

Planning And Decision-making

31. I am planning to construct a building at Starry Sky Plaza. Please analyze its relationship with the surrounding environment and propose a reasonable advice. (WHU)

Answer:

Project Analysis: Proposed Construction at Starry Sky Plaza

The proposed project is located at Starry Sky Plaza, a central landmark within the core area of Wuhan University's Information Science Campus. The site covers an area of approximately 6,068 m². It is bounded by key campus arteries: Qiushi Avenue to the north, Xinghu 1st Road to the west, and Xinghu 2nd Road to the east.

I. Environmental Analysis: Surrounding Building Heights

The site is nestled within a distinct "basin" of varying building heights, creating a unique skyline transition that the new design must respect.

- **South Interface (High-Rise Zone):** Immediately to the south lies Student Dormitory Building 17, a dominant vertical volume with a height of 74.9m.
- **East Interface (High-Rise Zone):** To the east stands Student Dormitory Building 18, another high-rise structure reaching 72m.
- **North Interface (Low-Rise Zone):** The northern boundary is defined by a cluster of lower-scale residential buildings, including Building 20 (27.8m), Building 15 (24.4m), and Building 26 (24.9m). These structures maintain a modest scale of approximately 18–25m.

Architectural Insight: The surrounding context exhibits a pronounced “Low North, High South” hierarchical distribution. The new building will act as a pivotal "hinge" point, mediating the sharp visual transition between the massive high-rises to the south/east and the intimate scale of the northern residential blocks.

II. Impact of Volume and Layout on the Site

The plan introduces a building footprint of approximately 2,000 m², which constitutes roughly one-third of the total plaza area. Inserting this volume without compromising the plaza's open character requires a sensitive approach to massing and positioning.

1. Openness and Sightlines

- **Strategy:** The building mass should be strategically consolidated along the southern edge of the plot, running parallel to Qiushi Avenue.
- **Rationale:** By anchoring the building to the south, we maximize the distance from the northern residential cluster (Buildings 15, 20, 26). This placement preserves the critical "breathing room" for the plaza and prevents the new structure from visually overpowering the lower northern buildings or obstructing their ventilation corridors.

2. Spatial Continuity and Permeability

- **Strategy:** The design must avoid creating a "wall" that severs the plaza from the street.
- **Rationale:** To maintain the integrity of the existing lawn and circular walkways, the ground floor should feature elevated pilotis (stilt floor) or permeable "grey spaces." This allows the landscape to flow under and through the building, ensuring that pedestrian circulation and visual sightlines remain uninterrupted across the site.

3. Sunlight Analysis (Solar Envelope)

- **Parameters:** Wuhan is located at approximately 30.5°N latitude. On the winter solstice (the

worst-case scenario for shadows), the solar altitude angle at noon is roughly 36°.

- Calculation: Based on these geometric conditions, the shadow length cast by the building will be approximately 1.38 times its height.
- Implication: A building that is too tall will cast a long shadow northward, permanently shading the central lawn during winter months. To ensure the lawn remains a viable space for sunbathing and student activities in winter, the building height must be strictly controlled to prevent the shadow from engulfing the primary public zones.

III. Recommended Height Guidelines

To balance development needs with environmental quality, the following height control guidelines are proposed:

- 1. Overall Height Range: 26–30m (Approx. 7 Stories) This range is the "Goldilocks" zone for this site. A height of ~30m aligns harmoniously with the adjacent public buildings along Qiushi Avenue, creating a consistent street wall. Simultaneously, it remains low enough to minimize shadow impact on the northern dormitories and the central green space.
- 2. Flexible Morphologies: Stepped Terraces The design should avoid a monolithic "box" shape. Instead, utilize stepped terraces or segmented setbacks.
 - Constraint: The continuous main roofline should generally remain below 30m.
 - Allowance: Localized architectural features (e.g., elevator shafts, stair towers, or artistic nodes) are permitted to reach a maximum of 32m to add visual interest to the skyline without adding significant bulk or shadow.
- 3. The Optimal Approach: 27m with Elevated Ground Floor A target height of 27m is recommended. This height is sufficient to accommodate the required floor area ratio (FAR) while allowing for an elevated ground floor. This specific height serves as a gentle visual step-down from the 75m towers to the south, bridging the gap to the ~25m buildings to the north.

IV. Conclusion

The construction of a 2,000 m² facility at Starry Sky Plaza presents an opportunity to enhance the campus core, provided the massing is handled with care. The Optimal Solution:

- Position: Anchor the building along the southern boundary near Qiushi Avenue.
- Height: Cap the main roofline at approximately 27m, with a hard maximum of 32m for architectural accents.
- Form: Incorporate ground-level transparency (pilotis) to preserve the flow of the plaza.

This strategy successfully integrates the new volume into the "Low North, High South" context, ensuring that Starry Sky Plaza retains its value as a sunlit, open, and vibrant public space for Wuhan University.

32. To facilitate student access to and from the campus, a new school gate is proposed to be built at (113.982101, 22.605906). Please analyze whether this decision is reasonable. (SZU)

Answer:

Based on the structured data provided, the proposal to build a new school gate at the coordinates 113.982101, 22.605906 is reasonable and highly recommended, particularly for improving student

commute efficiency.

Here is the detailed analysis of the location and its surrounding factors:

1. Internal Convenience: Proximity to Residential Areas

The proposed location is situated at the northwest corner of the campus, directly adjacent to the western dormitory cluster.

- **Target Audience:** This gate would primarily serve students living in the "Violet" (Ziluolan) dormitory (Center: 113.98282, 22.60526), "Holly" (Dongqingshu) dormitory, and "Triangle Plum" (Sanjiaomei) dormitory.
- **Current Pain Point:** These dormitories are located on the far west side of the campus. Currently, students here are far from the main academic buildings (like the Engineering School at the east end) and the main East Gate (approx. 113.9904, 22.60216). A gate here would provide a critical exit point for this high-density living area.

2. Transportation Accessibility

The transportation infrastructure at this specific location is already developed, making a gate here logistically viable.

- **Road Access:** The coordinates fall directly on or next to Likang Road (Road ID: 929480771), a tertiary road that runs along the western edge of the campus. This allows for direct vehicular pick-up and drop-off.
- **Public Transit:** There is an existing bus stop named "Ziluolan" (Violet) located at [113.98237, 22.60491], which is only about 100–150 meters south of the proposed gate. This confirms that public bus routes already service this specific stretch of road, ensuring immediate public transport connectivity for students.

3. External Environment and Constraints

- **Openness:** The area immediately to the west is occupied by the Shenzhen Xili Golf and Country Club (BBox ends at 113.98449, covering this longitude).
 - **Implication:** While this means there is no bustling commercial district immediately outside (no shops or restaurants directly across the street), the presence of the golf course guarantees a quiet environment.
 - **Traffic:** Since the golf course is a large enclosed facility, Likang Road is likely used primarily for campus, hospital, and golf club traffic, avoiding the heavy congestion of major city arterials.
- **Safety:** The Shenzhen University General Hospital is located to the south. A gate at the proposed northern coordinate helps separate student residential traffic from the emergency and public traffic flowing to the hospital further south.

Conclusion

The decision is Reasonable. Building a gate at 113.982101, 22.605906 is a strategic move. It transforms the "dead end" of the western dormitory area into a transit-accessible hub. It leverages the existing Likang Road and Ziluolan bus stop to solve the "last mile" commute problem for students living in the Violet and Holly dormitories, without requiring significant new external road infrastructure.

33. Please plan the open space within the coordinate range [(114.355478, 30.527577), (114.355892, 30.527791)] and propose a specific architectural or spatial planning scheme that can improve the area's functions and provide convenience for teachers and students. (WHU)

Answer:

Based on the geographic data of the Information Faculty, the designated area with coordinates [(114.355478, 30.527577), (114.355892, 30.527791)] is located in a prime central spot.

Here is the analysis of the current site conditions and a specific spatial planning proposal:

1. Site Analysis

- **Location:** The area is situated immediately south of the "3S Statue (Dance of the Sky)" and to the west of the "Teaching Experiment Building".
- **Transportation Node:** To the south lies the intersection of "Qiusi 1st Road" and "Qiusi 2nd Road", making it a key passage for students and faculty entering the teaching area from the living quarters.
- **Current State:** The data indicates this area is adjacent to existing grassland patches (IDs 104372412, 104372397), serving as a green buffer zone for the campus.
- **Surrounding Function:**
 - **Academic:** Adjacent to the Teaching Experiment Building and near the School of Geodesy and Geomatics (Building 4).
 - **Cultural:** The "3S Statue" and the nearby "Antarctic Stone" give this area a strong scientific and commemorative character.

2. Planning Proposal: "Geomatics Culture Pocket Park" (Shared Academic Space)

Considering the high foot traffic from the teaching buildings and the cultural significance of the 3S Statue, I propose transforming this open space into a "Pocket Park" that integrates rest, study, and cultural exhibition.

A. Spatial Layout & Zoning

- **Central Interaction Plaza (Hardscape):**
 - **Design:** Create a small, permeable paved plaza centrally located at (114.3557, 30.5277).
 - **Function:** Serve as a viewing platform for the 3S Statue effectively connecting the statue area with the road, encouraging students to stop and admire the landmark rather than just passing by.
- **Outdoor Academic Discussion Area (West Side):**
 - **Design:** Utilizing the edge of the adjacent grassland, install semi-circular outdoor seating or stone benches.
 - **Function:** Provide a waiting and resting area for students before and after classes at the Teaching Experiment Building. This serves as a "buffer zone" for students carrying instruments or materials.
- **Cultural Walkway (East Side):**
 - **Design:** A small path connecting to the Antarctic Stone area to the east.
 - **Function:** Place small information boards introducing the history of the "3S" technology (GPS, RS, GIS) and the Antarctic scientific expeditions, reinforcing the faculty's academic identity.

B. Facility Configuration

- **Smart Seating:** Install benches with solar-powered USB charging ports to meet the needs of

students using tablets or phones for outdoor study.

- **Lighting:** Add ground-level lighting around the plaza to illuminate the 3S Statue at night, enhancing the campus atmosphere and safety.
- **Vending Kiosk:** Since this is a high-traffic intersection, a small automated vending machine (for drinks/snacks) could be placed near the road edge for convenience.

3. Expected Benefits

- **Convenience:** Solves the lack of outdoor seating for students waiting for labs in the Teaching Experiment Building.
- **Aesthetics:** Transforms a simple patch of grass into a structured landscape that frames the campus landmark (3S Statue).
- **Education:** Creates an immersive cultural environment that highlights the unique surveying and mapping heritage of the Information Faculty.

34. An abandoned building (OSM ID: 104219273) on campus is planned for renovation. Please analyze the surrounding spatial context and current shortages in campus facilities, and propose reasonable reuse functions for this building, supported by planning-oriented reasoning. (WHU)

Answer:

Based on the spatial data provided in the data, here is a renovation analysis and proposal for the abandoned building (OSM ID: 104219273).

1. Site & Context Analysis

- **Location & Scale:** The building is located at coordinates [114.35772, 30.53004] on the far eastern edge of the Information Faculty campus. It has a footprint of 671 m².
- **Immediate Neighbors:**
 - **West:** Directly adjacent to the Gymnasium and the Student Activity Center.
 - **South:** Close to major academic facilities, specifically the School of Geodesy and Geomatics (Teaching Building No. 4) and Teaching Building No. 2.
 - **North:** Near the Instrument Museum.

2. Current Facilities Gap Analysis

Analyzing the distribution of Point of Interest (POI) data reveals a significant functional imbalance in this eastern zone:

- **"Service Desert" in the East:** The campus's commercial and service core (Canteens 1, 2, 4, the "Xinbu CBD", and shops like 7-Eleven/Luckin Coffee) is heavily clustered in the central zone (Longitude ~114.353 - 114.354).
- **Distance Factor:** Students and faculty in the eastern academic cluster (Surveying/Mapping/Gym areas) are approximately 300-400 meters away from the nearest cafe or convenience store. While not a huge distance, it discourages short breaks and informal socialization.
- **Lack of "Third Places":** The area is dominated by "Hard" functions (formal teaching, intense sports). It lacks "Soft" spaces (lounges, quiet study areas) where students can rest after gym sessions or group discussions after class.

3. Renovation Proposal: "The East Wing Hub"

Recommended Function: Academic Cafe & Multifunctional Lounge

Given the 671 m² size, the building is large enough to support a mixed-use "Satellite Service Node" that combines leisure and light academic utility.

Spatial Zoning Plan:

- Zone A: Social & Refreshment (approx. 40%): A coffee bar or light meal station.
 - Target Audience: Students coming from the Gymnasium (post-workout refreshment) and faculty/students from the School of Geodesy seeking a nearby coffee break without walking to the central CBD.
- Zone B: Agile Learning Space (approx. 40%): Flexible seating with power outlets, suitable for laptop work or small group discussions.
 - Rationale: Serves as an overflow study space for the adjacent Teaching Building No. 2 and No. 4.
- Zone C: Sports Support / Shower Facilities (approx. 20%):
 - Rationale: Since it neighbors the Gymnasium, adding premium changing rooms or a small yoga/stretching studio would directly complement the existing sports infrastructure, which often lacks sufficient support amenities.

4. Planning Reasoning

- Functional Diversity (Mixed-Use): Introducing a commercial/leisure function into a strictly Academic/Sports zone creates a vibrant mixed-use cluster, keeping the area active throughout the day, not just during class or gym hours.
- Accessibility & Efficiency: This proposal solves the "last-mile" service gap. By placing amenities where the users are (the East edge), it reduces unnecessary foot traffic across campus for minor needs like water, coffee, or a rest spot.
- Adaptive Reuse: The building's proximity to the Student Activity Center makes it a natural extension for student life. Transforming an abandoned structure into a high-traffic social node improves campus safety (passive surveillance) and visual aesthetics.

35. There is an open plot of land located at 114.413 ° E, 30.492 ° N. Please provide specific functional suggestions for the buildings planned to be constructed on this site. (Optics Valley)

Answer:

Based on the coordinates provided (114.413°E, 30.492°N) and the surrounding facility data found in the file, this plot is located in a highly strategic "transition zone." It sits directly between an educational hub to the west and a commercial/office cluster to the east, with residential areas to the north. Here is an analysis of the site context and specific functional suggestions for the planned buildings:

1. Site Context Analysis

- West (Education Zone): The plot is immediately adjacent to Wuhan Guanggu No. 1 Primary School and its associated sports facilities, including a track and pitches. This generates significant foot traffic from students and parents, particularly during drop-off and pick-up hours.
- East (Business Zone): To the immediate east lie Weichuang Lou and Wentao Lou, which are commercial/office buildings. This indicates a steady flow of office workers requiring daily services.

- North (Residential Zone): There are apartment complexes nearby, such as the residential buildings around 114.412°E, 30.497°N.
- Access: The site is served by New Bamboo Road (Xinzhu Lu) and Xinyu Road, ensuring good accessibility.

2. Functional Recommendations

Given this unique positioning, the building should ideally serve as a "bridge" connecting the educational needs of the west with the commercial needs of the east.

Recommendation A: Education & Enrichment Complex

- Rationale: Capitalizing on the proximity to Wuhan Guanggu No. 1 Primary School, there is likely high demand for after-school services.
- Specific Functions:
 - After-School Care & Tutoring: Safe spaces for children to wait for parents finishing work, offering homework supervision.
 - STEAM Education Center: Classrooms for coding, robotics, or science workshops to complement the primary school curriculum.
 - Arts & Sports Training: Studios for music, dance, or martial arts, leveraging the adjacent sports track for synergy.
 - Parent Waiting Lounge: A cafe-style area with Wi-Fi where parents can wait comfortably or work remotely.

Recommendation B: Community Commercial & Service Hub

- Rationale: To serve the dual demographic of office workers from Weichuang Lou/Wentao Lou and the school community.
- Specific Functions:
 - Convenience Retail: A stationery store (essential for the school next door) and a convenience store.
 - Fast Casual Dining: Restaurants offering quick, healthy lunches for office workers and family-friendly meals for residents.
 - Bakery/Breakfast Bar: To serve students and employees during the morning rush.
 - Printing & Business Services: Supporting both the nearby offices and school projects

Recommendation C: Indoor Sports & Wellness Facility

- Rationale: The area already has outdoor pitches and a track. An indoor facility would allow for year-round activity regardless of weather, appealing to both students and stressed office workers.
- Specific Functions:
 - Indoor Badminton/Basketball Courts: High demand in mixed-use districts.
 - Youth Fitness Center: Specialized gym classes for children and teenagers.
 - Yoga/Pilates Studio: Targeted at the office workers in the adjacent commercial buildings
- **Summary of Recommendation**
 - The most efficient use of this land would be a Mixed-Use "Education + Service" Podium.
 - Ground Floor: Retail and dining (serving school traffic and office workers).
 - Upper Floors: Educational training centers and enrichment studios (serving the primary school students).