

Growing Grounds Nursery - Outdoor Plaza & Education Space

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This paper describes the planning, both design and financing, as well as the construction of an 800 square foot outdoor plaza area and education space. After six months of Planning and Fundraising, the scope of work included clearing and grubbing, relocation of irrigation lines, site grading and footing excavation, forming and pouring four architectural board form concrete benches and a planter, installing a perimeter French drain for site drainage, and installation of serpentine rock retaining walls, steel planters, a sail shade structure, outdoor string lights, a koi pond, and all significant landscaping. The author, over 100 volunteers, and various industry specialists completed 1,100 labor-hours over the course of five months to complete the construction. Design and Fundraising for the project occurred September 2017 to March 2018. Construction of the project commenced in April 2018 and continued until December 2018. This paper will focus on the process of obtaining funds, the evolution of the design, lessons learned, and how this knowledge will be applied to the construction industry.

Keywords: Construction, Landscaping, Architectural Concrete, Architectural Steel

Background

This project is located at Growing Grounds Nursery in San Luis Obispo, California. Growing Grounds Nursery is a part of Transitions Mental Health Association (TMHA), a functioning non-profit wholesale nursery that provides horticulture therapy, socialization opportunities, and soft job skills training for adults with severe and persistent mental illness. This new space will serve as the “heart of the nursery,” effectively being utilized as a break/gathering area for employees and volunteers, an education space for the community and a show area for customers.

In my first meeting with Director of the Nursery, Frank Ricceri, he expressed a need for “a center of the nursery.” At the time of this initial conversation, a large, unappealing and deteriorating deck sat in the middle of this area. This eyesore served as both a break room for the employees and a welcoming area for customers, however it left much to be desired. At this first meeting, I expressed to Frank my plans of graduating in the Fall of 2018. We both agreed to a completion date in December of 2018 and I requested his patience. I knew that planning; especially designing and fundraising, were going to constitute about 60% if of the project’s effort, which was challenging because these aspects of the project would show no physical progress.

Throughout the project, I relied on the advice of a number of professionals, including: Daniel Brekke with Brekke Brothers Construction, Matthew Yungert with Walker Warner Architects, Dan Knight with Dan Knight Construction & Plumbing, Mark Scott

with Hayward Lumber, Bruce Mercier with Cal Portland, Ryan Brekke with Pan Pacific Mechanical and Darwin Waite and Angel Leon with Simpson-Strong-Tie.

Fundraising and Design Process

Following our first meeting on September 26th 2017, I began working on the design process, which would take about three months. I met with employees of the Nursery on a bi-monthly basis to update them on my progress and to look for advice, critiques and User Input. Concurrently, I began looking at potential avenues for donations. Early on in the project, Bruce Mercier from Cal Portland pledged their support in anyway possible. This was a massive milestone in the project however, I was still challenged with the task of designing a space that I did not have a budget for and fundraising a budget for a space that was not designed.

Following the passing of the Trump administration's tax reform in late December, I found that the reform would sharply reduce the number of taxpayers that qualify for charitable tax deductions. This legislation resulted in removal of the middle classes incentive to donate to organizations like Growing Grounds. With 2018 quickly approaching, I jumped on the opportunity to inspire people to donate while they still had an incentive while the prior tax law was still in effect. Over the next two weeks over \$4,000 flowed in from donation request letters that I sent to friends and family. Following the New Year, another \$1,500 was raised.

At the beginning of Winter quarter, I began to seek material suppliers that would pledge support. I specifically stayed away from asking industry members or companies for their support I wanted the project to be solely about Growing Grounds and the community rather than the pending job opportunities I had acquired. Soon after this campaign, Hayward Lumber agreed to discount all purchases at cost plus 15%. This donation over the course of six months was priceless in value and established a relationship within the community. Soon after, Rental Depot agreed to donate equipment, Simpson Strong-Tie agreed to donate material, and Cal Pacific Electric, Dan Knight Construction, Paul's Concrete Pumping, and Brekke Brothers Construction all agreed to donate invaluable expertise and time.

Lastly, following the end of spring quarter, I sent a follow up project update to friends and family requesting that they forward it along within their respective networks. At this point, the project had become more than a vision; it was tangible, it had traction, and evidence to contradict disbelievers. This update along with a YouTube video produced by the department, created an influx of another \$2,000 in monetary donations and \$1,000 in material donations, which ultimately allowed the project to reach the finish line.

In conclusion, in the real world, an Owner comes in with a Budget, the Designer designs a space within that budget, and the Builder builds that space per the design and within the budget. I truly believe my process of designing, building, and securing funds concurrently, although highly stressful, ultimately delivered the best space and best value for the client.

Construction Process

Construction began with the demolition of the existing deck structure on, April 13, 2018. Following this, we cleared and grubbed the entire 1,000 square foot site in preparation for site work. Over the following months, six existing irrigation lines and ten existing electrical lines that ran through the center of the site at a depth not up to code were removed and relocated around the site. After the Underground was completed, approximately one month into the project, on May 11th I acquired a mini-excavator for one day of operation. Only having the Mini Ex for a day made it pivotal that all Excavation and Grading was complete that day. The site sloped 2.5 feet over the 45' diagonal. Working in tandem with the Mini Ex and a 1.5-yard Front Loader Tractor, we moved 25 cubic yards of earth in nine and a half hours. On the weekend of May 26th - May 28th, we built four architectural board form benches and one planter that would retain 13.5 cubic yards of concrete. The following week I spent bracing the forms, lining the planter form with cast in place lettering, and completing rebar in preparation for our pour date set on June 8th.

On June 8th, 12 volunteers came out, including Paul Warner from Paul's Concrete Pumping and Dan Knight from Dan Knight Construction & Plumbing to pour the 13.5 yards of colored architectural concrete donated by Cal Portland. Upon completion of the pour, the CM department sent out a crew to film the project for the Department's YouTube account. This video ended up being instrumental in obtaining more funding to complete the project. In the following week, I stripped and cleaned all the forms and sack and patched any flaws in the concrete to prepare the site for my three month long hiatus.

Over the summer I secured \$2,000 in monetary donations as well as a substantial \$1,000 material donation of Ipe wood to be used for the bench caps. Upon returning to SLO in September, I hit the ground running working Monday, Friday, and Saturday every week for eight weeks. I built the serpentine retaining rock walls, installed the French drain, and back filled the walls. I fabricated and installed the mild steel planters, step, and Koi pond. Lastly, I graded and compacted the decomposed granite to the final grade, built the Ipe wood benches, then erected the trellises, the shade structure, and the stringed lights. We finished off the project with the final landscaping on December 6th 2018, hours before our deadline of December 7th.

Final Deliverables

The final deliverable has been delivered to the client on the agreed upon completion date. The 800 square foot space includes all the amenities discussed throughout the course of the design. On December 7th, an unveiling ceremony occurred with TMHA board members, office workers, and Growing Grounds employees. On December 8th a BBQ was held in the space for all volunteers and donors of the project.

New Knowledge and Lessons Learned

This project has taught me countless lessons about how to be better builder, manager, student, community member and human. The lessons I have learned and relationships I have built throughout this project will follow me into the industry and into my future.

In regards to tangible lessons, this project allowed me to develop countless skills. With a learn by doing approach, I applied in practice every aspect of design, management, and craftsmanship. I am confident in saying that I am a better construction manager and future member of the industry because of the experience I obtained through this project.

In relation to industry lessons, I learned the importance of cross checking peoples' statements before making significant decisions. During the underground phase of the project, I met with the manager of the nursery to review my plans to trench through the roadway. He assured me that my proposed areas were clear for excavation. That Saturday I was onsite, alone, with a ditch witch (a massive chainsaw that connects to a walk behind front loader that trenches) when I was cutting my lines and I ripped up a thick black electrical wire. The transformer on the street power line sparked and tripped the breaker. I was told that the funds to replace the electrical breaker were to come out of my budget for the project but I indicated that this is not my expense, since I completed the appropriate due diligence. This taught me how critical thorough due diligence is and when it is appropriate to advocate for my interests.

The most important thing I learned is the importance of giving back and inherently the return pushing forth. When I was growing up, my mom led the development of seven community-based health centers at underprivileged schools in Oakland. My dad, during the recession, led a community volunteer effort to build a baseball field for my high school. Needless to say, I come from a family that prides itself on making the world a better place. Their acts are priceless; these acts are stones dropped in a lake that cause ripples. These ripples change lives and cause more ripples. If anything, I hope my project can cause ripples to effect change, to build progress and to make a difference. I did not set out with these intentions. I set out with the goal to deliver a project for Growing Grounds. However, over the course of this project, seeing over 100 volunteers give time and thousands of spectators pass by the site, I have learned that even I can effect change and I hope this project continues to do exactly that.

Carrying the Knowledge into the Industry

All in all, this senior project has provided me with countless lessons and a priceless experience. I now understand the evolution of a project and the necessity to challenge the design to deliver the best possible product.

I believe this project allowed me to step into multiple crafts and gain an appreciation for each. If anything, I understand it takes a team to build a project, a team with leadership, but a team nonetheless.