The site selected is an undeveloped piece of land located in the northwestern part of town. The space shows promise due to the nearby neighborhoods, access to parks and biking paths, especially the Douglas State Trail, pharmacy center, Wal-Mart, Sam’s Club, Target, Hy-Vee, and a short distance, roughly 10 minutes, from the heart of downtown Rochester. However, some of the challenges associated with the site include the prospect of future development, current location of construction, and the established community. Other features nearby the area include multiple community parks, a newly developed elementary school, a public golf course, a retirement living community, multiple private schools and churches, and multiple restaurants and dining options. While these features might not immediately impact the site in any way, they do provide options for job placement connecting the workplace training center.

SITE LOCATION: ROCHESTER, MINNESOTA

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MECHANICAL SYSTEM - HEAT EXCHANGER

Sensory overload is a common experience for individuals with ASD, reacting adversely to what most would consider completely normal, such as smooth or soft surfaces feeling rough and sharper, or a low humming of a fan or refrigerator sounding ear piercing and deafening, or the flickering of indirect fluorescent lights appearing overly bright or blinding. The mechanical system chosen for the residential units and the community center is a heat exchange air system. By pairing this system with radiant floor heating and natural ventilation, the buildings will be heated and cooled with minimal noise and ductwork from the mechanical system.

The primary method of heating for the buildings relies on a radiant floor system. This allows the temperatures to remain consistent and further reduce sensory noise from the mechanical systems. Natural ventilation, paired with the heat exchange, allows the buildings to cool better in the summer months and provide fresh air without relying on the need for air conditioning units or heavier mechanical systems. The pitched roof design not only helps create higher windows for the ventilation process, it also provides more access for natural light for interior corridors and spaces.

COMMUNITY CENTER FLOOR PLAN 4062 SQ. FT.