

FOOD SCIENCES COMPLEX SITE DEVELOPMENT GUIDELINES

DRAFT

Cornell University
Campus Planning Office

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B&P, December 6th, 2007

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SECTION I - SUMMARY

*This section provides an overview of the project background and description.
It presents the site criteria and recommendations for the project design and site design.*

PURPOSE OF SITE CRITERIA

To gain approval from the University and Trustees, as well as to inform senior administration, consultants and the project team about significant contextual and campus-wide considerations that impact the building site and the project. Key issues with this site that are crucial to the success of the project are: (i) optimize utilization of site; (ii) complement existing historic structures through sensitive massing and materials; and (iii) creating a distinct presence for Food Sciences while contributing to an enhanced Tower Road streetscape and the long term development objectives of the block.

BACKGROUND AND CONTEXT

The Department of Food Sciences is a unique, innovative, and world-class entity within the College of Agriculture and Life Sciences (CALs). Its mission seeks to educate undergraduate and graduate students for careers in the food industry, academia and government, as well as to conduct research that will expand the understanding of the various properties of foods, enhance the wholesomeness and availability of foods, and add value to raw agricultural products. The department operates in the Food Sciences buildings, which include the Stocking Tower, its Runway, and the Food Science Lab. To address lack of space, the State University Construction Fund (SUCF) conducted a facilities condition assessment of Stocking Hall as well as a space program assessment of the Food Sciences Department. In order to accommodate the needs of the department into the future, CALs seeks the construction of a new building that will meet current and future program and space needs as well as provide a facility that expresses the image and reputation of a world leader in the food sciences.

PROJECT DESCRIPTION

A new Food Sciences building on the site of the existing runway of Stocking Hall, coupled with the renovation of Stocking Tower and the Food Science Lab, will be able to meet the current and future needs of the department for at least twenty years. Such a configuration could yield a total of approximately 135,000 GSF for the department, which translates to approximately 76,000 NSF assuming a 57% efficiency rate. This increase of approximately 40,000 GSF from the current configuration is mostly the result of more efficient use of the site. Such a new complex will help the department achieve its educational and research goals by providing state of the art lab space that can adapt to the department's changing research needs, attract new faculty, and accommodate student research projects and outreach training into the foreseeable future. Also, the potential for community space (e.g, a dining facility) with increased amenities will bring more life to this area of campus, enhancing the department's visibility and exposure throughout the University.

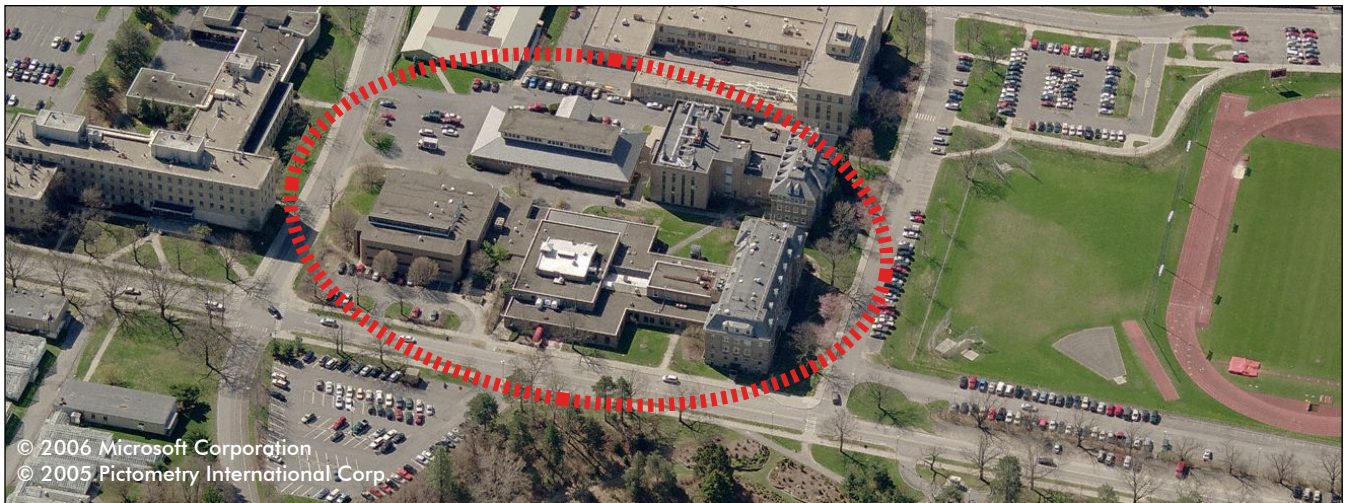


Figure 1. Aerial View of Site with Context Looking South

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Important considerations that the University expects the project to meet.

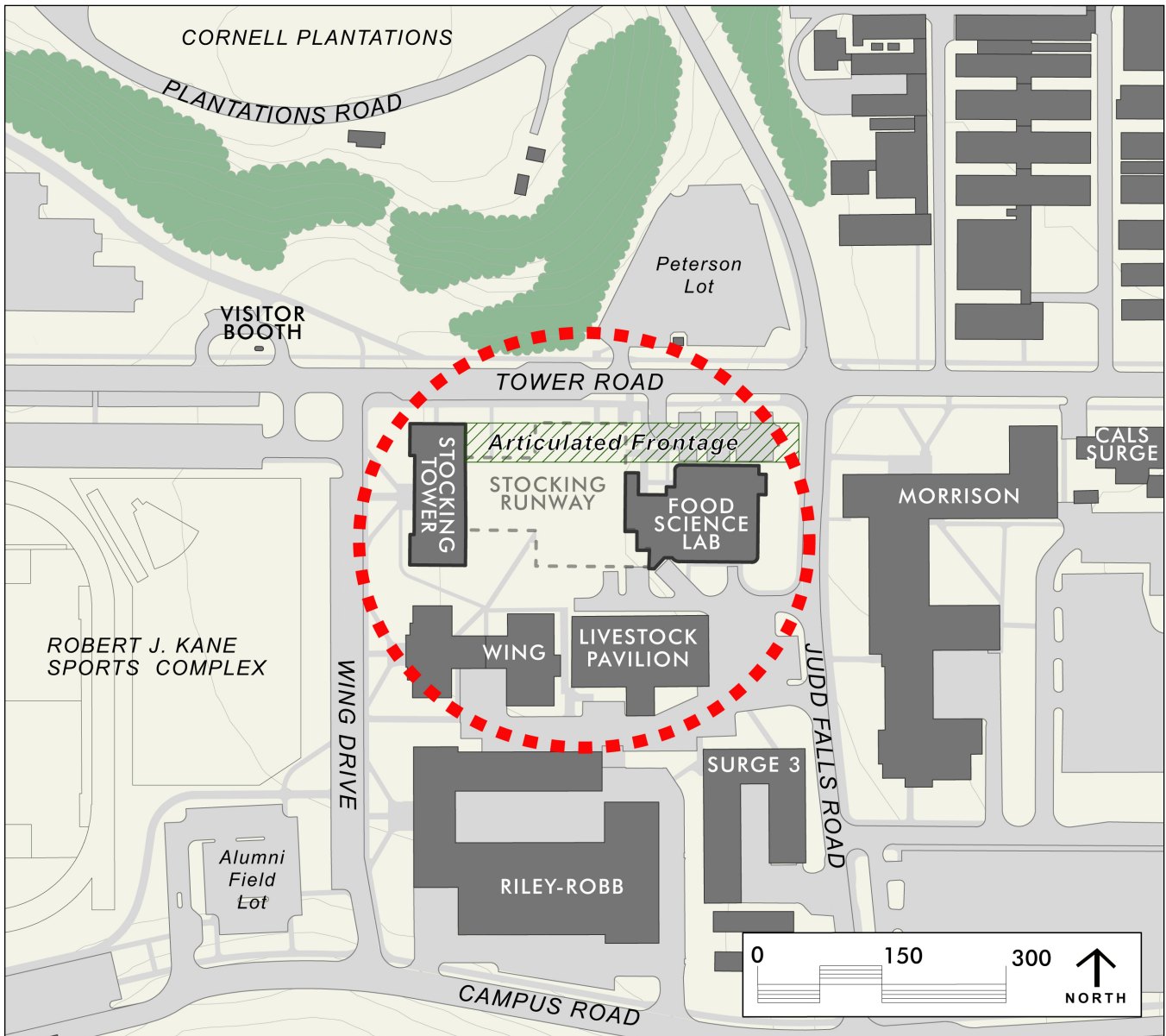


Figure 2. Site Location and Boundaries



Figure 3. Northern side of Stocking Tower and Stocking Runway which delineate the northern extent of the site



Figure 4. Western facade of historic Stocking Tower to which the future building will relate



Figure 5. Cornell Dairy Bar, a popular dining and socializing location for students, faculty, staff and visitors

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Important considerations that the University expects the project to meet.

- New building should consider and contribute to the long-term development of the complex and the block.
- The complex is at a gateway location on Judd Falls and Tower Road. The primary entrance should be clearly located on Tower Road.
- Optimize linkage between Stocking Tower and the new building at ground level to create community space and amenities that will be inviting to all campus users.
- Dairy Bar could utilize landscaped frontage and connection between Stocking Tower and the new building, becoming a feature of the building that contributes to the life on Tower Road.
- Enhance relationship of the complex to Tower Road and its context by articulating frontage along Tower Road, possibly by extending of an atrium or common space in the building to the green open space to the north and south
- Maintain and enhance the relationship of Stocking Tower and the new building to Wing Hall to the south.
- Massing, volumes, and materials should be sensitive and complementary to existing historic structures: Stocking Tower, Wing Hall and the Livestock Pavilion.
- Service entry should be from Judd Falls Road with better screening
- Enhance pedestrian and open space connection between Stocking Tower and Wing Hall
- Include sustainability in site and building design



Figure 6. Composite photo of north facade of the Food Science Lab, Stocking Runway, and Stocking Tower along Tower Road

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SECTION II - RATIONALE

This section contains detailed analyses of the site and conditions that produce the site criteria presented in the first section. The analyses are broadly divided into the following categories: planning, landscape, transportation, and utilities.

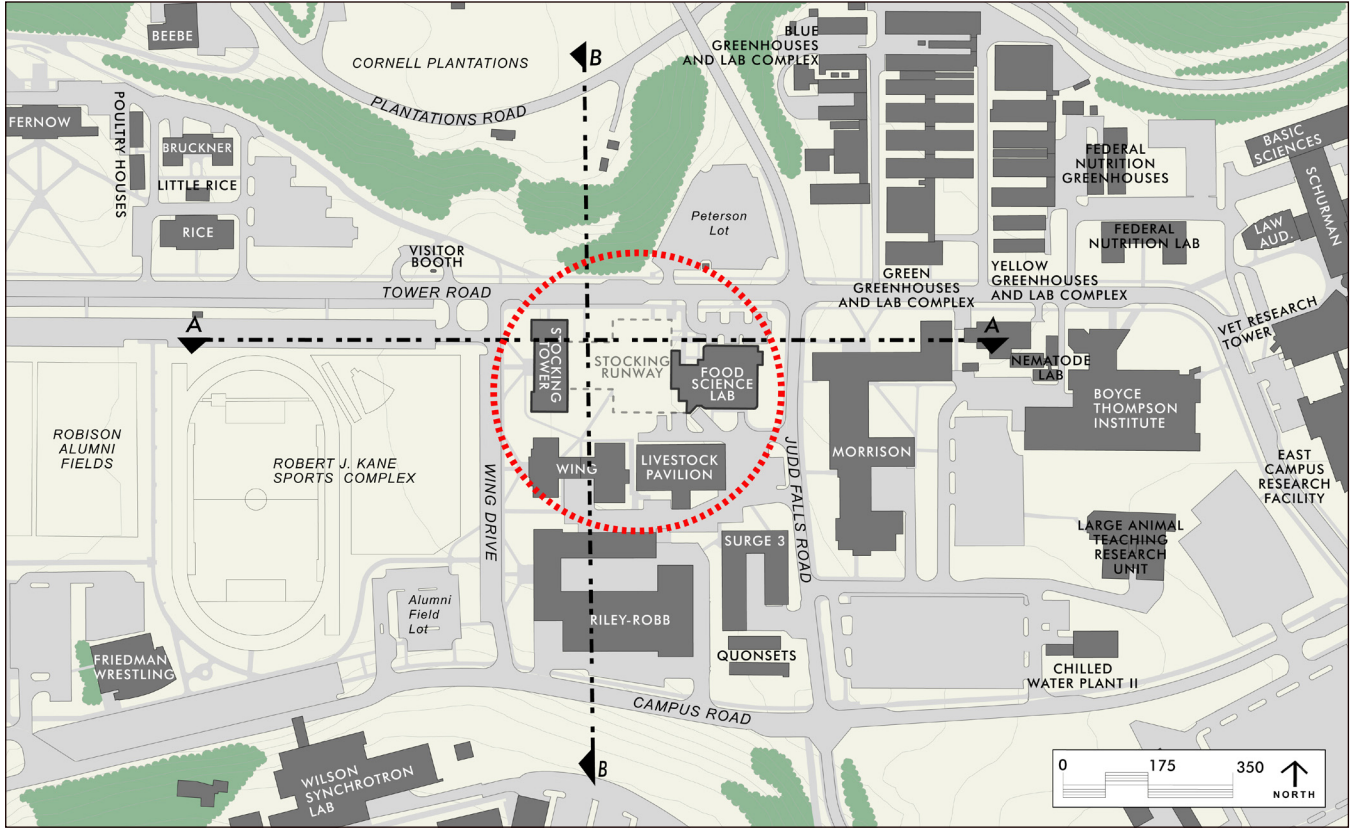


Figure 7. Site location

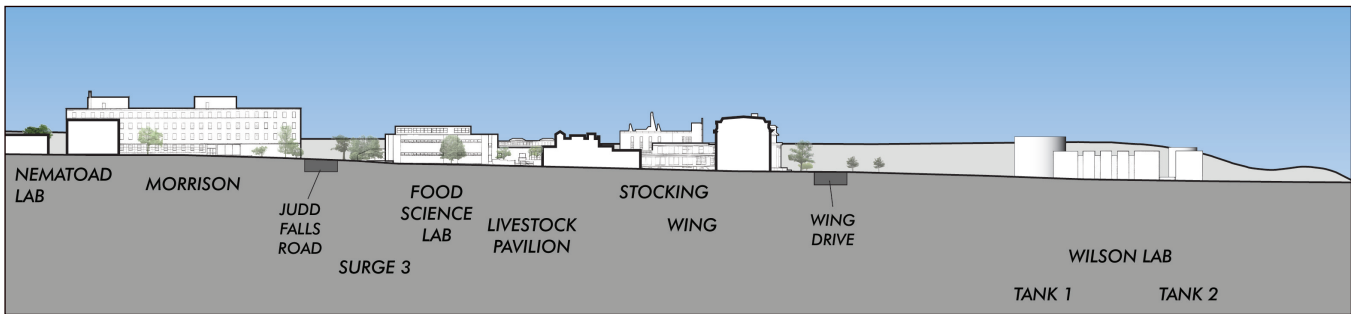


Figure 8. Section A-A, East-West section through site looking south

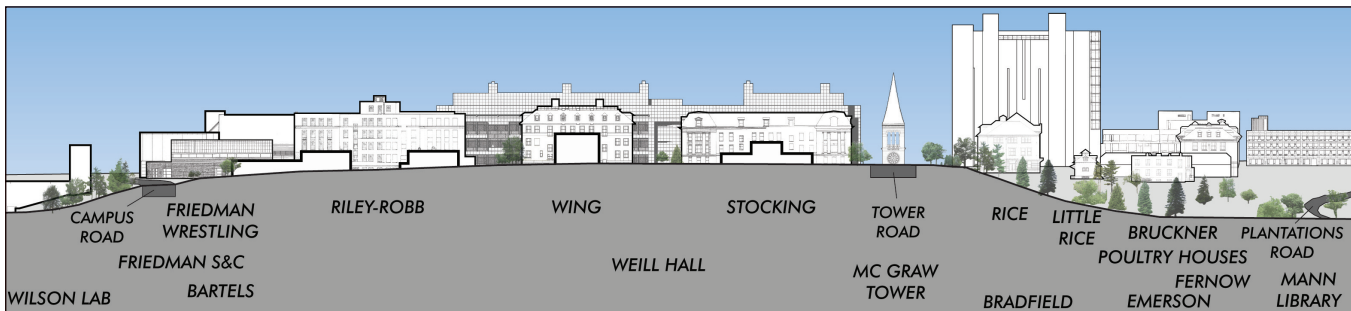


Figure 9. Section B-B, North-South section through site looking west

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LONG-TERM PLANNING AND CAMPUS CONTEXT

A consideration of the site and its relationship with the surrounding buildings, open space, users and the campus.

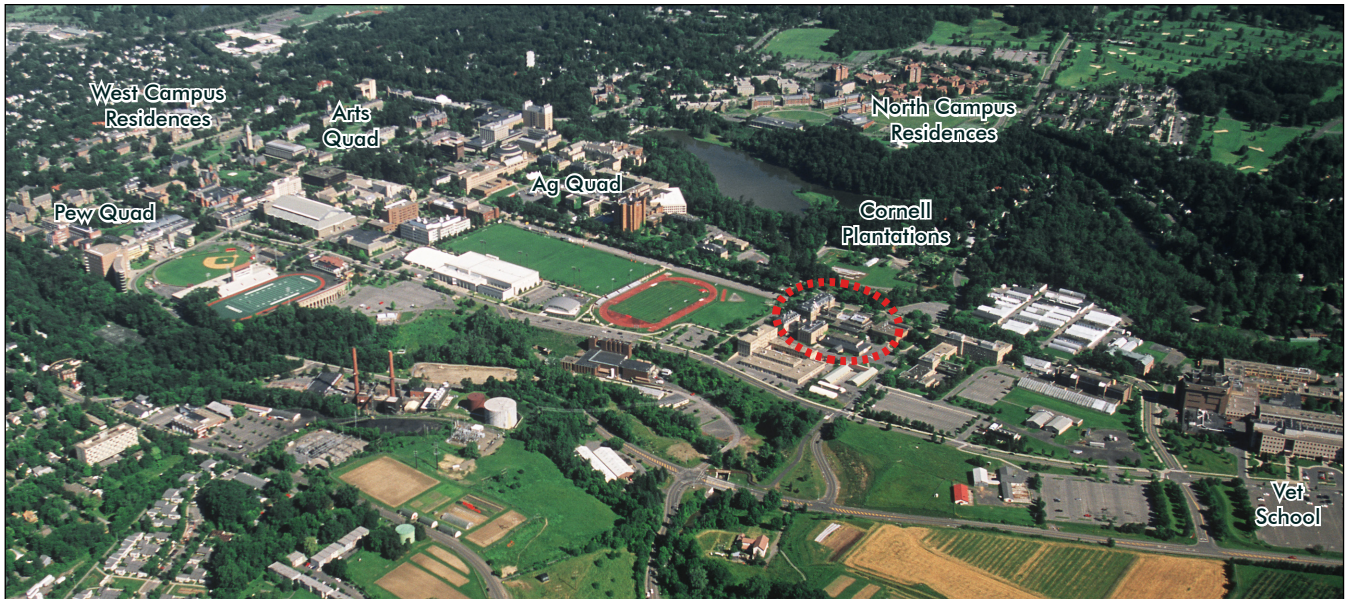


Figure 10. Aerial View of Site with Campus Context

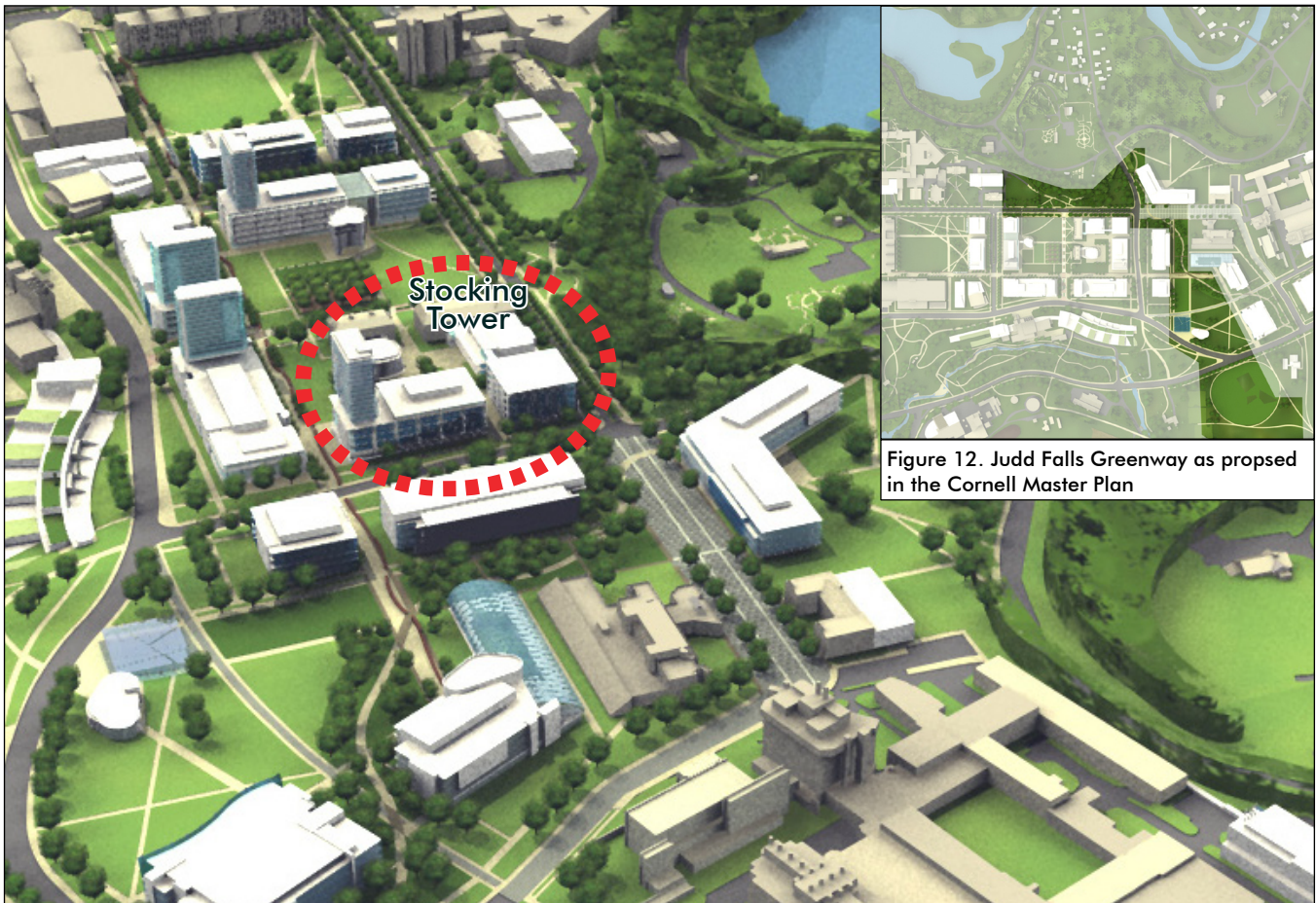


Figure 12. Judd Falls Greenway as proposed in the Cornell Master Plan

Figure 11. Greater density with enhanced landscapes is envisioned in this area of East Campus

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LONG-TERM PLANNING AND CAMPUS CONTEXT

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LOCATION, SITE BOUNDARIES AND CAMPUS CONTEXT

The site is bounded to the east and west by Wing Drive and Judd Falls Road, includes three buildings - the Stocking Tower and Runway, built 1923, and the Food Science Lab, built in 1988. The Stocking Tower, the Food Science Lab and the new building in between will form the new Food Sciences Complex. The frontage to the north is along Tower Road, with a view of the Cornell Plantations across the street. To the south are a loading area, the Livestock Pavilion and Wing Hall and the Wing Hall Wing extension (Figure 2). The rest of the block at the Campus Road edge consists of Riley Robb Hall, Surge 3 facilities, and two quonset huts. The landscaped edge along Tower Road has a lawn and small trees to the east. The site is immediately visible to the west as one enters the core campus from Judd Falls Road and Forest Home and this first view of the complex from this intersection as well as from the Plantations and Forest Home will be extremely important for current and future development in this area.

The new Food Sciences Complex is the first step in the long-term redevelopment of the block envisioned by the ongoing Comprehensive Master Plan. The vision for East Campus, where the site is located is one of increased density, maximizing the site's potential for buildings and open space. The future ground plane for the block is proposed to be green space flanked by taller buildings that define the edge of the block, especially to the west, south and east. The edge of the block along Tower Road, which directly relates to the site, is porous and articulated to create a stronger relationship to the Tower Road streetscape with a recommended opening to the interior of the block. There is an opportunity here to use the space between the buildings as common space that connects to either the Tower or the Food Science Lab. This space could accommodate program functions that serve the department as well as a larger campus community

The eastern edge along Judd Falls Road will be part of a greenway that extends from Cascadilla Creek, up the gorge slope and connects to the Cornell Plantations Botanical gardens to the north. This area overlaps with the service entry to the complex and this aspect should be considered in the site landscaping. The Livestock Pavilion is proposed to be relocated in the long term, but in the short term is expected to remain, perhaps providing surge space for the project. It is also important to keep in mind that the future redevelopment recommends a mix of uses - academic, social and cultural and residential - for this block and the area as a whole.

The long-term redevelopment plan also envisions a single-story below grade parking and service for future buildings south of the site. Service and loading for the Food Sciences Complex will need to be from Judd Falls Road, and above grade, while keeping in mind the desired outcome for the internal landscape of the block. Overall, being the first project on the campus that will be directly influenced by the Master Plan presents somewhat of a challenge. There is a unique opportunity to create the first move in the renewal of the entire block, but also to revive the street edges to the north and east, the relationship to Tower Road, and to provide a presence for the program at a gateway location to the center of campus.

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SITE AND LANDSCAPE

Consideration of the role of the site in the campus landscape structure.

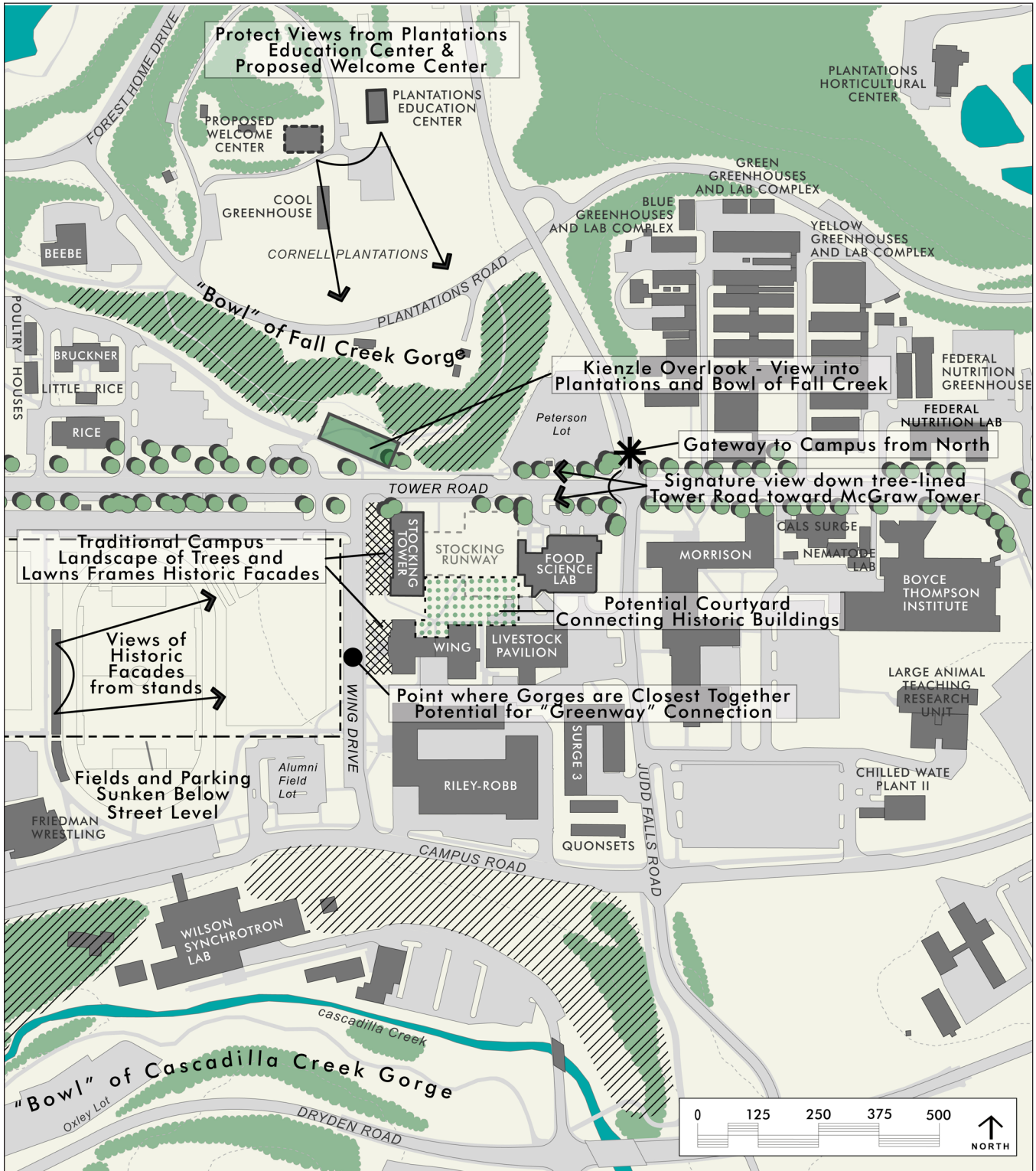


Figure 13. Landscape and Environment

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SITE AND LANDSCAPE

Consideration of the role of the site in the campus landscape structure.

LANDSCAPE AND ENVIRONMENTAL ISSUES

Historic Stocking Hall is prominently sited on the relatively high ground between Cascadilla and Fall Creek gorges, with Wing Drive being the point on campus where the two gorges are closest together. The northern terminus of Wing Drive is Kienzle Overlook, with commanding views of the Cornell Plantations Botanical Gardens, Lewis Education Center and future Welcome Center. The large, slightly depressed open space of Alumni Fields to the west allows long views to the new Life Sciences Technology Building and surrounding campus buildings.

The long axis of the Food Sciences Complex will front on Tower Road, a major east-west corridor on campus. Tower Road is lined with a double row of mature Red Oaks that frame long linear views to McGraw Tower to the west and the Vet Research Tower to the east. The existing Stocking Hall is set within a simple, traditional campus landscape of mature trees, low shrubs and lawn along Wing Drive. The green space between Stocking and Wing Hall provides for important pedestrian circulation both through and within the block

The Cornell campus is characterized by a generous and diverse system of interconnected open spaces from formal quads, courtyards and avenues to informal greenways and gardens. The Food Sciences Complex is expected to respond and connect to this system of open spaces, both by allowing north-south and east-west pedestrian movement, and creating places for seating, gathering, reflection and inspiration. The Complex has the opportunity to contribute to the creation of significant new public spaces within the block of land bordered by Tower, Judd Falls, and Campus Road and Wing Drive in an area that is deficient of shared green space and pedestrian connectivity. Since the historic structures of Wing Hall and the Livestock Pavilion would be preserved in the near future development of this block, these three buildings could define an open space that connects the three buildings.

The frontage on Tower Road must enhance both the street and pedestrian environments. A common space accommodating informal dining, gathering and waiting for buses would be desirable. There is currently limited space for street tree plantings along Tower Road. Minimizing the paved width of Tower Road by limiting service, drop-off and transit pull-off areas, and/or the use of structural soil under paved areas would enhance the planting environment. Current and future service access to the complex is from Judd Falls Road. This access should be enhanced and better screened from public spaces.

Cornell has design and construction standards for site and landscape work. Refer to <http://cde.pdc.cornell.edu/TableOfContents.html> and the Campus Landscape Notebook at <http://www.pdc.cornell.edu/pdc/cp/Campus%20Landscape%20Notebook.pdf>. The Campus Landscape Notebook provides a greater campus-wide landscape context as well as design considerations.



Figure 14. Tree lined expanse down Tower Road which should be strengthened along the Food Sciences block



Figure 15. Food Science Lab on corner of Tower and Judd Falls roads whose appearance could be enhanced with appropriate landscaping



Figure 16. View of Stocking Tower and Runway as seen from the Plantations Herb Garden

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TRANSPORTATION

Issues of access to, through and around the site.



Figure 17. Site Transportation and Circulation around Site

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TRANSPORTATION

Issues of access to, through and around the site.

TRANSPORTATION AND CIRCULATION

The existing Stocking Hall is located along Tower Road, a main thoroughfare along a major east-west axis of campus. There is constant traffic along this route at all times of the day, including that of cars, buses, bicycles and pedestrians. Two heavily utilized bus stops are located north of Stocking Hall, one on the south of Tower Road, and one on the north. Also, a designated bike lane exists along the entirety of Tower Road, and is therefore a preferred route for cyclists. Crosswalks exist on all four sides at the intersection of Tower and Judd Falls roads, as well as at the intersection of Tower Road and Wing Drive.

The frontage on Tower Road must enhance the pedestrian environment. At least one primary, accessible entrance should front Tower Road. The ground level building features should be attractive and human scaled. Overall, circulation of pedestrian traffic must be safe and effective and the site design should include and enhance the current pedestrian network, efficiently moving pedestrians around and through the block as well as across Tower Road.

Because of on-going construction projects, the construction team will need to closely coordinate its actions with that of other projects, namely Animal Health Diagnostic Center (March '08 - July '10), and Campus Road Realignment (Summer '08). Staging areas will need to be thoughtfully considered, and pedestrian movement should be impacted as minimally as possible with safe and obvious re-routing.

Service access to this block of campus is crucial as there are many deliveries and shipments made each day. The access, which should be from Judd Falls Road, can be enhanced to provide better screening and improved access. Currently, three loading areas serve the south side of Stocking Hall and the Food Science Lab. However, space for queuing and rotation is limited, resulting in problematic deliveries. The north side of the parking lot east of the Livestock Pavilion is unofficially used for queuing. This issue needs to be addressed in the new site design.

Bus stops located across from Stocking Hall provide excellent alternatives to driving and parking on campus. This is an advantage that can be leveraged with staff and visitors as part of a campus-wide transportation strategy.

Overall, the project needs to be thoughtful of all forms of transportation, be it vehicular, pedestrian, or bicycle. Any bike racks displaced by the project must be replaced. In the unlikely event of increased population at the facility, an adequate amount of bike parking must be added proportionate to any increase. Any parking spaces eliminated from the site due to a larger facility must be replaced elsewhere. The project team needs to work closely with the Department of Transportation and Mail Services and the Campus Planning Office to accommodate parking and circulation needs for the facility.



Figure 18. View east down Tower Road, a major transit, vehicular, pedestrian and cyclist corridor



Figure 19. Cyclist riding in bike lane on south side of Tower Road



Figure 20. The current service entry to the Food Sciences Complex off of Judd Falls Road

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UTILITIES

Consideration of campus utility infrastructure in the vicinity of the site.

UTILITIES ISSUES

The Cornell Utilities Department should be consulted for detailed information and projections regarding loads and capacity of the respective systems. The drawing below illustrates the location of major existing utilities on and around the site. The utilities should be considered in designing the replacement building. Also, any planning by the Cornell University Utilities Department needs to be included in building and site design. For more information and details, please contact Cornell University Utilities Department.

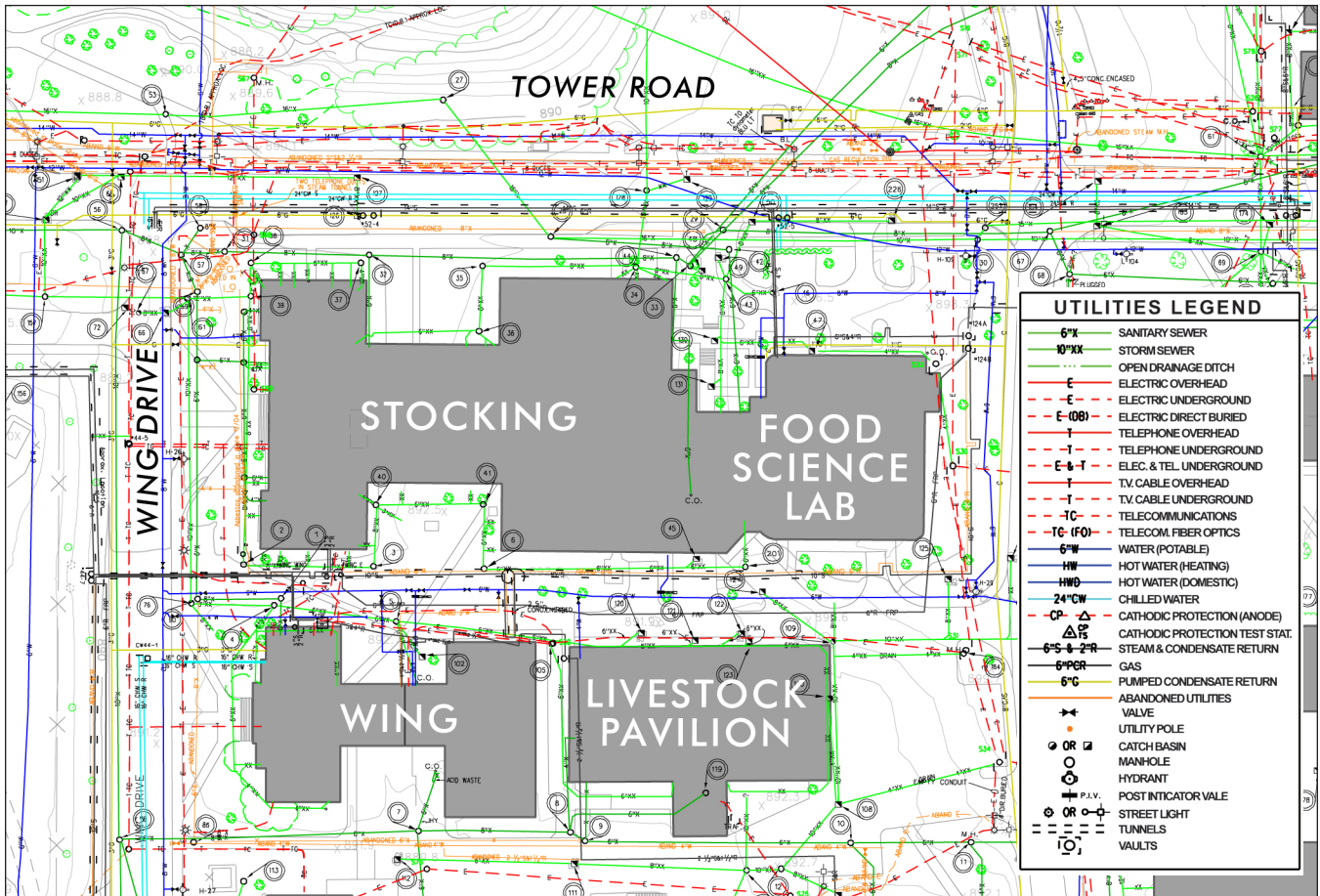


Figure 21. Utilities Diagram