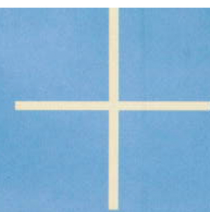


AZURE

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The Annual Houses Issue

6 STUNNING HOMES



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Emerald in the rough
The elegant front facade features a four-metre-high shimmering screen of green glass set against a charcoal slate background.



green light

By incorporating multiple environmental features, as well as a striking emerald glass wall, Paul Raff has created a beacon of progressive residential architecture

**By John Bentley Mays
Photography by Ben Rahn and Steve Tsai**

Toronto architect Paul Raff has long been interested in the crevices that punctuate the urban fabric. He delights in the fire escapes that twist up between buildings, the narrow staircases that burrow into the interiors of blocks of flats, the back alleys that crack the city's otherwise solid blocks. Each of these spatial features unlocks the urban mass a little, inviting light and air to penetrate the inner zones of our habitation. They are places where light plays across hard surfaces of brick, stone and metal, creating a visual poetry that is nuanced and urbane.

In his design for a new family home in Toronto's Forest Hill neighbourhood, Raff has put these urban fascinations with the subtleties of sunshine and shadow to work in arresting ways. Devised as a series of stacked boxes, the 325-square-metre house consists of a single-storey construction with the garage below and a two-storey volume with a rooftop pavilion for the master suite. Its L-shaped footprint embraces a pool that provides an external focus for views from the interior.

A perforated charcoal slate element gathers the sun's heat and filters incoming sunlight, generating a slow dance of light and shadow in the open-plan interior

The basic layout is not radically different from any other house up and down the shady street. Entering through the front door, the visitor finds the living room off to the left and the dining room to the right. The stair to the upper levels lies ahead, with a spacious kitchen completing the ground-floor ensemble of rooms. But that's where the resemblance between this house and its neighbours ends. Instead of facing the street with a conventional porch, the streetside facade is an elegant, restrained composition of charcoal slate planes and a broad screen of 475 tightly bound emerald green glass planks, rough cut from heavy sheets and installed with their edges outward. Canted slightly away from the sidewalk, this geometry of muted dark stone and shimmering green glass catches a slight curve in the street and moves with it, giving a refined lift to the otherwise dowdy streetscape.

The artistry of the glass screen is best appreciated in the living room, where it provides a sparkling green wall of illumination. The screen's thickness ensures privacy from the street, while its translucency takes advantage of all the available light. Throughout the day and night, the transit of the sun, the shifting shade of trees and the headlights of passing cars create a slow, unending abstract spectacle within the living room.

Here and elsewhere in the house, Raff departs from the more traditional homes of this upscale neighbourhood – with their small windows punched in thick brick and their plaster bulwarks – and experiments with the possibilities of light. The south facade off the kitchen and family room, for example, is composed of an expanse of clear glass curtain wall, a system more commonly found in high-rise office buildings than in ordinary residential projects. Raff uses it to striking effect by flipping the aluminum mullions (which normally face inward in a tall building) outward, generating a dramatic interior cascade of smoothly joined glass panels soaring to the upper storey.

Yet the inside of the house is not uncomfortably awash in brightness. The stair runs straight up alongside the curtain wall, breaking the sunshine that streams in from the south. And standing tall between stair and kitchen, a perforated charcoal slate element gathers the sun's heat and further filters

1 A view of the family room adjacent to the kitchen shows the monolithic wall of dark slate that rises from the lower level to the second floor. Random niches provide places for display and create patterns of light.

2 The master ensuite in the third-floor pavilion has a view directly into the canopy of mature trees

3 In the master suite, a custom-designed bed in bamboo incorporates ample storage, allowing it to take centre-stage

4 The living room is located directly behind the green glass screen, which provides privacy while allowing the passage of light. The painting is Lot C, 2001 by Mark Vinci.

5 A sculptural staircase with a slice of glass for a railing is situated between the curtain wall and the monolithic slate wall. The wall acts as a heat sink for the sunshine streaming through the south-facing glazing.

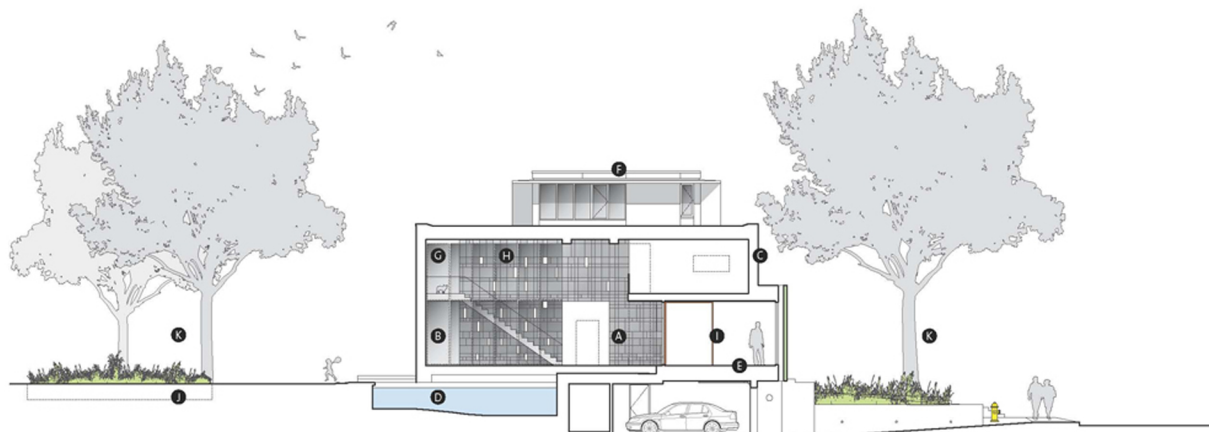
6 A stainless steel shower and sink are inserted into a wall of bamboo composite in the kitchen.

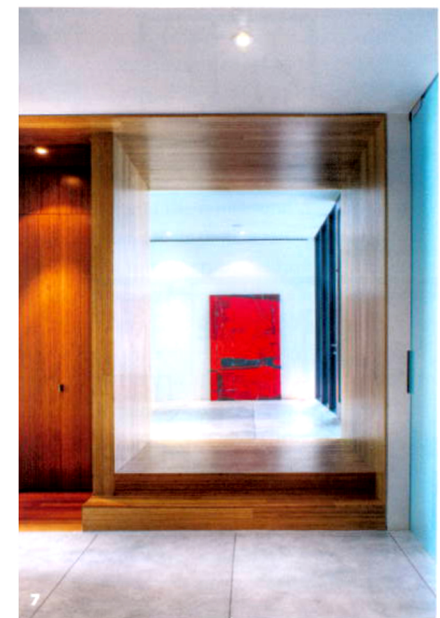
7 Stained bamboo paneling separates the entrance from the living room on one side and the dining area on the other.

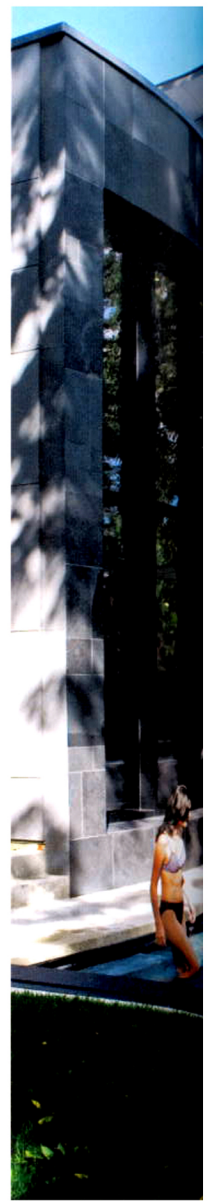
How it gets the green light

A high-performance building envelope and a passive solar approach are the basis of the building's environmental strategy. The house was oriented on a strict north-south-east-west axis, to take advantage of sun angles, and computerized energy modelling was used to optimize performance. The design's efficiency and compactness saved considerable resources in the initial construction and ongoing use of energy.

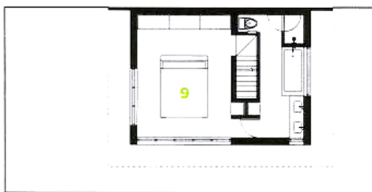
- A** Stone wall absorbs the winter sun and acts as a thermal heat sink, keeping the house warm at night
- B** Triple-layer, argon-filled high-performance glazing
- C** High-performance building envelope, including structurally insulated panel system (R36, roof R44)
- D** Designed and wired for future hydronic solar panels to heat the pool and the house
- E** Ultra-high-efficiency boiler and radiant in-floor heating
- F** Designed and wired for future roof-mounted photovoltaic solar panels to generate electricity
- G** Height of space allows for passive cooling in summer
- H** Automated shading to reduce summer heat gain
- I** Non-toxic, renewable materials, such as bamboo and wheatboard millwork, as well as low-VOC paint
- J** Stormwater managed on site with soak pits
- K** Existing vegetation and mature trees maintained







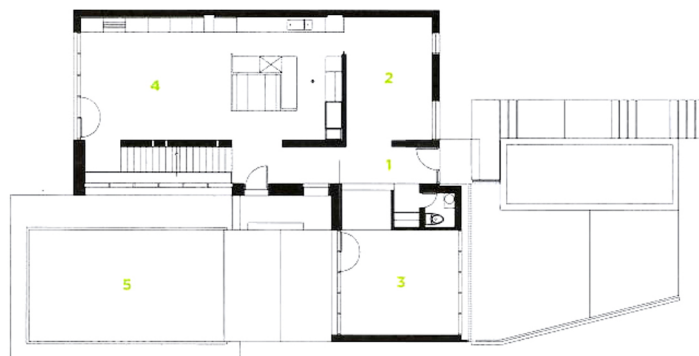
Third floor



Second floor



Ground floor



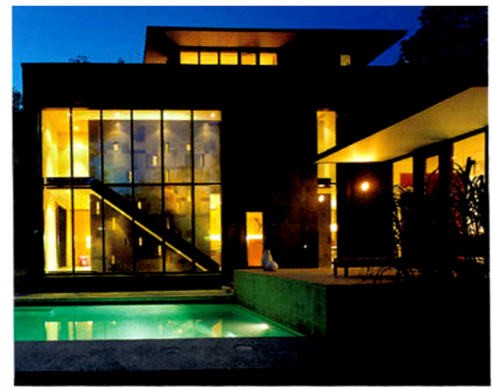
- 1 Entrance
- 2 Dining room
- 3 Living room
- 4 Kitchen/family room
- 5 Pool
- 6 Study
- 7 Atrium
- 8 Bedroom
- 9 Master suite



Opposite In the ample playroom on the lower level, the slate wall provides hidey-holes and a giant backboard. Radiant in-floor heating makes the house barefoot friendly.

Above Inserted in the open space of the L-shaped configuration, the swimming pool is screened from the street and positioned for southern exposure.

Right A night view across the pool shows the southern elevation at its most dramatic.



Raff has made a modern home that welcomes in all the light Toronto can offer, and that incorporates it with charming variety

incoming sunlight, generating a slow dance of light and shadow in the open-plan interior through the course of the day. The composition of the stair, the sheer wall of glass and the monolithic slate light filter and thermal wall echoes the fire escapes and tightly framed flights of steps that Raff has admired in the cityscape.

The architect's theme of shade and light is carried through, to lovely effect, in the palette he has employed in the inside finishes. Accents in dark slate contrast with the stained bamboo walls and natural bamboo millwork to create an interior landscape that is gentle without being weak or reticent, and that exploits to full advantage the natural beauty of stone and wood. This emphasis on nature's colours is carried through to the compact master suite, where curtains of natural canvas cover the expanses of glass.

The use of bamboo responds to the client's concerns about sustainability. Other replies to the clients' desire to reduce their home's impact on the environment include a high-performance building envelope, precisely calibrated and oriented to the changing angles of sunlight, and an ultra-high-efficiency boiler and radiant in-floor heating. Automated shading reduces summer heat gain. This house has also been designed and wired for future hydronic solar panels to heat the pool and the house, and roof-mounted photovoltaic solar panels to generate electricity.

Coming from the American Southwest, the clients were understandably apprehensive about Canada's long northern season of darkness. While no architect could give them the sun-washed desert they left, Raff has made for them a modern home that welcomes in all the light Toronto can offer, and that incorporates it with charming variety. The stylistic result of Raff's labour is a distinctively lyrical reinvention of modernism: free from the starkness and excessive simplicity of much advanced home design, loyal to the clarity of the best progressive residential architecture of yesterday, yet thoroughly contemporary in its understanding of life in the city now. **AZ**