



## Advancing the Living Community Challenge on CSUMB's Campus: Student Generated Recommendations for Building 12 Renovations

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## Introduction

The Living Community Challenge is a framework for master planning, design, and construction (Living Future, 2020), and California State University Monterey Bay (CSUMB) was the first university to undertake this challenge as part of its master planning processes. One aspect of the Living Community Challenge is the integration of biophilic design into the built environment. Stephen Kellert (2018) asserted that because people spend the majority of their time in built environments, systemic disconnections between people and nature also need to be addressed within the built environment itself. Biophilic design is a way to achieve this through integration of nature and natural features into landscapes as well as buildings themselves. Jones (2013) conceptualized that biophilic universities can “restore an emotional affinity with the natural environment” (p. 148) including aesthetics, bio-cultural connections, and the development of physical and social university spaces. From a health promotion standpoint, the incorporation of biophilic design into university campuses is increasingly viewed as a means to promote student health and well-being, particularly because university students experience high levels of stress and mental health challenges (Chrisinger & Rich, 2020; Gillis & Gatersleben, 2015; Gulwadi et al., 2019).

A recent review of biophilic design and university campuses found that students are often participants in research about biophilic design and restorative campus environments (Peters & D’Penna, 2020); however, the majority of these studies engage students in research through the use of surveys, simulations, and virtual or digital depictions of the environment rather than the physical environment itself. Peters & D’Penna (2020) recommended more research about biophilic spaces be conducted in actual physical environments because “biophilic design concerns far more than visual qualities and is multi-sensory and context-specific” (p. 7). Through a Research Methods in Environmental Studies (ENSTU 350) course, students do just that: they explore biophilic design on their college campus through the use of photovoice and interviews.

## Methods Overview

In the Research Methods class we review the basic biophilic design elements as developed by Kellert (2008) through a film, readings, and discussion. Students then apply photovoice to evaluate the campus’ strengths and weaknesses in terms of these biophilic design elements in order to support the continued articulation for how the campus can meet the Living Community Challenge. Students use colored frames to highlight aspects of campus that feel supportive (green frames) or that they would change (red frames) for biophilic design. In subsequent class sessions, students collectively review and discuss the photographs, identifying common themes and sometimes generating recommendations for new areas of campus. They then interview other students across a variety of majors to identify ways that other students’ perspectives are similar to or different from their own. Variations of this process have been incorporated over six semesters, involving more than 141 Environmental Studies students and many more students from across campus majors. Results from previous semesters have been summarized in a 2017 report, and a 2021 addendum to this report.

In the Spring 2022 semester, students explored the campus as a whole but then also focused specifically on Building 12 (the old Student Center) in order to generate recommendations for

the building's potential renovation. They also reviewed the campus master plan and sustainability plan to support and contextualize their recommendations. Twenty-three students participated in the photovoice method, and students subsequently interviewed an additional 35 students across 15 majors. The findings presented here draw from both photovoice and interviews primarily in the Spring 22 semester. They also partially draw from many semesters of discussion about this work, as facilitated and heard by the course instructor (and author of this report), Victoria Derr. Recommendations come from the students, but with some contextualization into what I understand the campus planning processes to be, with the hope of making the recommendations more readily utilizable. Any errors are my own.

## Overall Findings

Both photovoice and interviews identified the emotional benefits of nature; desire for increased and enhanced natural features; ways students might engage directly with nature; and spaces that promote relaxation, mental well-being, and a sense of belonging and connection to a broader community (Table 1). Across semesters of facilitating this research, students have increasingly emphasized the importance of nature for health and well-being, as identified this way:

“I feel like it [nature] does amplify my mental health, and I'm getting like Vitamin D from the sun and being outside and hearing the birds. I feel like it definitely keeps me more centered.”

While other studies have found university students seek nature for “being away” and a sense of solitude (e.g., Reese et al., 2020; Seitz et al., 2014), students in the ENSTU 350 research projects have often expressed an appreciation for the integration of nature more directly into the built environment, through courtyards, views of nature, and natural lighting (Fig. 1&2). Spaces that infuse variations in light and views of nature were particularly important for mental restoration that supports students' ability to work and learn. Students identified areas that blur the boundaries between indoor and outdoor spaces as particularly important for mental restoration in the built environment. They liked seating areas that utilized natural materials, including log benches or natural stone seating (Fig. 2). Students also identified features of campus that connect to ecological patterns and processes and to local ecology and place (Fig 3). These features demonstrate a sense of care and serve to develop a sense of belonging, which is also important for student well-being. The university library has been the most supportive place of refuge for students. This building contains many biophilic features in its design; it is highly effective at supporting views of sunsets and the ocean, views of open space and woodlands, diffuse and diverse light patterns, prospect and refuge, repeating patterns, and natural shapes and forms. The CAHSS building courtyards are increasingly a favorite space of students as well for the restorative nature provided while in the building itself, and the ability to easily use this space during short breaks between classes.

**Table 1. Results from Thematic Analysis**

Themes	Description of Theme	Recommendations for Campus
Theme 1: Preserving and Adding Plants and Natural Elements	Increase the diversity and number of plants on campus, particularly native and/or drought tolerant species.	Preserving and/or increasing areas with direct access to nature Implementing community gardens - in parking lot areas, rooftops, or in existing greenhouses Installing living walls and roofs
Theme 2: Avoiding Dead Spaces	Aversion to “dead spaces,” including large grass areas, large concrete areas/walkways, and blank walls on interiors and exteriors	Replacing cement and blank walls with murals which reflect: <ul style="list-style-type: none"> <li>• CSUMB’s identity, including sustainability</li> <li>• How the region has changed over time</li> <li>• Documenting climate change</li> </ul> Displays that motivate people to take action or raise awareness of human impacts on the local environment
Theme 3: Designs Highlighting Natural Processes	Architectural and landscape designs which focused on making natural processes visible, such as fog collectors and stormwater catchments	Install vertical gardens (on “dead space” walls) in interior or exterior spaces
Theme 4: Natural Light in Indoor Spaces	Ample natural lighting indoors, and aversion to dark or uniform spaces, which felt confining.	Increase skylights and glass in buildings Increase the use of local materials and earth-tone colors to break up dark or uniform spaces
Theme 5: Gathering Spaces	Preserve and increase gathering spaces on campus, including transitional or indoor-outdoor spaces, fully outdoor seating such as hammocks, and interior spaces with natural light and plants	One suggestion was to convert the area above the library café into an outdoor seating area For Building 12, create “rooms” that can provide more enclosed gathering spaces Increase seating in many existing natural areas



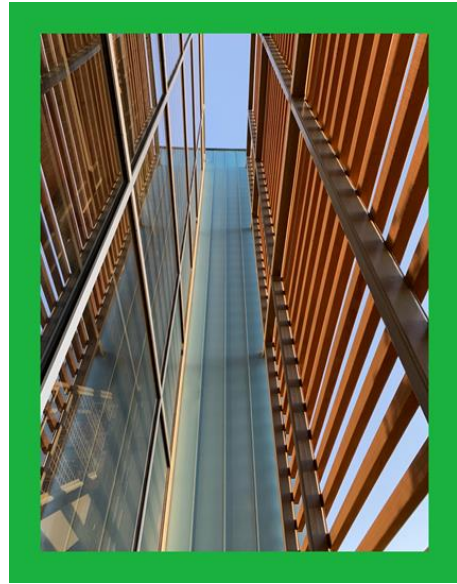
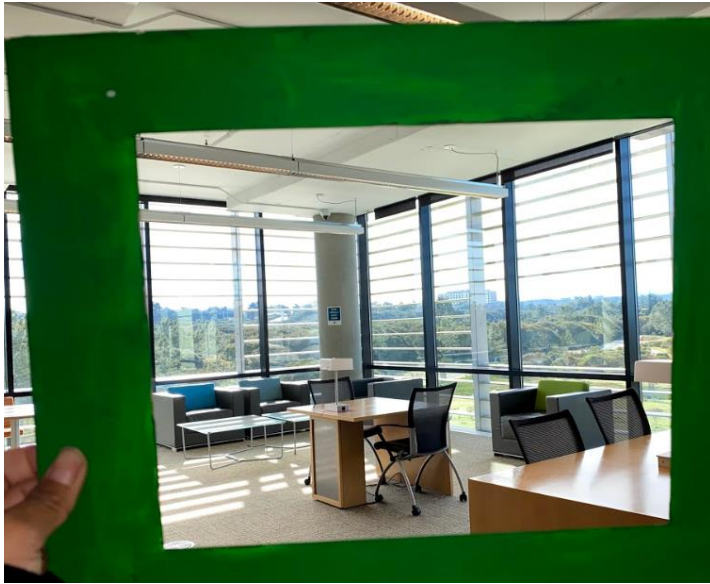


Figure 1. Diverse, light infused spaces

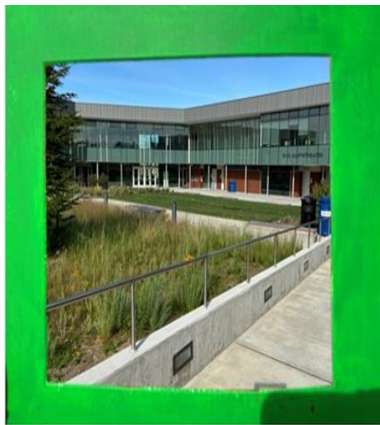


Figure 2. Areas that blur boundaries between “inside and out” and that incorporate nature into gathering spaces



Figure 3. Areas of campus that demonstrate connection to local ecology and care of place.

## Recommendations for Building 12

*“I think that having more hands-on experience during school would be so much fun. I think that not only will students find it more engaging, but it can contribute to making campus a nicer place to live.”*

### **Big Idea 1. Thematic “Rooms”**

Students identified a variety of ways that they wanted to see increased spaces for gathering, resisting “dead” spaces that students found particularly unappealing (Fig. 5), and cultivating a sense of belonging and shared identity.

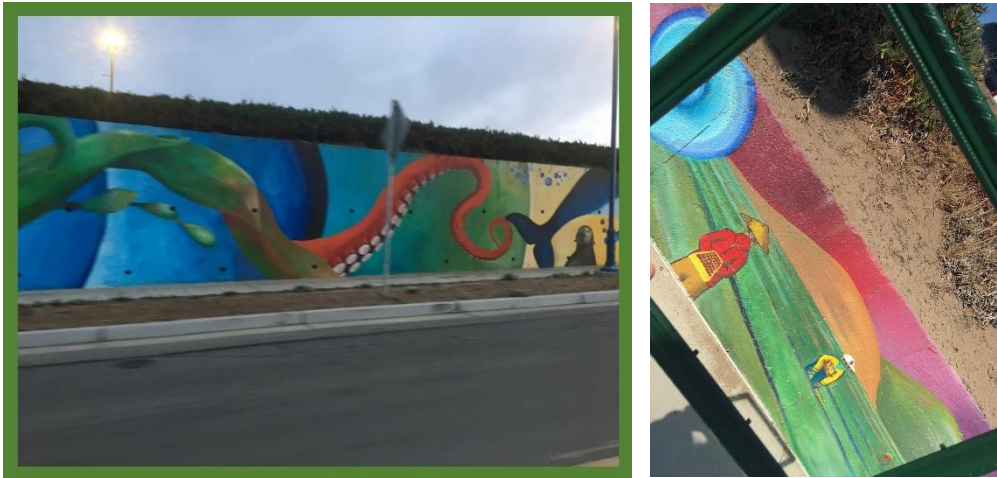


**Figure 5. “Dead Spaces” with Barren Qualities and Artificial Light. One student commented that “adding seating doesn’t make it more inviting”**

Students suggested that one way to bring many of the recommendations together would be to create a series of linked, thematic “rooms”. These could be demarcated in the long linear hallway spaces that currently exist within Building 12 (Fig. 5) and/or within some of the courtyard spaces outside of Building 12. Students had a variety of ideas for how this could be achieved. Some of these include:

- Using art (murals or mosaics) to partially enclose spaces. This would create a sense of prospect and refuge that is comfortable for gathering and is based in the elements of biophilic design. The art itself could be used to foster a sense of belonging and identity. Some of the ideas for art included:
  - Recreating (or building upon) the murals that were taken down for the construction of the OSU. These murals had themes of local places, including agriculture and Monterey Bay marine life (Figs. 6&7).
  - Telling the story of Land: the history of this place beginning with the Esselen peoples, moving through the military history, advancing to CSUMB, and circling back to a land acknowledgement and values that foster a decolonial mindset.
- Creating “rooms” that reflect different sustainability practices and goals. These could include rooms that reflect the three central goals (carbon neutrality, tree planting, and waste diversion) with murals or interactive exhibits (such as a living wall), that demonstrate a range of ways that these actions are important to the university and to

environmental sustainability. These rooms could also build on an interest to better bridge interior and exterior spaces, if they flowed between these types of spaces. A tree-planting courtyard, for example, or a living wall in the interior, could provide tangible ways that students can get involved in supporting their campus. Punching windows or skylights into these rooms for more natural light, could draw on and educate about passive solar properties and connect to carbon neutrality and sustainability goals. These “rooms” could also point people (through a kiosk, bulletin board, or digital map, to areas of campus where sustainability practices are enacted currently (such as stormwater mitigation features, laundry to landscapes, fog collection, and some of the (what will be) 2,030 trees that have been planted).



Figures 6 and 7. Mural sections from parking area where the OSU was constructed

### ***Big Idea 2. Living Laboratories for a Sense of Belonging***

Students were excited by the ideas of murals that could reflect the diversity of people and ecosystems that are a part of the students and regions CSUMB serves. Seeing oneself as part of a broader community, through mural art, was one means to reflect this diversity and create a sense of belonging.

However, students also gravitated toward more ways that living laboratory concepts could be integrated into the renovated student center. A center focused on students, and adjacent to the student union, could focus on ways that students can engage in living laboratory concepts. Some of these ideas are reflected in the concept of “Thematic Rooms” above, but students also liked the idea of creating hubs where anyone could come and try new ideas. This could be spaces for interaction with clubs, interactive art spaces, rotating art exhibits that any student could contribute to, a special memories walkway, small scale living systems or mini-gardens that students can plant and maintain, or other means where students can actively be involved in doing, and through doing with others, cultivate a sense of belonging.

Many students are not happy with the design and feel of the Otter Student Union. Some expressed that the building feels “too modern,” “like a gentrification of campus,” “too stressful” (near Starbucks) and uncomfortable for first generation students because it is aesthetically



inconsistent with their home communities. Students suggested there could be a space in Building 12 dedicated to facilitating workshops that actively engage students in design and planning of the campus infrastructure. Through these workshops, students could learn about sustainability of the campus in real time, and could contribute to longer term planning. Students expressed that they have not felt a part of campus planning efforts and that they want more ways to do so. Explicit integration of living laboratory concepts into Building 12, through process-oriented practices that are institutionalized into the building itself, was one way that students thought to achieve this.

Many students were unfamiliar with the Watershed Institute or garden at that space. They suggested that having small spaces at Building 12, where students could practice sustainability would make the more likely to be used, because it is in the heart of campus where students can go for a short break between classes or work.

### ***Big Idea 3. A Sense of Cohesion as Part of Community***

Students expressed interest in having Building 12 be a space for everyone – for reflecting on the diversity that is part of the campus and broader community but also as a unifying space. Students reflected that a sense of community needs to come not only from the social building of relationships but also from a more unified sense of design. They reflected that the campus lacks a cohesive design, and the OSU is the most glaring example of this. Students related ideas of cohesion and community in these ways:

- “I think the campus ... [could] better focus on creating designs that match each other. For example, having a color scheme or not necessarily going so modern with their designs where it just feels ill-placed.”
- “I think honestly, community is, like, this huge word that this campus really throws around, and I think part of community is cohesiveness.”
- “The school could incorporate more ethnic histories and dedicate buildings to prominent figures throughout history that maybe make these diverse student populations feel more welcome.”
- “I would definitely love to, maybe not even specifically my heritage, but I would love to see maybe more statues or buildings commemorated in the name of more people of color that are from this area, especially Indigenous people from this area.”

While commemorating buildings or statues are likely to be complicated, there is a possibility to involve students in oral history projects, to bring community into the space to tell their own histories, and to intentionally fold this into Building 12. This would build upon and expand upon the ideas of a living laboratory, in that a living laboratory is also a social space where people expand their sense of community to not only the campus but its residents just beyond, thus building a more cohesive place. The building could connect to academic units and courses where students realize and display projects, from visual or cinematic arts, to museum studies, scientific illustration, or oral histories research, that help to tell a more cohesive story.



### ***[Really] Big Idea 4. A Green Roof***

Students saw mention of a green roof CSUMB's sustainability plan, and were very engaged in wanting to see this happen. Early in the semester, they were informed that this would likely not be possible for Building 12 itself. However, they thought that this building would be an ideal space for a living roof because it would be directly visible from the OSU upper terrace. Students were so inspired by this idea that they requested and participated in a field trip to the California Academy of Sciences to learn more about green roofs. While there, they learned that the roof at the academy integrates many of the building systems onto the roof; that two years of research were undertaken to specifically identify plants that would work in that microclimate of wind, exposure, and moisture; that Rana Creek Nursery (in Carmel Valley) was a partner in this work; and that a host of volunteers are utilized to maintain the roof, which tied into their ideas of how to better realize living laboratories on campus. They were inspired by the participatory design of the CSU San Marcos green roof (Fig. 7) and saw the lack of one on the OSU as a lost opportunity to show innovations in sustainability that CSUMB espouses. While it may not be possible to have a green roof on Building 12 for a variety of potential reasons, including cost and structural limitations, this idea was strongly supported by students in the class and in interviews. Four to five students will continue researching green roofs and their potential for CSUMB's long-range campus planning and sustainability goals in the Fall 2022 semester.



**Figure 7. Green Roof at CSU San Marcos**

### **Acknowledgements**

The ideas in this report are the collective work of hundreds of students, as well as faculty and staff who have dedicated their time and perspectives over the years. We thank CSUMB for its vision to undertake the Living Community Challenge; this commitment in itself creates a sense of pride in our students, and we gratefully acknowledge that without this framework, students would not have such rich opportunities to explore and imagine possible futures for their campus. We especially thank Lacey Raak for her commitment to supporting students and the campus' potential to realize a more vibrant, just, and sustainable future.

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