

TRANSIT-ORIENTED DEVELOPMENT IN UNIVERSITY HEIGHTS

URBAN DESIGN / REAL ESTATE DEVELOPMENT STUDIO
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In many places across the US, and around the globe, development around public transit stations is on the rise. Known as transit-oriented development (TOD), this type of development maximizes the amount of residential, business, and leisure space within walking distance of public transit.

University Station, a Metrorail Station in the University Heights neighborhood, and on the “front lawn” of UB’s South Campus, sits amidst a number of large surface parking lots that present vast potential for TOD.

In this interdisciplinary studio, graduate students from the school’s real estate, architecture and planning programs worked together to examine the possibilities for TOD to make transformative impacts on UB’s South Campus, the University Heights neighborhood, and the City of Buffalo. Students worked in four separate teams, each producing its own development proposal for the area surrounding the station.

STUDENTS:

Team 1: The Hub

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Team 2: Hayes Hill

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Team 3: The Heights

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Team 4: The Corridor

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TRANSIT-ORIENTED DEVELOPMENT IN UNIVERSITY HEIGHTS

The Niagara Frontier Transportation Authority (NFTA) and the Greater Buffalo Niagara Regional Transportation Council (GBNRTC), in partnership with the University at Buffalo (UB), are exploring how to incentivize development in and around Metro Stations, including the University Station on UB's South Campus. A number of parking lots that front UB's South Campus offer great potential for TOD to anchor a walkable neighborhood and enhance connections between the campus, the University Heights neighborhood, and the City of Buffalo.

In an integrated studio, graduate students from UB's real estate development, architecture and urban planning programs considered how parking lots adjacent to University Station could be developed in a way that would be catalytic and transformative for the campus and neighborhood. Each team generated unique proposals, but all explored common themes and pursued common goals (listed below). In doing so, the students produced informed plans, with innovative designs and detailed financial analyses, with key takeaways and recommendations that will offer strategic insight into any future TOD initiatives pursued on or near the University Station.

What to Explore:

- (1) How can this part of the city be enhanced visually, economically, socially and ecologically?
- (2) How can connections between UB and the University Heights neighborhood be improved?
- (3) How can the "town/gown" relationship between the campus and the neighborhood be enhanced?

Goals for Development:

- (1) Be an exemplar of high-quality urban design
- (2) Create synergies with current and planned academic, research, and professional activities on the UB South Campus
- (3) Consider the viability of development as transit-oriented
- (4) Potentially re-purpose economically under-utilized properties to more beneficial uses

Image Source : UB Archives

TEAM #1: THE HUB

The HUB is a three-phase development project encompassing approximately 1.1 million gross square feet of building area and approximately 22 acres of the UB South Campus near the University Heights neighborhood. The HUB is anchored by a large transit-oriented development project and aims to fortify community wellbeing while catalyzing the symbiosis of the university campus with the surrounding neighborhoods. The project consists of a balanced mix of uses that support equitable and sustainable development and promote health and wellness, including affordable and workforce housing, retail, hospitality and event space, a state-of-the-art community wellness and recreation center, and public greenspace.

Given the underlying assets are owned by the State of New York, the project is proposed as a public-private partnership with at least one private developer and several public partners. The University at Buffalo represents the majority interest in the project with a private developer(s) and public agencies such as the Dormitory Authority of the State of New York (DASNY), the State University Construction Fund (SUCF), the Niagara Frontier Transportation Authority (NFTA), and the Greater Buffalo Niagara Regional Transportation Council (GBNRTC) filling varying degrees of smaller, but still critical roles.

Each phase of The HUB is estimated to take two and half years to complete on average, with an overall timeline of ten or more years to reach full build-out. The total estimated cost of the entire project is \$252 million.

Phase 1 involves 14 months of construction at a total cost of \$123.9M total costs, generating 8.7% IRR, 8% average cash-on-cash yield (over 20 years), and a net profit of \$21M.

Phase 2 involves 14 months of construction at a total cost of \$57.3M, generating 11.3% IRR, 18% average cash-on-cash yield (over 20 years), and a net profit \$15M .

Phase 3 involves 18 months of construction at a total cost of \$71.1M, generating 12.0% IRR, 31% average cash-on-cash yield (over 10 years), and a net profit of \$10M.

UB 2030



Campus Precincts

The campus is currently introverted from its surrounding uses, lacks street presence, and includes an abundance of underutilized greenspace.

The proposal seeks to build a dense mix of uses along the Main Street spine, while serving as a transit-oriented activity destination with a strengthened residential cluster.



The APEX Center

The APEX Center is envisioned as a critical piece in the overall development vision. The Center is envisioned as a 3-story, 375,000 SF structure built into the Onondaga Escarpment. The site includes: retail fronting Main Street; a bi-level parking structure screened from view by a re-designed University Station and storefront retail; and a high-transparency wellness and recreation center spanning the entire third floor.



TEAM #2: HAYES HILL

This project proposes a \$70 million mixed use development that will be delivered in two phases. The entire buildout will encompass 485,000 SF, includes 417 apartments, a community market, restaurant space, retail and amenity space, several enclosed greenhouses, and a structured parking garage. The theme of this project is to promote the integration of existing community members with the campus and vice versa, with the intention of attracting more students and users to south campus which will in turn attract professional programs to the campus.

The team believes that by creating an in-demand community on campus with the intention of drawing users to the site, the project will spur further development in the area. Upon development of further phases, the project will be the core of this area and will appreciate in value greatly.

The team projected a conservative project level IRR with reversion after ten years of 15.25%. Looking at this investment on a cash on cash basis in two phases workplan:

Phase 1 provides a 4.77% yearly cash on cash return.

Phase 2 provides a 15.18% yearly cash on cash return.

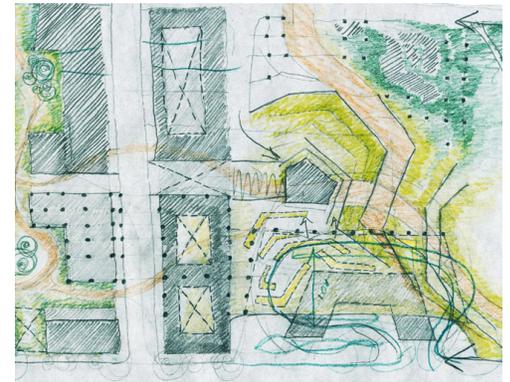
Further returns can be accomplished by acquiring specific private parcels around this site which will appreciate in line with the development of this project. That speculative analysis is not a part of this offering.

This proposal was created with the intention of convincing the University at Buffalo to allow development on the site with UB receiving the benefit of increased interest by both student and professional programs to use the campus, as well as the monetary benefit of land lease payments.

Site Plan

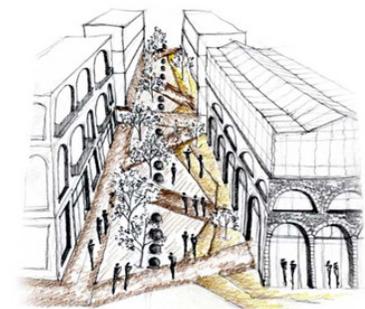
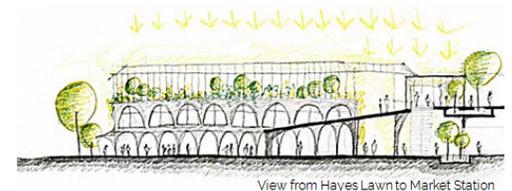


Concept Diagram



- Using the natural contours and expanding them into the architecture
- Providing hard landscaped public sculpture areas
- Using greenery as a wayfinding mechanism

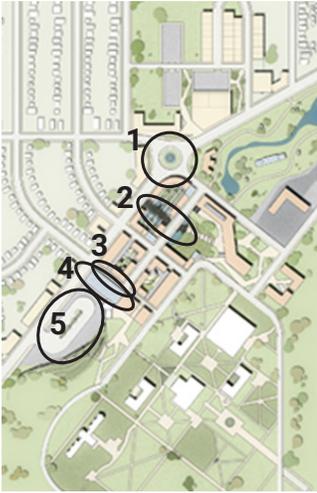
Concept Diagram



- Alternates between semi-public, public, and private spaces
- Architectural details and landscape that act as wayfinding mechanisms

HAYES HILLS DESIGN CONCEPT IMAGES

1. The Circle



2. Law School Steps



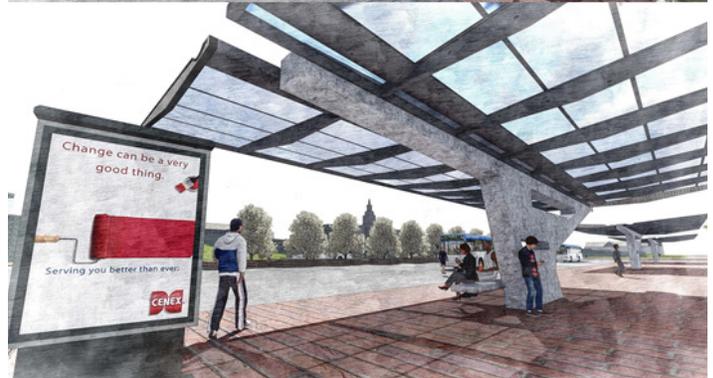
3. "Shared Space" Street



4. The Market



5. Multimodal Station



TEAM #3: THE HEIGHTS

The Heights is a transit oriented development that serves to connect the State University of New York at Buffalo's three campuses while engaging the Buffalo community at large. The development includes 1.2 million SF of space throughout the northwest quadrant of UB's South Campus. The project is anchored in bringing UB's vast academic and economic resources to light while taking advantage of the opportunity to direct the neighborhood toward a positive future. The project vision includes "a vibrant, sustainable hub of innovation which leverages UB's academic assets and strategic location to connect diverse groups of people and ideas."

UB has innovative programming in areas like Entrepreneurship with the Blackstone Launchpad serving as a place for student, faculty, and staff to innovate and start businesses. The campus has a lab dedicated entirely to renewable energy research and engagement. There are a multitude of fabrication areas, including a 3-D printing lab, architectural fabrications space, and engineering machine shops but their current locations are hidden from not only each other but the rest of the UB community. (This development idea would bring resources like these to a single site, where students and faculty can continue to engage with each other and the larger Buffalo community, which is the key to sustainable innovation.)

The development includes multiples phases:

Phase 1 totals \$45 million and includes an Innovation Center with 115,000 SF of non-traditional office, 13,500 SF of retail, a 10,000 SF theatre, 20,000 SF of lab and fabrication spaces open to the public and students, and 240 student housing micro units.

Phase 2 totals \$70 million and includes a 150-room hotel and conference center, a 111,000 SF Alumni Center with an exclusive restaurant for UB alumni and associated offices, 110,900 SF of retail including a new Target prototype geared for the evolving technological needs of college campus occupants, 56,000 SF of housing including rental units for graduate students with families, and a large ice rink and public market to attract the Buffalo community.

Phase 3 totals \$37 million includes mixed-income housing as well as everyday amenities like a daycare center and dining options.

The total project cost is \$152 million with financial returns divided into phases with one ten-year holding period each. Phase 1 requires \$5 million of equity and returns an IRR of 27% and net profits of \$15.8 million. Phase 2, which includes substantial park improvements, requires \$6.97 million of equity and delivers a net profit of \$17.5 million and an IRR of 12.8%. Phase 3 requires \$32.5 million in debt financing and \$3.65 million of equity. It delivers an IRR of 18% and a net profit of \$7.88 million.

Proposed Site Plan Diagram



Benefits of a Site Plan Proposal:

- Walkable neighborhood
- Inclusive environment for Millennials, Baby Boomers, and in between
- Connecting University and surrounding Residential neighborhood
- Reflecting the scale of the existing built environment

Road Network Modifications



Objectives:

- Weaving the existing road network into University campus
- Connecting Main street to Bailey
- Adding cycle tracks along main street by reducing one car lane on the east side
- Increased walkability

PROPOSED LAND USES



ESCARPMENT PARK



TEAM #4: THE CORRIDOR

This project proposes a 1.3 million SF mixed use development to be built in three phases, over roughly ten years. The development was named “The Corridor” because it adopts a marketplace concept as a pathway between the main buildings to be constructed along Main Street. The project incorporates three product types based on market research: multifamily residential, retail, and office.

All of the buildings are set to be three stories high to preserve the campus views. There is ground floor retail in the first six buildings moving away from the train station, totaling about 110,000 square feet. Above the retail, there is 100,000 SF rentable office space amongst the buildings. Finally, the largest component of the development, multifamily, accounts for about 417,000 square feet of space. To replace existing parking, and provide adequate parking for the new buildings, the team proposes five above-ground parking structures to accommodate the site and Metrorail users.

The total cost of building this development over three phases is projected to be \$164,607,053. Significant grant and other gap funding are required and will be sought to accompany the equity investor to make returns more attractive. The two major grant sources that the team recommends are the TIGER Grant and Economic Development Purposes Grant. A TIGER Grant would be funded through the US Department of Transportation, which awards grants for projects that supplement transit infrastructure, emphasizing access to safe and affordable transportation. The Economic Development Purposes Grant program was also deemed attractive, and the proposed project would qualify as an innovative redevelopment project that connects housing, jobs and transit.

The development is sectioned into three phases.

Phase 1 is the “catalyst site” that aims to spur further investment for the remaining two phases. Phase 1 has a total cost of \$60,622,000 with a project IRR of 17.02%.

Phase 2 cost is \$54,274,000 with an IRR of 26%.

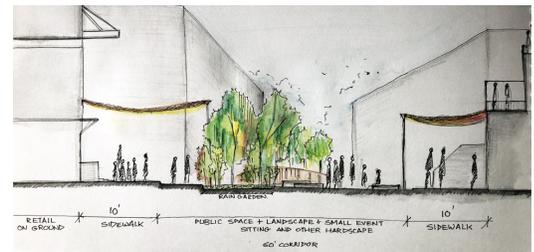
Phase 3 is very similar to phase 2, with a cost of \$49,712,000.

Walkable Neighborhood

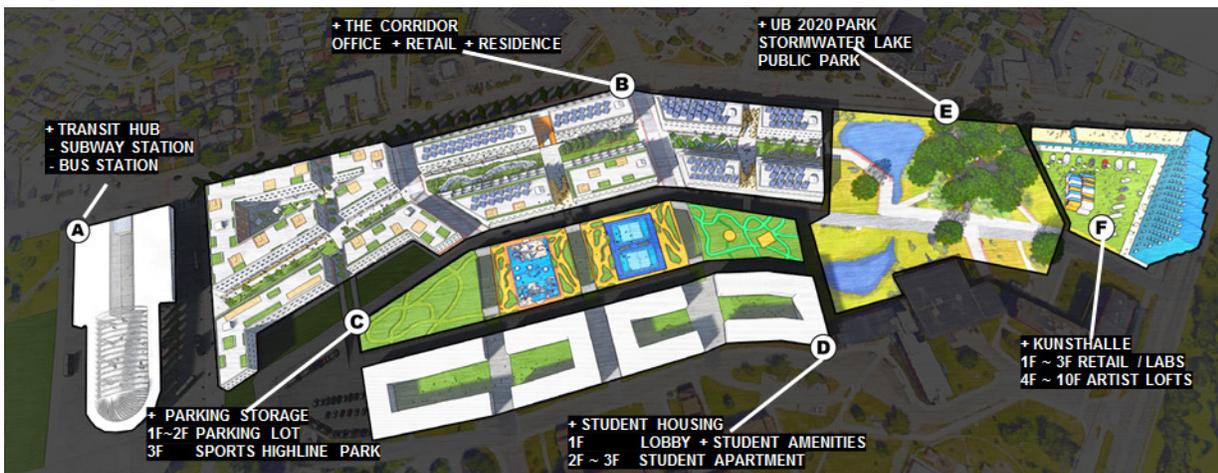


- An increase in walkability
- An increase in safety

Corridor Proposal



Proposed Uses



THE CORRIDOR DESIGN CONCEPT IMAGES



MAJOR THEMES AND TAKEAWAYS

In consultation with the four student teams, faculty leading this studio offer these takeaways regarding the feasibility, benefits, and key considerations of a transit-oriented development on the University at Buffalo Main St. campus:

1. **It is quite possible to** design a re-development of these parking lot sites that will **close the considerable distance that separates South Campus buildings, activities, and people from Main Street and the University Heights** neighborhood, and in a manner that **preserves the character of the campus** and viewsheds to major landmarks like Hayes Hall.
2. **Greater connectivity between the campus and the University Heights neighborhood** would result from “inviting” the existing street grid into the campus, and by incorporating “complete street” and traffic calming measures along Main Street.
3. **Redesigning the above-ground elements of the Metro Station, to create a safer, more pedestrian-friendly area** is critical to the future success of the South Campus and the University Heights neighborhood.
4. **Incorporating amenities on the South Campus that would be accessible to the community, such as park areas and other green space**, is important to both UB and the neighborhood. Teams hypothesized different ways that this could be done, including a restoration of natural features in and around the escarpment that is located at the northeast end of the site.
5. As recommended in the UB 2020 Plan, **the relocation of professional schools, such as the law and business schools, to the South Campus from the North Campus**, will bring those school faculty and students into a closer relationship with the downtown Buffalo CBD, where courts and major business are located. Right now, **without a vision for creating more attractive improvements to the South Campus, it would be hard to convince these schools to relocate.**