



3R Building Sustainability Office Case Study

LEED® Gold Certification for ID+C

LEED Certification: A Company Philosophy



The 3R Building Sustainability team had grown to the point where it became necessary to consider a new office space. The team's objective early on was to find a location in the heart of the city that is close to many local amenities and public transportation. With several options at hand, and the philosophy of sustainable buildings in mind, the decision was made to relocate to an existing building in the historic Strip District of Pittsburgh, Pennsylvania.

Relocating into an existing building has the advantage of having fully-developed infrastructure available, affording a connection to the history of the city, and reducing the impact that the construction of a new building would have on the environment.

The layout of the new office space was formed by an intent to allow for flexible work situations, height-adjustable desks and ergonomic chairs to foster healthy work habits, a collaboration room to allow for breakout sessions, and informal seating areas to “get away” from the desk for a while.

In keeping with 3R Sustainability's philosophy, the new office space was fit out to LEED® ID+C v2009 standards and has achieved LEED® Gold certification. 3R is also implementing a number of policies and procedures outlined in the WELL Building Standard® to promote the health and well-being of all team members.



LEED®—an acronym for Leadership in Energy and Environmental Design™—
is a registered trademark of the U.S. Green Building Council®

Building Profile



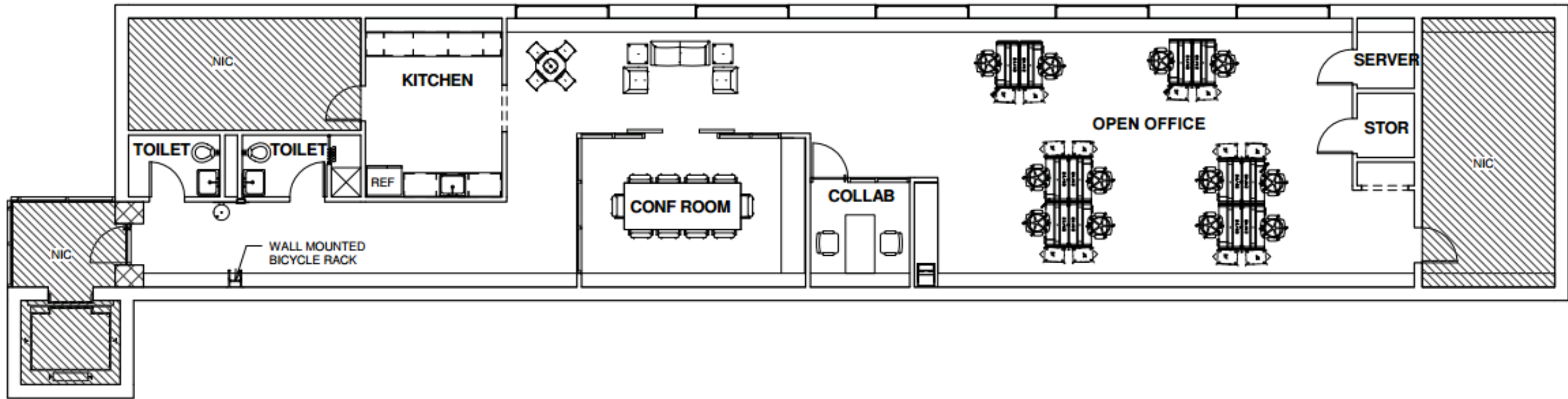
Although a new home to 3R, the building has stood in the Strip District for many decades, once serving as a bottling plant for a brewery and later a dairy company. Originally built as a part of the Phoenix Brewery around 1865, then used as a bottling house for the Otto Milk Company in the early 1900's, the building in which the new 3R Sustainability office is located, offered both great opportunities and also some challenges. The floor of the original building was sloped to allow fluids to drain to the center and to the south end of the building. While some of the slope has been levelled, there is still a distinguishable difference in floor height from one end to the other.

Sharing the 3-story building with other occupants, the 3R office occupies the entire 3rd floor of the building. The space is approximately 2,300 SF. It has entrances at the front and back of the building. The southwest wall of the office has 5 large windows that face the city of Pittsburgh and the northeast wall is original brick.

As you enter the office through the main entrance corridor, the restrooms and the kitchen are to the left. Directly in front of you is the conference room and informal seating area. Beyond that is the collaboration room and open work space with pods of two or four work stations. The back of the office houses the server room and storage for office supplies and employee belongings.



Building Profile



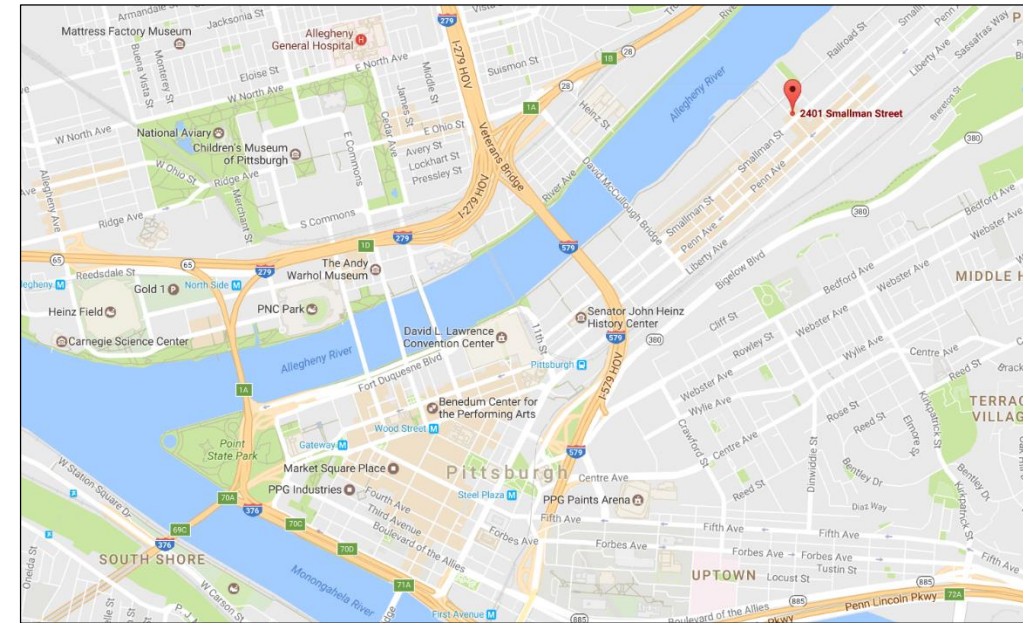
Sustainable Sites



For those not familiar with Pittsburgh, the Strip District neighborhood has a rich and diverse economic history. In the early days, it was home to mills, factories, and a hub for the transportation of goods and raw materials. In the early-to-mid-20th century it transformed into Pittsburgh's epicenter of market wholesalers – fresh produce, meats, and other goods. Today, the “Strip” is a well-known historic area, featuring many different markets, restaurants, businesses, and shopping.

In this neighborhood, the building is located within the limits of the city of Pittsburgh, Pennsylvania. A dense area, with a walkability score of 70, many amenities are within walking distance. Building occupants can easily work, eat, exercise, and relax at the well-rounded mix of businesses in the area. The building location is perfect for alternative transportation options, with nearby bus stops that take building occupants around, and out of, the city.

Along the banks of the city's three rivers are expansive, mostly flat, bike trails which lead into the city's neighboring communities, giving the area a bike score of 76. 3R employees enjoy easy access to these trails, being just a few hundred feet away from trail entrances. The 3R office offers a bicycle storage facility, as well as shower and changing room for those who choose to commute by alternative means and for those who choose to be active before or after work hours.



Energy & Atmosphere



Over 90% of new appliances purchased for the office are ENERGY STAR® labelled. These appliances include a refrigerator, a dishwasher, a microwave, desk lamps, a printer, a laptop, and monitors. Other office equipment was reused from the company's prior office; including computers and other network hardware.

100% of the spaces' energy usage (36.8 MWh/year) was offset by purchasing Renewable Energy Credits (RECs) through Carbon Solutions Group. 3R chose to not only meet the energy usage, but to double the amount of RECs purchased in order to pursue exemplary performance and offset their carbon emissions.

Along with the Fundamental Commissioning requirement, 3R chose to pursue Enhanced Commissioning for the space. The existing HVAC system and the new domestic hot water and lighting systems were commissioned, which identified issues that were able to be resolved prior to occupying the space.



Indoor Environmental Air Quality



Prerequisites were easily met with 3R's No-Smoking Policy and minimum IAQ performance being met with ventilation calculations and the results of a test and balance report, and furthermore exceeded the minimum requirement to meet the Increased ventilation requirement. The HVAC design met the requirements of ASHRAE Standard 55-2004. Verification was made, via an occupant survey, that thermal conditions in the building were satisfactory. This addressed the Thermal Comfort Design and Verification credits.

A Construction Indoor Air Quality Management Plan was followed during construction to reduce impacts on the construction team, as well as occupants on the other floors. Only low VOC paint and low-emitting adhesives were used on the interior. FloorScore® certified carpet was installed to keep exposure to indoor air contaminants to a minimum.

Furniture purchased for the office include desks, chairs, conference room table, lobby couch and chairs, and high-top lunch table, among some other smaller items. Purchased furniture met the requirements of either level® 1 certified to ANSI/BIFMA e3 Furniture Sustainability Standard, Green Guard Certified, or an equivalent.

The southwest wall of the office is pierced with five large windows, offering a beautiful view of the city. With an open floor plan, natural daylight flows throughout the entire work space. Windows are equipped with manually-adjustable blinds to regulate brightness. Furthermore, lighting fixtures in the office were reused and have been retrofitted to use energy-efficient LED bulbs. Various fixtures have dimming/multi-level capabilities, motion sensors, and/or shields to disperse light throughout the space properly and efficiently. Each work space is equipped with individual task lighting.

Indoor Environmental Air Quality



Water Efficiency

Water fixtures within the space were replaced with water-saving alternatives including EPA WaterSense® faucets, toilets, and showerhead. These are low-flow fixtures with aerators to meet water reduction goals.

Materials & Resources

The office features a recycling station for glass, plastics, cardboard and metals, and a separate bin to recycle paper. Additionally, there is a bi-weekly pick-up of compostables generated by the office staff through a local composting vendor.

Over 95% of the construction waste was recycled. An effort was made to salvage and recycle as much of the previous build out as possible. Existing doors, light fixtures, and HVAC equipment were reused. (Pictured on next page)



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Innovation and Regional Priority



The Innovation Category gives the project some flexibility to gain additional points for measures taken that don't easily fall into the other LEED credit categories or go above and beyond what another credit category may require. Typically, the project team pursues LEED pilot credits, or exemplary performance credits, for Innovation points. The 3R Sustainability office looks to add five LEED points in this category by pursuing the following credits:

- IDc1.1 Exemplary Performance of EAc1.1: Optimize Energy Performance - Lighting Power
- IDc1.2 Exemplary Performance of EAc6: Green Power
- IDc1.3 Exemplary Performance of MRc2: Construction Waste Management
- IDc1.4 Innovation in Design: Low Mercury Lighting
- ICc1.5 Innovation in Design: Green Education
- ID c2 LEED Accredited Professional

Additionally, the Regional Priorities of all LEED projects are assessed. These are essentially bonus points, assigned automatically, if the project has in some way addressed geographically-specific environmental priorities. The 3R Sustainability Office fits the criteria for one of the priorities in its region, and may gain one LEED point from the following:

- RPc1.1 Regional Priority: EAc2: Increased Ventilation



A Sustainable Home for the Sustainability Team

3R Sustainability is proud to not only have a new office that connects the team to the history of the city but also to reduce the environmental impact that an office move generates. 3R Sustainability now offers the team an environment which promotes the health of the occupants by focusing on low-contaminant products and materials.

The result is a pleasant and bright office environment that is conducive to productivity and which reduces the consumption of energy and water. The office location allows the occupants to use alternative transportation options for commuting and engaging with neighborhood businesses.

In March 2017, the 3R Sustainability Office was officially awarded LEED Gold certification for Interior Design and Construction for Commercial Interiors version 2009 by the USGBC.

