Acknowledgments

This toolkit was made possible by the support of the Brown School at Washington University in St. Louis and Moore Ruble Yudell (MRY) Architects and Planners.

REVIEWERS:

Amy Eyler, PhD
BEEP Co-Director
Brown School, Washington University in St. Louis

J. Aaron Hipp, PhD
BEEP Co-Director
North Carolina State University

Cheryl Valko, MPH, RD
BEEP Project Manager
Brown School, Washington University in St. Louis

Ramya Ramadas
BEEP Masters Research Fellow
Brown School, Washington University in St. Louis

The authors wish to give special thanks to the following people:

Edward Lawlor, PhD
Dean
Brown School, Washington University in St. Louis

Nicole Allen, MBA, MA
Assistant Dean
Sam Fox School of Design and Visual Arts
Washington University in St. Louis

Marissa Zwald, PhD
BEEP Project Manager
Brown School, Washington University in St. Louis

Maya McKenzie, MPH
BEEP Research Assistant
Brown School, Washington University in St. Louis

Hope O’Brien, MSW, MPH
BEEP Research Assistant
Brown School, Washington University in St. Louis

DESIGN

This toolkit was compiled and designed by Cheryl Valko, MPH, RD
# Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Introduction</td>
</tr>
<tr>
<td>8</td>
<td>Methodology</td>
</tr>
<tr>
<td>9</td>
<td>Activity Monitors</td>
</tr>
<tr>
<td>13</td>
<td>Worksite Satisfaction Survey</td>
</tr>
<tr>
<td>16</td>
<td>Stairwell &amp; Elevator Observations</td>
</tr>
<tr>
<td>19</td>
<td>Common Area Observations</td>
</tr>
<tr>
<td>22</td>
<td>Focus Groups</td>
</tr>
<tr>
<td>26</td>
<td>Key Informant Interviews</td>
</tr>
<tr>
<td>29</td>
<td>Social Network Survey</td>
</tr>
<tr>
<td>32</td>
<td>Ecological Momentary Assessment</td>
</tr>
<tr>
<td>35</td>
<td>Appendices</td>
</tr>
</tbody>
</table>
Introduction

Most adults are associated in some way to a worksite. Thus, the work environment contains opportunities to promote health, well-being, and collaboration while also contributing to environmental, social, and economic sustainability. A key opportunity lies in the way buildings, offices, and interstitial spaces are designed. Design elements, including the location of stairs, type of desk, and centrally located printers, not only promote more physical activity and less sedentary behavior among employees, but may also improve environmental outcomes and reduce waste. Other design elements such as hallways, walkways, or meeting spaces can contribute to increased interaction and collaboration among employees.

BEEP

In 2008, the Brown School at Washington University in St. Louis began a new program in public health and the number of faculty and staff grew substantially almost overnight. Talks soon began about expanding the current infrastructure to accommodate this new growth.

After several years of fundraising and gathering input from faculty, staff and students, construction on Hillman Hall began. The design concept encompassed 105,000 square feet where research, teaching, student, faculty, social and meeting spaces could coexist.

Two professors at the Brown School, Amy Eyler and Aaron Hipp, realized that the development of this building presented an immense opportunity to evaluate how changes to design elements in a worksite influence physical activity and sedentary behavior, collaboration and team science, and sustainability practices. After many months of design and planning, the Brown School Expansion Evaluation Project (BEEP) was born.

BEEP GOALS

BEEP consisted of three main goals:

- Assess physical activity and sedentary behavior among Brown School (intervention site) and Same Fox School of Design and Visual Arts (control site) staff and faculty before and after the completion of the Brown School expansion.
- Assess collaborative behavior and team science among faculty and staff before and after the completion of the Brown School expansion.
- Assess school sustainability efforts before and after the completion of the Brown School expansion.

PURPOSE OF THIS TOOLKIT

This toolkit aims to serve as a guidebook for groups interested in evaluating how current or new buildings can influence physical movement, collaboration, and sustainability. The toolkit describes eight methods used in the BEEP study. Within each section we describe the advantages and disadvantages to the method, and the main activities involved in planning, recruitment, implementation and analysis. We also describe budgetary items to consider, personnel
needed, and lessons learned. Finally, each method contains a “key document” section with direct links to templates used in the BEEP study. These documents can be tailored to your needs and serve as a starting point for a similar study, making the initial planning and development stage of each method significantly easier.
TEN STEPS TO DEVELOP A BUILDING EVALUATION

1. SET GOALS
   Define the purpose of your evaluation and goals of the building. What are you hoping to learn?

2. BUILD A TEAM
   Build a project team. Include decision makers, planners, architects, and potential building users.

3. DESIGN
   Design the evaluation and decide which methods to use.

4. PLAN
   Determine the timeframe and the process for each of the methods.

5. APPLY FOR FUNDING
   Apply for funding inside or outside of your organization to support the evaluation.

6. OBTAIN HUMAN SUBJECT APPROVAL
   Obtain human subjects approval before any research is conducted.

7. RECRUIT PARTICIPANTS
   Begin to recruit participants for the methods chosen. Details about recruitment for each method can be found within the toolkit.

8. IMPLEMENT THE METHODS
   Implement the methods and collect data. Details about implementing each method can be found within the toolkit.

9. ANALYZE RESULTS
   Evaluate the results and the process. Hire a statistician to analyze the results, if needed or work with students at a local university.

10. DEVELOP REPORT
    Use the results to develop a report to share with stakeholders and disseminate to other researchers and decision makers.
Methodology

A variety of methods were employed to collect data for the BEEP study. The following table describes how we used each of the methods, the duration, time period, objective of the methods and how each method related to our study topics of collaboration, sustainability and physical movement. Which methods you choose should be based on a variety of factors, including your evaluation goals, timeframe, and budget. It is important to always include a control site to show differences by building and controls for programmatic improvements during the same timeframe.

**TABLE 1: OVERVIEW OF BEEP STUDY METHODS**

<table>
<thead>
<tr>
<th>METHOD</th>
<th>WHO</th>
<th>DURATION</th>
<th>WHEN</th>
<th>HOW</th>
<th>OBJECTIVE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Monitor (physical activity)</td>
<td>Faculty and staff of the intervention and control sites</td>
<td>5 days, Monday through Friday during business hours</td>
<td>X X</td>
<td>Participants wore a thigh-mounted accelerometer device during business hours for a total time period of 5 days.</td>
<td>Obtain objective physical activity data during the work week</td>
<td>X</td>
</tr>
<tr>
<td>Worksite Satisfaction Survey</td>
<td>Faculty and staff of the Intervention and control sites</td>
<td>10 minute survey</td>
<td>X X</td>
<td>Paper survey given out at faculty and staff meetings</td>
<td>Obtain information on contentment with current workspace</td>
<td>X X X</td>
</tr>
<tr>
<td>Stair and Elevator Use Observations</td>
<td>All visible occupants of the intervention site</td>
<td>One week at 8:30am, 11:30am, 4:30pm on Mon &amp; Wed &amp; at 8:30am, 11:30am on Fri.</td>
<td>X X</td>
<td>Count the number of trips taken by stairs and by elevator</td>
<td>Obtain objective data on the number of people using stairs and elevators</td>
<td>X X</td>
</tr>
<tr>
<td>Common Area Observations</td>
<td>All visible occupants of the intervention site</td>
<td>One week at 8:30am and 12:30pm Mon - Thur and at 8:30am, 11:30am on Fri.</td>
<td>X X</td>
<td>Count the number of individuals in space (alone, pairs, groups; sitting, standing, walking, using digital media).</td>
<td>Obtain objective data on the number of people utilizing common areas and how they were utilizing them.</td>
<td>X X</td>
</tr>
<tr>
<td>Focus Groups</td>
<td>Faculty, staff and students of the intervention site</td>
<td>Two, 1-hour focus groups at baseline. Three, 1-hour focus groups post building construction</td>
<td>X X</td>
<td>A list of questions was used to guide the conversation.</td>
<td>Collect different groups’ opinions on issues related to the building design</td>
<td>X X X</td>
</tr>
<tr>
<td>Key Informant Interviews</td>
<td>Faculty and staff</td>
<td>Ten, 30 minute interviews</td>
<td>X</td>
<td>A list of questions was used to guide the conversation.</td>
<td>Compile different key players’ opinions on issues related to the building design</td>
<td>X X X</td>
</tr>
<tr>
<td>Social Network Analysis</td>
<td>Faculty and staff of the intervention site</td>
<td>15 minute, online survey</td>
<td>X X</td>
<td>An online survey was sent via email.</td>
<td>Obtain data on social and professional associations and collaborations</td>
<td>X</td>
</tr>
<tr>
<td>Ecological Momentary Assessment</td>
<td>Faculty and staff of the intervention site</td>
<td>10 days, Mon-Fri, 3X per day (9am, 12pm, and 3pm)</td>
<td>X X</td>
<td>Repeated sampling of subjects’ current behaviors in real time via text message</td>
<td>Obtain real-time data on activities while at work</td>
<td>X X X</td>
</tr>
</tbody>
</table>
Activity Monitors
Activity Monitors

Pedometers were one of the first activity monitors used regularly by researchers and consumers. Over the past decade, researchers have generally relied on research-grade accelerometers to collect objective data on physical movement and physical activity. Advances in new technology and decreasing costs of this technology have led to a flood of activity monitors developed for the general public. Recent studies have found that many of the new activity monitors, such as Fitbit™ devices, give similarly reliable results as the more expensive research monitors, particularly when measuring step counts and sleep duration.

**TABLE 2: COMPARISON OF THE ADVANTAGES AND DISADVANTAGES OF ACTIVITY MONITOR DEVICES**

<table>
<thead>
<tr>
<th></th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pedometers</strong></td>
<td>• Inexpensive</td>
<td>• Only collects step counts</td>
</tr>
<tr>
<td></td>
<td>• Easy to wear – often on waist band</td>
<td>• Participant often has to manually enter data into spreadsheet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Digital displays provide instant feedback and may change behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Often impossible to download data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• High participant burden – requires participant to report daily step counts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May not collect reliable data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Some versions easily lost</td>
</tr>
<tr>
<td><strong>Consumer-Grade Activity Monitors (Fitbit™, Up by Jawbone™, etc..)</strong></td>
<td>• Easy to wear – often on wrist</td>
<td>• May be difficult to download or share data</td>
</tr>
<tr>
<td></td>
<td>• Can collect a variety of data</td>
<td>• Can be expensive, depending on model</td>
</tr>
<tr>
<td></td>
<td>• Wide range of monitors available with varying features and cost</td>
<td>• May not collect or distinguish between different levels of exercise intensity</td>
</tr>
<tr>
<td></td>
<td>• Objective</td>
<td>• Some versions easily lost</td>
</tr>
<tr>
<td></td>
<td>• New evidence supporting reliability as compared to research-grade devices</td>
<td>• Digital displays provide instant feedback and may change behavior</td>
</tr>
<tr>
<td><strong>Research-Grade Accelerometers (activPAL™, Actigraph™, etc.)</strong></td>
<td>• Easy to download data</td>
<td>• Expensive</td>
</tr>
<tr>
<td></td>
<td>• Can collect a variety of data</td>
<td>• Can be difficult or cumbersome to wear – on thigh or waist</td>
</tr>
<tr>
<td></td>
<td>• Evidence-based use in research</td>
<td>• Some versions easily lost</td>
</tr>
<tr>
<td></td>
<td>• Objective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Increased sensitivity to upper body movement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Many versions can sense sit/stand</td>
<td></td>
</tr>
</tbody>
</table>
MATERIALS
Materials that are often required when collecting data via activity monitors include the following:

• Activity monitors – Determine the number needed early on in the process and consider collecting data in waves. This will reduce the overall number of monitors needed.
• Activity Log - participants are asked to record the times the accelerometer is put on and taken off. This helps to clarify when participants wear the monitor (but move very little) and when they do not wear it.
• Envelopes for monitor distribution
• Instructions for wear
• Human subjects approval documents
• Recruitment scripts (typically email or telephone)
• Equipment accessories:
  • If using activPAL™ accelerometers you will need additional materials:
    • Finger cots to water proof the devices
    • Tegaderm tape to attach the device to the thigh
    • Other accessories: belts, clips, etc.

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS

• Planning is key to successful implementation of activity monitor data collection. There are many moving parts when using accelerometers and significant room for user error. Creating a detailed plan and timeline for device distribution and collection, as well as visually clear instructions are crucial for improving participant adherence to the protocol and reducing loss of expensive activity monitors.
• If doing multiple waves of data collection, try to ensure the data is not biased by “unusual” weeks, such as spring break, exams, change in weather, day light savings, etc.
• Have a staff person dedicated to learning the activity monitor technology
• You should have at least one dedicated staff member to be in charge of follow-up after the monitors have been distributed. This helps to ensure that questions are answered, the participants are wearing the device correctly and they are returned in a timely manner.
• Use multiple communication methods to explain how to wear the device and follow the protocol, including face to face, email, telephone and written instructions when possible.
• If you are constrained by a tight budget, consider spreading out the data collection period into multiple waves, so a smaller number of devices can be used for a large number of participants.
• If possible, hand-deliver the accelerometers to participants, explain the study procedures, and demonstrate how to wear the device. This was particularly important with the type of accelerometers we used (activPAL™), which required the device to be worn facing right side up on the thigh. If accidentally worn upside down, the device did not collect data.
• Give participants multiple ways to return the devices. When feasible, offer to pick up the devices in person, or allow them to be dropped off at the Project Director’s office or returned via mail.

SAMPLE KEY DOCUMENTS

• Activity Log
• Activity Monitor Instructions
• Email Communication Templates
• Cover sheet for participant packet
• Consent document
### Table 3: Conducting an Evaluation with Activity Monitors

<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning</strong></td>
</tr>
<tr>
<td>• Obtain list of potential participants (e.g., all employees)</td>
</tr>
<tr>
<td>• Develop templates for emails and a phone call script</td>
</tr>
<tr>
<td>• Prepare and submit human subjects protocol</td>
</tr>
<tr>
<td>• Download any software needed to program devices and download data</td>
</tr>
<tr>
<td>• Program devices: Make sure accelerometers are in working condition (charged and functional)</td>
</tr>
<tr>
<td>• Train staff on wearing the device and explaining study procedures</td>
</tr>
<tr>
<td>• Order any needed supplies (e.g., tape, waist bands, etc.)</td>
</tr>
<tr>
<td>• Order incentives (such as gift cards), if needed</td>
</tr>
<tr>
<td>• Prepare and stuff envelopes with instructions, device and log</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
</tr>
<tr>
<td>• Send recruitment email to potential participants – explain the study and ask if they would be willing to participate</td>
</tr>
<tr>
<td>• 1-2 reminders emails may be necessary to increase response rate</td>
</tr>
<tr>
<td>• If potential participants do not respond to your recruitment emails, a personal phone call may also help to increase participation rates</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td>• Deliver devices, instructions and consent form to participants and demonstrate how to wear the device</td>
</tr>
<tr>
<td>• Send out follow-up email to make sure they received the device and were not experiencing any issues</td>
</tr>
<tr>
<td>• Send out follow-up to remind participants to wear the device and to coordinate packet return</td>
</tr>
<tr>
<td>• Send out reminder email that the devices need to be picked up on X date</td>
</tr>
<tr>
<td>• Collect devices and signed consent form</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
</tr>
<tr>
<td>• Download device data</td>
</tr>
<tr>
<td>• Send out individual activity report to participants</td>
</tr>
<tr>
<td>• Send incentives</td>
</tr>
<tr>
<td>• Input log data</td>
</tr>
<tr>
<td>• Create code book</td>
</tr>
<tr>
<td>• Analyze data: use SPSS to sort into Control/Intervention and Faculty/Staff</td>
</tr>
<tr>
<td>• Analyze means, frequencies and standard deviations</td>
</tr>
<tr>
<td>• Create report</td>
</tr>
</tbody>
</table>
Worksite Satisfaction Survey
The BEEP research team developed a worksite satisfaction survey to distribute to staff and faculty at baseline and after the new building was complete. This survey was developed to collect information on the following topics:

- Background information and primary personal workspace location
- Commute behaviors/patterns/preferences
- Current workspace features and attributes
- Communication preferences and challenges
- Meeting facilities in your current building
- Work experiences in your current building
- Indoor environmental quality
- Physical activity in the workplace
- Overall satisfaction with workspace and building

ADVANTAGES

- Inexpensive
- Low participant burden
- Can cover many different topics within survey
- Relatively easy to administer
- Ability to get high response rate by distributing at meetings

DISADVANTAGES

- Self-report data
- If not collecting identifying information, cannot compare individual baseline versus post data
- Data entry (not needed if online survey used)

MATERIALS

- Paper for printed surveys
- Pens or pencils

BUDGET

- Some potential budgetary costs may include:
  - Survey membership or account if conducting an online survey
  - Paper, pencils or pens and copying costs if conducting a paper and pencil survey
  - Incentives
  - For the BEEP study, all participants were provided an opportunity to enter their names in a drawing to win one of 4 $50 Amazon Gift cards.

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS

- If distributing the survey at meetings, at least two people should attend to help handout and collect the survey in a timely manner.
- Make sure to provide pens or pencils with the survey.
- Stapling the raffle sign-up to the survey on a separate page helped reassure participants that their survey answers would remain anonymous.
- Focus survey questions on behaviors or preferences that you think will change with the building and are important to the goals and mission of your organization.

SAMPLE KEY DOCUMENTS

- Worksite Satisfaction Survey
- Consent Form
### TABLE 4: CONDUCTING AN EVALUATION WITH A WORKSITE SATISFACTION SURVEY

<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Planning**   | • Obtain list of potential participants  
                   • Prepare and submit human subject protocol  
                   • Decide whether survey will be paper or online  
                   • Order incentives (such as gift cards), if needed  
                   • Develop survey questions and create and test survey tool |
| **Recruitment**| • Recruitment will vary depending on the type of survey used (paper or online)  
                   • If paper, recruitment may include asking someone in person to complete the survey  
                   • If online, recruitment may include sending a recruitment email asking for participation |
| **Implementation** | Intervention  
                   • To administer the survey to Intervention faculty, we received approval from the dean to administer during faculty meeting time  
                   • The individual surveys were placed on tables, along with the IRB Exempt Information Sheet and an incentive form  
                   • An announcement about the project and the survey was made and time was provided during the meeting to complete the survey  
                   • Survey materials were collected separately at the end of the meeting  
                   • For Intervention staff, paper surveys were passed out at large staff meetings and events  
                   • Surveys and incentive forms were collected separately after the breakfast  
                   Control  
                   • We coordinated with the Assistant Dean of the school to deploy the survey at a monthly faculty and staff meeting  
                   • A research team member waited outside of the meeting room and as individuals entered, the surveys were distributed, along with the Exempt Information Sheet, the incentive form, and a pen.  
                   • Survey materials were collected at the end of the meeting |
| **Analysis**    | • Sorted data into Control/Intervention and Faculty/Staff  
                   • Created a data codebook  
                   • Means and standard deviations were reported for measures  
                   • Used crosstabs to separate Control Faculty/Staff from Intervention Faculty/Staff  
                   • Frequencies were reported on Physical Activity Data and Shower Usage  
                   • Performed 3 Independent-sample T-Tests for all the measures  
                   • Control Vs. Intervention  
                   • Intervention Faculty vs. Intervention Staff  
                   • Control Faculty vs. Control Staff  
                   • Frequencies were reported on all variables. |
Stair and Elevator Observations
STAIRWELL & ELEVATOR OBSERVATIONS

OVERVIEW
Systematic observations of the stairwells and elevators in the intervention site were conducted to obtain direct information on stair and elevator use, including relevant concurrent characteristics of users, such as direction of travel, gender, age, and load individual may be carrying.

ADVANTAGES
• Inexpensive
• Objective data
• No participant burden
• Relatively easy task for observers if properly trained

DISADVANTAGES/CHALLENGES
• Difficult to recruit observers for large number of stairwells and elevators
• Requires clear directions and training to ensure data is collected correctly and observers go to the right area at the right time
• Those being observed may alter behavior if they realize they are being counted

MATERIALS
• Manila sized envelopes to hold observer materials
• Detailed floor plan of building(s)
• Multiple copies of the observation tools
• Schedule of observation times tailored for each individual observer

BUDGET
• Paper and copying costs for observation data collection sheets
• Cost of additional, temporary personnel to conduct observations

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS
• If your building contains a large number of stairwells, choose a sample to cut down on administrative time
• Create an extensive training tool to increase consistency across observers. This tool should include photos and the name of each of the observation point. The names should be the same as those listed on the observation tool.
• Make sure to incorporate direction of travel in the observation tool
• Recruit observers several weeks ahead of time, especially if you will need many observers. You may need to get observers set-up in payroll, which can take time.
• Consider using a free online scheduling tool, such as Sign-up Genius to schedule observers
• The number of additional personnel you will need to help conduct observations will depend on the following:
  • Number of observation time periods (for example, morning, noon and evening)
  • Number of stairwells and elevators being observed
  • Number of days of observation
  • Density of people/crowds. If a large number of people take the stairs and given times, you may need additional people to help count. For example, one stairwell or elevator may receive a huge influx of users at the beginning or end of a meeting or class.

SAMPLE KEY DOCUMENTS
• Stairwell and Elevator Observation Tool
• Stairwell and Elevator Observation Protocol
• Stairwell and Elevator Observation Training Slides
## TABLE 5: CONDUCTING AN EVALUATION WITH STAIRWELL & ELEVATOR OBSERVATIONS

<table>
<thead>
<tr>
<th><strong>MAIN ACTIVITIES</strong></th>
<th><strong>Planning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Create an observation tool that includes all observation points</td>
<td></td>
</tr>
<tr>
<td>• Create an extensive training tool to increase consistency across observers. This tool should include photos and the name of each of the observation point. The names should be the same as those listed on the observation tool</td>
<td></td>
</tr>
<tr>
<td>• Recruit and train observers</td>
<td></td>
</tr>
<tr>
<td>• Consider using a free online scheduling tool, such as <a href="https://www.sign-upgenius.com">Sign-up Genius</a> to schedule observers</td>
<td></td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
<td>• Not applicable</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>• One observer at designated stairwells and elevators records information on a coding sheet.</td>
</tr>
<tr>
<td></td>
<td>• Observations occur for 1 week every day during mornings (8:30-9:30am), lunch (11:30-12:30pm), and evening (4:30-5:30pm)</td>
</tr>
<tr>
<td></td>
<td>• The recording procedures require the observer to collect the following information on a coding sheet:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Date, Observation initials, Staircase location, Time Period, Start Time, and End Time:</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Activity:</strong> Mark whether participant is taking the stairs or the elevator.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Direction:</strong> Mark whether the participant is ascending the stairs or elevator (up) or descending the stairs or elevator (down).</td>
</tr>
<tr>
<td></td>
<td>• <strong>Gender</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Age</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Lg. bag/cart:</strong> indicate whether a person is carrying or pushing a heavy load (larger than a backpack or briefcase or pushing a cart).</td>
</tr>
<tr>
<td></td>
<td>• Any important characteristics of the individual were noted, such as whether the individual is a child.</td>
</tr>
<tr>
<td></td>
<td>• Verify that all coders were paid</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td>• Sort data into days and time period and used crosstabs to report frequencies</td>
</tr>
<tr>
<td></td>
<td>• Created a data codebook</td>
</tr>
</tbody>
</table>

---

*Building a Healthier Workplace*
Common Area Observations
Common Area Observations

OVERVIEW
Systematic observations of the common areas in the intervention site can be used to assess how the spaces are being utilized by faculty, staff, and students before and after a building expansion. It provides an assessment of collaboration within and current use of these spaces.

ADVANTAGES
• Inexpensive
• Objective data
• No participant burden
• Relatively easy task for observers if properly trained

DISADVANTAGES
• Requires clear directions and training to ensure data is collected correctly and observers go to the right area at the right time
• Those being observed may alter behavior if they realize they are being counted

MATERIALS
• Manila sized envelopes to hold observer materials
• Detailed floor plan of building(s)
• Multiple copies of the observation tools
• Schedule of observation times tailored for each individual

BUDGET
• Paper and copying costs for observation data collection sheets
• Cost of additional, temporary personnel to conduct observations

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS
• If your building contains a large number of common areas, choose a sample to cut down on administrative time
• Create an extensive training tool to increase consistency across observers. This tool should include photos and the name of each of the observation points. The names should be the same as those listed on the observation tool.
• Recruit observers several weeks ahead of time, especially if you will need many observers. You may need to get observers set-up in payroll, which can take time.
• Consider using a free online scheduling tool, such as Sign-up Genius to schedule observers
• The number of additional personnel you will need to help conduct observations will depend on the following:
  • Number of observation time periods (for example, morning, noon and evening)
  • Number of common areas being observed
  • Number of days of observation
  • Density of people/crowds. If a large number of people are in a common area and are moving around, you may need additional people to help count.

SAMPLE KEY DOCUMENTS
• Common Area Observations Coding Tool
• Common Area Observation Protocol
• Common Area Observations Training Slides
<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
<th>LIST OF MAIN ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>• Create an observation tool that includes all observation points</td>
</tr>
<tr>
<td></td>
<td>• Create an extensive training tool to increase consistency across observers. This tool should include photos and the name of each of the observation point. The names should be the same as those listed on the observation tool</td>
</tr>
<tr>
<td></td>
<td>• Recruit observers</td>
</tr>
<tr>
<td>Recruitment</td>
<td>• Not Applicable</td>
</tr>
<tr>
<td>Implementation</td>
<td>• The recording procedures require the observer to collect the information below on a coding sheet</td>
</tr>
<tr>
<td></td>
<td>• Observer name, Date and Start time</td>
</tr>
<tr>
<td></td>
<td>• Area being observed</td>
</tr>
<tr>
<td></td>
<td>• Whether there is an Event going on in the space you are observing</td>
</tr>
<tr>
<td></td>
<td>• Whether the Furniture appears to be rearranged from how it is normally set up</td>
</tr>
<tr>
<td></td>
<td>• Scan how many people are in the target area alone, in pairs or in groups</td>
</tr>
<tr>
<td></td>
<td>• Among those people, note how many individuals are sitting, standing, walking, or using digital media</td>
</tr>
<tr>
<td>Analysis</td>
<td>• Labelled observations, with each pair of observers represented by one number</td>
</tr>
<tr>
<td></td>
<td>• Split file based on number and reported frequencies</td>
</tr>
<tr>
<td></td>
<td>• Created a data codebook</td>
</tr>
</tbody>
</table>

TABLE 6: CONDUCTING AN EVALUATION WITH COMMON AREA OBSERVATIONS
Focus Groups
Focus Groups

Focus groups are a cost-effective method to help researchers to probe deeply about specific topics and allow answers to evolve and take shape during a group discussion. Focus groups typically contain 6-12 people and are held at a time convenient for the participants, often during lunch or after work. In a building evaluation, these people might include architects, planners, building occupants, director of operations, designers, and other management.

ADVANTAGES

• Provides information more quickly than if people were interviewed separately
• Ability to ask follow-up questions for clarification or deeper understanding of specific topics
• Does not require intensive training of research staff
• Allows the researcher to read body language and adapt
• Results can be easier to digest than complicated quantitative data and helps to tell a story
• Data collection may be enhanced by the interaction between and among participants.

DISADVANTAGES

• The conversation can veer off course, so valuable time may be wasted discussing irrelevant issues
• The skill of the interviewer can affect the depth and flow of conversation, thus impacting the results
• Respondents can feel pressure to answer questions in a similar way to others in the group, thus biasing results
• The small size of the group may not be generalizable to the larger population.

BUDGET

• Room rental for focus group, if needed
• Personnel to schedule and conduct interviews, and analyze data
• Transcription of digital recordings
• Meals for focus group team and participants
LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS

• Providing an incentive, either in the form of a gift card, cash, or lunch can increase participation
• Create a list of questions to help guide the discussion, but don’t be afraid to go off course if something particularly interesting is brought up.
• Having at least one researcher trained in qualitative methods is essential to obtaining quality data through key informant interviews.

SAMPLE KEY DOCUMENTS

• Focus Group Recruitment Email
• Focus Group Confirmation Email
• Focus Group Guide
• Focus Group Consent form
### TABLE 7: CONDUCTING AN EVALUATION WITH FOCUS GROUPS

<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
<th></th>
</tr>
</thead>
</table>
| **Planning**    | • Develop or modify an existing focus group guide to meet your needs  
|                 | • Select designated interviewer(s)  
|                 | • Train designated interviewer(s)  
|                 | • Reserve space, food and water, as needed  
| **Recruitment** | • Determine target population and brainstorm possible focus group participants  
|                 | • Send potential participants an initial recruitment email describing the study and asking if the participant would be willing to take part in a focus group  
| **Implementation** | • Collect data during a one-hour, in-person focus group  
|                 | • A trained interviewer should lead the group using pre-determined questions  
|                 | • Digitally record and use written notes to collect information.  
| **Analysis**    | • The digitally recorded notes can be transcribed verbatim by a professional or a member of the study team  
|                 | • At least 2 researchers should review the transcripts and search for themes  
|                 | • Organize your data. For example, if you have several interviews, you might organize the data by question  
|                 | • Place your data into categories or themes and create a codebook  
|                 | • Look for patterns across the themes or categories  
|                 | • Summarize the data  

---

Building a Healthier Workplace

25
Key Informant Interviews
Key Informant Interviews

Key informant interviews are used to gain a deeper understanding on a topic from the people who know the most about it. Typically key informants are a diverse group of people with a wide range of opinions. In a building evaluation, key informants might include architects, planners, building occupants, director of operations, designers, and other management.

ADVANTAGES

• Ability to ask follow-up questions for clarification or deeper understanding of specific topics.
• Does not require intensive training of research staff
• If the interviews are done in person, key informant interviews allow the researcher to read body language and adapt.
• Results can be easier to communicate than complicated quantitative data.

DISADVANTAGES

• Depending on the number of interviews being conducted, key informant interviews can be time intensive and costly when paying for personnel.
• The conversation can veer off course, so valuable time may be wasted discussing irrelevant issues.
• The skill of the interviewer can affect the depth and flow of conversation, thus impacting the results.

TABLE 8: CONDUCTING AN EVALUATION WITH KEY INFORMANT INTERVIEWS

<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning</strong></td>
</tr>
<tr>
<td>• Develop or modify an existing interview guide to meet your needs</td>
</tr>
<tr>
<td>• Select designated interviewer(s)</td>
</tr>
<tr>
<td>• Train designated interviewer(s)</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
</tr>
<tr>
<td>• Determine target population and brainstorm possible key informants</td>
</tr>
<tr>
<td>• Choose key informants to invite to participate. Often researchers will use a “snowball” sampling methods, where they ask each key informant to recommend someone else that they think should participate in an interview</td>
</tr>
<tr>
<td>• Send potential participants an initial recruitment email describing the study and asking if the participant would be willing to take part in an interview</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td>• Collect data during a one-hour, private interview, either in-person or over the phone</td>
</tr>
<tr>
<td>• A trained interviewer should lead the interview using predetermined questions</td>
</tr>
<tr>
<td>• Digitally record and use written notes to collect information</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
</tr>
<tr>
<td>• Have a professional transcriptionist transcribe the digitally recorded interviews</td>
</tr>
<tr>
<td>• Create a codebook based on overall themes</td>
</tr>
<tr>
<td>• Have two researchers thoroughly read through the interviews and code the answers to the questions</td>
</tr>
<tr>
<td>• Compare coding between researchers to ensure reliability and validity</td>
</tr>
<tr>
<td>• Continue to expand the codebook as new themes become apparent</td>
</tr>
</tbody>
</table>
BUDGET
• Personnel to schedule and conduct interviews, and analyze data
• Transcription of digital recordings

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS
• Providing an incentive, either in the form of a gift card, cash, or lunch may increase participation.
• Create a list of questions to help guide the discussion, but don’t be afraid to go off course if something particularly interesting is brought up.

SAMPLE KEY DOCUMENTS
• Recruitment email
• Key Informant Interview guide
• Key Informant Interviews Consent Document
Social Network Survey

Strong social networks are essential for good mental and physical health. Since most adults spend a large portion of their time at work, fostering an environment that enhances workplace social interactions should be an essential component of employee wellness. A social network analysis allows you to determine how people are interacting and connected before and after the new building is complete.

ADVANTAGES

• Inexpensive
• Low participant burden

DISADVANTAGES

• Participants may worry about how their social and work ties will be revealed
• Analysis may require an expert in social network theory and analysis

BUDGET

Some potential budgetary costs may include:

• Survey membership or account if conducting an online survey
• Paper and copying costs if conducting a paper and pencil survey
• Incentives

LESSONS LEARNED AND ADDITIONAL CONSIDERATIONS

Make sure the human subjects protocol and consent information clearly state how the information will be used and reported. This can help reduce questions and fears about how social and professional ties may be revealed.

SAMPLE KEY DOCUMENTS

• Social Network Survey Recruitment email
• Social Network Survey
• Social Network Survey Consent Document
### TABLE 9: CONDUCTING AN EVALUATION WITH A SOCIAL NETWORK SURVEY

<table>
<thead>
<tr>
<th>MAIN ACTIVITIES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning</strong></td>
<td>• Obtain list of potential participants</td>
</tr>
<tr>
<td></td>
<td>• Prepare and submit human subject protocol</td>
</tr>
<tr>
<td></td>
<td>• Decide whether survey will be paper or online</td>
</tr>
<tr>
<td></td>
<td>• Develop survey questions and create and test survey tool</td>
</tr>
<tr>
<td></td>
<td>• Order incentives (such as gift cards), if needed</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
<td>• Recruitment will vary depending on the type of survey used (paper or online)</td>
</tr>
<tr>
<td></td>
<td>• If paper, recruitment may include asking someone in person to complete the survey</td>
</tr>
<tr>
<td></td>
<td>• If online, recruitment may include sending a recruitment email asking for participation</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>• The data was collected via an online survey software program. Participants were sent a link to the survey</td>
</tr>
<tr>
<td></td>
<td>• When clicked, the link took them directly to the survey and described the study and the consent procedures</td>
</tr>
<tr>
<td></td>
<td>• The participant then completed and submitted the survey online.</td>
</tr>
<tr>
<td></td>
<td>• The survey remained open for 2 weeks and allowed a participant to start the survey, close it out and continue the survey at a later date</td>
</tr>
<tr>
<td></td>
<td>• Two reminder emails were sent to help increase the response rate</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td>• Survey responses were downloaded from the online survey software and descriptive statistics were analyzed in SPSS</td>
</tr>
<tr>
<td></td>
<td>• Ran counts for each person as well as the average and number of connections</td>
</tr>
</tbody>
</table>
Ecological Momentary Assessment
Challenges exist in measuring behaviors with retrospective and summary questionnaires, as they are vulnerable to recall errors and other biases. Ecological momentary assessment (EMA) allows participants to report various behaviors in real time. It can record the ecological context of certain behaviors as it is occurring, thus providing a detailed picture of the circumstances and settings around the behavior. Ecological momentary assessments are often administered through personal phone devices.

**ADVANTAGES**
- Collect real-time data from participants on a variety of topics
- EMA works well if each EMA survey can tie to a dependent variable collected via another method (e.g., accelerometer, or survey), but, the same participants need to complete both methods.

**DISADVANTAGES**
- Though not time-intensive, it can feel burdensome to receive requests to complete the survey several times a day
- The same questions are asked three times a day and can become repetitive

**BUDGET**
- This is a low-budget method. We used the PACO (Personal Analytics Companion Mobile App, www.pacoapp.com) Behavioral Research Platform application, which is online and free for Apple and Android users.
- We chose to not to distribute incentives, but they may help with retention.

**LEONNS LEARNED AND ADDITIONAL CONSIDERATIONS**
- Send reminder emails to help with participant retention over the course of the two week period
- Consider using incentives to increase participation and retention
- Make sure to limit the number of questions asked during each survey to help increase retention and reduce participant burden
- You may want to designate one person on your team to be the expert on the survey administration tool you choose to use, such as PACO. This person can learn the software or smartphone application and then train other part-time staff, if needed.

**SAMPLE KEY DOCUMENTS**
- Recruitment email
- Eligibility survey
- Physical Movement survey
- Collaboration survey
- Sustainability survey
- Android directions on how to download and set-up the PACO app - Example
- Iphone directions on how to download and set-up the PACO app - Example
<table>
<thead>
<tr>
<th>TABLE 10: CONDUCTING AN EVALUATION WITH ECOLOGICAL MOMENTARY ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAIN ACTIVITIES</strong></td>
</tr>
<tr>
<td><strong>Planning</strong></td>
</tr>
<tr>
<td>• Develop survey(s) (for example, the BEEP study created 3 separate surveys, one on physical movement, one on collaboration and one on sustainable behaviors)</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
</tr>
<tr>
<td>• Send a short eligibility survey to potential participants two weeks before data collection to verify desire to participate and possession of specific technology requirements to take part, such as a smart phone and a gmail account.</td>
</tr>
<tr>
<td>• Develop main survey questions and create and test survey tool</td>
</tr>
<tr>
<td>• Determine best online tool to distribute survey. For example, The Personal Analytics Companion (PACO) is an online tool for building your own personal science experiments that can then be administered by an app</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td>• Email invitation to participate. This email should include a description of the project and evaluation protocol and directions on how to install the phone application if the individual decides to participate</td>
</tr>
<tr>
<td>• Assign participants into study groups (for example, intervention moving, intervention not moving, and control). Participants can then be randomized to one of the three evaluation subgroups: 1) physical activity and sedentary behavior, 2) collaboration and team science, and 3) sustainability related behavior.</td>
</tr>
<tr>
<td>• Assign each participant to receive notifications to complete a survey by phone</td>
</tr>
<tr>
<td>• For a period of a specified number of business days (for example, over the course of 10 days, Monday through Friday), participants will be asked questions only related to the evaluation subgroup they have been randomly assigned</td>
</tr>
<tr>
<td>• For the duration of the study period, participants will be asked to take their phone with them wherever they go and they will receive three notifications (or requests to participate in the phone-based survey) per day during business hours (9am to 5pm). The notification tells the participant to complete the survey on the phone by reading questions on the phone screen and touching the phone screen to answer them</td>
</tr>
<tr>
<td>• Each mobile phone survey should take no longer than 30 -120 seconds to complete</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
</tr>
<tr>
<td>• Import Physical Activity, Collaboration and Sustainability data into analytic software from the PACO application</td>
</tr>
<tr>
<td>• Report frequencies and some mean/standard deviations.</td>
</tr>
<tr>
<td>• Separate multiple response questions and ‘multiple response sets’ to calculate frequencies for those questions</td>
</tr>
<tr>
<td>• Need someone familiar with multi-level modeling to fully analyze and get the most from EMA.</td>
</tr>
</tbody>
</table>
Appendices
Appendix A:

Sample Activity Monitor Key Documents

- Activity Log
- Activity Monitor Instructions
- Email Communication Templates
- Cover sheet for participant packet
- Consent document
**Sample Activity Log**

In the following table, please record the DATE and TIMES you left home to commute to work and when you arrived home from work. If the time you put the device on is different from the time you arrived/departed, please note these times in the notes section (e.g., attended a dinner meeting or child’s dance recital directly from work and did not go directly home). You DO NOT have to note any work-related activity, including lunch, which may take place outside of your primary workstation. This record will help us identify what time to look at your data, as we are seeking information about workday behavior.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time left for work</th>
<th>Time returned home</th>
<th>Specific times away from Brown</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE</td>
<td>3/March/2015</td>
<td>7:00AM</td>
<td>10:15PM</td>
<td>Dentist appointment, 3:30pm – end of day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forgot to put on activPAL in the morning; wore it 7:30AM—10:15PM</td>
</tr>
<tr>
<td>MONDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TUESDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEDNESDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THURSDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRIDAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For questions or comments, please contact <project director> at <email> or <phone>.
Sample Activity Monitor (activPAL) Instructions

<table>
<thead>
<tr>
<th>What is the activPAL?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The activPAL is a small light weight device that records general movement to allow us to get a better idea how often you sit, stand, and walk (total minutes during workday and percentage of time during workday).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For this study, we will ask you to wear the activPAL during commute and business hours at Brown for 5 days in one business week (Monday – Friday).</th>
</tr>
</thead>
<tbody>
<tr>
<td>• You are welcome to wear the activPAL continuously from Monday morning to Friday evening so as to not have to reapply the adhesive sticker.</td>
</tr>
<tr>
<td>• We do ask that you at least tape on the activPAL prior to your morning commute and then remove after your evening commute.</td>
</tr>
<tr>
<td>• The activPAL device is water resistant, it is okay to wear the activPAL in the shower.</td>
</tr>
<tr>
<td>• We ask that you take the device off if you will be submerged in water (bathing, swimming, etc.)</td>
</tr>
<tr>
<td>• If you need to remove the device for any reason during the workday, please remember to put it back on as soon as possible.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How to apply the activPAL (see detailed pictures on the reverse side)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wrap the activPAL in one latex finger cot, with the extra finger cot material rolled and on top of the activPAL or tied like a balloon.</td>
</tr>
<tr>
<td>2. Place the activPAL in the upright position (rounded top upright, arrow pointing up. Affix a piece of tegaderm tape on top of the activPAL. Remove the backing from the tegaderm, this will ensure that the activPAL will stay in place.</td>
</tr>
<tr>
<td>3. If you experience any skin irritation, please first move the activPAL to the opposite leg. If irritation persists, remove activPAL and contact &lt;project director&gt; at &lt;email&gt; or &lt;phone&gt;.</td>
</tr>
<tr>
<td>4. You may notice a green light flashing on the activPAL, that is normal and it means it is recording.</td>
</tr>
<tr>
<td>5. If you need to reapply the activPAL, you have been provided with additional finger cots and adhesives. Contact us if you need more of these supplies during the week of use.</td>
</tr>
</tbody>
</table>

Call/email <project director> at <email> or <phone> if you have any questions about the activPAL.
How to Apply Tape

(Please read the directions below in their entirety before attempting to apply the tape)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Turn over the tape so the 3M Tegaderm™ logo faces you. From the left side, peel off the 3M Tegaderm™ layer (arrows point left).</td>
</tr>
<tr>
<td>2</td>
<td>Hold activePAL upright and wrap in the finger cot. <em>You have option to place the activePAL in two finger cots if you plan to wear it continuously, including in the shower.</em></td>
</tr>
<tr>
<td>3</td>
<td>Place wrapped activePAL upright (<strong>rounded side up – this is EXTREMELY important, if it placed upside down, it will not collect any data</strong>) in the center of the sticker.</td>
</tr>
<tr>
<td>4</td>
<td>Flip the tape over and proceed to place the sticker with the activePAL to the middle part of your thigh, directly on your skin. <strong>ActivPAL goes directly on skin, underneath clothing</strong></td>
</tr>
<tr>
<td>5</td>
<td>Peel off the thin clear plastic layer from the center (measurement section) of the sticker. <strong>ActivPAL goes directly on skin, underneath clothing</strong></td>
</tr>
</tbody>
</table>
Activity Monitors: Sample Email Communication Templates

EMAIL 1
To: Participants
Subject: Movement Study – Device Drop Off

Hi <participant>,

Thank you so much for agreeing to participate in our movement study for the__________ project. We plan to drop off the activity devices, along with additional information about the project and how to wear the device, to either your office or mailbox on <date>. We ask that you wear the device during the week of <date> through <date>.

We chose these dates based on your listed date preferences. If this timeframe no longer works for you, please contact <project> at <email> or at <phone>.

Please let us know if you have a preferred time on <date> for us to drop off the packet and to briefly show you how to wear the device. This should only take 5 minutes.

Do not hesitate to let us know if you have any questions at all about the study!

Thanks again for agreeing to participate,

<Project Director>

EMAIL 2
To: Participants
Subject: Movement Study – Device Drop Off

Hi <participant>,

Thank you so much again for agreeing to participate in our movement study for the Brown School Expansion Evaluation project!

This email is to remind you to wear the device this morning before your commute, if possible. Also, please make sure to wear the device with the rounded end pointing up, otherwise the device will not collect data.

If needed, we are happy to provide extra finger cots or tape if you begin to run low at any time. Please do not hesitate to let us know if you have any questions by replying to this email or giving me a call at (314) 935-0119.
Thanks again,

<Project Coordinator>

EMAIL 3:
To: Participants
Subject: Movement Study – Mid-Study Check-in

Hi <participant>,

Thank you so much again for agreeing to participate in our movement study for the <project name> project!

This email is to check in to make sure you were able to apply the device appropriately and to see if you have any questions so far. If needed, we are also happy to provide extra finger cots or tape if you are running low. Please do not hesitate to let us know if you have any questions by replying to this email or giving us a call at <phone>.

Thanks again,

<Project Coordinator>

EMAIL 4:
To: Participants
Subject: Movement Study – Device Pick Up

Hi <participant>,

As we near the end of our movement study, we want to thank you all for your participation and leave you with a few notes about what is up next:

- Please continue to wear your device through the end of your commute home on Friday.
- Please sign and date the consent form that was provided in the packet.
- Please update the activPAL record with notes about your arrival and departure from work each day and any notes about your week or the device we should be aware of.
- After your commute home on Friday, please put your device, any extra materials, the signed consent form, and your updated activPAL record in the packet provided.
- We ask that you please leave your packets at the Service Center at the Brown School by 5pm on Monday 4/11. Please let us know if you have another preferred location for us to pick up your packet.
Thanks again and please let us know if you have any questions or concerns!

<Project Coordinator>
Sample Cover Sheet for Participant Packet

ActivPal Packet of Information

1. Sign and date the consent form (last page) and return to envelope.
2. Read directions on using ActivPal.
3. Prepare to wear device starting <date> before your commute until after your commute home. You will do this each day for the 5 day work week.
4. Record the times of use each day on the log included in this envelope.
5. After Friday’s commute home, put the device and any leftover finger cots or tape in this envelope with the ActivPal (please note that each device is worth $300).
6. We will pick up envelopes on <date>.

THANKS FOR YOUR PARTICIPATION!

☐ Check here if you want an individual activity report
Sample Activity Monitor Consent

*Be sure to follow your local Human Subjects/IRB requirements

Project Title:

Principal Investigator:

Research Team Contact:

This consent form describes the research study and helps you decide if you want to participate. It provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights and responsibilities as a research participant. By signing this form you are agreeing to participate in this study.

- You should read and understand the information in this document including the procedures, risks and potential benefits.
- If you have questions about anything in this form, you should ask the research team for more information before you agree to participate.
- You may also wish to talk to your family or friends about your participation in this study.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

WHAT IS THE PURPOSE OF THIS STUDY?

This is a research study. We invite you to participate in this research study because you are current full-time faculty or staff member at <organization>.

The purpose of this research study is to see evaluate how the building expansions at the <organization> may influence certain health behaviors, and how physical activity is related to worksite environments and design elements.

WHAT WILL HAPPEN DURING THIS STUDY?

- We will ask you to wear a small device on a small elastic belt around your waist for five days in one business week.
  - We are asking that you wear the device during your commute and business hours for five days in one business week (Monday through Friday).
  - You are welcome to wear the device continuously from Monday morning through Friday evening so as to not have to reapply the adhesive sticker.
  - It should be removed when showering, swimming, or playing contact sports.
  - If you do not wear the device for full 5 days, we may ask you to re-wear it.
- The data collected from the accelerometer device records your activity (or general movement) to allow us to get a better idea how often you sit, stand, and walk.
• Your accelerometer will have a unique ID number that you will be assigned. A separate key that connects the unique accelerometer ID number and your name will be stored in a separate locked filing cabinet in a locked office. Only members of the research team will have access to this master list. Once the device is returned, the physical activity and sedentary behavior data will be uploaded and removed from the device. Aside from your movement, no other data points or identifying information will be collected from the device.

**Will you save my research data to use in future research studies?**
As part of this study, we are obtaining data from you. We would like to use this data for studies going on right now as well as studies that are conducted in the future. These studies may provide additional information that will be helpful in understanding physical activity and sedentary behaviors in the worksite environment. It is unlikely that what we learn from these studies will have a direct benefit to you. There are no plans to provide financial compensation to you for use of your data. By allowing us to use your data you give up any property rights you may have in the data.

If you change your mind and do not want us to store and use your data for future research, you should contact the research team member identified at the top of this document. The data will no longer be used for research purposes. However, if some research with your data has already been completed, the information from that research may still be used. Also, if the data has been shared with other researchers it might not be possible to withdraw the data to the extent it has been shared.

**HOW MANY PEOPLE WILL PARTICIPATE?**
Approximately X number of people will take part in this study conducted by investigators at Washington University.

**HOW LONG WILL I BE IN THIS STUDY?**
If you agree to take part in this study, your involvement will last for five days.

**WHAT ARE THE RISKS OF THIS STUDY?**
You may experience one or more of the risks indicated below from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study.

- Participation in this study may involve some physical discomfort to you from wearing the device.
- You may also experience some worry about a loss of privacy as a result of revealing your activity levels for a business week.

**Breach of Confidentiality**
One risk of participating in this study is that confidential information about you may be accidentally disclosed. We will use our best efforts to keep the information about you secure. Please see the section in this consent form titled “How will you keep my information confidential?” for more information.

**WHAT ARE THE BENEFITS OF THIS STUDY?**
You may or may not benefit from being in this study. However, we hope that, in the future, other people might benefit from this study because it will help researchers learn more about people’s lifestyle
behaviors such as how much you move and your movement habits, as well as how it relates to changes in the worksite environment.

**WILL IT COST ME ANYTHING TO BE IN THIS STUDY?**
You will not have any costs for being in this research study.

**WILL I BE PAID FOR PARTICIPATING?**
You will be provided a X incentive for participating in this research study. You will need to provide your social security number (SSN) in order for us to pay you. You may choose to participate without being paid if you do not wish to provide your social security number (SSN) for this purpose. If your social security number is obtained for payment purposes only, it will not be retained for research purposes.

**WHO IS FUNDING THIS STUDY?**

**HOW WILL YOU KEEP MY INFORMATION CONFIDENTIAL?**
We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

To protect your confidentiality, all paper study records are kept in locked filing cabinets in a locked room at Washington University. Only the researchers and key staff will have access to either the locked room or the locked filing cabinet. All electronic study data (including the data on the device) will be seen only by the researchers or key study staff.

Participant data and identifying information are kept in separate locked files cabinets so that individuals are not easily connected to the study results. Data will be downloaded from the devices by trained research staff. To reduce the risk to an accidental disclosure of confidentiality, all subject records and data will stripped of individual identifiers following data collection. Only study investigators and authorized research staff will have access to data and the identifier key. Participants and other individuals external to the research team will not have access to individually identifiable information. The code that links the study ID and the name will be stored in a separate place than the data file until all of the measurements are complete. At that point, the personal information will be destroyed and all analyses will be conducted with the data set that has no personal identifiers.

If we write a report or article about this study or share the study data set with others, we will do so in such a way that you cannot be directly identified.

**IS BEING IN THIS STUDY VOLUNTARY?**
Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. Any data that was collected as part of your participation in the study will remain as part of the study records and cannot be removed.
If you decide not to be in this study, or if you stop participating at any time, you won’t be penalized or lose any benefits for which you otherwise qualify.

**What if I decide to withdraw from the study?**
You may withdraw by telling the study team you are no longer interested in participating in the study. If you decide to leave the study early, we will ask you to return the device and device packet using the intra-university email.

**Will I receive new information about the study while participating?**
If we obtain any new information during this study that might affect your willingness to continue participating in the study, we’ll promptly provide you with that information.

**WHAT IF I HAVE QUESTIONS?**
We encourage you to ask questions. If you have any questions about the research study itself, please contact <project director> and if you feel that you have been harmed in any way by your participation in this study, please contact <project director>

This consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by agreeing to participate in this study.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a signed copy of this form.

Do not sign this form if today’s date is after $STAMP_EXP_DT.

(Signature of Participant)    (Date)

(Participant's name – printed)

**Statement of Person Who Obtained Consent**
The information in this document has been discussed with the participant or, where appropriate, with the participant’s legally authorized representative. The participant has indicated that he or she understands the risks, benefits, and procedures involved with participation in this research study.
(Signature of Person who Obtained Consent)   (Date)

(Name of Person who Obtained Consent - printed)
Appendix B:

Sample Worksite Satisfaction Survey Key Documents

- Worksite Satisfaction Survey
- Consent Form
## Sample Worksite Satisfaction Survey

### Background information and primary personal workspace location

1. What is your role within this organization?  
   - □ Faculty  
   - □ Staff

2. Which floor is your workspace located?  
   ______ Floor

3. How many years have you worked as faculty or staff in this building?  
   ______ Years ______ Months

4. How long have you been working at your present workspace (i.e., office, cubicle)?  
   ______ Years ______ Months

5. Which building is your workspace located?  
   - □ Building 1  
   - □ Building 2  
   - □ Building 3  
   - □ Building 4  
   - □ Other ______________________

### Commute

6. On average, how many days per week do you travel to the office (i.e., commute)?  
   ______ Days

7. How far is your typical daily commute to and from this building?  
   ______ Miles round trip

8. Please indicate the number of days per week you commute to and from this building for each mode of transportation below.  
   - □ Walk  
   - □ Bicycle  
   - □ Car, truck, or van – single occupant  
   - □ Car, truck, or van – multiple occupants (e.g., carpool, vanpool, ride share)  
   - □ Bus  
   - □ Train  
   - □ Other ______________________

### Your current workspace

Considering the features and attributes of your current workspace, how satisfied are you with:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. The comfort of your workspace furnishings (chair, desk, computer, equipment, etc.)?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>10. Your ability to adjust your furniture to meet your needs?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>11. The colors and textures of flooring, furniture, and surface finishes?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>12. The amount of space available for individual work?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>13. Level of visual privacy in your workspace?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Communication

Considering communication in your current building, how satisfied are you with:

<table>
<thead>
<tr>
<th>Communication aspect</th>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Your ability to communicate with coworkers in person (face to face)?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>15. Your ability to communicate in privacy?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>16. The availability of space where you and your colleagues can talk into a speaker phone together?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Meeting facilities in your current building

Considering the meeting facilities in your current building, how satisfied are you with:

<table>
<thead>
<tr>
<th>Meeting facility aspect</th>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. The availability of meeting rooms on short notice?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>18. The availability of equipment in meeting rooms (white boards, speaker phone, computer access, LCD projectors, etc.)?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>19. The temperature of meeting rooms?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>20. The acoustic quality of meeting rooms?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>21. The availability of meeting rooms?</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Work experiences in your current building

Please rate your level of agreement with the following:

<table>
<thead>
<tr>
<th>Experience</th>
<th>Strongly agree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. I look forward to working in the building.</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
<tr>
<td>23. I am proud to show my building to visitors.</td>
<td>7 6 5 4 3 2 1</td>
<td>N/A</td>
</tr>
</tbody>
</table>
24. The overall appearance of the building is consistent with the mission of this organization. 7 6 5 4 3 2 1 N/A

25. There is a good sense of connection to the outdoors from inside the building. 7 6 5 4 3 2 1 N/A

26. There is a definite space that is the “heart” of the building. 7 6 5 4 3 2 1 N/A

27. I often stop and talk to others in corridors or break areas. 7 6 5 4 3 2 1 N/A

28. We have comfortable spaces to have lunch or take breaks inside the building. 7 6 5 4 3 2 1 N/A

### Indoor environmental quality

<table>
<thead>
<tr>
<th>How satisfied are you with:</th>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. The temperature of your office or workspace?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>30. The air quality in your workspace (i.e., stuffy/stale air, cleanliness, odors)?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>31. The amount of light in your workspace?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>32. The visual comfort of the lighting (e.g., glare, reflections, contrast)?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>33. The degree of control you have over the lighting in your workspace?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>34. The amount of daylight in your general workspace area?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>35. Your access to an outside view?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
<tr>
<td>36. The noise level in your workspace?</td>
<td>7 6 5 4 3 2 1 N/A</td>
<td></td>
</tr>
</tbody>
</table>

### Physical activity in the workplace

| During the past 5 workdays, how many days did you do moderate physical activities while at work? Think about only those physical activities that you did for at least 10 minutes at a time. (e.g., walking between places on campus, walking breaks) |  |
| Days per week | |
| □ No moderate physical activities during the work day (skip to 39). | |

| How much time do you usually spend on those days doing moderate physical activities during the work day? |  |
| Minutes per day | |

39. Do you have a sit/stand option at your desk?  
□ Yes  
□ No

40. During the past 30 days, have you used a shower on campus (after exercise or commute)?  
□ Yes  
□ No

### Please rate your level of agreement with the following:

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>41. There are adequate places for me to change clothing before or after exercise.</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
<tr>
<td>42. I would feel supported if I chose to exercise during the workday.</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
</tbody>
</table>

### General comments

<table>
<thead>
<tr>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. All things considered, how satisfied are you with your personal workspace?</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
<tr>
<td>44. How satisfied are you overall with the building in which you are currently located?</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enhances</th>
<th>Interferes</th>
</tr>
</thead>
<tbody>
<tr>
<td>45. To what extent does your workplace enhance or interfere with your individual work effectiveness?</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
<tr>
<td>46. To what extent does your workplace enhance or interfere with your ability to work effectively with others?</td>
<td>7 6 5 4 3 2 1 N/A</td>
</tr>
</tbody>
</table>
The purpose of the study is to evaluate the building expansion and examining how the new building may influence changes in physical activity behaviors, sedentary behaviors, collaboration among faculty and staff, and sustainable practices. As a faculty or staff member at this organization, we are asking you to help us by completing this survey about these behaviors.

If you agree to participate, please fill out this brief paper and pencil survey. You are free to skip any questions that you prefer not to answer. It will take approximately 10 minutes to complete.

We will not collect your name or any identifying information about you. To thank you for your time, we are offering everyone who completes the survey a chance to win one of four $50 gift cards to <organization>. Participation in the drawing is not required to participate in the survey. At the end of the survey, you will have the opportunity to provide your contact information to be entered into this drawing. To protect your privacy, the last page of the survey will immediately be removed so your personal information cannot be traced to your survey responses. Therefore, it will not be possible to link your name to your survey responses.

Completing this survey is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. Any data that was collected as part of your participation in the study will remain as part of the study records and cannot be removed.

If you do not wish to participate, you can choose not to take this survey. If you wish to complete this survey on your own time or in a different setting, you are invited to do so and return the survey via mail to <Study Director>. You will not be penalized or lose any benefits for which you otherwise qualify.

If you have any questions about the survey, please contact <Study Director> at <phone> or <email>.
Appendix C:
Sample Stairwell and Elevator Observations Key Documents

- Stairwell and Elevator Observation tool
- Stairwell and Elevator Observation Protocol
- Stairwell and Elevator Observation Training Slides
<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Direction</th>
<th>Gender</th>
<th>Age</th>
<th>Lg. Bag/Cart</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Stairs</td>
<td>Down</td>
<td>F</td>
<td>≥65</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Elevator</td>
<td>Down</td>
<td>F</td>
<td>≥65+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Elevator</td>
<td>Up</td>
<td>M</td>
<td>≤65</td>
<td>Carry</td>
<td></td>
</tr>
</tbody>
</table>

Date: [Sample Stairwell and Elevator Observation Tool]
Time period (circle): 8:30-9:30 am | 11:30-12:30 pm | 4:30-5:30 pm
Observer initials
Staircase location
Start time
End time
Sample Stairwell and Elevator Observation Protocol

Description and Procedures

Purpose
- To obtain direct information on stair and elevator use, including relevant concurrent characteristics of stair and elevator users. It provides an assessment of stair and elevator users’ direction of travel, gender, age, and load individual may be carrying.

Recording Procedures
1. On the observation point, enter the Date, Observation initials, Staircase location, Time Period, Start Time, and End Time:
   a. **Date**: Enter the date (mm/dd/yyyy) of the observation.
   b. **Observer initials**: Enter your initials.
   c. **Staircase location**: Note the staircase location as: Basement or Commons.
   d. **Time period**: Circle the appropriate box to indicate whether observations were made in the morning, lunch, or evening.
   e. **Start time**: Enter the start time of the observation period.
   f. **End time**: Enter the end time of the observation period.

2. For each individual traveling up or down the stairs or elevator, record the following information:
   a. **Activity**: Mark whether participant is taking the stairs or the elevator.
   b. **Direction**: Mark whether the participant is ascending the stairs or elevator (up) or descending the stairs or elevator (down).
   c. **Gender**: Mark the gender of the participant. M= Male; F=Female.
   d. **Age**: Mark the estimated age of the participant.
   e. **Lg. bag/cart**: Please indicate whether is carrying or pushing a heavy load (larger than a backpack or briefcase or pushing a cart).

3. In the notes column, indicate any important characteristics of the individual, such as whether the individual is a child.

Stair Case Location Codes for Coding Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hillman</strong></td>
<td></td>
</tr>
<tr>
<td>Hillman Basement Parking Lot</td>
<td>Basement-PL</td>
</tr>
<tr>
<td>Hillman Basement Elevator</td>
<td>Basement-E</td>
</tr>
<tr>
<td>Hillman Basement 1st Floor Stairs/Elevator</td>
<td>Basement 1st</td>
</tr>
<tr>
<td>Hillman 1st Floor-West</td>
<td>1st Floor West</td>
</tr>
<tr>
<td>Hillman First Floor Parking Lot Stairs</td>
<td>1st Floor –PL</td>
</tr>
<tr>
<td>Hillman First Floor –IT</td>
<td>1st Floor IT</td>
</tr>
<tr>
<td><strong>Goldfarb</strong></td>
<td></td>
</tr>
<tr>
<td>Goldfarb Basement Stairs/Elevator</td>
<td>Basement</td>
</tr>
<tr>
<td>Goldfarb First Floor Stairs/Elevator</td>
<td>Commons</td>
</tr>
</tbody>
</table>
Sample Stairwell and Elevator Observation Training Slides
BEEP Stair Observation Training
Why?

Purpose

• Count the number of trips taken by stairs and elevator
  • Information about users
    • Direction of travel (up or down)
    • Gender
    • Age
  • Load individual may be carrying (especially if using the elevator)
When?

• Monday, April 18\textsuperscript{th}
  • 8:30 AM – 9:30 AM
  • 11:30 AM-12:30 PM
  • 4:30 PM – 5:30 PM

• Wednesday, April 20\textsuperscript{th}
  • 8:30 AM – 9:30 AM
  • 11:30 AM-12:30 PM
  • 4:30 PM – 5:30 PM

• Friday, April 22\textsuperscript{nd}
  • 8:30 AM – 9:30 AM
  • 11:30 AM-12:30 PM
Where?

Hillman

Goldfarb
Enter the following information

- **Date**: Enter the date (mm/dd/yyyy) of the observation on each page.
- **Observer initials**: Enter your initials.
- **Staircase location**: Note the staircase location (you can find the staircase location on the “Description and Procedures sheet”).
- **Time period**: Circle the appropriate box.
- **Start time**: Enter the start time of the observation period.
- **End time**: Enter the end time of the observation period.

<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Emotion</th>
<th>Gender</th>
<th>Age</th>
<th>Lg. Bag/Crt</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stairs</td>
<td>Chip</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Stairs</td>
<td>Down</td>
<td>M</td>
<td>45+</td>
<td>Not carry</td>
<td></td>
</tr>
</tbody>
</table>
Coding Tools

• There are 2 coding tools: Hillman and Golfarb
  • Make sure you are using the correct one
    • The correct location is located on the header of the coding tool
# Recording observations

**Observer initiate**

- **Date:**
- **Time period (circle):** 8:00-9:59 am, 10:30-12:30 pm, 4:30-5:30 pm
- **Staircase Location:**
  - **Start time**
  - **End time**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Direction</th>
<th>Gender</th>
<th>Age</th>
<th>Lg. Bag/Cart</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stairs</td>
<td>Up</td>
<td>M</td>
<td>65+</td>
<td>Carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Up</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Down</td>
<td></td>
<td>65+</td>
<td>Chose carry</td>
<td></td>
</tr>
<tr>
<td>Elevator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Activity:** Mark whether participant is taking the stairs or the elevator (when applicable)
- **Direction:** Mark whether the participant is ascending the stairs or elevator (up) or descending the stairs or elevator (down) (when applicable)
- **Gender:** Guess the gender of the participant. M= Male; F=Female.
- **Age:** Mark the estimated age of the participant.
- **Lg. Bag/cart:** Please indicate whether is carrying or pushing a heavy load (larger than a backpack or briefcase or pushing a cart).
- **Notes:** Indicate anything important, such as if the person is on crutches or whether the person is a child.
Important things to note

• **During busy times**, prioritize counting Activity and Direction. Skip Gender, Age and Carrying if needed.

• This is not a perfect system. Some people will be missed or double counted. **Do the best that you can.**

• Use **notes** to explain other information you think is important (someone is disabled, a child is with a parent, etc.).

• If you can determine which **direction a person is going or coming from on the elevator**, mark it. Otherwise leave direction blank.
Goldfarb
Goldfarb First Floor Stairs/Elevator (Commons)
Goldfarb First Floor Stairs/Elevator (Commons)
Count people going up and down the stairs and elevator.
Goldfarb First Floor Stairs/Elevator (Commons)

What to watch

Where to Sit
Goldfarb Basement Stairs/Elevator (Basement)
Goldfarb Basement Stairs/Elevator
(Basement)
Count people going up and down the stairs and elevator.
Goldfarb Basement Stairs/Elevator (Basement)

Where to watch

Where to sit
Hillman 1st Floor – West Stairs/Elevator (1st Floor-West)
Hillman 1st Floor - West Stairs/Elevator (1st Floor - West)
Count people going up and down the stairs and elevator.
If you can determine the direction a person is taking on the elevator, mark it. Otherwise leave blank.

Hillman First Floor - Parking Lot Stairs (1st Floor PL)
Only count people going up or down the stairs! (Do not count the elevator)

Hillman 1st Floor - IT Elevator (1st Floor IT)
Count people going up and down the elevator (there are no stairs).
If you can determine the direction a person is taking on the elevator, mark it. Otherwise leave blank.

1st FLOOR PLAN
CROSS SQUARE FOOTAGE = 23927
Hillman 1st Floor – West Stairs/Elevator (1st Floor-West)

• Watch this 10 second video

• Example: You will count everyone you see. Stairs: 2 people down, 1 person up.
Hillman 1st Floor – West Stairs/Elevator (1st Floor-West)

Where to watch

Where to sit
Hillman 1st Floor – IT Elevator (1st Floor-IT)
Hillman 1st Floor - IT
Elevator (1st Floor IT)
Count people going up and down the elevator (there are no stairs).
If you can determine the direction a person is taking on the elevator, mark it. Otherwise leave blank.
• There are no stairs here!
• Only count people coming on and off of the elevator.
Hillman 1st Floor – Parking Lot Stairs (1st Floor PL)
Hillman First Floor - Parking Lot Stairs (1st Floor PL)
Only count people going up or down the stairs!
(Do not count the elevator)
Hillman 1<sup>st</sup> Floor – Parking Lot Stairs (1<sup>st</sup> Floor PL)

- The elevator here only goes down, so do not count it.
- Only count people coming in and out of the stairwell.
Hillman Basement -1\textsuperscript{st} Floor Stairs/Elevator (Basement-1\textsuperscript{st})
Hillman Basement-1st Floor
Stairs/Elevator
(Basement-1st)
Count people going up and coming down the elevator and the stairs.
Hillman Basement -1ˢᵗ Floor Stairs/Elevator (Basement-1ˢᵗ)

Where to watch

Where to Sit

• Count people going up the elevator or the stairs.

• Sit on the long bench
Hillman Basement – Parking Lot Stairs/Elevator (Basement-PL)
Hillman Basement-Parking Lot Stairs/Elevator (Basement-PL)
Count people going up to the 1st floor and coming down from the 1st floor on the elevator and the stairs.
Hillman Basement – Parking Lot Stairs/Elevator (Basement-PL)

Where to watch

Where to sit
Hillman Basement-Elevator (Basement E)
Hillman Basement-Elevator (Basement-E)

*Only count people going in and out of the elevator (there are no stairs).*
Hillman Basement-Elevator (Basement E)

- Count people getting on and off the elevator.
- There are no stairs.
- Sit on any of the benches nearby.
Questions?

• We know you will have questions.
• If people ask you questions while you are observing, you will be provided with business cards of the Study Director. Feel free to instruct anyone to directly contact her.
Appendix D:
Sample Common Area Observations Key Documents

- Common Area Observations Coding Tool
- Common Area Observation Protocol
- Common Area Observations Training Slides
## Sample Common Area Observation Coding Tool

<table>
<thead>
<tr>
<th>Observer name</th>
<th>Area</th>
<th>C-F Forum</th>
<th>GFC</th>
<th>Nessbaum Plaza/ Buder Garden</th>
<th>Homan Court</th>
<th>1st Floor Area</th>
<th>2nd Floor Area</th>
<th>Indoor Garden</th>
<th>3rd Floor Area</th>
<th>3rd Floor Terrace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there an event?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has furniture been rearranged?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Sit</th>
<th>Stand</th>
<th>Walk</th>
<th>Digital Media</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alone</strong></td>
<td>Record total number of individuals alone here</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pairs (2)</strong></td>
<td>Record total number of pairs of individuals here</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Groups (3+)</strong></td>
<td>Record total number of groups of individuals (3+) here</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the columns below, record the total number of number of individuals, that are either alone, in pairs, or in groups, that are sitting, standing, walking, or using digital media.
Sample Common Areas Observation Protocol

Purpose:
The purpose of these observations is to obtain direct information about common spaces at the Brown School before and after the building expansion. It provides an assessment of collaboration within and current use of these spaces.

How to conduct the scan:
- Enter the Observer name.
- Enter the Date of the observation.
- Enter the Start time of the observation.
- Circle the Area that you are observing – each area you observe should have a different observation form.
- Circle whether there is an Event going on in the space you are observing.
- Circle whether the Furniture appears to be rearranged from how it is normally set up.
- Starting in the first row, scan how many people are in the target area Alone and note in the Total column.
  - Then, among those people Alone, note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.
- In the second row, scan how many people are in the target area In Pairs and note the total number of pairs in the Total column.
  - Among those people In Pairs, note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.
- In the third row, scan how many people in the target area are In Groups (3+) and note the total number of groups in the Total column.
  - Among those people In Groups (3+), note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.
- Move to the next target area.

Areas Descriptions

<table>
<thead>
<tr>
<th>Title</th>
<th>Areas to Observe (use separate coding tool for each area)</th>
<th># of Coding Tools to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldfarb</td>
<td>Goldfarb Commons, Courtyard, Basement</td>
<td>3</td>
</tr>
<tr>
<td>Hillman 1st Floor</td>
<td>Nessbaum Plaza/Buder Garden, 1st Floor Area, Grounds for Change</td>
<td>3</td>
</tr>
<tr>
<td>Hillman 1st Floor – Part 2</td>
<td>Clark-Fox Forum, Homan Court</td>
<td>2</td>
</tr>
<tr>
<td>Hillman 2nd Floor</td>
<td>2nd Floor Area, Indoor Gardens</td>
<td>2</td>
</tr>
<tr>
<td>Hillman 3rd Floor</td>
<td>3rd Floor Area, Terrace</td>
<td>2</td>
</tr>
</tbody>
</table>
Common Area Observation Training
Why?

• Purpose

• Count people in the common spaces at the Brown School before and after the building expansion.
  • It provides an assessment of collaboration within and current use of these spaces.
When?

• Monday, April 25\textsuperscript{th}
  • 8:30 AM – 9:00 AM
  • 12:30 PM-1:00 PM

• Tuesday, April 26\textsuperscript{th}
  • 8:30 AM – 9:00 AM
  • 12:30 AM-1:00 PM

• Wednesday, April 27\textsuperscript{th}
  • 8:30 AM – 9:00 AM
  • 12:30 AM-1:00 PM

• Thursday, April 28\textsuperscript{th}
  • 8:30 AM – 9:00 AM
  • 12:30 PM-1:00 PM

• Friday, April 29\textsuperscript{th}
  • 8:30 AM – 9:00 AM
  • 12:30 AM-1:00 PM
Timing

• You are counting at one point in time (i.e., a snapshot) at the beginning of your observation period.
  • When you arrive at an area, count what you see at that moment.

• The time slots are scheduled for 30 minutes, but it may only take you 5-10 minutes to complete, depending on your area and the number of people you see.
Coding Tools

- There are 2 coding tools: Hillman and Goldfarb
  - Make sure you are using the correct one
    - The correct location is located on the header of the coding tool
Recording Observations

- **Observer Name:** Enter your name.
- **Date:** Enter the date (mm/dd/yyyy) of the observation on each page.
- **Start Time:** Enter the time when you began the observation.
- **Area:** Circle the Area that you are observing – each area you observe should have a different observation form.
- **Event:** Circle whether there is an Event going on in the space you are observing.
- **Furniture:** Circle whether the furniture appears to be rearranged from how it is normally set up.

### Example Table

<table>
<thead>
<tr>
<th>Area</th>
<th>CTR Forum</th>
<th>CTR</th>
<th>Student Union</th>
<th>Human Court</th>
<th>1st Floor Area</th>
<th>2nd Floor Area</th>
<th>3rd Floor</th>
<th>4th Floor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bldg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floors</td>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups (3+)</td>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recording Observations

- **ALONE**: Scan how many people are in the target area *Alone* and note in the **Total** column.
  - Then, among those people *Alone*, note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.

- **PAIRS**: Scan how many people are in the target area *In Pairs* and note the total number of pairs in the **Total** column.
  - Among those people *In Pairs*, note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.

- **Groups**: Scan how many people in the target area are *In Groups (3+)* and note the total number of groups in the **Total** column.
  - Among those people *In Groups (3+)*, note how many individuals are sitting, standing, walking, or using digital media in each of the corresponding columns.

- Move to the next target area.
Important things to note

• **Different forms should be used for each area** (e.g., if you are observing Hillman 1st floor you should use 3 coding tools – one for each of the following: Nessbaum Plaza/Buder Circle, 1st Floor Area, Grounds for Change)

• This is not a perfect system. Some people will be missed or double counted. **Do the best that you can.**

• Use **notes** to explain other information you think is important (children, weather for outdoor areas, etc.).

• **Digital Media is not mutually exclusive.** In other words, count a person that is sitting and listening to music twice- once in the sitting alone column, and once in the digital media column.
Example

• Count the number of individuals alone
• Count the number using digital media (e.g., laptops, cell phones)
Alone: 11
Digital Media: 10
• Count the number of pairs
• Count the number using digital media
Pairs: 2

Digital Media: 2 (individuals)
• Count the number of groups (3+)
• Count the number using digital media
Groups (3+): 2

Digital media: 7 individuals – though it’s difficult to tell from this picture.
• This is how the previous scene would be recorded on the coding tool.
Hillman 1st Floor

Nessbaum Plaza

Buder Gathering Garden

Grounds for Change (GFC)

1st Floor Area
Questions?

• Let us know if you have questions.
• If people ask you questions while you are observing, please direct them to talk to the Study Director.
Appendix E:
Sample Focus Group Key Documents

- Focus Group Recruitment Email
- Focus Group Confirmation Email
- Focus Group Guide
- Focus Group Consent form
Dear <Potential Participant>,

It is an exciting time at the <organization> with the one-year anniversary of the building expansion coming up! As our environment has changed in the past year, we are evaluating how the renovation and new building has influenced collaboration, physical movement, and sustainability practices. We would like to invite you to participate in this research study being conducted here at <organization>. As part of this study, we are conducting key informant interviews and focus groups with faculty and staff on these behaviors. You have the opportunity to help in this unique study!

If you agree to participate, we would like for you to be a part of the focus groups we are conducting. It should take approximately one hour of your time.

We are holding these focus groups on 3/28, 3/30, and 4/1 from 12-1 PM. If you have time to participate, please let us know which of these dates is most convenient for you through THIS doodle. Lunch will be provided.

If you have any questions about the study, please contact <Study Director> at <email>.

Thank you very much for your consideration.

<Study Director>
Sample Focus Group Confirmation Email

Dear <Participant>,

Thank you for agreeing to participate in the study focus group. Based on your doodle poll, we have assigned you to the focus group on <date, time and place>. We will be sending a calendar invite following this email.

Lunch will be provided. Please let us know if you have any dietary restrictions.

If you have any questions about the study, please contact <Study Director>

Thank you again for your consideration.
Sample Follow-Up Focus Group Guide

As a follow-up to the data collection last spring, we are conducting a focus group to understand staff perceptions of the new building. We will use information from this focus group to add to the other data we collect through surveys and observations.

1. Opening Statements
   a. Welcome participants, review the purpose of the focus group, and logistics

2. Introductions
   a. First, we would like you to introduce yourselves. Please tell us your first name and your role here.

3. Key Questions
   a. Tell me about your current office space and how it has changed since the opening of the new building.
      i. How has your department been impacted by the opening of the new building?
   b. What were your expectations of the new building? How have these expectations been met?
      i. Were there any positive or negative unexpected outcomes?
   c. What aspects of the new building or your new workspace impacted (if so, how?)
      i. Your work?
      ii. Your health?
      iii. Your job satisfaction?
      iv. Collaboration?
      v. Sustainable behaviors?
   d. How do you think the new building will impact the future of the Brown School? The university?
   e. Tell me a story about your experience in the new building.
   f. If you could change one thing about the new building what would it be?

4. Concluding Questions
   a. Is there anything we should have talked about, but did not?

5. Closing Statements
   a. Recapitulate discussion, thank participants, and summarize next steps
Sample Focus Group Consent
*Be sure to follow your local Human Subjects/IRB requirements

We invite you to participate in a research study being conducted by <Study Director>. The purpose of the study is to understand perceptions about the new building one year after its addition.

If you agree to participate, we would like you to participate in a focus group. You are free to skip any questions that you prefer not to answer. The focus group will take approximately an hour.

Your participation in this study is voluntary and you may decline to participate or terminate the interview at any time. You will be sent a copy of the results when they are published. However, if you have any questions about the study or have information to add after the interview, please call <Study Director> at <phone>.

If you have questions, concerns, or complaints about your rights as a research participant, please contact <your human subjects research office>.

Thank you very much for your consideration of this research study.

<Study Director>
Appendix F:

Key Informant Interviews Sample Key Documents

- Recruitment email
- Key informant interview guide
- Research Information Sheet/Consent Template
Sample Key Informant Interview Recruitment Email

Hello <First Name Last Name>==,

As our environment has changed in the past year, we are evaluating how the renovation and new building has influenced physical movement, collaboration, and sustainability practices. We would like to invite you to participate in this research study being conducted by <Study Director>. As part of this study, we are conducting key informant interviews with faculty and staff on these behaviors. You have the opportunity to help in this unique study!

If you agree to participate, we would like to interview you as a key informant. It should take approximately 30 minutes of your time.

If you have time for this interview, please let us know 3-4 convenient times for you to participate in the interview.

If you have any questions about the study, please contact <Study Director> at <email>.

Thank you very much for your consideration.

<Study Director>
Sample Follow-Up Key Informant Interview Guide

As a follow-up to the data collection last spring, we are interviewing key stakeholders to understand their perceptions of both the process of developing the new building and current insights about the building. We will use information from these interviews to add to the other data we collect through surveys and observations.

1. Opening statements/Introductions
   a. Welcome participant, review the purpose of the focus group, and logistics
   b. Interviewer introduction

2. Key Questions
   a. Describe the role you had in the development of the new building.
   b. Were you in the process from the beginning? How long?
   c. Tell me about your initial vision for the building. What did you think it would do for the organization? Beyond?
   d. How did you envision day-to-day life of faculty, staff and students with the addition of the new building? What were your expectations about the building (*Probe for specific aspects of the building*)?
   e. Now that we have been in the building since <date>, how has your initial vision changed or evolved?
   f. Tell me a story about your experience in the new building.
   g. What lessons can the organization learn from the process of building and operating the new building? What about the field of architecture in general?

3. Concluding Questions
   a. Is there anything we should have talked about, but did not?

4. Closing Statements
   a. Recapitulate discussion, thank participant, and summarize next steps
Sample Key Informant Consent
*Be sure to follow your local Human Subjects/IRB requirements

We invite you to participate in a research study being conducted by <Study Director>. The purpose of the study is to understand perceptions about the new building one year after its addition.

If you agree to participate, we would like you to participate in a key informant interview. You are free to skip any questions that you prefer not to answer. The key informant interviews will take approximately 30 minutes.

Your participation in this study is voluntary and you may decline to participate or terminate the interview at any time. You will be sent a copy of the results when they are published. However, if you have any questions about the study or have information to add after the interview, please call <Study Director> at <Email>.

Thank you very much for your consideration of this research study.
Appendix G:
Sample Social Network Survey Key Documents

- Recruitment email
- Key informant interview guide
- Research Information Sheet/Consent Template
Dear [name],

It is an exciting time at the <organization> with the building expansion underway! We are working to evaluate how the building expansion influences collaborative behavior and team science among faculty. We invite you to fill out this brief online network survey on your collaborations and interactions with other faculty members and research staff. The survey will only take 10 minutes to complete. Please click on the link below to access the survey.

Survey link

Thank you for your time!

<Study Director>
Sample Social Network Study Survey

Q1 This survey assesses how we interact with one another in research, teaching, and socially. The survey will take approximately 10 minutes to complete and is voluntary. To thank you for your participation, your name will be entered into a drawing for a $100 Gift card. If you have any questions about this assessment or the study, please contact <Study Director> at <email>.

Below you will find a link to the IRB Exempt Information Sheet/Consent Form for you to read. Thank you.

Exempt information sheet

Q2 What is your first and last name?

Q3 What is your role within the <organization>?
   ○ Faculty
   ○ Staff

Q4 Have you changed office locations since <date>?
   ○ Yes
   ○ No

Q5 Where is your current space located?
   ○ Building 1
   ○ Building 2
   ○ Building 3
   ○ Building 4
   ○ Other ____________________

Q6 On which floor is your work space located?
Q7 Please rate your level of agreement with the following about the new building:

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I look forward to spending time in the new building.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I am proud to show the new building to visitors.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>The overall appearance of the new building is consistent with the mission of the &lt;organization&gt;</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>There is a good sense of connection to the outdoors from inside the building.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>There is a definite space that is the “heart” of The new building.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I often stop and talk to others in corridors or break areas of the new building.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>We have comfortable spaces to have lunch or take breaks inside the new building.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>
The next question will ask you about your collaborations at the <organization> related to research activities, teaching activities, and social interactions. Please see below for descriptions for each collaboration type.

Research Activities
Research activities include any type of research or evaluation, and specifically include planning a new project, writing a grant, working on an active project, or disseminating research results via papers, conferences, or electronic media.

Teaching Activities
Teaching activities include curriculum development, classroom teaching (e.g., co-teaching, guest lecturing), and outside the classroom training activities.

Social Interactions
Because the <organization> promotes work/life balance and social connections, our evaluation also includes a question about social interactions with colleagues. Examples include non-work related lunches, book clubs, or special events.

Q8 Considering only current full-time faculty and research staff at the George Warren Brown School of Social Work:
In the first column, please check the individuals you have collaborated with on research activities since <date>.
In the middle column, please check the individuals you have collaborated with on teaching activities since <date>.
In the last column, please check the individuals you have socialized with during your free time since \( \text{<date>} \).

<table>
<thead>
<tr>
<th>Name 1</th>
<th>Collaborated with on research activities</th>
<th>Collaborated with on teaching activities</th>
<th>Socialized with during your free time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q9 Do you have anything else you would like to share about the new building? If yes, use the space below. If not, please continue to the next screen.
Sample Social Network Consent

*Be sure to follow your local Human Subjects/IRB requirements*

We invite you to participate in our research study conducted by investigators at <organization>. The purpose of this study is to evaluate how the building expansion may influence collaborative behavior and team science among faculty and research staff.

Participation in this study involves answering questions about your collaborations and interactions with other faculty members and research staff.

Taking part in this survey is completely voluntary. You are free to skip any questions that you prefer not to answer. If you do not wish to participate, you may respond to this email saying that you wish to be removed from our contact list. There will be no consequence if you decline. The survey may take approximately 10 minutes, and we ask that you try to complete the survey within 2 weeks.

Your responses will remain confidential, and all survey information will be kept in a locked file in a locked room and disposed of at the end of the study.

If you have questions about the study, please contact <Study Director> at <email>.

Thank you very much for your consideration.

<Study Director>
Appendix H:

Ecological Momentary Assessment Sample Key

Documents

- Recruitment email
- Eligibility survey
- Physical Movement survey
- Collaboration survey
- Sustainability survey
- Android directions on how to download and set-up the PACO app - Example
- Iphone directions on how to download and set-up the PACO app - Example
Hi <Potential Participant>

The Building Expansion Evaluation Project (BEEP) is underway and many of you have participated in various components of the study. We are extremely grateful for your involvement. As we continue to evaluate the impact of the renovation and new building, there is one more way you can help. As part of this next phase of the study, we are collecting post-test data from faculty and staff on collaboration, physical movement, and sustainability practices using an innovative method called Ecological Momentary Assessment.

To participate, we ask that you answer a mobile phone survey a few times a day for ten business days (Date - Date). Each mobile phone survey takes under one minute to finish. The answers to the survey on your mobile phone will be confidentially transmitted to the research team through the Internet.

If you are interested in the opportunity to help, please click on the following link to answer a few questions about your eligibility and for directions on how to download the phone app:

If you have any questions about the study, please contact <Study Director> at <email>.

Thank you very much for your consideration.

<Study Director>
Ecological Momentary Assessment Eligibility Survey

Thank you for considering participating in our Brown School Expansion Evaluation Project. We will be collecting information about specific behaviors among faculty and staff at the <organization> using Ecological Momentary Assessments.

Ecological Momentary Assessments will allow us to examine real-world behavior in real-time using your personal smartphone device. We will ask you a few questions on the next few pages to determine if you are eligible to participate.

Thank you again for considering participation in our project.

Do you use an iPhone or Android device?
- Yes
- No

Do you have a Gmail/Google account or are you willing to create a Gmail/Google account for this study?
- Yes
- No

We will ask that you carry your personal smartphone device with you for 10 business days (Dates). Through your smartphone and a phone app we will ask that you download, you will receive three notifications per day during normal business hours, with a request to take a one-minute survey about your behaviors and surroundings at the time. Given this information, are you interested in participating in this study?
- Yes
- No

IF NO to ANY of the 3 questions above: We appreciate your willingness to be a part of our study. Unfortunately, because of the platform of the phone app required to deploy the Ecological Momentary Assessments, you will not be able to participate at this time. We hope you will stay tuned for more opportunities to be engaged with this project.

IF YES to ALL of the 3 questions above: Please follow the directions in the document below to set up the PACO phone app to your iPhone or Android device. Please download this app by <date>. If you have any technical issues while downloading or questions about the app, please contact Thank you again for your participation.
Sample Ecological Momentary Assessment: Physical Movement Survey

1. **What were you DOING when the beep went off? (Choose your main activity)**
   - Sitting
   - Standing
   - Moving

2. **WHERE were you when the beep went off?**
   - Home (Indoors)
   - Home (Outdoors)
   - Work (Indoors)
   - Outdoors (Not at home)
   - Motor vehicle
   - Other

3. **How many TREES AND PLANTS are there in the area where you are right now?**
   - No trees or plants
   - A few trees and plants
   - Some trees and plants
   - A lot of trees and plants

4. **How did you travel to work today?**
   - Car/van/truck
   - Bike
   - Walk
   - Public transit
   - Other

5. **How long did it take you travel to work today?**
   ______ Minutes
Sample Ecological Momentary Assessment: Collaboration Survey

1. Within the past hour, with how many people did you have in-person interaction(s)?
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5+

2. Thinking of your most recent interaction, was this interaction...
   - Formal (Scheduled prior)
   - Informal (Impromptu meeting)

3. Thinking of your most recent interaction, did this interaction occur?
   - Walking
   - Your office
   - Colleague’s office
   - Common area
   - Hallway
   - Conference/meeting room
   - Classroom
   - Bathroom
   - Other

4. How productive have you felt today?
   - Very productive
   - Productive
   - Neither
   - Unproductive
   - Very unproductive

5. Within the past hour, how would you rate your productivity?
   - Very productive
   - Productive
   - Neither
   - Unproductive
   - Very unproductive
Sample Ecological Momentary Assessment: Sustainability Practices Survey

1. In the past hour, how many pages have you printed?
   - <5 pages
   - 5-9
   - 10-19
   - 20-49
   - 50+

2. In the past hour, (if you needed to discard an item) how often did you use the recycle or compost bin(s)?
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5+
   - N/A

3. Did you purchase a hot beverage and use a reusable cup (e.g. mug or thermos flask) today?
   - Yes
   - No
   - N/A

4. If you were away from your office for more than one hour, did you shut down your computer or put it in standby or hibernation mode?
   - Yes
   - No
   - N/A

5. If your office has natural light, did you use the natural light instead of the office lights when possible?
   - Yes
   - No
   - N/A

6. How did you travel to work today?
   - Car/van/truck
   - Bike
   - Walk
   - Public transit
   - Other

7. How long did it take you travel to work today?
   _____ Minutes
**Sample EMA Android Directions**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open the Google Play store. At the top of the screen, click the search icon.</td>
<td>Open the PACO app and click allow if the app asks for permission to send you push notifications. Then login with your Gmail email address and password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Step 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the search bar, type PACO and then <strong>click search</strong> (imperative). Look for the app with a dog picture and click on the app.</td>
<td>Skip provided tips by clicking ok. Tips do not pertain to participants.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Step 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click “Install” to download the app.</td>
<td>“Find Public Experiments”. Then look for your assigned survey “Brown School Expansion Evaluation Study - Physical Movement Post-Test” and click it.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Step 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>After downloading PACO, in an internet browser, go to: <a href="https://www.google.com/settings/security">https://www.google.com/settings/security</a> and then sign in. In the box that says “Account Permissions”, click settings (next to “Access for less secure apps”) and then enable, click done to save these changes.</td>
<td>Link your Google Account to PACO. Or login with your Gmail address and password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Then click “Join this Experiment” and click “I Consent” if you agree to participate in this pilot study.</td>
</tr>
</tbody>
</table>

Thank you for your participation. You can expect your first PACO notification at 9:00AM on <Date>. 
Thank you for your participation. You can expect your first PACO notification at 9:00AM on Monday April 18th.

### EMA Sample IPhone Directions

| Step 1: Open the app store. At the bottom of the screen, click the search icon. |
| Step 4: After downloading PACO, sign in with your Google Account (or Gmail). |
| ![Search Icon](image) |

| Step 2: In the search bar, type PACO and then click search (imperative). Look for the app with a dog picture and then click on the app. |
| Step 5: Allow PACO to join with your account. |
| ![Search Result](image) |

| Step 3: Click “GET”, then “INSTALL” to download the app. |
| Step 6: Click “Find Public Experiments”. |
| ![App Download](image) |

| Step 7: Look for your assigned survey “Brown School Expansion Evaluation Study – Physical Movement Post-Test” and click it. Then click “Join this Experiment” and click “I Consent” if you agree to participate in this pilot study. |

---

*Thank you for your participation. You can expect your first PACO notification at 9:00AM on Monday April 18th.*