



LivGenerations Ahwatukee

PHOENIX, ARIZONA

A SAGE Post-Occupancy Evaluation to Explore What Works



SPONSORED BY



FLOORING GROUP

A DIVISION OF ENGINEERED FLOORS

Table of Contents

Overview	3
2019 SAGE POE Team	4
IRB Research Protocols	5
The Setting	6
Design Objectives	9
SAGE Design Principles	10
Architectural/Interior Elements	11
Documentation/Evaluation	12
Observations	13
Design Goal 1: Support a Vibrant Life	13
Design Goal 2: Bring in the Community	21
Design Goal 3: Support Aging in Place	27
Key Takeaways	35
Design Process	35
The Sensory Environment	36
Summary	38
Reflections	39
A Note from J+J Flooring	41
About SAGE	42
Helpful Links	43

Overview

The **Society for the Advancement of Gerontological Environments** (SAGE) has been conducting post-occupancy evaluations for more than a decade. In 2019, a post-occupancy evaluation (POE) was conducted prior to the annual Environments for Aging conference in order to present the results to conference attendees.

Authorized by Scott McCutcheon, Chief Operating Officer at LivGenerations Senior Living. The POE was conducted within a newly constructed independent/assisted living building designed to provide services for seniors desiring to age in place. While on site the SAGE POE team was hosted by McCutcheon and Tammy Kucera, executive director at LivGenerations Ahwatukee in Phoenix, Arizona.

The SAGE POE team was first introduced to the community through the 2018 Environments for Aging Design Showcase competition entry submitted by Thoma-Holec Design, the interior design firm for the project. The project was recognized as an honorable mention for design excellence.



2019 SAGE POE Team

The 2019 SAGE POE team represented a broad cross-section of expertise in long-term care, dementia care, design for aging, codes and regulations, and operational and organizational management related to senior housing.



Amy Carpenter
POE Team Leader
Vice President
SFCS Architects, Inc.



Keith Gray
Director of Applied Research
J+J Flooring Group



Skip Gregory
Consultant
Health Facility Consulting, LLC.



Russell McLaughlin
Senior Associate
AG Architecture, Inc.



Migette Kaup
POE Research Coordinator,
Environmental Gerontologist/
Interior Designer/ Educator
Kansas State University



Steve Lindsey
CEO
Garden Spot
Communities



Kelley Hoffman
Partner/Interior Designer
RDG Planning & Design.

IRB Research Protocols

All POE Team members completed CITI (Collaborative Institutional Training Initiative) Certification for full compliance with Federal Guidelines for Research and the use of Human Subjects in Research. An IRB application for this research POE titled "A SAGE Post-Occupancy Evaluation" was submitted to the Kansas State University Office of Research Compliance and approved December 29, 2018. Project #9080.

Project briefing information was sent to LivGenerations one month in advance of the site visit and distributed to staff as well as residents to provide notification about the SAGE team's visit.

LivGenerations administrators also shared informed consent forms with staff. All residents and staff who participated in interviews and focus groups were capable of providing their own consent. (See Appendix for typical questions used in guided interviews and focus groups)

KANSAS STATE
UNIVERSITY



The **Society for the Advancement of Gerontological Environments** (SAGE) is a nonprofit, membership-based organization whose mission is "To promote collaboration among aging services providers, design professionals, regulators, residents, researchers, manufacturers, educators, students and others interested in providing innovative and appropriate environments for older adults."

To achieve this mission, SAGE: Provides a nexus for collaboration among all disciplines involved in the development, operation, and regulation of settings for older adults; Offers educational forums that feature current research and best practices for the design of living environments; Evaluates senior living environments based on SAGE's design principles and shares results through conferences and publications, and; Promotes regulatory change and research that supports resident-centered care.

SAGE has been conducting post-occupancy evaluations since 1999.

www.sagefederation.org

The Setting



LuAnn Thoma-Holec



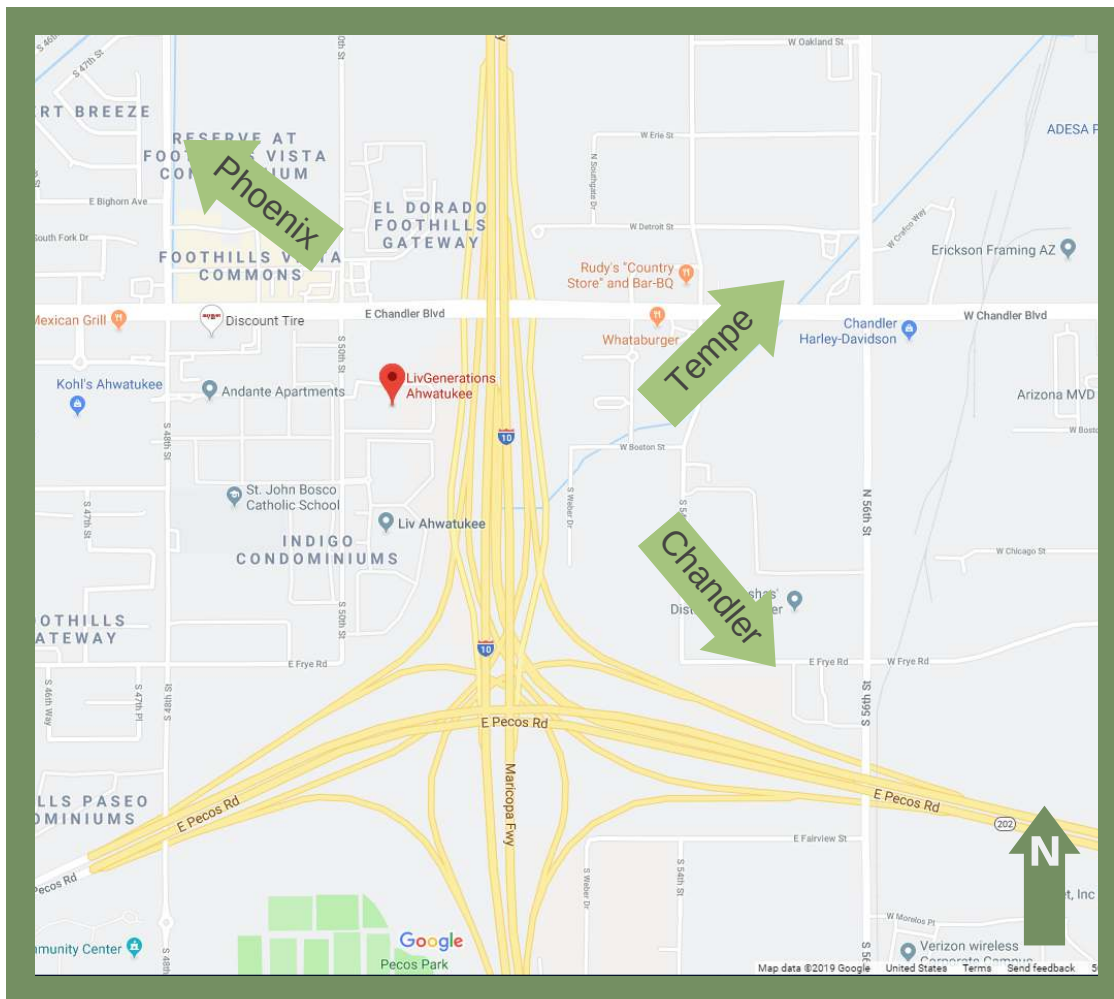
LivGenerations Ahwautukee was an Honorable Mention winner in the 2018 Environments for Aging Design Showcase. The architect is Todd + Associates and the interior designer is Thoma-Holec Design. Lead designer LuAnn Thoma-Holec, Principal at Thoma-Holec, met with the SAGE POE team to share the thought process and design decisions that went into the creation of this project.

Liv Communities is the owner of this project. The company was born out of a merging of two firms: Retirement Community Specialists, a senior living management company; and Investment Property Associates, LLC, a multi-family apartment developer. LivGenerations and its sister company Liv Multifamily, developed a vision of locating senior living communities adjacent to multi-family communities to create a multi-generational community “where people of all ages can interact with, and enjoy, each other.” (1)

The Ahwautukee project is the second LivGenerations project. Its first community, LivGenerations Agrotopia, in Gilbert, Arizona was planned to weave farming activities throughout the community and located the senior living building in the middle of the complex; right in the hub of activities. When planning the Ahwautukee community, project leaders wanted to create the same feel of inclusion as at Agrotopia. However, feedback from residents at Agrotopia was that they strongly wanted access to a public restaurant. The developers felt if they located the restaurant in the senior living building, it would increase the multi-generational interaction by drawing in residents from the apartment community as well as the greater area.

(1) quote from Scott Brooks on Liv Communities website www.livcommunities.com/518/

Ahwatukee is a neighborhood along the southern border of Phoenix proper. It is adjacent to South Mountain. It is well connected with highway and transit access, as well as many retail and restaurant venues close by. The site itself is very close to the busy intersection of Chandler Boulevard and South 50th street. A new shopping center is being constructed in front of LivGenerations along Chandler Boulevard.



LivGenerations Ahwatukee location . Ahwatukee is an urban village of Phoenix, Arizona.



The project includes two stand-alone buildings; one housing 48 memory care units arranged in four households of 12 each, and the main building with TUK Café, 97 independent living/assisted living apartments and associated common spaces.

While South 50th Street is a busy road, the TUK Café is tucked back on the site and not immediately visible to passing traffic. The memory care building is placed fronting 50th Street and the main building extends to the East.

The result of the site layout is that the TUK Cafe is not very visible from the road and, as a consequence, relies on signage to help guide people to the cafe. The POE team understands that there are a lot of constraints to any design and doesn't know what variables were faced in the layout. However, TUK would have greater visibility if the memory care building had been pushed back on the site to place the cafe fronting 50th Street.

Another alternative that would have solved another concern at the same time would be to flip the main building along the east/west axis. This would result in better visibility to TUK Cafe, even though it would still be set back from the road. In addition, it would place the pool in a better location for sun in the winter and shade in the summer months.

The buildings occupy a significant portion of the site leaving little space for parking. Staff noted that parking, especially for cafe visitors, is a challenge.

Design Objectives

The awards submission package provided by Thoma-Holec Design and LivGenerations identified several functional and therapeutic objectives for the project. These design objectives were summarized into three general goals (see boxed insert).



GOAL 1 - Support a vibrant life.

The design intends to support intergenerational programming involving multi-family residents. The campus provides multiple social, entertainment, lifestyle, and health/wellness amenities.

GOAL 2 - Bring in the community.

The design intends to minimize stigma associated with senior housing by creating opportunities for the public to socialize on the campus through the cafe.

GOAL 3 - Support aging in place.

The design intends to support a fully integrated model care where independent living residents can remain in the same apartment, even as their personal care needs increase, without having to move to a designated assisted living area.

The LivGenerations signature statue, "The Journey of Imagination," by Gary Lee Price, can be found in each of the LivGenerations communities.

SAGE Design Principles

SAGE holds the following values related to gerontological environments.

Physical safety and psychological security: Provide appropriate safe guards and enhance perception of security.

Environment as a therapeutic resource: Utilize all aspects of the environment (physical, programmatic and organizational) as a resource for healing and improved functioning.

Holism and well-being: Focus on needs and desires of the whole person social, emotional, spiritual and physical, vocational and intellectual.

Individual rights and personal autonomy: Maximize available choices, opportunities for self determination, and accessibility of options.

Communities and relationships: Generate opportunities for meaningful interactions and relationships among peers, families and staff.

Support of caregivers: Create an environment that promotes safety, efficiency, and emotional support.

Function enhancing technology: Harness new technology to increase functionality of the environment.

Creating and evaluating: Encourage innovation, diversity of approaches, experimentation with new solutions, and systematic evaluation of outcomes.



Architectural/Interior Elements

SAGE team members draw upon their expertise, familiarity with industry best practices, and experiences with senior living environments as they evaluate the effectiveness of the community's features that serve older adults and support staff. Many of the SAGE principles are evidenced by architectural and interior elements (see table below). The team also considers the historical context and feedback from the staff and residents as well as the interior designer's insights and perspectives.

Architectural or Interior Element	<i>Considerations (Selected Examples)</i>
Lighting	<i>Lighting levels, sufficient foot-candles. Control for glare.</i>
Use of Color	<i>Support for depth perception for aging eyes while maintaining residential or homelike aesthetic.</i>
Floor Coverings	<i>Support for ease of mobility while creating a soft surface to reduce potential injury from fall. Aesthetic supports a residential appeal and specification is appropriate for health care setting and required maintenance and life safety.</i>
Window Treatments	<i>Ability to adjust for different daylighting conditions (controlling glare). Aesthetic supports a residential appeal and specification is appropriate for health care setting and required maintenance and life safety.</i>
Acoustical Treatments	<i>Spatial volumes and potential sound transmission between private spaces is effectively designed to reduce negative stimulation and protect privacy.</i>
Circulation Patterns	<i>Movement through the space is supported by spatial layout and features that support autonomy in navigation and stamina (landmarks for reminders, handrails for support).</i>
Fixed Furnishings & Equipment	<i>Furnishings are supportive of frail adults. Aesthetic supports a residential appeal and specification is appropriate for health care setting and required maintenance and life safety.</i>
Moveable Furnishings & Equipment	<i>Furnishings are supportive of frail adults. Aesthetic supports a residential appeal and specification is appropriate for health care setting and required maintenance and life safety.</i>

Elements of the physical environment that contribute to the goals for a therapeutic environment for residents and a supportive work environment for staff.

Documentation/Evaluation

The SAGE POE team arrived onsite in the morning and was introduced to the administration of LivGenerations Ahwatukee and the interior designer, LuAnn Thoma-Holec. After an initial briefing about the history of the LivGenerations organization, its development, and current resident and staff use patterns of the Ahwautukee facility, the team was given a walking tour. Locations of rooms as identified on the floor plan were confirmed along with information on key project goals. During the tour, photo documentation of the spaces and the details of features were recorded.



Team members met with different users of the space in small focus groups. Resident participants met with members of the POE team in two separate groups to share their thoughts about the community--everything from design and security, acoustics and food, to programming and lifestyle.

Representatives from housekeeping, dining services, and activities provided enthusiastic insights into their experience as team members, observations of building design successes and opportunities as well as resident needs and quality of life. All focus group participants seemed eager and appreciative for the opportunity to share their opinions and ideas.



Every SAGE POE includes conversations with the actual users of the spaces within the building. Here residents sit down with the POE team and discuss what they value most about living at LIVGenerations.

Using the criteria for goals and environmental features, the POE team identified distinct features and supporting practices for LivGenerations Ahwatukee that had notable outcomes. These are summarized as they relate to each of the design goals. Specific attributes for each of these assets as well as opportunities to enhance the experience of these features are also highlighted.

Design Goal 1: Support a Vibrant Life

Support intergenerational programming involving multi-family residents. Multiple social, entertainment, lifestyle, health/wellness amenities are provided on campus.

This design goal addresses SAGE principle of “creating and evaluating” that encourages innovation, diversity of approaches, experimentation with new solutions, and systematic evaluation of outcomes. The SAGE principle of “individual rights and personal autonomy” is also related to this design goal, as the effort is to maximize available choices, opportunities for self-determination, and accessibility of options.

There are numerous activity-based spaces in this building providing many choices for residents. The spaces are spread throughout the building, located strategically along the circulation paths to break up long corridors.



Lobby: Beginning at the entrance, the lobby area is the main welcome center. The iconic sculpture of "The Journey of Imagination" greets residents, their families, and other guests as they walk through the sliding doors. Multiple seating areas are located in this space as well as a grand piano that is used for regular entertainment.



Bistro: Located immediately off the lobby, the open Bistro provides a location for a daily continental breakfast for residents who do not want a full meal in the morning. There are also refreshments and beverages available throughout the day. This is a popular space with residents and many social events were noted as occurring in the Bistro.

Design Goal 1: Support a Vibrant Life (continued)



The Ballroom

The Ballroom: Adjacent to the Bistro is an area referred to by the residents as “the Ballroom” due to the hard floor surface that is located in the center of the carpeted zone. This space is used as a dance floor as well as overflow space when the Bistro is full. For example, during the community’s Super Bowl party, the game was on the TV in the Ballroom, but the food was located in the Bistro.

Residents commented that using the Ballroom is sometimes awkward for any spontaneous activity because the furniture is so heavy that it is difficult to move. They must prearrange with maintenance to set the area for events.



Crave, view from second-floor overlook

Crave: The main dining area is also located near the lobby and across from the Bistro. This space is open for all meals and the service is menu-based, restaurant-style dining. The kitchen is open to the seating area creating a connection between the chef, staff, and residents. The chef makes frequent visits out to the dining space to talk with residents and check on the meals. Staff notes that the open plan influences their conversations in the kitchen since residents can see and hear what is going on.

Residents can bring guests and have the meal charges added to their monthly bill or pay by credit card. There are a variety of seating options from tables with chairs to booth options. There are also options for the types of chairs that are available relative to size, scale, weight, and degree of upholstery.



View through the restaurant into the open kitchen at Crave

The finish details of this two-story space create a dramatic interior that feels like a fine dining restaurant that you might find out in the greater Phoenix community. Residents on the second floor with apartments adjacent to the open area did comment that acoustics were an occasional challenge.

Design Goal 1: Support a Vibrant Life (continued)

Wine Cellar: The Wine Cellar or Wine Room is located on the first floor adjacent to an enclosed interior courtyard providing opportunity for the space to be opened to the exterior during events. This room is noted as the favorite location for providing an informal welcome and orientation for new residents with current residents. The scale of the room also lends itself to meetings and private parties. The design of the space has a heavy Italian influence with rustic colors and textured materials. The actual “cellar” for wine was not completed as originally intended.



There are commercial grade wine coolers integrated into the cabinetry located at the back of the space.



The Tea Room is one of the spaces that supports intergenerational activities. Family-members of all ages are invited or hosted by residents for special occasions such as bridal showers.

The Tea Room: The Tea Room is an intimate space located in the middle of a residential corridor that indeed provides a spot for hosting tea parties.

There are many intricate details incorporated throughout the room including raised strings of pearls on the walls, a teacup chandelier, china cupboards with tea service, and a hat rack adorned with a variety of hats for wearing while drinking tea.

The programming of this space is the challenge. The frequency of holding high tea seemed to be waning and residents noted that the space felt underutilized. Since the tables are always set for tea, they do not feel comfortable changing the arrangement for other activities.

Design Goal 1: Support a Vibrant Life (continued)



The Art Studio: The Art Studio is a “bonus” space that resulted from a converted storage room. This space is located at the end of a hallway and enjoys abundant daylighting through the large windows. The conversion resulted in supplementing the space with a countertop and sink as well as cabinet storage for art supplies. It is a small space, however, and not many residents can use the room for art activities at one time.

Theater: On the second level of the building, there is a theater that is furnished with fold-down theater seats with armrests and cup holders for over 20 people. Movies and educational programs are shown on the large flat screen TV and technology in the room provides for computer access. This space is located directly adjacent to the library.



The Scrabble Room: As a small social space at the end of a hallway, the Scrabble Room is named for the large replica Scrabble® board that hangs on the wall. This space is another “bonus room” as it was originally intended to serve as storage until the lead designer noticed that the room has three nice-sized windows in the space and recommended that the area be more appropriately allocated for resident use. One resident the POE team spoke with noted that she frequently uses the room for private parties and group activities, such as her card-making club, because it was so conveniently located near her apartment.

Design Goal 1: Support a Vibrant Life (continued)

Library: Immediately adjacent to the Theater is a Library area that offers shelving for books, puzzles, and games that are available for residents to access freely. A large table can be used for reading or as a meeting space, and other lounge furniture is close by for reading or socializing.



The Game Room: Around the corner from the Library residents can enjoy the amenities of the Game Room. This space has a pool table and two card tables as well as a full wall of cabinetry, including a full-sized refrigerator and countertop space for serving food during functions. Two sets of double doors open onto the Sky Deck.



Sky Deck: A fully furnished outdoor space located immediately off the Game Room, the Sky Deck is noted as a favorite spot for private parties. A canopy to block the sun covers seating areas on the deck and portable space heaters can be strategically located in the evening during cooler months to keep the social areas comfortable.

The Sky Deck also offers an outdoor barbecue grill and staff noted that activities that involve food on the deck are always quite popular.



Design Goal 1: Support a Vibrant Life (continued)



The Hallways: Circulation is treated as a special activity within the building and hallways are sensitively designed to provide multiple seating options as well as distinctive artwork to aid in wayfinding. One resident told the POE team that the hallways are her favorite "space" in the whole community. An allergy sufferer, she appreciates that she can log one mile of walking with four "loops" around the corridor, without any of the allergy symptoms she would experience outside. As she is a rather fast walker, her friends who walk with her appreciate that they can take breaks in any of the many seating areas and rejoin her when she comes around again.



Residents made several comments about the artwork themes that they could identify by hallway locations. This is an effective wayfinding strategy that also contributes to the beauty of the space.

Design Goal 1: Support a Vibrant Life (continued)

Salon and Day Spa: A hair and nail salon is available to the residents, although some noted that only having one stylist to select from is problematic. This area also has a room for massage therapy and residents are welcome to have their own therapist deliver services in that room.



Fitness Room: Adjacent to the Salon and Day Spa, residents have access to a generous fitness area that is equipped with a yoga zone, free weights, and aerobic equipment. Located on the edge of the building, there is plenty of natural light in the space.

Design Goal 1: Support a Vibrant Life (continued)



AstroTurf® gives some maintenance-friendly color in a tricky location near the pool.

Swimming Pool: The exterior courtyard outside the Fitness Room is the location for the pool. This area offers plentiful tables and chairs. Textured surface materials are slip-resistant, and, there is seating in a section of the courtyard. The challenge of seasonal sun patterns and the location of the buildings that surround the pool were noted by the residents. Unfortunately, shade falls on the pool during the cooler winter months rather than summer months. And, there is limited shade during the summer. The team noted protective sleeves had been placed on the metal railings to prevent burns and improve “grip-ability.”



View to the pool from the Fitness Room



View to the pool from above

Bark Park: As a pet-friendly community, LivGenerations Ahwatukee offers an enclosed dog area. Again, artificial turf is used as the flooring material to manage maintenance and the park is equipped with a “howdy” zone, running water for hydration and baths, and of course disposable-bag dispenser for easy cleanup



Design Goal 2: Bring in the Community

Minimize stigma associated with senior housing by creating opportunities for the public to socialize on the campus through the café.

This design goal addresses the SAGE Principle “communities and relationships” to generate opportunities for meaningful interactions and relationships among peers, family, and staff.

Design Goal 2 is addressed with the development of the TUK café, a second restaurant located near the entrance that is open to the public. For security reasons, there is a second (public) entrance from the parking lot into the café. Residents can access the space from the security of the interior hallways.



View of signage from the major street

The POE team noticed that from the outside, TUK lacks a strong curb appeal. It is set back from the street and is not clearly visible to traffic or even footpaths. Bright banners are located around the edges of the building to assist with wayfinding and directions for parking. Parking for the café is still a bit of a challenge.



Sidewalk from the main street



Sidewalk from the multi-family apartments.



Banner drawing attention to TUK entrance.

Design Goal 2: Bring in the Community (continued)



The public door to TUK shows how important graphic design can be for information and wayfinding.



POE Team Tip:

When it comes to signage, wayfinding, contrast, and visual acuity, it is important to remember that older eyes require more contrast between the text or image and the background in order to quickly identify and interpret important information.

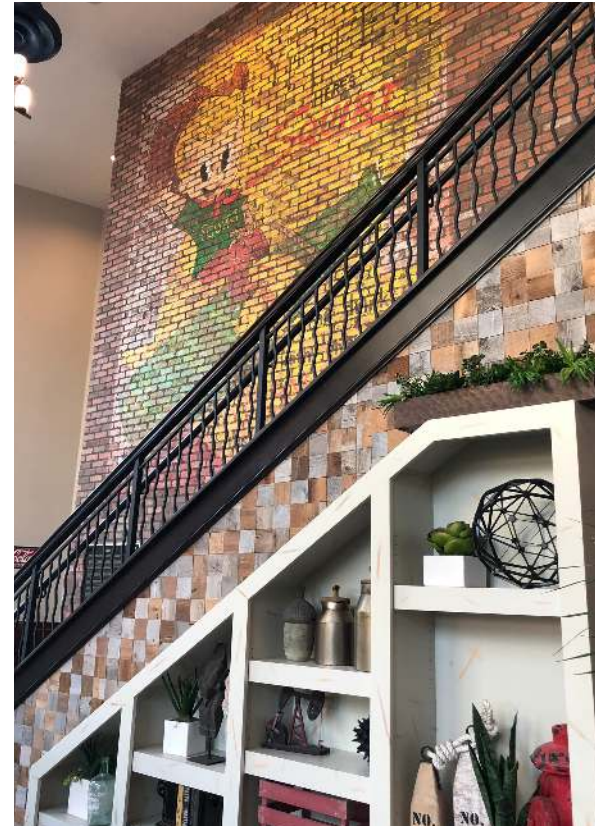
Graphics and signage on the doors to TUK demonstrate a range of legibility. Important information, *such as the hours of operation*, have low visual contrast, making it difficult to read even up close. Patrons driving by have to get out of their vehicles and walk up to the door to know if the cafe is open.

Less important information, like the branding for beverages being served, has high visual contrast (*their marketing department has this figured out*).

It is good to quickly be able to know, however, that free Wi-Fi is available.

Design Goal 2: Bring in the Community (continued)

Based on the reported Yelp metrics, TUK attracts community members within a 5-10 mile radius. The POE team observed a diversity of age groups using the space ranging from one resident who meets his friends from the surrounding community every week, to a college student studying, and a business man doing some work on a laptop. Residents reported that on weekends there are many young families with children utilizing the space.



Large garage doors on the west side of the café can be opened to an adjacent exterior patio space which creates an indoor-to-outdoor extension during nice weather. This was reported to be a popular feature.

The restaurant offers casual fare with grab n' go offerings for breakfast, lunch, and dinner. Staff reported that it serves more patrons in between the typical mealtimes. The staff noted that limited freezer storage requires that they use lots of fresh ingredients. The menu is appealing, although residents say they wish there were a few more healthy options.

The interior décor of TUK uses finishes and materials that have an "urban appeal." The combination of colors, patterns, finishes, and furniture are visually engaging.

"A major goal in today's senior living is to create vibrant environments that create opportunity and choice for their residents, and at the same time reach out to the community at large. While it can be a bit of a balancing act, when you factor in the human element, I think LivGenerations and the design team have made a solid effort in reaching their goal." POE Team Member



Design Goal 2: Bring in the Community (continued)

Design elements include exposed ductwork, weathered wood paneling, painted wood, brick with a hand-painted billboard, stainless steel back splash, concrete tile floors, garage doors that open to an outdoor patio, and recycled glass countertops.



The finishes and furnishings of TUK are a blend of contemporary fun with a nod to nostalgia that contributes to a casual, relaxed vibe.

Design Goal 2: Bring in the Community (continued)



TUK offers a variety of beverage options to cater to different tastes.



Indoor/outdoor seating is popular with residents and guests alike.



One cafe patron told the SAGE team that he regularly works and meets colleagues at TUK.



With a variety of seating options, there is something for everyone (of all ages) at TUK.

Design Goal 2: Bring in the Community (continued)

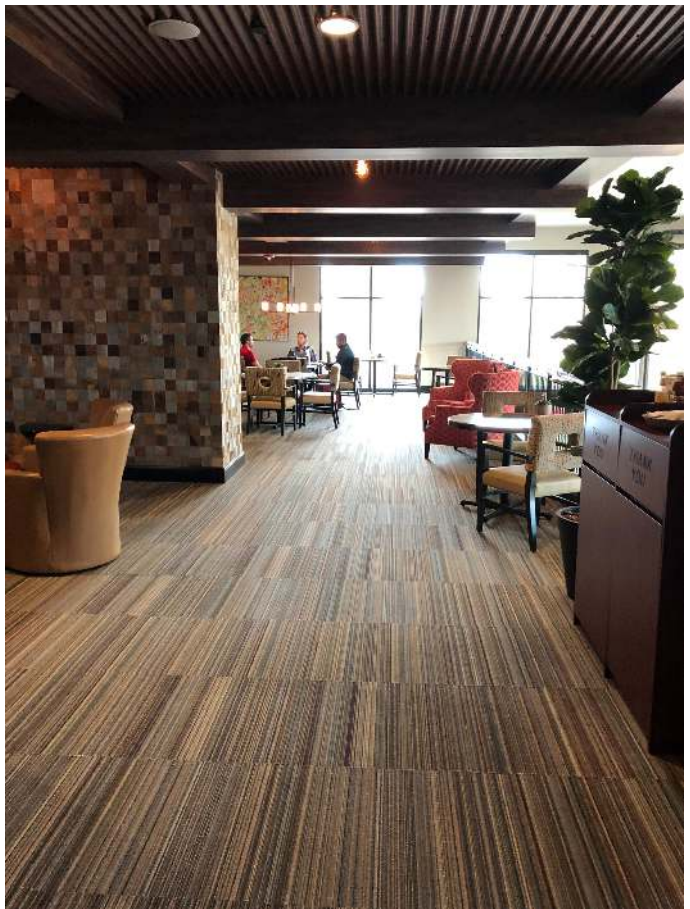


TUK Cafe, ground floor.



TUK Cafe, outdoor seating.

Although there is a secured door that leads to the residents' apartment spaces, some residents expressed some concerns about safety in regards to the public coming in to dine at TUK. No concerning incidences were identified, this just seemed to be a general statement about feeling safe.



TUK Cafe, second floor. The area features several "nooks" and seating options which are popular with the local community.

Design Goal 3: Support Aging in Place

Fully integrated model of care where independent residents can remain in the same apartment, as their personal care needs increase without having to move to a designated assisted living area.

LivGenerations is designed and constructed to comply with the licensing requirements for assisted living. Residents can remain in their apartments should their basic activities of daily living (ADLs) needs change requiring some additional supports as long as they do not require skilled care.



This design goal supports several SAGE principles. The first is "physical safety and psychological security." By creating the option for residents to remain safely in their own apartments even when they require assisted living services, residents' sense of privacy can be maintained. This also supports the SAGE principle of "holism and well-being" because aging in one's home and community increases the focus on the needs and desires of the resident as a whole person.

One and two-bedroom apartments have all the amenities of an independent living residence.

Apartment sizes range from:

- 1 bed / 1 bath: 689 - 988 SF
- 2 bed / 2 bath: 1,026 - 1,150 SF
- Studio Option (w/o full kitchen) 577 SF

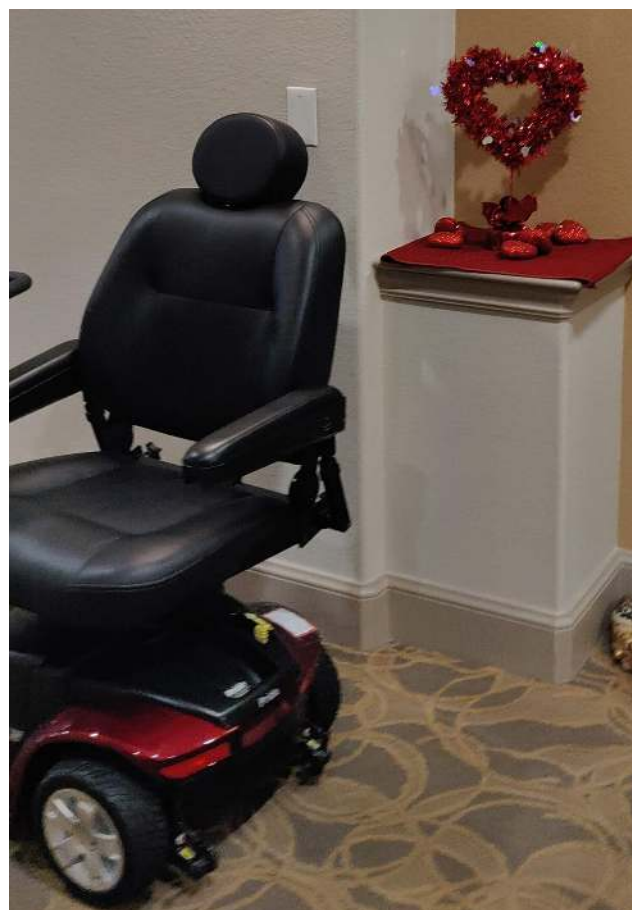
Design Goal 3: Support Aging in Place (continued)



CareTracker screen in hallway.

The integration of assisted living services within an independent living context also requires that attention be given to supporting the caregivers, also a SAGE principle. CareTracker® screens are located along the hallways for staff so they can make the necessary charting entries close to the apartments where they may be delivering care.

Note the integrated design of the lean rail that is a part of the wainscot detailing in the hallway outside of resident apartments. This is another example of the careful attention given to some of the design features in many areas.



Some apartments had scooters parked right out outside the front door, even though there are no outlets for charging.



The entrances to the apartments are set back slightly from the corridor. There is room for a built-in counter that most residents have personalized by adding decorative items.

POE Team Tip:



The use of scooters and power chairs is becoming increasingly common in all care settings, but especially so where providers are allowing residents to age in place. The top complaints from both residents and providers is that residents can't fit them in their apartments, and, there's nowhere to charge them. Leaving them in the corridor, as shown here, creates a variety of concerns. First, providers, especially the marketing team, don't like seeing the hallways cluttered with these devices. Next, there are code concerns. Not only do the scooters block the usable width of the corridor, but the "storage" of these devices creates a higher hazard level in a space that shouldn't be in a protected area.



Mobility devices are an increasingly important aspect of maintaining independence and autonomy. Designers should consider how to provide the necessary environmental supports, such as parking/storage and power, in the programming and design processes.

Designers should consider these devices when laying out an apartment. The key design features to consider include:

- **Wide doorways** (at least 36") throughout the unit.
- Consider adding an **automatic (push-paddle) door opener** on the door to the corridor to make it easier to go in and out. Since these doors are typically rated doors and have closing devices, this can be an obstacle.
- Create a **designated parking area** inside the unit that is easily accessed from the front door. This space should be at least 36" x 48" with a dedicated outlet for charging and adjacent walking space.
- Provide **space for turning** in every room. Some devices need a 66" turning radius.
- Allow **wider pull space** at interior doors. Use pocket or barn doors where possible.

Design Goal 3: Support Aging in Place (continued)



The kitchen and laundry spaces are located immediately inside the entrance of the apartments. Built-in shelves are incorporated into the walls to provide space for personal decorative items.



Built-in shelves.

There is plenty of room at the opening of the kitchen for a resident to maneuver with a mobility device, and there is plenty of space on the latch side of the door to maneuver getting in and out of the apartment.

Laundry equipment is tucked into a closet space and can be closed off by a pair of doors. Some residents noted that accessing the washing machine through the small door is a challenge due to the difficulty with reach. The lack of storage space for laundry detergents or other supplies is also a common comment.



Stackable washer and dryer.

Design Goal 3: Support Aging in Place (continued)

Most of the kitchens are a “U-Shaped” configuration. Many of the design features are universal with open space below counter-tops and sinks for residents who might need to work in the kitchen from a seated position. The openings also provide flexibility for installing a dishwasher if a resident requests one. There is a full-sized range, with a microwave/ hood combination (not so accessible) and a full sized refrigerator.

If medications need to be stored in the apartments (for assisted living services), there is a locked area in the kitchen cabinets where staff can secure them. Residents commented that they like the basics of the kitchen, but complained that the cabinets were not wide enough for standard plates. More than one resident shared that they had to get different dishes.



Full-sized appliances are installed in one- and two-bedroom apartments.



Base cabinet doors under the sink retract to provide access from a seated position.

POE Team Tip:

While it is a common “space saving” strategy to place a microwave over the cooktop, this can create multiple safety concerns. First, if a resident has something cooking on the stovetop, the heat generated can lead to burns if a resident reaches across to access the microwave. Second, the raised location of the microwave is at a difficult viewing angle for most residents.

In order to provide the needed clearance for the range hood, the bottom of the microwave will sit at approximately 54” above the floor and back from the front of the counter a minimum of 12”. This raised-and-recessed position makes it more difficult to see into a container that is in the microwave, and it makes reaching items in the microwave more difficult, especially for older women who tend to have more challenges with upper-body flexibility and strength.

To be more universal, microwaves should be located between the range of 30”– 48” above the floor with landing space close by for setting hot items down quickly.

Design Goal 3: Support Aging in Place (continued)



View into kitchen from living room.

The kitchens typically have a spacious pass-through counter area, or, are open to the living room. The living space in the apartment that the POE team toured accommodated a sofa and lounge chair, a TV console, and space (next to the pass-through from the kitchen) for a small dining table and a couple of dining chairs.

Natural light from the large window in the living room area carries over into the kitchen.



Ceilings are tall which creates more wall space to reflect the natural light coming in from the large window.

Some apartments have an exterior access point to a patio or balcony from the living room. If there is an outdoor space, there is also a small storage area for residents to use.



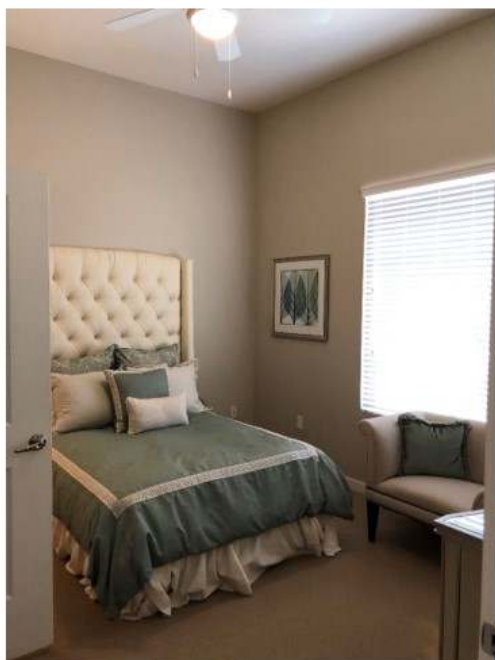
Access to patio.

Design Goal 3: Support Aging in Place (continued)



The apartment that the team toured had a bedroom that is large enough for a full-sized bed, a nightstand, chair, and a dresser. In one-bedroom apartments, access to the bathroom is through the bedroom. There is also a walk-in closet accessible from the bedroom space. The closet has the additional feature of having a pass-through door to the bathroom.

The thinking was that if a resident needed to have someone close while they bathed to ensure that they didn't experience any difficulties, the care provider wouldn't have to actually be in the bathroom, but could pass any needed items to the resident through the closet. The team thought this was a sensitive design idea to protect dignity while also addressing safety and security. The resident the team spoke with, however, didn't really see the point.



Bedroom is adjacent to the closet and bathroom. The bathroom has a cabinet opening into the closet.

Design Goal 3: Support Aging in Place (continued)



The bathrooms provide accessibility features under the vanity, around the toilet, and in the shower.

The bathrooms are also universally designed with features that support mobility and access. Base cabinet doors can retract below the counter-top providing wheelchair access under the sink. Grab bars are located next to the toilet in both ADA locations as well as an additional vertical bar located for stability in rising or standing.

The shower has a threshold-free design with the drain grill located towards the entrance of the shower to help minimize water running into the open floor space. The showers come equipped with a seat, grab bars on each wall, and adjustable shower controls.

Visually, the color contrast between the horizontal surfaces (e.g. the countertop and the floor) are discernable, but for someone with low-vision, more contrast might be beneficial.

POE Team Tip:

One detail that could be improved in many shower configurations is the location of the handle where the water and temperature are controlled. Many showers, like the one pictured above, require that the user reach into the shower (and across the stream of water) to turn the handle. This can be potentially dangerous if the water is coming out too hot and the user needs to adjust it before stepping into the shower.

Key Takeaways

There were two key factors that attracted SAGE to select LivGenerations Ahwatukee as the site of the 2019 post-occupancy evaluation. The first was the ability for independent residents to transition to assisted living in their own apartment as their personal care needs changed, without having to move. The second was the desire of the owner/operators to create an opportunity that could bring in the outside community to the campus. This was done by the inclusion of the casual dining venue, TUK, and was further enhanced by building adjacent to a conventional market-rate apartment complex built by the same provider. A memory support building is adjacent to but unconnected from the independent living. The end result is a smart, contemporary environment that is appealing to a wide age range of people.

Yet there is still human nature to deal with. Some residents were a little uncomfortable seeing an increase in the number of walkers and other mobility devices in the corridors of the apartment building. Similar feelings were expressed regarding some residents who enjoy sitting in the large front lobby every day. It can be difficult to reconcile these perceptions with the realities that the aging process comes with changes, many of which are unavoidable.

Aging in place in a housing model such as this also requires a careful blend of operational, organizational, and environmental planning. Predicting the staffing schedule for residents who may be transitioning into assisted living can be complicated, and, unlike dedicated assisted living buildings, these residents may be located all over the building, making delivery of care "less efficient." Holding true to the aging in place mission requires anticipating these challenges and associated operational costs.

The SAGE POE team has two final key take-away topics that are important to note about the design process and planning the sensory environment.

Design Process

Get the right people involved with the planning.

Making key design decisions about the spaces and their intended operational elements without getting actual "expert-users" involved can have an impact on the "experiences" that will be realized in the finished environment. Food service staff in particular noted that some good ideas about what should be served in TUK didn't end up happening because they weren't consulted about the needed equipment and logistical issues involved.

It is also critical for all stakeholders who are involved with the planning to think holistically about how the final design will impact on-going wellbeing for residents, staff, and other community members. The spaces once built, cannot stand alone. Consistent programming is critical to engage residents at multiple levels.

The Sensory Environment

The auditory and visual environment are “rich” but there are design features that create functional challenges for some residents.

Managing effective visual and auditory stimulation is critical to the functional use and enjoyment of spaces.



Card Room.

Dealing with lighting and glare are two factors identified by residents and staff as creating difficulty with the use of two activity based rooms; the Card Room and the Art Studio. The Card Room has the challenge of being (unintentionally) under lit on the interior which creates too much contrast between the amount of light coming through the windows and doors to the space (see image). Residents simply do not use this room during the day and have their card games in the back dining area in Crave.



Art Studio.

The Art Studio has a more even balance between interior lighting and exterior views, but the location of the room relative to the sun angles creates “visual hot-spots” for residents.



Sound Corridors and the Auditory Environment. The liveliness of the TUK café has one notable draw-back, which is that the acoustics are challenging to manage. Multiple hard surfaces on walls, floors, and ceilings, result in noise reverberating throughout the space. Staff commented that it is easy to overhear table conversations in the main café from the upper balcony.

The tall two-story space for both the lobby and the adjacent dining room (Crave) also creates a sound corridor between the piano, in the lobby, into Crave and up to the second floor. Residents that have apartments close to Crave on the second level noted that it could sometimes get a bit noisy.



Summary

The goal of any SAGE POE is to share lessons learned and contribute to the ongoing efforts to provide valuable insights that can be applied to future projects. The SAGE POE team learned a great deal from the residents, staff, designers, and leadership of LivGenerations Ahwatukee. They embody a dedication to living and supporting a quality of life that serves residents and their families to the highest level possible.

One of the most notable aspects of this project is how engaged the design team, under the leadership of LuAnn Thoma-Holec, continues to be in refining and modifying the details and features of the interior to respond to resident and staff feedback. There is no project that comes off without something that could be addressed, and Thoma-Holec provided an open and transparent assessment of key features that needed some attention, and how they were working to address them.

A SAGE POE provides the review team with numerous observations on the details and outcomes of the project. The team selected what they consider to be the most notable aspects to include in this report. It is their sincere hope that this glimpse into the LivGenerations project can provide helpful ideas for future design teams as well as providers who are considering remodeling or new construction projects.

The 2019 SAGE Post-occupancy Evaluation team is very grateful to the administration, staff, and residents of LivGenerations Ahwatukee for inviting SAGE to review their community. There is a strong sense of community at LivGenerations and the care and attention to resident needs and quality of life is clearly evident. As with all dynamic organizations, there is always a desire to continue to explore new ways of improving and living the vision and mission.





Steve Lindsey

CEO, Garden Spot
Communities
SAGE Board Member

2019 SAGE POE Team
Member

A key impression that is given when visiting LivGenerations Ahwatukee is that the design came together in a way that was intentional about attracting people in a post-demographic society. This is the idea that people – of all ages and in all markets – are no longer feeling bound by the expectations placed on them by society and are constructing their own identities more freely than ever.

In senior living, we tend to design spaces that we believe appeal to older adults. However, because most people in our society are embracing new technologies that allow them access more and more information, we now live in a connected world where people are exposed to ideas from all areas of society, and they are deciding for themselves what experiences and environments appeal to them. As a result, consumption patterns are no longer defined by ‘traditional’ demographic segments such as age, gender, location, income, family status and more.

Because of this, the idea of forcing all our thinking into the outdated frameworks of the past should now feel wholly inadequate, if not downright dangerous. The design team for this project broke out of this mindset and, because of the vision of the owners to create spaces where different generations could gather, were able to design spaces that don’t feel like a traditional senior living community.

There is no better example of this than the TUK Café, where urban finishes were chosen that offered interest to people of all ages. Careful attention was given to the experience of the user. With the combination of indoor and outdoor spaces, different seating levels, visually stimulating design elements and opportunities for singles users to groups, the café provides the user multiple experiences and view-sheds, depending on their desire at the moment.

A wide variety of seating was used to create a place for every person who comes there to find what they need, from a large “community” table to comfortable chairs where you can sit by yourself with a cup of coffee and a good book (or tablet).

With the nice food and beverage menu, the Wi-Fi that is available throughout, the wall-mounted televisions, and the vibrant atmosphere, it creates an inviting Third Space that is so critical for people of all ages who are casting off the old demographically-constrained expectations and constructing their own identities and way of living. The reminder for all of us is to treat our customers like the multi-faceted people they are. They deserve it, and increasingly, they demand it.



Kelley Hoffman

Partner/Interior
Designer
RDG Planning &
Design

2019 SAGE POE
Team Member

Months after completing the 2019 SAGE POE, what continues to resonate with me the most is just how insignificant interior design can be. This may be shocking coming from an interior designer who has spent the past 20 years designing environments for seniors. I would like to believe that it is less of a revelation and more of a reinforcement of my personal belief that to have a successful design, you must start with a successful program and operational model.

A successful design begins with enriching the lives of those who live in the environments we help to create. Success may also be defined, as it often is in the senior housing industry, by a thriving building occupancy. And to some, a successful design may be defined by simply creating a beautiful setting that is pleasing for people to reside. By these measures, LivGenerations Ahwataukee is certainly a success.

However, what continues to be replayed in my mind from the various interviews of current residents is all of the “buts.” In particular, the repeated comment, “it’s beautiful, but” is a good reminder that all of us design professionals need to hear. We have a charge to create not only beauty, but well-being.

There is no doubt that the environment plays a direct role in a person’s health and wellbeing and there are countless studies to support this. What we cannot afford to ignore is that health and wellbeing are also greatly impacted by living a life of purpose and meaning. The built environment can certainly help achieve this, but more importantly it has to begin with a mission and an operational team committed to providing programming and opportunities for residents to find their purpose and their meaning – and to live in an environment that supports it.

Too often it seems we designers sit in a room with developers, owners, and operators and brainstorm on what types of spaces should be included in the design of a senior living community. The recommendations come from our professional experience, focus groups, industry trends, and sometimes personal preferences or hobbies of the key decision makers or investors. Often, this results in fairly successful building and design.

Instead, we should begin the design process by asking operators what services and programs are they committed to delivering to their future residents? What is their plan to attract the best and highly qualified team members that will be responsible for implementing the programs? And, perhaps the most important question operators should be asking is, “What do the residents in our target market want, and how will we support those wants through the design of the built environment?”

A Note from J+J Flooring



Keith Gray
Director of Applied
Research
J+J Flooring Group

J+J Flooring Group's partnership with SAGE has blossomed since we planted the seeds of our collaboration in 2017. We have now completed two SAGE post-occupancy evaluations together, and planning is now underway for the 2020 SAGE POE, which promises to be the best one yet. J+J continues to support the SAGE POE because it is important and valuable work that promotes the quality of senior lifestyles.

The 2018 SAGE POE at the Cottage at Cypress Cove in Ft. Myers, Fla. evaluated a memory care community, whereas this year's POE at LivGenerations Ahwataukee in Phoenix, Ariz. focused on assisted living. I was struck by the differences in floorplans, amenities, furniture, finishes, and activity spaces in the two communities.

But more than that, the boldness of the planning and programming of the Ahwataukee community is truly inspirational. The owners and design team pushed the edge of the envelope, not only in the design and programming, but in the way in which the community is integrated with the greater Phoenix community.

And as I stated last year, that what gets measured, gets improved. J+J's support of the SAGE POE program has enabled the passionate and dedicated SAGE team to plan and execute its POEs with greater efficiency, a broader base of expertise, and more variety of site options. This is what we hoped would happen and are pleased to be part of this meaningful work.

The release of this report marks the beginning of perhaps the most critical phase of the 2019 SAGE POE. One valuable lesson I learned long ago in graduate school is that good work must be effectively communicated in order to be of real value. The best report in the world, tucked away in a folder and forgotten, is really only of value to those who wrote it.

To that end, we have engaged healthcare design knowledge expert and marketing consultant Sara Marberry, who has developed a comprehensive marketing communication plan for the 2019 SAGE POE. We will deploy it, we will learn from it, and hopefully more people and organizations will reap the benefits of this valuable collaboration.

About SAGE

Founded in 1994, the Society for the Advancement of Gerontological Environments (SAGE) is a membership-based organization that represents excellence in all facets of the senior-living industry industry.

To achieve its mission, "To promote collaboration among aging services providers, design professionals, regulators, residents, researchers, manufacturers, educators, students and others interested in providing innovative and appropriate environments for older adults," SAGE:

- Provides a nexus for collaboration among all disciplines involved in the development, operation, and regulation of settings for older adults;
- Offers educational forums that feature current research and best practices for the design of living environments;
- Evaluates senior living environments based on SAGE's design principles and shares results through conferences and publications; and,
- Promotes regulatory change and research that supports resident-directed care.

SAGE members enjoy networking and design-jury opportunities, free AIA-approved monthly webinars, committee participation to advance the SAGE mission and initiatives, exclusive member discounts, and more. To learn more about the benefits of SAGE membership, visit www.sagefederation.org.

President's Message

Since 1999 SAGE has recognized the critical importance of studying occupied environments in order to bring relevant data forward to inform new environments and problem solving. Each year our SAGE POE team visits a senior housing community to reflect on both the successes and potential failures of the built environment to support the building occupants and intended program.

With the incredible support of J+J Flooring Group, SAGE has been given the opportunity to vault the POE to the level of rigor found in the 2019 POE of LivGenerations Ahwatukee. Our SAGE multidisciplinary team has been allowed a full year to plan, visit, write, and publish this thorough and insightful white paper that has valuable information for all members of the senior living industry.

On behalf of SAGE I hope you have found this paper to be professional, thought provoking, and applicable to whichever facet of the industry you represent.

I challenge you to consider assessing your own ongoing work with the same rigor displayed in this paper. Only through continuous reflection, improvement, and use of a research-informed design process will we collectively provide innovative and appropriate environments for older adults.



Rob Simonetti, AIA
Design Director
SWBR Architects

SAGE President

Helpful Links



Watch the SAGE Webinar, "Notes from the Field: A SAGE Post-Occupancy Evaluation." *Presented by Amy Carpenter and Migette Kaup on October 24, 2019.*

Click below to learn more about all the organizations involved in the 2019 SAGE POE.

