



Mchugh Carroll Selected Works, 2019 - 2022

This past year with Americorps and Verde Valley Habitat for Humanity there was a ton of work done but most of it doesn't really belong in a portfolio. However, here are a few photos from volunteer work days I either participated in or lead. Your time reading this means the world, thank you and enjoy.









MCHUGH CARROLL +1 773 562 6481

maccarroll55@gmail.com

EXPERIENCE

Americorps VISTA with Verde Valley Habitat for Humanity

Construction Management Planner | Jun 2021 - Sep 2022 -Evaluated, planned & lead 9 home repair projects with volunteers while streamlining the home repair application process.

-Facilitated Construction Committee meetings with local professionals.

-Managed 60x60 modular office project through building move.

-Solicited bids & developed a budget for 1 new home construction.

-Trained replacement Construction Manager & created a 20 page sustainability binder to be handed down.

President's Commission on Carbon Neutrality

Building Standards Team Member | Oct 2020 - May 2021

-Helped develop a plan for U of M buildings to reach carbon neutrality.

Investigated standards across peer institutions.

-Researched potential of current LEED standards.

-Consulted with other analysis teams to design a revolving energy fund.

Wiss, Janney, Elstner Associates, Inc

Architecture Intern | Jun - Aug 2019

-Prepared construction documents for consulting during facade anchor & water testing projects. Performed anchor & water testing.

-Performed THERM analysis for condensation & thermal bridging issues.

-Performed Facade Critical on AON Tower, inspections on Marshall Field.

-Documented historic farmsteads in Manhattan-Monee, IL.

Illinois Solar Decathlon

Architecture Team Member | 2016-2018

-Participated in DOE Race to Zero Competition & Solar Decathlon China (SDC). -Worked on landscape designs & central Revit model.

-Spent six weeks in DeZhou, China to build the project & presented to architecture & engineering juries during the competition period.

CMMR Development, LLC

Architecture Intern | 2017 - Present

-Composed construction drawings for single family home renovations.

-Documented existing conditions in the field, measuring and drawing.

-Prepared schematic designs & presentations for clients including interior & exterior renderings for small commercial projects.

-Negotiated simple & straightforward design solutions for projects with small size & budget.

University of Michigan Adventure Leadership (Canceled due to COVID) Jun - Aug 2020

-Outdoor trip & team leadership, team building workshops.

EDUCATION

Master of Architecture 2021 University of Michigan, Ann Arbor (U of M) Bachelor of Science in Architectural Studies 2019 University of Illinois at Urbana-Champaign (UIUC) 2015-2018 Illinois Architecture Abroad -Barcelona El Vallés (IASAP-BV) 2018-2019

VOLUNTEERING & ORGANIZATIONS

Verde Valley Habitat for Humanity 2021-2022 Cottonwood Toastmasters International 2021-2022 Taubman College Core Compact Group 2020 Student Representative for IASAP-BV 2018-2019 USGBC Greenbuild Boston Volunteer 2017 Adler Planetarium Volunteer 2013-2018 UIUC Climbing Club Vice President 2017-2018 UIUC Climbing Club member 2015-2018 UIUC Campus Bike Project 2015-2017

AWARDS, TALKS & COMPETITIONS

HUD Innovation in Affordable Housing, Finalist 2021 Panelist U of M Earthfest 2020 Longo Competition, First Place 2020 Taubman Scholar Award 2019-2021 AISC Scholarship 2019 George Pullman Scholar 2015-2019 James Scholar UIUC 2015-2019 William B. Bauhs Scholarship 2018 I4I Study Abroad Scholarship 2018 Michael McCarthy Architecture Scholar 2017, 2018

CERTIFICATIONS

NOLS Wilderness First Responder Exp Nov 2023 OSHA 10 Hour Iss 2019 WJE Suspended Scaffolding Use and Rigging Iss 2019

SKILLS

	Beginner	Advanced	Exper
Autocad			
Revit			
Rhino			
Sketchup			
Grasshopper			
Honevbee/Therm			
Vrav			
Lumion			
Adobe CS			
Photoshop			
InDesian			
Illustrator			
Premiere			
Trefficie			
OGIS			
Google App Script			
Dubyle App Script			
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Contents

OVER THE GARDENS BAR	3
Housing - Multifamily	
BARCELONA MUSIC SCHOOL	
Civic - School	
LONE LIGHT	
Housing - Group	
CLASS COOP	27
Housing - ADUs	
THEATER OF REFUGE	33
Civic - Theater	
EL COLECTIVO DEL TULE	
Housing - Multifamily	
NICKY'S OF BEVERLY	
Commercial - Restaurant	
VIRTUAL MUSIC ENSEMBLE TECHNOLOGIES	
Branding	



OVER THE GARDEN'S BAR

Housing - Multifamily Detroit, Michigan Graduate - 3rd Semester Studio, Fall 2020 Adrian DiCorato, Liyah George and Gary Zhang

Focusing on shared ownership, Over the Garden's Bar offers an opportunity to attract a diverse economic population through the commoning of resources. The project suggests a living situation insulated from property speculation where land is owned by the residents and residents help fabricate their built environment—offering opportunities for better relations between diverse residents. The project also aims to balance financing and encourages shared commercial ownership operations to offer revenue generation opportunities in the face of another period of growth in Islandview.

Located at the intersection between East Grand Boulevard and Jefferson Avenue, the close proximity of the site to Downtown Detroit and the riverfront makes it a valuable place for economic growth. This makes the site more susceptible to transformational change as there are more opportunities for increased rents and speculators have more chances to acquire property.

Commoning offers an alternative in this framework. It suggests a living situation insulated from property speculation—where land is owned and developed by residents—offering opportunities for better relations between diverse residents. Over the Garden's Bar offers a sense of community by blurring the boundaries between public and private and encourages a sense of collective creation.





Detroit has been faced with the problem of vacancy since its economic downfall in the early 70's Responding to the adjacent SOM development along the riverfront, the edge of the site along Jefferson has an 8-story high rise residential tower. Behind the tower is a 3-story low-rise. On the ground plane the street edge along Jefferson hosts the major commercial components of the site. The cafes and grocery stores bring life to a street creating an active urban condition. As one moves into Grand Boulevard Street, the program gradually becomes more private.

The goal of the massing in the 'village typology' was to create a level of porosity and permeability of built mass, terrace, and landscape that could support the various activities of a small scale entrepreneurial neighborhood and community living.









11



CONGRESS STREET FACADE









ISLE TOWER SECTION AT WINTER GARDENS







UNIT TYPOLOGIES IN VILLA



Building on the narrative of economic diversity, the project proposes a wide socio-economic offering for housing. The project proposes 3 typologies the studio unit, the family unit (1-bed to 4bed unit typologies for families), and co-living units where 6-8 individuals share common living and kitchen spaces. The variants occur across both the village and the tower. This offer residents the option to choose a style of living based on their financial capability and need.

The project revolves around the use of interstitial space and community landscapes. The common spaces occur as winter gardens in the tower, terrace gardens, and interior gardens in the 'village.



VILLA COMMUNE



1-BED FAMILY UNIT **788 sqf** VILLA COMMUNE



STUDIO UNIT 600 sqf ISLE TOWER









BARCELONA MUSIC SCHOOL

Civic - School Barcelona, Spain Undergraduate - Senior 2nd Semester Studio, Spring 2019 *Individual*

Music is part of the daily beat for most people, even if they are not attending a school to practice it. It is consumed through the radio, our Bluetooth speakers and even the rare but evocative personal experience. Listening to music via headphones shares many of the same qualities we often set for our architecture. With headphones, person is able to listen to the music of their choice but still interact with the public, walking down the street or completing some work. They are respectful of the surroundings, generally not too loud to disturb their neighbors. It can sometimes even feel like a soundtrack to our own lives, impacting our feelings and moods. All of these similarities are inspiration for the Music School.

Done well, higher education institutions can provide resources to a community. The music school hopes to do this by splitting the classrooms with the practice rooms, located on the upper floors of the east wing of the building. The rooms can remain open independent of the rest of the school. In addition, all of the lot coverage that isn't allowed to be built on due to FAR restrictions is given back to the street and the public.





Design iterations start with Gaudi-esque forms and continued into a more modest facade that fits better in the neighborhood and surroundings. Axon sketching and parti diagrams helped determine elements like the divided public and private spaces in the building and the bridge between the two. It helped orient the corner of the building to the corner of the site, placing the bridge and passageway there to emphasize this.

Design development of the section helped inform the final design of the grade change between the school first floor and the cafe first floor (private for students and public). The plans keep some of the organic shapes from the elevations for fun.





CARRER D'ALABA VIEW









Jer AND ITOET









The site is located in the Poble Nou neighborhood of Barcelona, an area that was originally developed by textile industries but since the 1992 Olympics has transitioned to mostly apartments. It lies in Cerda's planned portion of the city, accounting for the regular city blocks as seen in the nolli diagram below and is a short walk from the Mediterranean. It is only about a 20 minute walk from other major music sites in Barcelona, l'Auditori and Escola Superior de Música de Catalunya.

Ground floor program includes a cafe open to the public and intended to bring in revenue for the school, small library for students and the public, a small street facing performance patio/sitting area and a much larger sunken performance patio/sitting area.











TIRSTFLOOR PLAN

⁽²⁾ FOURTH FLOOR PLAN





3 1:100 0 1 2 3 4 5m





While schools are intended to be for students, they must also be for the community as a whole. The communities often fund the schools and the schools can provide resources and support for the community that would be unavailable elsewhere. In terms of the music school, the practice rooms and library would be part of the resource sharing, and the outside space would be open to the public for concerts, seating and events.

The building maintains a height similar to the rest of the block, and mimics some of the other facade, while not copying. The roofline allows transom windows in the practice rooms at the top floor and higher ceilings in the office spaces, and reflects one of the buildings nearby.





CARRER D'ALABA ELEVATION





SECTION 1-1 1:100 0 1m 2m 3m 4m 5m





STANDING SEAM SLATE ROOF WITH INTEGRATED GUTTER







The courtyard/large outdoor stage space has a few functions. It offers stage/ performance space OUTDOORS in the year round fair-weather Mediterranean climate of Barcelona. Provides light to the other side of the school without threat of another building being built in its spot. And it tries to bring anyone passing by on the street into the building.

The structure is similar to many other institutional buildings in the vicinity, reinforced concrete beams and floor slabs with a curtain wall facade. This would provide the moderately long spans necessary for classrooms while at the same time allowing a high performance thermally broken envelope. The materials are readily available in the vicinity and construction techniques are well-known by local contractors. Columns would be used in the lower floors to free up additional open space.







Housing - Group Pelliston, MI Graduate - 2nd Semester Studio, Spring 2020 *Jaime Lee*

The University of Michigan Biological Station (UMBS) is located in Pellston Michigan on land that was acquired from logging companies after it had been deforested. It's 10,000 acres of forests have since grown back but research continues on the lasting impacts of this human action.

The Lone Light Studio was tasked with creating a building for research and living for the scientists, while paying attention to lighting (sun, moon, artificial) and the impact of the building on the landscape. Design studio individuals partnered with a student from the Digital and Materials Technologies (DMT) degree at the school to exchange ideas and potentially work together.



























The project looked at all options of lighting before resorting to artificial electric light. Sunlight would be the most common, but moonlight and campfires/wood stoves add a pleasant change that still can illuminate the space. Red light would still be artificial, but it would be less straining to the residents' eyes.

The light studies above helped informed the final design of a large main window behind which many of the day activities could be completed. It provides daylight to the kitchen, living room and lab. The bedroom only receives some of the light from the slot window in the early morning light, helping to keep it dark and offer a chance to fall back into our original day-night routines away from artificial light.







FIRST FLOOR PLAN

























RESEARCH LAB AT 11PM, SNOW

WINTER CONDITION, 20C INSIDE/15% RH, -23C OUTSIDE

The majority of the building is either composed of site sourced rammed earth or lumber from the trees cut to place the building. While rammed earth is more typically used in southwest climates, it functions well in colder climates when insulation is sandwiched in between layers. The Therm model above shows the temperature curves for the wall on a cold winter day.

Rammed earth exterior walls were chosen in partnership with DMT student Jaime Lee. Aside from how beautiful they are, the chosen site and the rest of the biological station actually has sandy soil that is a good composition for a rammed earth wall. Jaime created some test samples but COVID hit and the semester ended before it could be investigated further.

- 18.00< 15.34
- 12.67
- 10.01

- -0.65
- -3.31
- -5.98
- <-8.64

CLASS CO-OP

Re-imagining Class

CLASS COOP

Housing - ADUs Ann Arbor, MI Graduate - Summer Competition, Summer 2020 *Niels Hoyle-Dodson*

The Longo Competition was introduced by the architecture school at Michigan the summer directly after COVID shut down most of the world. The brief stated, "This competition challenges participants to consider how the corona-virus pandemic will impact the design and occupation of urbanism." And "How can we reconsider the space of the campus and city in the context of the pandemic in order to awaken modes of public life that will be valuable in a post-pandemic context?" Class COOP's response took advantage new student lives at home.

Class COOP looks to the history of the University of Michigan and the town of Ann Arbor, specifically through the organization Students for a Democratic Society (SDS) founded in 1960 to fight the inequity created by global capitalism. It ultimately failed by lacking to garner a working class coalition. Class COOP physically dissolves the academic institution of the U of M in favor of moving resources to where their students now reside, in the community.

Ann Arbor has a long and important history of civil demonstration.

The burgeoning industrial democracies of the early 20th century brought about a new paradigm in collective activism. Organizations like the League for an Industrial Democracy (LID) and the American Federation of Labor (AFL) sought to empower working people through labor organizing and political solidarity.

Founded in 1960 the Students for a Democratic Society (SDS) was formed at the University of Michigan as an offshoot of LID. SDS was a student activist organization driven by the principles of it's founding document the Port Huron Statement:

THE **PORT HURON** STATEMENT

. . . we seek the establishment of a democracy of individual participation governed by two central aims: that the individual share in those social decisions determining the quality and direction of his life; that society be organized to encourage independence in men and provide the media for their common participation . . .

SDS led a wave of political activism in the 1960's that redefined the role of universities as places of political change...

...However as the decade progressed The American manufactured war in Vietnam became a more salient issue amongst many SDS members. Disagreements about the direction of the organization led to it's fracturing, resulting in the formation of a violent radical sect known as The Weather Underground. As the perception turned against these "Weathermen" the SDS was marked in the public eye.

David Barbers book, "A Hard Rain Fell: SDS and Why It Failed" describes the collapse of SDS as a failure of it's members. It's "young, white American radicals - failed to grasp how white supremacy shaped their own thinking and action, failed to develop an analysis of imperialism that linked it to domestic conditions, and failed to challenge male supremacy within their own ranks. In short the SDS suffered from an insulated culture, in which the white male dominated world of Academia failed to reach out and build an intersectional working class coalition... [2]

[1] The Progressive Fox (Original ed.). Students for a Democratic Society (SDS) And Jeffrey Lebowski, known commonly as "The Dude". Retrieved 6 September 2019.

[2] Friedman, Tami J. Labour / Le Travail 63 (2009): 319-21. Accessed July 17, 2020. www.jstor.org/stable/40650269

While the University of Michigan owns and occupies 9.4 percent [1] of the 27.8 square miles that is the City of Ann Arbor [2], the vast majority of its resources, the academic schools and students, only amount to for 0.3 square miles at the heart of the city. The sharing of resources takes precedent in the Israeli kibbutz, a commune style living that undergoes transient style visitors like university students on account on birthright trips.2,3 The field matrix [4],[5] on the left, where P represents physical resources and S represents services, suggests the redistribution of those resources for a few departments based on community needs rather than spacial proximity to each other.

[1] The Regents of the University of Michigan. "Facts + Figures: U-M + Ann Arbor," 2020. http://communityrelations.umich.edu/facts-figures/.

[3] Feldman, Nadan. "In a Hyper-Capitalist World, the Kibbutz Is Making a Global Comeback," August 20, 2019. https://www.haaretz.com/israel-news/.premi-um-for-this-stanford-professor-theidea-of-the-kibbutz-is-alive-and-well-1.7684785.

[5] Fisk, Pliny. "The Future of Indigenous Building Materials." Center for Maximum Building Potential. SunPaper, September 1982. https://ww-w.cmpbs.org/sites/default/_les/ad4.1-indig_building.pdf.

	Departments	Issues.	
Course 1	Environment and Sustainability Business (Ross) Architecture (Taubman) Public Policy (Ford)	Affordable Housing (Pauline-Stadium) [COVID] Evictions	
Course 2	Medicine Nursing Social Work Information	Medicare for All (Northside) [COVID] Overcrowding of healthcare facilities	
Course 3	Engineering Law Public Health Art & Design (STAMPS)	Gelman Dioxane Plume (Abbot) [COVID] Increased need for outdoor space	
Course 4	Education LS & A Information Music, Theater & Dance	Computer and Internet Availability [Allen] [COVID] Necessity of online classes in fall	

Network	Point
Proximity to high rates of eviction Students' need to be housed City-School relationship	Students Itr Professors Current res University o City of Ann
Proximity to hospital Existing patients	-
Location between current course of plume and river Ann Arbor drink water in Barton Pond Groundwater monitoring stations	
University High School Pre-College Summer Pro- grams Athletics	
	Network Proximity to high rates of eviction Students' need to be housed City-School relationship Proximity to hospital Existing patients Location between current course of plume and river Ann Arbor drink water in Barton Pond Groundwater monitoring stations University High School Pre-College Summer Pro- grams Athletics

Assuming the University take responsibility for its students, the buildings that now sit empty would be deconstructed and used elsewhere to construct the ADUs in and around Ann Arbor. Each department would be reviewed for its adaptation potential, some of the best being Business, Policy and Environment. High occupancy rooms and heavily trafficked corridors are stripped of salvageable material to be re-purposed opening large gathering spaces that could be linked together along a disruption route. Resource distribution back into the community would be guided by the individual community needs.

community could imagine. Again, assuming the University takes responsibility for their students, they would fund the initial construction costs with rent going to a coop fund. The block would then begin functioning more as a whole and could isolate as necessary if COVID infections became an issue.

THEATER OF REFUGE

Civic - Theater Ann Arbor, MI Graduate - 1st Semester Studio, Fall 2019 *Individual*

The City of Ann Arbor has suffered a catastrophic flood. Climate change induced monsoonal rains overload the city storm drains and cause massive flooding that drains to the Huron river. As the water recedes it sweeps away large swaths of the city including most of the Power Center, a theater in the center of the city.

While this scenario is unlikely to happen to the location depicted even in the rapidly changing world today, the rebuilding of the Power Center after this fictional event illustrates the role our institutions may have to play in the future. The Theater of Refuge provides ideas about how our institutions that may have been built a hundred years ago as creative or entertainment outlets, can be built in the future to adapt to our survival needs as well.

The theater and the process of building the theater rely heavily on the events during and after Hurricane Katrina. The Superdome became the institution responsible for many people's survival in spite of all its shortcomings. After the storm, in 2006 artist Paul Chan helped host a performance of *Waiting for Gadot* among the Lower 9th Ward and Gentilly, neighborhoods most affected by the storm. It used the area as backdrop and helped fund repairs. The Theater of Refuge would do the same. The former Power Center would be converted into one large back of house, and would simultaneously work with homeowners to build set and homes. In addition, flytowers would be constructed to provide a sense of safety and provide a place for performance above and away from the flooded areas.

TIMEFRAME

APRIL 29TH, 2020 12:00 PM

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By the end of the week the water had cleared from the city and been swept away by the Huron, leaving the ruins of Ann Arbor behind.

APRIL 17TH, 2020 4:00 PM

The initial onslaught has left much of the city in ruins directly downstream of the event. The rain has not stopped and the Huron continues to swell but the worst seems to be over.

APRIL 17TH, 2020 12:00 PM

The water bursts from the dedicated storm drains Ann Arbor has and creates immense waves of pressure on existing buildings.

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APRIL 17TH, 2020 7:00 AM

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Ann Arbor is like it is any other day, with the exception of the spring showers here and there, one of which is beginning.

APRIL 17TH, 2020 12:00 PM

The storm has manifested into a force of nature and in combination with the the stormwater backup creates a powerful surge.

REAR OF THEATER WORKSHOP

EL COLECTIVO DEL TULE

Housing - Multifamily Firebaugh, CA

Graduate - U.S. Department of Housing Competition, Spring 2021 *Tom Bagley, Rowan Brady, Mitch Deans and Bronwen Schields*

El Colectivo del Tule was completed for the U.S. Department of Housing annual Innovations in Affordable Housing competition, where students are encouraged to work across disciplines to design affordable housing to fit a prompt. For the competition this year, a site in the California's central valley in the town of Firebaugh was chosen on a plot with existing HUD housing. The prompt was to either keep the existing units and add new ones, or redesign the entire site. El Colectivo del Tule adds new units to the open space between the existing, increasing density.

"A new model for affordable housing, Colectivo del Tule is a multi-generational mixed-use community focused on 100% affordability for its residential units. Our project looks to redevelop and integrate the Fresno Housing Authority's existing properties into a new neighborhood -- by strengthening and building community connections within the neighborhood and the greater City of Firebaugh. Our design includes the development of 174 new units, with 32% of the units affordable at 30% AMI. The remaining 181 units on our site will also be renovated to increase equity between new construction and remaining units. Our proposal seeks to create an innovative sustainable community that is resilient to the region's climate, offers a wide range of community amenities, enhances resident's quality of life, and is cohesive with the character and scale of the surrounding neighborhood."

COLECTIVO Z DEL TULE Z

SITE FACILITIES

BOYS AND GIRLS CLUB MIGRANT AND SEASONAL HEADSTART EMPLOYMENT ADVANCEMENT OFFICE CO-WORKING SPACE FARM STAND GROCER COMMUNITY CENTER COMMUNITY POOL PLAYGROUNDS, SLIDES AND SWINGS FERRACES AND PLAZAS

PLANTER BOXES

PARTI: MIXING PATH AND COMMUNAL NODES

DISTRIBUTION OF SOURCES ACROSS PHASES 1 AND 2

COLECTIVO DEL TULE

FII YF	VANCES: 25. 1, 5 & 20	YEAR 1	YEAR 5	Y
PHASEI	NOI	\$605,099.28	\$640,493.56	\$77
	Opex	\$358,260.00	\$411,111.59	\$68
	DSCR	1.19	1.26	1.5
	CASH FLOW	\$98,334.50	\$133,728,78	\$27
PHASEI	NOI	\$886,911.25	\$937,292.42	\$1,1
	Opex	\$678,135.00	\$778,175.51	\$1,3
	DSCR	1.19	1.25	1.8
	CASH FLOW	\$139,951.65	\$190,332.81	\$37

8,639.04 38,755.32 54 1,874.25 123,792.28 303,715.43 50 76,832.67

NICKY'S OF BEVERLY Commercial - Restaurant Chicago, IL Internship, Spring 2021 & Spring 2022 Joe Carroll

Done with CMMR Architects, Nicky's of Beverly is a hot dog and gyro restaurant that has been a staple in my neighborhood since I can remember. They outgrew their location in a strip mall down the street years ago and the owner Paul wanted to create a new location where people could sit and talk and enjoy themselves with live music during the summers. The first phase involved the main building located on the northeast corner of the site. The larger building wrapping around the rest of it is still a pending project.

