countdown anniversary of the 2019 Beijing World Garden Expo was held at the Badaling International Convention and Exhibition Center in Beijing. Members of the Executive Committee of Beijing Expo 2019, cadres and staff of Beijing Expo Bureau, global partners of Beijing Expo, provinces, municipalities, builders, volunteer representatives and representatives from all walks of life in Yanqing District participated. This home event includes video review of Beijing Expo memorabilia, singing and dancing of Golden Songs, poetry recitation, display of "Expo" aircraft model, display of licensed goods and exhibition plan, etc. Many leaders sent representative flowers from all over the world to children representatives from 16 districts in Beijing, hoping that children would plant flowers, hope and expectation.

Eight series of activities include the experience tour of the first "World Garden" Air China airliner, the signing activities of the second batch of sponsored enterprises of Beijing World Garden Expo, the exhibition and exhibition of "Approaching the Flowers of World Garden Expo" in 2018, the opening of parks in domestic provinces, districts and municipalities, the release of Beijing Garden Design Plan, and the first promotion of high-quality tourism products of Beijing World Garden Expo. Botanical Museum opening countdown-anniversary press conference.

## III. 200-Day Countdown to Beijing World Horticultural Expo

At 10 A. M. on October 11, 2018, leaders of China Flower Association, China International Exhibition Center of CCPit, Beijing Municipal Work Committee, Municipal Landscape and Greening Bureau, World Garden Bureau, Municipal Cultural Federation, Yanqing District, Winter Olympic Organizing Committee and other units, builders of Beijing World Garden Expo and nearly 1000 people from all walks of life participated in Xiadu Park in Yanqing District. Publicize the preparatory results of Beijing Expo to the society and mobilize the countdown preparations for Beijing Expo.

The 200-day countdown to Beijing World Horticultural Exposition consists of a series of activities, including the "New Age of Songs" singing activities launched to members of the Executive Committee and Beijing citizens from August to November 2018, and the organization of famous lyricist Wang Xiaoling, composer Yin Qing and singer Lei Jia to jointly create and complete the Expo song "Love My Home" activities, and the Expo Golden Song. "Happiness Forever" and "I Love You China" chorus flash activities, World Garden song singing series concert activities, to the park to comfort the front-line builders activities.

## IV. 100-day Countdown Mobilization Conference for Beijing Expo

On January 20, 2019, Beijing held a 100-day countdown mobilization conference for the 2019



Beijing World Horticultural Expo to mobilize and redeploy the preparatory work. Cai Qi, Secretary of the Beijing Municipal Party Committee and Director of the Executive Committee of the Beijing Expo, stressed that we should adhere to the guidance of Xi Jinping's socialist ideology with Chinese characteristics in the new era, further enhance the sense of responsibility, mission and urgency, race against time and do solid work to ensure the successful completion of the preparatory task of the Beijing Expo, fulfill the solemn commitment to the international community, and submit a satisfactory answer to the Party and the people. Chen Jining, Deputy Secretary of the CPC Beijing Municipal Committee, Mayor and Executive Director of the Executive Committee of Beijing Expo, Li Wei, Director of the Standing Committee of the Municipal People's Congress, and Jilin, Chairman of the CPPCC Municipal Committee attended.

The mobilization meeting briefed on the progress of preparations for the Beijing World Horticultural Expo. Gao Yan, president of the China Council for the Promotion of International Trade, vice chairman of the Organizing Committee and executive director of the Executive Committee of Beijing Expo, made requests for the preparatory work. Beijing Municipal Culture and Tourism Bureau, representatives of participating provinces, municipalities and volunteers made speeches respectively, expressing their confidence and determination to do a good job in the preparatory work.

## Part VII Exhibition and Display

The 2019 World Horticultural Exposition in Beijing, China is an international Olympic event in the field of horticulture, with 86 countries and 24 international organizations on five continents, 31 provinces, municipalities and Hong Kong, Macao and Taiwan regions in China, as well as professional institutions, enterprises and institutions, through more than 100 outdoor gardens and indoor exhibition areas, displaying new ideas, new varieties, new technologies and new varieties of horticulture in all countries and regions. New products and characteristic culture bring together the flower and horticultural products of various countries. There are more than 2 million plants (exhibits) in indoor and outdoor exhibitions, and more than 20000 new varieties and products have been introduced.

As the host country of the Expo, provinces, municipalities and Hong Kong, Macao and Taiwan have made full use of this stage to focus on the achievements of China's flower industry development and ecological civilization construction, highlighting China's wisdom and strength. A large number of self-cultivated new horticultural varieties with intellectual property rights made a brilliant appearance at the 2019 Beijing World Garden Expo.

In addition, the special flower international competition held by the Beijing World Garden Expo in 2019 has dedicated one horticultural visual feast after another to visitors, with a total of more than 3.8 million visitors. The international competitions during the Beijing World Horticultural Exposition are the richest in content and the largest in number of events ever held at the World Horticultural Exposition. A number of international competitions have improved the professional quality and exhibition standard of the Beijing Expo, brought China's advantages into full play, and displayed the world's top flower and horticultural works.

## Chapter I Overall Plan

The horticultural exhibition of this Expo comprehensively considers such factors as meeting the needs of the exhibition, rational layout of space and overall planning of post-exhibition utilization, highlighting the characteristics of "life, production and ecology complement each other, and science and technology and humanities integrate each other". The exhibition theme of flower horticulture exhibition is prominent and bright, which has effectively improved the professional level and exhibition effect of Beijing Expo in 2019.

In accordance with the principles of "advanced concept, diverse culture, wonderful content, fine exhibition, comfortable tour, green and low carbon", the Beijing World Horticultural Expo 2019, starting from the whole horticultural industry chain, adopts the means of combining physical display and interactive experience, traditional display and digital technology to display the achievements of ecological civilization construction, and to display new horticultural products, new technologies and new technologies of various countries. New ideas, special competitions and exhibitions, Inheritance and innovation of global horticultural history and culture truly reflects the level of global horticultural development and the common yearning for green life of all countries in the world.

### Section 1 Basic Document

The General Plan for Exhibition and Display of the International Horticultural Exposition 2019, Beijing, China (hereinafter referred to as the General Plan for Exhibition and Display) is a guiding plan for the preparation of the Beijing World Horticultural Exposition, an important basis for publicity and promotion, domestic and foreign exhibitors, indoor and outdoor exhibitions, etc. It has important guiding significance for doing a good job in horticultural exhibition and display and ensuring the expected results of the Beijing World Horticultural Expo. The Expo Bureau, together with the expert team and professional departments, adheres to the compilation principle of "advanced concept, diversified culture, wonderful content, fine exhibition, comfortable tour, green and low carbon", follows the compilation requirements of "professional, open and fine", bases itself on the excellent horticultural culture of China, integrates the achievements of world civilization, coordinates the intellectual resources in an all-round way, and completes the General Plan for Exhibition and Exhibition. Compile and report on video production.

In order to complete the formulation of the plan, the Expo Bureau has set up a joint team of horticulture, planning, exhibition, digital technology and other aspects, and constantly integrated and improved the overall idea, content and form of exhibition and display on the basis of extensive research on similar activities at home and abroad and in-depth discussion by experts in relevant fields. In the

process of compiling, we have repeatedly deepened and continuously improved the overall quality of the exhibition plan, and successively solicited and absorbed the opinions of 31 relevant member units of the State Forestry Administration, China Trade Promotion Association, China Flower Association and the Executive Committee, and the plan has been adopted by internationally renowned flower experts, former vice presidents of Beijing Forestry University. Professor Zhang Qixiang, Vice President of the International Association of Horticultural Producers, was the head of the expert review.

On August 16, 2018, Hu Chunhua, Vice Premier of the State Council and Chairman of the Organizing Committee of Beijing World Park Expo, chaired the third meeting of the Organizing Committee of Beijing World Park Expo 2019. At the meeting, the General Plan for Exhibition and Exhibition was approved by the Organizing Committee.

The meeting held that the General Plan for Exhibition and Exhibition fully respected international rules, comprehensively considered such factors as meeting the needs of the exhibition, rational layout of space, and overall utilization after the exhibition, and highlighted the characteristics of "life, production, ecology, science and technology, humanities integration". It fully promotes the history and culture of global horticulture, and truly reflects the level of global horticulture development and the common yearning for green life of all countries in the world.

#### -Purpose of establishment

Adhere to the "professional" plan. Give full play to the advantages of expert teams and professional departments to carry out research work and consolidate the foundation of scientific meetings. In the early stage of the planning, based on the needs of the Beijing World Horticultural Exposition, the Expo Bureau set up a team of more than 10 experts in horticulture, planning, exhibition and consultation, under the guidance of the State Forestry Administration, China Council for the Promotion of International Trade, China Flower Association and other institutions, carefully studied the rules of the International Exhibition Bureau and the International Horticultural Producers Association, and closely docked them. The Outline of Action for the 2019 Beijing World Horticultural Exposition of China and other achievements have actively carried out the work of sorting out the exhibition content. The contents of the exhibition framework have been preliminarily drawn up.

In the whole process, the advantages of the capital scientific research institutes and Beijing industry authorities were brought into full play, and five units, such as Beijing Forestry University and the Planning and Design Institute of the Ministry of Agriculture, took the lead in conducting special studies on exhibitions and exhibitions of flowers, bonsai ornamental stones and tea drinks; Organized and implemented by Beijing Landscape and Greening Bureau, Beijing Agricultural Bureau and Beijing Traditional Chinese Medicine Bureau, relevant ideas and requirements were put forward for the display of fruit trees, vegetables and medicinal plants, which provided an important support for the compilation

of the General Plan for Exhibition and Display.

Adhere to the "open" compilation plan. Facing the public bidding, we should absorb the advanced experience of successful meetings at home and abroad, broaden the ideas of holding meetings and optimize the display design. According to the preliminary results of previous sorting and research, the Horticulture Department of the Expo Bureau has carefully formulated the collection plan, adopted the form of public bidding and evaluated by the expert group, and selected a joint team composed of excellent exhibition planning and design units such as horticulture, exhibition, digital science and technology. On the basis of the winning bid scheme, it combines the advantages of other solicitation schemes and learns from the experience and horticultural concepts of advanced organizations around the world. In addition, the Expo Bureau has invited senior practitioners in the fields of horticulture, gardening, exhibition, architecture and fine arts, as well as participants in the preparation of large-scale exhibitions such as Shanghai World Expo, Kunming World Expo and Venlo World Expo in the Netherlands to conduct on-site exchanges, discussions and guidance, and constantly integrate and improve the overall ideas, contents and forms of indoor and outdoor exhibitions.

Adhere to the "delicate" plan. Repeated revision and continuous improvement will comprehensively improve the overall quality of the exhibition program. It has organized many well-known experts to conduct guidance and exchanges, and has done a solid job in program demonstration and optimization and improvement. After the compilation was completed, the opinions of the State Forestry Administration, China Trade Promotion Association, China Flower Association and relevant members of the Executive Committee were solicited and absorbed successively. The Expert Group agreed that: "Beijing Expo has a solid foundation, thorough research and analysis, correct guiding ideology, clear objectives, clear exhibition system, rich content, outstanding highlights and characteristics, diverse forms of exhibition, reasonable layout of exhibition items, and has strong operability, which lays an important foundation for the further implementation of the exhibition scheme of Beijing Expo." "According to the feedback from the evaluation, the contents of the relevant chapters of the General Plan for Exhibition and Exhibition have been further revised and improved."

## II. Composition of the Programme

The overall plan of exhibition and display consists of three parts: first, the general idea; Second, the exhibition features; The three is the exhibition plan. The exhibition is divided into two parts: indoor exhibition and special theme park. Among them, the indoor exhibition includes the China Pavilion, the International Pavilion, the Lifestyle Experience Pavilion and the Botanical Pavilion. In addition to the international exhibition garden and the Chinese exhibition garden, the outdoor exhibition also includes the special theme garden of 100 orchards, 100 vegetable gardens and 100 grass gardens. Through indoor and outdoor exhibitions, Beijing Expo will fully display life gardening and promote green lifestyle; Display horticulture production and promote the development of horticulture industry; Show ecological horticulture and interpret the concept of harmonious development; Display scientific and

technological horticulture, highlight the application of innovative achievements; Display humanistic horticulture and promote open, inclusive and civilized.

In terms of indoor exhibition, it involves China Pavilion, International Pavilion, Lifestyle Experience Pavilion and Botanical Pavilion. China Pavilion will create a display window for the achievements of ecological civilization construction, display the achievements of horticultural industry and ecological civilization construction in China, gather the high-tech achievements of original horticultural industry in China, carry forward the brilliant history and culture of Chinese horticulture, and embody the characteristics of Chinese horticulture and its contribution to the world. The International Pavilion builds a win-win platform for international exchanges and cooperation, deduces the history and culture of world horticulture along the "one belt and one road", and the official exhibitors show their unique horticultural products, horticultural technology and horticultural achievements. Lifestyle Experience Hall displays horticultural science popularization, life horticulture industry chain, tea and coffee culture in different forms, experiences ubiquitous horticulture, and leads a green lifestyle.

In terms of outdoor exhibition, besides building international exhibition gardens and Chinese exhibition gardens, we also focus on building three special theme gardens, namely, 100 vegetable gardens, 100 orchards and 100 grass gardens. Hundred vegetable gardens show the delicious and colorful characteristics of vegetables in all aspects, show the stories of vegetables and people in the long history and ecological space, show forward-looking cities and family farms, and show the new way of life with vegetables as the carrier. Hundred orchards construct rich and interesting fruit forest landscape, display and popularize advanced technology of fruit tree industry, highlight the rich cultural connotation of fruit trees, organize interactive activities of fruit tree horticultural knowledge popularization, and create a landscape exhibition garden with a variety of fruits. Baicao Garden shows the application of traditional Chinese medicine through the combination of medicinal plants, landscape and humanities, leads tourists to perceive the development and evolution of herbal medicine, promotes the traditional culture of the Chinese nation, and lets Chinese herbal medicine enter life.

The international competition is a professional project stipulated by the International Association of Horticultural Producers (AIPH) and the Bureau of International Exhibitions (Bie) for the World Horticultural Exposition, and is one of the important means and measures to ensure the exhibition effect. Among them, outdoor exhibition gardens include international exhibition gardens, Chinese exhibition gardens, enterprises and other exhibition gardens; Indoor exhibition area includes international exhibition area, provincial and municipal exhibition area, etc. Indoor exhibition area also holds indoor flower special competition, indoor exhibit competition and so on. At the same time, an international competition organization was set up to organize and coordinate various competition activities.

## Section II. Preparatory work

The horticultural exhibition of Beijing World Horticultural Exposition needs to make preparations in the early stage. In accordance with the arrangements for the preparations for the Beijing Expo, the Expo Bureau takes the lead in compiling the overall plan for exhibitions and exhibitions; Complete the indoor exhibition plan, construction, operation and maintenance of exhibition items, renewal and maintenance of exhibits and withdrawal of China Pavilion, International Pavilion and Lifestyle Experience Pavilion; Complete the international competition exhibition, evaluation, award and other work; Overall coordination of the construction, operation and maintenance of 100 orchards, 100 vegetable gardens and 100 grass gardens; Complete plant inspection and quarantine and biological prevention and control work in the park; Complete the construction and maintenance management of foreign designers' creative exhibition garden; Complete the construction of plant quarantine isolation and horticultural technology service area, professional exhibition and operation and maintenance.

Specifically, the preparatory work for the exhibition includes:

For three consecutive years, a series of exhibition activities of "Approaching the Flowers of the World Garden" have been held between 2016, 2017 and 2018, the Expo Bureau completed a series of exhibition and promotion activities of "Approaching the Flowers of the Expo" in Beijing Botanical Garden, Banshan Lake of Gui River in Yanqing District, Yanqing World Grape Expo Garden and Shunyi Fresh Flower Port, and carried out all-round and multiple flower testing, evaluation and exhibition demo for the Beijing Expo. Accumulate experience in organization and other aspects. In 2016, more than 2000 flower varieties, 15 new equipment and 30 new technologies were displayed in Beijing Botanical Garden and Banshan Lake of Gui River in Yanqing District, and 27 flower arranging exhibitions, special exhibitions on family horticulture, 15 activities on home gardens and 2 professional forums were held, attracting 500000 tourists.

In 2017, Yanqing World Grape Expo Garden was divided into indoor exhibition and outdoor exhibition for test exhibition, covering an area of more than 20000m<sup>2</sup>. Among them, the indoor exhibition area is about 2000 m<sup>2</sup>, and the exhibition of indoor characteristic plants, flower horticultural decoration, traditional Chinese medicine plants, vegetables and flower enterprises is held, and related horticultural activities are organized, aiming at the long duration of the exhibition, different indoor exhibitions, exhibitions and activities are explored, and the experience of horticultural exhibition is accumulated. While testing the adaptability of plant varieties, the outdoor exhibition focuses more on testing breeding technologies such as flowering regulation, innovating plant application display forms, and doing "homework" from plant varieties, production technology, application methods and other aspects to welcome the Expo. In addition, based on some of the award-winning works of the public participation in the collection scheme of creative garden in 2016, horticultural enterprises have invested in the construction of eight high-quality garden exhibition areas.

In 2018, on the basis of summing up the achievements of the previous two years'activities of "approaching the flowers of the World Garden", we enriched the exhibition content, innovated the exhibition mode, broadened the exhibition form, extended the exhibition cycle, and closer to the people's lives.Starting from the end of April 2018 and continuing until the autumn of 2018, it mainly includes the collection of exhibits in the spring and autumn previews of the Beijing exhibition area of the World Flower Grand View Garden "Blossom Beijing, Blossom World Garden";In Beijing Botanical Garden, the theme exhibition of *Paeonia lactiflora* was held;Indoor Spring Painting Exhibition of "New Flowers Blooming New Era" was held in the R & D Center of Beijing Flowers and Trees Co Ltd. in Shunyi Flower Port;2018 International (Yanqing) held in Yanqing DistrictForum on protection and rights protection of new plant varieties, field testing and display of flowers in the World Garden.

Complete the major scientific and technological project of Beijing "Beijing World Horticultural Exposition Ornamental Horticulture Technology Integrated Application and Science and Technology Demonstration Project". After three years of research and demonstration, the project results guaranteed the horticultural exhibition of Beijing World Horticultural Expo in 2019, and at the same time effectively promoted the development of flower industrialization in Beijing. First, more than 2000 flower varieties suitable for display at the Beijing World Garden Expo were selected from nearly 5000 plant varieties.Among them, more than 1000 flower varieties were displayed in different areas of the park, of which 516 excellent cold-resistant plant varieties were centrally displayed and applied, meeting with tourists during the 2019 Beijing World Garden Expo, increasing the richness and diversity of ornamental plants. And secondly, a technical system for breeding and ornamental quality control of nearly 200 ornamental plant is established. By tissue culture technology, flowering control and growth control, to ensure the consistency of flowering period and the stability of annual production quality of varieties displayed in Beijing World Horticultural Expo. Third, we should constantly innovate the application forms of flowers. After many application tests, sustainable mixed flower border, modular products, new three-dimensional beautification technology, construction and maintenance technology of quasi-natural flower meadow suitable for Yanqing area were developed, and application demonstration was carried out in the park.Fourthly, eight results exhibitions were held, 10 variety demonstration zones were established, and tests and demonstrations were carried out in Yanqing for three consecutive years from 2016 to 2018 to ensure the best state of flower display during the session and avoid low adaptability.



Do a good job in the operation and maintenance of exhibitions and the organization of exhibition activities. One is to compile and complete the exhibition and operation management manual of China Pavilion, International Pavilion and Lifestyle Experience Pavilion, guide the exhibition, replacement and operation and maintenance related work, and provide good exhibition services for all parties. Second, do a good job in daily maintenance and update exhibits in time. The exhibition group maintained the exhibits nearly 2000 times. Third, we should regularly weed out the old and bring forth the new to complete large-scale exhibitions. To coordinate and coordinate the large-scale exhibition of cut flowers, potted plants, bonsai, flower arrangement, dried flowers and other exhibits in 31 provinces, municipalities and scientific research institutes of 5 universities in the Chinese Pavilion. Hundred vegetable gardens and hundred grass gardens have completed five large-scale exhibitions. Fourth, organize more than 600 interactive experience activities such as Master Jinshiyuan of Gongmei and the dissemination of popular science of traditional Chinese medicine culture.

A total of more than 8,000 plant varieties are on display both indoors and outdoors, and 2367622 plants (pots) are on display in the outdoor and indoor exhibition areas of 31 provinces, autonomous regions and municipalities, with the total number of new plant varieties on display being 28939. For the first time, 12 tree species, 180 varieties and more than 6000 fruit trees were exhibited together, covering the main deciduous fruit trees in the north, such as fruits, nuts, stone fruits, pome fruits, berries, rootstocks and ornamental trees. For the first time, more than 20 categories, 236 varieties and more than 2 million vegetables were displayed. For the first time, more than 500 kinds of Chinese herbal medicinal plants were displayed centrally, and medicinal plants were displayed to guests at home and abroad in the form of horticulture.

**Hold international competitions and exhibitions.** The international competition of Beijing World Horticultural Exposition is a compulsory event of the World Horticultural Exposition, an important part of the Beijing World Horticultural Exhibition, and a stage for horticultural organizations and individuals in the world to display horticultural technology and exchange horticultural culture. The international competitions of Beijing World Horticultural Exposition are mainly divided into four categories: outdoor garden competition, indoor exhibition area competition, indoor exhibit competition of provinces, autonomous regions and municipalities in China, and indoor flower and plant competition. The international competition exhibition of Beijing Expo has been unanimously recognized by tourists, professional and technical personnel and other people from all walks of life, highlighting the professional level and strong influence.

In accordance with the relevant provisions and requirements of the Rules for the Organization of International Horticultural Exhibitions, the General Plan for International Competitions was completed and approved by the Organizing Committee of the 2019 Beijing World Horticultural Expo on August 16, 2018. In light of the actual preparation work of Beijing Expo, the International Competition Organizing Committee and the Evaluation Committee of Beijing Expo 2019 will be established to organize, carry out and coordinate the evaluation activities of various competitions, and complete the

evaluation rules, award scheme and other special schemes. By inviting 11 well-known and influential flower horticulture experts at home and abroad, 92 outdoor gardens and 54 indoor exhibition areas were evaluated three times, and 5 AIPH awards, 14 organizing committee awards and 27 organizing committee special awards were awarded. Nearly 10000 exhibits of five categories, such as cut flowers of provinces, municipalities and scientific research institutes of universities, were evaluated in four rounds, and more than 600 special prizes, 1300 gold prizes and 1900 silver prizes were awarded. From July 31 to August 1, 2018, the first expert review meeting on the exhibition plan of the indoor exhibition area of the China Pavilion of the 2019 Beijing World Garden Expo was held. In addition, seven international competitions were displayed in the international competition exhibition hall, and more than 800 units and individuals from more than 40 countries and regions participated in the exhibition, and more than 300 gold medals were awarded.

The number of exhibits in the international competition exceeds 20000, of which the total number of exhibits in the four provincial and municipal exhibitions competitions in China is nearly 10000, including fresh cut flowers, potted plants, potted landscapes, flower arrangement art and so on, which fully demonstrates the achievements of the development of horticultural industry in China.

The international competition of Beijing World Garden Expo is the one with the richest content, the largest number of projects, the largest number of participants and the largest number of exhibits. Among them, the 2019 World Flower Competition is the first international flower competition organized during the A1-level World Garden Expo approved by the International Association of Horticultural Producers, and also the largest, highest level and most influential international flower competition held in China for the first time.

Complete the construction of plant quarantine isolation and facility horticulture high-tech demonstration zone, professional exhibition and operation and maintenance. The Plant Quarantine Isolation and Horticulture Technology Service Area (hereinafter referred to as the Expo Greenhouse) is located in the Living Horticulture Exhibition Area of the 2019 Beijing World Horticultural Expo, covering an area of 31000 square meters and a building area of 25000 square meters.

It is the first time to build a comprehensive greenhouse with multiple service guarantee and display functions in the fenced area of the World Garden Expo in China. One is the service guarantee function. To ensure the quarantine and isolation of imported plant materials during the Beijing World Horticultural Exposition and the demand for maintenance and rejuvenation. The second is the display function of modern cultivation technology of protected vegetables. The new technology, new idea and new method of facility vegetable cultivation are displayed to the public in the greenhouse. Third, the demonstration of new technology of facility horticulture will lead the development direction of facility horticulture. The greenhouse structure with high heat preservation and high light transmittance, the new generation of greenhouse positive pressure air supply environmental control system, the energy solution with energy saving as the core, and the automatic production solution are displayed. Fourth, we should

consider the utilization after the meeting as a whole. At the beginning of the greenhouse construction, the utilization of greenhouse after Beijing World Horticultural Expo was fully considered, and the existing facilities can meet the production of modern high-grade potted flowers and asexual female parents. Through the optimization of greenhouse structure, internal system and energy system, compared with the domestic intelligent greenhouse, the light transmittance of the greenhouse after operation can be increased by 10%, the structural material can be reduced by 10%, and the energy can be saved by 30% in the winter heating period. It is a new benchmark of domestic modern intelligent greenhouse with high efficiency and energy saving.

According to the needs of Singapore, Russia, India, Korea, Germany, France, UNESCO, International Potato Center and other countries and regions, the plant quarantine isolation zone of the World Garden Greenhouse provides more than 4000 square meters of quarantine isolation and conservation sites. More than 500,000 potted flowers have been displayed in the new technology exhibition area, and the Horticulture Department of the Expo Bureau has organized more than 20 batches of professional visits to actively display, demonstrate and promote advanced technology.

Complete the construction and maintenance management of foreign designers' creative exhibition park. During the meeting, the Horticulture Department of the World Horticultural Bureau invited George Hargreaves of the United States, James Hitchmough and Tom Stuart-Smith of the United Kingdom, West8 urban planning and landscape architecture, Stieg L. Andersson, Stig L. Andersson, Ishihara Kazuyuki from Japan to design the exhibition garden with new technologies, new concepts and new materials, interpret the advanced level of world garden design, and complete five creative exhibition garden schemes with different characteristics. According to the design scheme of the creative exhibition park, the construction of five creative exhibition parks has been completed, covering an area of 7800 square meters. Among them, the American designer exhibition garden "East-West Garden", through the analysis of the global space environment between China and the United States, explores how Chinese local plants affect the design of public space in the United States and even around the world, and tries to find the "harmony but difference" of horticultural space between the East and the West; The British Designer Garden "New Silk Road" interprets the significance and value of horticulture in the ecological latitude, demonstrates the "quasi-natural dry meadow" landscape, and displays more than 80 kinds of introduced and wild plants. Utilizing the succession characteristics of plant communities, explaining the ecological nature of places and the construction ways of sustainable development, embodying the ecological significance in the vigorous plant materials, and providing new application concepts, perspectives and ideas of horticultural plants; Dutch designer exhibition garden "Time Garden", with a variety of plant collocation to create a different atmosphere of the courtyard implies different stages of life, leading visitors from the noise around, immersed in the light and shadow of the forest and breath. A symbolic journey through time; On the basis of interpreting Chinese traditional philosophy and aesthetics, the Danish designer "yuan" explores the relationship between man and nature in the new era of scientific development by constructing a new design language, thus

defining a new garden;Japanese designer exhibition garden "Taoyuan Township" combines Japanese gate, pavilion, tent chair, stone wall and other elements with Chinese classical literature, with rich plant levels and water systems.Pursue the "homesickness" in the city and interpret the "borderless" green space.

The professional forum on the theme of "Leadership, Communication and Co-prosperity" held during the Beijing World Garden Expo in 2019 has more than 400 live audiences and more than 150000 online audiences.

Complete the work of customs, inspection and quarantine, biological prevention and control and inspection and quarantine in the park.The World Horticultural Exposition Bureau communicated and coordinated with relevant departments of the State Forestry and Grassland Administration, completed the application and expert evaluation of materials for the "popular foreign introduction and trial planting nursery", and obtained the qualification of "popular foreign introduction and trial planting nursery" issued by the State Forestry and Grassland Administration, so as to create conditions for planting introduced plants and keeping them after the end of the termTo clarify the entry procedures of overseas plants and their products for exhibition;To handle the relevant filing procedures for the temporary import of exhibits, and through communication with Beijing Customs, provide tax guarantee for the temporary import of exhibits in Beijing Expo in the form of bank guarantee, so as to avoid the customs duties required for the temporary import of foreign exhibits.

In view of the pre-event, in-event and post-event supervision of nursery stocks at home and abroad, the Expo Bureau has established a traceability tracking system, strengthened regular epidemic detection, monitoring, prevention and treatment, so as to detect potential epidemic risks at the first time and take preventive measures in advance to ensure biological safety. The tracking signs of 35000 large seedlings and 150000 potted plants were hung, and insect hotels were installed, including 3 large and 10 small ones.In the park, 80 monitoring points and more than 500 sets of pest trapping devices are set up, pest inspection and monitoring are carried out twice a week, and quarantine pest census is carried out at least once a month, so as to find potential epidemic risks at the first time and take preventive measures in advance to avoid the occurrence of pests. On-site laboratories have been set up in the park, which can carry out pest screening and emergency identification at the first time.More than 3500 samples were identified by species identification of plants and pests monitored in the garden. Biological control, physical control and chemical control have been applied to prevent diseases and insect pests in an area of more than 2000 hectares.

Organize and implement the public participation in the collection contest of creative exhibition park schemes for Beijing Expo.In order to enable the public to participate in the preparation of the Beijing World Horticultural Exposition in 2019, fully embody the concept of opening up the Expo, enhance and stimulate the public's awareness and interest in horticulture, and expand the ideas and concepts of horticultural exhibition, it is sponsored by the Coordination Bureau of Beijing World Horticultural Exposition and the Chinese Society of Landscape Architecture.Jointly planned and

organized the "2019 Beijing World Park Expo Public Participation in Creative Exhibition Garden Scheme Collection Competition", which closely focused on the theme of "Green Life Beautiful Home" of the 2019 Beijing World Park Expo, reflecting the idea of "Let Hui Art Integrate into Nature, Let Nature Move the Soul". With horticulture as the medium, it leads people to respect nature, protect nature and integrate into nature. Give full play to creativity and imagination, explore a harmonious lifestyle of human beings, and create a new realm of world horticulture and a new model of ecological civilization.

The announcement of the competition was published on the relevant website on August 15, 2016, and the original creative schemes of various horticultural exhibition gardens were publicly solicited. It is required to rely on garden design, take plant materials (including fruits, vegetables, etc.) As the main display objects, consider the continuity of plant landscape, and follow the principles of ecology, economy and sustainability with unique creativity and design concepts, advocate the use of new materials, new technologies and new technologies, with a site area of about 100 square meters and self-determined shape.

Competition is divided into two groups of professional group and student group, in the early full publicity, mobilization on the basis of domestic professional design groups and individual designers, horticultural enthusiasts and the group received from Beijing, Shanghai, Suzhou, Guangzhou and other 14 provinces and cities of 177 works, participants include government agencies, enterprises and institutions of professional and technical personnel, university teachers, Gardening enthusiasts and people, and so on. A total of 321 works were received from 45 universities in China by the student group of landscape architecture, landscape architecture and related majors. After preliminary evaluation, the shortlisted works entered a 15-day online voting stage, in which millions of viewers participated, and the excitement was extraordinary. Finally, 71 works were awarded by domestic professional design groups and individual designers, horticultural enthusiasts and talent groups, including 2 first prizes, 6 second prizes, 14 third prizes and 49 excellent prizes. A total of 52 works were awarded to the student groups of landscape architecture, landscape architecture and related majors in China, including 3 first prizes, 5 second prizes, 14 third prizes and 30 excellent prizes. At the same time, it edited and published the Collection of Winning Works of Baihong Chuhui I 2019 Beijing World Garden Expo Public Participation Creative Exhibition Garden Scheme Collection Competition.

## Chapter II indoor exhibition hall and highlights

Flowers and horticulture are the main aspects of the Expo exhibition. The theme of flower horticulture exhibition of Beijing World Horticultural Exposition in 2019 is prominent and bright. Eighty-six countries and 24 international organizations from five continents, together with 31 provinces, municipalities, Hong Kong, Macao and Taiwan, as well as professional institutions, enterprises and

institutions in China, have displayed new horticultural ideas, varieties, technologies, products and cultures through more than 100 outdoor and indoor exhibitions, bringing together the flower and horticultural products of all countries.

The horticultural exhibition of Beijing World Horticultural Expo highlights the characteristics of life, production and ecology, and the integration of science, technology and humanities. For example, in the Chinese Pavilion, we will focus on displaying Chinese ecological culture and promoting the broad and profound national spirit of Chinese flower arrangement and intangible cultural heritage; In the Lifestyle Experience Hall, non-legacy masters interact with tourists on the spot, performing arts and crafts "Yanjing Baju" and "Beijing Nine Treasures"; In the International Pavilion, the multi-dimensional way of "physical plus multimedia plus interactive plus atmosphere" is used to tell the stories of global horticultural culture along the "one belt and one road", and famous flowers and trees from all over the world. Gathering unique horticultural characteristics and regional cultures from all over the world; In the Botanical Museum, the tropical plant community is displayed in the way of real ecological landscaping, so that visitors can perceive the real mangrove plant community and other tropical plants from zero distance in the greenhouse.

## Section I China Pavilion

The China Pavilion, named "Splendid Ruyi", is located in the core landscape area of the Expo site and is the landmark building of the current World Horticultural Exposition, with a total floor area of 23,000 square meters. The China Pavilion is located in the middle of the Landscape Horticulture Axis, with Guitang Lake and the Performing Arts Center on the north side, Landscape Horticulture Axis and the Botanical Pavilion on the west side, China Exhibition Garden and International Road on the east side, and the main entrance of the park on the south side. The exhibition hall mainly displays Chinese horticulture, collecting the flower horticulture essence of 31 provinces, municipalities and Hong Kong, Macao and Taiwan regions in one hall.

In the exhibition part of the China Pavilion, with the exhibition concept of "endless growth, splendid China", the exhibition form comprehensively uses the form of physical exhibition and scene reproduction, traditional horticultural techniques and digital new media to show the concept, achievements, regional characteristics and world influence of China's ecological civilization construction from all directions and angles.

Covering an exhibition area of 15000 square meters, the China Pavilion covers four major exhibition areas: China's ecological and cultural exhibition area, China's provincial and municipal horticultural industry achievements exhibition area, China's horticultural universities and research institutes scientific research achievements exhibition area and China's intangible cultural heritage flower arrangement art exhibition area. Through the four exhibition areas, we will display ecological

culture and conspire with the construction of global ecological civilization;Display the development of horticultural industry, horticultural science and technology innovation and high-tech achievements of provinces, districts and municipalities;Display the technology of scientific research institutions representing the international leading level, the green development achievements closely related to people's lives, and the scientific and technological achievements of China's original horticultural industry, etc;Classical works of flower arrangement, inheritance and innovation of Chinese traditional culture.

The exhibition area of China's ecological culture exhibition area covers an area of 3500 square meters, with horticulture as the carrier, focusing on "heaven, earth and people", "Huifeng and Chang", "landscape and Ming", "peaceful and comfortable residence" and "harmony and symbiosis".

The exhibition area of horticultural industry achievements in China's provinces, districts and municipalities covers 8590 square meters. In the exhibition areas of provinces, districts and municipalities, the characteristics of horticultural history and culture, horticultural industry development, horticultural science and technology innovation and ecological civilization construction will be displayed.

The exhibition area of China's high-tech horticultural achievements covers an area of 1130 square meters, mainly for domestic universities and scientific research institutes related to horticulture, gathering the scientific and technological achievements of horticultural industry originally created by China, representing the international leading level, displaying the green development technological achievements closely related to people's lives, and creating opportunities and conditions for promoting the transformation of scientific and technological achievements. Promote the independent innovation ability of horticultural industry, take R & D innovation as the driving force, and advocate green development mode and lifestyle.

China's intangible cultural heritage flower arrangement art exhibition area covers an area of 1780 square meters, which is divided into three parts: "flower recognition", "flower appreciation" and "flower tasting". Through flower utensils, ancient books, paintings and custom devices, the charm of traditional flower arrangement art of Chinese intangible cultural heritage is displayed to the public, classical works of Chinese traditional flower arrangement are displayed, traditional culture is inherited and innovated, and the national spirit of Chinese flower arrangement art and intangible cultural heritage is promoted.Among them, the products, technologies, materials and related green ecological technologies representing China's independent intellectual property rights and international influential ornamental horticulture industry chain are highlighted. Through the popularization of science in China's frontier technology nodes, it reflects the advanced and future development direction of China's modern ornamental horticulture technology.

In addition, oracle bone inscriptions, plants in the Book of Songs and other materials, combined

with modern scientific and technological means, show the natural and simple scientific view of the harmonious coexistence of man and nature; With the help of the large-scale long roll exhibition wall and mirror device of Fuchun Mountain Residence Map, the beautiful green mountains and rivers are displayed by exquisite flower printing and flower arranging techniques, combined with modern multimedia interactive technology; With the effect of interweaving images and texts, it explains the direction of promoting the construction of ecological civilization in the new era of our country.

During the Beijing World Horticultural Exposition, more than 300 kinds of rare plants unique to China were exhibited in the China Pavilion. Among them, there are more than 200 kinds of living plants, which come from more than ten units, such as Beijing Botanical Garden, Institute of Botany, Chinese Academy of Sciences, Xiamen Garden Botanical Garden, South China Botanical Garden of Chinese Academy of Sciences, Shenzhen Xianhu Botanic Garden of Chinese Academy of Science, etc. Most of them are national first and second-class rare plants, and many of them are endangered species. More than 50 species, including Huagai Wood from Xiamen Botanical Garden, Tigergrass from South China Botanical Garden and *Passiflora edulis* from Xishuangbanna, have been allowed to settle in Beijing for the first time since the World Horticultural Exposition was held in Beijing, which has also facilitated the largest introduction of rare plants in Beijing Botanical Garden in recent years, and at the same time increased the number of rare plant species in the greenhouse by 10%.

The China Pavilion will continue to serve as a large-scale horticultural exhibition hall and become the main exhibition hall of the "Beijing Flower Show", making the "Beijing Flower Show" a world-class flower show as famous as the Chelsea Flower Show in the United Kingdom.

## Section 2 International Pavilion

The International Pavilion, one of the main venues of Beijing Expo 2019, is located in the middle of the World Horticulture Axis, close to the China Pavilion and the Interpretation Center, surrounded by the International Exhibition Garden and the China Exhibition Garden, and facing the Lawn Theatre and the Lake District on the west side. It is on the planning axis of Haituo Mountain and on the south bank of Guishui River with beautiful ecological environment. In terms of architectural appearance, the 94 steel "umbrellas" of the International Pavilion open up an area of 12770 square meters, and the open "petals" of the "umbrellas" symbolize that all countries are "melting and blooming" together in the world's big home to create a green and harmonious future.

The International Pavilion carries out indoor garden exhibition around the theme of "Green Life, Beautiful Home". Adhering to the exhibition concept of "harmony and blooming", we will display the achievements and contributions of national (regional) and international organizations in horticulture, hold international competitions and exhibitions on indoor flowers, and promote the innovation and



development of horticulture industry.

The exhibition area of the International Pavilion is 12770 square meters. It is divided into four exhibition areas, including sinking square, preface hall, national (regional) and international organization exhibition area, indoor flower special international competition exhibition area.

The Sunken Plaza, with an exhibition area of 860 square meters, serves as the entrance for visitors to enter the International Pavilion. It is located on the first floor of the underground, combining the functions and structural characteristics of the Sunken Plaza, through the steps of the World Garden, the theme ecological green wall, the main shape and the movable garden, etc it jointly interprets the colorful "Hundred Gardens" and invites guests from all over the world with gardening as the medium.

Preface Hall, with an exhibition area of 1260 square meters, is located on the first floor of the underground, serving as a transit space for visitors to rise from the login space to the exhibition venue. On the basis of ensuring openness and good trafficability, it adopts a multi-dimensional experience mode of "physical + multimedia + interaction + atmosphere", and displays "plant origin center", "species communication and exchange along the Belt and Road" and "world famous flowers and trees" on the facade and ground. And other horticultural cultural contents, multi-dimensional experience and appreciation of diverse and prosperous global horticultural culture. Condense the friendship of all countries. Through horticulture, we will build a better future of openness, tolerance, common prosperity and win-win cooperation.

The exhibition area of national (regional) and international organizations covers an area of 7100 square meters, and the exhibition area of national (regional) and international organizations is planned and laid out in combination with the exhibition space of international pavilions and relevant exhibition experience. Among them, the intercontinental group is divided into national (regional) booths according to Asia, Europe, America and Oceania.

Indoor flower special international competition exhibition area area of 3550 square meters, according to the AIPH rules, fully considering the flowering period of different flowers, industry development leading and other factors, adopt the mode of changing exhibition and closing hall, hold peony, peony, orchid, rose, combination of potted plants, bonsai, chrysanthemum six kinds of special international competitions and 2019 World Flower Art Competition. Tourists experience the global horticultural culture in a variety of ways and watch seven international horticultural peak battles.

After the meeting, the International Pavilion can be used as a horticultural trading center in China, a trading platform for horticultural product research and development, cultivation or reuse as other multi-functional venues.

### Section 3 Lifestyle Experience Hall

Lifestyle Experience Hall is located in the northeast corner of Beijing Expo Park, which is the nearest exhibition hall to Yanqing City, so it becomes an important node connecting urban life and pastoral scenery. The south and west of the Lifestyle Experience hall are the international exhibition area during the exhibition.

According to the exhibition concept of "love gardening, love life", the Lifestyle Experience Museum comprehensively uses static display, dynamic display, visual, auditory, interactive experience and other ways to show the horticultural life close to the people. Around plant diversity, coffee, tea, traditional crafts and so on, experience the application of horticulture in clothing, food, housing, use, entertainment, health and other aspects, so that tourists can experience horticulture to make life better.

The exhibition area of Lifestyle Experience hall is 9400 square meters. It is divided into four exhibition areas, including the Preface Hall, the Popular Science Horticulture Exhibition Area, the Life Horticulture Exhibition Area and the Special Horticultural Exhibition Area.

The exhibition area of Preface Hall is 680 square meters, which skillfully uses the entrance and space of the venue and the zigzag road to create a horticultural landscape ramp. Visitors walk slowly along the ramp from the first floor to the second floor, appreciate different theme plants along the way, and enhance their deep impression of horticulture.

Popular science horticulture exhibition area exhibition area of 1910 square meters, Located in the two floor of the Lifestyle Experience hall, Exhibition area will be thousands of years of Chinese herbs in people's lives as the main line, Combined with modern multimedia means, Panoramic experience herb landscape 、 Actual contrast understand genuine medicinal materials 、 Scene reproduction herbal concocted herbal culture and medicinal plants application demonstration.

The living horticulture exhibition area covers an area of 3120 square meters, and relevant enterprises are organized to take the form of rotation exhibition, through the creation of artistic conception of living space and the landscape performance of enterprise exhibits, to display the new and excellent horticultural varieties and products in the world, the most advanced horticultural technology and concepts, to display the regional characteristics and industrial achievements of Yanqing, and to

experience meteorology, aerospace and horticulture. The interconnectedness of life and gardening.

The special horticultural exhibition area covers an area of 3690 square meters, with four special exhibitions of "Arts and Crafts", "Tea Four Seas", "Coffee Life" and "Green Future". More than 100 tea, coffee and other related enterprises participated in the exhibition.

"Arts and Crafts" thematic exhibition, in the form of social crowdsourcing, takes the form of physical display, live performance and experience interaction, solicits national works of masters of arts and crafts, traditional and modern crafts such as porcelain, sculpture and lacquerware related to garden horticulture, so that visitors can feel various horticultural handicraft and creative works at close range, and feel the intangible cultural heritage. Experience the cultural value of traditional craft inheritance.

Another key exhibition, "tea around that world", will display tea's history and culture in the form of picture, text and video.

The way of dynamic experience shows visitors the habit and etiquette of drinking tea, so that visitors can feel the profound historical and cultural connotation of tea. At the same time, it organizes many rounds of different forms of experience activities.

The theme of "Green Future" is to combine bionic robots, 3D printing, intelligent equipment, virtual reality and other frontier technologies with horticulture, transcend the limitations of physical space, create unlimited interactive experience, and experience the most novel horticulture cross-border product experience. In the Lifestyle Experience hall, we also organized more than 500 interactive experience activities such as Master Gongmei Jinshiyuan, Chinese medicine culture popularization and so on.

## Section 4 Botanical Hall

The curatorial theme of the Botanical Museum is "Plants: Incredible Wisdom", which fully demonstrates the survival and reproduction wisdom of plants to visitors through a series of techniques, calling on human beings to protect plants and care for the earth. On July 29, 2019, after three years, China's first natural documentary "Chinese Plants Affecting the World" was held at the Botanical Museum of Beijing World Garden Expo Park.

### Layout of exhibition area

There are thousands of plant varieties in the Botanical Museum, which is a magical "plant kingdom". With "Plants: Incredible Wisdom" as the main line, the Botanical Museum integrates the functions of plant greenhouse, scientific and technological services, popular science education, international exchanges, tourism and leisure, and creates a colorful and wonderful plant world like a

"kaleidoscope".

As one of the four core venues of the Expo, Botanical Hall is located in the heart of the park, covering an area of 39000 square meters and a building area of 9660 square meters. Botanical Museum not only has many surprises in architectural design, but also is the only exhibition hall with greenhouse exhibition area and indoor exhibition hall that can rise to the roof of Beijing World Garden Expo.

The architectural design concept of the Botanical Museum is "the rising horizon". The surface mechanism of the building is inspired by the plant root system, and the huge hanging root system spreads downward continuously, which directly presents the strong vitality of plants originally hidden underground to visitors, not only producing a strong visual impact, but also leading visitors to embark on a wonderful plant world journey starting from feeling the power of plant root system. Visitors enter the Botanical Museum as if they were entering the gray space below the soil, where 3,156 metal roots simulate the huge life system of plants in the invisible earth. The space under this shadow is also set up for the sake of humanization, so that the audience in line can avoid sunshine exposure, and at the same time, the psychedelic space can reduce the restlessness of waiting. With the deepening of the tour, from the first floor along the eastern part of the exhibition hall air hovering walkway through the second and third floors gradually climb up, you can enjoy the ultimate beauty of overlooking the mangrove plant crown from high altitude, until you reach the roof plane of the Botanical Hall, as if shuttling above the horizon.

The building of the Botanical Museum is divided into three floors, with teamlab digital exhibition hall and theme greenhouse on the first floor, covering 880 square meters and 2850 square meters respectively, in which the digital art immersion theme exhibition takes the mangrove plant community as the starting point, from the basic environment of mangrove plant survival "intertidal zone". The wisdom of roots, seeds and leaves of mangroves and the mangrove ecosystem are three levels to describe how plants use their own wisdom to adapt to the environment, form an ecological system with migratory birds and aquatic animals and plants, and understand plants from a perspective beyond ordinary observation.

The theme greenhouse gathers 1001 species and more than 20000 precious plants, mainly displaying plants in multi-latitude areas, focusing on the characteristic vegetation of various climate zones, as well as the preservation and exhibition of rare and endangered plants. Through mangroves, tropical rainforests, ferns, palm trees, pulpy plants, insectivorous plants, moss and so on to show the diversity of the plant kingdom and the wisdom of plant survival and adaptation to the environment, there are 5 exhibition areas and 12 scenic spots. The five exhibition areas are "adversity survival area", "plant war zone", "long March area", "billion year footprint area" and "transformation area".

Through a series of high-tech creative techniques, the pavilion fully demonstrates the "wisdom of plants" to visitors, calling on human beings to protect plants, care for the earth and pay attention to the future of mankind. Among them, artificial mangroves reproduce the characteristics of vivipary, prop roots and salt secretion evolved by mangroves to adapt to the tide fluctuation, highlighting the ecological functions of coastal guards; Tropical rainforests focus on showing the competitive and synergistic relationship between plants and plants, plants and animals, such as air gardens, single-tree forests, old stems and flowers, dripping leaf tips, giant leaves, strangling phenomena, etc; Palmaceae and pteridophytes show their excellent propagation wisdom; Succulent plants have evolved the ability to adapt to the arid environment through stem and leaf metamorphosis; Insectivorous plant mates eat meat to get nutrients; How the little man of the plant kingdom found his own living space.

The second floor of the building is a green multi-functional lecture hall of 480 square meters, and public activities such as mangroves, plant science paintings, popular science education and salon forums will be held during the session. Around the distinct theme of "Chinese plants in the works of world painters", through the exhibition and popularization of ancient and modern plant science and art paintings at home and abroad, the little-known field of plant science and art paintings is presented in an all-round way. Extensive knowledge of ecosystems derived from plants is displayed in the form of multimedia information/art installations, and famous paintings of past Dynasties are displayed alternately. The Royal Kew Garden Botanical Garden and the Institute of Botany of the Chinese Academy of Sciences are also involved in telling the story of people and plants.

The third floor is the brand exhibition hall, which shows the story behind the construction of Vanke Enterprise Culture and Botanical Museum. In addition, the roof design of the Botanical Museum is also a highlight, with CITIC Botanical Theme Coffee Bookstore and souvenir shop on the roof floor, roof observation deck and Giraffe Dead Wood Art Installation "Molly and Her Family" (Molly and her family). Standing here, you can enjoy the beautiful scenery of Guishui River, Haituo Mountain, China Pavilion, Tiantian Mountain and other Beijing World Gardens.

## II. Animal Stars

The Giraffe deadwood installation "Molly and her family" came from as far away as Africa, at first, they were not what they are now, after being polished by James Doran-Webb's studio in Cebu, Philippines, made a long journey to China, and finally appeared on the roof observation deck of the Botanical Museum.

This work uses a steel dragon skeleton, wrapped in dead wood, the overall device is installed in a metal frame welded under the roof and the ground, the metal frame measures 1200 cm (length) X 450 cm (width) X 45 cm (height), weighing about 2200 kg.

"Molly and her family" creator James from the United Kingdom, his adult moved to the Philippines to live and work, life is dealing with plants, he with a new perspective, with dead wood as the language of artistic creation, has become the world's leading dead wood animal installation artist, let everyone listen to the "plant language". At the same time, he also advocated the protection of the ecological environment, with a unique method, so that the immortal dead wood sculpture can withstand decades of outdoor weather conditions. James takes part in the Chelsea Flower Show every year and works in public and private spaces all over the world.

Molly and her family is made from reclaimed wood and stainless steel, with the reclaimed wood coming from Vitex Floret. Vitex parviflora is the national tree of the Philippines. It once grew in the central part of the country. Its wood is prized for its durability, even insects, known as tree busters,

cannot penetrate it easily, and it degrades very slowly. So the Filipinos used the trunks to support their houses for a solid and stable effect, and it was because of this feature that Vitex was cut down to the brink of extinction in the course of the 20th century.

James came to the Philippines from England and happened to find that Vitex floret wood could be used for his artistic creation, for which he specialized in collecting Vitex floret wood, which is dead wood of plants more than 50 years old.

James has been collecting the wood for the past 30 years, and now he has collected more than 100 tons of reclaimed Vitex wood, and it is because of him that these dead plants can continue their life in a new way.

James chose to create in the form of a giraffe because giraffes are one of the largest herbivores in the world. James hopes to make this special animal from dead wood, so that extinct plants can be regenerated through artistic creation, while at the same time conveying the concept of environmental protection in an innovative way.

This fully expresses the concept of "green life and beautiful home" of Beijing Expo. Attention was drawn to the relevance of plants to human survival, which allowed for an emphasis on the use of waste materials and the protection of forests. He uses art as a language to express, calling on everyone to take action, cherish forests and plants, and cherish the earth's resources.

The giraffe art installation began in July 2018 and was completed in January 2019, lasting seven months. In early February 2019, four large containers loaded with giraffes were shipped from Cebu Island, Philippines, and entered Tianjin Port, and finally arrived at the site of Beijing World Garden Expo in the early morning of March 1.

### Chapter III Exhibition Garden

The exhibition garden is an important part of the 2019 Beijing World Garden Expo, which can directly show the regional culture and landscape from all over the world.

From a geographical point of view, the entire Beijing World Horticultural Exposition Park across the Guishui River, and 10000 mu of Forest Park intersection blend, and Beijing's second highest peak Haituo Mountain, National Wetland Park Wild Duck Lake, world-class geological relics Longqing Gorge, the Four Seasons Flower Sea and other natural beauty into one, a "city in the park, park around the city, city scene blend" garden beauty.

At the same time, the exhibition garden is also an important window for Beijing Expo to show the world the construction of ecological civilization and beautiful China, and to convey to the world the green concept of "green water and green hills are Jinshan and Yinshan". People-oriented, cultural diversity, scientific and technological innovation, ecological upgrading, industrial development and so

on.

Covering a total area of 503 hectares, the Expo has designed and constructed 40 international gardens, 34 Chinese gardens, 3 special gardens, 5 designer gardens and 17 enterprise gardens. At the same time, children's exhibition gardens and three-dimensional flower beds in 16 districts of Beijing have been built. The exhibition garden implements the harmonious coexistence between man and nature in every detail, not only shows the exotic customs and regional culture of many countries, but also shows the garden art and horticultural culture of China for nearly 3000 years, and innovatively shows the Chinese charm, Chinese style and Chinese style to the world.

In addition, the Beijing Expo has won the recognition of the International Exhibition Bureau, which praised China's professional and efficient preparations for the Beijing Expo, setting an example for other countries to host the Expo.

## Section 1 International Exhibition Garden

The International Garden is one of the special features of Expo 2019 Beijing, and participants from all over the world have taken this opportunity to show their green programs, arouse people's attention to nature, raise global awareness of ecological environmental protection, and contribute to the realization of a greener future for mankind.

There are 110 countries and international organizations participating in the 2019 Beijing World Park Expo, including 86 countries and 24 international organizations. The countries and international organizations participating in the outdoor exhibition include Russia, Britain, Germany, the Netherlands, the United Arab Emirates, Qatar, Japan, Singapore, Australia, Sudan and other international organizations such as UNESCO, the International Bamboo and Rattan Organization, the World Meteorological Organization and the Shanghai Cooperation Organization. In the International Exhibition Garden, people can enjoy exotic gardening without going abroad, and the unique exhibition gardens attract a large number of tourists to stop and stay.

Skipped chapter 4

## Chapter V Science and Technology Expo

In order to provide basic information support for the park, highlight tourists' experience, create scientific and technological highlights of "Wisdom Expo" and



improve the level of fine scientific management of the park, the Expo Bureau, together with first-class research institutions and leading enterprises of information industry in China, will make overall planning for the construction of "Wisdom Expo" in 503 hectares of fenced area of Beijing Expo in 2019.

In June 2018, the "Wisdom Expo" project was approved by the Beijing Development and Reform Commission. In July 2018, Zhongtong Service Kexin Information Technology Co Ltd. won the bid, started construction in August 2018 and completed construction in March 2019. The project includes three application support systems, namely, tourist experience, comprehensive management and public service, which are composed of 10 hardware systems and 12 software systems, including information infrastructure, data support platform, interactive experience application, park service application, park management application and information security. The project integrates artificial intelligence, virtual reality (VR) and augmented reality (AR)., virtual vision and other high and new technologies, the park service and comprehensive management based on the analysis of tourists' big data, the innovative research and development and integrated application of human-computer interaction technology, provide management services and support for the organizers, exhibitors and visitors of Beijing World Garden Expo, provide exhibitors and visitors with new scientific and technological experience, and provide comprehensive information technology support for the Expo.

According to the Project Proposal of "Wisdom World Garden" of Beijing World Horticultural Exposition, the construction and application of "Wisdom World Garden" project covers the outdoor public area of 503 hectares of Beijing World Garden Expo fence, consisting of a set of infrastructure, a support platform and three application service systems, totaling 24. The goal of scientific management of the park is to ensure the high-speed, safe and reliable operation of the information system. To provide comfortable and convenient services for tourists. The source of funds for the Wisdom World Park project is all from the central government. The Information Technology Department of the Expo Bureau is the implementing agency of the "Wisdom Expo" project of the 2019 Beijing World Horticultural Exposition.

After a lot of construction, visitors can eventually interact with the robotic arm of the artificial intelligence experience area in the World Expo Park, find AI

robots to imitate their own actions synchronously, use mobile phones to watch plays in AR virtual attractions, go to fantasy light and shadow forests and dandelion interaction, and accidentally meet the "God dragon".

## Section 1 Infrastructure Construction

In order to ensure the communication and informatization of the park, with the approval of the Expo Bureau, the Information Technology Department of the Expo Bureau is responsible for organizing the construction of informatization infrastructure, surveying and designing from March to September 2018, starting construction in October 2018, and putting into use in April 2019.

The information infrastructure of the park mainly includes:

Construction of public communication network base station. By China Telecom Co Ltd. Beijing Branch, China Mobile Communications Group Beijing Co Ltd China United Network Communications Co. Ltd. Beijing Branch, Beijing Zhengtong Network Communications Co. Ltd Capital Information Development Co. Ltd. and China Tower Co. Ltd. Beijing Branch contracted to build a total of 12 outdoor single-tower base stations in the park. 74 micro-communication stations and emergency vehicle parking points. All 12 base stations include 2G/3G/4G/5G network signals of three major operators of telecommunications, mobile and Unicom, 74 micro-stations and communication emergency vehicles as a supplement to that signal coverage of the outdoor base station.

Indoor distribution system and supporting computer room and power transmission construction. Room sub-systems were set up in China Pavilion, International Pavilion, Lifestyle Experience Pavilion, World Garden Hotel, Digital Center, Botanical Hall, 5G Exhibition Hall, Security Center, World Garden Town, WF02/04/08, Industrial Belt 7 #, Pipe Gallery Control Center and No.1 and No.2 Energy Stations and other areas with weak signal coverage, achieving full coverage of 2G to 5G.

Construction of communication micro-station. Relying on 78 intelligent lamp poles in the park to build communication micro-stations, equipped with transmission equipment, to achieve the main roads and crowded areas of communication signal coverage.

Emergency communication construction. Prepare communication support plans and on-site disposal plans, and conduct special emergency drills; Two 800m base stations and four 1.4G base stations are erected in the park by sharing base stations, and 150 800m mobile stations and more than 1300 walkie-talkies are leased and distributed

to all units for use; Emergency communication vehicles will be put in the China Pavilion, International Pavilion, Lifestyle Experience Pavilion and P4 parking lot outside the park, and the three major operators of telecommunications, mobile and Unicom and Zhengtong Company will be equipped with engineering emergency repair vehicles and more than 40 technical support personnel to provide full-time support. Construction of radio monitoring stations. Radio fixed monitoring stations will be built in Yanqing District, radio mobile monitoring vehicles will be dispatched in the park and surrounding key areas, and radio monitoring will be carried out in the park and key areas outside the park during the opening and closing ceremonies.

## Section 2 5G Application and Display

In Beijing Expo Park, there are more than 3000 intelligent well covers that will "call for help" when they are abnormally tilted, 900 intelligent garbage cans that will "call for" clean when they are full, 280 intelligent battery cars that can respond to "calls" in real time, and countless intelligent lamp poles, intelligent smoke sense, environmental monitoring and other equipment distributed in the Expo. These are the innovative experiences brought about by the integration of 5G and Internet of Things technology.

2019 Beijing World Garden Expo highlights "science and technology leading, ecology first, highlighting characteristics, people-oriented", with the Internet of Things and 5G as the "nerve", big data and artificial intelligence as the "brain", through the combination of virtual and real techniques, the World Garden Expo from the traditional garden art exhibition into a horticultural event blending adults, nature, science and technology and culture. At the same time, we plan to take China's mountain and sea classics as the content theme, create a light and shadow forest tour project, and create a new panoramic stage for exhibition and interaction at night in a specific area.

On September 5, 2018, the Expo Bureau organized a special meeting to confirm the Implementation Plan of 5G Demonstration Application of the Expo. At this meeting, it was decided to set up a "5G centralized exhibition area" in the park, and the Expo Bureau will be responsible for providing about 300 RRF land in the east side

of Gate 6 for 5G ad hoc centralized exhibition; Beijing Municipal Bureau of Economic Informatization is responsible for the construction of the centralized exhibition area and the planning, layout and exhibition of the exhibition content.

On October 12, 2018, the Expo Bureau organized a special meeting to adopt the 5G Exhibition Housing Scheme for Telecom, Mobile and Unicom Expo. On the morning of January 29, 2019, Ye Dahua, deputy director of Beijing World Horticultural Exposition Bureau, chaired a special meeting to study the 5G centralized display scheme of Beijing World Horticultural Exposition and the landing of robot application demonstration in the park. The meeting agreed in principle on the 5G new technology and robot application demonstration and 5G centralized display scheme of Beijing World Park Expo. The 5G centralized exhibition hall of the three major operators is located at the northeast side of Gate 6 of the Park and the project department of Nanyuan Urban Construction Group of South Road of the Park, which integrates the 8K high-definition video display led by the Municipal Economic and Credit Bureau using 5G network with the exhibition hall of China Telecom, with a total floor area of about 717 square meters. The meeting made it clear that the Beijing World Park Expo should provide a display platform for high-tech enterprises in Beijing.

#### 1. China Tower: Building and Sharing the Foundation Stone of 5G

Rich wisdom application can not be separated from the smooth network bearing, Beijing Expo has a high demand for communication support. Under the guidance of the government, China Tower Beijing Branch practices the new development concept, takes the lead in coordinating the construction needs of public network and government special network of three operators, namely, telecommunications, mobile and China Unicom, makes unified planning, shares intensive, and promotes the construction of mobile communication infrastructure with high standards, high quality and high efficiency.

Among them, the successful completion of the mobile communication infrastructure construction of Beijing Expo includes 12 macro base stations, 74 lamp pole micro-base stations, 114 intelligent lamp poles inside and outside the park, and the indoor signal coverage task of the exhibition hall with an area of more than 200000 square meters, which strongly supports the three operators of telecommunications,

mobile and Unicom to the park and the surrounding important roads. Security monitoring and other needs have laid a solid foundation for the vast number of guests at home and abroad to enjoy the first 5G "Wisdom World Park" in history.

In the early stage of mobile communication infrastructure construction of the 2019 Beijing World Horticultural Exposition, China Tower Beijing Branch fully communicated with relevant competent departments, planned the mobile communication infrastructure as a whole according to the overall layout and specific requirements of the Beijing World Horticultural Exposition, and defined the combination of macro station and micro station, the combination of traditional and new room, power, The overall construction mode of transmission is combined, and the overall planning scheme is continuously optimized. Finally, the "three-dimensional" network integrated solution is adopted to meet the coverage needs of high, low, far, near, indoor, outdoor, multiple networks. In addition, through the centralized and unified monitoring platform based on the leading technology of "Internet + Internet of Things", all access equipment in the park can be visually controlled and controlled to ensure the communication of Beijing Expo.

Through the overall planning of the iron tower company, the "synchronous planning, synchronous design, synchronous construction and synchronous delivery" of communication infrastructure and buildings in the park are fully realized, which not only guarantees the good network quality of 4G and 5G, but also guarantees the beauty of buildings and environmental coordination. The 12 outdoor macro base stations built by Beijing Branch of China Tower in the park not only carry the signal coverage of 9 sets of 2G/3G/4G/5G systems of three operators, but also carry the wireless bridge equipment services of Zhengtong 800m private network, Shouxin 1.4G private network and intelligent world park high point security monitoring and control landscape lighting, so as to transform the communication tower into a social tower. And that multi-purpose of one tow is maximized. The 45-meter-high macro base station beside the International Pavilion, which has the most typical sharing significance, carries 11 sets of communication systems of three operators, Zhengtong and Shouxin, as well as security monitoring and wireless bridge control services, can be called the "central nerve" of the park. In order to ensure aesthetic

coordination, all macro base stations in the park are beautified in combination with the surrounding environment and integrated with the park scenery.

As the main venue of Beijing World Horticultural Exposition, China Pavilion, Beijing Branch of China Tower has built floor stations and high-quality indoor network infrastructure. China Pavilion has high requirements for aesthetics. During the construction process, China Tower Beijing Branch has optimized the scheme many times in combination with the actual construction situation. Without affecting the coverage effect, it has beautified and concealed the antenna, equipment and other related facilities, which not only meets the coverage needs of the three communication operators, but also realizes the coordination between mobile communication facilities and the surrounding environment.

In addition, the government of Yanqing District implements the concept of green development, strives to build "Science and Technology Expo Wisdom Expo", adheres to the "government-led, tower co-ordination", and promotes the co-construction and sharing of mobile communication infrastructure in accordance with the "1 + 1 + 3" construction mode of "government + tower + three telecommunication operators", which not only avoids duplicate investment, but also makes the environment more beautiful and ecological. Based on the overall planning and sharing advantages of the Iron Tower Company, the Yanqing District Government also requires the Iron Tower Company to build multi-functional intelligent light poles on the main roads of Yanqing, which not only achieves good signal coverage and early layout of 5G network and Internet of Things, but also achieves good guarantee for urban operation such as video surveillance, environmental surveillance and roadside parking. The government of Yanqing District also took advantage of the opportunity of the Beijing World Garden Expo, led by the Iron Tower Company, to realize the 4G access to 376 administrative villages in Yanqing District by the end of 2018, and completely solved the problem of mobile phone signal blind area of 10.2 km in the main ditch area of Liu Gan Road, so that the people in remote areas of Yanqing can enjoy the convenience of information and communication as well as the urban people.

The communication infrastructure of Beijing World Park Expo in 2019 is built by the tower company, which demonstrates the effectiveness of shared development. It not only fully realizes the sharing of iron towers, computer rooms, power introduction,

transmission cables and other resources in the industry, but also continuously expands the breadth and depth of sharing, and actively promotes the open sharing of communication resources and social resources. By maximizing the sharing of resources among all parties, the investment cost has been greatly reduced, the construction efficiency has been improved and more value has been created. For example, the 12 macro base stations in the park are fully shared by 5 units, and the cost saving is more than 50% compared with that of each unit.

## 2. China Telecom: 5G Experience Hall

In addition to providing high-quality and intelligent communication infrastructure and security services for Beijing Expo, China Telecom Beijing Company also brings splendid 5G scene experience to the public with the help of Internet of Things, cloud computing, 5G and other technologies. China Telecom covers 5G signals in the whole park and digital center, and covers China Telecom fixed network resources in China Pavilion, International Pavilion, Botanical Pavilion, Yongning Pavilion, Horticultural Town, Lifestyle Experience Hall, Performing Arts Plaza and Commercial Service Building, so as to provide safe, stable and high-speed communication services and emergency support for Beijing Expo in 2019.

Combination of cloud and network to serve the wisdom of the Expo. Relying on the safe, reliable and flexible Beijing government affairs cloud platform, China Telecom Beijing Company has provided reliable computing, storage, network resources, three-dimensional security services and all-round support for the 2019 Beijing World Garden Expo, bearing and supporting the "Wisdom World Garden" information system platform of the 2019 Beijing World Garden Expo, escorting the "brain" of the World Garden Expo. Beijing government cloud platform also carries intelligent transportation, face recognition security, AI energy saving and emission reduction, AR/VR interactive experience, tour app and exhibition platform and other systems in the park, providing stable, safe, continuous and efficient operation guarantee for the 2019 Beijing Expo.

China Telecom Beijing Company provides Internet dedicated lines for visitors to Beijing Expo Park for office and public areas to access the Internet; Provide a



number of data line business services for the park to ensure safe, stable and high-speed data transmission and backup between the "Smart World Park" system, ticketing system and cloud platform;The group voice trunk service provided in the park for the daily office liaison of the park office staff;Through more than 2000 intercom terminals, China Telecom Tianyi Intercom Service, which is provided for park staff and security personnel, ensures that staff and security personnel inside and outside the park can exchange information quickly at any time and anywhere, and improves the management efficiency and security quality of the park.

Comprehensive communication support services for the Expo Media Center and the Expo Hotel. China Telecom Beijing Company will provide wired and wireless mixed network communication services for the Beijing World Garden Expo News Media Center. After passing the identity authentication, Chinese and foreign media can enjoy high-speed, safe and stable Internet access services. At the same time, the unique Internet Yundai security service and special hybrid network situational awareness service of China Telecom Beijing Company also escort the media center of Beijing Expo in network security. At the same time, in the live broadcasting rooms and unilateral point areas of various media, China Telecom Beijing Company has deployed abundant optical cables and transmission resources, which can provide stable and high-speed signal transmission services for the media. In order to increase convenience, China Telecom Beijing Company has achieved 5G signal coverage for the media center, providing wireless transmission guarantee for major media through safe and high-speed 5G transmission.

China Telecom Beijing Company provides high-quality communication services such as Internet, voice telephone and hotel perfect alliance for the three reception hotels of Expo Longqing Hotel, Hyatt Hotel and Ocean Spring Hotel, which are supporting the 2019 Beijing International Horticultural Exposition, so as to improve the hotel information service and ensure the security and stability of the communication business of the three hotels during the event.

China Telecom 5G Pavilion. As a "5G demonstration area", China Telecom 5G Pavilion is located about 100 meters west of Gate 1, with an indoor area of 453 square meters, which combines VR, MR, UAV and AI robots with 5G technology, fits the theme of "Green Life, Beautiful Home" and brings splendid 5G experience to visitors. Entering the 5G Pavilion of China Telecom, the experiencer can connect the 5G signal into WiFi through the mobile phone, experience the extraordinary speed of 5G network, and download a 1G movie in only tens of seconds. Wearing high-definition virtual reality glasses, you can watch the real-time return of UAVs and remote camera equipment to the Beijing Expo Park landscape, with the best perspective to visit the panoramic Expo. At

5G cloud classroom, with the help of a pair of MR hybrid reality glasses, shows two virtual robots to vividly explain 5G knowledge for everyone.

In the 5G dream life section, under the guidance of the winglet robot, the experiencer can switch the living room, kitchen, bathroom and bedroom scenes with gestures, control various novel intelligent life applications, and feel the future family life.

Exhibit 1: 5G-AI robot. Staff wearing induction clothing to make actions, any action, as long as the coverage of 5G network, the robot can be completed synchronously, almost no carton, which is also an application relying on the low delay characteristics of 5G network, this technology is suitable for some high-risk scene operations.

Exhibition two: 5G future city. As the basic communication construction operator of Beijing Expo, China Telecom has also made use of the technical advantages of 5G connection to create a real "smart Expo" for Beijing Expo. The 5G Pavilion takes Beijing Expo Park as the blueprint to build an induction sand table, which presets the four representative application scenarios of environmental monitoring, intelligent sanitation, intelligent irrigation and water quality monitoring in the corresponding induction position of the sand table, and drags the screen to the induction position, so that the corresponding solution for video viewing can be switched.

Exhibition three: 5G cloud classroom. China Telecom has broken the time and space restrictions through 5G + MR technology, so that students in remote areas can also

share high-quality educational resources. With the help of a pair of MR hybrid reality glasses, two virtual robot images are presented to vividly explain what 5G is, which is more interesting and intuitive for the audience to understand 5G and look forward to the future of 5G.

Exhibit 4: 5G-AI patrol robot. Patrol robots are deployed in the 5G Pavilion of China Telecom, which send the pictures captured during patrols back to the monitoring screen of the Pavilion through the 5G network. This is also a new security monitoring solution provided by the application of 5G new technology for large-scale activities such as the Expo.

Item 5: 5G Cloud Games. With the high bandwidth and low latency characteristics of 5G network, games can rely on the servers on the cloud platform for computing and rendering, players do not need high-end graphics cards and processors, only need an ordinary display, you can enjoy it.

Play the game happily.

Item 6: 5G Dream Life. 5G Dream Life uses CAVE virtual display technology to show 5G future family life scenes. Under the guidance of the winglet robot, the experiencer can switch the living room, kitchen, bathroom and bedroom scenes with gestures, and control various novel intelligent life applications, so as to feel the future family life first.

Item 7: 5G Expo. Experiencers wear 4K or 8K VR glasses, can watch the UAV and remote camera equipment through the 5G network real-time return of the Expo Park landscape, relying on the 5G network low delay, high speed characteristics to achieve the picture without carton, to bring the experiencer immersive experience, with the best perspective to tour the panoramic Expo.

Exhibit 8: Time Travel. To celebrate the 70th anniversary of the founding of the People's Republic of China, this paper reviews the 70-year development process of the telecommunications industry and China Telecom. The communication history review is presented through the "interactive physical transparent screen". At the same time, the audience can experience interactive photography, through face scanning, automatically generate a photo of their own age, as a commemorative photo of the times.

Exhibit 9: 5G • AI experience area. In the 5G artificial intelligence experience

area, there are mechanical arm guessing punches and health check-up instruments, and the experimenter can feel the powerful intelligence of 5G through interaction. With the rapid approaching of the era of 5G + artificial intelligence, the combination of the two will build a safer, more convenient and comfortable living environment for the world, and everyone will witness an era of intellectualization. Item 10: 5G equipment display area. Visitors can get close contact with all kinds of 5G-related equipment, including the latest 5G mobile phones, 5G digital terminals, 5G chips independently developed by China, and feel China's leading edge in the field of 5G.

Item 11: 5G + 8K cinema hall. The 5G + 8K UHD projection hall is jointly built by China Telecom and the UHD Video (Beijing) Production Technology Collaboration Center of Beijing Economic and Information Bureau, which can accommodate 30 people to watch the film. The resolution of 8K is at least 7680 X 4320 pixels, 16 times that of 2K and more than 4 times that of 4K. Higher resolution means faster transmission rate requirements, 4G network can only meet the 2K quality of live broadcasting, and the emergence of 5G, just in time. As a new generation of mobile communication technology, 5G provides unprecedented high-speed, low-delay, large connection of interconnected mobile data transmission capacity, making ultra-high definition, especially 8K video signal mobile transmission possible.

### 3. China Unicom: 5G Helps Wisdom Expo

As one of the three major operators in China, China Unicom has launched 5G medical services for the Beijing World Horticultural Expo, opening a green road of life for the park to Yanqing Hospital of the Third Hospital of Beijing Medical University through 12 macro stations and 112 light pole stations. The exhibition hall of Unicom is divided into four regions, showing the development process of communication from the aspects of "history", "5G experience", "5G + medical treatment" and "5G + tourism" respectively, while highlighting the tremendous changes that the 5G era will bring to future work and life. As the leading operator in Beijing, Beijing Unicom is speeding up the transformation of the network, realizing the intellectualization and automation of the network, and striving to build a 5G network with leading technology and strong efficiency.

Relying on the whole network service system and its own service capabilities, Beijing Unicom guarantees the 2019 Beijing World Park Expo with advanced communication technology and professional service team, and injects strong new momentum into the World Park Expo. Beijing Unicom strives to build 5G exhibition hall, through historical inheritance + 5G, to show the past, present and future of communication development, and to depict the blueprint of convenient and beautiful life that 5G industry application will bring to the people in the future.

Hundred years of Unicom, historical inheritance. In this exhibition hall, from the birth of Beijing Telecom to the 19th National Congress of the Communist Party of China, the brand advantages of Beijing Unicom's century-old brand will be introduced. With the centennial history of Beijing Unicom as the theme and the development of Beijing's telecommunications as the main line, this paper expounds the history, development and important position of Beijing Unicom in various historical periods and in the history of China's communications. From 1880, China established the General Administration of Telegraph. In 1883, for the first time, there were telecommunication institutions and services in Beijing. In early March 1949, the central organs of the Party moved from Xibaipo, Pingshan County, Hebei Province, to Xiangshan, Peiping, and the Peiping Telecommunication Bureau set up a communication network in the area of Xiangshan, Badachu, Yuquan Mountain and Qinglongqiao. In April 1949, Chairman Mao Zedong and Commander-in-Chief Zhu De issued a "command to March to the whole country" to the PLA through this network at Shuangqing Villa in Xiangshan, crossing the Yangtze River and liberating the whole of China. Xiangshan Telephone Bureau accompanied the birth of New China, and its historical achievements will be recorded in history forever. Peiping Telecom Bureau is also the predecessor of Beijing Unicom. From a historical point of view, it shows Beijing Unicom, an old shop that has experienced a century of history.

Intelligent medical treatment. China Unicom, together with its partners, won the bid for the 5G Technology Demonstration Application-Telemedicine First Aid System Construction Project of Beijing Expo in 2019, which will focus on the four scenarios of "on-site remote first aid guidance, remote monitoring in transit, hospital patient's condition assessment and decision-making, and remote operation guidance", and formulate remote consultation system, remote medical cooperation system and

remote consultation system for Beijing Expo. Emergency command service platform and other detailed implementation plans have become an important part of the medical security of Beijing Expo.

Visual telemedicine provides high-definition image transmission for customers in the medical industry with the help of wearable visual MR/AR devices, which supports remote real-time discussion and intuitive perception of tissues and organs under 3D imaging anatomy, and understands the relevant composition and characteristics.

Telemedicine monitoring uses 5G to assist medical monitoring, monitors patients' vital signs in real time, continuously and for a long time, and transmits vital signs data and emergency alarm information obtained by medical equipment such as ECG, monitor and ventilator to medical staff by 5G network. Medical staff can learn the current status of patients in real time through 5G cellular network, and make timely judgment and treatment of the patient's condition.

#### 5G display

Drone. Relying on 5G cellular network, indoor UAV demonstration is built. It shows the application of UAV in infrastructure, disaster prevention and mitigation, remote sensing, surveying and mapping, analysis, remote control and so on.

Data collection, data analysis and data reporting are completed by combining graphics-based AI processing technology with 5G man-machine scene. It can realize a variety of services including lightweight goods transportation, 5G signal supplementary coverage, security monitoring, positioning and so on, and can be widely used in security, agriculture, transportation, medical rescue, communication and other scenarios in the future.

VR cloud rendering, using 5G technology, virtual and rendering images, and real-time rendering pushed to VR equipment, with faster transmission speed, more interactive picture content, to create an immersive sense of the scene for the audience, providing immersive communication experience.

Remote arm signature. Intelligent manipulator can realize 5G air transmission, ensure remote control effect, flexible control, and can be applied to scientific experiments, telemedicine, underground operations in extreme environments in the future.

New Media. Through 5G technology to achieve real-time and realistic effects of new

media communication, people can watch VR live broadcasting through 5G network, which can be applied to live broadcasting of conferences, performances and other activities in the future, and wearing VR glasses will have an immersive feeling on the spot.

#### Intelligent Tourism

Tour assistant explanation. Using the speed advantage of 5G network, it can enrich the graphic information to AR glasses in real time, and tourists can get a more intuitive feeling by wearing AR equipment. It is mainly used for sightseeing and other scenes that need manual explanation at present.

AI travel assistant. According to the tendency of tourists and groups, the collection and induction of tourist images and related materials are carried out by using the 5G + AI capability of Unicom;The content uploaded by tourists is merged, and then the footprint content and experience are output in turn to form thousands of people and thousands of articles.

#### 5G ski machine

Use 5G technology to simulate the real scene ski machine and enhance the interaction. Through 5G characteristics to meet the specific work needs of all walks of life in the future, and this exhibit focuses on the entertainment experience, so that exhibitors can actually operate, personally feel the more advanced network for the future life of fun.

### IV. China Mobile: Demonstration of 5G Achievements

China Mobile will integrate 5G communication innovation technology into the Expo and serve the Expo, let science and technology change life, and help to achieve the goal of "a new model of ecological civilization in the new realm of world horticulture". In the preparatory process, adhering to the enterprise mission of "creating an unlimited communication world and being the pillar of the information society", China Mobile fully relies on existing resources to overcome difficulties, and comprehensively promotes the construction of the park network, service guarantee, booth display and other work.

Strengthen network construction and build high-speed Expo. A number of mobile 2G

base stations, 4G base stations and 5G base stations are planned in the fenced area of Beijing Expo 2019. According to the estimated traffic volume, the mobile network scale in the fenced area can meet the daily average of 100,000 people and peak of 250,000 people, and can meet the simultaneous access needs of more than 50,000 users. China Mobile has carried out network emergency deployment, and can set up emergency vehicles around the China Pavilion, International Pavilion and Lifestyle Experience Pavilion at any time to fully guarantee all communication needs in the park.

Make full service guarantee and show warm-hearted Expo. During the Beijing World Horticultural Exposition, adhering to the service concept of "customer is the root", China Mobile can provide two supporting schemes, namely, fast processing channel and characteristic intimate service. Special seats will be set up to provide exclusive services for staff, tourists and important customers, special contact persons will be set up, and green channels for customer communication will be established. According to the characteristics of visiting customers, it provides international users with services such as renting machines, short-term access number, passport access number processing, etc and domestic users.



Provide mobile services such as off-site payment, card replacement, etc. 10086 hotline provides 7x24 hours business consultation and processing, solving customers' worries in an all-round way, while setting up professional teams for logistics and security to coordinate on-site.

Make a fine 5G display and present the wisdom of the World Garden. In order to improve the public's awareness of the characteristics of 5G network (large broadband, low delay, interconnection of all things), highlight China's 5G innovation strength, serve the security guarantee and application of the World Garden, and in view of the technical characteristics and three types of application scenarios of 5G, China Mobile displays 5G technology achievements in the park, and the exhibition booth is equipped with professional receptionists. And set up special reception for VIP customers and media. The exhibition projects are: 5G game, 5G holographic communication, 5G smart city, 5G network UAV.

5G games: In the cloud game running mode, all games are running on the server side, in the client, the user's game device does not need any high-end processor and graphics card, the audience can experience live games including FIFA 18, NBA 2017, Assassin's Creed, Resident Evil, Final Fantasy 12, Need for Speed 20, Tomb Raider and so on.

5G holographic communication: Simulate the experience of future 5G holographic call. After the characters are captured and expressed by the high-definition camera, the virtual image moves synchronously with the characters. At the same time, the sound collection device can be set up to make on-site analog calls with guests.

5G Smart City: simulates the usage scenario of 5G network in future smart cities, providing audience with live experience through sand table and large screen. The audience can operate the pad central control, watch the large screen, and combine the dynamic sand table to reflect the 5G smart city application scenarios such as "data management", "vehicle and road collaboration", "intelligent security" and "environmental perception".

5G Network-connected UAV: through the mosaic screen to play the panoramic picture taken by UAV at high altitude outside the Expo and the non-real-time video information superimposed by VR layer. Outdoor hovering UAV can show the Beijing Expo scene from the perspective of UAV for the audience, cruise UAV can interact

with tourists in the route to take photos, and set up an UAV to provide network remote viewing entrance, so as to realize the live broadcast of panoramic video of the park and exhibition area filmed by UAV.

### Section 3 Wisdom World Garden

Beijing Expo combines garden art with science and technology, breaks the physical space boundary inside and outside the park, and brings unique scientific and technological experience to tourists.

In the natural ecological exhibition area, a visual feast of the integration of science and technology culture and natural landscape, the "fantastic light and shadow forest" project, has been widely welcomed since the opening of the park, attracting a group of tourists to experience. This project takes Shanhai Jing as its content source, relying on virtual vision and human-computer interaction technology, leads people through time and space, and opens an interactive experience of fantasy light and shadow world.

In the Chinese Eco-cultural Exhibition Area of the China Pavilion, the beautiful landscape created by layers of veil and light and shadow makes tourists immerse themselves in it and forget to return. Petals fly all over the sky, suddenly turning out green mountains and waters, suddenly turning into a pink peach forest, golden paddy field. Here, we use the spatial progressive panoramic image, combine the ancient picture scroll with the modern dynamic digital display form, realize the three-dimensional effect of Chinese painting, let people like into the painting.

In the park, visitors can also "visit the Expo with a mobile phone". Through mobile app, we can realize a one-stop intelligent tour guide for eating, living, traveling and traveling.

Guo Ziliang, Minister of Information Technology of Beijing Expo Bureau, said that the combination of big data, interactive technology and physical space brings a series of cutting-edge science and technology services to tourists, and interacts with tourists in more diverse ways, making Beijing Expo an innovative experience demonstration of science and technology tourism.

— Smart-Core, a smart brain for the Expo

Wisdom is the characteristic of the 2019 Beijing World Park Expo and the guarantee for the smooth development of the Beijing World Park Expo. An invisible brain (Smart-Core) works intensively to provide intelligent support for the harmonious operation of different objects such as tourists, management, internal and external transportation, security, exhibition and service in the park. In the command hall, it draws the heat of passenger flow in real time, so that commanders can grasp the trend of passenger flow in time, carry out park management, organize exhibition activities and carry out scheduling. Within the park, it coordinates staff to guide and serve tourists. Around tourists, it guides tourists' personalized travel according to their interests and park congestion. Through this brain, Beijing Expo will open its arms and provide thoughtful, personalized and convenient integrated services for every tourist.

#### (-) Main function

Smart-Core is located in the middle layer of the Wisdom Expo, which is the big data analysis and application support system for tourists of Beijing Expo, and mainly realizes the following functions on the basis of gathering relevant data of park passenger flow, management, service and operation:

Comprehensive situation information service for regional exhibition support: During the exhibition, it provides comprehensive situation display of three levels of one district and one garden for Yanqing area and relevant departments of Beijing, mainly including:

Municipal level: the road conditions of the main expressways to and from Yanqing (Jingzang, Jingli and Jingxin, including the road traffic conditions, road closure control conditions and vehicle statistics at and out of the entrance), and the current number of people in the park;

District level: road conditions of main roads around the park (Yankang, Shiyuan, Baiquan, Guichuan, etc.), parking spaces around the park, statistics of tourists received by the park on the day and predicted follow-up passenger flow, surrounding catering and accommodation service facilities, and current situation of passenger flow of other scenic spots in Yanqing area;

Park: passenger flow distribution (thermal map or calorific value map), number of people in main venues, congestion of main roads in the park, personnel distribution

in main areas of the park, statistics of personnel entering and leaving the gate, and real-time road conditions of main connecting roads around.

Big data services within the park: support other application systems and visual display of management decisions in the park operation and management activities, mainly including:

Summary view of the current situation of the park: information on the follow-up reception of ticket sales in the park on the same day, thermodynamic diagram of personnel distribution, summary of personnel distribution queuing and reservation status of main venues, summary of wifi equipment service facilities management events in the park, summary of personnel distribution statistics in the park area, and real-time display of tourist events.

Current situation and forecast of passenger flow in the area and gate area: Map labeling display of current passenger flow distribution in the park area, historical statistics display, distribution forecast of short-cycle passenger flow increment, gate area personnel distribution, statistics of people entering and leaving the gate on the same day;

Exhibition, analysis and prediction of the current situation of the venues: the number of people in the venues at the main venues, the current situation of reservation and performance, the queuing time of venue personnel, the statistics of the distribution of residence time of venue passenger flow, the statistics and portraits of the source groups of venue tourists, the objects with strong interest in the venues, the current status of energy consumption of venues, personnel distribution around the venues and the short-cycle prediction of venue personnel;

Traffic status in the park: current congestion index and map marking of main roads in the park, overall road congestion situation of the park on that day, list display of roads with serious congestion, and prediction of road short-cycle congestion status;

Event situation: summary and map labeling of tourist service events on that day, event classification list, event details, and analysis of the impact of the event on surrounding traffic;

Personnel location and traceability: personnel location retrieval, trajectory

annotation, tourist behavior summary, tourist interest and target extraction and annotation, tourist portrait;

Park management situation: comprehensive status of main venues in the park (flow of people, energy consumption, status of surrounding service facilities), detailed display of WiFi network service status and WiFi equipment status around the venues in the area

Operation situation: the distribution and status annotation of restaurants in the park, and the distribution and status annotation of toilets in the park.

## (2) Intelligent Services

Intelligence is the key to the success of this brain. Unlike the traditional management system, Smart-Core carries out real-time analysis of 16 million tourists on the basis of massive information, and realizes "What are you doing?" And "What do you want to do" for each tourist in the park? "What is your influence on others?" Answers to three big questions. On this basis, with other dispatching tools and means in the park, the "traceability, predictability and guidance" of tourists' behavior can be realized. It organically combines tourist behavior prediction, personality guidance and flow scheduling.

"China Pavilion" is a necessary choice for every visitor at the Beijing World Garden Expo, but the long queue and hasty guide show cause tourists to be very tired, and the effective time of the park tour is greatly reduced. In view of this situation, when visitors enter the park, Smart-Core begins to interact with visitors. According to the multi-channel information source, it draws the thermal view of the park flow, the current situation view of the park and the passenger flow congestion prediction view in real time. On this basis, Smart-Core realizes behavioral sketch and portrait according to the route of tourists, and predicts their interest. At the same time, combined with park control measures, offline performing arts activities, virtual landscape settings and other means to personalize the planning of tourist guidance program, tourists through Smart-Core to guide the way to play other scenic spots to avoid the peak of passenger flow, greatly reducing congestion, queuing caused by "fatigue time". At the same time, tourists can visit more scenic spots in a more comfortable and personalized way. At the same time, it makes the park provide better

experience and service environment for tourists under the limited resources and space conditions.

Through the brain of Smart-Core, the green mountains and waters in the park interact organically with everyone, making Beijing Expo become the backyard of every visitor. Smart-Core brings together the research results of many researchers in the field of big data, artificial intelligence and information security in the Institute of Software, Chinese Academy of Sciences, and is bred through the hard research and development of dozens of engineers in the platform for the transformation of scientific and technological achievements of the Institute of Software.

During the Beijing World Park Expo, the brain collects and processes more than ten kinds of related data in real time in the park, including ticketing, internal and external traffic, access inspection, wireless communication, mobile terminal, video and so on. At the same time, on the basis of the Internet map service provided by Gaode, the information of the whole station related to eating, living and traveling around Tencent and Ali will be aggregated and processed, and the information boundary between online and offline, physical space inside and outside the park will be broken through, so as to enhance the data application ability to a new height. On this basis, combined with the data of equipment operation, service facilities operation and daily business of the park management department, the panoramic data set of the park is formed as a whole. With this as a support, Smart-Core spans three different scenarios and covers the whole park. 0.3 square kilometers, 24 hours to meet the 16 million tourists, 5 core venues, 12 management departments, 10 business systems, 10 surrounding parking lots, 13 internal and external connecting roads, more than 60 park operation units, 6 external management docking units of tourist services, exhibition security, park management Intelligent analysis and data service requirements.

"People-oriented, science and technology lead" is one of the themes of Beijing Expo. It is also the ardent expectation of the people to organically integrate the green mountains and waters with our life and development. Relying on this brain, the Beijing World Garden Expo has unified the two. By combining with the process of Beijing World Garden Expo, the researchers of the Institute of Soft Intelligence and Software of China Science have continuously improved the brain, and the blueprint

of Beijing World Garden Expo has become more and more colorful.

## 2. New Demonstration of Scientific and Technological Cultural Tourism—Magic Forest

The 2019 Beijing World Horticultural Exposition is the “Olympic Games” in the field of horticulture, and how to innovate and demonstrate science, technology, culture and horticulture is an indispensable topic. In this context, the fantasy light and shadow forest came into being.

“Fantastic Light and Shadow Forest” is a major scientific and technological project supported by Beijing Science and Technology Committee and applied by Beijing World Horticultural Exposition Coordination Bureau in 2018. The project is jointly constructed by the Expo Bureau, Beijing Zhongke Shiwei Culture and Technology Co Ltd. and the Institute of Automation, Chinese Academy of Sciences. The project is located in the natural ecological exhibition area 500 meters west of Gate 5 of North Road, covering an area of 6300 square meters.

The project takes the Chinese traditional cultural classic “Mountain and Sea Classic” as the source of inspiration, takes the exotic flowers and plants, rare birds and animals of “Mountain and Sea Classic” as the roles, uses AR, big data, artificial intelligence, 5G and other frontier technologies, through virtual vision, human-computer interaction, new media art installations, comprehensive use of sound, light, electricity, film and other means. The interactive experience of the world of light and shadow is a visual feast of the integration of science, technology, culture and natural landscape for the visitors of Beijing World Park Expo.

Magic Light Forest integrates AR technology, artificial intelligence technology, virtual vision technology, human-computer interaction technology and new media technology, and combines with Chinese traditional culture Shanhai Jing to create a fantastic world full of imagination. Mirage Forest combines day and night design, divided into “Sun Fantasy” and “Moon Fantasy”.

During the day, visitors download the “Sun Fantasy”, “Sun Fantasy” based on AR and virtual vision technology for users to create a fantastic light forest AR landscape garden, users through mobile phones to find, participate in the experience, a daytime looks ordinary garden, but there are unexpected encounters. Encounter the

story on the rock;Encountered the beast faeries;Maybe you will encounter a group of fairies ... "Solar Fantasy" recreates the night exhibition of the fantastic light and shadow forest.At the same time, there are also contents beyond the night, the most amazing is the amazing presentation of "Tiannu scattered flowers" in the sky, flowers will fall on top of each user, users can take pictures with Tiannu in the clouds. AR landscape garden of "fantastic light and shadow forest"- "solar fantasy", for users who do not stay in Yanqing and can not experience the fantastic light and shadow forest at night. At the same time, it is also a digital garden that users can "invite home".Downloading the home version of "Sun Fantasy" through the cloud provides users who can't come to the Expo with the opportunity to interact with "immortals".

At night, the gods and beasts in Shanhai Jing are resurrected, and the mountains and rivers are also flexible, and tourists download the "Moon Fantasy" application to interact with this fantastic world. In the fantasy light and shadow forest, there are five kinds of magical energy, such as gold, wood, water, fire and earth, which are incarnated as five-color divine stones to help users call divine animals and realize their good wishes.Users here will encounter a symbol of luck auspicious white deer, you can request white deer to achieve their wishes;You will encounter the legendary Candle Dragon, Cheng Huang, Jinwu, He Luo Fish and Rotary Turtle, which symbolize the divine animals of gold, wood, water, fire and earth, bringing tourists to different scenes. Through the support of human-computer interaction technology and artificial intelligence technology, tourists will also experience the flow of their own energy here, the more tourists, the brighter and more colorful the lights in the forest.Visitors can also bring "forest" for tourists to prepare equipment a "fairy mirror", mirror in the traditional folk custom has the meaning of evil spirits, an embedded chip of the mirror, constitute this "fairy mirror", through this baby, visitors can find the story of the forest, in the rocks, in the trees, "fairy glass" will help users find the secret that can not be seen during the day, but also help tourists call God beast, Blessing peace, and all these will be the way for users to get the colorful stone.Mirage Forest provides exclusive content services for tourists. When users collect enough magic stones, they can summon the Candle Dragon. At that time, the Candle Dragon appears to shock the



audience, just for You come in the night.

In the magic light forest, lights, images, flowers and plants are alive, will interact with tourists from time to time, the magic light forest at night is a visual fantasy travel to tourists.

Magic Light Forest integrates science and technology and culture, day and night, scenic spots and families, online and offline, real and virtual scenes, as well as a variety of human-computer interaction design, and supports each other in experience, forming an innovative demonstration in the mode of science and technology cultural tourism, bringing tourists a rich and colorful surprise experience.

### 3. "Wisdom World Garden" Tourist Mobile App

In order to provide tourists with a full range of tour and experience services to help tourists more comfortable and convenient to visit the park in Beijing Expo, Beijing Expo launched "EXPO 2019"- "Wisdom Expo" tourist mobile app, visitors can "enter" at home for immersion viewing, according to the recommended route. It can also directly purchase tickets and make venue reservations. In addition, the application also provides the introduction and positioning of the park venues, exhibition parks and scenic spots, theme activity information, live navigation and AR functions, so that visitors can experience the innovative experience of Beijing Expo which integrates science, technology and culture. Tourists can also find information about transportation routes, surrounding restaurants, accommodation, scenic spots through the application, or learn about plants, flowers and horticulture in the "Plant Classroom" column.

Download "EXPO 2019", at home through the "online Expo", with a full range of panoramic tours, in the China Pavilion, Yongning Pavilion, Beijing Garden and other core venues, landscape and scenic spots of Beijing Expo for "immersive" viewing, so that you can enter the Beijing Expo before it has a three-dimensional and comprehensive understanding. In order to determine the destination for the tour in the Expo. At the same time, the Beijing World Garden Expo has carefully selected several "recommended routes" for tourists in "EXPO 2019", and tourists can choose their own tour paths according to their own needs. Of course, you can also plan

your own tour path in the Expo according to your personal interests and time. In addition, with the support of background data, they can even directly purchase tickets and make venue reservations, so as to make the journey more smooth and comfortable.

In "EXPO 2019", the venues, gardens and scenic spots in the Expo are introduced and positioned in detail, including the core China Pavilion, International Pavilion, Lifestyle Experience Pavilion, Botanical Pavilion and Performing Arts Center, as well as 34 domestic exhibition gardens, 41 international exhibition gardens, 17 enterprise exhibition gardens, 5 designer creative gardens, 8 AR landscape gardens and 44 main scenic spots. Users can use "EXPO 2019" to understand the information of venues, landscape and scenic spots, as well as thematic activities, and can also use navigation to get there. Through the way of "real navigation", it can also superimpose the compass in the field environment on the mobile screen, which is more convenient and fast to find the direction of their own progress. In addition, whether tired, hungry or in need of medical, transportation, maternal and child services, you can also use the "EXPO 2019" in your hand to find the content you need.

Of course, "EXPO 2019" can provide not only a technological upgrade in service experience, but also an amazing visual experience. In the "AR garden", health Dan Jingchou debut pavilions; The sky full of fireworks at any time in the garden over the blooming; Another fairyland world is hidden in the rocks of the observation deck; Traditional fashion show and gorgeous sea world are hidden in a magic wall. With mobile phones, you can find these different interpretation scenery brought by AR technology between pavilions and natural landscapes. Experience the innovative experience of tourism brought by the integration of science, technology and culture. In addition, "EXPO 2019" can also quickly find the traffic routes around the Expo, making the return journey more convenient and comfortable. It can also provide information about catering, accommodation, scenic spots and so on, so that tourists can easily "eat, live and travel" in Yanqing.

As the official application of Beijing World Horticultural Exposition, "EXPO 2019" also does not forget the original intention of "Green Life, Beautiful Home" of this World Horticultural Exposition, and specially opens up a small column of "Plant

Classroom” in its application, in which the knowledge and cultural content of plants, flowers, horticulture and so on are displayed.

#### Section 4 Robot

The 2019 Beijing World Garden Expo not only shows the world the level of horticulture in China, but also shows the level of artificial intelligence in China and the service and innovation ability of artificial intelligence application in international exhibitions, thus realizing the perfect integration of flower ecology and dynamic technology. The Expo will integrate scientific and technological innovation, introduce artificial intelligence services such as unmanned driving, robots, human-computer interaction, light and shadow experience, and create a scientific and technological Expo.

Under the condition that the core park of the Expo covers 5G signal in an all-round way, the combination of 5G and AI robots has a very surprising effect. The human-computer interaction robot of China Telecom Experience Hall is smooth and accurate when synchronizing the movements of the experiencers, the cheetah robot of Lifestyle Experience Hall can sell coffee without anyone, the garden patrol robot of Beijing Hall shoulders the responsibility of security and detection, and the wise Walker of South Road in the park “Snail Xiaobai” is an unmanned sweeping robot, and the Neolithic unmanned selling car. (After setting up the route, it can be driverless and stop automatically when meeting tourists. For people to buy the goods they need, no one sells drinks and snacks. These robots not only facilitate the needs of tourists, but also show the power of science and technology.

Because 5G is faster than 4G, there is almost no delay in the signal received by AI robot when human-computer interaction, and the movement of synchronous experiencer is smooth and accurate. This feature also enables AI robots to carry out high-risk operations under low delay characteristics. In addition, in the 5G environment, the AR landscape experience is also more smooth, the official app provides eight AR virtual attractions. The time and space tunnel on the south wall of the Lifestyle Experience hall also hides the secret of AR technology.

##### 1. Internet Red Robot Youyou

After the official opening of the Expo, the garden of 100 gardens, which gathers

the world's fine horticulture, appeared at home and abroad, among which the ecological float parade staged every day attracted attention. Ten ecological floats not only show the superb level of Chinese flower art, but also show the scientific and technological level of AI World Garden Expo. On top of the float, the humanoid robot of Youyou, a Chinese net red robot, which integrates the top technology of artificial intelligence, waved to Chinese and foreign audiences and attracted attention. This robot is not only the face of the flower car, but also the service of the venue tour guide, representing the level of artificial intelligence deployment of the Expo.

The robot talks directly to the global audience, giving people the most intuitive feeling, and the organizers are very careful in choosing partners. Finally, from the enterprise strength, core technology, functional stability, operating system and other dimensions of selection, the organizers of the Expo finally selected

Kangli Youlan.

Kangli Youlan is the world's top robotics company, invested by four listed companies, Red Star McLaren, Ziguang, Kangli Elevator and Shensi Electronics. And with the Chinese Academy of Sciences, Intel, IBM, Tsinghua University, Huawei, Invida, Baidu, Tencent and other top scientific research institutions and Internet giants to reach strategic cooperation, is the first service robot enterprise to obtain ISO9001 quality management system certification, is a member of the National Robot Standardization Group. The products of Kangli Youlan Company, Yiyi Youyou, are the first large-scale service robot capable of mass production in China, and become the second robot product capable of being truly commercially used in the world after Softbank Pepper in Japan, with the current market share of over 60%. The products are widely used in natural language interaction, deep semantic understanding, computer vision, autonomous positioning and navigation, automatic obstacle avoidance, motion control, Robot bionic simulation and modular design, etc. Breakthrough technological progress has been made.

At present, Kangli Youlan robot products have been widely used in family, education, government, justice, shopping malls, hotels, real estate and other fields. In addition to Youyou, the robots in the Expo, including Kangli Youlan Robot Xiaozhi,

HelloKitty.Xiaoben, etc serve the Robot Lecture Hall, International Pavilion and China Pavilion and other Expo scenes.

Among them, Hello Kitty is the first product of Kangli Youlan IP strategic layout, which is aimed at the domestic robot market. Hello Kitty has perfect accompanying entertainment, curriculum education and programming learning functions, and also carries a large number of technologies such as accompanying sound, touch induction, family information memory, so that the audience entering the "Robot Hall of the World Horticultural Exposition" can feel and understand the Science and Technology World Horticultural Exposition through AI robot wisdom.

Robot Xiaozhi is the world's first intelligent modular learning AI educational robot, representing the most advanced level of science and technology in China's educational robot industry, with perception, recognition, very human-like smart interaction, has also become a point of view in the Science and Technology Expo.

## 2. Invited "Lecturer" Xiaoben

The 2019 World Horticultural Exposition in Beijing, China invited a "star" to help explain, and its high popularity attracted people to watch, adding a bright color to the Beijing Expo. This star comes from the small stupid intelligence, is one section of height about 150 centimeters commercial robots, its fuselage screen approximately 27 inches, the outward appearance design shows the technical breath. Robot has the functions of hosting check-in, active reception, navigation tour, business inquiry and so on, which are mainly used in exhibition hall, medical treatment, government affairs, transportation, retail, public prosecution law and many other fields.

Founded in March 2016, Xiaoben Intelligence jointly developed an artificial intelligence (AI) engine based on natural language processing technology (NLP) as the core with the State Key Laboratory of Intelligent Technology and Systems of Tsinghua University. The AI engine has the ability of large text data mining and analysis, such as intelligent question answering, knowledge map representation, emotional analysis, and integrates face recognition. Speech recognition and speech synthesis technology, with multi-modal information processing capabilities. With AI engine as the core and facing the demand of online intelligent information service,

online intelligent customer service and intelligent robot telephone have been developed; Oriented to the application requirements of entity service robots, a service robot interaction platform Service robot hardware platform, and has independent hardware research and development and production capacity is developed. At the Beijing World Garden Expo in 2019, Xiaoben Robot is mainly responsible for the reception and explanation of China Pavilion, International Pavilion and Lifestyle Experience Pavilion. The cute little fool will take the initiative to receive visitors to the venue every day, through voice communication with the robot or touch the big screen in front of the robot, you can check the map, related routes, exhibition area information of the conference at any time. At the same time, Xiaoben also led you to visit the venue and explained the specific content of the venue in detail, conveying the theme of "Green Life Beautiful Home".

### 3. Neolithic unmanned vehicles

Neolithic Unmanned Vehicle is an unmanned vehicle product launched by Neolithic Huitong (Beijing) Technology Co Ltd. which is suitable for operation in parks, industrial zones, business zones and other parks, with L4 automatic driving capability and in line with European L6e light tram standard, modular intelligent cargo box can also meet the retail, security, express delivery and other scene operation needs. The model serving the Beijing World Garden Expo is the retail type of Neolithic Unmanned Vehicle, tourists can call the Neolithic Unmanned Vehicle to their side only through a small program, scan and pay for the goods they need, and feel the convenient experience of buying drinks and snacks anytime and anywhere.

As a Neolithic unmanned vehicle with service experience in more than ten areas of China, such as Beijing Shougang Industrial Park and Xiongan New Area, it has rich accumulation in automatic driving and vehicle networking technology. Neolithic has developed L4 level automatic driving brain and vehicle networking system for small vehicles. Different from the traditional concept of vehicle networking, it has a complete ecological system from cloud platform to chassis, which includes a variety of business models, vehicle safety system, fault detection and processing, assistant driving and so on. In order to improve the safety ability of the whole vehicle, Neolithic has independently developed a parallel driving system and a cerebellar system, the former is used to remotely synchronously take over the unmanned vehicle and drive it remotely; The latter is based on vehicle-level ultrasonic radar as an independent safety redundancy.

In addition, the battery part of the Neolithic Unmanned Vehicle adopts the power exchange scheme, and independently encapsulates the Package, coupled with the BMS system of the vehicle regulation level, so as to achieve the endurance of 100 kilometers, a single person can complete the power exchange in 30 seconds without any tools, making the vehicle support all-weather operation, providing tourists with uninterrupted multiple services.

At the Beijing World Park Expo, the Neolithic Unmanned Vehicle is responsible for the sale of drinks and food in the park, because it has the technology of automatic driving, vehicle networking and big data, which not only facilitates tourists to

buy goods anytime and anywhere, but also solves the inconvenience of traditional parks to find and buy goods on foot, and also helps the park to achieve. Through the vehicle network system, vehicles can be flexibly allocated according to the volume and needs of tourists, to meet the needs of tourists at any time, to achieve efficient, convenient and energy-saving balance, and to spread science and technology for the world.

#### IV. Northern Tiantu Airlines-Unmanned Ship, Plant Protection UAV and VR Teaching System

Northern Tiantu Aviation Technology Development (Beijing) Co Ltd. has applied the three major scientific and technological achievements of unmanned ship, plant protection UAV and VR virtual teaching system at the Expo, which integrate modern multi-field industries and promote landing through independent research and development, to add brilliance to the scientific and technological elements of Beijing Expo.

The 2019 Beijing World Park Expo covers a total area of about 960 hectares, with many landscape scenery, and the Tiantu unmanned ship carries out inspection demonstration by the lake. The unmanned ships displayed during the Beijing World Garden Expo include two major categories of detection unmanned ships and water rescue unmanned ships, which can combine real-time navigation data and visual maps of the ground station (GCS) to accurately complete automatic navigation/return navigation, route navigation, detour navigation, point to point navigation and many other navigation tasks. The rescue unmanned ship can be thrown from a ship, a shore or an airplane, has the functions of intelligently correcting the course and automatically returning after losing connection, can travel in the water without being interfered by external force, can travel in a straight line and can travel on both sides, and can simultaneously rescue 2 to 3 people falling into the water at a speed of more than 4 times that of a lifeguard.

Large-area horticultural manual control is time-consuming and laborious, Tiantu M4E multi-rotor plant protection UAV can not only provide safe and stable flight defense services for horticulture, but also have the advantages of simple operation, easy to carry, waterproof, easy maintenance and so on, which can escort the beautiful



scenery of Beijing Expo.

With the development of UAV technology, UAV has been widely used in all walks of life. The emergence of 5G has also enabled the UAV industry twice. The VR flight experience system independently developed by Tiantu was also displayed at the Beijing World Park Expo, which simulated the real scene through VR virtual technology and brought a unique UAV flight experience to tourists.

## Section 5 Internet of Things (IoT)

As a global partner of the 2019 Beijing World Park Expo, China Telecom has provided high-quality communication support services for the Beijing World Park Expo, and through the Internet of Things, cloud computing, 5G and other technologies, it has brought these high-tech details together to create a new realm of science and technology. Innovation and new model of the Expo.

### I. Integrated Management Platform of Internet of Things in the Park—the “Brain” of the Expo

The comprehensive management platform of the Internet of Things in the park built by China Telecom is a SaaS product of the open platform of the Internet of Things in China Telecom for the management of the park. The platform includes air monitoring, intelligent fire protection, intelligent environmental sanitation, intelligent lighting, intelligent battery car and intelligent manhole cover, which realize the unified visual management and humanized service platform for people, things and environment in the park. On this platform, the information of all infrastructure monitoring sensors in the park can be monitored. At the same time, data can be analyzed and decided on the platform. Let the “live” Expo will be more “smart” and bring people a new experience of interconnection of all things.

Two, park infrastructure monitoring I the “antenna” of the World Garden Fair.

In the park, China Telecom has installed monitoring facilities on the infrastructure of the park, such as well cover, garbage can, street lamp, battery car, smoke environment monitoring, etc. With the help of NB-IoT network, a large number of equipment terminals are on-line, and power consumption is reduced, so that the

equipment is free from the trouble of power supply. Let the park management department can not go out, understand the facilities in the park; Let the platform display every corner of the park through an interface; Let visitors know that the future smart park has really come to us by experiencing the 2019 Beijing World Park Expo.

## Part VIII Business and Ticketing

The commercial operation of Beijing World Horticultural Exposition includes three parts: sponsorship and investment, franchise and commercial management of the park. Among them, the sponsorship and investment promotion work is carried out in a market-oriented way, the total amount of sponsorship is a historical record of the Expo, and the brand linkage effect between the sponsoring enterprises and the Beijing Expo is good; In terms of franchising, 25 franchised enterprises provide a wide range of franchised goods with high quality, which meet the various needs of all sectors of society for franchised goods of Beijing Expo; In the commercial management of the park, through the establishment of the Park Market Management Office, the establishment of the Park Government Service Hall and the strengthening of market supervision, the Expo Bureau has ensured the orderly operation of the business in the park, while the Beijing Expo has actively constructed and operated product exhibition area projects in poor areas to help fight poverty.

Adhering to the guiding ideology of "visitor-centered" and the principle of "sharing, benefiting the people and innovation", the ticketing work of Beijing Expo promotes the design, sale and publicity of tickets in a solid and orderly manner.

### Chapter I Sponsorship

The sponsorship of Beijing Expo includes global partners, senior sponsors, project sponsors and special sponsors, including 9 global partners, 3 senior sponsors, project sponsors and special sponsors. The total amount of sponsorship investment is nearly 1 billion yuan, of which cash sponsorship is about 216 million yuan. The number of sponsoring enterprises and the total amount of sponsorship of the 2019 Beijing World Horticultural Exposition are far more than those of previous World Horticultural Expositions, creating a new record of the amount of sponsorship of the domestic World Horticultural Expo.

Sponsoring enterprises of Beijing Expo provide support for Beijing Expo through sponsorship of funds, products, equipment, facilities and free services.

### Section 1 Sponsorship, Investment Promotion and Fulfillment

Beijing World Horticultural Exposition adopts a market-oriented way to carry out brand sponsorship and investment promotion, and the sponsored enterprises recruited are widely distributed in different industries and diversified in nature, showing the image of Beijing World Horticultural Exposition as "a new realm of world horticulture, a new model of ecological civilization" to the public from different fields, stimulating the public's yearning for Beijing World Garden Exposition in 2019, and conveying the concept of green development. Sponsorship products and services involve ticketing, catering, travel, communication, insurance, cultural activities, publicity and promotion, etc which guarantee the needs of the operation of the park, reduce financial input, and provide important support and guarantee for the smooth operation of Beijing Expo.

The overall fulfilment of sponsorships of Beijing Expo is good, of which the cash contract amount is about 216 million yuan, delivered 180.5 million yuan, and the fulfilment rate is about 83%;The contracted amount of VIK is about 750 million yuan, and about 466 million yuan has been supplied or delivered, and the performance rate is about 62%.

The development concept of Beijing Expo is in line with that of the recruited sponsor enterprises, and through cooperation, the mutual benefit and win-win of the brand can be fully realized, the beneficial supplement of the preparatory meeting and the sharing of industry resources can be realized, so that Beijing Expo will become a vivid practice of "practicing the concept of green development and building an ecologically beautiful China".Before the closing ceremony, the Expo Bureau accepted the sponsor's suggestion to take the lead in establishing the "Enterprise Green Development Alliance" and jointly issued the "Beijing Expo Enterprise Green Development Initiative", so that the Beijing Expo, which advocates "green life", will never end, and the pace of implementing the socialist concept of ecological civilization and building a "beautiful home" will never stop.

## Section 2 Global Partner

**Air China.** China's only flag carrier, a member of the Star Alliance. Through Air China using Beijing as a hub, a strong and balanced global route network, especially

after joining the Star Alliance, passengers can easily and quickly reach 1317 airports in 193 countries. Air China provides air travel services to the Expo, which guarantees the transportation services of the Expo staff.

**CYTS.** The Central Committee of the Communist Youth League established the first tourism enterprise after China's reform and opening up. It has been rated as "China's well-known trademark" by the State Administration of Industry and Commerce, and has officially become the global partner of the 2019 Beijing World Park Expo, which is also the first and only qualified enterprise for China's tourism enterprises. The ticketing system developed by CYTS provides technical services for the ticketing work of the Expo; At the same time, CYTS will paint the theme of the Expo on the vehicles serving the Expo, and 120 CYTS theme painting buses will shuttle around Beijing Qianmen, the Forbidden City, Badaling, Bird's Nest and other scenic spots, spreading the influence of the Expo to the streets and alleys of Beijing.

**Bank of Beijing.** China's largest city commercial bank and the third largest bank in the Beijing area, employs more than 3,600 people and serves individual and corporate customers through its 116 branches. At the same time, the Bank of Beijing has also set up 272 ATMs in its coverage outlets and established a fast-growing e-banking business. The Bank of Beijing has provided a full range of financial services for the Expo, including about 8.2 billion yuan in financing services, on-site financial payments and foreign currency exchange.

**Beijing Shunxin Holding Group Co Ltd.** It is a comprehensive large-scale enterprise group integrating bio-brewing, nutritious meat, safe agricultural products, healthy real estate, ecological building, scientific and technological planting, financial services, comprehensive sectors and other industries. Shunxin provided food, beverage, mineral water and other products for the Expo, and provided material support for the operation of the event and condolences for important festivals.

**Vanke Co Ltd. (VANKE)** was founded in 1984, after more than 30 years of development, has become a leading domestic urban and rural construction and life service providers. In order to save energy consumption, the design and construction of the Botanical Hall of Beijing Expo 2019 has formulated environmental positioning plan and building intelligence in advance, carried out passive and active two-way energy saving, and adhered to the three principles of low carbon, low water and low emission.

**Beiqi Group.** As one of the key automobile groups in China, Beijing is a state-owned enterprise with a complete industrial system of independent brand, joint venture and cooperation, new energy vehicles, auto parts, auto service trade, auto industry finance, internationalization, general aviation, travel services, reform and adjustment. Beiqi Group sponsored vehicles and travel services to ensure the traffic demand of the Expo.

**Beijing Branch of China Telecom Co Ltd.** Founded in 2002, relying on the rich communication infrastructure of China Telecom, supported by advanced network technology, strong operational capacity and rich management experience, we provide customers with comprehensive information services of all businesses in the first place. Relying on its network resources, China Telecom will provide high-quality and intelligent communication and intelligent operation support for the 2019 Beijing World Garden, and deeply integrate the advantages of information integration of China Telecom's "Internet + industry" into all operation links of the Expo, helping to build the Beijing World Garden Expo into a green, technological, innovative, efficient and intelligent horticultural event.

**Baidu.** The world's largest Chinese search engine and the largest Chinese website. Founded in Zhongguancun on January 1, 2000, the company founder Robin Li has the patent of "hyperlink analysis" technology, which makes China one of the only four countries in the world with independent search engine core technology besides the United States, Russia and South Korea.

**JDCOM.** In 2004, it formally set foot in the field of e-commerce, and in 2017, the market turnover of Jingdong Group was close to 1.3 trillion yuan. In July 2018, Jingdong ranked 181st in the Fortune Global 500 for the third time, second only to Amazon and Alphabet in the world, and third among Internet companies. In May 2014, Jingdong Group was officially listed on the Nasdaq Stock Exchange in the United States, which is the first large-scale comprehensive e-commerce platform successfully listed in the United States.



### Section 3 Sponsors

#### 1. Premium Sponsor

**PICC Property Insurance Company.** Its predecessor is the People's Insurance Company of China established on October 20, 1949, headquartered in Beijing, is the core member and landmark main industry of the People's Insurance Company of China Group Limited (PICC Group, No.114 of Fortune 500), and is a domestic company with a long history and large business scale. Large state-owned property insurance companies with strong comprehensive strength rank in the forefront of the global property insurance market in terms of premium scale.

PICC Property Insurance provides comprehensive insurance services for the Expo, including engineering insurance, comprehensive liability insurance and property insurance, and establishes fast claims settlement points and helicopter rescue services in the park. Before the opening of the Expo, PICC Property Insurance and the Expo Bureau carried out risk point investigation and combing, which provided support for the Expo to resolve various risks.

**Beijing Gehua Large Cultural Activity Center Co Ltd.** Independent music producer of Beijing Olympic Games and Paralympic Games, operator of news center for non-registered journalists, and exclusive ticket operator. The company takes the national and Beijing large-scale cultural activities as the operation platform, and is committed to providing customers with cultural performances, exhibitions, creative design, cultural performances and equipment rental in one of the whole process services. The event management platform built by Gehua provides necessary

technical services for the Expo, and provides urban screens, building screens, bus screens and other platforms to publicize the Expo in Beijing, and continues to publicize the Expo on the outdoor screens of Beijing landmark buildings such as the World Trade Center Tianjie and Dongzhimen Business District.

**Beijing Huaxiang Flowers and Trees Group Co. Ltd.** Established in 2001, located in Caoqiao Village, Fengtai District, Beijing, is a group garden flower enterprise affiliated to Beijing Caoqiao Industrial Corporation.



## 2. Project Sponsor

**Sinotrans.** The first listed company in the domestic air freight forwarding industry. Its core businesses include air freight forwarding, express delivery and comprehensive logistics. The international freight forwarding business ranks first in the domestic industry. It was established in October 1999 and successfully listed on the Shanghai Stock Exchange on December 28, 2000.



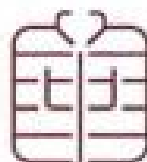
## 3. Special Sponsors

**Shenzhen DRINGO Food Co Ltd.** Founded in September 2001, it is a food processing and manufacturing enterprise integrating R & D, production and sales, focusing on cookies, pastries and gelatin candies.

**Beijing Dongxiang Environmental Technology Co Ltd.** Established on December 9, 2005, it is a national hi-tech enterprise integrating scientific research, production and sales, and a supplier of resource treatment and recycling of organic solid waste from Beijing Expo Garden in 2019.



**Chinese suit.** Brand under the Zhongshan City Chinese dress Co Ltd is China's senior custommade dress famous brand. The company is headquartered in Zhongshan City, Guangdong Province, "a great man of the century," Sun Yat-sen's hometown.



## Chapter II Franchising

### Section 1 Licensed Commodities

Since 2017, the Beijing Expo Bureau has selected 25 enterprises to become licensed enterprises of the Beijing Expo through public solicitation and expert evaluation. In the form of contract agreement, concessionary enterprises are allowed to use their names, trademarks, proprietary technologies, products and operational management experience for Beijing Expo. The licensed enterprises of Beijing Expo have enriched and improved the categories and quality of licensed commodities to meet the various needs of all sectors of society for licensed commodities of Beijing Expo.

Among the franchised enterprises, there are state-owned enterprises represented by Beijing Gongmei Group Co Ltd China Gold Coin Corporation, China Post Group Corporation, Bank of Beijing Co Ltd. and Beijing Railway Train Service Co Ltd. as well as experienced private enterprises such as Beijing Prosperity Culture Development Co. Beijing Huajiang Cultural Development Co Ltd. and Beijing yuanlong Yatu Cultural Communication Co Ltd. are also franchised enterprises of the Beijing Winter Olympic Games.

In terms of the production of licensed commodities, from the start to the end of the franchising work of Beijing Expo, more than 1800 licensed products were developed, covering 12 categories such as horticultural products, mascot cultural derivatives, crafts and so on.

Beijing Expo will continue to enrich the types of licensed products, combined with important time nodes to develop special derivatives;Standardize the evaluation procedure of licensed products, formulate and promulgate the Management Measures for the Audit of Licensed Products, and provide the working basis for the audit and approval of licensed products;It has organized many press conferences on licensed commodities and new products of licensed products, and expanded the publicity of new products.

There are 27 retail outlets for licensed goods in Beijing Expo, which adopt the retail mode of "online + offline". There are two online retail stores, namely Tianmao Flagship Store of Beijing Expo Licensed Goods and Jingdong Flagship Store of Beijing Expo Licensed Goods. There are 25 offline retail outlets (including parks), mainly concentrated in key business circles, shopping malls, scenic spots and Xinhua bookstores in Beijing, Shanghai, Guangzhou and Shenzhen.Fifteen franchised stores will be opened in the Expo site, including the first floor of the China Pavilion, the second floor of the International Pavilion, the Horticultural Industry Zone, the Children's Paradise and Gate 1.

The best-selling licensed products of Beijing Expo include commemorative passports, commemorative plates, bird series and derivatives of "Chinese Plants Influencing the World".

Beijing Expo will organize press conferences on licensed commodities, licensing activities for licensed enterprises, promotional activities for licensed commodities, and the launching ceremony of commemorative stamps and precious metal commemorative coins for Beijing Expo. At the same time, with the help of large-scale exhibition activities to promote Beijing Expo licensed goods, such as Beijing International Tourism Commodities and Equipment Exposition, Beijing Cultural Expo, Beijing International Design Week, China Gift Home Exhibition, China-ASEAN Expo, 2019 China Tourism Industry Expo and so on.

## Section 2 Commemorative Coin

Beijing Expo commemorative coins are legal currency issued by the state to commemorate Beijing Expo, including ordinary commemorative coins and precious metal commemorative coins.

In August 2018, with the approval of the People's Bank of China, the Beijing World Horticultural Expo established the "2019 Beijing World Horticultural Expo Precious Metal Commemorative Coin" (hereinafter referred to as "Beijing World Gardening Expo Commemorative Coin"). In December 2018, the People's Bank of China announced on its official website to the whole society the issuance plan of the precious metal commemorative coin project in 2019, in which the Beijing World Garden Expo commemorative coin project issued 5 grams of gold coins 1.

Ten thousand, 30 grams of silver coins, 30 thousand, 3 grams of button coins, 20 thousand, are all national legal currency.

For the commemorative coins of Beijing Expo, China Gold Coin Corporation invites manuscripts from design units in the industry, carries out public solicitation activities, and organizes the production of sample coins after the approval of the design drawings by the People's Bank of China; After the sample coin was examined and approved by the People's Bank of China, the China Gold Coin Corporation organized two national mints, Shenzhen Guobao Minting Co Ltd. and Shanghai Minting Co Ltd to produce in batches.

On April 24, 2019, the People's Bank of China issued a bulletin announcing the specifications, circulation and patterns of commemorative coins for the Beijing World Garden Expo. Among them, 5 grams of round gold commemorative coins are refined coins, containing 5 grams of pure gold, 20 mm in diameter, 80 yuan in denomination, 99.9% in fineness, and the largest circulation is 10000. The 30 gram round silver commemorative coin is a fine coin, containing 30 grams of pure silver, with a diameter of 40 mm, a face value of 10 yuan, and a fineness of 99.9%, the largest circulation of 30000 pieces. The 3-gram round uranium commemorative coin is a refined coin, containing 3 grams of pure uranium, 18 mm in diameter, 100 yuan in denomination, 99.95% fineness, and the largest circulation is 20000 coins.

The obverse design of the commemorative coins of Beijing Expo is the combination of

the emblem and the Great Wall elements, and the name of the country and the year number are printed. The back of the 5 grams circular refined gold commemorative coin is designed with the combination of the architectural shape of the Chinese Pavilion and the decorative pattern of plants, and the Chinese words and denominations of "2019 Beijing World Horticultural Exposition" are printed; The back of the 30g round silver commemorative coin is designed with the combination of the local architectural shape of the International Pavilion and the decorative pattern of plants, and the Chinese characters and denominations of "2019 Beijing World Horticultural Exposition" are printed; The back of the 3-gram round button commemorative coin is designed with the combination of mascot and plant decoration patterns, and the Chinese characters and denominations of "2019 Beijing World Horticultural Exposition" are printed.

On April 29, 2019, the first launch of precious metal commemorative coins for Beijing Expo was held in the Expo Park.

The commemorative coins of Beijing Expo are distributed by China Gold Coin Corporation and sold to horticulture enthusiasts and coin enthusiasts all over the world through domestic and foreign distribution channels.



8-5 图 5 克圆形精制金质纪念币正面图案和背面图案



8-6 图 30 克圆形精制银质纪念币正面图案和背面图案



8-7 图 3 克圆形精制铂质纪念币正面图案和背面图案

### Section 3 Commemorative Stamps

The commemorative stamps of Beijing World Garden Expo are specially issued to commemorate the Beijing World Garden Expo.

On April 29, 2019, China Post issued a set of two commemorative stamps for the 2019 World Horticultural Exposition in Beijing, China, with the stamp patterns named Green Life and Beautiful Home. The face value of the full set of stamps is 2 yuan.

At the launching ceremony of the Beijing World Horticultural Expo, the Beijing Branch of China Post Group Co Ltd. cooperated with the stamp issuance to launch the theme first day cover, theme postcard and theme album of "2019 China Beijing World Horticultural Exposition". During the Beijing Expo, Beijing Post set up theme post offices and several postal service outlets in the park, launched the "102019" exclusive postal code for the Beijing Expo, and provided many services such as parcel delivery, souvenir envelope and postcard sales and postmark.

Commemorative stamps of "2019 Beijing World Horticultural Exposition" show magnificent and colorful Expo grandeur in the form of people's favorite, and convey the objectives, concepts and themes of Beijing World Horticultural Exposition with exquisite design language.



8-8 图 纪念邮票



8-9 图 首日封



### Chapter III Commercial management in the park

In January 2018, the Beijing World Park Expo started its business planning and investment promotion work, and began to negotiate with catering associations and their enterprises to make preparations for the formulation of the work programme. In June 2018, the Expo Bureau formulated the General Plan for Business Planning and Investment Promotion of the Park, which was adopted by the Party Group Meeting in August; In December, according to the progress of investment promotion, the Park Business Management Policy, the Work Program of the Park Market Management Office and the General Program of the Park Market Management Work were formulated.

The commercial planning of Beijing Expo Park in 2019 adheres to the service principle of "visitor-centered", aiming at meeting the basic needs of visitors for commercial services in the park and enhancing the experience of visitors. The introduction of fast food, dinner as a supplement, taking into account Chinese and Western food, dinner and fast food, Muslim vegetarian food, respect for national beliefs and eating habits, focusing on the display of Chinese food culture. The allocation of commercial service points is mainly decentralized and supplemented by centralized ones, which ensures the continuity of visitors' park visits and fully considers the convenience of visitors' consumption. The choice of merchants is mainly based on large households, supplemented by small households, paying equal attention to brand and quality, focusing on cost-effective and security.

At the end of 2018, with the approval of the Beijing Municipal Government, the Beijing World Horticultural Expo Bureau established the Park Market Management Office, which is supported by the Beijing Municipal Market Supervision and Administration Bureau and the Municipal Business Bureau, due to the large number of business departments, large investment area and complex business entities in Beijing World Horticultural Expo. Cadres familiar with relevant business were selected from Yanqing District Market Supervision Bureau, Business Bureau, Eco-environmental Protection Bureau and Tax Bureau to join the Park Market Management Office. The market management office of the park is mainly responsible for coordinating the processing of business licenses, managing the market order of the park, and docking the daily inspection of relevant commissions and bureaus.

In order to facilitate the business license processing and improve the efficiency of license processing, the market management office of the park has compiled the Service Guide for Business Operators in the park, which guides the business license processing. In order to regulate the business operations of the commercial operators in the Expo Park, maintain the normal order of the market in the Expo Park, protect the legitimate rights and interests of tourists, and ensure the effective operation of commercial businesses in the Expo Park, the Market Management Office of the Expo Park has worked out and issued the Regulations on Commercial Management in Expo Parks, Regulations on Business Operation and Management in Expo Parks, Regulations on Food Safety Management in Exhibition Parks, and Regulations on Cross-door Business Operations of Business Operators in Expo Sites. Four normative documents, as well as the "Park Commodity Sales Price Commitment" and other documents, and before the opening of the park to organize business training, so that businesses familiar with market management norms.

In order to better serve the merchants in the park, the Expo Bureau has set up a one-stop government service hall in the park, which gathers six departments of market supervision, taxation, ecological environment, culture and tourism, fire protection and commerce Bureau to work on the spot, and provides on-site consultation, license processing, tax registration, invoice application, quasi-business license and business license for exhibitors and exhibitors during the session. Banking and insurance services, a total of 7 business processing. By the end of September 2019, the one-stop government service hall of the park had received more than 1400 people, answered nearly 800 people for various kinds of consultation, and handled 214 industrial and commercial business licenses and 188 food business licenses. There are 10 small grocery stores and 2 small-scale food production licenses.

The one-stop government service hall of the park realizes the comprehensive window working mode of "comprehensive reception at the front desk, parallel examination and approval at the back desk, unified delivery at the window", which maximizes the efficiency of examination and approval service, and most merchants realize online processing, and only let merchants run once at most if they need on-site processing. Prior to the opening of the Expo, catering merchants were pre-examined for decoration drawings to improve the accuracy of the submitted information, thus creating a



"speed" for the Expo to be delivered within one working day for industrial and commercial business licenses and three working days for food business licenses. After the opening of the park, the park one-stop government service hall is mainly responsible for the international exhibition park license processing work, due to the international exhibitors language communication is not smooth, China's laws and license processing procedures are not familiar with, the park one-stop government service hall staff to foreign exhibitors one-to-one service, by all countries. Some foreign exhibitors sent Jinqi and praise letters to praise the government service of Beijing Expo. Make Beijing Expo a window to show the high quality business environment.

In terms of market supervision, before the opening of the Expo, the Market Management Office of Beijing Expo Bureau, together with the Beijing Municipal Market Supervision and Administration Bureau and the Market Supervision and Administration Bureau of Yanqing District, formulated the Work Program on Further Strengthening Food Safety Supervision of the Expo, and set up special law enforcement personnel according to the requirements of the Program. Three to six law enforcement personnel are arranged to conduct market supervision and inspection in the Park every day. The Beijing Expo Bureau, the Municipal Market Supervision and Administration Bureau and the Yanqing District Market Supervision and Administration Bureau have established a regular inspection mechanism to conduct joint comprehensive business inspections twice a week, with about 10 people arranged for each comprehensive inspection, so as to standardize the market order of the park, achieve effective supervision and protect the legitimate rights and interests of tourists.

As for the food safety of the Park, the Market Management Office of Beijing Expo Bureau, together with the Market Supervision and Administration Bureau of Yanqing District, the Health and Health Committee of Yanqing District and the Bureau of Commerce of Yanqin Emergency Response to Food Supply in the Park

According to the plan, the four units jointly held two emergency drills, established a linkage mechanism during the session, arranged the possible food safety and food supply, and eliminated the hidden dangers of food safety and supply after the opening of the park in time.

Yanqing District market supervision department in the park to set up a rapid

detection of food raw materials laboratory, daily sampling of nearly a dozen restaurants 5 to 6 kinds of food raw materials, sampling food ingredients in the pesticide residue value, clenbuterol content, edible oil peroxide value and acid value and other indicators for rapid detection, to ensure the park food safety. Food operators in the park need to report the menu catalogue of their business to the market management department of the park for the record before opening, and at the same time, all the food materials purchased need to keep the documents, establish the account, and establish the traceability system of food materials to ensure that the food raw materials are traceable.

The market management office of the park coordinates the business management of all departments in the park, establishes the market management team of the park, strictly manages the food dealers in the park and strictly controls the red line of food safety. The market management office of the park arranges 8-10 administrators to inspect the merchants according to the area, and at the same time, six volunteers are arranged to participate in the inspection of the park market every day. According to the statistics of the business volume of the park every day, the total commercial turnover of the park is about 2300 million yuan, of which the total turnover of catering is about 144 million yuan; The total retail turnover is 56 million yuan, the turnover of electric cars rental is about 32 million yuan, and the business explanation is about 4.5 million yuan. The consumption of the park shows a trend of higher holidays and weekends and lower weekdays. By the end of September 2019, more than 170 complaints had been handled, and most of them had been effectively handled. In order to thoroughly implement the spirit of the Nineteenth National Congress of the Communist Party of China, fully implement the precise poverty alleviation strategy of the two sessions on fighting against poverty, and with the help of the platform of "exhibition, exchange and trade" of Beijing Expo, to show the world the great achievements made by China in safeguarding and improving people's livelihood and eliminating poverty, the Expo Park has set up in WF07. It aims to promote their respective ecological horticulture, tourism and other resources on the platform of Beijing Expo with the help of 162 days of duration, and to focus on the achievements made since the battle against poverty.

On July 5, 2018, the Expo Bureau organized a symposium to study the relevant work

of the exhibition work conference plan of the product exhibition area in poverty-stricken areas of the Expo, and finally decided to adopt the "6 + 1" model for the exhibition garden, consisting of Qinglong, Fengning, Youyang, Wangcang, Hezhang and Jiusan Society. Six counties of Lueyang and counterpart support units of Beijing Counterpart Support Cooperation Promotion Association participated in the exhibition. In late July 2018, a symposium on exhibition work in poor areas of the Expo was held, requiring exhibitors to improve the exhibition plan to ensure the smooth progress of the exhibition work. Subsequently, by the end of 2018, the greening and basic engineering work of the company was started, and the greening work of the exhibition area was basically completed in March 2019. At the same time, the construction of the exhibition garden was started, and the construction and exhibition of product exhibition areas in poor areas were successfully completed before the opening of the Expo on April 28, 2019.

After April 29, 2019, the project of product exhibition area in poverty-stricken areas entered the operation period. With the help of the influence of Beijing Expo and the platform of exhibition area, exhibitors have carried out rich and colorful cultural exhibitions, consumption poverty alleviation and other work. During the session, the various departments of the Expo Bureau guaranteed a total of 8 provinces, 13 prefectures (cities, prefectures, leagues) and 64 counties (cities, districts and banners). And relevant departments and social welfare organizations in Beijing carried out 94 poverty alleviation promotion activities, the recipient countries came to Beijing World Garden Expo to participate in the activities 10061 people, 577 exhibitors, more than 100000 people visited the exhibition area, and signed 120 consumer poverty alleviation cooperation contracts. In order to call on the whole society to concentrate on poverty alleviation, promote industrial development in poverty-stricken areas, and publicize the unique charm and market value of characteristic products in poverty-stricken areas, the Beijing World Horticultural Bureau, in conjunction with the Beijing Poverty Alleviation Office, launched the "Consumption Poverty Alleviation Caravan" to focus on displaying products from poverty-stricken areas and help them overcome poverty through tourist consumption.

## Chapter IV Ticketing

Ticketing work is the basis and main line of the operation of Beijing Expo, and also an important guarantee for visitors to get the best experience of the park. Through ticket design, sales, publicity and other work to enhance the image and brand value of Beijing Expo, it is of great significance to hold a successful World Horticultural Exposition.

### Section 1 Types and Pricing of Tickets

On August 17, 2018, at the third meeting of the Organizing Committee of the 2019 Beijing World Horticultural Expo, the General Ticketing Plan of the 2019 Beijing World Horticultural Expo was adopted. Beijing Expo tickets are divided into two categories, individual tickets and group tickets, with a total of 8 kinds. Individual tickets are divided into two categories of designated day tickets and weekday tickets, a total of six kinds, of which designated day tickets are divided into designated day ordinary tickets and designated day preferential tickets, weekday tickets are classified into weekday ordinary tickets, weekday preferential tickets, three tickets and full tickets. Group tickets are divided into ordinary group tickets and student group tickets. Among them, the designated day refers to the park opening day, "51" holiday, the Dragon Boat Festival, Mid-Autumn Festival, "11" holidays (including closing day). Five parts, a total of 17 days of designated days, tourists need to purchase a designated day ticket in advance, you can choose to visit on the designated day or use on any weekday. The opening time of Beijing Expo is 9 A. M. and the closing time is 9 P. m.

### Section 2 Ticket Sales Channels

In order to ensure the full coverage of the target customers, the ticketing sales channels of Beijing Expo are divided into three types: official self-operation, online agents and contracted travel agencies. Among them, the official self-operated channels mainly include the official website of Beijing Expo, the official app of

Beijing Expo and the on-site window of the session. Except for the official self-operated channels, the other contracted ticketing channels are all publicly solicited, and the results of the solicitation are publicized on the official website after expert evaluation.

On August 8, 2018, Beijing Expo Bureau published the Announcement on Soliciting Online Agents for Ticketing Sales of Expo 2019 and the Announcement on Soliciting Travel Agencies for Ticketing Sales of Expo 2019 on the official website of the Expo.

On August 28, expert review meetings were held respectively, and the results were published on the official website on August 30, 2018.

After the results of the solicitation were publicized and approved, the relevant work of consultation and signing was started. There are two online agents for signing the 2019 Beijing World Park Expo, namely, Roam and Barley; There are seven contracted travel agencies, namely, China Women's Travel Service, Qingdao Hand-in-Hand International Travel Service Co Ltd China Travel Service Headquarters Co Ltd Hunan Tongcheng Affinity Tourism International Travel Service Limited, Forest International Travel Service Limited, Beijing Xinhua International Tourism Limited and China Youth Travel Holdings Limited.

Table 8-1 Types of Tickets and Applicable Rules for Beijing Expo

Category	Type of ticket		Applicable Rules
One People Ticket	Finger Set 0	Designated Day	<ul style="list-style-type: none"> <li>• For all person</li> <li>• Visit on the appointed day, or use on any weekday</li> </ul>
		Designated Day Preferential Ticket	<ul style="list-style-type: none"> <li>• For people with disabilities</li> <li>• For persons born on or before December 31, 1959</li> <li>• Applicable to students in general higher education, high school education and compulsory education</li> <li>• For children over 1.3m in height (under 14 years old)</li> </ul>
		Weekday Ordinary	<ul style="list-style-type: none"> <li>• For all person</li> <li>• Any weekday visit except designated day</li> </ul>
		Weekday Preferential Ticket	<ul style="list-style-type: none"> <li>• For people with disabilities</li> <li>• For persons born on or before December 31, 1959</li> <li>• Applicable to students in general higher education, high school education and compulsory education</li> <li>• For children over 1.3m in height (under 14 years old)</li> </ul>
	Ping 0	Three-time ticket	<ul style="list-style-type: none"> <li>• For all person</li> <li>• In addition to the designated day, each ticket can</li> </ul>
		Full-ride ticket	<ul style="list-style-type: none"> <li>• For everyone, personally identifiable data is collected for ticket purchase</li> </ul>
		Ordinary Team Ticket	<ul style="list-style-type: none"> <li>• For groups who sign up with a travel agent and book in advance with an itinerary</li> </ul>
		Student Team Ticket	<ul style="list-style-type: none"> <li>• Applicable to student teams with more than 30 students (including 30 students) organized by schools or related institutions at the stage of general higher education,</li> </ul>

Table 8-2 Entry Instructions for Applicable Object of Concessionary Ticket

Applicable Object	Preferential Object Entry Description
Persons with	Holders of the Disabled Federation, the Civil Affairs Department,
Old People	Holders of valid identity documents of birth on or before 31
Children	Applicable to children over 1.3 meters in height (under 14 years
Student	Holders of valid student certificates or certificates that can prove their student identity at the stage of general higher education, high school education and compulsory education, and foreigners hold relevant valid certificates. The students in the general higher education stage refer to the full-time students in colleges and universities, including higher vocational colleges, junior colleges, undergraduate courses, master's and doctoral students, excluding continuing education students, self-taught examination education students, night school students, correspondence education student s, network education student s, all kinds of on-the-job education students and all kinds of adult learning courses trainees. Students in senior high school education include students in senior high school, secondary vocational school, vocational school and technical school. Students in compulsory education stage include junior high school
Chinese servicemen on active service	Holder of a valid military officer certificate, military civilian cadre certificate, sergeant certificate, soldier certificate or student certificate issued by the army (including the armed police force).

Table 8-3 Ticket Price System of Beijing Expo

Types of tickets		Price Coefficient	Ticket price (yuan)
Benchmark Fare			120
Designated Day	Ordinary	1.3 times the benchmark prices	160
	Preferential	6. 3% off a regular ticket for a specified	100
Weekday	Ordinary	Base Price	120
	Preferential	6% off regular ticket prices	80
	Three-time	Every time is the ordinary daily ticket	300
	Full-ride ticket	4.2 times the price of a normal weekday ticket	500
Team	Regular Team Ticket	(About 5-8% discount of normal fare for the corresponding date)	—
	Student Team	(About 3-6% off the base fare)	—



## Part IX Operation Services

According to the characteristics of the park, the operation team of Beijing Expo is divided into venue operation team and area operation team, and the management of venues and areas is carried out in the mode of "venue responsibility system" and "director responsibility system". By rationally allocating the responsible persons of each section, the key tasks of project management, information compilation, material management and quality supervision are clearly defined to people.

Actively formulate relevant plans and systems as the basis for the management of venues and districts: for venues, formulate the Overall Operation and Management Plan for Venues and Performing Arts Centers and the Special Operation Plan for China Pavilion, International Pavilion, Living Pavilion, Botanical Pavilion and Performing Arts Center according to the characteristics of venues; In terms of districts, the "District Site Operation Manual", "District Site Management Implementation Plan", "Beijing World Park Expo District Emergency Plan" and "District Grid Optimization Plan" have been formulated.

With the help of the organic cooperation of different business departments, the operation of venues will coordinate and improve all kinds of service guarantees to ensure the smooth and effective operation and management of Beijing Expo Park; Regional operation focuses on strengthening system construction, building training system, improving communication and coordination mechanism with "four meetings" mode, compiling and standardizing information flow process to reduce information asymmetry, and providing timely and effective information for decision-making level.

## Chapter I Operation Team

### Section 1 Venue Team

The venue responsibility system is implemented in Beijing Expo venues, and the venue managers are fully responsible for the work of the venues. The management of each venue is composed of the venue director, executive director and executive director assistant, which are respectively held by the leaders of the Expo Garden Bureau, ministers of various ministries and staff of relevant line departments. The person in charge of each venue is responsible for the reception and publicity of major events in their respective venues; The venue executive responsible person is responsible for the overall management, overall operation and emergency command of the venue; The assistant to the venue executive is responsible for the management of the management team and carries out all venue work according to the instructions of the venue executive. The relevant management team of each line sinking is responsible for the management of the work of each line in the venue.

China Pavilion, International Pavilion and Lifestyle Experience Pavilion each have one venue director, one venue executive director and one to three venue executive assistants. According to the actual operation needs, a comprehensive coordination group, reception service group, property management group, volunteer management group, publicity management group, engineering group, business management group and security group are set up.

Gui You Theatre and Botanical Museum each set up a venue director, a venue executive director, and several venue executive assistants. Gui Mei Theatre has set up a comprehensive coordination group, reception service group, property management group, volunteer management group, security group, activity management team, engineering group and publicity management group. The Botanical Museum has set up safety assurance group, volunteer management group, comprehensive office, tourist reception group, protocol reception group, order maintenance group, environmental protection group, activity management group, administrative management group and equipment and facilities inspection group.

## Section 2 Area Team

Drawing lessons from the operation experience of previous expositions, in order to ensure the normal operation of the park and enhance tourists' experience, Beijing Expo Park implements on-site overall management. According to the factors such as site management radius, service and sightseeing nodes, theme exhibition area, main road boundary division of the park and actual workload of each area, the whole park is divided into four areas: a, B, C and D.

Area a is the core landscape area, including important venues and exhibition gardens such as China Pavilion, Guiyou Theatre, Youyou Lake and Domestic Exhibition Garden, which are divided into five grids. Area B is an important tourist and recreational area, including plant hall, city and personal exhibition area, horticultural town, 300 gardens, Yongning Pavilion and horticultural industry supporting land and other exhibition halls and commercial services, divided into three grids. Area C includes International Pavilion, Lifestyle Experience Pavilion, International Exhibition Garden and supporting land for horticultural industry, which are divided into four grids. Area D includes Guishui River, wetland and green plant leisure area, which is divided into three grids.

The personnel arrangement of the area includes the management level and the executive level of the area. The management team of the zone will be composed of 30 persons, including the zone director, 2 deputy zone directors, and 5-7 part-time directors from each line department; The executive level of the area is composed of outsourced professional management team, with 12 people in a single class in each area, and 129 people in total according to 15 grid management tasks in four areas.

Area team is mainly responsible for the development of area site quality management norms and standards and general emergency disposal process; Handle and coordinate on-site affairs and emergency events in a timely manner; Supervision and comprehensive management of operation quality.

In terms of specific work, the team of the district manages and controls 55 items of affairs in 8 categories and 40 emergency incidents in 6 categories, counts the basic data of operation according to the requirements, completes the tasks of functional allocation in the district, and implements dual quality control with the

tasks of line departments to achieve full coverage of management.

Disposal of on-site matters refers to the behavior and commodity quality that occur within the red line of the area and are not operated in accordance with the norms, and on-site matters are divided into eight categories, namely, public facilities, service facilities, horticultural landscape, garden order, construction, commercial operation norms, service behavior quality and environmental hygiene.

On-site emergency events refer to all kinds of abnormal events occurring within the red line of the region. According to the actual situation of Beijing World Horticultural Exposition, on-site emergency events are divided into engineering, activity, reception, small passenger flow, transportation and internal management. The third-party professional management team of the executive level is mainly responsible for the implementation of on-site inspection, problem collection, summary and reporting. It involves daily patrols along prescribed routes. Actual statistics, summary, preliminary analysis of basic data and information of operation, to help achieve the formation of information reflux between lines and regions; The disposal of eight categories of matters in the field of the area shall be handled according to the event level, and those that can be handled on the spot shall be corrected, and those that cannot be handled on the spot shall be recorded, summarized and reported in the form of words and pictures; Six types of general emergency incidents at the scene of the area are dealt with preliminarily at the first time to control the development of the situation.

## Chapter II Park operation

### Section 1 Service Object

Tourists are the largest group at the Beijing World Garden Expo. At the entrance of the security check, volunteers serving tourists assist the security personnel to remind tourists to be ready for the security check. From the park to every venue and exhibition garden, volunteers provide warm and thoughtful service for tourists. Visitors can get inquiry services of transportation, meteorology, accommodation, travel routes and other information in the park. Different types of tourists can get targeted personalized services, such as services for the disabled, maternal and child services, etc; The park provides meticulous visitor care services such as

queuing area care interaction, special weather service, special festival interaction and so on.

In order to ensure that no obvious tourists stay and queue for a long time on the peak day of passenger flow in the park, queuing areas and buffer zones are designed, sufficient iron horse fences and reminder signs are set up, 450 square meters of awning are built, 12 cooling equipment are set up, and spray humidification system is installed to provide intermittent shade experience for tourists. The temperature inside the greenhouses in the queuing area of popular pavilions was generally 5 ° C-10 ° C lower than that outside the greenhouses.

The park has clearly defined the standards for the use of green corridors in various venues, which is convenient for visitors over 75 years old, disabled people, infants and pregnant women. Five comprehensive service centers, 54 volunteer consultation desks, 238 umbrellas, 73 loving seats and 6 AED automatic rescue machines have been set up to meet the needs of tourists for sightseeing, rest, inquiry and rescue. During the Beijing International Horticultural Exposition, advisory services have been provided. More than 90000 times, 921 hours of broadcasting such as searching for people and objects, weather forecast, etc. Were released, medical assistance was provided to 289 tourists, and 9100 hours of tourist services were provided by general tourist services and order maintenance personnel of venues.

The venues have set up a variety of services, such as explanation services, tour guide consultation, emergency assistance, language translation, order guidance, tour route design and so on, providing nine services such as public welfare explanation, wheelchair, umbrella, small medicine box, drinking water, mobile phone charging, and distributing publicity materials such as Beijing Expo tour guide map to tourists to meet the needs of tourists. The public welfare explanation services provided by the venues of Beijing Expo will regularly explain to tourists many times a day to meet the needs of tourists to understand the Beijing Expo in depth. During the session, a total of 1.1 million tourists were served by public welfare 32495.

In order to ensure the accommodation needs of tourists during the operation of Beijing Expo, the International Horticultural Exposition Company, in conjunction with Hyatt Hotel Management Group, Hong Kong-China Travel (Zhuhai) Ocean Spring Bay Co Ltd. and Shanghai Pinzhen Hotel Management Company, has built three hotels with

different characteristics, namely Beijing Expo Hyatt Hotel, Beijing Expo Ocean Spring Bay Business Hotel and Beijing Expo Puban Hotel, to meet the needs of multi-level and characterized guest needs. The three hotels provide 471 rooms and 748 beds at the meeting time, which can meet 1535 people at the same time.

Exhibitors at home and abroad are an important group participating in the Beijing Expo. The apartments of the exhibitors in the Expo Village meet the accommodation needs of the exhibitors. Since the arrival of the first German team on April 15, the apartments of exhibitors have received more than 60 official delegations and thousands of official exhibitors. Through quality management, the exhibitor apartment was widely praised by the residents. In the two questionnaire satisfaction surveys, the guests gave good feedback to the exhibitors' apartment service team, with a comprehensive satisfaction of more than 98.3%. According to the questionnaire scores and guests' opinions, the service team of exhibitors' apartments adjusted their work in time. During the Beijing Expo, the service team of the apartment of the exhibitors received 11 written letters of praise and 1 silk banner from the guests.

In terms of news media services, a press center will be set up to accept registration from domestic and foreign media, organize press conferences, and provide information and support services for the media during the exhibition. The news center has functional areas such as journalist working area, interview area, rest area, press release hall, TV studio, network live broadcasting room and radio live broadcasting room. At the same time, an online news center will be set up to provide an all-round resource sharing platform for the media, such as official press releases, videos and pictures. The news center highlights the characteristics of science and technology, horticulture, to achieve full coverage of 5G signal, reporters can through 5G + 4K VR technology, watch the instant picture of the park.

## Section 2 Operation Mode

### I. Operation design

In terms of venues, Beijing Expo should draw lessons from the operation experience of Shanghai World Expo, Xi'an World Expo, Qingdao World Expo and other large-scale exhibitions, considering its high-level, large reception and other characteristics,

it should maintain the independence and integrity of venue operation, and formulate the Overall Operation and Management Plan of Venues and Performing Arts Centers, as well as the China Pavilion, International Pavilion, Living Pavilion, Botanical Garden, The special operation plan of the performing arts center adopts the "venue responsibility system" mode for overall management.

In terms of districts, in order to effectively guide the operation and management of Beijing Expo, the "District Site Operation Manual", "District Site Management Implementation Plan", "Beijing Expo District Emergency Plan" and "District Grid Optimization Plan" have been formulated, and the corresponding District Operation Manual has been designed for each district in accordance with the different operation conditions of the four districts. Through the management system of "strip-patch integration and strip-tube integration", the Expo Bureau takes the region as a unit and data as support to implement quality dual control, improve the response speed of on-site emergency incidents and improve the fine management level of the park.

## II. Venue Operation

The venue coordinates the work of tourist reception, concierge reception, facilities and equipment, environmental protection, commerce in the museum, exhibition and exhibition, volunteers, security, information technology, activities, publicity and exhibitor services. Among them, the four sections of visitor reception, concierge reception, environmental protection and facilities and equipment are self-recruited and self-managed by the venues, while the other sections are sunk into the venues by the business line departments, and managed by the venue leaders, thus forming a streamlined and efficient venue management mode.

Within the scope of the venue area, the tourist reception service carries out eight specific services during the operation period, including inquiry and guide service, lost and found service, lost personnel service, special population service, medical assistance service, complaint acceptance, in-building broadcasting, and routine large passenger flow guidance, and formulates corresponding workflow and standards for these eight specific services. At the same time, in the aspects of protocol reception, order maintenance, environmental protection, administration, volunteer management, equipment and facilities maintenance, the corresponding work overview

and management mode were formulated, the post allocation and post responsibilities of executives were defined, and the content, process and standard of reception work were refined.

Tourist reception. Tourist reception involves reception personnel management, inquiry and reception services, special groups and lost personnel services, lost and found services, tourist complaints handling, tourist satisfaction survey, supporting services and other related work.

Concierge reception. Protocol reception services include reception personnel management, reception tasks, information reception and processing, reception preparation, reception implementation, summary and feedback, health care and food hygiene security, and management of journalists accompanying the delegation.

Display Management. Exhibition management in the exhibition hall and area mainly includes personnel and certificate management, exhibition area layout and construction, exhibition materials, exhibition replacement and withdrawal.

Exhibitor assistance. Exhibitor assistance is mainly to coordinate the reception of exhibitors and guests invited by Beijing Expo, daily contact and communication with exhibitors, and coordinate the publicity, cultural activities, business operations and other work of exhibitors.

Publicity management. The publicity management business is responsible for providing relevant services for the media, organizing and implementing press releases, live broadcasting in the museum, daily use of the media working area and management of media personnel, as well as providing property security for venue publicity work.

Event Management. Event management mainly involves venue management, performance management, audience organization management, major events and special day activities management, competition management and so on.

Information management. Information management business is responsible for the use of network communication system, wireless WiFi system, multimedia entertainment interactive system, venue reservation service system, visitor call for help system and fault reporting.

Business Management. Commercial management involves contract management, construction and fire acceptance, commercial personnel management, commercial



material supply, daily operation and management, food safety management and other related work.

Facilities and equipment management. Facilities and equipment management work mainly includes three aspects, one is the field equipment patrol staff

Recruitment, training and management, the second is the daily inspection and feedback of public infrastructure equipment, and the third is the routine maintenance, maintenance and emergency repair of facilities and equipment in venues.

Volunteer Management. The volunteer management business is responsible for coordinating the recruitment and training of venue volunteers, and assigning and guiding the work of venue volunteers.

Environmental protection. Environmental protection business is mainly responsible for cleaning services and waste classification collection in various areas of the park, management of waste removal points in venues, daily environmental protection and waste removal in public areas outside venues. According to the Environmental Sanitation Operation Plan for the Park Area of Beijing World Horticultural Exposition 2019 compiled by the Expo Bureau, the responsibilities of various departments and units are clearly defined, and a unified operation standard and management system are formulated to meet the needs of environmental sanitation guarantee during the Beijing World Horticultural Exposition and provide tourists with a clean, beautiful and harmonious garden environment. During the operation of Beijing Expo, a total of 3280 large-scale cleaning vehicles were dispatched, and other small cleaning vehicles were 65600, clearing and transporting 5070 tons of garbage.

Safety and security. Security is fully responsible for the security of venues and public areas, including public security management and order maintenance, access management, security management, fire management, terrorism-related violence and other order maintenance. In addition, the Expo Bureau has strengthened supervision over the use of water, electricity, gas and heat in civil air defense buildings, equipment rooms, standby rooms and warehouses, as well as the standardized management of eight special operations and inspection and maintenance operations. During the session, all kinds of potential safety hazards were actively inspected and found, and all lines were coordinated to supervise and rectify, so as to

effectively prevent major accidents in the park. Regularly carry out self-examination and self-correction of the responsibility of the main body of security, and upgrade the management of all special operations during major holidays.

In terms of the area, in addition to the above services, it also involves the guarantee of ship projects. Because there is no effective connection path between the north and south sides of Gui River, in order to meet the traffic security needs of the park waters, maintain a good water environment and timely disposal of emergency emergencies, Beijing Expo has set up a water area security boat project in the park, improve the water area security function, and enhance the emergency response capacity of the water area. Two "double-body double-engine electric boats" and two speedboats are used for basic support of waters, temporary task support and emergency response, and three electric cleaning boats are equipped to clean the waters in time.

### III. Area Operation

In terms of system construction, taking the "2019 Beijing Expo Park Operation and Management Standards" as the standard, the operation of the area adheres to the principle of "system management", establishes the system of Beijing Expo, covers the specific indicators, standards and assessment modes of the implementation of various work in the park, and makes the work data-based, so as to have rules to follow and evidence to follow.

Establish communication and coordination mechanism. Through the daily morning meeting, weekly joint meeting, data analysis meeting and comprehensive coordination meeting of operation and management, the coordination and communication between departments and regions will be strengthened and smoothed to promote effective management. The "Four Sessions" mode ensures the orderly operation and efficiency improvement of the whole.

Through the linkage of handstand, monitoring platform and Wechat group, the service team in the area has constructed an internal and external linkage mechanism, which provides guarantee for the disposal of instantaneous large passenger flow, personnel loss, lost goods search and other events, and effectively plays the role of "filter" and "barrier". At the same time, the area implements the radio fixed-point information system, monitors the real-time situation of hot spots, key areas and activity areas, and coordinates the personnel of all lines in the area according to the division of responsibilities, so as to ensure the orderly tour of the park and provide a comfortable tour environment for tourists.

Standardize the information flow process to ensure timely and accurate management information. During the operation of Beijing World Park Expo, the operation data of various departments are divided into four categories: business data, complaint data, risk warning and emergencies. Through the collection, processing, research and analysis of these four types of data, regular and timely submission, effective information is formed to facilitate the rapid absorption and utilization of decision-making level.

Through the analysis of information and related data, we should strengthen the prediction and management of key areas and key issues, and regularly submit daily, weekly, monthly and special reports. During the Expo period, 165 daily newspapers,

23 weekly newspapers, 12 special newspapers and 6 monthly newspapers were completed.

#### IV. Emergency Plan

This Expo has the characteristics of high reception standard, long duration, large area, large number of tourists, long distance and great social impact. In order to fully prevent and effectively respond to emergencies, minimize the hazards and impacts caused by emergencies, and ensure the smooth holding of the 2019 Beijing World Park Expo, after extensive collection of information, careful research and demonstration, many field surveys, consultation with experts, and repeated revision and improvement, the Beijing World Park Expo Operations Management Department has formulated General Emergency Plan for Emergencies in Beijing Expo Park in 2019. The plan from the preparation basis and working principles, event classification and event classification, plan system and organization system, monitoring and early warning, emergency disposal and rescue, emergency support, emergency plan management seven aspects are clear, as the basic follow of the park emergency work. At the same time, the Operation Management Department coordinated the relevant departments of the Expo Bureau to prepare 52 special emergency plans and on-site disposal plans for water, electricity, heat, medical and health care, food safety, extreme weather, communication support, etc. And put them on record.

The Emergency Leading Group (ELG) is composed of the Expo Bureau, the municipal departments and the Yanqing District Government and other relevant units stationed at the Expo. Its organizational structure is consistent with the on-site operation command system of the Expo. The leader of the emergency guidance team is Wang Hong, the executive deputy leaders are Wang Jun and Deng Naiping, and the deputy leaders are Zhou Jianping, Zhang Shusen and Yu Bo.

The emergency leading group is responsible for studying and formulating policies, measures and guidance for dealing with emergencies in the Beijing Expo area; To be responsible for the emergency command, disposal, aftercare and summary of major emergencies in the park; When an emergency exceeds the disposal capacity of the Beijing Expo area, it shall be reported to the Executive Committee of the Beijing Expo and the municipal government in accordance with the procedures to coordinate

the relevant forces for disposal; For major and above emergencies, on the basis of the framework of the emergency leading group, a temporary emergency response headquarters will be set up to coordinate with the municipal government, the Executive Committee of Beijing Expo, the municipal emergency response headquarters and other relevant departments, and to organize the early disposal, related guarantee and post-disposal of major and above emergencies in the park.

Under the emergency leading group, the park emergency office is set up as the office of the emergency leading group, and the park operation command center undertakes the specific work. The director of the emergency office of the park is Zhou Jianping, and the deputy directors are Ye Dahua, Wugang, Wang Chuncheng, Lin Jinwen, Zhang Lannian, Mao Dongjun, Sun Lianhui, Pang Wei, Chen Weidong and Li Yi.

Under the command of the emergency leading group, a monitoring system for emergencies should be established to monitor important infrastructure, passenger flow, public security, transportation, food safety, forest fire risk, meteorology and plant epidemic situation. Establish an early warning system and make a hierarchical response to different early warning levels. Strengthen the guarantee of command system technology, team, materials, transportation, food safety, medical and health, public security, communications and meteorological services.

The Expo Bureau actively organized various emergency drills, carried out more than 10 desktop deduction of special emergency plans and on-site disposal plans for the park, and organized and coordinated special and comprehensive emergency drills (large passenger flow guidance, medical rescue of tourists injured, tree lodging, water pipe bursting, firefighting, etc.) During the trial operation of the park. To lay a solid foundation for the normal operation of the park. During this period, the Expo Bureau participated in two comprehensive exercises on forest fire prevention and flood control organized by Beijing.

In order to ensure the normal operation of the park in rainy days, the district service team stuck to their posts in the heavy rain: guiding tourists to shelter from the rain, setting up safety warning signs in flooded roads, and conducting investigation of potential safety hazards. Under the bad weather, the operation staff never slackened their efforts to do a good job in the service guarantee of Beijing Expo.

### Chapter III Protocol Services

Beijing Expo has provided a number of specific and thoughtful services for visitors. Among them, the protocol reception service ensures the smooth completion of the protocol reception for major events and VIP reception in the park by improving the management and system construction of the service team and establishing a supervision and management system.

The Beijing International Horticultural Exposition has a long duration, many activities and a high standard of protocol. As an important basic work for the operation of the Expo, the protocol reception work adheres to the first good standard, aims at serving the construction of the Capital International Exchange Center, and displays the service card of the Capital.

## Section 1 Reception Work Mechanism

Based on the overall plan of Beijing Expo and the actual conditions of the park facilities and activity venues, the Bureau has formulated the Work Program for VIP Reception at Beijing Expo, which covers the scope of VIP visitors, reception contents, courtesy standards, hardware and software configuration, streamline and spatial organization, etc; The Implementation Manual for Protocol Reception of Beijing World Horticultural Exposition was compiled. Clear staffing and job responsibilities, personnel training program, protocol level division, line design program, implementation process; Organize the staff to compile a 100,000-word "Explanatory Handbook" covering the overall introduction of the park, major venues, performing arts centers, provincial and municipal exhibition parks, national exhibition parks, etc as the basic materials for the commentators to publicize and introduce the Beijing Expo to the outside world. These documents are important guidelines for the orderly operation of protocol reception.

In accordance with the park operation command system, the overall reception plan for the VIP reception during the Expo will be planned and implemented under the Beijing Expo Command Center. The Protocol Reception Department will coordinate with relevant business departments to carry out the VIP reception work, and guide the outsourcing service team to carry out the reception tasks.

In order to ensure the implementation of protocol work, the Expo Bureau has established the "Protocol Reception Service Supervision System", designated special personnel to carry out VIP reception service supervision, real-time feedback of inspection results, and put forward rectification suggestions. Establish a daily inspection mechanism for protocol work and conduct inspection ". Hold regular meetings every week to summarize the work of the protocol service team last week, and deploy the work arrangements for next week.". Supervise the third-party service team to hold regular meetings in the morning and evening, sort out the work arrangement and summarize the work problems on that day, and ensure the implementation of the work deployment.

The protocol service team prepares daily operation daily report, monthly summary, forms monthly operation report, summarizes and reports the protocol reception work in time. 162 daily and 8 monthly reports were compiled during the whole session.

Emergency Response Mechanism. The Expo Bureau shall appoint a chief person in charge of protocol work, who shall have the first right to dispose of emergencies and clarify the responsibilities of each post in emergencies. Reception tasks, facilities and equipment, other situations, according to the actual situation to judge the category, classified treatment. The Protocol Reception Department and other assisting departments should establish a linkage and coordination system, strengthen communication and coordination among departments, and form a unified command, coordinated and orderly emergency management mechanism.

## Section 2 Reception during the Preparatory Period

During the preparatory period, the Protocol Department of the Expo Bureau actively cooperated with the Organizing Committee, the Executive Committee, the Ministry of Foreign Affairs and other relevant departments to discuss the protocol work of Chinese and foreign leaders attending the opening ceremony, and formulated the proposal plan for the protocol work of Chinese and foreign leaders attending the opening ceremony of the 2019 Beijing World Park Expo, the assembly plan for the guests of the opening ceremony, the reception lunch plan and the reception plan for guests of the opening event. Organize three foreign advance missions and seven comprehensive drills, and implement relevant work one by one according to the plan. Under the orderly arrangement of protocol work, on the day of the opening ceremony of the Expo, guests gathered in strict accordance with the time flow, and all kinds of guests entered and exited in an orderly manner. Before the opening of the Expo, the Concierge Department began to improve the preparation of reception sites and supporting service facilities, including Yongning Pavilion, VIP Entrance and Exit, Longqing Hotel and other reception sites; Travel, transportation, accommodation and other service guarantee schemes should be determined in advance, and the reception office of the municipal government should cooperate closely to complete the reception guarantee tasks of Chinese and foreign guests during the opening ceremony.

## Section 3 Reception During the Session

After the opening of the Expo, the duties of the Protocol Department of Expo Bureau



will be transformed into the Park Reception Team in the operation command system of Beijing Expo, which will liaise with the relevant units of the Central Committee and Beijing, and undertake the reception of VIP guests at the Expo. Internally, we should contact the venues, districts and working groups horizontally, and coordinate the reception work as a whole.

From April 29 to October 7, the Expo Bureau successfully received 1948 VIP groups, welcoming and seeing off more than 39782 Chinese and foreign VIPs, including 1576 domestic VIP groups with a total of 34811 and 372 foreign groups with a total of 4971. According to the VIP level, we received 63 groups of Chinese and foreign leaders at the VI level, welcoming and seeing off 1390 VIPs to visit the park; 504 delegations at V2 level (provincial and ministerial leaders and ambassadors to China) welcomed 8691 VIPs to visit the park; V3 level (Department Bureau level leaders) 1381 groups, welcome and see off 29701 distinguished guests to visit the park. The VI level guests received are (according to the chronological order of the inspection) Wan Gang, Vice Chairman of the National Committee of the Chinese People's Political Consultative Conference (CPPCC), May 3; Chen Zhili, former Vice Chairman of the Standing Committee of the National People's Congress, May 7; Liu Xiaofeng, former Vice Chairman of CPPCC, May 9; Li Changchun, former Standing Committee member of the Political Bureau of the CPC Central Committee, May 10; Wan Exiang, Vice Chairwoman of NPC Standing Committee and Chairman of Central Committee of Revolutionary Committee of Chinese Kuomintang, May 13; and Zhang Meiying, former Vice Chairwoman of CPPCC (May 16) Liang Zhenying, Vice Chairman of the CPPCC National Committee (May 22) Cao Gangchuan, former Vice-Chairman of the Central Military Commission, Li Jinai, former member of the Central Military Commission (May 22), Jia Qinglin, former Standing Committee of the Political Bureau of the Central Committee and Chairman of the CPPCC National Committee (May 24 H), Li Yuanchao, former member of the Political Bureau of the Central Committee and former Vice-President of the State (May 25), and Guo Jinlong, former Member of the Politburo and former Member of the Steering Committee for the Construction of Spiritual Civilization. Chen Xi, member of the Political Bureau of the CPC Central Committee (28 May H) Chen Zhu, Vice Chairman of the Standing Committee of the National People's Congress (May 31), He Lifeng, Vice Chairman of the CPPCC National Committee and

Director of the National Development and Reform Commission (June 1), Su Hui, Vice Chairman and Taiwan League Central Committee (June 6), Zhang Youxia, Member of the Politburo of the Central Committee and Vice Chairman of the Central Military Commission (June 7), Former Member of the Central Military Commission, Former State Councilor and Minister of Defense Liang Guanglie (13 June H) Zhao Hongzhu, former Secretary of the Secretariat of the Central Committee (June 15), Talat Jafiri, Speaker of North Macedonia (June 18 H), Sun Jianguo, Member of the Standing Committee of the National People's Congress and Deputy Chief of Staff of the Joint Staff Department of the Central Military Commission (June 19 H), Mualim, Vice Prime Minister and Foreign Minister of Syria (June 19 H) and Jia Chunwang, former Procurator-General of the Supreme People's Procuratorate (June 20 H). Zheng Jianbang, vice chairman of the CPPCC National Committee (June 28th) He Wei, Vice-Chairman of the CPPCC National Committee (30 June), Cai Dafeng, Vice-Chairman of the Standing Committee of the National People's Congress and Chairman of the Central Committee of the Democratic Progressive Movement (2 July), Wu Weihua, Vice-Chairman and Chairman of the Central Committee of Jiusan Society (4 July), former President Megawati of Indonesia (8 July) and former Vice Premier Wu Yi of the State Council (31 July). Gu Xiulian, director of the working committee of China's care for the next generation (19 August H) Fan Changlong, former member of the Political Bureau of the Central Committee and former vice chairman of the Military Commission (August 27), Cao Jianming, vice chairman of the Standing Committee of the National People's Congress (August 28), Vice President Mercedes Araoz of Peru (September 1), Zhao Keshi, former member of the Central Military Commission and former Minister of Logistics and Support Department of the Military Commission (September 6), former Standing Committee of the Political Bureau of the Central Committee, Wu Guanzheng, former Secretary of the Central Commission for Discipline Inspection (7 to 8 September) Li Bin, Vice Chairman of the CPPCC National Committee (September 14-15H), Aligeng Yimingbahai, Vice Chairman of the Standing Committee of the National People's Congress (NPC) (September 18), Du Qinglin, former Vice Chairman of the CPPCC National Committee (September 22H), Shen Yueyue, Vice Chairperson of the Standing Committee of the NPC (September 23), President of the National Congress of Ecuador Litaldo and Ecuadorian Ambassador to China Larrea and his delegation

(September 24), Gao Yunlong, vice-chairman of the National Committee of the Chinese People's Political Consultative Conference (CPPCC) (September 26h), Wang Chen, vice-chairman of the Standing Committee of the National People's Congress (NPC) (September 26h), Liu Yandong, former member of the Political Bureau of the CPC Central Committee and former vice-premier of the State Council (September 27), Sun Chunlan, member of the Political Bureau of the CPC Central Committee and vice-premier of the State Council (September 28h) and Zhang Jun, member of th(28 September H)Zhang Ping, former Vice-Chairman of the Standing Committee of the National People's Congress and President of the Consumer Association of China (September 29), Gu Shengzhu, Vice-Chairman of the CPPCC National Committee and Standing Vice-Chairman, Central Committee for Civil Construction (October 2-3), Miao Hua, Member of the Central Military Commission and Director of the Political Work Department of the Military Commission (October 3), Liu Qi, former member of the Political Bureau of the Central Committee and former Secretary of the Beijing Municipal Committee (October 4). Meng Jianzhu, former member of the Political Bureau of the Central Committee and former Secretary of the Central Political and Legal Commission (October 6th)

The protocol and reception services have been highly praised by the central leadership, party and state guests, and people from all walks of life. 55 distinguished guests from home and abroad have written messages of praise for the Expo, and 16 letters of commendation and 8 silk banners have been received from relevant party, government and military organizations.

Among the Chinese and foreign dignitaries who left messages with inscriptions, Liang Zhenying, vice chairman of the CPPCC National Committee, praised the Expo with the inscription "Better Life". He Wei, vice chairman of the National Committee of the Chinese People's Political Consultative Conference (CPPCC), spoke highly of the Expo and wrote an inscription, "Show the world's horticulture, promote green development." Gao Yunlong, vice chairman of the CPPCC National Committee, wrote an inscription for the Expo, praising it as "beautiful world champion.". Chad's ambassador to China Songi Ahmed said in a message. "The park is spectacular, worthy of the Great People's Republic of China.". I would like to thank China in particular for all its support to Africa and Chad. I wish the World Horticultural Exposition

a complete success. "Sanson Ndayizeye, Permanent Secretary of the Burundian Ministry of Trade, said. "We highly appreciate your warm reception of our delegation." Mayanta Dissanayake, leader of the United National Party of Sri Lanka and chairman of the Foreign Affairs Committee of Parliament, left a message of thanks after the visit: "We are the Sri Lankan parliamentary delegation, and we are deeply impressed by the service, innovation and talent of the Expo, and thank you very much for your warm hospitality." Fabiola Munoz, Minister of Agriculture of Peru, said, "Thank you so much for giving us the opportunity to learn about nature, experience China and experience this amazing world of flowers." Barbara Wells, Director of the International Potato Center, said: "This is a wonderful experience, and I sincerely wish the Beijing World Horticultural Exposition a complete success." After the visit, Japanese Ambassador to China Yutaka Yokoi wrote the inscription "Japan-China Friendship", affirming the positive role of the Beijing World Garden Expo in promoting the development of friendship between the two countries.

#### Title X Publicity

After the successful bid of Beijing Expo, the influence of Beijing Expo has been expanded through press releases, activities promotion, media services, social publicity and official website publicity, and the awareness and participation of the whole society in Beijing Expo have been enhanced. Rich and colorful pre-conference activities, active publicity and promotion at home and abroad, show a good image of Green Expo and Green Beijing at home and abroad. Traditional media and new media have combined to give a comprehensive report on the preparation and holding of the Beijing World Garden Expo. Actively strengthen social propaganda and enhance the effect of propaganda. The construction and operation of the official website conveys the most authoritative information to the outside world. Through the provision of news information and the management of propaganda activities, it has broadened the channels of news release, actively paid attention to the direction of public opinion, and created a good atmosphere of public opinion for the smooth holding of Beijing Expo.

The works and publications of Beijing Expo involve books, documentaries and promotional films, which meet people's cognitive needs for Beijing Expo and

horticulture from different perspectives, and further disseminate green scientific knowledge to the world and convey the concept of green life.

## Part X Promotion

### Chapter I Promotion of the Expo

#### Section 1 Publicity Activities

Through various cultural publicity activities and internal and external publicity and promotion activities, not only the whole people will know about and participate in the Expo, but also the influence of Beijing Expo will be further extended to the whole world, showing a good image of Green Expo and Green Beijing.

##### I. Publicity of Social Activities

During the preparation period of Beijing Expo, with the help of all sectors of society, a wealth of social publicity activities were carried out. During the collection of emblems and mascots for the Beijing Expo, from May 29 to June 10, 2015, the Beijing Expo Bureau and Yanqing County jointly held an exhibition of works entitled "Little Hands Painting the Expo, Masters Helping the Expo". More than 60 excellent works were exhibited at the Beijing Children's Palace and the Olympic Building, enabling young people and people from all walks of life to understand, participate and share the Expo.

In October 2015, the solicitation of songs for the 2019 Beijing World Garden Expo was launched, with a wide range of participation and a high degree of participation, and more than 3000 creators of different ages, types of work and regions created 2551 works. After collection, preliminary evaluation, re-evaluation and final evaluation, the "Top Ten Golden Songs", "Ten Excellent Songs" and five "Excellent Lyrics" of Beijing Expo in 2019 were selected. Through the perfect combination of music and literature, these songs widely disseminate the beautiful image, core values, theme and ecological concept of Beijing Expo in the way of music.

Highlighting the characteristics of horticulture, organizing and planning mass activities such as "I am a horticulturist", "a good classroom for horticulture life", "Horticulture Talents around me". In August 2016, a large-scale public welfare promotion project of the Beijing World Horticultural Exposition, "Gardening

Life Good Classroom”, sponsored by the World Horticultural Exposition Bureau, launched a number of thematic activities, such as horticultural therapy, parent-child horticulture, gourmet horticulture, flower sea hand-painting, flower language situational performance, horticulturists’ forum and international youth horticultural exchange, to disseminate and popularize horticultural knowledge to the public in various ways, so as to make the Beijing World Horticulture Exposition “integrating gardening into nature and touching the soul of nature” is deeply rooted in the hearts of the people.

On April 17, 2017, the documentary “Chinese Plants Affecting the World” was launched and the selection of image ambassadors for Beijing World Garden Expo was held in Wanshengyuan, Beijing Botanical Garden. At the event, the World Horticultural Exposition Bureau issued the announcement of the selection of image ambassadors for Beijing World Horticultural Exposition, which will adopt the methods of directional invitation and social promotion, aiming at promoting Beijing World Horticultural Expo at home and abroad, spreading the concept of China’s green development, sharing China’s green development experience and establishing China’s image of green development with the help of the influence of image ambassadors. Dong Qing, Lu Zhi and Liu Jin were elected as the image ambassadors of Beijing Expo. CCTV host Dong Qing believes that human survival can not be separated from plants for a moment, she has always had a deep feeling for plants, she said. “I volunteer to be the image ambassador of Beijing World Garden Expo, hoping to speak for plants and make voices for plants, so that more and more people pay attention to plants and think about how to live in harmony with nature.”. “Lv Zhi is a professor of conservation biology at Peking University, executive director of the Center for Natural Conservation and Social Development, and founder of the Landscape Nature Conservation Center.”. Since 1985, she has been engaged in the research, practice, capacity-building and policy promotion of nature conservation in China. Liu Jin, a film and drama performance artist, is well known and loved by the world for his role as Premier Zhou Enlai. In addition to his status as an actor, in 2008 he began to participate in the large-scale public welfare activities co-sponsored by the National Greening Commission and other institutions-Green China Travel, since then Liu Jin has been associated with green ecology, and has continuously devoted himself to various public welfare

undertakings. Liu Jin expressed the hope that with the help of the identity of the image ambassador of Beijing World Garden Expo, more people will practice the green lifestyle and contribute to our common beautiful home.

From April 26 to June 10, 2017, the Expo Bureau, Beijing Science and Technology Commission, Beijing Landscape and Greening Bureau and Yanqing District People's Government jointly sponsored a series of exhibitions of "Approaching Flower 2017" in the World Grape Expo Garden of Yanqing District, which brought more than 1200 kinds of flowers from all over the world. It fully demonstrates the contribution of plants and flowers to human survival and life. Indoor exhibition and outdoor exhibition, indoor exhibition held indoor characteristic plants, flower horticultural decoration, traditional Chinese medicine plants, vegetables and horticultural enterprises boutique exhibition, and organize related horticultural activities. While testing the adaptability of plant varieties, the outdoor exhibition focuses on testing breeding technologies such as flowering regulation, innovating plant application and display forms, and preparing for Beijing Expo from plant varieties, production technology and application methods.

On May 19, 2017, at the opening ceremony of the 7th Beijing Chorus Festival and the 4th Capital Citizens Chorus Week, "Green Beijing" and "Happiness Forever", which were selected as the "Top Ten Golden Songs" in the "Collection of Songs for Beijing World Horticultural Exposition", appeared under the brilliant performance of Qiuzhiyun Chorus, as the "Top Ten Golden Songs", "Ten Excellent Songs" and five "Excellent Lyrics" of Beijing World Horticultural Exposition. The first non-online social promotion since its release.

Launched in June 2018, the "Hundred Flowers Struggle" series of activities held ten activities with ten kinds of flowers as the theme for millions of students from 92 universities in Beijing during an eight-month period.

During the preparation period, posters were distributed to 376 administrative villages, 30 communities, 54 schools, 12 A-level tourist attractions, 28 star-rated and key tourist hotels, 32 tourist consultation stations and some units in Yanqing District, the host area of the Expo; Since 2015, more than 100 publicity and popularization activities have been carried out on the theme of "Approaching the Expo-Expo Knowledge Hall"; From April 28 to May 15, 2016, a series of horticultural



cultural activities with the theme of "Expo in My Heart" were carried out, such as poetry couplet collection activities, poetry and prose collection activities, painting collection activities and "spiritual home" classical poetry competition activities; Since September 5, 2018, a series of activities of "Weekly Lesson" on horticultural knowledge have been carried out for the community residents of the whole district. Popularize horticultural knowledge such as flower, vegetable, fruit tree, Chinese herbal medicine, tea and other planting, pruning, maintenance or horticultural therapy, and train horticultural handicraft production, horticultural painting and calligraphy, poetry and photography.

## 2. Internal Publicity and Promotion

On May 9, 2018, the first provincial, regional and municipal publicity and promotion event of the Beijing World Horticultural Exposition was successfully held in Shenzhen, aiming at disseminating the theme and spirit of the Beijing World Horticultural Exposition to the whole society, and advocating that the whole people love horticulture, pay attention to ecology and participate in the Expo.

On June 15, 2018, the Expo Bureau launched three promotional activities in Kunming and Beijing: "Meet in Kunming from 1999 to 2019 and gather in Beijing again for 20 years", the promotional activities of the Expo 2019 were successfully held in Kunming, Yunnan Province; The first flight of the second Beijing World Garden Expo theme painting aircraft "Flower Blooming Shengshi" was successful, and the theme activity of "Transmitting Green Dream" was held on the flight; At the 2008 Beijing International Tourism Expo, the theme and preparation progress of the Beijing World Garden Expo were publicized to the public at home and abroad, and visitors were invited to meet in Beijing in 2019 and go to the Great Wall to meet at the foot of the Great Wall.

On November 9, 2018, at the 2018 China Tourism Industry Expo, more than 700 tourism-related enterprises and nearly 300000 visitors were invited to promote the Beijing Expo; From November 13 to 5, the Expo Bureau participated in the first Chongqing International Tourism Fair in 2018, promoting the Beijing Expo to more than 500 units such as global tourism-related industries, tourism news media and more than 200000 visitors.

### III. External Publicity and Promotion

Beijing Expo will expand the effect of the Expo by strengthening exchanges and interaction at home and abroad. He has participated in various expositions and major events hosted by various countries in the world for many times, making full use of the international platform of the International Exhibition Bureau and the International Horticultural Producers Association, and taking advantage of participating in the 157th General Assembly, 158th General Assembly, Spring Executive Committee Meeting, Rules Committee Meeting and International Horticultural Producers Association. Connecting with relevant international organizations and countries, publicizing and promoting the Beijing World Park Expo. Enhance the international influence of the 2019 Beijing World Park Expo.

From October 10 to 12 H, 2012, during the Second International Conference of Exhibitors of the World Expo in Milan, Italy, to promote the 2019 Beijing World Garden Expo to the representatives of the International Exhibition Bureau and its member countries. From March 16 to 20H, 2015, the Expo Bureau carried out publicity and promotion work at the AIPH Spring Conference in 2015. From May 22 to 29 H, 2015, the Expo Bureau visited the United Kingdom, Italy, the Royal Horticultural Society, Kew Gardens and Wellesley Gardens in London, the Eden Project Management Agency, and the Venice Branch Organizing Committee of the Milan World Expo in Italy to conduct exchanges and publicity and promotion work.

From May 30 to June 3, 2015, during the Beijing Week of the Milan World Expo, the Expo Bureau held the forum of "Blooming 2019 Beijing World Garden Expo" Chinese Flower Arrangement Art Performance and "Beijing-Milan Designers Dialogue 2019 Beijing World Garden Expo", and set up a large led screen and propaganda platform in the China Pavilion. Circularly broadcast promotional films, distribute promotional materials for Beijing Expo, and carry out fixed-point publicity. More than 20000 publicity materials and materials were distributed, attracting nearly 100000 audiences from all over the world.

From May 25 to May 30, 2016, at the 2016 Antalya World Garden Expo, the Beijing World Garden Bureau visited 51 participating countries of Antalya World Garden Expo to enhance the awareness, attention and participation of participating countries in the Beijing World Garden Expo; Organize Beijing entrepreneur delegation to discuss

and exchange with relevant enterprises of Turkey and participating countries, and carry out business docking activities; At the same time, relying on the National Pavilion Day of China, the promotional film of Beijing Expo will be broadcast circularly through the led screen. Publicity points will be set up to distribute brochures, CD-ROMs, leaflets, souvenirs and other materials for publicity and promotion of Beijing Expo.

From June 16 to 18, 2017, during the Beijing Activity Week of Astana World Expo 2017, the Organizing Committee of Beijing World Garden Expo introduced the theme, concept and overall layout of the park of Beijing World Garden Expo 2019 in detail to the audience through the Russian version of the promotive film, the Russian version and the English version of the promotional folder of the Expo. The Beijing World Garden Bureau visited the pavilions of the countries along the "one belt and one road" at the World Expo site to promote the Beijing World Garden Expo and promote the participation of the countries along the "one belt and one road" in the Beijing World Garden Expo. During the Expo, the Expo Bureau organized the promotion meeting of Caribbean Community countries and South Pacific countries for the 2019 Beijing Expo, and promoted the Beijing Expo to representatives of relevant countries. In October 2017, during the "Beijing Week" in Ottawa, which was led by the Foreign Affairs Office of the Beijing Municipal Government and the Information Office of the Municipal Government, the mascot sculpture of Beijing World Garden Expo was settled in Ottawa and unveiled. The signing ceremony of "Sun Circus" between the World Garden Bureau and Canadian National Treasure, the theme promotion speech of Beijing World Garden Expo, and the Ten Golden Songs "Happiness Forever" were held. The publicity and promotion activities of the theme day of "Feeling China's Magical Plants" were held. With interactive activities of horticultural experience and flower arrangement, tea ceremony and Chinese flower car performances full of Chinese style and horticultural characteristics, it vividly tells Chinese horticultural stories overseas and disseminates Beijing's traditional culture. The event attracted about 16000 visitors in Ottawa, and more than 10000 publicity materials were distributed. On November 130, 2017, the Beijing Expo Bureau held a publicity and promotion meeting for the 2019 Beijing Expo in Paris, France, to introduce the latest preparations for the Beijing Expo to the representatives of more than 160

national exhibition bureaus attending the 162nd General Assembly of the International Exhibition Bureau. Participants at the promotion meeting carefully watched the promotional film of the 2019 Beijing World Park Expo, expressing their appreciation and support for the concept of green development and the preparations for the orderly promotion of the Beijing World Park Expo.

On September 8, 2018, a delegation of the World Horticultural Bureau participated in the 2018 World Tourist Cities Federation Qingdao Xiangshan Tourism Summit, promoting the Beijing World Horticultural Expo to more than 100 tourist cities around the world, introducing in detail the rich tourism resources of the host city, the tourism and cultural activities during the session, the architectural landscape of the main venues, the exhibition and exhibition planning of the park, and cooperating with Seoul, Helsinki, Athens and Beijing. Representatives of important tourist cities such as Berlin, Phnom Penh and Lima exchanged views to expand the international influence of Beijing Expo.

On September 17, 2018, the China Council for the Promotion of International Trade (CCPIT) and the Beijing International Horticultural Exposition (BIE) jointly held a publicity and promotion event in Milan, Italy, to promote the theme of "Green Life and Beautiful Home" for the Italian local government, local media and travel agencies, to introduce the progress of the preparation work and to promote the rich tourism resources of the Beijing International Horticultural Exposition.

## Section 2 Media Publicity and Reporting

During the Beijing World Garden Expo, both the traditional media represented by newspapers, radio and television, and the new media represented by the Internet and mobile phones, have adopted various forms to publicize and report the Beijing World Garden Expo in an all-round way, showing every highlight of the Beijing World Garden Expo.

During the Beijing World Garden Expo, the Economic Voice Channel of the Central People's Radio launched 144 columns of "Meeting Beijing 2019", "Meeting Beijing 2019" and "Voice of Flowers", and the Beijing People's Radio broadcast 12 live programs of the Beijing World Garden Expo. Beijing Daily features or full-page graphic reports.

Since June 2016, the morning news program of Beijing Satellite TV has opened the

column "I am a horticulturist" to publicize the culture of the World Garden and the essence of the 2019 Beijing World Garden Expo from all angles.

In July 2016, the official micro-blog and official micro-letter of Beijing World Garden Expo were opened to disseminate the most authoritative information at the fastest speed, while holding rich and interesting online and offline activities to continuously enhance the stickiness of official micro-blog to fans. At the same time, with the major events during the preparation and holding of Beijing Expo as the main content, new media products in various forms such as text, pictures, videos, H5, games, posters and so on will be produced to facilitate the forwarding of new media platforms.

On the occasion of the first anniversary of the birth of Bud and Little Sprout, the video "What Are the Big Tricks to Leave the Green Shade of Beijing World Garden Expo?" Produced by Beijing World Garden Bureau was broadcasted on domestic mainstream video platforms including Tencent, Iqiyi, Toutiao, Miaopai, Baidu, Sina and Youku, which expanded the influence of Beijing World Garden Expo.

Starting from 2019, a number of media in Beijing have launched key columns such as "Expo Direct Attack", "Charming Expo" and "Pavilion Tour" to introduce the outdoor exhibition garden and the main exhibition hall in a panoramic way, combining the on-site exhibition with the excavation background, and explaining the exhibition concept, highlights and scientific and technological connotations in detail. Special topics such as "Cultural World Garden", "Science and Technology World Garden", "Creative World Park", "Green World Park" and "Low Carbon World Park" have been set up, and a series of reports have been launched around the theme of "Looking at the World Garden for Development". A series of reports, such as "Everyone Looks at the World Garden", "Looking at the World Garden, Promoting Change" and "Changing the Way in Progress", were launched to display the Beijing World Garden Expo in an all-round and multimedia way.

In April 2019, the special issue of "Garden and Pavilion Collection of Beijing Expo 2019" was launched in the media, which systematically introduced the outdoor and indoor pavilions of participating countries, organizations and enterprises, and provided visitors with practical guidelines for visiting the venues of Beijing Expo. At the same time, a weekly journal will be published during the Beijing Expo, which

will release real-time information during the Beijing Expo synchronously with the official website.

Beijing Expo actively uses overseas social media to promote its work. Posts published by the Bureau on the Facebook account of "Explore China", such as "Humble Administrator's Garden", "Liangyuan Garden", "Beihai Park", "Summer Palace" and "Lion Forest" and "Zhi Lian Nunnery" etc reached a total of about 3.19 million people within three weeks of the publication of the articles, and about 180000 people liked them.

Domestic and foreign media actively reported the publicity and promotion activities of Beijing Expo. During the Beijing Week of Milan World Expo, Xinhua News Agency, Fox News Network, CNBC, Phoenix Satellite TV, Beijing TV, Beijing Daily, China Net and many other domestic and foreign media carried out a large number of follow-up reports on the whole event, and published more than 20 articles. During Ottawa Beijing Week, 213 related media reports were published in 260 media such as American City Business Daily, Yahoo Finance, Dow Jones Marketwatch, Pittsburgh Post, Canadian National Post and ABC, with more than 83.53 million visits.

The press center of Beijing World Horticultural Exposition, which began operation on April 27, 2019, has received 6705 Chinese and foreign journalists and organized 4814 media interviews and reports.

According to statistics, during the operation of Beijing Expo, more than 50 special editions were published in major newspapers of the central government, more than 3000 articles were broadcast on various lines and terminal platforms of Xinhua News Agency, and more than 3000 minutes were broadcast on CCTV, CCTV and Guoguang of the Central Radio and Television Station. Municipal newspapers published nearly 150 special editions, published nearly 800 pictures and charts, nearly 1600 original articles, more than 1400 radio and television programs, lasting more than 2000 minutes, 51.6 million hits on local websites, 640 million micro-blog topics related to Beijing Expo, and nearly 1 million discussions. More than 2 billion times have been transmitted in various forms at all ends.

During the opening ceremony of the Beijing World Garden Expo, CCTV's comprehensive channel and news channel were broadcast live, and the variety channel broadcast live theatrical performances. More than two hours of studio special programs closely

follow the theme of "Green Life Beautiful Home", highlighting Xi Jinping's ecological civilization thought, fully demonstrating the achievements of China's ecological civilization construction.

In terms of publicity and reporting of the opening ceremony, the news center of Beijing TV Station broadcast the opening ceremony live. For the first time, the most advanced all-digital multimedia 600 square meters studio in Asia was used, and two digital satellite live transmission vehicles were dispatched on the spot. It publicizes in the form of pictures, short videos, visual long pictures, two-dimensional hand-painted animation videos, H5 interactive products and so on, and pushes millions of audiences. The opening ceremony of the live broadcast of the program "Beautiful Beijing Colorful Expo", the audience rating in Beijing reached 1.46%, and the population of Beijing was 2.96 million; At the same time, the ratings of 35 cities in China ranked second, with a population of 3.37 million per minute, which achieved good ratings and publicity results.

During the closing ceremony of the Beijing World Garden Expo, CCTV Variety Channel and News Channel broadcast the closing ceremony live. The one-hour program presented the grand closing ceremony of the Beijing World Garden Expo and widely disseminated the achievements of the Beijing World Garden Expo.

### Section 3 Social Publicity

The Beijing World Park Expo has actively strengthened social publicity, and people's attention to the Beijing World Park Expo has been enhanced by putting outdoor advertisements, promotional films and promotional materials.

On November 22, 2018, the first batch of 10 "Beautiful Expo" propaganda buses officially departed, with the emblem and mascot patterns of Beijing Expo painted on both sides of the body, which became a mobile propaganda medium, traveling in the Great Wall, the Forbidden City, Beijing Expo Park and other major scenic spots in Beijing. During the meeting, tourists will experience the activities of Beijing World Park Expo, such as refreshing tour, health tour, parent-child tour and so on. In addition to publicizing buses, some important areas and landmark buildings in Beijing have set up countdown signs for the 2019 Beijing World Garden Expo, wall advertisements and high column advertisements have been put on the main busy roads

in Beijing and the junctions of roads entering and leaving Beijing, light box advertisements have been put on Beijing subway lines and bus stations, and body advertisements have been placed on buses on key lines.

Beijing Expo uses VR technology to publicize the image of Beijing Expo by rolling video promotional films on Beijing Metro video terminals and outdoor led large screens. At the same time, paper publicity materials will be distributed at various stations and bus stations of Beijing Metro, and wind flags will be arranged at major sections, elevated roads and Beijing International Airport in Beijing to enhance the publicity effect of Beijing Expo in an all-round way.

#### Section 4 Official Website

The official website of the Beijing World Horticultural Exposition provides authoritative, accurate and timely information on the preparatory process and other aspects of the event, and serves as a window for people from all walks of life to learn about the Beijing World Horticultural Exposition and a bridge for people from home and abroad to participate in it.



## Construction of official website

On April 27, 2015, the official website of the 2019 Beijing World Garden Expo was officially launched. As one of the important publicity platforms in the preparatory stage, the first edition of the official website of Beijing World Horticultural Exposition has set up several sections, such as News Center, World Horticultural Exposition, Beautiful Yanqing, Garden Collection, Horticulture Encyclopedia, Series Activities and Partners, to publicize the preparations for Beijing World Horticulture Exposition and horticulture-related knowledge.

The official website of Beijing World Park Expo will undergo page revision with different emphasis at different preparatory nodes, carry out stage publicity, promotion and application bearing for global users, and report the progress of preparations for Beijing World Park Expo in an all-round way. On December 8, 2016, the Chinese official website was revised for the first time, and the special topic was launched synchronously with the new version of the official website. According to the needs of the preparatory work, the revised official website of Beijing Expo will divide the news section into headline news, hot news and video news. At the same time, we will add columns on Expo planning and market services to follow up the progress of the work of the Beijing Expo site. In order to make it more convenient, fast and comprehensive for visitors to understand the relevant information of Beijing Expo, a media report column is added to collect the relevant reports of the mainstream media from all angles. In addition, the horticultural information is integrated and merged into a series of planning columns.

On May 24, 2018, the Chinese official website was revised for the second time. After the revision, the home page added countdown cards, and in order to facilitate visitors to keep abreast of relevant information, on both sides of the home page placed official micro-blog and Weixin two-dimensional code, mobile phone recognition can jump. "Series Planning" was renamed "Horticultural Corridor" to continue to improve horticulture-related knowledge. Set up the column of "Announcements and Regulations" to integrate the relevant announcements and laws and regulations of Beijing World Garden Expo for the convenience of browsers. A bulletin display column is set under the head map to update in real time. In addition, the Beijing World Horticultural Exposition has a special topic "Monday Garden" to introduce the

relevant contents of each exhibition garden.

On September 24, 2018, the Chinese official website was revised for the third time. The top picture on the front page will be replaced by the latest publicity picture of the main venues, and the announcement display column below will be retained. According to the needs of work and publicity, two sections of Expo service and volunteer style have been added. Among them, the Expo service is divided into four sub-columns according to the needs of tourists, namely, pre-trip information, tour line recommendation, rental information and park business. In addition to volunteer related news and information, set up links, click to enter the Beijing World Garden Expo volunteer registration platform.

On April 29, 2019, the Chinese official website was revised for the fourth time. The revision meets the needs of the Beijing Expo, with headlines, online tickets, online Expo, how to get to the Expo, daily activities and online stores on the front page. At the same time, the latest activity arrangement is displayed again under the news section for tourists' reference. For the high-tech content of this Expo, a column of Science and Technology Expo will be set up and displayed on the home page, so that more tourists can understand the perfect combination of the latest technology and horticulture.

On April 26, 2016, the English version of the official website of the Beijing World Horticultural Exposition was launched, which is one of the important information platforms for overseas to understand and share the Beijing World Horticultural Exposition, and will enable more public and exhibitors to enjoy faster, more efficient and more international information of the Beijing World Garden Exposition at any time. The background picture of the English website is the plan of the Beijing Expo Park, and the main colors are red and blue. The English official website focuses on inviting exhibitors, and the column settings are different from the Chinese version, except for news, the main column is set up to download the "Participation" (exhibition) column. Referring to foreign horticulture and other related websites, we design a home page which is in line with the reading habits of English-speaking countries, and use large head pictures to attract visitors to further understand the Beijing Expo and related content from a visual point of view. In September 210, 2018, the English official website was revised for the first time.

This revision adjusts the design style, the color scheme is taken from the new version of the emblem of Beijing Expo, and the display head map is updated to the concept map of the five major venues. In order to ensure the visual effect, the integration of various columns classified, using geometric design, click into the secondary page can still read detailed information.

On April 29, 2019, the English version of the official website was revised for the second time. In order to facilitate the audience to consult the relevant information at the meeting, enlarge the columns to display pictures, and pursue better visual effect. Referring to the Chinese official website, we will add columns on activities, ticketing, online Expo, science and technology Expo and media center.

On December 17, 2018, the German and French versions of the official website of the Beijing World Garden Expo were officially launched. German and French official website page design is consistent, color matching from the Beijing Expo emblem. A large map shows the style and features of the Beijing Expo site, click to learn about the five major pavilions related information. The website content follows up the preparatory work of Beijing Expo, improves the relevant information, and displays the relevant videos of Beijing Expo. July 30, 2019, German version of the official website revision; On August 22, 2019, the French version of the official website was revised. These two revisions unified the style of small language websites, using geometric graphics to integrate content, while ensuring that visitors get relevant information at the first time.

The official website of the World Horticultural Exposition in Beijing, China, was launched in Western and Arabic in September 300, 2019. Columns include news (photo news, hot news and video news), attractions (major venues, twelve sceneries, international garden, domestic garden, enterprise garden, master garden and characteristic garden), activity arrangements, online Expo, science and technology Expo (5G, wisdom Expo, robot and Internet of Things) and online ticket sales. Among them, in order to conform to the reading habits and customs of the countries where the language is used, the color of the home page of Arabic official website is different from that of other languages, choosing green and black.

## II. Operation of the Official Website

The official website actively organizes online publicity of the Expo, promotes the gradual warming of the coverage of the Expo, and creates a good online public opinion environment for the preparation and holding of the Expo.

Since the launch of the official website of Beijing Expo, as of November 8, 2019, the official website has published 2741 Chinese news articles, 1933 English news articles and 968 news articles in other languages. In addition, 9742 pictures were published on various language websites. The content of the official website is reproduced by other media with increasing frequency.

The number of visits to the official website has also gradually increased. In

November 2016, the website opened the creative exhibition park scheme to solicit votes, the enthusiasm of the masses to participate was very high, and the number of visits to the official Chinese website increased sharply. As of September 2019, the total number of visitors to the official website reached nearly 120 million.

### III. Publicity Activities of Official Website

In November 2016, the official website held the "2019 Expo Creative Exhibition Park Scheme Collection Competition" student group and professional group online voting activities. The total number of votes was 3.5 million.

The official website has planned a series of products, such as World Garden Tour, Chinese Flower Complete, Chinese Garden, Horticultural Encyclopedia and Expert Interview. Special photographers visited France, Austria, Germany, Russia, Ireland, Iran, India, Israel, Japan, Brazil, Australia, Canada and other countries to take nearly 10000 images, filling the gap of no World Garden related products on the network. The special topic of Chinese gardens is planned from three aspects: northern royal gardens, Jiangnan classical gardens and Lingnan private gardens, showing the history of Chinese gardens and feeling the cultural and artistic charm of gardens. The special topic of Chinese flower encyclopedia introduces Chinese famous flowers with high-definition pictures. The topic of horticulture encyclopedia popularizes the basic knowledge of horticulture through the form of questions and answers. Expert interview topic, invite 12 experts and scholars to conduct interviews, to explain horticultural knowledge from a professional point of view.

In order to better cooperate with and serve the media reporters in their work, on April 24, 2019, the website of the press center of Beijing World Horticultural Exposition will be launched to provide the latest news, announcements and various service information of the Expo, and set up a data and picture center for downloading, which will carry out services and applications at different stages for media users.

### Section 5 Publicity Organization and Management

Doing a good job in news propaganda and creating a good atmosphere of public opinion are an important part of the successful holding of the Beijing Expo.

-, press release

From 2016 to 2019, the Beijing Expo Bureau held five press conferences at the

Information Office of the State Council, announcing the latest developments in the exhibition invitation, preparation progress and preparations for the closing ceremony of the Beijing Expo.

## II. Publicity content

During the preparation period of Beijing World Horticultural Exposition, from 2014 to 2016, through the first meeting of the Organizing Committee of Beijing Expo, the International Exhibition Bureau considered and approved the application for accreditation and flag awarding of Beijing Expo, the publicity and promotion of Beijing Expo with the help of Milan Expo, and the launch of publicity and promotion activities in Antalya, Turkey, by the Information Office of the State Council. Emblem and mascots of Beijing Expo released, Beijing Expo closed in Antalya. We will publicize the main nodes and major activities in the preparations for the Expo, such as receiving the flag at the curtain, so as to expand the influence of the brand, theme and concept of the Beijing Expo in society.

From 2017 to 2018, the Expo Bureau promoted the mascot emblem, started the construction of venues, started the market development, counted down for two years, counted down for one year, and signed the first national exhibition agreement by planning large-scale activities, opening personalized special columns, launching special columns and special activities. At the Astana World Expo, the promotion of the Beijing World Garden Expo and other major activities at various important nodes in the preparatory process were carried out in an all-round way. Focus on countries, domestic provinces (regions, cities) Participate in the dynamics of Beijing Expo, and combine the national roadshow, Expo Tourism Promotion Week and other activities to create a good atmosphere for market development and international exhibition. At the same time, we should make use of major domestic activities such as Science and Technology Week, Science Expo, Cultural Expo and so on to promote the Beijing World Garden Expo.

In 2019, through the 100-day countdown ceremony, the release of the song, the opening and closing ceremonies of the Beijing World Horticultural Exposition, the activities of China Pavilion Day and the activities of other countries and regions Pavilion Day, and other important nodes and major activities, to attract

horticultural industry practitioners, horticultural enthusiasts and people from all over the world to participate in the Beijing World Horticultural Exposition.

## II public opinion monitoring

In order to fully understand the interest and satisfaction of tourists, the Expo Bureau has established an all-media public opinion monitoring platform, set up a public opinion monitoring team, formed a working procedure for handling public relations in news propaganda crisis, and done a good job in public opinion monitoring. Since the implementation of public opinion monitoring, the amount of media coverage has continued to grow, and public opinion monitoring has been comprehensive and timely, providing important reference for the correct guidance and timely handling of social conditions and public opinion, providing effective information services for the work of Beijing World Park Expo, making Beijing World Park Expo in a positive atmosphere of public opinion during the preparation and holding period.

## Chapter II Works and Publications

### Section I Publications

During the preparatory process of the Beijing World Horticultural Exposition, according to the needs of the work, a book entitled "Beautiful Landscape Painting Colorful World Horticultural Exposition-Planning for the Park of the 2019 Beijing World Horticulture Exposition in China" was published. This book describes the site selection, planning and design of Beijing Expo in detail from the aspects of overall planning, main scenery and characteristics, main buildings and highlights, exhibition garden and infrastructure of the park, so that readers can have a thorough understanding of the whole process of planning of Beijing Expo as if they had participated in it personally.

### Section 2 Documentary Film

In order to timely and objectively record the progress of the preparation and holding period of the Beijing World Park Expo and display the latest developments of the Beijing World Park Expo at home and abroad, the Expo Bureau has launched a documentary planning and shooting project since 2016, and has produced more than ten editions of documentaries with different contents, lengths and languages. It is mainly used for the report of BIE and AIPH Congress, overseas publicity and promotion, international exhibition invitation, work report of the Organizing Committee and Executive Committee, publicity and promotion of domestic provinces, municipalities and Hong Kong, Macao and Taiwan regions, investigation report of leaders at all levels, etc and is adjusted and improved according to the holding of major thematic activities and conferences. According to the needs of propaganda, documentaries will be put on TV, Internet and outdoor propaganda screens to enhance the attention and influence of Beijing Expo.

On April 17, 2017, the opening ceremony of the large-scale documentary "Chinese Plants Influencing the World", filmed and produced by the Beijing World Garden Bureau, was held in Beijing Botanical Garden. The documentary is divided into ten episodes, which are filmed by eight film crews in 93 regions of 27 provinces in China and more than 30 regions of 7 countries abroad, covering 28 kinds of plants



in 21 subjects, and deducing around ten themes of plant paradise, tea tree, mulberry, rice, soybean, materia medica, bamboo, fruit, garden and flowers.

On July 29, 2019, the documentary "Chinese Plants Influencing the World", which lasted three years, was released at the Botanical Museum of Beijing World Garden Expo Park. It is the first natural documentary in China to show the world of plants in an all-round way, using major historical nodes, major events and important figures to depict how Chinese plants change the world, clarify how Chinese plants are discovered by the world, take root and grow in the world, and realize the interaction between China and the world.

Chinese Plants Influencing the World is the longest 4K documentary in China at present. The documentary was broadcast on CCTV Documentary Channel in September 2019.

### Section 3 Publicity Materials and Publicity Films

With the emblem and mascot as the core elements, Beijing Expo has planned, designed and produced dozens of publicity materials that highlight the theme and concept of the Expo, are rich, diverse, convenient, practical and internationalized, including emblem badges, mascot ornaments, canvas bags, scarves, emblem puzzle sets, water cups, etc which have been exchanged at home and abroad. It has played an important role in foreign visits and cultural activities as a carrier of publicity for the Beijing Expo.

In terms of promotional films, from September 23 to 27 H, 2017, at the opening ceremony of the 2nd China-Canada International Film Festival, the three-dimensional animated micro-film "The Secret of Flowers" co-produced by Beijing World Garden Bureau and Beijing Zhongke Shiwei Culture and Technology Co Ltd appeared in the International Film Exhibition Unit of the Film Festival and won the Best Special Effects Award. "The Secret of Flowers" is a new form of micro-animation short film to convey the theme of "Green Life, Beautiful Home" of Beijing World Garden Expo. The short film is aimed at young audiences, with the image elf from the depths of the future universe- "Guang Tuan Er" as the protagonist, with witty and interesting performance techniques and vivid and interesting animation plots, each episode tells a little secret of a flower. The short film cooperates with the way of new media

dissemination and promotion, conveys green scientific knowledge, and conveys the concept of green life.

On June 19, 2019, a series of national horticultural promotional films of "One Flower, One Garden and One City" were released in the peer square of Beijing World Horticultural Expo Park. With the theme of horticulture, aesthetic theme, national characteristics and the connotation of harmonious coexistence between man and nature as the train of thought, the promotional film presents the horticultural characteristics and cultural essence of 10 countries, such as Cambodia, Czech Republic, Djibouti, Japan, Kyrgyzstan, Myanmar, Nepal, Pakistan, Singapore and Tajikistan, and shows that all countries in the world build a beautiful earth home together. The beautiful vision of building a community of human destiny.

## Part XI Volunteering

Volunteers are an important force for the success of Beijing Expo, an important channel for the general public to build, govern and share the Expo, and an important window to show the good image of Beijing to the world. To hold a "unique, splendid and unforgettable" horticultural event is inseparable from the participation and dedication of volunteers at the Beijing World Horticultural Expo.

Nearly 20000 volunteers from 48 universities, 16 districts and counties, 51 enterprises and 2 social organizations participated in the 2019 Beijing World Park Expo. Nearly 120000 volunteers have provided services for more than 1 million hours. On average, more than 600 volunteers participate in the service every day, distributed in more than 100 posts of 8 categories and 18 sub-categories, providing public welfare explanation, inquiry service, order guidance, reception assistance, media service, exhibitor service, organizer work coordination, visitor assistance, activity organization assistance and other services. During the 162 days of the conference, an average of 20000 questions were answered by tourists every day. Volunteers from the core venues and exhibition parks have carried out more than 15000 of public welfare explanations, which have served nearly 240000 Chinese and foreign tourists and received nearly 10000 letters of praise.

Beijing Expo regards volunteer service as a big classroom for young volunteers to learn Xi Jinping's ecological civilization thought and a big stage for them to jointly build a green home and a beautiful China. Inside and outside the park, with their beautiful smiles and warm and professional services, volunteers have made the spirit of the Expo and volunteerism widely popular in the whole society, demonstrating to the world the achievements of the national ecological civilization construction, and showing the good image of Beijing's service to the society. The volunteer work is well organized and the service is thoughtful and meticulous, which is highly praised as "full of capital characteristics, meeting the needs of the exhibition, reflecting international standards", and is unanimously praised by the organizing committee, the media, exhibitors and tourists.

## Chapter I Recruitment and Training

### Section 1 Recruitment

On June 8, 2018, the second Plenary meeting of the Executive Committee of the 2019 Beijing World Horticultural Exposition was held, and a volunteer working group of the Executive Committee of the Beijing World Horticultural Exposition was set up, with the League Municipal Committee as the lead unit, which is responsible for the recruitment, publicity, training, management and recognition of volunteers in the park, city and society of Beijing World Gardening. And coordinate the implementation of volunteer security work. Each volunteer source unit shall set up a working organization led by the competent leaders, formulate and implement its volunteer service work programme as a whole, and do a good job in the recruitment, selection, training, management and guarantee of volunteers.

In accordance with the requirements of the Executive Committee of Beijing Expo and the actual work, the goal of volunteer recruitment is to organize a volunteer team with high political quality, strong ability and excellent service quality to provide high-quality volunteer services for Beijing Expo. The recruitment of volunteers for Beijing Expo is based on "organizational mobilization" supplemented by "social mobilization", "directional recruitment" supplemented by "social recruitment", and is aimed at universities, enterprises, League and District committees, first-level volunteer service organizations and foreign volunteer service teams.

#### I. Recruitment Requirements

The Volunteer Working Group carries out volunteer recruitment in accordance with the General Policy for Volunteers in the Park of Beijing World Horticultural Exposition 2019. The source units of volunteers select the park volunteers who meet the needs through the recruitment work of recruitment notice publication, registration, screening, interview and so on. In order to provide emergency support services for volunteers in special periods such as trial operation, opening and closing ceremonies, major events and extremely large passenger flow, the Expo Bureau has recruited and reserved 2000 general volunteers in Yanqing District, 90 volunteers majoring in foreign languages, 30 volunteers majoring in media and 30

volunteers majored in communications in relevant universities, and they are on duty at any time according to their work needs to ensure emergency needs.

The conditions for the selection of volunteers at the Expo site are as follows: volunteer to serve the Expo site; Be over 18 years old and in good health before taking up the post; Before registration, they need to become real-name registered volunteers on the "Volunteer Beijing" platform; Comply with Chinese laws and regulations and relevant regulations of the Expo; Be able to participate in the training and related activities of the Expo; Be able to carry out volunteer work continuously during the Expo Applicants whose mother tongue is not Chinese should have the ability to communicate in Chinese; Have the necessary professional knowledge and skills for volunteer service posts; Experience in event service is an advantage.

## II. Recruitment Proc

By the end of September 2018, the volunteer working group will communicate and coordinate with the relevant employing departments to implement the actual job needs of volunteers; Complete the recruitment, training and other programs.

In mid-November 2018, the mobilization and deployment meeting of relevant schools and enterprises was held to organize and mobilize the recruitment of volunteers for Beiyi Expo Park; Each source unit formulates its own volunteer service work program, establishes relevant work organizations, and initiates volunteer recruitment and training.

In early December 2018, each volunteer source unit completed the recruitment notice, registration, screening, interview and other recruitment work of its volunteers. Among them, according to the procedure of "material preliminary examination, superior examination and interview", volunteer candidates are initially confirmed at a rate of 150%; According to the procedure of "Expert Interview, Background Examination, Confirmation of Employment and Signing of Agreement", the list of volunteer candidates in the park is confirmed at 120%.

In mid-December 2018, the Expo Bureau decided on the list of volunteers in the park, sorted out and refined the work content of volunteers according to the needs of various employing departments, and compiled job descriptions.

By the end of February 2019, the volunteer source units will complete the desktop deduction of volunteer work and start the basic skills training of volunteers in such aspects as "should know and respond".

By the end of March 2019, the first batch of general training for volunteers in Beijing Expo Park will be carried out, and the relevant departments of the League Municipal Committee will organize and complete the centralized general training for volunteers. Before taking up their posts, the employing departments organize volunteers to carry out professional training according to the needs of their tasks.

### III. Sources of Volunteers

The volunteer team of Beijing Expo is mainly composed of college students, and at the same time, it extensively absorbs the participation of enterprises and Beijing citizens, including college students volunteers, enterprise volunteers, social volunteers and pioneer volunteers.

Beijing Expo mainly recruits college students volunteers for universities in Beijing and enterprise volunteers for enterprises in Beijing. Relevant schools and enterprises are authorized to recruit volunteers in stages and establish corresponding training, organization and management systems in accordance with the qualifications determined by the Executive Committee of Beijing Expo through group registration, and accept the tasks assigned by the Executive Committee of Beijing Expo with schools and enterprises as units. The Volunteer Working Group of Beijing Expo openly recruits social volunteers for all League District Committees and first-level volunteer service organizations, directly receives individual applications through Internet registration, and selects and recruits volunteers from the applicants according to the qualifications determined by the Executive Committee of Beijing Expo; It is also aimed at real-name registered volunteers with relevant skills from all walks of life in the city, selecting excellent and capable personnel to form a pioneer team of volunteers and jointly participate in training. Guarantee important activities and undertake urgent tasks of the Executive Committee.

### IV. Working Mechanism

Volunteer recruitment is an important prerequisite for the service guarantee of

Beijing Expo. The Expo Bureau attaches great importance to the volunteer work of Beijing Expo, and the source units of volunteers have set up working groups led by the leaders of the units, strengthened organizational leadership, and comprehensively promoted the recruitment, management, guarantee and incentive of volunteers.

In strict accordance with the post conditions and number of volunteers in the park, the Expo Bureau extensively publicizes and launches, strengthens the work requirements, and selects volunteers with strong political nature, excellent style and outstanding abilities to participate in the service guarantee of the operation of the Beijing Expo Park.

The main person in charge of the organization of each unit registered by the group is the first person responsible for volunteer recruitment, establish and improve the volunteer team organization system of the unit, select excellent leaders and managers, cooperate with the organization, allocation, promotion, service and other related work of volunteers, and assist in volunteer management and related security work.

In order to ensure the service of Beijing Expo, the volunteer source units have formulated a thorough work programme, strictly guaranteeing the schedule and quality of work, and ensuring the smooth progress of volunteer service.

## Section 2 Training

In order to do a good job in the training of volunteers for Beijing Expo, the Expo Bureau organized a backbone volunteer training camp to conduct centralized and closed training for volunteers; The Expo Bureau unifies the development of network training for all volunteers; Volunteer source units concentrate on carrying out off-line centralized face-to-face training synchronized with the publicity and volunteer mobilization of Beijing Expo; After reporting to various departments of the Expo Bureau, the volunteers will carry out post internships. The overall training is planned, managed and supervised by the Volunteer Management Department of the Expo Bureau. Among them, the backbone volunteer training camp and network training are organized by the volunteer management department; Off-line training is organized and implemented by volunteer source units; The volunteer use department is

responsible for organizing and implementing the internship.

Before taking up their posts, each volunteer receives systematic training of not less than 30 hours, such as general training, professional training and on-the-job training. Tongchuan training includes volunteer role recognition and mission, volunteer rights and obligations, large-scale activities volunteer service norms, etiquette norms, emergency response and self-emotional regulation knowledge; Professional training includes exhibition situation and characteristic exhibition projects, introduction of large-scale activities and attractions, transportation network inside and outside Beijing Expo Park, wisdom Expo Park, tourist service information, etc. To help volunteers familiarize themselves with and master the operation of Beijing Expo. Improve the quality of volunteer service. In the early stage of the opening ceremony, the Expo Bureau launched a special training camp for volunteer management teams and key volunteers, providing special training for the operation and management, post allocation, work schedule and work arrangement of volunteers in the park, so as to enhance the leadership ability of volunteer management teams and strengthen the accurate understanding of the overall work of Beijing Expo.

In order to enable volunteers to quickly master the post service skills, the Beijing World Horticultural Exposition has innovatively filmed the post service content into a live demonstration video, which covers the main posts of volunteers, the job responsibilities of key types of work, work characteristics, key points to note, etc. The shooting of post training courses is all realized through the on-site display of volunteers, through intuitive, The image training video enables volunteers to adapt to the post environment and working characteristics in advance, and ensures that volunteers are "on duty, on duty and competent".

In order to turn the disadvantage of frequent rotation of volunteers into an advantage, the Volunteer Management Department of the Expo Bureau has established a management mode of volunteer experience summary and one-to-one handover of posts. After each batch of volunteers finished their service, the experience summary of volunteers was carried out, and the highlights and shortcomings found in the process of the batch of volunteers' induction were summarized, and passed on to the next



batch of volunteers. In order to ensure the accuracy of information transmission, the park volunteer handover work highlights the one-to-one mode, through the handover ceremony and more than half a day of work handover, volunteers can quickly adapt to the post. Continue to carry out volunteer experience summary and work handover, constantly strengthen volunteer post training, improve the comprehensive service level of volunteers.

## Chapter II Operation Management

The operation and management of volunteers is not only a part of the overall operation and management of the park, but also has relative independence and particularity. Taking the overall operation and management plan of Beijing World Horticultural Exposition as a guide, in accordance with the principles of integration of different departments, division of labor and responsibility, separate operation and hierarchical management, and focusing on the characteristics of this World Horticultural Exposition, such as high demand for volunteers, long cycle, long distance, large number of people and rotation, in order to ensure that volunteers work in a large scale weekly rotation. The Volunteer Management Department of the Expo Bureau carries out its work in accordance with the mechanism of "point, line and surface" combination, pre-post docking, division of labor and responsibility, hierarchical management and regional operation.

### I. Combination of "Point, Line and Surface"

In view of the changeable needs of volunteers in various business departments of the park, a "point, line and surface" post allocation system is established: "point" refers to the consideration of the distribution of post sites, security facilities, number of people at the sites, as well as the professional and gender requirements of volunteers, etc and the actual work needs are combined to write the "job description", refine the specific responsibilities of posts, and sort out the rest areas and drinking points at the post sites. Guarantees the human hillock to match, the human makes the best use;"Line" is the main line of work to establish a clear source unit, a League Municipal Committee and a volunteer management department commissioner docking post allocation responsibility mechanism, clarify the main

responsibilities of each link, clarify the main responsibilities of each link, stipulate the requirements of post allocation at all levels, refine and adjust the "Source Unit Post Allocation Table" and "Park Post Allocation Table", and write "Matters needing attention in post allocation and related requirements". Simplicity and efficiency; "Face" is to consider the management mode of districts and blocks as a whole. Reasonable allocation of volunteer posts in source units by means of complete packaging, fully meeting the post needs of special requirements, ensuring that the posts of source units do not overlap, overlap or change, so as to make volunteer management regionalized and integrated, so as to achieve single docking and orderly and efficient management.

## II. Pre-post docking

Establish docking mechanism. The park operation department has set up four working groups, namely, comprehensive administration, activity propaganda, service guarantee and park operation, which are responsible for the communication between the volunteers and the source units before they take up their posts, and the volunteers take on the comprehensive coordination functions of operation management and logistic support after they take up their posts. Each source unit should set up corresponding groups or designate special docking personnel, and the docking work starts from recruitment and selection, and lasts for the whole volunteer service cycle.

Clear time and tasks. In order to make the preparation of each batch of volunteers orderly before taking up their posts, the task arrangement of each stage of volunteer docking work is clearly defined as the guide for the preparatory work of each source unit. One month before the opening of the Expo, each source unit shall determine the final list of volunteers and post arrangement, provide materials and photos required for certification, supplement and adjust the clothing of volunteers individually, and organize professional training and emergency drills for volunteers in their own units. Half a month before the opening of the park, each source unit determines the operation and management system of this batch of volunteers, and submits the list of responsible persons and team leaders of each venue (area); Define the temporary Party and League organization settings of this batch; Complete docking

with security vehicles, clear vehicle traffic routes, passenger arrangements, etc. One week before the opening of the park, the head of the Youth League Committee of each source unit, each venue (area) The person in charge and the group leaders went to the park to survey, familiarize themselves with the post points and docking work, exchanged with the previous batch and received materials. Within three days before the volunteers take up their posts, the source units hold the oath-taking meeting of each unit to distribute materials.

### III. Division of Labor and Responsibility

Venues (districts) and departments are the main body of direct use and management of volunteers after taking up their posts, mainly responsible for task allocation, business guidance, attendance management, assessment and other responsibilities. The Volunteer Management Department coordinates the allocation and use of volunteers in the park, mainly undertakes the responsibilities of work supervision and emergency coordination, and provides two full-time volunteer managers and about two backbone volunteers for each venue (area). The source unit mainly coordinates the number of staff according to the post allocation, and assists in the ideological and disciplinary work of volunteers.

### IV. Hierarchical Management

The Expo Bureau has set up an on-the-job volunteer management system according to the four levels of the park, venues (districts), groups and post points. The park level is coordinated by the volunteer department, and each venue (area) is responsible for the volunteer management of the venue (area) by the batch of university teachers and enterprise group cadres; Volunteer Department for each venue (area) Two full-time volunteer managers are allocated respectively, responsible for docking venues and districts, assisting the volunteer leaders of the source units to carry out their work; Each district shall set up a team according to the post area or category, and each team shall have a team leader; Each group has a different number of posts.

## V. Partition Operation

The operation and management of volunteers will mainly sink to the venues (areas), and the basic operation and management of volunteers will be carried out based on the venues (areas). Generic volunteers are one batch a week, rotating every Monday; After the volunteers take up their posts, the venues (districts) will give brief and effective on-the-job training according to the pre-determined job requirements; During the working period, the venue (area) is responsible for the assessment and guidance of the volunteers. Venue (Area) According to the specific situation, the volunteer posts can be temporarily adjusted and the volunteers in the region can be used as a whole.

In addition to the handover day, the daily work of volunteers basically includes three main process links, namely, preparation for duty, post service and return from duty. In terms of job preparation, the daily working time of volunteers is from 9 to 18 o'clock, volunteers arrive half an hour ahead of time to prepare for service, and venues (districts) or groups hold pre-job meetings to summarize and comment on the previous day's work and put forward requirements for the day's work. In terms of post service, volunteers provide volunteer service for tourists according to their post responsibilities and the requirements of various venues (districts), and volunteers can take half an hour off for every two hours of service. In terms of returning from post, volunteers submit post operation logs after finishing service at 18 o'clock every day, sort out materials at work sites, and then go to the parking lot outside No.3 Gate by bus after gathering in sub-venues (districts) or departments, and return to their residences.

Docking in advance. According to the plan, the next batch of source units need to go to the park about a week in advance to connect with on-the-job service volunteers and venues (districts) in advance. School, enterprise, venue (area) and group, which are mainly the overall arrangement of docking, familiarity with the workplace, understanding the work flow and exchanging service experience.

Handover on duty. In principle, the handover of new and old batches of volunteers is every Sunday afternoon. On the first day of duty, a new batch of volunteers should arrive at the park at noon, and each group should arrive at the duty site under the leadership of the backbone volunteers and team leaders according to the

distribution of posts. The staff of the venues (districts) or departments will train the volunteers in this batch before they take up their posts, and lead them to familiarize themselves with the working environment. In addition to the handover of specific work, two batches of volunteers held a formal handover ceremony, which was attended by the leaders of the two schools and some volunteer representatives. The previous batch of volunteers returned to school after one day's service.

End the handover. The end of the handover is mainly the handover of materials, equipment and other aspects of work, mainly at the venue (area), group level. After the last day of service, when the batch of volunteers check the materials and materials according to the requirements of the off-post handover form, the backbone volunteers of the second daily newspaper are sorted out and handed over to the next batch of volunteers on the second day.

### Chapter III Service Guarantee

Volunteers are an important force for the success of the Beijing World Horticultural Exposition, and doing a good job in various security work of volunteers will help volunteers to better contribute their strength to the Beijing World Horticultural Exposition and promote volunteerism.

#### I. Logistics Support

In accordance with the principles of unified budget, unified procurement, classified implementation and nearby guarantee, the logistic support of volunteers is mainly carried out by the volunteer department, with the cooperation of venues, districts and departments. Transportation support, clothing and equipment are directly guaranteed by the Volunteer Department, working meals and drinking water are uniformly declared by the Volunteer Department, and venues (districts) are provided nearby.

Logistical support work requires all volunteers and the whole process of service to be guaranteed, strict quality control, to ensure the safety of each volunteer, to implement the principle of combining spiritual incentive with material incentive, to implement the principle of thrift, through the establishment of rules and regulations, fine workflow, through efficient and effective logistics support work

to ensure the effective implementation of volunteer service activities. To stimulate the enthusiasm of volunteers to serve the Beijing World Garden Expo, facilitate communication between management team members" Effective communication" to help strengthen the role of volunteer team management, management team to do a strong backing.

## II. Traffic Guarantee

All volunteers who participate in the service arrange accommodation in the Party School of Yanqing District Committee; Each batch of volunteers arrived at Gate 3 parking lot by car around 8 o'clock, and after getting off and gathering, they entered the park from Gate 3 security check; After entering the park, according to the distance of the venue (area), take walking or battery car to arrive at the post area; After finishing the service in the afternoon, we will return to the parking lot of Gate 3 according to the venue (area), and return to Yanqing Party School by car. According to the post settings, 10 battery cars are needed as ferry cars in the morning and evening of ordinary days, and 15 battery cars are needed on peak days.

## III. Food and Beverage Guarantee

During the meeting, the volunteers' catering will be budgeted by the Volunteers Department in accordance with the standard of equal treatment with the official staff of Beijing Expo, and after the budget approval, it will be guaranteed by the venues (districts) as a whole. In principle, breakfast, lunch and dinner are provided for volunteers in the park.

The dining places and standards of the volunteers in the park are consistent with those of the official staff of Beijing Expo. By means of contractual obligations, regular inspection and spot checks at any time, the canteen is required to keep samples of each meal to ensure the quality and hygiene of the food supplied, to ensure the cleanliness inside and outside the restaurant, and to ensure food safety. In the opening ceremony stage, in view of the problems of large number of volunteers, long working hours and limited access to the park, the volunteers' meals at the opening ceremony are fully guaranteed by submitting the number of meals in advance,

diverting meals in batches, delivering meals to the station and preparing meals. During the formal session, through coordinating the printing of volunteer vouchers by the Office of the Expo Bureau, about 300000 people were guaranteed to eat; In view of the problems of large span and time-consuming dining in the volunteer park, we have opened up a volunteer dining point in the park according to local conditions; In view of the large number of volunteers dining on the handover day, we adopt such methods as opening meals in advance, staggering peak meals, and opening special meals lanes to ensure the meals of new and old volunteers. It has opened up Muslim meals.

For drinking water for volunteers, the application, management and distribution of drinking water 14000 boxes are unified. Through the coordination of resident staff, 600 boxes of drinking water are distributed to the volunteer residence every week, and the volunteers can drink freely and bring them into the park. At the same time, a map of drinking water points in the park was drawn for volunteers to supplement drinking water by themselves. Drinking water supply stations are set up in Lifestyle Experience halls, vegetable gardens and volunteer homes to provide emergency drinking water for volunteers. When encountering high temperature and hot weather and extreme passenger flow, we should organize all human and material resources that can be mobilized to ensure the drinking water supply of volunteers in hot spots.

#### IV. Accommodation Guarantee

Provide accommodation for volunteers in Yanqing dependency. It is planned to upgrade and renovate the Party School of the District Committee in Yanqing District as a volunteer residence. Yanqing District provided 696 beds by renovating the dormitory of the Party School of the District Committee as a place for volunteers to live; Provide unique design of special clothing for volunteers; Equipped with raincoats, toilet water, throat lozenges and other necessary support equipment; Thirty volunteer service booths have been set up at the relatively dense tourist sites in the park for volunteers to carry out their work; The Municipal Volunteer Service Federation has brought the park volunteers into the unified guarantee of the whole city's volunteers. It is insured by PICC Property Insurance and provides personal

accident injury insurance with an amount of 1.5 million per person; The 200 square meters of independent space in Gate 1 of the park is selected to establish a volunteer home, which serves as a place for volunteers to carry out team building, service guarantee, exhibition, leadership condolences and work team office and meeting; At the same time, the work guarantee and incentive measures of volunteers' certificates, transportation, meals, medical treatment, service certificates and memorial books have been completed. Volunteers have no worries in the process of in-session service.

## V. Clothing and Equipment Support

In the design of volunteer clothing for Beijing World Garden Expo, we have learned from experts and scholars many times and set strict design standards; Communicate and coordinate with suppliers many times, learn from others, and make several drafts. Finally, the theme of Beijing Expo volunteer costume design "Butterfly Love Flower" originated from the main visual log of Beijing Expo. "Flower of the Great Wall" organically integrates the cultural elements of the China Pavilion, the International Pavilion, the Performing Arts Center and the Great Wall of Beijing World Garden Expo, embodies the solemn and gorgeous beauty of "bird style, such as flying", reflects the modern beauty of the application of international design language, and also reflects the health, enthusiasm and vitality of contemporary young volunteers. Clothing fabrics contain many scientific and technological elements, sweat, sunscreen, breathable, fast-drying, can adapt to the weather and temperature characteristics of the Beijing Expo period; Short sleeve Polo. The "freezing point cooling technology" and "anti-odor technology" utility model patented material of the shirt can effectively solve the problem of sweat odor of volunteers; Hat tail accessories "cool towel" use special cool technology fabrics, wet water can play a cool cooling effect, can bring cool comfort to volunteers when working in the sun for a long time in summer; The colorful reflective hot marks on the front and back of the jacket can ensure the safety of volunteers' travel activities in the evening. The volunteer clothing of Beijing Expo highlights the neat, youthful, vigorous and healthy spiritual outlook of the volunteers, making the volunteer group the most beautiful scenery of the Expo.



## Part XII Finance

Financial budget and management run through the whole process of preparation, bidding and hosting of Beijing Expo, including budget preparation, budget implementation, budget supervision and so on.

In May 2016, the Internal Control Manual of Beijing World Horticultural Exposition Coordination Bureau (Trial Implementation) was officially issued and implemented, and the internal control system played a significant role in the preparation of Beijing World Horticultural Exposition. With the promotion of the preparation work for Beijing World Horticultural Exposition, the adjustment of organizational structure and the improvement of work management requirements, the internal control system needs to be improved according to the work requirements. At the beginning of 2018, based on the actual situation of the Expo Bureau and on the basis of soliciting opinions and suggestions from all sides, the Expo Bureau launched the revision and improvement of the internal control system, and completed the Internal Control Manual of the Bureau of Coordination of Beijing International Horticultural Exposition (Revised in 2018) (hereinafter referred to as the "Internal Control Manual").

The Internal Control Manual includes the internal control system at the unit level, the internal control system at the business level and some systems and management methods related to economic business. The internal control system at the unit level mainly includes the basic situation of the unit, the objectives, contents and principles of the internal control construction work, the internal control organization structure, the main responsibilities of key positions, the decision-making mechanism of economic matters, risk assessment and control, financial information disclosure, information construction, internal control evaluation and supervision, etc. The internal control system at the business level mainly includes budget business control, revenue and expenditure business control, government procurement business control, asset business controls, contract business controls, construction project business controls and internal control evaluation and supervision.

## Chapter I Budget Preparation, Revenue and Expenditure

In order to standardize the revenue and expenditure behavior during the Beijing World Park Expo, strengthen budget constraints, strengthen budget management and supervision, and improve the efficiency of the use of funds, according to the Budget Law of the People's Republic of China, Beijing Budget Examination and Supervision Regulations, Beijing Municipal Basic Expenditure Budget Management Measures, Beijing Municipal Project Expenditure Budget Management Measures and other laws and regulations, the Expo Bureau combines with its actual work. The Budget Management Measures of the Bureau of Coordination of Beijing World Horticultural Exposition have been formulated.

On February 10, 2015, the Budget Management Measures of the Bureau of Coordination of Beijing World Horticultural Exposition were deliberated and adopted at the special office meeting of the Bureau of Horticultural Exposition.

### Section 1 Budget Preparation

#### I. Scope and Procedure of Preparation

The budget of Beijing Expo includes income budget and expenditure budget, and the expenditure budget includes basic expenditure budget and project expenditure budget. The basic expenditure budget is an annual basic expenditure plan prepared to ensure the normal operation of the Bureau and complete its daily tasks, including personnel funds and public funds.

Project expenditure budget is an annual project expenditure plan prepared by the Expo Bureau in addition to the basic expenditure budget in order to accomplish specific tasks and career development goals.

The budget preparation of the Expo Bureau is carried out in accordance with the procedures of "combination of upper and lower levels, hierarchical preparation, level-by-level summary and final approval". Budget preparation should be standardized in procedure, scientific in method, timely in preparation, complete in content, detailed in project and accurate in data.

Departments scientifically prepare annual budgets in accordance with their

responsibilities and annual tasks. The budget of each department shall be submitted to the Finance Department for summary after being confirmed by the department head and approved by the director in charge. The Finance Department classifies, reviews and summarizes the budgets submitted by various departments, and on the basis of full communication with various departments, puts forward suggestions for comprehensive balance and submits them to the deputy director in charge of finance and the executive deputy director for approval.

After the adoption of the comprehensive budget balance proposal, the Ministry of Finance prepares the draft annual budget for consideration and approval by the Party Committee of the Bureau. According to the annual budget approval of the Municipal Finance Bureau, the Finance Department shall issue the current year budget to all departments.

## II. Budget Implementation and Supervision

Each department is the main body of the budget implementation of its own department, which is responsible for the budget implementation at different levels and centralized management. After the budget approval is issued, all departments are required to strictly implement the standards, purposes and amounts stipulated in the budget, and it is strictly forbidden to change the purposes and standards of budgetary expenditure without authorization.

Departments refine their work tasks, clarify their work programs, and carry out preparatory work for the implementation of government procurement in advance. Reasonably grasp the rhythm of budget implementation, and the Finance Department regularly reports the budget implementation of each department.

Each department of the Expo Bureau shall establish its own budget implementation analysis system, study and solve the problems existing in the budget implementation, and put forward improvement measures to improve the effectiveness of budget implementation. At the end of each year, each department submits the budget performance of the year to the Finance Department in writing.

The Party Committee of the Expo Bureau will regularly listen to the opinions of the heads of various departments on major issues and suggestions in the process of budget implementation, and study and formulate corresponding measures and measures

to ensure the smooth implementation of the budget. The Audit Department shall conduct internal audit on the budget implementation process periodically or aperiodically to ensure the authenticity and legality of budget implementation. Departments shall establish a supervision and feedback mechanism for budget implementation, correct deviations in the process of budget implementation in a timely manner, and the heads of departments shall take full responsibility for budget implementation. Through performance evaluation, the budget implementation and accountability mechanism are linked, and at the same time, it provides a reference basis for future budgets.

### III. Contents of budget preparation

In 2016, the revenue budget was 0.1086456 billion yuan and the expenditure budget was 0.1086456 billion yuan. Among them, the basic expenditure budget is 1.4071 million yuan and the project expenditure budget is 0.1072385 billion yuan. In terms of expenditure, the department budget items mainly include park planning, publicity and planning of the Expo, horticultural exhibition guarantee, legal and regulatory formulation services, investment invitation, affairs coordination and office rental. In 2017, the revenue budget was 0.98173311 billion yuan, the basic expenditure budget was 1.1957 million yuan, and the project expenditure budget was 0.9805355 billion yuan. In terms of expenditure, the departmental budget items mainly include the first phase of the public greening landscape project of Beijing Expo and the infrastructure construction project of the park, as well as the service guarantee funds for horticultural exhibition and display, domestic and foreign investment invitation, market development, publicity and planning of the Expo, overall planning of the park, related legal services and office rental.

In 2018, the revenue budget was 1.9814943 billion yuan and the expenditure budget was 1.9814943 billion yuan. Among them, the basic expenditure budget is 1.4897 million yuan, and the project expenditure budget is 1.1980045 billion yuan. In terms of expenditure, the department budget items mainly include the first phase of public greening landscape of Beijing Expo, the second phase of public greening landscape, park infrastructure construction, China Pavilion, International Pavilion, Lifestyle Experience Pavilion, as well as domestic and foreign exhibition invitation, market

development, news and publicity planning of the Expo, park master plan, related legal services and office rental.

In 2019, the revenue budget was 1.6699 billion yuan and the expenditure budget was 1.6699 billion yuan. Among them, the basic expenditure budget is 2.4563 million yuan and the project expenditure budget is 1.6674527 billion yuan. On the expenditure side, the budget items of the department mainly include the first phase of public greening landscape of Beijing Expo, the second phase of public greening landscape, the infrastructure construction of the park, the projects of China Pavilion, International Pavilion and Lifestyle Experience Pavilion, the protocol and reception services of Beijing Expo, the implementation of the international competition of Beijing Expo, the planning and operation of news publicity of Beijing Expo, and the construction and maintenance of news center. Cultural Gathering, Float Parade Performance, Operation and Maintenance Guarantee, and Operation Command System Service of the Expo Services, related legal services and other services to ensure funding.

## Section 2 Budget Management

The Party Committee of the Expo Bureau is the decision-making body of the budget management of the Expo Bureau, which is specifically responsible for examining and approving the draft budget, final accounts and budget adjustment plan of the Exposition Bureau; To coordinate and solve major problems in budget management.

The Finance Department is the daily budget management organization of the Expo Bureau, specifically responsible for: drafting the internal budget management system; Organize and guide budget preparation, budget adjustment and other work; According to the financial approval, the indicators are decomposed and approved by departments; Summarize the preparation and approval of the draft global budget and final accounts and the disclosure of budget and final accounts information; Organize budget performance management and other related work.

Each department is the specific executing agency of the budget of the Expo Bureau, and is responsible for the authenticity and integrity of its budget. Each department is responsible for its own budget preparation and budget adjustment; Execute the budget in strict accordance with the budget approval and standards; Be responsible

for the analysis of the budget implementation of the department, and other budget implementation related work.

Centralized management is carried out for cross-departmental economic business, and the Finance Department undertakes the guidance and audit functions. The budget submitted by the business department is first reviewed by the centralized management department, and then summarized and balanced by the finance department. Meetings, going abroad, vehicles and printing are managed by the office; Personnel funds and training fees shall be managed by the Human Resources Department; Informatization projects are managed by the Ministry of Information Technology.

The Expo Bureau strengthens budget performance management and establishes a whole process budget performance management mechanism of "budget preparation with objectives, budget implementation with monitoring, budget completion with evaluation, evaluation results with feedback, feedback results with application". In the process of budget implementation, the budget execution department shall file the project declaration text, budget, performance target declaration form, budget review report, government procurement data, results, acceptance data, supervision and inspection and other data as required to ensure the integrity and authenticity of the archives and regularly summarize the project work cooperate with the performance working group to carry out performance management analysis and related data statistics, and rectify according to the results of performance evaluation.

Budget business mainly includes budget preparation and approval, execution, adjustment, final accounts, performance management and other links. According to the main risks of the budget preparation link, budget approval link, budget execution link, final accounts and performance evaluation link, when evaluating the risk of budget business, the key concerns are: whether the communication and coordination among departments in the budget preparation process is sufficient, whether the budget preparation is corresponding to the specific work, and whether it is combined with asset allocation; Whether the budget is implemented according to the approved amount and expenditure scope, and whether the progress is reasonable. Whether there are no budget, over-budget expenditure and other issues; Whether the final accounts are true, complete, accurate and timely, etc.

### Section 3 Financial Revenue and Expenditure

In strict accordance with the principle of strict economy and thrift, the Expo Bureau strengthens management, activates stock funds and reduces the cost of implementation of various tasks, so as to effectively improve the efficiency of the use of financial funds. The financial revenue and expenditure of Beijing Expo covers the whole process from the beginning of the preparation period to the completion of the final accounts after the meeting.

The sources of income of the Expo Bureau in each year include financial allocation income, other income and carry-over balance at the beginning of the year. On the expenditure side, according to the nature of classification, including basic expenditure and project expenditure; According to the functional classification, it includes education expenditure, culture, sports and media expenditure, urban and rural community expenditure, agriculture, forestry and water expenditure, commercial services expenditure and so on.

In 2015, the income of the Expo Bureau was 3.1045061 billion yuan; The expenditure is 3.062936 billion yuan, mainly for agriculture, forestry and water expenditure.

In 2016, the income was 0.6004697 billion yuan; The expenditure is 0.100529 billion yuan, mainly for education expenditure and agriculture, forestry and water expenditure.

Income in 2017 was 3.7650681 billion yuan; The expenditure is 2.9827128 billion yuan, mainly for education, culture, sports and media expenditure, agriculture, forestry and water expenditure, commercial services and other expenditures.

Income in 2018 was 2.0035649 billion yuan; Expenditure of 1.1781113 billion yuan was mainly used for education expenditure, cultural, sports and media expenditure, urban and rural community expenditure, agriculture, forestry and water expenditure, commercial services and other expenditures.

Income in 2019 is 2.3929251 billion yuan; Expenditures amounted to 1.6349752 billion yuan, mainly for education expenditure, cultural, sports and media expenditure, urban and rural community expenditure, agriculture, forestry and water expenditure, commercial services and other expenditures.

According to the preparation process, Beijing Expo Bureau has continuously

established and improved its organizational structure, steadily promoted the key work of park construction, exhibition and investment invitation, opening and closing ceremonies, and ensured the efficient and orderly operation of the preparation and organization work. The Expo Bureau strictly implements the financial budget management system and internal control system, abides by the relevant provisions of "triple and one big", strengthens the examination and approval of all aspects of expenditure, effectively controls expenditure, and the overall capital income is better. After the closing ceremony of Beijing World Horticultural Exposition, the follow-up audit work was successfully completed to ensure the authenticity and rationality of various expenditures. At the same time, the Expo Bureau has earnestly completed the withdrawal of exhibitions after the Expo, the maintenance and transfer of Beijing Expo assets, as well as the operation and asset maintenance of the park.

## Chapter II Financial Management

The financial management of the Expo Bureau mainly includes formulating financial management and internal control system, organizing budget declaration, approval, publicity and implementation, managing sponsorship income of Beijing Expo and bank account of the Expo Bureau, handling fund payment and non-tax revenue surrender, accounting for financial budget, infrastructure projects and non-tax revenue, and carrying out budget. Dynamic management of fixed assets of the Expo Bureau, etc. It mainly involves the following contents:

Do a good job of fund guarantee. We should earnestly take the guarantee of funds as the core task, actively strive for financial support from the Municipal Finance Bureau, make good use of financial funds and sponsorship funds as a whole, give full play to and utilize the advantages of various funds, meet the needs of holding meetings, and realize thrifty holding meetings.

Strengthen budget preparation and management. We should persist in taking the preparation and disclosure of budgets in accordance with the law and regulations as the top priority of our work, strive to improve the scientificity, foresight and integrity of budget preparation, and ensure the timeliness, standardization and accuracy of budget disclosure.

Strict budget implementation management. Strictly implement the laws and regulations



of budget management, strengthen the seriousness of budget implementation, standardize budget implementation procedures, and effectively prevent and control budget implementation risks.

Do budget performance management. Firmly establish the concept of performance, enhance the sense of responsibility and efficiency, establish and improve the budget performance management mechanism, and realize the integration of budget and performance management.

Strengthen the management of state-owned assets. Give full play to the material basis role of all kinds of assets in the process of holding meetings, effectively allocate, use and dispose of assets, improve the efficiency of asset use, and ensure the safety and integrity of assets.

Standardize the management of sponsorship revenue. We should conscientiously fulfill our duties and tasks in the management of sponsorship revenue, effectively strengthen coordination and guidance, promote the improvement of the management system and mechanism of sponsorship revenue, and bring sponsorship revenue into the standardized management track.

## Section 1 Accounting

The financial department shall set up accounting books and conduct accounting according to law. According to the actual economic and business matters, the Finance Department shall, in accordance with the national unified accounting system, timely carry out accounting treatment and prepare financial accounting reports to ensure the authenticity and integrity of financial information.

Accounting vouchers are prepared according to the original vouchers and relevant information after examination; The registration of accounting books must be based on the audited accounting vouchers; Financial and accounting reports shall be prepared on the basis of the audited accounting records and relevant information. The Finance Department regularly organizes account checking, so that the accounts, accounts, accounts and accounts are consistent.

## Section 2 Management of Sponsorship Revenue

Beijing Expo sponsorship income refers to the cash and non-cash income (referred to

as "VIK") obtained through brand sponsorship and investment promotion in the process of Beijing Expo. Among them, VIK refers to the special forms of income provided by sponsoring enterprises, such as physical goods and services.

### I. Management Policy of Sponsorship Income

In order to strengthen and standardize the management of sponsorship revenue of Beijing Expo and improve the efficiency of the use of funds and assets, according to the Budget Law, the Law on State-owned Assets of Enterprises, the Letter of Beijing Finance Bureau on Strengthening and Regulating the Income Management of Beijing Expo and other relevant provisions, and in combination with the 2019 China Beijing World Horticultural Exposition. The Financial Management Measures for Sponsorship Income of the World Horticultural Exposition in Beijing, China, 2019 were formulated and issued on November 8, 2018.

The sponsorship income of Beijing Expo will be included in the overall revenue and expenditure budget of Beijing Expo, and the project budget and VIK use plan will be prepared as required, which will be implemented after being submitted to Beijing Finance Bureau for approval.

The Expo Bureau is responsible for the preparation, implementation and supervision of the Beijing Expo sponsorship income budget. Among them, the Finance Department is responsible for organizing and guiding the preparation of the sponsorship income and expenditure budget, declaring the budget and issuing the budget approval according to the prescribed procedures. The Audit Department is responsible for auditing and supervising the income and expenditure of sponsorship income.

Relevant departments of the Expo Bureau involved in sponsorship income and expenditure (use) shall be responsible for preparing their own project budget declaration materials and VIK use plan, and submitting project budget fund payment materials and VIK Receipt in accordance with the prescribed procedures.

The VIK Management Office set up by the Expo Bureau is responsible for formulating the implementation rules of VIK management, drafting and submitting for review the VIK use agreement, organizing the preparation of VIK use plan and VIK price evaluation, establishing the VIK use account, and coordinating the sponsor enterprises to provide goods and services in a timely manner according to the

approved VIK Receipt Form submitted by the user department. Establish VIK physical reserve warehouse, check and accept and keep the physical goods in warehouse, and timely feedback relevant reports and documents.

The company is responsible for accounting the financial revenue and expenditure of the sponsorship income of Beijing Expo. It is responsible for opening a special account, making independent accounting of the sponsorship income, reporting and paying taxes according to regulations, issuing invoices to sponsors according to law, handling the payment of cash sponsorship income, and reporting the income and expenditure of sponsorship income to Beijing Expo Bureau regularly according to the prescribed procedures.

## II. Use and Management of Sponsorship Income

The user department shall prepare and submit the project budget to the Finance Department of Expo Bureau, and the Finance Department shall review and summarize the budget and submit it to Beijing Municipal Finance Bureau for approval according to the prescribed procedures. VIK user departments will report the use plan to the VIK Management Office of Expo Bureau, which will report to the Finance Department of Expo Bureau after reviewing and summarizing, and the Finance Department will review and report to Beijing Municipal Finance Bureau for approval according to the specified procedures. After the Beijing Municipal Bureau of Finance gives its approval, the Finance Department of the Expo Bureau will send the budget to the user department and copy it to the Expo Company and the VIK Management Office of the Expo Bureau. The VIK Management Office of the Expo Bureau shall, according to the approved VIK use plan and the sponsorship and investment invitation contract, draw up a VIK use agreement with the sponsoring enterprise, and determine the name, quantity and amount of VIK (calculated according to the appraisal value), transfer method, rights and obligations of both parties and related liability for breach of contract, etc and submit for approval in accordance with the prescribed procedures. The implementation of the project funds budget shall be handled in accordance with the relevant provisions of the fund payment management of the Expo Company. VIK shall review and make payment in strict accordance with the budget and procedures.

### III. Supervision and Inspection of Sponsorship Income

The management and use of sponsorship income shall be subject to supervision and inspection by financial, auditing, discipline inspection and supervision departments according to law. The Audit Department of the Expo Bureau shall audit and supervise the implementation of the project budget and the use, storage, valuation and accounting of VIK.

#### Section 3 Contract Management

In order to strengthen the contract management of the Bureau of Coordination of Beijing International Horticultural Exposition, standardize contract behavior, prevent contract risks, reduce contract disputes, improve work efficiency, safeguard the legitimate rights and interests of Beijing International Horticultural Exposition 2019 and its organizers, and ensure good results in political, social, economic and legal aspects, according to the Contract Law of the People's Republic of China and other laws, The relevant provisions of laws and regulations refer to the contract management measures of domestic large-scale international exhibitions. Based on the actual work, the Bureau has formulated the Measures for Contract Management of the Bureau of Coordination of Beijing World Horticultural Exposition, which was deliberated and adopted at the 3rd Executive Meeting of the Bureau on December 2, 2014.

#### I. Contract Management Responsibilities

The business department directly involved in contract affairs is the contract handling department, which is the main responsible department for drafting and fulfilling the contract. If the contractual affairs involve two or more departments, the department most directly related to the contractual affairs is the contract handling department.

The main responsibilities of the contract handling department are: organizing the comparison and selection of the other party of the contract; For projects that are not included in the government procurement catalogue but should be organized for bidding according to law, the bidding procedures should be strictly implemented in conjunction with the Ministry of Legal Affairs, the Ministry of Finance and the

Ministry of Audit; To examine the qualifications and credit standing of the other party to the contract; Organize contract negotiation and participate in contract negotiation with Legal Department and Finance Department; Draft the contract text and be responsible for submitting the contract for countersigning and approval; Actively exercise contractual rights and fulfill contractual obligations; Handle or assist in handling contract disputes; The main person in charge of the contract handling department is the first person responsible for the aspects of contract performance links and procedures, acceptance, capital safety and use efficiency; Be responsible for making, signing, registering, keeping, filing and other related work of handling contracts.

The Legal Affairs Department shall perform the following duties in contract management: at the invitation of the contract handling department, participate in the comparison and selection of the other party to the contract, contract negotiation and bidding negotiation; At the request of the contract handling department, assist in organizing the legal expert demonstration meeting; Guide or assist the contract handling department to draft the contract text, and review the legality of the contract terms; Responsible for the production of the model text of the contract in the common areas of the Expo Bureau; A contract account and a database are establish, Numbering the contract and handling the relevant registration and filing matters required by the contract according to law; Responsible for the coordination and handling of contract disputes within and outside the Expo Bureau; Strictly manage and use the special contract seal and the signature seal of the legal representative of the Bureau according to law.

The Finance Department shall perform the following duties in the process of contract management: review the clauses related to capital, finance, taxation and bidding in the contract; Fulfill the obligation of collection and payment in the contract.

The Audit Department shall perform the following duties in the course of contract management: checking the contract performance efficiency and integrity; Supervise the compliance, fairness and confidentiality of contract management procedures; Find problems and put forward suggestions for improvement or corrective opinions in time.

## II. Contract Management Workflow

Before signing the contract, the financial terms of the contract should be audited, which should be completed by the Legal Affairs Department, Finance Department, Audit Department and contract handling department to enhance the compliance and operability of the contract.

After the contract draft is revised, the contract handling department shall fill in the Contract Countersignature Form of the Bureau of Beijing International Horticultural Exposition Affairs Coordination Bureau, and the person in charge of the department shall sign the comments and attach the original application for approval of project initiation, the revised contract text and necessary information, and submit them to the Legal Affairs Department, Financial Department and Auditing Department in turn for examination and countersignature, and then report to the relevant leaders of the Bureau of Beijing International Horticultural Exposition. Comments on the signature in the Contract Countersignature Form of the Bureau of Beijing International Horticultural Exposition Coordination.

After the contract is countersigned, the contract handling department shall bind the text of the contract in a unified way, submit the agreed number of copies to other parties to sign and seal, and then sign the text of the contract by the legal representative of Expo Bureau or its authorized leader.

After the conclusion of the contract, the handling department, the Legal Affairs Department, the Finance Department and the Audit Department shall file and keep the original contract respectively. At the same time, the contract handling department shall properly manage the photocopy of the Contract Countersignature Form of Beijing International Horticultural Exposition Coordination Bureau, the approval documents for starting the contract project, etc and submit them to the office of the Expo Bureau for filing. After receiving the original contract materials submitted by the contract handling department, the Office of the Expo Bureau shall be responsible for sorting out the original contract materials into documents and archives and keeping them.

## III. Measures to Control Financial Risks in Contract Management

The contract handling department keeps abreast of and grasps the performance of the

contract so as to find out the risk of breach of contract in time. Once it is found or there are obvious signs that the other party of the contract fails to fulfill its contractual obligations, may fail to fulfill its contractual obligations, can not fully fulfill its obligations or has defects in fulfilling its obligations, the contract handling department will collect and properly keep the evidence materials related to breach of contract, and notify the Finance Department to suspend the payment of outstanding amounts after the consent of the leaders of the Expo Bureau. In case of any breach of contract or possible breach of contract during the performance of the contract, each department of Expo Bureau will notify the Legal Affairs Department in time and handle the case with the assistance of the Legal Affairs Department so as to protect the rights and interests of Expo Bureau to the maximum extent.

The main risks of contract management are as follows: the scope of contract signing is not clear, and proper separation of authority for contract review and approval is not carried out; The content of the contract is inaccurate and does not completely include the necessary terms stipulated by law; The contract drafters fail to revise the contract according to the improvement suggestions of the auditors; Contract signing without effective authorization, contract text as the basis of financial processing, has not been timely transmitted to the Finance Department; Fails to properly perform its contractual obligations, when contract disputes occur, they are not handled properly, resulting in economic losses and affecting their reputation.

In the risk assessment of contract management, the financial department will focus on: whether to achieve centralized management; Whether to clarify the scope and conditions of the economic activities of the contract; Whether the contract performance is effectively monitored; Whether to establish a contract dispute coordination mechanism.

## Part XIII Safeguards

In the process of organizing and holding the Beijing World Horticultural Exposition, various safeguards and supervision work is very necessary. In terms of traffic security, we should improve the transport facilities of the park, do a good job in vehicle management and emergency management, set up special lanes for Beijing Expo, open a number of bus lines, and open seven key highways to provide convenient traffic information services. In terms of security, according to the different stages of security work in Beijing Expo, four measures should be strengthened in anti-terrorism and anti-terrorism, and the application of science and technology information should be strengthened to support security work.

In order to do a good job in the supervision of Beijing Expo, the Expo has set up corresponding supervision institutions at the organizational level, and refined the supervision mechanism to ensure that the supervision work has rules to follow. During the preparation and hosting of the Beijing Expo, supervisory authorities at all levels carried out the whole process and all-round supervision of the work of the Beijing Expo, involving peripheral safeguard supervision, engineering construction supervision, audit supervision and other links, so as to promote the effective implementation of various tasks. Start the construction of sunshine projects, comprehensively implement the system of government affairs and financial disclosure, accept the supervision of the masses, strengthen risk prevention and control, and ensure sunshine, honesty and thrift. Supervisory workers are conscientious and make due contributions to the realization of the goal of "running meetings honestly"



## Chapter I traffic guarantee

### Section 1 Park Traffic Management

Beijing Expo site is the destination and gathering area of tourists and exhibits, and good traffic operation management and guarantee is the key to the success of Beijing Expo. In order to standardize the traffic operation management of the park and improve the traffic operation efficiency of the park, the Expo Bureau has compiled the Traffic Management and Operation Standards of Beijing Expo Park in 2019, drawing on the experience of previous Expo traffic guarantee.

The traffic operation management of Beijing Expo Park includes: the traffic service management of tourists, VIP personnel and battery car sightseeing; Park logistics distribution, environmental sanitation cleaning and other park operation guarantee traffic management; Traffic management of special vehicles such as fire fighting, medical treatment, communication, power supply, flood control and engineering emergency rescue in the park; Large passenger flow, special weather, emergency traffic management during the exhibition.

According to the tasks and objectives of traffic management in the park, and in accordance with the principle of "unified command, flat management, professional operation and hierarchical responsibility", the Beijing Expo will build a traffic operation management organization in the park. The park traffic operation management organization is divided into decision-making level, command level and execution level. Under the leadership of the command center of Beijing Expo Park, the Expo Bureau established the traffic operation and dispatch center of the park, which is responsible for vehicle dispatch and management. Vehicle centralized operation units complete specific traffic security work according to their respective responsibilities and tasks.

#### I. Transportation Facilities in the Park

There are 10 entrances and exits in the fenced area of Beijing World Horticultural Exposition, including 2 main entrances and exits, 7 secondary entrances and exits, and VIP entrance I. There are 22 roads in the park, including 5 first-class garden roads, 10 second-class garden roads and 7 third-class characteristic

paths.

According to the parking demand of Beijing World Horticultural Exposition, 10 parking lots will be set up outside the park, including bus parking lot, bus parking lot and car parking lot, where priority will be given to the parking of buses and large and medium-sized special buses, and multiple roads will be set up to connect the parking lots, so that the vehicles entering and leaving the parking lots can flow orderly. In order to minimize the entry of external vehicles into the park, only battery car parking lot, parade car parking lot and VIP bus parking lot are set up in the park.

## II. Vehicle Management

Vehicles entering the Expo include battery cars for tourists, VIP sightseeing battery cars, parade floats, logistics distribution cars, VIP cars (including guard cars), sanitation cars, landscape maintenance cars, fire fighting vehicles, power supply vehicles, communication vehicles, obstacle removal vehicles, engineering emergency vehicles, police battery cars and other special service vehicles, as well as exhibition and withdrawal vehicles entering the Expo with special permission.

During the Expo period, all motor vehicles must enter and leave the Expo Park with a valid Beijing Expo vehicle pass and according to the information on the entrance and exit, route, area and venue number, and time period specified on the vehicle pass. After entering the parking lot, the vehicle speed should be controlled according to the speed limit sign of the parking lot, and in principle, the driving speed of the vehicle in the parking lot should not exceed 5km/H.

The responsible units of parking operation in the park establish management systems such as inspection, personnel management and safety norms, and the relevant systems clarify the responsible persons, main working procedures and post responsibilities. At the same time, professional training for parking administrators is carried out, including parking related laws, regulations, policies, management systems, safety norms, fire protection knowledge, parking guidance, emergency plans and so on.

### III. Emergency Management

In order to establish a traffic emergency response system with centralized command, orderly linkage and resource sharing, the Expo Bureau has formulated the Park Traffic Emergency Management Plan. According to the management plan, the Expo Bureau, under the unified leadership of the Safety Emergency Command, established the Park Traffic Emergency Command. The traffic emergency headquarters of the park is responsible for organizing and directing the handling of traffic emergencies in the park; Decide to start and terminate the emergency plan for traffic accidents in the park; Determine the on-site emergency command personnel and issue dispatch instructions; Supervise and inspect the storage of emergency equipment and materials; Coordinate with the relevant departments of the park and report to the emergency department of the superior unit for emergency rescue.

The Traffic Emergency Response Office is set up under the Park Traffic Emergency Response Command, which is responsible for the daily work of the Command and implements the decision of the Command.

Park traffic emergencies mainly involve emergencies caused by traffic accidents, large passenger flow and special bad weather and other risk factors. According to the hazard degree, spreading scope, influence size, personnel and property loss and other conditions that the park sudden traffic emergency may cause, the emergency events are divided into four levels from low to high: general (n level), larger (m level), major (u level) and especially major (I level).

Emergency response includes information report, advance disposal, hierarchical response and response upgrade. According to the types of emergencies, the hierarchical response can be divided into traffic accidents, bad weather and peak passenger emergency response. For different levels of emergency response, different disposal measures are set. The response upgrade is that if the emergency situation is further expanded, it is expected that it will be difficult to implement effective disposal by relying on the existing emergency resources in the park, the park traffic emergency headquarters will immediately report to the superior units, and the superior emergency rescue headquarters will mobilize various disposal reserve forces to put into disposal after expanding the emergency response.

## Section 2 External Traffic Management of the Park

### I. External Traffic Organization

In order to ensure the green traffic of Beijing World Horticultural Exposition, a special road for Beijing World Horticultural Exposition is set up on Beijing Jingli Expressway (from Sixth Ring Road to Xiaodalu Exit of Yanchong Expressway). The special road for Beijing Expo will be opened during the weekend of April 29, 2019 to October 7, 2019, Labor Day, Dragon Boat Festival, Mid-Autumn Festival and National Day. The special lane is set up in the inner lane of both directions of Jingli Expressway, which consists of lane markings, road surface text marks and signs.

Only public transport vehicles, buses, Expo registered vehicles, road maintenance vehicles, police cars, fire engines, ambulances and engineering rescue vehicles performing emergency tasks are allowed to pass the exclusive lanes of Beijing Expo from 7 to 11 o'clock in the direction of leaving Beijing and from 17 to 22 o'clock in the direction of entering Beijing, and other vehicles are prohibited from passing. During the Beijing World Horticultural Exposition, 18 pairs of trains will run every Monday, Friday, Saturday and Sunday on the suburban railway line S2, with 7 trains going to Yanqing and 4 trains returning to the city. There are 14 pairs of trains running every Tuesday, Wednesday and Thursday, including 5 through trains running to Yanqing and 3 trains returning to the city.

In terms of bus routes, a total of 6 bus lines have been designated for the Expo. One of them will be opened during the Beijing Expo, and the other five will be opened on weekends and holidays.

During the Beijing World Park Expo, the headquarters of the security command center will adopt the policy of issuing "passes" for the surrounding areas of the park in different periods and sections, and assign orderly posts, guidance posts and patrol cars according to the situation of each parking lot to ensure smooth traffic during the exhibition period; For example, the parking lot around Beijing Expo is full of vehicles, and the peripheral dredging measures are started to ensure the smooth traffic of the main roads; All kinds of large and medium-sized trucks (except vehicles with passes) are under all-weather control around the Beijing Expo.

## II. Transport Infrastructure

In terms of external passageway facilities, there are three expressways, namely, Beijing-Tibet Expressway, Beijing-New Expressway and Beijing-Li Expressway, one expressway auxiliary road of Beijing-Tibet Auxiliary Road and one second-class highway of National Highway 110.

In April 2019, seven key highway support projects (Xingyan Expressway, Yanchong Expressway Plain Section, Yankang Road, Kangzhang Road, Baikang Road, Dongjiang Road and Yannong Road) were completed and opened to traffic. The completion and opening of seven key highways has strengthened the connection between the roads around the park and the main and auxiliary corridors, enhanced the interconnection capacity between the Beijing Expo Park and the outside world, and created good traffic conditions for tourists to visit the Beijing Expo.

## III. Traffic Information Services

In April 25, 2019, Beijing traffic app "Expo travel guide" was launched. Users can get travel information quickly through bus travel, self-driving travel, prompt information and other sections. Bus travel section involves bus special line, suburban railway line S2 and conventional bus departure station, operation time, line, etc as well as Yanqing regional bus and tourism bus information service. Self-driving travel section involves parking lot location, remaining parking space inquiry service, Jingli Expressway dedicated road, traffic control road prompt service around Beijing Expo. The information section refers to the dynamic road conditions of the main roads leading to the Beijing Expo. At the same time, the information of public transport, groups, the number of self-driving tourists and the road conditions of the main roads to Beijing Expo will be presented in time on Beijing Traffic app.

## Chapter II safety guarantee

### Section I. Security mechanisms

The security work of Beijing World Horticultural Exposition is different according to different stages of Beijing World Horticultural Exposition, mainly involving the trial operation stage, the special security stage of the opening ceremony and the exhibition stage.

The trial operation stage is from April 1 to April 2, 2019. On the 16th, we organized different levels of stress tests and half-load and full-load rehearsal drills, relying on the park to carry out security actual combat drills on a trial basis, focusing on running-in command system, service deployment, post docking, etc to improve security work measures, and lay the foundation for the formal extension of security work.

The special security phase for the opening ceremony was from April 21 to April 28H. The Beijing Secret Service took over the management and control of the park, and led the special security work such as site explosive search and security check, core area management and control, and opening ceremony security according to the "Work Plan" for the opening ceremony.

The exhibition period is from April 29 to October 7, and the security deployment will be fully implemented to ensure the security of key activities such as opening and closing ceremonies and daily extension. During the service period, the Secret Service will take the lead in the special security activities, and other extensions will be deployed in three levels according to special days, key days and ordinary days. During the exhibition period, on the basis of three-level deployment, according to the actual situation of risk assessment, pre-sale tickets, weather changes and so on, the service level will be started through the Federation and the notification of the on-site joint logistics command. According to statistics, since the fifth meeting of the Organizing Committee, more than 272000 security forces, such as police, armed police, fire rescue, security guards and security guards, have been invested.

The Expo Bureau strengthens the application of science and technology information to provide scientific and technological support for security. Relying on the "Wisdom

World Park”, we have organized the construction of security technology in the park, and established a four-in-one science and technology information security system of “video surveillance, perimeter alarm, flow monitoring and electronic fence”. At the same time, relying on surveillance video and WIFI signals, a thermodynamic analysis system for monitoring the gathering of people is established. On this basis, we should supplement the construction of scientific and technological systems such as admission personnel verification, face recognition and electronic fence, so as to provide support for security prevention and ensure security through science and technology, so as to achieve the goal of “seeing clearly, hearing clearly and early warning”.

In order to ensure the maintenance of public order, Beijing Expo will use advanced technology, supporting equipment and facilities, and implement a netlike management mode that combines people, technology and things, from the surface to the point. The key areas of the park can be monitored dynamically in real time through the configured monitoring center, and the flower supermarket configures the monitoring and fire control center to complete the all-round monitoring of the internal areas. Mobile posts are allocated in each supporting commercial area, strict patrol is carried out according to the pre-set patrol route and patrol process, real-time contact is formed by using the intercom system in patrol, abnormal situations are found to be summarized to the monitoring center at any time, and the monitoring command center unifies the allocation, so that the service area forms a safe network management state.

Most of the supporting businesses in Beijing Expo are catering, and the management of electricity and gas in fire safety has become the focus. In order to ensure fire safety, the park is equipped with micro-fire stations, while Beijing Expo staff regularly enter businesses for fire safety inspection, organize business fire escape drills, ensure the normal use of fire facilities, actively carry out fire hazards inspection, rectification, prevent fire accidents, and through the formulation of fire emergency plans. Guarantee to minimize the loss in case of fire accidents.

## Section 2 Anti-terrorism and Anti-riot

Beijing World Horticultural Exposition is a concrete manifestation of green ecology, with a large number of visitors and a highly crowded key area. With regard to anti-terrorism, the Expo Bureau has strengthened four key measures: First, explosion-proof tanks have been set up in the entrance areas of Beijing Expo to dispose of suspicious explosives in advance, so as to gain time for subsequent professional disposal and to maximize the safety of tourists' lives and property. The second is to organize the armed police emergency anti-terrorism special combat team to concentrate on standby in the security command center, and to prepare for the emergency anti-terrorism department. And the deployment of armed vehicles in the periphery of the park to carry out patrol control. Thirdly, explosive ordnance disposal (EOD) forces and armed emergency response forces will be regularly deployed in the control area of Beijing Expo, equipped with explosive ordnance disposal (EOD) equipment and related weapons and equipment, so as to be in a state of war at any time. When the second-level and first-level service deployments are launched, the armed and explosive disposal forces and equipment outside the park are increased to enhance the disposal capacity. Fourth, the deployment of mobile forces, by the public security police, armed police, security officers in conjunction with their respective responsibilities, organize mobile forces, in Beijing Expo site inside and outside the different points on standby, ready to deal with emergencies at any time.

Security facilities. Security inspection machines, security gates, hand-held security detectors, explosive security detectors, liquid security detectors and vehicle security detectors are set up at gates 1 to 8 of the park, and security supervision police, security supervisors and security guards are deployed to conduct a comprehensive security inspection of the people entering the park and the articles they carry. As of October 9, there were more than 4.399 million people entering the park for security inspection, and more than 167000 prohibited and restricted items were found, including 233 drones.



## Chapter III Supervision and Safeguard

### Section 1 Supervision System

Among the supervisory organizations for the preparation and organization of the Expo, the Discipline Inspection Team (hereinafter referred to as the "Discipline Inspection Team") of the Beijing Municipal Commission for Discipline Inspection and the Beijing Municipal Commission for Discipline Inspection in the Municipal Bureau of Landscaping is responsible for the discipline inspection and supervision of the Expo, and guides, supervises and inspects the discipline inspection work.

The main responsibilities of the discipline inspection group are: to supervise and urge the leading groups of the Bureau and their subordinate leading bodies to implement the main responsibility of building a clean and honest Party conduct, to undertake overall planning and deployment, to select and employ cadres well, to deepen the construction of discipline style, to strengthen the education of clean government and the construction of punishment and prevention system, and to investigate and deal with discipline violations. Implementing the responsibilities of inspection and assessment, fulfilling the main responsibility and special report of supervision responsibility; We should give full play to the role of discipline inspection committees and discipline inspection committees. Actively assist Party organizations at the corresponding levels to strengthen Party conduct construction and organize and coordinate anti-corruption and honesty work, safeguard the collective responsibility of Party organizations for Party conduct and honesty construction, the first responsibility of the principal leaders of the team, and the authority of the members of the team to assume the leadership responsibility of "one post, two responsibilities" according to the division of labor; Check the leading groups and their members, Party members and leading cadres to abide by the Party Constitution and other Party laws and regulations, implement the Party's line, policies and resolutions, and abide by political discipline and rules. And the implementation of democratic centralism, the exercise of power according to law and honesty in politics; According to the Guidelines for Integrity and Self-Discipline of the Communist Party of China and the Regulations on Disciplinary Punishment of the Communist Party of China, we should investigate and punish violations of

discipline and regulations. To guide grass-roots units to do a good job in honesty letters and visits, and to assist the Municipal Discipline Commission in investigating and dealing with cases of violation of discipline and law by Party members and cadres; Strengthen the supervision of administrative duties, in accordance with the provisions of the Beijing Administrative Accountability Measures, and in accordance with the relevant requirements of the Municipal Discipline Commission Supervision Bureau, start the accountability procedure, investigate and confirm the accountability situation, adopt legal accountability methods, carry out assessment and accountability work, and promote the administration of supervisory objects according to law.

The ways that the discipline inspection team usually takes to carry out supervision include attending relevant meetings, consulting relevant materials, putting forward written opinions, interviewing letters of admonition, investigating and filing cases and notifications, accepting complaints, complaints and other necessary ways. The supervision work of the discipline inspection team is organically combined with the work of letters and visits, disciplinary review, system implementation, rectification and punishment, so as to play a comprehensive role and comprehensively promote the construction of a clean and honest Party conduct and corruption prevention system.

On July 3, 2015, with the approval of the Organization Department of the Beijing Municipal Committee of the Communist Party of China, the Discipline Inspection Committee of the Beijing International Horticultural Exposition Coordination Bureau of the Communist Party of China (hereinafter referred to as the "Discipline Inspection Committee") was established to establish and improve the system of punishment and prevention of corruption with equal emphasis on education, system and supervision. The Discipline Commission of the organ accepts the dual leadership of the Party Committee of the organ and the Discipline Work Commission of the municipal organ.

The main duties of the Commission for Discipline Inspection include: Safeguarding the Party Constitution and other regulations within the party, inspecting the implementation of the Party's line, principles, policies and resolutions by Party branches and Party members; To assist the leading Party members' groups and Party

committees in strengthening the building of a clean and honest Party conduct and in organizing and coordinating anti-corruption work. Make conduct discipline and ideological and moral propaganda and education for Party branches and members, and make decisions on maintaining Party discipline; To supervise the Party branches and every Party member, including the administrative person in charge, and to check the implementation of the responsibility system for building a clean and honest Party conduct; To assist the higher authorities in inspecting and handling cases of violation of Party discipline by Party members; Accept complaints, complaints and appeals against violations of Party discipline committed by Party organizations and Party members, and do a good job of letters and visits. Guarantee the rights of Party members; Strengthen the self-construction of discipline committees and cadres, and improve the political and professional quality of discipline inspection cadres. In view of the risks of clean government in the preparatory work and operational mechanism of Beijing World Park Expo, the Discipline Inspection Commission of the organ strengthens the construction of restriction and supervision mechanism, improves the construction of Party conduct and clean government system, implements the "one post, two responsibilities", thoroughly searches for the risk points of clean government, actively prevents risks, and implements the "two responsibilities" record system for Party conduct and clean government construction.

The Discipline Inspection Commission and the Discipline Inspection Commission are responsible for the daily supervision of the preparation and holding of the Beijing World Park Expo, and the various supervisory bodies at the Beijing level also supervise the work of the Beijing World Park Expo. From June to August 2016, the First Inspection Group of the Beijing Municipal Committee conducted a two-month inspection of the Expo Bureau, pointing out eight 16 specific problems in two aspects, and the Expo Bureau identified the problems and actively rectified them.

## Section 2 Supervision Mechanism

In order to further strengthen the risk prevention and control, supervision and management of the "three-fold and one-big" matters decided by the Party Group of the Expo Bureau, and establish an effective safeguard and supervision mechanism, the Expo Bureau has formulated the "Several Provisions of the Party Group of the

Beijing World Horticultural Exposition Coordination Bureau of the Communist Party of China on Implementing the "Three-fold and One-big" System to Strengthen Risk Prevention and Control" in light of its own reality. This regulation includes the contents and principles of major decision-making, the scope, principles and procedures of cadre selection and appointment by Party groups, the contents of major projects, the basic requirements and decision-making procedures of major project decision-making, and the contents, basic requirements and approval of the use of large funds.

The implementation of the "three-fold and one-big" collective decision-making regulation is an important part of the work style construction and the implementation of the responsibility system for the construction of a clean and honest Party conduct, and is also a powerful measure to promote openness, strengthen risk prevention of a clean and honest government, and prevent dishonest behavior in the process of employing and handling affairs. The Discipline Inspection and Supervision Group of Beijing Municipal Commission for Discipline Inspection and Municipal Supervision Committee in the Municipal Landscape and Greening Bureau will attend the resolutions of the Party Group of the World Gardens Bureau on the decision-making of "three major and one major" issues, and strengthen the inspection and supervision of the implementation of the "three major and one major" decision-making system.

In order to earnestly implement the principle of democratic centralism, insist on improving the democratic and scientific decision-making system, and realize the scientific, democratic and standardized decision-making on major issues, the Expo Bureau has formulated the Democratic Decision-making System on Major Issues (Trial Implementation) of the Coordination Bureau of the Beijing World Horticultural Exposition of the Communist Party of China. The procedures and the inspection carried out are specified and strictly implemented.

In terms of the system of letters and visits reporting, the Discipline Inspection Unit Supervisory Office has set up special reception sites, reporting telephone and reporting mailbox to ensure the smooth channels of letters and visits. The masses report to the Discipline Inspection Unit Supervision Office by letter, visit or telephone or network, and register uniformly and enter all the information into the

computer management. The clues to the problems reflected should be verified by timely interviews and letters, so as to ensure that the reports must be checked, the results must be checked and the results must be repeated, and the reasonable demands of the masses should be solved in time and on the spot according to law, and various problems such as demolition, resettlement and relocation should be properly handled.

### Section 3 Peripheral Safeguard Supervision

#### I. Supervision of the Preparatory Process

In February 2015, a leading group was set up in Beijing's Yanqing District to supervise the preparations for the Expo. Under the organizational framework of "One Office, Seven Departments and Two Groups", the Discipline Inspection and Supervision Committee of the District Commission for Discipline Inspection took the lead in setting up a discipline inspection and supervision group (with the District Audit Bureau, Finance Bureau, Housing and Construction Commission and Development and Reform Commission as members) to supervise the preparations for the Expo. On January 23, 2019, according to the work deployment of the Beijing Municipal Committee and Municipal Government, the Yanqing District Committee and District Government set up the "Four Activities" Service Guarantee Leading Group (Headquarters), set up "One Department, Three Departments and Ten Groups", and started the meeting command and operation mechanism. The original discipline inspection and supervision group was changed to the supervision and investigation department, and the Yanqing District Committee inspection office and the district government inspection office were included in the member units of the supervision and investigation department. The supervision department is fully responsible for the supervision of the preparation work of Yanqing District of Beijing World Horticultural Expo, and has established and improved the 4 + 6 supervision mode, namely, self-correction, daily supervision, special supervision, professional supervision, four supervision methods and six working mechanisms of organizational leadership, main responsibility, publicity according to law, regular reports, work interviews and accountability investigation. To provide organizational guarantee and mechanism guarantee for the preparation and supervision of Beijing Expo.

In terms of the promotion of system construction, we should clarify the disciplinary provisions. Yanqing District has successively promulgated the Notice on the Implementation of the "Ten Strict Prohibitions" Discipline Requirements for National Staff in the Preparations for the World Horticultural Exposition and the Winter Olympic Games in Yanqing District, the "Ten Strict Prohibitions" for Special Supervision of Key Engineering Projects by Discipline Inspection and Supervision Cadres in Yanqing District, and the Regulations on Establishing a Record and Reporting System for Party Members, Cadres and National Public Officials to Intervene in Major Matters and Engineering Construction Notice on Further Perfecting the Service Guarantee of "Four Activities" and Strengthening the Construction of Style of Work. Work style, work discipline, emergency duty, alcohol prohibition and other work were emphasized, and serious accountability for dereliction of duty was clearly put forward, so as to provide disciplinary guarantee for the implementation of activities including Beijing Expo. We will improve the special system and organize member units to formulate a series of systems, such as the Interim Measures for the Use and Management of the Special Funds for the World Horticultural Exposition and the Winter Olympic Games (Trial Implementation), the Measures for Audit Supervision and Management of the Special Funds for the World Horticultural Exposition and the Winter Olympic Games, and the Notice on Further Strengthening the Inspection of Major Construction Projects, so as to standardize the work of project approval, fund supervision and audit supervision, and prevent potential risks of clean government. To establish a system, the leading member units of the District Discipline Commission collect 34 systems and disciplines related to the construction regulations, supervision and disciplines of the Winter Olympic Games and the Beijing World Horticultural Expo, and compile them into a book and distribute them to the main responsible units to facilitate the implementation of various systems.

## II. Service Guarantee Supervision

According to the deployment of the Leading Group (Headquarters) of the "Four Activities" in Yanqing District, the Supervisory Office has formulated the Work Programme of the "Four Activities" Yanqing District Service Guarantee Supervision and Supervision, sorted out the key tasks of preparing for the Beijing Expo in an

all-round way, and completed the task of preparing for the Beijing Expo in Yanqing District Service Guarantee. Implement wall charts to supervise the battle.

Beginning in April 2019, the sinking supervision force of the supervision and investigation department adhered to the principle of "supervising the overall task advancement and focusing on the completion of a single task", focusing on the task advancement link and compacting the main responsibility of the department in accordance with the time node of 39 major tasks completed by the Yanqing District Committee and District Government. Every day, it combs out the tasks that the "ten groups" should complete, and inspects them one by one, and implements the management of write-off.

During the preparation for the opening ceremony, the supervisory department carried out 17 rounds of inspection and "looking back", focusing on 84 problems existing in many drills and key tasks related to Yanqing District at the Beijing World Horticultural Exposition Organizing Committee meeting, carrying out key inspections one by one, and urging all responsible units to conscientiously perform their duties and implement rectification and reform in a timely manner. At the same time, more than 130 service guarantee tasks of 10 groups were inspected, and 72 problems were found. Around the National Day activities and the closing ceremony of Beijing Expo, the Inspection Office carried out key inspections and inspections on various service guarantee tasks.

#### Section 4 Supervision of Engineering Construction

In terms of project construction, the Expo Bureau and the Expo Company strengthen the overall cost control of operational projects, audit the rationality and compliance of project bidding, contract and payment, strengthen the overall management of project site progress, quality, safety in production and civilized construction, and strictly start the project early warning and "red light" mechanism in accordance with the schedule and project progress.

##### I. Safety and Quality Supervision

Each project department of Beijing World Park Expo will set up a safety and quality management organization with the project leader as the core, and Party a, the

designer, the construction party and the supervisor will jointly participate in the organization, decompose the safety and quality objectives, implement the safety and quality responsibilities, and form a safe and quality management system under the joint management of all participants; Actively require all parties involved in the construction to establish an effective safety management system, organize regular safety meetings, safety inspection and review regularly, and ensure the safety of the construction. Conduct a comprehensive safety and quality hazard investigation on site material management, scaffolding, safety protection, construction electricity, fire protection, engineering quality, etc; Supervise and urge the supervision unit to implement the supervision responsibilities to ensure the project quality and construction safety; Organize the personnel of the project department to inspect the safe and civilized construction of the project from time to time. Before the construction blueprint is issued to the general contractor of the construction project, each project department will organize the design, construction, supervision and other units to conduct a joint review of the drawings; Intensify on-site acceptance and process acceptance of raw materials, semi-finished products and finished products; Sign a safety production responsibility letter with each general contractor.

Before the start of each project, according to the individual engineering design drawings, engineering contents and characteristics, the relevant units are urged to complete the construction organization design and the preparation of various special schemes, to investigate the sources of construction safety risk, and to investigate the key safety monitoring sub-projects and potential safety hazards of the project in the early stage of the construction scheme; Formulate quality inspection plan, clarify key inspection procedures and inspection frequency, and implement the responsible persons of each specialty. And strictly in accordance with the established plan for inspection, evaluation, control work. To clarify the standards, requirements, responsibilities and obligations of the safety risk management and control of the participating construction units, to require the construction units to improve the identification list of construction safety risk sources and corresponding control measures, and to supervise and inspect the implementation of the construction safety risk management and control measures and systems of the



construction units and supervision units in the process of construction.

Regularly organize regular supervision meetings and joint safety and quality inspection, as well as large-scale safety and quality inspection and summary meetings, and listen to the work reports of construction units and supervision units. Put forward reasonable suggestions on construction deployment, process arrangement and existing problems, and inspect all kinds of technical data of construction units and supervision units from time to time.

Each project department participates in the quality and safety video meeting organized by the District Construction Committee every month, attaches great importance to the on-site inspection by Beijing Public Works Quality Supervision Station, Municipal Construction Committee, Municipal Civil Air Defense, Beijing Special Equipment Testing Center, Yanqing District Housing and Construction Committee Safety and Quality Supervision Station and Yanqing District Quality Supervision Bureau, and supervises the construction units and supervision units. The design unit timely rectifies the problems and replies in writing.

## 2. Supervision of completion acceptance

In early April 2019, Xie Wenzheng, deputy governor of Yanqing District Government, chaired the "Coordination Meeting on Acceptance and Acceptance of Completion of Expo Projects", which requested that the construction projects of Beijing Expo be completed and accepted before the opening of the Park and completed and filed within the required time.

In accordance with the requirements of the meeting, the project departments of Beijing Expo construction organize the general contractors, supervisors, survey and design units to carry out acceptance on the project, and urge the general contractors to carry out pre-acceptance of fire control, data, air, water quality, lightning protection and other testing work. After organizing and completing the work of civil air defense acceptance, air testing, water quality testing, lightning protection testing, fire protection acceptance and archives acceptance, it has passed the acceptance of Yanqing Branch of Beijing Planning and Natural Resources Commission, Yanqing District Housing and Urban-Rural Construction Commission, District Quality and Technical Supervision Bureau and so on.

After the completion and acceptance of the project, the project departments also completed the completion and filing of the project within the prescribed time.

Thanks to the joint efforts of all parties, the Expo site has been highly praised by the International Bureau of Expositions, the International Horticultural Producers Association, exhibitors from various countries, domestic and foreign visitors and the media.

### III. Territorial Supervision

After the establishment of the Discipline Inspection and Supervision Group of Yanqing District, in order to strengthen the supervision of the construction projects of Beijing World Horticultural Exposition, the "Work Program on the Implementation of Project-based Management and Supervision of the Construction Projects of Winter Olympic World Horticultural Exposition" was issued, which adhered to project-based management and strengthened the implementation of the main responsibility for the preparatory tasks. The Discipline Inspection and Supervision Team, together with the Regional Expo Office and Major Project Office, has completed the "Plan for Supervision of the Preparatory Projects for the World Horticultural Exposition" and carried out "Wall Map Supervision" on the basis of time nodes.

Since 2017, the Discipline Inspection and Supervision Group has carried out several rounds of follow-up inspections on 35 construction projects of Beijing World Horticultural Exposition from 14 main responsible units, involving key supporting projects such as transportation, electricity, meteorology, communication and landscape greening, and carried out all-round inspections by means of reporting, consulting traces of performance and on-site inspection. Four units, such as the District Water Bureau, issued the Supervision Recommendation, requiring rectification within a time limit. Six copies of the Work Report are submitted to the District Committee and District Government on important issues that need to be coordinated and solved by the District Committee and District Government.

### Section 5 Audit Supervision

The Audit Department of Expo Bureau carries out internal audit and supervision work, is responsible for studying and formulating the audit plan of project funds for

Beijing Expo, formulating the implementation plan of audit supervision, and setting up an audit and rectification working group to organize, implement and supervise the rectification; Put forward audit suggestions on the authenticity, legitimacy and efficiency of the financial revenue and expenditure of Beijing Expo; To track and supervise the budget implementation of various departments during the preparation and holding period, as well as the use of funds for major projects and major economic activities; Special audit of the financial revenue and expenditure of the subordinate units; Improve the internal control system. During the preparation and holding of Beijing Expo, the Audit Department organized more than 10 special audit rectification and deployment meetings, organized internal audit training, participated in the announcement of policies and regulations and answered questions more than 200 times, audited nearly 1000 project contracts, and completed the annual departmental budget audit rectification work of Beijing Audit Bureau.

The Audit Department of the Expo Bureau organized a total of 163 budget projects for the years of 2017, 2018 and 2019, involving about 712 million yuan of financial funds; In 2019, the performance of capital construction procedures, the establishment and implementation of management system, and investment control of eight municipal investment projects were examined, and the construction management of some projects of four construction projects was emphatically sampled, with the contract amount of 411 million yuan. In accordance with the requirements of "pre-problem, side-examination and side-reform", the Audit Department has achieved full coverage of all completed projects in all departments, and has implemented rectification throughout the whole process of audit work, effectively playing a supervisory role.

During the preparation and holding of Beijing Expo, the leaders of Beijing Municipal Audit Bureau led many teams to the front line of the park to conduct research and guide internal audit work, which promoted the standardized management of all work of Beijing Expo and successfully completed the task of hosting the Expo.

The audit results show that in order to reflect the theme of "Green Life, Beautiful Home" of Beijing Expo, the Expo Bureau and all participating units have established and improved the management system, clarified responsibilities and strengthened overall coordination in accordance with the requirements of the Beijing Municipal Government, which has promoted the construction and exhibition work of Beijing Expo, ensured its success and made it a splendid and fruitful event. A green event of mutual learning among civilizations. The Expo Bureau is able to implement the financial budget management system and internal control system, comply with the relevant provisions of the "triple major", give full play to the role of internal audit in internal supervision and external communication, actively cooperate with the government audit, urge all departments to rectify the problems found in the audit in a timely manner, implement audit recommendations, and serve the Expo Bureau to continuously improve its management capacity.



This summary was translated using AI, and edited by intern  
Lauren Yu, 2021.