

C. DOWNTOWN CAMPUS “PARTNERING”

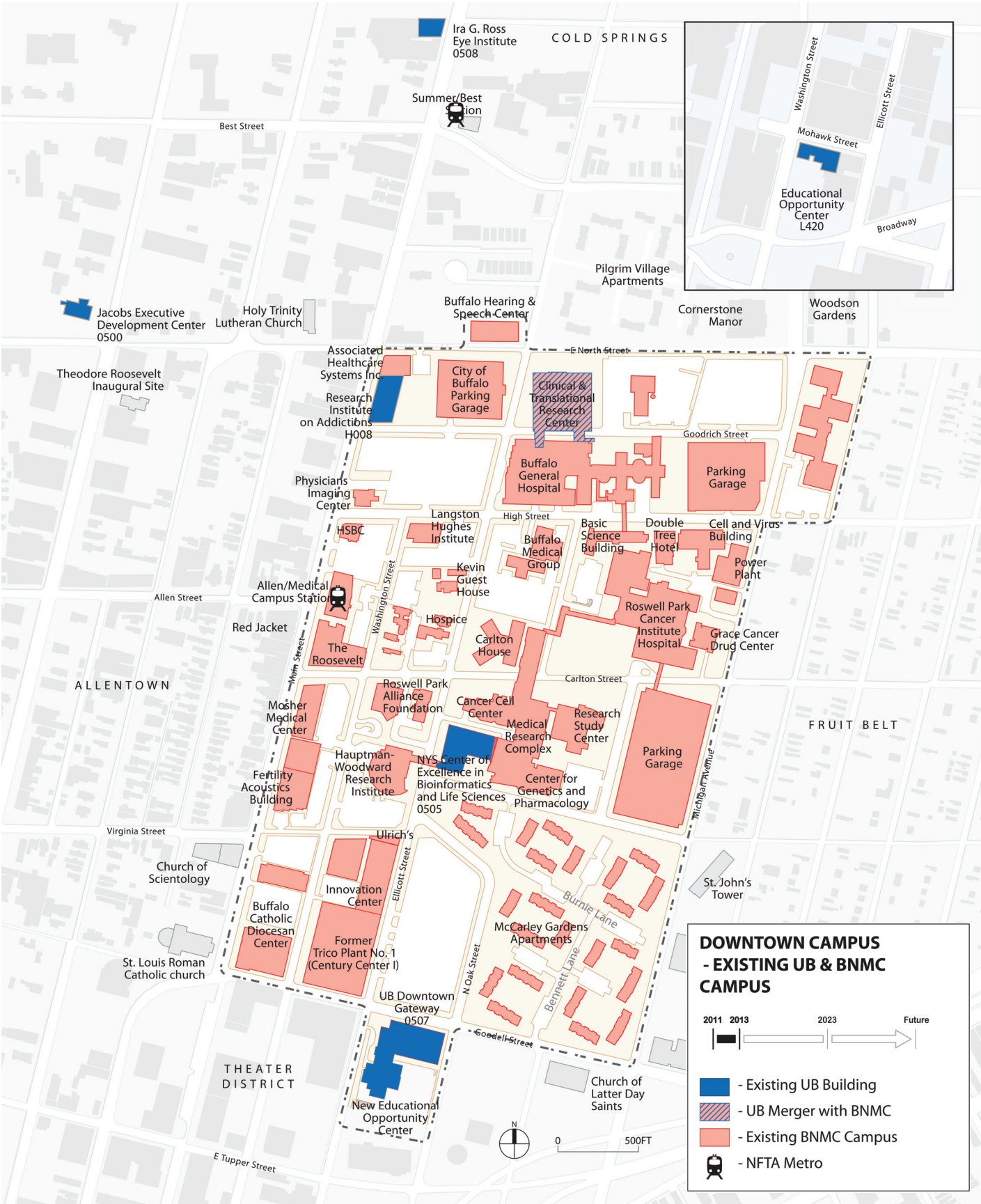


Figure C-67: Existing UB & BNMC Campus Diagram.

DOWNTOWN CAMPUS

The future of Downtown Campus hinges upon the migration of UB’s health sciences schools from South Campus to downtown. The inherent benefit lies in the integration of resources and potential for collaboration with partner institutions, Kaleida Health, Roswell Park Cancer Institute and other members of the Buffalo Niagara Medical Campus (BNMC). Of the three campuses, UB’s vision for the Downtown Campus is the most ambitious, involving the creation of a world-class center of clinical practices, medical education, and health sciences research. Making the most of this opportunity will require the eventual migration of all five of UB’s health sciences schools beginning with the School of Medicine and Biomedical Sciences by 2023. The School of Nursing and the School of Public Health and Health Professions will be close behind. Eventually, the School of Dental Medicine and the School of Pharmacy and Pharmaceutical Sciences will follow in future generations. While there are many important factors involved in the making of the future of the University at Buffalo, the relocation of the School of Medicine and Biomedical Science from South Campus to Downtown Campus is arguably the most significant factor in its role as catalyst for following moves throughout the University.

BNMC, a not-for-profit consortium of nine health-care related institutions, has developed a master plan of the medical campus on behalf of its members. The BNMC plan was developed in conjunction with the UB2020 plan as an integrated approach representing the interests of all the partner institutions, the University at Buffalo, and the surrounding neighborhoods. Also initiated by BNMC and in cooperation with the City of Buffalo, was the Four Neighborhoods, One Community neighborhood planning effort. Among other things, this plan clarifies how the growth of BNMC member institutions can be planned to provide the maximum positive impact on the two adjacent neighborhoods, Allentown and the Fruit Belt. The Facilities Master Plan builds upon the work of all these plans to bring together a comprehensive approach while incorporating the most current thinking related

to phasing, program, and land use. While there are a number of options available, fundamentally, the Facilities Master Plan seeks to:

- Satisfy common development goals
- Create nodes that center activity and provide a sense of place
- Bring vitality to streets
- Provide community green spaces
- Balance density to remain sympathetic to context

Of the three campuses, the questions related to the Downtown Campus are the most complex and open. The presence of premier partner institutions paired with the availability of land presents a great opportunity for all to create an active urban environment that fosters connectivity and collaboration while contributing to the development of downtown Buffalo at large.

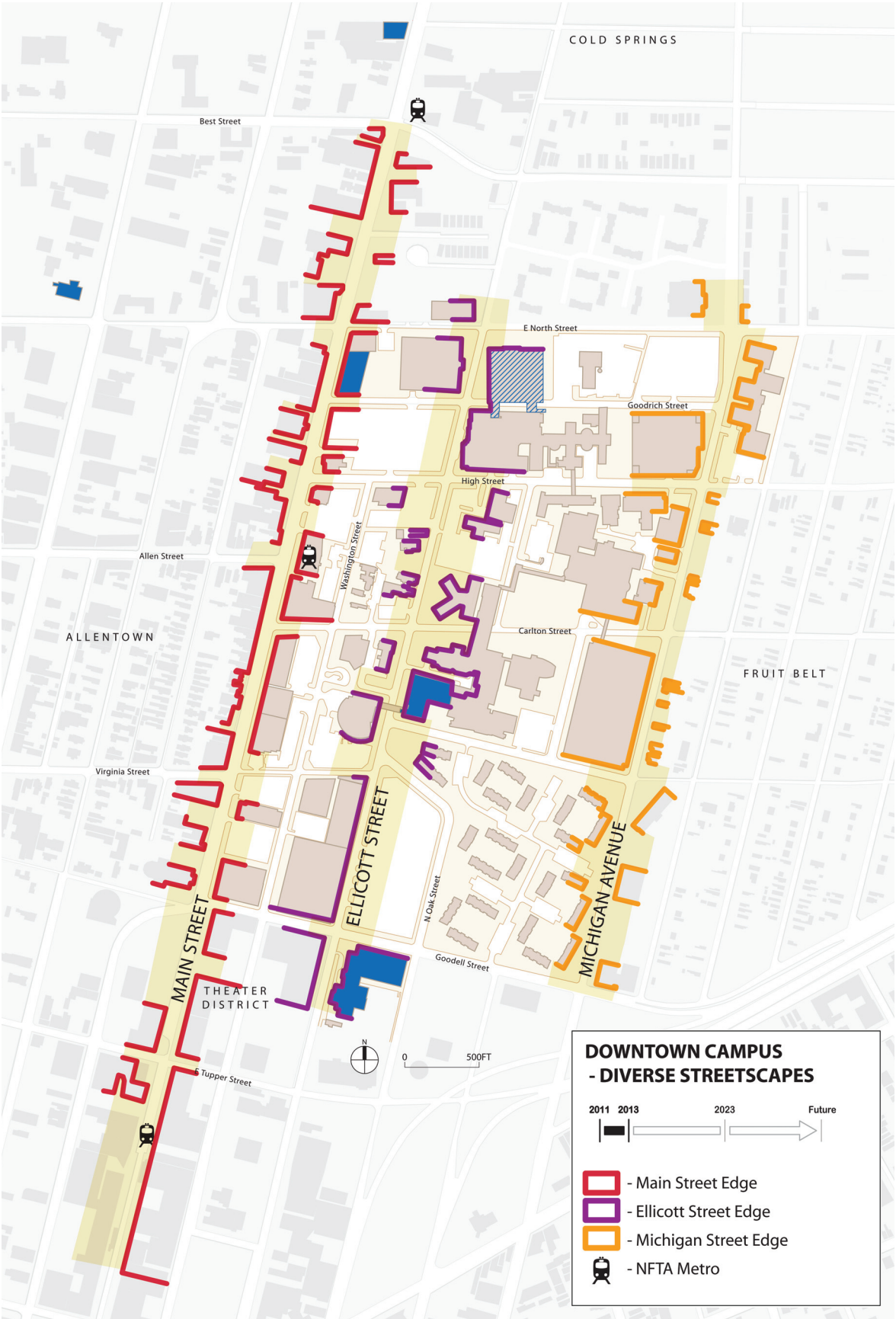


Figure C-68: Downtown Streetscapes Diagram.

CURRENT LAND AND BUILDING USE

Unlike UB’s North and South campuses, Downtown Campus will not be established on a cleared site entirely owned by UB or physically set apart from its surroundings. Instead, it will be carefully integrated into a complex urban landscape with an array of existing facilities, streets, and neighborhoods, where a multiplicity of institutional partners and neighbors all seek to make their own futures. While this context poses some real challenges, there are clear assets to the Downtown Campus making it replete with possibilities. Key assets include the ability for growth in situ, its proximity to downtown Buffalo, its adjacency to diverse neighborhoods, and access to public transit. Making the most of these opportunities will require a coordinated effort with UB and BNMC partners as smart growth always requires collaborative planning.

While ripe with potential, the Downtown Campus as it exists today is a product of independent institutional growth based on land use and without the benefit of a unified, comprehensive plan. As such, the campus currently has neither a clear organizational structure nor a sense of place. The existing buildings on the Downtown Campus are varied and heterogeneous, ranging from sleek, modern buildings with street appeal to tall bulky masonry buildings with large footprints, long shadows, and no street presence. The urban form is compromised by buildings that are irregularly set back from the streets and large expanses of surface parking and vacant lots separating buildings and weakening the synergy that might come with greater density. Instead of consistent street walls with active ground-floor uses, there are many highly inconsistent street walls with blank facades. Another challenge is the transition between institutional and neighborhood fabric. Existing buildings are large and bulky with parking and service needs often detracting from character of adjacent neighborhood. Existing open spaces lack program or definition to make them active destinations. A linear park was proposed within the UB2020 and is currently under construction. This park will enliven Ellicott Street and connect various

buildings and spaces. However, it will not address the lack of entrances fronting Ellicott Street to make it a truly active pedestrian thoroughfare.

The northern and southern edges of the BNMC Campus abut social housing developments, Pilgrim Village and McCarley Gardens respectively. Nearing the end of their life, the two housing sites present a unique opportunity for expansion of this district and present possible future sites for UB. For the community, the development of these sites would provide improved edges fronting the Allentown and Fruit Belt neighborhoods and populate the district with more active uses that would help support local businesses. For the campus, development of these sites will significantly increase the size and population of the BNMC Campus, bringing to fruition the vision of a world-class medical center.

Current UB facilities include the New York State Center of Excellence in Bioinformatics and Life Sciences (COE) which houses researchers from several UB health sciences departments and UB’s Center for Computational Research and Center for Advanced Biomedical and Bioengineering Technology. Also, the Research Institute on Additions (RIA) in Downtown Campus houses UB’s center for the study of alcohol and substance abuse prevention and treatment, and related issues. A new addition to the campus is the UB Clinical and Transitional Research Center (CTRC) and Biosciences Incubator. This facility was developed in collaboration with Kaleida Health as a single structure housing both UB functions and Kaleida’s new Global Vascular Institute and provides a model for future collaborative ventures downtown. At the southern edge of the campus, UB has recently completed the Downtown Gateway building which, combined with the existing M. Wile building, provides community educational services, job training, and employment placement services.

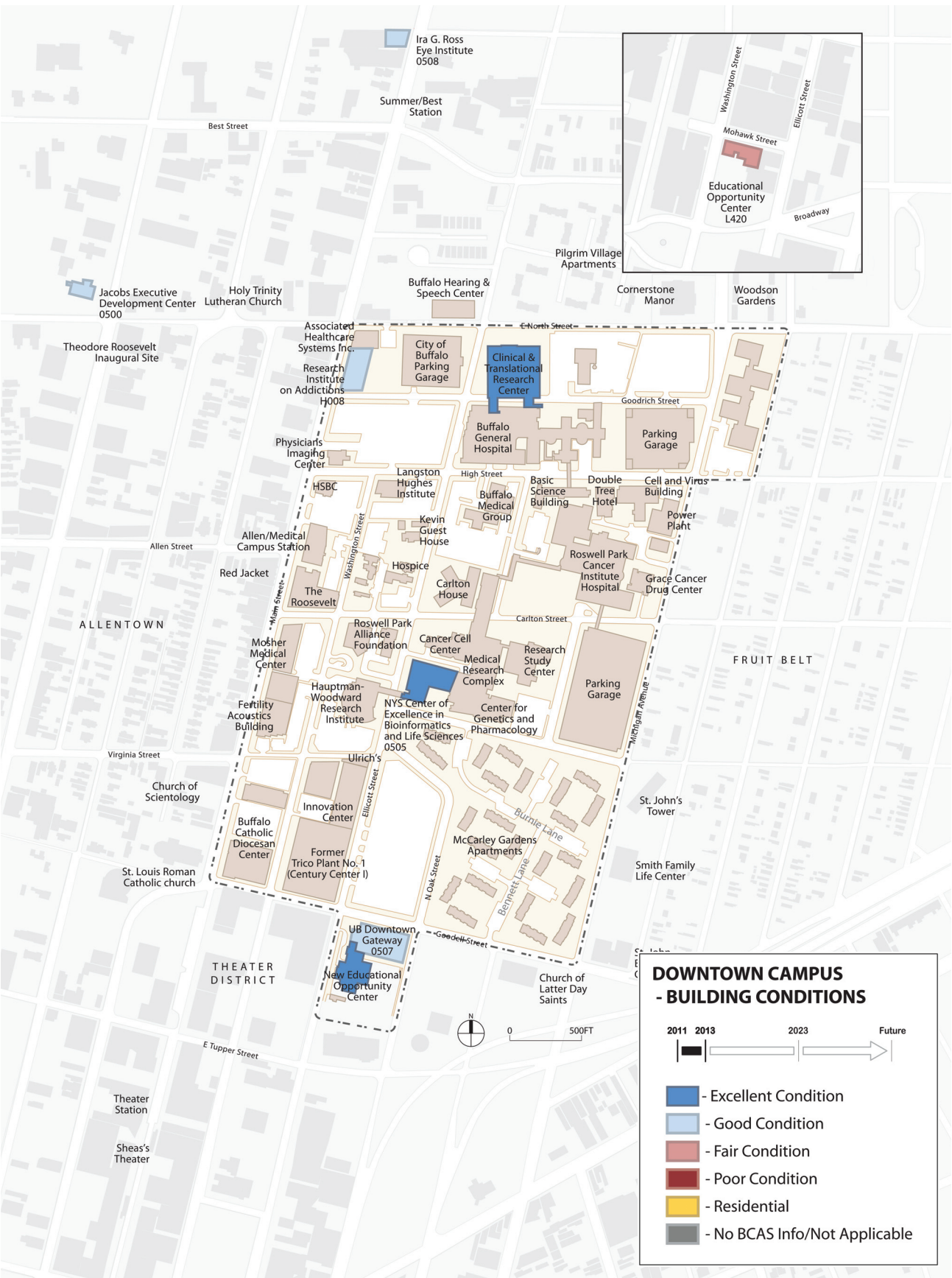


Figure C-69: Downtown Building Conditions Diagram.

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DESIGN PRINCIPLES

The design strategy was developed from a careful analysis of existing conditions, future uses, and goals set out by UB for Downtown Campus. Through a series of work-sessions with UB, several key design principles were identified as drivers for design options:

- Maintain critical mass of medical school in first stage move
- Maximize adjacencies to partner institutions to promote collaboration and efficiency
- Organize buildings around active outdoor spaces
- Prioritize development of entrances along Ellicott Street
- Reflect urban scale and density in land use
- Respect context
- Reinforce the BNMC Plan

DESIGN APPROACH

Rather than being limited to any particular site or sites, the design principles are intended to guide a new level of collaborative planning with all BNMC partners seeking to develop on the campus as a whole. Together, these principles constitute a cohesive vision for the campus that will facilitate interdisciplinary collaboration, connect the campus to its neighbors, and enhance its physical identity. Designed as a landscaped campus street lined with institutional buildings, Ellicott Street should be the “common address” for the entire campus. Away from Ellicott Street, new development should be programmed and scaled to create a transition between medical campus and surrounding neighborhoods. Office and residential uses should sit atop retail, community space, and other active ground floor uses. Consistent street walls and the extension of the street grid into the campus would integrate the campus into the area’s urban fabric, support pedestrian traffic, and simplify wayfinding. New pedestrian gateways at Allen and High streets and opportunities for a major new park along a restored Virginia Street would provide neighborhood amenities, improve pedestrian access to transit, and help tie Allentown and the Fruit Belt together across the campus. Buildings organized around outdoor space help establish a collegial atmosphere and provide places for gathering, interaction, and repose as well as forming interrelationships between facilities.

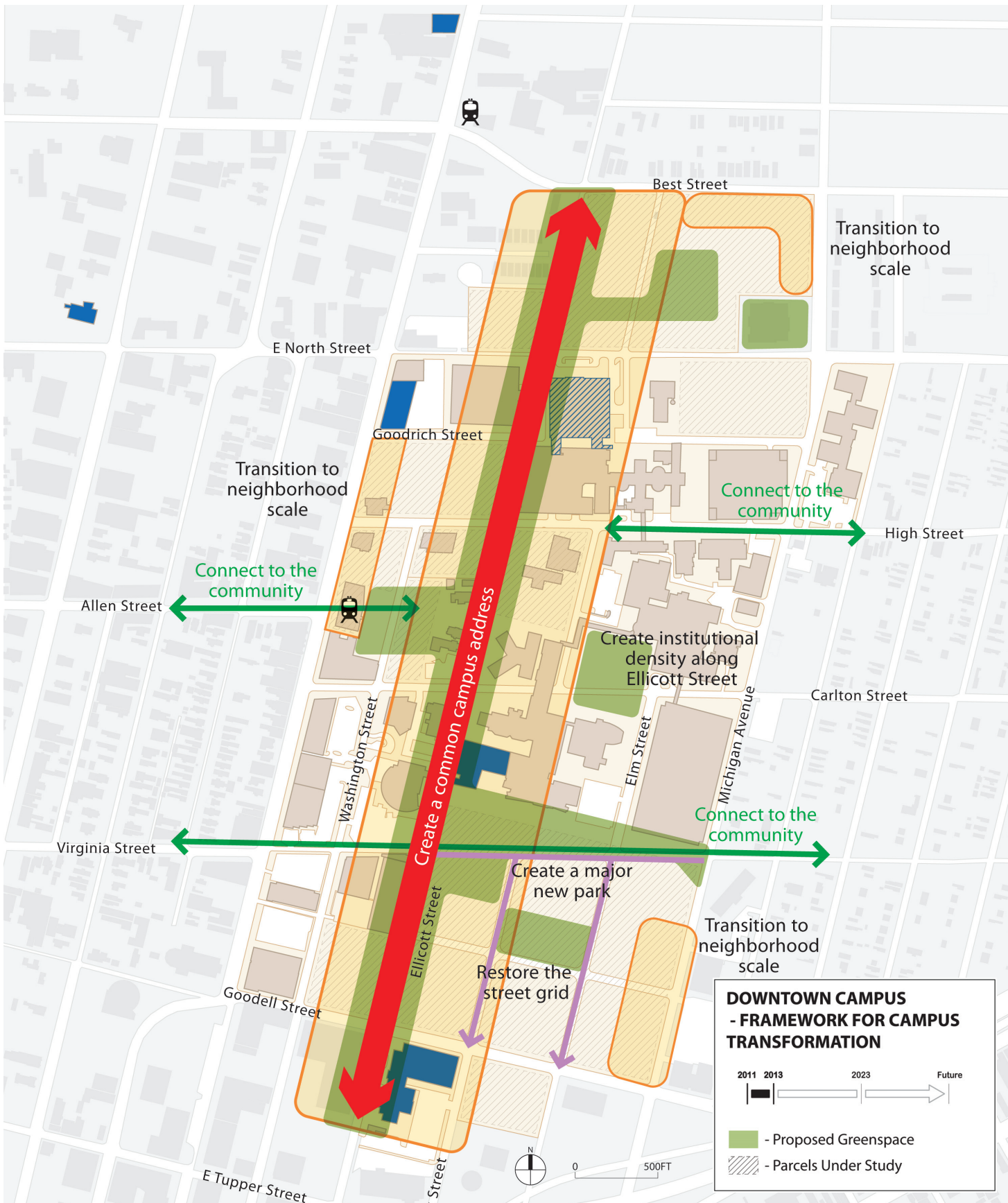


Figure C-70: Framework for Downtown Campus Transformation Diagram.

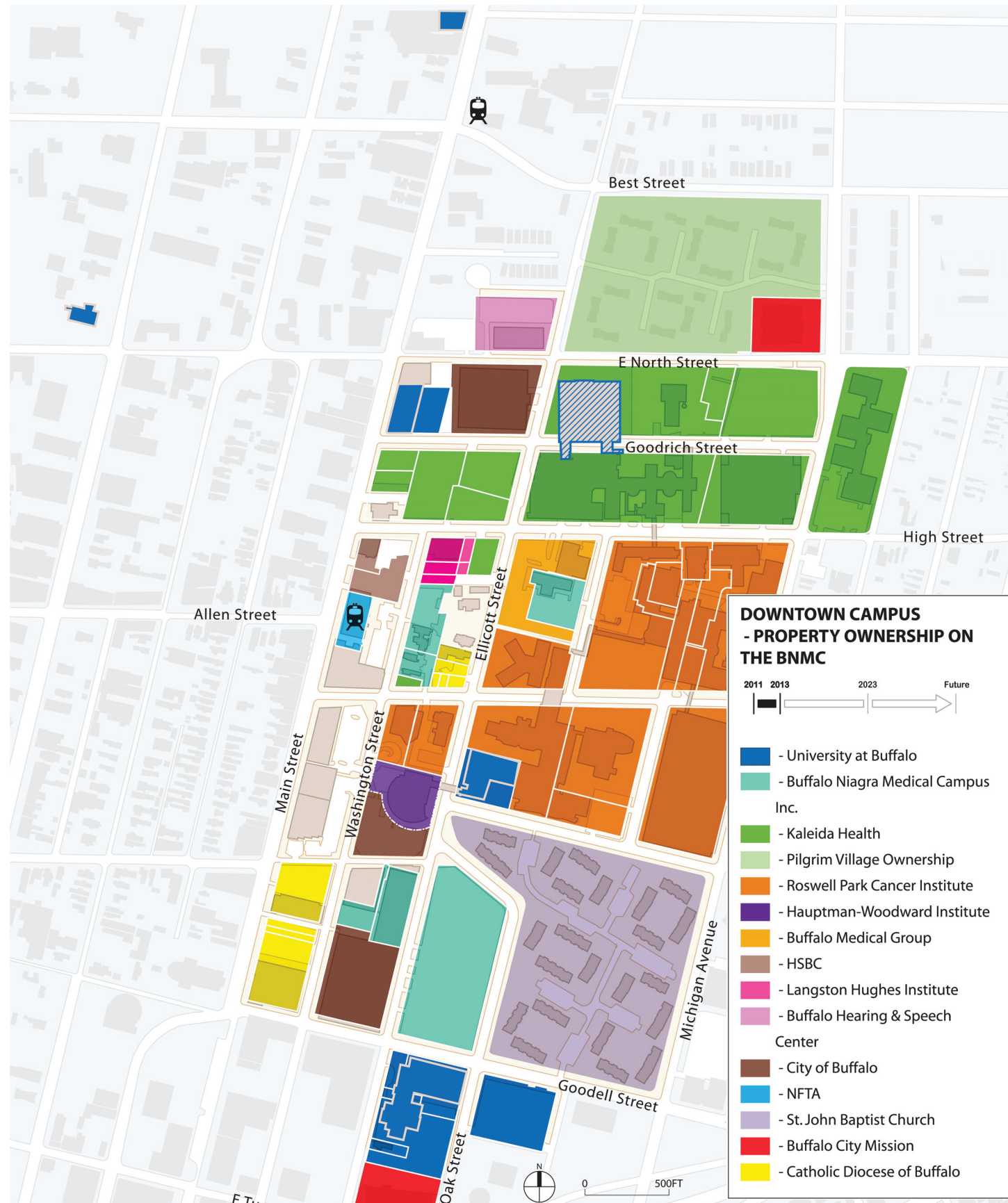


Figure C-71: Downtown Property Ownership on BNMC Diagram.

PROPERTY ACQUISITION

UB owns four parcels on the medical campus: the RIA at Main and Goodrich streets, UB's New York State Center for Excellence in Bioinformatics and Life Sciences (COE) at Ellicott and Virginia streets, and two properties south of Goodell Street. In addition to the GVI/CTRC/Biosciences Incubator on Kaleida property, UB has developed the UB Downtown Gateway. This facility will consist of two interconnected buildings on the southern edge of the BNMC, the historic daylight factory building designed for the M. Wile Company, renovated to house many of UB's civic engagement programs and a new Educational Opportunity Center (EOC) to the south, scheduled for completion in 2012. Together, these buildings, joined by a new atrium, will provide a "front door" to Downtown Campus from the rest of downtown Buffalo.

These existing sites, even if they were redeveloped, are not adequately sized to accommodate the future growth of UB in the downtown campus. Therefore, it is necessary that UB acquire additional property for expansion, whether done so independently or in collaboration with partner institutions. In order to minimize the total footprint required to grow new facilities for UB's downtown campus, the university will pursue infill development of vacant sites and strategies such as air rights purchases and the "stacking" of UB spaces atop partner facilities. However, the accommodation of large health sciences facilities and the creation of a cohesive campus environment – necessary to achieve the full potential of the Academic Health Center – will also require demolition and adaptive re-use of some existing properties.

Four siting options were examined for their redevelopment potential in separate design options. Each of these properties or group of properties presents opportunities for all involved, allowing current residents to trade up to better housing, and surrounding neighborhoods to trade up to a stronger base of mixed-use revitalization.

[C. DOWNTOWN CAMPUS]

BURNIE C. MCCARLEY GARDENS (PARCEL 4)

This affordable housing complex, constructed in 1978 by St. John Baptist Church occupies 15 acres in the southeast corner of the medical campus. UB has been in negotiations with St. John Baptist Church to purchase the property located strategically adjacent to the UB Downtown Gateway. As a sizable tract of land, this site offers flexibility for UB to cluster health sciences together with the added benefit of possible public/private development. Being situated at the southern end of the campus, remote from Kaleida Health presents a clear disadvantage to the McCarley Gardens site from the standpoint of maximizing connections and collaboration. The site’s size, visibility and access from highway 33 make it ideal for a use that is associated with but not directly dependent upon the rest of the BNMC partnering institutions. UB currently has purchased an option to buy this site in the near future.

PILGRIM VILLAGE (PARCEL 1)

This 90-unit affordable housing complex, constructed in 1980 by a private developer, occupies more than 12 acres north of the medical campus. Kaleida Health has obtained an option to lease the property from a private development company. Cornerstone Manor, at the corner of Michigan Avenue and North Street would not be a part of this redevelopment. Its direct adjacency to Kaleida health, ample size, and adjacency to Summer-Best NFTA station presents the Pilgrim Village option as a very desirable site for UB development. Any possible use or acquisition would require an agreement with Kaleida as well as a transition plan for the existing residents. The Buffalo Hearing & Speech Center site at North and Ellicott Street should be considered along with this site in order to frame a north gateway to the BNMC campus.

BNMC PARKING LOT (PARCEL 10)

This site located between McCarley Gardens and Ellicott Street stands as a surface parking lot owned and controlled by the BNMC. Advantages for development of this site include its adjacency to Ellicott Street, its adjacency to the UB Gateway, and its lack of existing structures. Development of the site would add density and frontage along Ellicott Street. The site’s size would present difficulties for parking and its southern location has inherent disadvantages similar to those characteristic of the McCarley Gardens site. The Trico site currently owned by the city of Buffalo would become very important should the BNMC Parking Lot site be developed.

MAIN STREET – PHASE IV (PARCEL 2)

The initial site that was evaluated and became the front runner in Phase IV discussions, is the site bounded by Main, Ellicott, Goodrich, and High Streets and is owned by Kaleida Health. As an option Kaleida has considered developing the site in collaboration with a local developer for use as an outpatient facility for the Women’s and Children’s Hospital and as a medical office building. Alternatively, the site could be developed as a collaboration between UB and Kaleida in similar fashion as the combined CTRC and GVI building. This site has the distinct advantage of visibility along Main Street and adjacency to the Allen Street NFTA station.

MAIN STREET – PHASE V RECOMMENDATION (PARCEL 11 AND 12)

Subsequent development of this concept, based on discussions between UB and Kaleida Health, has evolved into a clearer site diagram that places the SMBS south of High Street, with an increased frontage onto Main Street. It is this “Main Street”concept that has been carried forward as the recommended plan for the Downtown Campus in 2023.

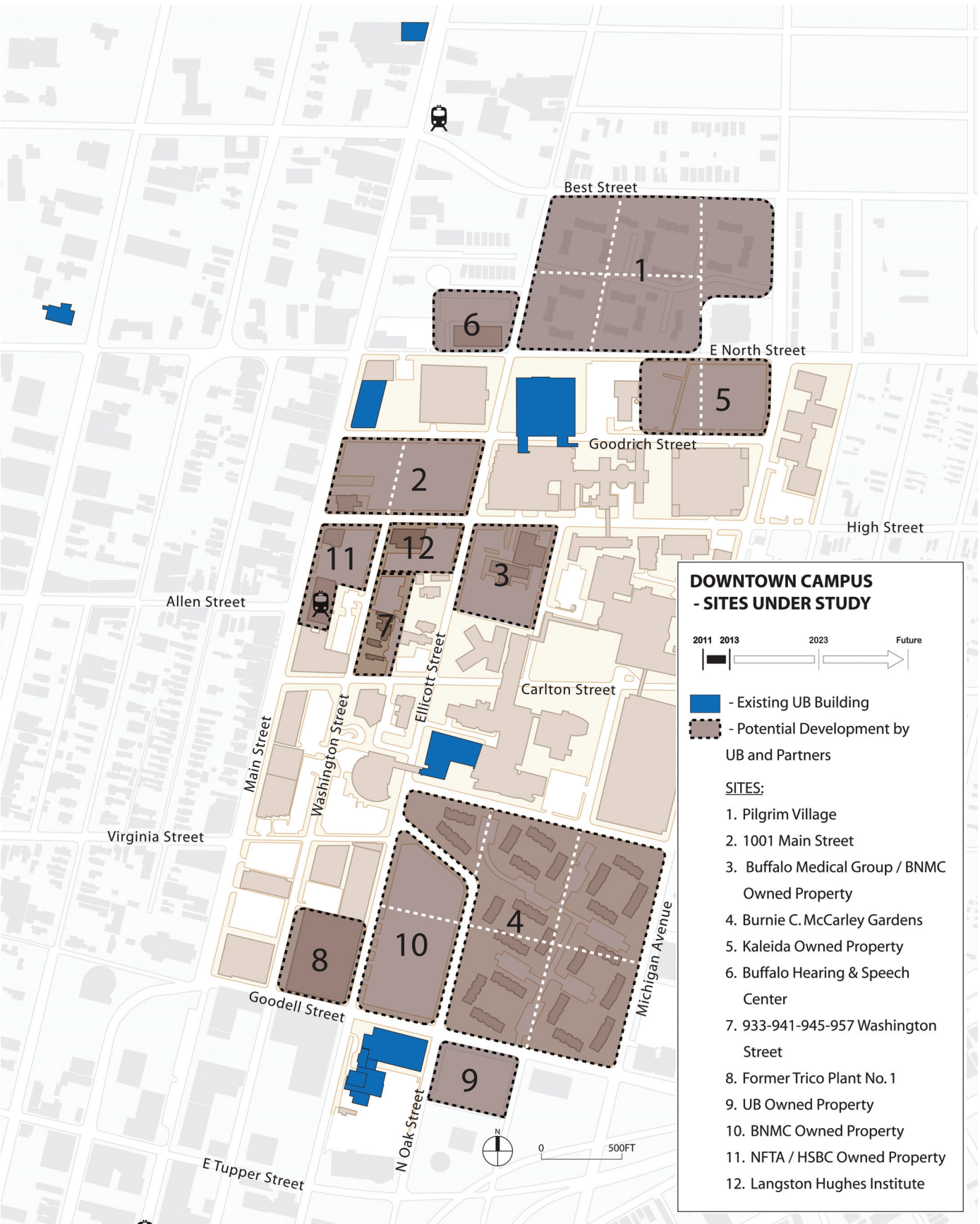


Figure C-72: Downtown Campus Sites Under Study Diagram.

COMPONENTS

UB’s move into Downtown Campus will infuse the campus with world-class clinical practices, medical education, and health sciences research. The components involved in this move provide the necessary ingredients to make a successful multi-disciplined medical campus. The first and most significant component is the School of Medicine and Biomedical Sciences. This move will happen in two stages, but is strategically staged to ensure uninterrupted operation of the school and to bring a critical mass downtown in a single move. This initial move will establish UB’s presence downtown and immediately strengthen connections with partner institutions. Following the medical school in future stages will be School of Nursing, School of Public Health and Health Professions, School of Dentistry, and School of Pharmacy.

The success of the Downtown Campus will also depend on thoughtful attention to the public realm. In cooperation with BNMC, the development of the campus must be formed with attractive public outdoor spaces that add character and vitality to the campus. As BNMC develops a linear park along Ellicott Street, it is important to also consider quads, parks, and streetscapes as important contributions to the community.

The Phase III report of this FMP did not project a need for student housing in the near future. Students and staff will largely be living off-campus in adjacent neighborhoods Allentown and the Fruit Belt or elsewhere. That said, providing live/work options for students and staff is an added benefit that may attract talent and is consistent with strategies for UB’s North and South Campuses. In this case, a public/private collaborative development option is a good alternative to traditional on-campus housing, leveraging alternative financing options. A mixed-use type of facility including built-to-suit student housing in addition to market valued housing and street front retail would provide a venue for students while also engaging the community. This type of mixed-use

development has been used to activate the streetscape of strategically placed parking structures to inject life into the development and prevent the perception of “walls of parking.”

Public/private development has become a popular option among colleges and universities enabling them to develop facilities that both meet programmatic needs and enhance the campus environment. The Downtown Campus presents unique opportunities for public/private development by virtue of its location downtown, its population base, and its present and future institutions. Having a collaborative relationship with BNMC also gives the opportunity for possible partnerships in bringing to fruition public/private developments that are mutually beneficial. Some possible public/private projects that have been considered are a research park, medical office buildings, hotel and conferencing center, and mixed-use student housing and retail.

The primary impetus for establishing a downtown medical campus for UB is the inherent benefits gained from enhanced collaboration with partner institutions like Kaleida Health and Roswell Park. In addition to the potential for new synergies, an added benefit to forming closer adjacencies is the potential for greater efficiencies through shared resources and facilities. Establishing a 21-st century health sciences library will be useful for all the institutions related to the downtown campus and help establish a center of academic and campus life. Other shared facilities such as meeting rooms, conferencing center, food service, and amenities such as fitness and recreation centers can all benefit from shared use as well as promote interaction between populations.

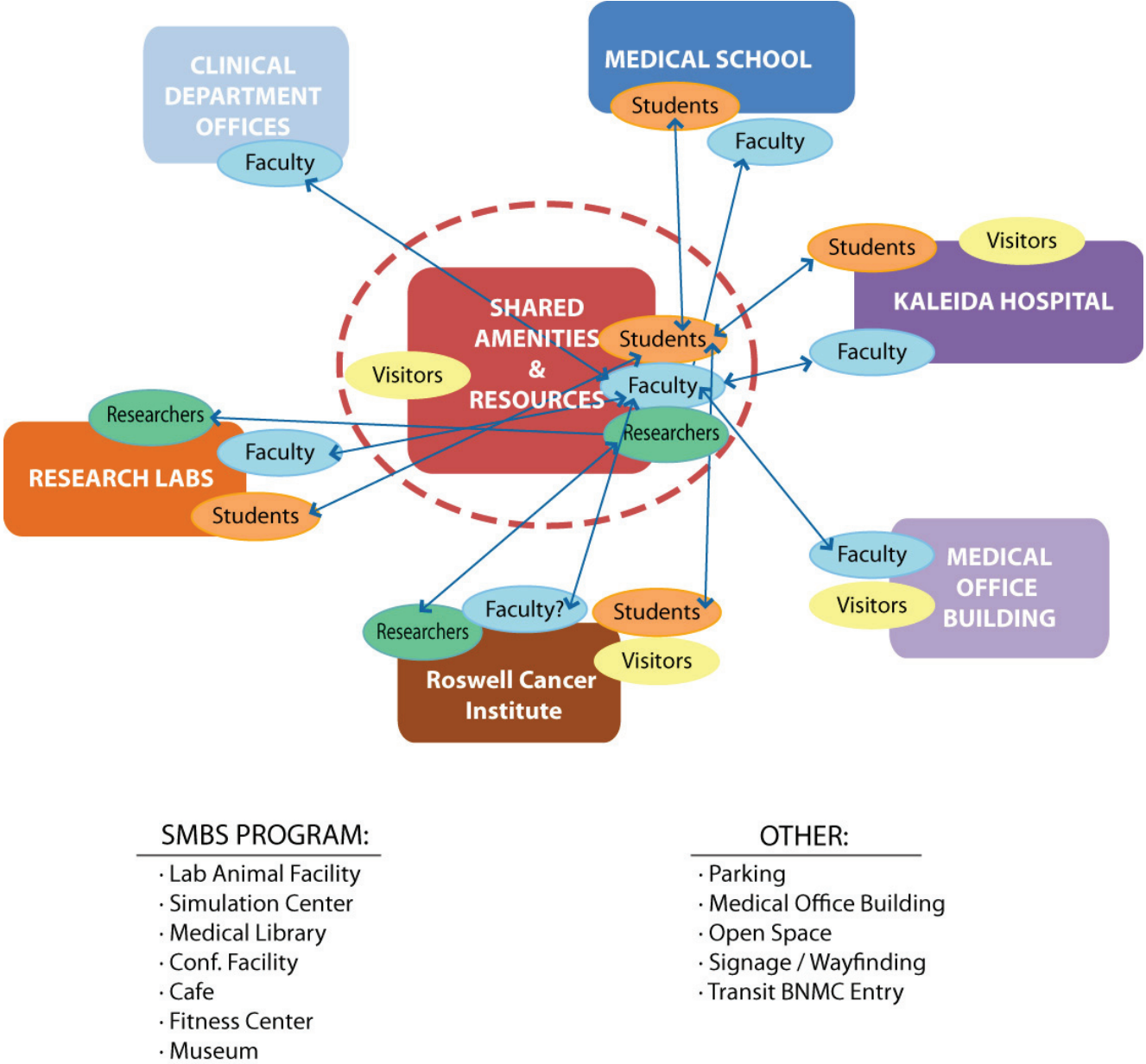


Figure C-73: Downtown Shared Opportunities with Partners.

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Figure C-74: CTRC under construction (<http://ubphoto.smugmug.com>).



Figure C-75: UB Downtown Gateway (<https://www.buffalo.edu>).

RECOMMENDED PLAN FOR SMBS

The Phase IV options explored several scenarios for locating the School of Medicine and Biomedical Sciences in the Downtown Campus. The most compelling solution places the medical school at a central location that will give UB a strong presence and provide maximum adjacencies for connectivity with partner institutions Kaleida Health and Roswell Park. This scheme was titled “1001 Main Street” and initially was seen as a collaborative development of the 1001 Main Street site with Kaleida Health that would house both the UB’s medical school and facilities for Kaleida’s Women and Children’s Hospital. This initial plan also anticipated the development of a medical office building on the site at the corner of High and Ellicott Streets.

Subsequent development of this concept, based on discussions between UB and Kaleida Health, has evolved into a clearer diagram that places the SMBS south of High Street, with an increased frontage onto Main Street. It is this “Main Street” concept that has been carried forward as the recommended plan for the Downtown Campus in 2023.

“MAIN STREET” DEVELOPMENT 2023

The location of the new SMBS is adjacent to Buffalo General Hospital, the new Global Vascular Institute (GVI), UB Clinical and Translational Research Center (CTRC) complex, and the future Kaleida Health Women’s and Children’s Hospital and the Medical Office Building (MOB). These facilities will all be physically connected, thereby creating a “coatless environment” for medical education, research and care. For the first time in Western New York, this will bring together the three components of patient care, medical education and bio-medical research in one physical location. This integrated program will place emphasis on patient outcomes, foster advancements in medical education and provide the setting for new breakthroughs in medical research.

The property bounded by High Street on the north, Allen Street Extension on the South, Main Street on

the West and Ellicott on the East, provides the ideal location for UB, not only in centralizing the school, but also by placing it with prominent presence adjacent to the Metro station and Main Street. The central location also provides increased opportunity for resources to be shared between partner institutions. Facilities such as a medical library, meeting, conference, or food service, can gain efficiency and usefulness if developed together in a collaborative fashion and can begin to be a “Heart of the Campus” for UB Downtown.

Phased Development

The new SMBS facility will be approximately 825,000 GSF. When the entire SMBS has been moved downtown, the total school assets will be over 1 million GSF. The school will be moved to the Downtown Campus in two phases.

Phase I

Will consist of roughly 520,000 GSF and will hold the dean’s functions, biomedical education, the basic sciences departmental space and most of their research and faculty. It is anticipated that this will be a seven story building fronting onto Main Street and will require the redevelopment of the NFTA Allen-Medical Campus Station, located at 929 Main Street, across from the eastern terminus of Allen Street. Phase I will require an integral Central Utility and Power Plant dedicated to the support of the SMBS.

Phase II

Will be approximately 305,000 GSF and will hold clinical department administrative space, additional biomedical education to accommodate growth, and research and faculty/staff offices for the remainder of the basic sciences departments and clinical translational research space. It is anticipated that the Phase II building will also be a seven story building.

A four story Parking Garage on the site bounded by North, Ellicott and Goodrich Streets will be shared the partners, and will accommodate approximately 2000 vehicles.

Preliminary SMBS Program

The Capital Planning Group at UB has conducted a departmental projection assessment, an analysis of the utilization of the existing SMBS buildings and together with departmental interviews, the program was generated.

The space program for the new SMBS is currently being developed with the following priorities in mind:

- Create a “front door” to the School of Medicine and Biomedical Sciences
- Emphasize student learning environment in both formal and informal settings
- Emphasize interdisciplinary collaboration among departments
- Create an environment which supports high level funded research

Based on the priorities listed above the following assumptions were developed:

- Learning and student spaces will foster collaboration and collegiality and will be considered an “Academic Commons”. Didactic and active learning will be centralized to emphasize the student experience.
- Class sizes will increase from 140 to 180 students. Didactic learning venues will accommodate one cohort or more.
- Educational space will be designed to be flexible so that these spaces can respond to changes in pedagogies and faculty and student needs.
- Core Areas (research support) will be shared appropriately among faculty and staff according to area of interest.
- Dean’s office suite and all of the space for dean’s functions will be considered part of the “front door” to the school and collaboration among these units will be encouraged.
- Basic sciences departments will be identified and interdepartmental research will be encouraged.

- Clinical sciences departments will be encouraged to use the buildings to create one school and break down silos in research and practice.
- Programmatic research space will be aligned thematically as opposed to departmentally to foster interdisciplinary and translational research.

The health sciences core curriculum will be integrated in the medical and biomedical sciences education. The pedagogy for the SMBS is a hybrid of the Organ Systems/ Integrated Medical Sciences and Problem Based/Case Study learning models. As such there is a need to accommodate didactic learning of larger class sizes (one cohort at a minimum) and small group learning environments for case study activity. There should be an integration of core Health Science curriculum. This should be a core curriculum across all schools so that early didactic courses can be taught to SMBS, Nursing, Pharmacy and others together. A very large 500 person auditorium would be needed for this to happen.

Active learning is at the heart of the biomedical education at UB. A simulation center and large gross anatomy suite will be an asset to medical students and the medical community at large. These will also be designed with flexibility to adjust to advancements in teaching. Computer labs for teaching and testing will be provided and designed with moveable partitions so that faculty have the flexibility to create one large computer lab to hold one cohort for testing and divide this space into several smaller rooms for teaching or independent student work.

The main Health Sciences Library will remain in Abbott Hall until the other Health Sciences schools move to the Downtown Campus. The new SMBS building will have a library, according to Liaison Committee on Medical Education (LCME) requirements. This will be a valuable resource for faculty with open work space and individual study rooms.

Fostering excellence in faculty research is one of the highest priorities of the University. Faculty members

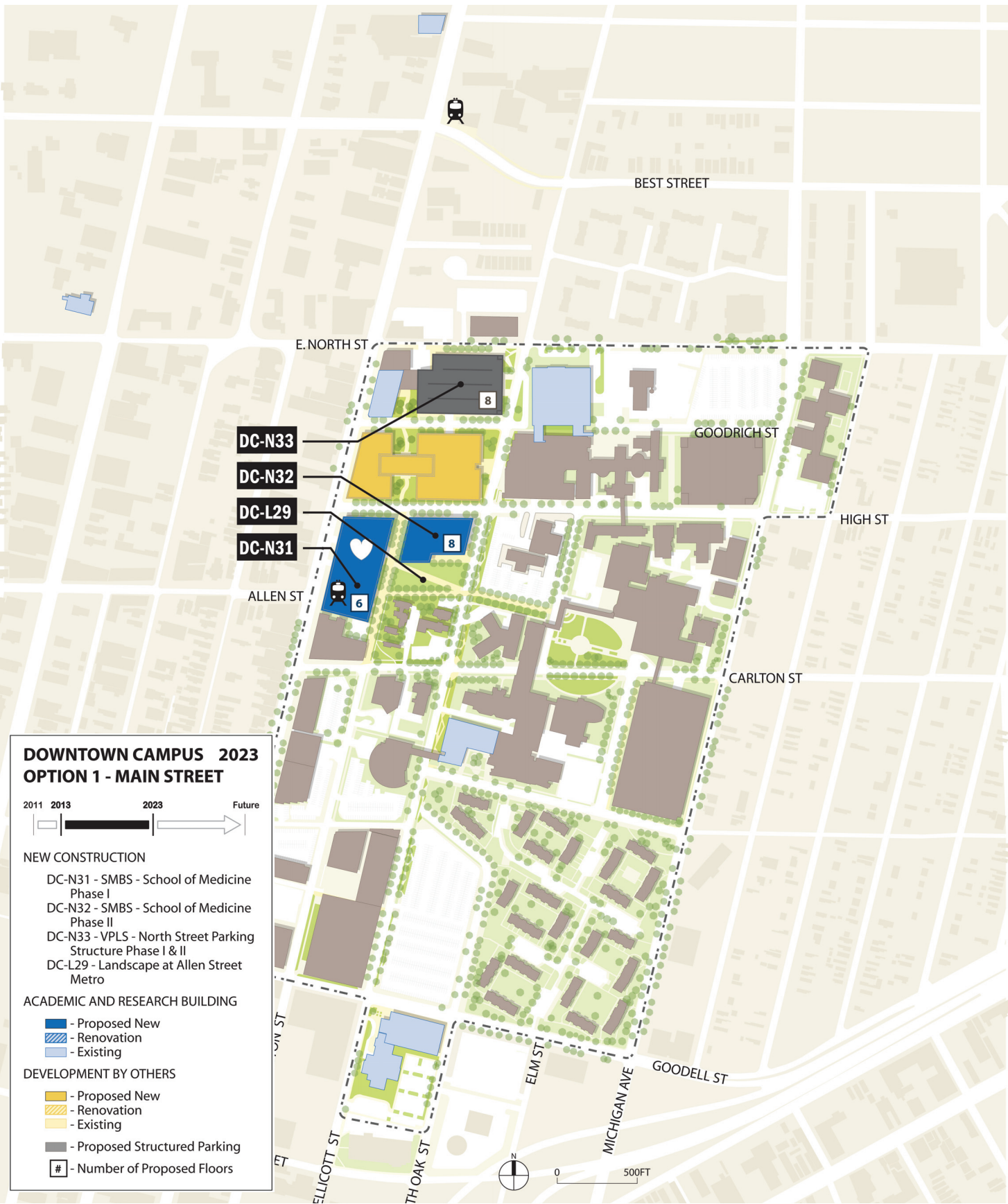


Figure C-76: 2023 Downtown Option 1 Diagram.

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Figure C-78: Hauptman-Woodward Medical Research Institute (<http://ubphoto.smugmug.com>).

will be encouraged to collaborate with their peers by areas of interest. The new research labs will be designed to accommodate this. They will also be designed to provide the institution with the flexibility to adjust research space assignments according to faculty need and changes in the research. Core or support areas will be shared to further encourage collaboration. The primary Lab Animal Facilities (LAF) will be part of Phase II. A 12,000 NSF LAF/BSL3 space will be provided to support research in Phase I. The existing LAF in the Biomedical Education Building will remain open until Phase II is complete. The existing Biomedical Research Building will house some of the SMBS faculty until Phase II is complete.

Other planning assumptions were as follows:

- One office per faculty
- One office-sized space per staff member
- One research module per faculty member
- Additional research modules will be available and assigned by the dean according to need and funding



Figure C-79: Research Collaboration (<http://ubphoto.smugmug.com>).

FINAL BUILD OUT

Beyond the 2023 planning period, the future health sciences schools will occupy the McCarley Gardens site, which UB currently has an option to purchase. With the available acreage, public/private development is also available for possible research or mixed-use facilities. Due to its direct relationship with Kaleida Health’s new Skilled Nursing Facility at Goodrich and Michigan the plan proposes the optimum site for the School of Nursing would be at the Buffalo Hearing & Speech Center site at North and Ellicott. The Pilgrim Village site would be available for development by others, such as Kaleida Health, or development as a research park by UB in collaboration with BNMC. While placing UB’s Schools of Public Health, Dentistry and Pharmacy at the McCarley Gardens site helps concentrate UB at the southern end of campus by the UB Gateway Center, the obvious disadvantage is that the later health sciences moves will be somewhat distant to the Medical School and other partnering institutions.

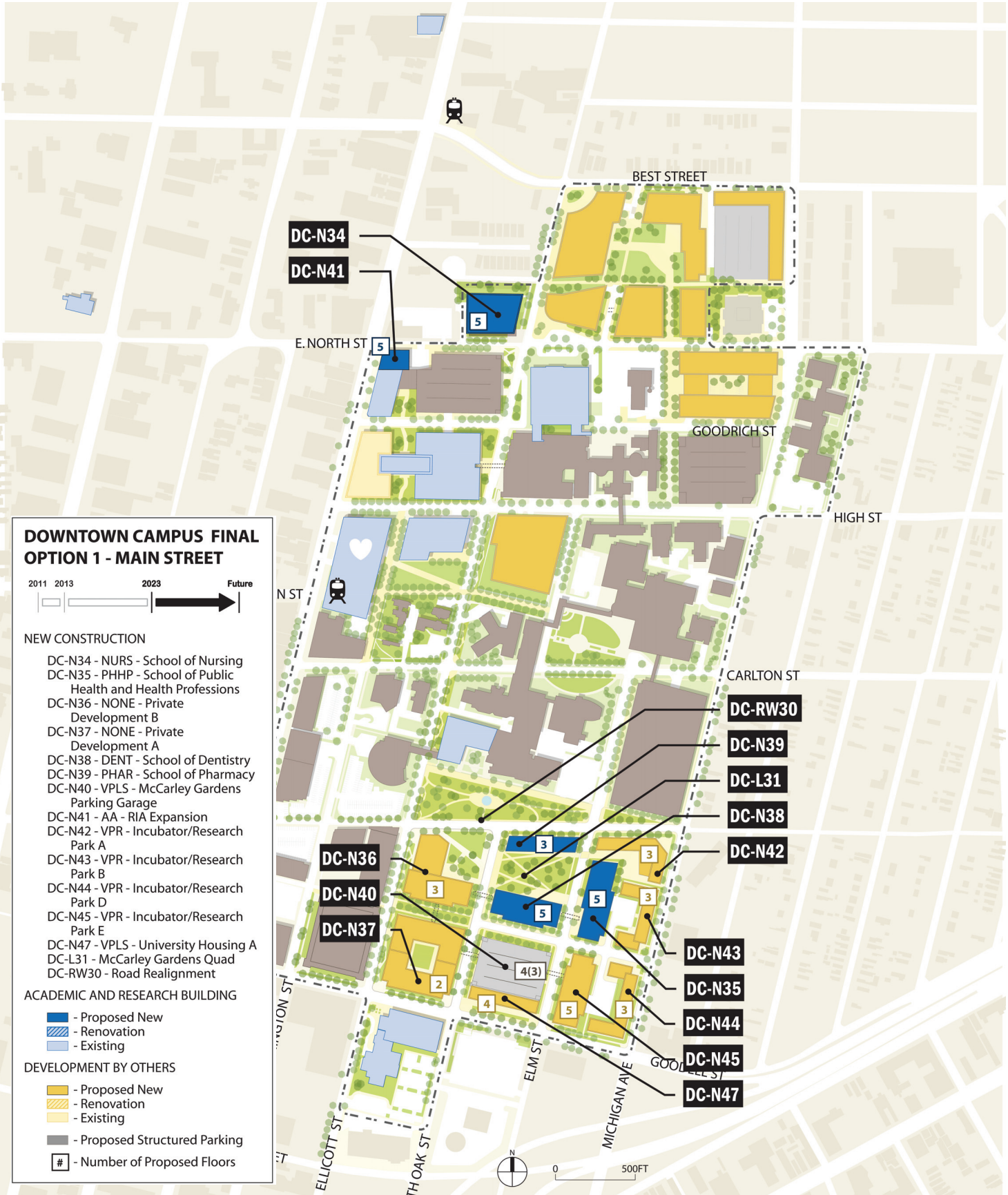


Figure C-77: Final Buildout Downtown Option 1 Main Street Diagram.

PUBLIC/PRIVATE DEVELOPMENT

There are several factors related to Downtown Campus that make it ideal for development through Public/Private funding models. Having collaborative partners at BNMC gives opportunity to join resources to produce facilities that are mutually beneficial. Much as UB’s CTRC and Kaleida’s Global Vascular Institute were developed as a shared facility, other parts of Downtown Campus can be developed in close collaboration utilizing new and innovative financial models. The vibrant downtown environment also naturally attracts private developer interest. Projects such as a new medical office building can be developed with investors to create speculative office space. Additionally, developers in conjunction with hotel operators can bring hotel and conferencing into Downtown Campus serving both the medical campus and City of Buffalo. Finally, the availability of land and the existence of world class research facilities such as Roswell Park provide a natural opportunity to develop a research park through as a collaboration between UB, partner institutions, and private developers.

COMMUNITY ENGAGEMENT

The FMP was developed to be compatible with the BNMC plan as well as the *Four Neighborhoods, One Community* neighborhood plan developed by the City of Buffalo. UB understands its relationship with the community to be important to its mission as a public institution. In addition to providing educational programs and community uses, UB is cognizant of how significant an impact the development of each of its campus has on the greater context of Buffalo and adjacent neighborhoods. As such, the FMP considers multiple variables to control and direct growth of the Downtown Campus in order to benefit all parties involved. Specific strategies UB is prepared to take in engaging the community include:

- Property acquisition
- Responsible land use
- Urban design
- Streetscape improvements

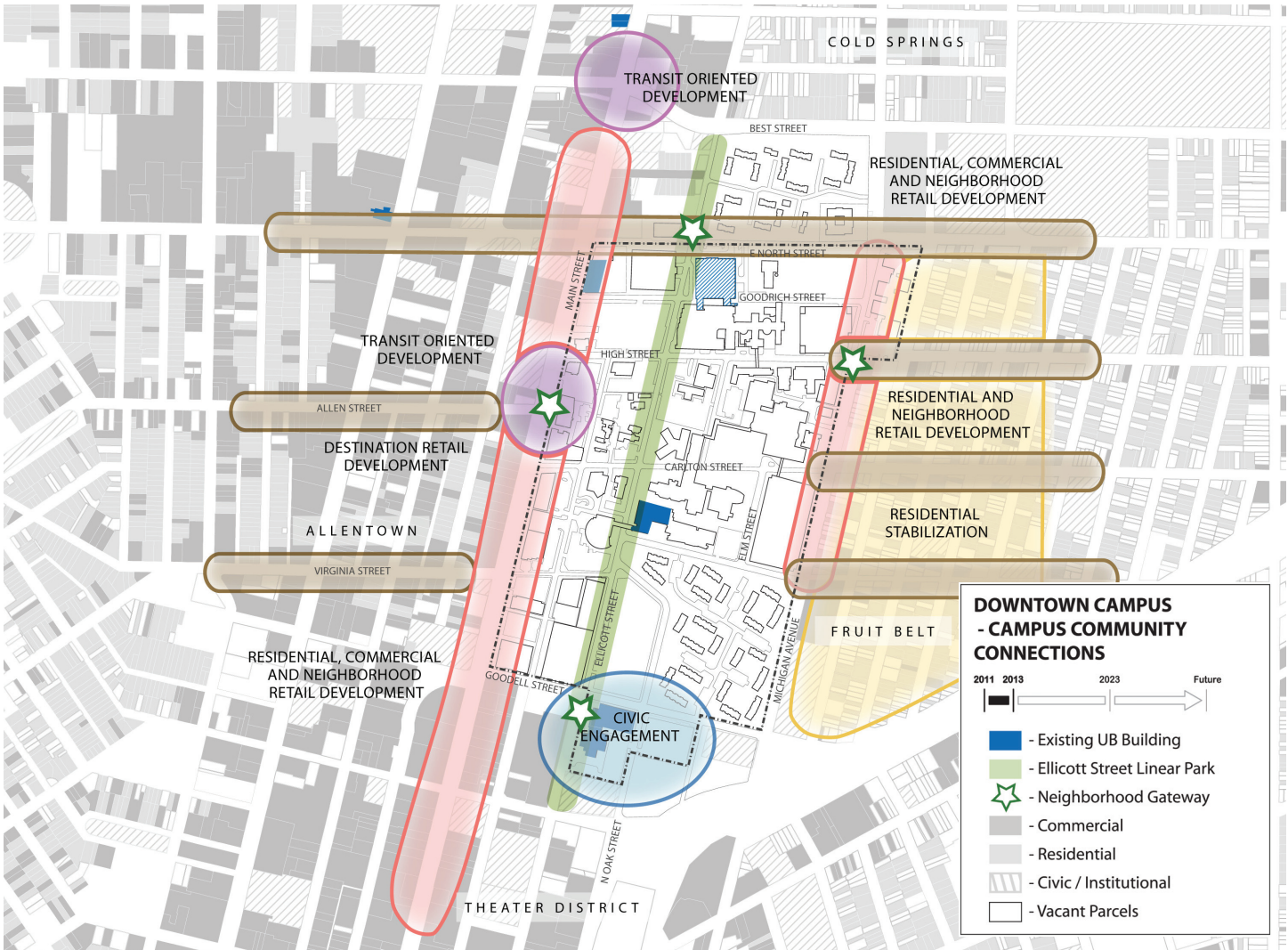


Figure C-80: Downtown Campus Community Connections (Building UB, 206).

- Retail and residential stabilization
- Collaborative planning
- Workforce development

For Allentown, the FMP prioritizes mixed-use development along Main Street, supporting neighborhood retail development with streetscape improvements. A neighborhood gateway between the medical campus and Allentown at the intersection of Main and Allen streets will be created to provide stable tenants for storefronts and redevelop the Metro Rail station along with a pedestrian connection to Ellicott Street. For the Fruit Belt, mixed-use development along High Street will be prioritized, with the adaptive re-use of existing brick buildings, construction of new

buildings with street level retail and housing above. A continuous street wall of civic, retail, residential, and medical office buildings will be developed along Michigan Avenue at a scale and level of sensitivity to design that will provide an appropriate transition between the large institutional structures of the Medical Campus and the small-scale residences of the Fruit Belt. A neighborhood gateway between the campus and neighborhood will be created at High Street with new buildings programmed with active street edges. Pedestrian and transit connections between the Fruit Belt, medical campus, and Metro station will expand neighborhood access to local and regional employment opportunities.

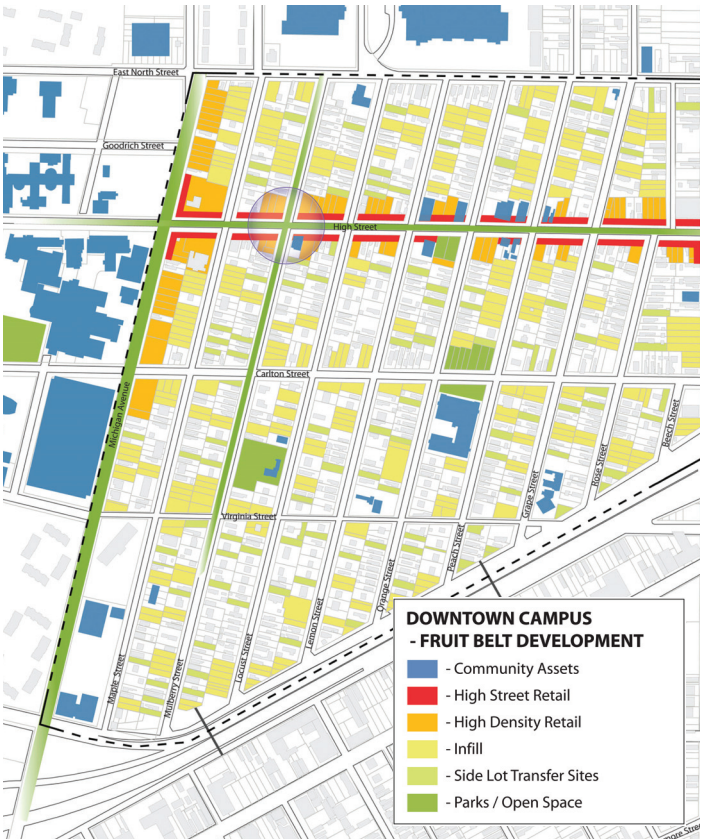


Figure C-81: Fruit Belt Development Framework Plan (Building UB, 194).

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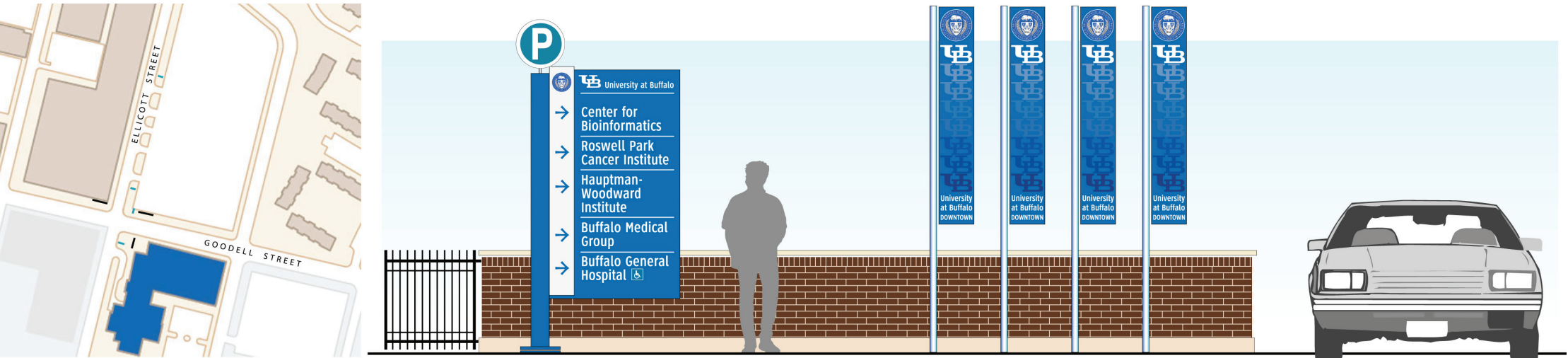


Figure C-82: Downtown Wayfinding Banners.



Figure C-83: Downtown Campus Approaches (Building UB, 211).

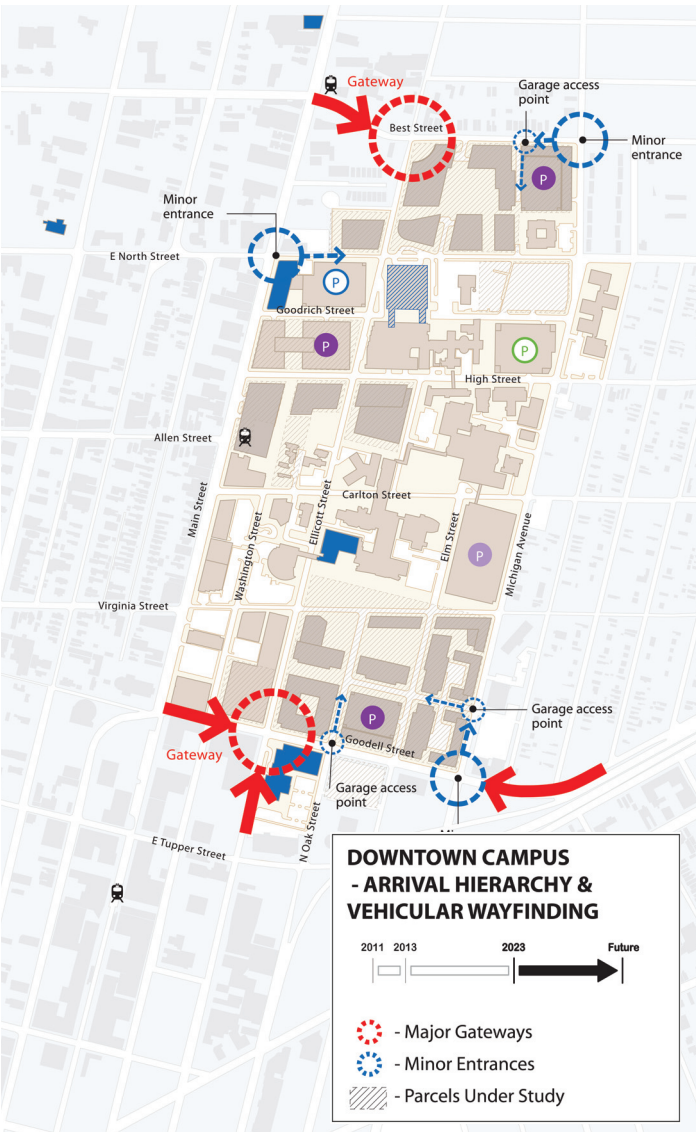


Figure C-84: Downtown Campus Arrival Hierarchy.

WAYFINDING

In order to achieve recognition of a new campus boulevard on Ellicott Street., and creation of gateways at north and south ends, wayfinding will rely heavily on the use of pole signs, banners, flags and other freestanding elements where the scale of the downtown environment may not allow erection of architectural walls and larger masonry features.

The primary gateways at Ellicott and Best Street., and Ellicott and Goodell Street. should employ vertical gestures to create a sense of place, with versions of a similar nature scaled down to fit secondary entryways on Best Street. and North Street. These secondary graphic vehicles may also serve to mark the path to and from the transit station by providing visibility from a greater distance.

The extension of the campus hardscape vernacular, such as benches, bollards, lamp posts, etc., to these locations will further serve to differentiate the intersections and announce arrival.

Pole signs and freestanding directional signs should be designed to express a ‘banner appearance’ while employing permanent materials and colors to serve as low maintenance solutions. Landscaping elements such as fencing and thorned shrubs at these locations will serve to enhance and protect signs and graphics from vandalism and graffiti.

To provide reassurance to visitors and keep traffic moving in and through urban campus environs, the parking component should be included in listings of directional messages as a part of larger displays. Where parking designation is needed at garage access points, the universal “P” should be sized and placed to coordinate with other messages, rather than adding additional signs. This “P” should be a grand scale without appearing obtrusive, and although the sign should serve as wayfinding landmarks for arriving and departing visitors, the signs should be scaled to avoid competition with vehicular and pedestrian directional sign features.

A key to the success of exterior signs and graphics on UB buildings within the Downtown Campus will be relating these facilities to the larger hospital complex on websites and printed media bringing visitors to the greater BNMC campus. Gateway entrances are a perfect opportunity to establish a connection between UB and other partnering institutions.

Directions to ‘UB Bioinformatics’ should fit within the existing listings on Main Street and Goodell at Ellicott streets. As a general rule fitting the names of UB facilities to the larger network of existing and proposed directional signs around and within the Downtown Campus will serve better than separate sign installations.

UB’s existing Research Institute on Addictions is in need of a larger panel or set of individual letters to provide better visibility on Main Street. The Gateway Building is also in need of more prominent identity elements. Banners would be a cost-effective way to achieve heightened presence while enhancing the overall streetscape.

CIRCULATION

PEDESTRIANS AND BICYCLES

Downtown Campus is located within the historic street and sidewalk grid of downtown Buffalo. Because of this, the infrastructure for good pedestrian circulation, such as sidewalks, traffic signals with pedestrian crossing phases, and crosswalks, already exists. Improving the pedestrian experience within this FMP, then, focuses on creating attractive and safe environments as the Downtown Campus shifts and grows. In particular, Ellicott Street is a key north-south spine through the center of Downtown Campus and should be treated as a primary pedestrian route. Main Street is also a primary north-south route, but because it bounds the campus only on the west side, it becomes an important link back into the adjacent community. In the long-term future, the realignment of Virginia Street, along with the north-south extensions of Oak and Elm Streets through the McCarley Gardens site, will further simplify pedestrian (and vehicular) circulation. The pedestrian gateways at Allen Street and High Street, as previously discussed, provide key linkages into the adjoining neighborhoods.

According to the 2010 Bicycle Route Guide produced by the Greater Buffalo-Niagara Regional Transportation Council, there are no signed bike routes in downtown Buffalo. Contrary to what is shown in UB2020, there are also no existing designated bike routes and, in fact, all of Main Street, including between Goodell and East North Streets, is depicted on the map as “Caution Advised.” To provide better cycling access to and within Downtown Campus, it will be necessary to work closely with the City of Buffalo to create safe and signed bikeways. UB2020 shows a plan for future share-the-road bicycle routes, and these should be implemented with the FMP, if possible, and include “sharrow” markings on-street, as well as signage. This FMP makes an important change to the UB2020 bicycling plan by removing the shared lane on Main Street. Bicycling on this road is unsafe and unnecessary with the addition of Ellicott Street. Additionally, bicycle racks should be installed at key building sites and within any parking structures.

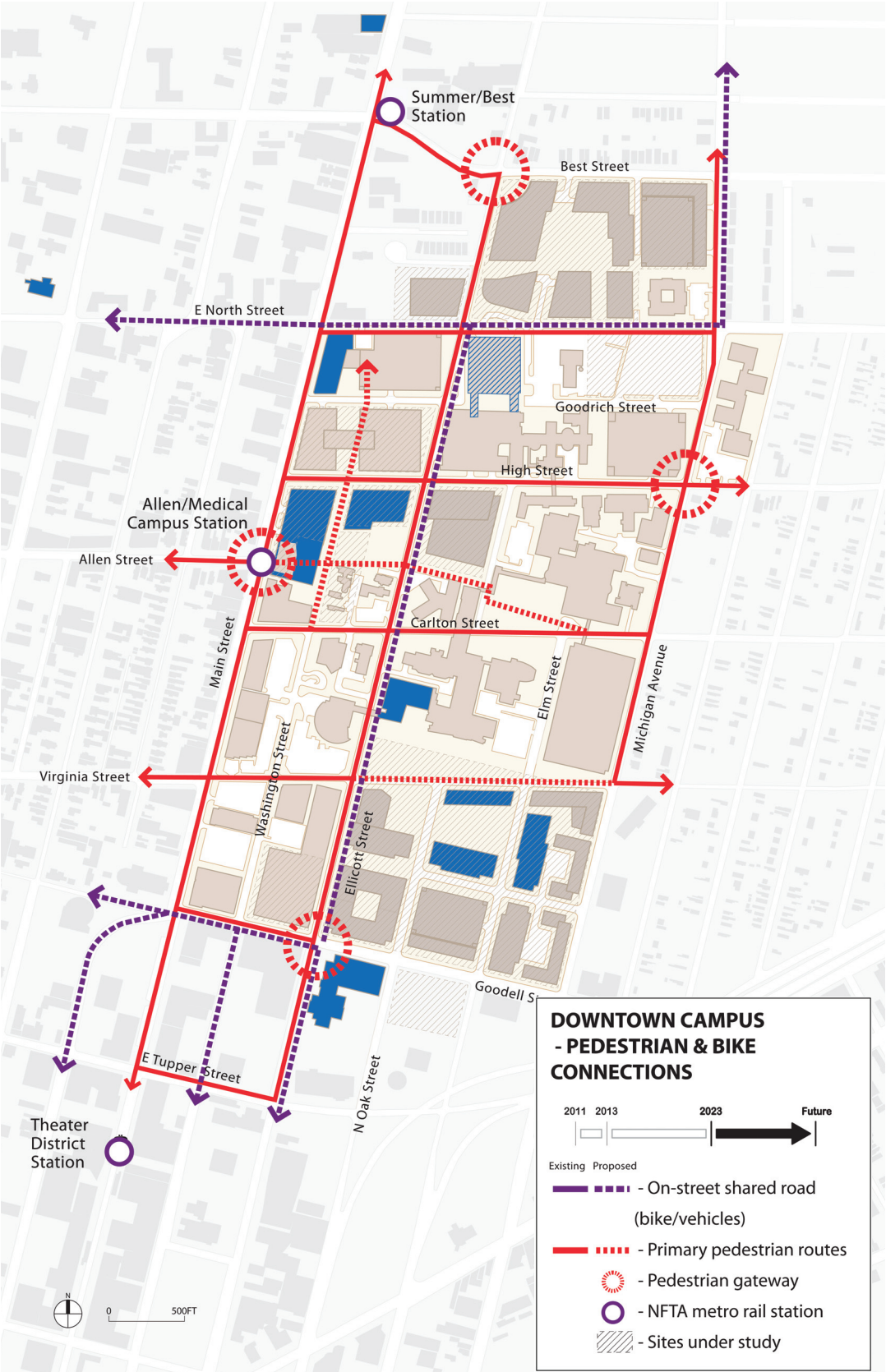


Figure C-85: Downtown Pedestrian and Bicycle Connections Diagram.

[C. DOWNTOWN CAMPUS]

TRANSIT

Currently, the campus is well served by public transportation through the Allen/Medical Campus NFTA rail station as well as UB shuttles. As the campus develops under this FMP, the UB bus routes would be adjusted to meet the demand of new buildings. In addition, the pedestrian connections to the bus stops and transit stations would be improved. Although it may be a more long-term project, formalizing the pedestrian connection from the east side of the Allen/ Medical Campus Station to connect, midblock, back to Washington Street and Ellicott Street would complete an important connection between the campus and transit.

VEHICULAR CIRCULATION

As part of this FMP, no major vehicular circulation changes are anticipated. In the full build out of UB2020, the realignment of Virginia Street and the extension of Oak and Elm Streets will improve the flow of vehicles and pedestrians throughout the campus. In the shorter term, however, vehicular circulation would be best enhanced through definitive wayfinding to parking facilities and specific campus buildings. This would help to minimize the need for drivers to circle the campus which creates additional congestion.

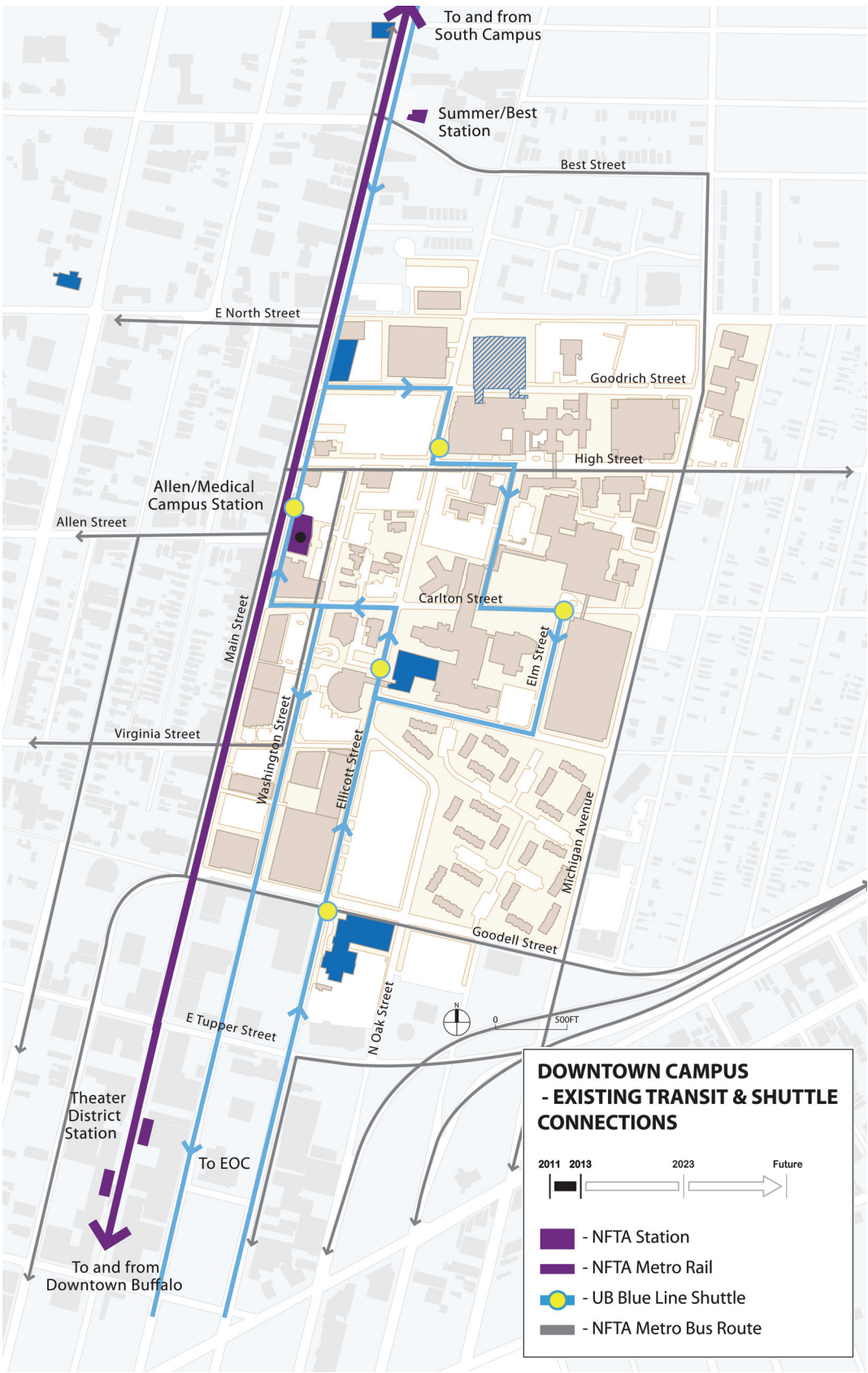


Figure C-86: Downtown Existing Transit & Shuttle Connections.

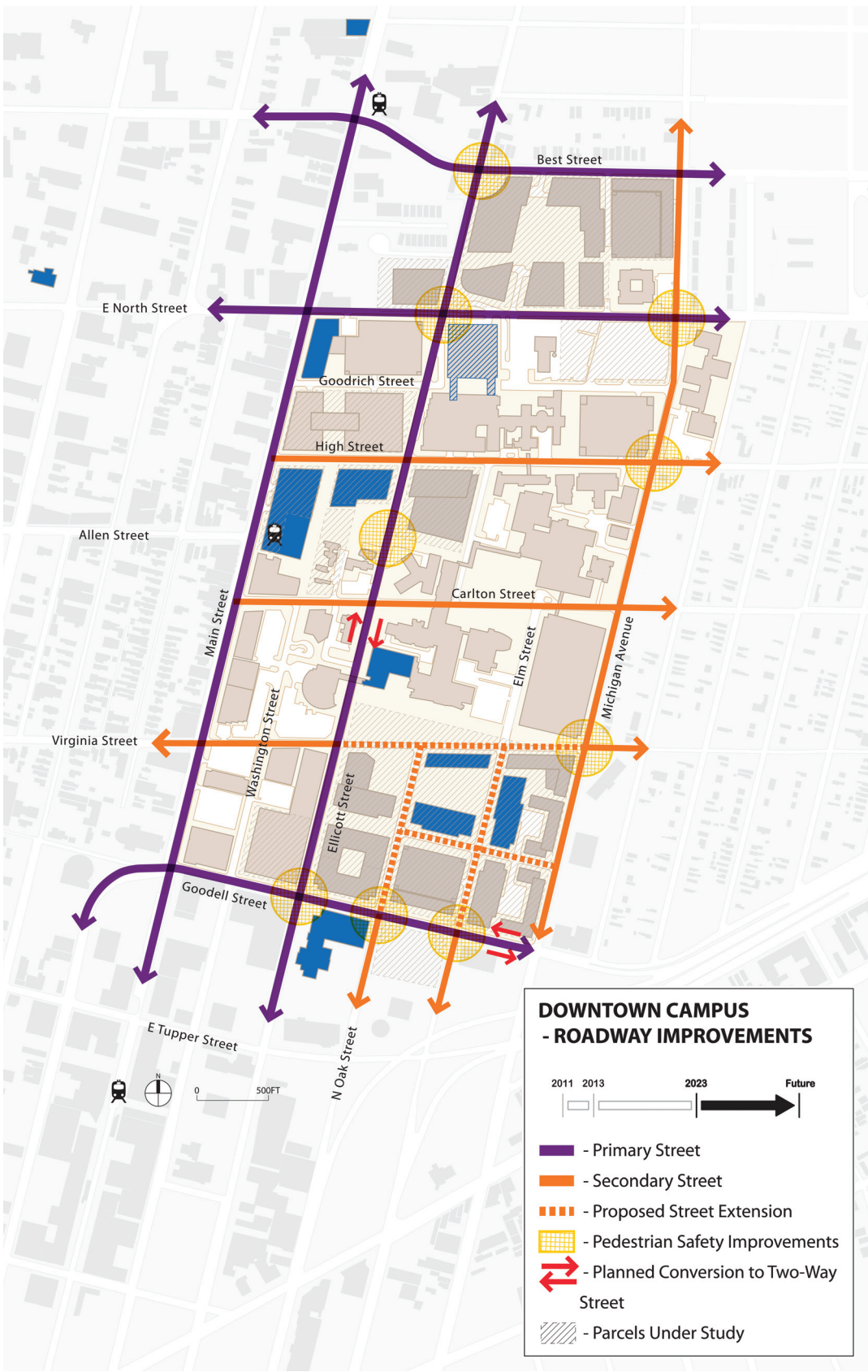


Figure C-87: Downtown Roadway Improvements.

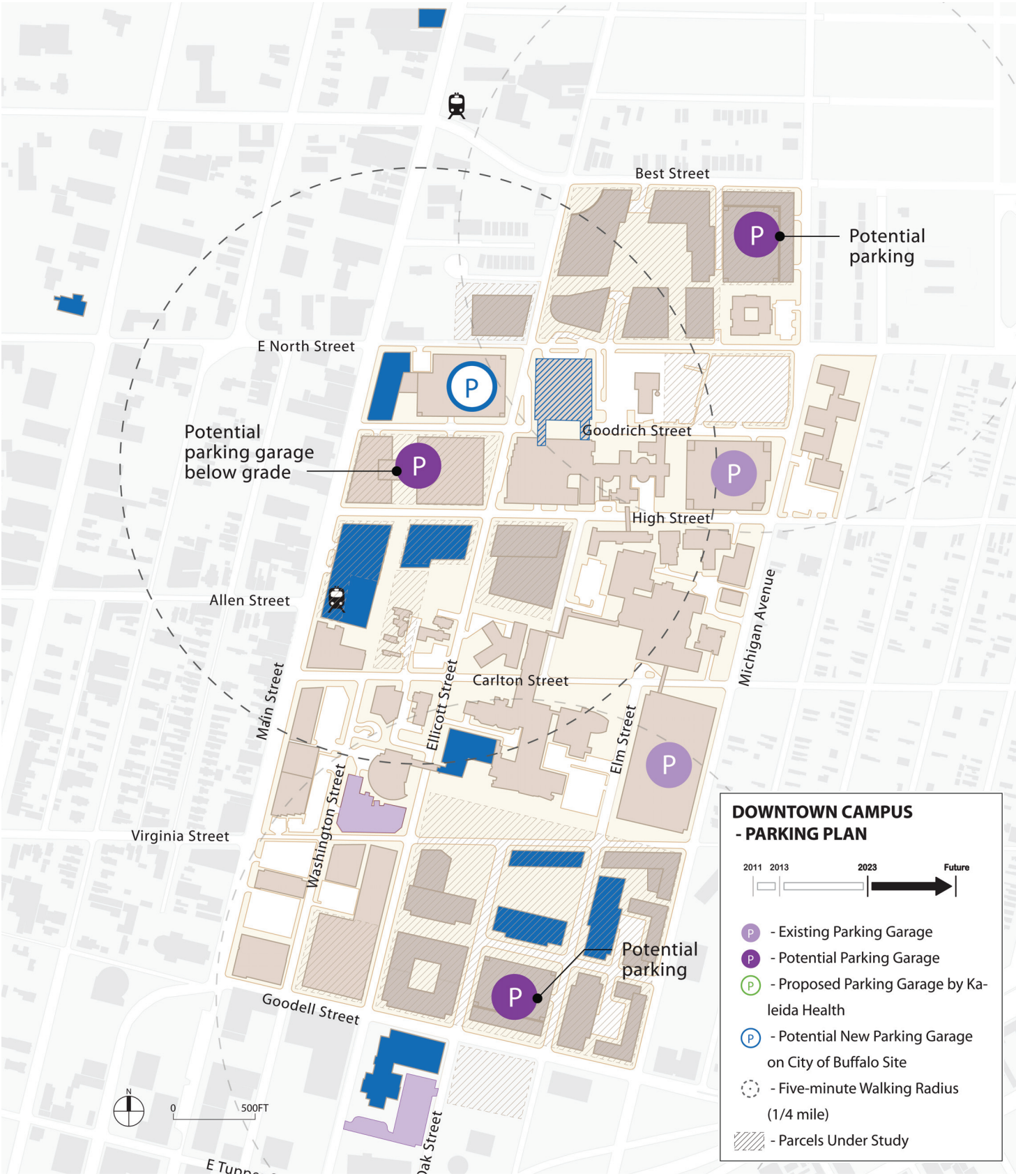


Figure C-88: Downtown Parking Plan.

| Downtown Campus (each phase cumulative) | | | | | |
|--|---------------------------------|------|-----------------|-----------------|--------|
| Parking Spaces | Existing 2010 ⁽¹⁾ | 2013 | Phase 1 2018 | Phase 2 2023 | Beyond |
| Demand | 207 | 207 | 728 | 1,265 | 2,132 |
| Displaced Parking | - | | | | |
| New Parking | - | 450 | 450 | 450 | 450 |
| Total Supply | total supply is unknown | | | | |
| NOTES: | | | | | |
| ((1) Existing 2010 parking supply numbers were assumed the same as the 2008 existing parking supply inventory provided in the UB2020 analysis. | | | | | |

Table C-7: Downtown Parking Summary.

PARKING

One stand-alone parking garage is scheduled to be completed within the FMP time frame. This parking structure is known as the North Street garage. According to the Kaleida Health website, it will accommodate 1,800 parking spaces and be complete in 2012. The SMBS Master Plan states that 25% of this garage will be dedicated to UB. As a result, the new parking available in the future is assumed to be about 450 spaces.

Although UB2020 does not provide a detailed inventory of parking around Downtown Campus, it does state that the overall medical campus has an extensive parking supply, with about 5,550 off-street and 840 on-street parking spaces. In addition, there are off-site parking facilities served by shuttle buses. All of these parking areas, however, serve the larger medical district, not just UB. According to UB2020, a parking study by BNMC projected an on-campus shortage of nearly 2,500 parking spaces by 2014 due to the growth of member institutions. However, that study did not account for growth based on the relocation of the UB health science and related programs. It would appear that UB2020 provided a projection for this relocation.

The analysis in this FMP updates that UB2020 projection. The column, in the Table C-7, labeled “Beyond” represents the full build out and is the column most comparable to UB2020. Whereas UB2020 projected a demand for 3,817 spaces, this updated analysis lowers that to 2,132 spaces. The analysis shows that more parking will be needed in addition to the 450 spaces provided by the North Street garage. Additional parking, likely sited underground, may be developed as part of the SMBS building.

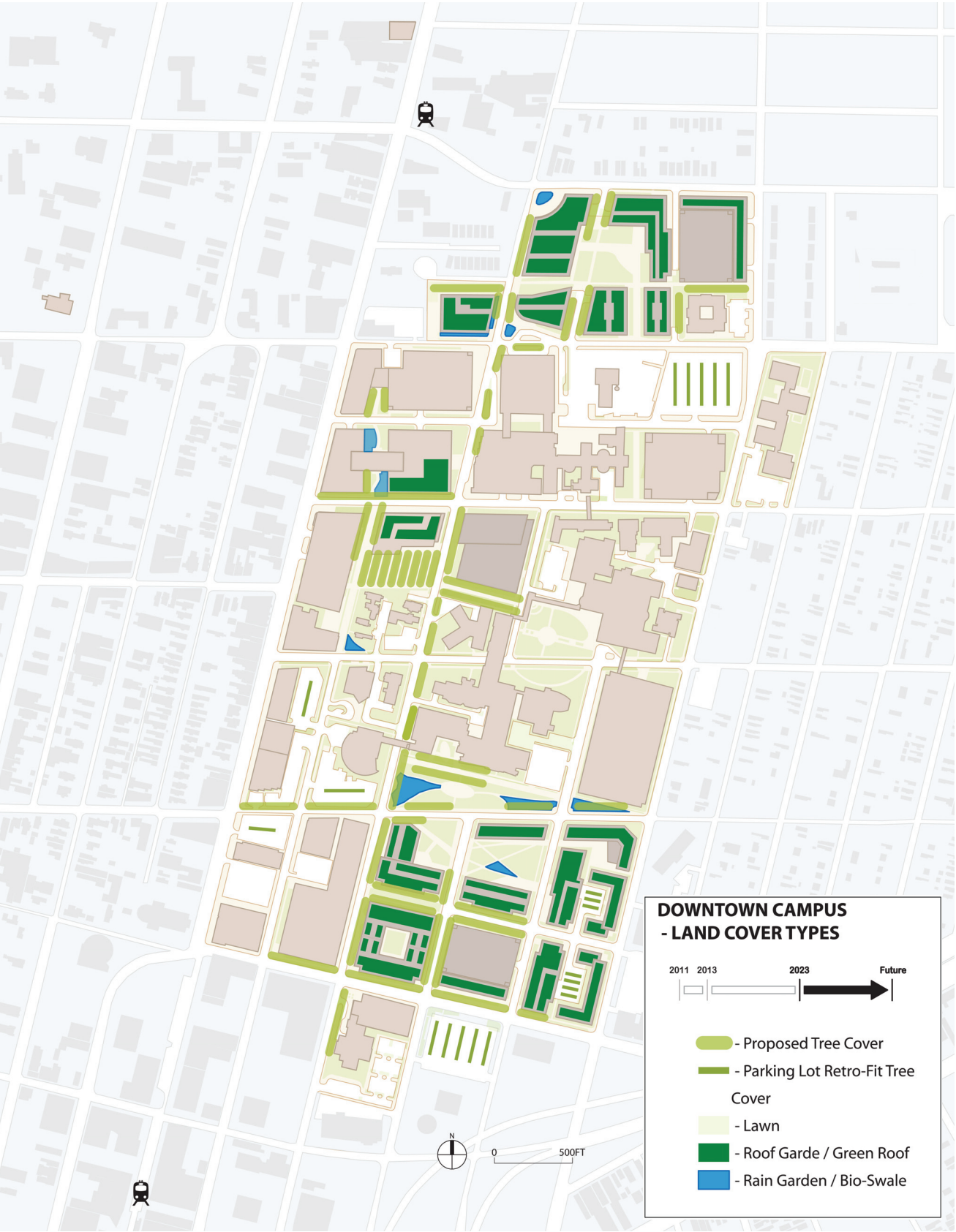


Figure C-89: Downtown Land Cover Types.

LANDSCAPE

ASSETS

The Downtown Campus is located in the heart of Buffalo and is infused with an urban energy that sets it apart from the other two campuses. From the campus core there are many important sight lines that offer a direct view to the city skyline. These views offer a direct link and constant reminder of the symbiotic relationship and connectivity between the campus and the city. The current green/open spaces offer a visual reprieve from the urban nature of the Campus while the mature street trees assist the level of pedestrian comfort by reducing the scale for the public realm. The green spaces within this campus play a large role in creating a “cohesive” campus vernacular. There are many opportunities for new buildings and proposed construction projects to increase the amount of available green space in the form of street trees, courtyards, and roof gardens. The existing vehicular grid offers logical corridors of development on Ellicott Street, Virginia Street, and Carlton Street. This grid is a great resource for establishing improved streetscapes and linear greenways within the campus. The surrounding neighborhoods offer an unusually mature and consistent tree canopy for an urban area, which help define the edges of the campus.

CHALLENGES

The built urban fabric of the Downtown Campus offers many challenges. The most significant challenge is the limited space available at the street level for open space and for green infrastructure management of storm water. The combination of the severe microclimates created by the urban nature of the campus and the poor, heavily compacted urban soils will challenge the future development of plant communities and establishment of any natural areas.

DESIGN DIRECTION

The campus site design needs to focus on creating active outdoor green spaces in which to organize future building development. This chain of green spaces will create a unifying rhythm within an evolving mosaic of land ownership, partnerships and shared

facilities. The site concepts for the Downtown Campus suggest a vertical integration of ground level open space with roof gardens and green roofs.

Roof tops are an essential and often under-utilized spatial resource in the urban environment. For the Downtown Campus, a mix of roof gardens and green roofs can provide a system of elevated open spaces for visitors and building occupants. Roof gardens can be highly supportive of the health care mission that is central to the Downtown Campus. Therapeutic benefits of green space are well-documented, and development of a roof garden network downtown will work in tandem with the ground level parks, courtyards and streetscapes. Roof gardens and green roofs reduce storm water runoff, energy consumption, urban heat island affect, and improve air and water quality. They also create a natural habitat for important pollinators and migrating species, and provide functional green spaces for property owners and the public to enjoy.

The landscapes embedded in this precinct dedicated to medicine and health care will fully engage the uplifting and healing potential of open space. The street scape improvements should continue to develop and enhance the linear urban greenway while simultaneously incorporate innovative approaches to storm water management. The experience of landscape on the Downtown Campus will consist largely of short walks from transit/parking or between destinations within the district. The landscape concepts therefore are focused heavily on the enhancement of the pedestrian environment. All improvements within the public realm shall emphasize Universal Design solutions and offer full accessibility for visitors with different mobility levels. The streetscapes will be established with a unified streetscape vocabulary that is pedestrian friendly, sustainable and compatible with the highly urbanized environment.

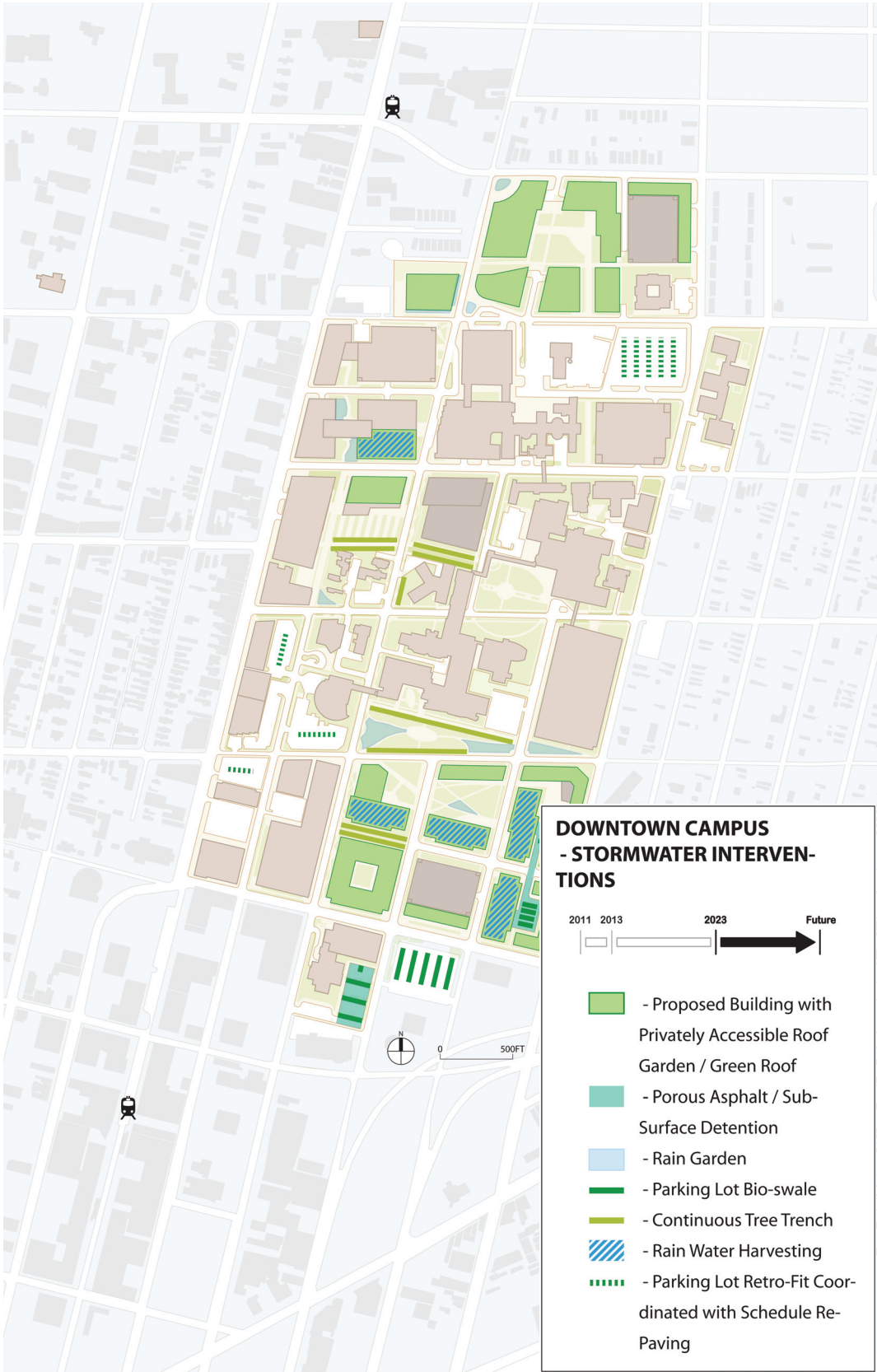


Figure C-90: Downtown Stormwater Interventions.

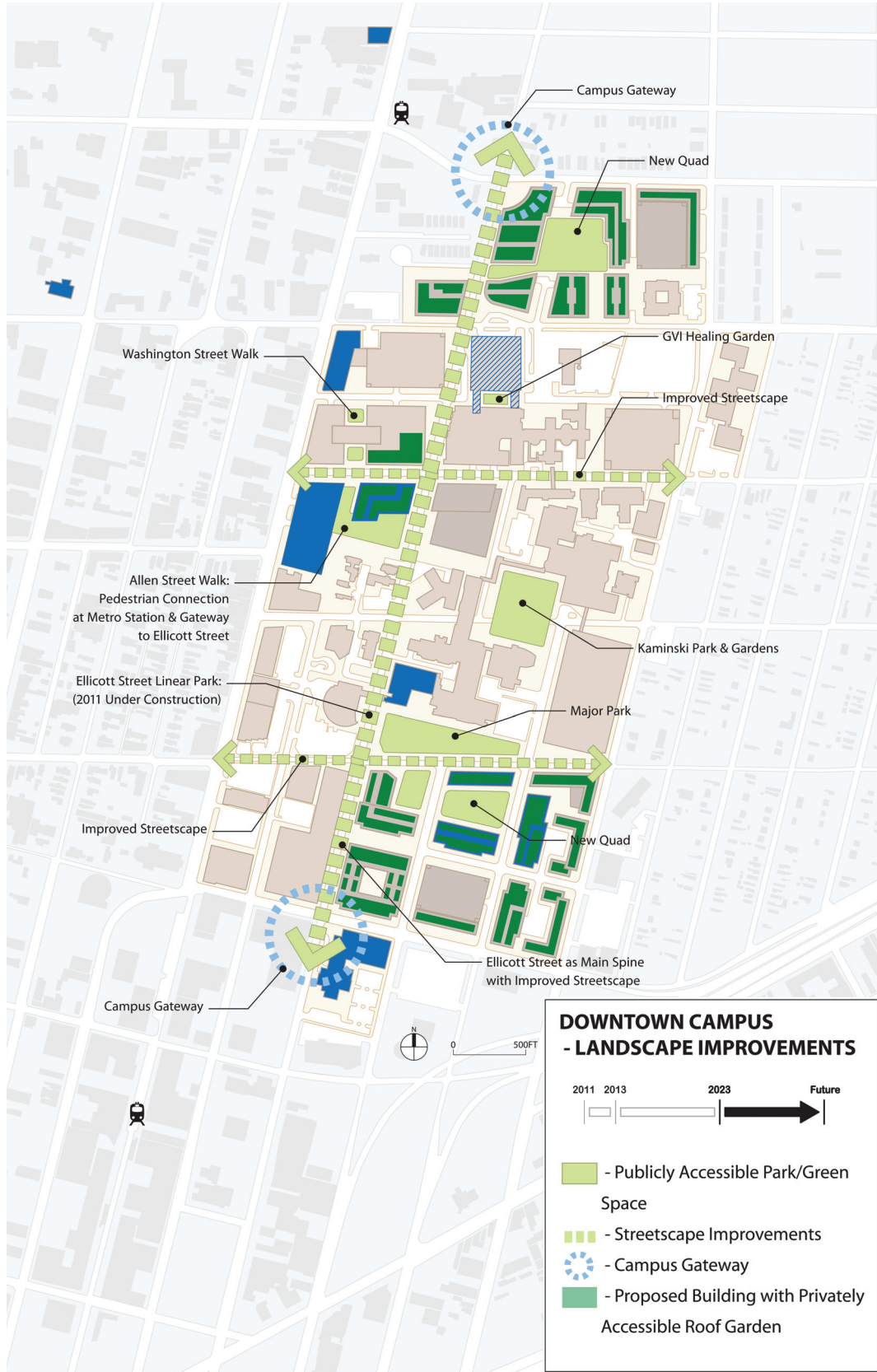


Figure C-91: Downtown Landscape Improvements.

[C. DOWNTOWN CAMPUS]

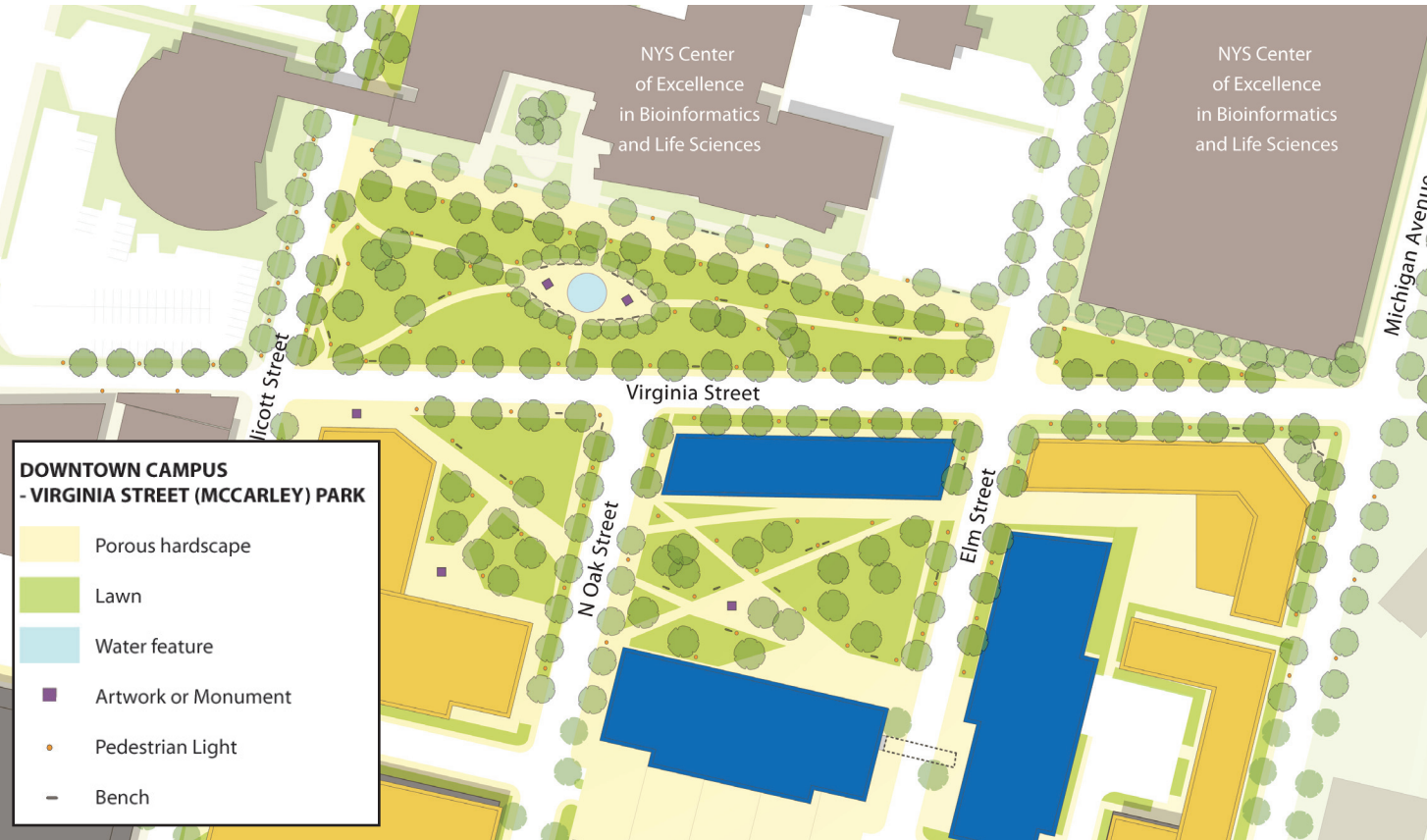


Figure C-92: Virginia Street (McCarley) Park Plan.

REPRESENTATIVE PROJECTS

Virginia Street (McCarley) Park

Open Space Type: Plazas and Gateways

McCarley Park and a reconnected Virginia Street will improve public access between the neighborhoods of Allentown and the Fruit Belt. A new McCarley Park is one of four significant new open spaces that would connect to the linear park along Ellicott Street by short walks. The proposed McCarley Park would be bigger than any existing green space in Allentown or the Fruit Belt. Located on both sides of the newly reconnected Virginia Street, the space is intended to provide a significant new neighborhood amenity and encourage east-west pedestrian travel across the medical campus. Improvements would include new concrete sidewalks, landscaping and related site furnishings. This landscape project addresses the open space goal of programming the landscape.

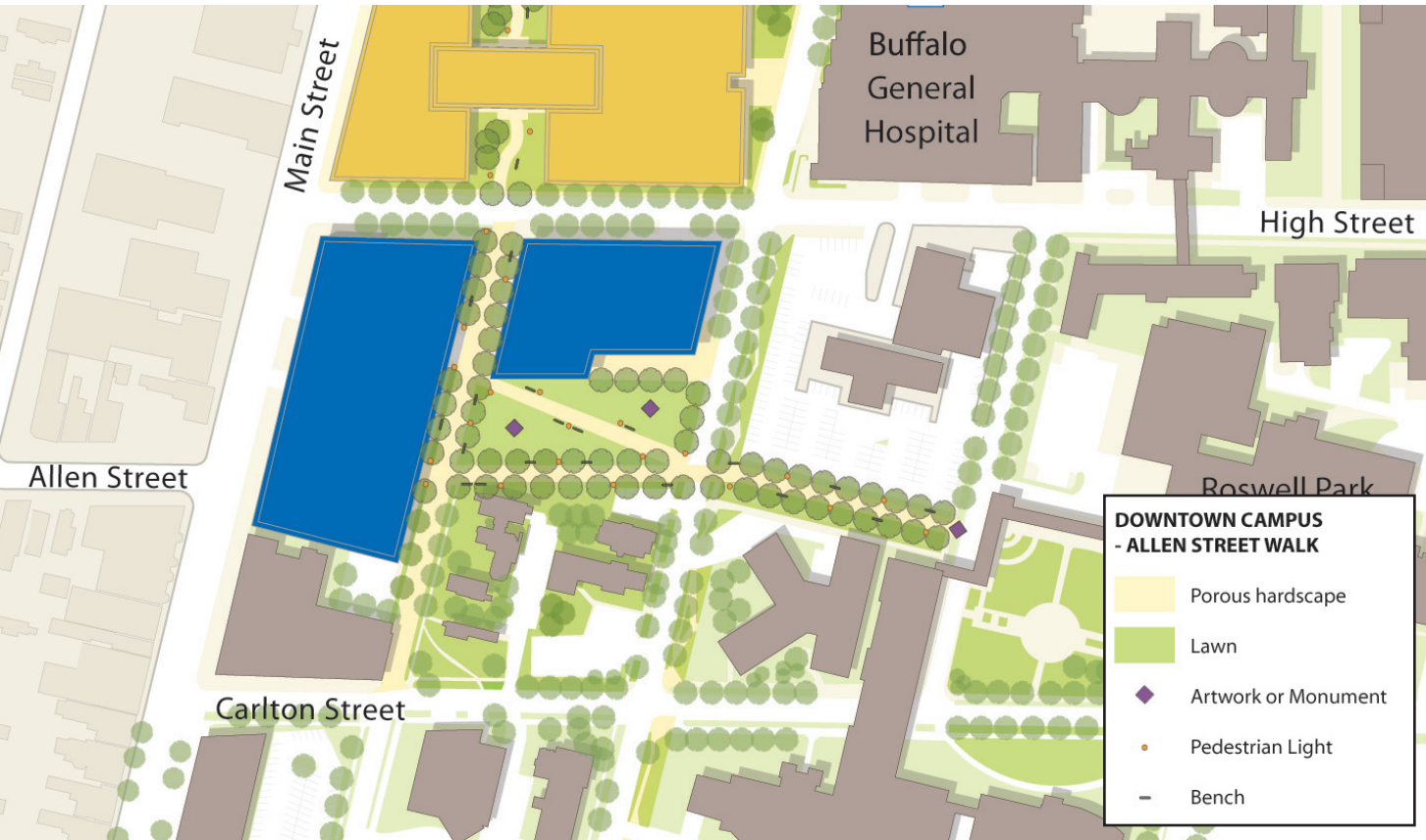


Figure C-93: Allen Street Plan.

Allen Street Walk

Open Space Type: Corridors & Promenades

Within the Downtown Campus district green streetscapes will function as the primary public spaces. The eastward extension of Allen Street from Main to Ellicott streets, planned as a broad, tree-lined pedestrian pathway, can connect across Ellicott Street to Carlton Street with a new pathway through the Roswell Park campus. Washington Street can be extended as a pedestrian pathway north of High Street to connect the Allen Street extension to the Research Institute on Addictions. The Allen Street Walk will enhance pedestrian and bike connections, to improve linkages to transit stations and encourage alternatives to car travel. To encourage walking and its benefits to health and a sense of campus community, the design of the Allen Street Walk will provide for an engaging and comfortable pedestrian experience. Plantings will be selected for a four-season palette and adaptability to urban conditions. Porous pavements, rain gardens

and continuous tree trenches will intercept storm water from rooftops and hardscapes, divert it from municipal sewers, and allow for filtration and infiltration. A unified vocabulary of site furnishings will establish a strong sense of place and support comfort and accessibility for pedestrians.

This landscape project addresses the following open space goals: program the landscape, improve storm water management, provide for active transportation, design for micro-climate enhancements, place-making and campus identity.

SITE / INFRASTRUCTURE ENHANCEMENTS
SAFETY AND SECURITY

A strong sense of safety and security for UB, the medical campus, and the surrounding neighborhoods will be critical to attracting world-class talent to the Academic Health Center and leveraging the growth of Downtown Campus for local revitalization through increased foot traffic. University Police has identified needs for a comprehensive facility with a communications and dispatch center, emergency operations center, and an enhanced police radio system, all of which should be shared by the security forces of the BNMC partners in order to coordinate efforts and maximize efficiency.

UTILITIES

The main water, sanitary, and electric lines for the Downtown Campus are city systems. It is up to these utility companies to provide adequate service on the main system. The main utility companies are The Buffalo Sewer Authority, The Buffalo Water Authority and National Grid. The available capacity in the main lines should be vetted with these agencies. The private utilities are the lines from the buildings to the streets; the maintenance of these lines is the responsibility of the University. As the migration of the Medical School proceeds and buildings come on line the services should be sized accordingly.

CHILLED WATER
System Capacity

The University at Buffalo Downtown Campus has a Chilled Water Plant in each individual building. There is no Central Chilled Water System.

System Opportunities and Constraints

When buildings are built and renovated, the building chilled water systems should be interconnected to form Localized Chilled Water systems. The Localized Chilled Water systems will provide a measure of backup not realized by stand-alone plants. If possible, the systems can be established to form a chilled water plant that will serve the buildings in the area. This provides a measure of redundancy as well as

opportunities to reduce energy by only using the equipment needed for the group of buildings. This will generally require the operation of fewer chillers than stand-alone building plants.

HEATING
System Capacity and Condition

Heating on the Downtown Campus is provided on a building by building basis. The heating system conditions vary by building.

System Opportunities and Constraints

As buildings are renovated and built, the use of individual building heating plants should be compared to the use of localized area heating plants that would serve buildings in close proximity to one another.

ELECTRICAL
System Capacity

Unlike the North and South campuses, the Downtown Campus area is presently served by individual utility feeders to each building. Existing buildings being renovated will in some cases re-use the existing infrastructure provided by the utility company. New building construction shall be served by its own building substation, thus conduit routing for power and communication distribution for Downtown buildings needs to be provided.

Building Construction, Renovation and Demolition

Existing renovated buildings will be provided with upgraded electrical components when required. The capacity of medium voltage feeders and associated distribution will be upgraded as required, but will be re-used where they provide sufficient capacity. New components will be provided to existing infrastructures, such as main switchgear, power wiring, electrical distribution, lighting system, emergency power/lighting system, fire alarm system, telecom/data system (cabling only), and specialty systems. It is recommended that an upgrade be done to the emergency power/lighting system, new lighting design, and electrical wiring distribution.

Also, metering data must be gathered for each building, in order to determine current load capacity and evaluate what upgrades need to be made to the building’s power supply. For all existing buildings to be demolished, a study must be done prior to demolition to determine the location of underground electrical conduit routing.

New buildings shall be provided with all electrical components: main switchgear, power wiring, electrical distribution, lighting system, emergency power/lighting system, fire alarm system, telecom/data system (cabling only), and specialty systems.

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