MEMBER BUILDING CASE STUDY

60 Lake Street | Main Street Landing

PROJECT BACKGROUND:
Main Street Landing (MSL) strives to promote ecological integrity, economic security, empowerment, responsibility and social well-being, and believes that everyone deserves to live, work and play in an environment that is healthy, accessible and affordable. This landmark waterfront four-story building at 60 Lake Street in downtown Burlington, Vermont was built in 2005 and includes office, retail, and performing arts spaces, as well as an underground parking garage. The majority of the building is office space, and is home to the Seventh Generation headquarters, Skinny Pancake restaurant, the Peace & Justice Center’s store and office, as well as the Main Street Landing Performing Arts Center.

Main Street Landing has been a strong, active member of the Burlington 2030 District and has exemplified its dedication to reducing energy use in its properties by undertaking several impactful projects since joining the District. For a Property Energy Plan update developed for the year ending 8/31/2019, the property’s EUI was 80 kBTU/ft². This is 16% less energy use than when the building joined the Burlington 2030 District in 2017.

ENERGY EFFICIENCY:
In Summer of 2017, MSL implemented recommendations from a retrocommissioning study that generated a verified 10% weather-normalized annual electric savings. These updates optimized mechanical systems including the chiller plant, boiler plant, and main building ventilation air handling unit by making adjustments to the controls and occupancy schedules. The project improved the performance of the equipment and ensures the appropriate conditions in the spaces are maintained. In addition to these measures, MSL has added a focus within their facilities staff to improve and increase training on the building systems. A few of the projects are as follows:

1. Public Space Occupancy Schedule: Using a public space occupancy schedule is a human-responsive strategy that saves energy by ensuring that mechanical systems are only running in occupied mode when there are actually people in the space, rather than just when any other part of the building is occupied. At MSL, a controllable occupancy schedule was implemented in public spaces that allows facilities staff to pre-schedule specific areas to switch to occupied mode when an event is planned in those spaces. This is in contrast to the previous occupancy schedule that had all of these spaces in occupied mode 18 hours/day, 7 days/week.

2. Reset Schedules: A temperature reset schedule adds an extra layer of control to a building’s heating and cooling system so that it responds to the real-time building conditions and outside temperatures rather than staying at a static temperature. Without reset schedules in place, the system would over-cool or over-heat in the first stage of the system loop, which would cause re-heating or re-cooling down the line. Reset schedules were added at MSL for the boilers, chiller, and cooling tower to adjust the temperature of the water circulated through the building for heating or cooling.

3. Owner Training: MSL has implemented a more robust training program for their facilities staff. The training has increased facilities staff’s ability to understand how the building’s control system works, change setpoints, adjust schedules and recognize savings opportunities on their own.

BUILDING STATS:
- Owner: Main Street Landing
- Building Type: Mixed Use - Office
- Location: 60 Lake Street in Burlington, Vermont
- Built/Renovated: 2005
- Square Feet: 92,874
- EUI: 80 kBTU/ft² (2019)
- Baseline EUI: 115 kBTU/ft² (regional average)
- Reduction: The property is using 31% less energy than the Mixed Use Office property type baseline. This is 16% less energy use than when the building joined the 2030 District in 2017.

MSL has built its success through a vision of environmental and social consciousness. The company has consistently considered the environmental impacts of construction and is committed to being a leader in sustainable, ecologically responsible development.