

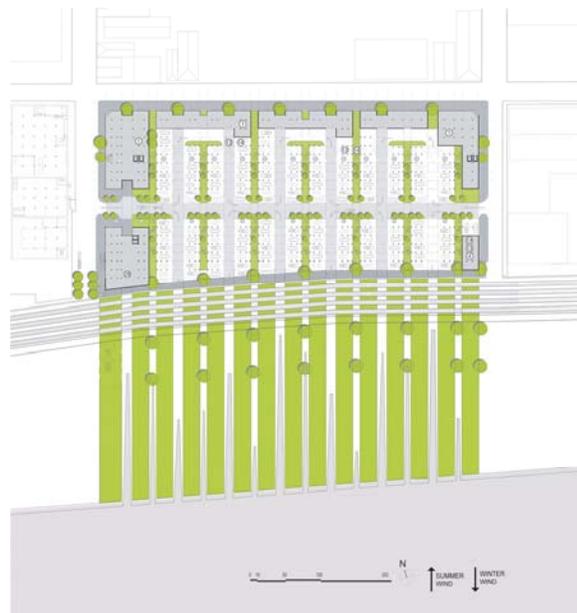
Camel Back Shot Gun Sponge Garden

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This high-density urban housing landscape is designed as an environmental sponge absorbing climatic impacts and slowly filtering the captured water and energy back into their natural and human eco-systems.

The site reaches out through the park to create an alluvial delta comb recapturing passing river sediment to slowly replenish and build the high ground and its natural waterfront life, much as the natural delta, bayous and barrier islands originally functioned. These sponge-like delta fingers then reach back and up to form the housing blocks themselves, which in turn also function as absorptive, living tissue in the larger landscape. Rainwater captured on the building roofs is trickled down through the organic siding system, watering the plants and filtering the excess water, which is then stored in larger rain barrel tanks distributed throughout the block. Excess water storage capacity will then be available for a large area of the city in future emergencies, and storm sewers will not be overloaded during more typical rain conditions.





The project will be fabricated almost entirely off-site using a hybrid, steel-frame/structural insulated panel system. The individual building units will be efficiently manufactured in three road-legal halves per typical two or three-bedroom flat and then stacked by crane as complete housing units on top of prefabricated, ground level retail and service cores built of water- and termite-resistant composite concrete panels. Earth excavated for building foundations is redistributed as water absorptive landscape berms creating a unified outdoor common space flowing upward from the river bank, through the public park and integrating into the geometry and eco-system of the individual house blocks. Earth cut and fill is balanced in order to minimize

cost, energy expenditure and existing community disruption, while simultaneously enhancing the rich symbolism of a community rooted in the riverine ebb and flow of the local earth, water and weather cycles.

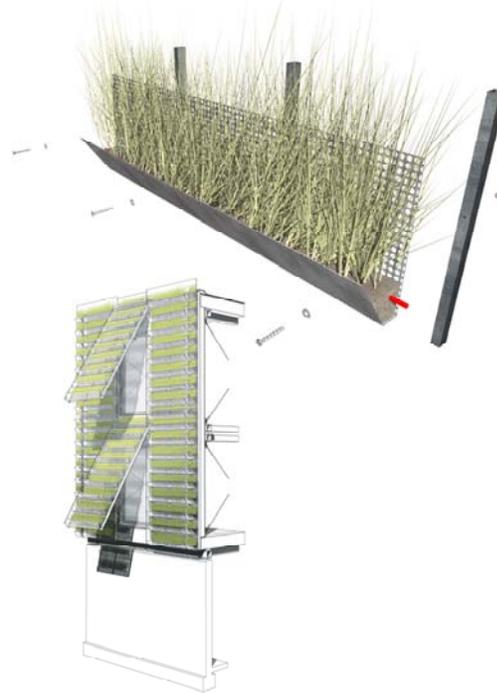
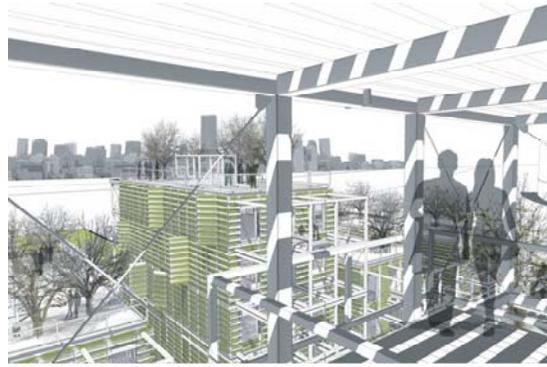
Dwelling units share a common geometric order defined by the local urban street grid and local housing typologies merging with the delta webbing of earth and water at the riverbank. Within the regular grid, rising and falling house positions create a readably syncopated rhythm, allowing the gardens and open space to shrink and swell across the roofs, creating variously sized and shaded outdoor gardening, dining and play areas. Market rate dwelling units will be largely pre-assembled with finished interiors, while below-market units will offer self-build options that incorporate homeowner and volunteer labor at both the factory and on-site construction stages. Self-build and volunteer labor construction process variations will accommodate differential cost structures, rather than overt distinctions in unit size, placement or quality. Within a highly democratic common building language, a wide range of residential, retail, community gathering and child-care spaces are included in the site planning and distribution of system modules, resulting in architectural, economic and social diversity intertwining across the well-integrated site. Community vegetable gardens, picnic and play areas weave as continuously linked walkways and platforms winding among the buildings above the parking level below, both defining internal community areas and flowing outward to the street edge as densely vegetated corridors of air and skylight, welcoming integration with the life and spatial massing of the larger neighborhood.



Primary design emphasis is placed on high-quality urban community life, applying a highly economical, energy-efficient, fair-wage manufacturing and construction process accompanied by sustainable land use patterns, siting optimized for solar and natural wind flow access and control; healthy, green-technology materials; and low energy-consumption mechanical and filtration systems. The building grain follows the typical street front building rhythm in the neighborhood and is organized to optimize day lighting, ventilation and outdoor access to all living units, offering air and light on all four sides of every unit as well as shade-protected outdoor living and play spaces. Primary building faces are composed of generous balconies or sunrooms intended to enliven all street and community garden facades with active, populated and densely planted outdoor living areas that also shade the public sidewalks and protects them from rain, as is a traditional New Orleans street pattern.



The configuration of the housing blocks step down and adjust to the neighboring buildings, and step back at street level to activate street frontage with outdoor cafes, retail shops, bus stops, and pedestrian traffic. The site is conceived as a dense urban landscape block, porous to light and air at the residential levels, and carved out at the ground level to provide a dense parking area largely invisible to the surrounding streets and residents above, yet highly cost-effective as on-grade construction without expensive ramps and structure. The building itself is detailed as a simple, rational frame armature bringing the peopled life of shops, homes, trees, and hanging gardens into the forefront as a primary image of the site, with all building skins composed of louvered shutters made of growing tubes that absorb and slowly filter rainwater from the roofs back down to rain barrel storage containers while nurturing dense wall plantings for shade, privacy and healthy air.



Underground and grade-level environmental systems will be placed as entirely pre-fabricated utility vaults with primary plumbing and mechanical systems already integrated at the factory. Ground level retail/restaurant, mechanical/utility and parking areas will be swung into place as water and rot resistant pre-fabricated steel/concrete composite panels similar to tilt-up construction. Parking is effectively offered, while car share, bicycle parking, and commercial storefront areas adjacent to city bus stops all encourage positive, car-free urban life. At the same time, primary street frontage accommodates urban parallel parking and storefront commercial space to accommodate existing community traffic logic and to maximize friendly retail, residential and community center use at the street level.

Residential units will arrive as pre-assembled and pre-finished living units delivered as components similar to the arrival of two-piece, doublewide trailer units, and lifted into place by crane. The entire manufacturing and pre-fabrication process can be completed off-site within a 5-month, just-in-time delivery framework, overlapping with a total 3-month on-site construction period, minimizing costs, speeding housing delivery, and minimizing neighborhood disruption. The rationalized, componentized manufacturing, delivery and erection process provides tremendous cost-savings and reductions in urban disruption and site pollution. The building materials are high-recycled-content concrete, steel, and recycled wood—inert, healthy and free of off-gassing chemical products. Surfaces are hard and robust concrete, plantation hardwoods, and cement plaster on composite cement board—there are no absorptive, closed cavity insulation or drywall products. The building is organized and detailed to provide maximum daylight and airflow to each unit, and all primary community spaces, stairways and balconies are open air. All rooftops are designed for maximum photovoltaic energy production or for community and private garden spaces, and all roofs collect and filter rainwater for use as non-potable household water. Household gray-water will be filtered and recycled as garden irrigation. Black water and grade-level storm water will both be pre-filtered and partially treated prior to release into the respective city systems, in order to minimize the impact of increased density on existing city services. The intention of the site planning and building systems construction is to minimize adverse impacts on the delicate local urban and natural ecosystems, while offering latent absorptive capacity, internal self-sustainability, and reserve public emergency capacity for the surrounding community during extraordinary storm conditions. The exposed steel frames with prominent cross-bracing and active shutters function both physically and symbolically as reassuring resistance against wind and weather. The construction of the building and its landscape reaching out through the Alluvial Sponge Garden park as an integrated delta barrier eco-system absorbing and accommodating the cyclical interactions of earth and water in extreme conditions, is intended as a prototypical approach to the functional and symbolic possibility of sustainable life at this water's edge.

