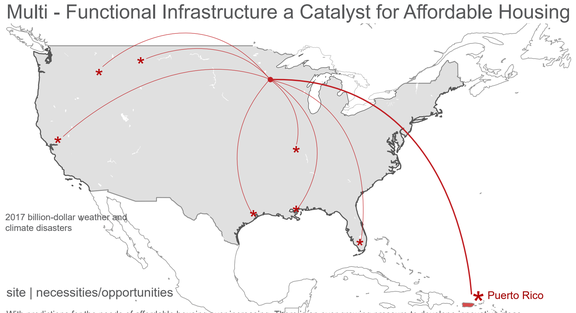
Multi - Functional Infrastructure a Catalyst for Affordable Housing

2018 Ralph Rapson Traveling Study Fellowship



site | necessities/opportunities

With predictions for the needs of affordable housing ever increasing. There is an ever growing pressure to develope innovative ideas and strategies. With no single strategy which mitigates this problem instead we will need to leverage multiple opportunities into the built environment. This will not be accomplished just through public policy and urban planning; we will need to take advantage and leverage our extraneous resources.

"Architecture starts when you carefully place two bricks together" Mies van der Rohe.

It is often said that cities lack the resources to fill the gap in need for affordable housing but communities invest a lot of resources in single use structures and infrastructure. If we could leverage these resources in a simple and effective way it may allow for a new typology, creating a pre-planned second life to these utilitarian structures.

This proposal looks at the problem of providing good affordable housing to those in need through two lenses. First suggesting there are opportunities with semi permanent infrastructure; such that happens responding to large scale disaster events, world gatherings (ie Olympics), areas receiving short term influxes of people(oil fields), or even the industrial neighborhood in close proximity to most communities. Even with these very specific events, careful planning would allow them to create well defined communal and gathering spaces after they are adapted to their next use. With forward creative thinking many of these utilitarian elements could provide more value to the community.

Secondly it suggests there are "systems" in place that could be leveraged or engineered to allowing a second more meaningful life. These modified "pre-engineered" systems provide an opportunity for meaningful change in how the built environment is developed and shaped. Use of a simple clear span structure acting as an armature for an immediate need (ie hurricane relief) can concurrently support important infrastructure; such as making electricity and collecting rain water. This structure can be clad readily available materials; from as simple as plywood left over from boarding up houses or a high performance insulated panel. After this structure has serviced it purpose, it then would be fit with a new program. Prefabricated housing units could be shipped and an hung from the structure from a series of cables reducing the need for a brick and mortar construction site. Other infrastructure items could be re-used such as sheet pilings and jersey barriers to provide necessary site amenities and shape communal space quickly and effectively. Through thoughtful planning these utilitarian developments can seamlessly transform into valuable community resources.

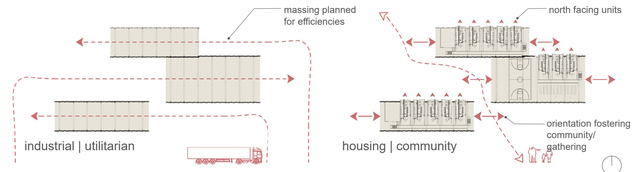
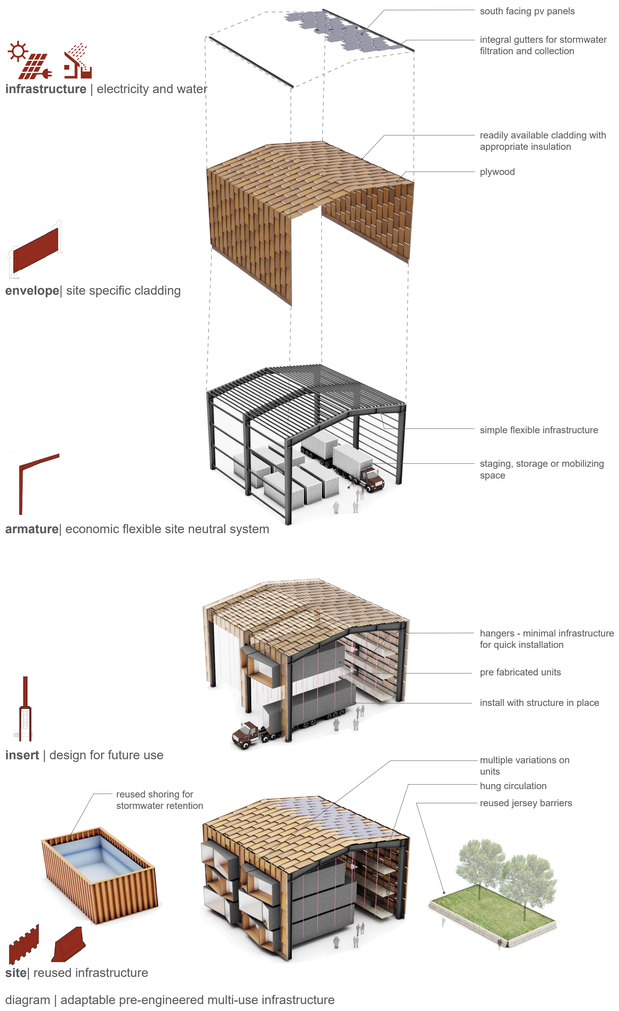


diagram | multi life building massing



infrastructure | electricity and water

envelope| site specific cladding

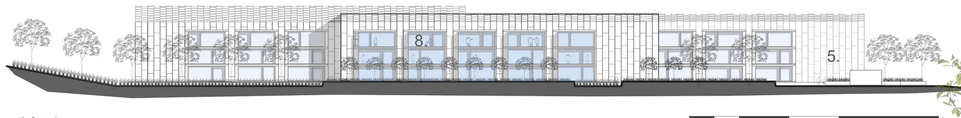
armature| economic flexible site neutral system

insert | design for future use

site| reused infrastructure

diagram | adaptable pre-engineered multi-use infrastructure

elevation/section **a** - west facade

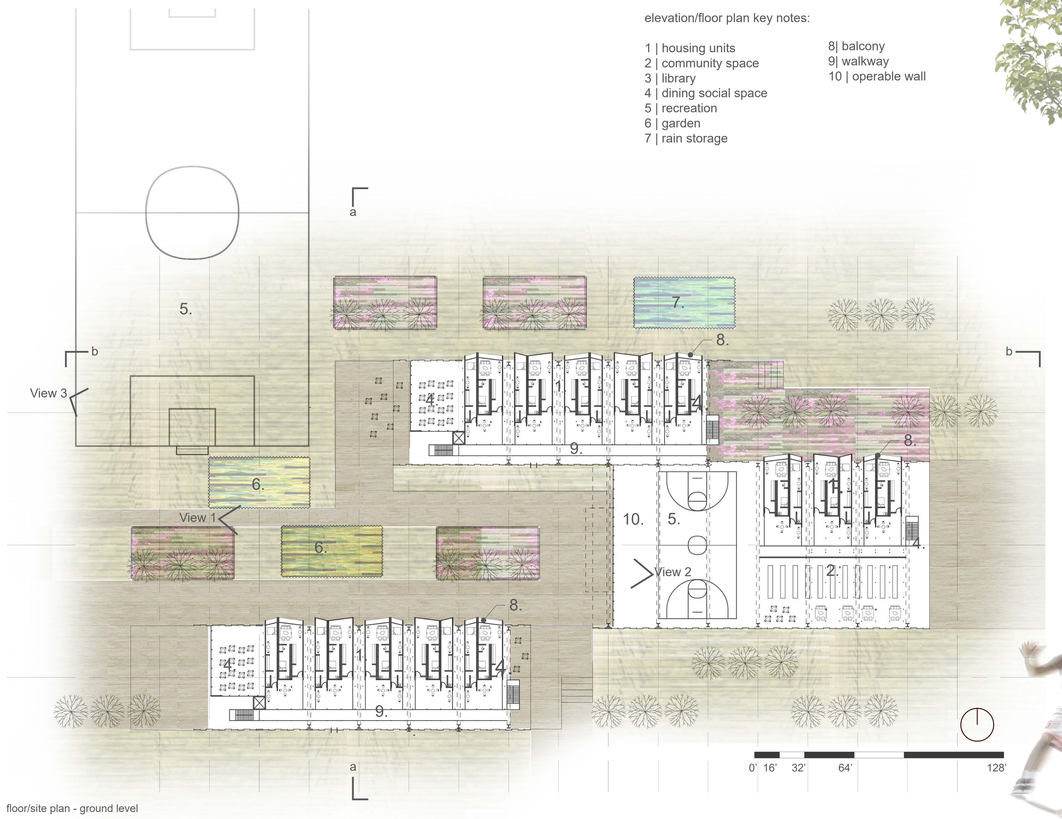


elevation **b** - north facade

0' 16' 32' 64' 128'

elevation/floor plan key notes:

1 | housing units
2 | community space
3 | library
4 | dining social space
5 | recreation
6 | garden
7 | rain storage
8| balcony
9| walkway
10 | operable wall



floor/site plan - ground level

perspective 1 | communal resources

perspective 2 | interior exterior connections

perspective 3 | communal massing

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