



## **AUGUST 2014 WORKSHOP**

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The Boulevard House

I am a second year urban planning student at the Taubman College of Architecture and Urban Planning. Last year, I signed up for a welding workshop offered by Taubman College, led by Mick Kennedy, a professor in architecture. Eager to learn more, I created an independent study led by Mick so that I could continue to weld regularly and work on a project.

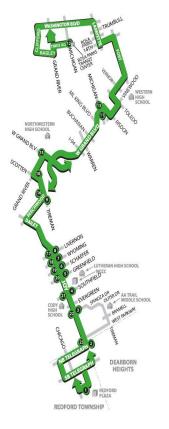
Our focus for the independent study was a welding project in Detroit. Mick told me about The Boulevard House, a space for campus-community collaborative work at 412 West Grand Boulevard in Southwest Detroit; managed by People's Community Services, The University of Michigan School of Social Work, and El Museo del Norte. I decided that I would, through welding, create something for The Boulevard House.

I knew that I wanted to teach welding to others, especially women, so when I heard about the REI grant I immediately applied. I learned in late April that I was a grant recipient, and also found out that very same day that I was a Brademas Fellow and would work at Southwest Detroit Environmental Vision. This meant working over 60 hours per week on both projects, but I knew with enough planning and support I could accomplish my goal of creating this program.

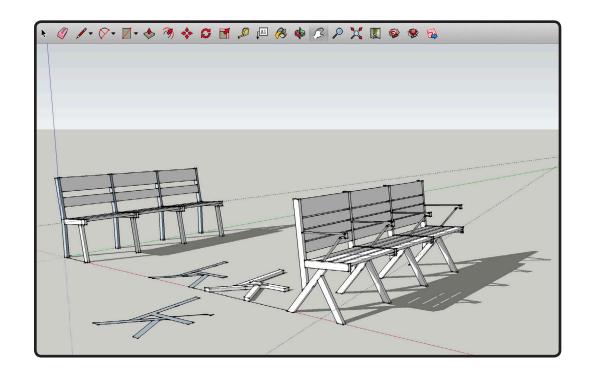
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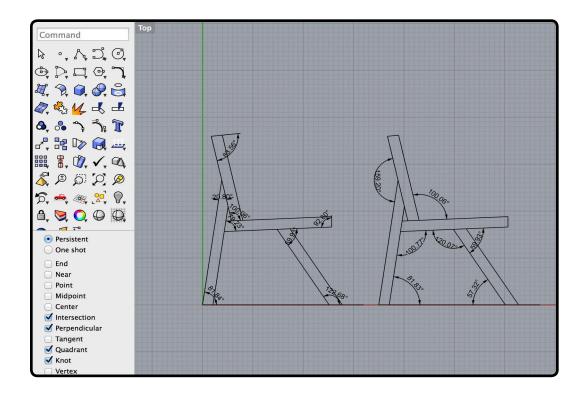
Top Image: The Boulevard House Bus Stop Left Image: The bus stop's route, Route 27 Joy Road

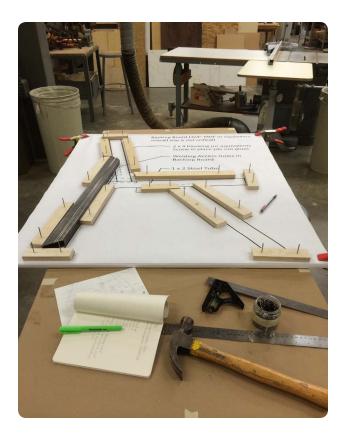


In early May, Mick and I visited Maria Cotera, co-founder of El Museo del Norte at The Boulevard House. I told Maria about my welding workshop and how I wanted to create something useful for the space. There is an active bus stop in front of the house with nowhere for people to comfortably wait for the bus, so I proposed creating a bus bench. Maria loved the idea as she often saw people waiting for long periods of time with no place to sit.



Top Image: Bench drawing in SketchUp Bottom Image: Bench drawing in Rhino







Mick and I designed the bench in SketchUp and Rhino. We also constructed a jig (pictured above), a hand built custom framework for assembling the frame of the bench which allows for replication and accuracy. I measured and precut the steel to eventually be welded together, planned the schedule for the weeklong workshop, and conducted outreach for food sponsors and site visits. The workshop is a mix of learning how to weld and how to network with local organizations that are hiring or offering career training.



Disenos Ornamental Iron

The grant awarded me \$2,500 to run the workshop, so in order to help extend the funds, I sought donations. Carhartt provided flame resistant welding apparel, lunch was donated from local businesses, and Disenos Ornamental Iron - an ironwork fabrication company in Southwest Detroit - allowed us to use their space and equipment, and assisted us during the workshop.



Coalition on Temporary Shelter

Through my fellowship at Southwest Detroit Environmental Vision, I met Audra Carson of De-tread. Audra helped me to push my ideas into action. Audra also put me in touch with Delphia Simmons, a staff member at COTS, the Coalition on Temporary Shelter in Midtown Detroit. Delphia organized a meeting with several women interested in participating in my welding workshop.

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#### RELEASE AND WAIVER OF LIABILITY AGREEMENT

("Participant"), acknowledge that I have voluntarily applied to participate in the following activities at ("Organization") welding, polishing metal, drilling into metal, and cutting metal, concrete pouring, and cutting wood, drilling wood, and lifting materials

I understand that there are certain risks of injury inherent in welding, metalworking, concrete pouring, and woodshop, as well as in traveling and other related activities incidental to my participation, and I am willing to assume these risks. I hereby certify that I am fully capable of participating in the welding, woodshop, and concrete pouring program and that I am healthy and have no physical or mental disabilities or infirmities that would restrict full participation in these activities, except as listed below.

In addition to giving my full consent for my participation, I do hereby waive, release and hold harmless the organization named below, its officers, sponsors, supervisors, and representatives for any injury that may be suffered by myself in the normal course of participation in the designated workshop and the activities incidental thereto, whether the result of negligence or any other cause.

I HAVE CAREFULLY READ THIS AGREEMENT AND FULLY UNDERSTAND ITS CONTENTS, I AM AWARE THAT THIS IS A RELEASE OF LIABILITY AND A CONTRACT BETWEEN MYSELF AND THE ORGANIZATION, AND SIGN IT OF MY OWN FREE WILL.

## PARTICIPANT/RELEASOR: Full Legal Name (printed): Street Address: List any physical limitations (hearing, sight, allergies, etc.):

#### MIG WELDING GUIDE

#### Step 1: Background



This is a basic guide on how to weld using a metal mert gas (MIG) welder. MIG welding is the awesome process of using electricity to melt and join pieces of metal together. MIG welding is sometimes referred to as the "hot glue gum" of the welding world and is generally regarded as one of the easiest type of welding to learn.

MIG welding was developed in the 1940s and 70 years later the general principle is still very much the same. MIG welding uses an arc of electricity to create a short circuit between a continuously fed anode (+ the wire-fed welding gun) and a cathode ( - the metal being welded).

The heat produced by the short circuit, along with a non-reactive (hence inert) gas locally melts the metal and allows them to mix together. Once the heat is removed, the metal begins to cool and solidify, and forms a new piece of fused metal.

A few years ago the full name - M (GMAW), but we can call it MIG. Metal Inert Gas (MIG) welding was changed to Gas Metal Arc Welding

MIG welding is useful because you can use it to weld many different types of metals: carbon steel, stainless steel, aluminum, magnesium, copper, nickel, silicon bronze and other alloys

Here are some advantages to MIG welding:

- The ability to join a wide range of metals and thicknesses
- All-position welding capability
- A good weld bead A minimum of wel
- Easy to learn

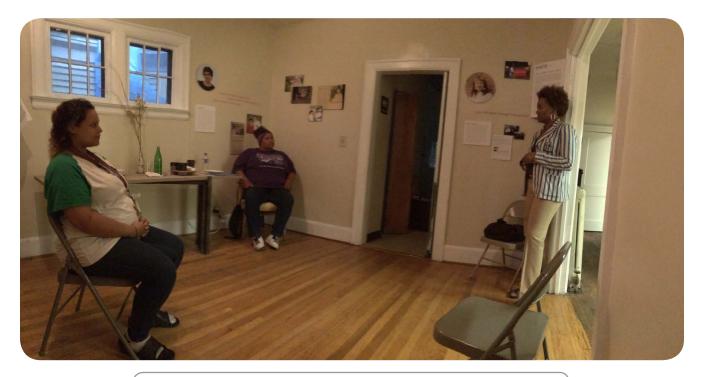
Here are some disadvantages of MIG welding:

- MIG welding can only be used on thin to medium thick metals
- The use of an inert gas makes this type of welding less portable than arc welding which requires no external source of shielding gas
- Produces a somewhat sloppier and less controlled weld as compared to TIG (Tungsten Inert Gas Welding)

For several weeks leading up to the workshop, I held a weekly Friday meeting at COTS. Six women attended the first meeting. At this meeting I introduced myself and the project, explained welding, handed out a copy of the workshop schedule, distributed two recent news articles on the need for skilled laborers, and stressed that attendance for all 4 days of the workshop from 9am to 3pm would be necessary. I would provide transportation, lunch, and safety equipment, and they would need to be on time, listen to instructions, and ready to learn.

Four of the 6 women from the first meeting attended the second meeting. We discussed potential site visits, and I distributed a welding guide I had put together and a waiver stating that Disenos would not be held liable for any injuries. I also provided two resume samples and asked that they come with a resume on the first day of the workshop. If they did not have a resume, I would help them create one to deliver to HR or the staffing arm of the organizations we were visiting.

On the third and final meeting, only 3 of the 4 women attended. One of the women interested in the workshop, Shanitha, had to drop out because she was offered a job at The Empowerment Plan, a Detroit non-profit that hires previously homeless women to fabricate sleepingbag coats for the homeless. I had told Shanitha about The Empowerment Plan in our previous meeting and was pleased to hear she had found employment with them.



From left to right: Daniela, EOnka, and Audra at The Boulevard House

On the first day of the workshop, two of the women, EOnka and Daniela, showed up, but the third was not present and unreachable. It's difficult to get people to commit to a pilot workshop, with no compensation or guaranteed job in the end, and embarking on something new and challenging.

After picking up Daniela and EOnka from COTS, we went to The Boulevard House to check out the bus stop and chat over coffee and bagels.

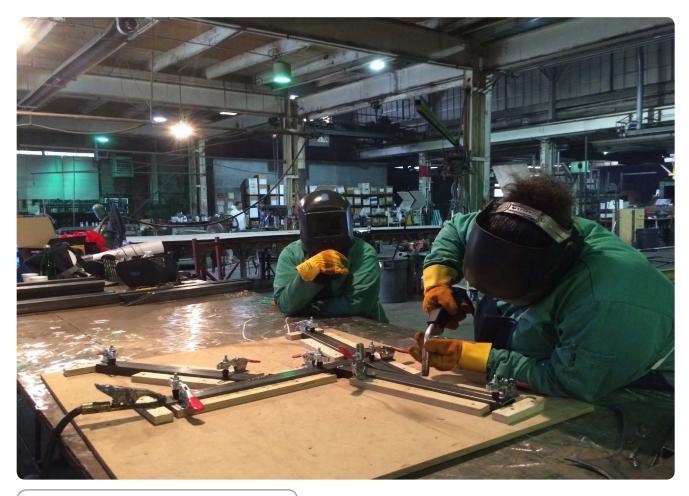
Audra stopped by The Boulevard House to discuss her transition from a corporate job at Blue Cross Blue Shield to creating her own business and working with and helping her community. The women enjoyed learning from and speaking with Audra and felt inspired and motivated to take on welding.



Daniela and EOnka

Daniela is a 21-year-old wonderful mother of two who is expecting another in November. Daniela lives in Detroit and works the evening shift at Happy's Pizza in Ypsilanti. The low pay, long commute, and inconvenient hours impede her ability to save money. Daniela recently completed her GED and wants to be a strong role model for her children. She joined the welding workshop because she wants to gain experience and create a resume. Daniela is interested in participating in a plumbing program being offered this fall. It's a 5-year apprenticeship led by the first female master plumber. During the apprenticeship, you work part-time and earn a plumbers certificate and associates degree.

EOnka is 45 years old, she moved to Detroit 25 years ago from New Orleans. EOnka works part time as a janitor, but due to a decrease in hours she found herself unable to pay rent and had to seek temporary shelter at COTS. EOnka joined the welding workshop because she wants to gain a new skill and make her resume more attractive. She is interested in working for Rebel Nell, a jewelry company.



Daniela and EOnka placing steel in the jig

After lunch, we went to Disenos and received a tour of their workspace. We reviewed safety precautions and I gave a welding demonstration. EOnka and Daniela both did an excellent job welding and were excited to start working on the bench the next day.

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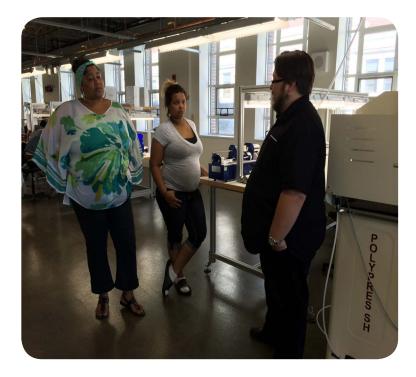


Daniela and EOnka welding



Daniela and EOnka modifying the jig

Day 2 of the workshop was devoted to welding the bench frame at Disenos; we were able to complete three of the four frames of the bench.



Getting a full tour of the Shinola facility



Touring the dustfree watch assembly room at Shinola

On day 3, we received an extensive tour of Shinola's headquarters in New Center. Shinola is a Detroit-based company founded in 2011 and produces handcrafted watches, bicycles, and leather goods. Shinola is hiring for multiple positions that pay above minimum wage but do not require any prior experience. Daniela and EOnka were able to speak with the HR director and submit their resumes directly to her.



Getting a tour of the Focus: HOPE facility

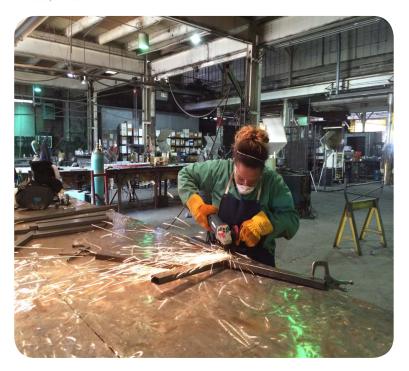


Learning about Focus:HOPE's Machinist program

Afterward we visited Focus: HOPE to learn more about their career training programs in machinery, information technology, engineering, and computer classes. Since 1981, these free programs have trained 12,000 men and women who have established careers that pay sustainable wages.



Photo by Jim Wes



The Empowerment Plan facility

Daniela grinding the bench frame

Day 4 started with a visit to The Empowerment Plan, we received a tour of their workspace and learned more about their product and objectives. Afterward we finished welding the last frame, grinded each weld on each frame, and welded brackets to hold the bench seat and backrest.



The Architectural Salvage Warehouse



Applying spar urethane to the reclaimed wood

The bench seat and backrest are made of reclaimed wood from The Architectural Salvage Warehouse, a non-profit in Detroit that keeps building materials out of landfills through architectural salvage. The wood cost a bit more than purchasing from Home Depot, but I wanted to reuse material of a higher quality. The wood was from the studs of a home recently deconstructed on Carpenter Street in Detroit. We applied a clear coat of spar urethane on each piece of wood. It forms a protective barrier against rain and moisture and contains UV blockers to reduce fading from the sun.





Finished bench frames

Finished seat (one of three)

The last day of the workshop was bittersweet. We had fun working together and worked hard building the bus bench. I gave Daniela and EOnka certificates of completion and recommendation letters. We also sent thank you notes to all who helped us out. The completed bench has three seats and is just under 6 feet long. It will be fully assembled on site at The Boulevard House and cemented into the ground at the end of October.

EOnka expressed interest in working at Rebel Nell while speaking with a staff member at The Empowerment Plan. The staff member said that she knew the women running Rebel Nell and would reach out to them. Because of her experience in welding, EOnka was contacted by Rebel Nell for an interview. Delphia and I are working together to get Daniela into the plumbing apprenticeship program this fall.

The workshop wasn't necessarily about becoming a certified welder but about building confidence and exposing yourself to new things. The workshop served as a catalyst to network with others and learn of new opportunities. It also helped us to gain skills, create relationships, and increase our professional and social reach.

SUPPLIES	\$485.59
GAS (1,100 MILES)	\$155.12
155 HOURS (\$12/HR)	\$1,860.00
TOTAL	\$2,500.71

To stay on budget, I kept a running spreadsheet of all expenditures. Expenses for materials and supplies came to \$485; I drove 1,100 miles and spent \$155 on gas; I worked 155 hours, paying myself \$12 per hour.

# THANK YOU!

### A big thank you to our sponsors and supporters!

Architectural Salvage Warehouse, Audra Carson, Carhartt, Coalition on Temporary Shelter, Daniela Hagen, Delphia Simmons, Detroit Institute of Bagels, The Empowerment Plan, Eonka Payton, Focus: HOPE, Great Lakes Coffee, Honey Bee Market, Nieves Arzola and the rest of the crew at Diseños Ornamental Iron, Mick Kennedy, Mudgie's, Nick Tobier, REI Center at Michigan State University, Shinola, Slow's, and The Workshop.

