3lys1um: Reconnecting Suburbia for a Sustainable Future

By Francisco Labastida

Executive Summary for the CSLA Student Award of Excellence 2025

Suburbia, as we know it, was built to separate us from nature. This project questions its origins and purpose, asking how we can reconcile suburban development with the natural world in the face of climate change. Growing up in a region where nature was integral to life, I see Canada's biodiversity as a unique opportunity to redefine our relationship with the land. Historically, suburban landscapes prioritized utility over ecological harmony, and today, integrating green infrastructure into these environments is a necessity for thriving communities.

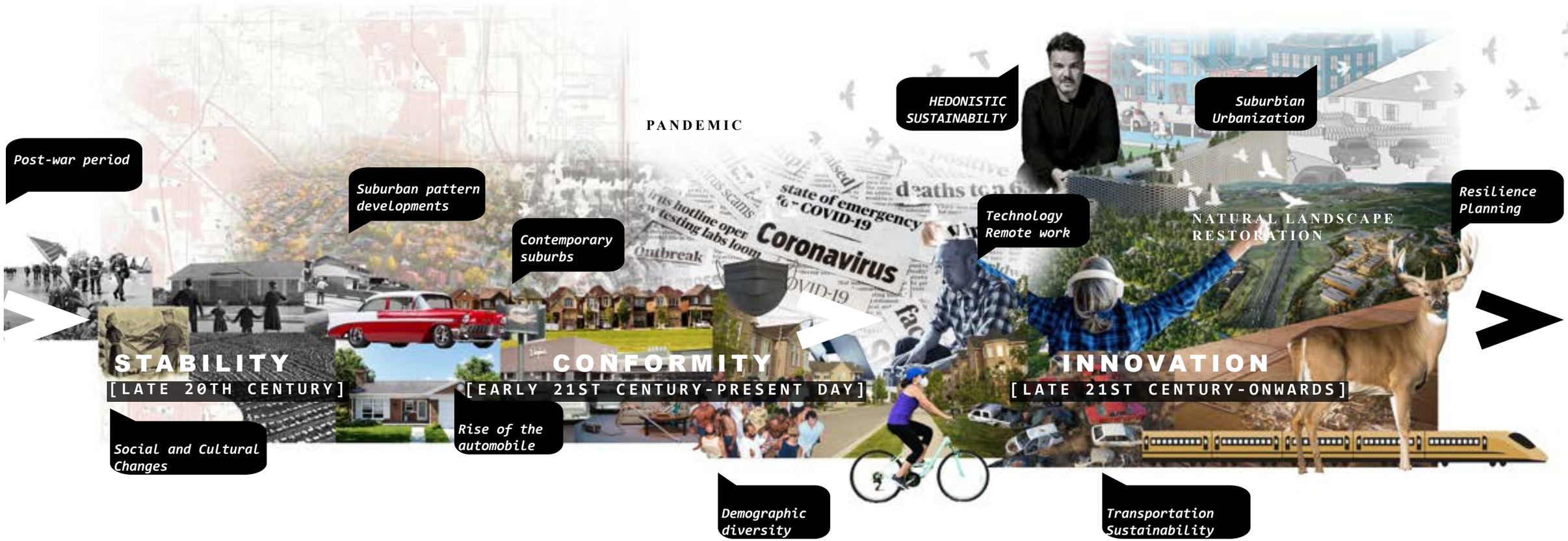
Suburbia has long been criticized for promoting conformity and lacking diversity—both in terms of demographics and biodiversity. Its design isolates individuals, fostering a sense of detachment not only from each other but also from the natural environment. This project challenges these conventions by proposing a vision of suburbia that is inclusive, dynamic, and ecologically integrated.

This project addresses the fragmentation of suburban land by focusing on the restoration and maintenance of ecosystems to support biodiversity. It seeks to enhance the quality of life for both residents and wildlife through thoughtful ecological design. The project also emphasizes the creation of small green corridors within neighborhoods, enabling a more dynamic coexistence of human and natural systems. Revitalizing underutilized laneways forms another vital component, aiming to attract diverse demographics while fostering a sense of community and encouraging suburban densification.

A transformative element of this project is the reimagining of the Confederation Park Golf Course as a wetland sanctuary. This vision reflects a future where traditional golfing may no longer hold the same cultural relevance. By repurposing the land into a space that promotes sustainability, inclusivity, and community-building, the project not only restores ecological balance but also cultivates a shared sense of purpose and connection among residents.

The narrative begins at Nose Hill Park, traverses the suburban neighborhoods of Charleswood, Collingwood and Triwood and culminates at the Confederation Park Golf Course. This journey underscores the opportunities to reconnect with the land, demonstrating how suburban environments can evolve to integrate biodiversity, foster community engagement, and adapt to the pressing challenges of climate change.

This innovative vision challenges the status quo of suburban development, transforming it into a space of ecological and social harmony. By weaving together themes of biodiversity, sustainability, and urban densification, *3lys1um* tells a compelling story of reconnection, offering a roadmap for a resilient future where communities and nature coexist.



Speculative Timeline

Suburbia, shaped by a history of separation, was designed to prioritize automobility, distancing people from nature and isolating both communities and ecosystems. As values shift toward integration—fueled by changes in lifestyle, remote work, and increased emphasis on walking, cycling, and public transit—this speculative timeline reexamines the past. It envisions a future where suburban spaces transform into dynamic, heterogeneous ecosystems that support biodiversity, connect communities, and harmonize human life with the natural world.

CONNECTING LAND

WEAVING STREETS

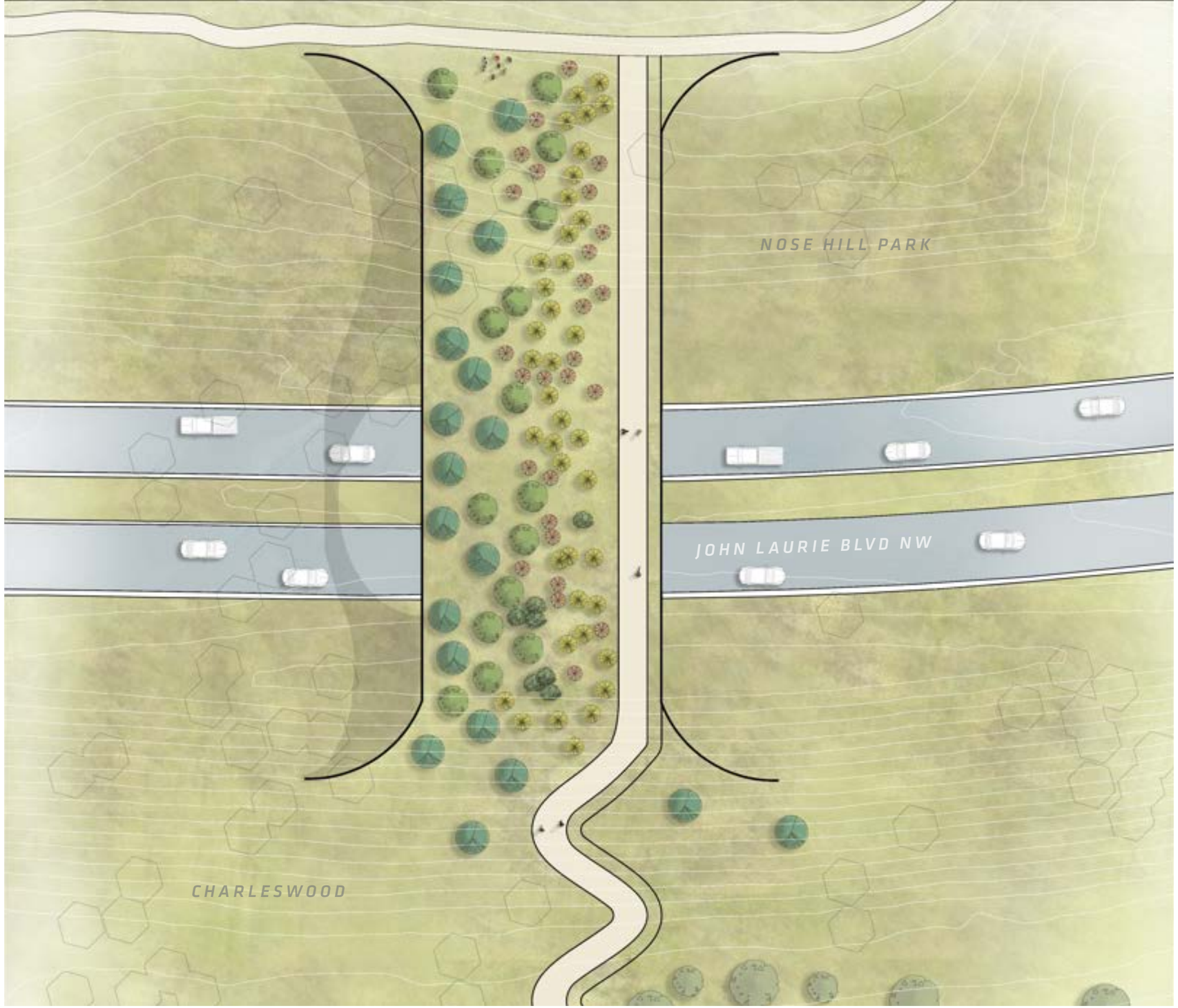
RECLAIMING SPACE

Project Masterplan

The masterplan addresses the challenge of landscape and habitat fragmentation caused by postwar suburban planning practices prioritizing automobiles. It leverages a unique design opportunity to reconnect natural systems and communities. By integrating biodiversity, connectivity, and urban resilience, the plan reimagines green corridors, traffic-calmed streets, repurposed golf courses, and wetland parks, transforming suburban spaces into vibrant, adaptive environments for both people and wildlife.

Bird's Eye View of Nose Hill Overpass

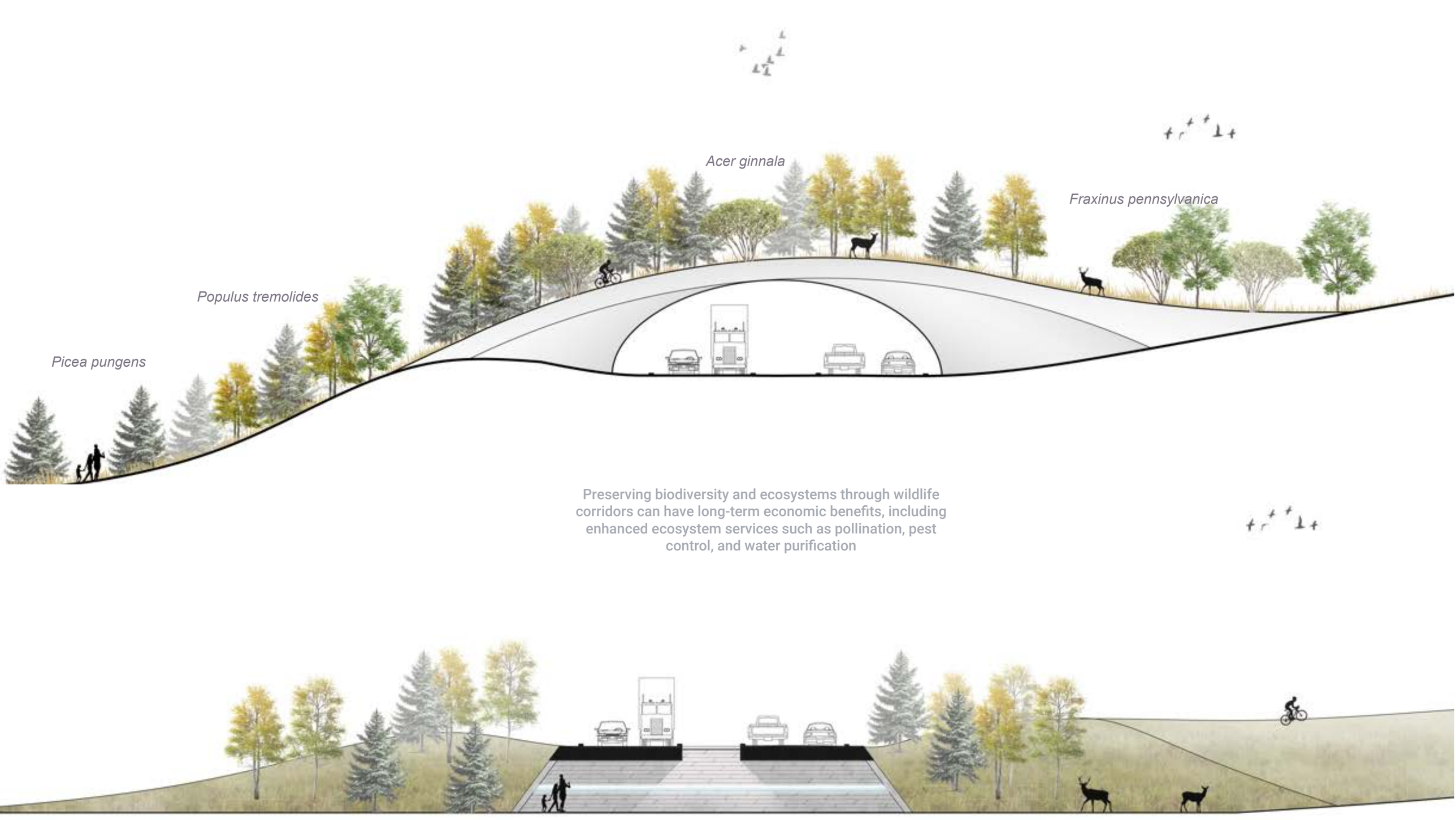
A bold initiative to restore connectivity between Nose Hill and the riparian system of Confederation Park, severed by suburbanization. This overpass prioritizes ecological continuity, serving as a green corridor for wildlife and pedestrians while seamlessly integrating into the urban landscape. By bridging upland and riparian environments, it fosters safe passage, enhances biodiversity, and creates opportunities for community interaction, redefining mobility across urban and natural spaces.



Overpass Plan View and Project Goals

This plan view highlights the overpass's design, which integrates nature and infrastructure to enhance urban connectivity, addressing land fragmentation in suburban environments. With goals centered on fostering mobility, promoting wildlife corridors, and reducing environmental impact, the project balances ecological and social needs. The overpass is a key component in transforming suburban spaces, providing safe passage for animals, connecting neighborhoods, and creating an iconic example of sustainable design within the evolving urban landscape.

Nose Hill Underpass Plan View
The underpass plan showcases a thoughtful design for wildlife and pedestrian movement beneath urban roads. Serving as a safe, green passage, it connects critical habitats while offering accessibility for people.



Preserving biodiversity and ecosystems through wildlife corridors can have long-term economic benefits, including enhanced ecosystem services such as pollination, pest control, and water purification

Overpass and Underpass Section Views

The curved form enhances structural efficiency and blends into the landscape, while the integration of local vegetation creates safe, natural pathways for wildlife crossings. Underpasses can provide cooler microenvironments compared to overpasses, which might be beneficial for certain species, especially in regions experiencing temperature extremes. In areas with natural terrain features such as depressions, gullies, or valleys, underpasses can take advantage of these natural features to create wildlife passages. This makes it easier to integrate wildlife corridors into the existing landscape.

Overpass Visualization
A dynamic visualization of the Nose Hill overpass showcases its role as a green artery connecting fragmented ecosystems. The overpass features vegetation and pedestrian pathways, enabling coexistence between wildlife and urban life. This visualization invites viewers to imagine a future where green overpasses become vital links in creating resilient, connected, and biodiverse urban environments.

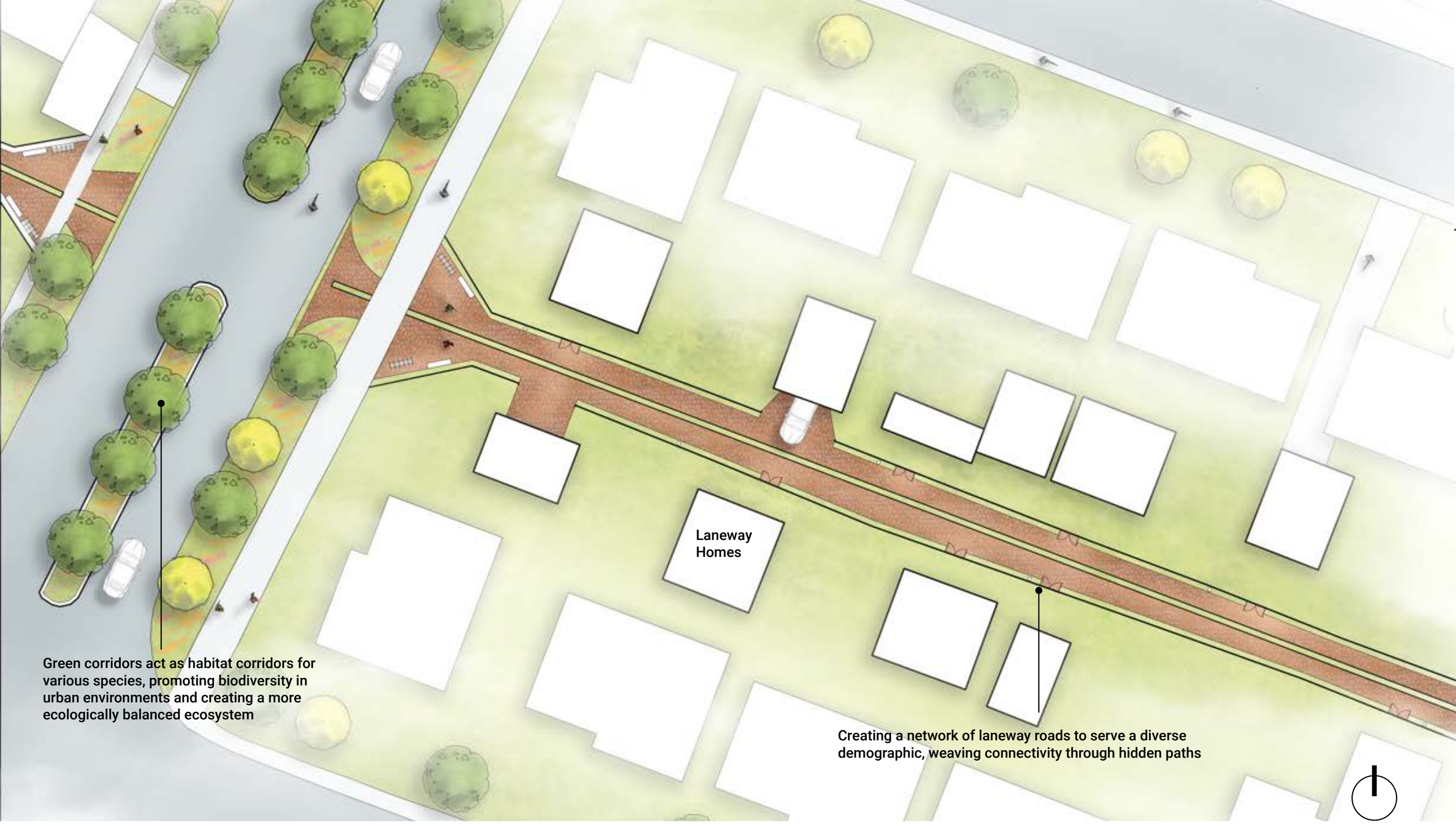
Underpass Visualization
Transforming a utilitarian space into a vibrant corridor that safely connects communities and supports urban biodiversity, underpasses also present an opportunity to restore ephemeral watercourses. These watercourses once linked upland ecosystems like Nose Hill to lowland ecosystems such as the Confederation Creek coulee, reestablishing critical ecological and hydrological connections.

WEAVING STREETS

Through suburban fabric, a vibrant thread,
Humans and creatures, cohabiting spread.
In streets anew, connections surge,
A harmony of life, a shared urge

Isometric View of a Green Corridor

An isometric view highlights a transformative design strategy addressing the problem of wide suburban streets that encourage speeding, compromising safety for pedestrians, cyclists, and wildlife. By reclaiming asphalt, the design creates a vibrant green corridor connecting neighborhoods, integrating lush vegetation and pedestrian pathways. This multifunctional space slows vehicular traffic, supports biodiversity, and enhances community engagement. It fosters ecological health while elevating the aesthetic and social value of the neighborhood, offering a sustainable model for reconnecting suburban areas as thriving, connected ecosystems.



Plan view of the Neighborhood

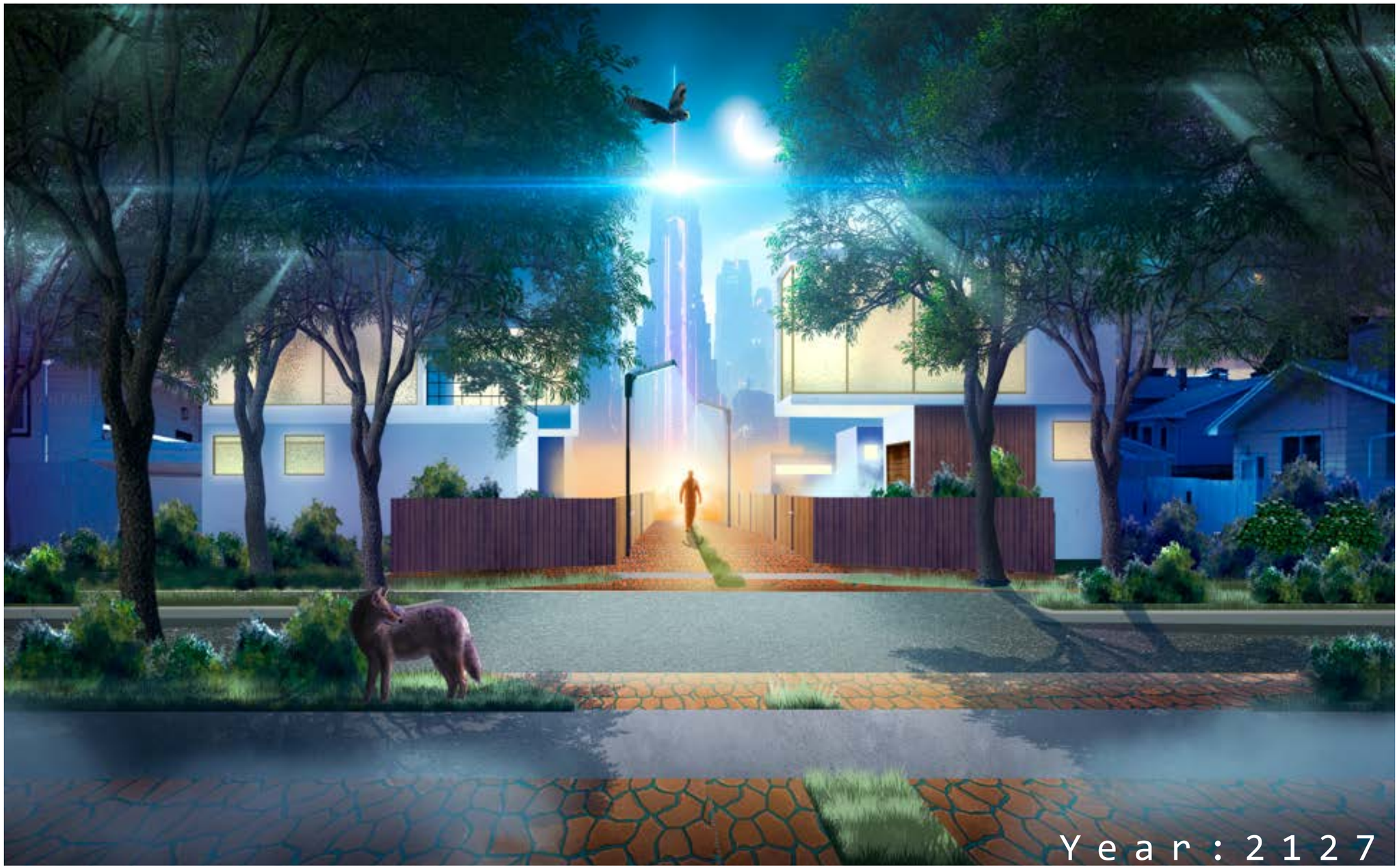
This approach emphasizes the potential of laneways as a design opportunity to absorb future population growth and ensure suburban areas accommodate demographic diversity, fostering social vitality. By revitalizing laneways and establishing small green corridors within neighborhoods, the strategy enhances biodiversity, supports diverse housing types, and creates opportunities for young people, families, and those aging in place. Integrating ecological and social elements transforms underutilized spaces into vibrant community assets, promoting suburban densification, connectivity, and sustainability while fostering local engagement and economic opportunities.

Green Corridor and a Laneway Section Views

These sections illustrate the transformation of traditional streetscapes and laneways into multifunctional green corridors. By incorporating native vegetation, permeable surfaces, and shared spaces for wildlife and communities, the design enhances ecological resilience and urban experience. Green corridors improve stormwater management by absorbing rainwater, reducing flooding risks, and recharging groundwater. This approach strategically utilizes underutilized spaces, optimizing land use to accommodate growing populations while preserving the suburban character. Transforming laneways into functional road networks further maximizes existing infrastructure, creating sustainable, vibrant neighborhoods.

Top Down View of the Neighborhood

The overarching goal is to establish a replicable model across various streets, seamlessly merging the natural and urban fabric by integrating green corridors with lush canopies. This approach seeks to harmonize urban spaces with nature, fostering a scalable blueprint that not only enhances environmental sustainability but also creates inviting, resilient streetscapes for communities to thrive. The addition of laneway roads provides an alternative network for various modes of transportation, encouraging diverse mobility options such as cycling and walking. Improved accessibility and increased foot traffic can contribute to the economic development of local businesses situated along the newly established laneway roads



Laneway and Green Corridor Visualization

Density and biodiversity are not mutually exclusive—they can coexist and thrive through inclusive design that supports all life forms and lifestyles. This vision showcases the transformation of underutilized laneways into vibrant, pedestrian-friendly pathways that blend residential density with suburban charm. By integrating biodiversity and fostering community engagement, these spaces evolve to meet the changing needs of the community, offering a futuristic model of cohesive, sustainable urban living.

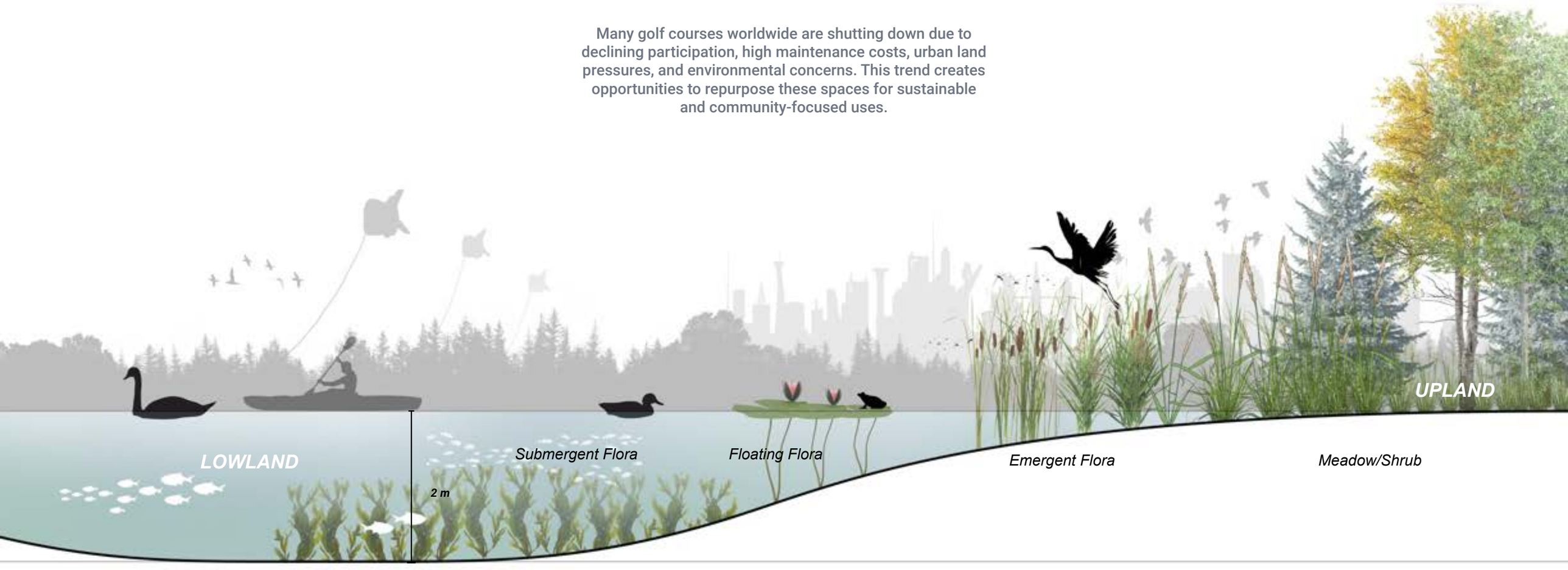
Bird's Eye View of Confederation Wetlands Park

This vision reimagines underutilized spaces, such as golf courses, as equitable and climate-resilient infrastructure. Golf, an exclusive sport consuming vast land for a small audience, is declining in popularity, presenting an opportunity to repurpose these spaces. By transforming them into multifunctional landscapes, they can better serve as urban runoff management systems, addressing Calgary's increasing risk of intense rain events driven by climate change. This design prioritizes resilient infrastructure, improved water management, and proactive flood mitigation to protect communities. It integrates biodiversity and residential density, blending suburban charm with sustainability to meet evolving community needs.

Plan View of Confederation Park Golf Course

This vision preserves the historical layout of postwar suburbia by maintaining the shape of golf course fairways, while subverting their function to serve as rainwater collection ponds. This design adaptation is essential for addressing the climate change projections of more frequent and intense storm events, particularly in densifying suburban watersheds. The transformed fairways become key elements of climate resilience, mitigating flood risks, and helping manage urban runoff. By blending the old with the new, the design honors the area's history while preparing it for future environmental challenges, fostering a sustainable coexistence between urban development and natural systems.

Many golf courses worldwide are shutting down due to declining participation, high maintenance costs, urban land pressures, and environmental concerns. This trend creates opportunities to repurpose these spaces for sustainable and community-focused uses.



Golf Course Evolution Section Views

Transforming a golf course into a wetland enhances biodiversity, improves water quality, mitigates flooding, and provides recreational, educational, and aesthetic benefits. This sustainable conversion reduces maintenance costs, supports climate resilience, and creates a multifunctional green space that benefits both the environment and the community.

Confederation Wetlands Park Visualization

In this future vision, nature has reclaimed the once-manicured golf course, transforming it into a vibrant, self-sustaining wildlife habitat. The landscape is now dominated by natural ecosystems, with diverse plant life and thriving animal communities, reclaiming the space as a sanctuary for nature amidst the urban surroundings.