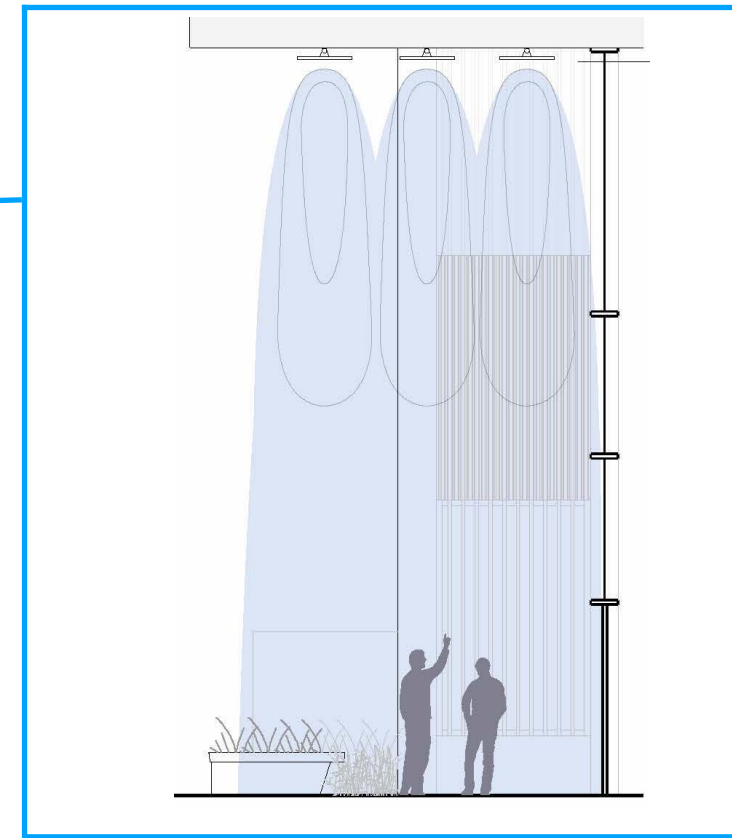
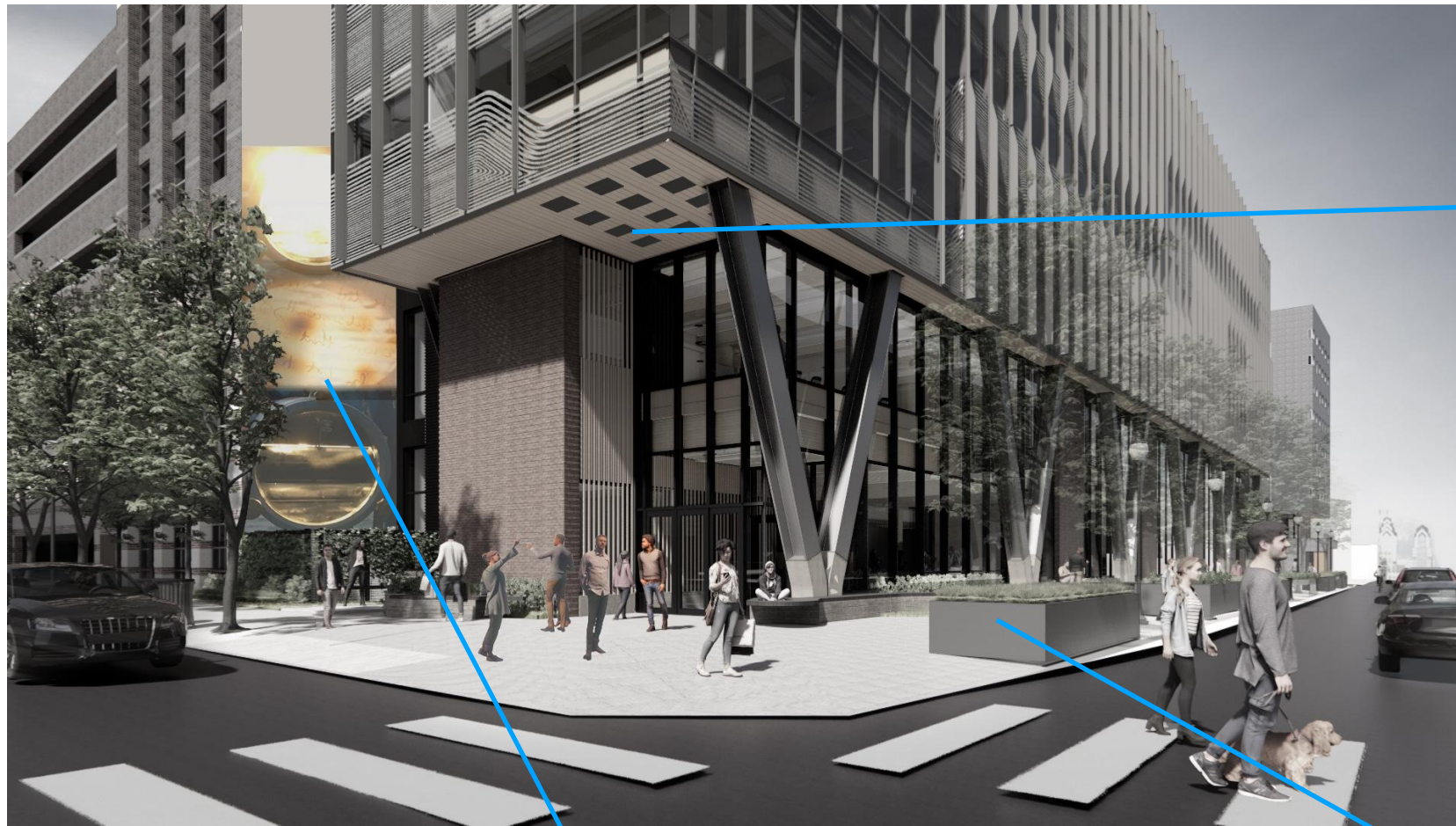


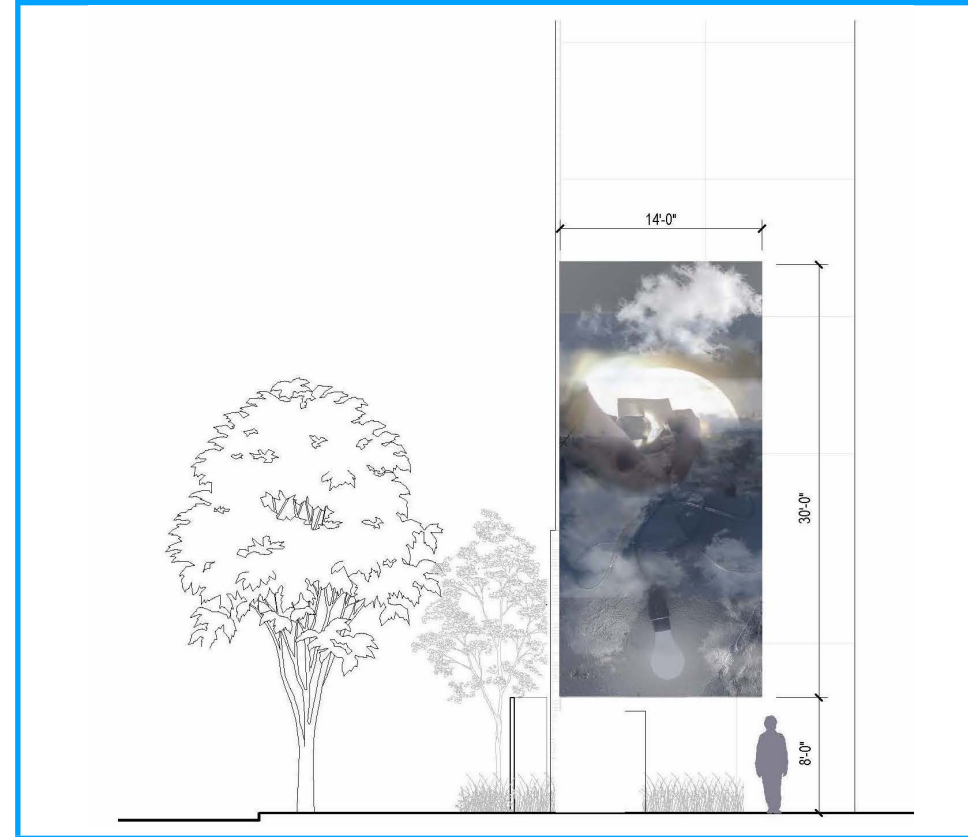
BODIES OF KNOWLEDGE



LAURA BOLES FAW and SUMMER MEI LING LEE



Audio Spotlight Installation



Video Projection



Integrated Stone Community Space

CONCEPT

Laura Boles Faw and Summer Lee propose a public art installation at the site of Penn's Data Science building, entitled "Bodies of Knowledge." The work will perform meaningful connection through three elements: the corner sidewalk planter sculpted to include an intimate space for face-to-face communication; a directional sound installation at the threshold of the entrance to the building that communicates unheard community voices to those who enter the building; and a vertical beaconing wall that contains a large-scale projection that communicates the aspirations of the students and faculty out into to the larger community.

The three works are grounded in community engagement and center on communication, the foundation of data, and utilize the different ways data is collected, input, transformed and utilized. The works emphasize human connection throughout: connection between Penn's data science field and community, the students and faculty and each other, and the unheard or historic voices to the contemporary users of the space.

- 1) *"What always speaks silently is the body."** Cut stone seating is integrated into the metal planter closest to the building's entrance. Users of the seating are enveloped by the planter's landscape material, interacting within an intimate and enduring space for one-on-one interaction. Wisp granite will be modeled with the textural quality of hand-worked clay, etched with polished and flamed contrasting text derived from a community engagement process. The textual elements become illuminated with moisture from rain or condensation. Therefore, the seats for communication are in themselves ephemeral and dynamic in how the text is rendered and communicated out to passers-by. The existing benches across the sidewalk become audience seating to watch dyads of people "perform" communication, whereby data is transmitted in human interaction, through connection and attention.

- 2) *“Whatever surrounds you, a broad melody always wakes behind you, woven out of a thousand voices, where there is room for your own solo.”** An audio spotlight sound sculpture will be placed in a fixed area of space at the building’s entrance threshold. Through community engagement, voices and sounds will be collected into a sound installation that will be lightly audible inside a fixed area of space that entrants pass through to enter the building. Present-day entrants will enter the space and connect to the unheard and historical voices of the community and underrepresented data scientists. By using audio spotlight technology, the listener can engage different layers of sound depending on their position within the threshold.
- 3) *“Make of yourself a light.”** A large-scale projection will be cast on the garage wall, made from visual data collected from a community engagement process with the building’s users (i.e. students and faculty) and turned into a message to the broader community communicating their hopes and aspirations for the field. For example, class work diagrams and schematics can be transformed into artistic video imagery through language and metaphor. As a result, the activities from the inside of the building will be transformed into data that connects to those outside — the interior of the building signaling out.

The artist’s aspiration is that the three works combine to express the communicative and connective qualities of data science, and by dint of these processes, the field’s potential when under-represented voices and perspectives can see themselves reflected, welcomed, and as prospective participants in the field.

Laura Boles Faw and Summer Mei Ling Lee's work has centered on the aspirations and failures of technology to connect us. Central in this work for a data science environment is an awareness of whose voices get communicated, which data is used for whose ends, and data science's ubiquitous but mostly hidden presence in our lives; how we communicate, how we connect, and how we visualize. Conscious to the historical moment where the monumental is under scrutiny for its oppressive historical narratives and hegemonic visuality, Laura and Summer conceive of this public artwork as a community space for fluid interaction, ephemeral experiences, and the exploration of universal themes.

* Quotations are

METHOD OF APPROACH AND PROCEDURE

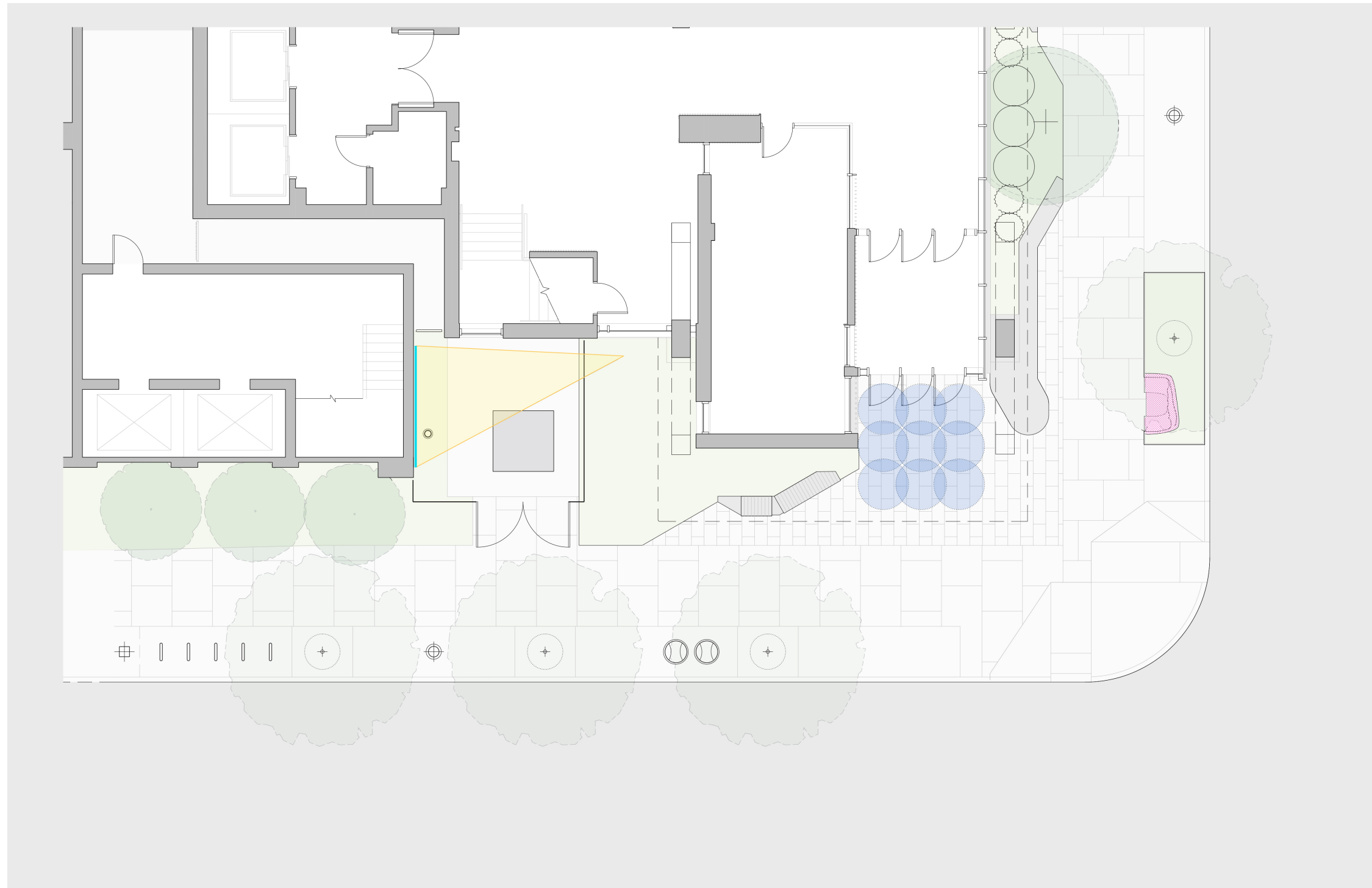
To prepare for this public art installation, lead artists will engage community members to collect text and visuals for resource material. They will then collaborate with architect Josh Keller, One Diversified, and Quarra Stone to produce a large-scale permanent outdoor projection, audio spotlight installation, and a stone seating insert in the landscape planter. Through an intensive design and fabrication process, the lead artists and key personnel intend to interpret and realize the community resource material into the three component works to form a comprehensive public art statement about data's aspirations to connect and communicate.

COMMUNITY ENGAGEMENT

Summer Mei Ling Lee and Laura Boles Faw have over 30 years combined experience of leading multi-lingual art process workshops, community art projects, and expressive arts support groups. For "Bodies of Knowledge," the lead artists will use text and visuals derived directly from community engagement activities to create genuine site-specific artworks and to promote community ownership and investment in the artworks. As a result, the community will see themselves reflected and engaged in the work.

- 1) Community organization partners will be chosen who have experience, resources and engagement with the targeted community constituents, including the Data Sciences Department at Penn.
- 2) Artists will partner with at least 3 organizations with \$10,000 grants to host at least a total of 6-8 workshops with a diverse range of relationships to the building's location, including students and faculty of the building, neighborhood residents, and indigenous community members, who will be compensated for their participation. Interpreters will be provided as needed.
- 3) Workshops will be held for small groups of 15 participants, structured as art-process groups. The lead artists will use art-making as a tool for community members to explore and express where they live in relationship to this project, how data science has influenced their lives, and what they hope data science could achieve.
- 4) Artists will gather results into a digital catalog, and use the testimonies as the basis for the text and images that will inform the planter seating, sound installation, and projection.

PROJECT MATERIALS AND INSTALLATION



Floor Plan of Three Art Work Components

PROJECT MATERIALS AND INSTALLATION

PLANTER SEATING:

Materials

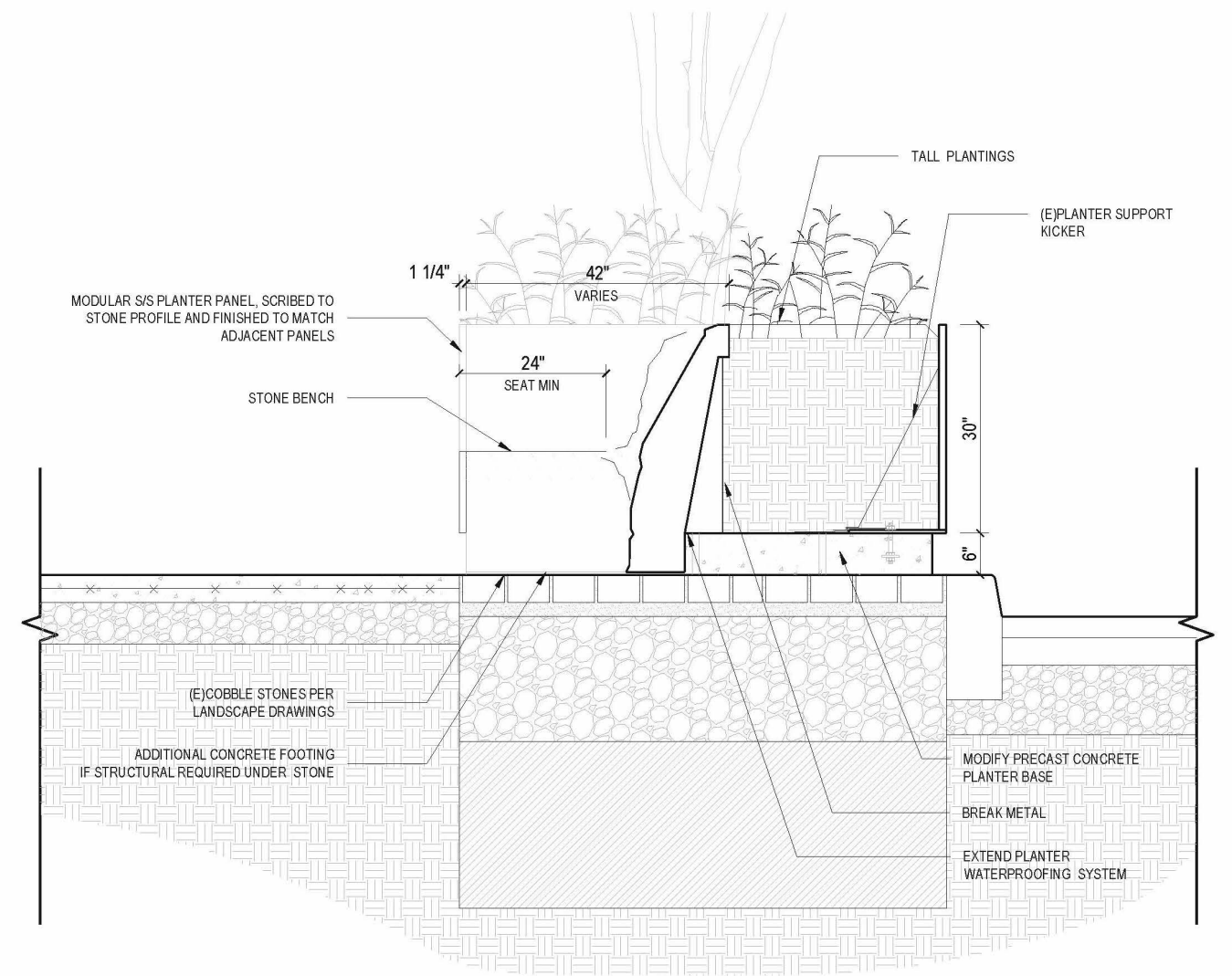
A stone seating space for intimate conversation will be realized by Quarra Stone, a stone manufacturer specializing in public art. The material of wisp granite is chosen for its ability to be carved by machine and resemble clay like textures. The metal planters provided by Penn will be cut to integrate the stone seating and refinished with a powder coat for a seamless cross-section appearance. The text derived from the community engagement process will be machine cut by Quarra Stone into the stone by flaming and polish contrast, so that moisture and weather elements make the text at times legible and revealing.

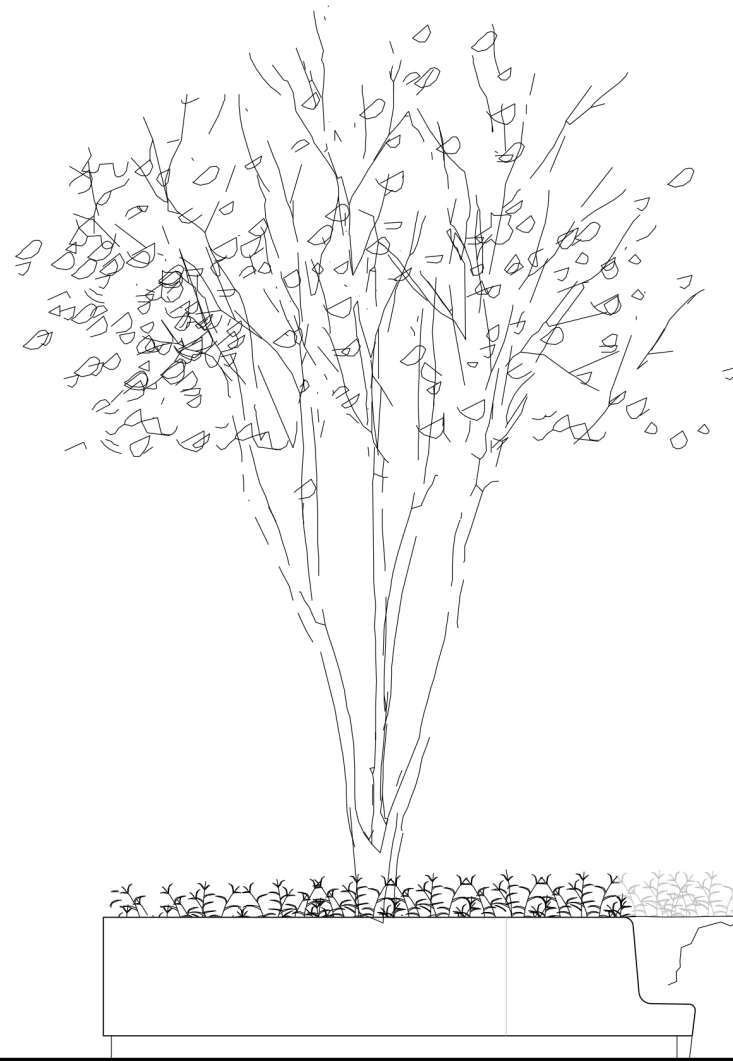
Landscape plants will be planted to envelop the intimate seating space. Alluding to body, hand, soil, and history, the materials will remind the creators and users of data science of connection to community and precedence.

Installation:

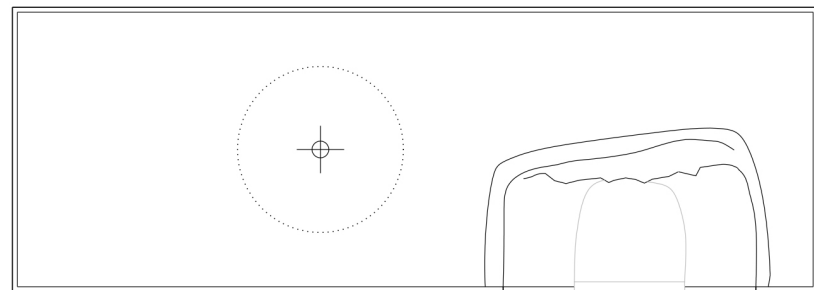
Quarra Stone will complete the installation under the direction of Heather Schact in coordination with lead artists and project architect Josh Keller.



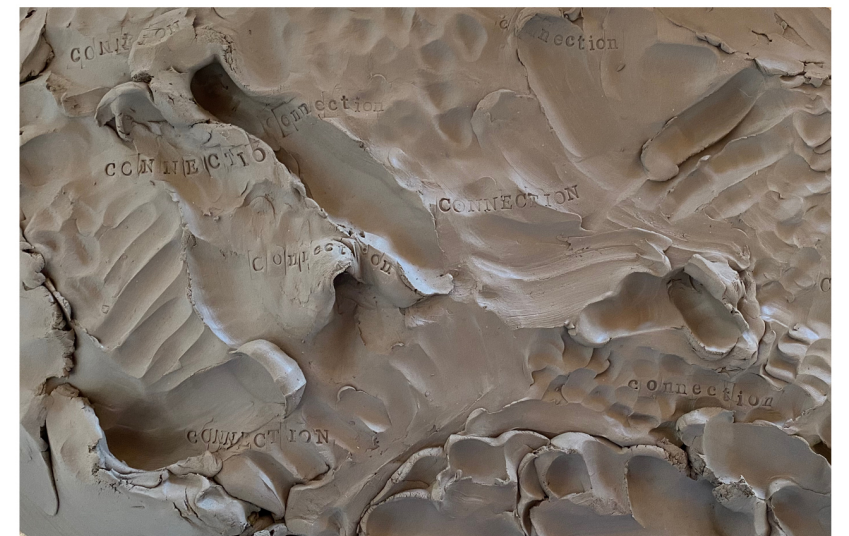


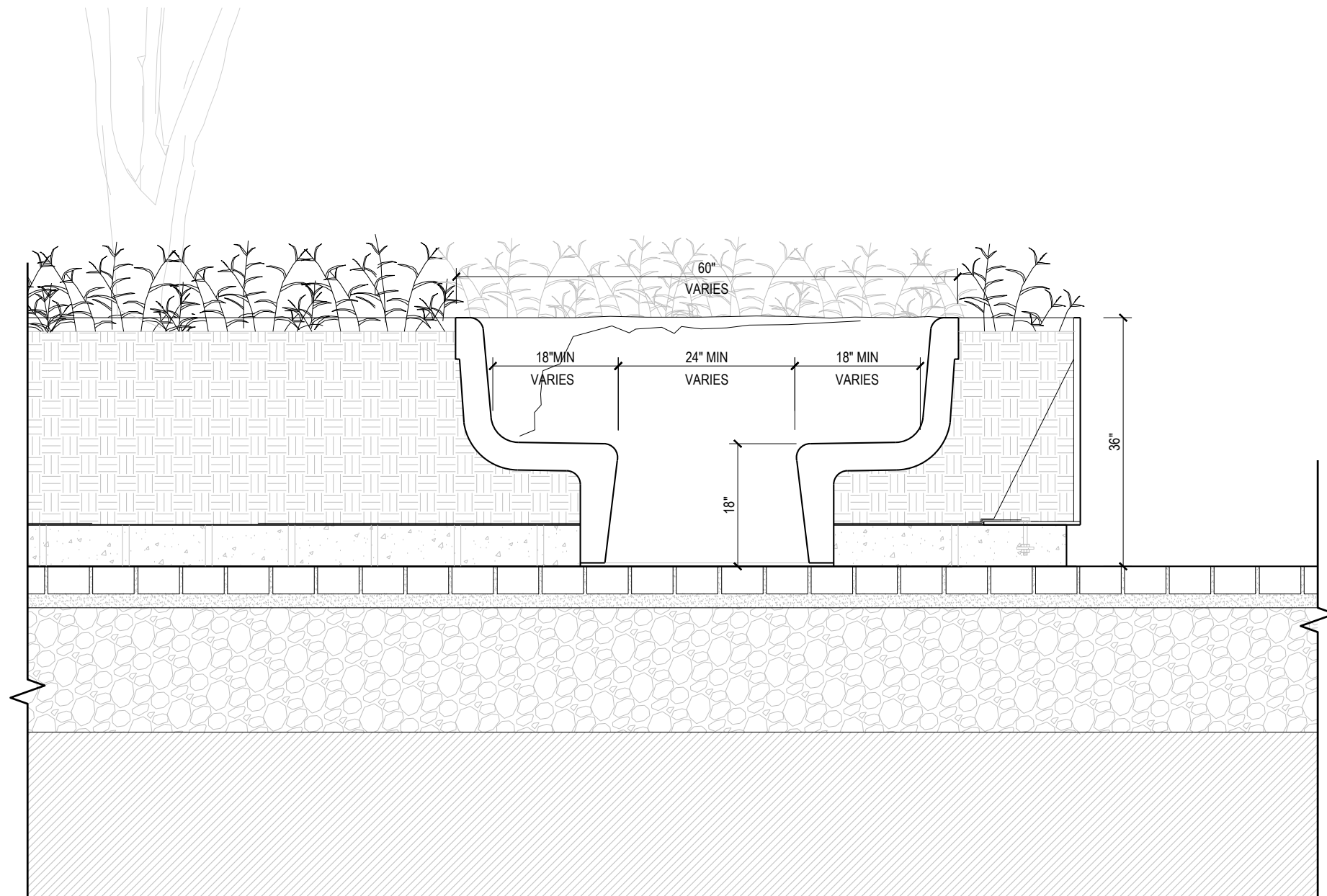


Wisp granite will be machined with the textural quality of hand-worked clay

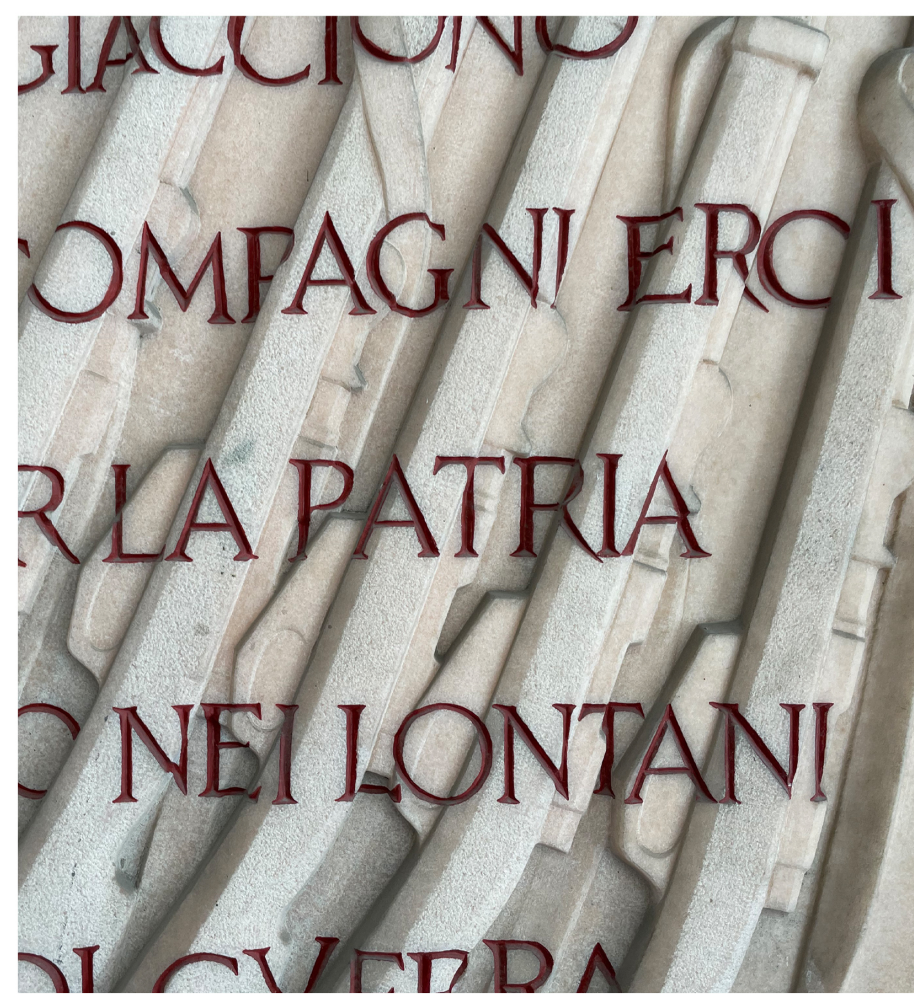


Stone Planter Seating Elevation and Floorplan





Planter Seating Working Section



Sculptural and Textural Precedent
for stone seating fabrication



PROJECT MATERIALS AND INSTALLATION

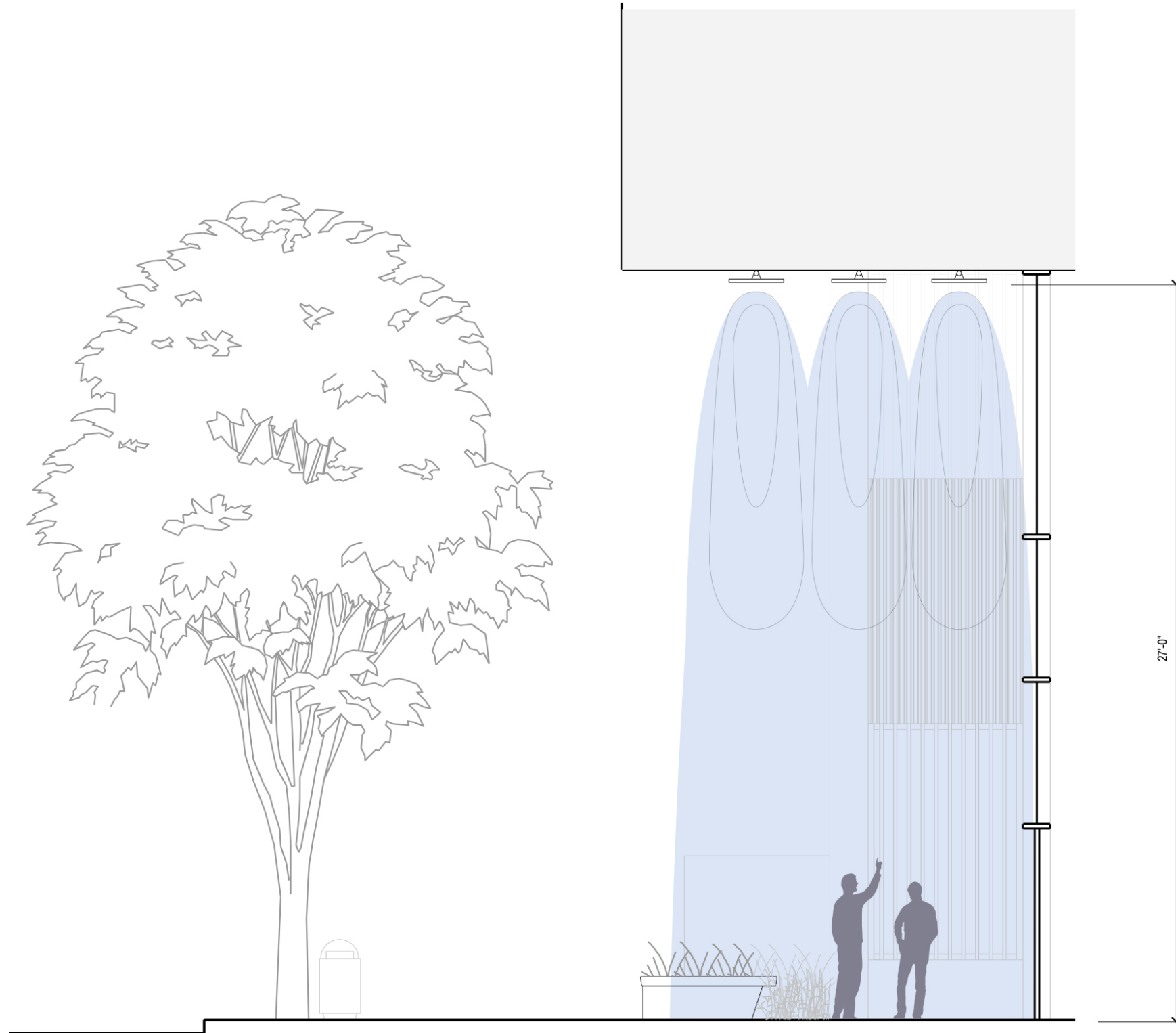
AUDIO SPOTLIGHT

Materials

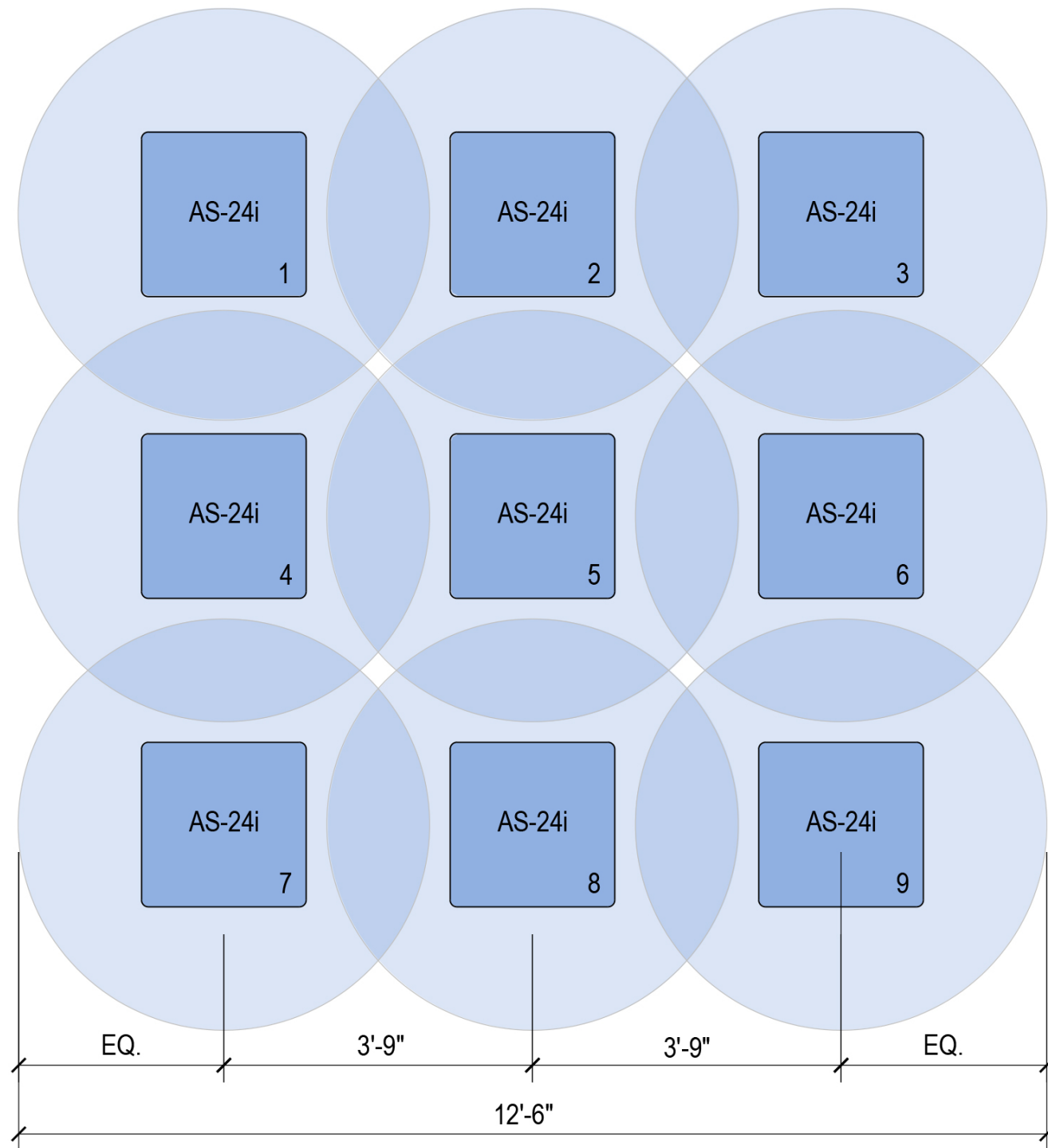
Nine audio spotlight speakers (as-24i), measuring 24 x 24” each, a technology developed by an MIT student and produced by Holosonics, will be installed with custom mounting kits on the ceiling overhang of the entrance of the building. An approximately 160 square foot area of the buildings entrance will be activated with 4 channels of 5-foot sound beam width. The sound experience can be singular or overlapping into layered sounds, depending on where the participant is standing. The sounds will be derived from the community engagement process, and might include testimonies, historical voices, and ambient sounds from the surrounding community.

INSTALLATION

One Diversified is the preferred installer of audio spotlight technology and will install the speaker systems. Using Penn’s lift, union installers will place speakers on the entrance threshold overhang and connect the data and power routing into the Level 1 head-in room, where a panel with a network switch and touch screen controls for both the projection and audio systems are located.



Audio Spotlight Installation Section Elevation



Audio Spotlight Layout Diagram and Speaker Detail

PROJECT MATERIALS AND INSTALLATION

OUTDOOR PERMANENT LARGE-SCALE PROJECTION

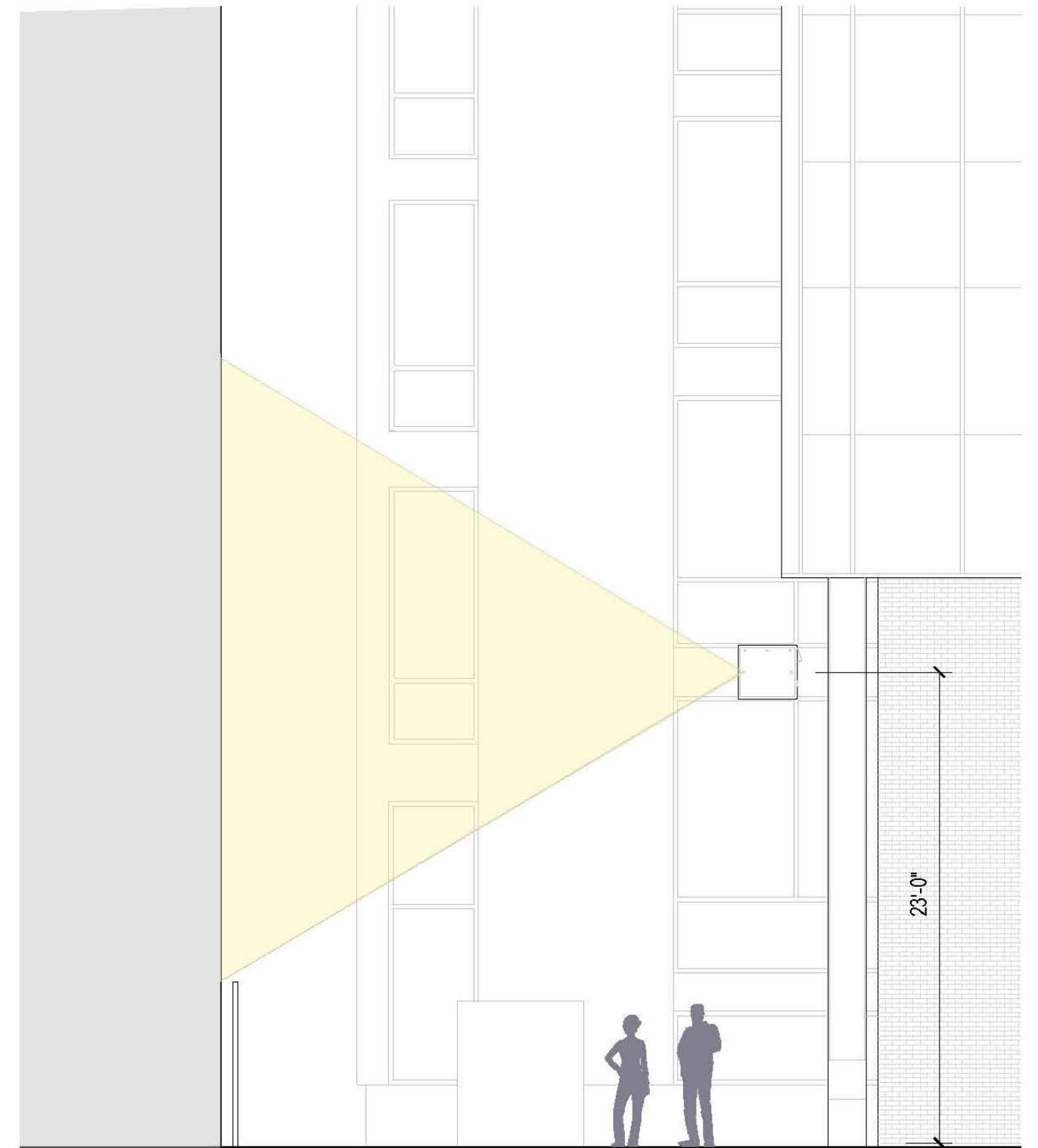
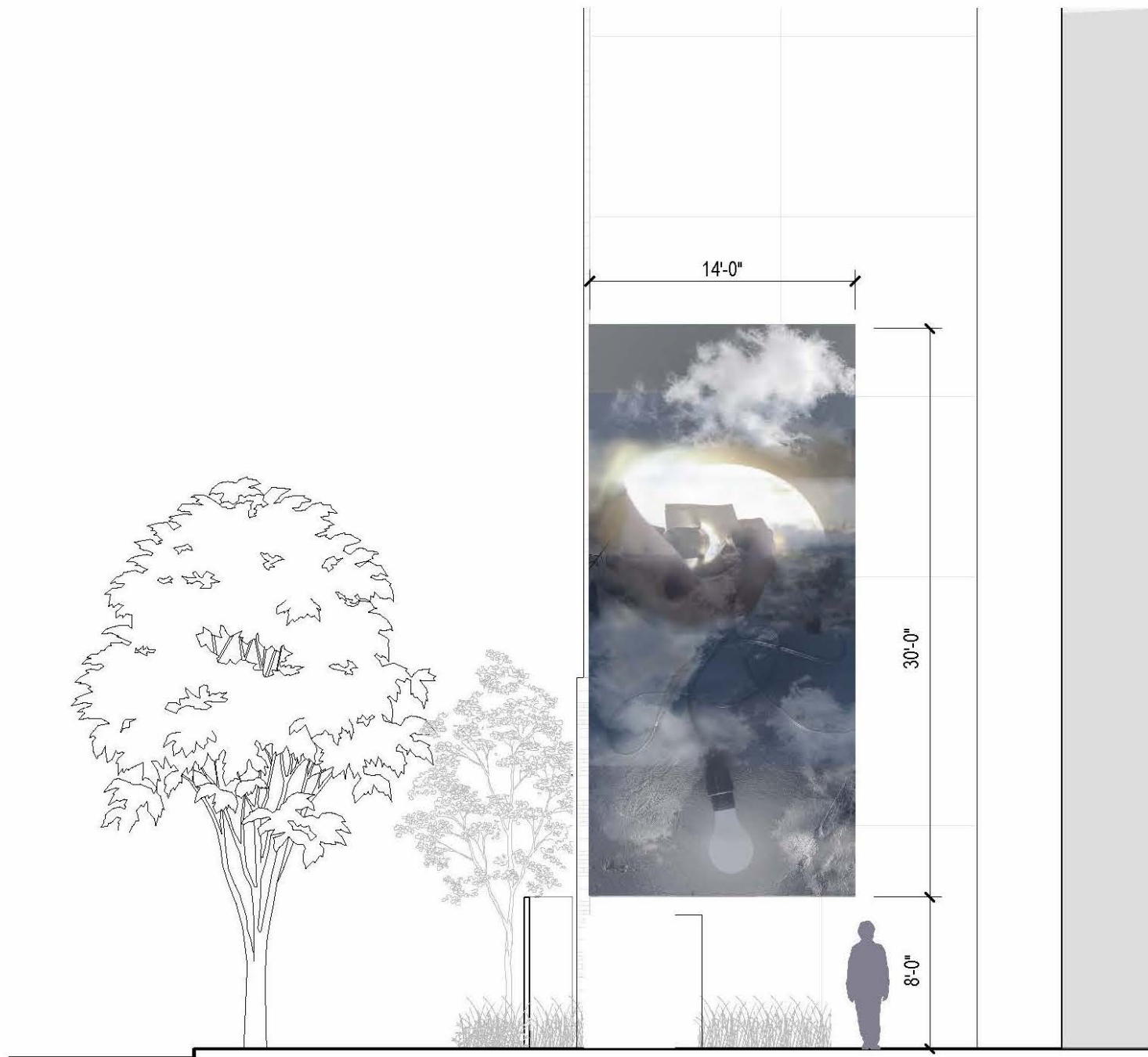
MATERIALS

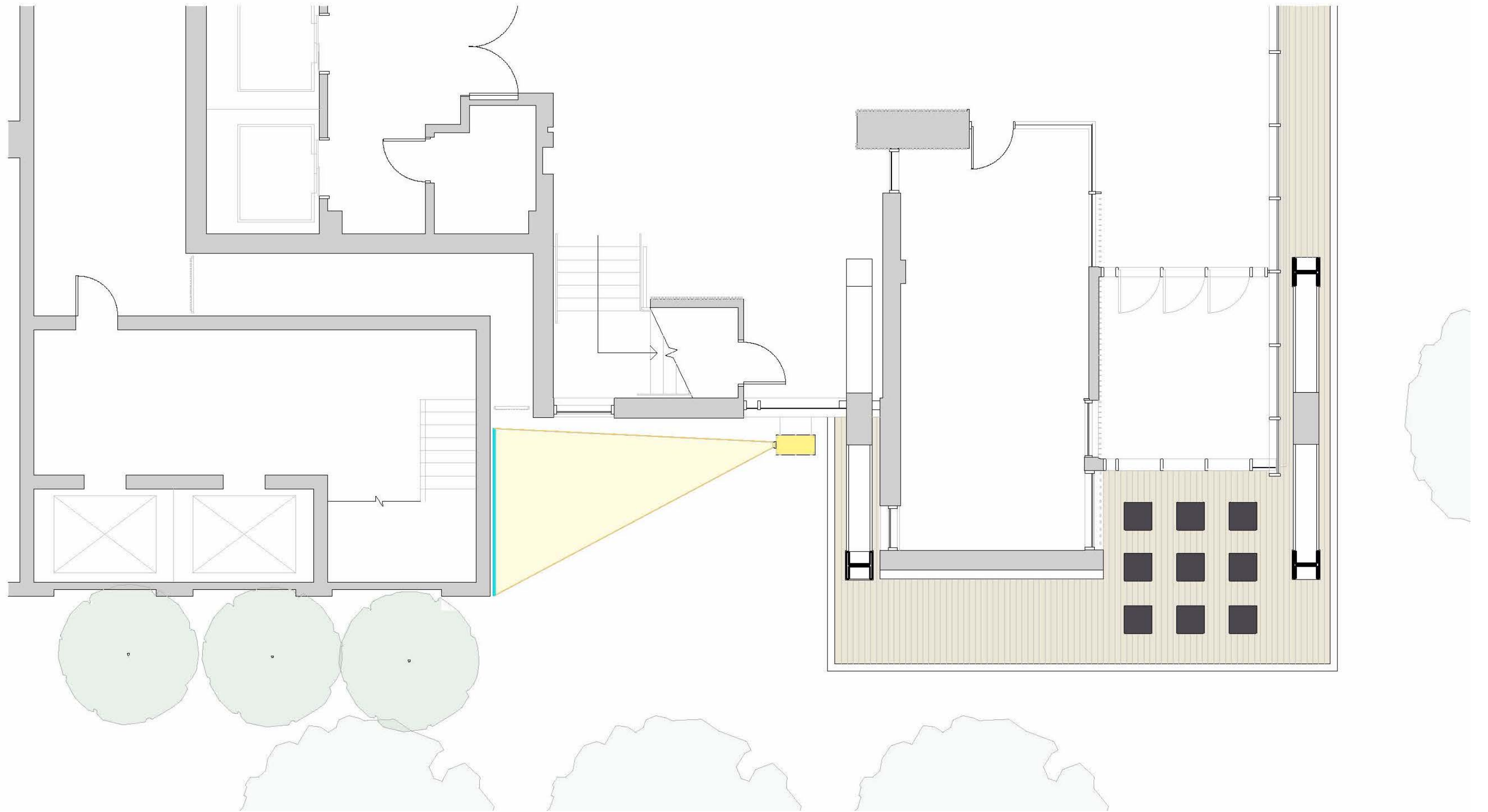
One PT-RZ21KU Series Panasonic Projector will be installed on a pole mount to throw a 30 x 14 foot projection on the bottom half of garage wall. The projected image will be based on the lead artists' community engagement process with the faculty and staff of the Data Sciences Department at Penn. The projector will be programmed to begin at twilight and end at 2 a.m. or agreed upon time with Penn.

INSTALLATION

Diversified will install projector and map the projection to the garage wall using a pole mount affixed to the recessed portion of the building.

Section Elevation of Outdoor Projection





Reflected Ceiling Plan



Projector and projector housing detail

ARTISTS BIOS

Laura Boles Faw and Summer Mei Ling Lee are exhibiting artists who met in 2009 and have been collaborating on a wide range of projects since 2016 addressing the universal human need for deeper connection. Both have executed public art projects in the United States and in China, and are currently working on projects in Europe. After Laura moved to Philadelphia several years ago, the two have more emphatically and yet poetically critiqued the effects of ever-quickening and often superficial technological communication through performative and often participatory projects and installations. They examine the aspirations and failures of technology to connect us, particularly weighted in 2020 during the pandemic and polarizing presidential election.

Summer Mei Ling Lee is a multi-media artist who graduated from Stanford University in 1997 and received her MFA in painting and sculpture from the San Francisco Art Institute in 2011. Recent exhibitions include Minnesota Street Project (San Francisco); Saatchi Gallery, London; Marqueyssac, France; Untitled Art Fair “Monuments;” Chinese Culture Center of San Francisco; SCOPE Miami Beach (Art Basel); Berliner Liste; Italian Institute of Culture; San Francisco Arts Commission; Yerba Buena Center for the Arts (San Francisco); Southern Exposure (San Francisco); Woman-Made Gallery (Chicago); and Fei Contemporary Art Center (Shanghai). Her recent public art installation, “Liminal Space/Crossings,” funded by the NEA Our Town Grant, was a finalist for the Robert E. Gard Award and the subject of a documentary film screened at CAAMfest 2018. Lee was recently interviewed and featured in Hyperallergic magazine for her installation Requiem, which pays homage to Hong Kong’s Tung Wah Hospital’s role in the repatriation of Chinese immigrant bones to China. Lee’s research on the bone boxes in Hong Kong and Taishan, China is featured in a documentary film, Requiem. Her work is in the permanent collection of the Berkeley Art Museum and He Xiangning Museum in Shenzhen, China.

Laura Boles Faw's work consists of investigations through sculptures, installations, drawings and mixed-media works. In addition to her solo practice, she collaborates with several artists through discursive and ongoing projects. In the winter of 2020/2021, Boles Faw completed a permanent public artwork in OH Bay Cultural Park in Shenzhen, China. She has recently exhibited in the Bay Area at [2nd floor projects], The Contemporary Jewish Museum, The Chinese Culture Center, Minnesota Street Project, Scrawl Center for Drawing, Meridian Gallery, MAX Occupancy, Alter Space Gallery, Kala Art Institute, Royal NoneSuch Gallery, Root Division, and Ever Gold Gallery. Additionally, she has exhibited at Ms. Barbers (Los Angeles); Practice Space (Cambridge, MA); Santa Cruz Museum of Art and History (Santa Cruz, CA); James Madison University (Harrisonburg, VA); and Vast Space Projects (Las Vegas, NV). Boles Faw was named the 2019 SBC-VCCA Teaching Fellow to teach at Sweet Briar College while in residency at the Virginia Center for the Creative Arts. She has also been in residence in LongLi, China where she was commissioned to make a permanent public work for the Second (Longli) International New Media Art Season, and at Kala Art Institute and LOOP Arts in the Bay Area. She is a recipient of a California Arts Council Artist Activating Communities Grant with the Chinese Culture Foundation of San Francisco. Boles Faw received a BA in Art History from Sewanee and an MFA in Sculpture from the San Francisco Art Institute where she held the position of Lecturer in the Sculpture Department from 2012-2018. Several years ago, she relocated from San Francisco to Philadelphia.

Josh Keller was born in the ferric blue-collar mountains of Western Pennsylvania. His unmistakably middle-class childhood was tempered by the sensibilities of this community that toiled at turning iron, limestone and coke into cold hard steel. The mill town values that emphasized a hard day's work and the production of the physical underpin Josh's creative practice.

In 1996 he received undergraduate degrees in architecture and science from Kent State University. He has worked for various architects in cities all over the world including Cleveland, Washington DC, Pittsburgh, Chicago, London

and San Francisco. For the last 20 years he has worked at Bohlin Cywinski Jackson where he has worked on a number of award winning projects including Newport Beach Civic Center, Apple Retail London, and Pixar Animation Headquarters.

In addition to architectural studies, Josh has a Masters of Fine Arts from the San Francisco Art Institute which makes him an ideal collaborator for public art projects. During his tenure at BCJ, he has collaborated with local arts commissions and artists such as Cerith Wyn Evans and James Carpenter to seamlessly integrate art into the built environment in a thoughtful manner.

Outside of these architectural related projects, Josh also maintains a modest studio art practice. His art work is idea and process driven. His work has been exhibited at the Toomey Tourell Galley, Headlands Center For the Arts, the DeYoung Museum, the Pittsburgh Chapter of the American Institute of Architects Gallery and is currently preparing for a November show at Eleanor Hardwood Gallery in San Francisco.

KEY PERSONNEL

Laura Boles Faw and Summer Mei Ling Lee, Lead artists

Josh Keller, RA, Josh Keller Architect

Heather Schact, Art Director, Quarra, NY and Wisconsin

Bryan Pass, Diversified, Philadelphia, PA

CONSERVATION AND MAINTENANCE

For the planter seating, stone is durable and easily treated for dirt and light vandalism in routine landscape maintenance.

The projector lamp life span is 20 - 25,000 hours. The projector would run dusk until 2 a.m. or agreed upon time with Penn.

The sound installation components have run for 25 years at 24/7 without replacement. The sound installation provider offers a buyback-exchange program, providing a 50% discount from MSRP for the return/exchange of any equivalent legacy model, regardless of the condition of the returns. Repair is less costly.

BUDGET

Category	Item	Description	Unit Price	Qty	Cost
Artist Fee					
	15% of Total Budget				\$106,875
Community Engagement					
	Grants for Partnering Community Organizations		\$10,000	x3	\$30,000
	Artist Travel, Workshop Materials, Per Diem, Documentation/Digital Catalog		\$7,500	x1	\$7,500
Final Design Development					
Video	Documentaiton for projector location, enclosure and mounting detail				
	Documentation for data and power requirements and routing to IDF on Level 1				
	Documentation for projection wall surface prep				
	Coordinate with suppliers as necessary				
Sound	Documentation for speaker location and mounting details				
	Coordination with other building systems on entry soffit (ie sprinklers, lights...)				
	Documentation for data and power routing to IDF on Level 1				
	Coordinate with suppliers as necessary				
Integrated Stone Seating	Document Stone Seating Insert for fabricator				
	Document alterations to metal planter				
	Document adjustments to planter water proofing				
	Document adjustments to floor finish				
	Document concete footer (if needed)				
	Document any changes to planting material (if needed)				
	Coordinate with fabricators as necessary				
Coordination w/ Design Team	Coordinate changes with project design team as necessary				\$33,000
Travel					
	Airfare	Laura, Summer, and Josh to Quarra Stone	\$325 round trip	x3	\$975
	Airfare	Summer from SFO to Philadelphia	\$400 round trip	x2	\$800
	Hotel	Philadelphia, PA	\$200/night x 3 rooms	x4	\$2,400
	Hotel	Madison, WI- Quarra Stone	\$200/night x 3 rooms	x2	\$1,200
	Car Rental	Madison, WI- Quarra Stone	\$96/day	x3	\$288
	Car Rental	Philadelphia	\$90/day	x7	\$630
	Per Diem		NA		

Category	Item	Description	Unit Price	Qty	Cost
Insurance					
	Commercial General Liability- \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. \$1,000,000 annual aggregate; automobile liability insurance	\$305/artist for two years	\$610	x2	\$1,220
	Workers' Compensation		NA		
Professional Consulting Fees					
	Josh Keller, Architect				\$5,000
Administrative Expenses					
	Shop Drawings				\$2,000
	Project Documentation (In progress and completed)				\$2,500
	Contract				\$600
Contingency					
	7% of project total				\$49,875
DIVERSIFIED LLC					
Audio Spotlight Sound Installation Equipment					
Audio	Holosonics AS-24i	2x2 ceiling speaker with narrow throw	\$1,525	x9	\$13,725
	QSC CORE 510i CTO	Integrated Core with eight I/O card slots, 256 x 256 networked audio channels, dual redundant media LAN ports, one Auxiliary LAN port, 16 configurable GPIO, 64 next-generation AEC processors, 2RU.	\$5,779	x1	\$5,779
High Definition Outdoor Projection Equipment					
Display	Panasonic PT-RZ21KU Projector	21,000 Lumens 3DLP Laser, WUXGA Resolution	\$40,499	x1	\$40,499
	Panasonic ET-D3LEU100 Lens	Zero-Offset Ust (0.37:1) For 3Dlp Projectors	\$16,000	x1	\$16,000
	Tempest 56.314.LXDUS	Tacit 314 Custom Landscape Enclosure / Front Load-In	\$25,000	x1	\$25,000
Video Transmitter/Receiver	Creston HD-TX-101-C-E	DM Lite – HDMI® over CATx Transmitter, Surface Mount	\$212	x1	\$212
	Creston HD-RX-101-C-E	DM Lite – HDMI® over CATx Receiver, Surface Mount	\$212	x1	\$212
Head-In for Projection and Sound Installation					
Control	One Diversified	Control System with Network switch	\$4,487	x1	\$4,487
	Creston TSW-1070-B-S	10.1 in. Wall Mount Touch Screen, Black Smooth	\$1,795	x1	\$1,795
	Creston CP4N	4-Series Control System	\$1,795	x1	\$1,795
Rack	One Diversified Equipment Rack		\$1,282	x1	\$1,282
Misc Materials	Installation materials		\$7,000	x1	\$7,000

Category	Item	Description	Unit Price	Qty	Cost
Professional and Administrative Services					
Professional Services	Engineering, Project Management, Programming, Union Installation, Field Engineering		\$70,000	x1	\$70,000
Travel and Expenses	Travel and Expenses Budget		\$611	x1	\$611
Transportation/Freight					
Freight	Freight		\$1,235	x1	\$1,235
Additional Installation Needs					
Lift	Penn's Telescopic Boom	Use of Penn lift for installation of speakers and projector	\$0		\$0
QUARRA STONE					
Integrated Stone Seating	Wisp Granite Stone Fabrication	Retrofitting of existing metal planters: cutting, reassembly and powder coating for a seamless finish Transportation of stone and metal planter to site Installation			\$277,765
LANDSCAPE MODIFICATIONS					
Additional Plants		Additional plants (Snowdrift Mountain Laurel, Mexican Heather Grass, Rose Fountain Grass or other) around stone seating inserts	\$30	x8	\$240
TOTAL					\$712,500

PROJECTED TIME SCHEDULE

FALL 2021 — Research Phase

- Workshops are conducted and a digital catalog is created.
- Artists develop community engagement material into the renderings of the three works (Text for planters, sound files for sound installation, and visuals and text for outdoor projector).
- Architect will develop renderings of project for Quarra and Diversified and Project Team. Artists consult and finalize shop drawings and material choice for stone seating.

SPRING 2022 - SUMMER 2022 — Fabrication Phase

- Artists make .5 model of the stone seating and submit to Quarra for 3D scanning.
- Quarra fabricates stone insert and integrates into planters.
- Artists ship metal planters to Quarra who will custom fit the stone seating into the planter and refinish.

SUMMER 2024 — Installation Phase

- Diversified install sound installation, and projector.
- Quarra delivers and installs stone seating and planter.