A VISION FOR GROWTH





Master Plan

For The Office of the Vice Chancellor for Research and



Prepared by

CANNONDESIGN

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Research Park at the University of Illinois

Establish a path for the future



Introduction

This Master Plan update builds upon the previously approved Research Park Master Plan Update issued July, 2001, focusing on the Research Park and adjoining properties in the previously identified Zones 1-6.

Zones 1-6 are now collectively bordered by St. Mary's Road to the North, Windsor Road to the south, the Illinois Central right-of-way to the west and the recommended extension of Fourth Street to the east. This planning area, collectively referred to as The Research Park at the University of Illinois, consists of approximately 250 acres exclusive of current out parcels.

Previously identified Zones 7 and 8 extending to Lincoln Avenue as well as parallel planning efforts involving Orchard Downs and potential new athletic facilities are being assessed and coordinated as part of a more global University-wide planning effort. This Master Plan focuses on the Research Park.

Planning Objectives

The overriding objective of this Master Plan is to foster the development of an exciting live, work and play environment that supports and enhances the dynamic research community at the University of Illinois. This environment will add to the vitality of interdisciplinary problem solving and entrepreneurial growth by attracting and maintaining the talent and resources required to assure the University of Illinois' continued pre-eminence in ground-breaking research and development.



In addition, this Research Park Master Plan update seeks to:

•Respect and enhance the existing market driven development pattern while providing a flexible framework to migrate to potential higher density in the future.

•Accommodate successful market rate amenity retail as well as future housing to create an attractive and sustainable, live, work and play environment.

•Utilize open space and landscape as a unifying element to connect various sub-districts within the Research Park.

•Combine open space with an effective, incremental solution to storm water management.



Existing Conditions Understand the constraints and opportunities

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Today's Context

Understand the constraints and opportunities

Existing Conditions

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Today's Context

Understand the constraints and opportunities

1 Right-of-Way and Utility Corridors

Existing right-of-ways and utility corridors established by Griffith Drive, Oak Street and First Street in the north-south direction as well as Hazelwood Drive and Gerty Drive in the east-west direction establish set alignments that need to be respected as development continues.

2 Out-parcels

Six significant out-parcels remain that have varying degrees of influence on future phasing including St. Mary's Cemetery, the Ameren CIPS property west of Griffith Drive, the State Office Building, the Credit Union, the private housing complex south of Gerty Drive along the First Street right-of-way, and the Illinois Fire Safety Institute (IFSI) property.

3 Existing Buildings to Remain

Existing buildings to remain include the State of Illinois Natural History Survey and the Waste Management and Research Facility, and the Children's Research Center. UIUC buildings to remain include the Administration Information Technology Services (AITS) building north of Gerty Drive. The Master Plan will respect and enhance the new Research Park facilities built to date as shown.

4 Existing Buildings to be Removed

The balance of all buildings and facilities will be removed to make way for expansion of the Research Park. The relocation of all South Farm structures east of First Street will be accomplished as part of the South Farm modernization program.

5 Transportation

The Research Park site remains within reasonable walking distance from the Main Campus and is currently served by two Mass Transit District routes. Walking trails, and bike paths connecting to significant housing locations should be accommodated.

6 Gateway Entries

Other planning influences of note include the important existing gateway entries at First Street and St. Mary's Road as well as First Street and Windsor Road.

7 Open Space

The potential of large open space to the east offers a valuable amenity with attractive vistas.

8 Topography

The site generally slopes from northeast to southwest with a grade change of approximately forty feet from St. Mary's Road to Windsor Road.

9 Stormwater Detention

Substantial existing stormwater detention is provided at the southwest corner of the site.



Master Concept Plan Establish a framework

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Research Park Area Districts

Strengthen the identity, use and value of each zone within the Research Park

Overlay Districts

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Eight Zones of Development





Research Park Area Districts

Strengthen the identity, use and value of each zone within the Research Park

Multi-Use District North Multi-Use District South

Two multi-use districts have been identified. The north district will include a hotel, restaurant and conference center. The south multi-use district will incorporate commercial space with office or residential above with sufficient site area to incorporate additional program elements.

The interface between the Multi-Use districts and the Research Core will incorporate "Main Street" commercial concepts with on-street parking.

The final location and arrangement of commercial zones will be confirmed through the due diligence of the private developer in consultation with the University.

3 Research Core

The center of the Research Park is designated as the Research Core with the master planned capability to support higher development density with the introduction of parking decks.

4 Perimeter Research North

5 Perimeter Research South

Frontage sites along St. Mary's Road and Windsor Road enjoy high visibility and will continue to be attractive to corporate partners such as Motorola.

These sites will continue to rely on surface parking to meet parking requirements reserving higher long term density for the Research Core.

Windsor Road frontage will continue to be required for use as part of the overall stormwater management program per the previous master plan update.

6 The State Surveys

A State Survey District has been established on the western edge of the Research Core clustered around existing Survey buildings.

Existing Waste Management and Natural History facilities in the State Survey's district total approximately 180,000 Gross Square Feet (GSF) with planned long term expansion of an additional 425,000 GSF for the planned consolidation of the Natural History Survey, the Geologic Survey and Water Survey within the district.

7 Light Manufacturing

A light manufacturing zone has been established with logical service off Griffith Drive and convenient access to possible corporate facilities to the south.

8 Out Parcels

Land not currently included in the Research Park. Selected properties have the potential for longer term acquisition.

Master Concept Plan

Establish a framework to guide future growth of the Research Park

Low Density Build-Out with Alternate Configuration

.3 FAR Development Density with Surface Parking



(N)

The overall program for the Research Park remains unchanged with the State Survey's, office, academic and corporate research the predominant uses with associated support functions.

Nominal development blocks of 600' x 600' will support structured parking decks as shown allowing for infill buildings of 3 and 4 stories to achieve a development density of approximately 1.0 FAR within the Research Core district.





Master Concept Plan

Establish a framework to guide future growth of the Research Park



This maximum density achievable with surface parking can be further enhanced by the master planned potential for multiple parking decks that could ultimately support an estimated 5,000,000 GSF within the Research Park boundary.

Nominal development blocks of 600' x 600' will support structured parking decks as shown allowing for infill buildings of 3 and 4 stories to achieve a development density of approximately 1.0 FAR within the Research Core district.





Streets and Access

Unify and connect the Research Park by extending the existing road network



- 3 Signalized intersections at Hazelwood Drive and Gerty Drive should be added as land east of First Street is developed to enhance pedestrian movement and promote communication between research facilities.
- 4 It is recommended that Fourth Street ultimately be extended through the site to provide secondary access and enhance traffic dispersion as density increases.
- 5 The difficult intersection at Griffith Drive and St. Mary's Road with its proximity to the viaduct and steep grade change suggests that Griffith Drive should should remain a collector street.
- **6** The existing primary east-west streets of Hazelwood Drive and Gerty Drive should be maintained in their current alignments. These two streets in combination with Griffith Drive, Oak Street, First Street and Fourth Street establish the overall development framework.
- 7 The introduction of additional lateral streets establish a nominal 600' x 600' block system creating a more pedestrian friendly environment while also providing a flexible framework to support higher density over the longer term.
- 8 On street parking is anticipated in "main street" commercial zones as indicated on the right-of-way profiles that follow.

*Note: With the proposed introduction of new streets, an update of the completed traffic impact analysis is recommended.



Right-of-Ways

The following typical right-of-ways and recommended setbacks have been developed for the proposed street network:

First Street Entry Boulevards - 100° R.O.W.

- 20' Setbacks
- 10' Median







First Street Typical - 90' R.O.W. - 20' Setbacks







Right-of-Ways

Typical Lateral Street - 60° R.O.W. - 0' Setbacks

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New Street at Fourth Street - 70' R.O.W. - 0' Setbacks - 10' Median







Right-of-Ways

Define the development network

Oak Street - 60' R.O.W. - 20' Setbacks







New Streets North and South

- 90' R.O.W. - 0' Setbacks

- Diagonal on-street parking







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Streetscapes Enhance the character of the Research Park



Formal Zones

The formal streetscape component of the Research Park will enhance the right-of-ways by incorporating hardscape, street lighting, furnishings, trees and plantings. Together, these unique components will comprise the fabric for creating the area's character. The purpose is to provide a pleasant and safe pedestrian experience while also providing a sense of place and identity for the Research Park at the University of Illinois.



Primary Elements

The streetscape is defined by two major elements:

- Lighting •
- Trees and other landscape plantings •

Secondary Elements

Secondary elements add detail and structure and include:

- · Sidewalk pavements
- Roadway pavements
- Street furniture including benches, waste • receptacles and bike racks
- Community identifiers and kiosks •
- . Public art, including sculpture
- Public transit stops and shelters •
- Traffic control devices •

Specific recommendations for the Primary streetscape elements are as follows.

Fox/Atkins Development, LLC

Streetscapes

Enhance the character of the Research Park

Lighting

The vehicular lighting standard for the Research Park should provide illumination over large areas of the right-of-way as efficiently as possible and should incorporate a cut-off fixture. Cut-off fixtures direct the light down onto the roadway and sidewalk, instead of up or out.

The pedestrian light fixture is another important element of the streetscape that may be attached to the same pole as the vehicular fixture. Should this option be selected, the pedestrian scale fixture should accent the chosen light standard for the vehicular zone. A cut-off fixture should be specified here as well to help maintain "dark skies".





Landscape Plantings

Trees

In addition to lighting, trees are another dominant and highly visible element in the streetscape. Trees provide the design skeleton of the length of the streetscape by adding rhythm and spatial volume. Trees also add variation on colors and textures as the seasons progress by providing spring bloom, summer shade, fall color and winter interest in branching patterns. Street trees also provide a defense against the "urban heat island effect" and protect pedestrians from harsh weather conditions. They can also improve air quality and lower energy costs.

Plantings will set up views and vistas as visitors and workers arrive to their destination while enhancing the overall experience. Within the streetscape itself, plantings will provide visual interest to both pedestrians and drivers. Plantings will also be utilized as creative screening elements for surface parking areas and incorporated into their interior providing a softening effect as well as environmental beautification.

Plant heights must be considered to provide safety and security in the streetscape. Typically, the design height is governed by the local jurisdiction as well as the design speed of the roadway. Free and clear site distance triangles should be incorporated at all crossing areas such as intersections with crosswalks, driveways and parking lot access conditions.

Minimum branching height for trees should also be considered. Typically, a distance of six to seven feet (6'-7') from the top of the rootball is a sufficient zone that allows pedestrians to pass by in a safe manner.





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Strengthen the campus setting

Open Space Network, Ultimate Development

Informal Landscape and stormwater control framework



In addition to the more formal landscape elements associated with the typical right-of-ways, the Master Plan envisions a more natural landscape network featuring indigenous species that further serves to unify the Research Park and celebrate the important work of the State Surveys. A rich and diverse habitat exists along the small holding ponds that will be saved as part of the interior landscaped zone that unifies the State Survey Campus.

Permanent open space and informal landscape features can be developed in the low density mode and remain intact as density increases.

The informal landscape network combined with water features can contribute to the overall integrated stormwater management system of the site by contributing important bio-filtration for surface run-off, promote improved infiltration as well as incremental stormwater detention.



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Sustainability

Demonstrate leadership in environmental quality

Sustainable Design

The Research Park employs and will continue to advocate design and construction techniques that speak to today's environmental concerns. Ongoing development will reflect a sustainable design approach that seeks to balance environmental responsiveness, resource efficiency and community sensitivity.

The University of Illinois' leadership in research and the development of new technologies is supported and enhanced by a parallel commitment to sustainable design principles in the Research Park.



Integrated Stormwater Management

Aspects of the integrated stormwater management system include but are not limited to wet detention ponds, vegetated swales and bioretention.

Wet detention ponds provide both retention and treatment of contaminated stormwater run-off. By capturing and retaining run-off, wet detention ponds control both stormwater quantity and quality. The pond's natural physical, biological and chemical processes then work to remove pollutants.

Vegetated swales are broad, shallow channels with dense stands of vegetation covering the side slopes and bottoms. Swales can be natural or man-made and are designed to trap particulate pollutants, promote infiltration, and reduce flow velocity.

Bioretention utilizes soils and both woody and herbaceous plants to remove pollutants from stormwater run-off. Water is ponded and gradually infiltrates the bioretention area or is evapotranspired.¹

¹Excerpts from EPA's 'Stormwater Technology Fact Sheets



Parking and Development Density

Establish a comprehensive parking strategy

Ultimate Build-Out



Market driven structures in the Research Park will require a street, parking lot, lobby sequence to provide convenient, immediately adjacent on grade parking. Structures built to date are typically two stories with at least 32,000 GSF floor plates. The proposed nominal 600' x 600' block dimensions will support two such structures with adequate on grade parking for cars at a rate of 3.5 cars per 1,000 GSF of building area with provision for reasonable landscaped buffer zones.

The Master Plan provides for multiple potential parking deck locations assuming three decks at 1,500 cars and one larger deck between Griffith and Oak at 2,500 for the potential of 7,000 cars. These decks, in combination with the acquisition of the Ameren CIPS property for additional surface parking will support a density approaching an FAR of 1.0 in the identified Research Core district. This FAR is achievable assuming a downward trend in the required parking ratio to 2.5 cars per 1,000 GSF of building area. This assumption is supported by prospective improvements in public transit serving the Research Park, availability of closer in housing options and the diversity associated with large parking decks. A formal zoning variance would need to be secured for this reduced parking ratio.

The thoughtful placement of buildings in the lower density surface-parking mode will preserve two additional building sites on the typical development block. Later infill buildings would be a combination of three and four story structures to achieve the higher FAR target of 1.0.



Public Transportation

Establish a comprehensive approach to public transit for the convenience of employees, students and visitors

Ultimate Build-Out



Mass Transit District bus lines currently serve the Research Park. Bus routes should be adjusted or extended over time as new buildings come on line.

Ideal routing for a prospective light rail system would create a loop that provides stops at proposed deck locations, provides additional access and visibility for the "main street" commercial districts and generally serves to connect the Research Park as a whole.





Selected Research Park Districts Careful planning to ensure success

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Multi-Use District North

Strengthening the connection to the Research Core



The Multi-Use District North occupies the super-block bounded by St. Mary's Road to the north, a New Street North to the south, the proposed Fourth Street extension to the east and First Street on the west. The nominal block depth of 600 feet will support the phased development of the hotel, restaurant and conference center and future athletic facility fronting St. Mary's Road.

This district will include a 120 room hotel, 200 seat restaurant, and up to 36,000 GSF Conference Center with room to expand as market demands. The proposed facility is designed to support larger conferences. On-site parking for each entity is available in addition to the potential shared use of Assembly Hall parking across St. Mary's Road to the north when scheduling allows.





Multi-Use District South

Provide an amenity that activates the street

While the north commercial cluster will benefit from the additional synergy created by the hotel, restaurant and conference center, the south commercial cluster will benefit from the exposure to the high volume of auto traffic on Windsor Road. This improved visibility will attract high quality amenity retail tenants that otherwise would not be available to the Research Park.



Low Density Development

The Multi-Use District South anchors the south end of the Research Park with a more substantial commercial cluster. A portion of the south commercial development should be oriented toward Windsor Road to announce the commercial presence and screen the service entrances and parking for the storefronts oriented to the street.



Buildings oriented toward the Research Park are anticipated to be mixed-use with office or residential over commercial space creating a "lifestyle center" environment.

Proposed commercial space benefits from an entry sequence via Windsor Road that directs auto traffic northbound on First Street and subsequently eastbound on New Main Street South, thus exposing storefronts prior to convenient on-street parking or supplemental on-site parking. Similar to the Multi-Use District North, additional commercial space may be incorporated across New Main Street South as market conditions and higher development density dictate.

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State Surveys

Achieving a naturalistic campus cohesion



The creation of the State Survey Campus seeks to consolidate the Illinois State Natural History Survey (ISNH), Geological Survey (ISGS), Water Survey (ISWS) and Waste Resources and Management Survey (ISWM).

Planning for the surveys includes the short term integration of a new laboratory building for the Natural History Survey portion of the campus, just north of Hazelwood Drive and east of the existing ISNH buildings. Development opportunity for additional Geologic and Water survey south of Hazelwood Drive is planned in the short term.

State Survey facilities are organized around an internal meadow that will serve as a living laboratory and natural habitat. This natural setting is linked to the Research Park as a whole through the informal open space network via walking trails that offer a counterpoint to the more formal streetscapes.

The internal meadowland will be established in the short term just east of the existing ISNH buildings and extended south, acting as unifying element that speaks to the Survey's mission of environmental preservation and research.





Ultimate Development

The Water Surveys will eventually be moved from their current position just south of Gerty Drive, terminating the south end of the State Surveys campus. Along with the ISNH and ISGS, a total of six, paired survey buildings will encircle the internal meadow in the ultimate development.

As the need for parking increases, ultimate plans to acquire and develop the Ameren CIPS lands to the west of Griffith Drive into surface parking lots will be complemented with the construction of a 2,500-car parking deck just to the south of a new lateral street north of the newly positioned ISWS buildings.



Development Phasing Integration and Implementation

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Anticipated Phasing Sequence

A structured approach to development

.3 FAR Development Density



LEGEND- ESTIMATED COMPLETION DATES



Mid-range development phasing is informed by existing outparcels west of First Street and the schedule for vacating UIUC South Farms facilities east of First Street. Thus, constrained development will occur from St. Mary's Road, south, and Windsor Road, north.

This development sequence will leverage the two Multi-Use Districts that anchor the Research Park by clustering new research/office facilities in these zones, further supported by the possible introduction of mixed-density housing east of Research Park Drive. New roads and utility infrastructure will be phased consistent with the above building sequence.