

## BRIEF STATEMENT OF PROGRAM

In the early 1990's, the department of Facilities & Services collaborated with the landscape architecture firm Moore Iacofano Goltsman, Inc. to develop the National Endowment for the Arts (NEA) grant proposal to explore the concept of Accessible Landscape. The proposal was funded and the Accessible Landscape project was started to create landscapes that would meet the needs of all members of the University community. We envisioned landscapes that would transcend the mere implementation of ADA accessibility code requirements, as the separate accommodations mandated by ADA often have the undesirable effect of segregating users. The goal of the Accessible Landscape project was to create universally Accessible Landscape that promote inclusiveness by seeking solutions which integrate the competing needs of both the disabled and the general population.

Our methods for enhancing the functionality of our space have included: eliminating stairways in favor of gently sloping pathways that are always the primary, rather than secondary path. We have designed and installed new outdoor furniture that provides more flexibility than the usual fixed seating and table heights and introduced audible wayfinding cues at key locations around campus. The Accessible Landscape project has provided an umbrella under which Facilities has partnered with faculty and students from the departments of Design & Industry, Art, Engineering, Broadcasting, and Special Education, along with staff from the Disability Programs and Resource Center (DPRC) to produce creative and innovative solutions.

As a result of our efforts, the campus environment has become more welcoming, with a user friendly landscape. We have enriched the curriculum of participating Colleges by introducing Accessible Landscape into classroom discussions and projects. We have an active design outreach program through our website, and we have been invited to participate in international design conferences and to publish our results in universal design publications as far away as India.



## INSTITUTIONAL BENEFIT

This ongoing transformation of our grounds into a barrier-free zone has not only improved the appearance of the campus, but has also contributed enormously to institutional benefit in the following ways:

*Social Benefit for All:* The most obvious beneficiaries of these accessibility projects are the disabled on campus, whose special needs no longer limit their access to those common areas that have undergone 'inclusive' design change. Inclusive furniture such as the Open Bench adjusts to accommodate wheelchair-bound persons, while Sound Web audible cues assist the visually impaired to orient themselves on campus.

The general campus population also benefits from these changes. The elimination of regulation bars and rails along re-graded pathways helps to beautify all of these areas. The musical and nature sounds emanating from the Sound Web offer an ambient aural treat to passersby. Height-adjustable furniture provides comfortable seating for different heights.

*Educational Benefit:* This project has instructional and practical value. Students are involved in the entire process including initial brainstorming, interacting with focus groups, conceptual designing, construction modeling, project scheduling and management, publication in a variety of formats, and speaking before classes and professional associations. In brief, we present them with an opportunity to apply what they've learned in the classroom to real life experience.

*Multidisciplinary Collaboration:* We have collaborated with faculty and students from the Department of Design & Industry to develop ideas and prototypes for seating designs, and drawn on the talents of our Engineering Department instructors and students to design and build programmable logic circuit boards to provide the many features of the Sound Web. Department of Special Education experts transformed our view of appropriate placement for the audible landmarks, resulting in much greater effectiveness. Focus group participants from DPRC and Special Education provided valuable input through their personal experience with disabilities.



## INNOVATIVE, CREATIVITY, AND ORIGINALITY

The task of designing an all-accommodating, multi-featured product is one that demands imagination, creativity, and problem-solving skills. Faculty, staff and students dedicated to the Accessible Landscape projects have exercised their collective know-how to conceptualize, develop, and manufacture products that are innovative and unique.

The University takes great pride that the Benches and Sound Web were collectively developed by the University community. The process of innovation does not cease at project completion, as we constantly seek to improve upon existing designs. Our Universal Seating Design Studio program not only guided the original Bench concepts through four design generations, but formulates new ideas each year as new students seek to enhance the project.

Beginning with the Open Bench, which provides variable spacing by means of seats that slide horizontally in both directions, we progressed to MyTable, which allows each user to adjust the height for maximum comfort and utility. With the help of student engineers, we ensured ease of operation by developing solar powered lifting columns and pressure sensitive buttons, superseding the bolt-and-arm crank first used to alter table height. Currently, we are exploring the idea of modular single seat and table furniture that can offer new flexibility for multiple uses through alternative configurations.

The project's newest invention, the Sound Web audible wayfinder, demonstrates the ingenuity of San Francisco State University's engineers students. Beginning with wind chimes, the project now offers solar powered playback devices working 24/7 for our community. Careful attention was given to the selection of sounds used to indicate each type of landmark. A variety of sound clips from nature, music, and industry were tested in focus groups and in the field, for elements of clarity, likability, obtrusiveness, and resonance. The audio samples that won strong user preference were then paired to corresponding campus location types, for instance, the sound of wind chimes is associated with major pathway intersections, percussion rhythms mark the location of student support facilities, non-native birdcalls indicate primary entrance points to the campus, etc. Staff who conduct campus Orientation and Wayfinding training familiarize their clients with the function of these devices.



## PORTABILITY AND SUSTAINABILITY

The idea of creating inclusive spaces has universal applicability. We receive inquiries from around the world regarding implementation, and our students are carrying this experience with them to their next professional roles. Our colleagues are invited to join us in raising the standard for inclusiveness in public landscapes. This process can be replicated at any public and private place such as educational campuses, business parks and hospitals, recreational spaces, airport and transit venues.

We are in the process of posting detailed construction information as open source material for others to use. Individual help is also made available. We have provided Sound Web design information to a user in South Carolina seeking to adapt the idea to a neighborhood.

Our standard is to utilize the most sustainable technology available in all our projects. For example, solar power is used for all electrical power requirements, making these items affordable for developing countries as well. Solar power is a cost effective alternative to traditional sources of energy that are rising in cost. Material choices are being guided by environmentally responsible objectives to maximize recycled content and recyclability when the product becomes obsolete. Our standard is also to render the devices maintenance-free to the degree possible, and sturdy enough to resist and discourage vandalism.



## MANAGEMENT COMMITMENT AND EMPLOYEE INVOLVEMENT

Credit for the success and popularity of the Accessible Landscape Project is due to the many constituents on campus that have been wholeheartedly involved in giving shape and form to the ideas promoting inclusiveness.

As the issue of accessibility is of central concern for the campus, managers in DPRC work in close partnership with Facilities, supporting the effort to develop and implement ideas from the project. A wide selection of staff from DPRC, along with Special Education faculty and staff, participated in product testing by focus groups during the design phase, and reviewed final designs for compliance and feature development. Their experience enables them to provide special insights and recommendations. DPRC has supported the Sound Web project by providing funding, while Special Education educates its students about the accessible features we install on campus, and has made supporting the effort part of the professional association agenda for Orientation and Mobility professionals.

Collaboration with the college departments continues, as solutions for inclusive environments have been introduced into the curriculum, which then generates another round of innovation or improvement to existing projects. Facilities staff and students currently working on the project are invited to speak to the classes and engage them in this mission. The projects have also served as the basis for an ongoing partnership with the Engineering Design Center, where students and faculty engage in the nuts and bolts of innovation.

At project conclusion, staff from Facilities & Service install the equipment and provide support for any periodic maintenance.



## DOCUMENTATION, ANALYSIS, CUSTOMER INPUT, AND BENCHMARKING

Prior to implementation, each project under Accessible Landscape actively seeks customer input during the evolutionary phase of a design. Focus groups, comprising a broad selection of staff and students from the University's administrative and academic departments, are invited to make recommendations that add value to the function and utility of the end product, e.g. our consultation with DPRC and Special Education resulted in identification of appropriate landmarks where placement of the Sound Web audio navigational devices would be most useful.

Analysis of accessible designs occurs during product conceptualization and testing. Design strengths and weaknesses are identified and analyzed, and these undergo several refinements until they are deemed satisfactory.

Project documentation for the most current Accessible Landscape project, the Sound Web, is posted on our department's website at <http://plopws.sfsu.edu/soundweb/>. The Sound Web was featured in local print and TV media, in the University's alumni magazine, and in a national publication for college facilities. The write-up generated interest in and queries about the Sound Web project from outside quarters.

The benchmark for the Accessible Landscape project is continuous improvement of the comfort and user friendliness standards for our University grounds, while making maximum use of on-campus resources to accomplish this goal. These objectives have been fulfilled, even as we constantly move the goalpost upward and make the process of meeting our goals an ongoing process.

