



MANHATTAN VS ALLEYWAY HOUSING MANHATTAN VS

SUSTAINABLE MANHATTAN : VISIONS FOR A MORE SELF-RELIANT AND RESILIENT COMMUNITY

IT IS BECOMING INCREASINGLY CLEAR THAT THE 21ST CENTURY WILL CONSTITUTE A RADICALLY NEW ERA IN HUMAN HISTORY, ONE THAT WILL BE DEFINED BY OUR COLLECTIVE RESPONSE TO THREE INESCAPABLE AND INTERCONNECTED PROBLEMS THAT ARE ALREADY COMBINING TO CREATE A PERFECT STORM.

THE POPULATION EXPLOSION: THE GLOBAL POPULATION NOW STANDS AT 6.7 BILLION PEOPLE. BY 2050 IT IS ESTIMATED THAT THERE WILL BE MORE THEN 9 BILLION.

PEAK OIL AND NATURAL GAS: THERE IS A GROWING CONSENSUS AMONG PETROLEUM GEOLOGISTS THAT WE ARE PRESENTLY ON THE "BUMPY PLATEAU" OF PEAK OIL AND THAT THE ERA OF EASILY ACCESSIBLE, CHEAP OIL (AND OTHER FOSSIL FUELS) IS NOW FOREVER BEHIND US. WITH ALMOST UNIMAGINABLE CONSEQUENCES, IT IS ESTIMATED THAT BY 2030 THE WORLD WILL HAVE APPROXIMATELY 25% LESS OIL THEN IS CURRENTLY AVAILABLE AND 50% LESS BY THE YEAR 2050.

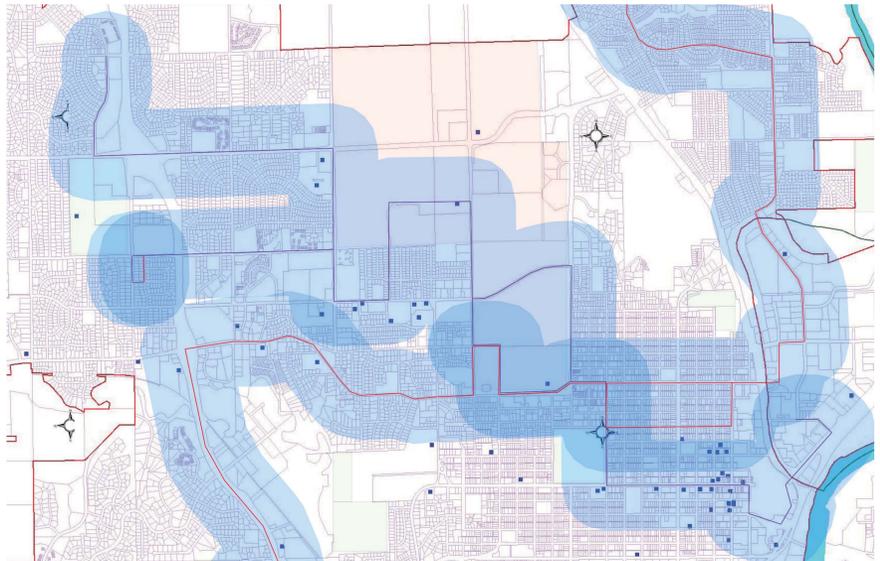
CLIMATE DESTABILIZATION, MASS EXTINCTIONS AND ECOSYSTEM COLLAPSE: AS A DIRECT RESULT OF POPULATION PRESSURES AND HUMAN ACTIVITY WE ARE ALREADY LIVING IN AN ERA SCIENTISTS CALL THE SIXTH GREAT EXTINCTION. WITHOUT RAPID AND DRAMATIC ACTION TO LIMIT THE PRODUCTION OF GREENHOUSE GASES IT IS VIRTUALLY CERTAIN THAT WE WILL CROSS KEY CLIMATE CHANGE TIPPING POINTS, LEADING TO A WORLD THAT IS SERIOUSLY INHOSPITABLE TO ALL LIFE AS WE KNOW IT.

IN ORDER TO RESPOND EFFECTIVELY TO THESE PRESSING PROBLEMS IT WILL BE NECESSARY FOR US TO LITERALLY RE-MAKE THE HUMAN FOOTPRINT ON THE EARTH, TOWN BY TOWN AND COMMUNITY BY COMMUNITY. AS DESIGNERS OF SUSTAINABLE BUILDINGS AND A NEW ECOLOGICALLY SUSTAINABLE PATTERN OF HUMAN SETTLEMENTS, WE WILL NEED TO BE GUIDED IN ALL OF OUR EFFORTS BY THE THREE DESIGN AND FUNCTIONING OF THE NATURAL WORLD: 1) CREATE NO WASTE; 2) USE ONLY RENEWABLE ENERGY; 3) RESPECT AND ENHANCE BIOLOGICAL DIVERSITY.

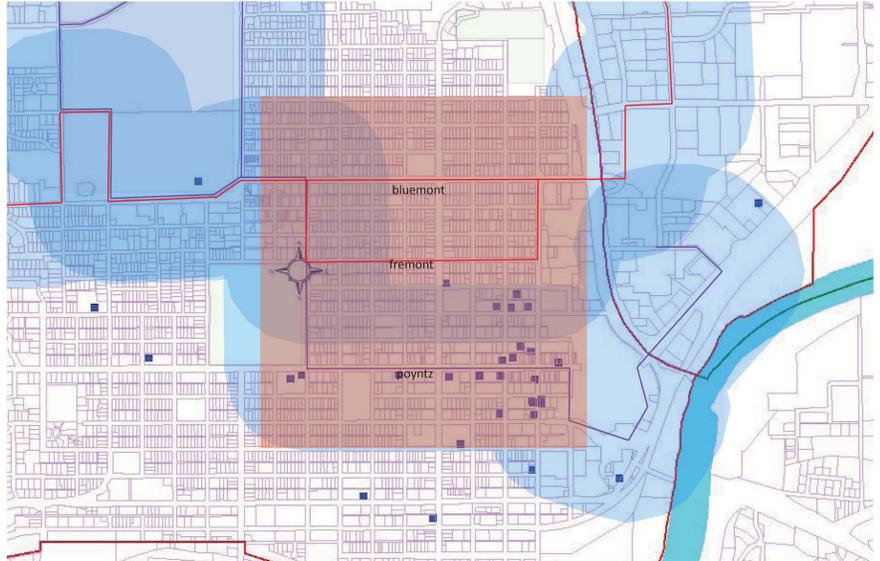
NEAR NET ZERO ENERGY BACKHOUSES, GRANNY FLATS AND GARAGE APARTMENTS: A STRATEGY FOR INCREASING DENSITY AND SUSTAINABILITY IN THE OLDER NEIGHBORHOODS

DEVELOP A SERIES OF NEAR NET ZERO ENERGY ALLEYWAY HOUSES, SUITABLE FOR MULTIPLY SITUATIONS, USING DESIGN GUIDES SUCH AS:

- TRADITIONAL NEIGHBORHOOD OVERLAY DISTRICT GUIDE (TNO),
- LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED),
- THE CHICAGO GREEN ALLEY HANDBOOK,
- UNIVERSAL DESIGN STANDARDS (AGING-IN-PLACE)
- LOW IMPACT DEVELOPMENT STANDARDS (LID)
- HOME ENERGY EFFICIENT DESIGN (HEED)



MANHATTAN FUTURE BUS ROUTES
MANHATTAN HAS A BUS ROUTE PROPOSED TO START THE SPRING OF 2012. THE CITY RECEIVED FEDERAL FUNDS FOR PUBLIC TRANSPORTATION AFTER THE CITY SURPASSED 50,000 CITIZENS. THE TWO FUTURE BUS ROUTES ARE SHOW ABOVE IN RED AND PURPLE. THE BLUE INDICATES A 5 MINUTE WALKING RADIUS (1/4 MILE), WHICH IS THE AREAS MOST LIKELY TO USE THE BUSES DAILY.



AREA OF FOCUS
THIS PROJECT IS FOCUSED TOWARD AREAS WITH A JEFFERSONIAN GRID SYSTEMS, WHICH USE ALLEYS. THIS PUTS THE FOCUS MAINLY AROUND THE OLDER NEIGHBORHOOD OF MANHATTAN, MAINLY EAST MANHATTAN BETWEEN KSU CAMPUS AND DOWNTOWN. WHEN OVERLAYING THE BUS ROUTE, AND THE 5 MINUTE WALKING RADIUS, OVER A MAP OF MANHATTAN, A FOCUS AREA DEVELOPS FROM MANHATTAN AVE TO 3RD ST AND THURSTON TO COLORADO.

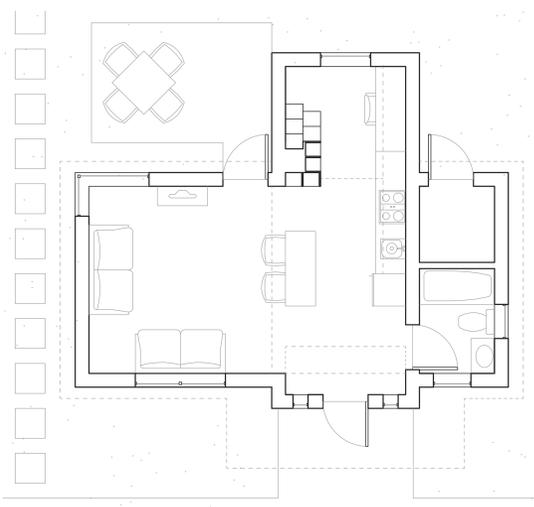


SITE STUDY
THE BLOCK OF KEARNEY TO VATTIER AND 9TH TO 8TH IS THE BLOCK USED FOR THE SITE STUDY. THIS BLOCK WAS CHOSEN BECAUSE THE LOTS ON THE BLOCK ARE AVERAGE SIZE FOR MANHATTAN, 50 FT X 150 FT, AS WELL AS ITS PROXIMITY TO KSU CAMPUS, NORTHERND REDEVELOPMENT AND THE ELEMENTARY SCHOOL.



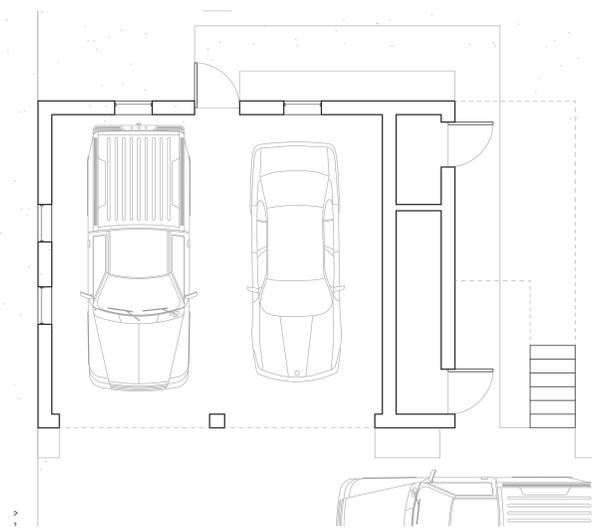
LOT SELECTION
WHEN CHOOSING LOTS FOR DEVELOPMENT, MANY ASPECTS WERE TAKEN INTO ACCOUNT: AVERAGE LOT SIZE, VARYING EXISTING HOUSE SIZES, VARYING EXISTING HOUSE HEIGHTS, DEPTH OF HOUSE INTO LOT, STYLE OF EXISTING HOUSE, ETC. THE FOUR MIDDLE LOTS WERE CHOOSE BECAUSE THEY MET THE MOST OF THE REQUIREMENTS AS WELL AS ABLE TO DEVELOP THE ALLEYWAY HOUSES TOGETHER.

ALLEYWAY HOUSE TYPE #1: LOFT STYLE
 478 SQ FT
 1 BED/ 1 BATH
 505 SQ FT FOOTPRINT



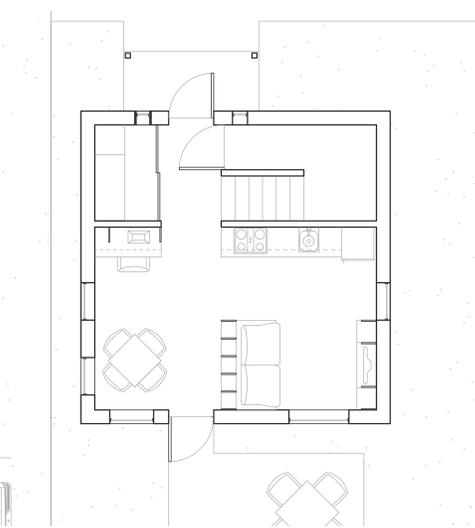
FIRST FLOOR PLAN
 1/4" = 1'0"

ALLEYWAY HOUSE TYPE #2: GARAGE APARTMENT
 507 SQ FT + 2 CARS
 1 BED/ 1 BATH
 608 SQ FT FOOTPRINT



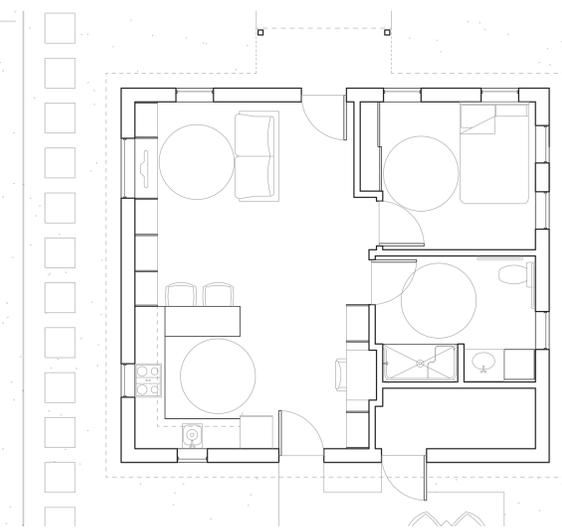
FIRST FLOOR PLAN
 1/4" = 1'0"

ALLEYWAY HOUSE TYPE #2: TRADITIONAL
 640 SQ FT
 2 BED/ 1 BATH
 430 SQ FT FOOTPRINT

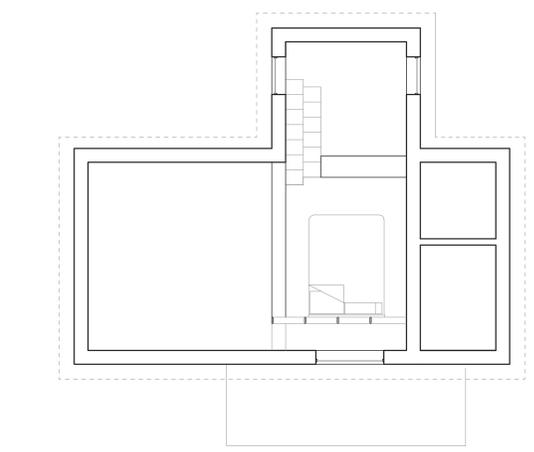


FIRST FLOOR PLAN
 1/4" = 1'0"

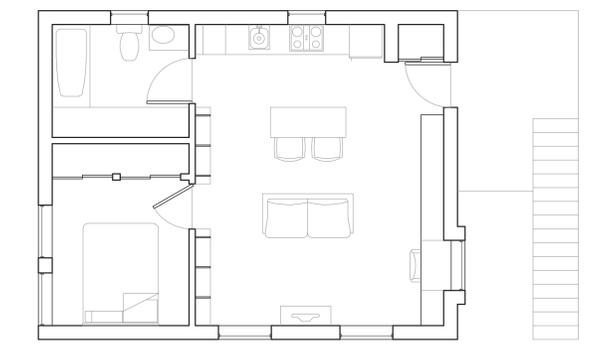
ALLEYWAY HOUSE TYPE #4: ACCESSIBILITY
 600 SQ FT
 1 BED/ 1 BATH
 712 SQ FT FOOTPRINT



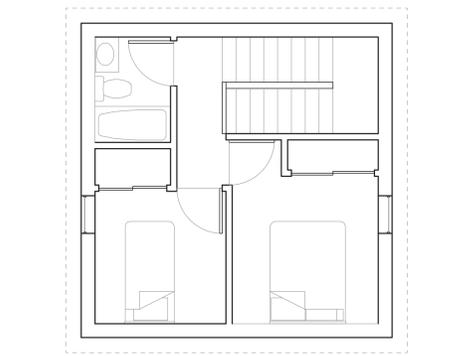
FIRST FLOOR PLAN
 1/4" = 1'0"



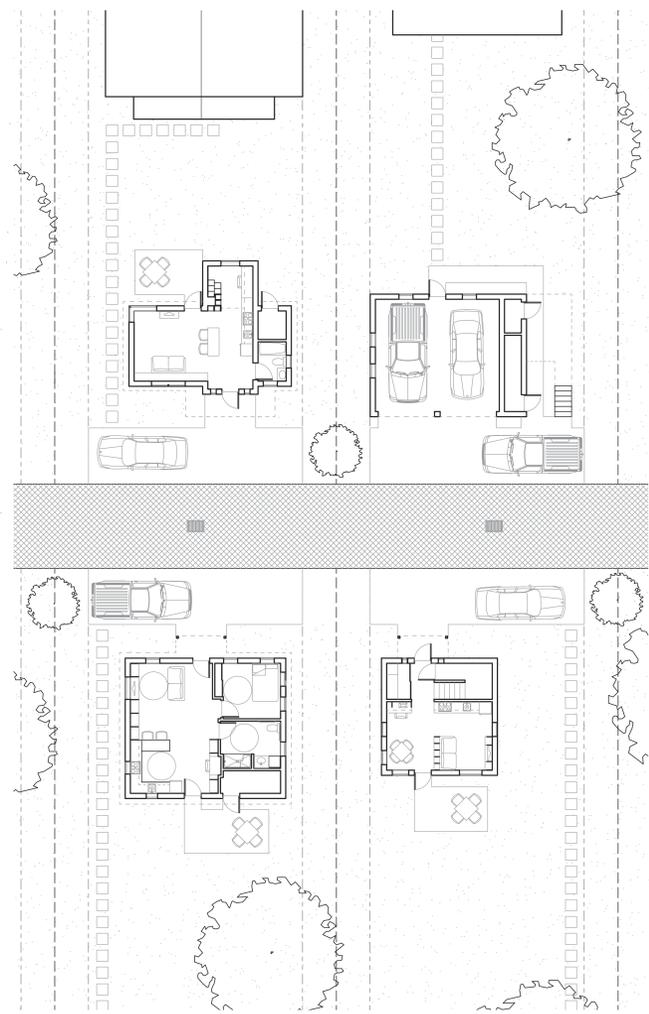
SECOND FLOOR PLAN
 1/4" = 1'0"



SECOND FLOOR PLAN
 1/4" = 1'0"



SECOND FLOOR PLAN
 1/4" = 1'0"



SITE INDICATOR
 1/16" = 1'0"

The Low Impact Development Center, Inc.
 Sustainable Design and Water Quality Research

