



The robust facade relief provides additional shade in the summer, therefore reducing the amount of direct sunlight shining through.

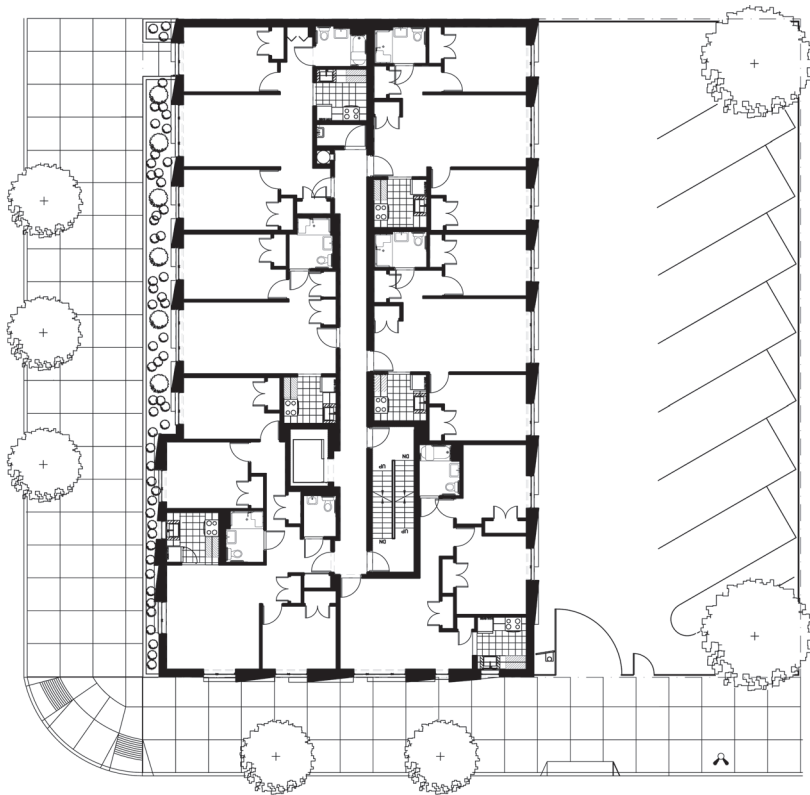
Multiple dwelling in New York

With the block of flats at 803 Knickerbocker Avenue in Brooklyn, architect Chris Benedict, R.A. proves that it is even possible in New York to achieve the passive house standard without extra construction costs. A well-conceived layout and innovative materials made this possible.

Building owner
Ridgewood Bushwick, Senior Citizens Council, Inc.,
New York, US
Architect
Chris Benedict, R.A., New York, US
Location
Knickerbocker Avenue, Brooklyn, New York, US
Sto products
Facade insulation system with Lotus-Effect® -
Technology (StoTherm Lotusan NExT)
Applicator
Alpha Construction, Astoria, NY 11105, US

Photos
Ridgewood Bushwick, Senior Citizens Council, Inc.,
New York, US

The consumption figures attract attention: For heating and air conditioning, the five-storey apartment building with thirty flats of different sizes is supposed to consume only around 15 kW/m² per year. In comparison with the New York average, that is extremely low. Furthermore, the total power consumption (therefore the primary energy) is estimated at less than 120 kWh/m². The crucial element in achieving this standard is the construction of an intelligently modelled, high-performance facade insulation that keeps the interior temperatures steady. Only small amounts of energy are required for the adjustment of the heating and air conditioning to the most comfortable levels. Also essential are the highly insulating, airtight windows. Ventilation of passive houses is vital, and this is taken care of by a heat recovery system that adjusts the room air temperature with ventilators powered by renewable energy. However, with its sculptural autonomy and form, the facade also manages to impress independently of the climatic aspects. In good weather, it also provides the inhabitants with a spacious roof terrace as a communal space in the densely built-up city.



Typical floor plan