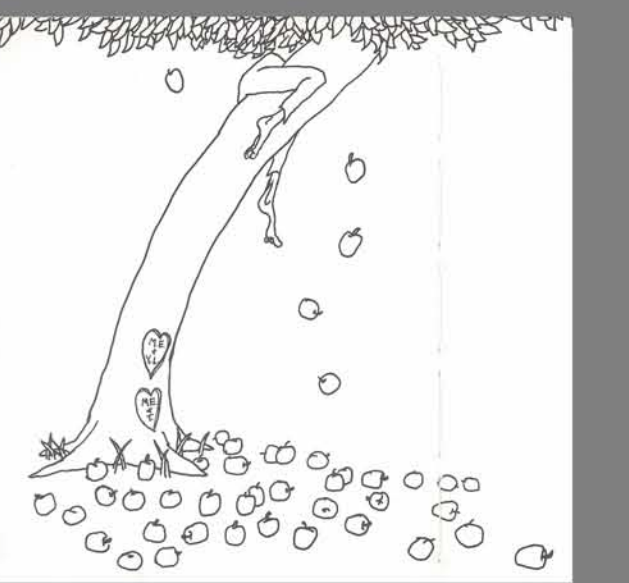
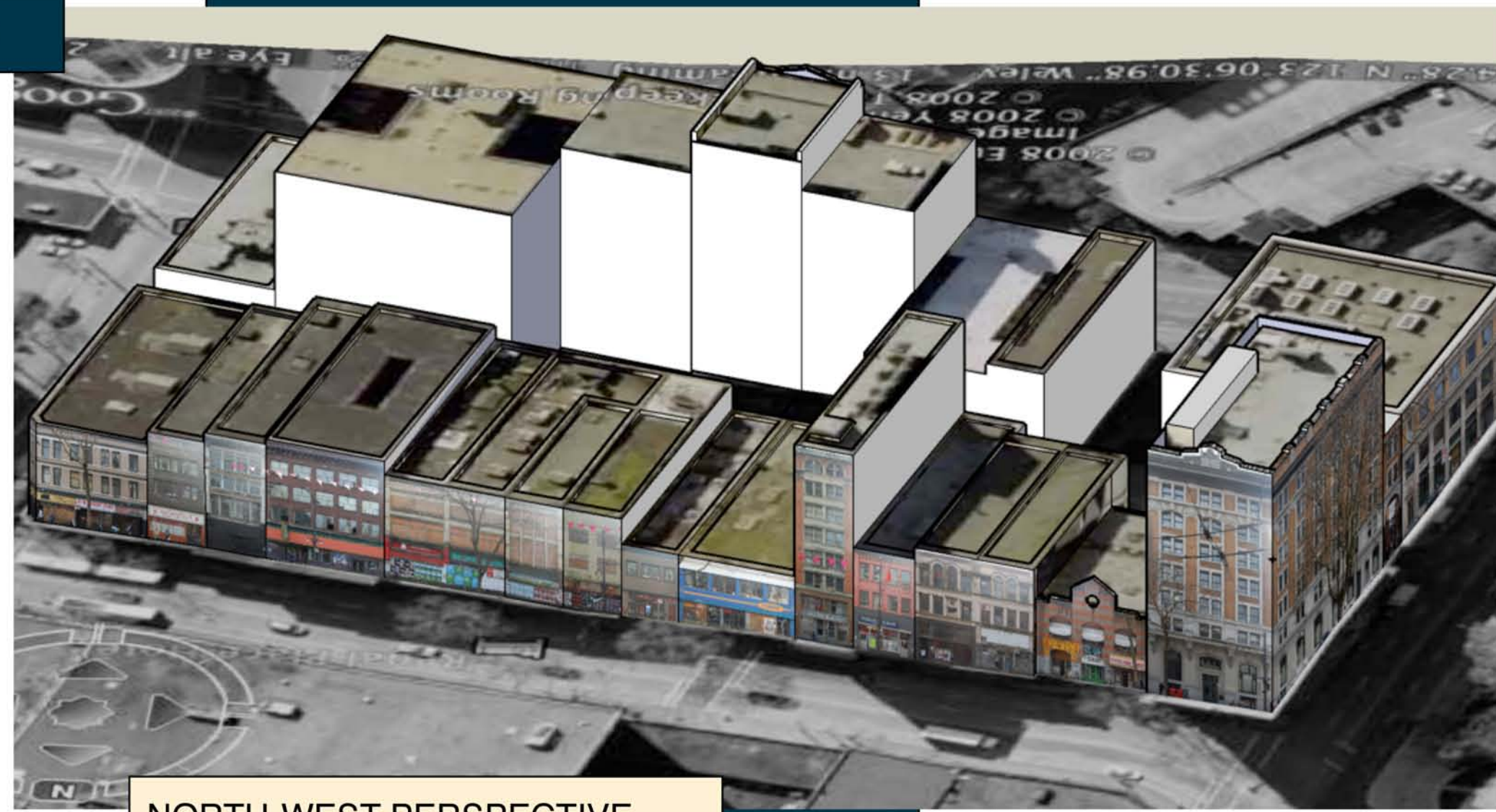




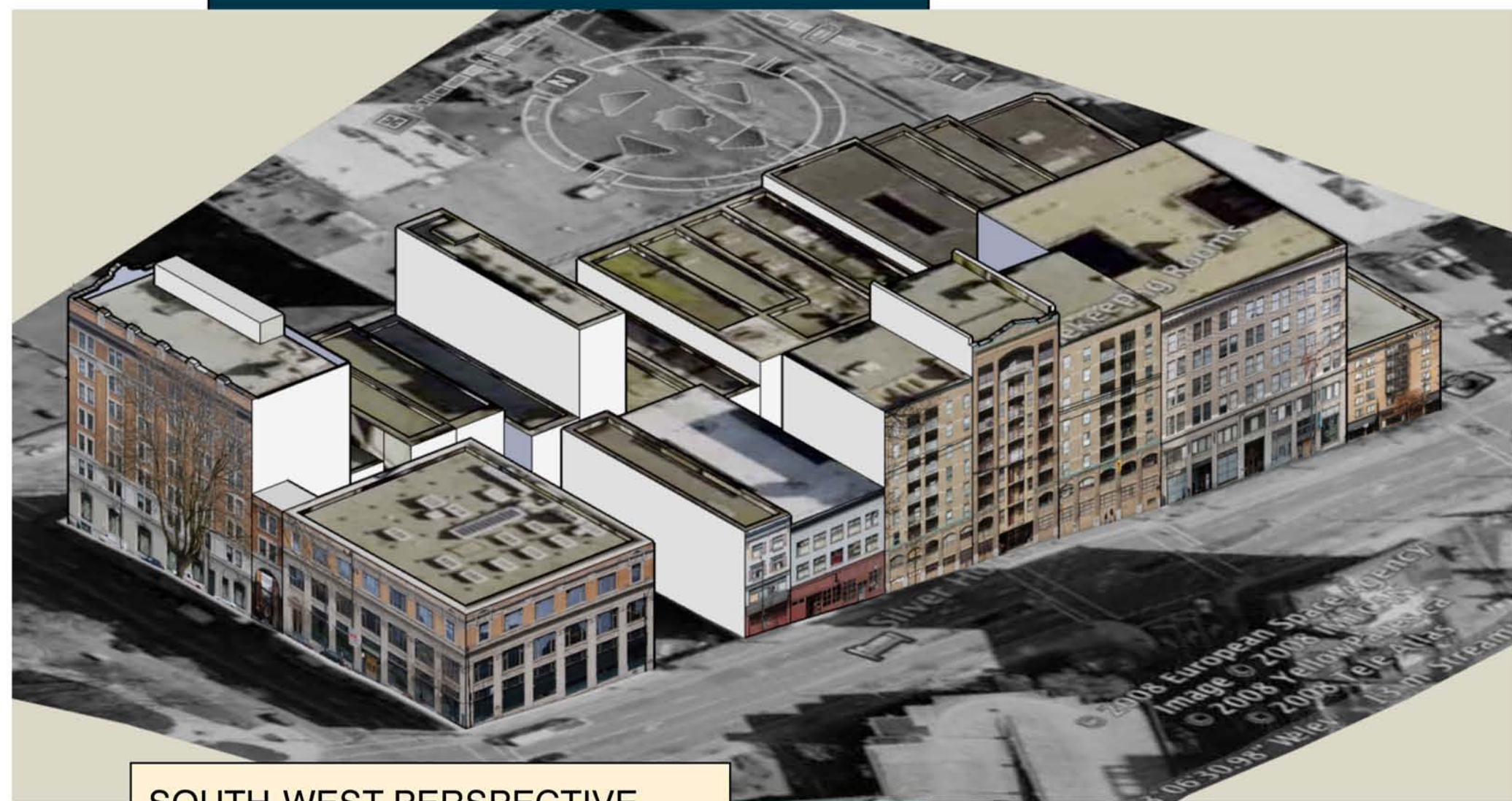
CRADLE OF VANCOUVER: REVISITING "THE GIVING TREE"



SITE



NORTH-WEST PERSPECTIVE



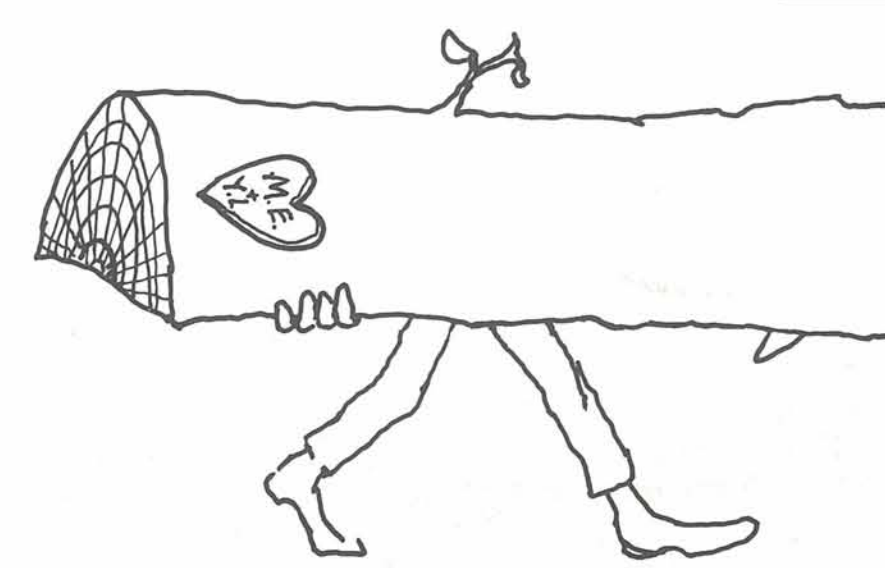
SOUTH-WEST PERSPECTIVE

Our site is the 100 block of West Pender St. in downtown Vancouver. On the far side of Victory Square is a heritage plaque marking the reference point for the original city layout; we are truly in the cradle of Vancouver. Our downtown location has been urban for the last 100 years. Nearby, there is an opportunity for habitat exchange at 1002 Station St., a brownfield site ideal for conversion to natural habitat.

"ONCE THERE WAS A TREE..."

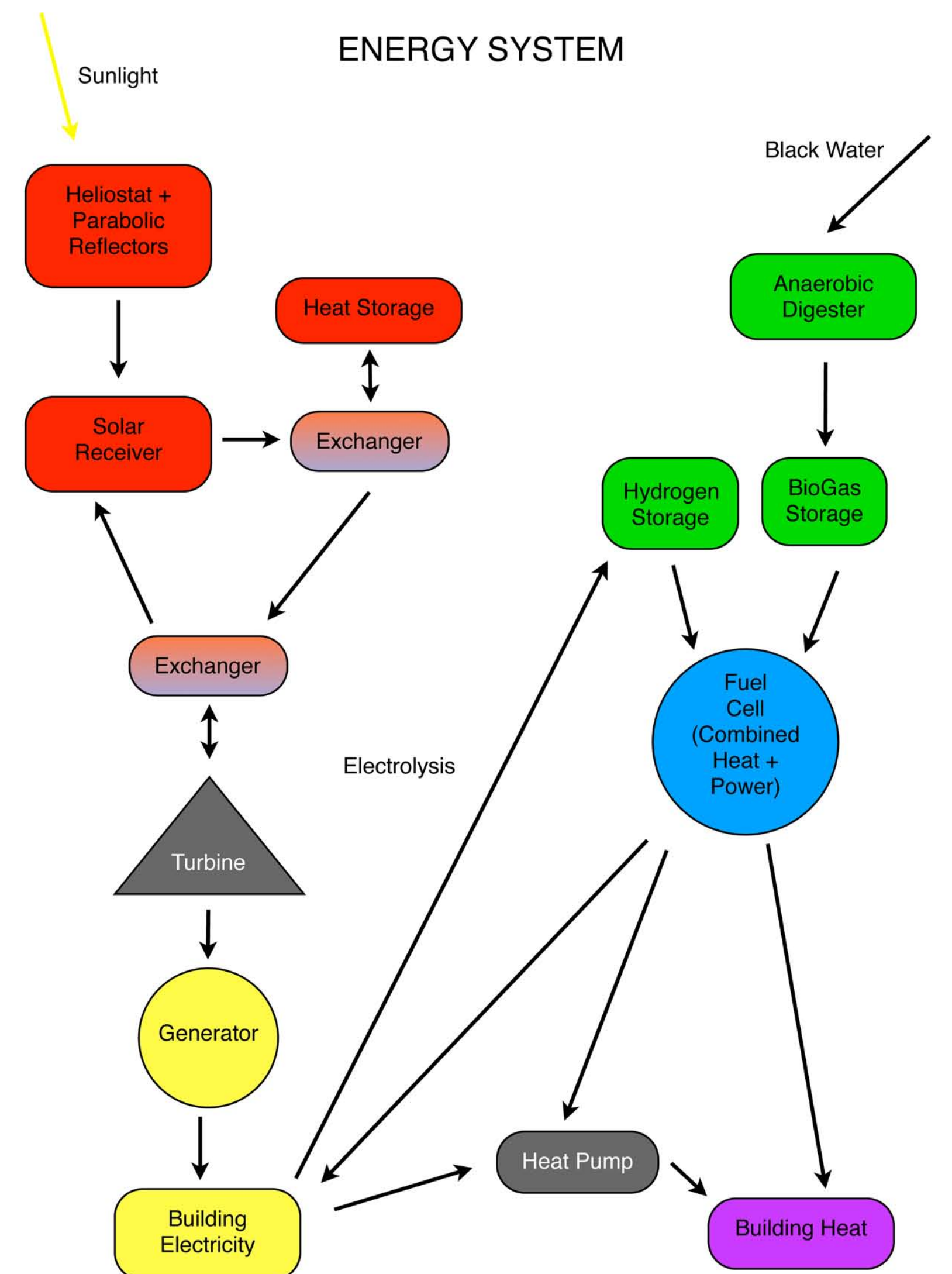


"AND SHE WAS OFTEN LONELY..."



ENERGY

In order to meet our 'Net Zero Energy' goal, we've copied nature and developed a diverse set of integrated systems. The energy for the building will come from a combination of solar, geothermal and biogas, operating on a diurnal cycle. Our system will collect solar energy using a heliostat field and a parabolic mirror on the roof to concentrate light at the thermal collection tower. This will generate electricity to power the building and the ground source heat pump to heat/cool the occupied spaces. The other source of energy is the blackwater system, which produces Biogas through an anaerobic digester. During the peak hours of insolation, the solar system should meet the electrical demands of the building, and also store excess energy as both heat and electrolysis produced hydrogen. During the time of day where the available solar energy does not meet demand, the system can draw on the stored heat. At this time, the system can also produce head and electricity from a CHP fuel cell, capable of using both hydrogen and Biogas.



WATER

The roof will be used to collect water into a purification system located deep in the building. Water discharge from our building will be sent to a local facility for treatment.

"AND SO THE BOY CUT DOWN HER TRUNK AND MADE A BOAT AND SAILED AWAY."

