WATERFRONToronto

Rees WaveDeck Key Facts

DIMENSION
10.7m (length)
45m (width)
Total area = 480m^2

The height of the deck above the water varies according to seasonal changes in water levels. Today the deck is approximately 0.85m above the lake at it's lowest point and 1.6m above the lake at the east and west sides.

The wavedeck can accommodate up to 1200 people and structurally could hold the weight of a fire truck.

MATERIALS
The deck is made up of 2730 deck boards (2275 short deck boards and 455 long deck boards).

Two types of wood were used to build the deck: Ipe wood, a durable hardwood with an extended life-cycle of 40 years; and gluelam Coastal Yellow cedar, chosen for its water-repellent character.

Ipe wood was also used for the Spadina and Simcoe WaveDecks as well as Waterfront Toronto's water's edge improvement projects at York and John Quays. This helps provide a coherency and unified look for the central waterfront.

The steps are large gluelam Coastal Yellow Cedar timbers which were custom milled to accurate radii in order to obtain the playful undulating curves of the deck.

The wavedeck had to be structurally built to withstand the strong wave force of the lake and any ice shifting.

LIGHTING
The deck is lit from below using LED fixtures mounted to the timber structure to illuminate the water and cast a glow from beneath the deck.

The LED lights are highly-efficient with a 20-year life cycle.

BUDGET AND TIMING

The overall project cost (which includes design and construction) is $4 million. This is significantly under the $5m original budget estimate for the project.

Construction began in October 2008 and was completed in less than 10 months, ahead of schedule and under budget.

Pile driving and dockwall rehabilitation commenced in November and continued through to January, followed by the installation of fish habitat. The primary steel beams were installed in March. Timber beams were installed in April over a period of two weeks. The timber decking and deck furniture such as railings and benches were installed over a two month period.

ACCESSIBILITY

The wavedeck is fully wheelchair accessible, with no slopes steeper than 5%. In addition, accessible route markers denote routes which are free of steps.

DESIGN & USES

The wavedeck is a uniquely Canadian structure that exists nowhere else in the world. The design of the wavedeck was inspired by the shorelines of Ontario's great lakes and the Canadian cottage experience.

The wavedeck is an urban dock that is both a piece of art and a functional gathering space. It is a completely flexible structural space. The stairs act as an informal amphitheatre and the varying heights of the deck allow for different vantage points and ultimately different experiences with the lake.

The form allows people to interpret the space in many different ways: the amphitheatre-like steps can be used as a passive sitting place, or as an active learning space for summer camps or the nearby sailing school. A portion of the toe rail at the centre of the deck is removable to accommodate boarding of small boats from the WaveDeck.

The two 15 metre backless benches act as an elegant barrier to the water while also providing seating for users of the space.

CONSTRUCTION CONTRACTOR

Somerville Construction, a privately owned Toronto based firm built the Rees, Simcoe, and Spadina WaveDecks. Somerville has extensive experience working on the waterfront and other unusual, one-of-a-kind, high-profile projects.

OPERATION OF THE WAVEDECKS

The City of Toronto is the owner of the Rees WaveDeck and the Parks Department will provide maintenance and operation of the public space.

ENVIRONMENTAL SUSTAINABILITY

The wavedeck includes the creation of new fish habitat. Riverstone shoals, tree logs and embankments were installed to provide shelter and increased feeding and forging opportunities for lake fish. Aquatic Habitat Toronto, of which Waterfront Toronto is a partner, has won a Public Sector Quality Fair award for the aquatic habitat enhancement work being done on Toronto's waterfront.