

## The Supporting Statement

### Part B. Collections of Information Employing Statistical Methods

The following five questions must be answered only if Item 17 on Form OMB 83-I is "Yes." If the information collection involves statistical methods, the OST will request a review and concurrence from the Bureau of Transportation Statistics (BTS) before sending it to OMB.

1. Describe potential respondent universe and any sampling selection method to be used.

The University of Illinois at Chicago Survey Research Laboratory (SRL) is responsible for recruiting the study respondents. Address-Based Sample (ABS) will be ordered from Genesys Sampling of Marketing Systems Group.

The initial sample will be randomly selected addresses from the four target neighborhoods. SRL will mail the advance letter / return postcard to each of the addresses. Respondents who are interested in participating will return the postcard. The University will include screening questions in the advance letter to potential survey participants to ensure that (1) respondents work or attend school in an area potentially reachable via transit. (One possible definition: work in the city of Chicago or within three miles of a transit line); and that (2) respondents regularly travel to the nearest train station or its vicinity. The purpose of the screening is to ensure adequate sample participation by people with certain desired characteristics: travel to work or school sites that could be reached by transit, or to the station area.

The four neighborhoods were the product of a two-by-two design: more affluent (Skokie, Evanston) and less affluent (Cicero, Pilsen), and auto-oriented in urban form (Cicero, Skokie) and more transit/pedestrian-oriented in form (Pilsen, Evanston). The underlying premise that that urban form and household income are two of the most important determinants of mode choice; this design ensures that a) there is variability in each; and b) the University can observe the effect of each separately.

SRL will order approximately 7,700 addresses, and anticipates that these will result in 766 completed interviews. Based on the distribution of completed questionnaires in the pretest, it is anticipated that 78 questionnaires will be completed in two neighborhoods (Cicero and Pilsen), and 310 questionnaires will be completed in the other two neighborhoods (Evanston and Skokie). The initial recruitment will be by mail with responses by return mail. The University estimates that in order to obtain an overall 766 completed mail surveys, they will need to start with a sample of 7,700 addresses. The University will expect 1,463 respondents to return a postcard, completed with contact information.

Households that indicate an interest in the study, by completing and returning the postcard, will then receive a survey packet, which will include a travel diary and images they will need to have on hand for the telephone interview. They will be instructed to complete their travel diary before the interview, and told that interviewers will start to call them about 2 weeks after they receive the packet in the mail. Based on the pretest that SRL conducted in Spring 2011, the University estimates that they will be able to contact 94.7% of the 1,463 households to ask for the respondent who filled out the postcard and then expect 77.8% of the households contacted to be cooperative. Of the resulting 1,078 households, the University estimates 92.9% will be eligible (the others will not speak English or Spanish, will not have an adult aged 18 or older, or will not live at the sampled address). Of the eligible households, the University anticipates they will be able to contact 85.0% of them to conduct the survey and that 90.0% of those contacted will complete the interview. In the end, the University expects

766 completed interviews and a participation rate of 10 %. Percentages are based on the pre-test response rates.

Participants will be recruited within a four-week period (so there could be two weeks between when they are called and when they complete their survey and interview). Filling out the survey would take one day. The follow-up interview will take approximately one hour.

2. Describe procedures for collecting information, including statistical methodology for stratification and sample selection, estimation procedures, degree of accuracy needed, and less than annual periodic data cycles.

The survey will ask respondents about their current travel behavior. This will be in the form of a trip diary for a particular day (i.e. trip destination, purpose, time of departure and mode). For some subset of trips, respondents will be asked what they would have done if their primary mode were not available. Options will include switching modes or destinations, or eliminating the trip altogether. The assigned days will be staggered, both to represent a range of conditions and to allow follow-up phone interviewing as soon as possible after the individual's assigned day. The University will restrict our questions to the adult who is completing the survey (one per household).

A second part of the survey will present trip scenarios to respondents under the altered urban-design conditions and ask them to choose a mode and destinations. They will be asked to review their actual trips for the day and indicate whether any of their modes or destinations would have changed given the proposed physical improvements to the walking, cycling, and transit environments. They will similarly be asked if any trips would have been added or eliminated under the proposed changes. Regardless of whether a respondent indicates that any trip would change under the improved conditions, he or she will be asked to subject one particular trip on the trip diary to analysis under the new conditions. Choice of a trip will be based on a hierarchy that we will establish with work trips at the top, then school trips, then shopping trips. Most of the trips will involve travel outside of the respondent's neighborhood; while the urban design improvements will be represented for the neighborhood only, respondents will be asked to imagine such improvements all along their route.

A third category of information to be collected by the survey is a set of rating-of-alternatives variables (e.g. how would rate their trip to a transit station regarding convenience, safety, etc.).

Responses from stated preference will be normalized to the revealed preference data. That is, the stated-preference scenarios contain among them a status-quo scenario. In principle, stated-preference responses to the status quo scenario should match current behavior. We expect that there will be bias, however, with stated behavior ostensibly showing higher rates of walking, cycling, and transit use than revealed behavior. Estimated rates of use of travel modes for future scenarios will be reduced by the extent of the bias observed in the gap between current behavior and stated behavior under the status quo scenarios.

The University will target four neighborhoods in the Chicago region: Cicero, Pilsen, Evanston and Skokie. These four neighborhoods represent different land-use and demographic characteristics, to ensure the ability generalize of the research findings to a variety of urban conditions.

The information collection is a convenience sample for exploratory advanced research purposes and is not designed nor will be used to generalize travel behavior nor transfer results to other groups or locations.

3. Describe methods to maximize response rate.

The University will mail a letter to those addresses asking them to participate in the study and offering them a \$50 incentive for their cooperation. The letter will be double-sided, English on one side and Spanish on the other, and will contain a return postage paid postcard, which will ask for their name, address, e-mail address, and telephone number if they are interested in enrolling in the study.

This study is unique in that it requires participants to complete four separate elements that are each independently burdensome, and taken as a whole, are very burdensome. After respondents return the response letter and indicate their interest in participating in the study, they are mailed a study packet that includes a travel diary and a booklet with images and worksheets. The first thing we ask respondents to do is to spend time completing a detailed, five-page travel diary in advance of the telephone interview. Then, we ask them to complete a 30 minute telephone interview. Finally, during the phone interview, respondents are asked to fill in values on the six separate worksheets that we provide in the booklet. These values are calculated based on information the respondent provides during the phone interview using the travel diary, so they cannot be pre-filled. Once the respondent fills in the values, they are asked to answer questions based on the images and worksheets. In appreciation for the considerable amount of effort we are asking respondents to put into this study, we propose offering a \$50 incentive. Research has shown that incentives increase cooperation and there is some evidence that they reduce the number of calls required on sample cases which reduces interviewer effort and cost. (Groves, R.M., and Couper, M.P. (1998). *Nonresponse in Household Interview Surveys*, New York: Wiley.) The \$50 incentive used in this study is appropriate for helping us achieve a reasonable participation rate. The results of the pretest indicate that even with the \$50 incentive, the participation rate for this study is somewhat low at 10%.

#### 4. Describe tests of procedures or methods.

The University is using standard method including pre-testing. The University recruited some staff members not involved in this project to complete the travel diary and participate in a cognitive interview so we could do some initial testing of the questionnaire and the study materials. The purpose of this was to solicit some feedback on the following: (1) how easy or difficult it was to complete the diary, (2) whether the survey questions were clear, (3) whether there was anything confusing about any of the questions, and (4) to test have respondents fill in values on the worksheets for the choice experiments and answer questions based on those worksheets. Based on the feedback we received during this cognitive interview process, we made both design changes and substantive changes to the travel diary, the worksheets and the questionnaire.

A pretest was conducted in Spring 2011 following all the proposed procedures designed for the main study. This pretest served as a test-run of the main study, and it was used to test assumptions about cooperation to the initial mailing. The pretest also allowed interviewers to collect feedback from respondents. Changes to the main study design were made based on the pretest outcomes. Sample rates were adjusted and minor wording changes were made to the questionnaire and study materials.

The pretest began with a random sample of 100 addresses – 25 from each of the geographic areas – that was purchased from Genesys sampling. Based on original sample rates, it was expected that from these 100 addresses, 10 interviews would be completed. However, the agreement with the federal Office of Management and Budget (OMB) was that we would only complete 9 interviews during the pretest. Initial recruitment letters were sent on April 18, 2011 and the ninth telephone interview was completed on May 31, 2011. Overall, the sample rates during the pretest reflected what was expected, except that the rates varied substantially by neighborhood which means that completed interviews for the main study will most likely not be equitably distributed amongst the four geographic areas.

The changes made to the questionnaire and study materials based on this pretest have been incorporated into the final documents sent to OMB for review.

5. Provide name and telephone number of individuals who were consulted on statistical aspects of the IC and who will actually collect and/or analyze the information.

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