



**ILLINOIS**

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



# Multi-Modal Transportation Study

## EXECUTIVE SUMMARY

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prepared for

The University of Illinois at  
Urbana-Champaign

by

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## BACKGROUND AND PROJECT APPROACH

The University of Illinois at Urbana-Champaign (UIUC) is a thriving campus of more than 50,000 students, faculty and staff. Uniquely situated within two cities, the University is the region's economic and cultural center. Like many college campuses, the University of Illinois faces tremendous transportation challenges. The essence of the challenge is finding ways to move people to and around campus as safely and efficiently as possible, without compromising personal safety, the quality of campus life, the environmental setting of the campus, and the academic mission of the University.



Pedestrian safety issues have been at the forefront of the University and community consciousness over the past several years. Most recently, two students were killed while walking on campus, and numerous others have been injured. This study aims to enhance pedestrian safety on and around campus through a two-pronged approach: 1) a series of system-level improvements to promote the use of alternative modes and reduce modal conflicts, and 2) street-level improvements specifically targeted at improving pedestrian safety at intersections and street crossings. These approaches are based on the recognition that making the campus safer and friendlier for pedestrians requires a broad vision of the entire campus transportation system, and possibly fundamental changes to the way people expect to get to and around campus.

## KEY ISSUES

At the outset of the study, a number of key issues were identified, including:

- Creating a safe, walkable, and healthy campus environment.
- Reducing conflicts between pedestrians and other modes of travel.
- Becoming less reliant on the automobile by encouraging the use of alternative modes.
- Moving automobiles out of the campus core.
- Improving bicycle safety.
- Enhancing the efficiency and effectiveness of the transit system.



## SYSTEM-LEVEL PLAN

The system-level plan approaches pedestrian safety and general mobility from a macro perspective. A key question is how can pedestrian safety be enhanced while still moving people efficiently to and around campus? What systemic choices need to be made, and what are the impacts and trade-offs of those choices?

The system-level plan is built around the following parameters:

- Additional (new) parking should be built on the periphery of campus, instead of in and around the campus core.
- Transit system improvements are needed to improve service and enhance the quality of the campus.
- Streets within the campus should be developed as “complete streets.”
- The bicycle facility network on campus should be improved to enhance safety.
- Use of alternative modes of travel should be encouraged.

## Parking

Parking and its management are important factors in the success or failure of campus life. People who drive to campus and around the campus rely on the parking system to provide a space as conveniently and reliably as possible. But parking also has wider impacts: on the university’s finances, on students’ and employees’ finances, and on the environmental quality and overall ‘livability’ of the campus.

One of the most effective ways of enhancing pedestrian safety is to reduce the number of potential pedestrian/car conflicts, and one simple way to reduce the number of conflicts is to reduce the number of cars on campus. Currently, surface parking lots and parking decks are interspersed within and around the campus core. While this system provides a high degree of convenience to users, it brings cars into the core where pedestrian volumes are the highest.



## Key Parking Recommendations

- > Concentrate future parking on periphery of campus in transit/parking hubs and park-and-ride lots.

- > Develop park-and-ride lots that are free and easily accessible (via express transit service) to and from campus.
- > Minimize development of new surface lots in core campus.
- > Continue to provide adequate service and accessible parking.
- > Require resident students to park in remote resident storage lots that are secure and easily accessible by transit.
- > Investigate other parking permit price structures to reduce parking demand.

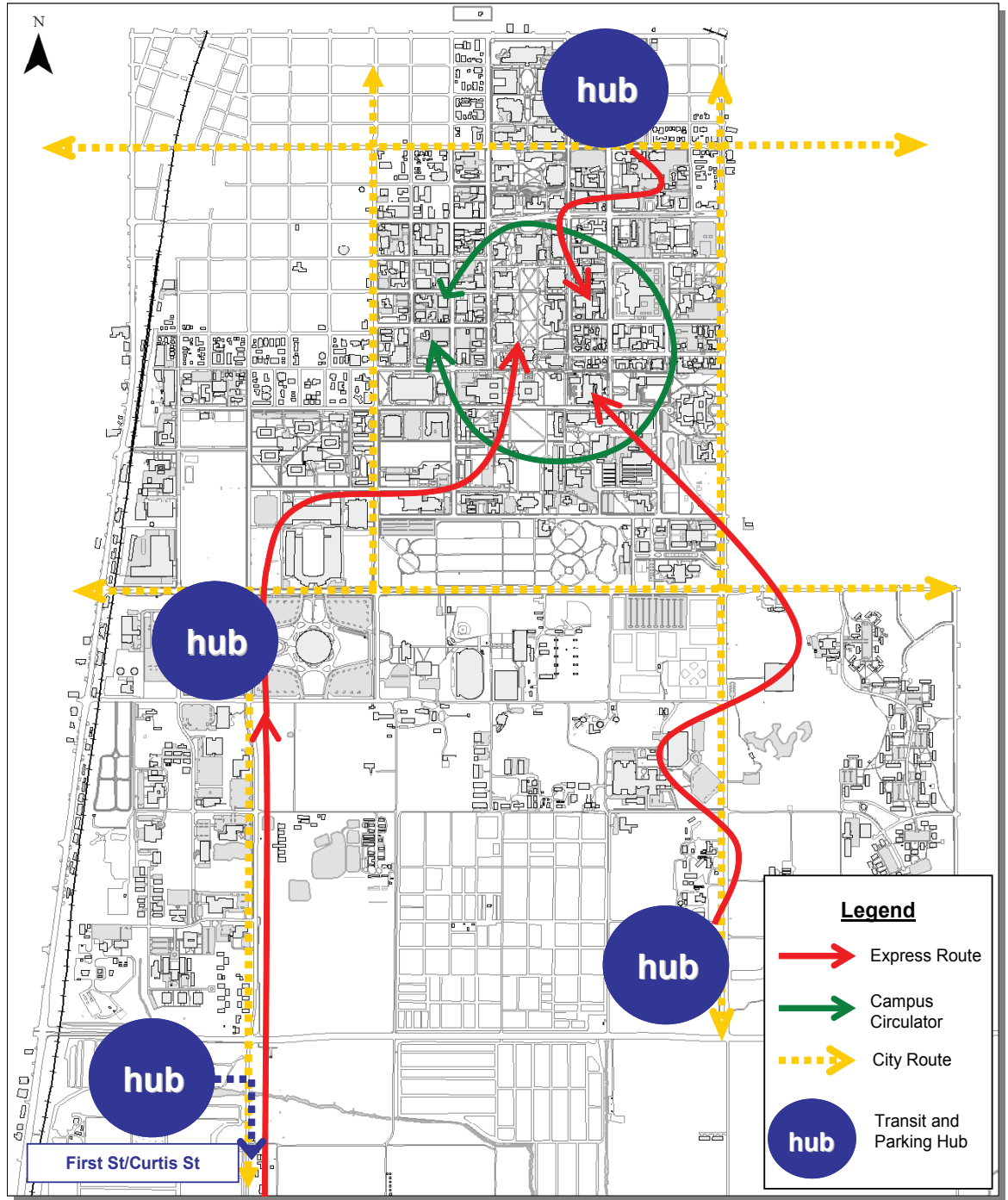
## Transit

An effective and efficient transit system is the key to a balanced and sustainable campus transportation system. Students, in particular, rely on the transit system to get them to and around campus, as well as to off-campus destinations. The system currently operated by the MTD provides a high level of service to students, accessing most areas of campus from student residential areas. But the high degree of access to the campus core has come at the expense of the campus environment, campus aesthetics, and possibly pedestrian safety. The recommendations in this study are aimed at improving the quality of the campus-serving bus system. The main goal is to improve mobility and pedestrian safety, and the secondary goal is to improve the overall service quality and attract new riders.

### Key Transit Recommendations

- > Move city MTD routes that do not primarily serve campus to the periphery of campus.
- > Reduce the number of buses passing through the heart of campus, especially on Wright Street.
- > Develop a transit/parking hub system in conjunction with park-and-ride lots (see Figure 1). City and regional transit would feed the hubs, and express shuttles from the hubs would feed the campus core.
- > Consolidate bus stops on campus, especially in the campus core.
- > Convert existing fleet of campus-serving buses to low-floor, high-capacity buses that are more efficient and promote the University brand.
- > Work with the MTD to continue implementation of STOPwatch GPS information system campus-wide.





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**Figure 1:  
Transit and Parking Hub  
Concept**

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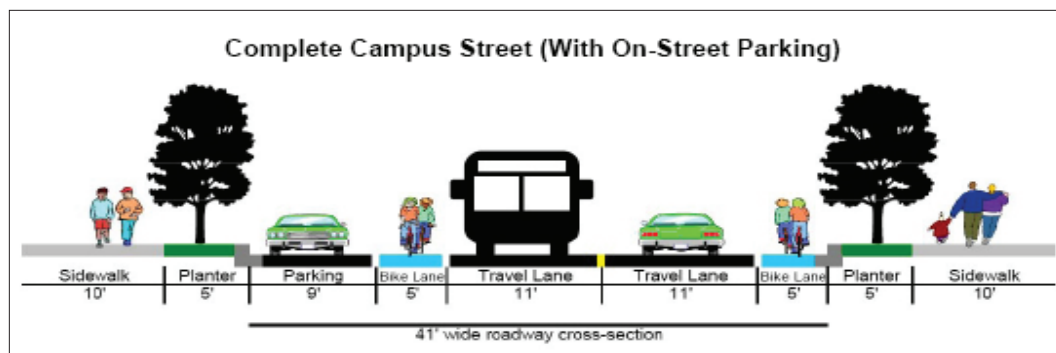


## Streets

Campus streets are key contributors to creating a memorable sense of place on college campuses. Streets should function at a much higher level than simply moving vehicles. They should enhance the pedestrian friendliness of the campus, provide safety for users of all modes, and add to the aesthetic and environmental qualities of the campus. One of the objectives of this study is to create the framework for developing great campus streets. Great campus streets:

- Accommodate multiple modes on-street in a safe and efficient manner;
- Utilize landscaping and other design treatments to enhance the streetscape and campus character;
- Give low priority to cars and highest priority to pedestrians; and
- Create a memorable sense of place.

Great campus streets are also “complete streets” – streets that successfully and safely integrate multiple modes (pedestrians, bicycles, buses, cars) in the same right-of-way.



### Key Streets Recommendations

- > Create great campus streets that are pedestrian-friendly and visual amenities for the campus.
- > Create “complete streets” - streets that successfully and safely integrate multiple modes (pedestrians, bicycles, cars, buses) - across campus.
- > Develop Wright Street, Gregory Drive, Springfield Avenue and Goodwin Avenue as campus gateways.
- > Develop Wright Street as a model for other campus streets.
- > Limit large delivery trucks on campus by enforcing central receiving system and restricting hours of delivery.



## Bicycling

By many standards, the University of Illinois campus area is ideal for bicycle commuting. The topography is flat, the campus and surrounding area are compact, the grid-patterned streets are predictable and efficient, and many students live within an easy bicycle ride to campus. But there are a variety of safety and functionality issues with the campus' current bike path system.

It is recommended that bicycles become part of the proposed "complete streets" program. Bicycles can safely be accommodated on the street with bike lanes in most situations, with bike paths supplementing the system of on-street facilities in areas without street access (ie, across the campus quad) or in areas intended for recreational use. In the long term, the current bike path system should be phased out as streets are redeveloped as "complete streets" to accommodate bicyclists with bike lanes. Careful planning of the transition from the current bike paths to on-street bike lanes will be required. Bicycle education and promotion should be an ongoing University effort.

In the short term, major safety issues with the current bike path system should be addressed. Recommended solutions include improved signage, bike path striping and markings, and painting the bike paths blue with standard bike symbol markings through intersections and conflict points.

### Key Bicycle Recommendations

- > Commission a comprehensive campus bicycle plan.
- > Implement bike lanes on campus streets as part of "complete streets" program. Bike paths should supplement the street system of bike lanes.
- > Develop and implement a comprehensive bicycle education program.
- > Implement temporary solutions for existing bike paths.
- > Provide other amenities to accommodate existing bicyclists and attract new ones.

### Use of Alternative Modes - Travel Demand Management (TDM)

One of the keys to increasing pedestrian safety is to decrease the number of pedestrian/car conflicts, and one way of reducing the number of cars on campus is to reduce the demand for parking. In addition to changing the location, pricing and system of campus parking, there are a number of other tools the University can use to encourage the use of alternative modes. Collectively, these strategies, programs, and policies are known as Travel Demand Management (TDM).

The University currently utilizes a variety of programs to give commuters options in their mode choice. But there is no comprehensive, centralized TDM program, and no





single staff person responsible to administer it. Transportation planning duties are currently split among multiple staff persons. It is recommended that the University hire a full-time Transportation Planner/TDM Coordinator that can act as the University's liaison with regional transportation planning partners, advocate for campus transportation needs, and educate and assist commuters in using alternative modes.

It is also recommended that a comprehensive TDM program, which may be called the Commuter Assistance Program (CAP), be developed and promoted to provide incentives to use alternative modes. Elements of the CAP may include

- Give financial incentives for not buying a parking permit.
- Provide parking vouchers for those who may need to drive occasionally.
- Provide a guaranteed ride home program.
- Establish preferred parking for carpool/vanpool users.
- Enhance existing ride-matching service for carpoolers and vanpoolers.
- Implement car-sharing (short-term rentals) program.

#### Key TDM Recommendations

- > Hire a full-time transportation planner/TDM coordinator.
- > Develop and promote a comprehensive TDM program (Commuter Assistance Program) to provide incentives to use alternative modes.

#### STREET-LEVEL PLAN

The street-level plan focuses on street improvements that should be implemented at intersections and mid-block crossings, as well as pedestrian-safety signage. These improvements complement the recommended system-level strategies and improvements.

This study recognizes that significant work and study has recently been done for these types of street-level improvements in the University District. Specifically, the following studies have taken a comprehensive look at pedestrian safety improvements: *Campus Area Transportation Study* (Clark-Dietz, Inc.), *University District Crosswalk Guidelines* (CUUATS), and *Comprehensive Crosswalk Assessment* (UIUC Civil Engineering Dept.). For a variety of reasons, including lack of funding, the recommendations in these studies have not been fully implemented. It is critical that the University work with the local jurisdictions to identify funding sources, implement needed improvements, and develop a program for regular maintenance.



### Pedestrian Crossings

There are currently a variety of crosswalk types and other pedestrian crossings in the campus area. These treatments have evolved over time and have created a system of mixed messages and confusion for pedestrians and motorists. One of the most important strategies to address pedestrian safety at the street level is to create an environment of consistent messages and expectations. Crosswalks and crossings should be of a standard type, design and material to effectively communicate the crossing.



The *University District Crosswalk Guidelines* (CUUATS) provides specific guidance for developing consistent treatments and improvements. It is recommended that the University continue to implement the recommendations in the *University District Crosswalk Guidelines*. As part of the implementation, alternative funding sources should be identified to fund a comprehensive and regular construction and maintenance program. Intersection and crossing improvement projects should be prioritized based on a ranking system that accounts for factors such as pedestrian volumes, accident data, proximity to significant pedestrian generators, and other factors.



In addition to intersection and crosswalk improvements, there are a variety of other treatments that can be implemented to enhance pedestrian safety, including channelizing pedestrian flow, pedestrian refuge islands, curb extensions, and use of pavers and alternate materials. Also, traffic signals on campus should be upgraded to include more wide-spread use of pedestrian countdown signal heads.

#### Key Pedestrian Crossings Recommendations

- > Develop a comprehensive program for intersection and crossing improvements on campus.
- > Implement recommendations detailed in the *University District Crosswalk Guidelines* (CUUATS).
- > Channelize pedestrian flow through use of medians, landscaping, and other physical barriers.
- > Implement other pedestrian safety treatments at appropriate locations.
- > Upgrade traffic signals on campus to enhance pedestrian safety, including more wide-spread use of pedestrian countdown signal heads.

### Signage

Signage is another key component of creating a consistent pedestrian environment, especially for motorists. There are currently numerous pedestrian safety sign types



in place around campus. Like multiple crosswalk types, multiple sign types create confusion and ambiguity for motorists and pedestrians.

The *University District Crosswalk Guidelines* recommend use of a standard sign type that is currently being implemented successfully on campus. It is recommended that full implementation continue, including replacing existing signs that do not conform to these standards.

### Key Signage Recommendations

- > Develop and implement a signage program that utilizes consistent sign types, designs and placement.
- > Follow the *University District Crosswalk Guidelines* (CUUATS) for sign type and placement. Replace existing signs that do not conform to standards.



## IMPLEMENTATION PLAN

A critical piece of an effective transportation plan is developing a sound implementation plan. Given that a major constraint for transportation improvements is funding, it is imperative that potential projects be evaluated, planned and prioritized. The implementation plan included in the *Multi-Modal Transportation Study* suggests a method for carrying out each of the recommendations in the study. Implementation will undoubtedly require high levels of coordination with local transportation partners. New funding sources may be required, as well as possible organizational changes to carry out new programs and initiatives. The implementation plan is the first step in accomplishing both the broad vision and specific details of this *Multi-Modal Transportation Study*.



