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**PRINSIPLES OF UNIVERSAL DESIGN IN THE FORMATION OF
PUBLIC PARKS**

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The use of ideas, results and texts of other authors must be referenced to the appropriate source.

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INTRODUCTION

Against the backdrop of population diversification and inclusive community construction emerging as core demands of urban development, public parks have evolved from traditional green leisure spaces into composite venues integrating all-age social interaction, health promotion, and cultural inheritance. However, 'single group-oriented' restrictions are prevalent in most existing parks: either overlooking youths and adolescents' requirements or disregarding the needs of individuals with mobility disabilities, which leads to low space use and Restricted access, hindering the realization of 'undifferentiated participation for all groups.'" "Universal Design," with its "allages inclusive nature, functional flexibility, and seamless experience" as its centrepont, offers the key to overcoming the aforementioned challenges. Scholars at home and abroad have formed three main research directions: expanding the needs of special groups, constructing intergenerational collaborative scenarios, and optimizing micro-spaces. Nevertheless, there remain shortcomings: over-reliance on theory divorced from practice, focus on single groups lacking an all-age perspective, and insufficient resident participation leading to a disconnect between designs and actual needs. A systematic "theory-practice" framework has not yet been established. Based on this, this study takes community public parks as the research object, integrates theories from multiple disciplines such as landscape architecture and environmental psychology, and adopts a four-dimensional research method including literature review, mixed research, field research, and interdisciplinary verification. Combined with case comparisons and multi-scenario observations, sort out the spatial usage needs and pain points of different age groups. The research core is to construct a three-in-one university design system of "theory - method - practice": in terms of theory, clarify the five principles of "spatial interconnection, functional adaptation, emotional sharing, safety and comfort, and ecological adaptation", and form a response of "physical accessibility - functional compatibility - emotional resonance"; in terms of practice, propose target plans for four areas: elderly activity area, children's

activity area, leisure area, and shared plant area, and rely on modular combination and flexible planning to achieve all-age friendly adaptation. This study enriches the application of public space university design theory, and also provides guidance for park renovation and implementation through the full-chain design of "needs - plans - verification". Finally, it not only achieves the goal of "age-friendly design", but also makes the park a key carrier to promote community integration and improve residents' happiness.

SECTION I. HISTORIOGRAPHY OF THE ISSUE.STATUS OF RESEARCH ON THE TOPIC

1.1. State of research on the topic

The research on "Application of College Design Principles in the Development of Public Parks" needs to rely on a multidisciplinary and multi-dimensional approach for improvement. This report focuses on community parks, which are relatively easy-to-access public spaces in the research. In these parks, the research more firmly implements the core points of college design such as "all-age inclusiveness, functional adaptability, and smooth user experience", and three main research trajectories have emerged.

1.1.1 Expanding Universal Design for Special-Needs Populations

The aging society has arrived, and the special needs groups are becoming more and more diverse. Community parks are places where people of all ages often gather, and the research focus has changed. Now, it is not only to carry out age-friendly renovations, but also to introduce universal design and carry out "indiscriminative services" for all vulnerable groups. The proportion of China's elderly population exceeds 18%, and other groups such as the disabled group, the child group, and the pregnant group have different spatial needs. Academic research has shifted from the renovation of a single elderly group to constructing a systematic framework for all special needs groups.

The research focuses on "accessible, safe, and convenient" in universal design. Scholars do not limit themselves to the upgrading of local facilities, but study the walking paths for all users through spatial planning and equipment design to achieve inclusiveness. "All-scene barrier-free" is the basic goal, which not only lies in whether the road is flat and whether the navigation is smooth, but also lies in the continuous connection of the space from the community entrance to the internal circulation of the park. This not only requires the system to eliminate height differences and narrow passages, but also requires improving the environmental prompt system to help the visually impaired identify the space.

The fall prevention safety paradigm is gradually replaced by the "risk pre-judgment" principle of universal design. This principle includes urban lighting adapted to night scenes, non-slip sidewalks and surrounding protection facilities to ensure the safety of the elderly and children. The rest area design adopts the concept of "universal facility multi-functional adaptability", focusing on comfort and multi-functionality, not just placing benches. This space can meet the long-term use of the elderly, provide short-term rest for children, and also provide temporary support for pregnant women, achieving the goal of "one space, multiple benefits".

These studies use theoretical modeling to transform universal principles into design guidelines. "Boundary friendliness" reduces spatial segmentation through transition areas, enabling the natural integration of special groups; "comprehensive facility accessibility" makes equipment evenly distributed without operation barriers; "overall safety cultivation" deals with physical and psychological safety matters through environmental creation. All these create a theoretical basis that fits well with universal design for the design of community parks with special needs.

1.1.2. Intergenerational Synergy Through Universal Design Integration

Community parks belong to daily social places in the high-density urban core area, and the intergenerational integration research is developing from preliminary exploration to fine-grained collaboration direction. Focusing on the paradigm of "difference harmony and resource sharing" in universal design, scholars have constructed a more inclusive spatial system.

In addition to the traditional boundaries between the old and the young, the "demographic neutrality" of universal design includes the activity needs of teenagers and middle-aged and young people. The three collaborative design pillars: "structural sharing", "interaction sharing" and "emotional sharing" solve resource conflicts through universal spaces. Structural sharing builds a circulation system that is age-optimized and mutually integrated, suitable for the elderly to stroll, teenagers to carry out activities, and also provides a place for adults to exercise purposefully, with no isolation barriers. Interaction sharing takes "functional universality" as the core, relying on flexible areas to flexibly support the elderly's socializing, children's playing, and adults' fitness, transcending the limitations of a single user space. Emotional sharing uses "scene resonance" to create an intergenerational communication space, transforming the park from a simple activity place into a power source for promoting intergenerational connection.

These studies recount the "adaptive elasticity" of universal design. Intergenerational collaboration is to re-plan dynamic spaces, not simply to superimpose solutions, which can reduce interactions and can enhance mutual benefits. Temporal and spatial partitioning is to divide peak hours or areas among different groups, and "compatible adaptation" enables facilities to be re-configured intuitively according to users' habits. This turns community parks into "spaces shared by multiple generations" and explores a new theoretical path for universal design in the intergenerational context.

1.1.3. Universal Design Integration in Micro-Spatial Typologies

In high-density cities, community parks are "embedded open spaces", witnessing the transformation of micro-space research: not only to activate universal design to promote the development of "integration of facilities for all ages and upgrading of experiences".

Micro-spaces are places of high-frequency contact. Design precision is related to the display of "detailed care" in universal design. In addition to small functional conversions, the research also conducts "the barrier-free selection of micro-spaces and the comfortable use for all ages", and analyzes the way of large-scale universal design integration. The integration of facilities first proposes "functional mixing and operations can be intuitively viewed", and thinks about how to allocate the compact area so that the rest of the elderly, the play of children, the modern exercise of adults, etc. can be gathered together without forming functional islands to exclude people. The expansion and optimization have "perceptual empathy", exploring how to create the surrounding environment through environmental elements such as light, color, and acoustics to meet specific sensory needs (such as. People with visual impairments, children sensitive to noise.

Cutting-edge achievements has promoted the formation of the "general design micro-space integration logic", namely "priority for all ages", "flexible functional matching" and "non-discriminatory experience". The spatial planning adopts the way of "functional penetration", not mechanical division, and various facilities organically coexist according to the principle of "unified space adaptable to multiple scenarios". Equipment design focuses on "universal adjustability", and a single device can be adjusted according to needs without exclusive customization. The key is that the coherence from micro to macro space makes the local universal design match with the overall layout, unifying fragmented optimization and system function realization.

1.1.4.Paragraph Summary

These studies have identified the status of "general design carriers" for micro-spaces and also outlined a clear path for the optimization of small all-ages. They have constructed a formal framework and logic, making the application of general design in parks richer and providing academic basis for the development of micro-spaces in future community parks.

1.2. Research methods

Simultaneously functioning as the "doorstep public space for residents," community parks provide activities for all age groups, from elderly morning exercises to children playing, middle-aged and young adults relaxing, and inhabitants enjoying time in the neighborhood. Directly fulfilling the needs of different groups will greatly improve residents' satisfaction with their quality of life and contribute to the development of the community's collectivization and integration. The core of the universal design principle lies in breaking the limitation of "adapting to a single group" and achieving the goal of "enabling everyone to use the space conveniently and comfortably regardless of age or ability differences" — this concept is highly consistent with the essential nature of community parks, which is "serving all ages and being close to daily life".

Currently, research related to the universal design of community parks has begun, but some studies still have the problem of a single research method: some rely solely on theoretical deduction, deviating from the actual scenarios of residents' use; some focus only on the needs of a specific group, making it difficult to achieve adaptation for all ages; others lack in-depth participation of residents, resulting in a disconnect between design schemes and real needs. To address the above issues and ensure that the universal design principle is truly implemented in every detail of community parks, this study, considering the characteristics of community parks — "high frequency of use, great differences among groups, and complex scenario needs" — has constructed a multi-dimensional research methodology system covering from theoretical support to practical verification, from data quantification to emotional capture, and from professional design to

resident participation. This system not only guarantees the scientificity and systematicness of the research but also is fully in line with the real life of community residents, ensuring that the finally formed universal design scheme has both theoretical basis and the ability to effectively solve the pain points encountered by residents when using the parks.

1. Literature Review and Theoretical Methods The core is to sort out the achievements of general design at home and abroad and provide theoretical support for the general design of community parks. The research is not limited to pure "design theories" but focuses on content related to the daily life of community residents. For example, it sorts out research on "how to make spaces adapt to the daily activities of residents of different ages", integrates materials from fields such as "residents' activity habits in the community" in environmental behavioral science and "facilitating the use by special groups" in barrier-free design, and finally constructs a theoretical framework for the universal design suitable for community parks, ensuring that the theory does not deviate from the actual needs of the community.

At the same time, the research also collects interdisciplinary research results (such as content related to residents' quality of life, including "the impact of community park design on residents' health" and "how spatial layout improves the cooling effect of the community"). It evaluates the additional benefits that universal design can bring to the community environment and residents' lives beyond "convenient use", so that the theoretical framework not only focuses on "usability" but also takes "beneficial effects" into account.

2. Mixed Research Method Combining Qualitative and Quantitative Approaches This method breaks the limitations of a single research paradigm through the organic combination of quantitative and qualitative research. In the quantitative analysis phase, first, spatial analysis technology is used to systematically sort out the demographic structure characteristics within the service radius of the

community park (including the distribution ratio of groups of different ages and the distance between residential spaces and the park) to identify the target service groups. Then, a standardized scale and statistical analysis methods are adopted to organize residents of all age groups to conduct quantitative evaluations of the existing facilities in the park (covering dimensions such as satisfaction with leisure facilities and the sufficiency of activity spaces), and reveal the public's objective feedback on the existing facilities through structured data.

In the qualitative research phase, qualitative research methods such as in-depth interviews and participant observation are used to focus on the spatial use needs of special groups. Semi-structured interviews are conducted to collect the spatial use experience of people with mobility impairments and the elderly. Behavior mapping is used to systematically record their activity trajectories and behavioral patterns, and deeply explore spatial problems that are difficult to capture through quantitative scoring, such as "insufficient path accessibility" and "mismatch between facility size and ergonomics". This method combines phenomenological reduction and situational analysis, and constructs a qualitative interpretation framework for residents' spatial use dilemmas based on quantitative data, providing research support with both empirical basis and humanistic care for the design of community parks.

3. Field Research Method Adopt the participatory observation method and collect data through field investigations. Specifically, community parks with regional and demographic representativeness are selected as samples, and behavior trajectory tracking technology is used to continuously record the spatial use patterns of groups of different ages. During the research process, focus is placed on the morning exercise routes of the elderly, the after-school activity trajectories of teenagers, and the distribution of fitness behaviors of young adults. Differences in the frequency of spatial use are analyzed in detail, and physical obstacles and behavioral restrictions encountered by various groups during spatial use are

recorded emphatically, so as to identify the optimization direction of universal design.

In addition, the research also focuses on the public activity spaces of community parks, systematically investigating the rationality of spatial layout, the accessibility of traffic paths, the convenience of leisure facilities, and the age-inclusive usability of facilities. At the same time, in-depth research is conducted on the microclimate environment, analyzing the sunshade effect in summer and the wind protection performance in winter, and exploring the practical effectiveness of the universal design principle in "improving spatial comfort and enhancing residents' stickiness to spatial use".

4. *Interdisciplinary Research Methodology* In this study, the interdisciplinary integration method is used to combine landscape architecture, environmental psychology and sociological theories, and an evaluation system for the universal design of age-friendly and functional community parks is constructed.

Using this standard system, systematically evaluate the design proposals to ensure that design decisions achieve a balance in multiple dimensions. This evaluation process is committed to building a design framework that accommodates the abilities of all ages. After the community park is completed, it can meet the diverse usage needs of groups such as the elderly, children, young and middle-aged people, and the disabled, and realize the core concept of universal design.

Conclusions to the first chapter

1. The result of contemporary park design has shifted from a functional orientation. Based on the analysis of literature, the key principles of general park design are determined.

- The design of "people-oriented" is laid based on humanism, integrates cultural symbols, creates a comfortable psychological emotional situation, and increases the sense of belonging of the place.

- Multidimensional design aspects

When designing public parks, three main aspects must be systematically taken into account: the physical space aspect, the ecological environment aspect, and the social interaction aspect

The overall system framework formed by the 3D collaborative design in the barrier-free design of parks.

- Focus on inclusivity and age-friendliness

The design of modern public parks must abandon the traditional model of focusing solely on a single user group. Instead, it must adhere to three design criteria: "spatial accessibility, functional versatility, and emotional connection."

2. A triple design criterion is formulated to meet the requirements of modern public parks within the concept of friendly space: spatial accessibility, functional versatility and emotional connection.

3. The principles of landscape design in the context of environmental justice and methods for ensuring a balanced distribution of public service resources have been systematized.

4. A theoretical basis for an in-depth discussion of specific design strategies has been created, demonstrating the leading role of universal design principles in creating the design of contemporary public parks.

SECTION II. Section 2 Requirements for Park Development

2.1 Characteristics of Park Functional Organization

The primary prerequisite for public park design is to fully adapt to the behavioral characteristics and demand differences of users of different age groups. The elderly, with their relatively slow movement and more precautionous behaviour, prefer stationary practices such as walking around and playing chess. They are also prone to physical exhaustion, requiring at least adequate configuration of seating areas for rest and thorough coverage of sunshade facilities. Adolescents and children are energetic and tend to engage in dynamic activities like running and climbing, but

they have weak safety awareness, so safety protection design in activity areas must be regarded as a core priority. Middle-aged groups mostly visit the park as "family companions," with the core demand of balancing children's play and the elderly's rest within the same spatial scope.

Based on the demand characteristics of different age groups, the functional organization of modern public parks presents three core features:

The first is the diversification of functions. Parks are no longer limited to simple green spaces and walkways, but need to plan activity zones adapted to different groups, such as children's play areas, elderly fitness areas, and family picnic areas. Various functional zones must form a reasonable ratio, not only accurately matching the specific needs of each group but also ensuring that family members can "find their own places" within a short distance. This confirms the practical value of diversified functional configuration.

The second is the rationality of zoning. High-quality park design appropriately separates noisy children's activity areas from quiet elderly resting areas, while avoiding complete isolation. Natural separation interfaces are commonly built with green belts, micro-topographic elevation, and other means. These interventions are relatively easy to reduce interference between the different functioning areas while preserving visual continuity to ensure the care of and safety monitoring of a particular family's members. It is especially crucial to establish freely accessed and functional corridors between the different functioning areas to ensure the movement of the elderly, parent-child strollers, and other groups.

The third is temporal flexibility. The peak usage periods of parks show obvious time differentiation: mornings are mainly for the elderly to do morning exercises, while evenings focus on children's activities after school. In response to this, a "multi-functional composite space" design strategy can be adopted. The same facility area can, for example, be used as a tai chi exercise zone for elderly people during the day and be transformed into the playground space for children in the

evening just through some facility modifications, which effectively maximize site's utilization rate. In addition, small changes such as adjusting the fountain switch time can make it more convenient for different groups to use.

2.2 Universal Design Requirements in Park Spatial Organization

The core of park space layout design is to make it convenient for users to use. There should be no obstacles from the entrance to the exit, reduce the difficulty of use, and also need to balance the needs of different groups of people. Barrier-free design is a key support, not only in terms of facilities, but also to be integrated into the layout. The design should pay attention to the groups with explicit and potential needs. Control the core elements, realize the use mode of non-differentiated space, and reflect the core of universal design that serves everyone. Please provide the specific sentence content to be modified so that I can rewrite it as required.

The creation of spatial hierarchy is the key to balancing "group interaction" and "individual privacy" in the universal design of parks. Its core value lies in relying on the combination of different spatial forms to meet the needs of diverse group activity atmospheres and avoid the limitations of the application of a single form. The design should follow the principle of "elderly-friendly and scene-adaptive" to construct a systemic layout mode of "central aggregation - peripheral dispersion" so as to balance "dynamic interaction" and "quiet rest". The central activity area, as the dynamic hub of the park, needs to undertake core functions such as group aggregation, social interaction, and collective activities. The spatial scale needs to fully consider the number of people in peak periods to ensure that many people can move at the same time without looking crowded. Basic service facilities also need to be equipped to support continuous use. In terms of layout, it should be located at the core of the park, and the sense of aggregation and attractiveness of the space should be strengthened through an open site form and transparent sightline design, allowing different groups to naturally integrate into the interactive scenario.

Small scattered resting spots around the park should follow the principle of "decentralized layout and comfortable scale" and form a dynamic-static separated spatial relationship with the central activity area. These resting spots do not need a unified specification and can be flexibly set in combination with natural conditions such as topographic undulations and vegetation surroundings to create small-scale spaces with both privacy and comfort. They can not only meet the quiet needs of the elderly for sitting, resting, reading, and viewing but also adapt to the lightweight needs of young people for short stays and mobile office work, and can also serve as transition spaces for family groups to rest temporarily. The design of walkways connecting the central area and resting spots is also an important part of creating hierarchy. It should avoid the simple design of straight-through paths and instead adopt a winding and meandering movement form. Combine plant clusters with landscape elements to create a landscape style of "changing scenes step by step". The sidewalk needs to be wide enough, and it is relatively comfortable for one or two people to walk. The road surface should be kept flat without uneven bumps to ensure the safety of the elderly and children.

Plant configuration is the "soft support" of spatial hierarchy, with dual values of "landscape function" and "spatial form", not just at the aesthetic level. In the core activity area, open plant configuration levels are adopted. Choose trees with neat shapes and sparse branches, and do not let the dense canopies block the line of sight and light, so as to ensure the transparent lighting of the activity space. Low-flow shrubs are also used to enclose the boundaries, define the space and not obstruct the interactive line of sight. In the surrounding rest areas, trees, shrubs and ground covers are mixed to form a "enclosed" landscape. Tall flower stands provide shade. Medium and low shrubs act as a screen. Ground - cover plants soften the boundaries of the ground and create a resting area that has both shade and a sense of privacy. When choosing plants, strictly follow the principle of "four - season landscape". Mix different kinds of tree species: some bloom in spring, some provide shade in summer, some show colorful leaves in autumn, and some still

remain green in winter. This makes sure the park space has rich landscape layers and a good user experience no matter how the seasons change, and all people can feel a comfortable space when they visit the park in different seasons.

Safety assurance is another core dimension of universal design. Its essence is to construct a systematic safety protection system covering all groups and all usage scenarios, rather than partial protection of a single link. It is necessary to fully consider the safety risk characteristics of different groups and the risk differences of usage scenarios to realize the full-chain design of "risk prediction - proactive protection - scenario adaptation." In terms of ground pavement design, not only should non-slip and wear-resistant basic materials be uniformly adopted, but also differentiated adaptation should be carried out in combination with the usage intensity and risk level of different areas: for key areas with high-frequency use and high risk of falls, such as children's activity areas and main activity routes for the elderly, the protection level should be strengthened by increasing surface anti-slip textures and using paving materials with a certain degree of elasticity. At the same time, the flatness of the pavement surface should be ensured to avoid safety hazards caused by joint height differences and material sudden changes. In terms of amusement facility safety protection, in addition to standardly laying cushioning materials around facilities to reduce the risk of fall injuries, it is also necessary to strengthen protection from two aspects: the safety standards of the facilities themselves and the spatial layout. The facility structure must comply with safety specifications for all-age use, avoiding design defects such as sharp edges and gaps that are easy to cause pinching. The space is transparent for easy monitoring, and the lack of obstructions enables parents to capture the activities of children. It constitutes a double guarantee of "facility protection and line monitoring". In terms of lighting system design, uniform brightness distribution is only a basic requirement, and it is more necessary to realize "scenario-based adaptation + full-time coverage": activity areas should adopt lighting configurations with higher brightness to meet the visual needs of dynamic activities, while walkways and

resting areas should adopt soft and non-glare lighting design to avoid strong light stimulation affecting eyesight. At the same time, dark corners that are easy to form at road turns and dense vegetation areas should be eliminated, and emergency lighting facilities should be added to deal with sudden power outages and other situations. This not only improves the sense of safety during night use through a stable lighting environment but also extends the effective use time of the park in different periods through scientific lighting design, adapting to the day and night usage needs of all groups.

2.3 Basic Methods for Public Space Design Formulation

The starting point of high-quality public park design lies in constructing a research system of "accurate demand capture - effective data conversion," rather than a single information collection. The research should aim at "full population coverage and full scenario adaptation." In the early stage, it is necessary to carry out predictions combined with the population structure, social characteristics, and site status within the park's service radius to clarify the core dimensions and key groups of the research. Conduct on - site observation , using continuous - time recording method, track the usage frequency , behavior characteristics and potential pain points of space at different time periods. Then combine with in - depth interviews to explore the implicit needs of specific groups .

Specific planning and design should follow the three-stage logic of "overall coordination - local refinement - system synergy" to convert research needs into implementable spatial schemes. In the overall coordination stage, carry out "site adaptation + demand matching". According to the site terrain, ecological base and urban planning, determine the scale, location and core functions of each main functional area, so that the functional layout matches the demand distribution within the service radius. In the local refinement stage, strengthen the regional connection design through mobile connection, transparent sight and functional supplement: the mobile design constructs a network of "main road connection +

branch extension", the main road ensures barrier-free and fast access, and the branch trail connects functional areas and creates experiences; the sight design adjusts the interaction and privacy level, the central area uses transparent sight to promote social interaction, and the rest area creates an enclosed effect. Rely on landscape elements to create an enclosure effect; the functional complement considers using landscape connection in different areas to form a cycle of "activity - rest - service". As the carrier of space design, plant selection should achieve the three balances of "aesthetics + function + ecology": create landscape levels with seasonal changes, give play to ecological functions such as shading, noise reduction and purification, and select appropriate plant species according to the space function. For example, plant fragrant flowers in the rest area to increase the experience. .

The integration of cultural elements is the key to the "sense of place" of the park and the residents' sense of belonging. It should be designed in the way of "localization + functionality + experience", and do not rigidly pile up cultural symbols. The selection of cultural elements should be rooted in the context of local culture, capture the collective memory of residents, local folk customs or historical stories, and then refine the core symbols into design languages. The integration method should be deeply combined with the spatial functions: integrating local characteristic patterns into the paving design, which can not only define the boundaries of the space but also convey cultural information; landscape sketches tell historical related things and have practical functions such as rest and guidance; plant configuration adopts local characteristic tree species to create a double symbol of "ecology + culture".

Conclusions to the second chapter

Park development takes the behavioral characteristics and demand differences of different age groups as the primary prerequisite, and constructs a functional organization system with diversified functions, rational zoning, and temporal flexibility. At the same time, in spatial organization, it implements the universal design principle of "convenient use for all users". It creates an inclusive and safe space through the systematic integration of barrier-free design, the construction of spatial hierarchy of "central activity area + peripheral rest area + reasonable path", the plant configuration that unifies functionality and landscape, and full-scenario safety assurance measures. During the design process, it is necessary to rely on the research system, follow the three-stage logic of "overall coordination - local refinement - system synergy", and integrate localized cultural elements to enhance the sense of place and belonging. Ultimately, a public space with practicality, ecology and culture is built, which realizes the development goal of "serving all users, responding to diverse scenarios and promoting intergenerational integration".

CHAPTER III. Public park design project based on universal design principles

Based on the comprehensive results of three research methods—systematic review of domestic and international literature in the field of universal design, comparative analysis of typical public park cases in different regions, and multi-period and multi-scenario on-site tracking and observation—this study has constructed a systematic public park universal design framework with both theoretical support and practical adaptability. This framework takes "age-inclusive friendliness" and "inclusive design" as its dual core tenets. Among them, "age-inclusive friendliness" does not simply cover all age groups, but emphasizes the precision adaptation to the behavioral characteristics, physical fitness conditions and activity preferences of different age stages; "inclusive design" breaks through the physical limitations of traditional barrier-free design, and further covers groups

with implicit needs such as cognitive impairments and temporary mobility difficulties, so as to achieve the core goal of "non-discriminatory adaptation".

The framework systematically integrates three core modules: first, the spatial layout strategy centered on "hierarchical layout + full-area accessibility", covering key contents such as the spatial structure of central aggregation and peripheral dispersion, and the construction of a circular barrier-free network; second, the functional adaptation principle focused on "diversified configuration + temporal flexibility", including the precise division of age-specific functional zones and the design of multi-functional composite spaces; third, the safety assurance system based on "full-scenario coverage + full-chain protection", covering dimensions such as physical environment safety, facility use safety and night activity safety. These three modules work together to build a truly "all-people, all-scenario and all-time" barrier-free public space environment.

In terms of spatial organization, the framework innovatively adopts a hybrid model of "precision adaptation by age-specific zoning + natural transition of shared spaces". The zoning link is not simply divided by age, but delineates three core functional zones based on the activity intensity, interaction needs and facility dependence of different groups: the elderly health and fitness activity area adapted to the physical fitness and resting needs of the elderly, the family interaction area meeting the needs of family collective interaction and care, and the children's exploration area conforming to children's nature of exploration and safety protection needs. The circular barrier-free main path realizes the full-area connection of various functional zones, ensuring the smooth passage of wheelchairs, strollers and other means of transportation. At the same time, "intergenerational shared nodes" are added in the connection and transition zones between various functional zones. These nodes are equipped with light interactive facilities suitable for all ages, creating low-pressure interaction scenarios and providing spatial carriers and scenario support for spontaneous cross-age communication between the elderly and children, as well as among family

members. Finally, achieve the design goal of "regional adaptation to ensure expansion and shared space to promote integration".

3.1. CONCEPT

1.Design of Elderly Activity AreaDesign Concept: The 200-square-meter senior activity area is carried out in accordance with the concept of "Safe Progression · Aging Adaptability". Using a scientific exercise intensity grading system, customized exercise programs are formulated for the elderly aged 60 - 80 with different health conditions. This design places safety requirements and the physical and mental health of the elderly in the primary position, aiming to build a comprehensive space that encourages moderate exercise, enhances vitality, and ensures comfort and safety. Specifically, it focuses on strengthening the safety protection of the exercise paths and the aging-adaptable design of facilities, fundamentally eliminating the elderly's concerns about exercise, enabling them to participate in activities with peace of mind.

Functional Zones:

(1). Strength Fitness Area: There are age-friendly fitness equipment as well as flexible aerobic and strength training equipment. There are safety handrails next to each piece of equipment as a guarantee. The floor is paved with special anti-slip mats, which have good buffering effect and reduce the risk of falling. There are movement demonstration diagrams on the wall to meet the needs of the elderly to exercise alone. The spatial layout ensures that the passage is wide and not crowded. Multiple rest and supply stations are set at reasonable positions to help the elderly replenish their physical strength in time.

(2). Leisure and Wellness Area: It is customized for the elderly and those with limited mobility. It has a slow - walking path with anti - slip patterns, which is suitable for people of different heights and with different mobility. It has mild

exercise equipment to add a sense of comfort. It is also equipped with a comfortable seat with a backrest for immediate rest.

Value and Significance:

(1). Safe Exercise: Relying on grading facilities and all-round protection, because the safety system is perfect, the elderly can exercise stably and correctly, and the needs of balance exercise and the prevention of risks.

(2). Health Promotion: Designed specifically for progressive exercise classification, scientifically planning the layout of space and equipment, helping the elderly improve physical skills such as cardiopulmonary and muscle strength in a standard way, and reducing the risk of exercise injuries.

(3). Psychological Support: Comfortable design and spacious social space help the elderly develop regular exercise habits; after psychological counseling, it promotes interactions among groups and strengthens self-belief; improves interpersonal coordination among strangers and reduces loneliness.

(4). Age-Inclusive Participation: Diverse activity scenarios and equipment choices match the needs of the elderly with different physical conditions (healthy, limited mobility), form a positive community atmosphere of mutual assistance and encouragement, and improve overall participation.

Through the environmental planning and the full-chain safety system, the activity area has achieved the core goal of "risk control and survival guarantee" for the elderly-friendly exercise. Help each elderly person find their own healthy lifestyle and effectively improve the quality of their later life.

2.Planning and Design Scheme for Children and Adolescents Activity Area:

There is a core concept in the children and teenagers' activity area, which is "Explore Nature · Infinite Growth". Relying on scientific age - graded planning and contextualized facilities, it provides immersive exploration experiences for

children of different age groups. The design combines natural elements with creative amusement, creating a multi - layer space with safety, interest and education. It also sets up panoramic supervision and parent fitness facilities, combining children's independent exploration with parents' at - ease company, forming the "Free Growth · Peaceful Care" model.

Functional Zones:

(1) Children's Exploration Activity Area Aged - based design is used to meet the development needs of different stages. It is divided into two core areas, namely the toddler exploration area and the older children's challenge area. The toddler exploration area focuses on sensory enlightenment and the cultivation of basic abilities. It is equipped with sensory facilities. The rainbow mat can stimulate the sense of touch and the development of the soles of the feet. The mini - climbing wall can exercise balance and ensure safety. The snail slide can bring an initial exploration experience. The Older Children's Challenge Area builds a comprehensive exploration system to strengthen spatial cognition and physical coordination development: Corridors form a three-dimensional traffic network through staggered overhead walkways; elastic trampoline areas are embedded in the ground to form a visual focus with buffer edges; spider web climbing frames with gradient difficulty challenge limb coordination ability. Parental fitness equipment is installed in the area, equipped with interactive facilities to ensure parents can supervise the children's activity area while exercising.

(2) Half-sized Basketball Court It is planned according to the standard size of a half-sized basketball court, integrated with badminton court design and adopts dual-court marking design for both basketball and badminton, which can switch between basketball and badminton courts to meet the different sports preferences and usage scenarios of children and adolescents. The court is equipped with a height-adjustable basketball hoop system to meet the basketball needs of different height stages; the pavement uses PU material, which has both non-slip

performance and sports buffer protection function, effectively reducing the injury risk of both sports. Anti-collision soft edge barriers are set at the court boundaries to avoid collision injuries; lighting systems are equipped for night use to ensure sufficient light for various sports at night; seats are planned around the court to meet the half-time rest needs.

(3) *Skateboarding Training Area* It takes wavy ramp combinations as the core training facilities, with non-slip and wear-resistant surface materials, balancing training interestingness and safety controllability. The resting seats can be set; the railings divide the activity area from the passage to guide orderly activities.

Educational Value:

(1). *Ability Development:* A multi-level facility system meets the physical needs of children and adolescents at different stages, promotes the development of large muscle groups and the coordination of limbs; the design of complex movement routes and 3D space cultivates spatial cognition, logical thinking and risk prediction, and achieves the coordination of physical and intellectual development.

(2). *Social Cultivation:* Open space layout breaks down barriers, enabling children and teenagers to interact in the form of self-organized groups; combined facilities and team sports form collaborative game and team cooperation models, helping to cultivate communication skills and team collaboration qualities.

(3). *Intergenerational Integration:* Integrate fitness equipment with parent-child facilities to create a high-quality scene for parent-child coexistence. The boundary design of the semi-enclosed space leaves an independent exploration space for children while meeting the supervision needs of parents, and thus the emotional connection between parents and children is established.

Through modular spatial organization, age-adapted facility configuration and progressive challenge design, this activity area realizes the core goal of edutainment of "Bounded Exploration · Limitless Growth", constructing a safe,

reliable, interesting and educational community growth paradise for children and adolescents.

3. Universal Design Scheme for Leisure Area: This leisure area adheres to the core universal design principle of "All-Age Sharing · Physical and Mental Nurturing". Through differentiated spatial design and compatible facility configuration, it meets the diverse needs of multiple groups and caters to different scenario preferences such as solitary contemplation and social communication. The quiet space surrounded by bamboo landscapes and the open communication area form a complementary layout, allowing people of all age groups to choose a suitable leisure method according to their own state.

Functional Zones:

(1) Bamboo Forest Quiet Area: A sound and light filtering system is constructed through three layers of bamboo walls, forming a core quiet area with both privacy and transparency. There is a semi - enclosed meditation pavilion inside, with sound - absorbing and brightness - adjustable partitions. It is suitable for adults to relax and meditate, and can also be used for the elderly to close their eyes and rest.

(2) Open Leisure Area: Spatial layout has been designed for visual and comprehensive barrier-free access. The main passages have no steps, which belongs to barrier-free design. The central interactive area is equipped with a multi-functional table, which can be used for carrying out activities related to chess and card games, board games and handicrafts; the surrounding rest areas have various adaptive designs.

4. Shared Planting Area Design Scheme

This planting area has the concept of "Green Healing · Intergenerational Sharing". This planting area uses differentiated planting and all-age facilities to meet the gardening needs of all age groups, with special attention to the elderly aged 60 to 80. The sustainable space system constructed with environmentally friendly

recycled materials retains the fun and labor experience of traditional planting, breaks through the limitations of climate and seasons, and can be used all day long. All facilities are designed in a universal way to ensure that the elderly can use them conveniently and safely, which is helpful for physical and mental rehabilitation, and meets the participation needs of children, teenagers and adults. In addition, this planting area also enhances the community's environmental awareness and the inheritance of farming culture.

Functional Zones

(1) *Open-Air Planting Area:* Eight elevated planting boxes are evenly arranged in a radial pattern. Each planting unit is equipped with a built-in irrigation system that can adjust water volume on demand to avoid waste; it is integrated with tool storage seats. The ground adopts permeable concrete pavement technology to quickly drain water and avoid water accumulation; anti-slip warning strips are set at the edges of the planting beds to prevent slipping.

(2) *Arbor Planting Area:* A double-arched white wooden arbor is built using recycled leftover materials from community renovation, which has both environmental demonstration and landscape decoration functions. The top of the arbor is integrated with intelligent supplementary lighting and sunshade systems, and cooperates with temperature and humidity sensors to realize all-weather planting environment control. A plastic greenhouse can be built inside the arbor to break through the restrictions of adverse weather such as rainy days and winter. Two planting boxes are set inside, which can be accurately adapted to the growth needs of different plants such as fruits, vegetables and flowers; drawer-type classified storage boxes are set at the bottom to realize "one-stop" horticultural management of seeds, tools and fertilizers, improving operational convenience.

(3). *Core Values:* Physical Rehabilitation: Moderate horticultural work accurately exercises limb coordination ability. Operations such as touching plants, perceiving scents, watering and fertilizing strengthen multi-sensory stimulation, which is

especially helpful for the elderly to maintain fine hand movements and muscle strength.

Mental Healing: The complete plant growth cycle from sowing, maintenance to harvesting brings participants a clear sense of accomplishment and control, relieves stress, regulates emotions, and especially improves the sense of loneliness and loss in the elderly.

Community Integration: The intergenerational cooperative planting model of "the elderly pass on experience, young and middle-aged contribute strength, and children learn knowledge" is built. Enhance intergenerational social connections and strengthen community cohesion in the process of working together.

Environmental Demonstration: Design details such as waste recycling, intelligent water-saving irrigation and three-dimensional planting can realize the concept of sustainable development through actual scenarios, and make the whole community have environmental protection awareness and action awareness.

GENERAL CONCLUSIONS

In urban development, diverse popular structures and inclusive communities have become crucial. Park universal design goes beyond facility adaptation and constructs a paradigm for inclusive environments for various groups. The core is to abandon the old idea of "priority for a single group" and rely on systematic planning to balance the needs of users of different age groups with different mobility abilities, achieving the spatial value of "non-discriminatory adaptation and warm care". Research data and cases show that success is not a random combination of facilities but requires three core dimensions: physical accessibility, functional adaptability, and emotional connection, forming a multi-level system of "space bearing - activity adaptation - emotional resonance". Physical accessibility is the basic guarantee, eliminating mobility barriers through barrier-free paving, continuous handrails, spacious passages, etc.; functional adaptability is the core

support, relying on modular facilities and flexible space strategies to make a single space "multi-functional in one location", demonstrating the design wisdom of "all-age reuse"; emotional connection is the value sublimation, stimulating group belonging through spatial scene creation. The value of this design practice not only improves spatial efficiency but also deeply affects the reconstruction of community relationships: by means of intergenerational interaction scenes, cross-group cooperation carriers and other ties, breaking the social barriers caused by differences in age and ability, and promoting deep community integration and multi-cultural exchange. The intergenerational collaboration model in the shared planting area and the all-age sharing scenario in the leisure area are typical implementations of this concept from theory to practice, confirming the dual effectiveness of universal design in "enhancing spatial value and consolidating community vitality".

1 Principle of Spatial Interconnection The Principle of Spatial Interconnection takes the independent access of all groups as its core goal, with the barrier-free access network serving as the core framework running through the entire area, systematically connecting multi-level activity spaces. In the construction of the access network, refined design is adopted to ensure full-area accessibility: step barriers are completely eliminated; continuous handrail systems are installed along major access paths to adapt to both adults and children; the width of main passages is no less than 1.8 meters to meet the needs of wheelchairs and pedestrians moving side by side, and ensure flexible turning of single wheelchairs. On this basis, focus is placed on ensuring the independent experience rights of groups with different mobility abilities: parents pushing strollers can move smoothly through various functional areas, and the elderly can move safely with the help of continuous handrails, realizing unobstructed access to all spatial nodes. Through transparent sightline design, it is ensured that the rest area can directly observe the dynamics of the planting area, which not only facilitates parents to supervise children's

participation in planting, but also enables the elderly to take care of each other, achieving the dual connection of "physical connection" and "emotional interaction".

2 Principle of Functional Adaptability The Principle of Functional Adaptability takes all-age applicability and scenario compatibility as its core goals, adopting the dual strategies of modular facility configuration and flexible space planning. Through the design logic of adjustability, combinability and convertibility, a single space breaks through age and functional limitations to flexibly adapt to the differentiated needs of multiple groups. In the design of modular facilities, focus is placed on adaptability innovation: the height-adjustable basketball hoop in the children and adolescents activity area caters to both children's shooting practice and teenagers' standard competitions, embodying the adaptation logic of "growth-oriented facilities". In flexible space planning, a "dynamic scenario conversion" mechanism is established: on one hand, functional conversion is realized through sign guidance and rapid facility reorganization. For example, the half-sized basketball court can complete the scenario conversion from "basketball competition to badminton match" within 10 minutes through preset badminton court markings and quickly assembleable lightweight net posts; the dual guarantee of "facilities adapting to different groups and spaces carrying multiple scenarios" truly achieves the core goal of "one site with multiple functions and all-age adaptation", creating basic conditions for cross-age groups to conduct activities in the same venue.

3 Principle of Emotional Sharing The Principle of Emotional Sharing takes cultural empathy and intergenerational symbiosis as its core, abandoning the superficial stacking of cultural elements. Through the dual paths of "concrete display + immersive participation", it deeply integrates local farming culture and community memories into the spatial texture, while creating multi-dimensional collaboration scenarios to make the venue a carrier of emotional connection rather than a mere activity space. In the implantation of cultural elements, a "all-age readable" hierarchical design is adopted: a farming culture display corner is set at

the entrance of the shared planting area, which can arouse the working memories of the elderly and enable children and teenagers to learn about traditional farming; a "community farming memory wall" is built in the area, presenting the moments of the community's annual planting activities in the form of photos and handwritten notes. Residents can add their own planting stories at any time, strengthening the sense of place identity that "this is our planting area". In the creation of collaboration scenarios, a full-chain interaction model is built with "intergenerational skill inheritance" as the core: during the spring plowing season, "experienced elders guiding novices" sowing activities are organized, where the elderly with traditional farming skills demonstrate seed selection and germination methods, young and middle-aged people assist in soil turning and trellis building, and children participate in sowing and label insertion under guidance; during the growth period, a "crop adoption" program is launched, where each planting unit is adopted by cross-age family teams - the elderly are responsible for daily maintenance guidance, teenagers undertake growth data recording and online sharing, and children participate in light work such as watering and weeding; during the harvest season, a "shared harvest festival" is held, where the picked fruits and vegetables are processed into delicacies, the elderly teach cooking skills, young people are responsible for venue arrangement, and children perform farming-themed skits, forming an emotional closed loop of "working - inheriting - sharing". In addition, the cultural display wall adopts a "dynamic update" hierarchical presentation mechanism: the upper layer displays farming antiques and stories provided by the elderly, the middle layer posts crop growth comics drawn by teenagers, and the lower layer reserves a graffiti area for children to draw "my ideal vegetable garden", realizing all-age co-creation of cultural content. The design is also linked to the leisure area to extend emotions: the open leisure area regularly holds "farming-themed tea parties, where participants from the planting area can bring the crops they have gleaned for the purpose of sharing their experiences with the group of participants, thereby extending the emotional

connection of the planting scenario to the leisure scenario. Lastly, through the establishment of intergenerational cultural inheritance and in-depth intergenerational collaborative collaboration, all-age groups' sense of place identity is reinforced, supporting intergenerational communication and emotional resonance in a natural and sustainable manner.

4 Principle of Safety and Comfort The Principle of Safety and Comfort takes full-scenario protection and all-group adaptation as its core, abandoning the one-size-fits-all general protection model. Through the three-layer design logic of "risk prediction - detailed prevention and control - experience optimization", it integrates full-scenario safety protection details and all-group comfort adaptation plans, building a dual guarantee system of "all-round protection and warm experience". In terms of safety protection design: colored pervious concrete with high friction coefficient is used for pavement; meanwhile, the water permeability system adopts the combined design of "pervious pavement + blind ditch drainage" to avoid water accumulation; double protection of "edge softening + collision buffering" is implemented for facility protection - easy-collision parts such as support piles are wrapped with 5cm-thick high-density sponge anti-collision soft packs, covering the easy-collision range of children and the elderly; anti-glare LED lamps are used for night lighting, and the projection design avoids direct light from shining into the eyes; adjustable local spotlights are additionally installed at the operation positions of the planting area to ensure clear vision for night work without affecting people in the surrounding areas. In terms of comfort adaptation design, experience details are optimized: graded adaptation design is adopted for rest seats; the rest area is equipped with a semi-enclosed structure that is windproof and rainproof, matched with breathable and sun-protective rattan seats, taking into account both ventilation and sunshade needs. This strategy of "precision in safety protection and hierarchy in comfort design" not only eliminates potential safety hazards through full-scenario detailed prevention and control, but also improves

the user experience through all-group adaptation design, truly realizing the organic unity of safety and comfort.

5 Principle of Ecological Adaptation The Principle of Ecological Adaptation takes the harmonious coexistence of humans and the environment as its core goal, abandoning the misunderstanding of ecological design that "emphasizes form over effect". Through the four-dimensional strategies of "material recycling, vegetation localization, water conservation and lightweight maintenance", it selects eco-friendly configurations and builds a self-regulating micro-ecological system, comprehensively ensuring the environmental resilience and ecological value of the park throughout its life cycle. In the application of recycled materials, localized design of "community waste resource utilization" is implemented: the main structure of the double-arched wooden arbor in the shared planting area uses waste old wood from community reconstruction, which is re-cut and spliced after anti-corrosion treatment. This not only retains the landscape value of the natural texture of wood, but also reduces the energy consumption of new wood felling and transportation, realizing the recycling closed loop of "waste - building materials - reuse". In vegetation selection, the principle of "local priority and suitable plants for suitable sites" is adhered to: native plants adapted to the local climate are preferred, which not only reduces maintenance costs such as irrigation and fertilization, but also provides habitats for local insects and birds, improving regional biodiversity; at the same time, a three-layer vegetation structure of "arbor - shrub - herb" is adopted - upper-layer arbors provide shade, middle-layer shrubs define spaces, and lower-layer herbs cover the ground to reduce soil erosion, building a stable plant community. In water resource management, an intelligent water-saving irrigation system is used: when the water content in the planting box is lower than the threshold, the drip irrigation device is automatically activated, and differentiated irrigation modes are set for different plants such as fruits, vegetables and flowers. In addition, ecological explanation signs are set up to make ecological design a vivid teaching material for community environmental

education, guiding all-age groups to participate in ecological maintenance, and truly realizing the trinity of "design function, ecological value and educational significance".

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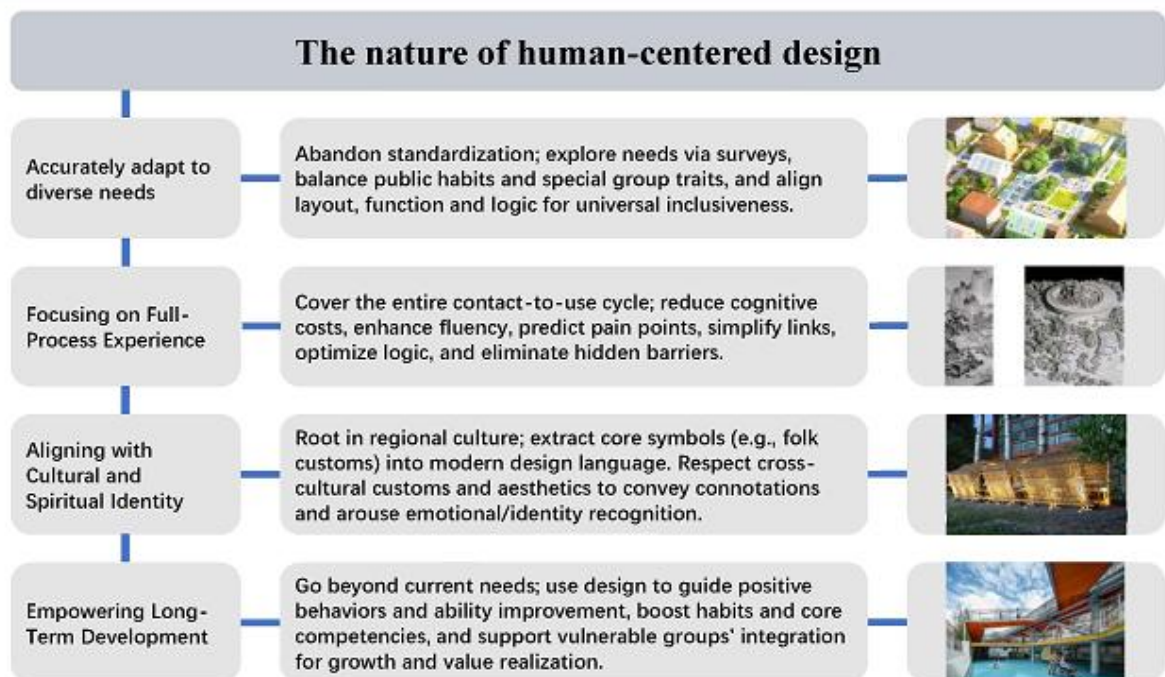
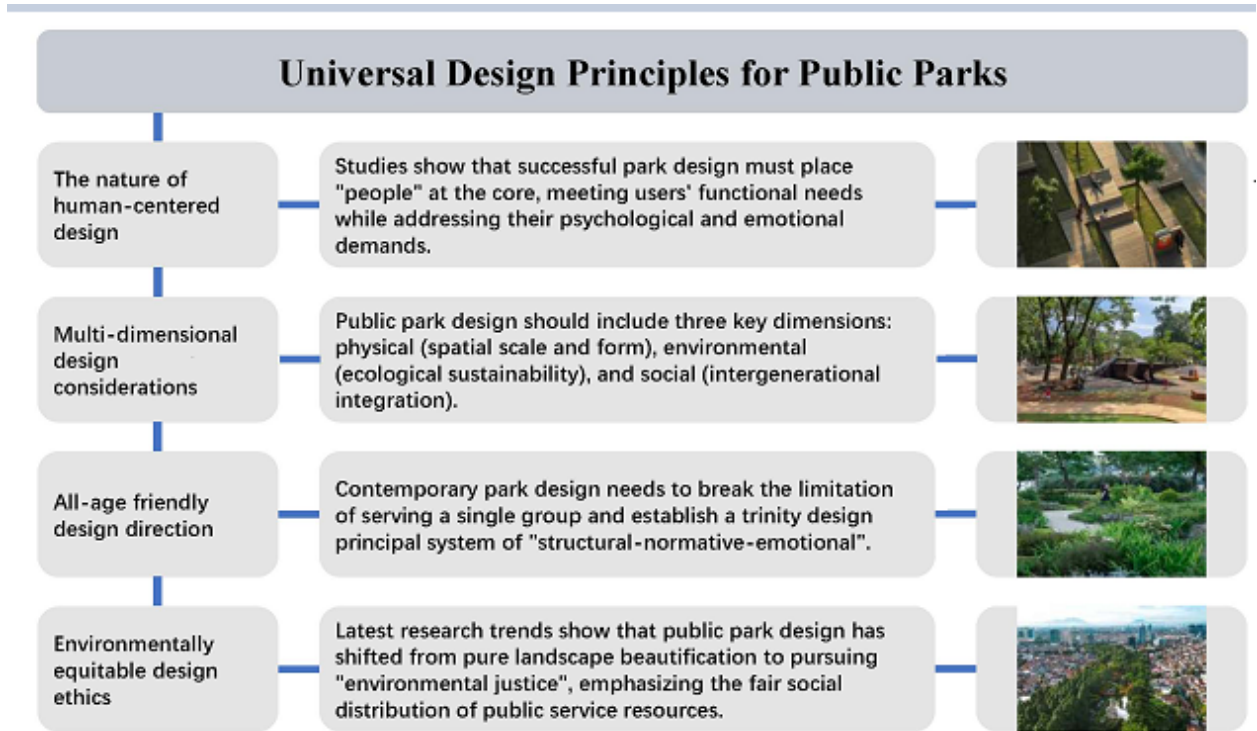
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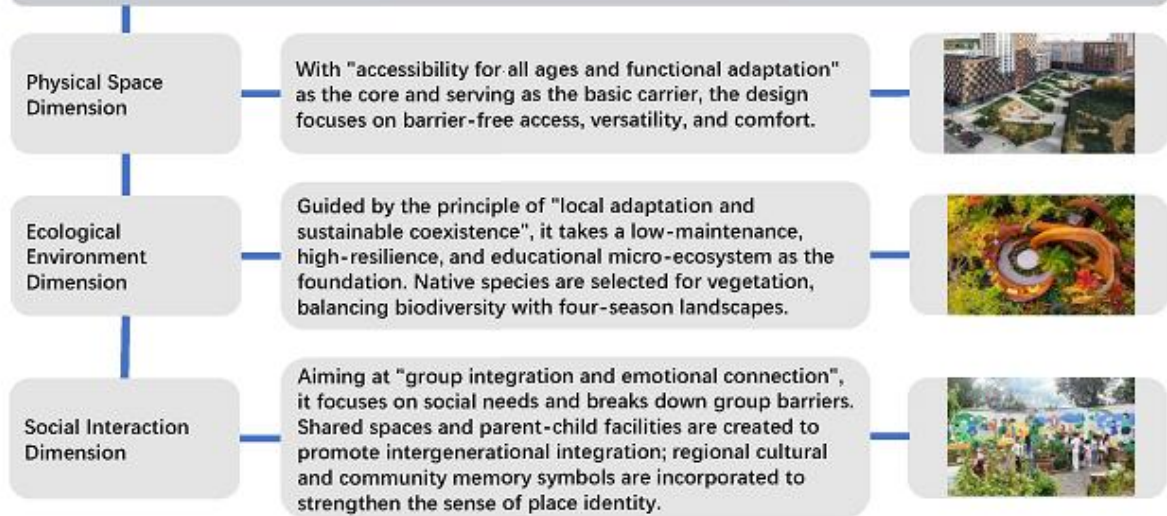
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APPENDIX A. Visual material for the text



Multi-dimensional design considerations

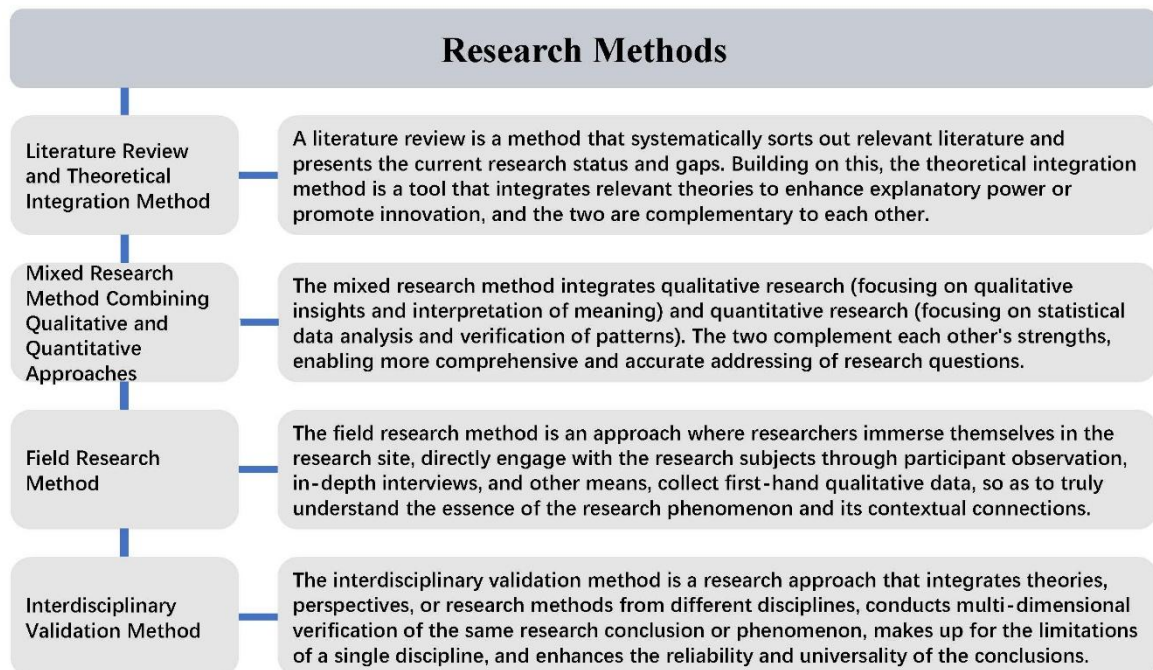


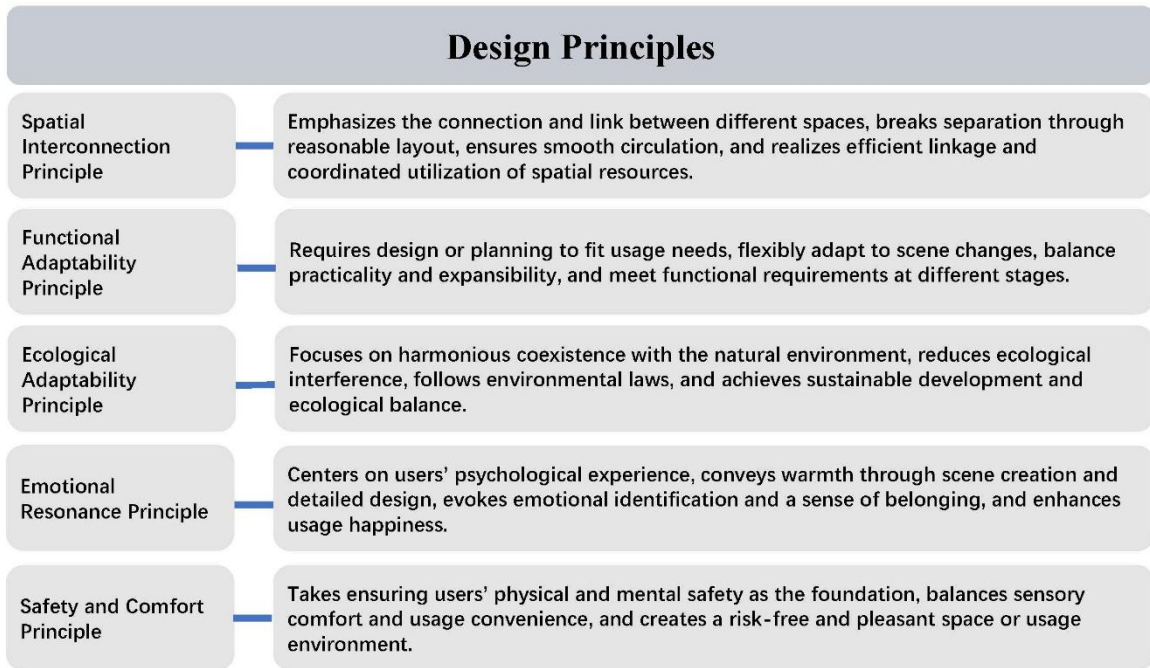
All-age friendly design direction





APPENDIX B. Tables, diagrams





APPENDIX C. Project proposal

| 03 Theoretical basis



01. Theoretical foundations of environmental behavior

This theory emphasizes the interaction behavior between humans and the environment, and how to guide the sharing behavior of users of different ages through design.



02. Theoretical foundations of spatial justice

This theory focuses on equity and accessibility in urban spaces, advocating for prioritizing the inclusion of all age groups, especially vulnerable groups, in park design.



03. Theoretical basis of adaptive design

The theory takes adaptability as the core, and proposes that parks need to adapt to population density changes, climate fluctuations and use time changes.

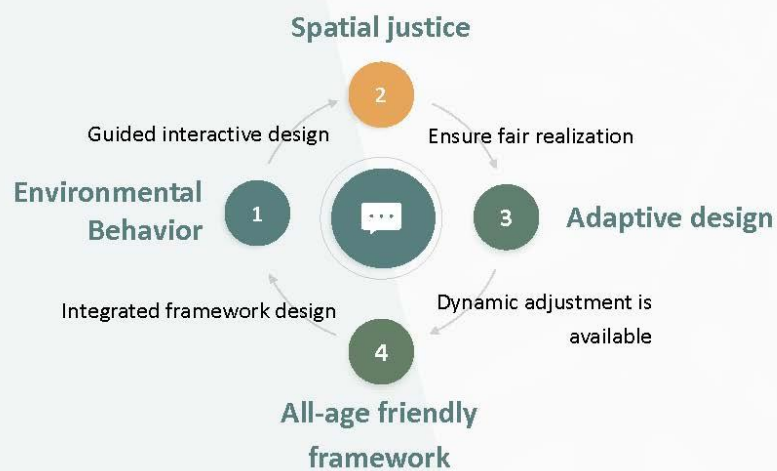


04. Theoretical basis of the concept of age-friendly cities

This theory proposes that age-friendly frameworks should integrate communities, health systems, and environments to create inclusive spaces that promote intergenerational integration.



| 04 Theoretical Connection Framework



| 06 Investigation and analysis



Paving fragmentation and stagnant water



Insufficient illumination at night



People and vehicles are mixed



The ground is slippery



The steps are not matched with ramps



Few rest areas



| 06 Investigation and analysis



"The old guys are always disturbed by pedestrians when playing chess" - Uncle Chen, 69 years old

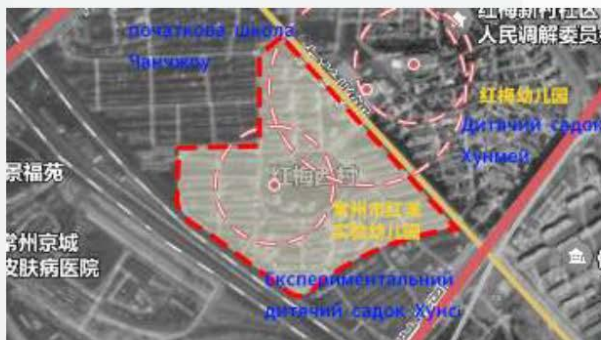
"There are too few sun seats in winter, and the plastic chairs are easy to overturn" - Grandma Wang, 76 years old



"I can only step on the tree altar when my baby is playing on the slide" - Ms. Li, 32 years old



| 09 Preliminary analysis/site selection



Site selection

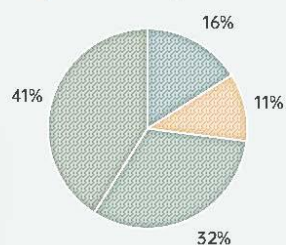
The site of this project is very special, with a large number of residents in the neighborhood. There is also a kindergarten full of vigor and vitality in the community, which is the cradle of children's enlightenment and education, and every day you can hear the innocent laughter and childish songs of the children.



| 06 Investigation and analysis

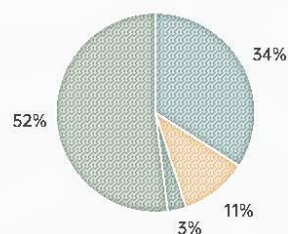
AGE DISTRIBUTION OF COMMUNITY MEMBERS

■ child ■ youth ■ middle aged ■ senior citizen



UTILIZATION RATE CHART OF COMMUNITY PARK MEMBERS

■ child ■ youth ■ middle aged ■ senior citizen





Community Rehabilitation of Caohu 2 District, Xiangcheng District, Suzhou, China

Relying on "all-ages sharing and emotional care," the project creates a public space that not only meets the safety and exploration needs of children, but also takes into account the diverse needs of seniors, youth, and parents, creates an atmosphere of interactive community communication, and promotes "fun for all ages."

summary

The Caohu community project transforms an old public space with a single function into a vibrant, shared place for all ages through design for all ages. The design comprehensively improves the quality of the space, enhances the sense of belonging and interactive experience of community residents, and realizes an organic combination of function and emotion.

The outer garden of Ditan Park, Beijing

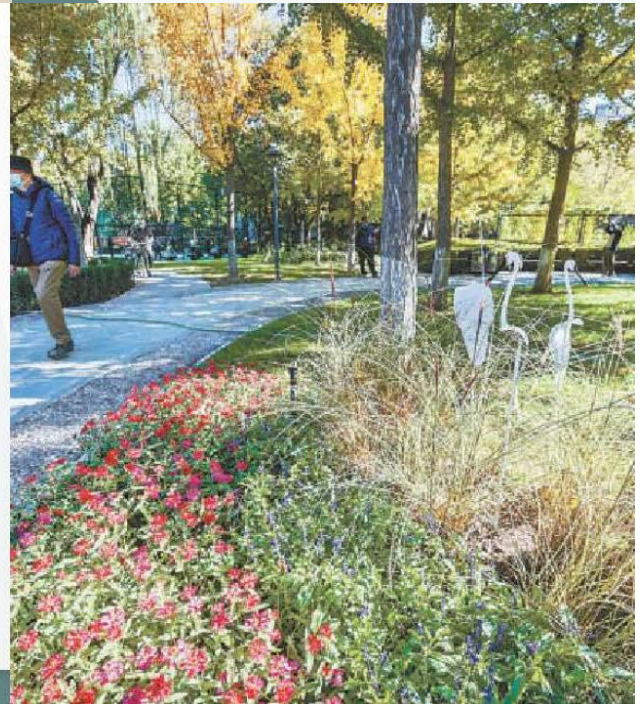
With a total area of 6.05 hectares, the park is an open city park for all ages with a natural and quiet garden valley and a magnificent and poetic ginkgo forest, as well as badminton courts, table tennis courts and children's play areas.

summary

The outer garden of Ditan Park is carefully constructed with the concept of friendliness for all age groups.

In terms of amenities, there are not only barrier-free access ramps and rehabilitation railings suitable for the elderly, but also interesting play areas for children, as well as badminton and table tennis courts to meet the fitness and exercise needs of young people.

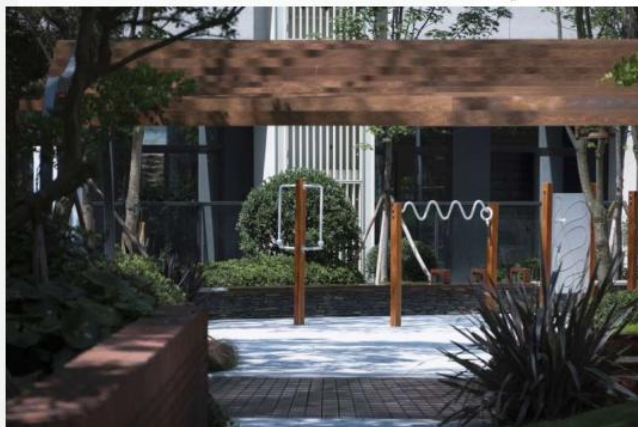
Through this renovation, the Ditan Park outdoor garden has realized the integration of functions and landscapes for all age groups and has become a popular outdoor city park that can comprehensively meet the leisure and entertainment needs of citizens of all ages.



| Region 1 Exercise area for the elderly

Case: Chengdu Jintang Elderly Care Institution

The park has set up a recreation and sports plaza that can accommodate 10-20 people at the same time, and is equipped with equipment and fitness areas, as a compound space where the elderly can exercise. The floor is paved flat and non-slip, and the equipment is mainly soothing, rehabilitative physical training and cognitive training for the elderly.



| Region 2 Auxiliary equipment parking area

Case: Wuxi Yixing Zhuhai Park

In the barrier-free park, electric wheelchair rental helps people with physical disabilities to accompany their families to spend exercise time, and the parking service of lightly folding wheelchairs allows tourists with leg and foot disabilities not to worry about whether their wheelchairs are hindering others.

In addition, barrier-free assistive devices allow users to meet diverse needs, convey the temperature of the city, and realize "small assistive devices" to hold up "great happiness".



Region 3 Leisure Plaza

Case: Xing'an Square

A diverse and inclusive urban living room, including "tables and chairs in the living room, red carpet in the living room, garden in the living room, and parasols in the living room". There should be spaces suitable for the elderly to sit and rest, chat and even play cards, and there should also be elegant coffee bars suitable for young people to sit down, lean on, and consume. The ground has a unique texture of the floor paving, making some locations unique fields or even stages.



Region 4 Event square

Case : Chengdu Mixc City Public Square Renovation Design

The square uses water flow to increase vitality and also brings space for children to play, with different groups of plants embellished to improve the climate of the park together with the water flow. Of course, the tree pool and seats are essential to bring leisure time to visitors.



Region 5 Sports Square

Case: Tianjin Sino-Ocean Future City Sports Park

The area provides a dynamic and challenging sports space for skateboarders. The ground of the square has been specially treated to ensure the smoothness of gliding and the safety of users. There are also seats around it, allowing spectators to enjoy the visual feast brought by skateboarding.



Region 6 Terrace area

Case : Chongqing Longfor Yinian Apartment Rehabilitation Garden

The project is located on the roof of the 17th floor of Longfor Xinyicheng Yinian Apartment, and the main service apartment is to help the elderly and care for the elderly. In order to eliminate the negative emotions of the elderly due to the decline of physiological function, reduced resistance, slow metabolism and cognitive ability as much as possible, the design team uses the rehabilitation landscape as a medium to promote the happiness and sense of belonging of the elderly by guiding the elderly to carry out outdoor gardening activities, recreation and exercise, communication and interaction, so as to improve the quality of life of the elderly.



Region 7 Quiet relaxation area

Case: Chengdu Jintang Elderly Care Institution

Age-appropriate handrails are set up on the periphery of the bamboo forest to meet the needs of the elderly in wheelchairs, and can also be used for the elderly who walk slowly to stop and rest for a short time. In terms of floor paving materials, choose flat, non-slip and anti-glare materials to ensure the safety and comfort of walking. Seats are also set up in the area to ensure the rest needs of the elderly.



Region 8 General leisure area

Case: Chengdu Jintang Elderly Care Institution

This is a localized courtyard space composed of small space series and integrated into the elements of old Chengdu life, restoring the urban scene that the older generation of Chengdu people are familiar with. Each small space can accommodate 4-6 people, which not only satisfies the elderly drinking tea, chess and cards, listening to books and some leisure and entertainment activities, but also promotes communication between the elderly.



| Region 10 Children's leisure activity square

Case : Wujiang China Resources Vientiane Hui landscape design

In the site, the height difference is used to create an interesting micro-terrain space, with high and low, ups and downs, and rich spatial changes. Encourage children to explore and learn and let their imaginations run wild. Set up beneficial children's activity facilities such as interactive climbing grass slopes, fun seesaws, slides, and interactive devices, so that children's exploration, climbing and other natures can be fully released. In the square, the runway around the island, the collage of blue and gray plastic floor mats creates a dynamic, fun and creative space, and also encourages parents to interact with them and spend a good family time together.



| Region 11 Sunshine lawn

Case : The construction of all-weather urban habitat in Shanghai Tianlin Park

First, we designed the central area of the park as a large grassy slope accessible to users based on the current situation, providing a basic park experience for high-density communities. At the same time, the main garden road composed of a circular walking path is designed on the outside of the lawn, laying the basic spatial framework of Tianlin Park on the basis of compatibility with multiple functions.



Region 12 Small basketball court

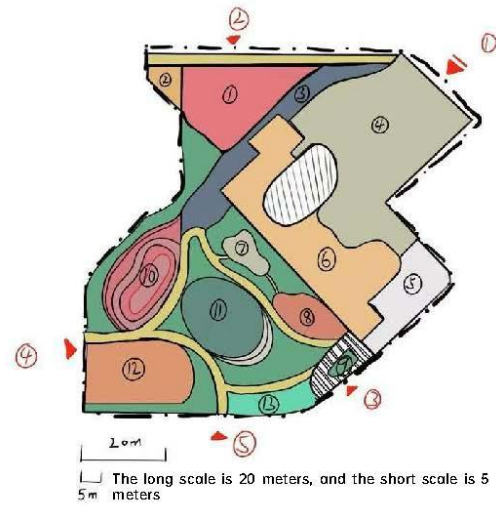
Case: Huaqiao Youth City Park

As the core of public activities in the community, the Youth City Park focuses on all-age friendliness and social attributes. A small basketball court has been set up to meet the needs of activities, and a variety of leisure facilities have been added, including seats of different sizes, shaded spaces and open activity areas to encourage communication and interaction among residents. At the same time, the space design emphasizes accessibility and inclusivity, allowing users of different fitness levels to find suitable activities here.



12. Scheme design

This is the rough design of this time, dividing the entire park into 12 pieces, which will be designed one by one.



Region 1 Exercise area for the elderly



| Region 2 Auxiliary equipment parking area



| Region 3 Leisure Plaza



| Region 4 Event square



| Region 5 Sports Square



Region 7 Quiet relaxation area



Region 8 General leisure area



| Region 10 Children's leisure activity square



| Region 11 Sunshine lawn



| Region 12 Small basketball court



| Region 13 Community shared garden

