BUILDING PERFORMANCE

The Tidelands at UCSF’s Mission Bay campus offers sustainable, high-quality housing for up to 710 tenants. The community’s efficiencies, studios, one-bedroom, and two-bedroom apartments are spread across two courtyard buildings, each of which are respectful of and closely associated to their surrounding neighborhood and the greater city. The site is well-connected to quality transit with access to diverse amenities, encouraging daily physical activity over a vehicular lifestyle.

PROJECT OVERVIEW

<table>
<thead>
<tr>
<th>Size</th>
<th>360,000 square feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Building Standard</td>
<td>LEED BD+C V4</td>
</tr>
<tr>
<td>Certification Level</td>
<td>LEED Gold</td>
</tr>
<tr>
<td>Program</td>
<td>Administrative offices, leased retail space, and apartments for 710 residents</td>
</tr>
<tr>
<td>Location</td>
<td>San Francisco</td>
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</tbody>
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The Tidelands was designed with efficiency in mind, beginning with efficient use of space. While the complex may feel light and airy, its six-story buildings are each only 58 feet tall in order to meet neighborhood zoning requirements. To take advantage of every inch of height, the Tidelands uses a post-tensioned concrete structure, allowing for thin slabs without the need for beams. A decentralized mechanical system saves even more space by eliminating ductwork in the ceiling and floors.

The Tidelands' courtyard further contributes to the complex's commitment to efficiency and sustainability. Off-site fabricated panels help shade each building from unwanted solar heat, while their material—glass fiber-reinforced concrete—was chosen for its durability and environmental performance over its entire life cycle.

In lieu of interior gathering spaces, the Tidelands' courtyards provide welcoming and peaceful resident gathering spaces. Landscaped with native, drought-tolerant plantings that reduce the need for irrigation, the courtyards are at the center of the buildings' donut-shaped form and—along with carefully designed windows with digitally optimized dimensions—ensure that even interior-facing units have access to beautiful views and an abundance of natural daylight.

SUSTAINABILITY AT A GLANCE

- 42% reduction in energy use*
- 42% reduction in interior water use*
- 75% reduction in exterior water use*
- 81% reduction in carbon emissions*
- 34% of open space is vegetated
- Residential regularly occupied areas are over 90% daylit
- Non-residential regularly occupied areas are over 50% daylit

*over baseline building
Sustainable, wellness-centered design continues inside the complex. To start, each unit is outfitted with an energy recovery ventilator that continuously circulates clean, fresh air—each intake valve is equipped with a particle filter that minimizes external pollutants—without losing any heat energy in the exhaust. This system not only maximizes air quality, but also decentralizes HVAC systems so that each resident has complete control over their individual environment. By combining this technology with operable windows, super-insulated walls, and a self-shading facade, the Tidelands eliminates the need for mechanical air conditioning and drastically reduces its carbon footprint. This passive cooling strategy, along with the complex’s high efficiency-electric heat pumps, has eliminated the need for any on-site carbon combustion and has resulted in an energy use intensity that is 42% below typical residential buildings.

Even the Tidelands’ finishes and furnishings were chosen with wellness and sustainability in mind. The complex’s interior materials have minimal embodied environmental impacts, and in many cases the Tidelands’ durable concrete structures serve as the final finish for ceilings, floors, and sections of walls. Additionally, the Tidelands’ interiors targeted compliance with the Living Building Challenge Red List, incorporating materials that are free of chemicals harmful to humans, animals, and/or the environment. Along this line, all paint, ceiling, and flooring products are verified as having low or no volatile organic compound (VOC) emissions.

From a maintenance and operational standpoint, the Tidelands incorporates enhanced building commissioning; a collaborative process which assures the building manager is educated on the monitor-based systems operations to ensure all energy-related systems and equipment are maintained properly and functioning as designed. Through this close monitoring, the University can ensure the Tidelands continues to meet all its performance goals for years to come.