

DEPARTMENT OF COMMUNITY DEVELOPMENT SERVICES

Planning Division

memorandum

TO: Laurel Lunt Prussing, Mayor

FROM: Elizabeth H. Tyler, FAICP, Community Development Services Director

DATE: June 6, 2013

SUBJECT: Urbana Bicycle Master Plan Update Budget Revision Ordinance

Introduction

At the June 3, 2013 City Council meeting, several questions were raised regarding the Urbana Bicycle Master Plan Update. This memorandum addresses those concerns.

Urbana's 2008 Bicycle Master Plan is an award-winning plan that has guided Urbana's capital improvements investments in terms of accommodating bicycles as a valid travel mode. By the end of 2014, the majority of the recommended network in the Plan will have been installed. A comprehensive update of the Plan is necessary to ensure the network that has been and continues to be installed is the most appropriate network for all Urbana residents.

Bicycle planning and infrastructure is an emerging field and best practices are changing quickly. Several of the standard facilities being installed across the country today did not exist when the current plan was written. One of the reasons staff and BPAC are recommending a comprehensive update to the plan is due to these changes in best practices. Another reason for the update is due to the change in the needs and desires of bicyclists in our community, which have also changed greatly since 2008. And yet another reason is to plan for the next phase of bicycle improvements. A comprehensive update of Urbana's bicycle master plan will help us assess how we have done so far and where we need to go in the future to have a community in which bicycling is a valid and respected mode of transportation.

The decision to create a community in which bicycling is a real transportation option originated in the 2005 Comprehensive Plan (Goals 46, 47, 48, 49, and 50) and a 2007 City Council goal to "get Urbana bicycling." The 2008 Bicycle Master Plan provided a framework in which to do this. The City has been able to leverage a total of \$2,308,478 in grant monies for bicycle facilities as a result of having an award-winning bicycle master plan. Urbana was recognized by the League of American Bicyclists in 2010 by being designated a bronze-level bicycle friendly community. In 2011, the City adopted a Complete Streets policy which commits the City using complete streets concepts in designing, constructing, reconstructing, and maintaining roadways. The term "complete streets" describes an integrated transportation network designed,

constructed, and maintained to allow safe and convenient travel along and across streets for all users, whether traveling by foot, bicycle, motor vehicle, or transit, and regardless of age or physical abilities. The key benefits of complete streets include safety, health, sustainability, and livability. For more information on the City's complete streets policy, see http://www.city.urbana.il.us/agendas - packets - Minutes/Agendas 2011/11-07-2011/Ordinance 2011-11-118.pdf.

Discussion

Questions were raised about the draft scope of services between the City and the Regional Planning Commission (RPC), the consultant selected to undertake the plan update. Attached is a copy of the draft scope of services. The scope includes the following key tasks: 1. Project Initiation - related documents & best practices review; 2. Goals & Objectives; 3. Existing Conditions; 4. Travel Demand Analysis; 5. Public Meeting #1; 6. Proposed Bicycle System and Support Facilities Development – to include recommendations for bicycle enhancements such as signage, bicycle parking requirements, and education/encouragement/enforcement strategies; 7. Public Meeting #2; 8. Draft Plan Report; 9. Final Plan Report; and 10. Plan Presentation and Approval. Also attached is a copy of the Pedestrian and Bicycling Survey (PABS), which RPC is proposing to use as part of the plan update. This survey would provide the City with baseline data in order to better plan for bicycling in Urbana.

The issue of reaching low-income neighborhoods was raised at the Council meeting. One of the reasons for ensuring the City's bicycle network pays particular attention to low-income neighborhoods is that bicycles can connect people with jobs, particularly in neighborhoods where car ownership is prohibitively expensive. In negotiating the scope with RPC, City staff specifically requested that the plan pay particular attention to those in our community who ride bicycles out of need rather than choice. This is reflected in the scope, in Task 4: Travel Demand Analysis, Task 5: Public Meeting #1, and Task 6.3: Education/Encouragement/Enforcement Strategies. As part of the scope, RPC has suggested holding public meetings in the Lierman neighborhood, at King School, and for the Latino/Latina population.

In addition to undertaking a comprehensive update to Urbana's bicycle master plan, RPC has also been contracted to undertake a bicycle trails master plan for the Urbana Park District. RPC is hoping to be able to combine the public outreach for these two efforts, in order to reach a larger portion of our community. The Urbana Park District has an extensive mailing list, which RPC would be able to use during Urbana's plan update if Urbana's plan is conducted simultaneously with the Urbana Park District plan. RPC is also hoping to coordinate the gathering of data for Urbana's plan with some of the public outreach they are already doing as part of the Long Range Transportation Plan (LRTP). For information about the LRTP, please see http://www.ccrpc.org/transportation/lrtp2/. Examples of the planned outreach for the LRTP include attending the Urbana Sweetcorn Festival and attending the Urbana Park District's Neighborhood Nights.

Another question brought up at the meeting was whether GIS analysis of trip origins and destinations would be included in the plan update. This is included in Task 4. Some of this information will also be gathered from the survey, although the survey will not obtain specific bicycle trip origin/destination information, but instead will obtain general information about the type of trip—i.e., a trip to work or school. The survey would also provide information about where respondents live.

A final question was raised asking whether City staff could undertake an update to the master plan without the assistance of RPC. Staff from the Departments of Community Development Services and Public Works, in particular Rebecca Bird in the Planning Division and Brad Bennett in the Engineering Division, will work closely with RPC on this project, along with the Urbana Bicycle and Pedestrian Advisory Commission. However, to undertake a comprehensive update to the master plan without the assistance of RPC would require an extensive amount of staff time and expertise and would negatively impact other ongoing engineering and planning efforts. In addition, the benefits that can be gained by RPC undertaking Urbana's master plan update along with the Urbana Park District bicycle trail master plan and the LRTP would not be possible without RPC's assistance. RPC was the consultant for the City's original plan and therefore have specific expertise and experience in both preparing bicycle master plans and in local bicycling conditions and needs.

Rita Morocoima-Black, Champaign County Regional Planning Commission CUUATS Transportation Planning Manager, will attend the City Council meeting on June 10, 2013 to answer any further questions Council may have.

Fiscal Impact

The Urbana Bicycle Master Plan Update will cost \$38,000. Sufficient funds are available in the Capital Improvement Plan to cover the expense of the Bicycle Master Plan Update, meaning that this budget amendment will not divert funds planned for other projects.

The City has received eight grants totaling \$2,308,478 since the adoption of the 2008 Urbana Bicycle Master Plan which have helped fund bicycle facilities: 1. Windsor Road – Philo Road to Stone Creek Boulevard and Philo Road – Colorado Street to Windsor Road, \$320,000; 2. Goodwin Avenue – Springfield Avenue to Bradley Avenue, \$390,000; 3. Stone Creek Boulevard – Amber Lane to High Cross Road, \$150,000; 4. Windsor Road – Stone Creek Boulevard to High Cross Road, \$35,000; 5. High Cross Road – Windsor Road to Po Boys, \$558,000; 6. Main Street – Cottage Grove to Dodson Drive, \$626,000; 7. Safe Routes to School Grant - bicycle network within 1.5 miles of Urbana Middle School, \$199,000; and 8. Safe Routes to School Grant – signage, \$30,478.

Staff anticipates applying for future Illinois Transportation Enhancement Program (ITEP) grants for bicycle facilities. The ITEP grant program is a competitive program in which having an updated comprehensive bicycle master plan will make the City's grant applications more competitive.

Recommendation

It is	recommended	that the bu	dget amen	dment ord	inance for	the Urban	a Bicycle	Master F	' lan
Upc	late be approve	ed.							

Prepared by:	
Rebecca Bird, Planner II	

Attachments:

Urbana Bicycle Master Plan draft scope of services

PABS survey report executive summary and copy of survey – this is the standard PABS survey and may be modified to better suit Urbana's needs. A copy of the full 107 page report is available by contacting Rebecca Bird at rlbird@urbanaillinois.us or 217-384-2440.



CUUATS

CHAMPAIGN URBANA URBANIZED AREA TRANSPORTATION STUDY

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2013 Urbana Bicycle Master Plan Update - Proposed Scope of Services

The 2013 Urbana Bicycle Master Plan is a comprehensive update of the 2008 Urbana Bicycle Master Plan and builds upon the facilities and programs that were identified in the 2008 Plan.

The 2013 Urbana Bicycle Master Plan will also supplement existing transportation plans by providing a framework for the implementation of bicycle facilities throughout the City.

The Bicycle Plan will include extensive public outreach, including two public meetings and other activities that involve stakeholder organizations and individuals.

Task 1: Project Initiation

Initial meeting: CCRPC staff will hold an organizational and initial meeting with staff at the City of Urbana and other agencies/organizations to collect available data and published materials, establish schedules, and establish communication channels with various interest groups, stakeholders, city staff, and local agencies. Also, a Steering Committee will be created to oversee the development of the 2013 Urbana Bicycle Master Plan.

Related documents review: CCRPC staff will conduct literature review of several documents including LRTP 2035: Choices, 2005 Urbana Comprehensive Master Plan, Boneyard Creek Master Plan, 2012 Downtown Urbana Plan, University Avenue Corridor Study, and Safe Routes to School analyses, Greenways and Trails, University of Illinois Bicycle Master Plan, and Champaign Moving Forward, and identify and confirm key outcomes related to bicycle infrastructure and activities.

Website: CCRPC staff will set up a project website to include information about the project, upcoming meetings, options for submitting comments to the project manager, draft and final project reports, etc.

Best practices review: CCRPC staff will identify best practices with respect to bicycle infrastructure and non-infrastructure needs/services. Special attention should be paid to comparable ("Big Ten", Midwest, similar climate, and historic "grid" street layout) with successful bicycling programs such as Bloomington, Indiana; Ann Arbor, Michigan; La Crosse and Madison Wisconsin; Chicago, Illinois; Minneapolis, Minnesota; and Portland, Oregon; and Berkley, California. This section will include best practices regarding which treatments are appropriate for different streets—ie, when to use bike lanes versus sharrows and what to do when on-street parking is present (and to include the data behind when and why bike lanes are generally preferred over sharrows when there is sufficient room); what conditions are necessary for neighborhood greenways (also known as bicycle boulevards); and when are shared bus/bicycle lanes appropriate.

Task 2: Goals and Objectives (G&O)

CCRPC staff will review and update the goals, objectives, and performance measures of the current Urbana Bicycle Master Plan. CCRPC staff will review and summarize key goals, objectives, and policies contained in existing plans and compare them with policies from different jurisdictions, along with policies from state and local agencies and organizations. CCRPC staff will then develop overall goals and objectives for the 2013 Urbana Bicycle Master Plan. The final set of G&O and Performance Measures will provide direction for the development and implementation of the proposed bicycle plan as follows:

- Goals, or future visions, will be based on existing documents and include any new initiatives.
- Objectives are more specific statements under each goal that will define how the goal will be achieved along with its performance measures.
- Performance Measures are metrics that can be used to assess progress toward meeting
 the objectives and could be utilized in prioritizing strategies. Special emphasis will be
 given to define Performance Measures related to the potential health benefit of a given
 strategy. Performance measures could be utilized to define future success including
 designation of the City of Urbana as a "Silver" Bicycle Friendly Community.

The final set of goals and objectives will be submitted to the Steering Committee for review and approval.

Task 3: Existing Conditions Evaluation

CCRPC staff will include an evaluation of existing bicycle facilities identified in the 2008 Urbana Bicycle Master Plan to verify their current conditions and evaluate bicycle safety. The evaluation of existing bicycle facilities will be conducted on site by driving, riding, and walking the existing routes/bicycle system. Observations will be noted in field surveys and photographs. CCRPC staff will also review bicycle plans of adjacent communities within the urbanized area to provide continuity of the proposed system. For the purpose of evaluating bicycle safety, CCRPC staff will gather crash data/histories from IDOT. This data will be used to map out bicycle crash locations in the city. The results of the existing conditions evaluation shall be summarized in a report to be submitted to the Steering Committee for review and approval.

Task 4: Travel Demand Analysis

CCRPC staff will conduct GIS analysis identifying potential origin/destination travel pairs where biking could provide a viable travel option for employment destinations, educational institutions, recreational facilities and areas of residential concentration with particular attention to disadvantaged populations. To the extent possible, CCRPC staff will also collect available data from the local bicycle clubs/organizations regarding bicycle use of specific routes. A website survey will be set up to determine the most common destinations. Based on the feedback received from the web surveys and the input received at the public meeting, CCRPC staff will provide recommendations for possible signage locations and destinations.

Task 5: Public Meeting #1

Conduct a public meeting to solicit input on current issues and needs related to bicycling in Urbana as well as important origin/destination travel pairs. CCRPC staff will additionally reach

out to community leaders and the public in low-income and/or disadvantaged neighborhoods to determine their needs.

Task 6: Proposed Bicycle System and Support Facilities Development

Task 6.1: Bicycle Enhancements

Assess the feasibility of and make recommendations for other bicycle enhancements, such as new types and locations for additional bicycle parking and wayfinding signage, shared lane markings, bicycle boulevards, community bicycle sharing, and other bike infrastructure facilities. Formulate strategies for partnering with or otherwise incentivizing the private sector to provide adequate facilities (bicycle lockers, showers, etc.) for bicycle commuting employees and/or patrons.

Task 6.2: Land Use Strategies/Design Standards

Review bicycle parking requirements in the zoning code and make recommendations regarding best practices. Assess desirable changes in the zoning code such as offsets to vehicular parking with bicycle parking.

Task 6.3: Education/Encouragement/Enforcement Strategies

Make detailed and specific recommendations for a bicycle education/outreach program for the general public and for populations identified in item 4 above, with implementation steps that identify responsible parties, cost, and timeline. The education recommendations should include guidance on which department bicycle education programs generally reside in in municipalities. In consultation with law enforcement, identify and prioritize enforcement strategies, with implementation steps that identify responsible parties, cost, and timeline. Identify and prioritize strategies related to potential health benefit of a given strategy utilizing assessment measures. In consultation with the school district, identify strategies to coordinate with school physical education and drivers education programs.

Task 6.4: Proposed System

CCRPC staff will develop a proposed system of bicycle facilities, including the following major steps:

- Develop GIS base maps of the existing and proposed bicycle system.
- Incorporate other relevant data on the new GIS base map.
- Identify needed new routes as well as bicycle travel facilities based on field observations, survey responses, input from public participation program, and input from the City of Urbana staff and other interest groups.
- Prepare a map of the proposed bike system containing existing and proposed routes and their designation and corresponding lengths according to the design standards.
- Prepare a map of the possible origin/destination travel pairs and corresponding signage.
- Develop criteria for making future decisions regarding bicycle infrastructure projects (ie, criteria to help determine which type of facility to install in a particular location and how to make decisions regarding facility types that are not yet known but come to be accepted after the adoption of the plan).

The proposed updated bicycle system map will contain existing and proposed routes and their designation. The development of the proposed updated system shall be described in text and

maps included in a report to be submitted to the Steering Committee and City of Urbana staff for review and approval prior to preparing a draft bicycle plan.

Upon the approval of the proposed bicycle map, CCRPC staff will circulate the draft bicycle systems map to stakeholders, interest groups, state and local agencies, etc. for their review and comments.

Task 7: Public Meeting #2

Conduct a second public meeting to solicit input on the draft map and recommendations of the City of Urbana Bicycle Master Plan.

Task 8: Draft Plan Report

CCRPC staff will develop a prioritized action plan that will form the basis of the recommendations in the 2013 Bicycle Master Plan. The plan will include recommendations for potential implementers and potential funding sources in the action plan. The 2013 Bicycle Master Draft Plan will be submitted to Steering Committee members for review and approval. After its approval, the draft plan will be made available to the general public for 30 days for review and comments.

Task 9: Final Plan Report

CCRPC staff will prepare a Final Bicycle Master Plan Report, incorporating the comments from the public including revised priorities and cost estimates.

Task 10: Plan Presentation and Approval

CCRPC staff will present the final report to the Bicycle and Pedestrian Advisory Commission, Plan Commission and the City Council and request endorsement of the report by the Bicycle and Pedestrian Advisory Commission and Plan Commission and adoption by the City Council.

Budget and Timeline

Update of Urbana Bicycle Master Plan															
Task	Project Manager	Planner	Intern	1	2	3	4	5	6	7	8	9	10	11	12
Seering Committee Meetings (4 meetings) Task 1: Project Initiation	6	12													
Initial meeting	2	3													
Review related documents		7													
Create and maintain website		7													
Review best practices	3	10													
Task 2: Goals and Objectives															
Review goals and objectives on existing plans &															
policies from state and local agencies and		5													
organizations Develop new goals and objectives	5	5													
Define Performance Measures	5	5													
Task 3: Existing Conditions Evaluation	- J	,													
Inventory all existing facilities to verify their current	4	45	20												
conditions and evaluate bicycle safety	4	15	30												
Review bicycle plans of adjacent communities	2	5													
Gather crash data/histories & map out bicycle crash	2	10	5												
locations	-	40	45					_							
Create Existing Conditions Report	5 2	40	15												
Review Draft Existing Conditions Task 4: Travel Demand Analysis		10													
Conduct GIS analysis identifying potential															
origin/ destination travel pairs	5	5	15												
Collect data from local bicycle organizations &															
using bike counters regarding bicycle use of specific		5	20												
routes		_													
Prepare & setup survey & analyze results Provide recommendations for possible signage		5	15												
locations and destinations	5	15	5												
Task 5: Four Public Meetings (at UMS,															
Lierman neighborhood, King School, Latino Neighborhood)															
Public Workshop: Existing Conditions displays,	30	30	15												
issues, forces, desires, goals and objectives review															
Summarize issues and opportunities and desires	5	15	5												
Task 6: Proposed Bicycle System and															
Support Facilities Development															
Assess the feasibility and make recommendations for bicycle enhancements	5	10													
Assess desirable changes in the zoning code	8	20													
Formulate strategies for partnering with the private	5	10													
sector	5	10													
Provide recommendations for bicycle education	8	20													
program for the general public	-	-										_			
Identify and prioritize enforcement strategies Prioritize strategies including health benefits	5	5 10													
Develop criteria for future decisions regarding bike															
infrastructure projects	5	10													
Prepare map of proposed bike system including															
existing & proposed routes, designation & lengths	5	10	15												
according to design standards															
Prepare map of possible origin/destination travel pairs and corresponding signage	5	5	15												
Task 7: Public Meeting # 2															
Public Workshop: Proposed routes, desired	_	0-	,-												
facilities locations & priorities	5	20	10												
Task 8: Draft Plan Report							_	_							
Project Prioritization and listing potential	5	15													
implementers and potential funding sources			10												
Map final proposed system	5	5	10	-											
Prepare draft plan document	5	30													
Conduct revisions based on comments received	2	5													
Steering Committee review/draft approval	5	5													
Task 9: Final Plan Report Finalize draft plan document including comments															
received from public and agencies	5	15													
Task 10: Plan Presentation and Approval															
Final approval	5	5													
Total Hours	169	409	175												
10101110	\$32,5		.,,									_		_	_

City of Urbana Bicycling and Pedestrian Survey

The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. The City of Urbana like many other communities does not have recent reliable data regarding how many active travel trips occur in its jurisdiction, let alone how the numbers may change over time. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data are able to track trends and prioritize investments to ensure the success of new facilities.

This proposal includes a low-budget survey method and related sampling strategy to easily, affordably, and reliably document the amount of local walking and cycling happening in the City of Urbana. A statistically-valid survey is often crucial in getting reliable information from the community, both as a baseline for setting realistic and achievable goals, and as a tool to accurately determine the needs and desires.

The proposed survey of Urbana residents is expected to be conducted by mailing and using a website created to answer the survey.

Considering Urbana's population of 41,250, the number of surveys needed to be sent out based on an expected 30% response rate and at a 95% confidence level, with a margin of error of +/-5% is estimated to be 1,273 surveys. Assuming \$1.75 for mailing each survey with a postage paid response envelope, the cost to mail the surveys is \$2,228.

As for the online option, CCRPC/CUUATS staff could create a survey on our website which would make data collection and processing easier. Through light advertising, we could potentially expand the response rate of the survey by allowing people who didn't get a mailer to take the survey online.

Bicycling and Pedestrian Survey														
Task	Website Master	Interns	1	2	3	4	5	6	7	8	9	10	11	12
Survey Addressing and Mailing														
Survey Website Creation	10													
Paper Survey Processing		80												
Paper and Web Survey Processing Combination	15													
Report Creation	10													
Total Hours	35	80												
TO TAL PERSO N N EL C O ST	\$2,92	21.01												
Survey Mailing	\$2,228													
TO TAL SURVEY CO ST	\$5,14	19.01												

Estimated Cost and Turnaround Time for Completing the Update of the City of Urbana Bicycle Master Plan and Bicycling and Pedestrian Survey

CCRPC would require \$37,677.45 to complete the above mentioned tasks for the Update of the Urbana Bicycle Master Plan and the completion of the Bicycling and Pedestrian Survey. Estimated turnaround time for completing both projects would be approximately 12 months.



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Measuring Walking & Cycling with PABS: A Low-Cost Survey Method for Local Communities

Ann Forsyth, Kevin J. Krizek, and Asha Weinstein Agrawal

MTI Project 2907

October 2010

Many communities want to promote walking and cycling. However, few know how much nonmotorized travel already occurs in their communities. This research project developed the Pedestrian and Bicycling Survey (PABS), a method that local governments can use to assess levels of local walking and cycling behavior. PABS is a four-page mail-out/mail-back survey that allows communities to reliably answer such questions as:

The PABS survey questions produce reliable data . . . And PABS is simple and inexpensive to administer, too.

- How much walking and cycling is occurring in my community?
- What is the purpose of walking and cycling trips?
- Who is completing the bulk of the walking and cycling trips?
- How often are people walking and cycling?

Study Methods

This research project tested the PABS method to ensure that it is both cheap and simple to administer, and also that it produces reliable data.

To test the quality of the questionnaire, the survey was administered twice to the same set of respondents, a week apart. This process checks for so-called *test-retest reliability*: do respondents answer questions about their general behavior the same way when they take the survey multiple times? An early version of the questionnaire was tested with 100 people, and the final version with another 87.

In addition, the survey was administered in San Jose, California, to verify that the sampling and administration procedures developed were sound. An important part of the test was to verify the feasibility of the random sampling strategy chosen, a two-stage cluster sample.

Findings

The PABS survey questions produce reliable data on walking and cycling.

This finding confirms that the PABS questionnaire produces quality data, with most questions achieving adequate to excellent reliability when tested using standard statistical techniques. PABS is also the first known survey that collects walking and cycling data for transportation planning purposes with questions tested for reliability.

The San Jose field test identified many kinds of walking and cycling trips, including trips missed by other common survey approaches like the American Community Survey.

The field test successfully picked up a wide variety of walking and cycling trips. In fact, PABS identified considerably more walk and bike trips than the American Community Survey, which is often used as a measure of walk and cycle trips. PABS picked up more of these trips because the survey asks different questions, including questions about walking and cycling up to a year earlier and about many different trip purposes.

Sample results from the San Jose field test: Percent of residents who walked or cycled in the last month, by trip purpose

Trip Purpose	Cycled	Walked
To/from public transit	4%	13%
Destination OTHER than transit	14%	60%
Recreation/exercise	17%	80%

PABS is simple and inexpensive to administer.

The San Jose pilot showed that the survey could be administered and analyzed by a small team: a local supervisor, three research assistants to coordinate, enter data, and analyze data, and volunteers to address and mail surveys. In addition, the two-stage cluster sampling method that was tested proved cost-effective, even for a large city like San Jose with a population of almost one million people.

Policy Recommendations

The authors recommend that communities consider using PABS to document levels of walking and bicycling. This quality-tested survey has a number of advantages:

- The well-documented method for administering the survey reduces staff time and costs compared with developing a non-standard approach.
- Because PABS uses a random sampling technique, the results can be generalized to the full community.
- Questions about habitual behaviors have high reliability—that is, people asked the same questions at different times will give similar answers.
- Answers can be compared across communities.

About the Authors

Ann Forsyth is Professor of City and Regional Planning at Cornell University, Kevin J. Krizek is Associate Professor of Planning, Design, and Civil Engineering at the University of Colorado, and Asha Weinstein Agrawal is Associate Professor of Urban and Regional Planning at San José State University.

To Learn More

For more details about the study, download the full report at **transweb. sjsu.edu/project/2907.html**. In addition, the authors have prepared a manual for practitioners who wish to use PABS. The current version of the manual is at the same website, and later updates will be posted at http://www.designforhealth.net/health/PABS.html.



MTI is a University Transportation Center sponsored by the U.S. Department of Transportation's Research and Innovative Technology Administration and by Caltrans. The Institute is located within San José State University's Lucas Graduate School of Business. **WEBSITE** www.transweb.sjsu.edu

Measuring Walking and Cycling Using the PABS (Pedestrian and Bicycling Survey) Approach: A Low-Cost Survey Method for Local Communities







MTI Report 10-03







EXECUTIVE SUMMARY

To tackle the problems of greenhouse gas emissions, traffic congestion, resident quality of life, and public health concerns, communities are relying on various initiatives to spur more walking and cycling. As local governments face hard choices about which programs to fund, decision makers, planners, and residents all seek to understand if proposed policies to increase bicycling and walking—modes referred to as "active travel"—will actually work. However, most communities have unreliable means to know how many active travel trips occur in their jurisdictions, let alone how the numbers may change over time. This project developed a low-budget survey method and related sampling strategy for communities to easily, affordably, and reliably document the amount of local walking and cycling happening among their residents.

There are of course already a number of excellent existing travel surveys, and the Pedestrian and Bicycle Survey (PABS) is designed to fill a gap between the more expensive travel diary and phone interview approach and a place-focused intercept survey best suited for collecting data on travel in a particular corridor. The authors propose that an inexpensive mail survey like PABS that documents active travel behavior among a community's general population will be of considerable use to local communities for both planning and evaluation purposes.

PABS is designed to provide information about both the people who do and do not walk and cycle, document walking and cycling that might occur regularly but not in any given week or any specific place, and provide information about a wide variety of trip purposes. For example, the PABS tool allows communities to affordably answer such questions as:

- How much walking and cycling is occurring in my community?
- What are some general purposes for the walking and cycling trips?
- Who is completing the bulk of the walking and cycling trips?
- How often are people walking and cycling?

The PABS instrument includes questions to address these topics, as follows:

- Whether respondents have walked or cycled within the last 7 days, last month, or last year (Question 3). This question determines who uses those modes at all.
- On how many days they made walk or bicycle trips for different purposes in the past 7 days (Questions 4–11). The authors chose to ask about the number of days on which such trips were made, rather than the number of individual trips, to make the survey easier to complete. This question provides information about the frequency of walking and bicycling.
- On how many days a week they commute by foot or bicycle, on average (Question16). This question provides data on behavior that might be missed by questions focusing on the previous 7 days. Commute data is also of particular interest to most transportation planners, since these trips comprise about 15% of

all daily trips in the U.S.¹ and comprise the richest data source for travel analysts.

 Typical socio-demographic information, information on key factors that might limit active travel, such as physical disabilities or weather, and information on whether the respondent has regular access to a bicycle or motor vehicle.

One of the most important contributions of this research project is that the Pedestrian and Bicycling Survey (PABS) instrument has been tested for reliability across separate administrations one week apart (known as "test-retest reliability" or repeatability). Compared with research in the field of public health, very few transportation surveys have been tested for such reliability.² That is, researchers typically do not know how likely it is that survey respondents will provide similar answers at different times. Some design-related environmental audit tools have been tested for inter-rater reliability but there is need for additional reliability testing of surveys that collect travel behavior data.³ The PABS tool achieved adequate to excellent reliability for most questions, creating a useful instrument and a baseline for future comparison with other instruments.

A field test of PABS conducted in San José was designed to test and confirm that PABS is indeed a simple survey implementation process that local government staff could easily follow without specialized technical support. A number of aspects of this test were successful—obtaining mailing lists from widely available sources, drawing a random sample, using accessible copying and mailing providers to copy and distribute the survey, entering data, and conducting analysis. The test, using a single mailing of the survey instrument netted a low response rate that was nevertheless comparable to that for many similar surveys. The report suggests mechanisms that communities can use to improve the response rate to adequate levels. These generally involve multiple contacts with households, such as reminder postcards, additional survey mailings, and strategies for raising general public awareness of the survey and its importance.

Accompanying this report is a user-friendly manual that cities and nonprofit organizations can use to walk step-by-step through the survey implementation process.⁴

How Do You Get Around Town?

This survey asks you questions about how you get around for your daily travel, with a focus on how often you bicycle and walk. Even if you never walk or bicycle, we are still very interested in your responses. Thank you for taking the time to complete this survey!

Questions about your recent trav	<u>el</u>						
1. What is today's date?	/ Month	/	Day	-			
2. Were you out of town during the last	7 days?						
□8 No OR	 9	Yes (If yes,	how man	y days	,)	
3. Check one box for each line below to tell us THE MOST RECENT TIME you used each type of travel. Note that some trips you make may fit into multiple categories below. For example, if you walked to the store yesterday to get exercise AND to buy bread, then you would check "Last 7 Days" for both row "g" and row "h."							
						Not Used	
		Last 7	Last	Last 3	Last	in the	
Type of Travel		Days	Month	Months	Year	Last Year	
a) Passenger or driver in a vehicle (for example, a car, truck, motorcycle, o taxi)			\square_2	\square_3	_ 4	 5	
b) Public transit (for example, bus, tra	in,	\square_1	\square_2	\square_3	 4	□ ₅	
c) Bicycle to or from public transit		\square_1	\square_2	\square_3	\square_4	\square_5	
d) Bicycle to a destination OTHER THAN public transit (for example a job, store, park, or friend's house		□ 1	\square_2	□ 3	 4	□ 5	
e) Bicycle for recreation or exercise (or not include riding a stationary bicy		\square_1	\square_2	\square_3	1 4	\square_5	
f) Walk to or from public transit	·	\square_1	\square_2	 3	 4	 5	
g) Walk to a destination OTHER TH public transit	AN	\square_1	\square_2	 3	 4	 5	
h) Walk for recreation, exercise, or to walk the dog		\square_1	\square_2	\square_3	 4	\square_5	

Questions about HOW OFTEN you BICYCLED in the last 7 days

In the last 7 days (up to yesterday), on how many days did you:									
4. Bicycle to OR from public transit (for example, to a bus or	train								
stop)		Number of	•						
5. Bicycle to OR from work or school		Number of	days						
6. Bicycle to get somewhere OTHER than work, school, or p									
transit. (For example, to go shopping, see a friend, or eat a management of the state of the sta									
Do NOT include trips with no destination, such as a bike solely for exercise.)		Number of	dave						
7. Ride a bicycle for exercise or recreation, without having a destination.		Number of	days						
for the trip.		Number of	davs						
1			<i>y</i> ——						
Questions about HOW OFTEN you WALKED in the l	ast 7	days							
In the last 7 days (up to yesterday), on how many days did you:									
8. Walk to OR from public transit (for example, to a bus or train Number of									
stop)		ramber of	days						
9. Walk to OR from work or school	• • •	Number of	Number of days						
10. Walktogetsomewhere OTHER than work, school, or public tra									
(For example, to go shopping, see a friend, or eat a meal									
NOT include trips with no destination, such as a walk solel exercise.)	•	NI	1						
11. Walk for exercise or recreation, without having a destination		Number of	•						
the trip		Number of	days						
Questions about your general travel									
			Prefer						
	Yes	No	not to						
12. Do you currently have any physical or other health			say						
condition that limits the amount of walking you can do?	\square_1	\square_2	\square_3						
13. Do you currently have any physical or other health condition									
that limits the amount of bicycling you can do?	\square_1	\square_2	\square_3						
and mines the universe of Steyening you can do.									

42	Арре	endix A: The Final Sui	rvey (Questionnaire	in English an	d Spanish	
14. Ir	n the last 7 da	ys, did you have acco	ess to	a working B	ICYCLE?		
	Always	Most of the time	S	□ ₃ Sometimes	Rarel	у	Never
15. truck		7 days, did you have tle that you can use e			_		
	\Box_1 Always		S	□ ₃ Sometimes	□ ₄ Rarel	у	□ ₅ Never
	de any of the	TYPICAL WEEK, h			•		
	a) Number o	of days walking:(twalking to or was at least 1	-	l car or transits	stop IF the
	c) Number d) Number	of days bicycling: _ of days taking publi of days driving mys of days riding as a p	— ic tran self: _	nsit (for exam	ple, a bus, tra		
		cycle, how many more of your local clima			ou TYPICAI	LY NOT ma	ke trips
	Number of	months:	OR	□77 I never	bicycle OR	□99 I don't	know
18. by wa	•	walk, how many mo			you TYPICA	LLY NOT m	ake trips
	Number of	months:	OR	□77 I never	walk OR	□99 I don't k	anow
Som	e questions	about you and yo	our h	ousehold			
	n what year w ar:	ere you born?					
20.		treets intersect close		•			
21. H	(First street low many yea	rs OR months have OR Months	you l	(Se ived in this n	cond street n eighborhood	ame)	

22.	What z	ip code do y	ou live in?		_			
23.	What is	your legal g	gender?					
	\square_1 N	Male] ₂ Female	□3 I	Prefer not t	o say		
24. W	What is you	ur race or et	hnicity? (Chec	ck all that	apply.)			
	□2 Am □3 Asia		n or Alaskan l	Native	□6 White □7 Don't	know	an or other P	acific Islander
25.	Which	categories b	est describe ye	ou? (Chec	k all that a	pply.)		
	□2 Wor	king for pay	OUTSIDE the rk	home	\square_{6}	Going Retired	d	
curre dorm	ently live v	vith you in y	bout your how your home. Planouse, or with ERE 🗖 .	ease do n	ot include	renters	or tenants. I	f you live in a
26. H	How many	people live	in your house	ehold, incl	luding you			
	Numbe	er of people	under 16:	_ Numb	per of peop	ole 16 ye	ears and olde	r:
	Iow many otorcycles	_	otor vehicles a	re there is	n your hou	sehold?	(For exampl	e, cars, trucks,
		,						
	ehold inco	ome. Please	1 el choices, and mark an "X" BINED incon	on the s	cale below	oses, we to indi	cate the APF	PROXIMATE
	0	\$20,000	\$40,000	\$60,0	00 \$8	0,000	\$100,000	\$120,000 or more

ORDINANCE NUMBER 2013-05-048

AN ORDINANCE REVISING THE ANNUAL BUDGET ORDINANCE, FY2012-13 (Urbana Bicycle Master Plan Update)

WHEREAS, the Annual Budget Ordinance of and for the City of Urbana, Champaign County, Illinois, for the fiscal year beginning July 1, 2012, and ending June 30, 2013, (the "Annual Budget Ordinance") has been duly adopted according to sections 8-2-9.1 et seq. of the Illinois Municipal Code (the "Municipal Code") and Division 2, entitled "Budget", of Article VI, entitled "Finances and Purchases", of Chapter 2, entitled "Administration", of the Code of Ordinances, City of Urbana, Illinois (the "City Code"); and

WHEREAS, the City Council of the said City of Urbana finds it necessary to revise said Annual Budget Ordinance by deleting, adding to, changing or creating sub-classes within object classes and object classes themselves; and

WHEREAS, funds are available to effectuate the purpose of such revision; and

WHEREAS, such revision is not one that may be made by the Budget Director under the authority so delegated to the Budget Director pursuant to section 8-2-9.6 of the Municipal Code and section 2-133 of the City Code.

NOW,	THEREFO	ORE, B	E IT	ORDAIN	ED BY	THE	CITY	COU	NCIL	OF	THE	CITY
OF URB	ANA, IL	LINOIS	, as	follow	vs:							
Sect	ion 1.	That	the .	Annual	Budget	be	and	the	same	is	here	eby

revised to provide as follows:

FUND: Capital Improvement Fund

ADD EXPENSE : Bicycle Master Plan Update \$38,000.00

<u>Section 2.</u> This Ordinance shall be effective immediately upon passage and approval and shall not be published.

Section 3. This Ordinance is hereby passed by the affirmative vote of two-thirds of the members of the corporate authorities then holding office, the "ayes" and "nays" being called at a regular meeting of said Council.

PASSED by the City Council th	nis,
·	
AYES: NAYS: ABSTAINED:	
	Phyllis D. Clark, City Clerk
APPROVED by the Mayor this $_$	day of,
 '	

Laurel Lunt Prussing, Mayor