A Collective

"A Collective" is comprised of three women from three far-reaching corners of the world who have come together to address a critical need for the city they now call home. The team represents the areas of Architecture, Urban Planning and Landscape Design.

Our design is indicative of the PNW love of the outdoors and nature. The classic A-Frame is now an American cultural icon, immediately recalling notions of calm and intimacy with the natural world in its openness and reflection of the towering cedars that inhabit our region.

Our team wanted to provide a solution that would have minimal implications for the natural processes at play in, around, and below our DADU. We live in an ever changing and adapting city so we felt we should encourage a design that could also be easily adapted or if necessary, removed or relocated.

- •\$50k
- •\$168 sq/ ft
- One week of construction
- Customizable for different sites and budgets
- Simple modular construction
- •Low impact site development



Team



Erica Bush is a project manager and urban designer at MAKERS Architecture Planning and Urban Design. She is also an artist and runs a creative firm called Boomslang Creatives. Erica has been practicing urban design and urban planning since 2007 after receiving her BA in Political Science and Sociology from The New School in her home city of New York. Erica received her Master's in Urban Planning and Master's in Landscape Architecture at the University of Washington in 2014 where her thesis work focused on public space's response to addressing the needs of the unhoused. Erica has created dozens of public art exhibits that reflect social and political discourse within Seattle. Erica is a member of the Sunny Arms Artist Cooperative in Georgetown Seattle and a member of AIA Seattle COHO (Committee on Homelessness).



Juliette Dubroca is a (nearly licensed) architect at RHO Architects in Seattle. Originally from France, she is a graduate of the M.Arch I at Cornell University. Juliette has been practicing architecture since 2011 in offices in Rome, Paris, NYC and Seattle. She has been a lecturer at the University of Washington since 2017. She has also been a full-time faculty at Cornell University and Washington State University. In the summer of 2017, she co-taught a graduate level studio for WSU students on DADUs. She is a member of AIA Seattle COHO (Committee on Homelessness). Juliette is also fluent in French, English and Spanish.



Mariana Gutheim is a Project Manager at Environmental Works Community Design Center, a non-profit that provides sustainable architectural and planning services to low-income and under-served communities. Mariana also has her own practice, Studio Parenthesis, an interdisciplinary architecture, design and art studio. Originally from Argentina, Mariana had been practicing and studying architecture in her home country (where she is a licensed architect), France and the USA. She earned her architecture degree at the School of Architecture, Design and Urbanism from the University of Buenos Aires (FADU-UBA) in 2011. In 2008 she was a visiting student at the Villette School of Architecture in Paris and she got her MFA at the School of the Museum of Fine Arts and Tufts University in 2016. Mariana is one of the co-founders of QTPOC Seattle Collective. She is an active member in the Queer Trans POC community and cares to provide a safe space for people to meet by organizing different activities monthly. Mariana will be a part-time lecturer at UW during the Spring.



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Zoning and Regulatory Compliance

Our primary focus is to provide a cost-effective design that would allow for the greatest number of homeowners the opportunity to assist in the housing challenges here in Seattle while meeting building codes and the City's Regulations for DADUs. Our design also meets the City's request for "Small-footprint DADUs". Our design measures 240 ground floor square feet, a size that meets coverage limits on lots as small as 3,200 square feet which is the minimum lot area required for a DADU. Our design's shape also allows for placement on narrow lots, treed lots, and lots with limited available yard space. We've included a series of diagrams to depict these possible arrangements. Our design's post on pier construction not only reduces the need for costly excavation but allows for placement on uneven surfaces and protecting rootzones.

At its highest point of 16', our DADU meets all possible DADU approved sites under the new July 2019 legislation.

Our design is achievable within a \$50k or \$168 sq/ft budget which is detailed within our submission. This cost point is much more achievable than the average DADU cost which averages \$312 to \$505 sq/ft or well over \$100k total cost. In order to reduce cost we needed to create a design whose assembly and engineering was simpler than any prototypical single-family home.

Costs were reduced by:

- Utilizing Structural Insulated Panel (SIP) construction which drastically reduces the need for specialized construction labor.
- Utilizing modular construction with building materials measuring either 4'x3' or 4'x 5.'
- Using off the shelf materials easily accessible at a standard hardware store.
- Low cost electrical, heating and post on pier construction which means no need for the construction of a foundation.
- Using SIPs also means no need for scaffolding or a crane during the construction process reducing costs.

Key Design Goals

Small Footprint Cost effective solution







Ecological Components



In addition to developing a cost effective solution, our team wanted to create a design that

Through the use of low impact development tactics, our design meets sustainability measures of reducing stormwater flows off site, while increasing the aesthetic of the overall space. The A-frame structure lends itself well to on site rain water treatment through trenched bioswales positioned at

The inclusion of bioswales with the design also increases the level of privacy for the residents of both

An additional design detail is the inclusion of a modern trellis that articulates up the side of the DADU. The trellis takes advantage of the rainwater system to add passive cooling to the building while further screening the structure and allowing for personalization of the design.



Design Scalability

Our team wanted to create a design that could easily allow for various levels of investment. In other words, scale to meet the financial and design aesthetics of a wide variety of clients. The below diagrams demonstrate how the design could easily be adapted and individualized.





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Additional design features at greater cost include a covered porch and glass front wall

Further length can be added for larger living spaces as site allows

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Cost Estimate

- Post on pier foundation
- •Use of SIP panels
- Off the shelf vinyl windows



Price per plan: \$1,000 Hourly rate: \$120.00

Note regarding sewage cost:

New low income housing can benefit from a discounted capacity charge from the City of Seattle. Building is occupied residents (owner or tenant) whose income is at or below 80% AMI or residents receiving support services for homelessness. Source: King County Department of Natural Resources and Parks

Note regarding rain garden: Rain water catchment costs could be subsidized through SPU Rain Wise program

MATERIAL COS	STESTIMATE				
		DIMENSION	UNIT PRICE	ITEM NUMBERS	PRICI
MATERIAL					
02. SITE CONS	TRUCTION	- I I	T		
trenching - site	dependent				
landscaping ma	terials for rain garden		120\$ / SF		\$1,000.0
03 CONCRETE	=				
Home depot	- concrete pier				\$1 000 0
					, ,
06. WOOD AND	PLASTICS		1	ł	
Home depot	cedar decking for rain screen				\$600.0
Home depot	decking	(2x4) 8 footers	3	9	\$27.0
Home depot	decking	(2x8) 8 footers	36	6	\$216.0
	SIP Panel (wall)				\$6,000.0
	SIP Panel (floor)				\$3,000.0
07. THERMAL	AND MOISTURE PROTECTION				¢200.0
	flashing	+ +			\$200.0 ¢150.0
	metal roofing			40	0.001 ¢
		5-0 x 6-0	23	40	φ 9 20.0
08. DOORS AN	D WINDOWS				
Home depot	round window	3'-0" x 3'-0"	838	2	\$1,676.0
Home depot	single hung		60	1	\$60.0
Home depot	casement		300	1	\$300.0
Home depot	exterior door		300	1	\$300.0
Home depot	interior door		80	1	\$80.0
09. FINISHES			T		
Home depot	birch plywood sheet	4'-0" x 8'-0"	\$50	42	\$2,100.0
custom built	stair				\$1,000.0
IKEA	kitchen base cabinets		212	3	\$636.0
Home depot	stick on tiles				\$300.0
Home denot	shower stall		300	1	\$300.0
Home depot	toilet		200	1	\$200.0
	bathroom sink		80	1	\$80.0
IKEA	vanity		200	1	\$200.0
HAIER	w/d combo		1000	1	\$1.000.0
IKEA	kitchen sink		100	1	\$100.0
16. ELECTRIC	AL				
accucold	fridge	60"x24"x24"	840	1	\$840.0
Home depot	range (electric cooktop)		250	1	\$250.0
Home depot	hood vent		100	1	\$100.0
Home depot	electrical baseboard heater		200	3	\$600.0
Home depot	tankless water heater		300	1	\$300.0
Home depot	light fixtures				\$300.0
TOTAL MATER	RIALS				\$23,835.0
CONTINGENCY	✓ 10% of total material cost				\$2,000,0
CONTINUENC					φ2,000.0
LABOR					
carpentry					\$15.000.0
plumbina		1			\$3.000.0
electrical					\$4,000.0
finishes					\$4,000.0
TOTAL LABOR	2				\$26,000.0
TOTAL					\$51,835.0

One Week Construction







Elevations



Side Elevation



Front Elevation Scale: 1/4"=1' 0"

Elevations



Scale: 1/4" =1' 0"



Front Elevation Scale: 1/4"=1' 0"

Sections



Longitudinal Section Scale: 1/4"=1' 0"



Material Palette



Built in cabinetry



Landscaping river rock



Polyvinyl wall finish



Built in cabinetry



Standing seam metal roof



Birch plywood finish



Post on pier foundation



Free standing kitchen sink

Image facing front



Interior Side Elevation



Interior Front Elevation

