

# HACKER

## Evaluating Design Impact Under Quarantine

### PROJECT OVERVIEW

Hacker Architects are interested in understanding the impact of their design decisions on the user experience of five of their Portland-area residential projects. One of their greatest challenges has been a pandemic that prevents their team from conducting quantitative research within each of their occupied residential buildings to better understand the effect of site-specific designs of the architecture. What has become a unique opportunity, Hacker proposes that we research, develop, administer, and analyze the responses of a Post Occupancy Evaluation that addresses the design decisions vs. their impact on user experience and the impact of COVID-19 on the user experience

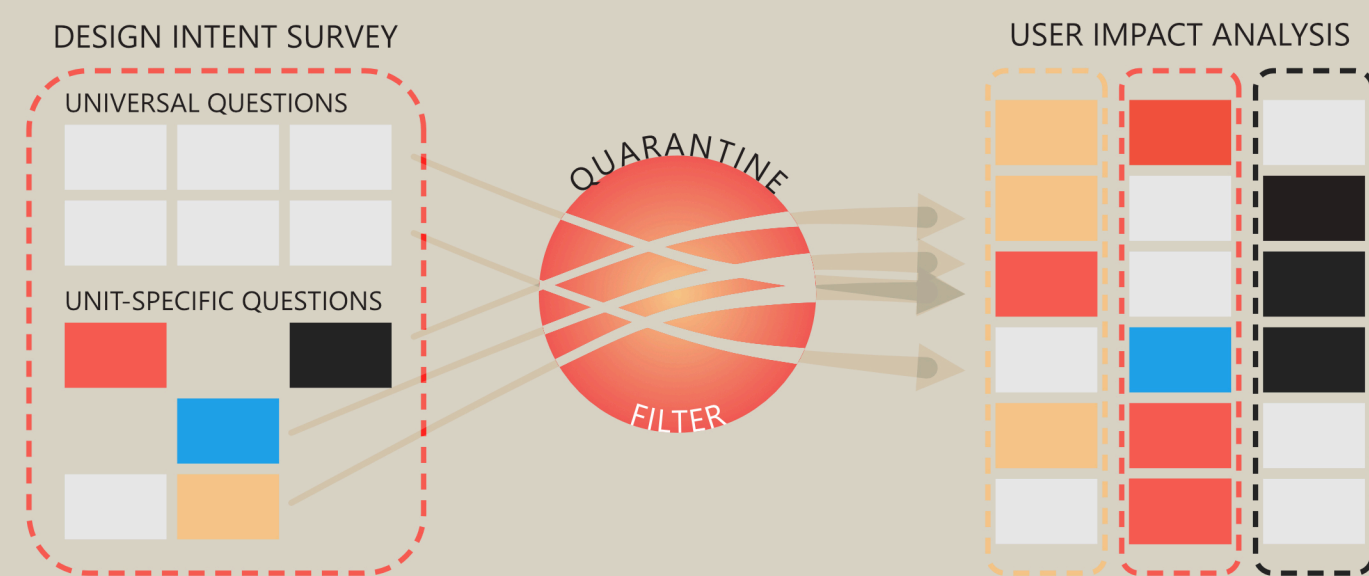
### PROJECT GOALS

- 1 Determine scope of achievable POE development, administration, and analysis across five residential projects
- 2 Better understand the user and the user experience
- 3 Understand design intent vs. design impact
- 4 Collect qualitative information on five residential projects complementary to future qualitative & quantitative studies

### RESEARCH AND METHODOLOGY

Our approach began with research precedent studies conducted by Hacker as well as notable POE research conducted by SOM in 2015 and Leamann, et al. in 2010. In addition to better understanding the framework and phrasing of questions to avoid misleading respondents, the research reinforced the importance of POEs to sustainable architectural practice. Qualitative information provides better context but lacks the degree of certainty of quantitative data. Furthermore, qualitative information can be difficult to analyze; it is helpful to look for patterns in responses. Although, they create more work for researchers than multiple choice questions, open-ended questions allow for greater understanding of respondents.

Our methodology came in two phases. First, the Hacker team determined that they are most interested in understanding the design impact vs. design intent of their architectural decisions. We evaluated the similarities and differences between the five proposed buildings for survey, and developed a POE with universal questions that apply to all buildings and specific questions to better understand the design impact of unique features to each building's units.



It is important to consider that the study will represent a snapshot in time. Asking respondents for recollection of previous seasons can be unreliable so it is imperative to ask questions as they relate to the respondent's present as they are currently experiencing it.

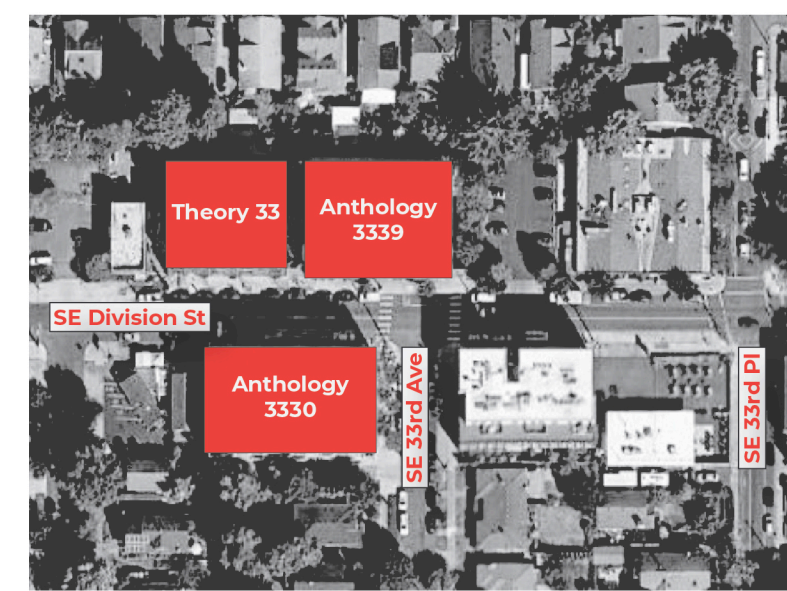
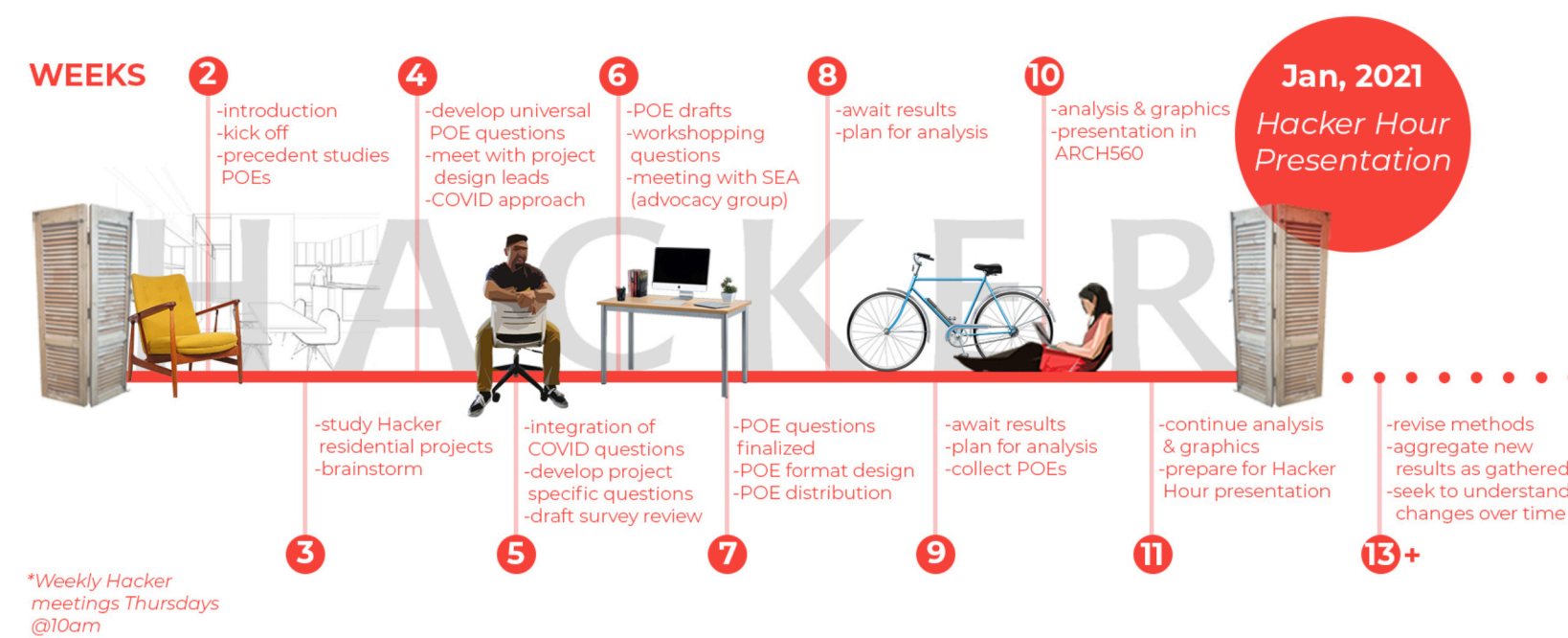


Sean Silverstein & Megan Doherty

**COURTYARD - 3330**  
30,000 sf  
6 studios  
24 one-bedrooms  
8 respondents

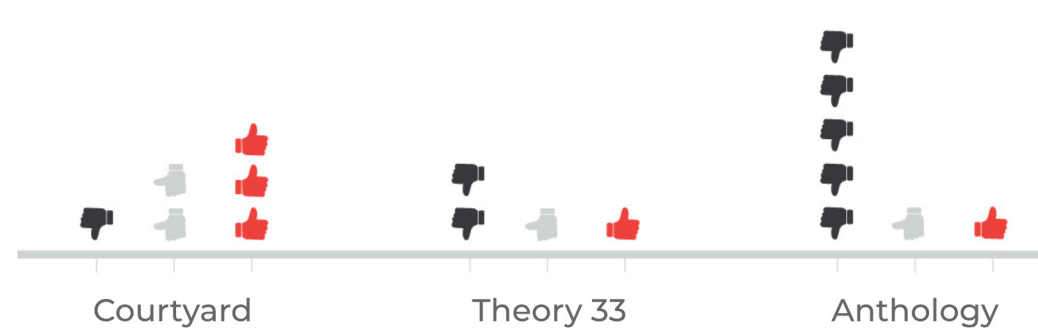
**THEORY 33**  
26,000 sf  
6 studios  
21 one-bedrooms  
3 two-bedrooms  
5 respondents

**ANTHOLOGY - 3339**  
31,000 sf  
4 lofts  
11 studios  
16 one-bedrooms  
8 respondents



### UNIT DESIGN AND LAYOUT

How would you describe the durability of interior finishes in your unit?



"Many cracks in countertops, finishes on faucets are old and caulking is coming off"

Anthology

The question of interior finish durability solicited significantly more negative responses from Anthology than from Courtyard and Theory 33.

Is there sufficient room to function in your kitchen?

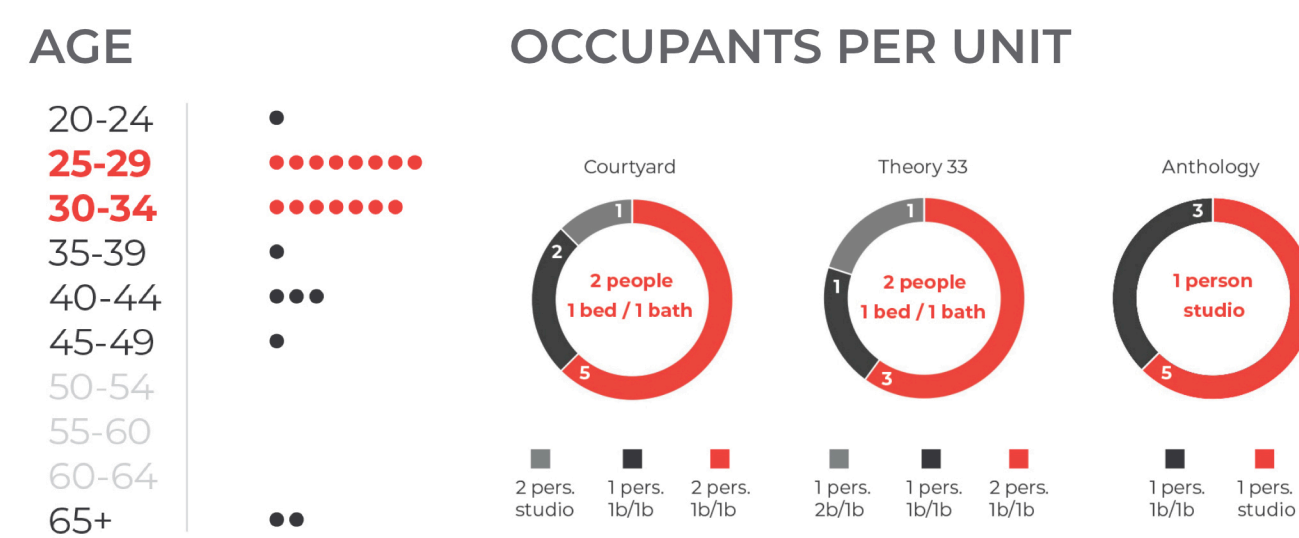


"There is zero storage space for plates/cups/spices, etc. I had to dismount the stupid bars that literally provide zero benefit and install shelves."

Anthology

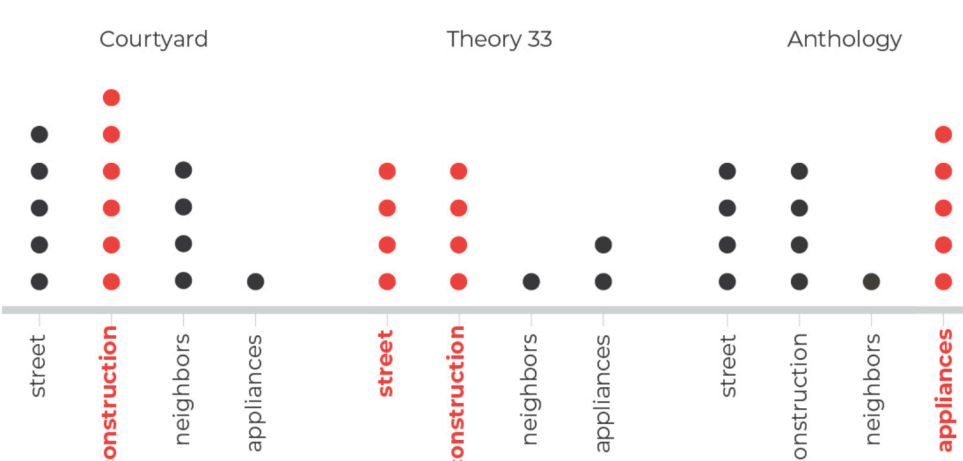
Due to limited square footage and the reduced kitchen footprint of Anthology's units, has a minimum threshold been crossed?

### DEMOGRAPHICS



### PERCEIVED ACOUSTIC COMFORT

What acoustic issues have affected your living experience in your unit?



"trash pick up, I know I can't control it but its driving me crazy every single night M-F."

Courtyard

### USE OF COMMON AREAS

How do you use the common spaces in your building?



\* Applicants were asked to choose all options that apply. Other options included: reading, taking a phone call, and spending time with others.

"There's almost no usable common space in our building. It's a bummer."

Theory 33

### WORK FROM HOME

Have you rearranged your layout to work from home?



\* Only respondents who work from home answered this question.

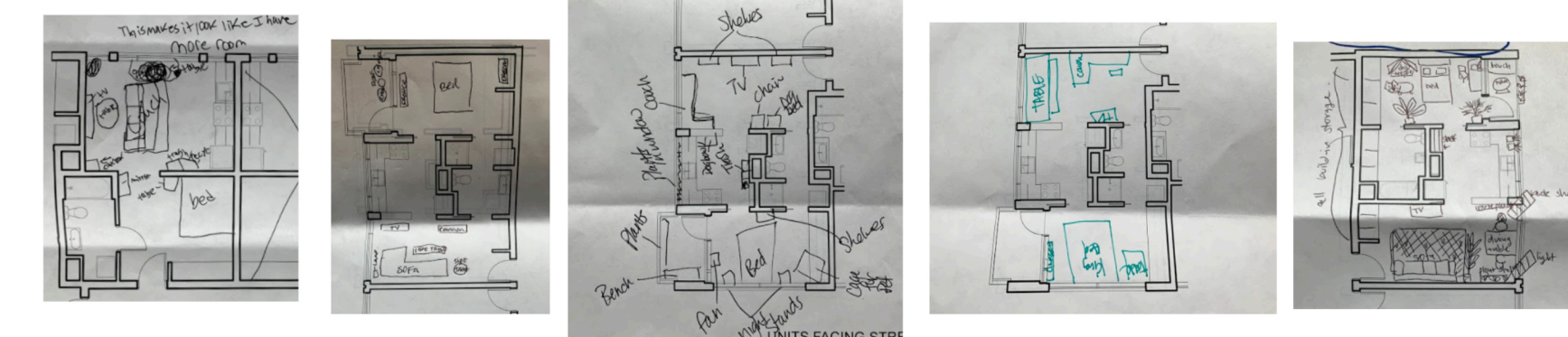
"The bedroom is split between an office + bedroom"

Courtyard

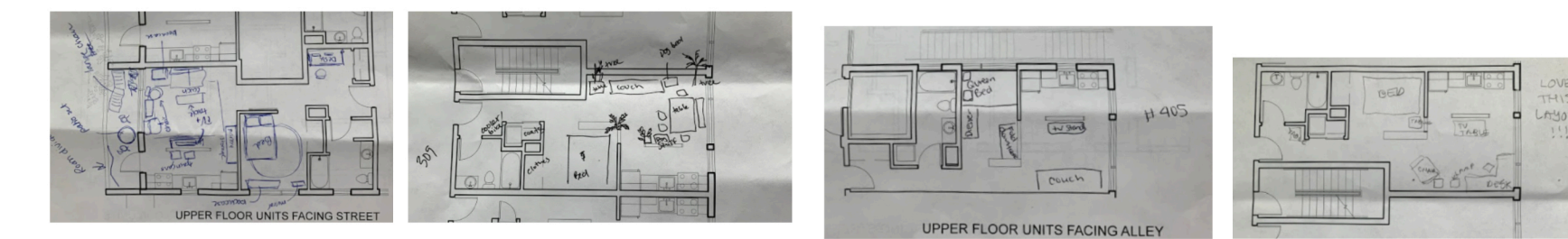
### FURNITURE ARRANGEMENTS

#### COURTYARD

Courtyard one-bedroom units are nearly identical in size and layout. One of five respondents placed a dining table in its intended space. The other four merged it with the living space.



#### ANTHOLOGY



### CONCLUSIONS & LIMITATIONS AND CONTINUED RESEARCH

With the number of responses limited to twenty-one as of 9 December 2020, it is not reasonable to draw conclusions from these POEs. Still, the inherent value of the surveys is to better understand the user of the architecture in the snapshot of time the surveys take place. Patterns may emerge, questions may yield unexpected responses, or support previously held assumptions. This study aimed to set the course for a more sustainable approach to the architectural design process for Hacker; one that includes soliciting feedback on design decisions from those interacting with it.

Five out of seven respondents from Anthology provided negative feedback about the durability of the surface materials. The majority of respondents did not think, as the research team assumed otherwise, that there are common spaces in their buildings. Some respondents indicated that they wished their shades had the same functionality as those at the Hacker-designed building

across the street. The value of the responses are the questions that follow. Why are the respondents seemingly unaware of the common spaces? Does the user experience differ from the original design intent? The questions regarding storage and arrangement offer intriguing glimpses into the impacts of unit design on user experience. The kitchens of Courtyard are smaller than those of the other two surveyed buildings and the responses to functionality are noticeably negative. Considering the total unit footprint, small differences in relative space allocation may significantly impact the user experience.

All of this is to say that if the surveys are to provide value to the Hacker team, they ought not to be interpreted without continued refinement and additional research. The next step is to take note of how to overcome and better understand the user experience even in times of quarantine – the inability to see units firsthand, the difficulty collaborating through technological constraints, and the uniqueness of living in a small apartment under quarantine – and compare to more conventional methodologies.