

Streetsville Build Details

Source: Habitat for Humanity Mississauga

Habitat for Humanity Mississauga is proud of the green design and construction elements of our first build in Streetsville. Our first home incorporates simple and effective energy saving measures including energy efficient appliances, the best available building science and one of the most energy efficient heating and cooling systems available with a geothermal ground source heating system.

It all started with a site layout and a house designed to blend into the neighbourhood, with optimized window locations provide natural light, free heat from the sun in the winter and fresh air in the summer. Habitat Mississauga wanted a safe, comfortable home that the family and the community could be proud of, walking distance from schools, parks and shopping.

Building on a family friendly green design, the house incorporates simple, efficient and effective environmental impact reducing features like smart temperature controls, right-sized mechanical equipment and the latest advancements in building technology. The home is “renewable-ready”, set up to take advantage of free solar and wind power in the future as the residential power generation programs and technology evolve and improve.

Finally, the home was built using local materials and resources whenever possible making this truly a local project with big impact.

The house features a geothermal heating and cooling system and is read providing the family with the best in home comfort for their family while reducing their environmental footprint and saving 30% of a typical monthly energy bill.

1. Home size optimized material and energy impact over the lifecycle of the home
2. Maximized opportunities for cost-effective integration of green design and construction strategies with integrated project planning
3. Enhanced building durability and performance of the building envelope through the incorporation of a building durability management process
4. Not developing on environmentally sensitive lands
5. Infill project on a previously developed site with no requirement for additional infrastructure
6. Project location encourages walking, biking and public transit minimizing the dependency on automobile dependency
7. Immediate access (less than 400m) to open space provides opportunity for walking, physical activity and time spent outdoors
8. Minimizing long term impacts to the building lot with the incorporation of Erosion Controls during construction and minimizing the disturbed area of the site

9. Designing landscape features to avoid invasive species and minimize demand for water and synthetic chemicals
10. Designing landscape features to reduce heat island effects
11. Designing site features to minimize erosion and runoff from the home site
12. Minimizing outdoor demand for water through water-efficient irrigation
13. Minimizing the indoor demand for water through water-efficient fixtures and fittings
14. Design and installation of insulation to minimize heat transfer and thermal bridging
15. Minimize energy consumption caused by uncontrolled air leakage into and out of conditioned spaces
16. Maximize energy performance of windows
17. Minimize energy consumption due to thermal bridges and/or leaks in the heating and cooling distribution system
18. Reduce energy consumption associated with the heating and cooling system (Geo-Thermal: Horizontal ground loop & heat pump)
19. Reduce energy consumption associated with domestic hot water system, including improving the efficiency of both the hot water system design and the layout of the fixtures in the home.
20. Reduce energy consumption associated with interior and exterior lighting
21. Reduce appliance energy consumption
22. Optimize the use of framing materials
23. Increase demand for environmentally preferable products and products or building components that are extracted, processed and manufactured within the region
24. Reduce waste generation to level below the industry norm
25. Minimize the leakage of combustion gases into the occupied space of the home
26. Reduce moisture and exposure to indoor pollutants in kitchen and bathrooms
27. Provide appropriate distribution of space heating and cooling in the home to improve thermal comfort and energy performance
28. Reduce particulate matter from the air supply system.
29. Reduce occupant exposure to indoor pollution originating from an adjacent garage
30. Maintain the performance of the home by educating the occupants