IN THE INNOVATE SCENARIO, advanced building technologies, clustered development, and focused transportation are utilized to promote a sustainable development. Transportation is concentrated along key routes to promote a walkable community. Public shuttle service provides a sustainable means to navigate through the site and connects residents with other focal destinations throughout Tinley Park.

DAYLIGHTING strategies and **GREEN ROOFS** are also utilized to help alleviate solar heat gain wand reduce energy consumption. Atrium courtyards penetrate buildings to provide daylight to multiple floors. Building heights are determined by using solar angles to provide maximum and minimum heat gain during both winter and summer months.

Residential neighborhoods are clustered around common green spaces. Green spaces serve both as recreational areas for social interaction as well as smaller **COMMUNITY GARDENS** for local food production.

DESIGN TEAM:
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Valerie De Luca senior designer
Yun Tong project architect
Peter Szczelina project architect
Sean O'Gorman architect

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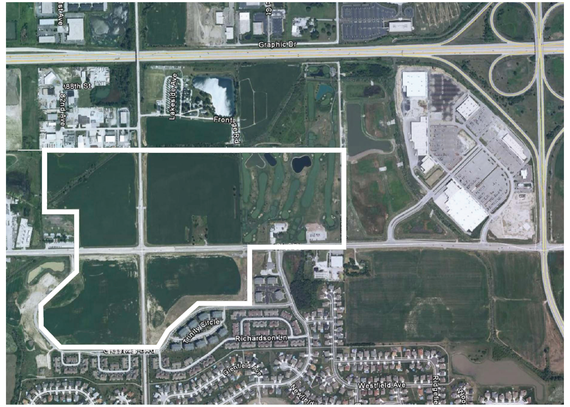


EXISTING CONDITIONS

PROPOSED SITE PLAN

CONCEPT PHOTOS

Vertical Sky Gardens

Community Farm

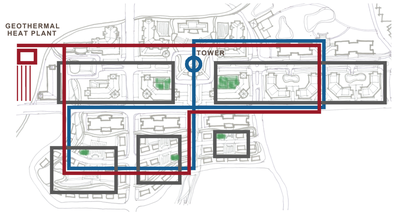
Rooftop Solar Collectors

Vertical Green Wall

Private Gardens

Reflecting Ponds

Green Roofs

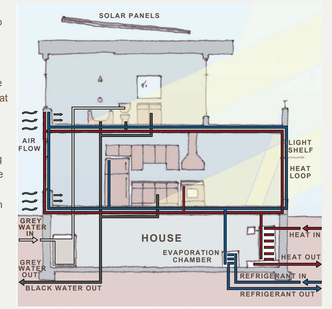


UTILITY DIAGRAM

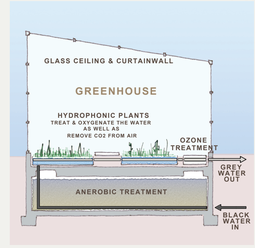
GREEN TECHNOLOGIES are employed for all buildings within the development. **Geothermal heat** and sustainably produced refrigerant pipes are circulated to each building on site by way of underground loops. **Waste water** is also circulated away from buildings underground, and taken to **GREENHOUSES**. These facilities are centrally located in the community to serve as a visual reminder of the green strategies implemented in Tinley Park.

TOWER

The **TOWER,** located in the center of the community plaza, acts in a similar manner to a compressor in an air conditioning system; but on a larger scale. Advanced **solar technology** heats and compresses refrigeration fluid, traveling up the legs of the tower. The **wind turbine** powers a pump that circulates the compressed fluid back down and through condensation lines of the **refrigerant loop**, where it is cooled and distributed throughout the site. Each building then has an **evaporation chamber,** here the compressed fluid is released, and this absorbs heat from the building's refrigeration lines**.** The decompressed refrigeration fluid then returns to the **TOWER**, to repeat the process all over again.



THERMAL ENERGY



GREENHOUSE

Heat and refrigerant loops branch off from the **UTILITY DIAGRAM** and enter each building. Rather than burn fossil fuels, buildings use **THERMAL ENERGY** to heat and cool the indoor environment and appliances. Daylighting and natural ventilation strategies reduce energy consumption even further. The remaining electrical requirement is supplied by **solar and wind technology** implemented on site, at each building. Surplus power is then returned to the electrical grid, to be used by others during peak demand hours.

Blackwater is filtered at each building, before being circulated to **GREENHOUSES.** These bioremediation facilities use plants to naturally treat the water and convert it to **graywater**. The water returns to each building safe for irrigation and flushing toilets.

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