

CITY OF URBANA, ILLINOIS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

MEMORANDUM

TO: Bruce Walden, Chief Administrative Officer
FROM: William R. Gray, Public Works Director
Gale L. Jamison, Assistant City Engineer
Joseph L. Smith, Senior Civil Engineer
DATE: November 9, 2005
RE: Lincoln Avenue Improvements, Nevada Street to Pennsylvania Avenue

INTRODUCTION

City of Urbana, City of Champaign, University of Illinois and Mass Transportation District (MTD) staff with the assistance of consulting engineer, Clark Dietz Engineers, have worked over the last several years to complete the Campus Area Transportation Study (CATS). The purpose of CATS was to evaluate the interaction of pedestrian, bike and vehicular traffic within the campus area bounded by First Street on the west, University Avenue on the north, Lincoln Avenue on the east and Florida Avenue on the south and to develop recommendations and design guidelines to maximize the safety of pedestrians, bicyclists and motorists on campus and to discourage pass thru vehicular traffic. Recommendations for Lincoln Avenue in the CATS included signalization of intersections with high vehicular and pedestrian movements, reduction from two lanes in each direction to 3-lane configuration with a two-way-left-turn lane between Nevada Street and Pennsylvania Avenue and raised median crosswalks at high pedestrian locations. The improvements proposed for the 2006 construction season would implement those recommendations in conjunction with scheduled pavement maintenance.

The City Council will be asked to consider a motion to support the proposed 3-lane configuration with raised median pedestrian crosswalks on Lincoln Avenue between Nevada Street and Pennsylvania Avenue.

ISSUES AND DISCUSSION

Existing Conditions: The existing asphalt pavement is forty feet wide face to face of curb and is striped as 2-10 foot wide lanes in each direction. The intersections at Nevada Street and Pennsylvania are all-way stop controlled. Current average daily traffic (ADT) volumes on Lincoln Avenue are on the order of 16,000 to 17,000 vehicles per day and may be expected to grow up to ½ percent per year over the next 20 years. The residential area immediately to the east of Lincoln Avenue has a significant student and university employee population. The proximity to campus results in large numbers of pedestrian and bicycle crossings of Lincoln Avenue. Many of those crossings occur at those streets between Nevada Street and Pennsylvania Avenue where there is no traffic control on Lincoln Avenue.

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Concerns include excessive vehicle speeds, pedestrian and bicyclist safety, high incidence of accidents, traffic congestion, bus traffic and delivery vehicles.

Proposed Improvements: The plan shows the installation of traffic signals at Nevada Street and at Pennsylvania Avenue with new concrete curbs widened with larger radii to better accommodate bus-turning traffic and new accessible ramps. The traffic signals will have audible pedestrian push-button devices and countdown pedestrian signal timers similar to the ones found on Green Street in Campustown. The intersections will be fully-actuated with vehicle detectors and energy efficient LED signal heads mounted on overhead mast arms. The signals will be coordinated to provide progression between the existing signals at Florida Avenue, Illinois Street, Green Street, Springfield Avenue and University Avenue. New streetlights will be installed on Lincoln Avenue from Delaware Street to California Street with metal halide white light fixtures. The street will be resurfaced from Delaware Street to California Street as will Pennsylvania Avenue from Busey Avenue to Dorner Drive. The new pavement will be marked to provide 2 thru lanes, a bi-directional left turn lane and 2-4 foot wide paved shoulders. Raised curb medians are being considered at key pedestrian points as well to provide additional safety for pedestrians and bicycles. No bus turnouts are being planned at this time but staff will be working with MTD officials to minimize the number of locations that buses will stop to load and unload.

Benefits: After the proposed improvements are completed, Lincoln Avenue will become a safer, less hostile environment for all transportation modes utilizing it. It is expected that there will be minimal to no loss of roadway capacity, a reduction in average delays from 28 to 23 seconds in the morning and 40 to 29 seconds in the evening, a 10 % reduction in speeds and a 10 – 15% reduction in accidents.

Public input: A public information meeting was held on the 27th of October at Leal School a summary of questions and answers is attached.

CONCLUSIONS:

Although the City has the ability to phase the project to allow the installation of 4 lanes with signals and then try the 3 lane design, the primary goal of the planned improvement to Lincoln Avenue is to provide a safe roadway for all users of the street. The installation of a 3 lane street will not create any appreciably longer delays than a 4 lane design, but the 3 lane design creates a safer street by maintaining the posted speed limit, providing fewer lanes of traffic for pedestrians to cross and giving bicyclists a usable area for travel.

FISCAL IMPACT:

The Lincoln Avenue project, which includes traffic signals at Pennsylvania Ave. and Nevada Ave., resurfacing of the pavement and new streetlights, is budgeted at \$1,100,000. The University of Illinois will be contributing \$265,000 and the State of Illinois awarded a grant of \$90,000 towards the signals at Pennsylvania Ave. Because re-striping the pavement is required as part the of scheduled pavement maintenance, the proposed change to a 3-lane configuration will have minimal cost impact.

RECOMMENDATIONS:

It is recommended that the City Council pass a motion supporting the 3-lane configuration on Lincoln Avenue between Nevada Street and Pennsylvania Avenue.

ATTACHMENT
PUBLIC INFORMATION MEETING SUMMARY
OCTOBER 27, 2005

In mid-October a mailing to all residents and property owners on Lincoln Avenue and an e-mail notification to the WUNA neighborhood was extended by Public Works that briefly described the proposed improvements and notified the community of a Public Information Meeting to be held on October 27, 2005 at Leal School. There was extensive e-mail and phone response to the notification and several questions and concerns were brought forth. Responses to those e-mail questions were provided at the public information meeting and are summarized below:

- How will MTD bus traffic be accommodated with the three-lane cross section?
MTD has agreed to work with the City to establish a minimal number of designated stops on Lincoln Avenue between Nevada Street and Pennsylvania Avenue. Public Works staff will work with the University of Illinois to develop a bus turnout where possible on the west side of Lincoln Ave.
- How will delivery vehicles be accommodated?
Public Works staff will survey existing delivery locations and work with the various establishments to develop designated delivery locations and schedules. The current thought is to direct delivery vehicles to park and unload in the bi-directional turn lane and to restrict their delivery times to non-peak times. Parking and unloading on the side streets will be discouraged.
- How will pedestrian and bicyclist safety be improved with the proposed signalization of Nevada St. and Lincoln Ave.?
Audible pedestrian call buttons and count-down signals consistent with accessibility standards developed by CUUATS and adopted by the City will be installed at the signalized intersections.
- Will the proposed change to a three-lane section cause drivers to bypass Lincoln Ave. via Busey Ave.?
It is believed that the decreased delay at the signalized intersections with no loss in thru capacity with the proposed lane configuration would not encourage such bypass actions.
- Where will the proposed pedestrian crossings be located?
Three potential locations have been preliminarily identified; one just south of Iowa Street, one just south of Ohio Street and one just south of Indiana Street. The exact number and location will be determined during final design of the improvements.
- Will crosswalk lighting similar to those on Springfield Ave. at Grainger Library be installed on Lincoln Ave.?
No.

- Will raised medians be provided at the crosswalks?
Yes
- Will the new design reduce traffic delays on Lincoln Ave.?
Projections prepared by CUUATS staff suggest that the AM Peak delays will be reduced from 28.2 seconds to 22.7 seconds and that the PM Peak delays will be reduced from 40.5 seconds to 29.4 seconds through the reach from Nevada Street to Pennsylvania Avenue..
- Are there plans for vegetation in the medians?
No.
- Are there opportunities for un-mowed vegetation in the medians to discourage pedestrian crossings?
Not being considered as part of these improvements. The large number of turning movements does not make the barriers practical.
- Are there planned improvements to Pennsylvania Ave.?
Pennsylvania Avenue will be milled and resurfaced from Dorner Drive on the west to approximately half way between Lincoln Avenue and Busey Avenue.
- Can steps be taken on Pennsylvania Ave. and Illinois St. to prevent speeding to make the new signals?
Speeds will be monitored at Illinois Street and at Pennsylvania Avenue, when signalized, and appropriate recommendations made for resolution of speeding issues.
- What are the statistics for accidents on Green St. from Fourth St. to Wright St.?
Data provided by the City of Champaign suggests that there has been a significant reduction in the number of turning crashes with the change from the 4-lane to 3-lane section on Green Street. At the 4th Street intersection the reduction in total crashes was 40%. In the reach between 4th and Wright Streets there have been no reported pedestrian vehicle accidents since the conversion to 3 lanes.
- Can the proposed signals be coordinated to allow for pedestrian crossing gaps at the proposed crosswalk locations?
The traffic signals along Lincoln Avenue will be coordinate between University Avenue and Florida Avenue to maximize gaps at the proposed crosswalk locations.
- Can the proposed design provide a safe crossing between Nevada St. and Pennsylvania Ave. for bicyclists?
The proposed crosswalks with raised medians will provide a safe crossing for bicyclists and pedestrians alike. Bicyclists will have to walk their bikes across Lincoln Avenue in the pedestrian crossings and yield to cross-traffic.

- What problems might be anticipated for football game and student move-in day?
It is anticipated that there will be traffic backups as there are now on those busiest traffic days of the year. Because the capacity of the street will not be diminished by the change to 3 lanes and because the proposed traffic signals will move the traffic more efficiently, it is anticipated that the traffic conditions will not be worsened by the proposed improvements.
- How will traffic to Lincoln Ave. from the west Urbana neighborhoods be accommodated?
With coordinated traffic signals larger gaps than exist currently with the stop sign controlled intersections at Nevada Street and Pennsylvania Avenue will be provided for vehicles from the east to access Lincoln Ave.
- Are there appropriate warrants for the proposed signals at Pennsylvania Ave. and Nevada St. on Lincoln Ave.?
Appropriate warrants exist for both the intersections at Nevada Street and Pennsylvania Avenue with Lincoln Avenue.
- Is it possible to phase the project? Signals first and three-lane section at a later time?
Phasing the improvements is possible; however, because the re-striping of the pavement is to occur with the scheduled pavement resurfacing project, additional cost would be incurred to grind off the new striping to change to the three lane section at a later date.

During the Public Information Meeting there were several comments and opinions both pro and con regarding the proposed change from 4 to 3 lanes for Lincoln Avenue. Generally the comments centered on the following concerns:

- The adequacy of the proposed 4 foot shoulders to accommodate bike traffic.
- The maneuverability of traffic around stopped buses and delivery vehicles.
- The maneuverability of emergency vehicles around stopped vehicles.
- The volume level of the audible pedestrian signals.
- The vehicular capacity of a single thru lane in each direction as compared to two thru lanes in each direction.
- The condition and availability of bike pathways west of Lincoln Avenue.
- The diversion of traffic to the east through the residential neighborhoods.
- The possibility of phasing the project to implement 4 lanes with signals first; then try the 3 lanes?



Planning Department • 102 N Neil St • Champaign IL 61820 • (217) 403-8800 • fax (217) 403-8810 • www.ci.champaign.il.us

November 4, 2005

Chancellor Richard Herman
317 Swandlund Administration Building
601 E. John Street
Champaign, IL 61820

Mayor Jerry Schweighart
102 N. Neil Street
Champaign, IL 61820

Mayor Laurel Prussing
400 S. Vine Street
Urbana, IL 61801

Dear Chancellor Herman, Mayor Schweighart and Mayor Prussing:

At the request of the Chancellor, the Campus Area Transportation Study Technical Advisory Committee (CATS TAC) reconvened in emergency sessions to address a renewed concern about pedestrian safety following the tragic death of Sarah Channick after being hit by an MTD bus. The Committee was expanded for this purpose to include students, law enforcement officers and Professor Rahim Benekohal who is undertaking an intersection study for the university at this time. Our commitment was to have recommendations for immediate actions ready in four weeks. To that end, the Committee voted unanimously to forward the attached recommendations at its meeting Tuesday November 1.

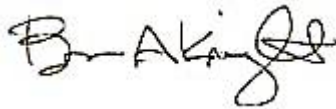
In making these recommendations, we wish to emphasize that it is still our belief that the biggest impact on pedestrian safety will result from continuing to pursue the implementation of the recommendations from CATS Phase II. However, the short-term recommendations contained herein are items we believe can be implemented quickly, as most do not require substantial engineering design. We do recognize that since these actions are being considered outside of normal budget cycles, implementation will require reallocating funds and shifting priorities. With that in mind, it is our request that these recommendations be implemented as soon as possible. We will be meeting again in January, and at that time will request a progress report from all three agencies.

In addition to these short-term recommendations, the CATS TAC has discussed a number of longer-term actions that it believes should be pursued to further the improvement of the transportation system in the University District in general, and pedestrian safety specifically. These are projects that require further study, engineering analysis, public input, planning and time to implement. Because of this, and the importance of continuing to implement the original recommendations, we strongly recommend that our three

agencies continue to work together cooperatively under the terms of a new intergovernmental agreement. This recommendation, along with a list of actions it should address, is listed as number 10 under the miscellaneous issues on the attachment.

Finally, as you are all aware, the Champaign City Council has voted unanimously not to reduce the speed limit in the area to 20 mph. In doing so, Council members expressed the belief that this recommendation did little to improve pedestrian safety and was therefore not warranted. They also generally indicated support for the other recommendations being made which they believed had a greater positive impact on pedestrian safety. During discussions at the CATS meetings, it was noted repeatedly that speed did not play a role in any of the recent accidents. Rather, this was seen as a way to send a message to drivers in the University District that they are in a unique area. I believe that the members of the Committee would agree that our other recommendations are more important in the long run to promoting pedestrian safety and would suggest that a patchwork of speed limits will not move us towards our goals. I would therefore propose that we set aside the issue of the reduced speed limit for now and focus on completing the other recommended actions. If I can answer any questions, or provide more background on the basis of our recommendations, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce A. Knight". The signature is stylized with a large initial "B" and a long, sweeping underline.

Bruce A. Knight FAICP
Chair of the CATS Technical Committee
Planning Director
City of Champaign

CATS TAC Short Term Recommendations

These recommendations would be implemented immediately and most of them would not require substantial engineering design; rather, only interim changes would be necessary to accomplish them (i.e. placement of planters, barricades, etc).

Bus Issues

1. Consolidation of bus stops
 - a. Gregory St. (In front of the Library) - MTD is looking to change this to a farside stop for westbound buses rather than a nearside stop.
 - b. Green St. (In front of the Illini Union) - Consolidating the eastbound stop in front of the Illini Union and the stop at Mathews and Green Street as one stop in front of the Illini Union¹.
2. Route choices to reduce turning movements
 - a. Illini - Reroute the Illini that currently is westbound Wright to Chalmers to 6th to Armory to 4th and reroute the buses to Wright to Chalmers to 4th. This would reduce 6 turns an hour at 6th/Chalmers and 6 turns an hour at 6th and Armory.
 - b. Loop route - Reroute the Loop that currently runs westbound from Green to Fourth to Armory to Wright to Green to operate on Green east and west only. This would take two trips per hour in both directions from that area and would reduce three trips an hour from Green Street on to Fourth Street, three trips an hour at 4th and Armory, Armory and Wright as well as three trips an hour along Wright Street northbound. In the opposite direction, it would take 3 trips off of Wright Street southbound, eliminate 3 turns at Wright and Chalmers, 6th to Chalmers, 6th and Armory and also 3 trips at Armory and 4th. Next year MTD would look at changing the frequency on the Green line to 15 minute frequencies and eliminating the loop from that area, which would reduce bus frequency from 5 to 4 an hour.
3. Audible Caution on buses: MTD is evaluating the possibility of having audible signals from 7 a.m. to 7 p.m. to be activated by operators when pedestrians are present.
4. MTD Personnel Training: MTD would evaluate the training program and review the training related to turning movements and pedestrian/driver interactions.
5. Strobe lights on buses for turning: Installation would initially be done on all articulated buses and then would be installed on all other buses.
6. Install pedestrian signs at intersections: The City of Champaign and the University would install "LOOK" signs at intersections based on MTD recommendations.
7. Apply for Grant to do a demonstration project to install bus activated "Don't Walk" signs.

Intersection Issues

1. Crosswalk striping/restriping: Making sure there are well-painted crosswalks throughout the university district.

¹ This change will require more than just moving the shelter and stop, it would eventually require an engineering study to consider the placement of the crosswalk and other issues.

2. Pedestrian markings: "Look" pavement markings (already ordered) to be installed at other critical intersections where safety issues exist.
3. Pedestrian Signs: Look signs (already ordered) to be installed at other critical intersections where safety issues exist.
3. Design intersections for better bus turning maneuvers: the cities and the University are committed to designing any future intersection for better bus turning movements. Implementation of this item would be long term.
4. Temporarily convert to one lane southbound through the south leg of the intersection and begin design work to make permanent changes at Sixth and Chalmers.

5. No Turn On Red at all signalized intersections in the University District with periodic enforcement of the laws, including Lincoln Avenue and Illinois Street and Kirby Avenue at Oak Street and First Street. Also, consideration of no Turn on Red along Springfield Avenue at First Street, Fourth Street and Sixth Street (if IDOT agrees).
6. Install countdown signals for pedestrians at other signalized intersections in the university district (consider installing these signals when upgrading or redesigning intersections).
7. Upgrading Signals at Springfield/Goodwin, Sixth/Gregory, Sixth/Armory, Fourth/Peabody, and Fourth/Gregory.
8. Implement temporary measures to improve the Fourth and Chalmers intersection considering that the Illini route is being rerouted to turn at that intersection.
9. Study the Green Street corridor between Mathews and Wright Street and come up with a detailed improvement plan that all agencies could agree to.
10. Identify intersections needing immediate attention for improvements to apply for demonstration project grants.
11. Identify and prioritize all intersections that need upgraded lighting and define guidelines to use for all intersections to improve roadway lighting at intersections. If there is an intersection that needs immediate attention, the intersection should be included in a short-term implementation plan for lighting.

Miscellaneous Issues

1. Develop a Safety Awareness Education Program for students, faculty, and staff.
2. Continued enforcement of pedestrian and motorists at crosswalks.
3. New Student Orientation - send training and information via mass e-mail messages to all university students; provide orientation packages for transfer students and graduate students, and contact international students through the international office.
4. Safety Contest involving the local newspaper or other means as well as several departments in the University.
5. Hold several focus group meetings before the end of the semester- seven different groups have been identified including pedestrians, drivers, bus drivers, bicyclists, people with disabilities, law enforcement and business owners.
6. Change speed limit in the University District to 20 MPH contingent upon cities approval.
7. Change UIUC entrance signs to warn motorists of pedestrian priority area.

8. Install permanent speed signs at key locations in the University district and continue to use portable speed trailers at other locations around the university district.
9. Possibility of closing Virginia Street at Pennsylvania Avenue to improve safety at that intersection.
10. Prepare an Intergovernmental Agreement with all agencies participating in CATS and expand CATS group to include law enforcement members and student representatives to:
 - i. Study and provide specific recommendations for improvements for selected intersections on campus.
 - ii. Develop a bike plan for campus.
 - iii. Create a more specific implementation plan for recommended improvements for the University District from the CATS report.
 - iv. Develop and implement an educational and marketing program for safety awareness in the University District.
 - v. Study the pedestrian crossings along Lincoln Avenue where there is approved University housing, fraternities and sororities.
 - vi. Study bus routes (frequency and paths).
 - vii. Study parking philosophy on campus.

Informational Meeting

Scheduled by



For

Improvement of Windsor Road from Philo Road to High Cross Road

Date: Thursday, November 17, 2005

Time: 6:00 PM – 8:00 PM

Location: Stone Creek Golf Club
2nd Floor Meeting Room
2600 South Stone Creek Blvd.
Urbana, Illinois

The City of Urbana will hold an Informational Meeting concerning the proposed improvement of Windsor Road from Philo Road to High Cross Road. All persons interested in this project are invited to attend this meeting. The meeting room is accessible to persons with a disability.

The meeting will be conducted on an informal basis. A brief presentation on the status of the project will begin at 6:30 pm. Representatives from the City of Urbana and Foth & Van Dyke / Daily Division will be available before and after the presentation to discuss the project. Representatives will answer individual questions and record comments offered by those in attendance. Verbatim comments will not be recorded. The presentation will address topics such as the need for the project, right-of-way and easement acquisition, and the tentative construction schedule. Preliminary reports, including environmental documents and an engineering analysis with drawings, and maps, will be available for inspection and viewing during the entire time.

For more information, contact: William Gray P.E., Public Works Director
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Email: wgray@city.urbana.il.us