

COMPREHENSIVE GREEN NETWORK PLANNING



Proposed new park at Blatchford, Edmonton

COMPREHENSIVE GREEN NETWORK PLANNING

TODAY

Essentials of a plan

Relationships to other plans

Process- approach to plan-making

Contents of a green network plan

Examples: North Vancouver & Edmonton

WHAT IS A PLAN?

Definition of *planning*

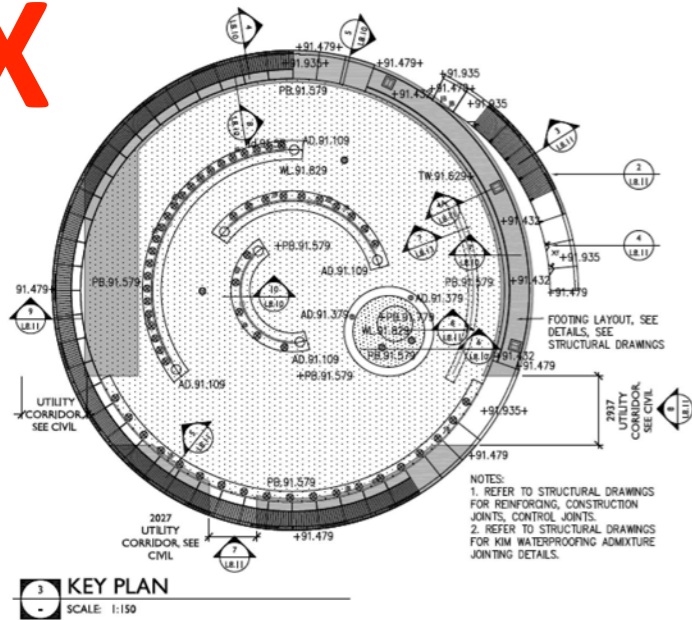
(Miriam-Webster.com)

the act or process of making or carrying out plans

specifically: ***the establishment of goals, policies, and procedures*** for a social or economic unit

WHAT IS A PLAN?

X



Definition of *plan*

1 : a drawing or diagram drawn on a plane: such as

a : a top or horizontal view of an object

b : a large-scale map of a small area ✓

2a : a method for achieving an end ✓

b : an often customary method of doing something :
procedure

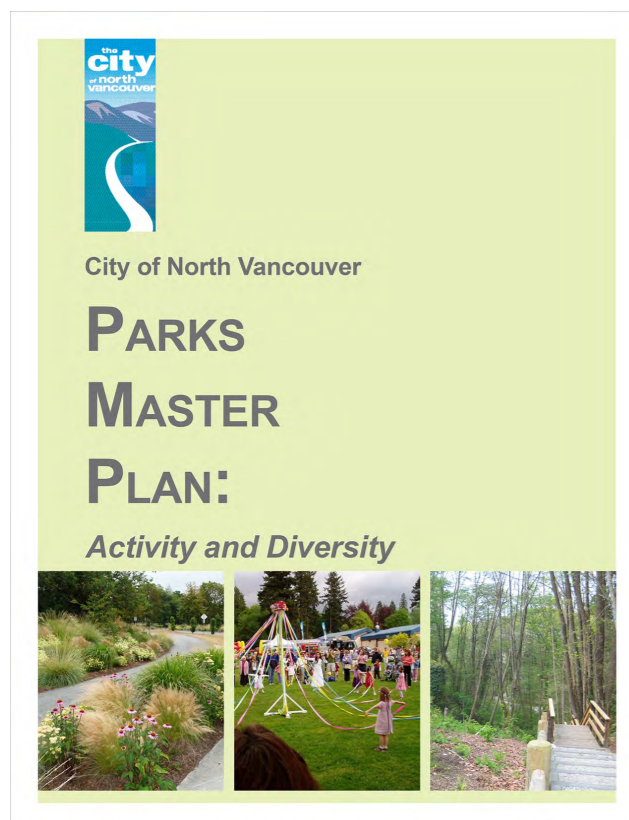
c : a detailed formulation of a program of action ✓

d : goals, aims ✓

*3 : an orderly arrangement of parts of an overall design
or objective ✓*

4 : a detailed program (as for payment or the provision of
some service) pension plan

✓



DECISION-MAKING FRAMEWORKS



Decision framework used by Design Centre for Sustainability



Decision framework used by Design Centre for Sustainability

DEFINING TERMS: What are goals?

GOAL:

“An object or end that one strives to attain.” *Websters New World Dictionary*

“The broadest statement of a community’s aims.” *Rohse, Land Use Planning in Oregon.*

“Goals are intended to elaborate upon the fundamental principles of sustainability and express an ideal. Some goals will conflict with other goals.” *Sheltair Group- Sustainable Urban Development Guidelines for Southeast False Creek, 1998*



GOALS



- Goal 1: Green Economy
- Goal 2: Climate Leadership
- Goal 3: Green Buildings
- Goal 4: Green Transportation
- Goal 5: Zero Waste
- Goal 6: Access to Nature
- Goal 7: Lighter Footprint
- Goal 8: Clean Water
- Goal 9: Clean Air
- Goal 10: Local Food

TWO

Greener Communities

4. Green Mobility: Make walking, cycling, and public transit preferred transportation options
2020 Target: Make the majority of trips (over 50 per cent) on foot, bicycle, and public transit
5. Zero Waste: Create zero waste
2020 Target: Reduce solid waste per capita going to landfill or incinerator by 40 per cent
6. Easy Access To Nature: Provide incomparable access to green spaces, including the world's most spectacular urban forest
2020 Targets: Every person lives within a five-minute walk of a park, beach, greenway, or other natural space; plant 150,000 additional trees in the city
7. Lighter Footprint: Achieve a one-planet ecological footprint
2020 Target: Reduce per capita ecological footprint by 33 per cent

Goal 6: Access to Nature: Provide incomparable access to green spaces, including the world's most spectacular urban forest

WHAT ARE OBJECTIVES?



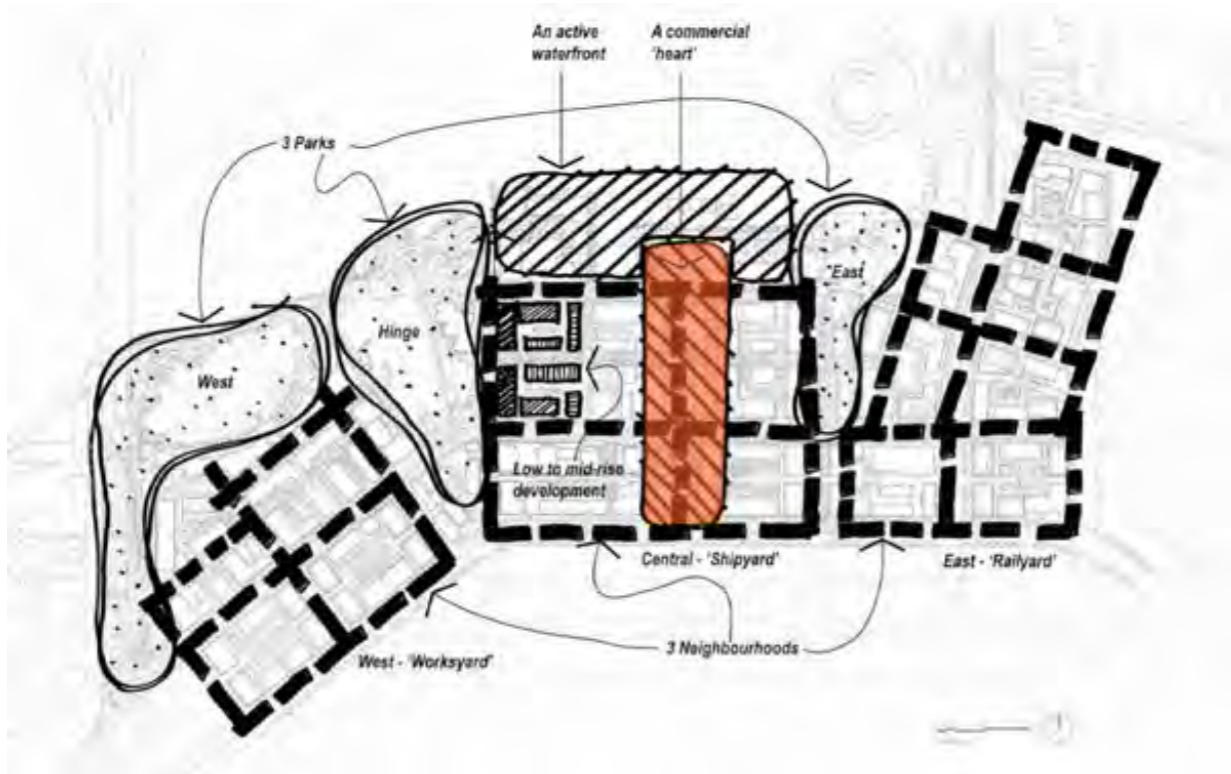
OBJECTIVE:

“Something aimed at or striven for.” Websters New World Dictionary

“Objectives add greater specificity and detail to goals and increase their focus toward specific areas of action.” Kellett, Sustainability Indicators for Computer-based Tools in Community Design

*Objectives are similar to goals but are more specific. They use terms that indicate the direction of change that is needed and **makes it possible to set measurable targets for performance**.* Sheltair Group- Sustainable Urban Development Guidelines for Southeast False Creek, 1998

GOALS AND OBJECTIVES



EXAMPLE:

Sustainable Urban Development Guidelines for Southeast False Creek, 1998 Sheltair Group

GOAL:

Minimize the need to travel outside the neighbourhood for basic services.

OBJECTIVES:

Increase proximity of housing to key activity centers

Increase pedestrian, bicycle and transit amenities within the neighbourhood

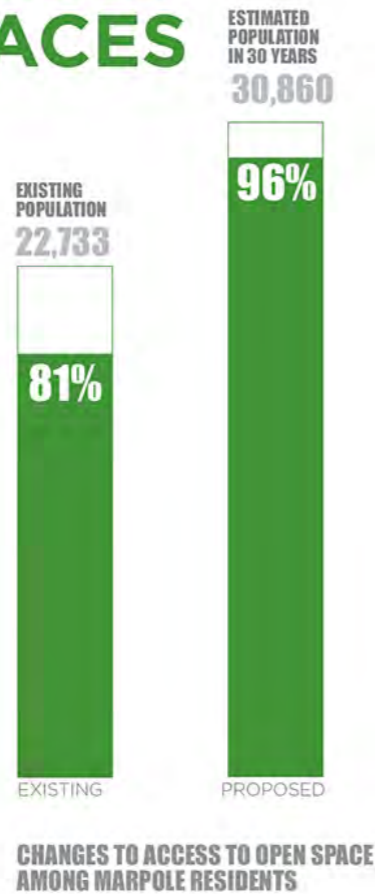
WHAT ARE INDICATORS AND TARGETS?

ACCESS TO PARKS AND OPEN SPACES

The number of residents and jobs within 400 meters of parks and open space is a key feature of healthy, walkable communities and an important means to reduce automobile dependency.

The proposed plan provides 29,625 Marpole residents the opportunity to walk to local services, a 38% increase over existing conditions.

96%
OF MARPOLE RESIDENTS CAN
WALK
5 MINUTES TO LOCAL OPEN SPACE



*How do we know what's better?
How do we know when we get there?*

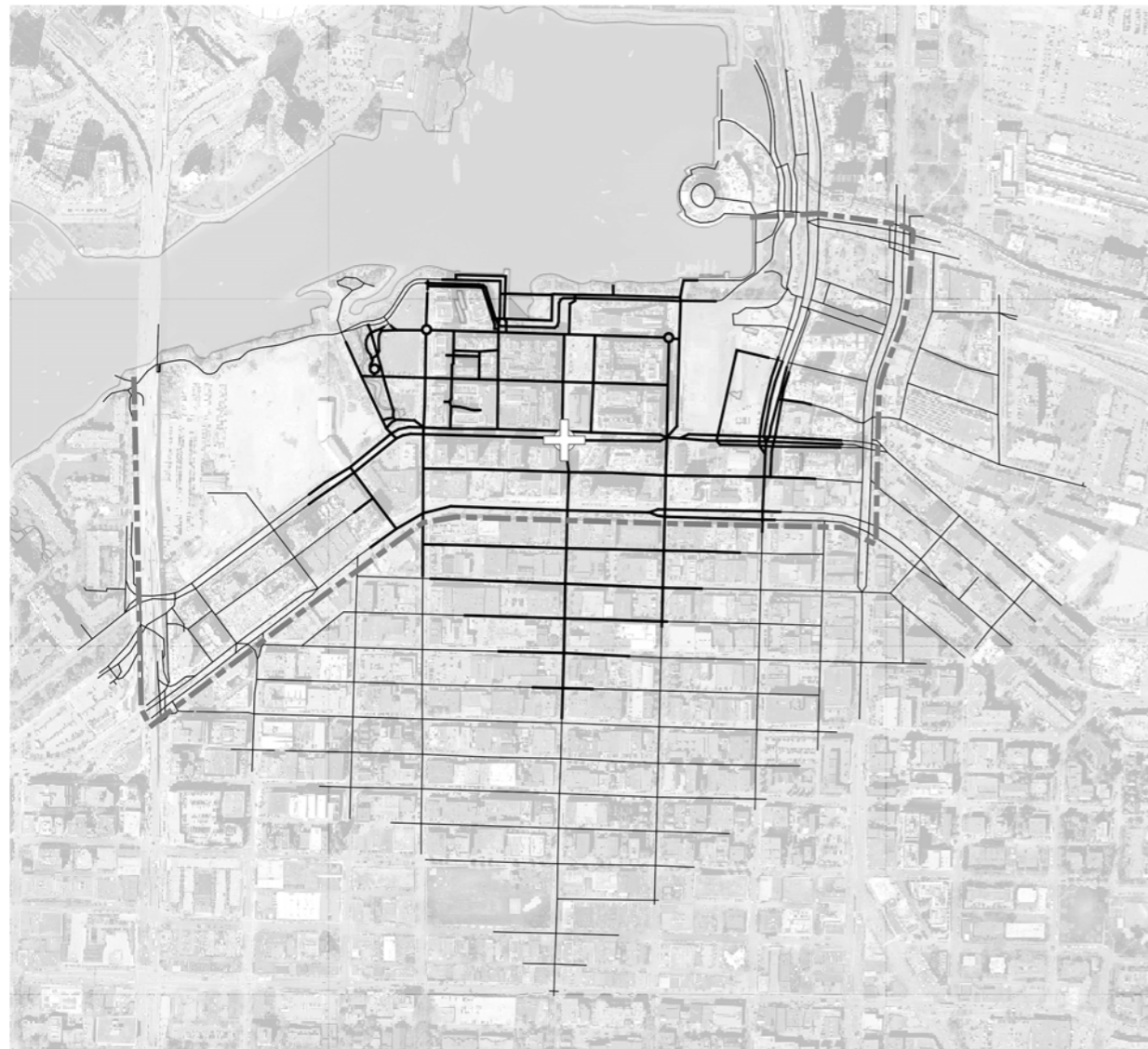
INDICATORS

- *provide a basis for comparing one place or proposition to another*
- *each indicator— an expression of a desired outcome + a way of measuring*

TARGETS

- *Specific numeric goals*

GOALS AND OBJECTIVES + INDICATOR



—— 400m Buffer - - - - 800m Buffer

GOAL:

Minimize the need to travel outside the neighbourhood for basic services.

OBJECTIVES:

Increase proximity of housing to key activity centers

INDICATOR:

Percentage of dwellings within 350 m of basic shopping needs and personal services.

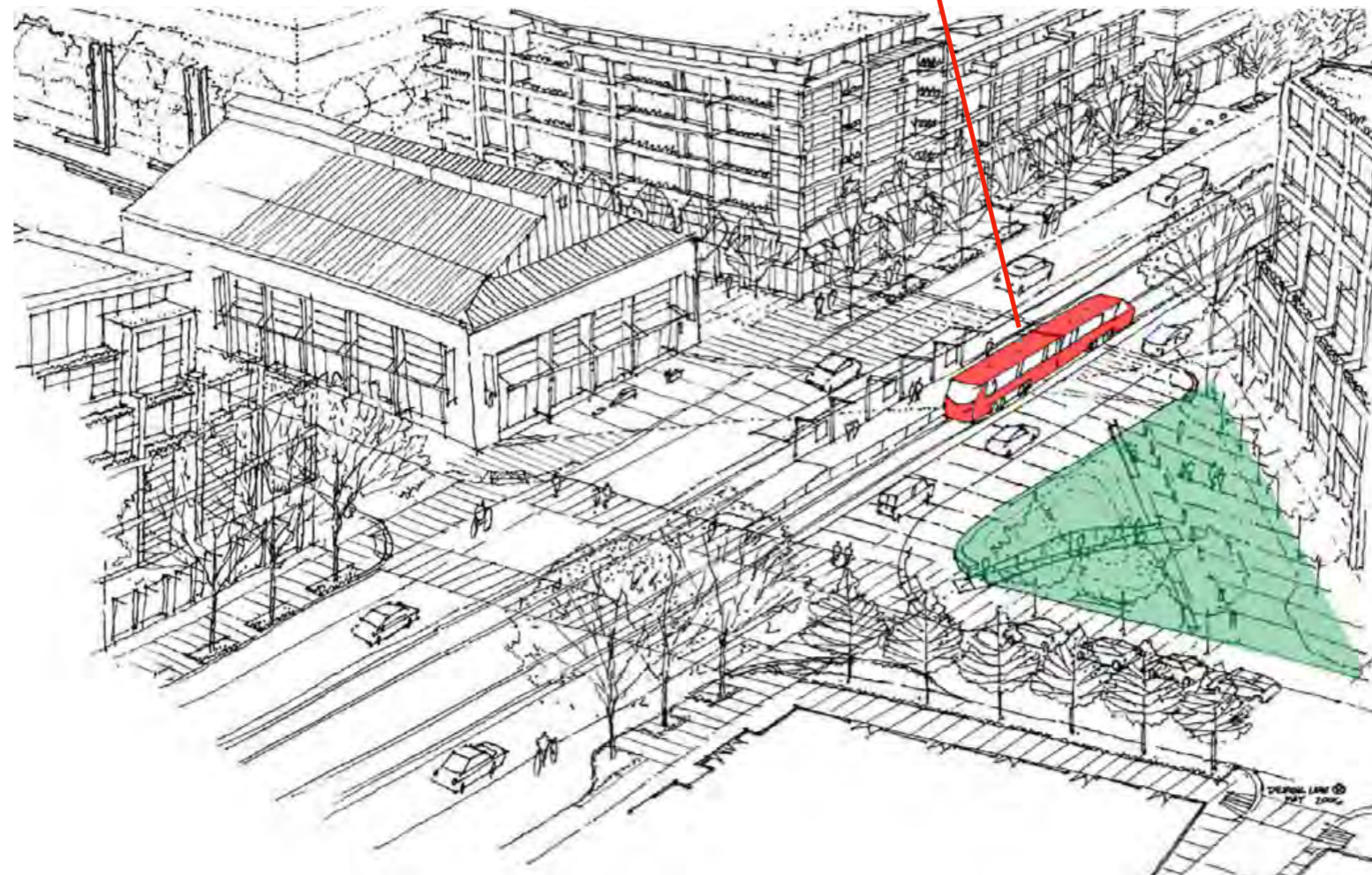
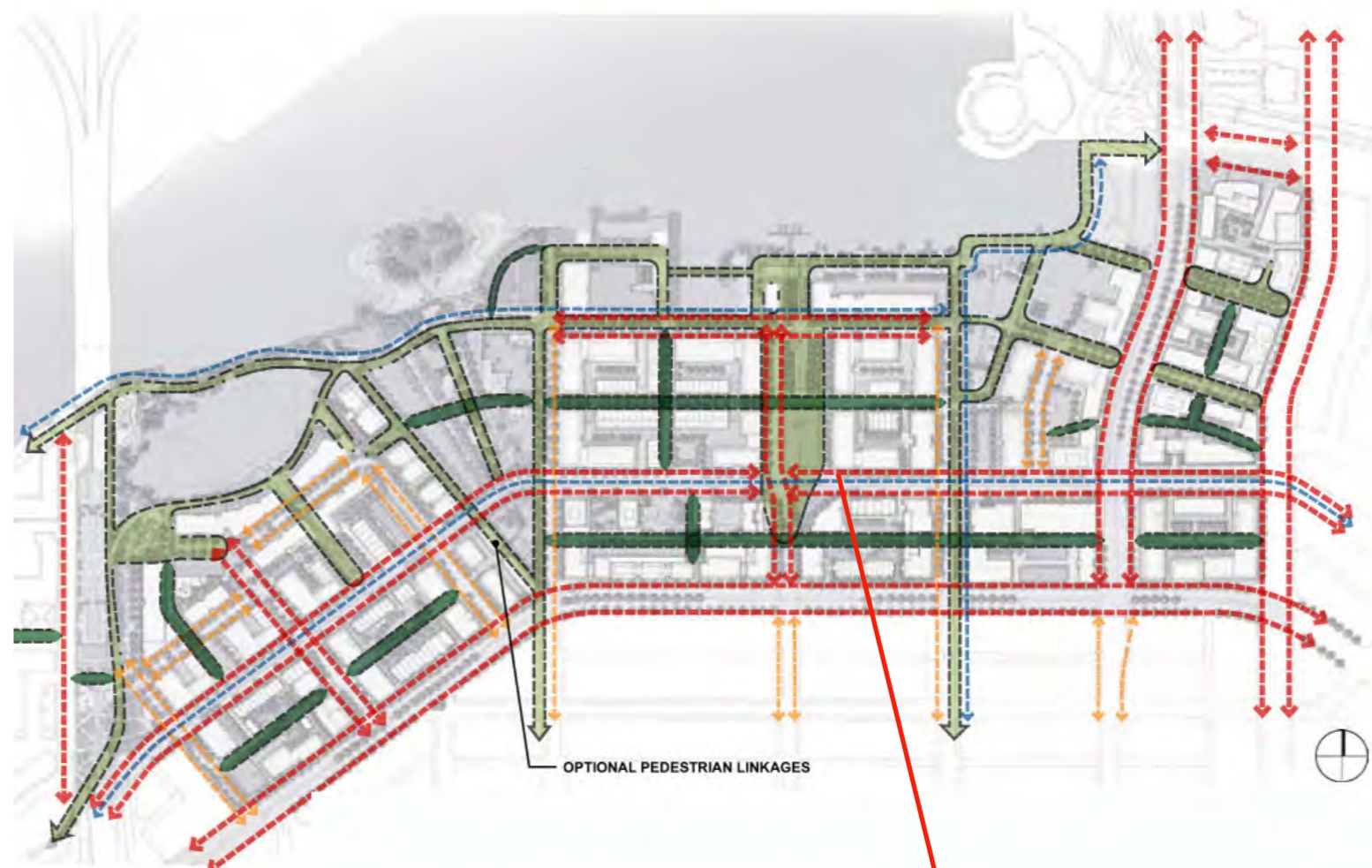
Sustainable Urban Development Guidelines for Southeast False Creek, 1998 Sheltair Group

OBJECTIVES + TARGETS

OBJECTIVE: Increase pedestrian, bicycle and transit amenities within the neighbourhood.

- Pedestrian*
- Bicycle*
- Bus*
- Streetcar*
- Rapid transit*
- Water ferry*
- Community cars*

TARGET:
60% of all trips to be NON- auto based
< 1 parking space / unit



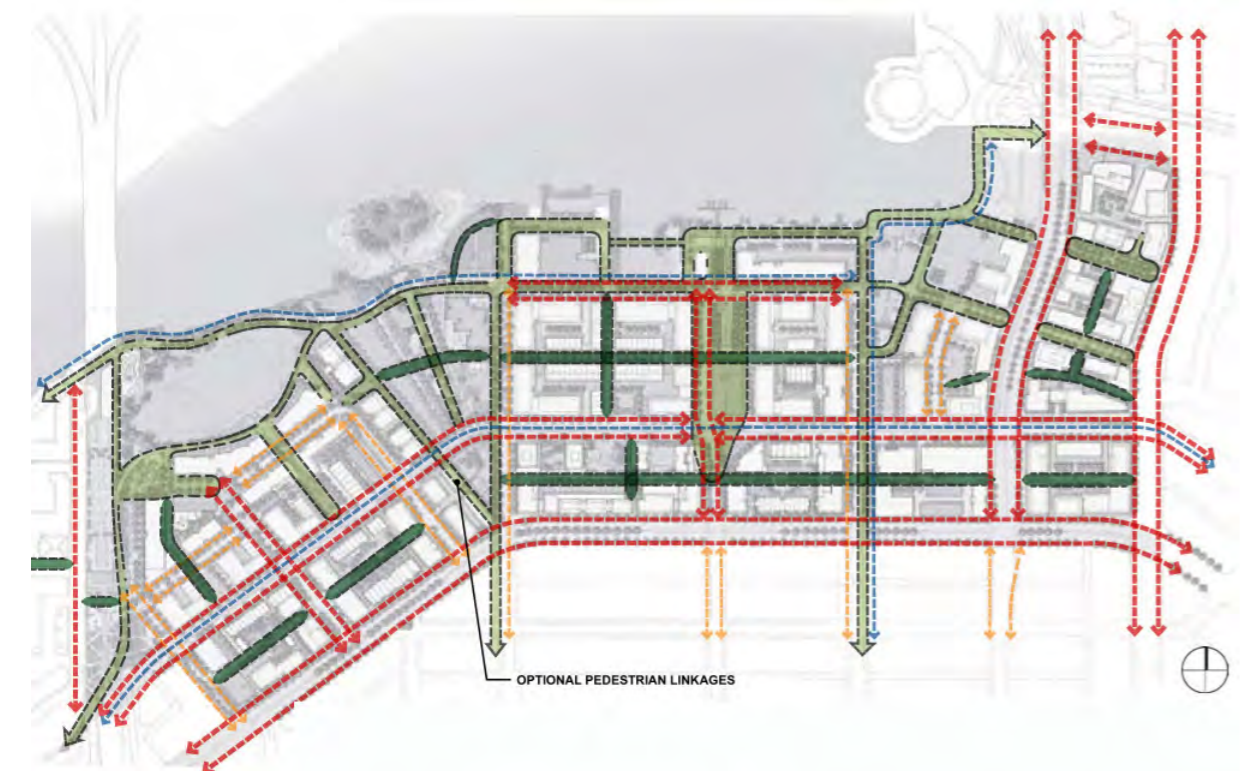
WHAT ARE STRATEGIES?

Strategies are **specific approaches** that can be taken to achieve the objective.

OBJECTIVE: Increase pedestrian, bicycle and transit amenities within the neighbourhood.

STRATEGIES might include:

- create a village centre
- fine-grained pedestrian network
- on-street and off-street bike paths



WHAT ARE STRATEGIES? WHAT ARE ACTIONS?

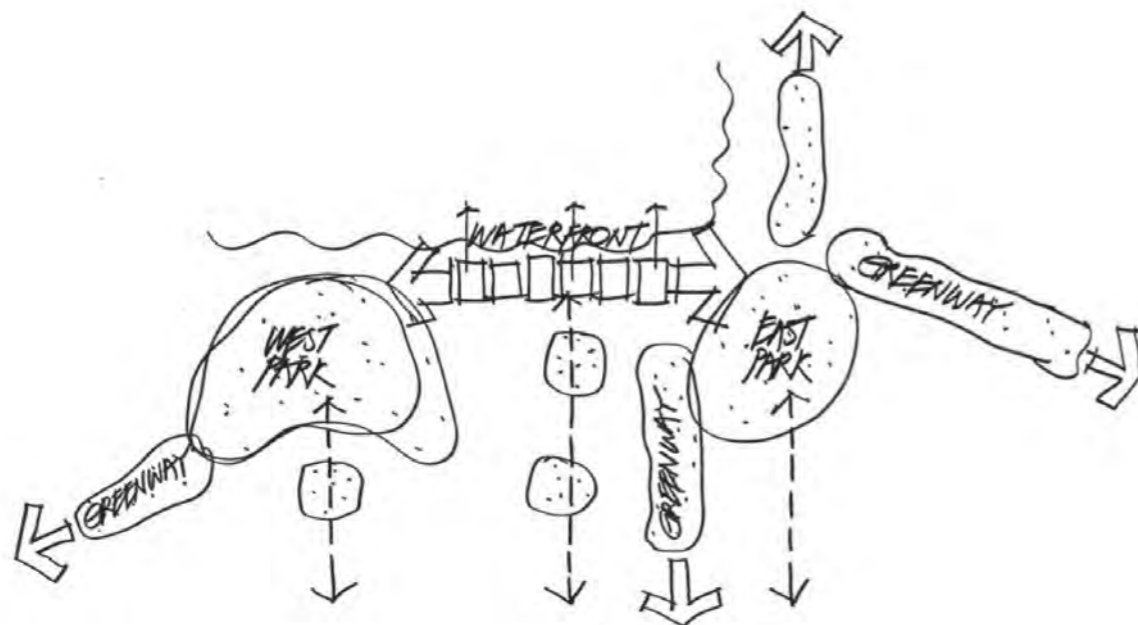


Strategies are specific approaches that can be taken to achieve the objective.

OBJECTIVE: Increase pedestrian, bicycle and transit amenities within the neighbourhood.

STRATEGIES might include:

- *create a village centre*
- *fine-grained pedestrian network*
- ***on-street and off-street bike paths***



ACTIONS

Complete the Seaside Greenway

Connect Ontario bikeway to Seaside Greenway

Goal 6 became Goal 5

5/ ACCESS TO NATURE



GREENEST CITY

2020 ACTION PLAN
PART TWO: 2015-2020



Greenest City Action Plan PART 2

GOAL: VANCOUVER RESIDENTS ENJOY INCOMPARABLE ACCESS TO GREEN SPACES, INCLUDING THE WORLD'S MOST SPECTACULAR URBAN FOREST.

2020 TARGETS:

1. ALL VANCOUVER RESIDENTS LIVE WITHIN A FIVE-MINUTE WALK OF A PARK, GREENWAY OR OTHER GREEN SPACE.

Indicator: Percent of city's land base within a five minute walk to a green space.

Baseline (2010): 92.6%

Actual (2014): 92.7% (+0.1%)

2. PLANT 150,000 NEW TREES.

Indicator: Total number of additional trees planted.

Baseline (2010): 0

Actual (2014): 37,000

2050 TARGET:

INCREASE CANOPY COVER TO 22%.

Baseline (2013): 18%

Note: Development of a biodiversity target is currently underway.

ACTIONS

5/ ACCESS TO NATURE

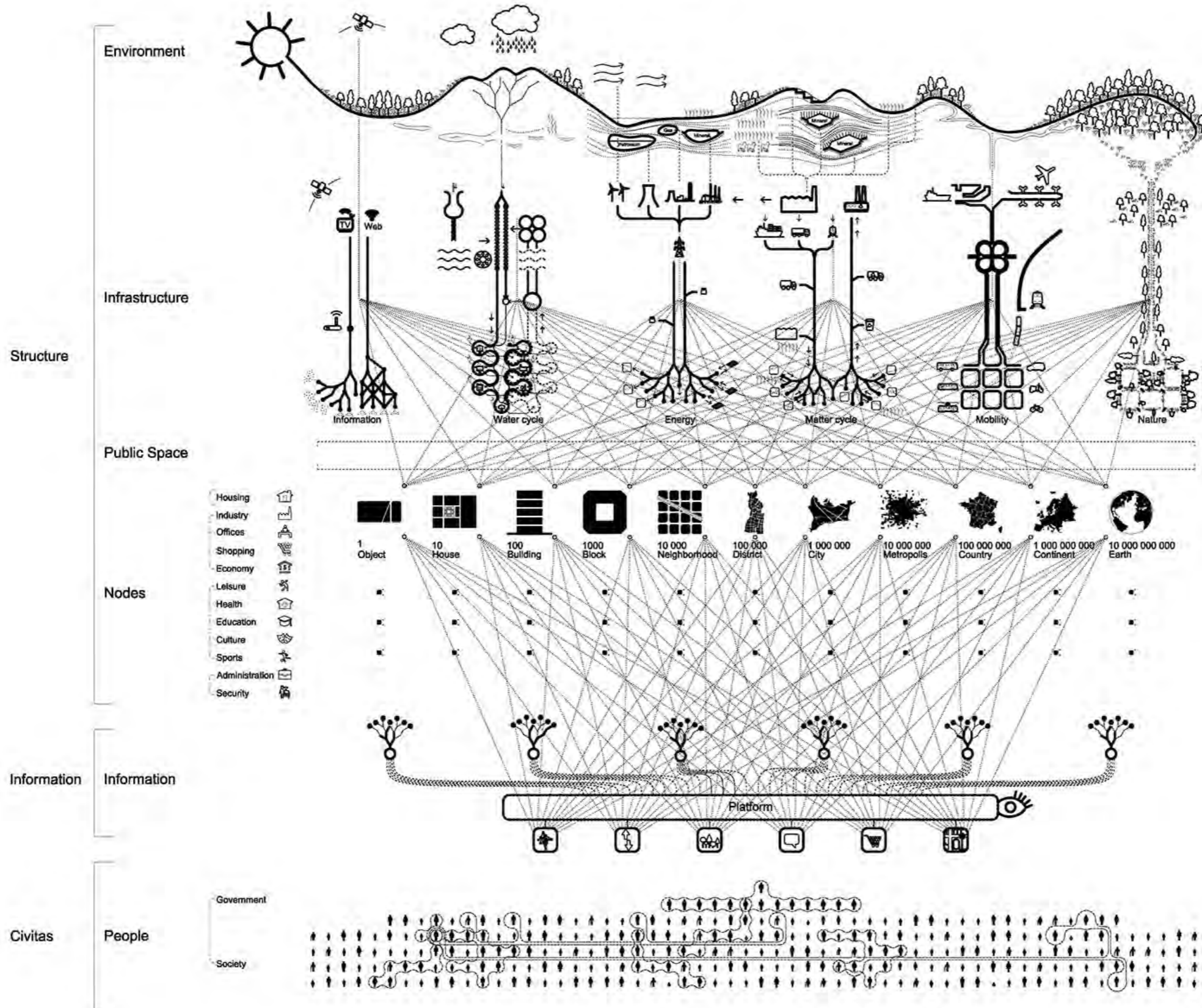
**GOAL: VANCOUVER RESIDENTS ENJOY
INCOMPARABLE ACCESS TO GREEN SPACES,
INCLUDING THE WORLD'S MOST
SPECTACULAR URBAN FOREST.**

- *Complete new park at Yukon & 17th*
- *Acquire 4 hectare park at Cambie & Fraser River*
- *Build the new 10 hectare park system at East Fraserlands*
- *Expand private property, street and park tree planting*
- *Create a new inventory system for trees on City land*
- *Update tree management plans and planting standards*
- *Develop policies and criteria to retain healthy, mature trees*

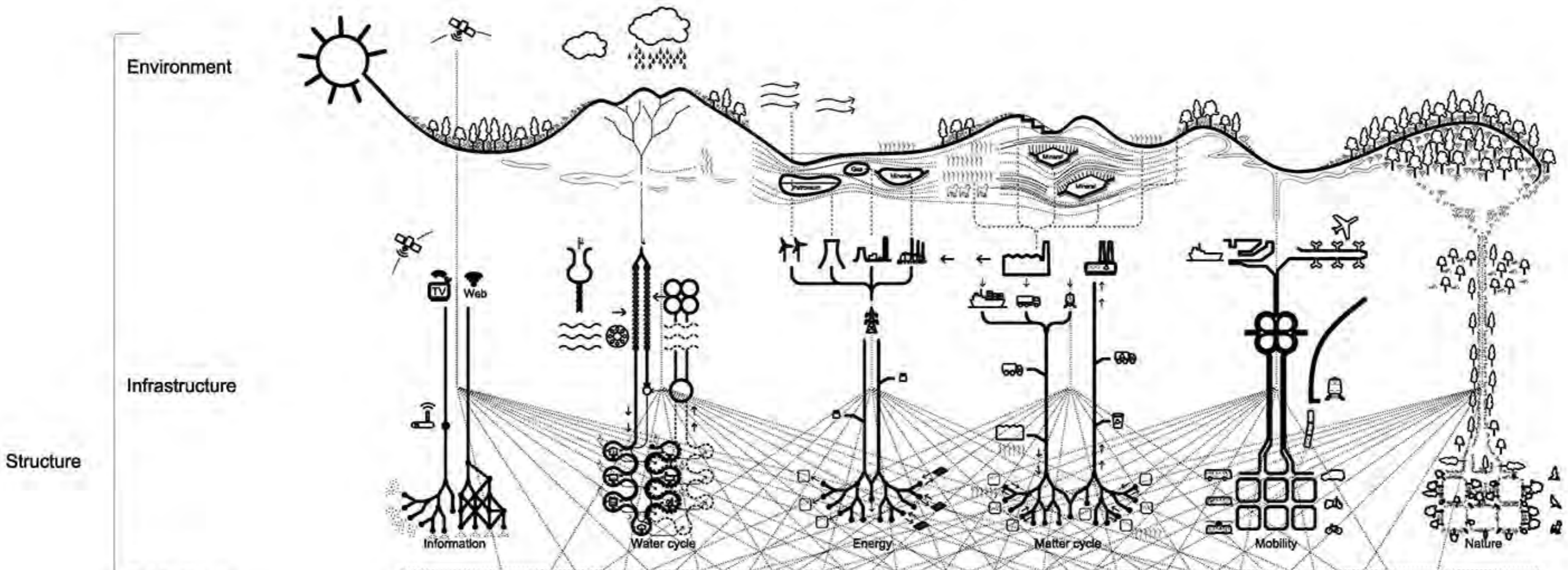
COMPREHENSIVE- MULTI-SECTOR PLANS

COMPREHENSIVE- MULTI-SECTOR PLANS

CityProtocol.org



COMPREHENSIVE- MULTI-SECTOR PLANS



COMMON COMPONENTS

- built form*
- transportation*
- communications*
- social services*
- energy*
- waste*
- green networks*

BC THE OFFICIAL COMMUNITY PLAN (OCP)

“Official community plans describe the long-term vision of communities. They are a statement of objectives and policies that guide decisions on municipal and regional district planning and land use management. These decisions impact communities' sustainability and resilience.”

Authority: Local Government Act.

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INSTRUMENTS

***Land use regulations** (zoning, development regulations)*

***Bylaws** (parking and loading, sign and screening, landscaping)*

THE OCP- EXAMPLE 2014 CITY OF NORTH VANCOUVER

- 1 Land Use: Housing, Population & Employment
- 2 Transportation, Mobility & Access
- 3 Community Well-being
- 4 Natural Environment, Energy & Climate
- 5 Parks, Recreation & Open Space
- 6 Arts, Culture & Heritage
- 7 Economic Development
- 8 Municipal Services & Infrastructure



NORTH VANCOUVER: Natural environment

1 Land Use: Housing, Population & Employment

2 Transportation, Mobility & Access

3 Community Well-being

4 Natural Environment, Energy & Climate

Goal 4.1: Develop, promote and implement strategies to mitigate and adapt to climate change.

Goal 4.2: Measure, maintain and improve long-term ecosystem health

Objective: 4.2.1 Maintain and enhance biodiversity and ecological health in the City

5 Parks, Recreation & Open Space

6 Arts, Culture & Heritage

7 Economic Development

8 Municipal Services & Infrastructure

Legend

Stream

City Boundary

Streamside Development Permit Area

ESA Category

- High
- Moderate
- Moderately-low
- Low



Schedule C Environmentally Sensitive Areas

Part of the Official Community Plan

NOTES
Adopted March 23, 2015
Amended April 3, 2017

BC THE OCP- Example North Vancouver

5 Parks, Recreation & Open Space

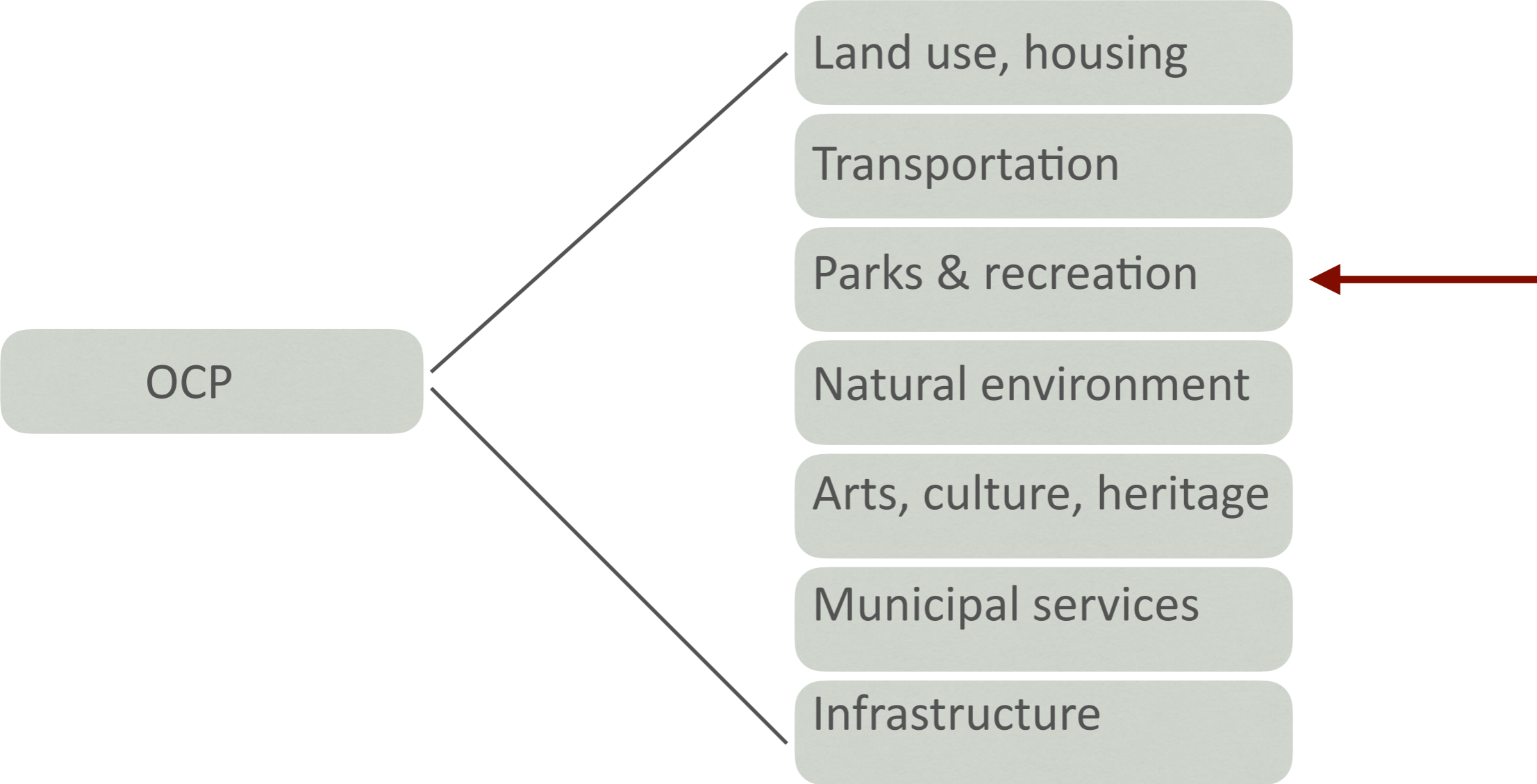
Goal 5.1: *Expand the integrated system of parks and greenways throughout the City as articulated in the Parks Master Plan.*

Objective: 5.1.1 Acquire sites to enhance key greenway linkages (recreational and ecological) between existing parks and public open spaces;

Goal 5.2: *Support, enhance and maintain recreation as a vital aspect of a healthy community*

Goal 5.3: *Provide a variety of public spaces for community engagement and stewardship*

FUNCTIONAL PLANS



GREEN NETWORKS PLANS- North Vancouver Parks Master Plan 2010



City of North Vancouver

PARKS MASTER PLAN:

Activity and Diversity

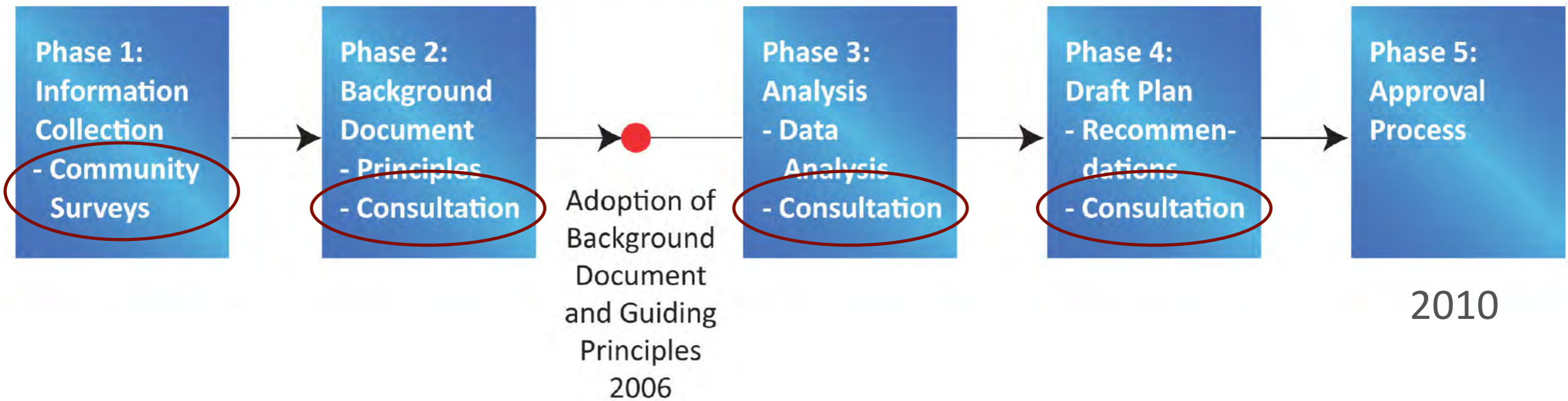


CONTENTS

- 1 People and interests
- 2 Vision
- 3 Parkland
- 4 Outdoor recreation
- 5 Park management
- 6 Implementation

Consultants: Catherine Berris and Associates

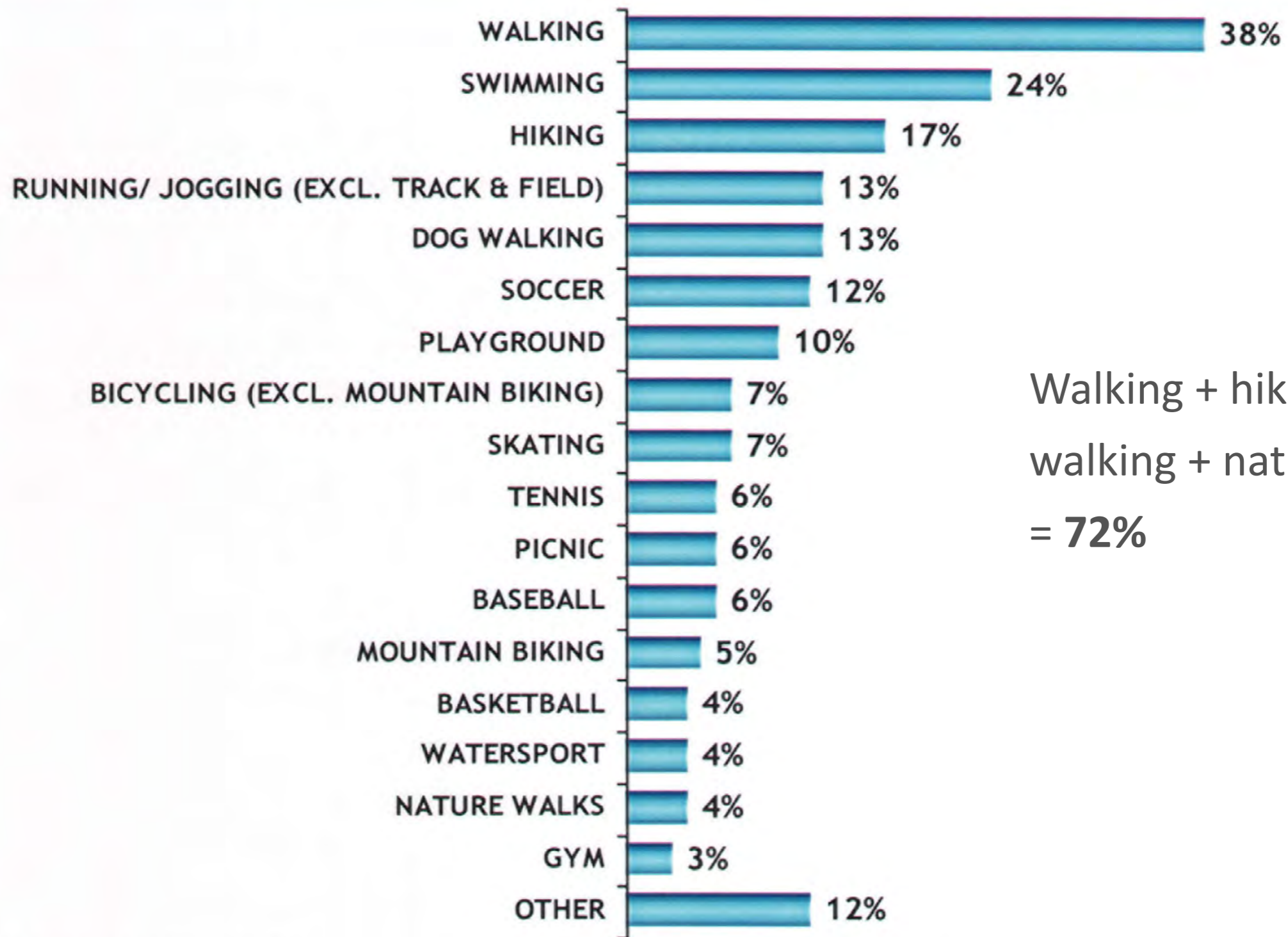
VANCOUVER PARKS MASTER PLAN 2010



ENGAGEMENT METHODS:

- surveys
- staff and stakeholder workshops
- public open houses

B3. For what activities does your household use North Vancouver parks & recreation facilities?
(base 150 CNV public)



Walking + hiking + dog walking + nature walks = 72%

Figure 2: Activities in North Vancouver Parks and Recreation Facilities

Source: Barb Justason Inc., 2004

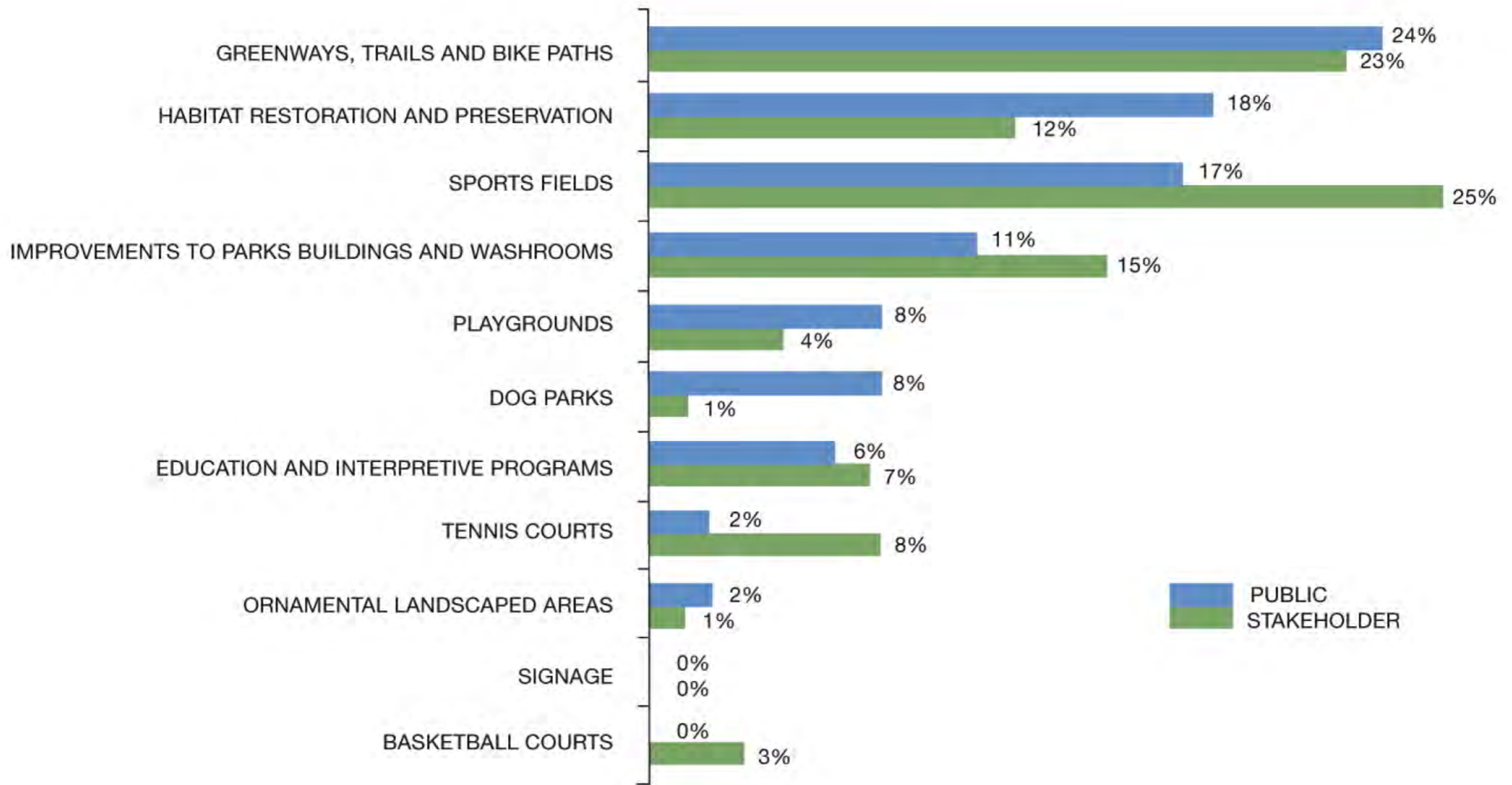


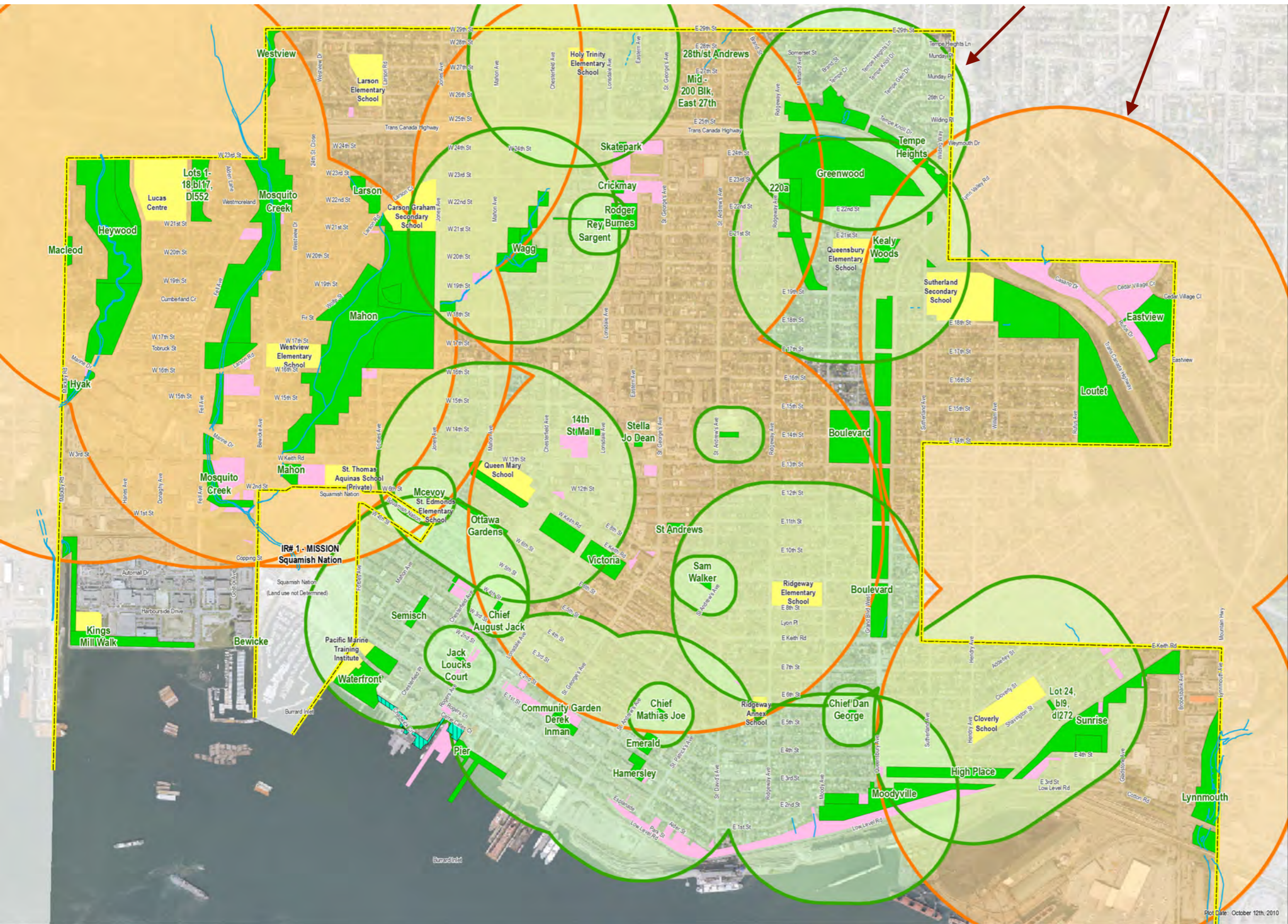
Figure 5: Funding Priorities for North Vancouver Parks and Recreation Facilities

Source: Barb Justason Inc., 2004

400 m & 800 m

Map 2:
Park Spatial
Analysis

- Legend
- Neighbourhood Parks & Schools Buffer (0.4 & 0.1 km)**
 - Community Parks & Schools Buffer (0.8 km)
 - Parks
 - Other Open Space
 - Schools
 - City Owned Land
 - City Border
 - Stream
- **Note: under 0.2ha park - 0.1km catchment
>0.2ha park - 0.4km catchment



NORTH VANCOUVER PARKS MASTER PLAN 2010



MLA grad Lisa Parker at engagement event

GOALS

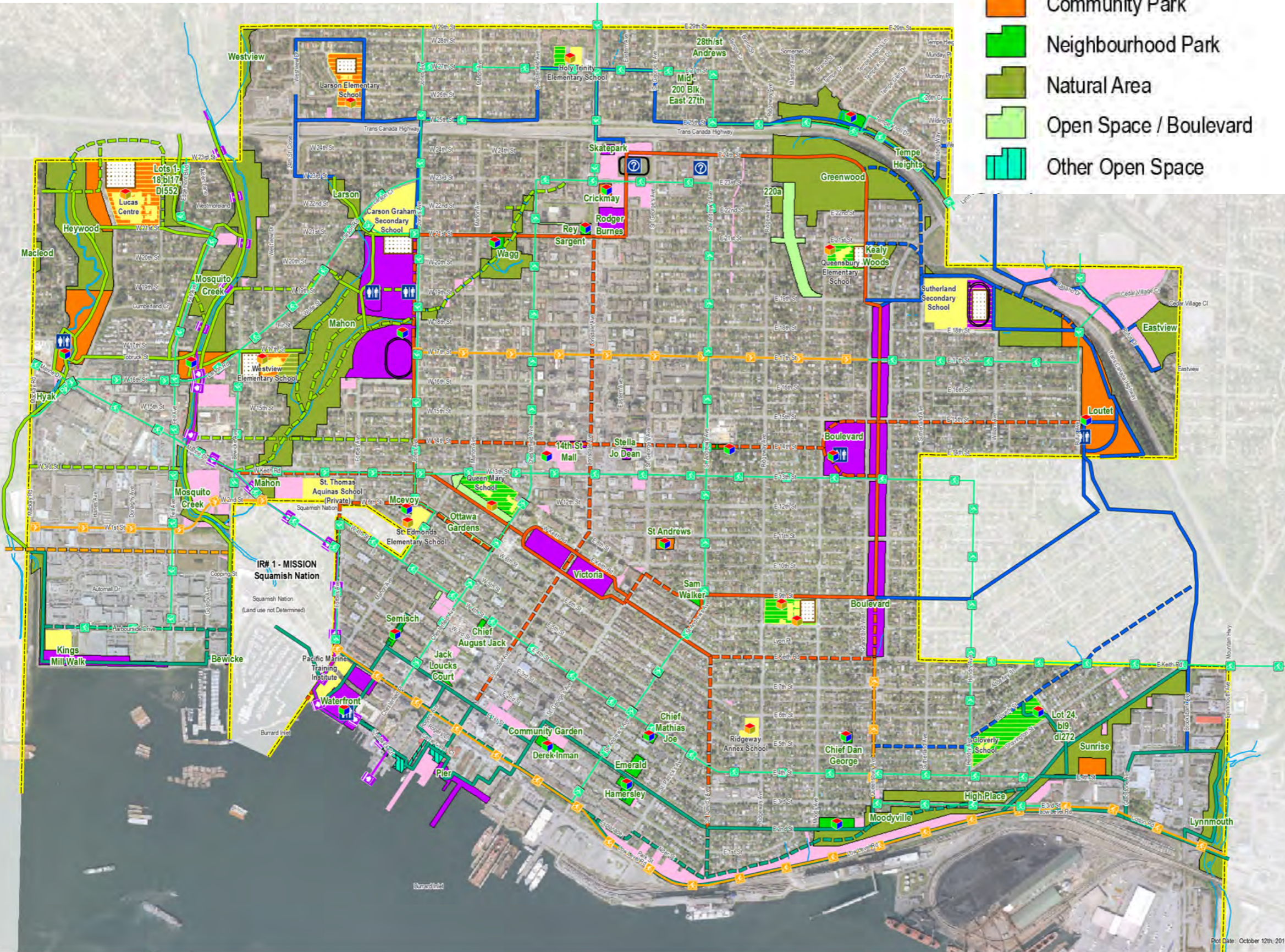
1. Emphasize the City's uniqueness
2. Ensure parks are well distributed
3. Program parks and open space to maximize potential
4. Interconnect parks, trails, and greenways
5. Protect and enhance natural resources
6. Protect and respect cultural resources
7. Cultivate partnerships
8. Ensure that the Parks Master Plan is practical to implement


































VANCOUVER PARKS - EXISTING

Parks

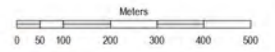
-  City-Wide Park
-  Community Park
-  Neighbourhood Park
-  Natural Area
-  Open Space / Boulevard
-  Other Open Space

Map 1:
Existing Parks
and Trails






- Legend**
-  School Playground
 -  Playground
 -  Washrooms
 -  For Removal*
 -  RunningTrack
 -  School Playing Field
 -  Official Bike Route
 -  Marked
 -  To Be Marked In Future
 - OCP Trail System**
 -  Upper Levels Trail System - Primary
 -  Upper Levels Trail System - Secondary
 -  Ravine Trail System - Primary
 -  Ravine Trail System - Secondary
 -  Green Necklace Trail System - Primary
 -  Green Necklace Trail System - Secondary
 -  Waterfront Trail System - Primary
 -  Waterfront Trail System - Secondary
 -  Potential Rail Trail Connection
 -  Trans Canada Trail
 - Parks**
 -  City-Wide Park
 -  Community Park
 -  Neighbourhood Park
 -  Natural Area
 -  Open Space / Boulevard
 -  Other Open Space
 - Schools**
 -  School Use
 -  City-Wide Use
 -  Community Use
 -  Neighbourhood Use
 -  Natural Use
 -  City Owned Land
 -  City Border
 -  Stream

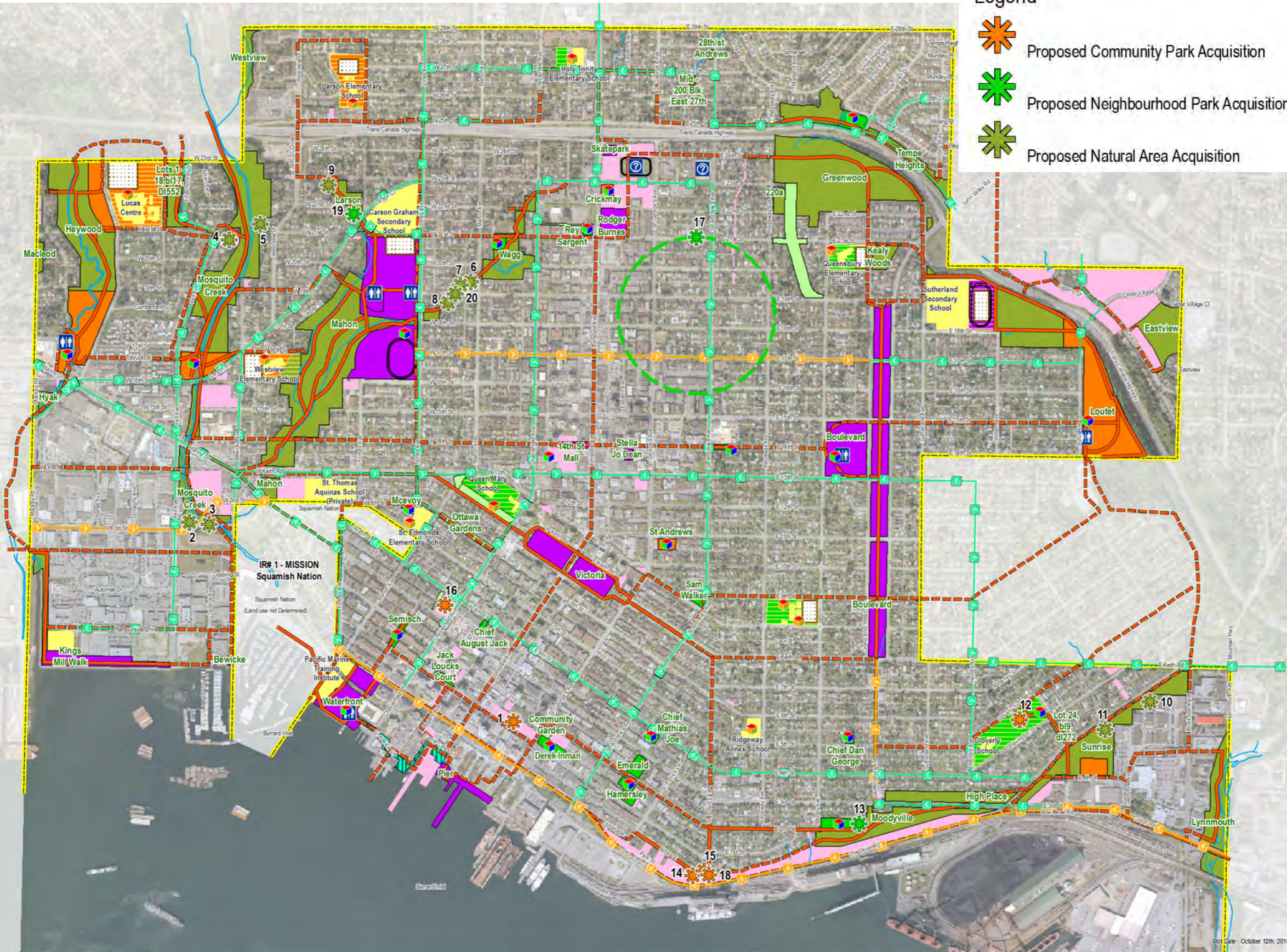
*Note: Norsemen and Micky McDougal fields are not included since they are scheduled for removal as part of the Harry Jerome redevelopment


















VANCOUVER PARKS - PROPOSED

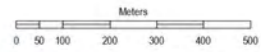
Legend

-  Proposed Community Park Acquisition
-  Proposed Neighbourhood Park Acquisition
-  Proposed Natural Area Acquisition



- ### Legend
-  Proposed Community Park Acquisition
 -  Proposed Neighbourhood Park Acquisition
 -  Proposed Natural Area Acquisition
 -  School Playground
 -  Playground
 -  Washrooms
 -  For Removal*
 -  Running Track
 -  School Playing Field
 -  Official Bike Route
 -  Marked
 -  To Be Marked In Future
 - OCIP Trail Status**
 -  Existing
 -  Proposed
 - Parks**
 -  City-Wide Park
 -  Community Park
 -  Neighbourhood Park
 -  Natural Area
 -  Open Space / Boulevard
 -  Other Open Space
 - Schools**
 -  School Use
 -  City-Wide Use
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 - Natural Use
 - City Owned Land
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*Note: Norsemen and Micky McDougal fields are not included since they are scheduled for removal as part of the Harry Jerome redevelopment





breathe

EDMONTON'S GREEN NETWORK STRATEGY

Strategic Plan

August 2017



EDMONTON'S GREEN NETWORK STRATEGY



breathe

EDMONTON'S GREEN NETWORK STRATEGY

Strategic Plan

August 2017

Edmonton

CONTENTS

- 1 Foundations
- 2 Edmonton's Green Network: layers and functions
- 3 Providing open space
- 4 Policy actions
- 5 From policy to action

Consultants: O2 Planning and Design, Calgary

EDMONTON'S GREEN NETWORK - Layers and functions

THEMES



ECOLOGY

Supports and enhances the environment by sustaining healthy and resilient ecosystems.



CELEBRATION

Connects people to one another and builds a sense of place by providing places for communities to thrive, gather and celebrate.



WELLNESS

Promotes healthy living and fosters wellbeing through diverse kinds of recreation, mobility and environments.

“BREATHE is a transformative strategy, based on a network approach. This approach acknowledges ***the interconnected nature of open spaces across the city, and the way that many different urban networks coexist and overlap to form an integrated, multifunctional green network.*** The Strategy considers the amount, function and configuration of not only municipal parks, but all publicly accessible open spaces, in order to form a comprehensive picture of how the entire green network performs.”

EDMONTON'S GREEN NETWORK- Definition

Edmonton's green network is an integrated system of open spaces, municipal parks and connections that provide value to residents and the environment.

It includes all the outdoor land and water that is publicly owned or publicly accessible, such as parks, plazas, pedestrian-priority streets, natural areas, greenways and green infrastructure.

THE WAY AHEAD + THE WAYS



VISION + GUIDING PRINCIPLES

Recognizable + Unique

Integrated + Multifunctional

High Quality Public Realm

Community Capacity

Safety

Wellness

Financial Resilience

Connected + Coherent

Equitable + Accessible

Ecological Integrity + Conservation



ECOLOGY

Water Management



Climate Regulation



Biodiversity



Risk Mitigation



Waste Management



Food Production



CELEBRATION

Aesthetic Value



Community Building



Public Safety



Heritage



Destination + Tourism



WELLNESS

Recreation



Mental Health + Wellbeing



Active Transportation



Learn + Play



STRATEGIC DIRECTIONS

Safe + Inclusive

Vibrant Spaces

Community Engagement

Education + Awareness

Distribution + Supply

Public Access + Connectivity

Ecological Integrity

Adaptive Management + Flexible Spaces

Collaborative Planning

Sustainable Funding

POLICY ACTIONS

EDMONTON'S GREEN NETWORK- Engagement

On-line surveys: 3,750 individuals and 94 stakeholder and community organizations

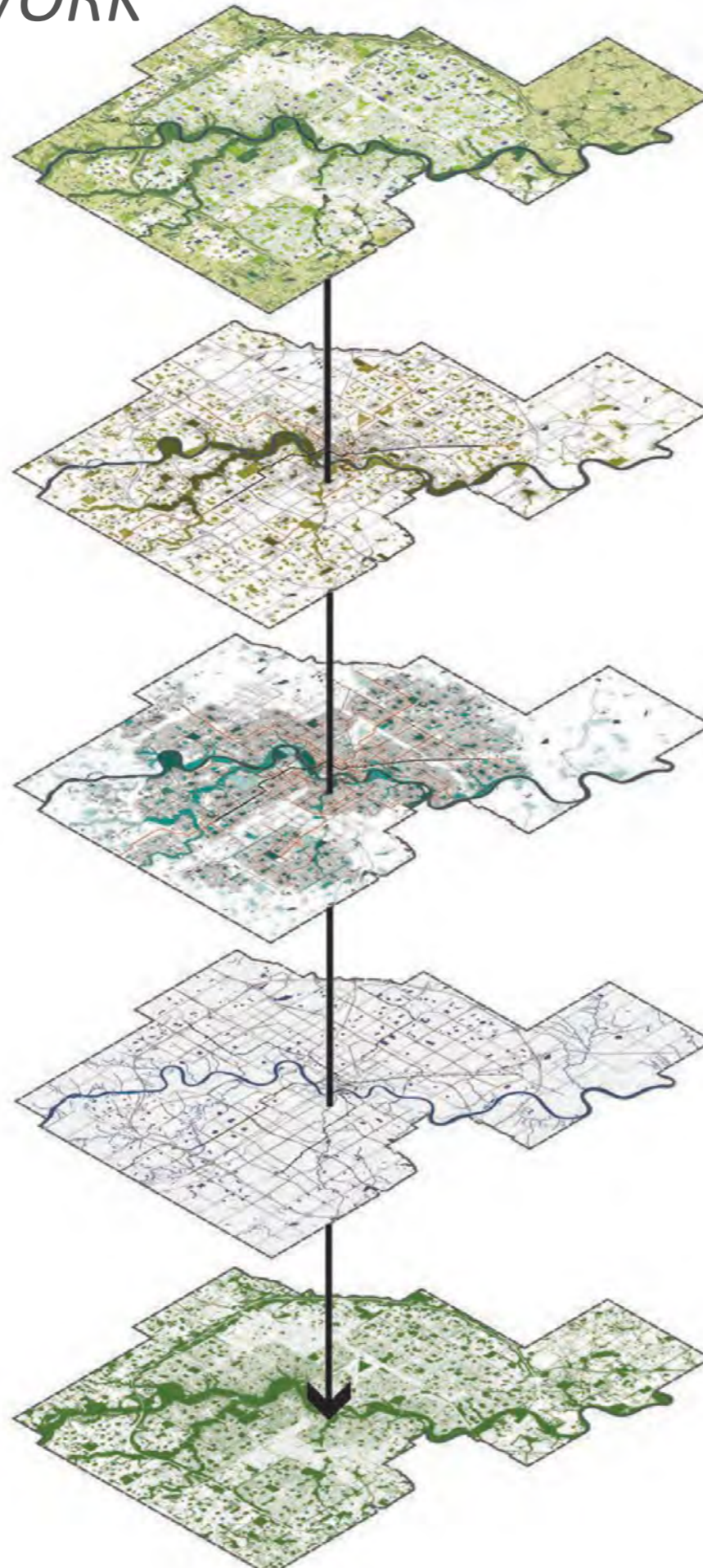
*More than **45 events and discussions**, including:*

- » Interactive public open houses*
- » Stakeholder meetings or workshops*
- » Pop-up engagement sessions at festivals and public events*
- » Meetings with communities of interest (e.g. children, youth, older adults, persons with disabilities, newcomers, etc.)*

GEOSPATIAL ANALYSIS

EDMONTON'S GREEN NETWORK

Ch. 2 Layers and functions



Ecology Network

- › Environmentally Sensitive Areas
- › Natural and Semi-Natural Areas
- › Community Gardens
- › Waterbodies
- › Wetlands
- › Stormwater Features and Ponds
- › Hydrology
- › Wildlife Connectivity and Habitat
- › Urban Forest Canopy



Celebration Network

- › Festival and Event Spaces
- › Community Gathering Spaces
- › Historic and Culturally Significant Landscapes
- › Main and Pedestrian-Priority Streets
- › Squares, Plazas and Promenades
- › Public Art
- › Ceremonial Spaces
- › Special Purpose Facilities



Wellness Network

- › Scenic and Serene Spaces
- › Sports Fields and Athletic Amenities
- › Educational Activity Centres
- › Pathways and Trails
- › Cycling Routes
- › Playgrounds and Spray Parks
- › Outdoor Ice Rinks and Skating Trails
- › Ski Hills and Cross Country Trails



Urban Infrastructure Network

- › Road and Pathway Network
- › Transit Network
- › Drainage Infrastructure
- › Power and Water Networks
- › Communications Infrastructure
- › Land Use and Development

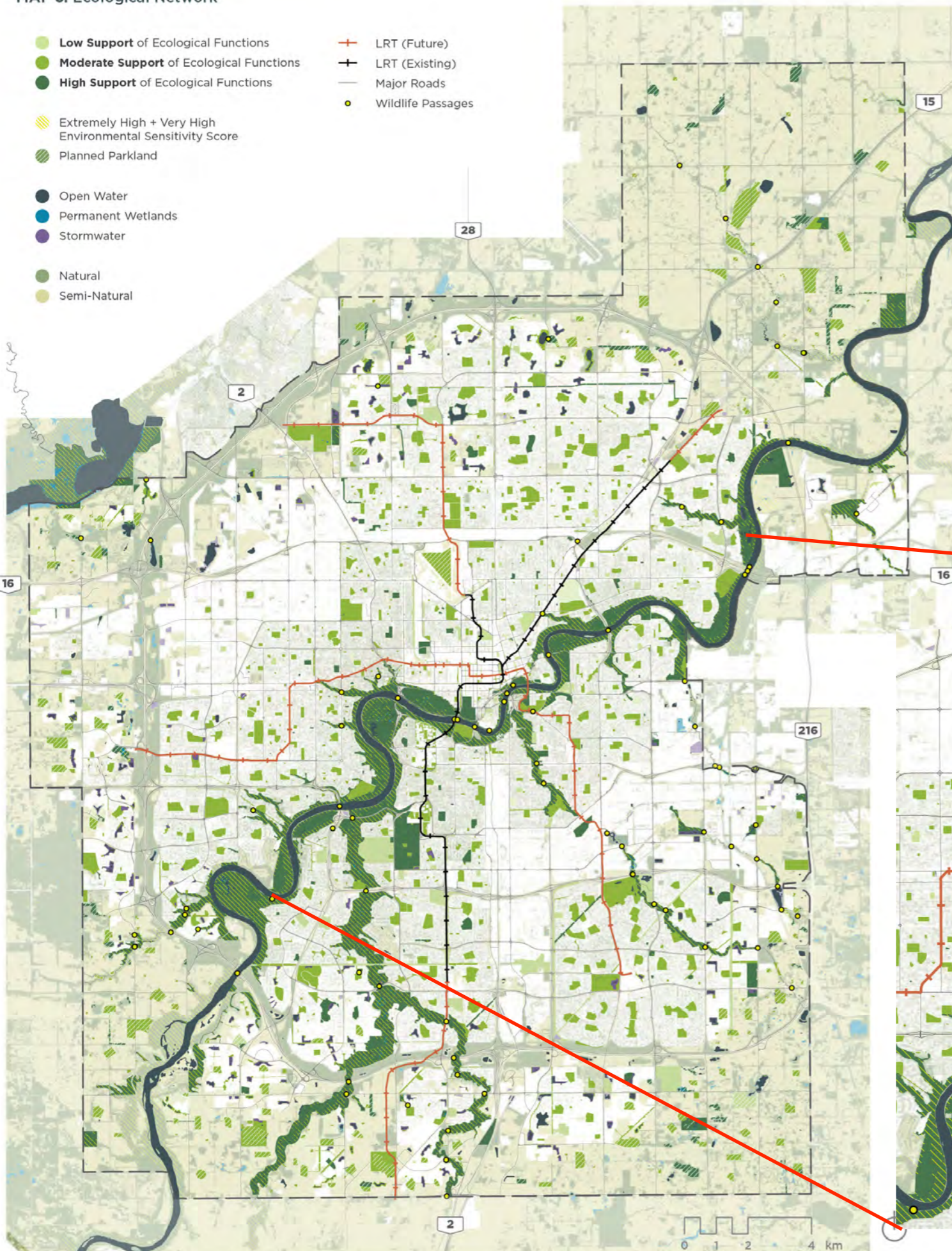
The Green Network

Publicly accessible open spaces contributing the city's:

- › Ecological Function
- › Operational Capacity
- › Recreational Potential
- › Social Community
- › Health and Wellbeing

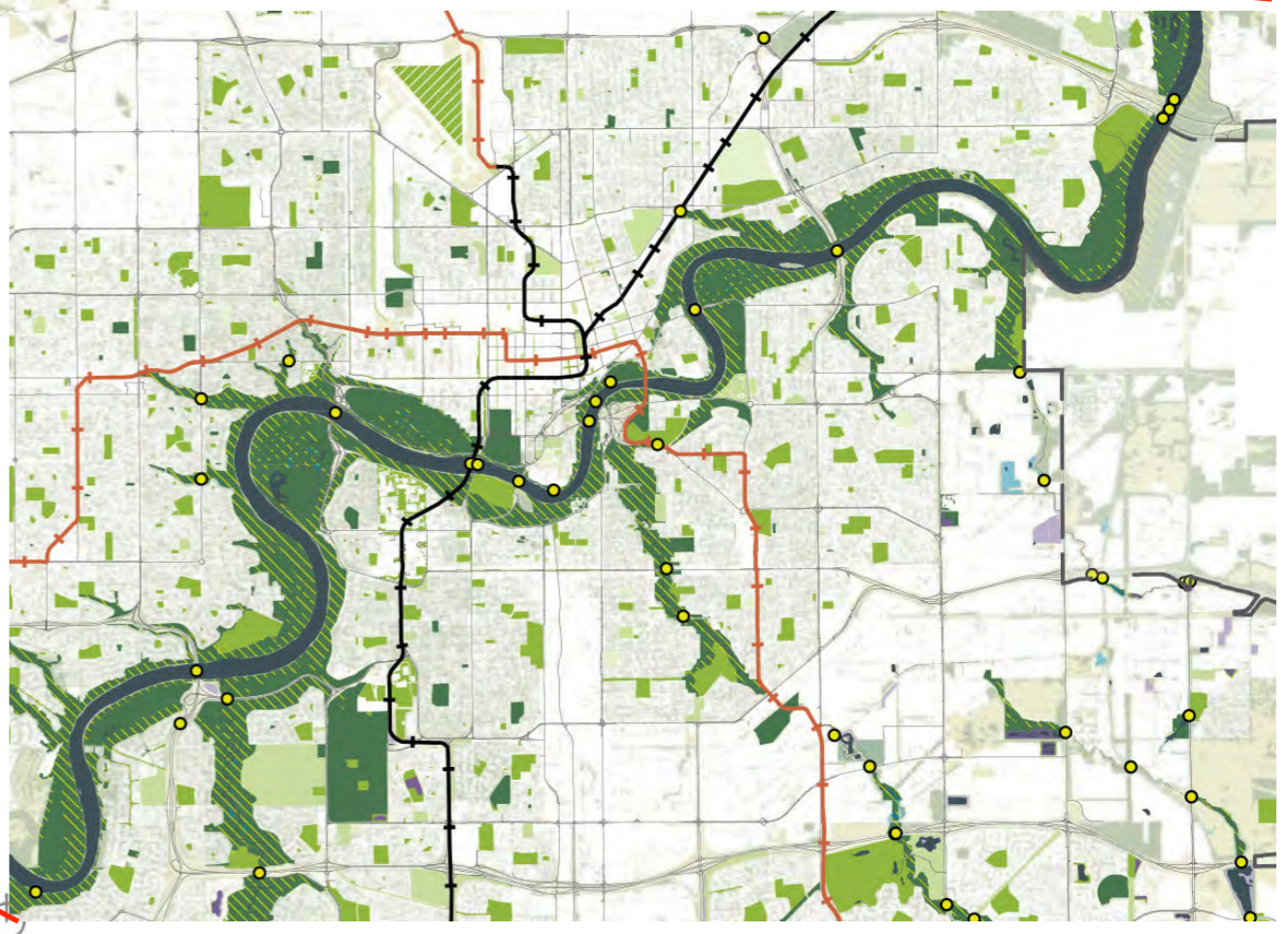
MAP 3: Ecological Network

- Low Support of Ecological Functions
- Moderate Support of Ecological Functions
- High Support of Ecological Functions
- Extremely High + Very High Environmental Sensitivity Score
- Planned Parkland
- Open Water
- Permanent Wetlands
- Stormwater
- Natural
- Semi-Natural
- LRT (Future)
- LRT (Existing)
- Major Roads
- Wildlife Passages



MAP 3: Ecological Network

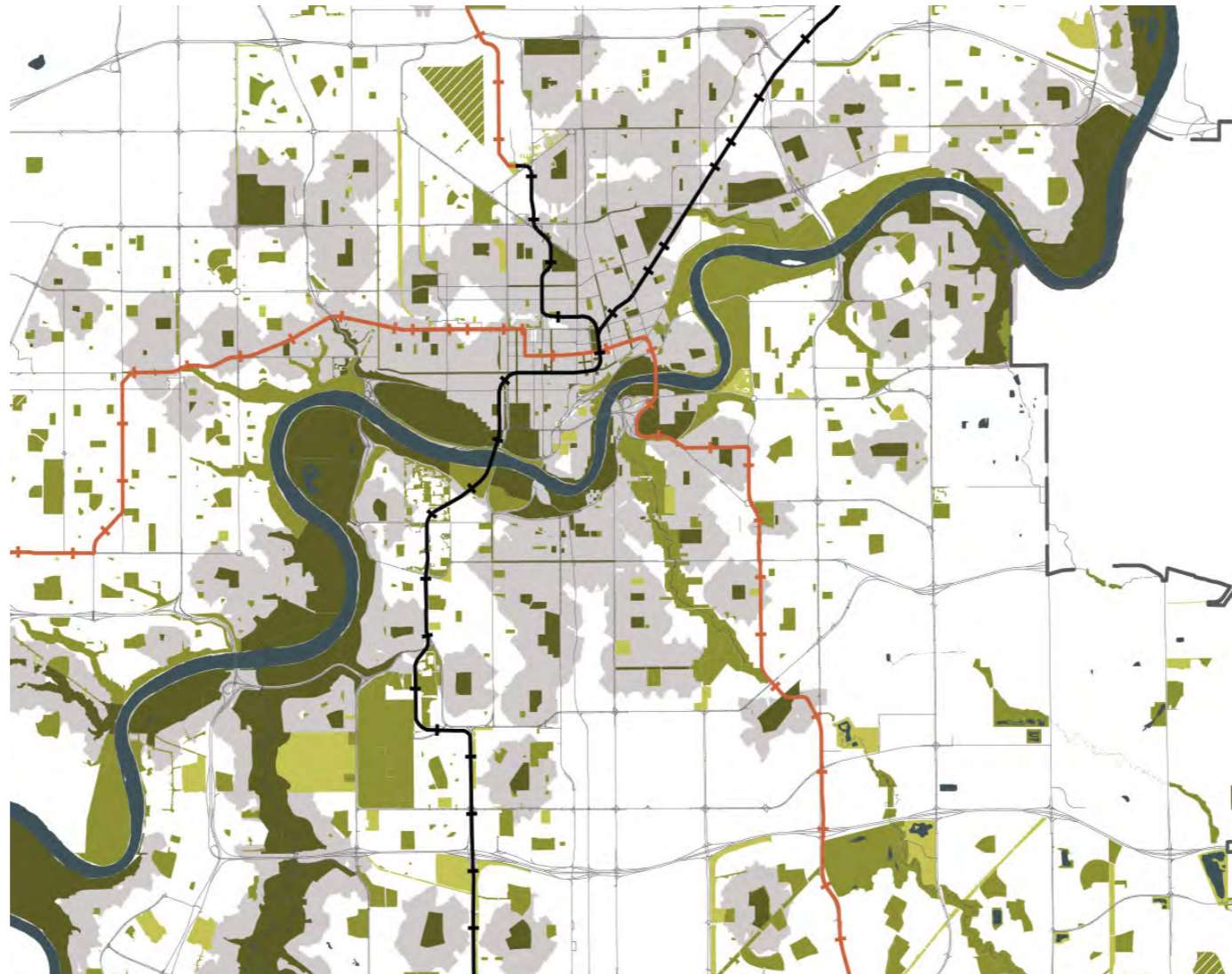
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- Wildlife Passages



MAP 4: Celebration Network

- **Low Support** of Celebration Functions
- **Moderate Support** of Celebration Functions
- **High Support** of Celebration Functions
- 400m Walkable Catchment around High Functioning Celebration Spaces
- Planned Parkland
- Open Water
- + LRT (Future)
- + LRT (Existing)
- Major Roads

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MAP 6: Multifunctionality of the Green Network

- Functional: High Functioning for **One** Theme
- Diverse: High Functioning for **Two** Themes
- Highly Diverse: High Functioning for **Three** Themes
- **Other Open Spaces**
- Proposed Parkland
- LRT (Future)
- LRT (Existing)
- Major Roads



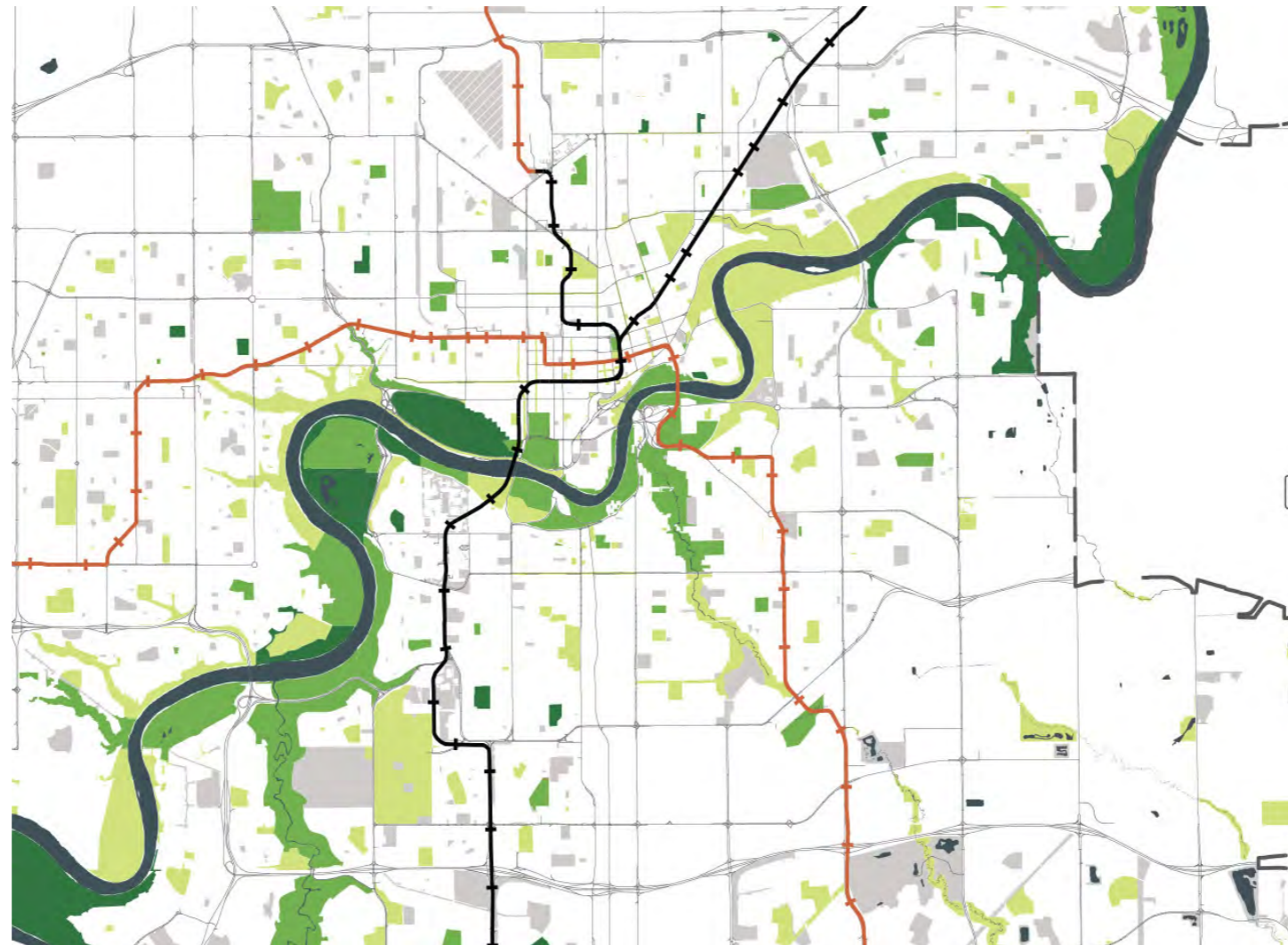
ECOLOGY



CELEBRATION

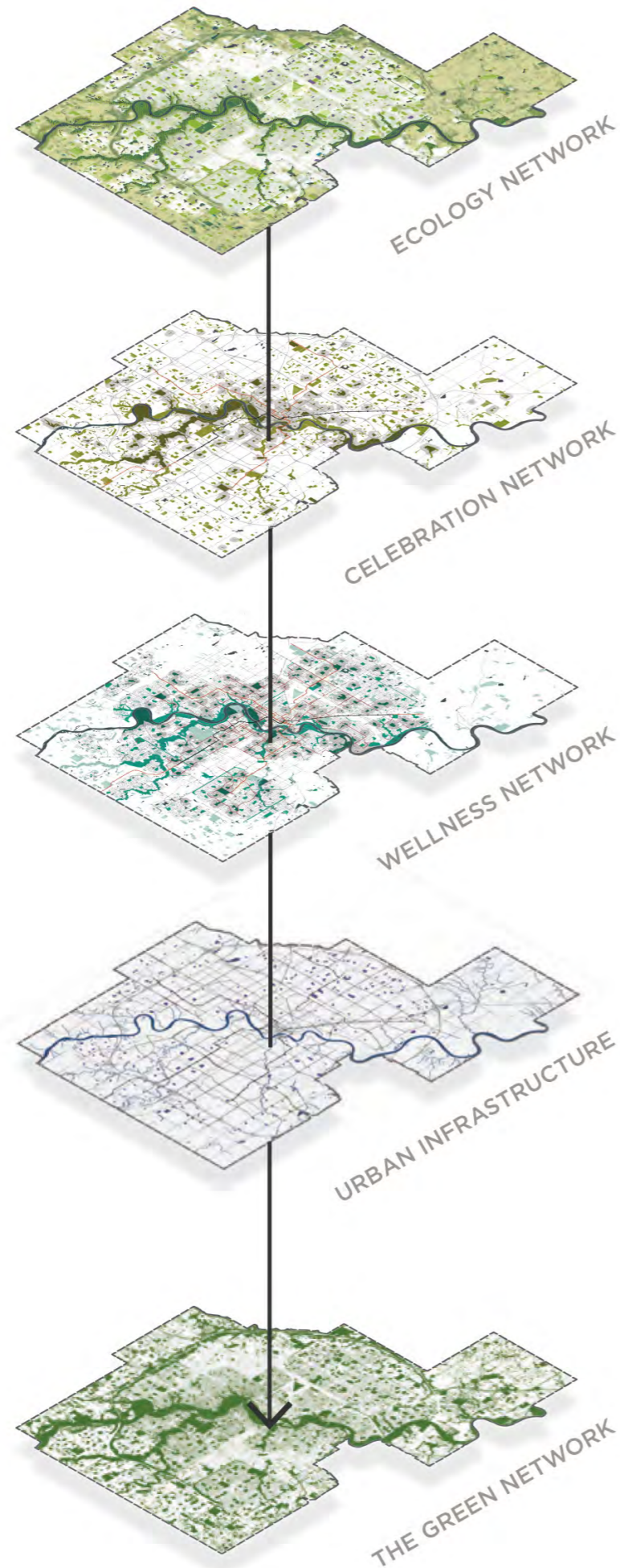


WELLNESS



LONG RANGE VISIONING

EDMONTON- BREATHE



STRATEGIES

- 1 Safe and inclusive
- 2 Vibrant spaces
- 3 Community engagement
- 4 Education + awareness
- 5 Distribution + supply
6. Public access + connectivity
- 7 Ecological integrity
- 8 Adaptive management + flexible spaces
- 9 Collaborative planning
- 10 Sustainable funding

EDMONTON'S GREEN NETWORK- Providing open space



Chapter 3

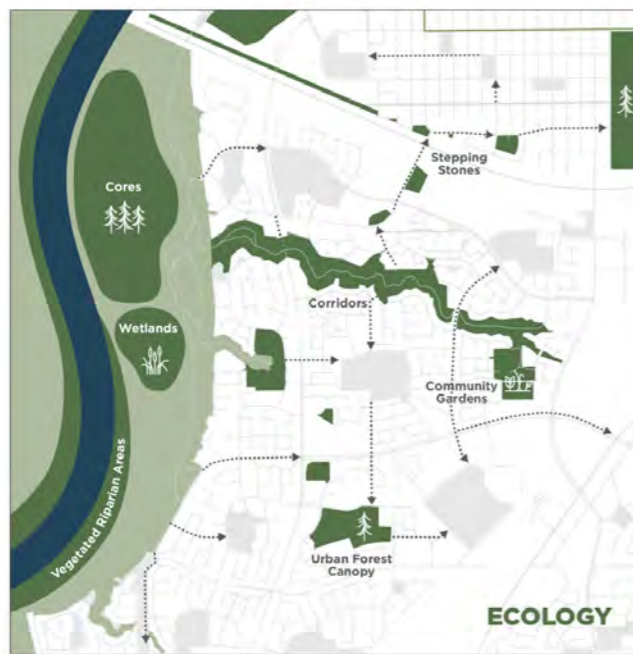
PROVIDING OPEN SPACE

Distribution: *The arrangement of, and access to, open spaces across the landscape.*

Quality: *The functionality of an open space, considering the condition of its infrastructure/ amenities and the value of the functions it provides.*

Diversity: *The range of different open space types and functions within the landscape.*

Supply: *The physical amount of open space.*

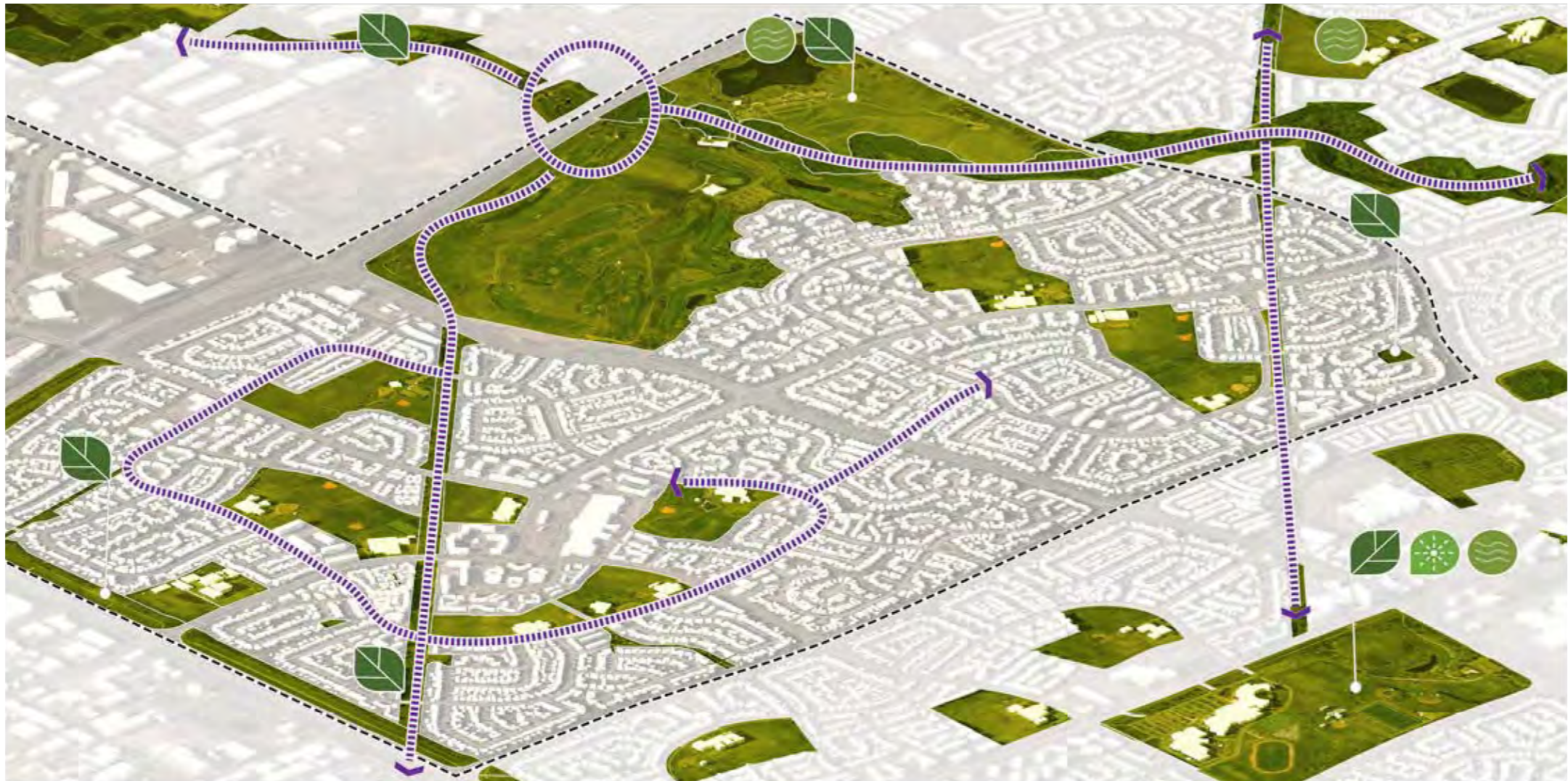


Ch. 3 PROVIDING OPEN SPACE STRATEGIES

- Improve the quality and multifunctionality of parks
- Retain existing public open spaces, parkland or otherwise.
- Repurpose under-utilized school sites and other spaces
- Encourage naturalization and Low Impact Development
- Improve green network connections
- Multipurpose greenway corridors along LRT lines
- Improve connections to the south

EXAMPLES OF PROPOSITIONS

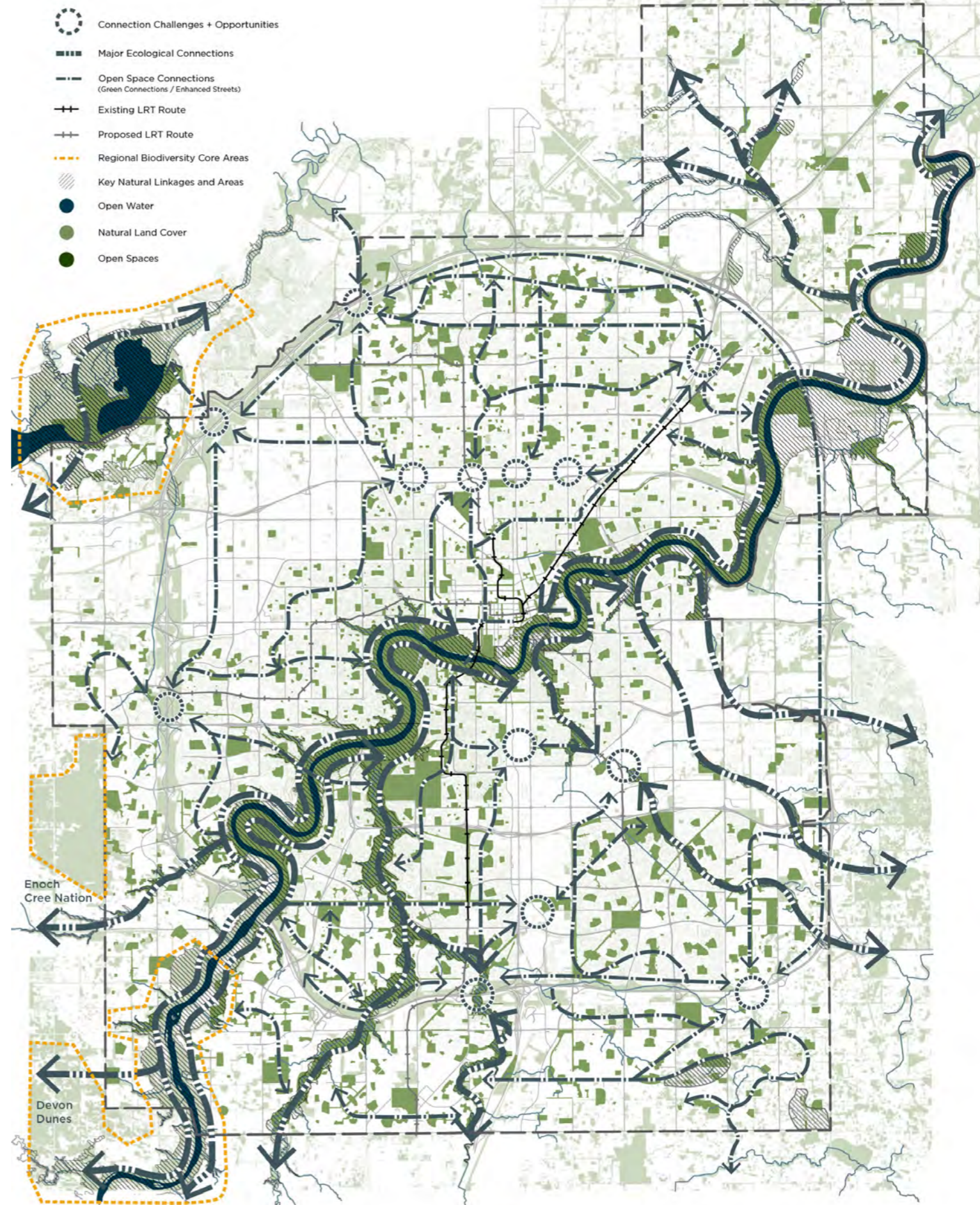
- Improve existing spaces for greater multifunctionality.
- Create new designed ecological space(s)
 - › Daylighting buried watercourses (e.g. Mill Creek).
 - › Conversion of existing parks to more ecologically-supportive spaces
- Establish “Green Streets” with ecological plantings in roadway greens.



EDMONTON'S GREEN NETWORK

MAP 2: Conceptual Spatial Connections




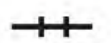





Concept map

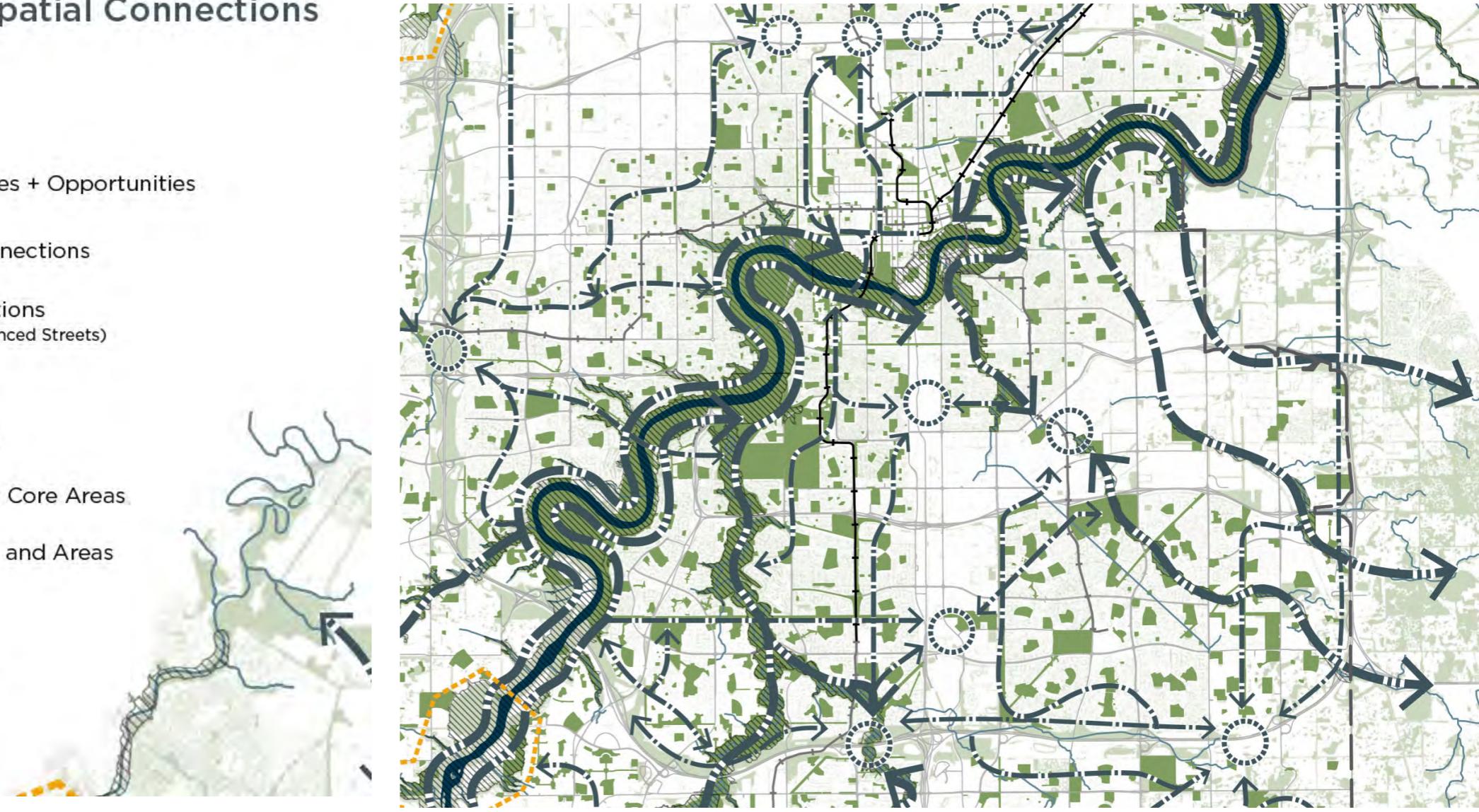


EDMONTON'S GREEN NETWORK

Concept map

MAP 2: Conceptual Spatial Connections

-  Connection Challenges + Opportunities
-  Major Ecological Connections
-  Open Space Connections
(Green Connections / Enhanced Streets)
-  Existing LRT Route
-  Proposed LRT Route
-  Regional Biodiversity Core Areas
-  Key Natural Linkages and Areas
-  Open Water
-  Natural Land Cover
-  Open Spaces



COMPREHENSIVE GREEN NETWORK PLANNING



INTEGRATED THINKING

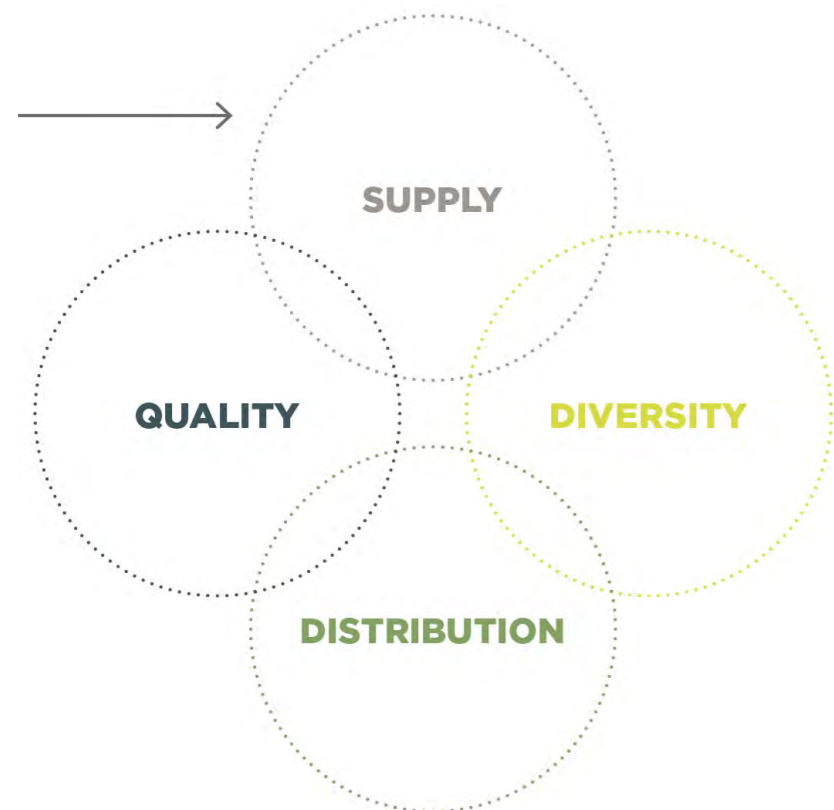
- visions, goals, objectives, indicators, targets, actions

PROCESS

- rock-solid analysis- both geospatial and human factors
- effective, transparent and long-term public engagement
- measure and evaluate

PROPOSITIONS

- long range visioning
- supply + distribution, diversity, quality, equity, connectivity
- ecological + anthropocentric functions (working together)



.....NEXT UP: INTRODUCE PROJECT 2