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A Report on Participant Sampling and Recruitment for Travel and Physical Activity Data Collection

Anne Vernez Moudon Brian Saelens

Scott Rutherford Mark Hallenbeck

Department of Civil and Environmental Engineering University of Washington Seattle, WA 98103

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University of Washington 135 More Hall, Box 352700 Seattle, Washington 98195-2700

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ABSTRACT

The substantial investments now being made in transit yield benefits that go beyond managing traffic congestion relief, and include improved environmental quality and potential gains in human health due to increased physical activity. Past research on the effects of such infrastructure investments on mode choice and physical activity has been hampered by cross-sectional designs that limit the ability to draw causal inference. A 5-year \$3.3 million study was submitted to the National Institutes of Health. The study takes advantage of the introduction of light rail transit (LRT) in Seattle. Using a case-control longitudinal panel design, 1000 adults living either close to (within 1 mile; case) or far from (control) an LRT station will be assessed prior to (baseline), soon after (post 1), and more than 2 years after (post 2) the introduction of LRT service. It is hypothesized that residents living close to LRT will have an increase in transportation-related walking and total physical activity relative to residents living farther away. Individuals' walking will be assessed via integrated information from portable GPS and a 7-day travel diary, and physical activity assessed via accelerometry. Neighborhood built environment will be assessed via parcel-level land use evaluation. Changes in non-LRT infrastructure and availability (e.g., bus routes) will also be considered. The proposal has been favorably reviewed once by NIH. The resubmission deadline is in early March. The December 2008 project start date does not give the research team the time needed to set up the protocol and collect the baseline data before Light Rail opens in July 2009. As a result, the research team has sought bridge funding for a May 2008 project start. TransNow support will contribute to this bridge funding and insure that baseline data can be collected on 1000 subjects for 7-day travel patterns. The study natural experiment design has strong potential to make a significant contribution to scientific knowledge and to transportation policy. The prospective evaluation of changes in the same individuals' transport modes and physical activity over a period of marked change in transportation and built environment is a rare, but potent test of the impact transportation investments on behavior.

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Problem Statement

The substantial investments that are being made in transit may yield benefits that go beyond managing traffic congestion relief, and include improved environmental quality and potential gains in human health due to increased physical activity. Past research on the effects of such infrastructure investments on travel mode choice and active travel has been hampered by cross-sectional designs that limit the ability to draw causal inference between infrastructure investments, related land use changes and development, and travel mode choice.

A 5-year \$3.3 million study was first proposed and submitted to the National Institutes of Health (NIH) in the winter of 2007. The study was to take advantage of the introduction of light rail transit (LRT) in Seattle. A case-control prospective cohort of 1,000 participants was proposed to assess physical activity and travel mode choice over a 7-day period at three points in time: prior to (baseline), soon after (post 1), and more than 2 years after (post 2) the introduction of LRT service. It was hypothesized that residents living close to LRT would have an increase in transportation-related walking and total physical activity relative to residents living farther away.

The proposal was favorably reviewed but not funded by NIH in the summer of 2007. Reviewers suggested changes to be made in a second round of submission in the fall of 2007, which would be reviewed by summer 2008. If accepted for funding, the earliest NIH project start date would be December 2008. This review schedule did not give the research team the time needed to set up the protocol and collect the baseline data before Light Rail was officially scheduled to open in July 2009. As a result, the research team sought start-up funding for an early project start in late spring 2008. Start-up funding was secured from Seattle Children's Hospital Research Institute and TransNow to begin collecting the baseline data on the 1,000 subjects for 7-day travel.

The 5-year \$3.3 million study was awarded funding based on the second round of favorable reviews in early summer 2008. The study eventually received early funding by the National Heart Blood and Lung Institute (NHBLI) at NIH in September 2008 (R01HL091881, Saelens Principal Investigator).

This report covers the methods used and early results obtained in the collection of baseline data. The focus is on approaches taken in the participant sampling and recruitment processes.

Background

Some 20 U.S. cities now have light rail systems serving areas with more than 50 to 60 million people and with 314 million boardings annually (Garrett, 2004). In the past two decades, twelve cities have opened LRT lines in the U.S. and in 2004, twenty more cities were planning to do so in the future (Kuby, Barranda et al. 2004). There has been and will likely continue to be an increase in the number of LRT systems available in U.S. cities. The number of LRT trips has increased by over 75% since 1989. The opportunity to study the prospective short-term and long-term impact of LRT is rare. Given increases in LRT systems development, availability, and ridership, studies of how these systems affect travel behavior are essential. The need for such studies is especially acute that the benefits of LRT must be weighed against the sizable investments the systems require.

Investments in LRT

The cost of light rail construction has varied widely, largely depending on the amount of tunneling and elevated structures required. In the U.S., it has averaged at about \$35 million per mile. Seattle's system is an outlier at \$179 million per mile, because it includes extensive tunneling in poor soil conditions, elevated sections, and stations as deep as 180 feet below ground level. Seattle LRT costs are more typical of subways or rapid transit systems than light rail. Like all transit systems, LRT has operating expenses that are not entirely covered by fare box revenues (Light Rail Transit Association, 2009).

Investments into LRT have been rationalized based on benefits related to reducing automobile traffic congestion, reducing air pollution, serving the poor, as well as economic development including job and wealth creation along lines. This study explores an additional benefit of LRT, that of supporting walking and other modes of active travel, and thereby increasing the amount of physical activity people do. This study therefore has the potential of positively linking transportation investment with improvements in human health.

Physical activity and walking

Physical activity is associated with numerous health benefits, including prevention of cardiovascular disease, diabetes, osteoporosis, and some cancers (U.S. Department of Health and Human Services 1996). Low levels of physical activity are a significant public health concern. Inactive lifestyles and poor diet accounted for approximately 365,000 deaths in the U.S. in 2000 (about 15.2% of all deaths), second only to tobacco (Mokdad, Marks et al. 2004; Mokdad, Marks et al. 2005). Physical inactivity is estimated to cost more than \$76 billion per year in direct medical expenses (Pratt, Macera et al. 2000) and along with overweight/obesity accounts for 27% of national health care charges (Anderson, Martinson et al. 2005). Despite the benefits, more than half of U.S. adults (<5% if using objective measures of activity) fail to meet the minimal recommendation for physical activity (30 minutes/day on most days of the week) and socio-demographic disparities exist (Centers for Disease Control and Prevention 1996). Walking is the most common form of physical activity among U.S. adults and is the most well-liked (U.S. Department of Health and Human Services 1996). Brisk walking is protective of health, particularly if done consistently (i.e., to/from work or to/from other modes of transportation) (Wagner, Simon et al. 2001). Walking-related health benefits are accrued independently of benefits from more vigorous activity (i.e., those traditionally considered "exercise", such as running, swimming) (Manson, Hu et al. 1999). Active commuting is associated with cardiovascular and other benefits, including better physical fitness (Hendriksen, Zuiderveld et al. 2000), lower cholesterol, and other positive health outcomes (Sallis 2008).

Although liked and beneficial, substantive amounts of walking are not a routine part of U.S. adults' daily lives. Findings from the National Household Travel Survey (NHTS) indicate that walk trips as a percentage of overall trips over 1 mile have increased from the mid 1990s (16.7%) to 2001 (21.2%) (Hamer and Chida 2008), but rates continue to fall below the 25% goal set by *Healthy People 2010*. Further, it is not clear whether the reported recent increase in walk trips reflects real improvements or is attributable to a change in the NHTS survey methodology for assessing walk trips (U.S. Department of Transportation and Federal Highway Administration 2004). A 10-year status report of the *National Bicycle and Walking Study* in 2004 highlights the failure to meet the goal of doubling the percentage of walking and cycling trips between 1990 and 2001. During this period, walking trips went from 7.2% to 8.7% of all trips (not limited to trips <1 mile), falling well short of the 15.8% goal.

LRT and walking

Perhaps not surprisingly, walking as part of one's daily transportation is related to obtaining recommended levels of physical activity. In a Portland study, LRT riders report 6.6 minutes of walking to get from home to a LRT station, but more than 10 minutes of walking to get from the terminal LRT station to work/school. Over 20% of LRT commuters reported walking more than 40 minutes from the terminal LRT to work/school and back each day alone (Dill 2006). Others found high levels of walking among transit users. A recent study of commuters from the same Northern New Jersey areas who work in New York City examined pedometer and self-reported transportation walking differences between train and car commuters. Train commuters had almost 30% more steps per day than car commuters. Adjusting for demographic factors, these train commuters were 4 times more likely to get >10,000 steps per day than car commuters (Evans and Wener 2006). In another study using National Household Travel

Survey (NHTS) data, investigators found that the average American transit user (only 3.1% of adults) walks 19 minutes per day to/from transit and 29% of these transit users attain physical activity recommendation levels based solely on walking related with transit use (Besser and Dannenberg 2005). Overall, public transportation access and use appear to promote more frequent walk trips and more overall walking.

TODs and walking

Neighborhood environments around LRT stations are generally more conducive to walking than other types of neighborhoods. Many are TODs (transit-oriented developments), which have greater residential density, greater land use intensity and mix, together with a constricted parking supply and good non-motorized transportation infrastructure (e.g., sidewalks, crosswalks). TODs often occur after the transportation infrastructure is in place. For instance, in a 6-year period in Dallas (1999 to 2005), there was an estimated \$3.3 billion in investment or re-investment in real estate around the newly established Dallas LRT line, much of it leading to increased density and diversity of land uses (e.g., residential near to other land uses such as retail, commercial, civic, etc) (Weinstein and Clower 2005). TODs are associated with higher transit or non-motorized transportation mode shares, and decreased length and number of single-occupant vehicle (in the car alone) trips (Ewing and Cervero 2002).

Evidence continues to demonstrate consistent relationships between transportation-related walking and residential density and distance and number of non-residential destinations close to residences (i.e., land use mix). Communities throughout the U.S. and other countries would benefit from understanding more about the possible health impacts of LRT. It is important to understand the possible positive and negative health impacts of such changes in the transportation system and related environment, particularly among disadvantaged populations.

Research Objectives

The primary objectives of the 5-year study are to examine transportation-related walking and total physical activity among demographically and initially environmentally similar individuals, who live close to (case) or far from (control) light rail transit (LRT) stations, before (baseline) and soon (post 1) and more than 2 years (post 2) after the introduction of LRT. The primary hypothesis is that Individuals living close to LRT stations will increase their transportation-related walking and total physical activity, compared to individuals living far from LRT stations, from before to soon after, and more than 2 years following the introduction of LRT.

The objective of the TransNow part of the project is (1) to help organize the logistics of the physical activity and travel data collection efforts, and specifically to sample and recruit study participants; and (2) to help collect baseline data for a 7-day travel and physical activity assessment on the participants before light rail opens.

Method

The 5-year prospective cohort study will generate primary data on travel and physical activity of 1,000 participants. With attrition, complete data will be available for 750 individuals. This is an individual-level study of randomly selected participants equally divided into those residing within < one mile of a transit station (cases) and those farther than one mile of a station (controls). Data on land use and the built environment around the stations, and where people live and work, will be obtained from secondary assessor's files. Secondary data on transportation systems characteristics, including transit availability will be obtained from local agencies.

This report summarizes the travel and physical activity data collection efforts to date (approximately one year into the study), with a focus on the sampling of households and participant recruitment of the baseline cohort.

Participants

Participants include one individual ≥18 years old from eligible households. Households in King County, WA (Seattle area) are randomly selected from case or control areas (see below how the case and control areas have been delineated). One participant from each of 1,000 households is recruited and assessed at baseline, with up to an expected 75% cumulative retention to the second follow-up (post 2) more than 2 years later, resulting in 750 individuals with complete data.

The participant assessment timeline takes into account various issues, including 1) the need to recruit and assess participants before the planned opening of LRT in July 2009; 2) the need to avoid time periods during the year (November to January) that are less representative of normal or routine travel and physical activity; 3) the ability to measure individuals at baseline, post 1 and post 2 at approximately the same time of year each time; 4) maximizing the amount of time allowed by a 5-year grant cycle to measure individuals as long after LRT begins as possible (for post 2 assessments), but after built environment changes have sufficient time to occur.

Strict inclusion/exclusion criteria are used for selecting participants. These include: individuals with medical conditions that interfere with the ability to walk outside their home will be excluded; at least one adult in the household must be English-speaking or willing to speak through an interpreter, but not necessarily have English as a first language or the language spoken in the home; if a household contains multiple eligible and interested participants, the adult with the nearest birthday is enrolled; individuals must have been living at their address for at least 1 year to be considered eligible; finally, individuals are recruited from residences that were built within the past three years. The last two criteria serve to reduce the possible effects of self-selection. Case and control participants are matched for income, ethnic diversity, and characteristics of their residential environment (see below).

Recruitment and retention

Residential households within the case and control areas are identified through the King County parcel layer and through a consumer marketing company that uses public information to identify individuals/households and contact information. Households are sent a letter introducing the study and contacted by phone soon after the letter is sent to assess eligibility and interest. In addition to this phone and mail recruitment, study fliers have been distributed to houses and posted in selected areas. The longitudinal nature of the study is explained to participants during the initial recruitment procedures. To improve retention, participants are given an honorarium of \$50 at the baseline assessment, \$60 at the first follow-up assessment (post 1), and \$75 at the final follow-up assessment (post 2). The retention rate for a previous project in the Seattle/King County area, which included accelerometer and extensive survey completion over the six month interval between the initial and follow-up assessment was 94% (Frank, Nader et al. 2003). Another similar but more intrusive 2-year study had a retention rate of 90%. In this study, power calculations to determine sample size were based on a conservatively based estimate of the ability to retain 75% of the original baseline sample.

Sampling cases and controls by geographic location

The case-control study design is based on respondents being closer (<one mile) or farther (>one mile) from a light rail station, but within the Urban Growth Boundary (which contains 95% of the population within 450 sq.mi.). While the literature indicates that the majority of transit users walk to transit and that these walking distances range between one quarter and one half mile, it also shows that walking distances are longer for rail than for bus transit. The selection of one mile as the threshold distance

seeks to capture people using different access modes to light rail, including those bicycling (the area is relatively flat and the City of Seattle has an aggressive master plan to expand the City's bike lanes) and those being driven ("kiss and ride" access mode). The one-mile threshold defines a geographic area that is smaller than that of zip codes and census tracts, which are commonly used to contact respondents through the random digit telephone dial method (RDD). To insure that cases and controls live within the specified distance of the LRT, sampling is done based on residential addresses. Parcel-level (tax lots) data are used to delineate the areas within which potential cases and control live, and residential addresses are randomly sampled within these areas.

The parcel database, which is also our principal source of objective environmental data, advantageously provides the smallest unit of geography available for the purposes of sampling, data capture, and analysis. This single spatial unit with low levels of aggregation is appropriate for this individual-level study of physical activity and environment. Successfully used in past research, this process ensures randomness throughout the matching process, addressing the a potential one-to-multiple, or multiple-to-one match among Parcel Identification Number (PIN), address, and telephone numbers (Lee, Moudon et al. 2006).

Sample size

A total sample of 6,000 household addresses is to be drawn, divided equally between the case and control populations, to account for attrition due to address errors, mismatch, and people moving out of the areas (estimated at 10%); and to recruitment rate (estimated at 20%). This sample is to yield the 1,000 baseline respondents for study.

Matching cases and controls

The aim is to have cases and controls differ only on their proximity to LRT. Matching variables for cases and controls comprise the principal determinants previously shown to be related to active living, physical activity, and walking sufficiently to enhance health. They cover sociodemographic and environmental characteristics, to include: (1) household income, a principal determinant of SES; (2) race; and (3) home value, as an indicator of wealth. Matching environmental measures include: (4) net residential density, as the leading determinant of environments that support active living; (5) housing type; (6) availability of proximate neighborhood services (i.e., land use mix), which has been associated with more walking; and (7) levels of bus ridership, an indicator of transit service and use, also strongly related to more walking. This process constitutes frequency matching, not one-to-one matching, as cases and controls are randomly selected from areas characterized by the same range of values for the seven variables listed above.

The data used to match controls with cases come from three databases, the U.S. Census (for household income and race), King County assessor's files (for home values, residential density, housing type, and availability of proximate neighborhood services) and METRO transit data (for bus ridership levels). These data involve two geographies, or spatial units of sampling: the Census block group and the parcel.

Travel behavior data

<u>GPS:</u> Participants wear the GlobalSat DG-100 GPS data logger & USB receiver for 7 days to assess travel behavior. This device is the weight of a standard pager, attaches to a belt clip, and works up to 20 hours (in our experience other devices have a longer battery life, but poorer satellite receptivity); participants are provided with a battery charger to charge batteries at night after taking off the device. The use of GPS devices has been initially limited to vehicles, due to size and battery power requirements (Wolf 2006), but portable GPS devices now allow for evaluation of all travel modes. They add significantly to data obtained in travel diaries, including improvements in estimated distance and time,

as well as improved accuracy in number of short trips taken (e.g., walking). GPS also provides route and speed data, which are not possible to obtain in standard travel diaries (Murakami, Wagner et al. 1997). Algorithms exist that allow for reliable classification of GPS information into travel mode (de Jong and Mensonides 2003). Using GPS and specified rules for trip and mode identification in a controlled study, Chung and Shalaby found that 91.7% of trip modes were correctly identified, with 100% of walking trips correctly identified (Chung and Shalaby 2005). After systematic data cleaning to eliminate problems during device initialization, GPS also provide an accurate assessment of walk trip distance (Duncan, Mummery et al. 2007).

<u>Travel diary (see Appendix A)</u>: Concurrent with wearing the GPS, participants complete a seven-day travel diary describing trips taken over that period. Information on each trip includes purpose, travel mode, trip duration, and amount of time spent at the destination. An adaptation of the "Puget Sound Regional Transportation Panel Survey" is used to construct the travel diary in order to include more detail on walking trips and locations of origins and destinations. Travel origins and destinations are listed as a set of addresses, an intersection, or the name of a landmark to make these data usable as information to be geocoded. In a prior study by Rutherford (co-investigator) and colleagues (Rutherford, Ishimaru et al. 1995; McCormack 2001), the resulting data set contained more than 24,000 addresses, intersections, and landmarks. Ultimately over 96 percent of the trip origins and destinations were successfully located.

Physical activity data collection and assessment.

Physical activity is measured by the MTI (formerly CSA) GT1M Actigraph, a commonly used accelerometer for the objective measurement of physical activity. The Actigraph is worn around the waist above the hip. It is sensitive and specific for human movement in the vertical plane (e.g., forward movement through vertical hip movement). When worn on the hip/waist, it has been shown to accurately reflect weight bearing physical activities in the laboratory and in the field (Melanson Jr. and Freedson 1995; Nichols, Morgan et al. 2000; Welk, Blair et al. 2000). Actigraph assessments of walking are highly accurate assessments of the metabolic costs of walking (Hendelman, Miller et al. 2000). Indeed, the CSA/MTI actigraph appears adept at measuring activity intensity accurately with walking/jogging speeds up to 9 km/h (5.6 miles/h) (Brage, Wedderkopp et al. 2003). In comparison to other types of accelerometers, CSA/MTI accelerometers have among the best reliability, with lower coefficients of variation and higher participant variance (as opposed to individual accelerometer variance when testing multiple accelerometers on the same individual at once) (Welk, Schaben et al. 2004). Specific thresholds to be used for categorization will be selected at the time of data analysis. Given the current debate in the empirical literature regarding appropriate thresholds, likely refinement and better specification of such existing thresholds will occur in the near future. (Matthews 2005; Welk, McClain et al. 2007) Minutes will be summed across hours and days within each intensity category to provide estimates of physical activity.

Survey data collection

A survey is administered to participants to measure demographic variables, employment characteristics, and attitudes and preferences regarding neighborhood, transport, and physical activity (see Appendix B). Perceived built environment around employment site and in an individual's home neighborhood is assessed by the abbreviated Neighborhood Environment Walkability Scale (NEWS), a well validated and reliable measure of built environment factors related to walking/activity (Saelens, Sallis et al. 2003; Brownson, Chang et al. 2004; Cerin, Saelens et al. 2006). Preferences regarding neighborhood of residence are assessed by the survey, including reasons for moving to the neighborhood and the relative importance of various neighborhood characteristics (e.g., ease of walking, quality of schools, home values, freeway access, proximity to routine destinations). Preferences and attitudes regarding transport

(e.g., enjoyment of walking, fuel efficiency, travel time) and physical activity (e.g., enjoyment, self-efficacy, barriers/benefits) will also be assessed (Dill 2006; Handy, Cao et al. 2006; Frank, Saelens et al. 2007) (Kendzierski and DeCarlo 1991; Sallis 2008).

Results

Case population

The geographic extent within which the case population is randomly sampled is delineated by the 1-mile buffer around the seven selected LRT stations. The area buffered totals 1,370 acres or 5.5 sq. km. Although spatially discontinuous, the area constitutes one universe of environment and people who are exposed to the new LRT system (Figure 1).

The total case population has 46,000 households in 100 census block groups. Table 1 summarizes the characteristics of the case population that are used for matching cases and controls. Median values of matching criteria variables are provided for the entire case population and per Census block group. The case population along the rail line is the most ethnically diverse in Seattle and the region (40% white in 2000, compared to 75% in the County as a whole); and the poorest (mean income of about \$40,000 in 2000, compared to \$56,000 for the county in 2004). Those two characteristics are associated with lower car ownership and higher transit use. Local transportation data show that about one in four families living in the Southeast Seattle area (which contains the bulk of the case population) do not own a car, and about 75 percent work within Seattle's city limits. According to the Seattle Department of Transportation 2008 estimates, 25 to 30 percent of the area workers commute by bus. Within the Southeast Seattle area, the Rainier Valley LRT corridor considered in this study already has high overall bus ridership levels. Sound Transit estimates for 2002 show that out of a total of 26 million transit trips (which include the two major transit hubs in Downtown Seattle and the University District), at least 5.5 million are in the Valley. Accordingly, average daily boardings for the LRT stations considered in the study are projected to reach 3,000—with only two of the Downtown Seattle stations having higher estimates at 7,900 and 8,700 riders.

Table 1: Characteristics of case population and values of matching variables (area defined by 100 Census block groups within 1 mile of seven selected rail stations)

DATA SOURCES		CENSUS 2000 BLOCK GROUP							KING COUNTY ASSESSOR'S ca 2004		
	population	ploneshod	HH median income*	% white*	size (acre)	pop density (per acre)	hh density (per acre)	median home value (\$)*	net residential. density (units /acre)*	Neighborhood services (% of area)*	bus ridership (per resid. unit)*
mean	1174	464	39,143	37.8%	119.5	17.53	7.55	98,880	40.71	5.8%	4.21
median	1109	405.5	39,118	31.7%	85.6	12.97	4.64	100,400	9.51	0	1.29
SD	499.35	270.81	15,853	23.2%	181.1	15.29	8.42	37,306	72.14	10.6%	10.29
minimum	331	120	7,382	3.1%	13.8	0.58	0.20	26,000	3.41	0	0
maximum	3769	2181	82,907	81.0%	1662.9	104.04	43.76	209,000	340.00	47.8%	78.56
All case block groups	117365	46366	39,118	38.3%	11948.1	9.82	3.88	107,700	10.79	19.42%	3.60

^{*} Matching variables

Matching cases and controls

The frequency matching of cases and controls is based on the seven criteria noted above. The matching process employs three steps. The *first step* is to delineate the geographic extent within which the control population is sampled based on the first two matching criteria, income and race. Selected for sampling the control population are those King County Census block groups that have the same range of

household income (\$7,400 – \$83,000) and percentage of white population (3.1% - 81.0%) as the case population The geographic extent of the control population includes 673 out of a total of 1,447 block groups that are more than a mile away from an LRT station. These block groups contain a large population in 344,427 residential units (from King Co assessor's parcel data) (Figure 1). Table 2 shows the distribution of residential units for cases and controls by income/race strata at the block group level. There were no residential units in two strata of the control block groups. Expectedly, these strata were those with less than 20% of the population being White, a condition only found in the area of the case population. The residential units in these strata were assigned to block groups with between 20 and 50% of their population being White.

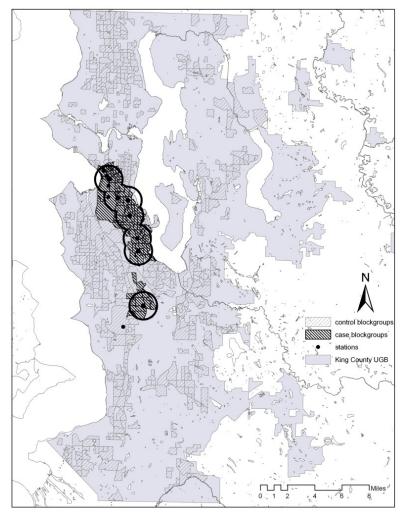


Figure 1: Distribution of case (dark grey) and control (light grey) block groups within King County Urban Growth Boundary

In the *second step*, parcel data are clipped to the 673 control Census block groups in order to match the control population based on the remaining five criteria. The residential units from which the control population is selected are stratified for two of the criteria, levels of bus ridership and proximity to neighborhood commercial centers, because the case population has a significantly higher number of residential units matching these criteria than the control population in the 673 block groups. As shown in Table 3, the stratification aims at having (1) slightly more than 60% of the residential units within ½ km of bus stops where the median number of riders per bus stop per day is more than 20 (for

comparative purposes, this figure applies to the top 40% of the County's bus stops); and (2) more than 60% of the residential units within less than 2,000 feet of a neighborhood retail center. The three remaining criteria, assessed property value, net residential density, and housing type, are then used for the final matching. Table 4 shows how a final distribution of 3,000 residential units randomly sampled for the cases and stratified by distance to neighborhood services and bus ridership levels for the controls, provides adequate matching for the three remaining criteria of housing type, assessed property value, and net residential density.

Table 2: First Step, comparing the distribution of residential units by median household income and race for cases and controls

	Residential Units (King Co Assessor's parcel data)						
Census Block Group Class	Cases—		a Light Rail			n a Light Rail	
(Income and % White)		Station	1	Station within UGB			
	Total	Percent	Sampled (#)	Total	Percent	Sampled (#)	
<20,000 & white <20%	1560	3.55%	106	279	0.08%	106	
<20,000 & white 20%-50%	2603	5.92%	178	777	0.23%	178	
<20,000 & white 50-75.7%	1463	3.33%	100	2566	0.75%	100	
<20,000 & white >75.7%							
20,001-30,000 & white <20%	2221	5.05%	152	451	0.13%	152	
20,001-30,000 & white 20%-50%	1939	4.41%	132	6118	1.78%	132	
20,001-30,000 & white 50%-75.7%	4558	10.37%	311	16483	4.79%	311	
20,001-30,000 & white >75.7%	159	0.36%	11	62	0.02%	11	
30,001-40,000 & white <20%	1496	3.40%	102	304	0.09%	102	
30,001-40,000 & white 20%-50%	6809	15.49%	465	9725	2.82%	465	
30,001-40,000 & white 50%-75.7%	1786	4.06%	122	53001	15.39%	122	
30,001-40,000 & white >75.7%	1459	3.32%	100	38331	11.13%	100	
40,001-50,000 & white <20%	3739	8.51%	255	57	0.02%	255	
40,001-50,000 & white 20-50%	2658	6.05%	181	7609	2.21%	181	
40,001-50,000 & white 50%-75.7%	3572	8.13%	244	57449	16.68%	244	
40,001-50,000 & white >75.7%	1496	3.40%	102	69272	20.11%	102	
50,001-60,000 & white <20%	1237	2.81%	84	429	0.12%	84	
50,001-60,000 & white 20%-50%	1292	2.94%	88	4044	1.17%	88	
50,001-60,000 & white 50%-75.7%	1498	3.41%	102	31777	9.23%	102	
50,001-60,000 & white >75.7%				524	0.15%		
>60,001 & white <20%	403	0.92%	28			28	
> 60,001 & white 20%-50%	556	1.26%	38	1226	0.36%	38	
>60,001 & white 50%-75.7%	1450	3.30%	99	43935	12.76%	99	
>60,001 & white >75.7%				8	0.00%		
Total	43954	100%	3000	344427	100%	3000	

The third and final step is to sample the case residential units from the 100 Census block groups and the control residential units from the universe (673 block groups) of residential units stratified and matched for the five criteria. In summary, the study population is representative of the characteristics of the population living within < 1 mile of a LRT station, with controls matched for SES (income and race) and for environmental criteria (distance to bus stop with relatively high levels of ridership; distance to a neighborhood commercial center; home assessed value; net residential density; and housing type). The population is NOT representative of King County's population.

Table 3: Second step, stratification based on the distribution of case residential units by distance to neighborhood commercial services and levels of bus ridership

Criteria	Categories	Housing units	Percentage
	less than 500 feet	13186	30.00%
	between 500-1000 feet	7296	16.60%
Distance to the closest	between 1000-2000 feet	10843	24.67%
NC2*	between 2001-5000 feet	9991	22.73%
	greater than 5000 feet	297	6.00%
	Total	43954	100%
	0 rider	734	1.67%
	1-20 riders	15925	36.23%
Levels of bus ridership	21-100 riders	24087	54.80%
	greater than 100 riders	3209	7.30%
	Total	43954	100%

^{*}NC2 = a Neighborhood Center delineated in GIS to comprise one grocery store, one restaurant, and one retail parcel (3 minimum within 50 m or less of each other); population living near NC2s was found to be more likely to walk sufficiently to enhance their health

Table 4: After stratification, checking the distribution of cases and controls for housing type, assessed property value, and net residential density

		Cases (< 1 mile from light rail stations)				Controls (> 1 mi	e away from li	ght rail stations)		
			Total Random sa						Sample (stratified by distance to	
		Total			nple	Total			NC2 and bus ridership levels)	
		Housing		Housing						
Criteria	Categories	units	Percentage	units	Percentage		Housing units	Percentage	Housing units	Percentage
	Single family housing units	18407	41.88%	1284	42.80%		149596	43.43%	959	31.97%
Housing Type	Multi-family housing units	25547	58.12%	1716	57.20%		194831	56.57%	2041	68.03%
	Total	43954	100%	3000	100%		344427	100%	3000	100%
	<\$200,000	22456	51.09%	1487	49.57%		173378	50.34%	1693	56.43%
Assessed property value per residential	\$200,000-\$400,000	17291	39.34%	1244	41.47%		130695	37.95%	968	32.27%
unit	>\$400,000	4207	9.57%	269	8.97%		40354	11.72%	339	11.30%
	Total	43954	100%	3000	100%		344427	100%	3000	100%
	less than 4 units per acre	1776	4.04%	108	3.60%		26634	7.73%	151	5.03%
	between 4-8 units per acre	8354	19.01%	576	19.20%		96355	27.98%	510	17.00%
	between 8-12 units per acre	6447	14.67%	467	15.57%		32335	9.39%	256	8.53%
	greater than 12 units per acre	27377	62.29%	1849	61.63%		189103	54.90%	2083	69.43%
	Total	43954	100%	3000	100%		344427	100.00%	3000	100%

Obtaining phone numbers and household names

Sampled residential addresses are sent to a vendor that uses reverse telephone directories to match a residential address to a household name and telephone number (this being an academic study, we were allowed to obtain phone numbers on the "do not call" registry). The vendor is blind to cases and controls in order to minimize possible bias in this and all further steps toward reaching potential participants.

We ended up using two vendors because the first vendor was not able to provide more than one telephone number per address, which meant that households living in multifamily housing were underrepresented in the sample. A second vendor was able to random sample names and telephone numbers from the same address of a parcel with multifamily housing. (Note: the assessor's parcel data includes the number of each condominium as a separate property, but they do not have numbers for apartments. Having apartment numbers may have made the match with reverse telephone directories easier, provided that the same recording system was employed in both data bases).

Match rates for residential addresses and name/telephone numbers were lower than expected, at less than 50%. Match rates were higher for controls than for cases (above 40% and above 50%, respectively. Table 5). Interestingly, match rates were lower for single-family residences than for multifamily units (about 40% and closer to 50%, respectively, data not shown).

Underestimating the number of residential addresses needed

The original count of 6,000 sampled residential addresses was found to be inadequate because both the match rate for address and household name and telephone number and the recruitment rate (see below) were lower than expected. Four rounds of sampling were eventually done for a total of 44,456 residential addresses sampled (Table 4).

Tubic 3. A	ible 3. Address sampling and match with telephones and names									
	Addresses	sampled		Cases			Controls			
Sampling rounds	Address count	Telephone and name match	Percent match	Address count	Telephone and name match	Percent match	Address count	Telephone and name match	Percent match	
1	6,000	2,908	48.47%	3,000	1,543	51.43%	3,000	1,365	45.50%	
2	14,500	6,564	45.27%	7,000	2,641	37.73%	7,500	3,923	52.31%	
3	9,968	4,928	49.44%	4,980	2,161	43.39%	4,988	2,767	55.47%	
4	13,988	6,662	47.63%	7,000	2,827	40.39%	6,988	3,835	54.88%	
Total/	44,456	21,062	47.70%	21,980	9,172	43.24%	22,476	11,890	52.04%	

Table 5: Address sampling and match with telephones and names

Participant recruitment

Figure 2 summarizes the steps taken in the recruitment process, and Figure 3 charts the progress made in this process. The trajectory indicates continuous and regular effort to reach the goal of 1,000 respondents by July 2009.

Overall, the recruitment process slowed down unexpectedly from September 2008 to mid-January 2009. Partial explanations include news of the declining economy, combined with the Holidays and bad weather during the Winter season. A relatively high rate of non-working phone numbers (about 20%) also slowed the process down. Recruiters were added to the team in February to try and speed up recruitment.

Α	В				С	D	E
Mail	Phone call						
	1	2		3			***************************************
Letter	Bad number						
	> 6 calls	Refuse					
	Call	Eligible		Agreement	Signed consent	Trained	Data collection
		Not eligible		Consent			

Figure 2: Basic steps in the participant recruitment process (Steps A through E; grey boxes indicate actions needed to proceed successfully to the next step in the recruitment process)

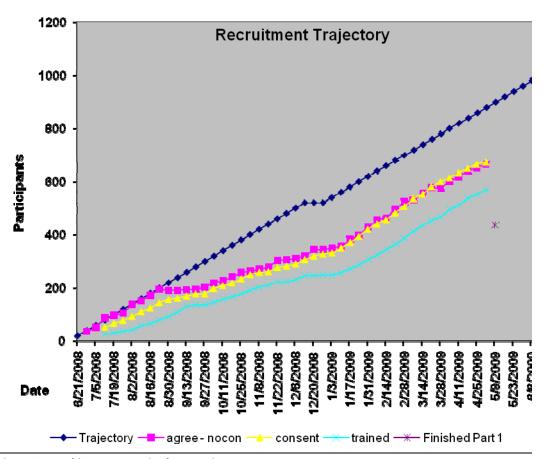


Figure 3: Tracking progress in the recruitment process

Refusals, eligibility, and consent

Nineteen percent of the phone calls made to reach potential participants revealed wrong phone numbers. Of the households/individual contacted by phone as of the end of April 2009, 10% were ineligible. Slightly more than 50% refused to participate in the study, and about 6% agreed to do so (Figure 4). Slightly more than 50% refused to participate. The remainder of the phone calls led to no

outcome, or agreement to participate. These figures fall within the range of those obtained in health surveys (Washington State Department of Health 2007).

Figure 5 shows the distribution of non-eligible respondents. Almost three quarters of the respondents had the wrong phone number or had moved; 14 % said they planned to move within two years; about 7% were disabled or home bound; 4% were too young; and about 2% had a language barrier.

Of those participants who agreed to participate in the study over the phone, about 70% sent in their signed consent and about 60% have been trained to do the data collection and use the accelerometer and the GPS. And about half those who have agreed to participate have provided completed data. The recruitment rate is lower than anticipated, at about 5%. It may be explained by the strains that the economic downturn is imposing on people; and by the weather in the late fall 2008 and winter 2009.

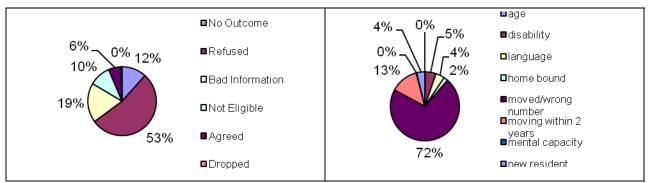


Figure 4: Outcomes of telephone calls made

Figure 5: Distribution of non-eligible participants

Cases, controls, and socioeconomic characteristics

Concerning the distribution of recruits, only about 43% of those who agreed are cases (Table 6). This may be explained by the higher number of minorities in the case than in the control population (Table 7). We have 30% of the case and 20% of the control population as non-white (compared to 60% in the entire case population). The lower proportion of non-white in the controls is expected since the case area houses the most racially diverse population in Washington State. Preliminary analyses indicate that the number of minorities who agree to participate in the study over the phone is substantially higher than that of minorities who actually send in the signed consent documents.

The lower proportion of young people in the participants (6% of the cases against 20% in the case population) is likely due to our use of land lines to reach the participants (see below) (Table 8). There are more female participants than in the case and control populations. This is because typically, females are more likely to participate in surveys or data collection efforts and are less dependent on cell phones than males (Table 9).

Table 6: Summary of Recruitment by case and control (%)

	Case	Control	Sub- Total
Agreed	43.42	56.58	70.16
No signed			
consent	43.09	56.91	23.77
Pending	35.42	64.58	6.07
Total	42.86%	57.14%	100%

Table 7: Summary of recruitment by ethnicity

Ethnicity	Case	Control	Total
Caucasian	65.49%	79.42%	73.45%
African American	13.86%	5.31%	8.98%
Asian	5.31%	3.32%	4.17%
Pacific Islander	1.47%	0.88%	1.14%
Hispanic	0.88%	0.88%	0.88%
Native American/Alaskan	5.60%	3.10%	4.17%
Multi-ethnic	2.06%	3.10%	2.65%
Unknown/Missing	5.31%	3.98%	4.55%
Total	100%	100%	100%

Table 8: Summary of case and control recruitment by age (%)

Age Category	Case	Control	Total
<=30	29.27	70.73	5.18
31-45	44.17	55.83	26.04
46-65	42.01	57.99	46.65
>=66	47.90	52.10	15.04
Missing	42.86	57.14	7.08
Total	42.86	57.14	100.00

Table 9: Summary of case and control recruitment by gender (%)

Gender	Case	Control	Total
Male	44.97	55.03	100.00
Female	40.91	59.09	100.00
Missing	45.71	54.29	100.00
Total	42.86	57.14	100.00

Discussion and conclusion

Data collection for the baseline cohort of cases and controls is proceeding according to most elements of the study plan. Respondents are using the various instruments specified for the study and delivering the data as anticipated in the design of the study. Amounts of individual physical activity are recorded over a 7 day-day period with continuous objective measures provided by accelerometry. Travel patterns are obtained objectively through continuous GPS data, also over a 7-day period. A hard-copy travel log is kept by respondents over the same period of time, which will serve to assess and coordinate data from both the accelerometers and the GPS. The availability of objective and subjective measures of activity in space and time will provide insights into participants' perceived and actual behavior. Finally, the availability of these complete data at three points in time, before, and twice after the opening of the Light Rail, offer a unique opportunity to examine potentially causal relationships between the provision of new transportation infrastructure and travel.

Sampling and recruitment efforts completed so far have yielded a number of lessons. First, they confirm that recruiting respondents via telephone (land line or cell) is problematic in handling a geographically specific sample. Our sampling by residential address documents the issues all too well: we find that contact information is available for less than 50% of the population of interest identified by their geographic location (where they live). While we have not yet analyzed the possible bias in the 50% matching of addresses and phone numbers, the match rate offers information than cannot be provided

by the RDD approach. Because RDD samples by telephone numbers, its geographic specificity remains at the typically coarse levels of the spatial sampling unit used (census tract, zip code, state, or telephone exchange). The study also confirmed that phone numbers for the population living in multifamily housing are more difficult to obtain than for those living in single family residence. This information again point to the shortcomings of RDD where participants' telephone numbers are selected from a large (and mostly unspecified) pool of phone numbers.

Furthermore, when phone numbers were obtained through the address matching process, about a quarter of these phone numbers were non-functioning. Furthermore, when the phones were functioning and when people could be contacted, a substantial number became ineligible because they had moved. Phone numbers are "portable," as they have been allowed to "move" with their owners for nearly half-a decade. It also seems that phone databases are not keeping updated records of the owners' place of residence.

Second, the use of land telephone lines for sampling and recruiting is ever more problematic because an increasing proportion of the population now lives in households that do not have land lines. Cells phones are even more portable than land line phones as users often keep their numbers and subscription with out of state providers. They therefore worsen the issue of portability and loss in geographic specificity found with land line phones (Mokdad 2008).

By state, cell-phone-only population varies from 5% to more than 20%, with the State of Washington at about 16% of the households and 16% of the adults in the state. Cell-phone-only population tends to be young and poor, pointing to issues of equity in future survey work (Blumberg 2009). In Washington State, cell-phone-only users tend to be younger, male and Black, Native American, Asian, Pacific Islander or Hispanic; employed, although with lower income and less education than a college degree; have better general health but less likely to have a health care plan or personal health care provider (Washington State department of Health 2007).

Overall, many steps are involved in both the sampling and the recruitment process. Each step entails the loss of a population of potential interest for recruitment. Some steps, such as the requirement for a signed consent, have particular repercussions on recruitment rates for minority and vulnerable populations. The intensive data collection required in this study, plus the need to retain the participants over three data collection periods, necessarily lower the recruitment rate. However, recruitment was impeded by the limitations of the necessary first phone contact.

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APPENDIX A: TRAVEL LOG

ACTIVITY CODES Enter 97 if you can't find a matching code

1	Working at employer site
2	Working from home
3	Incidental Shopping (gas, groceries,
3	medicine, etc.)
4	Major Shopping (furniture, clothes,
	appliances, auto, etc.)
5	Drop-off/pick someone up
6	Eating/ preparing meals/ dining out/
U	drive-through
	Entertainment (watching TV,
7	theater, spectator sports, dance,
	etc.)
8	Visiting friends/ relatives
9	Work related business (sales call,
	meeting, errand, conference, etc.)
10	School (attending classes)
11	ATM, banking, post office, utilities
12	Medical/ dental appointment
13	Watching children
14	Household work/ yard work
	Fitness/ exercising (working out,
15	walking, soccer, aerobics, tennis,
	etc.)
16	Recreation (vacation, camping,
	sightseeing, etc.)
17	Worship/ religious meeting
18	Community meetings, political/
10	civic event, public hearing, etc
19	Waiting for transportation/ changing
	modes of transportation
20	Sleep/ preparing for sleep
21	Preparing for the day
97	Other activity
100	Tour (See Instructions)

Thank you for your participation

Office Use Only:		
Date Mailed:	Date Entered:	Ву:
Date Received:	Date Entered:	By:
ID Number:		

TRAC

- 11	RAVEL LOG							
P	Please use for 7 days when wearing the activity meter & GPS.							
_	Planned Start Day:	Planned End Day:						

Travel Log Instructions

See the next page for an example of a completed log.

Use this log to record **PLACES** visited, **HOW YOU GOT THERE**, and the **ACTIVITIES** you did at each place. Record the following in as much detail as possible:

- <u>Places</u>: A place is any location you travel to, even if it's for only a
 few minutes. Places include bus stops, train stations, or park-andride facilities. It is very important to record place name, address
 and/or cross-streets and city. If you know the zip code, please
 record that also.
- <u>Times</u>: Record the time you arrived at and left each place. Exact times (to the minute) are preferred. For the travel log purposes, each day begins at 3am.
- Modes: Record how (e.g. car, bus) you traveled to each place using the Travel Mode codes. If there is no code for the mode you took, write '97' under travel mode.
- <u>Activities</u>: Record your *primary* activity at each place you go using the **Activity Codes**. If there is no code for your activity, write '97'.

<u>Tours</u>: A tour is a trip you take where you start and end at the same place without making any stops at another destination. For example, if you walked or rode your bike around your neighborhood without stopping at the bank, store, friend's house, or other place, this would be a tour. To record a tour, check 'other' and enter 'tour' in the Place Name, your travel mode, and '100' for the Activity Code. Enter the time you started the tour in the 'Arrived' time slot and when you ended the tour in the 'Left' time slot. However, **if you made any stops along the way** (store, park, etc.) **this would not count as a tour**. You would record your stop as the next 'place' in your travel log.

We guarantee that the information you provide will be kept confidential. Information you provide will be labeled using your ID#. Your name will not be connected to the information you provide.

Thank You!

Enter '97' if you can't find a matching code.

1	In auto/truck/van
2	Carpool or Vanpool
3	Bus
4	Light rail
5	Monorail/ trolley
6	Heavy rail (Sounder or other
b	train)
7	Dial-a-ride/ paratransit
8	School Bus
9	Ferry
10	Taxi/ shuttle bus/ limousine
11	Motorcycle/ moped
12	Bicycle
13	Walk
14	Airplane
97	Other

Starting the Travel Log:

<u>Step 1:</u> Enter the name and address of common places on page 4 (home, work, school, etc). When you fill out the daily log, you can enter the name of these common places without re-writing the address each time.

<u>Step 2:</u> Review the 'Travel Modes' and 'Activity Codes' on the fold-out flap. Please enter codes for travel and activity for each place.

<u>Step 3:</u> Read the instructions for 'Tours' on page 2. This will be used to records exercise or trips without a destination.

Daily Entries:

- Write in the date and check day of the week.
- Write in the time you put on your meter* and GPS**!!!
- The first entry is where you started your day (usually home); you don't need to write in a time you arrived or a travel mode for this
- For each place you go,
 - o check a location *or* write in place name and address.
 - write in the travel mode = how you got there (use codes on fold-out flap)
 - write in an activity code = what you did there (use the activity codes on the fold-out flap)
 - o enter the <u>time arrived</u> and <u>time left</u>.

If you go to more than 10 places in a day, use the 'extra places' at the end of the log. Enter the day, date, place#, and other place, travel, and activity information.

*The <u>meter</u> is programmed to start on the first day you are scheduled to start wearing it. You do not need to turn it on or charge the battery at any time. The meter charge will last for just over a week, and should be good until you send it back to us.

**The <u>GPS</u> must be charged every night, after you take it off for the day. Refer to your GPS instructions, or give us a call if the red light is off, or other lights on.

Common Places

- Enter the address of your home, work (if applicable), and school (if applicable), and any other places you visit **frequently**.
- When completing the travel log, you can refer to these places by name. You do not need to write the address again in the log if it is listed below.

Location	Name	Address (i.e. 3124 59 th Ave NE, Kent, WA 98030)	
Home:			
Work:			
School:			
Bus stop:			
Rail station			
Ferry terminal			
Daycare			
Supermarket			
Other:			
Other:			
Other:			

Example: Mon Tues Wed Thurs Fri Sat Sun Date 6/5/08	
Time you put the meter & GPS on: 7:34 am / pm	
Start of Day Place Name	Activi
⊠ Home □ Other: □ Work □ School Home	Code:

Nur Zip				learest Intersection	Street	City	Time Left: 8	:15 am/pm	
Place #1 Home Work	Other: School ved: 9:06 am/pi	Place N School m		learest Intersection	Street	City	Time Left: 3	Trave 1 ty Mode Coo 1 10 3 ::05 am/pm	
Place #2 Home Work	☑ Other:	Place N Trader	lame	4555 Roosevelt V	Vay NE Seat	tle, 98105		Trave Act ty Mode Coc: 3	
Time Arriv	ved: 3:23 am	/pm	Number or N Zip	learest Intersection	Street	City	Time Left: 3	3:48 am/pm	\mathcal{T}
Place #3 ☐ Home ☐ Work	Other:	Place N Home	Jame					Trave Act 1 ty Mode Coo : 6	
Time Arriv	ved: 4:13 am	/pm	Number or N Zip	learest Intersection	Street	City	Time Left: 7	7:15 am/pm	\bigcup
Place #4 Home Work	○ Other: ☐ School	Place N Tour	Tame					Trave Act 1 ty Mode Coo :	
Time Arrived: 7:15 am/pm Number Zip			learest Intersection	Street	City	Time Left: 8	3:00 am/pm		
Time you	took the meter	& GPS o	ff: 11:00	am / pm BESU	RE TO PL	UG IN YOUR GPS	TO CHARGE!!	!	
Time removed meter or GPS and reason: 12:15-12:28, Shower									

Day One Mon 7	Tues	Wed Thurs Fri Sat [Sun Date_				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Place N	Jame					Activi ty Code:
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #1	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #2	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #3	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	d: am/pm Number or Nearest Intersection Street City Time Left:				am/pm		
Place #4	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #5	Place N	Jame				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6 Other: Home Work School	Place N	Jame				Trave l Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #7	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #8 Other:	Place N	Name				Trave	Activi

Home Work School								l Mode :	ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #9	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #10	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/pm		Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off:		am / pm	BE SURI	E TO PLUG I	N YOUR G	PS_TO CHAR	GE!!!	
Fime removed meter or GPS and reason:									

2 nd Day Mon Tue	es We	ed Thurs Fri Sat S	Sun Date				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Home Other:						
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #1	Place N	1				Trave 1 Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #2	Place N					Trave 1 Mode	Activi ty Code:
Time Arrived: an	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #3	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: an	d: am/pm Number or Nearest Intersection Street City Time Left:				am/pm		
Place #4	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: an	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #5	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: an	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #6	Place N	Name			•	Trave l Mode	Activi ty Code:
Time Arrived: an	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #7	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #8 Other:	Place N	Name				Trave	Activi

Home Work School								l Mode :	ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Stı	reet	City	Time Left:	am/	pm
Place #9	Place N	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Stı	reet	City	Time Left:	am/	pm
Place #10	Place N	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off	•	am / pm	BE SURI	E TO PLUG I	N YOUR G	PS_TO CHAR	GE!!!	
Time removed meter or GP	S and rea	ason:							

3 rd Day Mon Tues	s 🗌 We	ed Thurs Fri Sat S	un Date				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Home Other:						
	Number or Nearest Intersection Street City Time Left: Zip						
Place #1	Place N	Place Name					
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	: am/	pm
Place #2	Place N	*				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/pm	
Place #3	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Street City Time Left:				am/pm	
Place #4	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #5	Place N	Name				Trave l Mode	Activi ty Code:
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6 Other: Home Work School	Place N	Name				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #7 Other: Home Work School	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/pm	
Place #8 Other:	Place N	Name				Trave	Activi

☐ Home ☐ Work ☐ School							l Mode :	ty Code:
Time Arrived: am/	Time Arrived: am/pm Number or Nearest Intersection Street City Time Left: Zip						am/pm	
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Time Arrived: am/	/pm	Number or Nearest Intersection Street City Time Left:					am/pm	
Place #10 Other: Home Work School	Place N	ame					Trave l Mode :	Activi ty Code:
Time Arrived: am/pm		Number or l Zip	Nearest Intersection	Street	City	Time Left:	am/	pm
Time you took the meter & GPS off: am / pm BE SURE TO PLUG IN YOUR GPS TO CHARGE!!!								
Time removed meter or GP	S and rea	ason:						

4 th Day Mon Tues	s 🔲 We	d 🗌 Thurs 🔲 Fri 🔲 Sat 🔲 S	un Date				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Place N		Activi ty Code:				
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #1	Place N	Place Name					
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #2	Place N	Vame				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/pm	
Place #3	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Street City Time Left:				am/pm	
Place #4	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #5	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6 Other: Home Work School	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
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Place #9	Place N	ame						Trave l Mode	Activi ty Code:
Time Arrived: am/	Number or Nearest Intersection Street City Time Left: Zip					am/pm			
Place #10	Place N	ame						Trave l Mode	Activi ty Code:
Time Arrived: am/pm		Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter & GPS off: am / pm BE SURE TO PLUG IN YOUR GPS TO CHARGE!!!									
Time removed meter or GP	S and rea	ason:							

5 th Day Mon Tues	s □ We	d 🗌 Thurs 🔲 Fri 🔲 Sat 🔲 S	un Date				
Time you put the meter &	GPS on:	am / pm					
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		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #1	Place N	Vame				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #2	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm (
Place #3	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #4	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #5	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6 Other: Home Work School	Place N	·				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #7 Other: Home Work School	Place N					Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
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Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Place #9	Place N	Iame						Trave l Mode :	Activi ty Code:
Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Place #10 Other: Home Work School	Place N	Iame						Trave l Mode	Activi ty Code:
Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off	:	am / pm	BE SUR	E TO PLUG	IN YOUR G	PS TO CHAR	GE!!!	
Time removed meter or GI	PS and re	ason:							

6 th Day Mon Tues	s 🗌 We	d 🗌 Thurs 🔲 Fri 🔲 Sat 🔲 S	un Date				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Place N	Jame					Activi ty Code:
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #1	Place N	1				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #2	Place N	1				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #3	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #4	Place N	Jame				Trave 1 Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #5	Place N	Jame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6	Place N	lame				Trave l Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #7 Other: Home Work School	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #8 Other:	Place N	Vame				Trave	Activi

Home Work School								l Mode :	ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #9	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #10	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off:		am / pm	BE SURI	E TO PLUG I	N YOUR G	PS_TO CHAR	GE!!!	
Time removed meter or GP	S and rea	ison:							

7 th Day Mon Tues	s □ We	d 🗌 Thurs 🔲 Fri 🔲 Sat 🔲 S	un Date				
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Place N	Name					Activi ty Code:
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #1	Place N	Vame				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #2	Place N	Vame				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm (
Place #3	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #4	Place N	Name				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #5	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #6 Other: Home Work School	Place N	Vame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #7 Other: Home Work School	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	pm
Place #8 Other:	Place N	Vame				Trave	Activi

Home Work School								l Mode :	ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Stı	reet	City	Time Left:	am/	pm
Place #9	Place N	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Stı	reet	City	Time Left:	am/	pm
Place #10	Place N	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm (Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off	•	am / pm	BE SURI	E TO PLUG I	N YOUR G	PS TO CHAR	GE!!!	
Time removed meter or GP	S and rea	ason:							

1st Extra Day Mon	Tues Wed Thurs Fri Sat Sun Date		
Time you put the meter &	GPS on: am / pm		
Start of Day Home Other: Work School	Place Name		Activi ty Code:
	Number or Nearest Intersection Street City 7 Zip	Γime Left:	am/pm
Place #1	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	/pm Number or Nearest Intersection Street City Zip	Гіте Left:	am/pm
Place #2	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	/pm Number or Nearest Intersection Street City 7	Гіте Left:	am/pm
Place #3	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	Number or Nearest Intersection Street City Zip	Γime Left:	am/pm
Place #4	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	Number or Nearest Intersection Street City Zip	Гіте Left:	am/pm
Place #5	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	/pm Number or Nearest Intersection Street City 7 Zip	Γime Left:	am/pm
Place #6 Other: Home Work School	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	Number or Nearest Intersection Street City 7 Zip	Γime Left:	am/pm
Place #7 Other: Home Work School	Place Name		Trave Activi l ty Mode Code:
Time Arrived: am	Number or Nearest Intersection Street City Zip	Γime Left:	am/pm
Place #8 Other:	Place Name		Trave Activi

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Home Work School								l Mode	ty Code:
Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Place #9	Place N	Iame						Trave l Mode :	Activi ty Code:
Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Place #10 Other: Home Work School	Place N	Iame						Trave l Mode	Activi ty Code:
Time Arrived: am	/pm	Number or l Zip	Nearest Intersection	St	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off	:	am / pm	BE SUR	E TO PLUG	IN YOUR G	PS TO CHAR	GE!!!	
Time removed meter or GI	PS and re	ason:							

2 nd Extra Day Mon [Tues [☐ Wed ☐ Thurs ☐ Fri ☐ Sa	t 🗌 Sun Dat	e			
Time you put the meter &	GPS on:	am / pm					
Start of Day Home Other: Work School	Place N	ame					Activi ty Code:
		Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #1 Other: Home Work School	Place N	•				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #2	Place N	•				Trave 1 Mode :	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #3	Place N	ame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #4	Place N	ame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #5	Place N	ame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #6 Other: Home Work School	Place N	ame				Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #7	Place N					Trave l Mode	Activi ty Code:
Time Arrived: am	n/pm	Number or Nearest Intersection Zip	Street	City	Time Left:	am/	/pm
Place #8 Other:	Place N	ame				Trave	Activi

Home Work School								l Mode :	ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #9	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Stı	eet	City	Time Left:	am/	pm
Place #10	Place Na	ame						Trave l Mode :	Activi ty Code:
Time Arrived: am/	pm	Number or l Zip	Nearest Intersection	Str	reet	City	Time Left:	am/	pm
Time you took the meter &	GPS off:		am / pm	BE SURI	E TO PLUG I	N YOUR G	PS_TO CHAR	GE!!!	
Time removed meter or GP	S and rea	ison:							

Extra Places

Place #	L	Mon	7	Γues [Wed	Thur	s 🔲 Fri	☐ Sat	Sun	Date				
Home		P	lace N	Vame									Trave	Activi
Other:													1	ty
Work													Mode	Code:
School													:	
Time Arrived:		am/pn	n	Num Zip	iber or Ne	earest Inte	rsection	Stre	eet	City		Γime Left:	am/	/pm
				1							L			
Place #		Mon		Tues [Wed	Thur	s 🗌 Fri	☐ Sat	Sun	Date				
Home		P	lace N	Vame									Trave	Activi
Other:													1	ty
Work													Mode	Code:
School													:	
Time Arrived:		am/pn	n		iber or Ne	earest Inte	rsection	Stre	eet	City	7	Γime Left:	am/	/pm
Time Timved.		am/pm		Zip										
_														
Place #		Mon		Tues [Wed	Thurs	s 🗌 Fri	☐ Sat	Sun	Date				
Home		P	lace N	Vame									Trave	Activi
Other:													1	ty
Work													Mode	Code:
School													:	
Time Arrived:		am/pn	n		ber or Ne	earest Inte	rsection	Stre	eet	City	ŗ	Γime Left:	am/	/pm
Time Timived.		am/pm		Zip										
Place #		Mon		Γues [Wed	☐ Thur	s 🗌 Fri	☐ Sat	Sun	Date				
Place # Home			☐ Tace N		Wed	☐ Thurs	s 🗌 Fri	☐ Sat	Sun	Date			Trave	Activi
					Wed	Thur	s 🗌 Fri	☐ Sat	Sun	Date			Trave	Activi ty
☐ Home Other: ☐ Work					Wed	Thur	s 🗌 Fri	Sat	Sun	Date				
Home Other:				lame						Date			1	ty
Home Other: Work School		P	lace N	Vame Num		Thurs		Sat		Date		 Γime Left:	1	ty Code:
☐ Home Other: ☐ Work			lace N	lame								 Γime Left:	l Mode :	ty Code:
Home Other: Work School		P	lace N	Vame Num								Γime Left:	l Mode :	ty Code:
Home Other: Work School		P	lace N	Vame Num			rsection					Time Left:	l Mode :	ty Code:
☐ Home Other: ☐ Work ☐ School Time Arrived:		am/pn	lace N	Name Num Zip	uber or Ne	earest Inte	rsection	Stre	eet	City		Γime Left:	l Mode :	ty Code:
☐ Home Other: ☐ Work ☐ School Time Arrived: Place #_		am/pn	n	Name Num Zip	uber or Ne	earest Inte	rsection	Stre	eet	City	r	Γime Left:	l Mode : am/	ty Code: /pm
☐ Home Other: ☐ Work ☐ School Time Arrived: Place #_ ☐ Home		am/pn	n	Name Num Zip	uber or Ne	earest Inte	rsection	Stre	eet	City		Γime Left:	l Mode : am/	ty Code:
Home Other: Work School Time Arrived: Place # Home Other:		am/pn	n	Name Num Zip	uber or Ne	earest Inte	rsection	Stre	eet	City		Γime Left:	l Mode : am/	ty Code:
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Home Other: Work School Time Arrived: Place # Home Other: Work School		am/pn Mon	n Ilace N	Num Zip Tues Jame	uber or No	earest Inte	rsection s	Stre	Sun	City Date			l Mode : am/	ty Code: /pm Activi ty Code:
Home Other: Work School Time Arrived: Place # Home Other: Work School Time Arrived:		am/pn Mon	n 1 ace N	Num Zip Tues Jame	uber or No	earest Inte	rsection s	Stre	Sun	City Date			l Mode : am/	ty Code: /pm Activi ty Code:
Home Other: Work School Time Arrived: Place # Home Other: Work School Time Arrived:		am/pn Mon P	n	Num Zip Tues Num Zip Tues Num Zip	wed Wed	Thurs	rsection s	Stre	Sun	City Date			Trave l Mode : am/	ty Code: /pm Activi ty Code:
Home Other: Work School Time Arrived: Place # Home Other: Work School Time Arrived:		am/pn Mon P	n 1 ace N	Num Zip Tues Num Zip Tues Num Zip	wed Wed	Thurs	rsection s	Stre	Sun	City Date			l Mode : am/	ty Code: /pm Activi ty Code: /pm
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Other:							1	ty
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Home Other:	M		Tues Wed Thurs Fri	Sat Sun	Date		1	ty
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APPENDIX B: SURVEY INSTRUMENT

ID#		_	TR	AC Survey	1					
We need your help to make our study a	success. Your ca	andid answ	ers to the ite	ms in this sur	vey are very					
important to us.										
Remember We want to know what you think										
We want to know what you thThere are no right or wrong ar										
Everything you tell us will be k		fidential (se	cret).							
And please	,									
Don't skip any questions and										
Provide only one answer for each										
If you prefer, call us and we can do some	e or all of the su	rvey by pho	one.							
A. Reasons for moving here Please rate how important neighborhood. For each re	each of the foll	eck one box	-	at	very important	r				
1. Affordability/Value										
2. Closeness to open space (e.g. parks)										
3. Closeness to job or school										
4. Access to bus transportation										
5. Access to train/rail transportation										
6. Desire for nearby shops and services										
7. Ease of walking										
8. Sense of community										
9. Safety from crime										
10. Quality of schools										

1	*	*	Ť
V	Ų	77	Ù

12. Access to freeways

11. Closeness to recreational facilities

B. Social cohesion of your neighborhood

How much do you agree or disagree with the following statements? Please check one box for each statement.

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1. People around my neighborhood are willing to help their neighbors.					
2. This is a close-knit neighborhood.					
3. People in this neighborhood can be trusted.					
4. People in this neighborhood generally don't get along with each other.					

ID#					TRAC	Surv	ey 1	
5. People in this same values.	s neighborhood do not share the							
Same values.	C. Types of residences in your How common are the follow box for each statement.	_	f buildings ii	•	ighborho Some	od? Pl		
1. Detached sing	gle-family residences							
2. Townhouses	or row houses of 1-3 stories							
3. Apartments o	r condos of 1-3 stories							
4. Apartments of	or condos of 4-6 stories							
5. Apartments of	or condos of 7-12 stories							
6. Apartments of	or condos 13 stories or more							
li	About how long does or would it isted below if you walked to ther Please check one box for each sta	m?	from your h 6-10 min	ome to to	he neare: 20-30		nesses or fa	Don't Know
Example: Gas St	tation			X				
1. Convenience	or Small Grocery Store							
2. Supermarket								
3. Hardware Sto	re							
4. Produce Stand	d or Farmer's Market							
5. Laundry/Dry	Cleaners							
6. Clothing Store	e							
7. Post Office								
8. Library								
9. Elementary So								
10. Other Schoo	ls							
11. Bookstore								
12. Fast Food Pla								
13. Coffee Place								
14. Bank/Credit15. Restaurant (
16. Video Store	non rast-1000j							
17. Pharmacy/D	rug Store							
Tri Hai Hacy/D	1 40 01010	_	_					_
18. Salon/Barbe	r Shop							

[check here ____ if you don't work outside your home or go to school]

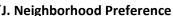
ID#		TRAC Survey 1		
20. Bus Stop				
21. Train/Rail Stop				

ID#	
-----	--

TRAC	Survey	1
INAC	Julvey	- 1

		1-5 min	6-10	min	11-2 min		20-30 m	iin	30+ min	Don't Know
22. Small/Neighborl	nood Park									
23. Large Communit	y or Regional Park									
24. Lake, River, Cree	k/Stream, Ocean									
25. Public Gym or Fi (e.g., community ce	tness/Recreation Facility nter, YMCA)									
26. Private Gym or F	itness Facility									
	ccess to services se check one box for each st	atement.		Stron: Disag		Som Disa	ewhat gree	Som Agr	newhat ee	Strongly Agree
1. Stores are within	easy walking distance of my	home.								
2. There are many pmy home.	places to go within easy walk	ing distance	e of							
3. It is easy to walk	to a transit stop (bus, train)	from my ho	me.							
	F. Streets in my neighborho Please check one box for ea		nt.	Stron	gly	Som	ewhat	Som	newhat	Strongly
1 The distance het	ween intersections in my nei	ahharhaad	ic	Disag	ree	Disa	gree	Agr	ee	Agree
	ards or less; the length of a fo	_								
•	alternative routes for getting rhood. I don't have to go the	•								
	G. Places for walking and cy Please check one box for ea	_	nt.	Stron	σlv	Som	ewhat	Som	newhat	Strongly
				Disag		Disa		Agr		Agree
1. There are sidewaneighborhood.	lks on most of the streets in	my								
2. Sidewalks are sep neighborhood by pa	parated from the road/trafficers, in the contraction is a second to the contraction in the contraction in the contraction is a second to the contraction in the contraction in the contraction is a second to the contraction in the contraction in the contraction is a second to the contraction in th	in my								
				OR [☐ The	re are	e no side	walk	S	
3. There is a grass/o sidewalks in my neigh	lirt strip that separates the s ghborhood.	treets from	the							
				OR D] The	re are	e no side	walk	S	

		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
4. My neighborhood st	treets are well lit at night.				
5. Walkers/bikers on t easily seen by people in	he streets in my neighborhood can be n their homes.		0		0
6. There are crosswalk cross busy streets in m	s and pedestrian signals to help walkers y neighborhood.				
3	Neighborhood surroundings ease check one box for each statement.				
		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
1. There are trees alon	g the streets in my neighborhood.				
2. There are many inte my neighborhood.	resting things to look at while walking in				
3. There are many attr (such as landscaping, vi	active natural sights in my neighborhood iews).	0	0	0	_
4. There are attractive	buildings/homes in my neighborhood.				
	Neighborhood safety – traffic and crime ease check one box for each statement.				
7-		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
	offic along <u>nearby</u> streets that it makes it to walk in my neighborhood.	0	0	0	_
2. The speed of traffic mph or less).	on most <u>nearby</u> streets is usually slow (30				
3. Most drivers exceed my neighborhood.	I the posted speed limits while driving in		0	0	_
4. There is a high crime	e rate in my neighborhood.				
5. The crime rate in my walks <u>during the day</u> .	y neighborhood makes it unsafe to go on				
6. The crime rate in my walks at night.	y neighborhood makes it unsafe to go on				



We'd like you to imagine moving to a different neighborhood. We'd like you to think about the kind of neighborhood you'd hope to find. Please read the following neighborhood descriptions, then circle the appropriate number to indicate your preference. Keep in mind that anything that we do not refer to in a question - such as school quality, public safety, or house cost - is exactly the same between the two choices presented.



If I were to move, I'd like to find a neighborhood ...

A. that is a lively and active place, even if this means it has a mixture of single family houses, townhouses, and small apartment buildings that are close together on various sized lots.

B. with single family houses farther apart on lots 1/2 acre or more, even if this means that it is not an especially lively or active place.

Your neighborhood preference is:

1.	0	1	2	3	4	5	6	7	8	9	10
strongly		some	what	neutr	ai	somewh	nat	strongly			
prefer A		prefer A			pre	fer B	pref	er B			

Or

If I were to move, I'd like to find a neighborhood . . .

A. where I can walk to stores, libraries or restaurants, even if this means that the houses and commercial areas are within a few blocks (1/3 mile) of each other.

B. where the commercial areas are kept separate (over a mile; 10 blocks or more) from the houses, even if this means that I can't walk to stores, libraries or restaurants.

Your neighborhood preference is (circle one number):

If I were to move, I'd like to find a neighborhood . . .

ID#										TR	AC Su	ırvey	1
A. where	l can	walk, b	icycle or	take pub	lic	Or	B. wit	h cul-d	le-sac	s and fe	ew peop	ole fro	m other
transit for some of my trips, even if it has							neigh	borho	ods w	alking o	r drivin	g on t	hem, even
through		-	-				if this	means	s I mu	st drive	for all	my tri	ps.
neighbor	rhood	s walkin	g or driv	ing on th	em.								
Vour ne	iahho	rhood n	referenci	e is (circle	one nu	ımherl							
3.	ignoc	moou pi	cjerene	on the contract	one na	iiibei j	•						
•	0	1	2	3	4	5	6	7		8	9	10	
strongly	,	some	what	neutral	S	omew	hat	stron	gly				
prefer A	۱ ۱	prefer A			prefer	В	prefe	er B					
For the	follow	ing que	stions, u	se these o	definitio	ons of I	Neighbo	orhood	s A ar	nd B:			
A 1.1.1.1.		1 ((4))					A1 - * - 1 - 1 -		I ((D))				
Neighbo							Neighb						
			•	e there is			Within			•			only
•	•			s, town hons ns on vari	-		single-f	amily r	iouse	s on 1 a	cre iots	•	
lots.	ents a	na cona	Ommun	is on vari	ous size	:u							
	tions	such as s	shopping	, a restau	ırant. a		Destina	tions s	uch a	s shopp	ing, a r	estaur	ant. a
				e within a			Destinations such as shopping, a restaurant, a public library, and a school are within a few miles						
blocks o	-						of my h						
Local de	stinat	tions are	close er	nough tha	at I can		Local de	estinati	ions a	re too	ar to w	alk, m	ost are
either w	/alk o	r drive. F	Parking t	here is lir	nited.		driven to. Parking there is ample.						
My one	-way	commut	e is 3 mi	les.			My one	-way c	omm	ute is 1	8 miles.		
Public ti	ransit	. like a b	us or tra	in, is nea	rbv.		Public t	ransit.	like a	bus or	train. is	dista	nt.
	•	•		•	•			·			,		
4. Assu	ming	that the	re are no	differen	ces betv	ween t	the neig	hborh	ods a	apart fr	om the	ones v	we mentioned,
	_		-	hink you'	d rathei								
N	eighb	orhood '	"A"	OR		Neigh	borhoo	d <u>"</u> B"					
5 11						NI - ! - l-	ll	-l ((A //)					
	-	one nur	-	el about l	iving in	weign	bornoo	a "A" ?					
	Circie	one nui	iibei.										
0		1 .	2 :	3 4	5		6	7	8	9	10	O	
dislik	e very	/		neutral				like v	ery				
much	1								-		much		
	-	-		l about li	ving in I	Neighb	oorhood	l "B"?					
	Circle	one nur	nber.										
0		1 .	2 :	3 4	5	i	6	7	8	9	10)	
	e very			neutr						e very			
much	-	•		cuti						· · · ·	muc	h	



K. Workplace Environment Please check one box for each statement.

1. Do you do any paid work outside you	ır home?	Yes □		No □			
If No, skip to section M on page 10							
2. Do you usually work at:	site each day	☐ Multiple sites each	day				
3. Is your primary work: □Indoors □Outdoors	☐Mixed indoors a	and outdoors					
4. How many days in the past month (about 20 work days) did you use each of the following modes of transportation to go to work. Include all modes taken (for example, if you took the bus on 20 days and then walked from the bus stop to work on 20 days, then you would put 20 for both bus and walking): If none, put "0". a days Walking							
5. How long does it take you to walk from inutes or □ I do not driv	om your parking sp e or take transit to	•	your primary	workplace?			
6a. Whether or not you drive, what wood or range6b. Does your employer offer parking we daily rate or range	·		ar your works	site?	_ daily rate		
Please indicate which of these items are Please check one answer for each item.	•	work.					
riease check one answer for each item.			Yes	No	Don't Know		
7. Exercise facilities (e.g. workout room path/PAR course)	/gym, exercise eq	uipment, walking					
8. Regular exercise programs (e.g. aerol etc.)	bic classes, team s	ports, walking groups,					
9. Shower facilities that you can use							
10. Lockers for clothes							
11. Safe bicycle storage							
12. An exercise specialist or activity coo	ordinator available	for employees					
13. Policies that encourage exercise or l	biking						
14. Employer provides paid time for you	u to exercise						

ID#		TRAC :	Survey 1	
		Yes	No	Don't Know
15a. Employer offers incentives not to drive to work (if no, skip to Question #16)			0	
	Programs Offered		rograms You (
 b. Carpooling or ride-matching program c. Cash in lieu of a parking space d. Free/reduced fair transit pass e. Ability to work at home one or more days per week f. Guaranteed ride home g. Vanpool service h. Parking closer to the office door if you carpool 			1 1 1 1	
16. Are the stairs at your work:a. accessibleb. safec. pleasant		Yes	No	N/A
17. Where do you <u>primarily</u> work? Street: CityState Zip				
18. What is the nearest intersection to your <u>primary</u> work &	place?			
19. How many days a week do you usually go to your prim	ary workplace?			
L. The Neighborhood Around Your Workplace We would like to find out about the neighborhood around the "workplace neighborhood" as being within a 10-15-mi			ofrom home. (Somewhat Agree	<i>Consider</i> Strongly Agree
 Stores are within easy walking distance of my workplace. 				
There are many places to go within easy walking distance of my workplace.	□ Strongly Disagree	□ Somewhat Disagree	□ Somewhat Agree	□ Strongly Agree
It is easy to walk to a transit stop (bus, train) from workplace.	my 🗆			

	ID#		TRAC S	Survey 1	
	The distance between intersections in my workplace neighborhood is usually short (100 yards or less; the length of a football field or less).	0	_	0	0
5.	There are many alternative routes for getting from place to place in my workplace neighborhood. (I don't have to go the same way every time.)	0		0	0
6.	There are sidewalks on most of the streets in my workplace neighborhood.				
7.	Sidewalks are separated from the road/traffic in my workplace neighborhood by parked cars.	0			0
8.	There is a grass/dirt strip that separates the streets from the sidewalks in my workplace neighborhood.				
9.	My workplace neighborhood streets are well lit at night.	0	0	0	0
10.	Walkers and bikers on the streets in my workplace neighborhood can be easily seen by people in nearby buildings or shops.				
11.	There are crosswalks and pedestrian signals to help walkers cross busy streets in my workplace neighborhood.	0		0	0
12.	There are trees along the streets in the neighborhood where I work.				
13.	There are many interesting things to look at while walking in my workplace neighborhood.	0		0	0
14.	There are many attractive natural sights in my workplace neighborhood (such as landscaping, views).				
15.	There are attractive buildings/homes in the neighborhood around my workplace.	0		0	0
16.	There is so much traffic along <u>nearby</u> streets that it makes it difficult or unpleasant to walk in my workplace neighborhood.				
17.	The speed of traffic on most <u>nearby</u> streets in my workplace neighborhood is usually slow (30 mph or less).	_		0	0
		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
18.	Most drivers exceed the posted speed limits while driving in my workplace neighborhood.				
19.	There is a high crime rate in my workplace neighborhood.				0
20.	The crime rate in my workplace neighborhood makes it unsafe to go on walks <u>during the day</u> .				

ID#		TRA	AC Survey 1	
21. The crime rate in my workplace neighborhood makes it unsafe to go on walks <u>at night</u> .		0	0	
M. PHYSICAL ACTIVITY				
We are interested in finding out about the kinds of physical activities questions are about the time you spent being physically active in the lado at work, as part of your house and yard work, to get from place to sport. Your answers are important. Please answer each question even if you do not consider yourself to be a	ast 7 days. place, and	They include I in your spare	questions about a	activities you
JOB-RELATED PHYSICAL ACTIVITY The first section is about your work. This includes paid jobs, farming, v that you did outside your home. Do not include unpaid work you might general maintenance, and caring for your family. These are asked in a	olunteer w do around	ork, course wo I your home, li		
1. Do you currently have a job or do any unpaid work outside your h Yes No [If o, go to the next section: TRANSPORTATION]	ome?			
The next questions are about all the physical activity you did in the last include traveling to and from work.	7 days as p	art of your pai	d or unpaid work.	This <u>does not</u>
2. During the last 7 days, on how many days did you do <u>vigorous</u> phys lifting, digging, heavy construction, or climbing up stairs <u>as part of you</u> only those physical activities that you did for <u>at least 10 minutes at a transfer.</u>	ur work?		# of Days	☐ none Go to #4
3. How much time did you usually spend on ONE of those days doing activities <u>as part of your work?</u>	vigorous į	ohysical	Daily Average	N.C
			Hours	Minutes
4. Again, think about <i>only</i> those physical activities that you did for at time. During the last 7 days, on how many days did you do <i>moderate</i> p carrying light loads <i>as part of your work?</i> Please <i>do not</i> include walking	hysical ac		# of Days	☐ none Go to #6
5. How much time did you usually spend on ONE of those days doing activities <i>as part of your work?</i>	moderate	physical	Daily Average	

Hours

Minutes

D#	TRAC Survey 1

 6. During the last 7 days, on how many days did you walk for at least 10 minutes at a time <u>as part of your work?</u> Please <u>do not</u> count any walking you did to travel to or from work. 7. How much time did you usually spend on ONE of those days walking <u>as part your work?</u> 	# of Days Daily Average Hours	□ none Go to #8 Minutes
TRANSPORTATION These questions are about how you traveled from place to place, including to places like work, ste	ores, movies, and s	so on.
 8. During the last 7 days, on how many days did you <u>travel</u> in a motor vehicle like a train, bus, car or tram? 9. How much time did you usually spend on ONE of those days <u>traveling in a car, bus, train or other kind of motor vehicle?</u> 	# of Days Daily Average	□ none Go to #10
Now think <u>only</u> about the <u>bicycling</u> and <u>walking</u> you did to travel to and from work, to do erra transportation (e.g., bus), or to go from place to place.	Hours ands, to access oth	Minutes er
 10. During the last 7 days, on how many days did you <u>bicycle</u> for at least 10 minutes at a time <u>to go from place to place</u>? 11. How much time did you usually spend on ONE of those days to <u>bicycle from place to place</u>? 	# of Days Daily Average	□ none Go to #12
12. During the last 7 days, on how many days did you walk for at least 10 minutes at a time to go from place to place?	# of Days Daily Average	Minutes □ none Go to #14
13. How much time did you usually spend on ONE of those days walking from place to place?	Hours	Minutes
HOUSEWORK, HOUSE MAINTENANCE, AND CARING FOR FA This section is about some of the physical activities you might have a around your home, like housework, gardening, yard work, general m your family.	one in the last 7 d	
 14. Think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <i>vigorous</i> physical activities like heavy lifting, chopping wood, shoveling snow, or digging <i>in the garden or yard</i>? 15. How much time did you usually spend on ONE of those days doing vigorous physical activities <i>in the garden or yard</i>? 	# of Days Daily Average	□ none Go to #16
	Hours	Minutes

ID#	AC Survey 1		
16. Again, think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <u>moderate</u> activities like carrying light loads, sweeping, washing windows, and raking <u>in the garden or yard?</u> 17. How much time did you usually spend on ONE of those days doing moderate physical		# of Days Daily Average	□ none Go to #18
activities in the ga	rden or yard?	Hours	Minutes
at a time. During carrying light load	tink about <i>only</i> those physical activities that you did for at least 10 minutes the last 7 days, on how many days did you do <i>moderate</i> activities like ds, washing windows, scrubbing floors and sweeping <i>inside your home</i> ? The did you usually spend on ONE of those days doing moderate physical	# of Days Daily Average	□ none Go to #20
activities <u>inside yo</u>	ur home?	Hours	Minutes
	RECREATION, SPORT, AND LEISURE-TIME PHYSICAL ACTIVITY This section is about all the physical activities that you did in the last 7 sport exercise or leisure. Please do not include any activities you have	days solely for rec	



20. <u>Not counting any walking you have already mentioned</u> , during the last 7 days, on how many days did you walk for at least 10 minutes at a time <u>in your leisure time</u> ?	# of Days Daily Average	□ none Go to #22
21. How much time did you usually spend on ONE of those days walking <i>in your leisure time?</i>	Hours	Minutes
22. Think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <u>vigorous</u> physical activities like aerobics, running, fast bicycling, or fast swimming <u>in your leisure time</u> ?	# of Days	□ none <i>Go to #24</i>
23. How much time did you usually spend on ONE of those days doing vigorous physical activities <u>in your leisure time?</u>	Daily Average Hours	Minutes
24. Again, think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <i>moderate</i> physical activities like bicycling at a regular pace, swimming at a regular pace, and doubles tennis <i>in your leisure time</i> ? 25. How much time did you usually spend on ONE of those days doing moderate physical	# of Days Daily Average	□ none Go to #26
activities in your leisure time?	Hours	Minutes

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	TIME SPENT SITTING The last questions are about the ti work and during leisure time. The reading or sitting or lying down to motor vehicle that you have alread	is may includ o watch televis dy listed.	e time spent sit sion. <i>Do not</i> inc	ting at a d clude any t Dai	esk, visiting	friends,
26. 1	During the last 7 days, how much time in total did you us	ially spend <u>s<i>u</i></u>	<u>tting</u> on a weekd	<i>lay?</i> Hot	ırs	Minutes
	During the last 7 days, how much time in total did you us	ıally spend <u>sü</u>	<u>tting</u> on a weeke	Dai	ly Average	1vImues
day?	•			Hou	ırs	Minutes
Hov	Physical activity includes activities like activity is any activity that takes at lessomewhat harder than normal. Confidence for Moderate Physical Activity we sure you are that you could do moderate physical activity each one answer for each item.	ast moderate	e physical effo	-		
		I'm Sure I Cannot		Maybe I Can		I'm Sure Can
1.	Do physical activity even though I am feeling sad or highly stressed.					
2.	Stick to my program of physical activity even when family or social life takes a lot of time.					
3.	Set aside time for regular physical activity.					
Enjo	oyment of Moderate Physical Activities					

Strongly

Disagree

Somewhat

Disagree

Neutra

ı

Somewhat

Agree

Strongly

Agree

Please use the above definition for physical activity. Please check one answer for each item.

4. I enjoy doing moderate physical activities.

physical activities.

activities.

5. I enjoy the feeling I get while doing moderate

6. I enjoy the feeling I get after doing moderate physical

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· ·	•
Regular Physical Activity	\leq
$\mathcal{Z} \setminus Regular$ Physical Activity	4

8. Feelings of discouragement.

9. Lack of equipment.

11. Lack of skills.

10. Lack of good weather.

You can get "regular physical activity" by either:

A. Doing <u>vigorous exercise</u>, like jogging or an aerobics class, <u>at least 3 times a week</u>, for <u>at least 20 minutes</u> each time OR

B. Doing moderate physical activity, like brisk walking or slow cycling, at least 5 days a week, for at least 30 minutes per day. You do not have to do all 30 minutes in one session.

O. Benefits of Regular Physical Activity This section is about some possible effects of regular physical activity. Please check one answer for each item.						
If I participate in regular physical activity, then:	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree	
1. I will feel less depressed and/or bored.						
2. I will improve my self-esteem.						
3. I will meet new people.						
4. I will lose weight or improve my shape.						
5. I will build up my muscle strength.						
6. I will feel less tension and stress.						
7. I will improve my health or reduce my risk of disease.						
8. I will do better at my job.						
9. I will feel more attractive.						
10. I will improve my heart & lung fitness.						
P. Barriers to Regular Physical Activity How often do the following prevent you from getting reg	ular physica	activity?				
Please check one answer for each item.	Never	Rarely	Some- times	Often	Very Often	
1. Self conscious about my looks when I exercise.						
2. Lack of interest in exercise or physical activity.						
3. Lack of self-discipline.						
4. Lack of time.						
5. Lack of energy.						
6. Lack of company.						
7. Lack of enjoyment from exercise or physical activity.						

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12. Lack of facilities or space.					
	Never	Rarely	Some- times	Often	Very Often
13. Lack of knowledge on how to exercise.					
14. Lack of good health.					
15. Fear of injury.					
16. Activity facilities or space is too far away.					
Q. Social Support					
Please check one answer for how often your <u>family</u> or <u>friel</u>	nds have do	ne the followi	-	st three mont	
	Never	Rarely	Some- times	Often	Very Often
1. Family did physical activity with me.					
2. Friends did physical activity with me.					
3. Family offered to do physical activity with me.					
4. Friends offered to do physical activity with me.					
5. Family encouraged me to do physical activity.					
6. Friends encouraged me to do physical activity.					
R. Travel Preferences and Attitudes					
R. Traver Preferences and Attitudes	Strongly	Somewhat	Noutra	Somewhat	Strongly
Please check one answer for each item.	Strongly Disagree	Somewhat Disagree	Neutra I	Somewhat Agree	Strongly Agree
	.		Neutra I		.
Please check one answer for each item. 1. Walking can sometimes be easier for me than	Disagree	Disagree		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving.	Disagree	Disagree	I	Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car.	Disagree	Disagree	 	Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike.	Disagree	Disagree □ □		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible.	Disagree □ □ □ □ □	Disagree □ □ □ □		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively.	Disagree □ □ □ □ □ □ □ □	Disagree □ □ □ □ □ □ □		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home)	Disagree Disagree Disagree	Disagree D D D D D D D D D D D D D D D D D D		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit. 8. Traveling by car is safer overall than walking. 9. Air quality is a major problem in this region. 10. I need a car to do many of the things I like to do.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit. 8. Traveling by car is safer overall than walking. 9. Air quality is a major problem in this region. 10. I need a car to do many of the things I like to do. 11. I prefer to walk rather than drive whenever possible.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree Comparison of the compa	Agree Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit. 8. Traveling by car is safer overall than walking. 9. Air quality is a major problem in this region. 10. I need a car to do many of the things I like to do. 11. I prefer to walk rather than drive whenever possible. 12. I am willing to pay a toll or tax to pay for new highways.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree	Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit. 8. Traveling by car is safer overall than walking. 9. Air quality is a major problem in this region. 10. I need a car to do many of the things I like to do. 11. I prefer to walk rather than drive whenever possible. 12. I am willing to pay a toll or tax to pay for new highways. 13. I like driving.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree C C C C C C C C C C C C C C C C C C	Agree Agree
Please check one answer for each item. 1. Walking can sometimes be easier for me than driving. 2. I would like to own at least 1 more car. 3. Travel time is generally wasted time. 4. I prefer to take transit rather than drive when possible. 5. I like riding a bike. 6. I use my trip to/from work productively. (Check if you don't work outside home) 7. I like taking transit. 8. Traveling by car is safer overall than walking. 9. Air quality is a major problem in this region. 10. I need a car to do many of the things I like to do. 11. I prefer to walk rather than drive whenever possible. 12. I am willing to pay a toll or tax to pay for new highways.	Disagree Disagree Disagree	Disagree Disagree Disagree		Agree Agree	Agree

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		Strongly Disagree	Somewhat Disagree	Neutra I	Somewhat Agree	Strongly Agree
16. Public trar driving.	sit can sometimes be easier for me than					
17. I try to lim	it my driving to help improve air quality.					
18. Traveling l	by car is safer overall than taking transit.					
19. Getting to	work without a car is a hassle.					
20. I like walk	ing.					
driving.	sometimes be easier for me than					
your desti						
few trips a	organize my errands so that I make as is possible.					
about dail	•					
between h	l/from work is a useful transition nome and work. twork outside home)		0		0	0
26. Fuel efficient choosing a	ency is an important factor for me in vehicle.					
	the telephone or Internet to avoid travel somewhere.					
	manage pretty well with one fewer car ave (or with no car if you have one car					
	nould be taxed on the basis of the pollution they produce.					
	ed to buy something, I usually prefer to e closest store possible.					
	needs to build more highways to ffic congestion.					
32. My housel and driving	hold spends too much money on owning g our cars.					
S. General informat	ion					
Please print clearly						
1. Home address:	Street	Apt./Sui	te			
2. Previous	City	State			Zin C	ode
address:	Street	Apt./Sui	te			
	Citv	State			Zin C	ode
	Country					

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3. Nearest Intersection to	o Home:		Street	& Street		
				Street		
4. Phone Number:	Area Code	Number	Alternate Phone Number:	Area Code	Number	
5. Age:			I none Number:			
	EI-					
6. Gender: ☐ Male ☐ 1		. 1 40 1				
7. Are you of Hispanic, N 8. Race (please check on Caucasian or White African-American or American Indian or Other	e or more): e or Black		□ Yes □ No □ Pacific Islander □ Asian or Asian Ame	rican		
9. Height: feet _	inches; or	centimeters				
10. Weight: po	ounds; or kil	lograms				
11. What was your highest education level completed? (please check one). Less than 7 th grade Junior high/middle school Some high school Completed high school Some college or vocational training Completed college or university Completed graduate degree						
12. How many people (in	ncluding yourself) live	in your household	l? people			
13. How many children	under age 18 live in yo	our household? _				
14. What are the ages of a) b)	the children living in c	<u> </u>				
15. What type of residen ☐ Single family house ☐ Multi-family house ☐ Apartment ☐ Condominium/townh ☐ Other	nouse	ase check one).				
16. Do you rent or own y	our home? 1.	. Own/buying	2. Rent			
17. How long have you li	ived at your current ac	ddress? year	r(s); month(s)			
18. Do you have a valid o	driver's license? 1. Y	'es 0. No				
19. How many drivable at your household?	motor vehicles (cars, t	rucks, motorcycle	s) are there			
20. What is your marital ☐ Married ☐ Widowed/divorced/se	☐ Single and	never married				

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21. Approximate	annual household	income (plea	ase check one)					
	<\$10,000					\$60,0	000-\$69,000		
	\$10,000-\$19,000					\$70,0	000-\$79,000		
	\$20,000-\$29,000					\$80,0	000-\$89,000		
	\$30,000-\$39,000					\$90,0	000-\$99,000		
	\$40,000-\$49,000					> \$10	00,000		
	\$50,000-\$59,000								
22. Please tell us	more about the <u>adı</u>								
	_	l work full	_	d work only	Is a stude	ent?	Is retired	l?	
	time?		part time						
Yourself	□ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	□ Yes	□No	
Other adult #1	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	
Other adult #2	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	
Other adult #3	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	
Other adult #4	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	
Other adult #5	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	☐ Yes	□ No	

Today's Date:	
---------------	--

Next Step:

Please take a moment to review your responses to make sure no questions were missed!!! Send back the following items in the return envelope:

Completed survey

After wearing for 7 full days:

- Activity Meter
- GPS Device
- GPS Charger
- Travel Log

If you don't have the envelope we provided, mail items to:

Trina Colburn, TRAC Project P.O. Box 20789 Seattle, WA 98102-9998

Please feel free to give us a call if you have any questions.

Trina Colburn, Project Coordinator: 206-685-7279

or trina.colburn@seattlechildrens.org

COMMENTS

If you have any additional comments or you'd like to tell us something about your neighborhood, transportation, or other activity please use the space below. We are also interested in hearing about your

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experience as a participant in and effort. We appreciate yo	our study. Any feedback you have for us is welcor ur participation!	me. Thank you for your time

You're Finished!



Thank you for your time and effort!

For Office Use Only

Date Mailed:	Date Entered:
Date Received:	By:

We need your help to make our study a success. Your candid answers to the items in this survey are very important to us.

Remember....

- We want to know what you think
- There are no right or wrong answers, and
- Everything you tell us will be kept strictly confidential (secret).

And please....

- > Don't skip any questions and
- Provide only one answer for each item.

If you prefer, call us and we can do some or all of the survey by phone.



A. Reasons for moving here

Please rate how important each of the following reasons was in your decision to move to your neighborhood. For each reason, please check one box.

Not at all Somewhat important important

Very important

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1. Affordability/Va	alue					
2. Closeness to op	en space (e.g. parks)					
3. Closeness to job	o or school					
4. Access to bus tr	ansportation					
5. Access to train/	rail transportation					
6. Desire for nearl	y shops and services					
7. Ease of walking						
8. Sense of comm	unity					
9. Safety from crir	ne					
10. Quality of scho	pols					
11. Closeness to re	ecreational facilities					
12. Access to freev	vays					
XXXX	B. Social cohesion of your neight How much do you agree or disag for each statement.		he followin	g statements	? Please cho	eck one box
		Strongly Disagree	Somewha Disagree	t Neutral	Somewhat Agree	Strongly Agree
1. People around r help their neighbo	ny neighborhood are willing to rs.					
2. This is a close-kr						
	eighborhood can be trusted.					
People in this n along with each ot	eighborhood generally don't get her.					

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5. People in this same values.	neighborhood do not share the				0			
	C. Types of residences in your How common are the following box for each statement.	_		your nei	ghborho	od? Ple	ease check	one
		None	A Fe	W	Some	Most	Al	I
1. Detached singl	e-family residences							
2. Townhouses of	r row houses of 1-3 stories							l
3. Apartments or	condos of 1-3 stories							l
4. Apartments or	r condos of 4-6 stories							
5. Apartments or	r condos of 7-12 stories							
6. Apartments or	r condos 13 stories or more							
Ak								
lis	ted below if you walked to then ease check one box for each sta		6-10 min	11-20 min	20-30	min	30+ min	Don't Know
lis	ted below if you walked to then ease check one box for each sta	tement.	6-10 min	_	20-30 □	min	30+ min	
lis Pl	ted below if you walked to then ease check one box for each sta	tement. 1-5 min	_	min		min	_	Know
lis Pl	ted below if you walked to then ease check one box for each sta ation	tement. 1-5 min □		min 区		min	0	Know
Example: Gas Sta 1. Convenience o	ted below if you walked to then ease check one box for each sta ation r Small Grocery Store	tement. 1-5 min		min 🗵		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor	ted below if you walked to then ease check one box for each sta ation r Small Grocery Store	tement. 1-5 min		min 🗵		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor	ted below if you walked to then ease check one box for each stan etion r Small Grocery Store e or Farmer's Market	tement. 1-5 min		min 🗵		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand	ted below if you walked to then ease check one box for each stan etion r Small Grocery Store e or Farmer's Market	tement. 1-5 min		min 🗵		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C	ted below if you walked to then ease check one box for each stan etion r Small Grocery Store e or Farmer's Market	tement. 1-5 min		min		min		Know
Example: Gas Sta 1. Convenience of 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry Co 6. Clothing Store	ted below if you walked to then ease check one box for each stan etion r Small Grocery Store e or Farmer's Market	tement. 1-5 min		min		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C 6. Clothing Store 7. Post Office	ted below if you walked to then ease check one box for each sta etion r Small Grocery Store e or Farmer's Market leaners	tement. 1-5 min		min		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C 6. Clothing Store 7. Post Office 8. Library	ted below if you walked to then ease check one box for each sta ation r Small Grocery Store or Farmer's Market leaners	tement. 1-5 min		min IX II II II II II II II II I		min		Know Compared to the compared
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C 6. Clothing Store 7. Post Office 8. Library 9. Elementary Sch	ted below if you walked to then ease check one box for each sta ation r Small Grocery Store or Farmer's Market leaners	tement. 1-5 min		min min		min		Know Compared to the compared
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry Co 6. Clothing Store 7. Post Office 8. Library 9. Elementary Sch 10. Other Schools	ted below if you walked to then ease check one box for each standarion r Small Grocery Store e or Farmer's Market leaners	tement. 1-5 min		min		min		Know Compared to the compared
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C 6. Clothing Store 7. Post Office 8. Library 9. Elementary Sch 10. Other Schools 11. Bookstore	ted below if you walked to then ease check one box for each standarion r Small Grocery Store e or Farmer's Market leaners	tement. 1-5 min		min		min		Know C C C C C C C C C C C C C C C C C C
Example: Gas Sta 1. Convenience of 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry Co 6. Clothing Store 7. Post Office 8. Library 9. Elementary Sch 10. Other Schools 11. Bookstore 12. Fast Food Place	ted below if you walked to then ease check one box for each standarion r Small Grocery Store e or Farmer's Market leaners	tement. 1-5 min		min		min		Know
Example: Gas Sta 1. Convenience o 2. Supermarket 3. Hardware Stor 4. Produce Stand 5. Laundry/Dry C 6. Clothing Store 7. Post Office 8. Library 9. Elementary Sch 10. Other Schools 11. Bookstore 12. Fast Food Place	ted below if you walked to then ease check one box for each standarion r Small Grocery Store e or Farmer's Market leaners	tement. 1-5 min		min		min		Know Comparison

17. Pharmacy/Drug Store

18. Salon/Barber Shop

19. Your Job or School					
[check here if you don't work outside	le your home	or go to sch	nool]		
20. Bus Stop					
21 Train/Rail Ston				П	

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		1-5 min	6-10	min	11-20 min	20-	30 min	30+ min	Don't Know
22. Small/Neighborh	nood Park								
23. Large Communit	y or Regional Park								
24. Lake, River, Cree	k/Stream, Ocean								
25. Public Gym or Fit (e.g., community cer	tness/Recreation Facility nter, YMCA)								
26. Private Gym or F	itness Facility								
	ccess to services se check one box for each sta	atement.		Strong Disagr	•	Somewh Disagree		mewhat ree	Strongly Agree
1. Stores are within	easy walking distance of my	home.			ı				
2. There are many p my home.	laces to go within easy walk	ing distance	e of		ı				_
3. It is easy to walk	to a transit stop (bus, train) f	from my ho	me.		l				_
53	F. Streets in my neighborhood Please check one box for ea		nt.						
				Strong Disagr		Somewh Disagree		mewhat ree	Strongly Agree
	ween intersections in my neight of a formal	-			I				
•	Iternative routes for getting rhood. I don't have to go the	-			ı				0
	G. Places for walking and cy Please check one box for ea	_	nt.						
				Strong Disagr	•	Somewh Disagree		mewhat ree	Strongly Agree
1. There are sidewa neighborhood.	lks on most of the streets in	my			I				
-	parated from the road/trafficers	in my			ı				
3				OR 🗆] Ther	e are no	sidewal	ks	

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3. There is a grass/dirt strip that separates the streets from the sidewalks in my neighborhood.

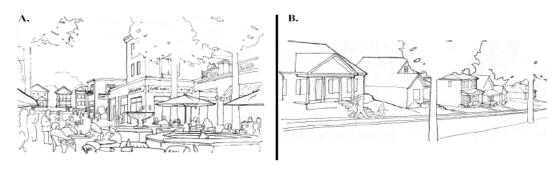
OR □ There are no sidewalks

		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
4. My neighborhood	d streets are well lit at night.				
5. Walkers/bikers o easily seen by peopl	n the streets in my neighborhood can be e in their homes.		_	_	0
6. There are crosswalks and pedestrian signals to help walkers cross busy streets in my neighborhood.					
	H. Neighborhood surroundings Please check one box for each statement.				
		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
1. There are trees a	long the streets in my neighborhood.				
2. There are many i my neighborhood.	nteresting things to look at while walking in				
3. There are many a (such as landscaping	ttractive natural sights in my neighborhood , views).		0	0	0
4. There are attract	ive buildings/homes in my neighborhood.				
	I. Neighborhood safety – traffic and crime Please check one box for each statement.				
<i>7</i>		Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
	traffic along <u>nearby</u> streets that it makes it nt to walk in my neighborhood.		0	0	0
2. The speed of traf mph or less).	fic on most <u>nearby</u> streets is usually slow (30				
3. Most drivers excemy neighborhood.	eed the posted speed limits while driving in		0	0	
4. There is a high cr	ime rate in my neighborhood.				
5. The crime rate in walks during the day	my neighborhood makes it unsafe to go on				

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6. The crime rate in my neighborhood makes it unsafe to go on walks at night.			



We'd like you to imagine moving to a different neighborhood. We'd like you to think about the kind of neighborhood you'd hope to find. Please read the following neighborhood descriptions, then circle the appropriate number to indicate your preference. Keep in mind that anything that we do not refer to in a question - such as school quality, public safety, or house cost - is exactly the same between the two choices presented.



If I were to move, I'd like to find a neighborhood ...

A. that is a lively and active place, even if this means it has a mixture of single family houses, townhouses, and small apartment buildings that are close together on various sized lots.

B. with single family houses farther apart on lots 1/2 acre or more, even if this means that it is not an especially lively or active place.

Your neighborhood preference is:

1.	0	1	2	3	4	5	6	7	8	9	10
strongly		some	what	neuti	ral	somewi	nat	strongly			
prefer A		prefer A			pref	fer B	pref	er B			

Or

If I were to move, I'd like to find a neighborhood . . .

A. where I can walk to stores, libraries or restaurants, even if this means that the houses and commercial areas are within a few blocks (1/3 mile) of each other.

B. where the commercial areas are kept separate (over a mile; 10 blocks or more) from the houses, even if this means that I can't walk to stores, libraries or restaurants.

Your neighborhood preference is (circle one number):

If I were to move, I'd like to find a neighborhood . . .

A. where I can walk, bicycle or take public transit for some of my trips, even if it has through streets and people from other neighborhoods walking or driving on them.

Or B. with cul-de-sacs and few people from other neighborhoods walking or driving on them, even if this means I must drive for all my trips.

Your neighborhood preference is (circle one number):

3. 1 7 9 0 2 3 4 5 6 8 10 strongly somewhat strongly neutral somewhat prefer A prefer A prefer B prefer B

For the following questions, use these definitions of Neighborhoods A and B:

Neighborhood "A":	Neighborhood "B":
Within a half-mile of my home there is a mix of single-family detached houses, town homes, apartments and condominiums on various sized lots.	Within a half-mile of my home there are only single-family houses on 1 acre lots.
Destinations such as shopping, a restaurant, a public library, and a school are within a few blocks of my home.	Destinations such as shopping, a restaurant, a public library, and a school are within a few miles of my home.
Local destinations are close enough that I can either walk or drive. Parking there is limited.	Local destinations are too far to walk, most are driven to. Parking there is ample.
My one-way commute is 3 miles.	My one-way commute is 18 miles.
Public transit, like a bus or train, is nearby.	Public transit, like a bus or train, is distant.

4. Assuming that there are no differences between the neighborhoods apart from the ones we mentioned, which neighborhood do you think you'd rather live in?

Neighborhood "A" OR Neighborhood "B"

5. How do you think you'd feel about living in Neighborhood "A"? Circle one number.

0 1 2 3 4 5 6 7 8 9 10

dislike very neutral like very much much

6. How do you think you'd feel about living in Neighborhood "B"? Circle one number.

0 1 2 3 4 5 6 7 8 9 10

dislike very neutral like very much much

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*K. Workplace Environment*Please check one box for each statement.

1. Do you do any paid work outside your home? Yes □			No □				
If No, skip to section M on page 10			_				
2. Do you usually work at:	y Multiple sites each da	у					
3. Is your primary work: □Indoors □Outdoors □Mixed indoors and outdoors							
4. How many days in the past month (about 20 work days) did you use each of the following modes of transportation to go to work. Include all modes taken (for example, if you took the bus on 20 days and then walked from the bus stop to work on 20 days, then you would put 20 for both bus and walking): If none, put "0". a days Walking							
	5. How long does it take you to walk from your parking space or transit stop to your primary workplace? minutes or						
6a. Whether or not you drive, what would be the daily COST of parking at or near your worksite? daily rate or range 6b. Does your employer offer parking with special employee rates? ☐ Yes ☐ No daily rate or range							
Please indicate which of these items are available at Please check one answer for each item.	t your work.						
		Yes	No	Don't Know			
7. Exercise facilities (e.g. workout room/gym, exercipath/PAR course)	se equipment, walking						
8. Regular exercise programs (e.g. aerobic classes, to etc.)	eam sports, walking groups,						
9. Shower facilities that you can use							
10. Lockers for clothes							
11. Safe bicycle storage							
12. An exercise specialist or activity coordinator ava	ilable for employees						
13. Policies that encourage exercise or biking							

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14. Employer provides paid time for you to exercise					

		Yes	No	Don't Know			
15a. Employer offers incentives not to drive to work (if no, skip to Question #16)							
	Programs Offered	1	Programs You I Month or More				
b. Carpooling or ride-matching program							
c. Cash in lieu of a parking space							
d. Free/reduced fair transit pass							
e. Ability to work at home one or more days per week							
f. Guaranteed ride home							
g. Vanpool service							
h. Parking closer to the office door if you carpool							
16. Are the stairs at your work:		Yes	No	N/A			
a. accessible							
b. safe							
c. pleasant							
17. Where do you <u>primarily</u> work? Street: City State Zip							
18. What is the nearest intersection to your <u>primary</u> workplace?&&							
19. How many days a week do you usually go to your prima days per week	ary workplace?						
L. The Neighborhood Around Your Workplace We would like to find out about the neighborhood around <u>your primary place of work</u> away from home. Consider the "workplace neighborhood" as being within a 10-15-minute walk of your workplace.							
	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree			
Stores are within easy walking distance of my workplace.							

Strongly

Disagree

Somewhat

Disagree

Somewhat

Agree

23. There are many places to go within easy walking

distance of my workplace.

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Strongly

Agree

24. It is easy to walk to a transit stop (bus, train) from my workplace.				
25. The distance between intersections in my workplace neighborhood is usually short (100 yards or less; the length of a football field or less).				
26. There are many alternative routes for getting from place to place in my workplace neighborhood. (I don't have to go the same way every time.)				0
27. There are sidewalks on most of the streets in my workplace neighborhood.				
28. Sidewalks are separated from the road/traffic in my workplace neighborhood by parked cars.	0		0	0
29. There is a grass/dirt strip that separates the streets from the sidewalks in my workplace neighborhood.				
30. My workplace neighborhood streets are well lit at night.	0		0	0
31. Walkers and bikers on the streets in my workplace neighborhood can be easily seen by people in nearby buildings or shops.				
32. There are crosswalks and pedestrian signals to help walkers cross busy streets in my workplace neighborhood.				0
33. There are trees along the streets in the neighborhood where I work.				
34. There are many interesting things to look at while walking in my workplace neighborhood.	0		0	0
35. There are many attractive natural sights in my workplace neighborhood (such as landscaping, views).				
36. There are attractive buildings/homes in the neighborhood around my workplace.	0			
37. There is so much traffic along <u>nearby</u> streets that it makes it difficult or unpleasant to walk in my workplace neighborhood.				
38. The speed of traffic on most <u>nearby</u> streets in my workplace neighborhood is usually slow (30 mph or less).		0		0
	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
39. Most drivers exceed the posted speed limits while				

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40. There is a high crime rate in my workplace neighborhood.				
41. The crime rate in my workplace neighborhood makes it unsafe to go on walks <u>during the day</u> .				
42. The crime rate in my workplace neighborhood makes it unsafe to go on walks at night.			0	
M. PHYSICAL ACTIVITY We are interested in finding out about the kinds of physical activities. The questions are about the time you spent being physically active in activities you do at work, as part of your house and yard work, to get recreation, exercise or sport. Your answers are important. Please answer each question even if you do not consider yourself to be a JOB-RELATED PHYSICAL ACTIVITY The first section is about your work. This includes paid jobs, farming, vunpaid work that you did outside your home. Do not include unpaid wo housework, yard work, general maintenance, and caring for your family 2. Do you currently have a job or do any unpaid work outside your have yes No [II o, go to the next section: TRANSPORTATION] The next questions are about all the physical activity you did in the last include traveling to and from work. 2. During the last 7 days, on how many days did you do vigorous phys like heavy lifting, digging, heavy construction, or climbing up stairs awork? Think about only those physical activities that you did for at leat a time. 3. How much time did you usually spend on ONE of those days doing physical activities as part of your work? 4. Again, think about only those physical activities that you did for at at a time. During the last 7 days, on how many days did you do moder activities like carrying light loads as part of your work? Please do not in the last in the physical activities like carrying light loads as part of your work?	the last 7 day from place to active person olunteer work rk you might of the come? 7 days as part ical activities a part of your ast 10 minute of the compact 10 minute of the compact 10 minute of the physical	ss. They includes place, and in your. cs., course work and around your paid or sked in a later state of your paid or Hours tes. # of Days # of Days # of Days	and any or home, line section. Grant Gran	ns about re time for ther ke
5. How much time did you usually spend on ONE of those days doing physical activities <u>as part of your work?</u>	moderate	Daily Ave		<u>inutes</u>

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time <u>as part of your work?</u> from work.	on how many days did you walk for at least 10 minutes at a Please <u>do not</u> count any walking you did to travel to or a usually spend on ONE of those days walking <u>as part your</u>	# of D Daily	Average	□ none Go to #8	3
These questions are about	TRANSPORTATION how you traveled from place to place, including to places like w	ork, stoi	res, movi	es, and so	on.
bus, car or tram?9. How much time did you	on how many days did you <u>travel</u> in a motor vehicle like a trai u usually spend on ONE of those days <u>traveling in a car, bus, tr</u>		# of Da	ys	□ none <i>Go to #10</i>
other kind of motor vehicle	<u>e?</u>		Hours		Minutes
	<u>bicycling</u> and <u>walking</u> you did to travel to and from work, to or to go from place to place.	lo errar			
10. During the last 7 days to go from place to place?	, on how many days did you <u>bicycle</u> for at least 10 minutes at a	time	# of Da	•	□ none <i>Go to #12</i>
11. How much time did you place?	ou usually spend on ONE of those days to bicycle from place to		Daily A		
			Hours		Minutes
12. During the last 7 days go from place to place?	, on how many days did you walk for at least 10 minutes at a t	<u>ime to</u>	# of Da		□ none <i>Go to #14</i>
13. How much time did yo	ou usually spend on ONE of those days <u>walking from place to p</u>	lace?	Daily A		30 10 11 1
			Hours		Minutes
	HOUSEWORK, HOUSE MAINTENANCE, AND CARING FO This section is about some of the physical activities you might h and around your home, like housework, gardening, yard work, and caring for your family.	ave don	e in the l		
time. During the last 7 da	e physical activities that you did for at least 10 minutes at a ys, on how many days did you do <u>vigorous</u> physical activities ag wood, shoveling snow, or digging <u>in the garden or yard</u> ?	# of D	ays Average	□ none Go to #1	
15. How much time did yo physical activities <i>in the g</i>	ou usually spend on ONE of those days doing vigorous arden or yard?	Hours		Minutes	S

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16. Again, think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <i>moderate</i> activities like carrying light loads, sweeping, washing windows, and raking <i>in the</i> garden or yard?	# of Days Daily Average	□ none Go to #18
17. How much time did you usually spend on ONE of those days doing moderate physical activities <i>in the garden or yard?</i>	Hours	Minutes
18. Once again, think about <i>only</i> those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do <i>moderate</i> activities like carrying light loads, washing windows, scrubbing floors and sweeping <i>inside your home</i> ? 19. How much time did you usually spend on ONE of those days doing moderate	# of Days Daily Average	□ none Go to #20
physical activities <u>inside your home?</u>	Hours	Minutes



RECREATION, SPORT, AND LEISURE-TIME PHYSICAL ACTIVITY This section is about all the physical activities that you did in the last 7 days solely for

recreation, sport, exercise or leisure. Please do not include any activities you have already mentioned. 20. Not counting any walking you have already mentioned, during the last 7 days, on □ none how many days did you walk for at least 10 minutes at a time in your leisure time? # of Days Go to #22

- Daily Average 21. How much time did you usually spend on ONE of those days walking in your leisure time? Hours **Minutes** 22. Think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do vigorous physical activities □ none like aerobics, running, fast bicycling, or fast swimming in your leisure time? # of Days Go to #24 Daily Average 23. How much time did you usually spend on ONE of those days doing vigorous physical activities in your leisure time? Hours Minutes 24. Again, think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do moderate □ none
- physical activities like bicycling at a regular pace, swimming at a regular pace, and # of Days Go to #26 doubles tennis in your leisure time? Daily Average 25. How much time did you usually spend on ONE of those days doing moderate physical activities in your leisure time? Hours **Minutes**

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activities.

TIME SPENT SITTING

The last questions are about the time you spend sitting while at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading or sitting or lying down to watch television. Do not include any time spent sitting in a motor vehicle that you have already listed.

		time spent sitting in a motor venicle	i mai you nav	e an eauy nsie	u.		
	During the last 7 kday?	days, how much time in total did you usu	ally spend <u>sit</u>	t <u>ting</u> on a	Daily Avera	ge	
27.]	During the last 7	days, how much time in total did you usu	ally spend <u>sit</u>	1	Hours Daily Avera	Minutes ge	
weel	kend day?				Hours	Minutes	
		N. Questions about Physical Activity Portion Physical activity includes activities like activity is any activity that takes at leasomewhat harder than normal.	brisk walkii		_	-	-
Hov		r Moderate Physical Activity that you could do moderate physical act for each item.	tivity in thes	e situations?			
			I'm Sure I Cannot		Maybe I Can		I'm Sure I Can
4.	Do physical achighly stresse	ctivity even though I am feeling sad or d.					
5.		ogram of physical activity even when al life takes a lot of time.					
6.	Set aside time	for regular physical activity.					
•	•	erate Physical Activities ve definition for physical activity. Pleas	se check one Strongly Disagree	answer for e Somewhat Disagree	ach item. Neutra I	Somewhat Agree	Strongly Agree
4. I	enjoy doing m	oderate physical activities.					
	enjoy the feeli sical activities.	ng I get <u>while</u> doing moderate					
6. I	enjoy the feeli	ng I get <u>after</u> doing moderate physical					

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You can get "regular physical activity" by either:

A. Doing <u>vigorous exercise</u>, like jogging or an aerobics class, <u>at least 3 times a week</u>, for <u>at least 20 minutes</u> each time OR

B. Doing moderate physical activity, like brisk walking or slow cycling, at least 5 days a week, for at least 30 minutes per day. You do not have to do all 30 minutes in one session.

O. Benefits of Regular Physical Activity This section is about some possible effects of regular physical activity. Please check one answer for each item.							
If I participate in regular physical activity, then:	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree		
1. I will feel less depressed and/or bored.							
2. I will improve my self-esteem.							
3. I will meet new people.							
4. I will lose weight or improve my shape.							
5. I will build up my muscle strength.							
6. I will feel less tension and stress.							
7. I will improve my health or reduce my risk of disease.							
8. I will do better at my job.							
9. I will feel more attractive.							
10. I will improve my heart & lung fitness.							
P. Barriers to Regular Physical Activity How often do the following prevent you from getting regu	ılar physical	activity?					
Please check one answer for each item.	Never	Rarely	Some- times	Often	Very Often		
1. Self conscious about my looks when I exercise.							
2. Lack of interest in exercise or physical activity.							
3. Lack of self-discipline.							
4. Lack of time.							
5. Lack of energy.							
6. Lack of company.							
7. Lack of enjoyment from exercise or physical activity.							
8. Feelings of discouragement.							

9. Lack of equipment.					
10. Lack of good weather.					
11. Lack of skills.					
12. Lack of facilities or space.					
	Never	Rarely	Some- times	Often	Very Often
13. Lack of knowledge on how to exercise.					
14. Lack of good health.					
15. Fear of injury.					
16. Activity facilities or space is too far away.					
Q. Social Support					
Please check one answer for how often your <u>family</u> or <u>frie</u>	nds have do	ne the followi	-	st three mont	
	Never	Rarely	Some- times	Often	Very Often
1. Family did physical activity with me.					
2. Friends did physical activity with me.					
3. Family offered to do physical activity with me.					
4. Friends offered to do physical activity with me.					
5. Family encouraged me to do physical activity.					
6. Friends encouraged me to do physical activity.					
R. Travel Preferences and Attitudes					
Please check one answer for each item.	Strongly Disagree	Somewhat Disagree	Neutra I	Somewhat Agree	Strongly Agree
33. Walking can sometimes be easier for me than driving.					
34. I would like to own at least 1 more car.					
35. Travel time is generally wasted time.					
I prefer to take transit rather than drive when possible.					
37. I like riding a bike.					
38. I use my trip to/from work productively. (Check if you don't work outside home)					
39. I like taking transit.					
40. Traveling by car is safer overall than walking.					
41. Air quality is a major problem in this region.					
42. I need a car to do many of the things I like to do.					
43. I prefer to walk rather than drive whenever					

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	possible.					
44.	. I am willing to pay a toll or tax to pay for new highways.					
45.	. I like driving.					
46.	. I prefer to bike rather than drive whenever possible.					
47.	Traveling by car is safer overall than riding a bike.					
		Strongly Disagree	Somewhat Disagree	Neutra I	Somewhat Agree	Strongly Agree
48.	. Public transit can sometimes be easier for me than driving.					
49.	. I try to limit my driving to help improve air quality.					
50.	. Traveling by car is safer overall than taking transit.					
51.	. Getting to work without a car is a hassle.					
52.	. I like walking.					
53.	Biking can sometimes be easier for me than driving.					
54.	. The only good thing about traveling is arriving at your destination.					
55.	. I prefer to organize my errands so that I make as few trips as possible.					
56.	. The price of gasoline affects the choices I make about daily travel.					
	The trip to/from work is a useful transition between home and work. if you don't work outside home)	0				0
58.	Fuel efficiency is an important factor for me in choosing a vehicle.					
59.	. I often use the telephone or Internet to avoid having to travel somewhere.					
60.	. We could manage pretty well with one fewer car than we have (or with no car if you have one car now).					
61.	. Vehicles should be taxed on the basis of the amount of pollution they produce.					
62.	. When I need to buy something, I usually prefer to get it at the closest store possible.					
63.	The region needs to build more highways to reduce traffic congestion.					
64.	. My household spends too much money on owning and driving our cars.					
S. Gene	eral information					

Please print clearly.					
1. Home address:	Street		Apt./Suite		
-	City		State		Zin Code
2. Previous address:	Street		Apt./Suite		
-	Citv		State		Zip Code
-	Country				
3. Nearest Intersection to) Home:		Street	& Street	
4. Phone Number:	Area Code	Number	Alternate Phone Number:	Area Code	Number
5. Age:					
6. Gender: ☐ Male ☐ 1	Female				
7. Are you of Hispanic, M 8. Race (please check one ☐ Caucasian or White ☐ African-American o ☐ American Indian or ☐ Other	e or more): or Black	merican descent.	☐ Yes ☐ No ☐ Pacific Islander ☐ Asian or Asian Amo	erican	
9. Height: feet _	inches; or _	centimeters			
10. Weight: po	ounds; or	kilograms			
11. What was your higher ☐ Less than 7 th grade ☐ Junior high/mid ☐ Some high school ☐ Completed high school ☐ Some college or vocat ☐ Completed college or ☐ Completed graduate of	ddle school ol tional training university	completed? (please o	check one).		
12. How many people (in	icluding yourself) li	ive in your househol	ld? people		
13. How many children u	ınder age 18 live in	your household?			
14. What are the ages of		in your household (if any)?		

15. What type of a Single family b ☐ Multi-family b ☐ Apartment ☐ Condominium ☐ Other	nouse nouse /townhouse	ive in? (pleaso	e check one)	•			
16. Do you rent or	r own your home?	1.0	wn/buying	2. R	ent		
17. How long have	e you lived at you	r current add	ress? y	year(s);	month(s	s)	
18. Do you have a	valid driver's lice	ense? 1. Yes	0.1	No			
19. How many dr		cles (cars, tru	cks, motorcy	vcles) are the	ere		
20. What is your in Married Widowed/divor	i i	Single and ne	ver married				
21. Approximate	annual household	income (plea	se check one	e)			
	<\$10,000					\$60,0	00-\$69,000
	\$10,000-\$19,000					\$70,0	00-\$79,000
	\$20,000-\$29,000					\$80,0	00-\$89,000
	\$30,000-\$39,000					\$90,0	00-\$99,000
	\$40,000-\$49,000					> \$10	0,000
	\$50,000-\$59,000						
22. Please tell us r		ults (18+ yeaı d work full □ No		d work only	Is a stu □ Yes		Is retired? □ Yes □ No
Other adult #1	☐ Yes	□No	☐ Yes	□No	☐ Yes	□ No	☐ Yes ☐ No
Other adult #2	☐ Yes	□ No	☐ Yes	□ No	☐ Yes		☐ Yes ☐ No
Other adult #3	☐ Yes	□ No	☐ Yes	□ No	☐ Yes		☐ Yes ☐ No
Other adult #4 Other adult #5	☐ Yes ☐ Yes	□ No	☐ Yes ☐ Yes	□ No	☐ Yes		 ☐ Yes ☐ No
Today's D			_ 103				L 103 L110

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Next Step:

Please take a moment to review your responses to make sure no questions were missed!!!

Send back the following items in the return envelope:

ID#	TRAC Survey 1
 Completed survey After wearing for 7 full days: Activity Meter GPS Device GPS Charger Travel Log 	
If you don't have the envelope we provid	ed, mail items to:
Trina Colburn, TRAC Project P.O. Box 20789 Seattle, WA 98102-9998	
Please feel free to give us a call if you have Trina Colburn, Project Coordinator: 206-6 or trina.colburn@seattlechildrens.org	• •
transportation, or other activity please us	you'd like to tell us something about your neighborhood, se the space below. We are also interested in hearing about udy. Any feedback you have for us is welcome. Thank you your participation!

You're Finished!

Thank you for your time and effort!

For Office Use Only

Date Mailed:	Date Entered:
Date Received:	By:

ID#