

Permeable Paving

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Abstract

Urban areas across the world suffer from problems caused by large amounts of impermeable surfaces. Runoff, flooding, and reduction of the water table are all problems that are caused by impermeable surfaces. Simply reducing the area covered by impermeable surfaces can make a significant difference in minimizing these problems. Using the WPI campus and drivable grass as a single solution will give information about the cost, time, and methods involved in reducing impermeable surfaces.

Impermeable Surfaces Cause:

- Runoff which causes
 - Contamination in water sources and the environment
 - Flooding
- Reduction of the water table

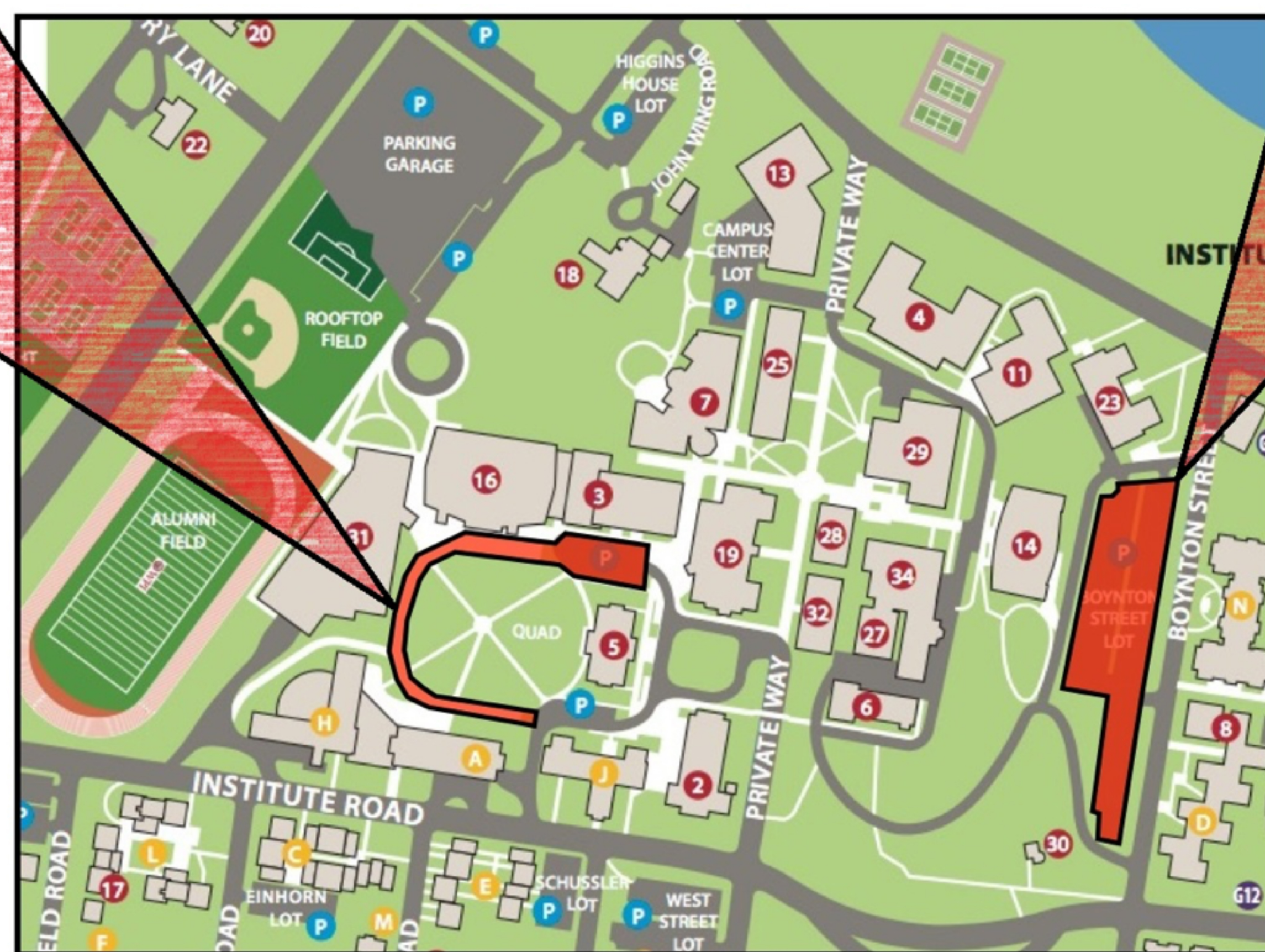
Solution

Drivable Grass can be used to replace asphalt and concrete parking lots and other impermeable surfaces in low or non vehicular use areas.

Case Study



Quad Service Road
 Total Area:
 22,500
 square feet



Boynton Street Lot
 Total Area:
 57,150
 square feet

By making more permeable surfaces in urban zones water is able to infiltrate the soil reducing runoff and replenishing the soil and water table.

As water infiltrates naturally through the grass and soil, it is biofiltered, cleaning the water without using chemicals.

Drivable Grass also gives LEED credit which is a green initiative that ranks a building based on how environmentally friendly it is.

Contacts

Contacts were invaluable to our project. By contacting the WPI Sustainability Team, Burlington Parks and Recreation Department, and Drivable Grass manufacturers we gathered valuable information about our solution. We gained customer testimonial on the system, information from the manufacturer, and specifics about our case study situation. These contacts shaped our project as their concerns and interests guided us toward a more specific and defined end product.

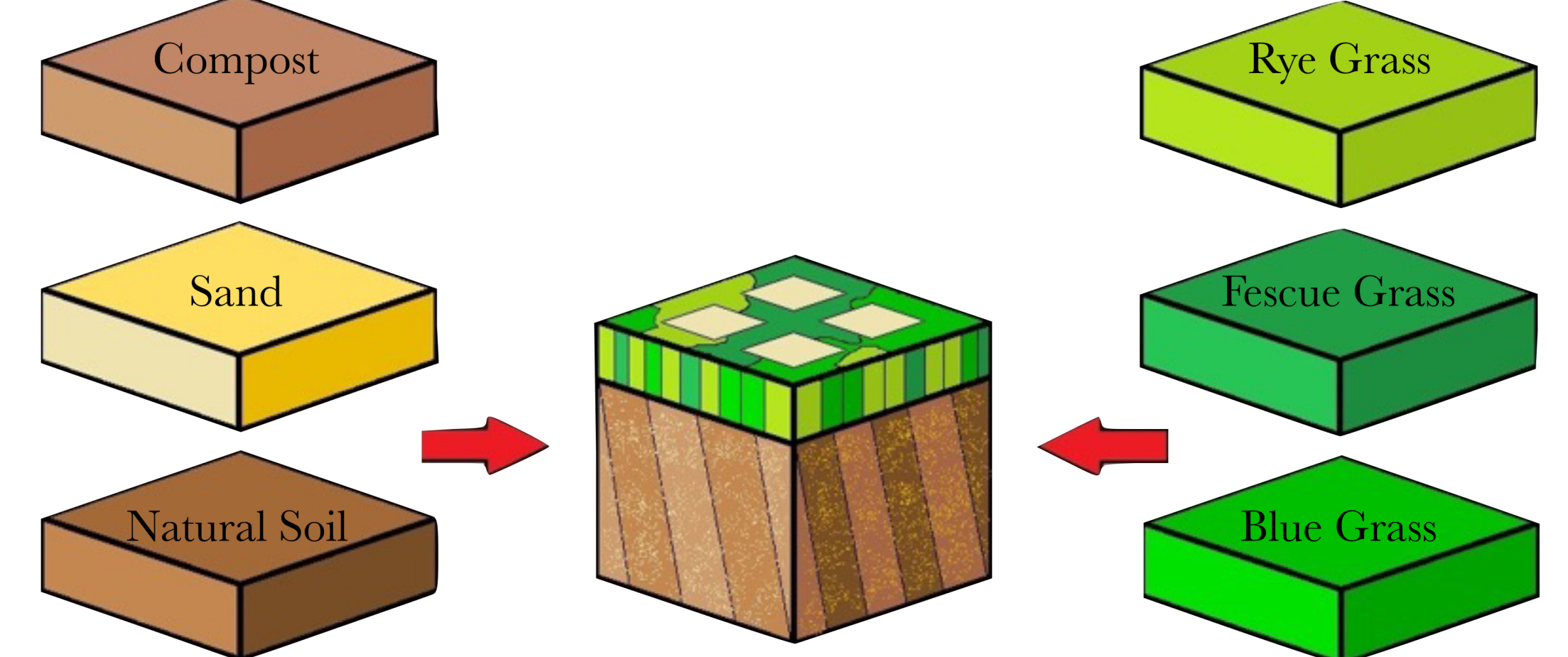
Prospective Costs

Asphalt Installment:
\$2.50-4.25/square foot
 Drivable Grass Installment:
\$2.50-2.75/square foot

Acknowledgments

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Low Maintenance Drivable Grass



This fertile soil mixture prevents weed growth. The mixture of native grasses grows without watering during normal climate conditions.

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