

Collaborative Planning and Design Interactive Digital Studio and Seminar Space

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Sponsoring Organization: College of Design, Construction and Planning (DCP), School of Landscape Architecture and Planning

Abstract: This proposal funds large display, high definition technology within a seminar space and an adjacent studio space in the School of Landscape Architecture and Planning to strengthen and broaden ongoing collaboration among students, faculty, practitioners, and jurors, creating an innovative learning environment. High definition visualization of geospatial information fosters unique forms of collaboration among students and faculty, encouraging them to explore the implications of changes to our built environment and its interfaces with the natural environment at a variety of scales from site to city to region as well as national and international contexts. Through hybrid opportunities created with these digital technologies, the intimate seminar and studio spaces will become open to students, practitioners, jurors, and faculty from around the world, enhancing the classroom experience for both those who choose to study on the UF campus and those who choose to do so virtually.

Purpose and Specific Objectives: This proposal supports state of the art, interactive technology in the School of Landscape Architecture and Planning (SLA&P) seminar (FAC 208) and studio (FAC 202) spaces, allowing faculty and students to more effectively access and display geospatial material, data, and conduct analysis in ground breaking dynamics that are interdisciplinary hybrids of online and on-ground courses, and access professional expertise from around the world. This spatial analysis using big data integrates design and planning in new ways so that we can better understand community dynamics to generate recommendations for policy changes that lead to a better quality of life for residents. We will be at the forefront of studio instruction in our college with the digital capacity and technology outlined here, being able to project and record high resolution imagery, which is critical for us to see and assess landscapes, topography, and land use. Nationally and internationally recognized experts, who otherwise would not be available due to scheduling or cost issues, will be able to participate in our studios and classes as well as on speaker panels of interest across the university. Engagement of faculty and students will occur within and outside the college, along with graduate students in the first online graduate program in planning in the U.S., to collaborate and innovate collectively on projects and initiatives that benefit their learning outcomes, the departments, school, college, and UF.

The spaces in these two rooms, once combined with the scale of the technology, will accommodate a heightened level of collaborative and critical learning that will also accommodate new integrated studies planned among all the units in the college and will enhance outreach to students across campus for participation in multi-disciplinary initiatives such as competitions that engage DCP with Fine Arts and Engineering (i.e., the EPA Challenge) and DCP and Business/Real Estate (i.e., the Urban Land Institute and national Housing competitions). With these new technologies, as outlined here, our School, College, and the University can excel collaboratively to realize a greater pre-eminence in design thinking; resiliency; land use, water, infrastructure, and resource interactions; and geospatial analysis and modeling, all of which are unifying focus areas that our faculty agree define the School. Among the ways in which we anticipate this hardware benefitting our students and faculty is through the use of UApps to more actively integrate new and emerging technology in courses such as Quantitative Methods, 3-D Visualization, and advanced design courses. Students in urban and regional planning and landscape architecture as well as from engineering, fine arts, architecture, geography, public administration, real estate, historic preservation, and others will benefit from the variety of courses anticipated in these spaces. Further, the tradition of engaging professionals in these fields to juror the designs, to facilitate service learning, and to virtually explore projects in various parts of the world will be possible with this technology. It will also allow graduate students in the online degree program in urban and regional planning to work collaboratively with their on-campus student colleagues.

Being able to accommodate desk critiques virtually as well as public presentations and off-site lectures will enrich the student experience in these spaces by expanding the wealth and depth of knowledge available to them. Our

faculty will also be able to work collaboratively with students who are off-site as well as professionals who might otherwise be unavailable but can now contribute their experiences in the profession.

This proposal is consistent with the mission of the College, School, and Departments of Landscape Architecture and Urban and Regional Planning. Specifically, these enhancements will engage our faculty and students in applied research that critically assesses ongoing processes of change in human settlements and engages students in projects intended to guide these processes. The advanced technologies will allow students and faculty to address the challenges of designing and planning human settlements informed by expertise from within and outside the college, including practitioners within interdisciplinary environments who work on diverse cutting edge projects.

This globally connected educational experience is at the core of the community and professional engagement advancing our fields and opening opportunities to work with a range of allied professions outside the college.

This proposal meets the first goal of the college's Strategic Plan, "Provide state-of-the-art instructional technology relevant to the design fields as well as applied professional fields such as historic preservation, urban and regional planning and building construction." This helps us meet key measures of success as well as the second goal, improving our national rankings. Here a key strategy is to "invite leading academics, professionals, and practitioners as lecturers, jury members, and practitioners". Our ability to engage with a broader range of practitioners and have them provide hands-on feedback virtually is a key component of our proposal.

Another goal (Goal 6) is to "[p]rovide students within all academic and professional programs the opportunity for an international and/or cross-cultural educational experience." These technologies will allow us to engage globally with a broader range of potential collaborators and jurors (as well as our online students who are based around the world) in active learning around community building and environmental networks and resiliency. Further, these tools, and the communication and feedback they accommodate, will also allow us to more easily enhance our courses through internationalization of the curriculum.

We are already taking a leading role in our teaching and research in sustainability (Goal 7). These technological tools will offer new ways forward to achieve the next level in leading pedagogy in this area. This will allow us to more easily "participate in local, state, national and international issues regarding sustainability" as well as foster opportunities for leaders in these areas to interact in ways that were not previously possible. We anticipate these activities will not only enhance student learning but also strengthen our ties with the local community consistent with the UF-Gainesville Strategic Plan. Demonstrating our value to local, state, national, and international partners is another outcome associated with this type of engagement.

In addition to learning through coursework, jury feedback, and lectures, our students and faculty will be better equipped to participate in national and international workshops and competitions that require interdisciplinary and cross-institution collaborations focused on addressing complex problems to achieve a common good. The reduction in travel costs for visitors/lecturers/jurors as well as accommodating a larger number of students and faculty without the constraints of space will allow the value of the technology to exceed the anticipated costs over a period of time.

The cost benefit ratio of this studio and classroom space with this enhanced communication and interactive learning capacity will far exceed the current possibilities of these spaces. The technological competencies, key skills for the design and planning professions as well as student learning outcomes for each program, will be enhanced via these opportunities, possible with this state-of-the-art studio/classroom environment. These key marketable skills are among the most valued by employers at firms and agencies that work collaboratively on solving challenging and complex problems. Clearly, the students' chances of success in securing employment and thriving in the professions are improved with these technologically connected spaces.

Impact/Benefit: The School of Landscape Architecture and Planning is uniquely positioned to connect innovations in big data and design thinking to policy making for applications to the built and natural environments. Our students will benefit from an enhanced collaborative environment that connects them with computer aided design, spatial thinking, and big data tools within a community of experts, academics, and fellow classmates around the globe who are dedicated to developing resilient solutions for emerging issues that challenge the design and planning professions. This technology will allow us to significantly broaden interaction between our online students, key contacts abroad and nationally, and on-ground students in a range of professions that we have already begun to work with through various studios, courses, projects, workshops, and competitions. Among these are IFAS (i.e., Wildlife Ecology, Program for Resource Efficient Communities), Engineering, Fine Arts, Real Estate, Environmental Law, and Public Health.

As we showcase these efforts to recruit students and attract the best faculty, we will strengthen both our undergraduate, graduate, and doctoral programs (Goal 9 of the DCP Strategic Plan). These initiatives will also allow us to promote our programs to alumni who are seeking interns and employees as well as funders to bring in assistantships, student awards, scholarships and additional enhancements to the School.

Bringing cutting edge projects into the classroom will allow our faculty to effectively and efficiently connect their research and teaching and strengthen the interdisciplinary capacity of these courses. Using enhanced technology to allow students and faculty to more seamlessly share their spatial thinking and policy ideas will also attract students seeking joint degrees and new learning opportunities. Further, creating new ways for our online students, enrolled in the first online graduate program in planning, to interact with the students and faculty on campus will not only promote accessibility in new ways to the learning environment but will also allow them, many working full time in planning related professions, to interact with their fellow students to facilitate learning among the students.

A key factor to keep in mind is that the classroom space will no longer limit the number of students, faculty, jurors, and guest speakers/collaborators involved in the range of teaching described here. These improvements will create an interactive environment that reaches in new ways well outside the walls of the classroom and studio. The efficiencies associated with this new technology will exponentially increase our access to expertise, including preeminent faculty, attract students from throughout the campus and beyond to engage with new initiatives, and allow alumni to actively participate in assignments, projects, workshops, and competitions without having to leave the office, leveraging existing resources to accommodate a broader range of interactive opportunities. Thus, we anticipate the benefits to students and faculty, as well as opportunities to engage alumni in new ways, will increase exponentially.

With our collaborative geographic spatial design studios, we consistently attract a large number of students from real estate, engineering, geography, and wildlife ecology. Given the role technology is already playing in creating cross-disciplinary classrooms, we believe that we will double the number of students hungry for new ways to inform their learning experience and prepare them for a dynamic interdisciplinary work space where design thinking and policy making are informed by these tools. Service learning, another area where students consistently express excitement, will also be enhanced through our ability to bring the community virtually into the classroom as well as work with faculty at other institutions and co-teach.

With these technology enhancements, we anticipate annually two studios (one per semester) that will now have the capacity to integrate our online students (increasing the impact from 15 to 25 students per semester). Further, the seminar space will be greatly expanded to accommodate 6 interdisciplinary courses per semester with 40% of the students from outside the School and college. In addition, the two student organizations – the Student Planning Association and the Student Chapter of the American Society of Landscape Architects – will now be able to more effectively collaborate with their online colleagues, enhancing their participation on Department, School and College initiatives. Further, these organizations will be able to engage virtually with other student organizations, community leaders, and guest speakers at significantly reduced rates, thus allowing them to leverage their budgets to realize larger goals.

Finally, both rooms are already wired for increased bandwidth, so we have the capacity in place to use this equipment and technology to a much fuller extent than in a typical classroom or studio space. These improvements will also allow us to more effectively use the capacity of the super-computer here at UF and to upgrade as further improvements occur. While the technology proposed here makes new ways of teaching possible, it is also designed to leverage future innovation with potential upgrades, such as 3-D visualization capability using headsets that allow students and faculty to more fully immerse themselves in virtual worlds they create to study energy and climate-change implications, views along a waterfront, the pedestrian experience, and implications of policy, land use, and zoning decisions.

Electronic and Information Technology Accessibility: We have reviewed the latest Web Content Accessibility Guidelines (WCAG) 2.1. We are aware of the requirements, and are capable of accommodating students. This proposal is for hardware; the software subsequently loaded on this UF hardware will align with these guidelines as directed by the university to ensure compliance. Further, students in our studios and classrooms generate their own work to share with their colleagues and faculty on their personal computers, which the School requires that all students have. These computers should already meet the individual needs of the students who own them. The classroom will be designed so that students can plug in at the podium to share their work on-campus and online.

Sustainability: This technology will be maintained through School and the two Department funds, fundraising, and equipment fees.

Timeline: We understand that the earliest this equipment could be installed is in spring semester 2018. If it can be done sooner, we certainly are ready to accommodate that installation for fall semester 2017. Our faculty can begin teaching these enhanced studio and seminar courses as soon as the equipment is installed.

Budget

Room FAC 202: \$47,399.66

FAC 202 Technology description: Room 202 will have a video wall consisting of 4 55" LCD panels in a 2X2 configuration. Any image will be available on any single display or over the entire video wall. There will be a classroom style podium and switching equipment. Connections for an installed PC, Crestron AirMedia, and Laptop port (VGA, HDMI, Mini-DisplayPort, Audio). A touch panel at the podium for control of the system. Two on-wall speakers for sound reinforcement. A 1080P PTZ USB camera mounted on the wall and run to the installed PC for video conferencing. Two wireless microphones (one handheld and one lapel) used for video conferencing. All necessary cabling to make a complete working system. The system controller programmed and all system functions tested. In addition, any necessary training provided to run the system.

FAC 202 Technology Specifications: Academic Technology Installation Labor (28 hours); Academic Technology Programming (40 hours); Crestron AM-101 (1); Crestron AMP- 2100 (1); Crestron CEN-SW-POE-5 (1); Crestron CNSP-XX (5); Crestron CP3N (1); Crestron DMC-4K-C-HDCP2 (2); Crestron DMC-4K-CO-HD-HDCP2 (2); Crestron DMC-4K-HD-HDCP2 (2); Crestron DM-MD8x8 (1); Crestron DM-RMC-4K-Scaler-C (4); Crestron DM-TX-4K-302-C (1); Crestron DSP-1283 (1); Crestron TSW-1060-B-S (1); Crestron TSW-1060-TTK-B-S (1); Dell MSA14 (1); Dell S2715H (1); Extron Cable Cubby 202 (1); Finish Cable – Microphone Cable – XLRM to XLRF (2); Generic 16/2 Speaker Cable (200); Generic Mini Display Port to HDMI Cable (1); Generic Panduit Allowance (1); Generic Podium Top Double (1); Generic Rack Hardware (1); HuddleCam 49 Foot USB 3.0 Active Extension Cable (1); HuddleCam Huddle Cam HD 10x (1); HuddleCam HuddleCam HD Wall-Mount (1); Klipsch CP-6T White (1); Liberty AV Solutions PCE5B014BK (4); Liberty AV Solutions Z100A15FT (3); Liberty AV Solutions Z100AM15FT (1); Middle Atlantic Products PTRK-14 (2); Peerless DS-VW765-LQR (4); Rough-in Cable – Cat6A Ethernet Cable – White (1); Rough-in Cable – Crestron Digital Media Cable – 8G+ (5); Samsung UE55C (4); Shure BLX1288/CVL (1); SnapAV B4-HD-2 (6); SnapAV B4-HD-3 (2); SnapAV B4-VGA-10FT (1).

Room FAC 208: \$18,763.48

FAC 208 Technology Description: Room 208 will have an 80" interactive LCD panel mounted on the entry wall. There will be a classroom style podium and switching equipment. Connections for an installed PC, Crestron AirMedia, and Laptop port (VGA, HDMI, Mini-DisplayPort, Audio). An additional laptop port on the table connected to the system. A touch panel at the podium for control of the system as well as basic source switching from the table using the Connect-it to select either installed PC or Laptop. The display speaker for audio. All necessary cabling to make a complete working system. The system controller programmed and all system functions tested. In addition, any necessary training provided to run the system.

FAC 208 Technology Specifications: Academic Technology Installation Labor (12 hours); Academic Technology Programming (14 hours); Crestron AM-101 (1); Crestron CNSP-XX (1); Crestron DM-8G-CONN-100 each (2); Crestron DM-CBL-8G-NP-SP500 per foot (100 ft.); Crestron DMPS3-4K-150-C (1); Crestron DM-TX-4K-302-C (1); Crestron TSW-760-B-S (1); Crestron TSW-760-TTK-B-S (1); Crestron TT-100-B-T (1); Dell MSA14 (1); Dell S2715H (1); Extron Cable Cubby 202 (1); Generic HDMI Cable 35FT (1); Generic Mini Display Port to HDMI Cable (2); Generic Podium Top (1); Generic Rack Hardware (1); Generic USB Extender 35' (2); Liberty AV Solutions E2-HDSEM-M-10 (1); Liberty AV Solutions PCE5B014BK (4); Liberty AV Solutions Z100AM15FT (2); LOGITECH MK710 (1); Middle Atlantic Products PTRK-14 (1); Peerless ST680 (1); Sharp PN-C805B (1); SnapAV B4-HD-2 (2); SnapAV B4-HD-3 (3); SnapAV B4-VGA-10FT (2).

Both rooms are ready to receive the equipment and upgraded for increased bandwidth.

Total Budget for Rooms FAC 202 and 208: \$66,163.14