

Waking the Shore

LEUWEBB PROJECTS + DIALOG + MULVEY & BANANI LIGHTING



EAST MEDIAN AND CROSSWALK

Time expands in the moment of passage, the transition from the urban realm to the natural one and back, as we pass through the threshold, slowing down, listening, looking, exhaling, before we continue on.

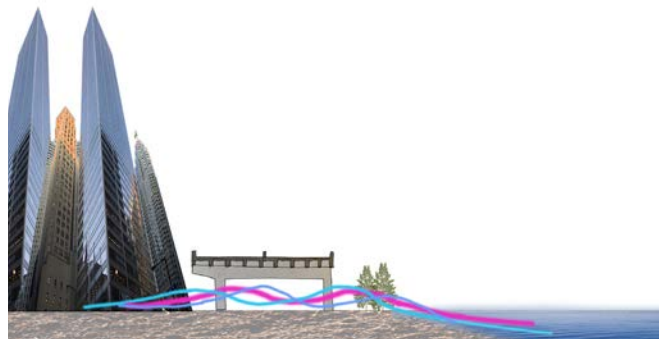


CONTEXT



The Gardiner Expressway is a regional thread. It runs just north of the current shoreline of Lake Ontario, hovering above the original shoreline from hundreds of years ago. To the north of the Expressway is the city – the centre of commerce and culture. Traditionally the Gardiner and Lake Shore Boulevard below have acted as barriers between the city and the lake. **Waking the Shore** seeks to reimagine this condition and create a space for people.

CONCEPT

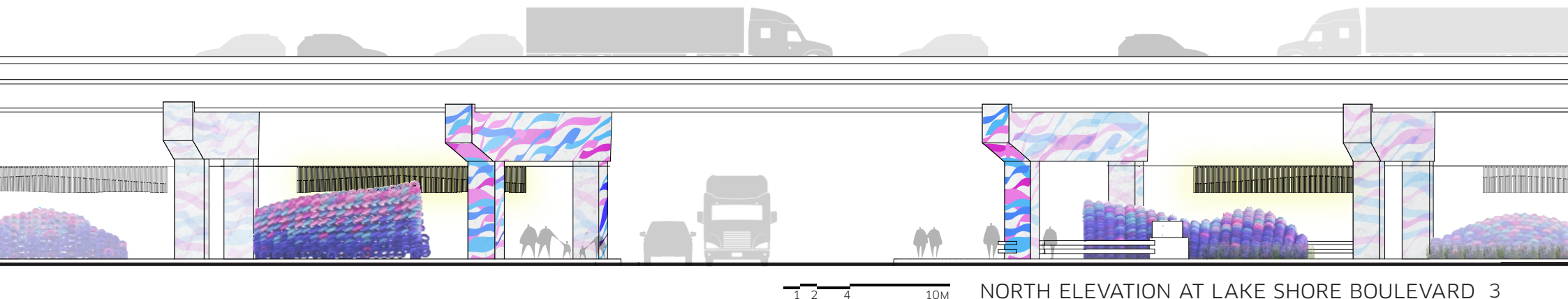


Waking the Shore is a public realm transformation that articulates our broader journey to a more sustainable, humane, and ecologically just future. In expressing the phenomena of the ever-changing environment around us, connecting our presence to the nearness of Lake Ontario, and celebrating the qualities of this location in the city, the project builds upon multiple layers of meanings and materials to create a new place for people.

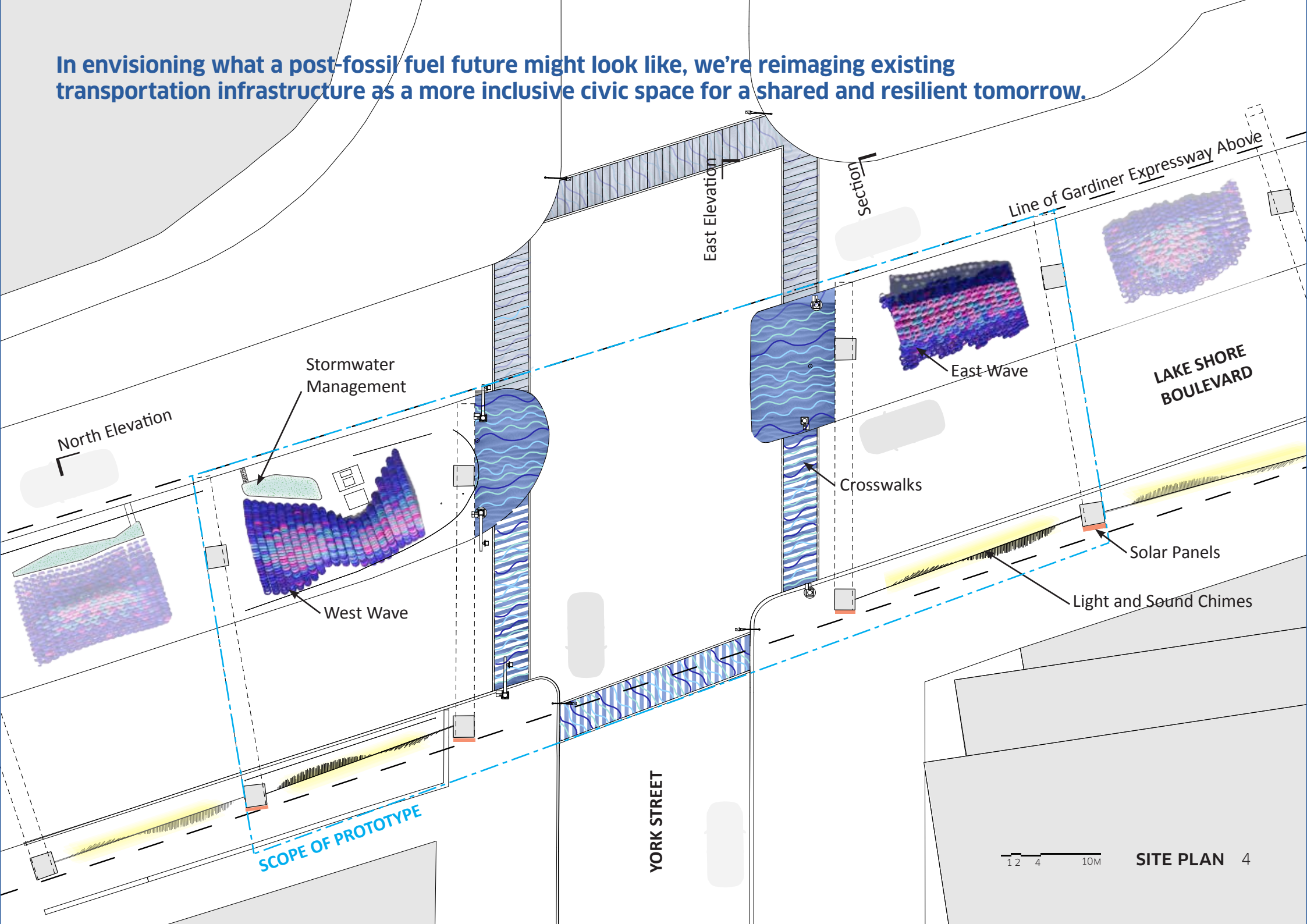
Through the powerful sculptural forms of rising waves, water reclaims its place of primal importance, evoking the deeper histories of the site. The forces of nature are expressed musically through sound in the kinetic wind chimes and in solar-powered illumination that further animates the area.

Within the east and west medians sit two swelling waves composed of brightly painted reused tires. Suspended between the Gardiner's south concrete bents are LED light rods and aluminum chimes that gently sway in the wind.

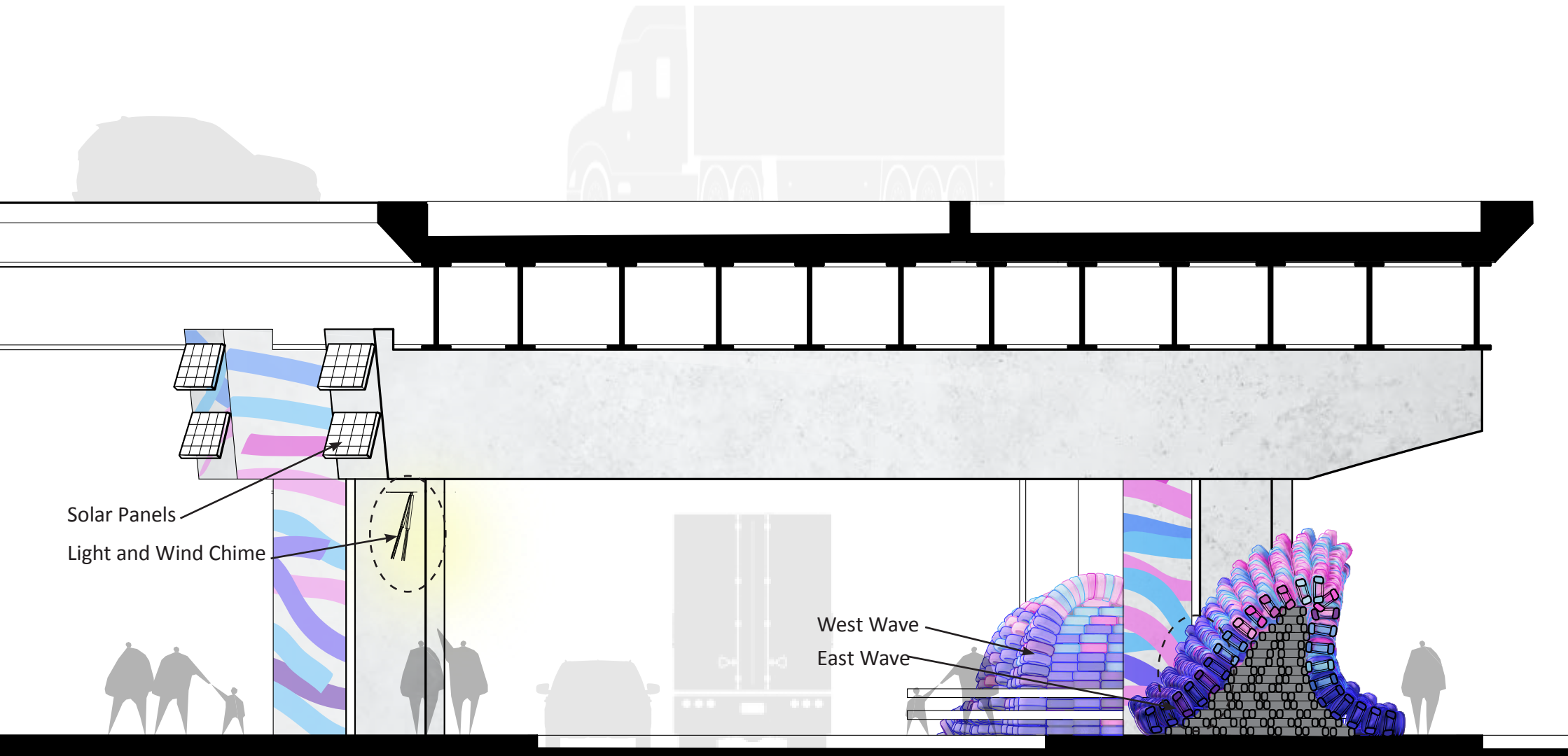
Colour is applied throughout the site in demarcating and reasserting the presence of people, with selected areas of the bents receiving a graphic paint treatment that evokes the movement of water. The crosswalks are also painted in highly visible colours, improving the safety and accessibility for all.



In envisioning what a post-fossil fuel future might look like, we're reimagining existing transportation infrastructure as a more inclusive civic space for a shared and resilient tomorrow.



Waking the Shore works with the incredible spaces under the Gardiner to celebrate this liminal zone of passage through connecting to water to express the rhythms of the natural world and weather; providing an abundance of solar-powered lighting to illuminate the under canopy; integrating sound elements to dampen or highlight selected sonic qualities; and embracing the medians as islands of refuge, safety and discourse.



REAL-TIME FEEDBACK

Connected with our creative and sustainable placemaking strategy, we envision a public realm defined and embraced by community, a space of invitation and agency. Inclusive in our approach to equity and diversity are opportunities for participation by the many communities invested in and using these spaces.

We invite open dialogue through the questions marked on the concrete columns and supplied with chalk:

Where are we going? How are we going to get there?

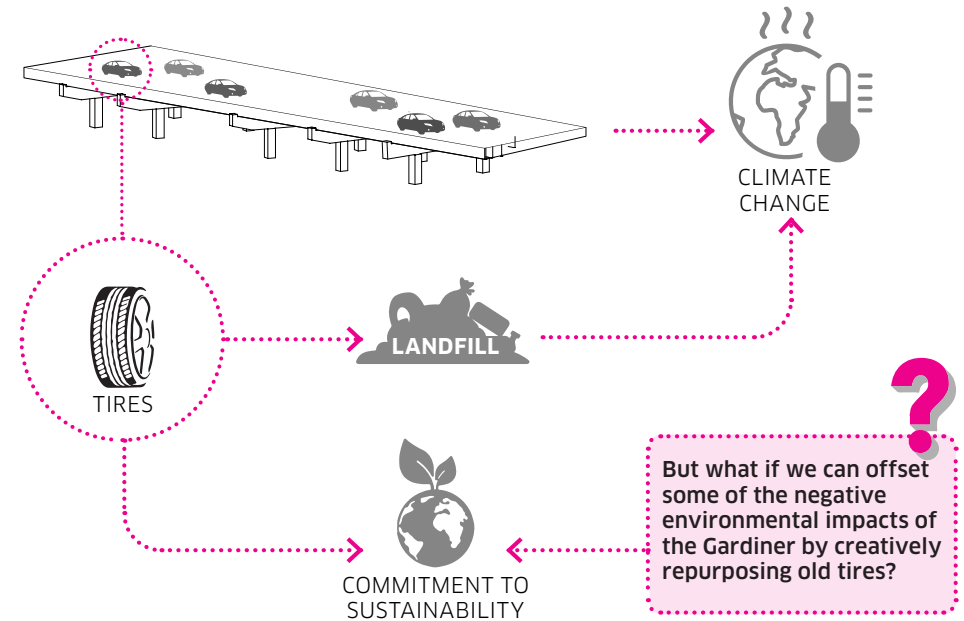
Where do we want to be? What comes next?

The intentionally temporary medium of the responses allows for an ongoing conversation marked by weather and time.



SUSTAINABILITY IN ACTION

Resiliency in a post-carbon future has many interrelated components, from reconnecting with our place in a city's complex urban ecosystem, to communicating possibilities of alternative directions through biophilic principles and regenerative technologies, and engaging communities in active conversations.



Our design gives tires new life by repurposing them as a module for sculpture. The waves of tires provide acoustic dampening by absorbing and refracting the noise of traffic. Their softness, colour treatment and texture contrasts with the hard concrete and steel of the Gardiner conveying safety and acting as a psychological buffer to the fast-moving flow of vehicles.

Finally, the project call outlines a two to three year installation plan. Our design strategy allows for easy demounting and redeployment of the tires and chimes at another site under the Gardiner Expressway, thus minimizing waste and greenhouse gas emissions.

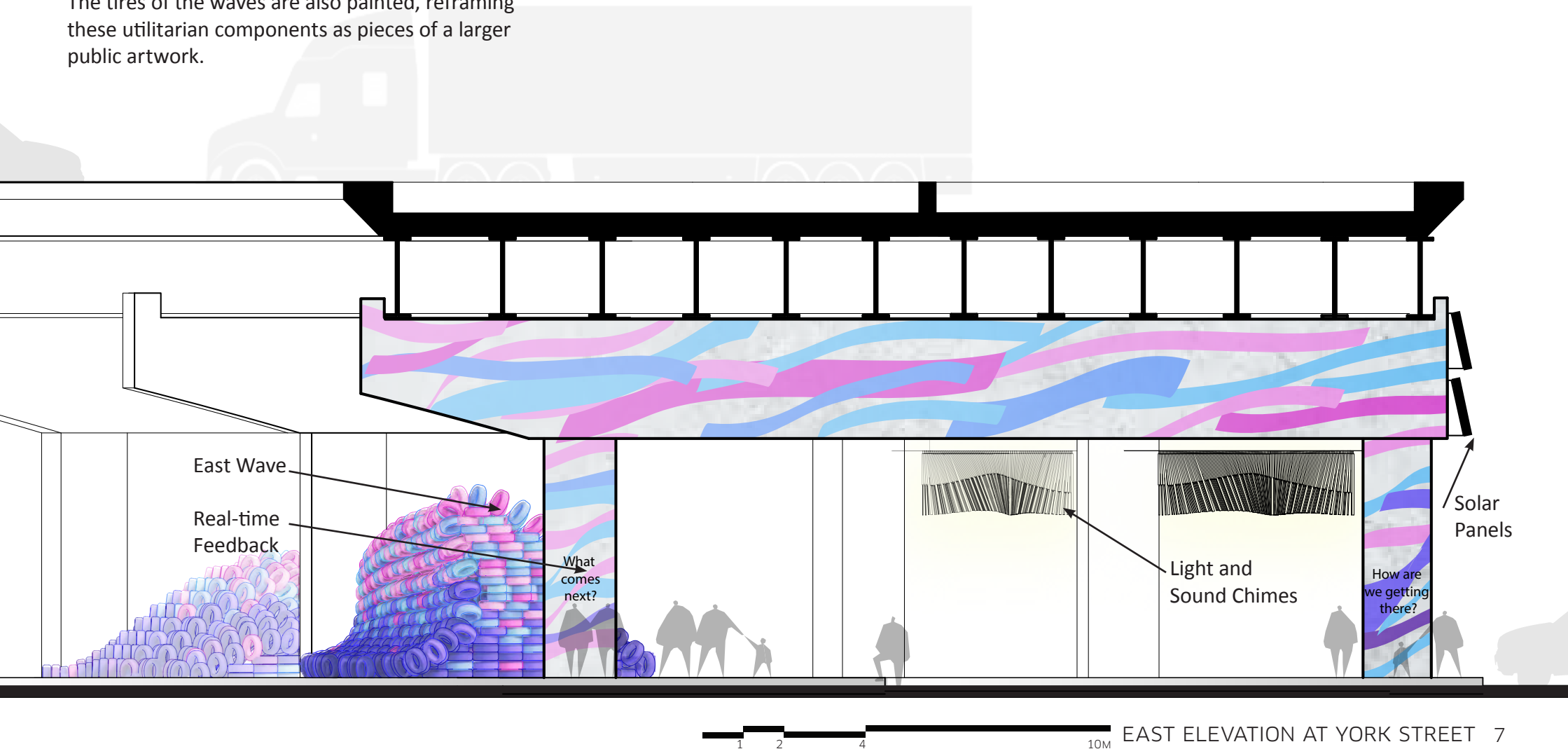
COLOUR & SOUND

We embrace colour to inject brightness into the often shadowed, monochromatic visual field under the Gardiner. Our colour strategy seeks to boldly demarcate the people spaces, the walking surface of the cross walks and the surface of the medians.

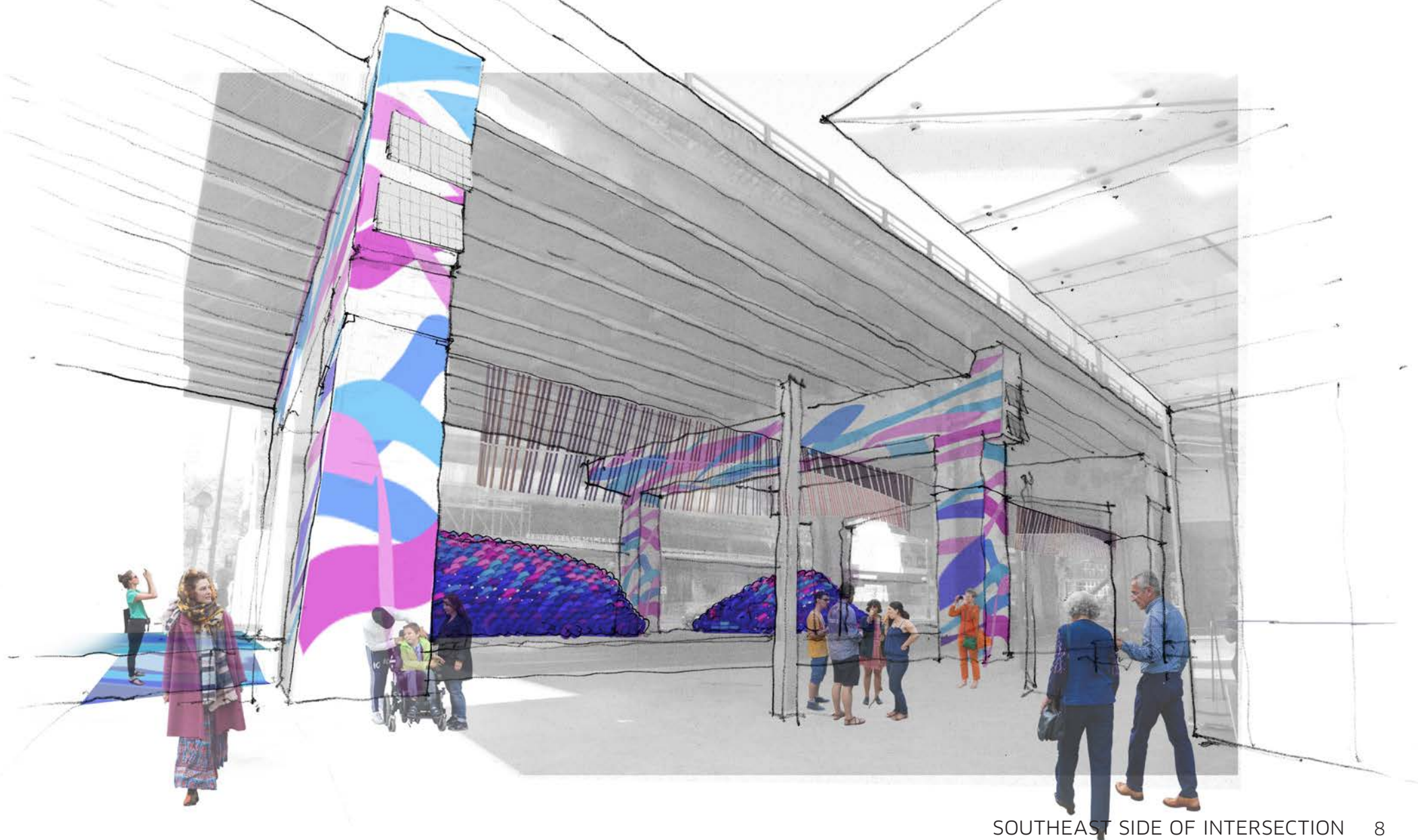
The tires of the waves are also painted, reframing these utilitarian components as pieces of a larger public artwork.

In painting the bents and columns of the Gardiner, we're purposely leaving exposed selected areas of the existing concrete surfaces, allowing the texture of the material to speak to the reality and age of this infrastructure, its continued use and its ongoing maintenance and repair needs.

We celebrate the movement of the wind through sound with wind chimes that are suspended between the columns of the bents. They ring in a gentle breeze and play chromatic chord patterns in heavy winds, evoking the changing conditions on the lake and the weather.



Over the course of the ongoing pandemic, we've come to appreciate even more the importance of connections enabled by the city, the restorative power of nature, the strength of community ties, and the need for public space to enable these connections and conversations to take place.

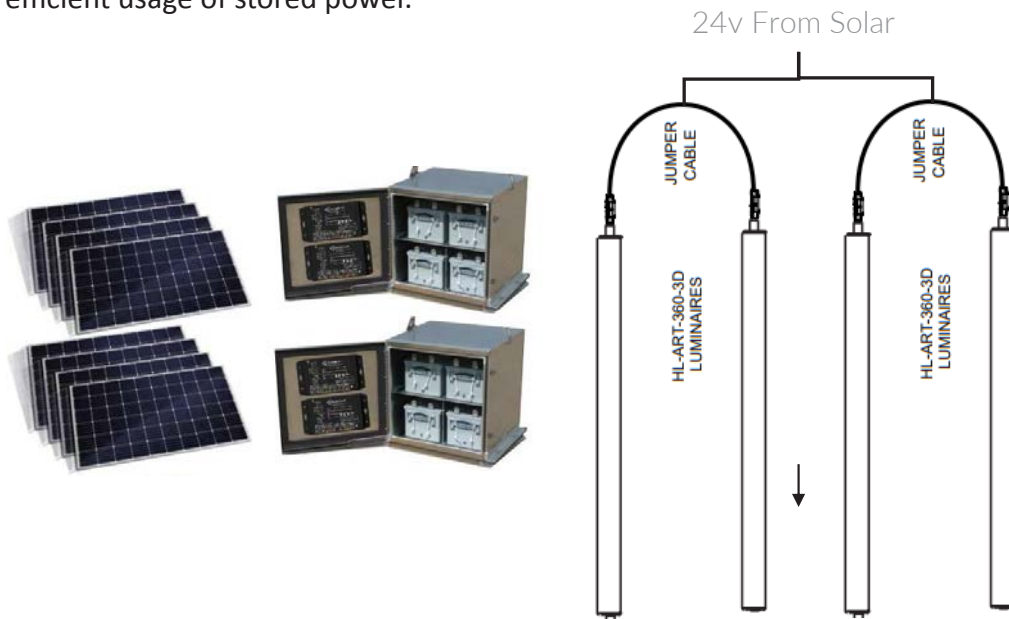


SOLAR POWERED LIGHTING

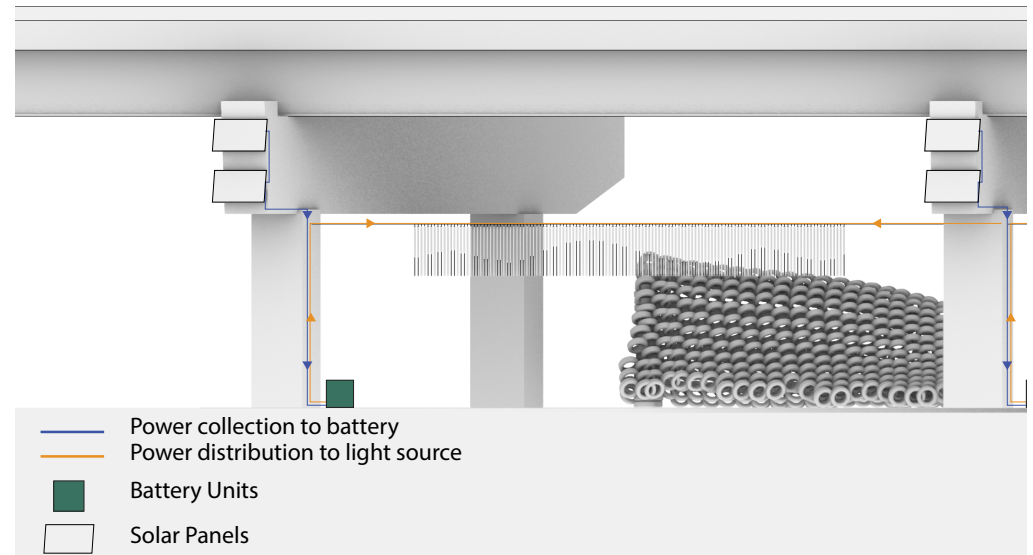
We harness the energy of the sun, to gather the energy through the day and bring the light at night. The site is self-sufficient as solar panels power the energy efficient led light fixtures. The panels are mounted to the south-facing uppermost level of the concrete bents in order to maximize exposure to the sun.

All lighting integrated into the chimes will use weatherproof 24v DC linear LED. The LEDs will be powered by 8x300W solar panels connected to 3 battery packs, the system will deliver 450 Watts for 5 hours (2250 Watt hours) in the winter, with approx 20%-30% more time in the summer. This will ensure that the lighting is powered into the evening for a minimum of 5 to 6 hours all year round.

Our team worked with Clear Blue systems and a local provider Illumient to analyze site conditions and design the proposed system. The system uses smart power management along with smart forecasting, to ensure the most efficient usage of stored power.



SOLAR PANELS, BATTERY UNITS, AND LIGHTING

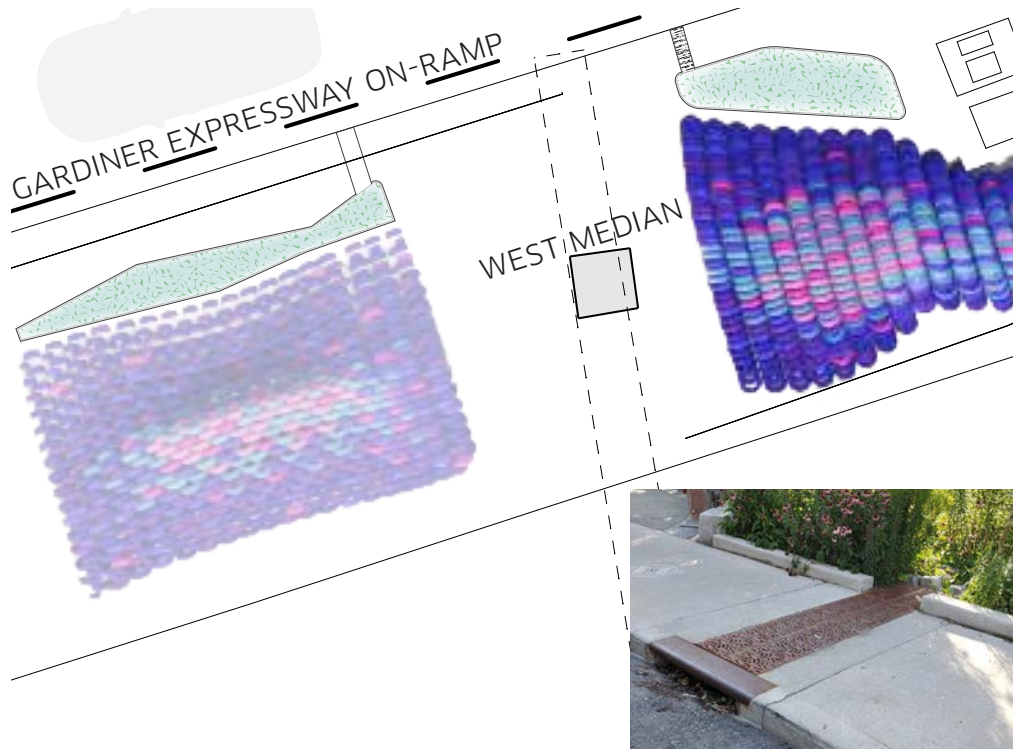


TYPICAL CHIME BAY 9

STORMWATER MANAGEMENT

Our design also allows for the opportunity to capture stormwater coming off of the Gardiner Expressway westbound on ramp and thereby reducing the flow of water into storm sewers. This captured stormwater can be used as a resource for passive irrigation of the two proposed low to no-maintenance planting areas north of the waves. These areas will filter runoff through a bed of crushed stone, gravel or other media while enhancing air quality and improving community wellbeing through biophilia. Plants selected for these two areas should be resilient hardy species resistant to shade, wind, and salt, while adding to the biodiversity of the corridor.

While the Technical Advisory Committee is not entertaining stormwater management strategies at this time, we propose this intervention in order to speak about the greater possibilities below the Gardiner Expressway.



STORMWATER RUNOFF ACCESS TO PLANTING

INSTALLATION, MAINTENANCE & UPKEEP PLAN

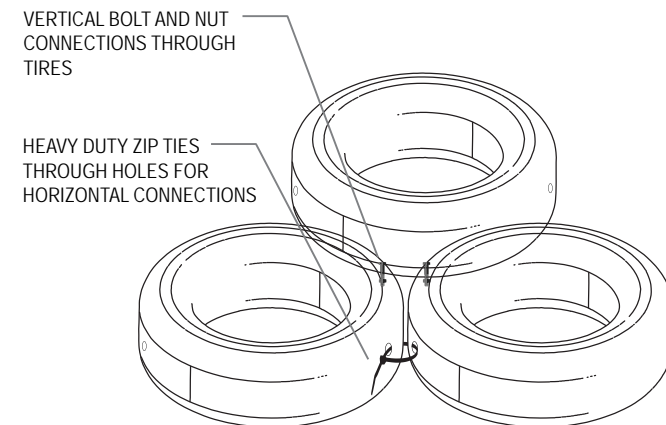
The Under Gardiner space presents unique challenges from an installation, maintenance, and upkeep perspective. Significant concerns are the safety of the installers and impact to vehicular and pedestrian traffic. To minimize impact and risk, the means of installation and frequency of maintenance and upkeep is critical to the success of the project.

Constraints

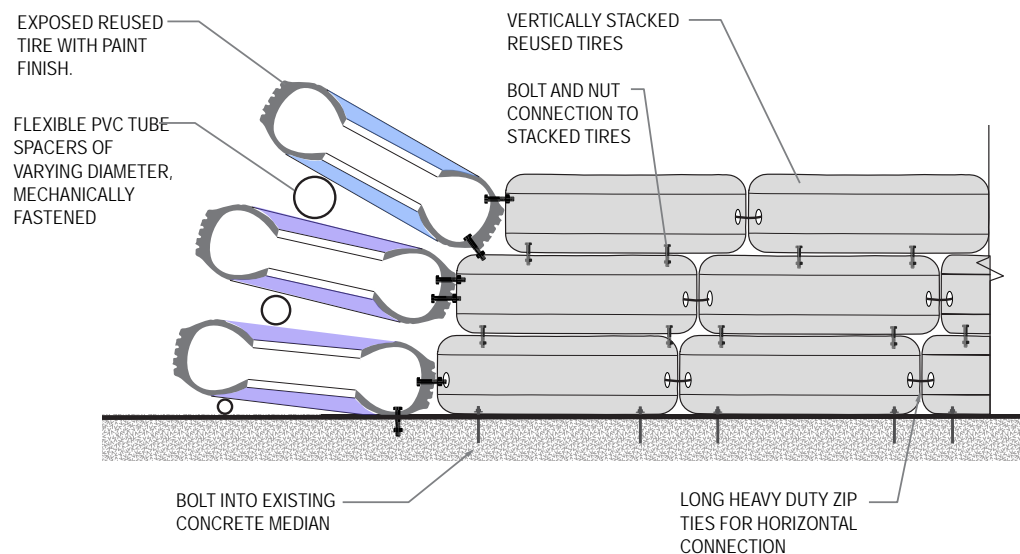
The clearances required by the City for inspection and maintenance of Lake Shore Boulevard and the Gardiner Expressway have been respected. There is more than a 1m setback from the curb of the medians - on the north side 2.1m and on the south side 1.6m. The waves and chimes are 3m back from the faces of the bents and from the underside of the Gardiner deck.

Installation

The wave and swell forms consist of stacked tires that will be mechanically bolt-fastened to resist loads. It is assumed that the existing median has been designed to bear the weight of service trucks; therefore no foundation is required to support the weight of the tires. The stacks may be assembled offsite, transported to site, and deployed into the designed configuration.



AXONOMETRIC VIEW OF TIRE CONNECTIONS 10

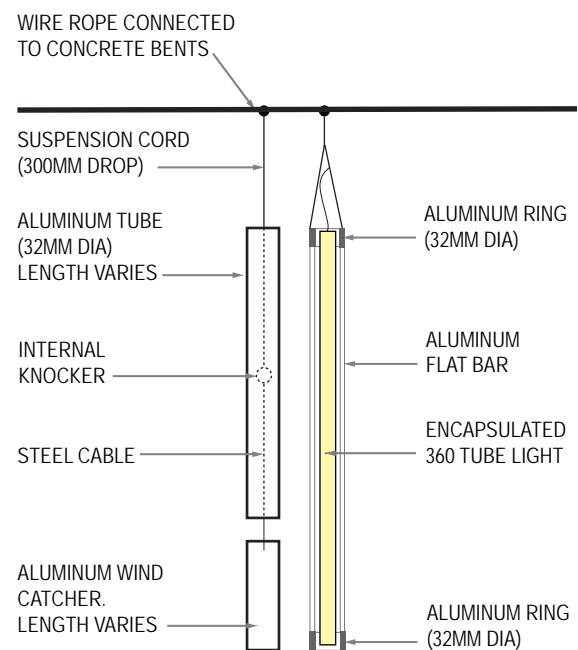


PARTIAL SECTION OF TIRE CONNECTIONS

The lighting and chimes will be suspended from the concrete bent structure with a fastening system similar to that at The Bentway and will be reviewed by two structural engineers. From the steel cable will be prefabricated aluminum chimes consisting of an aluminum tube, internal knocker, and aluminum plate acting as a wind catcher. The chimes are connected to the cable, as are the led light fixtures.

The solar panels will be mounted onto mounting arms that would raise the panels off the face of the bents and allow for easy visual inspection of the bents. These would be wired to batteries mounted within a weather-proof and vandal-proof enclosure that is connected to the led lights within the chime.

Power washing and surface preparation for graphics and subsequent painting will take place off-hours. A traffic management plan will be conducted to determine a reasonable strategy for the scale and scope of this design.



CHIME AND LIGHT DETAILS



BENTWAY CONNECTION DETAIL

Maintenance and Upkeep

Minimal maintenance is required for the project. While there is an anticipated two to three year timeline of the project, the materials specified are all robust and able to withstand the harsh conditions under the Gardiner Expressway. The tires are designed for extreme exterior conditions and an ideal material for this project due to its robustness. Lighting components may require biannual visits to review their condition. Quarterly cleaning of the paint to remove build up from smog, dirt, etc.

We walk under the Gardiner. As we seek refuge in the median and wait for the stoplight to change, we ponder the question, *what comes next?*

