

**PROJECT STATEMENT**

There are **THREE** interconnected driving forces behind our proposal for WALMA FLATS:

The **FIRST** involves the desire to create an affordable and primarily **walkable** community, especially in light of the significant parking requirements dictated by the Zoning code. Our proposal sees this as a community for people first and cars second; people that walk from their cars **through** the community to get to their homes; people whose outdoor space is preferably shaded and green rather than hot and dark; people who appreciate both intimate and collective public space for gardening, playing, exercising and performing.

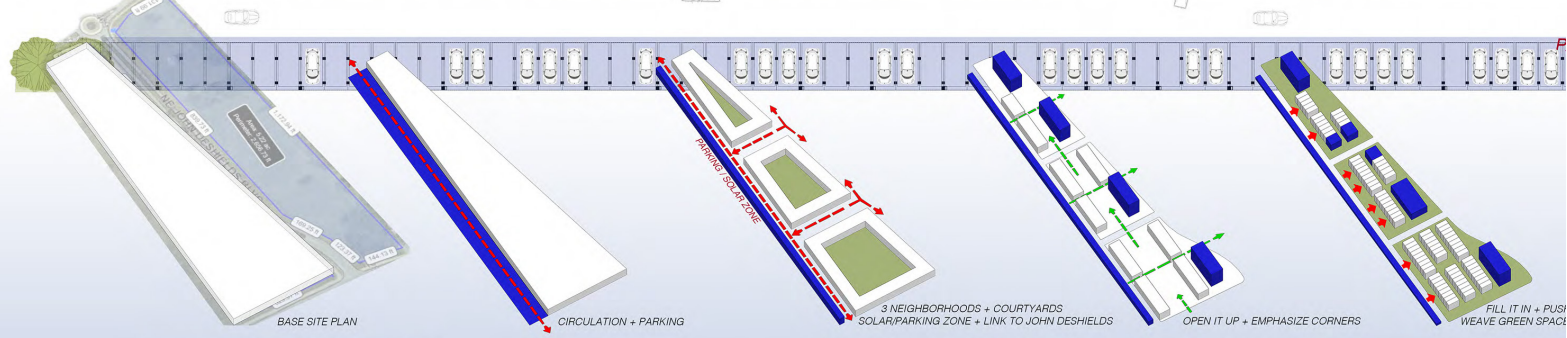
The **SECOND** involves a very deliberate and extensive use of the **row house** typology to form the basic DNA of the community. The "row" has remained a relevant and sustainable model of urban dwelling in North America for hundreds of years. It enables us to create a stronger sense of community by first **de-centralizing** circulation to apartments, thereby individualizing entries and with it a sense of place. Front doors at grade serve between one and seven units only, offering a stronger sense of ownership and neighborhood intimacy for community members and visitors.

The **THIRD** involves creating a **Net-Zero-Energy**, carbon-neutral community, one that generates all the energy that it needs on-site, cost-effectively. To support that effort, we imagine an alternative near-future scenario for this community which involves the inevitable expansion of **electric cars** and **car sharing services**. In 20 years when electric cars are the norm and sold at half the current price, they could be treated as an "appliance", and therefore unnecessary to **own**. Car sharing services will play a critical role in this burgeoning "appliance culture" and enable developers to include electric-car-sharing services on-site as the only form of transportation. We have predicted this transformation on our site proposal in two ways: 1. a significant portion of blacktop will be returned to green space or developable land. 2. All parking needed for the community will be housed in the "Parking/Solar Zone" on the Southern edge of the site. This will also function both as a renewable energy plant, and as a solar storage plant which uses the electric car batteries to power the community at night and during inclement weather.



VIEW A: COURTYARD FROM ABOVE

# WALMA FLATS



SOUTH ELEVATION: 1"=20'



**PROJECT STATS**

Type	Total #	%	SF	AVG
EFFICIENCY	10	3%	4200	420
LIVE WORK	18	6%	13485	749
1 BED	116	38%	68805	593
1.5 BED	63	21%	39830	632
2 BEDS	71	23%	63900	900
3 BEDS	29	9%	35750	1233
<b>SUBTOTAL</b>	<b>307</b>		<b>225970</b>	<b>736</b>

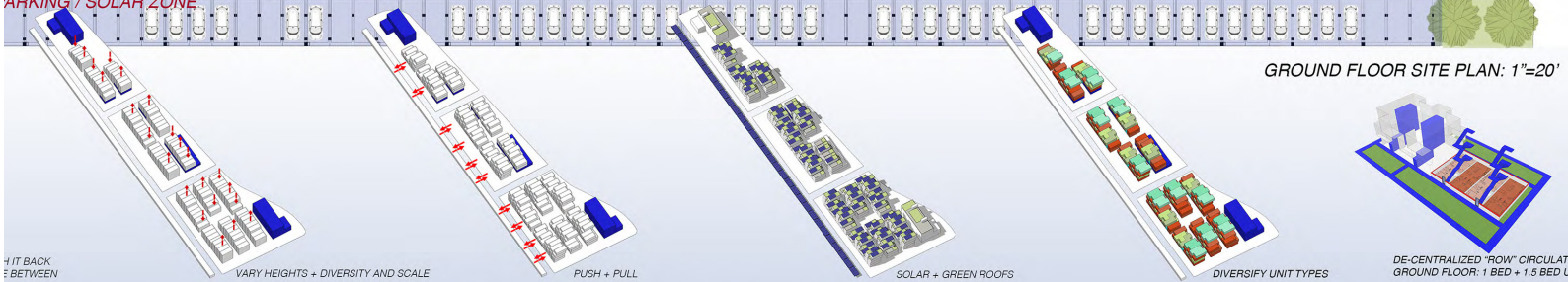
COMMERCIAL	5		21640	
PARKING	494	REQUIRED	482	
<b>TOTAL</b>			<b>247610</b>	

<b>TOTAL SITE</b>			<b>233175</b>	
BLDG LOT COVERAGE		35%	80680	
PARKING		37%	87740	
GROUND FLOOR OPEN SPACE		28%	64755	
<b>TOTAL OPEN SPACE</b>		<b>28%</b>	<b>64755</b>	
<b>GREEN ROOFS</b>		17%	40340	

VIEW B: COURTYARD VIEW



**PARKING SOLAR ZONE**



GROUND FLOOR SITE PLAN: 1"=20'





VIEW C: COMMUNITY GARDEN FROM SOUTH

**Passive House, Net-Zero-Energy and Attainable Housing**

Given the fact that buildings are responsible for almost 50% of all CO2 emissions in this country, it is incumbent upon the design and development community in THIS generation to radically "zero-out" architecture's impact on global warming. As such, our proposal is designed to be a Net-Zero-Energy/Carbon-Neutral development, one that generates all the energy that it needs, on-site, thereby neutralizing it's carbon footprint. In order to do this, the project will meet the rigorous Passive House (PH) energy standard, which enables buildings to consume 80% less energy than a typical code building. An initial utility analysis for our proposal looks like this:

Total Treated Floor Area	203,373 sf
Total Site Energy/sf based on PH metrics	5.0 kWh/sf/year
Total predicted annual Site Energy	1,016,865 kWh/yr
Total # of residential units	307 units
Average kWh/year/unit	3312 kWh/year
Average Total Utility cost/month/unit (\$0.09/kWh)	\$25/month

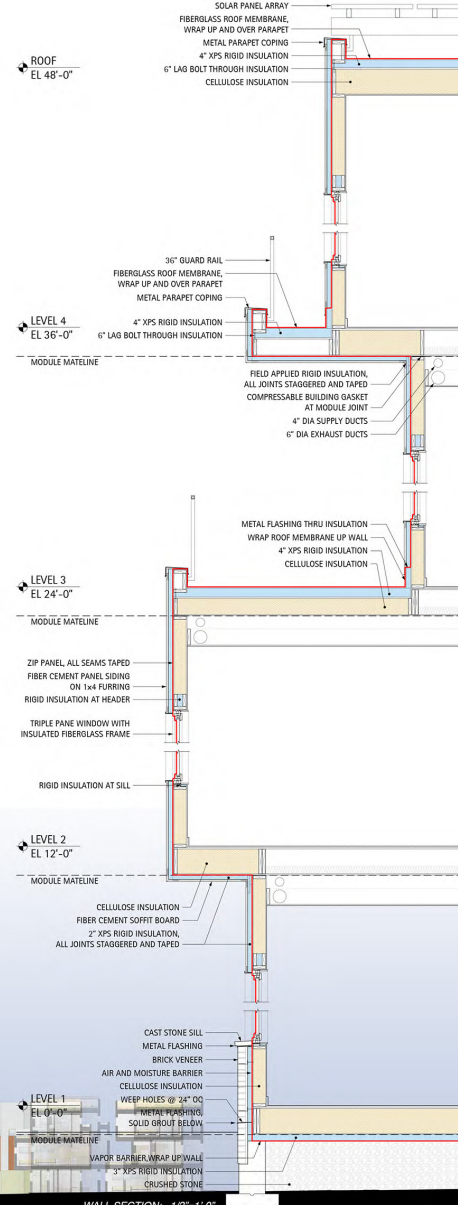
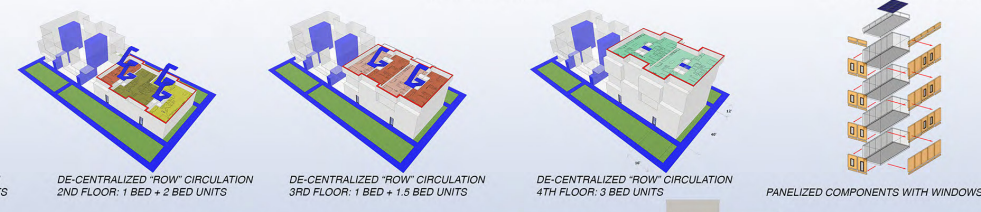
**Construction Techniques: Time is Money**

Our proposal is designed so that it can be built in three different ways: 1. Stick frames, 2. Modular, 3. Panelized components with windows and doors built-in. Each method of construction has it's own strengths and weaknesses:

**Stick framing** has the one significant benefit that it is the most common method of construction for single/multi-family homes in the country. Stick framing is cost-effective but takes the longest to build and is the least sustainable and efficient method of building from the perspective of material efficiencies, waste, weather delays, and quality control.

**Modular construction** would answer all these concerns and be the preferred method of building for our proposal given the scale, repetition, and dimension-ality of the project. Modular construction is also inherently superior relative to acoustic/fire separation between units. Because each module has its own walls, floors and ceilings, this doubling of building components between units creates safer fire separation assemblies and higher STC and IIC ratings than any single wall/floor/ceiling assembly between units. A high-performance envelope, bathrooms, kitchens, flooring, and finishes would all be constructed under stringent quality control protocols within the factory. Foundations and modules would be constructed simultaneously, reducing construction time by 50% compared to stick building. We have a great deal of experience with modular construction and have identified several modular factories in Arkansas capable of this typology.

**Panelized construction** offers similar benefits of precision and quality control of pre-fabricated construction as modular but without the specialized trucking, craning and scheduling requirements. While all interior and exterior wall and floor elements can be panelized, building an airtight Passive House thermal envelope is the most important element that would benefit from factory control, with triple-pane windows, doors, air-barrier, exterior insulation and Weather Resistant Barrier, all constructed at grade and in a factory-controlled setting.

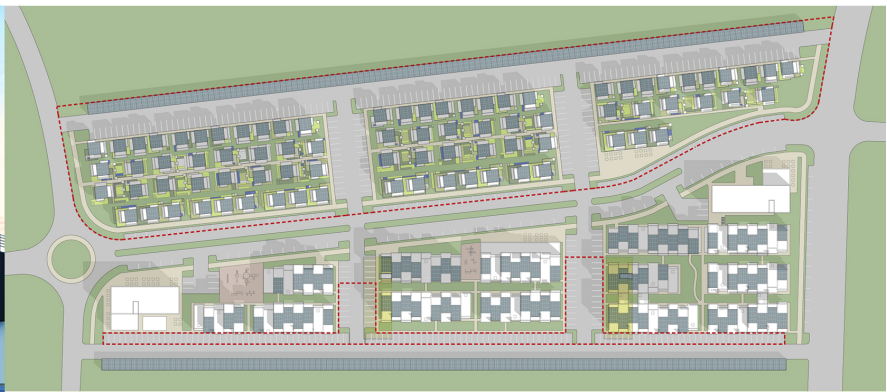




VIEW E: BIRD'S EYE VIEW LOOKING SOUTH



VIEW F: NIGHT RENDERING: NORTH EAST CORNER OF JOHN DESHIELDS BOULEVARD + EAST CENTRAL



SITE PLAN: Showing future site extension to the north. Four main site design strategies from Site 4 were extended: 1. Commercial buildings that front John Deshields Boulevard; 2. Parking strategy to break up site into 3 neighborhoods with concentrated Parking/Solar Zone on the North edge of the Site; 3. Similar but different de-centralized circulation and housing prototype in order to create multiple-scales of intimate and collective walkable alleys, lanes and green spaces; 4. Net-Zero-Energy community.



VIEW D: BALCONY VIEW OF 3RD + 4TH STORY APARTMENT



INTERIOR VIEW OF APARTMENT



INTERIOR VIEW OF APARTMENT



3 BED UNIT: 3:32'=1'-0" 1280 SF

2 BED UNITS: 3:32'=1'-0" 900SF

LIVE/WORK UNIT: 3:32'=1'-0" 785 SF

1.5 BED UNIT: 3:32'=1'-0" 640 SF

1 BED UNIT: 3:32'=1'-0" 600 SF

EFFICIENCY: 3:32'=1'-0" 420 SF