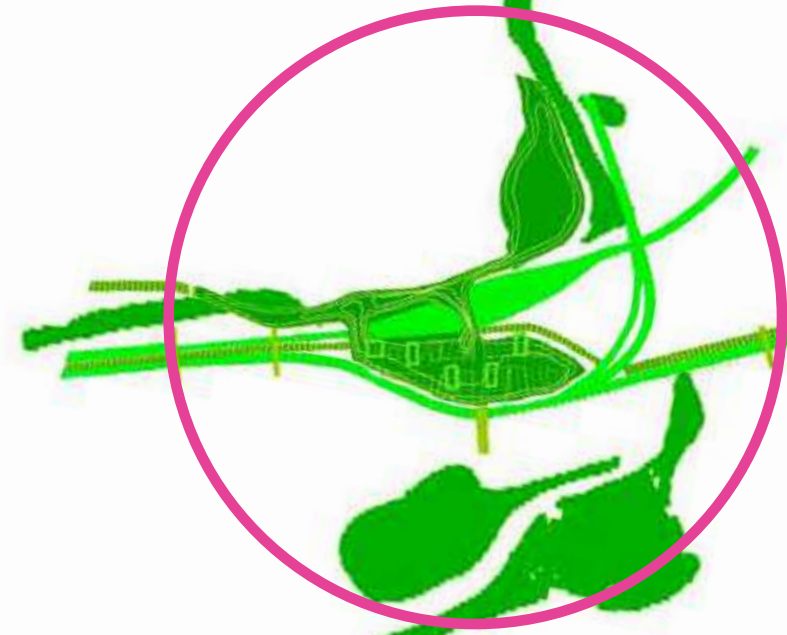


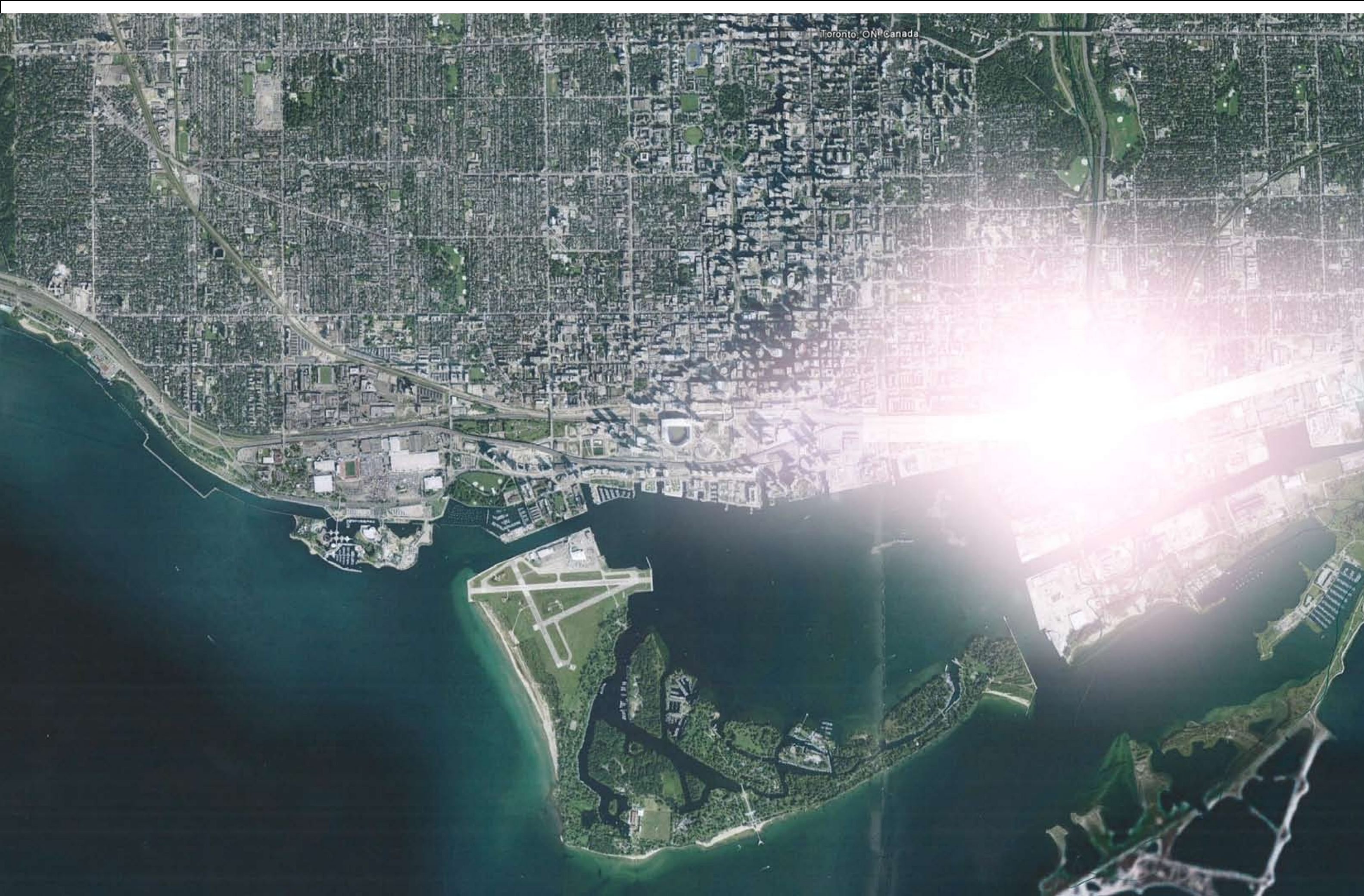
THE GAR



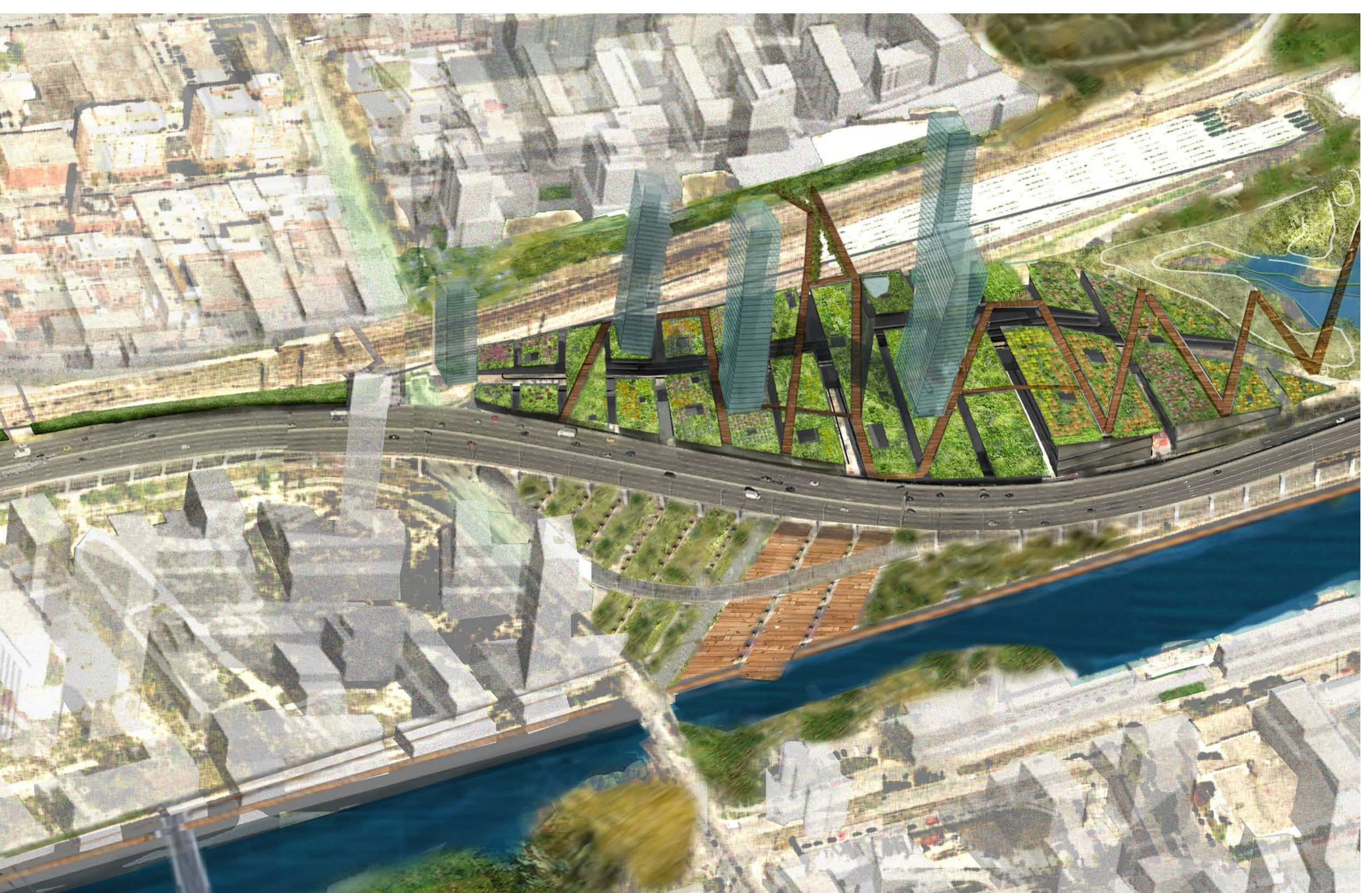
RECONNECTED. We're tying it all together; a city-like park inspires a park-like city.

We are not throwing it away anymore. Every bit of our city is a **vital piece of stored energy** poised to be reused.

Our Gardiner has the potential to activate an enlightened city building **initiative. The Constraint becomes an Opportunity.**



We will **use our city differently.** We will build on a paradigm shift that is already underway. Transit, bicycles and pedestrians are **reorganizing the flows of movement** and the circulation of city blocks. Public space will surround, integrate & incorporate the traffic.



**As the city becomes more park-like,
the park becomes more city-like.**

Betsy Barlow Rogers, founder central Park Conservancy

We are converting **THE GAR.**

Its a highway; a GO station;

a new community & neighbourhood.

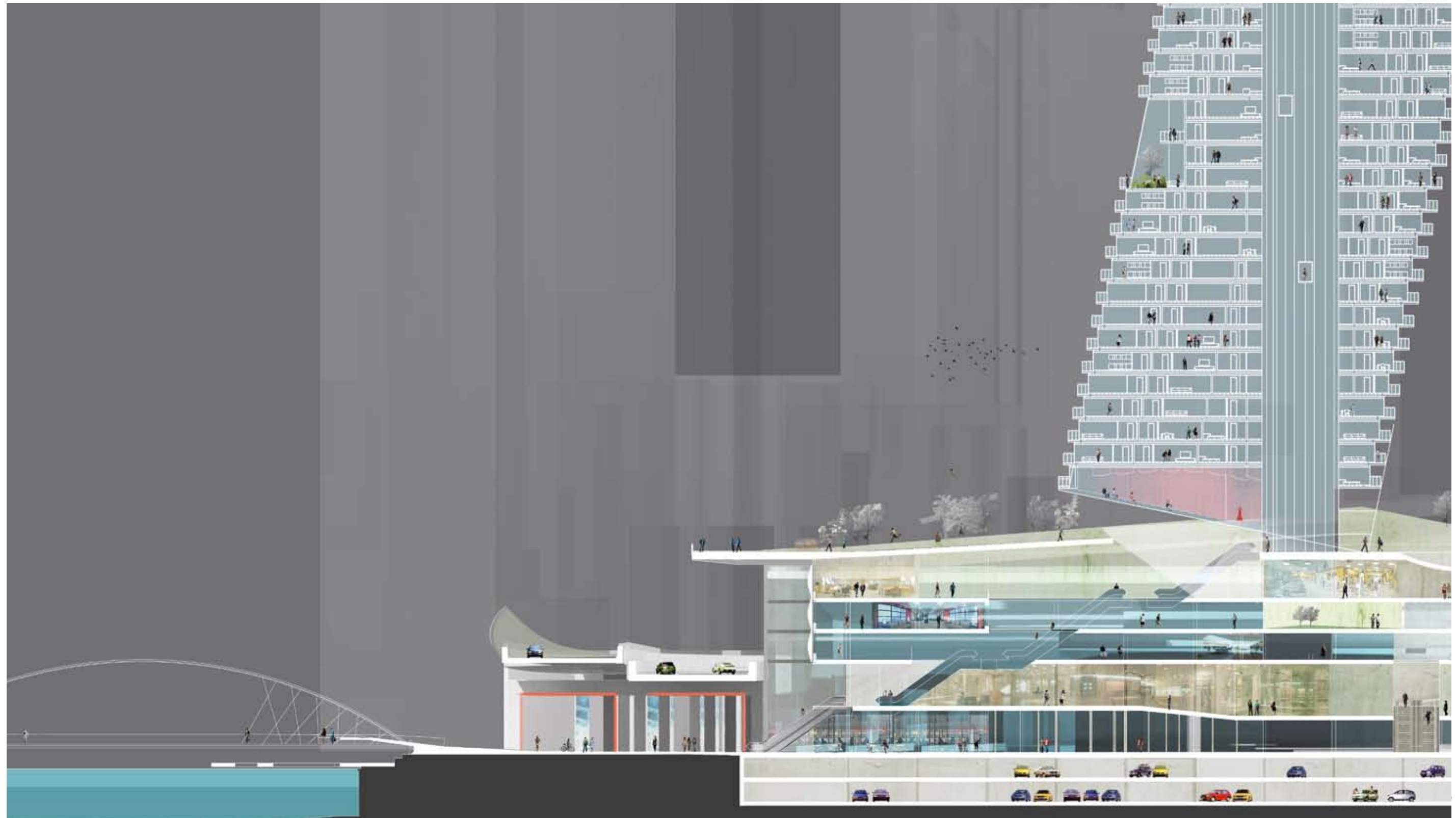
New parts of the city are forming...

inhabited landforms are rising.

It is Park City.



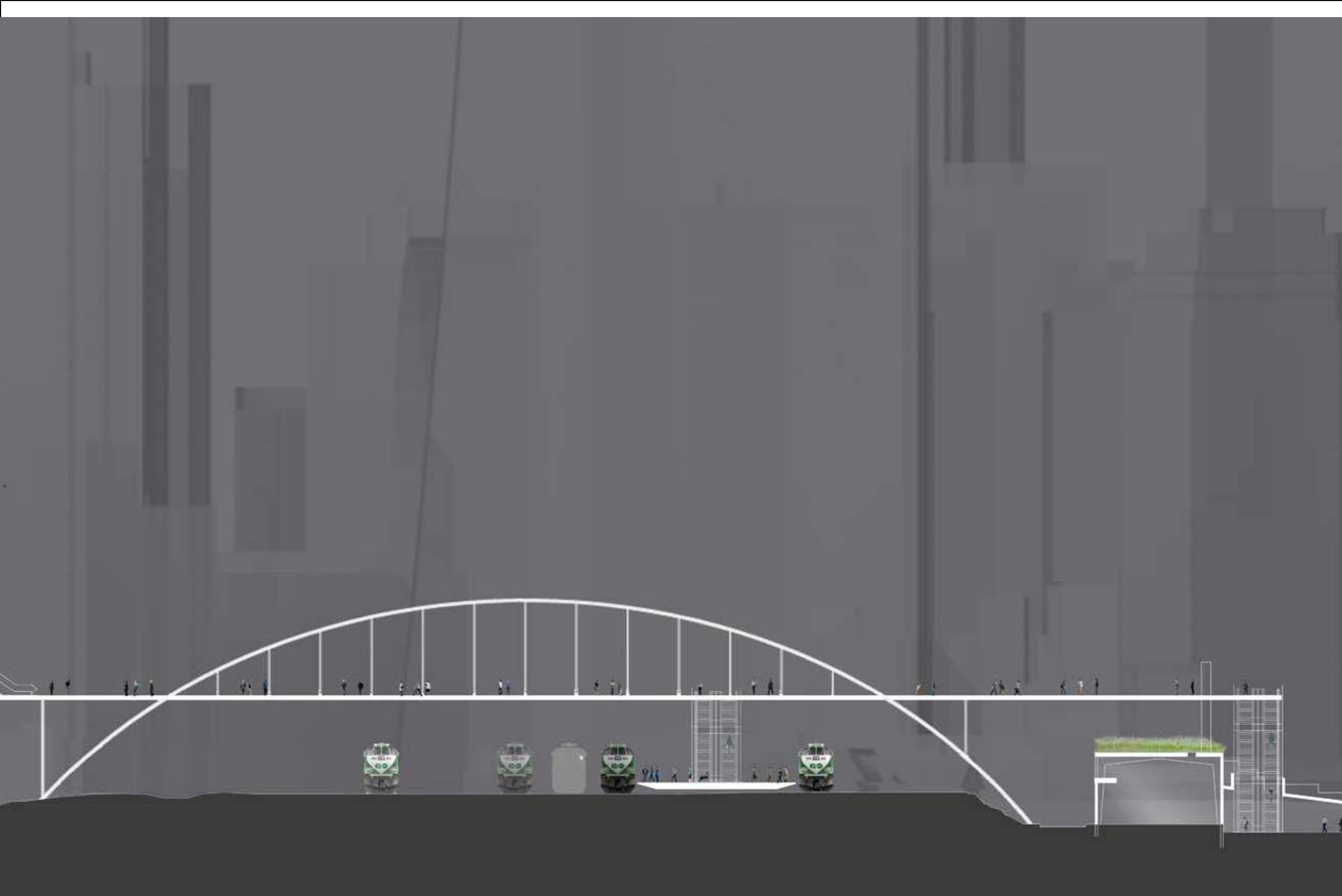




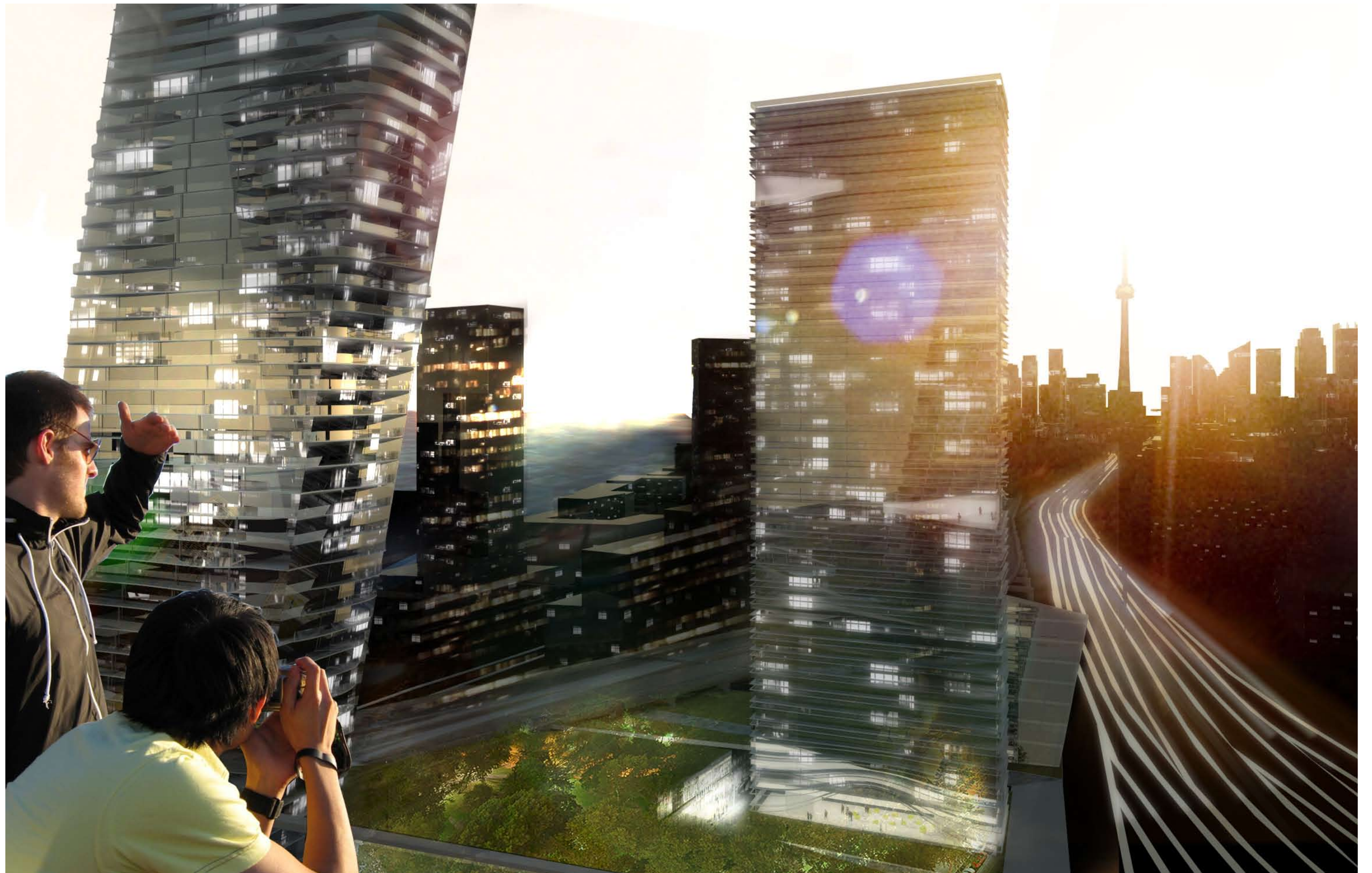
Reconnected. THE GAR provides a New Sectional Relationship between city, motorway and waterfront.



Hybrid forms of cross-sections create hybrid structures with multiple programs (civic, commercial, retail, &



recreational) running between the new mezzanine level, the top of the infrastructure, and the waterfront.





It's time we stop
looking at the Gardiner
as wasteland.
Why not let the
public space surround
the traffic?

The greatest constraints often lead to the most interesting solutions. Think of the Gardiner as a resource for building Toronto's future urban space and reuse this copious structure. We are **using design to make a radical revision of the Gardiner, using it to generate a new kind of neighbourhood, a new kind of city, THE GAR.**

We are capturing the best qualities and opportunities of the Gardiner's form, and reducing its ill effects. Rather than entombing it, we are reconfiguring and reusing the existing landscape around it, to make it part of **a dynamic connector of clusters of public space augmented by existing earth berms and strategic north-south arterials.**

Site = keystone at the epicenter of a massive reinvestment in Toronto's future.

It will serve 42,000 new residents, 20,500 employees and millions of annual visitors and be anchored by a new transit hubs.

Greatest barrier = not the Gardiner but the Rail Corridor. The Rail Corridor is skirted by Isolated Neighbourhoods. Creating the Clustered Islands of Distillery District, Olympic Park, West Don Lands, and the Lower Donlands. The eccentricity of the site demands a special response. The land is surrounded and traversed by major regional transportation corridors.

Removing this section of the elevated Gardiner is extremely difficult and costly in the short and medium term. But by moving Lakeshore Boulevard out from under the Gardiner and reshaping it, **the elevated Gardiner has a potential to become a monumental pedestrian Colonnade to the lake** and along 20 acres of new public space lining both sides of the Keating Channel.

480 Lakeshore property can be transformed into a new public ground at the level of a man-made Mountain with an intense urban life at multi-levels. Departing from the conventional logic of streets and blocks this new ground is penetrated by courtyards, passages, terraces, & bridges.

The coming shift in our use of the city is reflected in **a phased reduction of the Gardiner** and its conversion into a Sustainable Hybrid Link.

The Pedestrian Infrastructure ties all the pieces together through a network of pedestrian routes and ramps forming **a seamless landscape topography**.

We are suggesting an inversion: **why not let the public space surround the traffic?**

Providing easy access for the pedestrians and bikers, it is possible to regain the waterfront. We are moving the public program towards the most attractive place and integrating the heavy traffic under the cover of a public level.

THE GAR has the capacity to accommodate a whole new neighbourhood!

Max Non-Residential + Residential GFA = 300,000 m²

Max Residential GFA = 198,200 m²

Max Parking Capacity = 3000 cars

We propose a landscape platform, a single seamless topography tying all the elements together.

Within and atop the mountain **an intense program of new uses will serve the need for retail, cultural and civic uses and create a new residential and employment community which will animate the intricate multi-level network of interconnected public spaces.**

Inhabited land forms:

topographic manipulations, alternating plateaus and terraces.

Programmed landforms:

apartments, plaza, skating.

Atop the undulating high level public landscape of the mountain shaped by the surrounding topography of embankments and the dynamic form of the elevated structures, **strategically placed towers** contain a mix of uses including residential units with remarkable views.

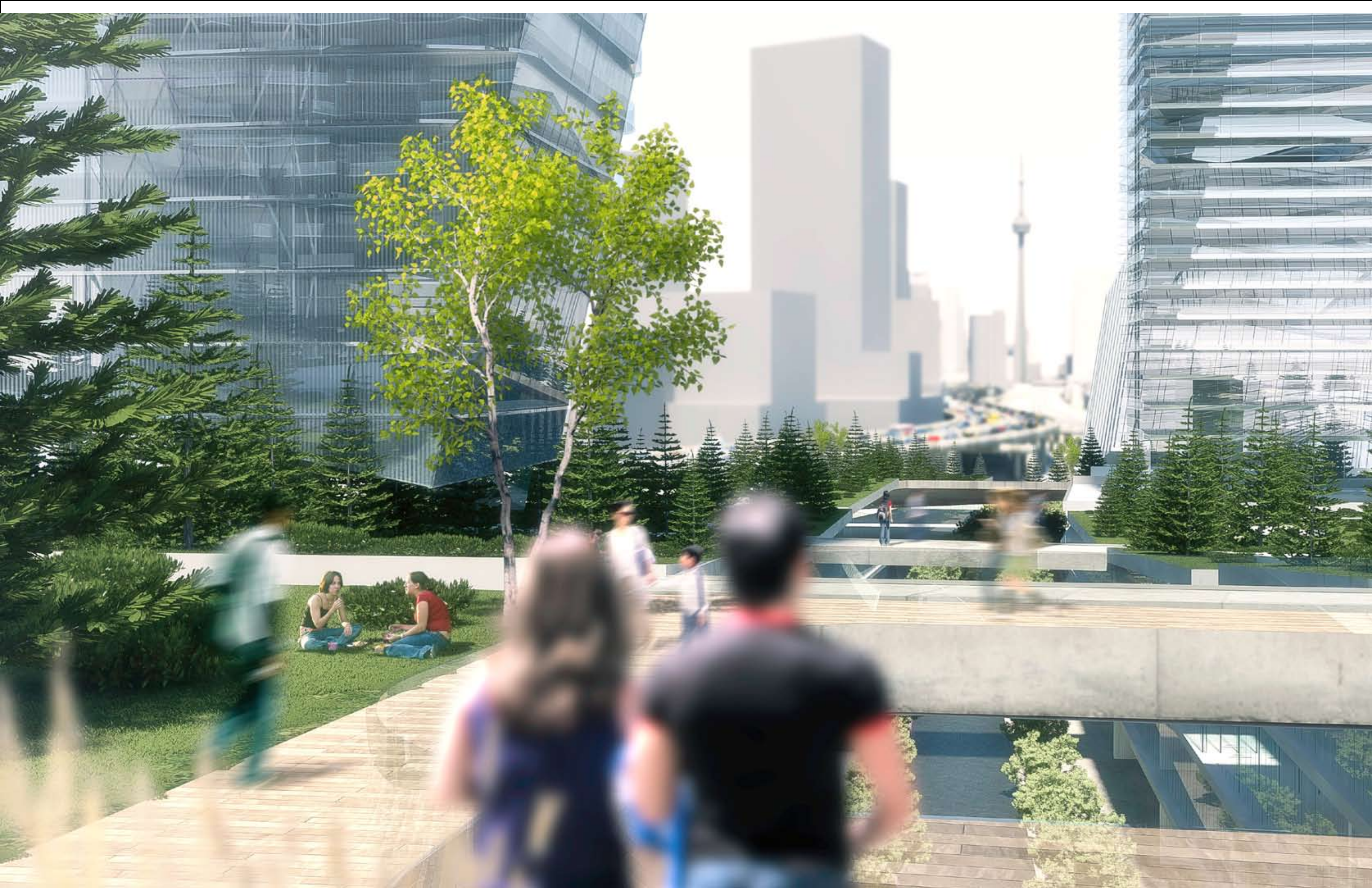
Provide the city with views never before experienced.

Buildings are treated as landscape concepts. There will be a transit plaza, green roofscapes/landscapes. The gardiner becomes an elevated park and the underpass a public space

The site completes **the Missing Link in the regional greenspace** connecting Distillery District, Don Lands, Lower Don Lands, New GO Station, District Energy Centre.

IT IS AN ECOLOGY UNTO ITSELF, AND CELEBRATES AN EXHILARATING WAY OF ENTERING TORONTO.

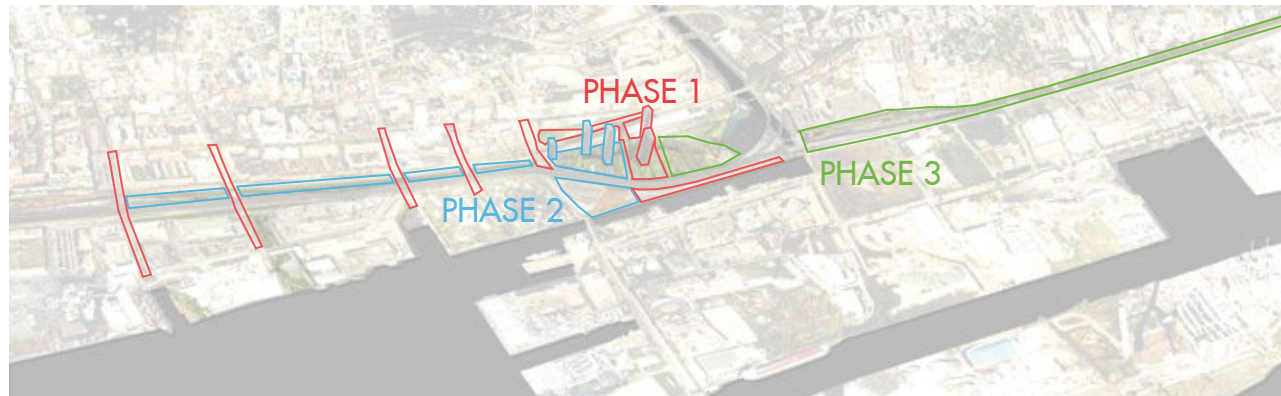








Phasing THE GAR
is a process of evolution
and acceleration.
We're not untying a
knot, we're tying it all
together.



We feel that the real creative opportunity lies in looking at THE GAR as a phenomenon of evolution. **Incremental transformation of the space between the City and the Lake from a barrier to a fertile ground for connectivity.**

The transformation weans us away from our reliance on a six-lane, controlled access highway that carries roughly 200,000 cars per day from the west and 120,000 cars per day from the east. We propose highly visible, affordable and useful transformations at early stages that incorporate public transit and pedestrian routes that accelerate this process decreasing the reliance on single occupancy vehicles.

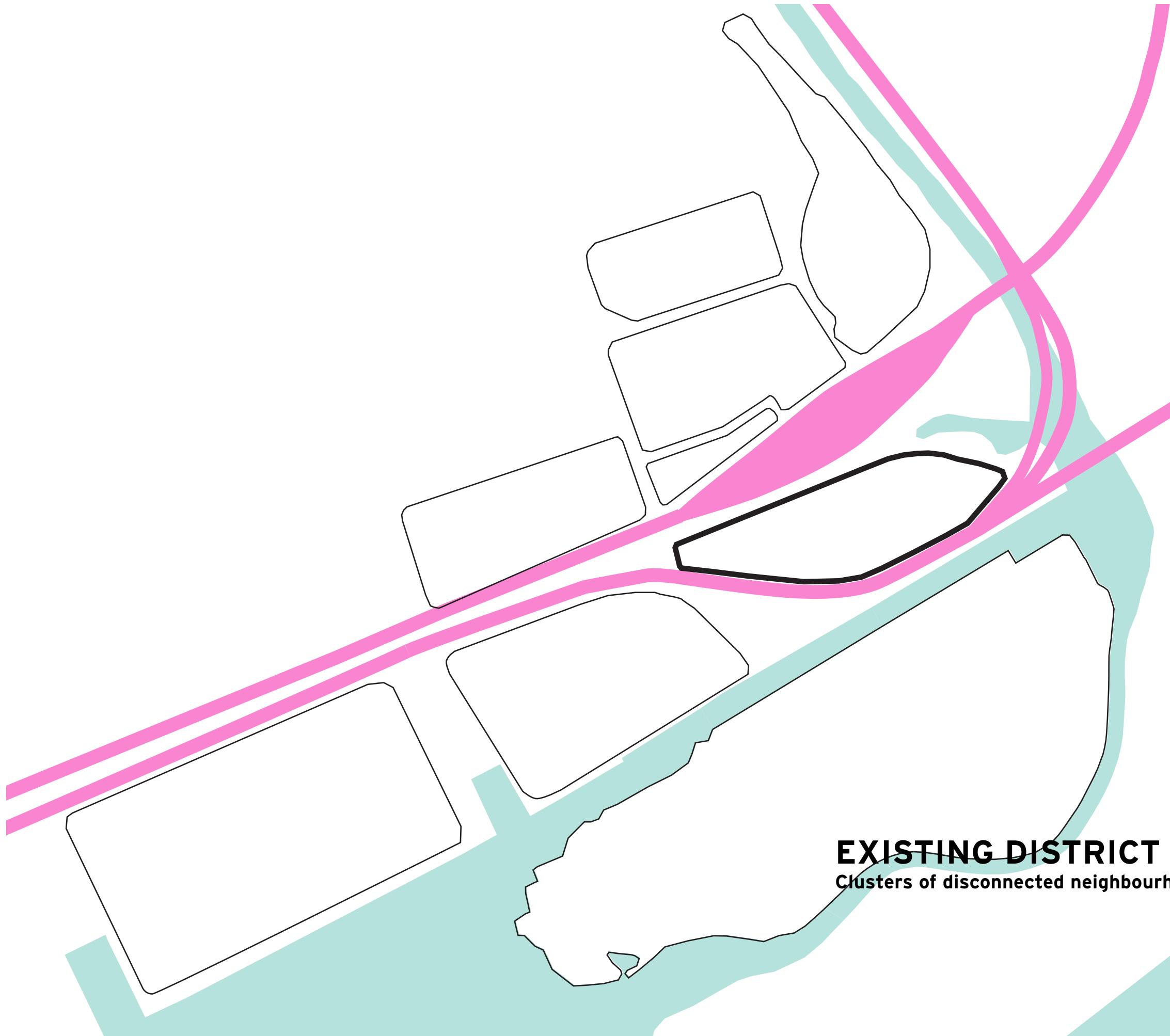
The key idea for tying the 3km stretch of study area together is the management of flows through the landscape and the topographic manipulations that support this new enhanced circulation.

The 480 site becomes the confluence point of all the infrastructure systems.

A path system ties the site together. Bike path infrastructure literally connects and merges into the mountain's path sinuously at the top level podium.

The Gardiner grid system is multiplied and extended into the mountain site, both as the structural grid for the new forms and as the landscape planting grid for the linear park under the Gardiner.

One organizing proportional system applies to both the new and existing pieces.

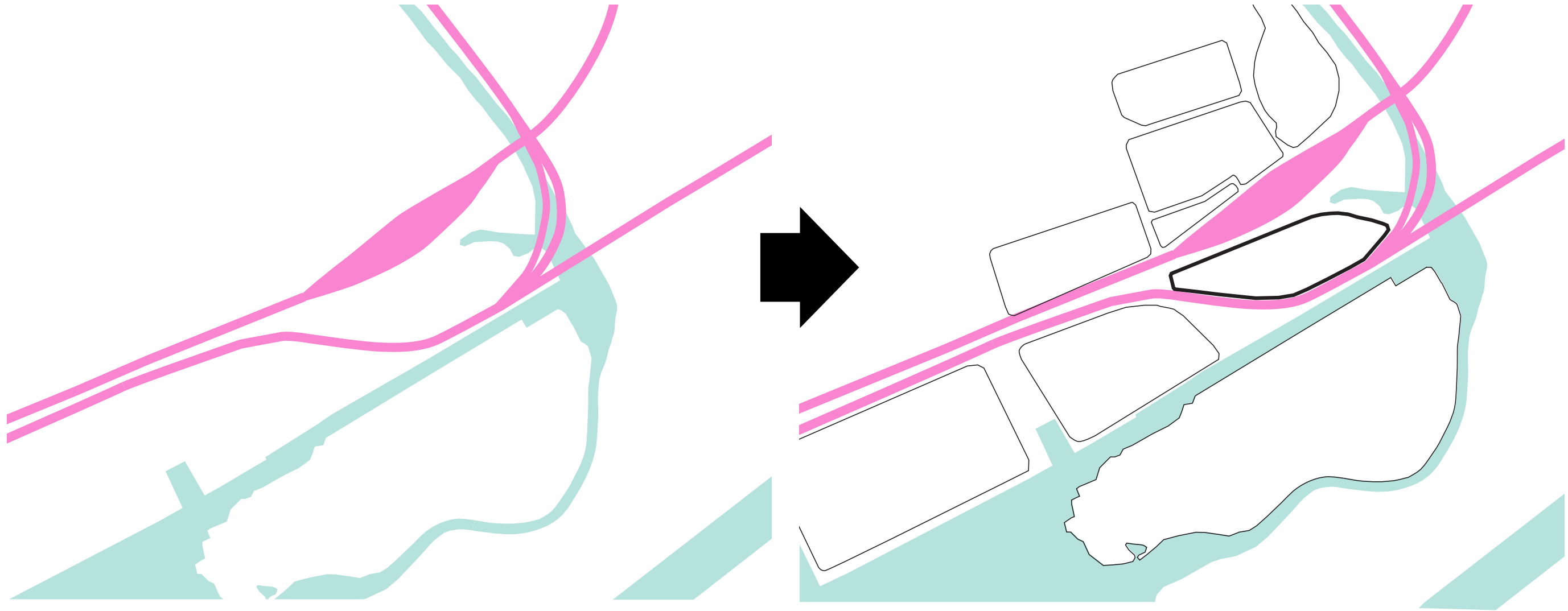


EXISTING DISTRICT ISLANDS
Clusters of disconnected neighbourhood islands.



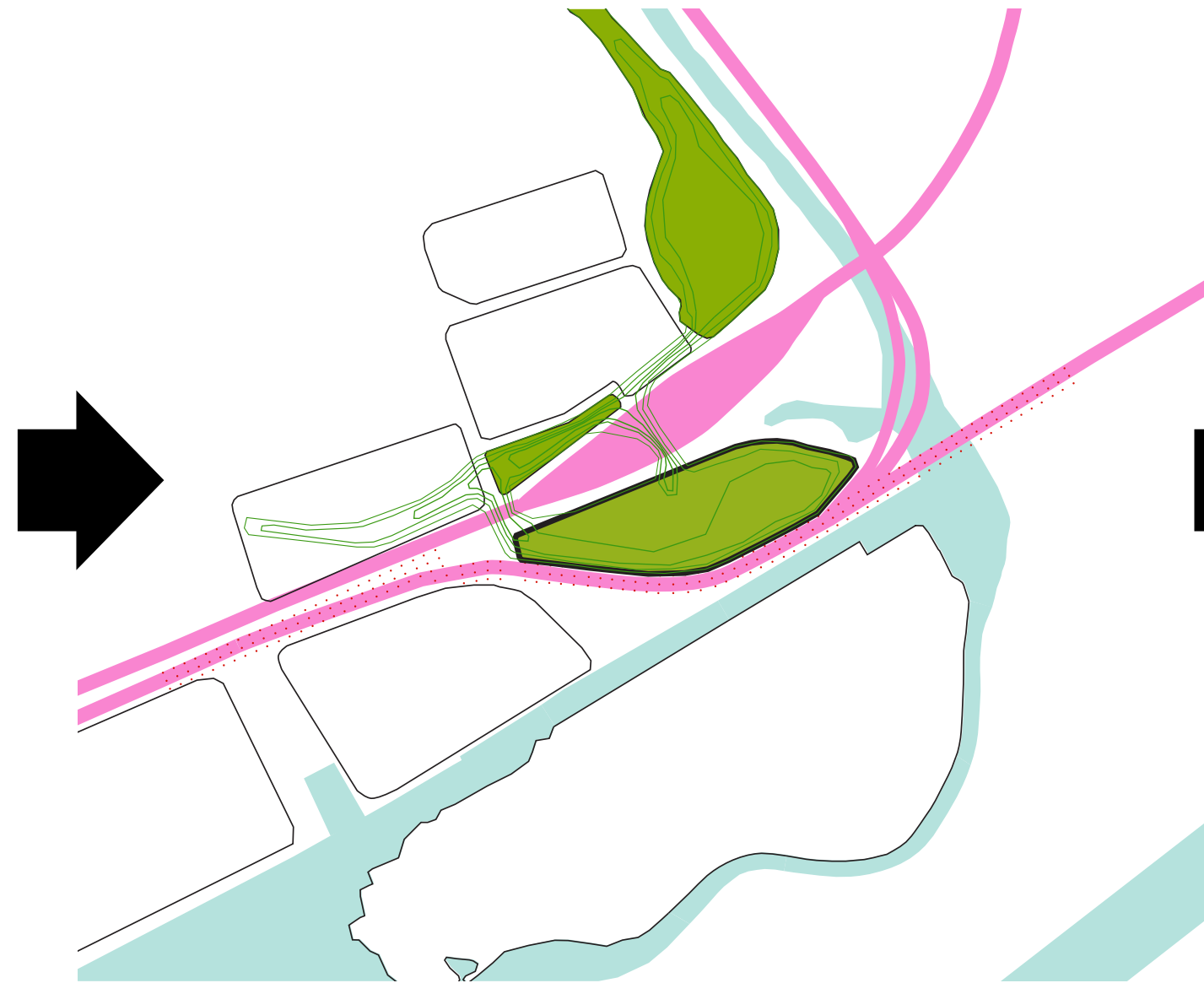
RECONNECTED.

A new urban topography, a sinuous landscape solving accessibility, but also tying all the disjointed clusters back together. A new eco-infrastructure.



²⁶ **Biggest obstacle for accessibility =
rail corridor
+
Gardiner**

Disconnected neighbourhoods.

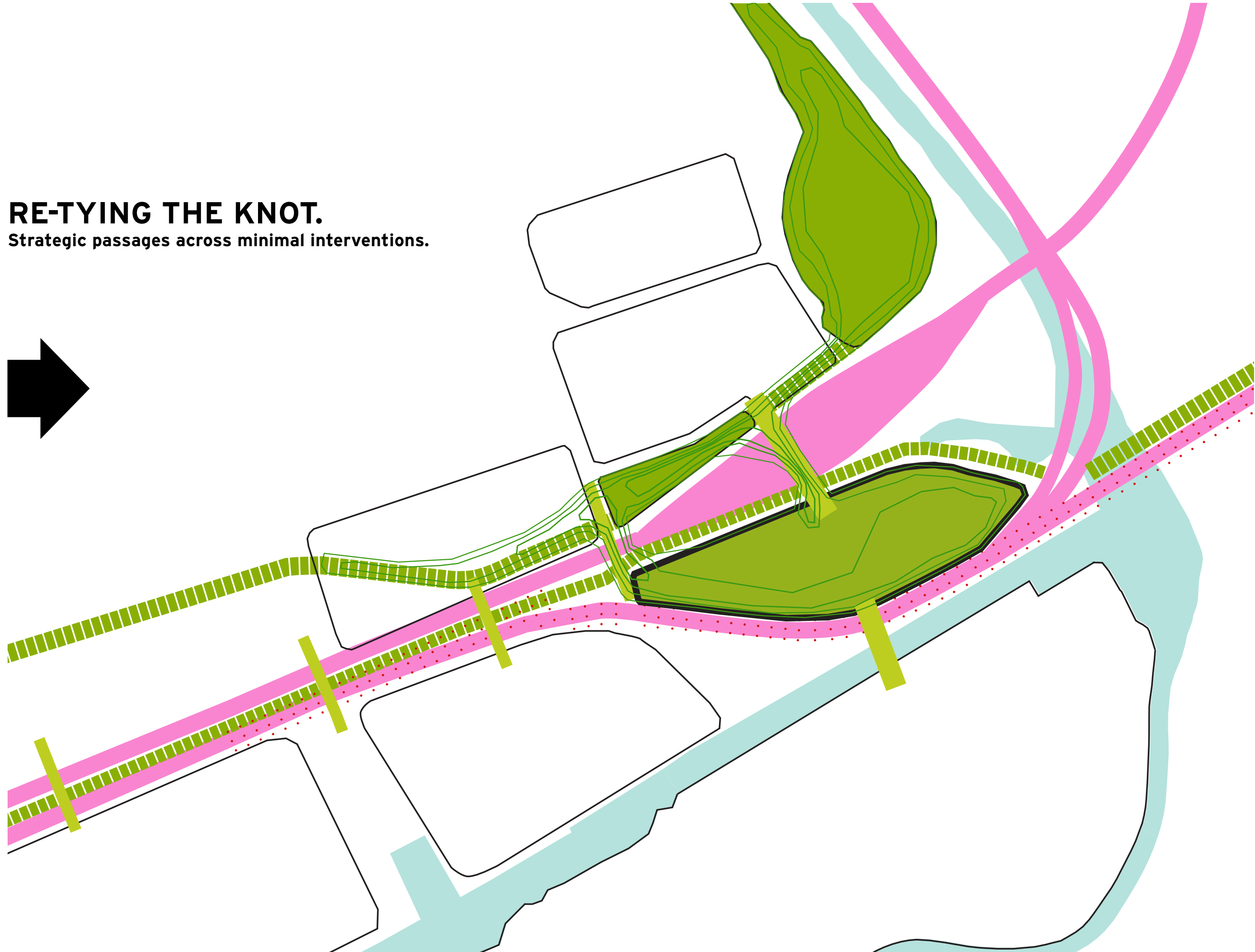
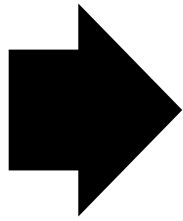


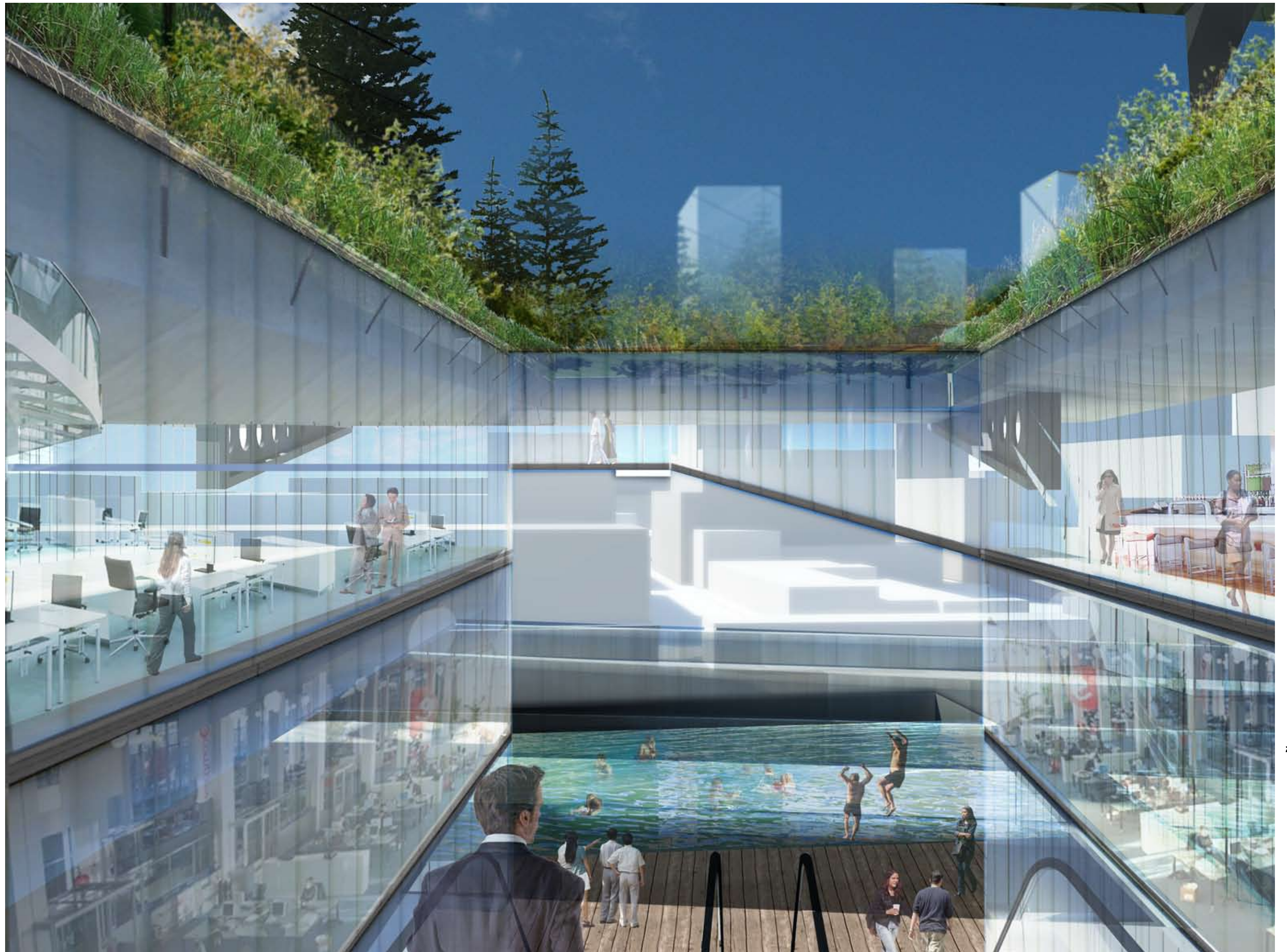
Proposed PanAm Games Olympic Park + District Energy Centre + 480 Lakeshore Site

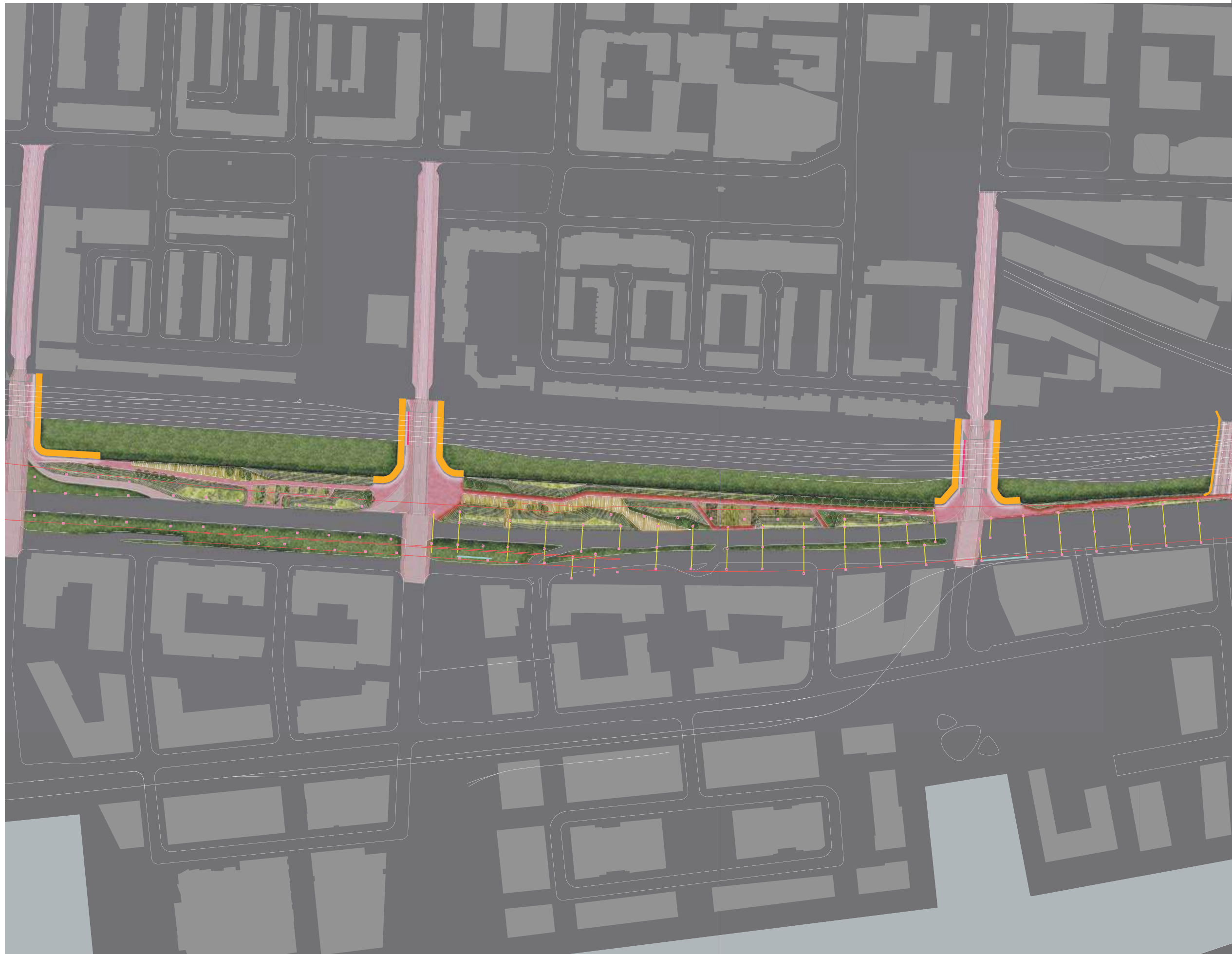


Can the existing topography of the rail corridor berms inform a congruent connection?

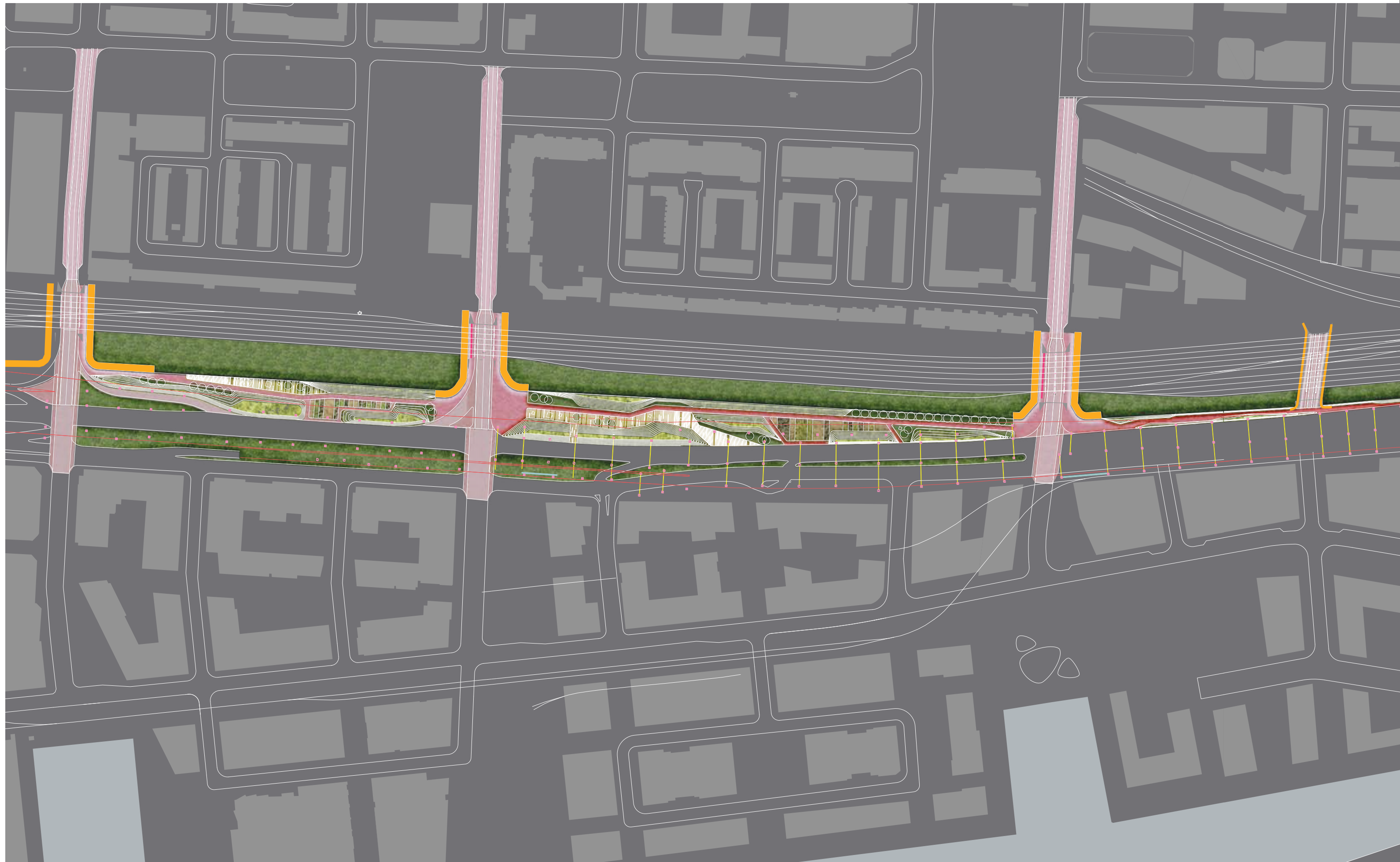
RE-TYING THE KNOT.
Strategic passages across minimal interventions.

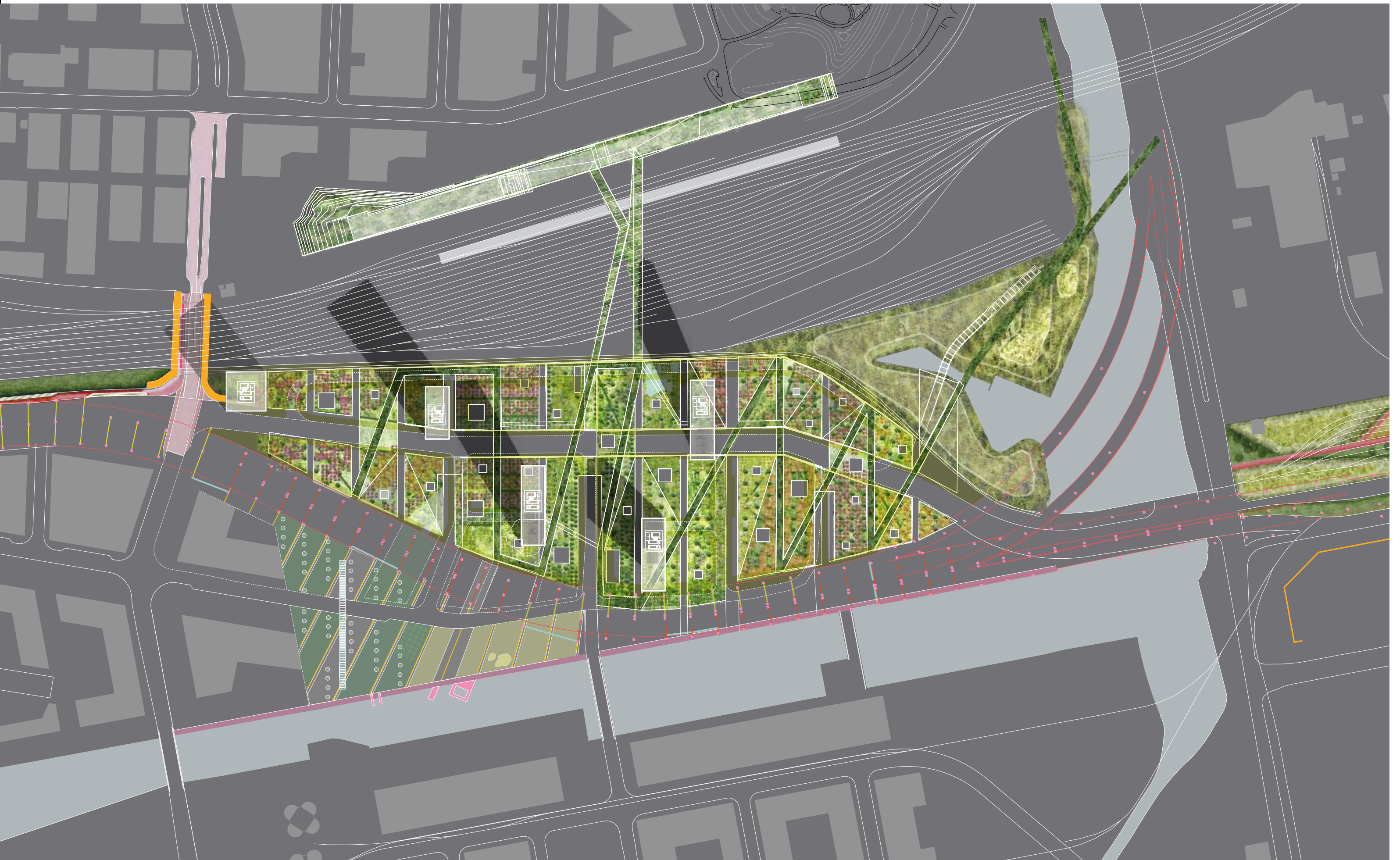














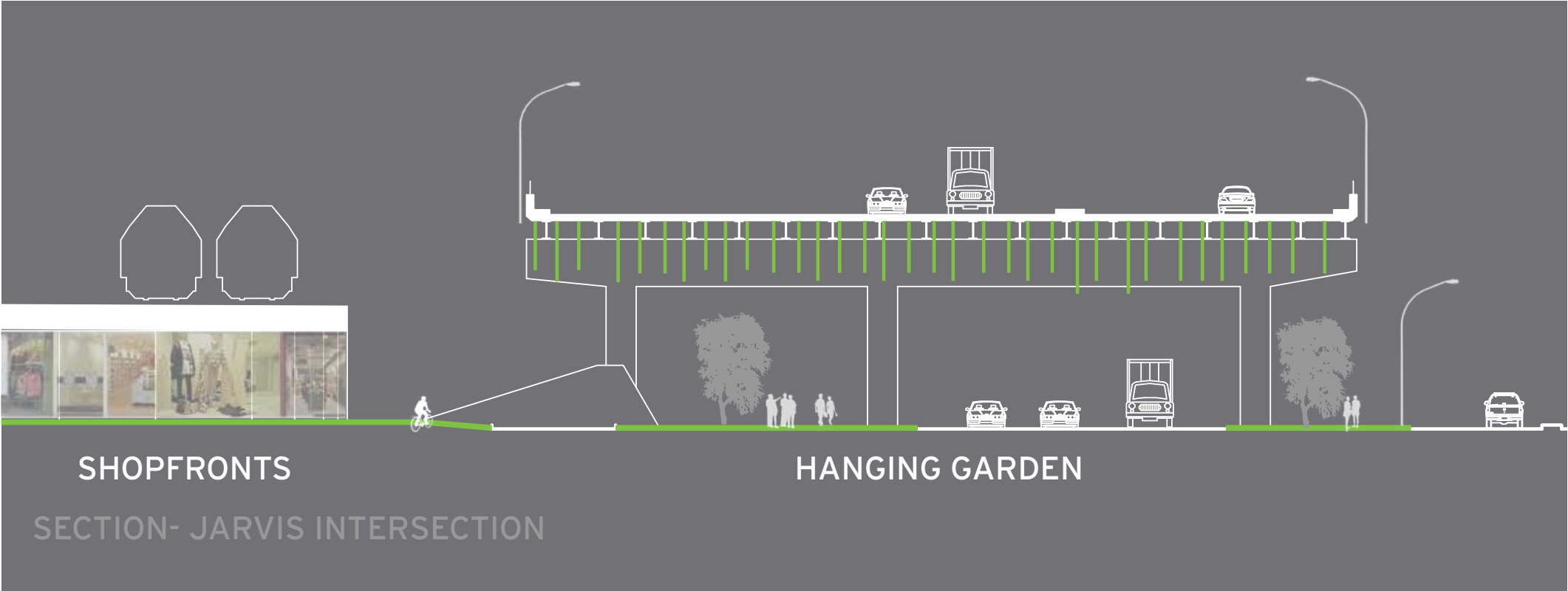
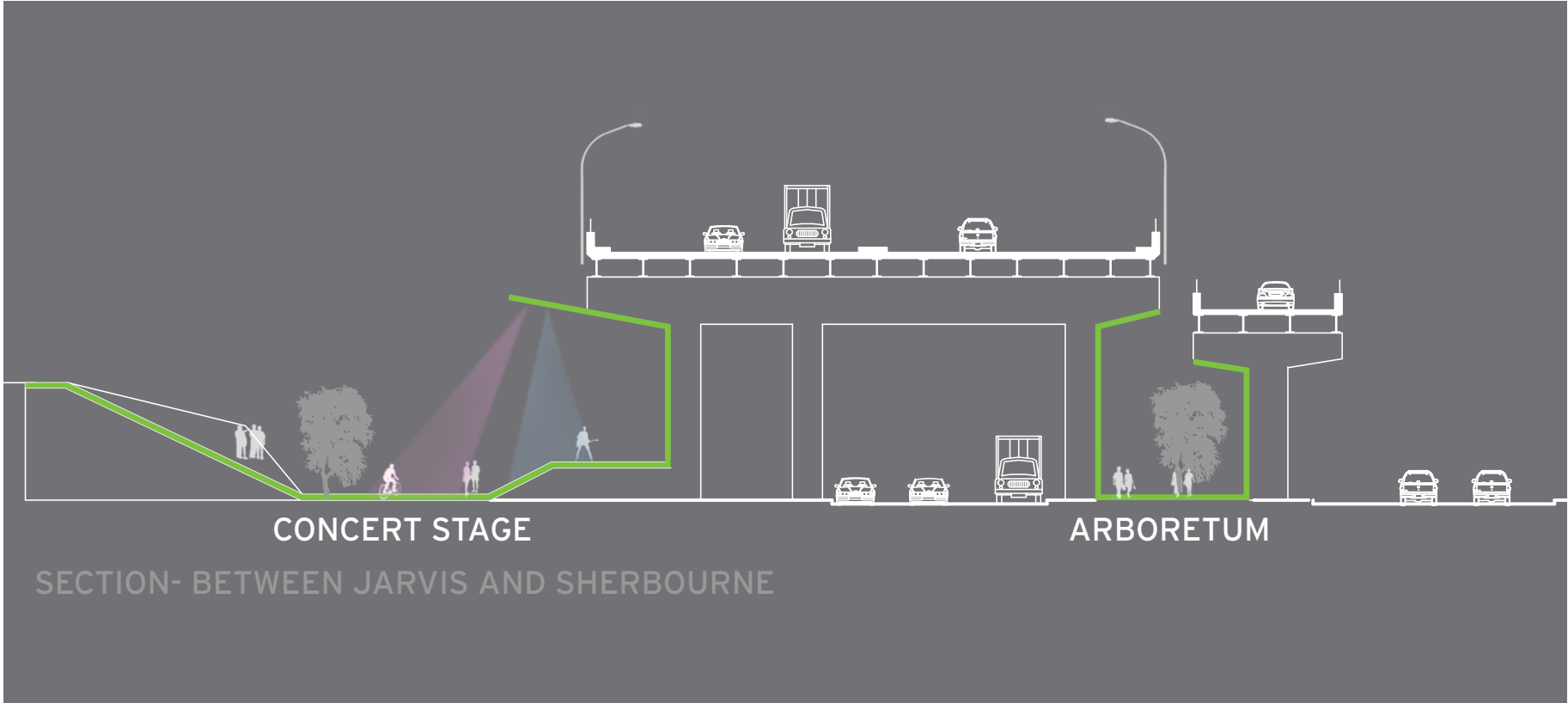
Design Elements

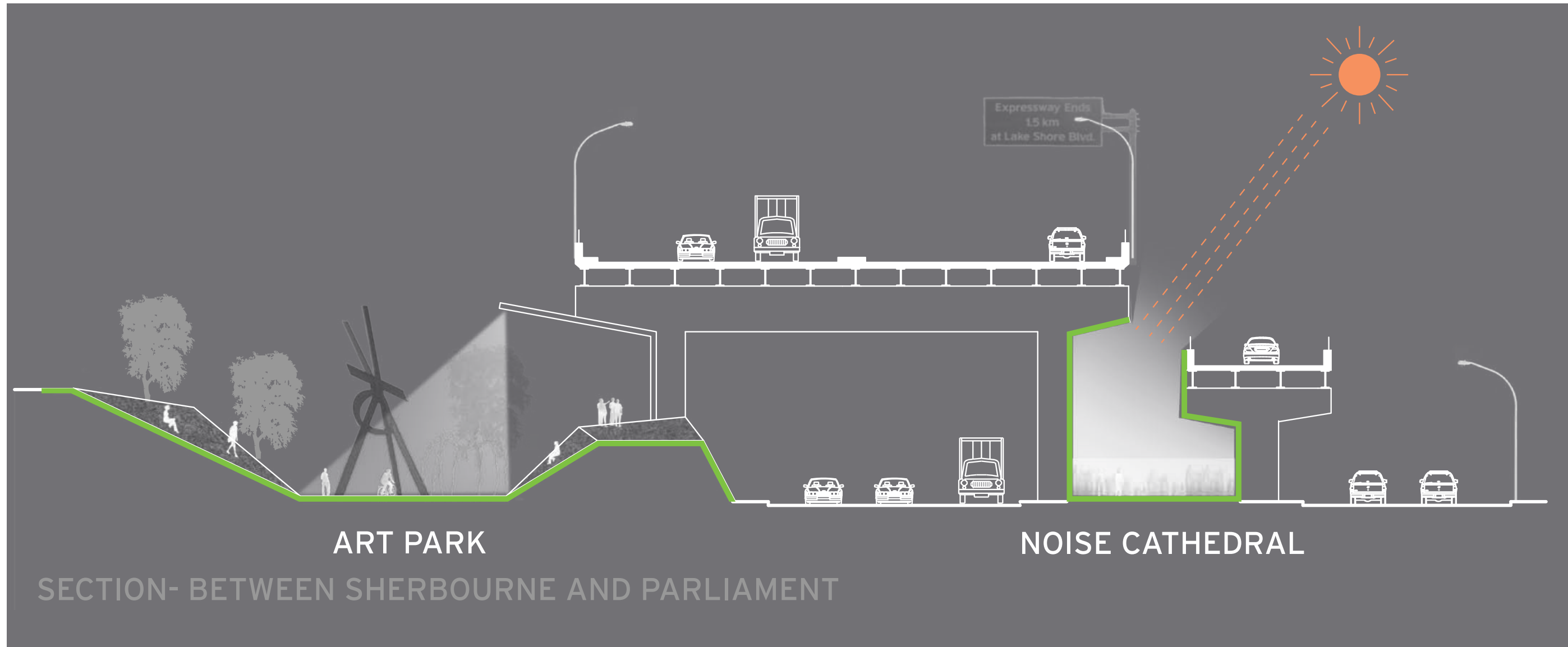
Aligned with it and forming its northern edge the 480 Lakeshore property offers a new development site calling for a unique (and phase-able) treatment. This departs from the conventional logic of streets and blocks and develops new public ground at the level of a man-made 'bluff' with an intense urban life at multi-levels penetrated by courtyards and passages at street level. This site is the keystone at the epicenter of a massive reinvestment in the creation of the East Bayfront, the Distillery District, the West Donlands, and the Lower Donlands which will serve 1000s of new residents and employees and millions of annual visitors.

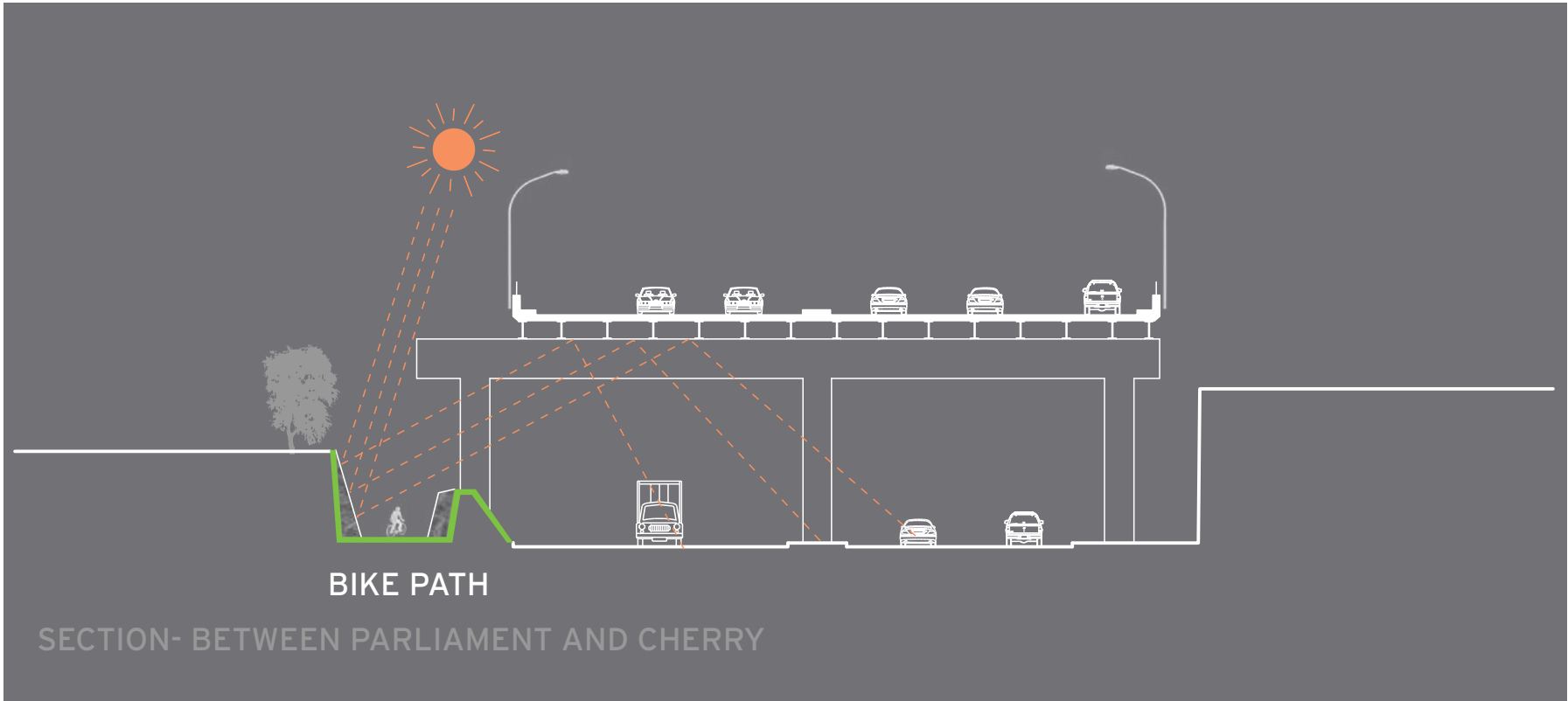
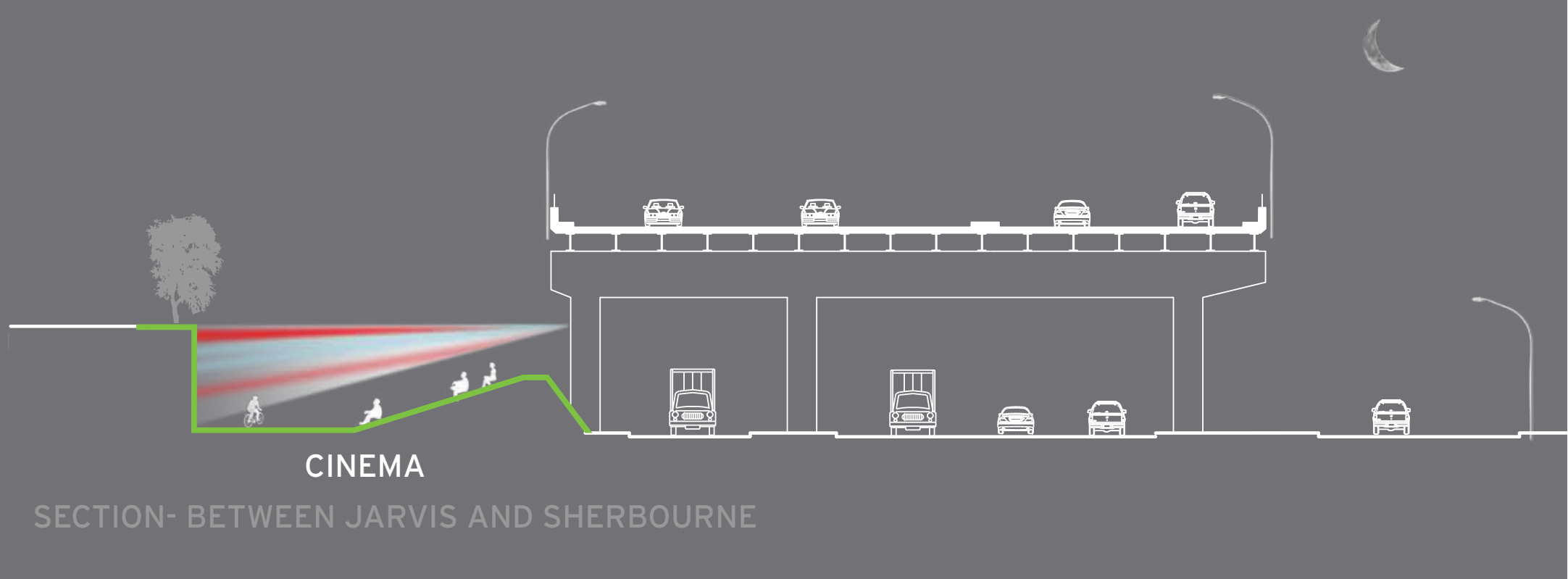


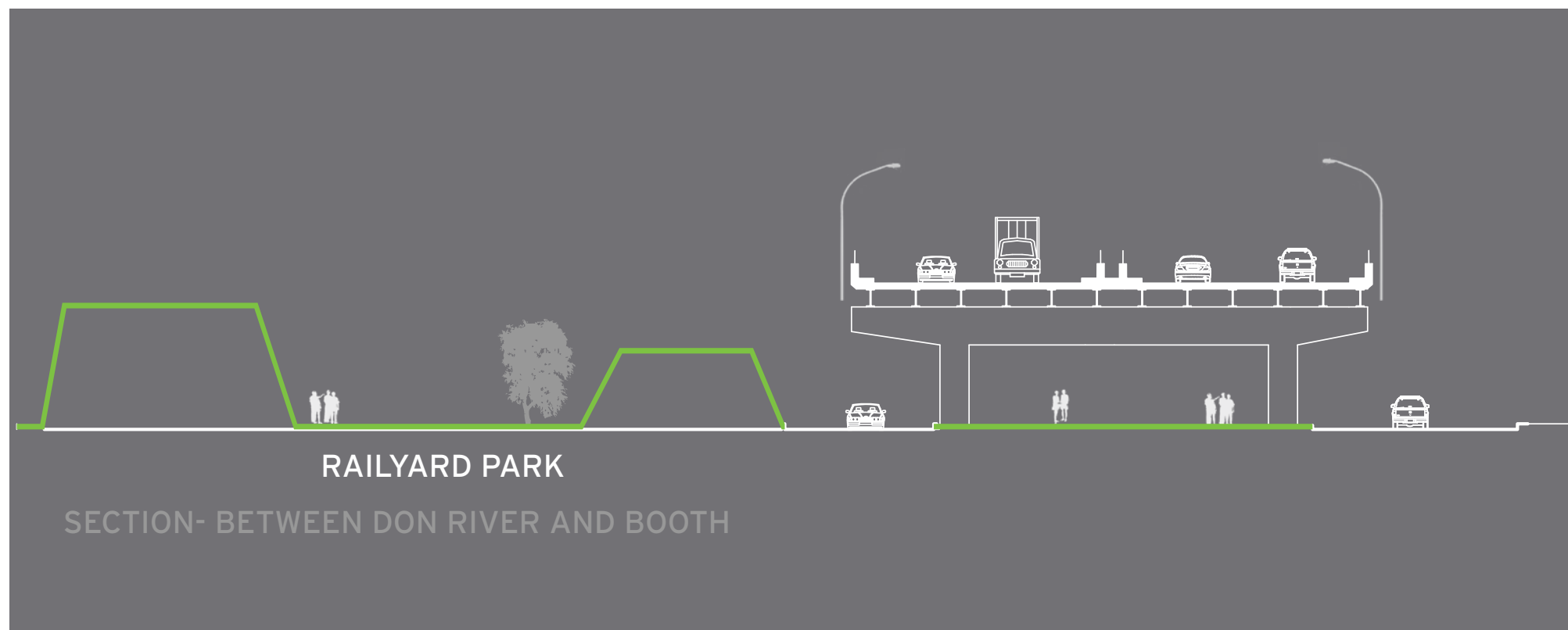
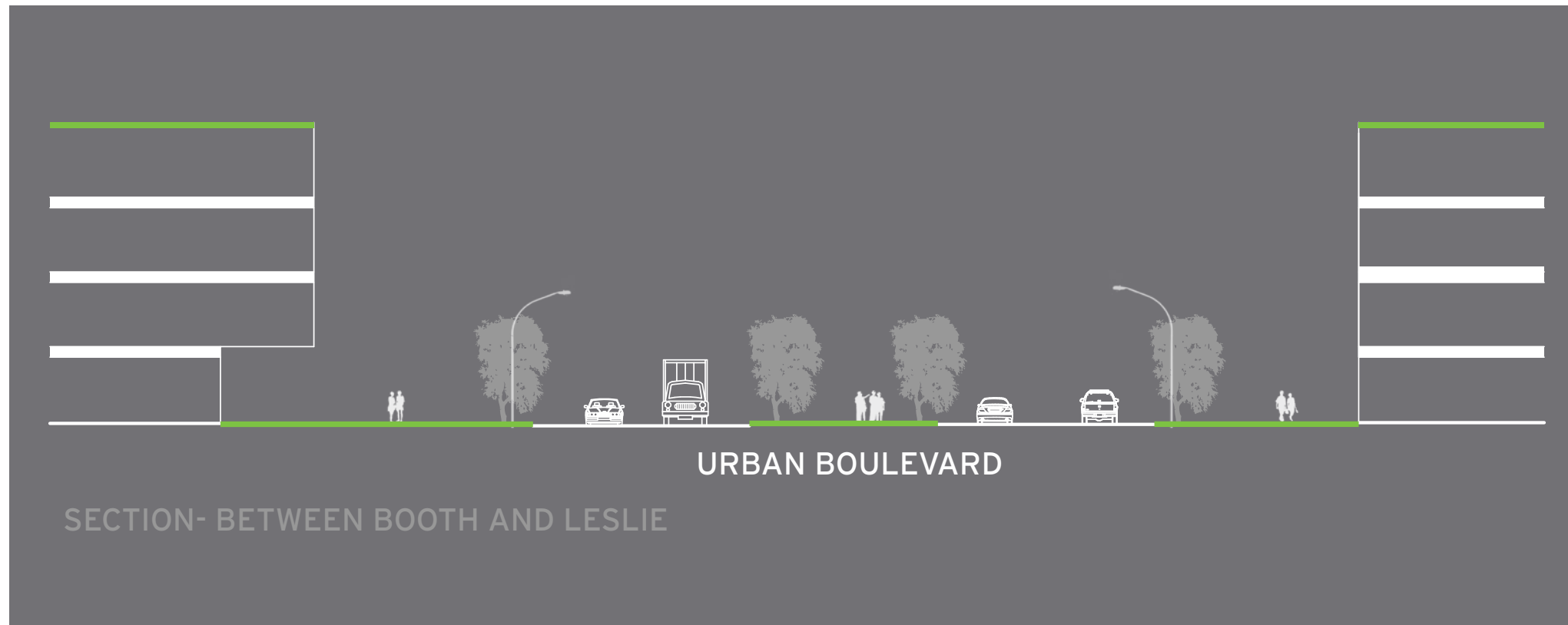
NS Connections

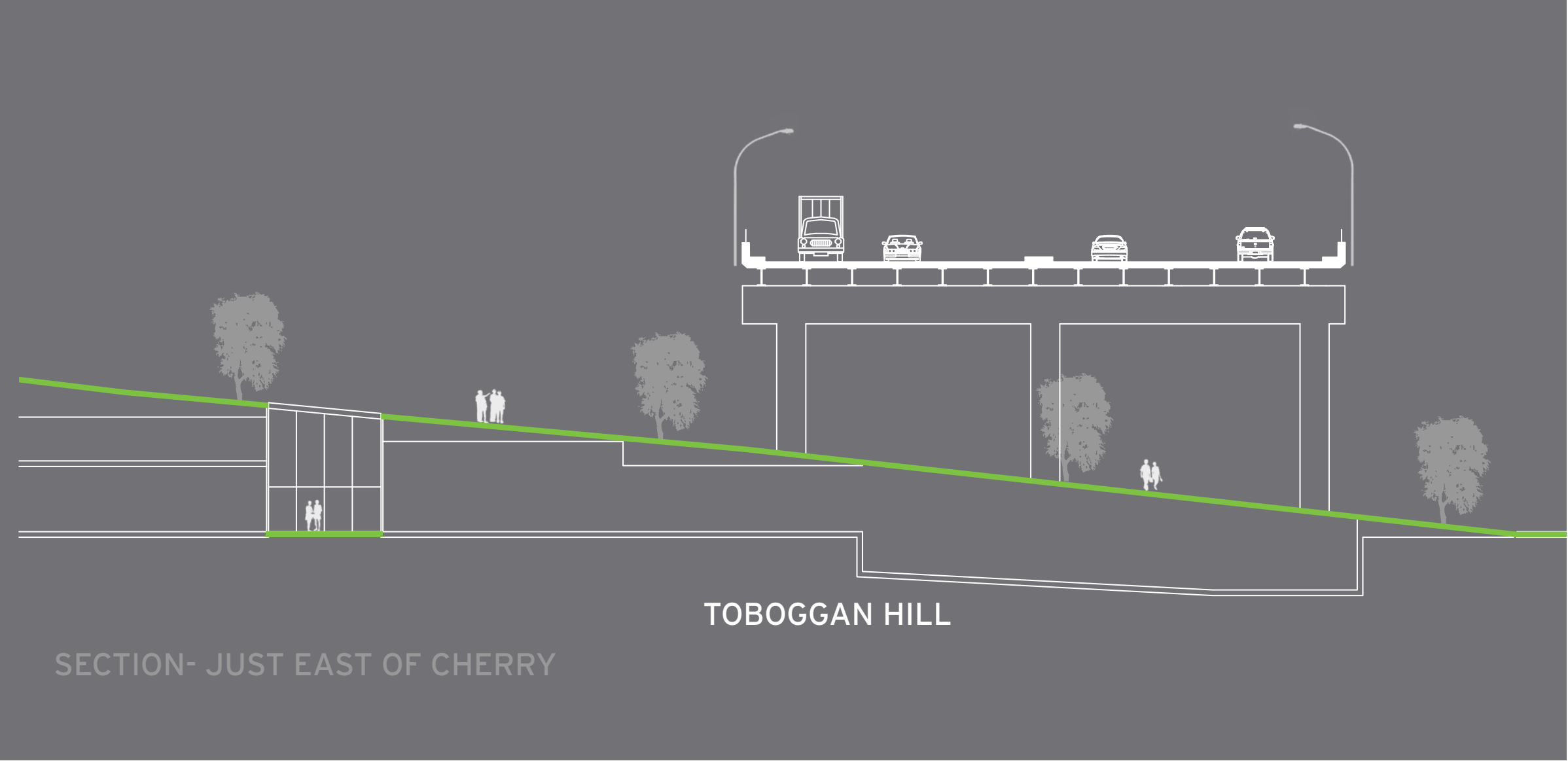
A powerful design driven program of perpendicular moves directed toward the water can alleviate the barrier of the rail corridor and better connect neighbourhoods all along the waterfront.











SECTION- JUST EAST OF CHERRY

TOBOGGAN HILL

DENSE TREE PLANTING

ART WALL

STREET LOWERED UNDER BERM

BIKE PATH

BERMED ART PARK

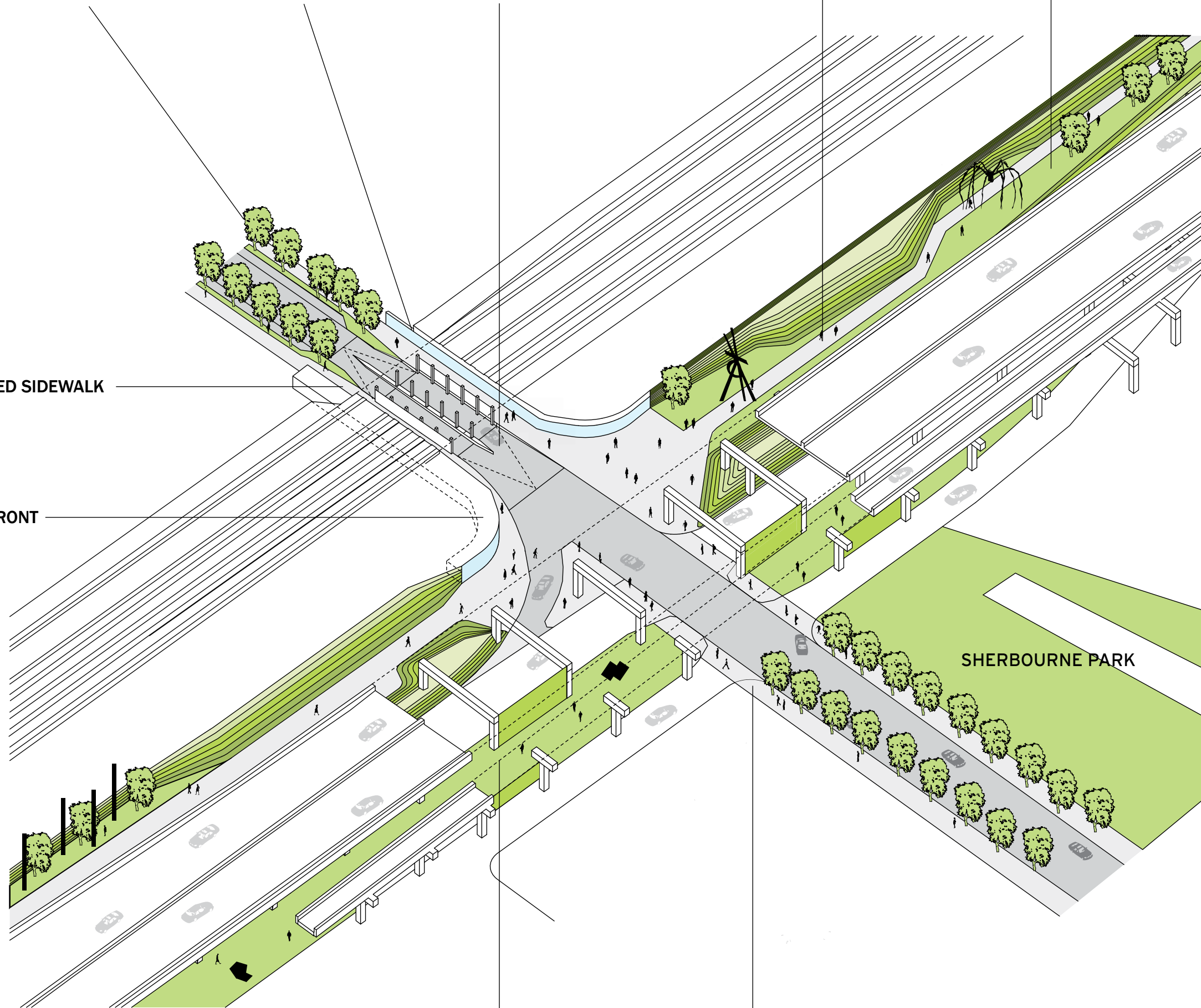
WIDENED SIDEWALK

SHOPFRONT

SHERBOURNE PARK

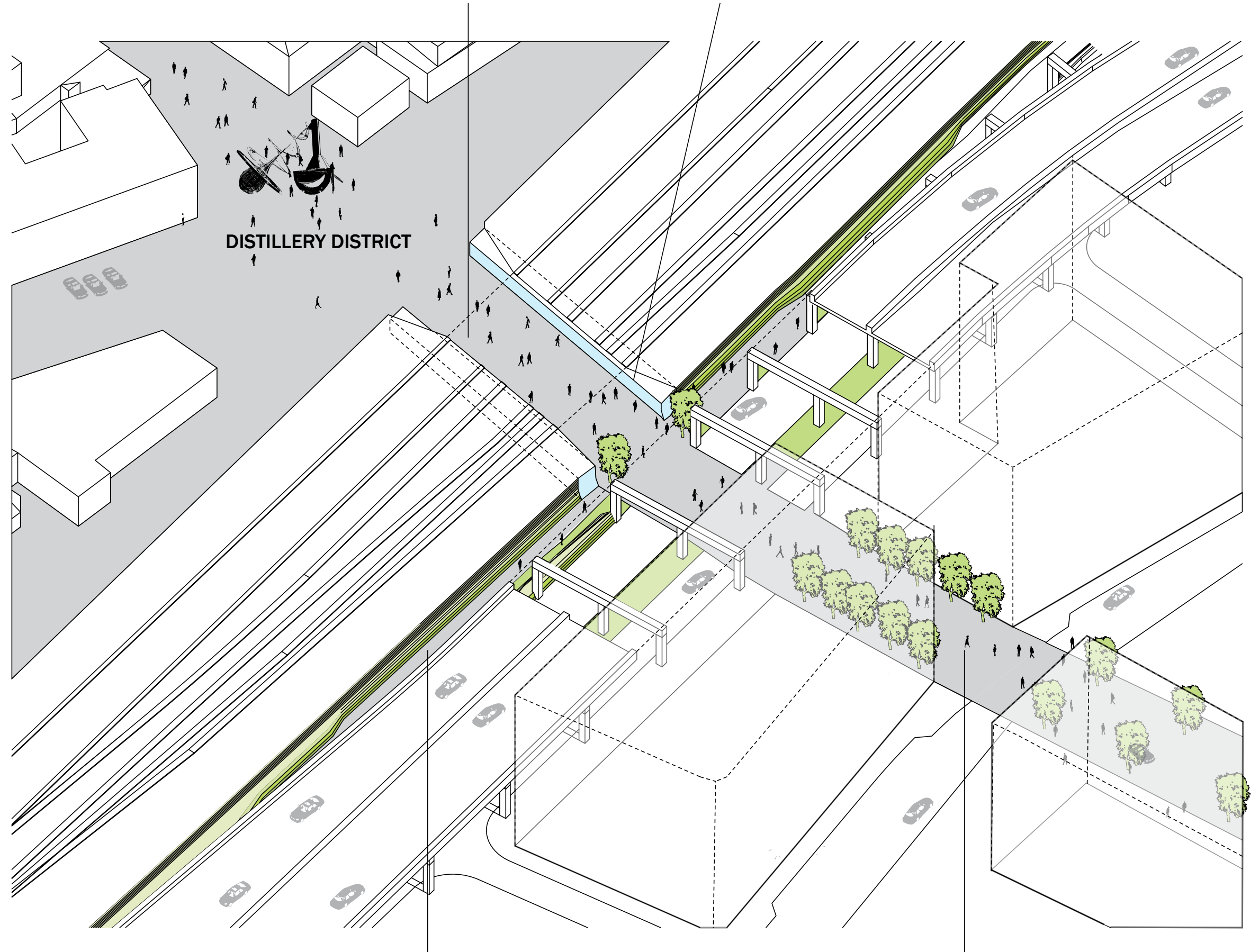
NOISE CATHEDRAL

NEW STREET PAVING



PEDESTRIAN UNDERPASS

SHOPFRONT



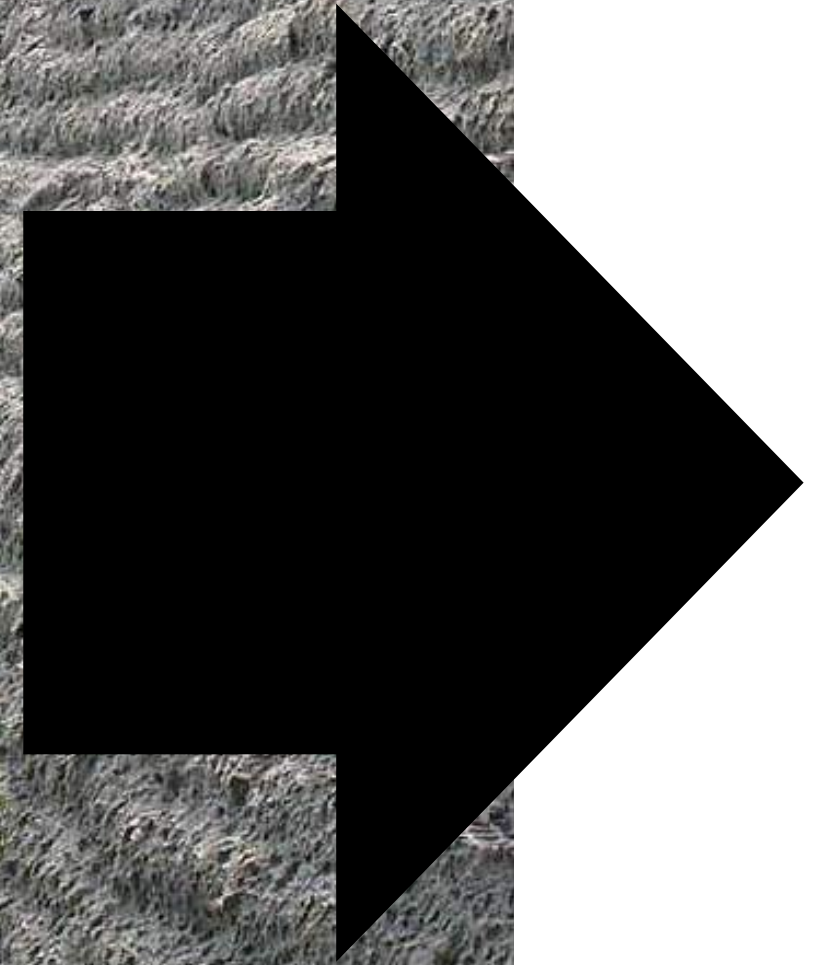
DISTILLERY DISTRICT

BIKE PATH

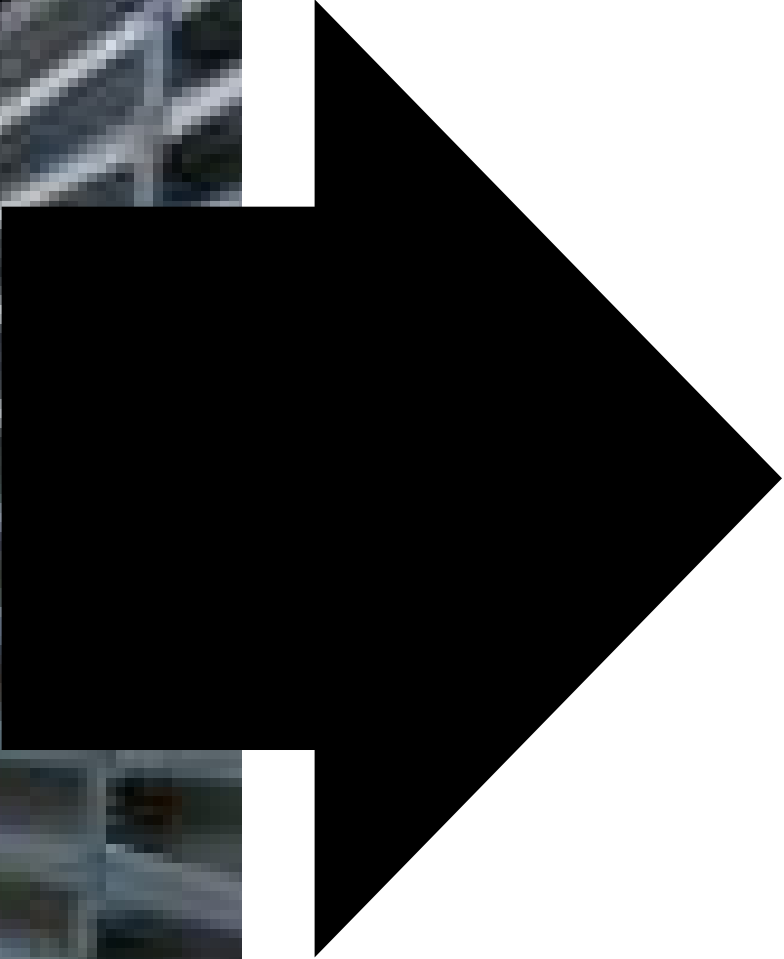
CONTINUOUS BRICK PAVING
TO WATERFRONT

Rail Berms

A new public space offers an interconnected network of public park space at the grade level.





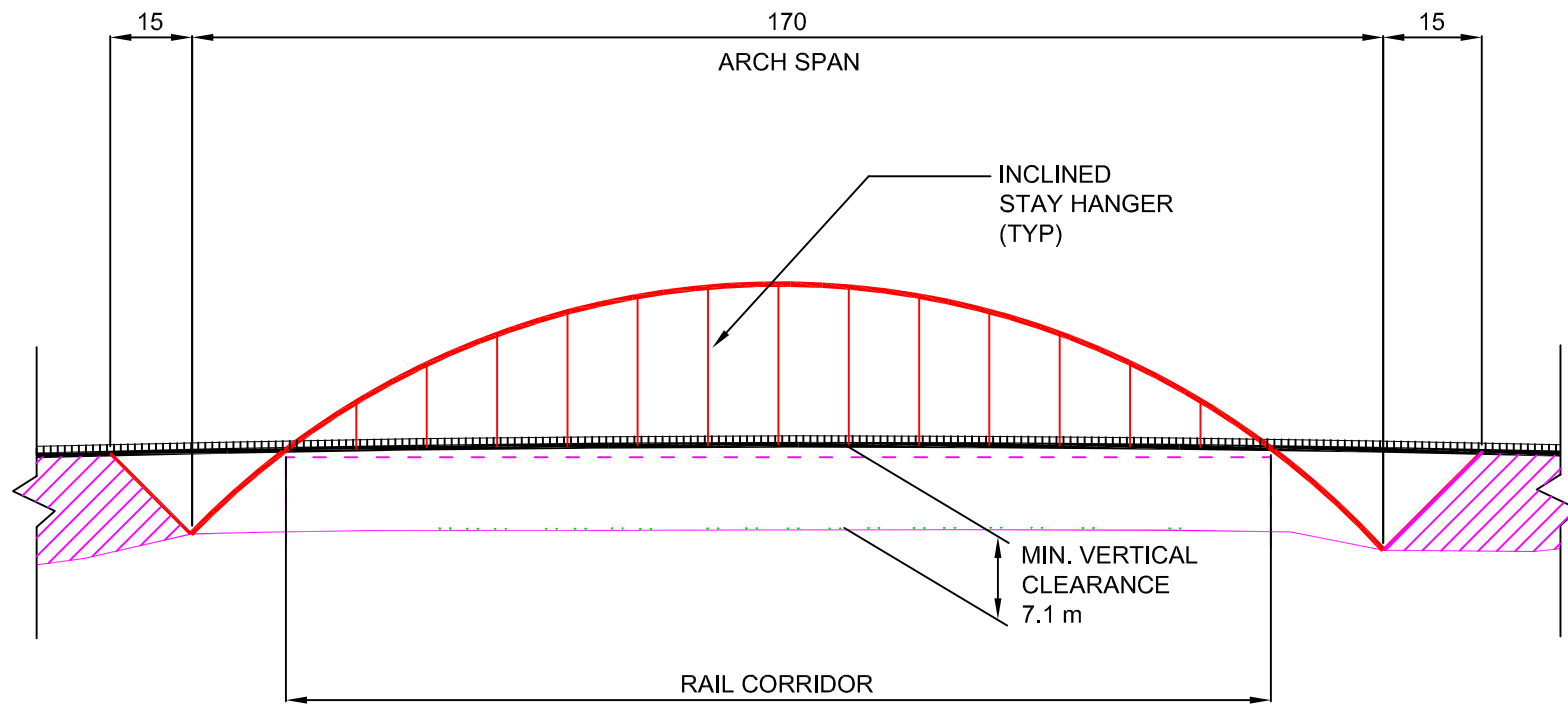




Bridges

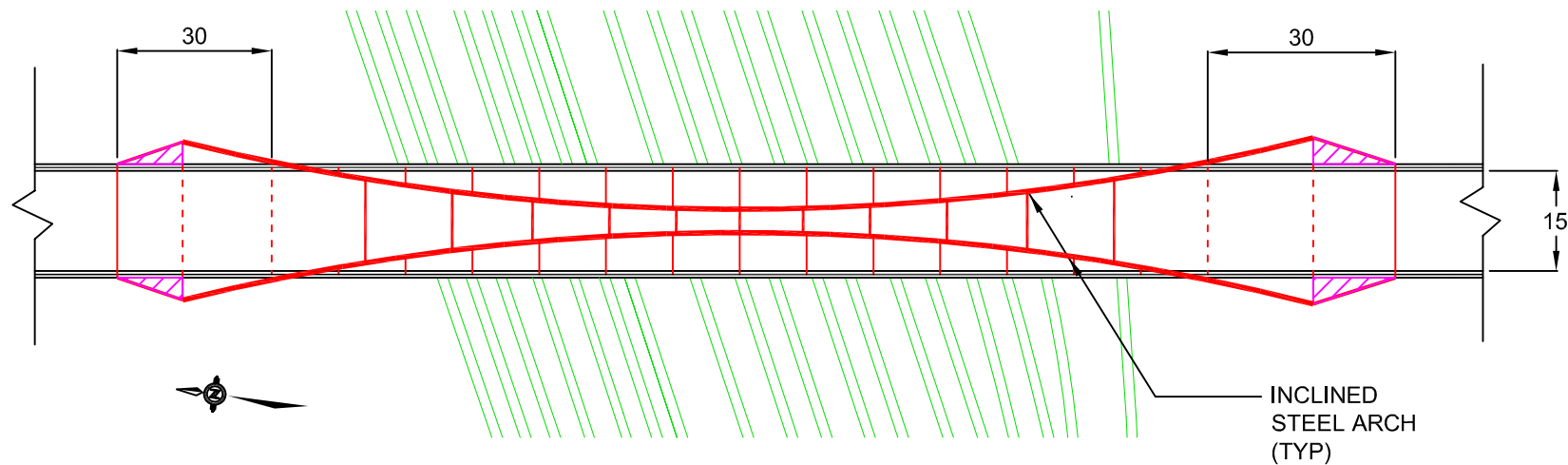
The scheme's primary new spatial elements become inhabited bridges. Four new structures augment the existing system of bridges and intensify the density of spatial relationships and uses. Along the Don Valley's north-south axis, inhabited bridge-cities use the program to link two parts of the City that conflict in both scale and character. The inhabited bridges are both horizontal and vertical connectors, with ramps, escalators, and elevators that link the lower levels of the Valley to the upper levels of the historical city. Each bridge accommodates two categories of use: in the core element, public or commercial use, and at the deck level, pedestrian traffic and related uses.

MUNITION STREET PEDESTRIAN BRIDGE OVER THE RAIL CORRIDOR



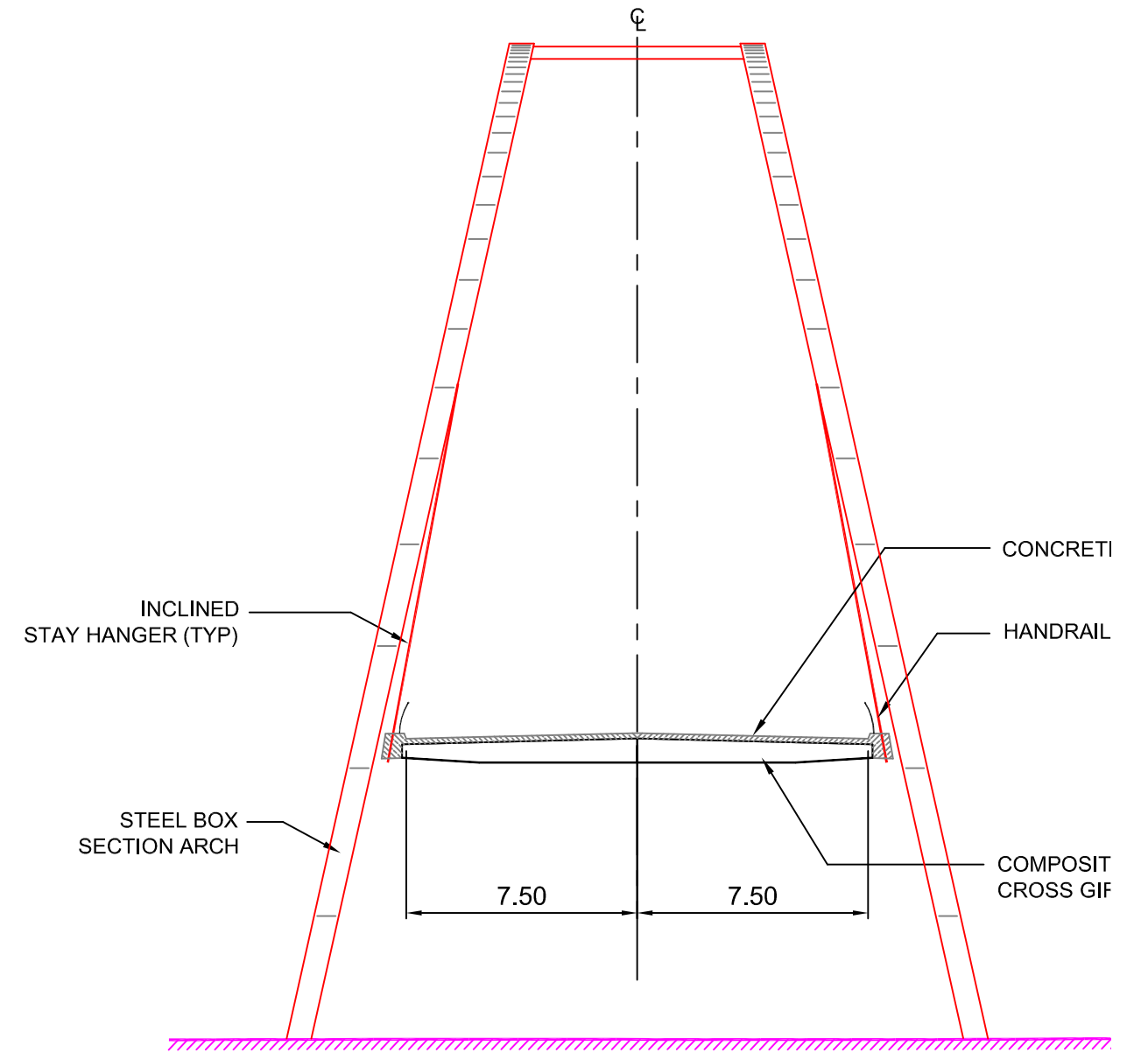
ELEVATION

SCALE 1 : 500



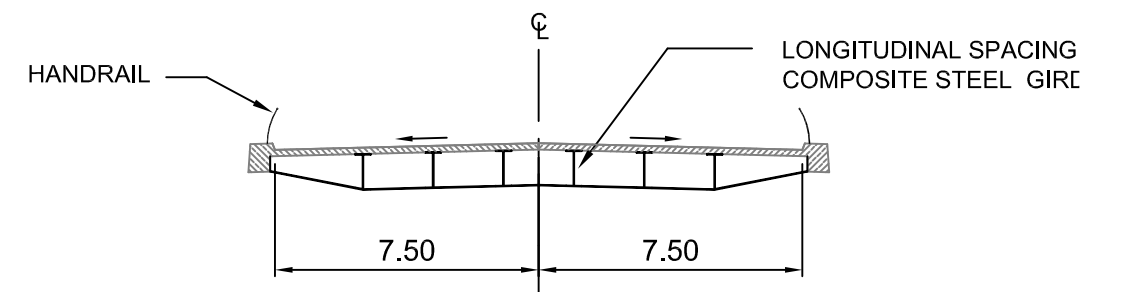
PLAN

SCALE 1 : 500



CROSS SECTION

SCALE 1 : 100



CROSS SECTION END SPANS

SCALE 1 : 100



Go Station

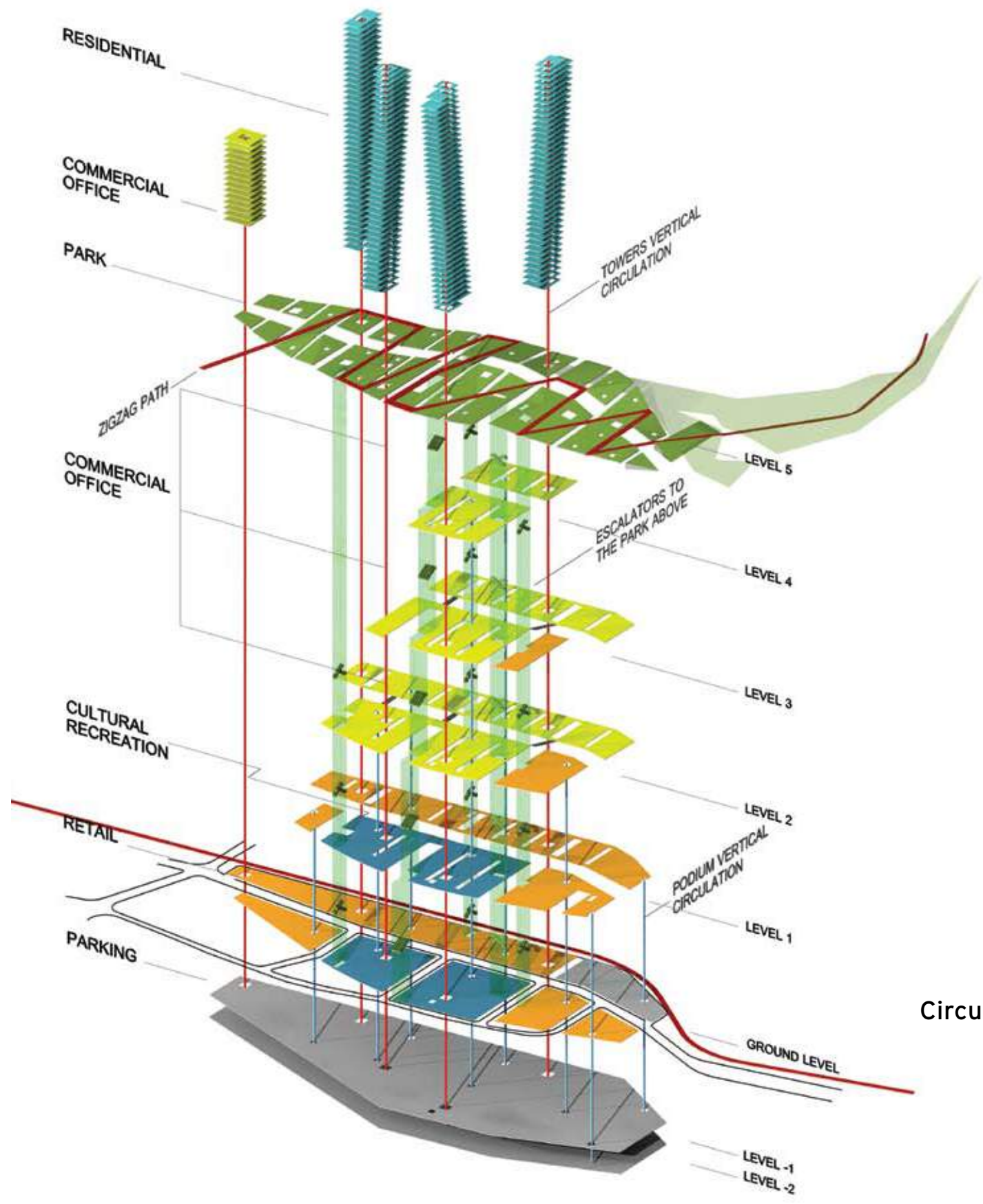
At the heart of this new district the temporary GO Station for the Pan Am Games should become a permanent fixture serving this major new pole of investment which parallels and exceeds that which is happening to the west in Liberty Village. This integrated whole has the potential to achieve a new level of sustainability in forming a pattern of transit oriented development served by GO and Light Rail on Queens Quay and Cherry Street.

Mountain Podium

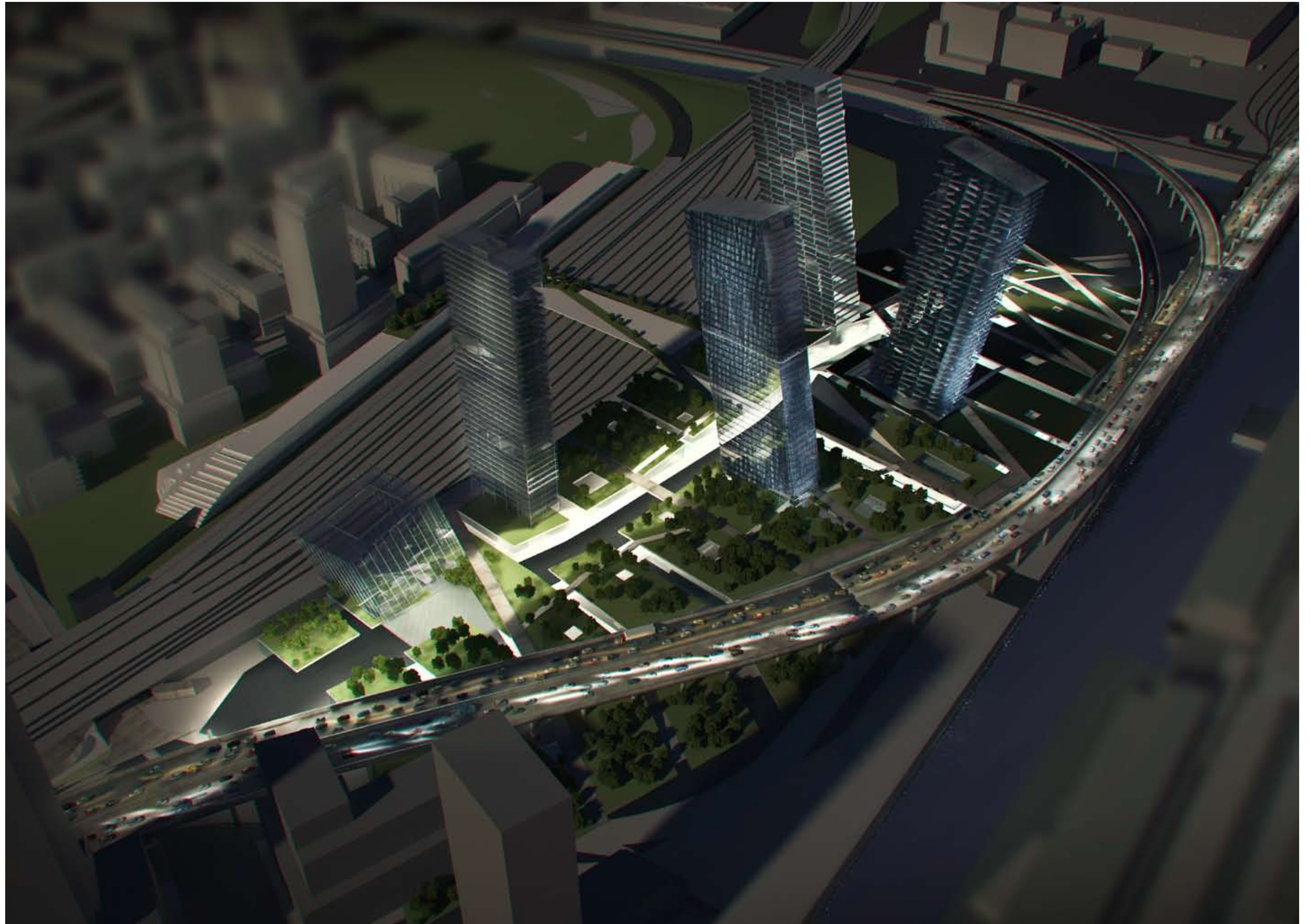
The design proposes a continuous, constructed landscape forming an uninterrupted Z-shaped “green” platform/mountain, that rises over the existing Gardiner and Lake Ontario. The mountain capitalizes on views of the skyline and the Lake reconnects the urban core to the revitalized waterfront.

Within and atop the podium, an intense program of new uses will serve the need for retail, cultural and civic uses and new residential and employment uses which will animate the intricate multi-level network of interconnected public spaces.

This man-made 'bluff' provides a remarkable new vantage point overlooking the harbour and new public landscape similar in size to Trinity Bellwoods Park integrated with new links to the West Donlands and Don River Park. On top of this undulating high level public landscape (shaped by the surrounding topography of embankments and the dynamic form of the elevated structures) strategically placed towers contain a mix of uses including residential units with remarkable views.



Circulation diagram for the 480 Lakeshore Site.



Park System THE GAR as Gathering Space.

The landscape design abstracts two of Toronto's iconic geographic typologies, the bluff and the ravine. The landscape subtypes- savannah (moist and dry), meadow, bluff, and ravine (moist slope and riparian slope) are all part of the larger Carolinian matrix.

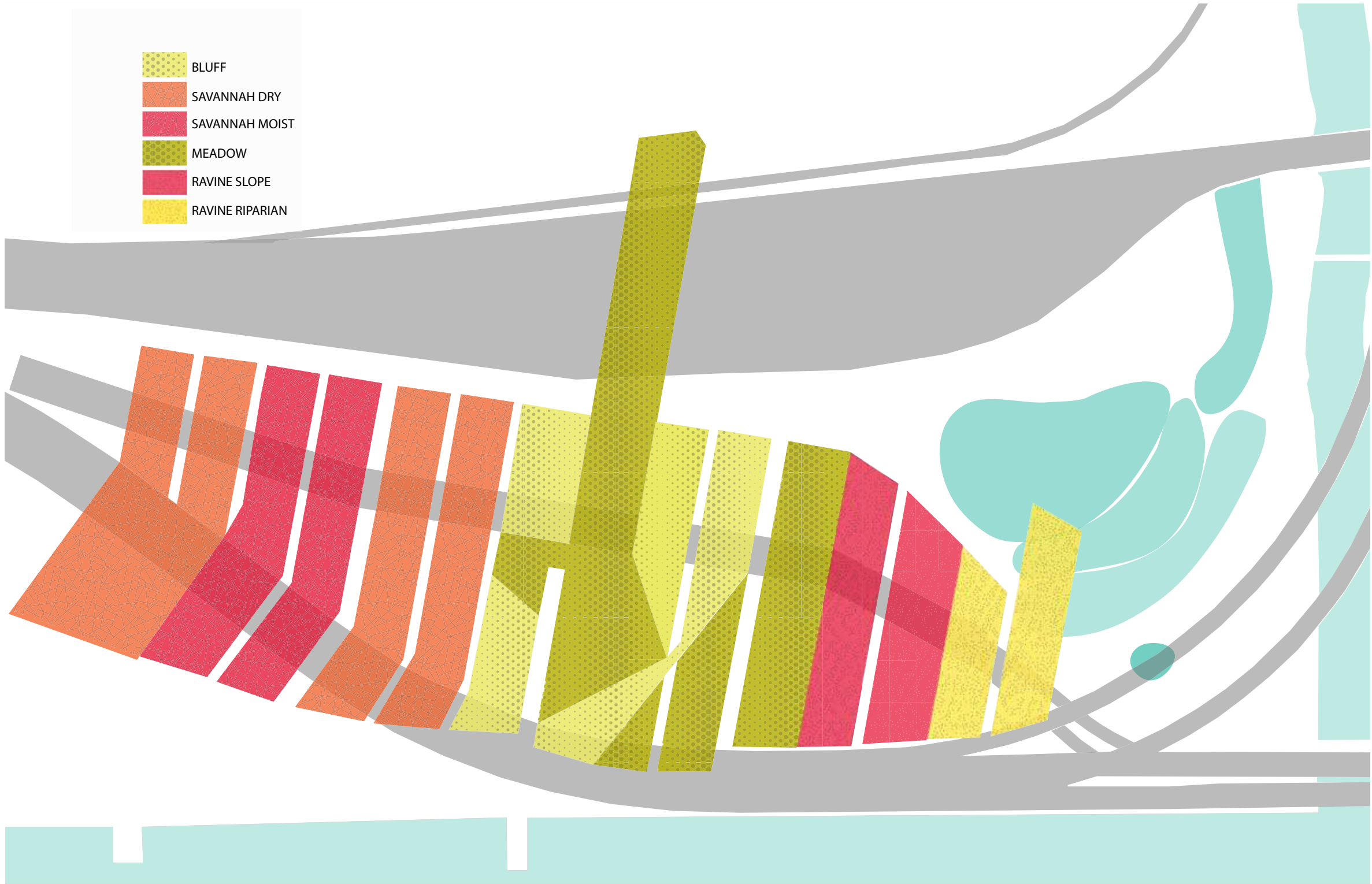
The two elevational extremes of bluff and ravine inspire an abutment of the topographic experiences of the man-made podium to the familiar experience of Toronto's most iconic landscapes, the Scarborough Bluffs and the Ravine System.

Gathering spaces along the 'bluff' zone connect the buildings, and are made lush with orchards, community gardens and play areas throughout.

The ravine landscape strategy under the Gardiner colonnade and along the Keating Channel is activated with recreational programming such as a swimming pool and restaurant pavilions. In spirit, it creates a covered boardwalk feel.



- BLUFF
- SAVANNAH DRY
- SAVANNAH MOIST
- MEADOW
- RAVINE SLOPE
- RAVINE RIPARIAN





- Pinus banksiana*
Jack Pine
- Acer saccharum*
Sugar Maple
- Rhus typhina*
Staghorn Sumac
- Calluna rosea*
Canada Blueberry
- Asclepias tuberosa*
Butterfly milkweed
- Asclepias speciosa*
Butterfly milkweed
- Elymus canadensis*
Canada Wild Rye
- Scirpus cyperinus*
Wool-grass
- Asarum canadense*
Heath aster
- Wild bergamot
- Quercus velutina*
Black Oak
- Quercus macrocarpa*
Bur oak
- Corylus americana*
American Hazelnut
- Sorghastrum nutans*
Indian Grass
- Wild sunflower
Helianthus annuus
- Quercus alba*
White Oak
- Quercus bicolor*
Swamp White Oak
- Quercus phellos*
Pine Oak
- Rhus aromatica*
Fragrant Sumac
- Prunus virginiana*
Choke Cherry
- Juglans cinerea*
Butternut
- Betula picea*
Yellow Birch
- Acer saccharum*
Sugar Maple
- Ammelanchier alba*
Strawberry
- Cornus amomum*
s.s. *caluga*
Silky Dogwood
- Populus grandidentata*
Large-tooth Aspen
- Populus tremuloides*
Trembling Aspen
- Salix petiolaris*
Slender willow
- Rhus typhina*
Staghorn Sumac
- Sambucus canadensis*
Common Elderberry

BLUFF **MEADOW** **SAVANNAH DRY** **SAVANNAH MOIST** **RAVINE SLOPE** **RAVINE RIPARIAN**



Landscape planting strategy for 480 Lakeshore site.

RAVINE RIPARIAN



Populus grandidentata
Large-tooth Aspen

Populus tremuloides
Trembling Aspen

Betula papyrifera
White Birch

Ostrya virginiana
Ironwood

Salix petiolaris
Slender willow

Rhus typhina
Staghorn Sumac

Sambucus canadensis
Common Elderberry

Cornus stolonifera
Red-osier Dogwood

Polystichum aristichoides
Christmas Fern

Dryopteris marginalis
Marginal Wood Fern

Athyrium filix-femina
Northeastern Lady Fern

Elymus riparius
Riverbank Wild Rye

Quercus rubra
Red Oak

Prunus serotina
Black Cherry

Juglans cinerea
Butternut

Betula alleghaniensis
Yellow Birch

Acer saccharum
Sugar Maple

Amenlicher arborea
Serviceberry

Cornus amomum
ssp. *obliqua*
Silky Dogwood

Ribes nigro
Black currant

Rhus typhina
Staghorn Sumac

Matteucia struthopteris
American Osterich Fern

Dryopteris intermedia
Glandular Wood Fern

Asarum canadense
Wild ginger

Quercus alba
White Oak

Quercus bicolor
Swamp White Oak

Quercus Palustris
Pin Oak

Rhus aromatica
Fragrant Sumac

Prunus virginiana
Choke Cherry

Carex blanda
Common Wood Sedge

Carex eburnea
Black-fruited Sedge

Carex pedunculata
Early-flowering Sedge

Carex vulpinoidea
Fox Sedge

Carex bebbii
Bebb's Sedge

Carex stipata
AWI-fruited Sedge

Carex laevivaginata
Smooth-sheated Sedge

Quercus velutina
Black Oak

Quercus macrocarpa
Bur oak

Carya glabra
Pignut hickory

Corylus americana
American Hazel

Prunus virginiana
Choke Cherry

Sorghastrum nutans
Indian Grass

Andropogon gerardii
Big Bluestem

Schizachyrium scoparium
Little Bluestem

Elymus hystrix
Bottlebrush grass

Liatris cylindracea
Cylindric Blazing Star

Helianthus divaricatus
Wild sunflower

Verbena stricta
Hoary Vervain

Andropogon gerardii
Big Bluestem

Elymus canadensis
Canadian Wild Rye

Clalmagrostis canadensis
Canada bluejoint

Panicum virgatum
Switch grass

Scirpus cyperinus
Wool-grass

Asclepias tuberosa
Butterfly milkweed

Hairy aster
Aster pilosus

Aster ericoides
Heath aster

Mentha arvensis
Wild mint

Monarda fistulosa
Wild bergamot

Solidago altissima
Tail goldenrod

Fragaria virginiana
Wild strawberry

Pinus banksii
Jack Pine

Acer saccharum
Sugar Maple

Rhus typhina
Staghorn Sumac

Clalmagrostis canadensis
Canada bluejoint

Asclepias tuberosa
Butterfly milkweed

Hairy aster
Aster pilosus

Panicum virgatum
Switch grass

Mentha arvensis
Wild mint

Monarda fistulosa
Wild bergamot

Solidago altissima
Tail goldenrod

Fragaria virginiana
Wild strawberry

Rudbeckia hirta
Black-eyed Susan

RAVINE SLOPE



MOIST SAVANNAH



DRY SAVANNAH



MEADOW



BLUFF







B01-Sylvia Park-New Zealand 1.jpg



B01-Sylvia Park-New Zealand 2.jpg



B02-Watertable Art Installation-Gardiner Expy 1.jpg



B02-Watertable Art Installation-Gardiner Expy 2.jpg



B03-Interface Studio-K and A Streetscape Plan- Philadelphia.jpg



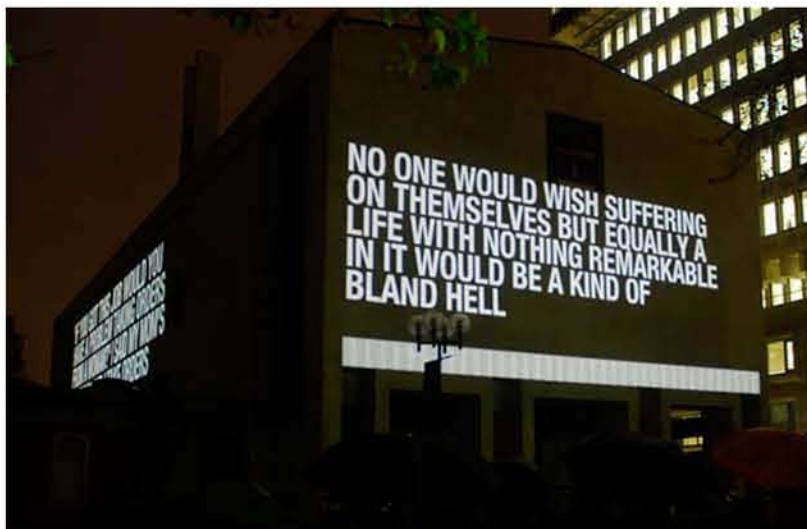
B04-Interface Studio-I95 Underpass-Philadelphia.jpg

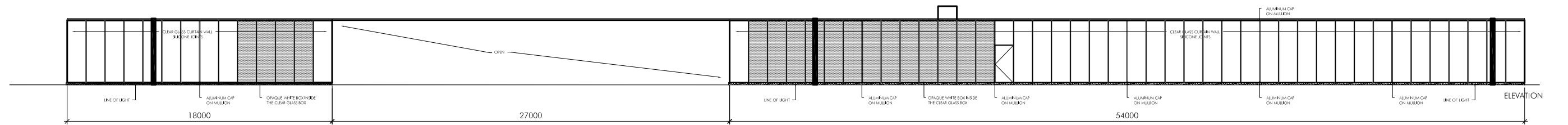
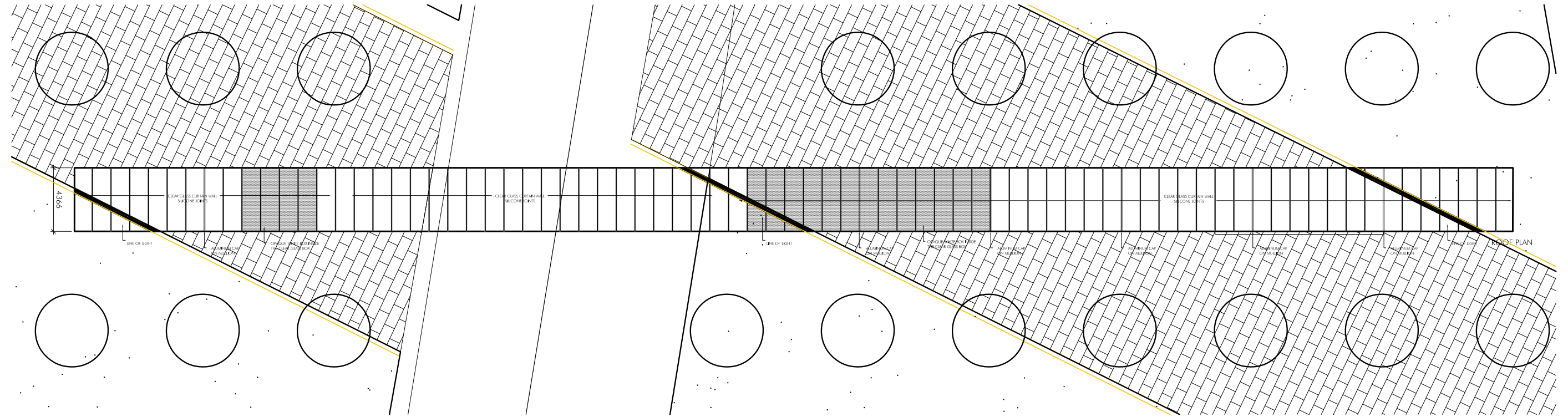
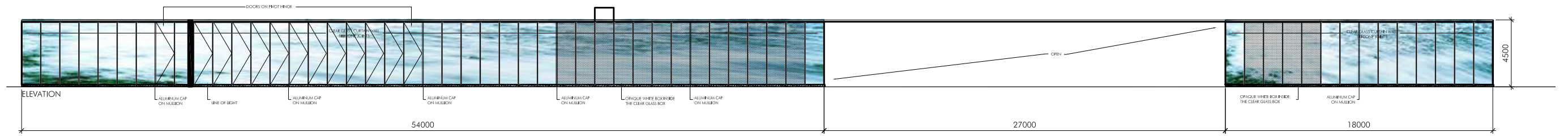


B05-WM Architects-Easlink Freeway-Australia 1.jpg

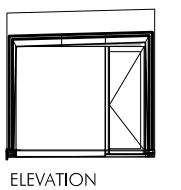
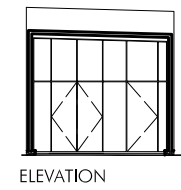


B05-WM Architects-Easlink Freeway-Australia 2.jpg

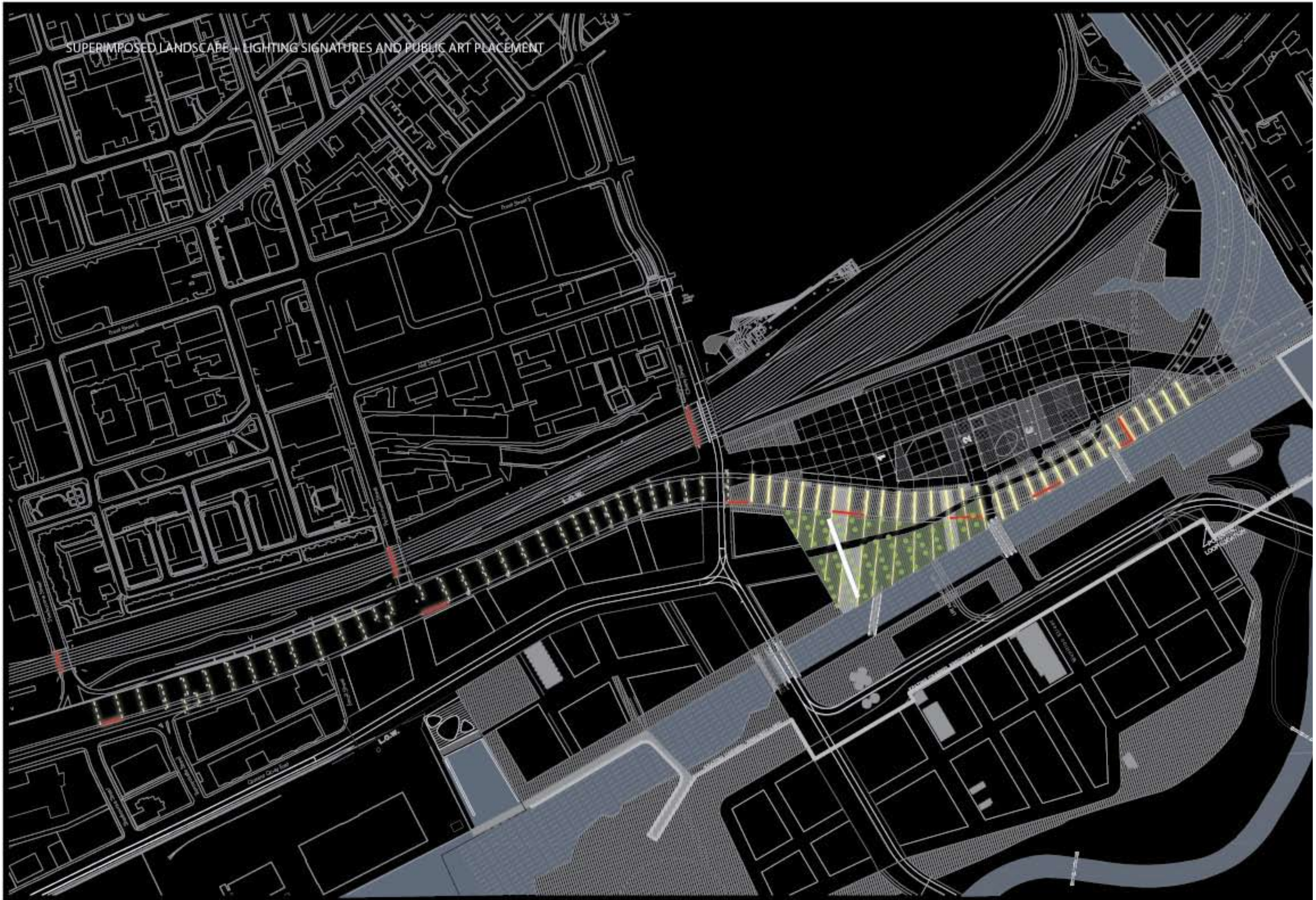




WATERSCAPE RESTAURANT & SHOP
 ROOF PLAN & ELEVATIONS
 SCALE 1:250



SUPERIMPOSED LANDSCAPE + LIGHTING SIGNATURES AND PUBLIC ART PLACEMENT

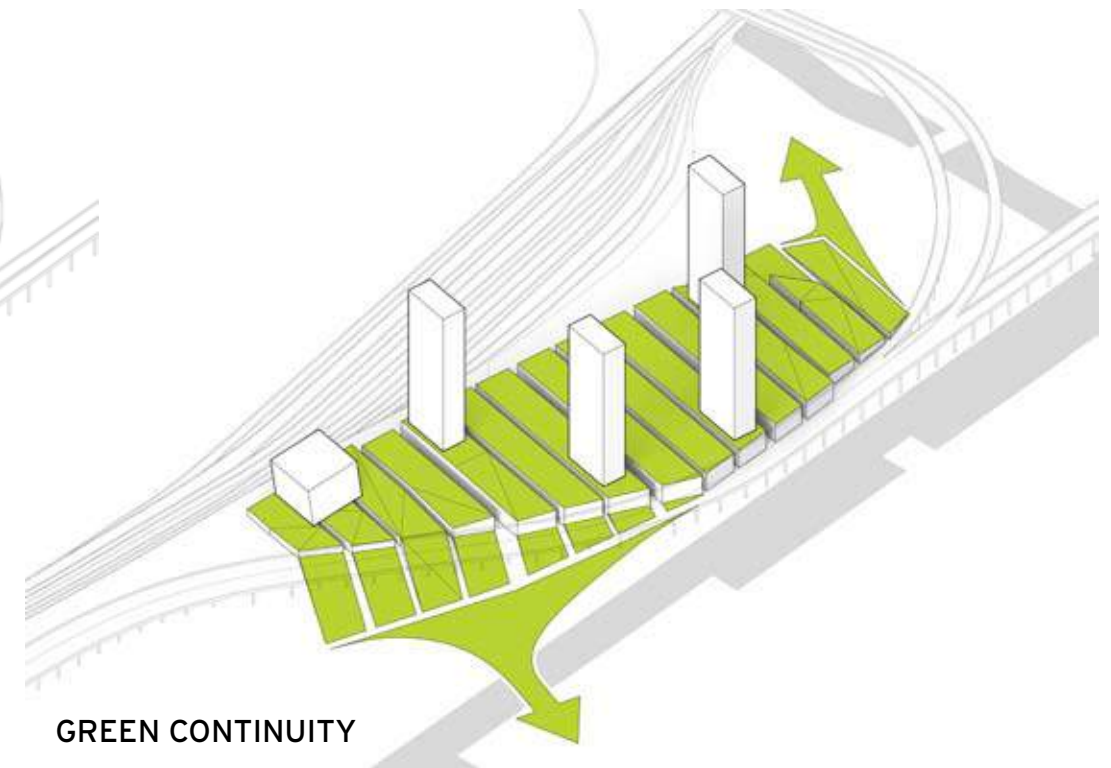
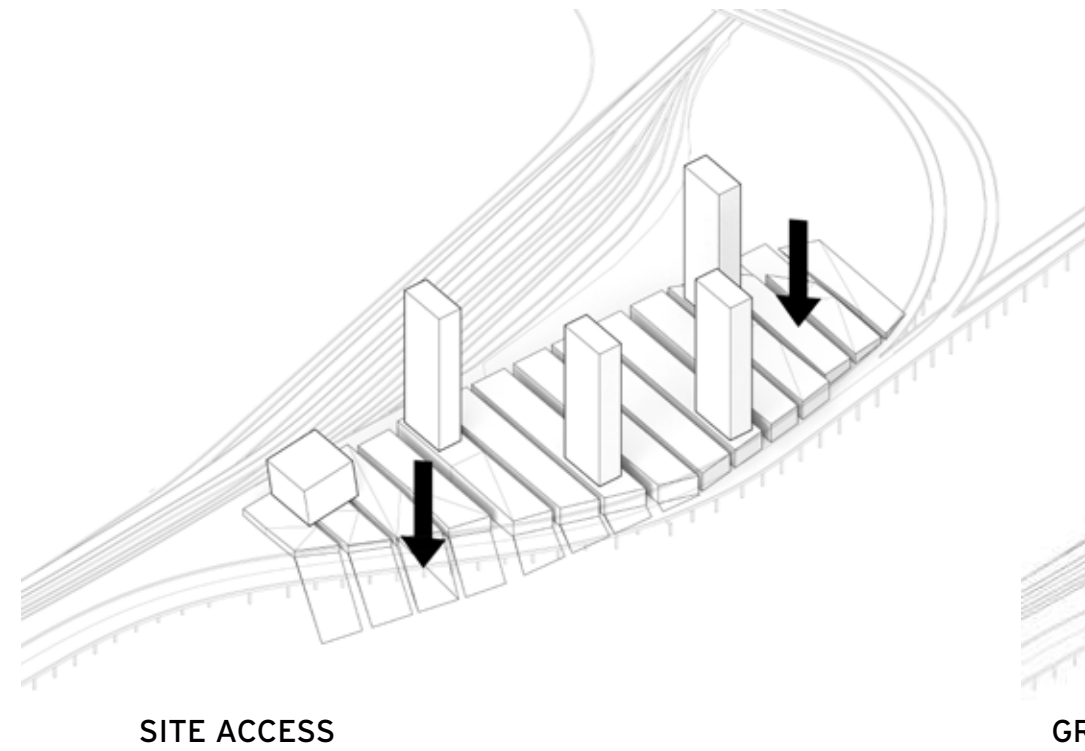
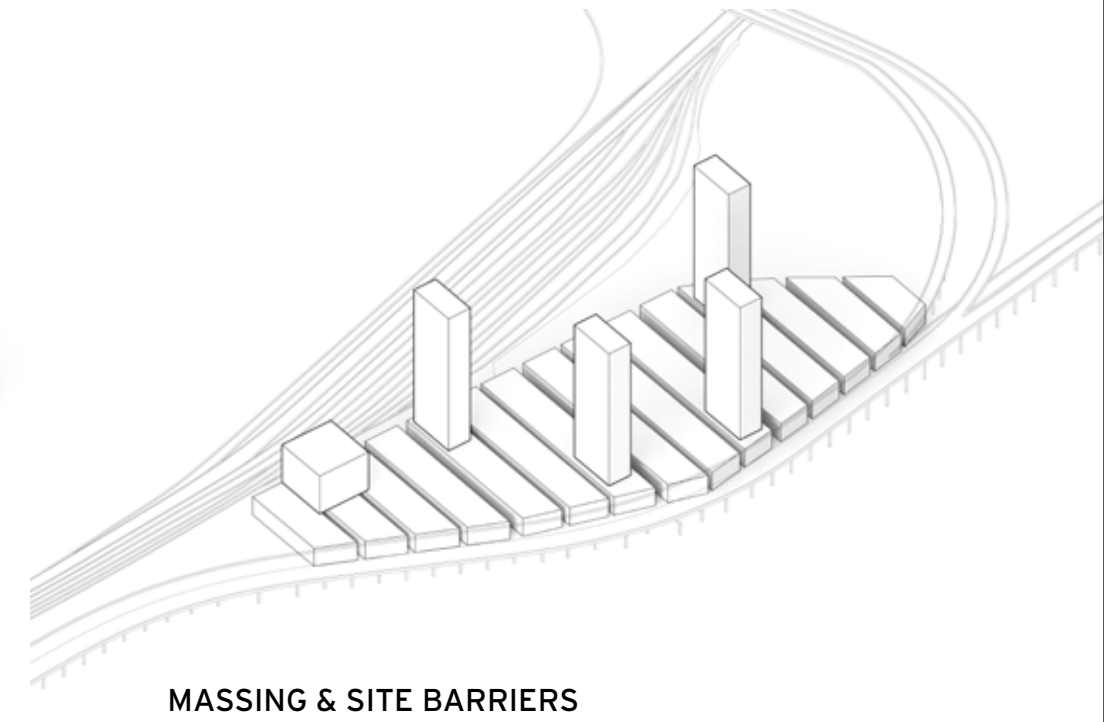
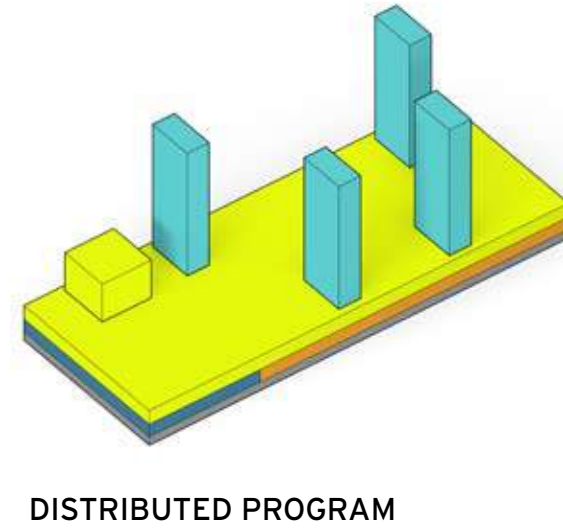
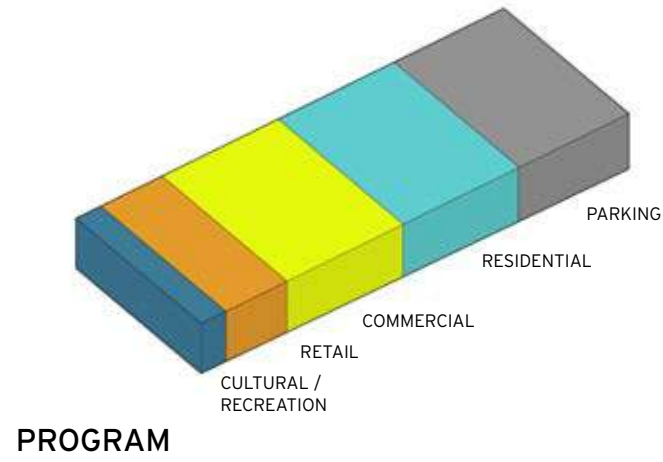


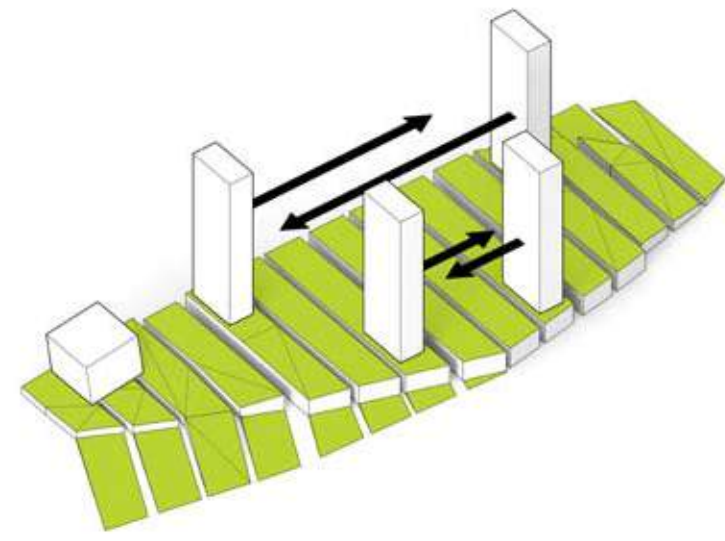
OVERALL CHANNEL EDGE IN CONTEXT



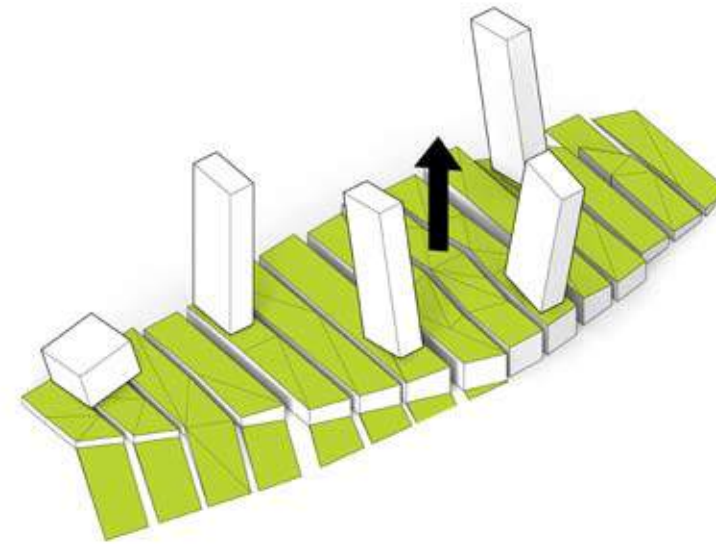
CONCEPT DIAGRAMS

Towers

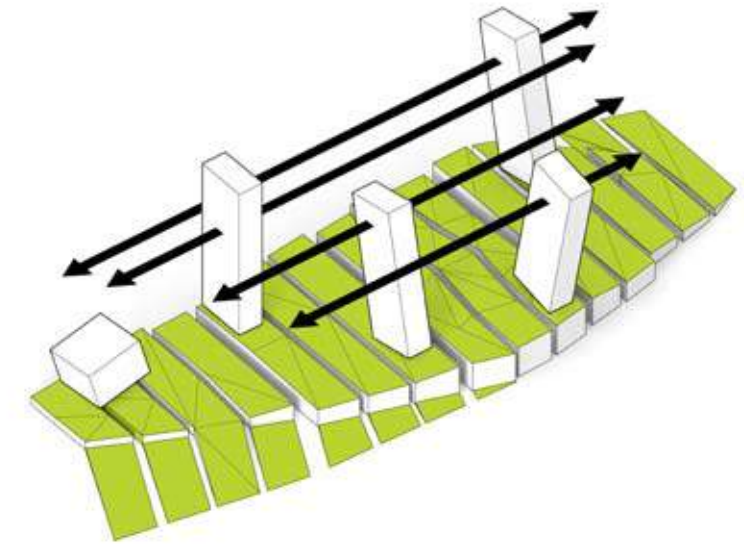




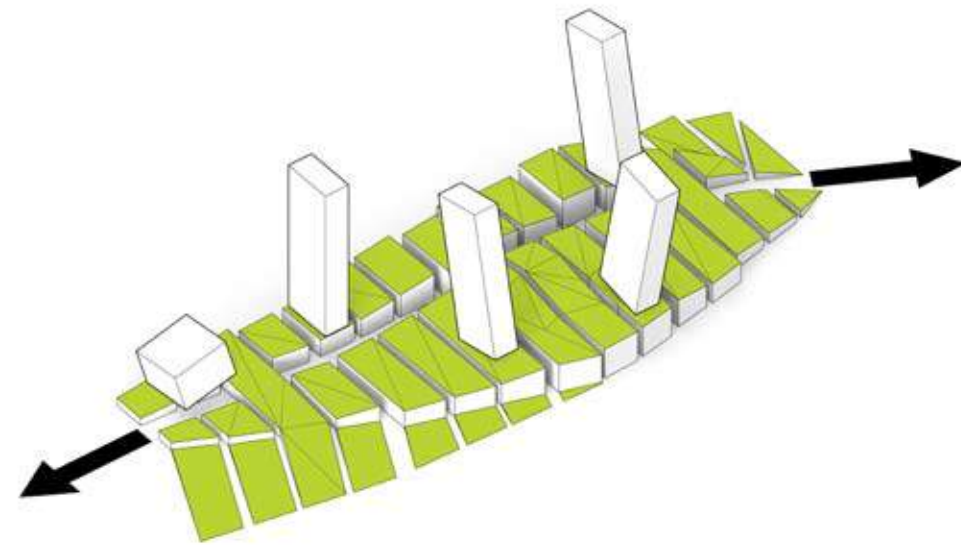
BLOCKED VIEWS



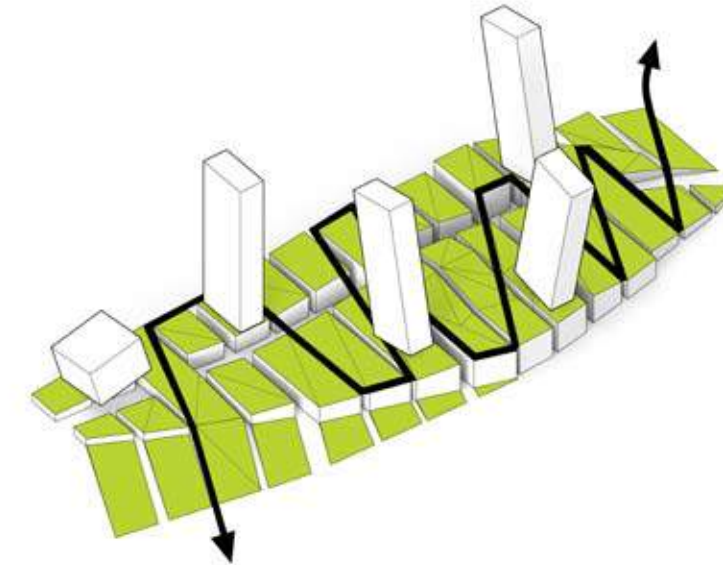
PULL UP TO HIGHWAY LEVEL



PERFECT VIEWS!

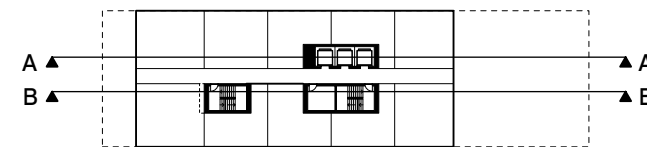
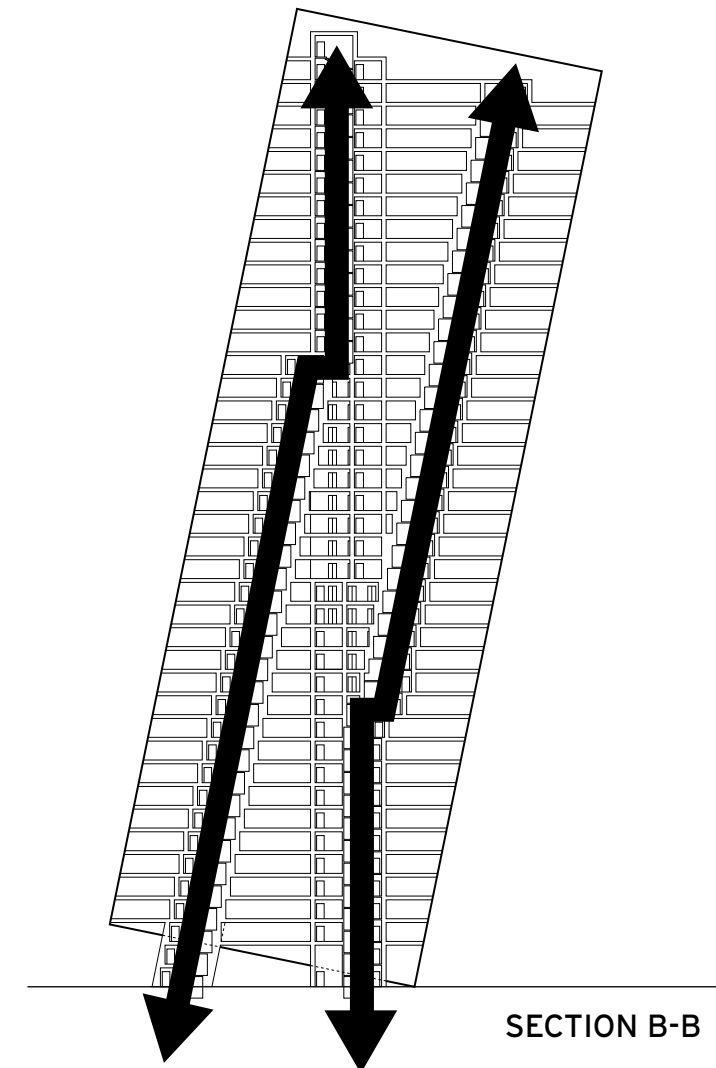
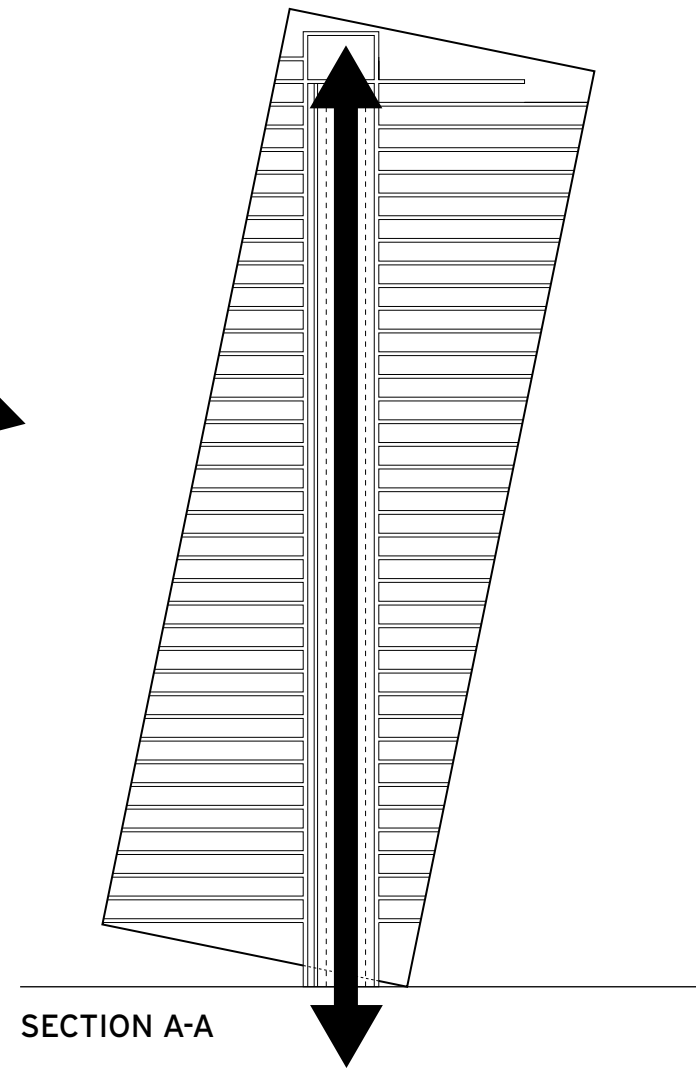
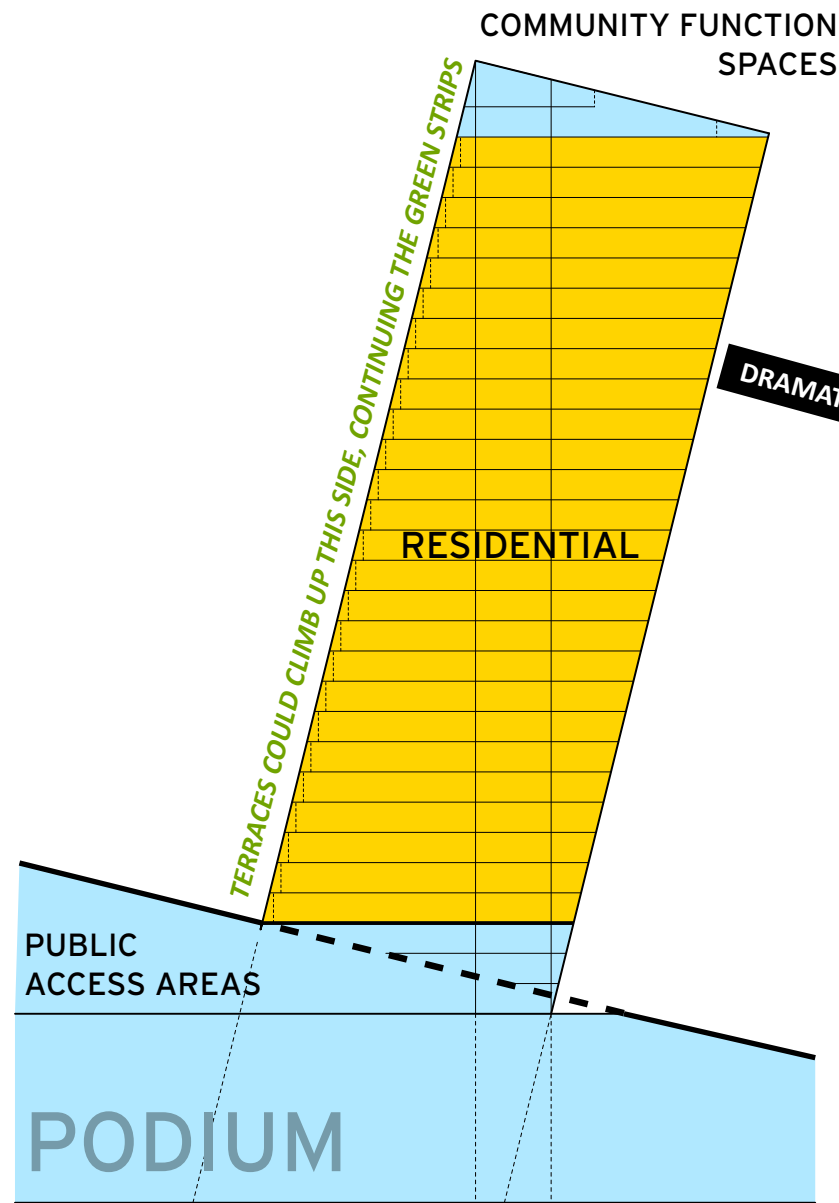


EAST-WEST CONNECTION FOR LAKESHORE BLVD E

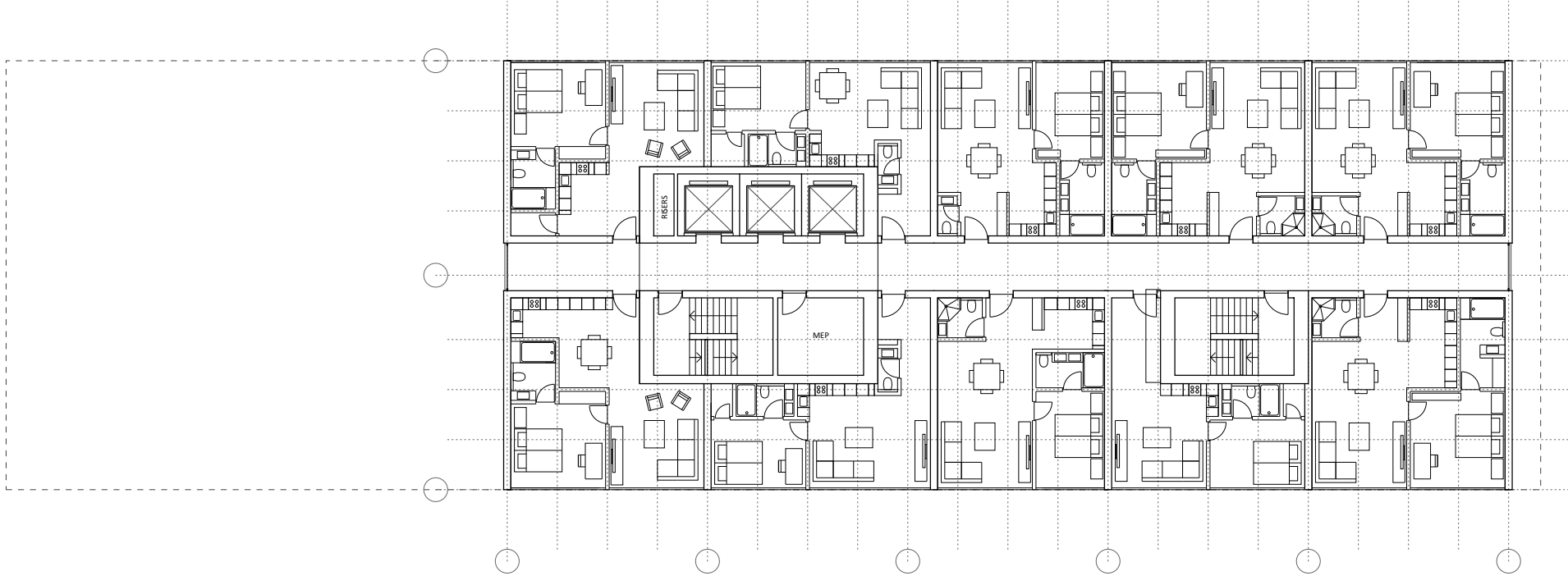


PEDESTRIAN PATH

RESIDENTIAL TOWER PROGRAM AND CIRCULATION

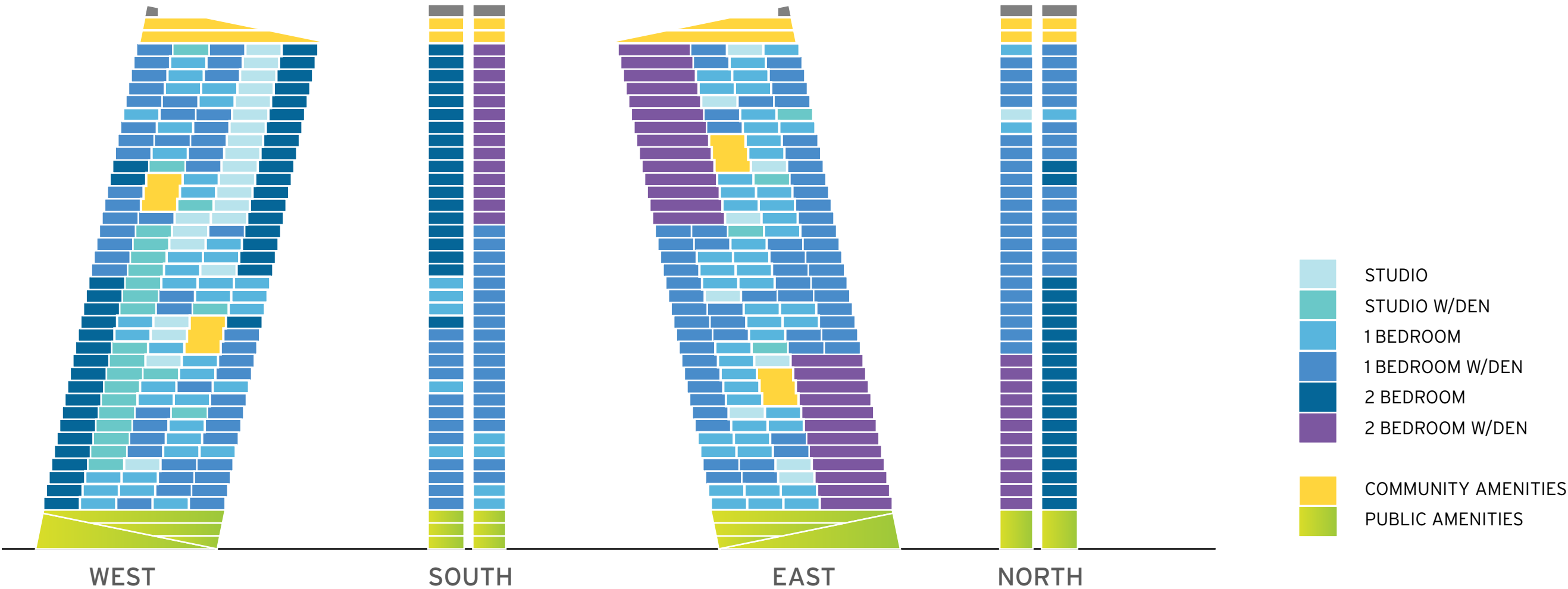


RESIDENTIAL TOWER TYPICAL PLANS AND UNIT MIX

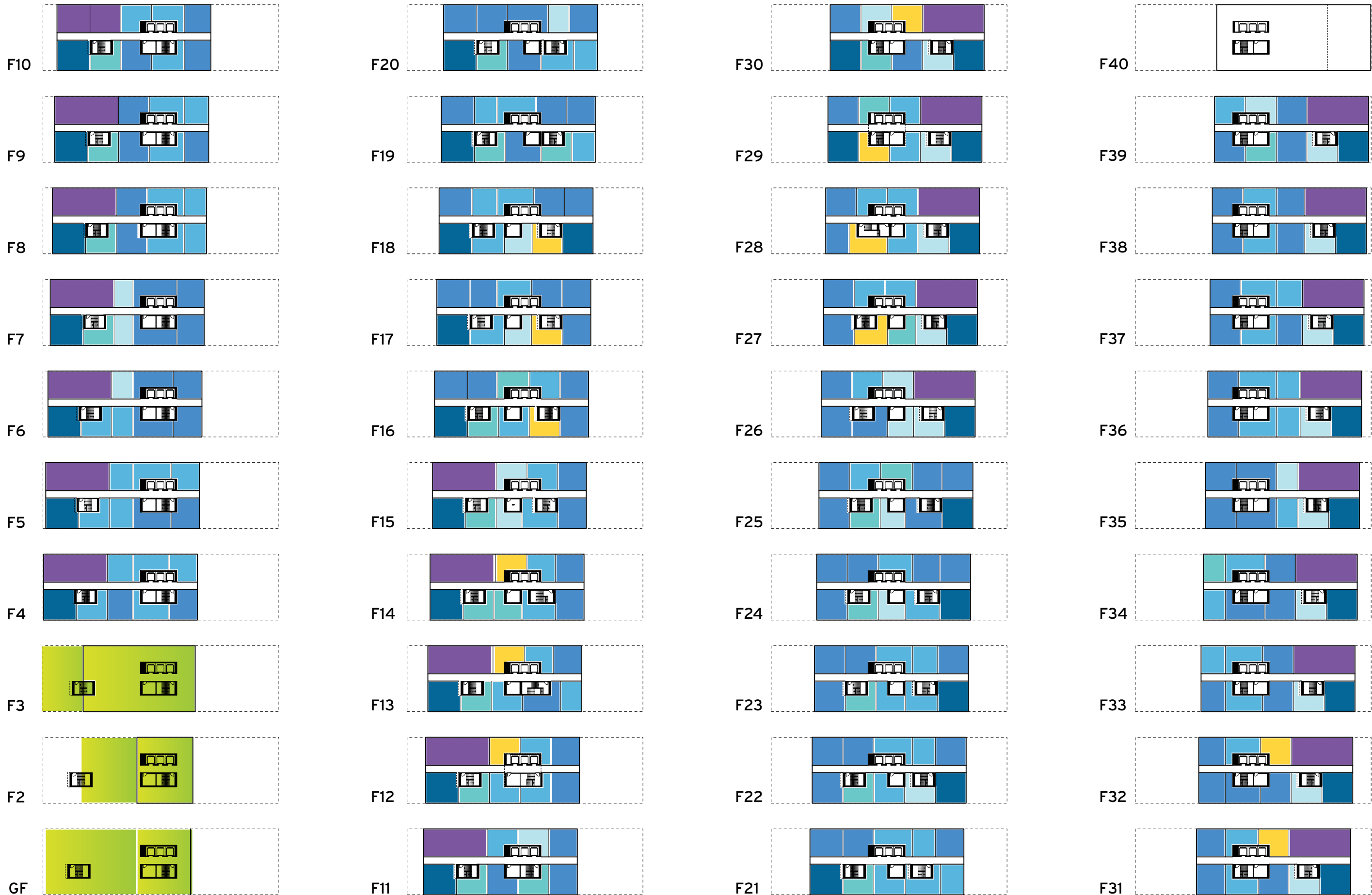


TOTAL GFA = 30,000m²

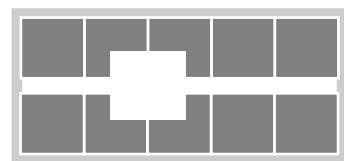
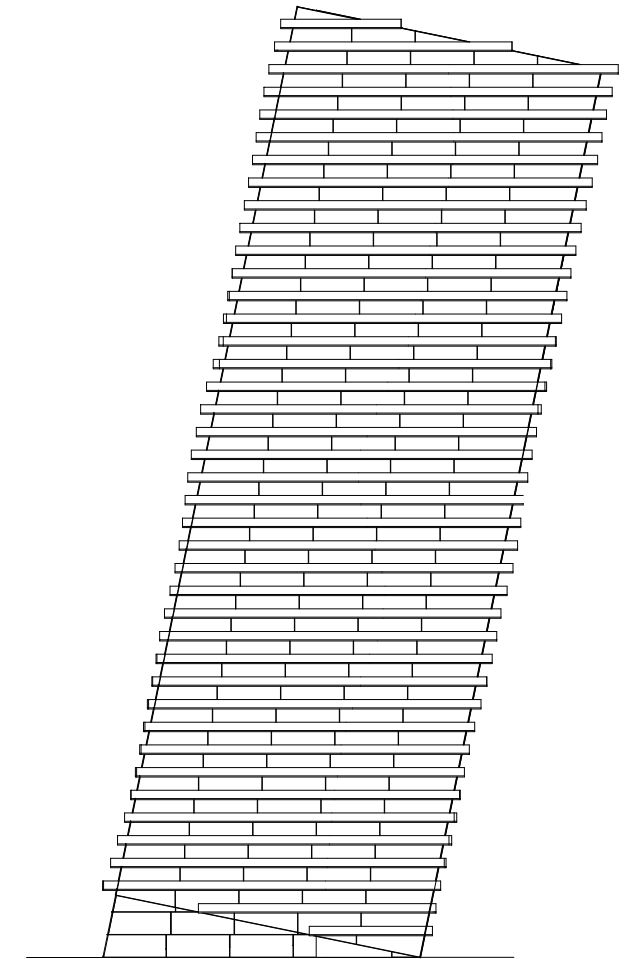
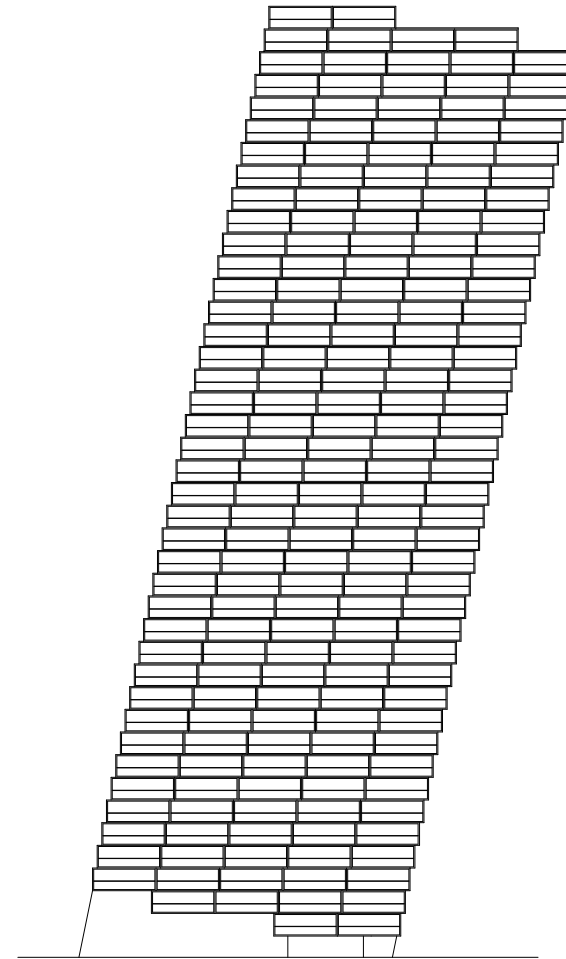
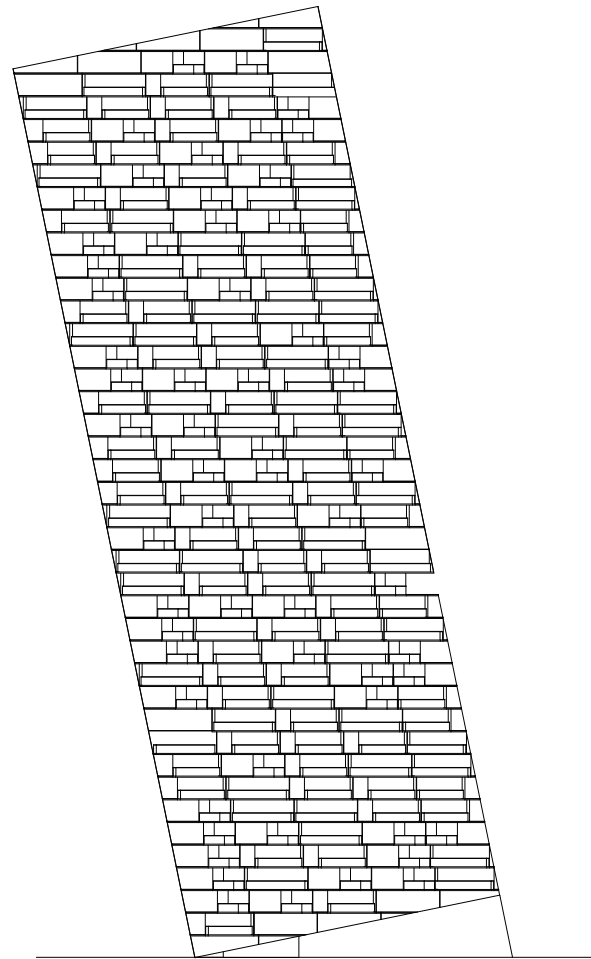
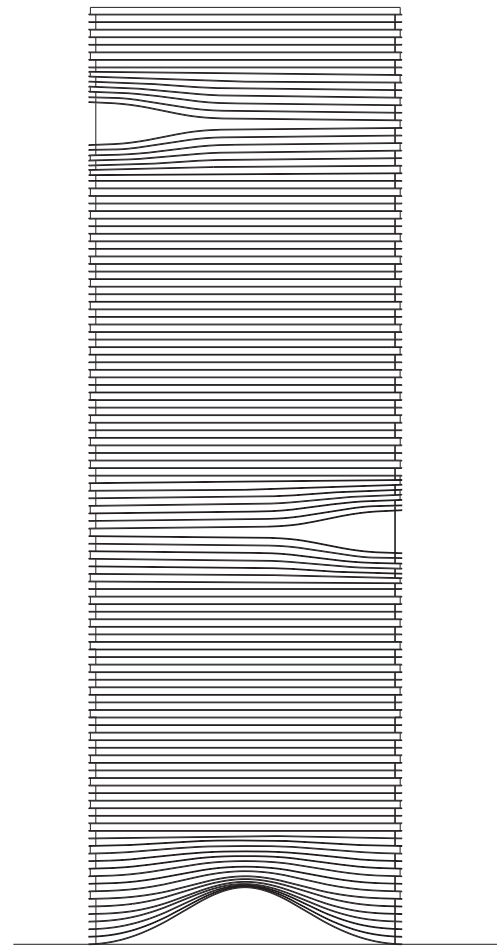
UNIT TYPE	QTY	AVG AREA
STUDIO	31	<45m ²
STUDIO W/DEN	27	45m ²
1 BEDROOM	87	50m ²
1 BEDROOM W/DEN	112	62m ²
2 BEDROOM	39	70m ²
2 BEDROOM W/DEN	26	>100m ²



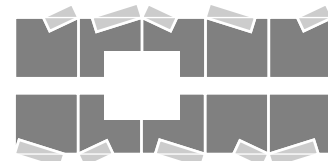
RESIDENTIAL TOWER TYPICAL PLANS AND UNIT MIX



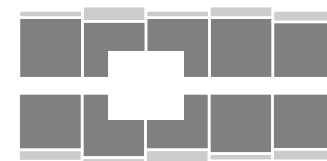
FACADE STRATEGIES PROVIDE VARIATION IN VIEWS & PRIVACY



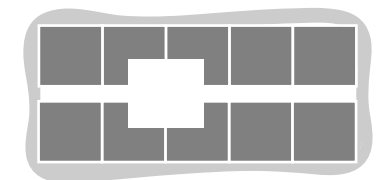
VOID BALCONY



TRIANGLE BALCONY

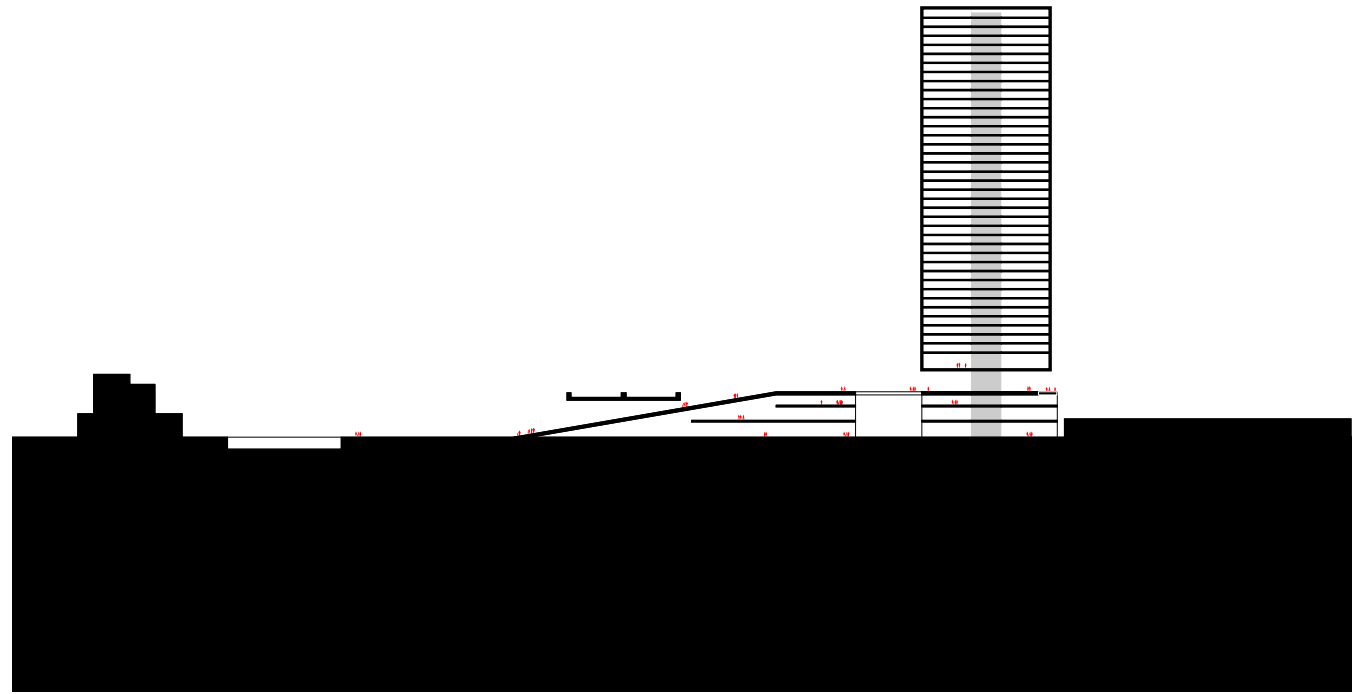
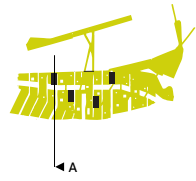


PIXEL BALCONY

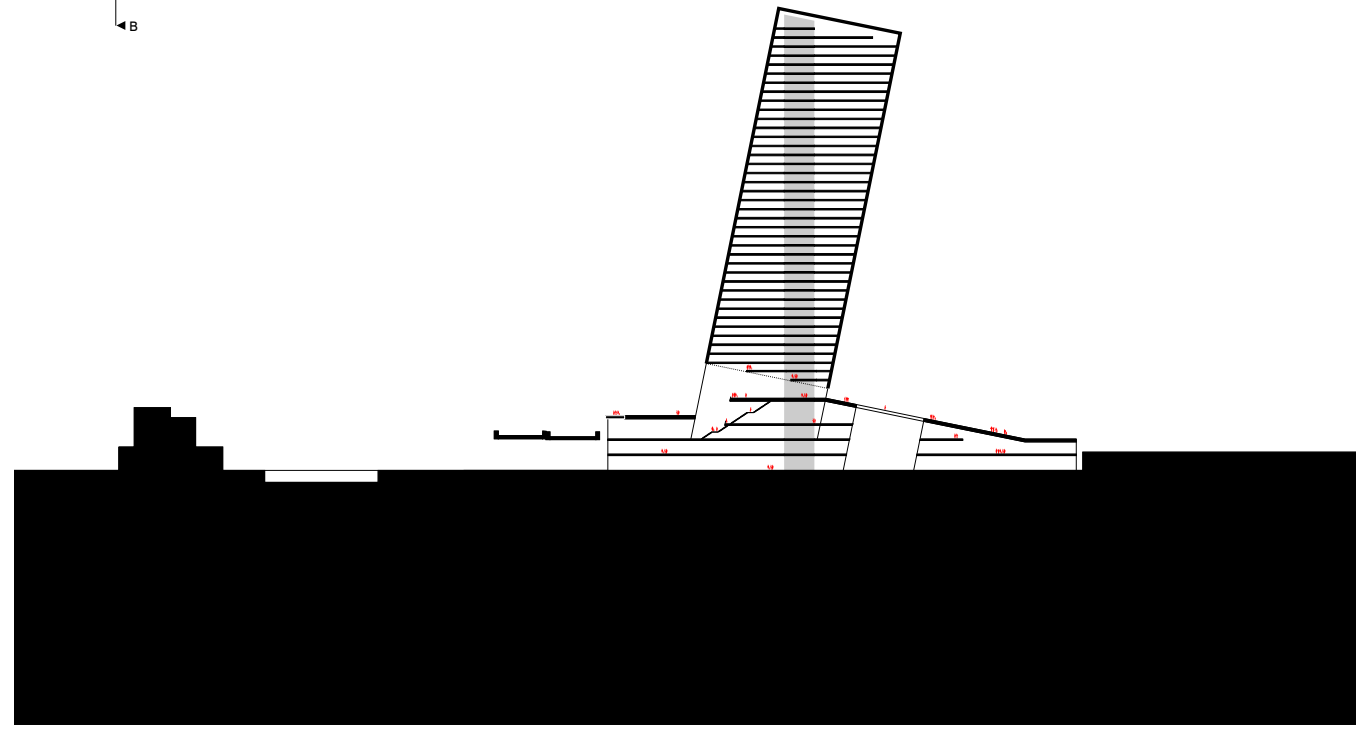
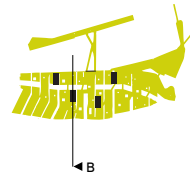


WAVE BALCONY

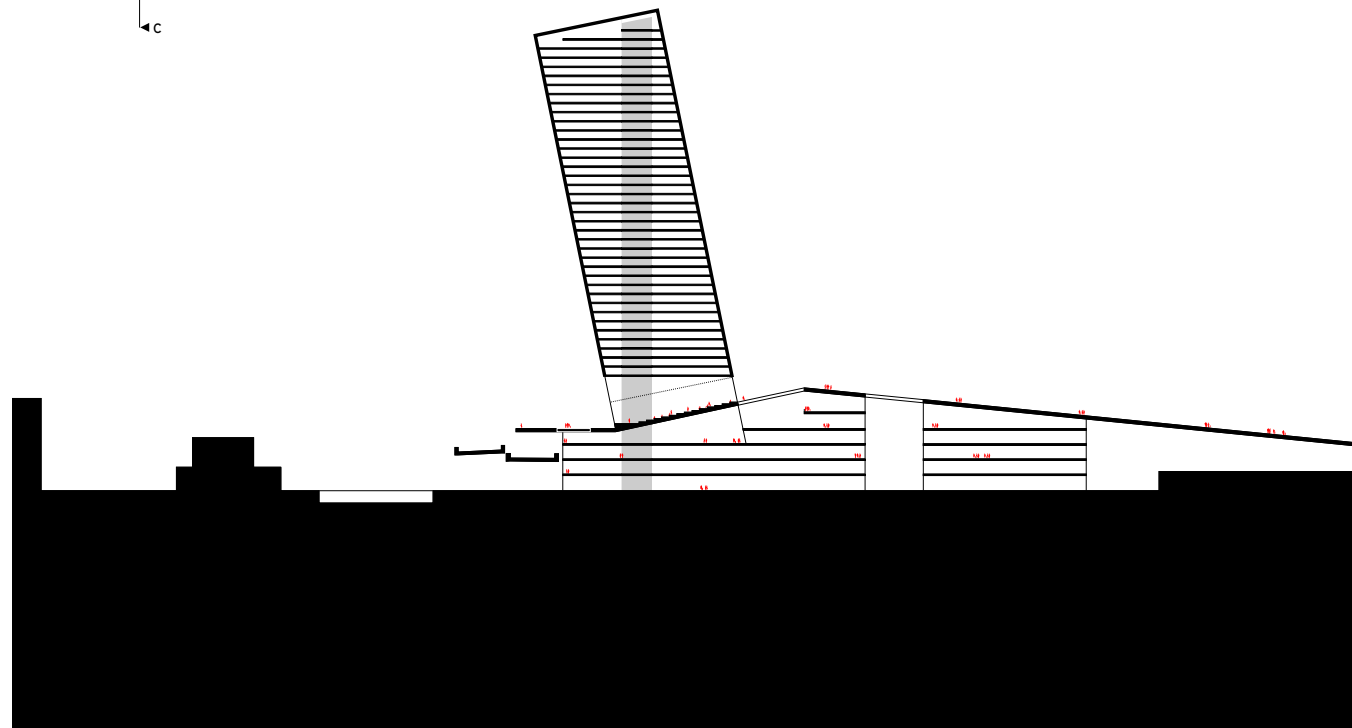
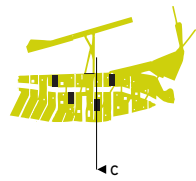
SITE SECTION A-A



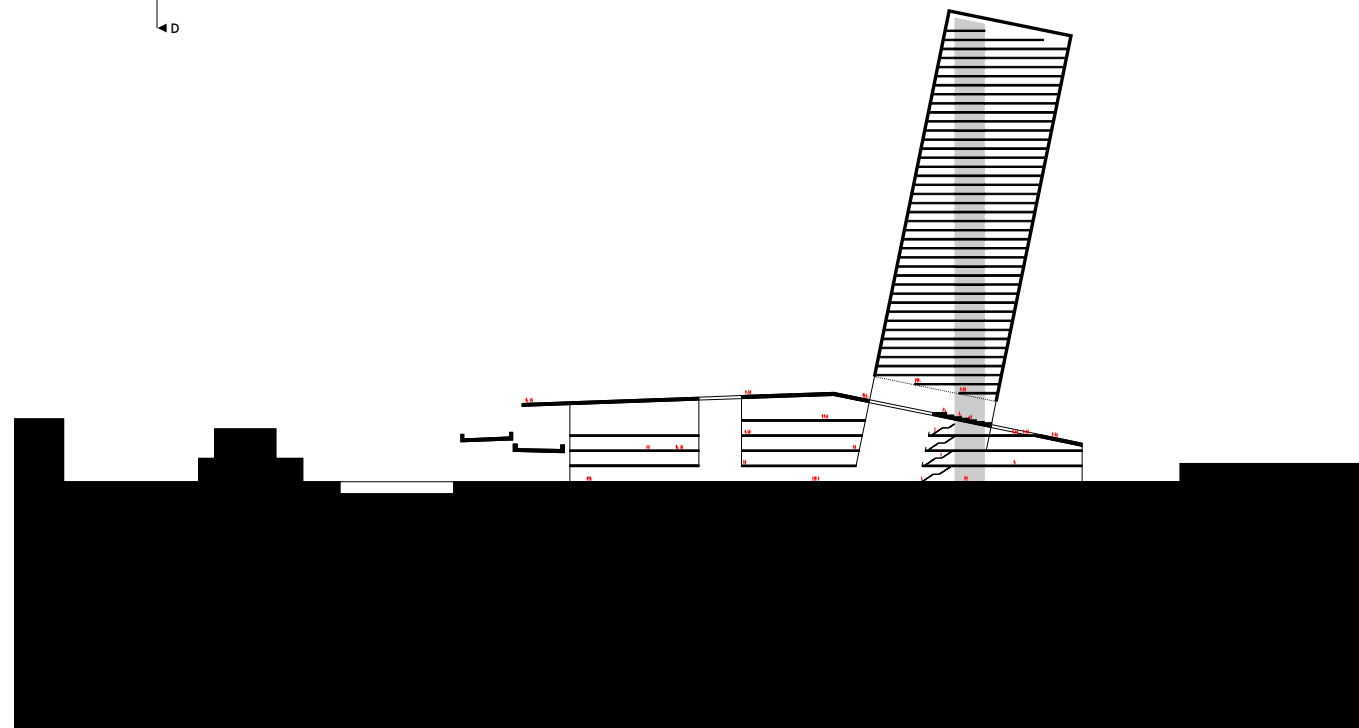
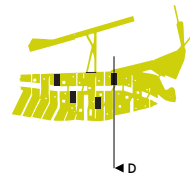
SITE SECTION B-B



SITE SECTION C-C

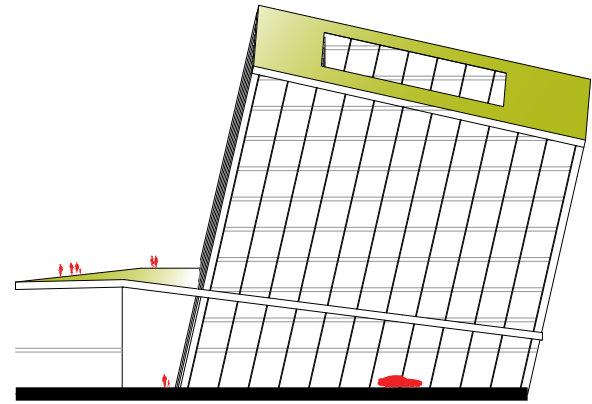


SITE SECTION D-D

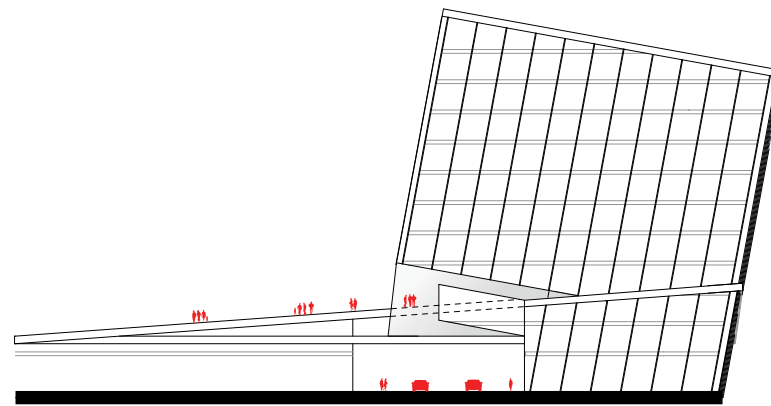


COMMERCIAL TOWER TYPICAL PLANS AND ELEVATIONS

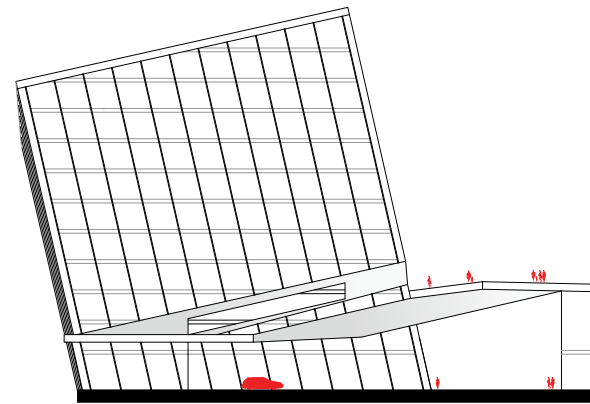
NORTH



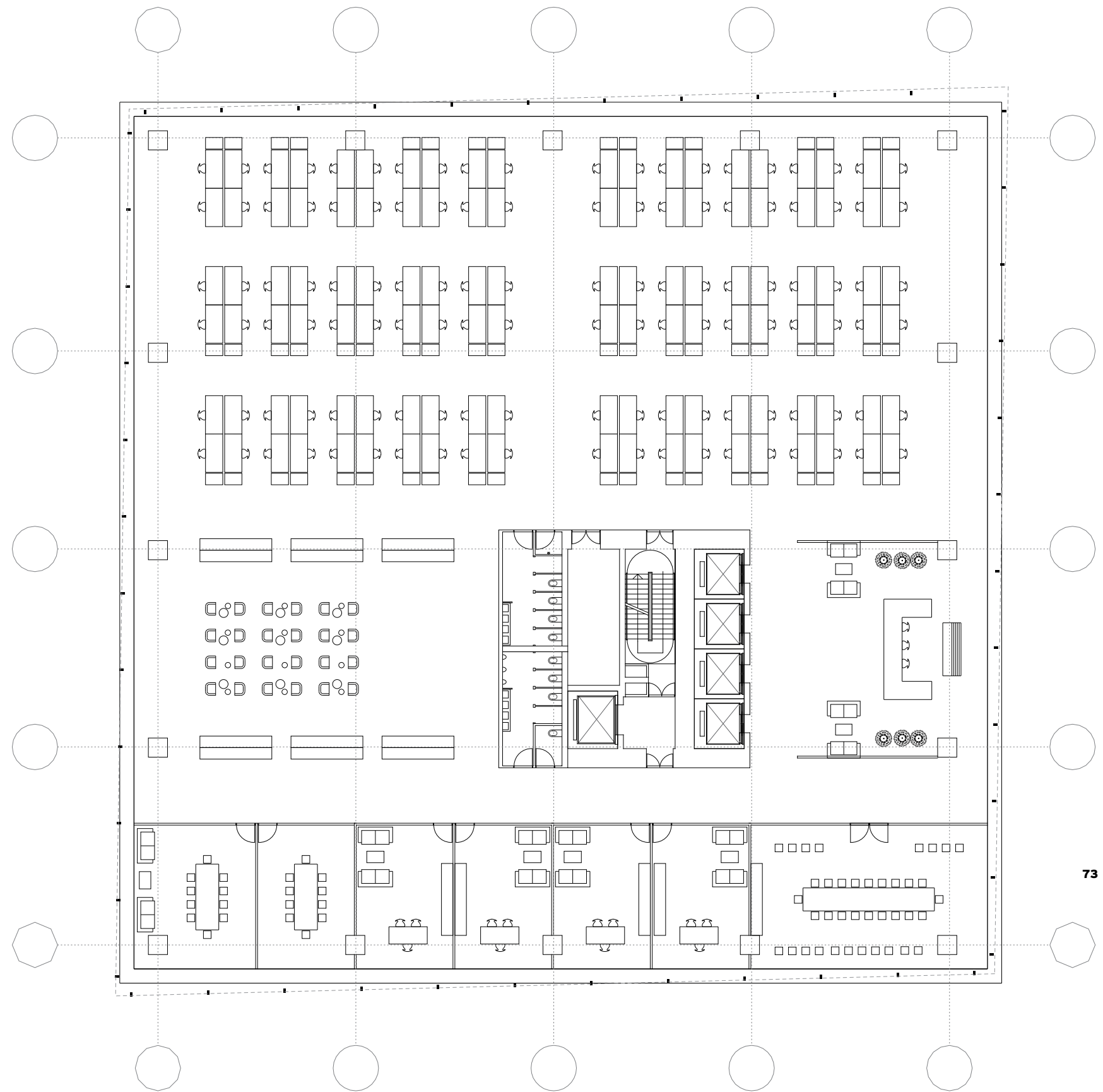
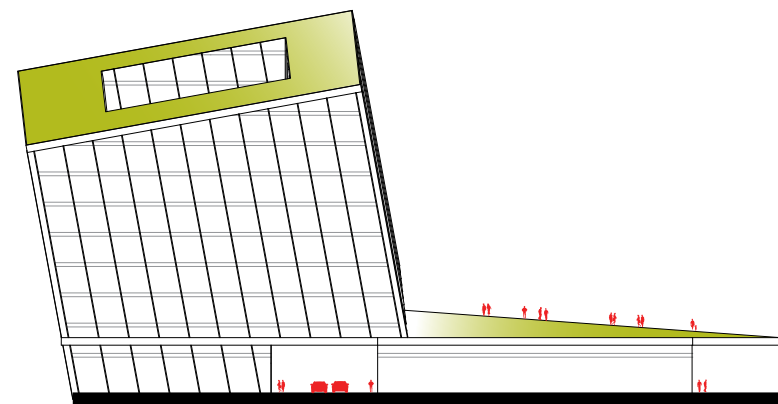
EAST



SOUTH



WEST



Sustainable design
provides solutions that
are more than green.
The first priority is the
human experience
– social sustainability.

Sustainable Innovations for THE GAR will promote environmental and urban stewardship through leveraging current and proposed infrastructure with the site's inherent energies, ecologies and communities.

The key to providing sustainable solutions for modern urban development is to **take an integrated systems approach where components of the design compliment each other and function more effectively as a whole.** Sustainability measures can be integrated into each of the major infrastructures by considering the natural elements, such as soil, water, and wind, and how they can be incorporated in both the summer and winter seasons.

A **direct heat exchange system** between the Gardiner and the Keating channel could reduce thermal stress and maintenance for the pavement and provide a recreational public water space. This would involve a closed-loop, in-slab hydronic system where embedded pipes beneath the surface help regulate the temperature of the pavement. The pipes would be filled with a water-glycol solution, and the improved heat capacity of the pavement would prevent freezing in the wintertime. In the summer the Gardiner would act as a solar collector to heat the water of a public swimming area within the Keating channel. **Selected zones of the Keating channel will be transformed into a solar heated public spa where minimized maintenance is provided by well balanced cleansing systems,** developed for large scale

outdoor applications. The channel could also have areas designated for canoeing and kayaking.

A passive lighting system using a highly reflective ceiling, skylights, and reflective facades on adjacent buildings could brighten the space beneath the Gardiner, creating a more welcoming atmosphere, and reducing energy needs. Lining the Gardiner with sound barriers and green walls will help absorb noise and air pollution. The sound barriers could be covered with Photovoltaics to generate electricity which could be fed back to the grid. New structures, vegetation and trees will provide windbreaks, reduce wind-chill, and create a more inviting environment for pedestrians and drivers.

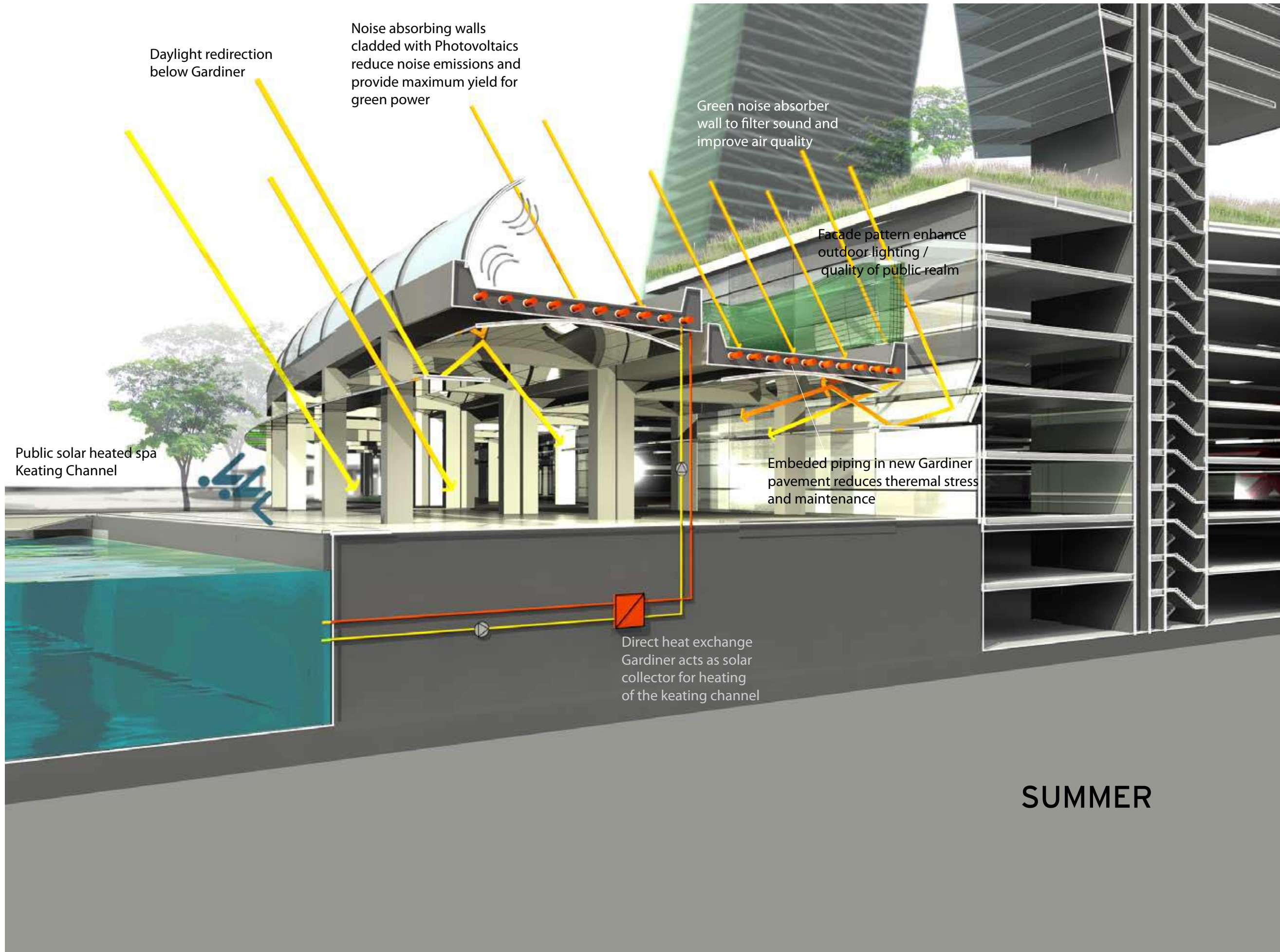
A sloping, vegetated Mountain will cover two levels of underground parking and provide roughly 74,000 square metres of green space for trees, meadows, and community gardens. Large skylights will allow beams of light to shine through the structure, illuminating the landscape beneath. An integrated irrigation system using rainwater collection and cisterns would keep the space green throughout the growing season. A community compost collection system could help build soil and fertilize community gardens. The Mountain will also contribute to urban heat island reduction by providing shade trees, green space, reflective surfaces and limiting the areas of exposed asphalt.

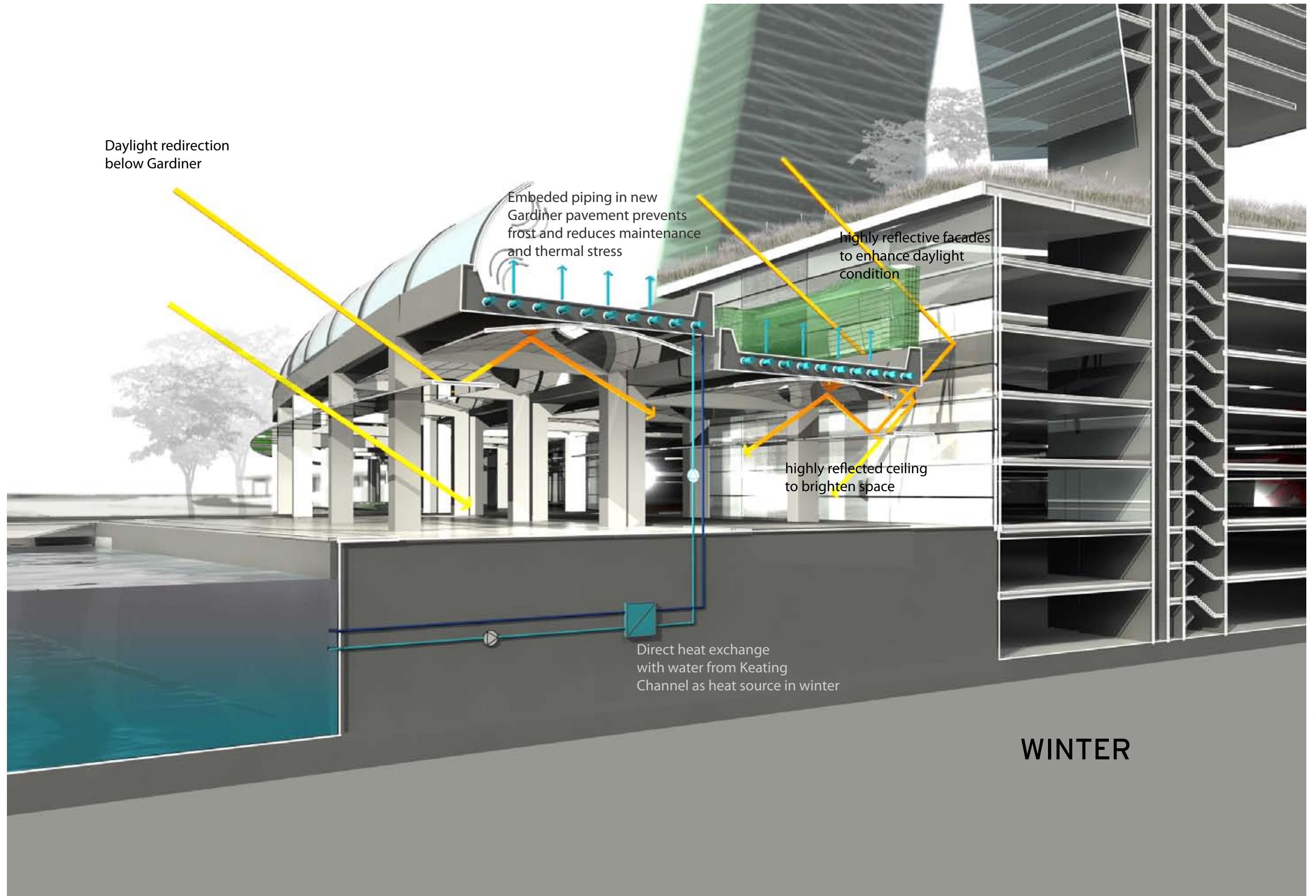
The UV treated stormwater from the stormwater management system outlined in

the West Don Lands Precinct Plan/Keating North Lands Plan could be pumped up to the Mountain surface for utilization as a water source for a water feature such as a stream and waterfall. The UV treatment system has to be pumped in its current configuration up to the Mountain surface allowing the added benefit of creating a water feature. The UV treated water would continue to discharge to the Keating Channel to facilitate an inflow at the east end of the channel.

The design offers **improved aesthetics, air quality, and living environment** for the area under and around the Gardiner expressway. Adjacent buildings will benefit from the improved visual quality, public transportation and traffic circulation. Local food production, reduced energy needs, and

small scale renewable energy will **contribute to Toronto's plan to become a greener city, a PARK city.**

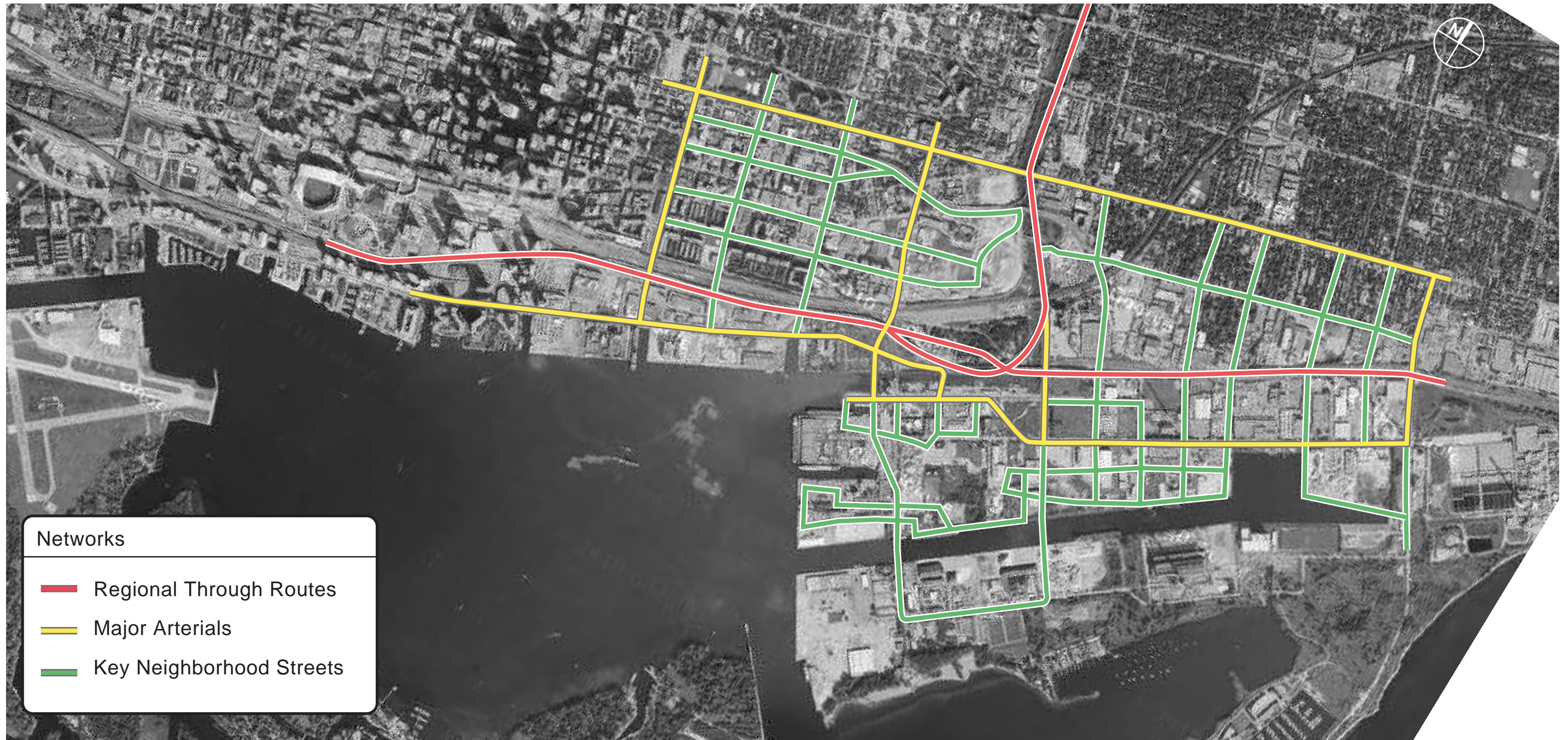


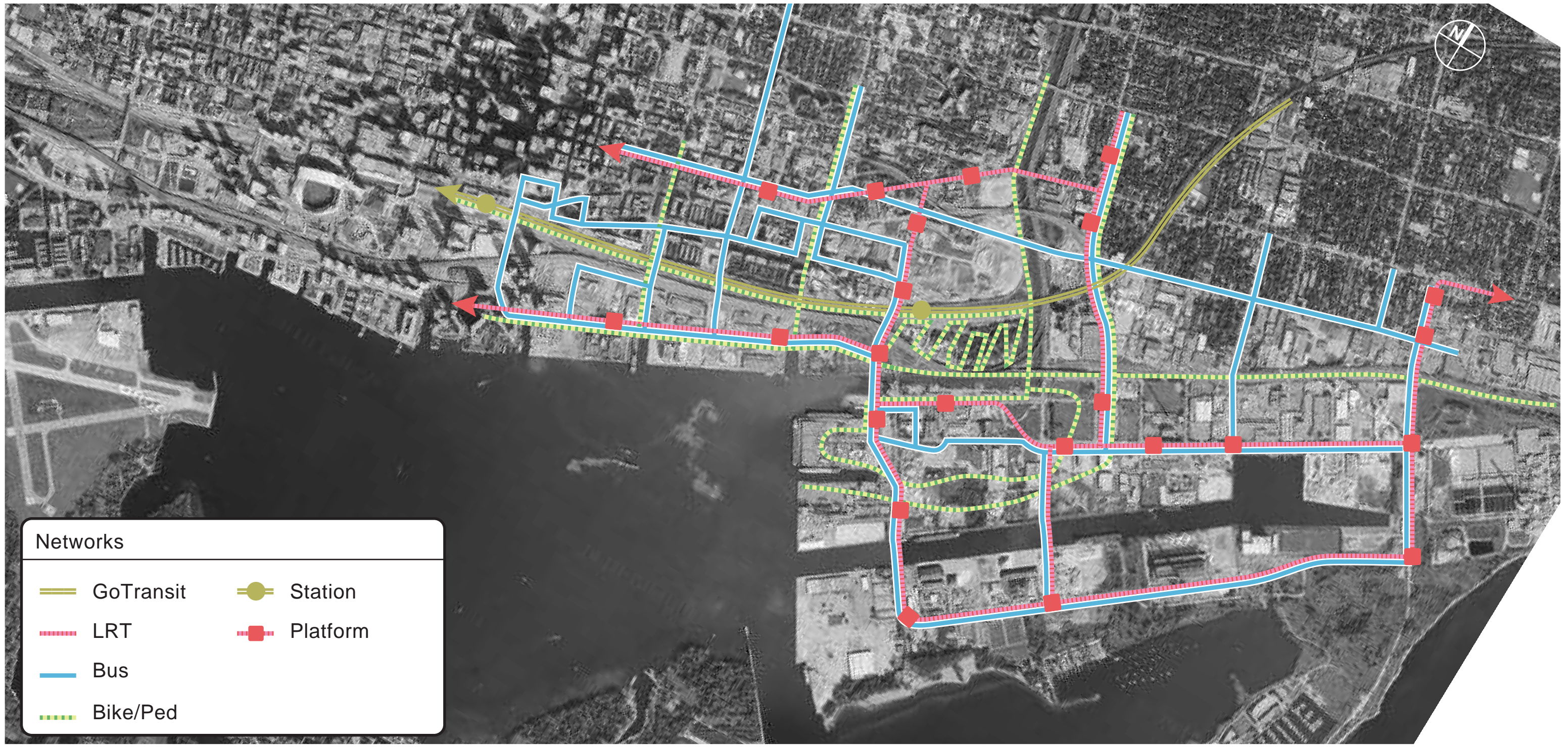


We foresee a solution that produces highly visible, affordable and useful change at early stages anticipating and incorporating transit and pedestrian routes that accelerate this process and decrease the reliance on single occupancy vehicles.

There is an extraordinary opportunity to forge a new integrated urban landscape that will tie these existing and emerging neighbourhoods together with big shaping moves and a rich palette of textures, lighting, furnishings, vegetation and improved connections through the railway and Gardiner corridors, the water's edge promenades, and an expansive park and trail network.







APPENDIX

THE GAR_PROJECT ECONOMICS

We do not see a singular solution but rather a set of affordable interventions. Not one gateway but multiple strategies that facilitate and encourage movement.

Great density and mix is anticipated along this corridor and the new neighbourhoods formed in this interstitial territory will not exist in isolation but in a very real sense will be an extension of bordering neighbourhoods. We do not see a singular solution but rather a set of affordable interventions. Multiple strategies that facilitate and encourage movement.

		Previously Planned and Budgeted for				Incremental Cost for Gardiner/Lakeshore Competition				Remarks
North / South Connections	Width (m)	Span (m)	Unit Cost (m2)	Cost	Width (m)	Span (m)	Unit Cost (m2)	Cost	Remarks	
1 Jarvis Street Underpass (under rail corridor)	26 (3)	41 (1)	26,300 (4)	28,035,800	26 (3)	6 (3)	13,150 (7)	2,051,400	3 m each side for gallery space is incremental cost. Unit cost is reduced to 1/2 as the marginal increase in span won't affect sub-structure fixed costs.	
2 Sherbourne Street Underpass (under rail corridor)	29 (3)	41 (1)	26,300 (4)	31,270,700	29 (3)	6 (1)	13,150 (7)	2,288,100		
3 Parliament Street Underpass (under rail corridor)	40 (3)	41 (1)	26,300 (4)	43,132,000	40 (3)	6 (1)	13,150 (7)	3,156,000		
4 Cherry Street Underpass (under rail corridor)	55 (3)	44 (2)	26,300 (4)	63,646,000	55 (3)	6 (3)	13,150 (7)	4,339,500		
5 Trinity Street Pedestrian Underpass (under rail corridor)	60	7	25,000 (4)	10,500,000	15	200	6,500 (5)	19,500,000		
6 Munition Street Pedestrian Bridge (over rail corridor)										Previously included in separate budget
Sub-Total				176,584,500				31,335,000		
Alignment of Lakeshore Blvd.		Width (m)	Span (m)	Cost per m2	Cost	Unit	Unit Cost	Cost		
Demolition of Lakeshore Blvd. - existing road removed						745 m	400 m (4)	298,000		
Roadwork, Sidewalks & Paths						745 m	10,000 m (4)	7,450,000		
Realign Lakeshore Blvd (Road Infrastructure) Allowance and Costs						No.	810,000 (4)	0		
Relocate Gardiner Columns (near Cherry Street)						No.	40,000 (4)	0		
New columns, assume						No.	25,000 (4)	250,000		
Impacted columns						Sum	1,600,000 (4)	1,600,000		
Protect surrounding areas						No.	810,000 (4)	3,240,000		
Relocate Gardiner Columns (west of Don River)						No.	40,000 (4)	80,000		
New columns, assume						No.	25,000 (4)	100,000		
Impacted columns						Sum	1,000,000 (4)	1,000,000		
Protect surrounding areas						No.	1,000,000	1,000,000		
Gardiner Columns Protection at widened Don River /Sediment Basin						No.	200,000	200,000		
North Bound - existing outside Don River						No.	1,600,000	1,600,000		
North Bound - existing inside Don River						No.	400,000	400,000		
South Bound - existing outside Don River						Item	1,500,000 (4)	1,500,000		
South Bound - existing inside Don River										
Intersection Improvements (pedestrian crossing) at Cherry St & Lakeshore Blvd.										
Mechanical										
Existing 2m filtered water tunnel 30m below grade									Assume \$200,000 cost for protection of each 6 x 6 column with sheet piles (depth of 6m)	
Services included in Municipal Infrastructure Costs below									Services included in Municipal Infrastructure Costs Below - assumed design will avoid any protective works to existing tunnel	
Electrical										
Lighting assumed 1 pole every 30m on both sides including bridge at sediment basin						No.	5,000	290,000		
Traffic Signals										
4 way intersection, traffic signals						No.	100,000	100,000		
T intersection, traffic signals						No.	100,000	200,000		
Sub-Total for Realignment		30 m	72 m	5,200 (4)	11,232,000					
Lakeshore Blvd. Bridge extension		7 m	72 m	5,700	2,872,800					
Harbour Lead Bridge - Average width of 7m										
Sub-Total					14,104,800			19,308,000		
Municipal Infrastructure Costs		Unit	Unit Cost	Cost	Unit	Unit Cost	Cost			
Site Servicing Costs (480 Site) (based on 2000m of ground level streets)										
Utility Tunnel		900.0 m	7,500	6,750,000						
Watermain Distribution System		2,000.0 m	1,500	3,000,000						
Sanitary Sewer Collection Pipework		2,000.0 m	1,000	2,000,000						
Sanitary Sewer SPS		1 LS	3,000,000	3,000,000						
Storm Sewer Collection System Pipework		2,000.0 m	750	1,500,000						
SWM - Ground Level Quality Control System		5 No.	200,000	1,000,000						
SWM - Storage		1 LS	1,500,000	1,500,000						
SWM - UV Treatment System		1 LS	1,000,000	1,000,000						
SWM - Treated Outlet Pipe to Mountain		500.0 m	300	150,000						
Lake Irrigation System		1 LS	1,000,000	1,000,000						
Pipework Crossings of Keating Channel		200.0 m	20,000	4,000,000						
Mountain Drainage System - Conveyance		4,500.0 m	500	2,250,000						
Mountain Drainage System - Control		1 LS	1,000,000	1,000,000						
Sub-Total								28,150,000		
Contingency Factor - 50%			50%	14,075,000						
Complexity Factor - 25%			25%	7,037,500						
Internal Road Network for "Mountain"		1 LS	10,000,000	10,000,000					Allowance for Road work for Mountain	
Sub-Total								59,262,500		
Sustainability Elements		Unit	Cost per Unit	Cost	Unit	Cost per Unit	Cost			
Noise Barriers along Gardiner		1,800 m2	1,000 m2	1,800,000					Assumed along entire length of Gardiner S of Mountain	
Hydronic In-Slab System / Heat Exchange with Pool		LS	1,800,000	1,800,000					Assumed \$2.4 sq. ft. for piping for 150,000 sq. ft. so \$300,000 for piping & \$1,500,000 for mech. shed etc.	
Concrete Topping for above Hydronic In-Slab System		8,100 m2	150 m2	1,215,000					Assumed 450m x 1.8m	
Green Walls along Gardiner		LS	400,000	400,000					Assumed 1.48m X 1.2' tall = 17,700 sq. ft at \$20 = \$354,000 plus plant material, say another \$50,000	
Reflective Panels		2,250 m	100 m2	225,000					Assumed 450m X 5m	
Public Pool for Keating Channel		LS	4,000,000	4,000,000					Very general estimate - Assumed 1 pool	
Sub-Total								9,440,000		
Incremental Structural Cost for Intensive Green Roof		Area	Cost per m2	Cost	Area	Cost per m2	Cost			
Incremental Cost for Concrete Roof Structure - Assume for 74,000m2 less voids, paths, vertical shafts, tower foot prints etc.		37,100.00	m2	400						
Total green roof area 37,100 m2*										
*Intensive plantings focused on columns will be 1m in depth therefore assume average depth of 600mm										
Sub-Total								14,840,000		
Landscaping Costs for Green Roof (Mountain)		Area	Cost per m2	Cost	Area	Cost per m2	Cost			
Surfacing Costs (Handball Courts, Ice Rink, Tennis, Basketball etc.)				853,800						
Hardworks (Circulation Paths, Wood Decking)				2,216,765						
Earthworks				1,220,275						
Softworks (Sod, Shrubs, Trees, Engineered Slope Planting)				5,881,750						
Irrigation				275,000						
Site Furnishings				320,000						
Lighting				600,000						
Public Art				500,000						
Sub-Total								11,867,590		
Treescape Enhancements		Span (m) (9)	Cost per LM	Cost	Span (m) (9)	Cost per LM	Cost			
Jarvis Street Enhancements (to Front Street)		433.0 LM	16,000	6,928,000						
Sherbourne Street Enhancements (to Front Street)		460.0 LM	16,000	7,360,000						
Parliament Street Enhancements (to Front Street)		434.0 LM	16,000	6,944,000						
Cherry Street Enhancements (to Front Street)		410.0 LM	16,000	6,560,000						
Carlaw Avenue Enhancements (to Eastern Ave)		287.0 LM	16,000	4,592,000						
Leslie Street Enhancements (to Eastern Ave)		390.0 LM	16,000	6,240,000						
Sub-Total								38,624,000		
Additional Landscaping along Rail Berm and Gardiner		Area	Cost per m2	Cost	Area	Cost per m2	Cost			
Landscaping south of rail berm East of Don River										
Don Valley Parkway to Leslie Street		57,295.3 m2	150 m2	8,594,294						
Landscaping south of rail berm West of Don River										
Cherry Street to Lower Jarvis		20,661.1 m2	150 m2	3,099,170						
Landscaping North of Rail Berm across from "Mountain" ?		12,000.0 m2	150 m2	1,800,000						
Landscaping Features South of Gardiner, North of Keating		1,500.0 m2	250 m2	375,000						
Landscaping SW corner of Mountain under Gardiner to Keating		13,500.0 m2	250 m2	3,375,000						
MSE Retaining Walls Between Lower Jarvis and Cherry Street (Sierra Slope)		5.5	1,150.0 (8)	4,427,500						
Sub-Total								21,670,963		
Total Cost for Public Realm Infrastructure				CAD\$ 190,689,300	Total Cost for Public Realm Infrastructure				CAD\$ 206,348,053	

Notes:

- (1) Based on 4 traffic lanes, 2 pedestrian S/Ws and 2-3m wide public gallery areas
- (2) Based on LDL span plus 2-3m wide public gallery areas
- (3) Based on info in Typologies for the Human Realm
- (4) Based on Unit Rates from Hanscomb Estimate for Lower Donlands dated June 2008
- (5) Based on Unit Rates from Hanscomb Estimate for Lower Donlands dated June 2008 + an allowance for structural loading for landscaping
- (6) Based on Rates from "Additional Structural Costs" Table in "Green Roofs in Metro Vancouver - Regional Issues and Business Case for Implementation" by Kerr Wood Leidal Associates.

Lakeshore / Gardiner Competition
Public Realm Infrastructure Estimate

Date:

June 25, 2010

North / South Connections		Previously Planned and Budgeted for				Incremental Cost for Gardiner/Lakeshore Competition				Remarks						
		Width (m)	Span (m)	Unit Cost (m2)	Cost	Width (m)	Span (m)	Unit Cost (m2)	Cost							
1	Jarvis Street Underpass (under rail corridor)	26	(3)	41	(1)	26,300	(4)	28,035,800	26	(3)	6	(1)	13,150	(7)	2,051,400	3 m each side for gallery space is incremental cost. Unit cost is reduced to 1/2 as the marginal increase in span won't affect sub-structure fixed costs. Previously included in separate budget
2	Sherbourne Street Underpass (under rail corridor)	29	(3)	41	(1)	26,300	(4)	31,270,700	29	(3)	6	(1)	13,150	(7)	2,288,100	
3	Parliament Street Underpass (under rail corridor)	40	(3)	41	(1)	26,300	(4)	43,132,000	40	(3)	6	(1)	13,150	(7)	3,156,000	
4	Cherry Street Underpass (under rail corridor)	55	(3)	44	(2)	26,300	(4)	63,646,000	55	(3)	6	(2)	13,150	(7)	4,339,500	
5	Trinity Street Pedestrian Underpass (under rail corridor)	60		7		25,000	(4)	10,500,000	15		200		6,500	(5)	19,500,000	
6	Munition Street Pedestrian Bridge (over rail corridor)															
Sub-Total								176,584,500							31,335,000	
Realignment of Lakeshore Blvd.																
7	Demolition of Lakeshore Blvd - existing road removed										745	m	400	m	(4)	298,000
8	Roadwork, Sidewalks & Paths										745	m	10,000	m	(4)	7,450,000
9	Realign Lakeshore Blvd (Road Infrastructure) Allowance and Costs										No.		810,000	(4)	0	
10	Relocate Gardiner Columns (near Cherry Street)										No.		40,000	(4)	0	
11	New columns, assume										No.		25,000	(4)	250,000	
12	Beams										Sum		1,600,000	(4)	1,600,000	
13	Impacted columns										No.		810,000	(4)	3,240,000	
14	Protect surrounding areas										No.		40,000	(4)	80,000	
15	Relocate Gardiner Columns (west of Don River)										No.		25,000	(4)	100,000	
16	New columns, assume										Sum		1,000,000	(4)	1,000,000	
17	Beams										No.		200,000		200,000	
18	Impacted columns										No.		1,600,000		1,600,000	
19	Protect surrounding areas										Item		1,500,000	(4)	1,500,000	
20	Gardiner Columns Protection at widened Don River / Sediment basin										No.		1,000,000		1,000,000	
21	North Bound - existing outside Don River										No.		200,000		200,000	
22	North Bound - existing inside Don River										No.		1,600,000		1,600,000	
23	South Bound - existing outside Don River										No.		400,000		400,000	
24	South Bound - existing inside Don River										Item		1,500,000	(4)	1,500,000	
25	Intersection Improvements (Pedestrian Crossing) at Cherry St & Lakeshore Blvd.															Assume \$200,000 cost for protection of each 6 x 6 column with sheet piles (depth of 6m)
26	Mechanical															Services included in Municipal Infrastructure Costs Below - assumed design will avoid any protective works to existing tunnel
27	Existing 2m filtered water tunnel 30m below grade															
28	Services included in Municipal Infrastructure Costs Below															
29	Electrical										No.		5,000		290,000	
30	Lighting assumed 1 pole every 30m on both sides including bridge at sediment basin															
31	Traffic Signals										No.		100,000		100,000	
32	Traffic Signals										No.		100,000		200,000	
33	4 way intersection, traffic signals															
34	"T" intersection, traffic signals															
35	Lakeshore Blvd. Bridge extension	30	m	72	m	5,200	(4)	11,232,000								Not part of incremental costs as bridge extensions are required for hydraulic capacity only
36	Harbour Lead Bridge - Average width of 7m	7	m	72	m	5,700		2,872,800								
Sub-Total								14,104,800								19,305,000
Municipal Infrastructure Costs																
37	Site Servicing Costs (480 Site) (based on 2000m of ground level streets)										Unit		Unit Cost		Cost	
38	Utility Tunnel										900.0	m	7,500		6,750,000	
39	Watermain Distribution System										2,000.0	m	1,500		3,000,000	
40	Sanitary Sewer Collection Pipework										2,000.0	m	1,000		2,000,000	
41	Sanitary Sewer SPS										LS		3,000,000		3,000,000	
42	Storm Sewer Collection System Pipework										2,000.0	m	750		1,500,000	
43	SWM - Ground Level Quality Control System										No.		200,000		1,000,000	
44	SWM - Storage										LS		1,500,000		1,500,000	
45	SWM - UV Treatment System										LS		1,000,000		1,000,000	
46	SWM - Treated Outlet Pipe to Mountain										500.0	m	300		150,000	
47	Lake Irrigation System										LS		1,000,000		1,000,000	
48	Pipework Crossings of Keating Channel										200.0	m	20,000		4,000,000	
49	Mountain Drainage System - Conveyance										4,500.0	m	500		2,250,000	
50	Mountain Drainage System - Control										LS		1,000,000		1,000,000	
51	Sub-Total														28,150,000	
52	Contingency Factor - 50%												50%		14,075,000	
53	Complexity Factor - 25%												25%		7,037,500	
54	Internal Road Network for "Mountain"										LS		10,000,000		10,000,000	Allowance for Road work for Mountain
Sub-Total								0							59,262,500	
Sustainability Elements																
55	Noise Barriers along Gardiner	1,800									Unit		Cost per Unit		Cost	
			m2								m2		1,000	m2	1,800,000	Assumed along entire length of Gardiner S of Mountain
56	Hydronic In-Slab System / Heat Exchange with Pool										LS		1,800,000		1,800,000	Assume \$2/sq. ft. for piping-150,000 sq. ft. so \$300,000 & \$1,500,000 for mech., shed etc.
57	Concrete Topping for above Hydronic In-Slab System	8,100									m2		150	m2	1,215,000	Assumed 1,480' X 12' tall = 17,760 sq. ft. at \$20 = \$354,000 + plant material, assume \$50,000
58	Green Walls along Gardiner										LS		400,000		400,000	Assumed 450m x 5m
59	Reflective Panels	2,250									m		100	m2	225,000	Very general estimate - Assumed 1 pool
60	Public Pool for Keating Channel										LS		4,000,000		4,000,000	
Sub-Total								0							9,440,000	

Gardiner Competition Strategic Approach

This scheme creates a proposal for the Toronto waterfront that keeps the Gardiner Expressway up and operational. Through strategic public infrastructure projects, this proposal will improve the economic development of the waterfront and Toronto overall in an incremental and cost-effective manner. Toronto has been experiencing a rejuvenated central city where proximity to the Financial District, cultural and retail amenities, and high regional accessibility have all provided a basis for new economic development. Just north of the waterfront, new neighborhoods have been established with highly desirable residential, office, and retail spaces. However, the physical and psychological barriers of the Gardiner and Lakeshore Boulevard in conjunction with deteriorated economic conditions have slowed the transition of development towards the waterfront.

Keeping the Gardiner Expressway up and operational allows for the continuous function of the region, while the relatively low-cost strategic improvements recommended by this scheme take hold. Development already slated for the waterfront, such as Parkside Development in East Bayfront and the Keating Channel Precinct in the Lower Don Lands, can take place without construction or vehicular constraints that demolition or tunneling would create.

The scheme calls for a series of improved north-south connections in addition to a signature economic development project, 480 Lakeshore. The first physical connections, streetscape and underpass renovations to key roadways, will provide significantly improved pedestrian and vehicular accessibility from the city core to the waterfront. Already in the planning stage, the proposal calls for more vibrant connections with gallery and retail space on both sides of the underpass corridors. These connections, beginning in the west towards the east, will provide more seamless connectivity from the central city to the Central Waterfront and East Bayfront. As economic development takes hold in those areas, simultaneous strategic construction projects to the east will set the next phase of waterfront development into motion.

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As streetscape and underpass improvements take place towards the west, major public construction projects to the east can begin. It should be noted that throughout this time, the Gardiner remains operational and will allow the central city and waterfront to continue to operate without significant traffic burden. Key public construction projects include the realignment of Lakeshore Boulevard through the 480 Lakeshore site, a pedestrian bridge that traverses the rail yard from Muniton Street onto the green roof of 480 Lakeshore, and an array of landscaping elements along the Gardiner.

With these improvements, 480 Lakeshore, with a new GO Station, can begin initial development. A green roof atop its podium structure will connect pedestrians between the new neighborhoods (River City, Athletes Village) in the West Don Lands and the waterfront, via 480 Lakeshore. The result is a seamless, highly accessible waterfront neighborhood for pedestrians, transit, and vehicles. Over time, neighborhoods in the West Don Lands, 480 Lakeshore, and the Lower Don Lands (Keating Channel Precinct) take shape all the while, the Gardiner remains up and operational. Incrementally, this strategy provides catalytic public realm infrastructure to support development already in the pipeline and stimulate new waterfront neighborhoods.

Toronto Waterfront Economic Development Projects

Several real estate developments are slated for the Toronto waterfront. Some projects remain in the planning stage, while others are under construction or occupied. The strategy presented by this scheme incrementally connects waterfront neighborhoods from the west to the east. New connections from the central city to the waterfront, will support these existing developments and improve the prospects for future neighborhoods in the planning stage.

East Bayfront

- Parkside Development, north of Queens Quay and east of the Sherbourne Park, will be the first private sector development in East Bayfront. The \$200 million project includes 540,000 total square feet with a 240,000 square foot podium and 300,000 square foot tower. Uses include residential, retail, office, and institutional.
- George Brown College is currently developing a new lakeside campus that will be a central home to George Brown's Centre for Health Sciences and a new 500-student residence hall.
- Corus Quay, recently completed directly on the water's edge, will be the new corporate headquarters for Corus entertainment. The eight-story, \$160 million project has 450,000 square feet of space for 1,200 employees. The project received public funding to be developed.

Lower Don Lands

- Keating Channel Precinct, in planning stages, will be a 25-block new neighborhood with the Keating Channel bisecting the area. The current draft plan envisions 4,000 residential units.

West Don Lands

- River City Development, a \$250 to \$350 million project that is currently in sales, will include five buildings with 900 for-sale residential units complemented by retail. The project is sited in the northeastern section of the West Don Lands.

- Toronto Community Housing is developing a three-building project with 243 affordable rental units geared for families and seniors. The project will include ground-floor retail and resident amenities.
- Athletes Village for the 2015 Pan American Games will accommodate 8,500 athletes and officials in a new neighborhood with sports facilities, retail space, and medical offices. The project is anticipated to turnover as a residential neighborhood with 2,100 housing units.

480 Lakeshore Residual Land Value Analysis Results

KPMB Architects, supported by Greenberg Consultants and AECOM, has developed a scheme to respond to the strategy of keeping the Gardiner Expressway up and operational. The vision includes a series of interventions that create rich, multimodal connections between the waterfront and the remainder of Toronto:

- Underpass Rehabilitations and Streetscape Enhancements for Jarvis, Sherbourne, Parliament, Cherry, and Trinity
- Munition Street Pedestrian Bridge
- Realignment of Lakeshore Boulevard

In addition to the public realm interventions, a key catalyst project in the proposed scheme is the mixed-use development of 480 Lakeshore located between the Don & Wilson Rail Yards to the north, the Gardiner Expressway to the south and west, and the Don River and Don Valley Parkway to the east. 480 Lakeshore will have a retail and office podium base along with five residential and office towers. Atop 480 Lakeshore is another key public realm infrastructure project, an expansive green roof public space that connects the Munition Street pedestrian bridge to 480 Lakeshore and points south on the waterfront.

AECOM Economics has prepared a preliminary residual land value analysis of the proposed 480 Lakeshore development. In the analysis, AECOM first estimates the residual land value of the 480 Lakeshore site and then compares that to cost of the entirety of the public realm projects.

480 Lakeshore Proposed Design

The proposed design for 480 Lakeshore calls for a large podium base structure (office, retail) punctuated by five towers (four residential, one commercial) on the 15-acre wedge of land. A pedestrian bridge on Munition Street will provide the connection to the Don West Lands to the north to

the site. Atop the podium will be a public green roof open space that links pedestrians throughout the site. Additionally, a proposed new GO Station at 480 Lakeshore will provide transit accessibility to the region.

Program

The program, outlined in Fig. 2, indicates a total gross floor area of 296,000 square meters or 3.2 million square feet. Of the total floor area, office and residential are the primary components, representing 40 percent each. The remaining is planned for retail. In addition, underground parking will require 103,000 square meters or 1.1 million square feet of space. When completed, the program will support approximately 4,500 office employees, 1,000 retail employees, 1,400 residential units, and 2,100 parking spaces on site.

Figure 2: 480 Lakeshore Proposed Program

Use	Gross Floor Area	
	Metric	Imperial
Office	117,116 sq m	1,260,626 sf
Retail	61,794 sq m	665,145 sf
Residential	117,412 sq m	1,263,812 sf
Grand Total SF	296,322 sq m	3,189,583 sf
Parking	103,000 sq m	1,108,683 sf
Total Acreage	6.1 hectares	15 acres

Source: KPMB Architects; AECOM

In order to make the project successful, the project requires a mix of residential, office, and retail uses. However, as the project will not developed for some time, the proportion remains flexible and can be rearranged to reflect market conditions at any given time period.

Residual Land Value Analysis Methodology

To compute the residual land value of 480 Lakeshore, AECOM took the following steps to evaluate the market value of the office, retail, residential, and parking uses:

Determine Market Value:

- Office and Retail - The analysis relies on the income-capitalization approach. The approach estimates the stabilized-year net operating income for each use and divides it by prevailing capitalization rates, yielding an estimate for total market value.
- Residential and Parking - The analysis estimates sale values of residential units and parking spaces.

Determine Construction Costs: AECOM developed order-of-magnitude vertical construction costs and site infrastructure cost estimates at 480 Lakeshore as well as the costs to develop the public realm infrastructure interventions.

- Estimate Residual Land Value: Subtracting construction costs from market value provides a residual land value estimate for the site.
- This analysis, referred to as a stabilized-year pro forma, is simplistic and does not consider the intricacies of absorption and multiple phases. The analysis does not consider the period to fully lease the office and retail spaces and the multiyear sales period for the residential and parking units. Additionally, tenant inducement packages for office and retail tenants in the first year of the lease and locked-in lease rates are not considered.

Assumptions

The analysis relies on assumptions regarding the real estate market in Toronto. AECOM spoke to market research analysts at Avison & Young, Devencore Newmark Knight Frank, and a local real estate developer to provide input on assumptions. AECOM provided order-of-magnitude construction costs for both 480 Lakeshore and the public realm projects.

Office:

- Average Lease Rate - \$30 per square foot, triple-net
- Vacancy Allowance - 5%
- Capitalization Rate - 7.25%
- Sales Cost - 4%

Retail:

- Average Lease Rate - \$32 per square foot, triple-net. This assumes the retail will consist of one-third big box retailers at \$15 per square foot and remaining two-thirds will consist of traditional retailers at \$35 per square foot.
- Vacancy Allowance - 8%
- Capitalization Rate - 7.5%
- Sales Cost - 4%

Residential / Parking

- Residential Sale Price - \$500 per square foot
- Parking Space Sale Price - \$22,000
- Sales Cost - 4%

Construction Costs

- Retail and Office - \$250 vertical hard costs per square foot, primarily located in the podium structure
- Residential - \$220 vertical hard costs per square foot located in towers
- Garage Parking - \$125 per square foot
- Soft Costs - 20% of hard costs
- Site Infrastructure Costs - \$59 million
- Public Realm Projects - Please see AECOM cost estimates.

Figure 3: 480 Lakeshore Residual Land Value Analysis

Program Description	Total Market Value	Vertical Hard Costs	Vertical Soft Costs	Residual Development Value
480 Lakeshore Program				
Residential	\$ 515,635,000	\$ (278,039,000)	\$ (55,608,000)	\$ 181,989,000
Retail	\$ 199,712,000	\$ (166,286,000)	\$ (33,257,000)	\$ 168,000
Office	\$ 428,161,000	\$ (315,157,000)	\$ (63,031,000)	\$ 49,973,000
Garage	\$ 45,030,000	\$ (138,585,000)	\$ (27,717,000)	\$ (121,273,000)
Total	\$ 1,188,537,000	\$ (898,067,000)	\$ (179,613,000)	\$ 110,857,000
		480 Lakeshore Site Work	\$ (59,263,000)	
		480 Lakeshore Residual Value	\$ 51,595,000	
		480 Lakeshore Acres	15	
		480 Lakeshore Residual Value per Acre	\$ 3,440,000	

Source: AECOM

¹ Figures may not add due to rounding.

The analysis results, shown in Figure 3, indicate 480 Lakeshore has a total market value of \$1.2 billion with vertical construction costs (hard and soft) of \$1.1 billion. After accounting for site infrastructure costs of \$59 million, the remaining residual land value is \$52 million, or \$3.4 million per acre.

Public Realm Funding Strategies

The land sale proceeds of \$52 million could be used to offset the necessary public realm infrastructure costs of \$148 million, leaving a \$97 million funding gap. In addition to immediate land sale proceeds, the City and Waterfront Toronto can expect significant property tax revenues from 480 Lakeshore. Newer, Class A office and retail properties in Toronto, conservatively pay approximately \$16 per square foot. Based on this, at full occupancy, the commercial uses of 480 Lakeshore can yield \$31 million in property tax revenues each year. Residential taxes at roughly 1.25 percent of the purchase price can yield \$6.7 million in property taxes each year. The annual property tax revenues of \$37 million, at full occupancy, can be considered a future revenue stream to offset the initial funding gap.

Appendix: Development Values by Use

Figure 5: Residential Units, For-Sale Development Value

Gross Square Footage	1,263,812
Gross to Net Factor	85%
Rentable Building Area (15% of Gross)	1,074,240
<u>Revenue from For-Sale Units</u>	
Average Price per Square Foot	\$ 500
Potential Cash Flow	\$ 537,120,205
Net Cash Flow	\$ 537,120,205
<u>Less Sales Costs at 4.00%</u>	\$ (21,484,808)
Market Value	\$ 515,635,397

Source: AECOM

Figure 6: Stabilized-Year Retail Income Statement & Development Value

Gross Square Feet	665,145
Loss Factor	10%
Rentable Building Area (90% of Gross)	598,631
<u>Retail Lease Revenue</u>	
Average Lease Rate (NNN PSF)	\$ 28.33
Potential Cash Flow	\$ 16,959,204
Less Vacancy Allowance (8% of Lease Revenue)	\$ (1,356,736)
<u>Less Operating Costs Incl. Tax, Insurance, Etc. (0% of Lease Revenue)</u>	\$ -
Net Cash Flow	\$ 15,602,468
Stabilized Year NOI	\$ 15,602,468
Capitalized Value at 7.50%	\$ 208,032,903
<u>Less Sales Costs at 4.00%</u>	\$ (8,321,316)
Market Value	\$ 199,711,587

Source: AECOM

Figure 4: Public Realm Funding

<u>Public Realm Costs</u>	
Underpasses (Jarvis, Sherbourne, Parliament, Cherry, Trinity)	\$ (11,835,000)
Munition Street Pedestrian Bridge over Rail	\$ (19,500,000)
Realignment of Lakeshore	\$ (19,308,000)
Sustainability Elements	\$ (10,640,000)
Podium Green Roof / Public Space	\$ (26,708,000)
Streetscape Enhancements	\$ (38,624,000)
<u>Additional Landscaping along Rail Berm & Gardiner</u>	<u>\$ (21,671,000)</u>
Total	\$ (148,286,000)
<u>480 Lakeshore</u>	
Residual Land Value	\$ 51,595,000
Funding Gap (480 Lakeshore Residual Value - Public Realm Costs)	\$ (96,691,000)

Source: AECOM

Figure 7: Stabilized-Year Office Income Statement & Development Value

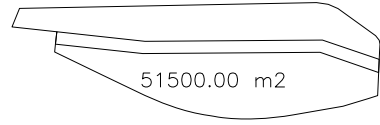
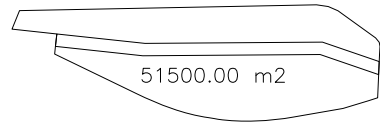
Gross Square Feet	1,260,626
Loss Factor	10%
Rentable Building Area (90% of Gross)	1,134,564
<u>Office Lease Revenue</u>	
Average Lease Rate (NNN PSF)	\$30
Potential Cash Flow	\$ 34,036,906
Less Vacancy Allowance (5% of Lease Revenue)	\$ (1,701,845)
<u>Less Operating Costs Incl. Tax, Insurance, Etc. (0% of Lease Revenue)</u>	<u>\$ -</u>
Net Cash Flow	\$ 32,335,060
Stabilized Year NOI	\$ 32,335,060
Capitalized Value at 7.25%	\$ 446,000,831
<u>Less Sales Costs at 4.00%</u>	<u>\$ (17,840,033)</u>
Market Value	\$ 428,160,798

Source: AECOM

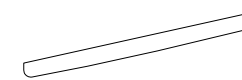
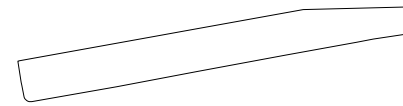
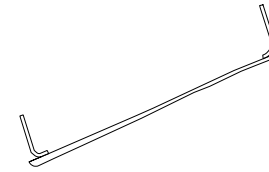
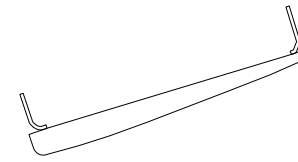
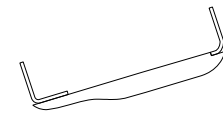
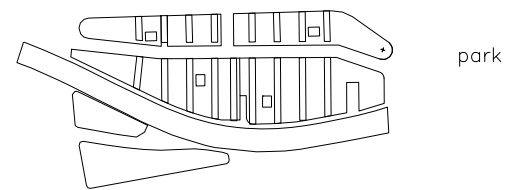
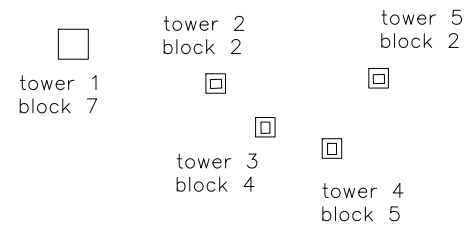
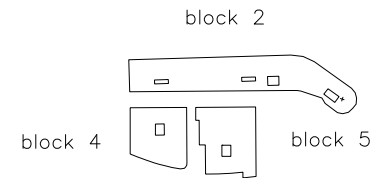
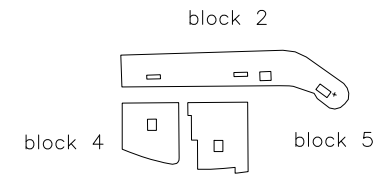
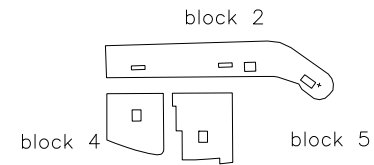
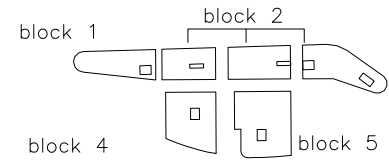
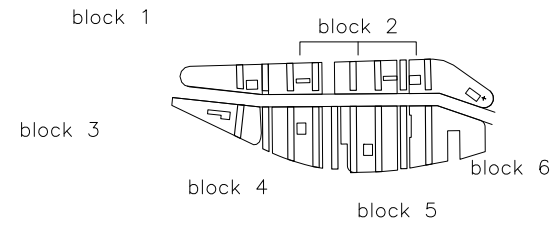
Figure 8: Parking Spaces, For-Sale Development Value

Gross Square Footage	1,108,683
Square Feet per Space	520
Total Spaces	2,132
<u>Revenue from Parking Space Sales</u>	
Revenue per Space	\$ 22,000
Potential Cash Flow	\$ 46,905,810
Net Cash Flow	\$ 46,905,810
<u>Less Sales Costs at 4.00%</u>	<u>\$ (1,876,232)</u>
Market Value	\$ 45,029,577

Source: AECOM



2 level parking
underg
103000.00 m2



Landscape – Jarvis St to Sherbourne St
6264.28 m2
Retail Units
927.02 m2

Landscape – Sherbourne St to Parliment St
11842.00 m2
Retail Units
711.65 m2

Landscape – Parliment St to Cherry St
2554.85 m2
Retail Units
822.36 m2

Landscape – Don Valley Parkway to Booth Ave
32556.81 m2

Landscape – Booth Ave to Logan Ave
2406.47 m2

Landscape – Logan Ave to Morse St
2061.68 m2

Landscape – Morse St to Carlaw Ave
1898.95 m2

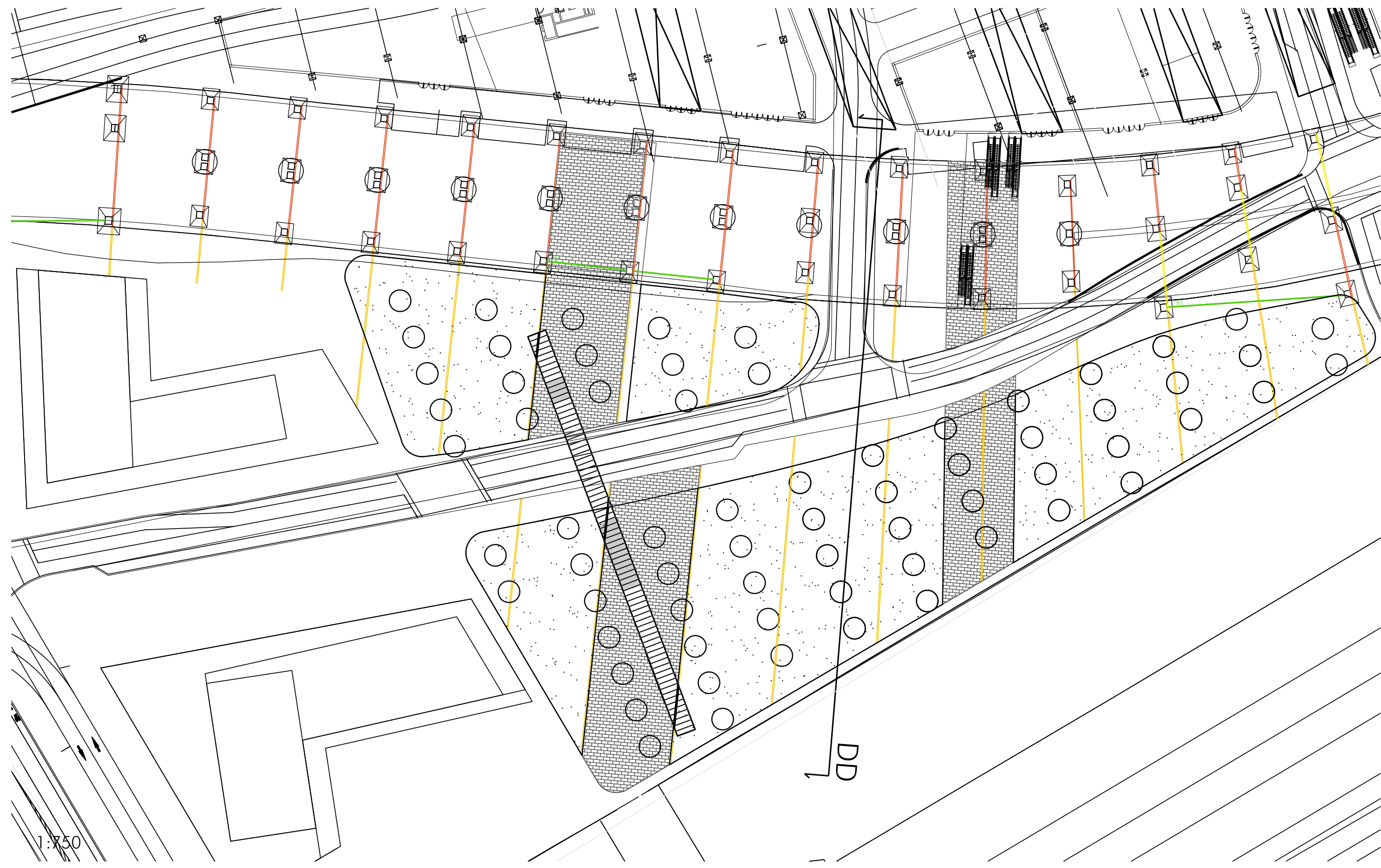
Landscape – Carlaw Ave to Winnifred Ave
7991.89 m2

Landscape – Winnifred Ave to Larchmount Ave
3042.30 m2

Landscape – Larchmount Ave to Rushbrooke Ave
3650.69 m2

Landscape – Rushbrooke Ave to Leslie St
3686.50 m2

site plan 1:750



1:750

DD



Gardiner Expressway + Lakeshore Redevelopment
Competition **Consultant List**

2010

KPMB, Architecture

Bruce Kuwabara
Marianne McKenna
Bo Yoon
Joseph Kan
Danielle Whitley
Ali Yarbakhti
Sharaneh Farahani
Lindsay Keir
Amanda Sebris

BIG, Architecture

Bjarke Ingels
Jakob Lange
Cat Huang
Stanley Lung
Brian Yang
Brian Muthaliff

ARUP, Transportation

Jonathan Wright
Trent Lethco

AECOM, Civil and Municipal Engineering

Marko Prgin
Mike Shallhorn
Anita Karvonen
Kate Coburn
Kumar Kintala

PHILLIPS FAREVAAG SMALLENBERG, Landscape

Kelty McKinnon
Greg Smallenberg

DAOUST LESTAGE, Urban Design

Renee Daoust
Rachel Stecker

GREENBERG CONSULTING, Urban Design

Ken Greenberg

TRANSSOLAR, Sustainability

Thomas Auer
Matthias Rudolph

WONDER Incorporated, Graphic Communication

Anita Matusevics



