

HEADWATER-LOT

SUMMARY

At the metropolitan scale, this project extends the city center around the Saint Charles river corridor, linking the suburban neighborhoods to the historic core. By concentrating around this river, the city may revitalize its civic and ecological fabrics, refocus its housing and transit development, and establish a coherent metropolitan identity. At the district scale, the proposed 'Headwater-lots' reclaim the space of redundant roads in order to create local connections to each river, improve water quality, and make space for collective activities.

HEADWATER-LOT

This project adapts surplus public rights-of-way (roads) for the creation of 'Headwater-lots'. By reclaiming the space of the street, the Headwater-lots create physical connections between existing neighborhoods and parks, newly densified areas, and the rivers. Each headwater-lot enables active mobility, infiltration, stormwater retention, civic uses, gardening, commerce, recreation, cultivation, etc. and permeates through the city. Segments along each headwater-lot vary in use and length, adapting to conditions along the urban transect. Each headwater-lot culminates in a metropolitan-scale program alongside the river, taking advantage of the enhanced urban continuity and improved water quality conditions.

IDENTITY

Quebec's historic core is the heart of the city, yet much of the urban territory is disengaged from the heritage narrative and the Saint Lawrence. Suburban neighborhoods are linked functionally to the center, via an extensive road network, but they do not count as places of civic importance. This project takes the Saint Charles River corridor as the focused extension of the city's heart. The proposed streetcar, mixed-use redevelopment, and riparian parks reinforce the urban-suburban corridor and consolidate growth.

CONNECTIVITY

Historically, river access was priority in Quebec's development. Every property owner held a strip of land, known as a long-lot, that interfaced with the river. Twentieth century urbanization, however, offered few interfaces with the water. Today, access to the rivers is dependent on automobile and the few entry points are inconspicuous. This project recreates the long-lot, retrofitting the city with a network of prominent spaces even within the context of close-packed private lots.

INFILTRATION STREETS










Quebec has more roads per capita than any city in Canada. Redundant roads fragment riparian corridors. The city's impervious character is a leading cause of poor water quality and river bank deterioration. While recent upgrades to the stormwater system offer relief, this project proposes reconsidering the city's roads as urban and ecological spaces that can contribute to, rather than undermine, water quality.

ECOLOGY

The length of each river is assigned an urban-ecological priority: conservation, regeneration, recreation, or concentration. The strategy proposes that the heads of Beauport and Montmorency, like Saint Charles today, are dedicated to hydrological and habitat conservation. Similarly, the agricultural lands of Cap Rouge are alleviated with a forest buffer along the river. Further downstream, areas currently having water quality issues are prioritized for riparian restoration and wetlands. Segments with higher population density are outfitted with abundant outdoor offerings, as well as prominent public spaces along the river. The mouths of each river are developed as urban places having close contact with the tidal zone.

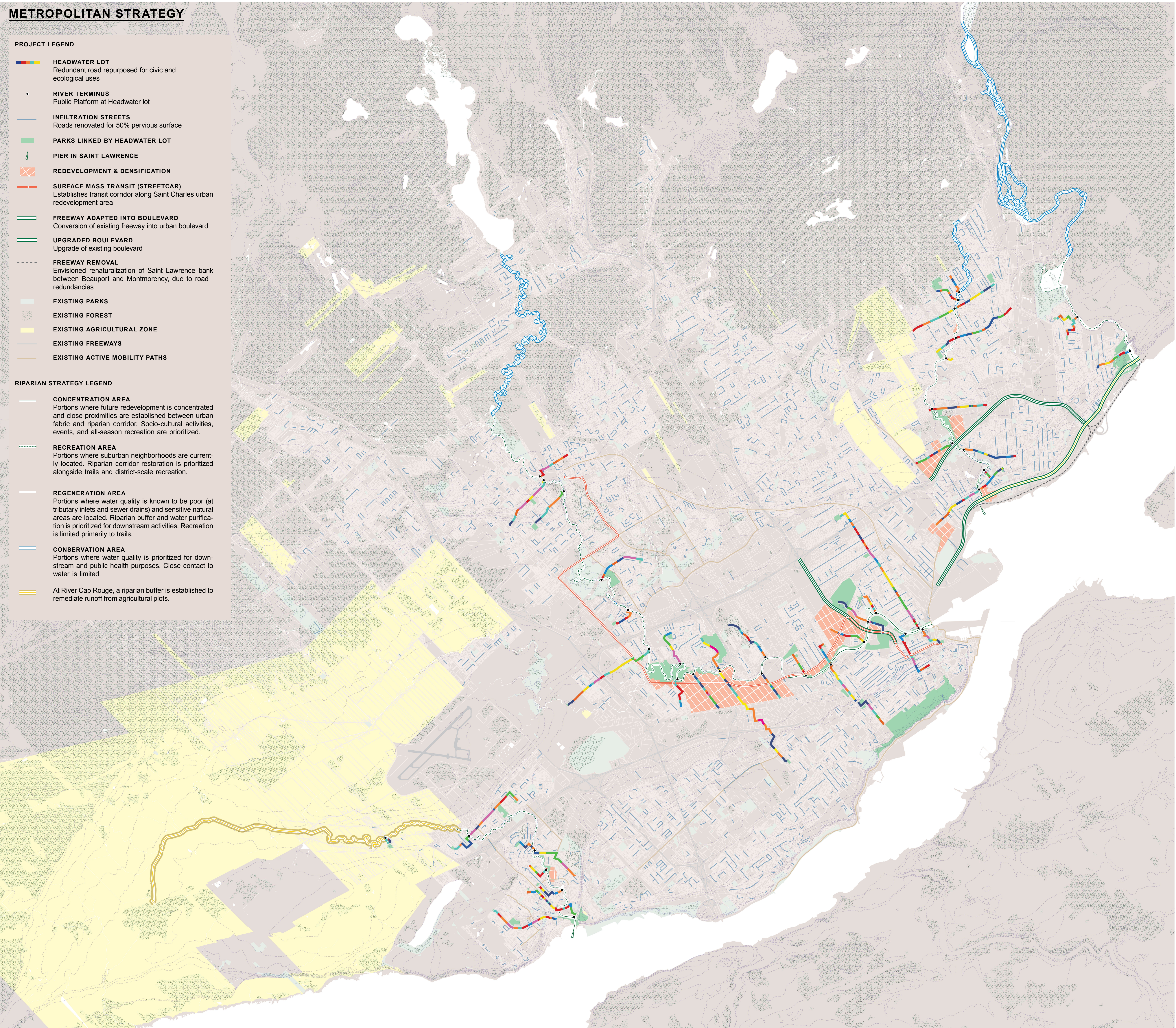
METROPOLITAN STRATEGY

PROJECT LEGEND

-  **HEADWATER LOT**
Redundant road repurposed for civic and ecological uses
-  **RIVER TERMINUS**
Public Platform at Headwater lot
-  **INFILTRATION STREETS**
Roads renovated for 50% pervious surface
-  **PARKS LINKED BY HEADWATER LOT**
-  **PIER IN SAINT LAWRENCE**
-  **REDEVELOPMENT & DENSIFICATION**
-  **SURFACE MASS TRANSIT (STREETCAR)**
Establishes transit corridor along Saint Charles urban redevelopment area
-  **FREEWAY ADAPTED INTO BOULEVARD**
Conversion of existing freeway into urban boulevard
-  **UPGRADED BOULEVARD**
Upgrade of existing boulevard
-  **FREEWAY REMOVAL**
Envisioned renaturalization of Saint Lawrence bank between Beauport and Montmorency, due to road redundancies
-  **EXISTING PARKS**
-  **EXISTING FOREST**
-  **EXISTING AGRICULTURAL ZONE**
-  **EXISTING FREEWAYS**
-  **EXISTING ACTIVE MOBILITY PATHS**

RIPIARIAN STRATEGY LEGEND

-  **CONCENTRATION AREA**
Portions where future redevelopment is concentrated and close proximities are established between urban fabric and riparian corridor. Socio-cultural activities, events, and all-season recreation are prioritized.
-  **RECREATION AREA**
Portions where suburban neighborhoods are currently located. Riparian corridor restoration is prioritized alongside trails and district-scale recreation.
-  **REGENERATION AREA**
Portions where water quality is known to be poor (at tributary inlets and sewer drains) and sensitive natural areas are located. Riparian buffer and water purification is prioritized for downstream activities. Recreation is limited primarily to trails.
-  **CONSERVATION AREA**
Portions where water quality is prioritized for downstream and public health purposes. Close contact to water is limited.
-  **At River Cap Rouge, a riparian buffer is established to remediate runoff from agricultural plots.**



The long-lot is Quebec's historic property structure. It was based on providing river access to all property owners.

OPPORTUNITIES: ACCESS

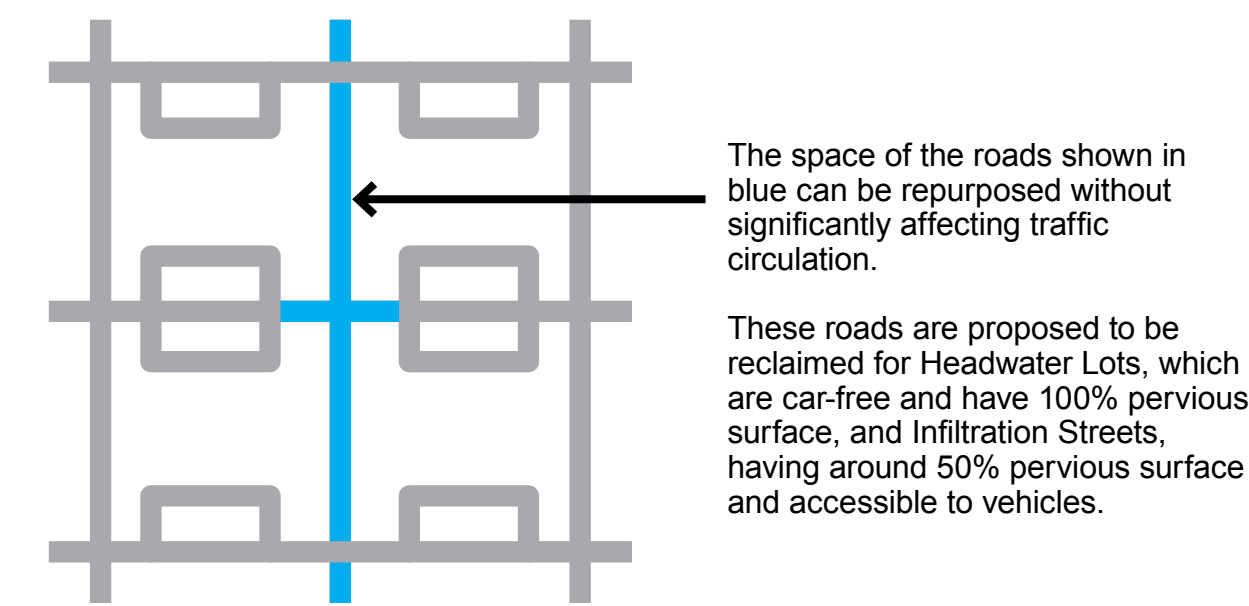


Planning of certain neighborhoods provided for public corridors that run between private properties. This allocation, although small, is crucial for river access.

Thin property allocation for river access at Saint Charles river.

This dock, located at Montmorency River, demonstrates the inspiring spaces that can be created along the water, using floating platforms, piers, low-water crossing, etc.

OPPORTUNITIES: REPURPOSE ROADS FOR SOCIO-CULTURAL USES AND ECOLOGICAL URGENCIES



ROAD NETWORK DIAGRAM

The space of the roads shown in blue can be repurposed without significantly affecting traffic circulation.

These roads are proposed to be reclaimed for Headwater Lots, which are car-free and have 100% pervious surface, and Infiltration Streets, having around 50% pervious surface and accessible to vehicles.



Road redundancies, especially in areas of low population density, are an opportunity to repurpose the rights-of-way. Autoroute Dufferin-Montmorency shown above.

RIPIARIAN CORRIDORS STRATEGY



The activities and development future for each river are defined as Conservation, Regeneration, Recreation, and Concentration. See detailed description in Legend on Metropolitan Strategy Map.