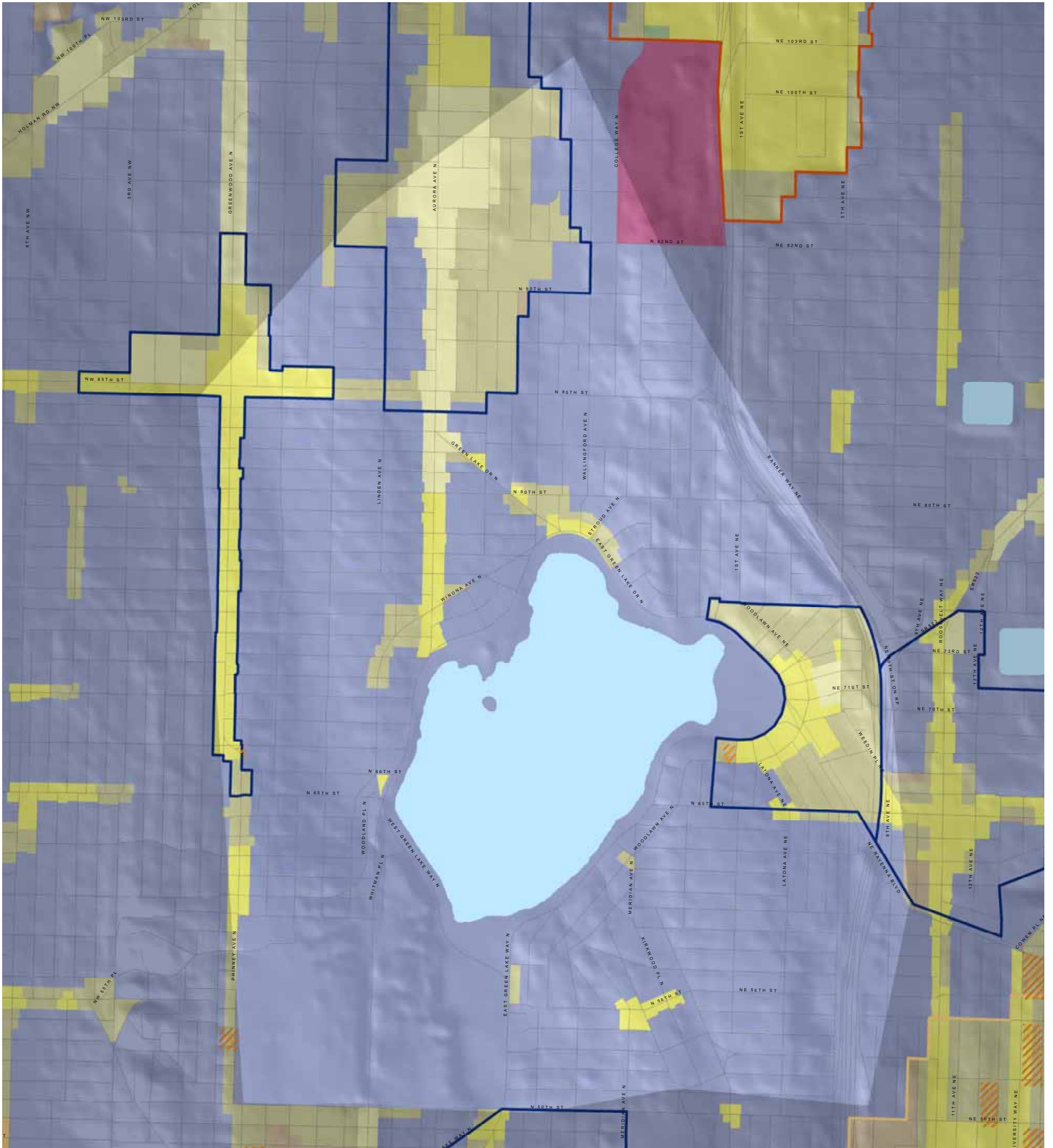# STUDY AREA : GREEN LAKE

Open Space Seattle 2100

Green Futures Charrette
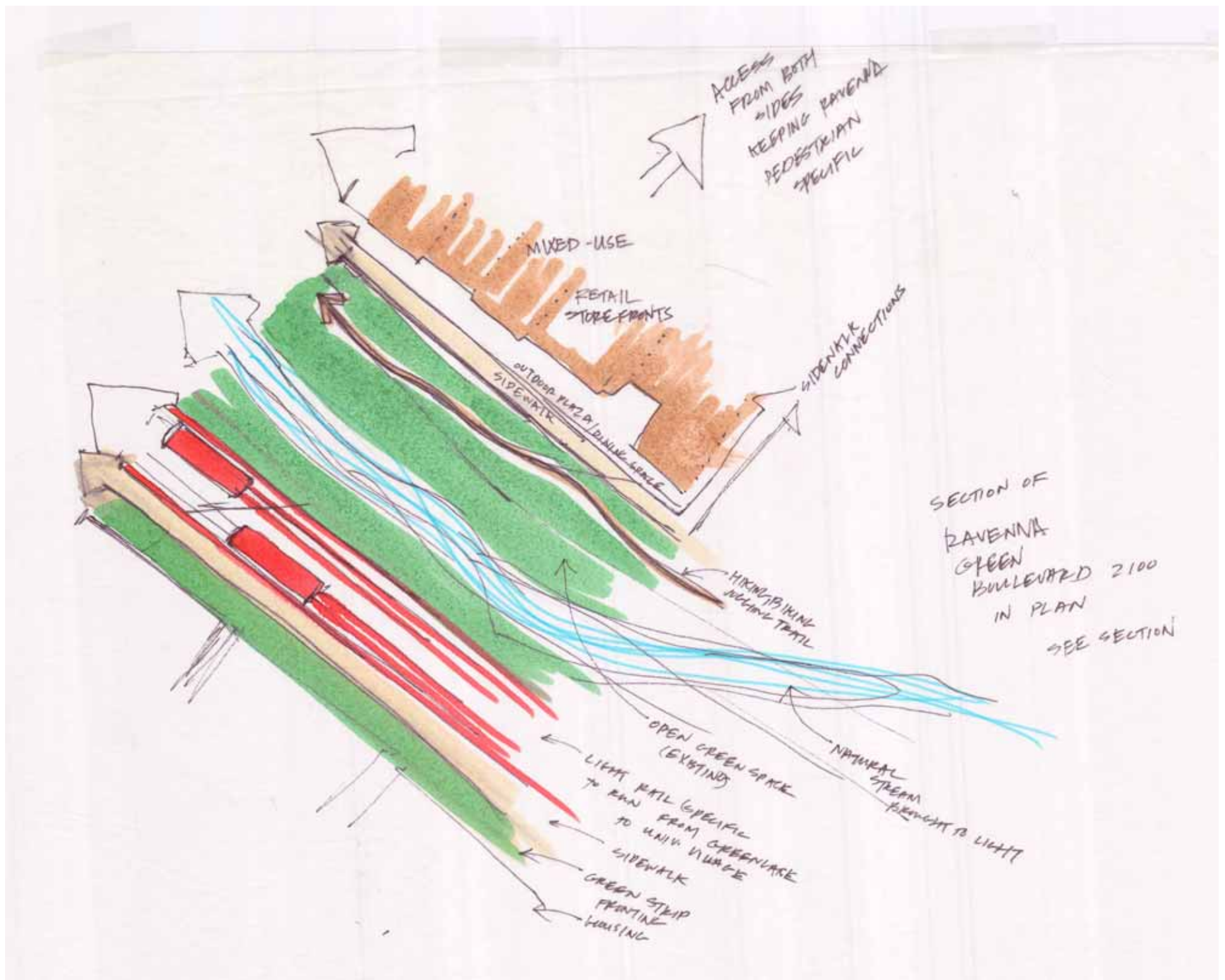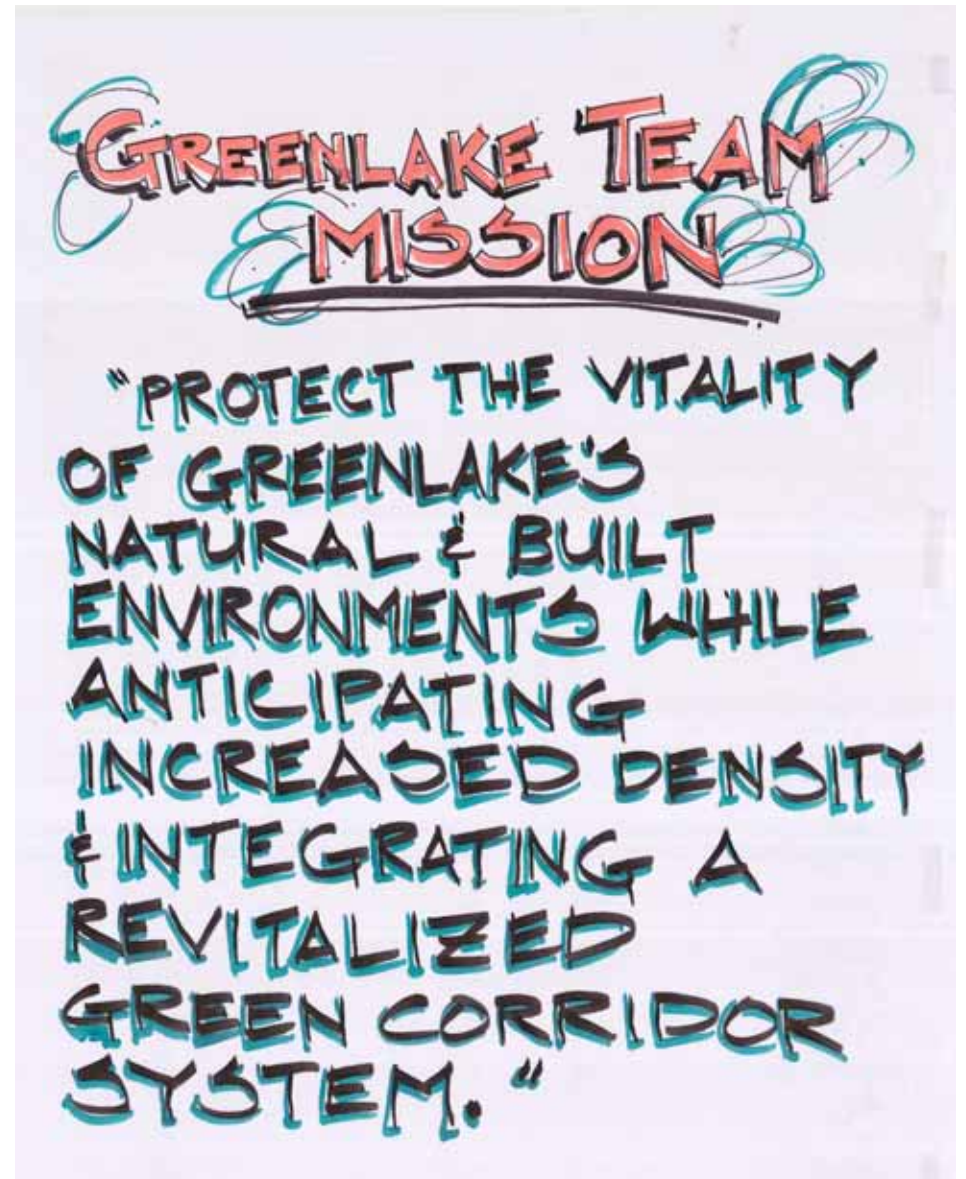February 3+4, 2006
Seattle, Washington

Planning for Green Lake 2100

The Green Lake watershed incorporates the neighborhood of Green Lake and parts of Licton Springs, Phinney, and north Wallingford. Its dominant feature is Green Lake, which is the raison d'etre for the regional park of the same name. Adjacent to Green Lake Park are Woodland Park, which features heavily used active and passive recreational areas, and the Woodland Park Zoo. The northern portion of the watershed includes Licton Springs Park, which contains Seattle's last remaining natural mineral spring. Historically, this spring was one of several which fed Green Lake. Today, it bypasses Green Lake in a culvert, and empties out at Lake Union.

Green Lake is the busiest park in the state of Washington, having received 1 million visitors in 2005, and the heart of a nutrient-rich ecosystem which is still only partially understood. Urban development has had a profound impact on the hydrological action of the lake. A 1908 USGS map shows a slightly larger lake than the one we are familiar with today – the water level was lowered by about 10 feet under the Olmsted Plan. By the 1930s, the lake was suffering from deforestation, development and the elimination of natural stream flow. Periodic blooms of blue-green algae, and the microorganisms that cause swimmer's itch, continue to be a problem today. Invasive species including European carp and milfoil threaten to overwhelm the natural inhabitants of the ecosystem.

The primary goal of our plan is to promote the ecological health of our park system while also accommodating the


GREENLAKE TEAM MISSION

"PROTECT THE VITALITY OF GREENLAKE'S NATURAL & BUILT ENVIRONMENTS WHILE ANTICIPATING INCREASED DENSITY & INTEGRATING A REVITALIZED GREEN CORRIDOR SYSTEM."
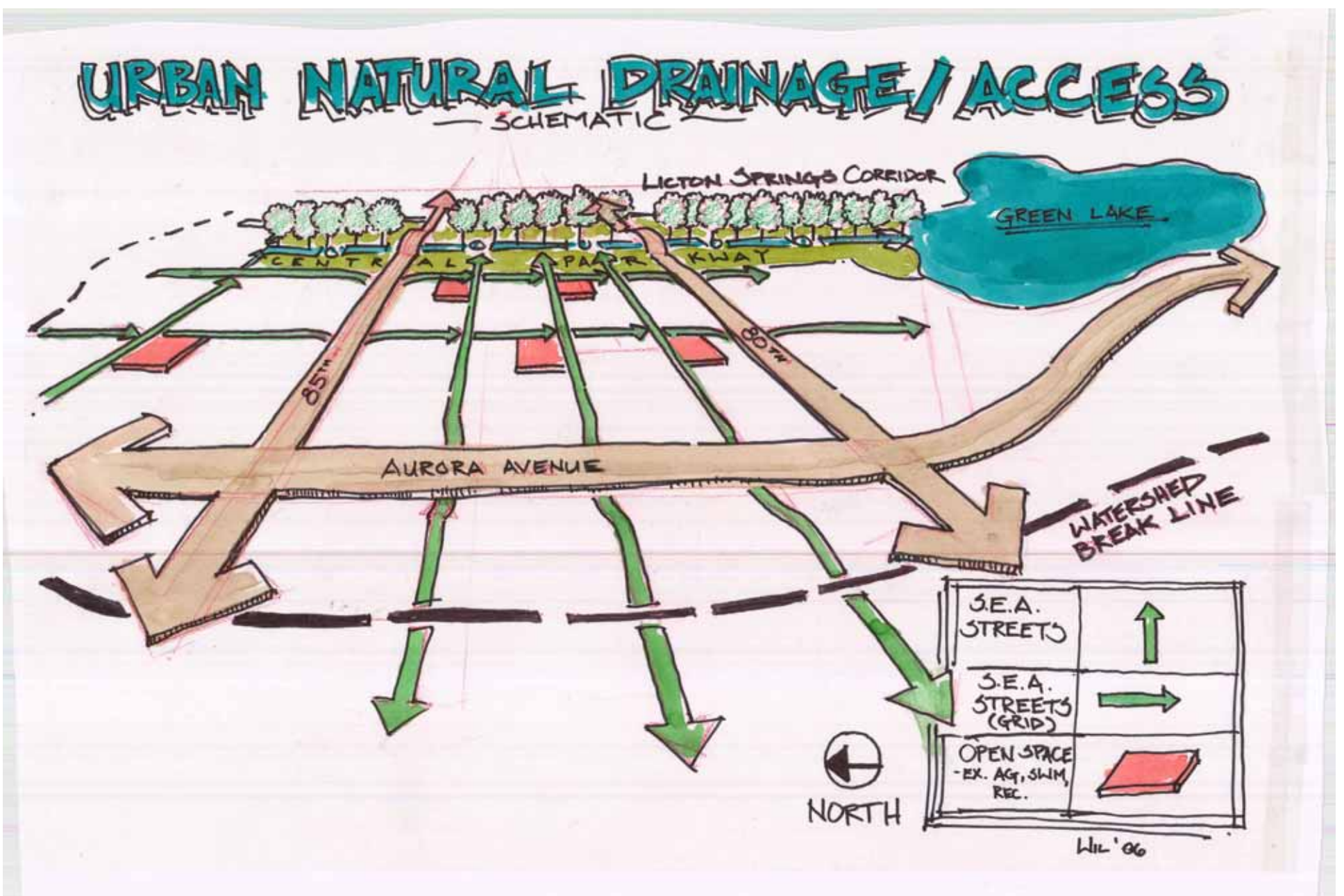
needs and impacts of a growing population. Central to this plan is an effort to maintain and improve Green Lake as the heart of a naturally functioning ecosystem by improving the natural inflow and outflow of clean, balanced water. Restoration of the natural flow will help recharge groundwater, provide streamside wildlife habitat, enhance the aesthetics of the park and surrounding neighborhood, and increase environmental awareness of residents and visitors.
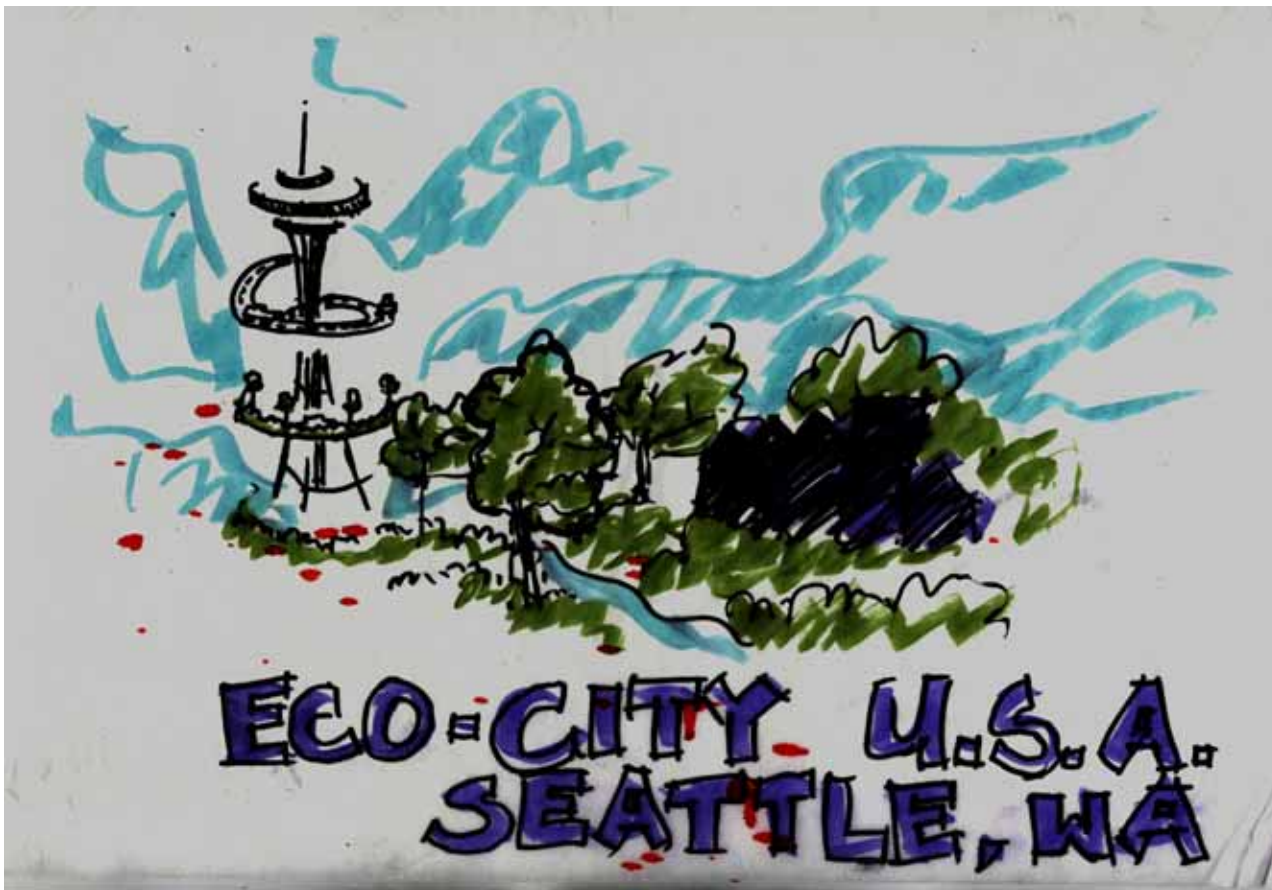
Our team identified several opportunities for restoring water flow to Green Lake: the historic stream that originates at Licton Springs and flowed through the Densmore Basin; and another historic stream that flowed from Crown Heights to Green Lake, which at times shares the path of the Interurban Trail. For outflow, daylighting Ravenna Creek would also provide opportunities to restore hydrologic connections and habitat connections. These daylit streams would employ SEA Street design and state-of-the-art filtration systems to treat water quality at various points throughout the system. These daylit stream corridors would also provide opportunities to connect regional pedestrian and bicycle trails. This layering of ecological function with recreational trails is a key component of our plan.
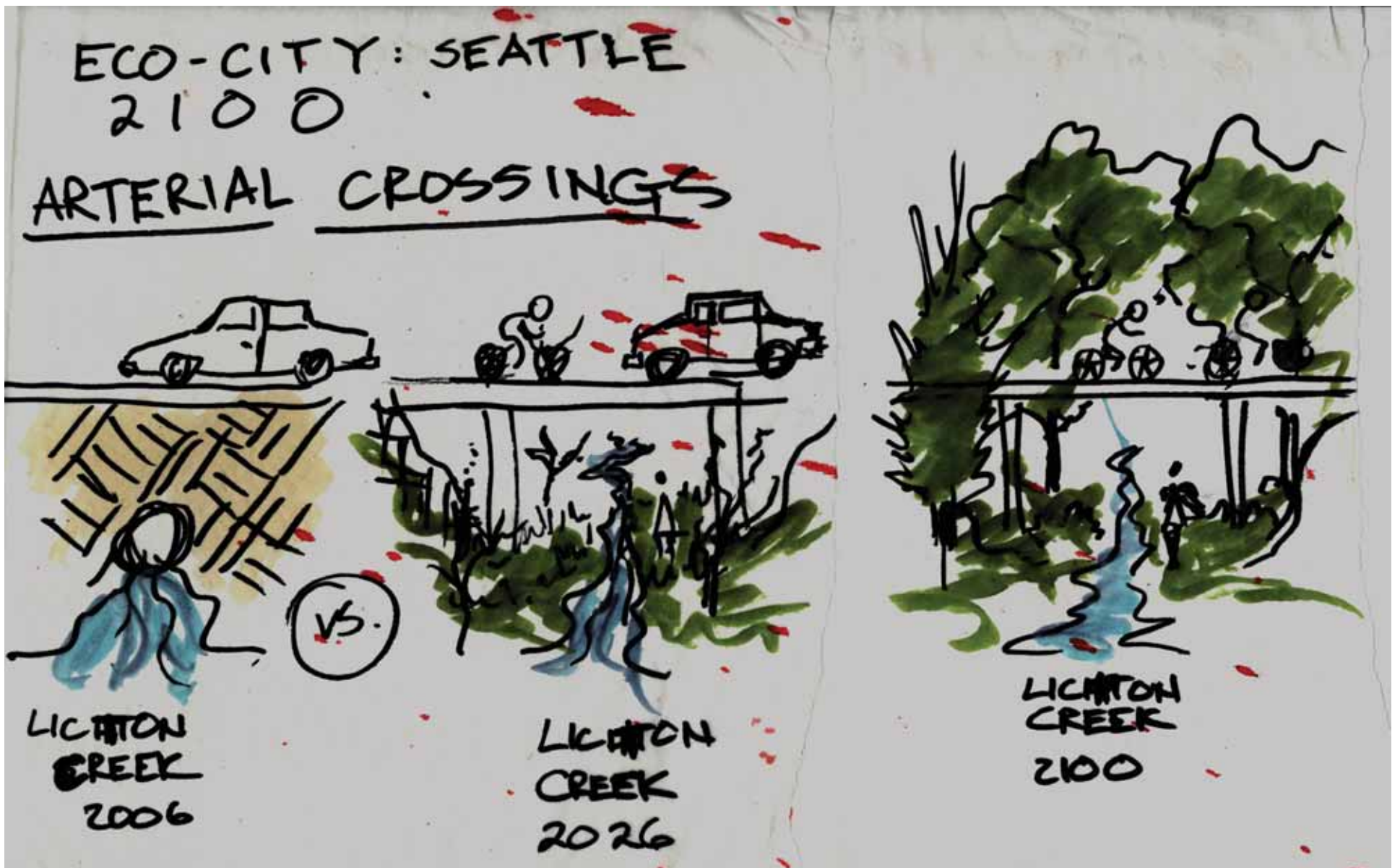
In terms of how people are getting around, we hope to encourage people

ECO-CITY: SEATTLE 2100
ARTERIAL CROSSINGS

LICTON CREEK 2006 vs. LICTON CREEK 2026   LICTON CREEK 2100


LICTON SPRINGS GREEN CORRIDOR 2100+
SECTION VIEW

100-year Implementation Strategies

- Water First (an education/propaganda program) – start with the kids
- Define jurisdictional boundaries based on watershed/basin boundaries
- GIS/GPS monitoring system
- Creates a foundation of interdependence (common goal)
  - Supreme stage of development
    - Dependence -> independence -> interdependence
- Acquire drainage/habitat/recreation right-of-ways
  - Green Corridors
- Renovate green corridors

RAVENNA BLVD. BECOMES A SEA STREET

ARTERIAL ROAD
2100

TYPICAL PEDESTRIAN CORRIDOR

RAVENNA GREEN BOULEVARD 2100!

SECTION VIEW

to use their cars less. Perhaps fewer cars, and slower traffic, might result in safer and more convenient conditions for those who choose to walk or ride bicycles. We would encourage people to use buses, which should be available at more frequent intervals, and which should also provide rides between nearby urban villages. We would also recommend that Green Lake Way be designated a green street, with limited vehicle access, thus blurring the boundary between park and street and improving pedestrian and bicycle access to the parks. Arterial bus and vehicle traffic would be encouraged to be re-routed between 1-4 blocks away from the perimeter of the park.

Also, to serve the needs of immediate residents of the watershed and to take some pressure off of the major parks, we recommend the creation of new small parks. These could be in the form of individual lots purchased with public money, or in a series of lid parks over I-5 which would improve safety and mobility across I-5 for pedestrians and bicyclists. Small parks are able to accommodate a range of uses, from a fitness trail to a P-Patch, to more passive playgrounds and gardens. One idea that might accompany P-Patches is a chicken coop co-op, in which participants would share the work and rewards for caring for chickens, and the co-op could exchange eggs, meat, and compost for vegetables grown in the an adjacent P-Patch.
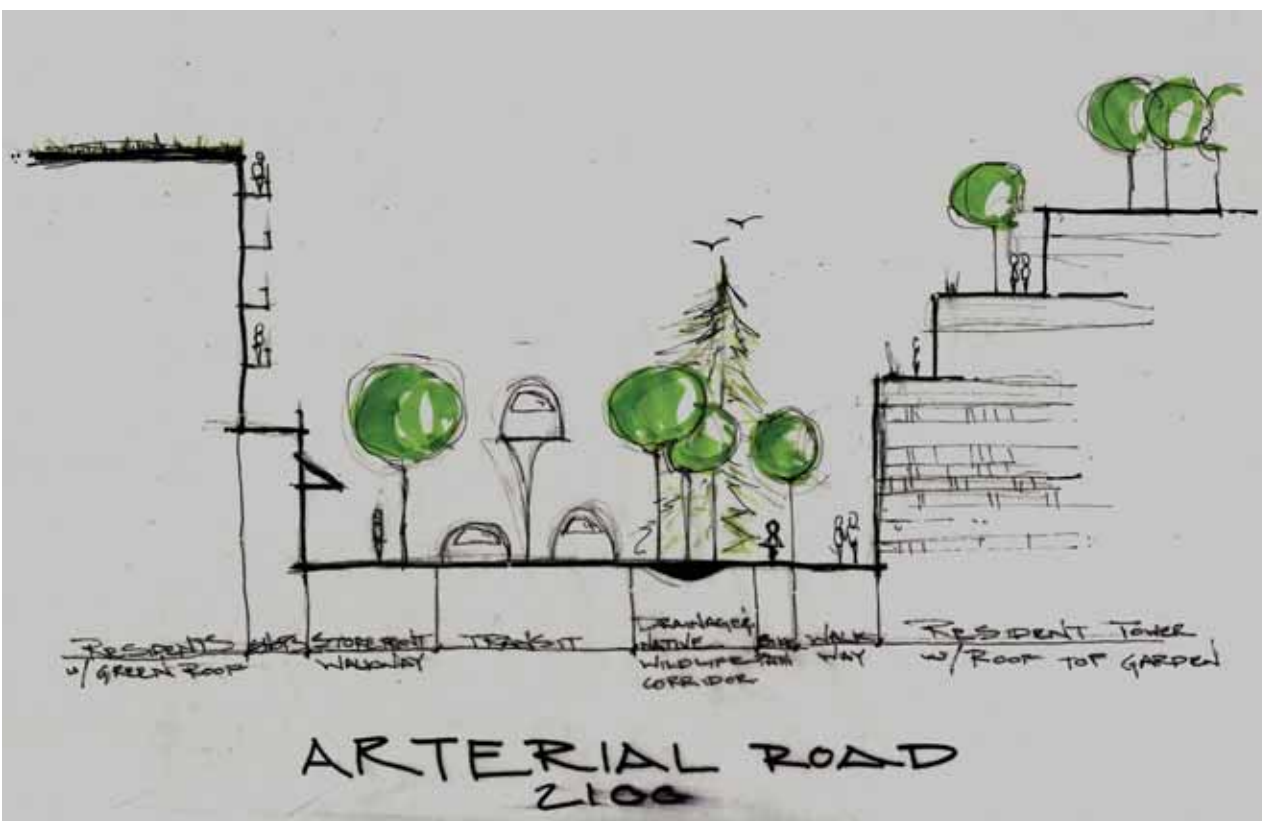
Since so much of this watershed is owned by individual homeowners, we would also recommend providing guidelines and incentives to homeowners for on-site stormwater treatment and habitat stewardship. This might be achieved in the form of green roofs, rain barrels, and rain gardens, or backyard habitat sanctuaries. Employing any of these strategies could result in a tax break for the owners.
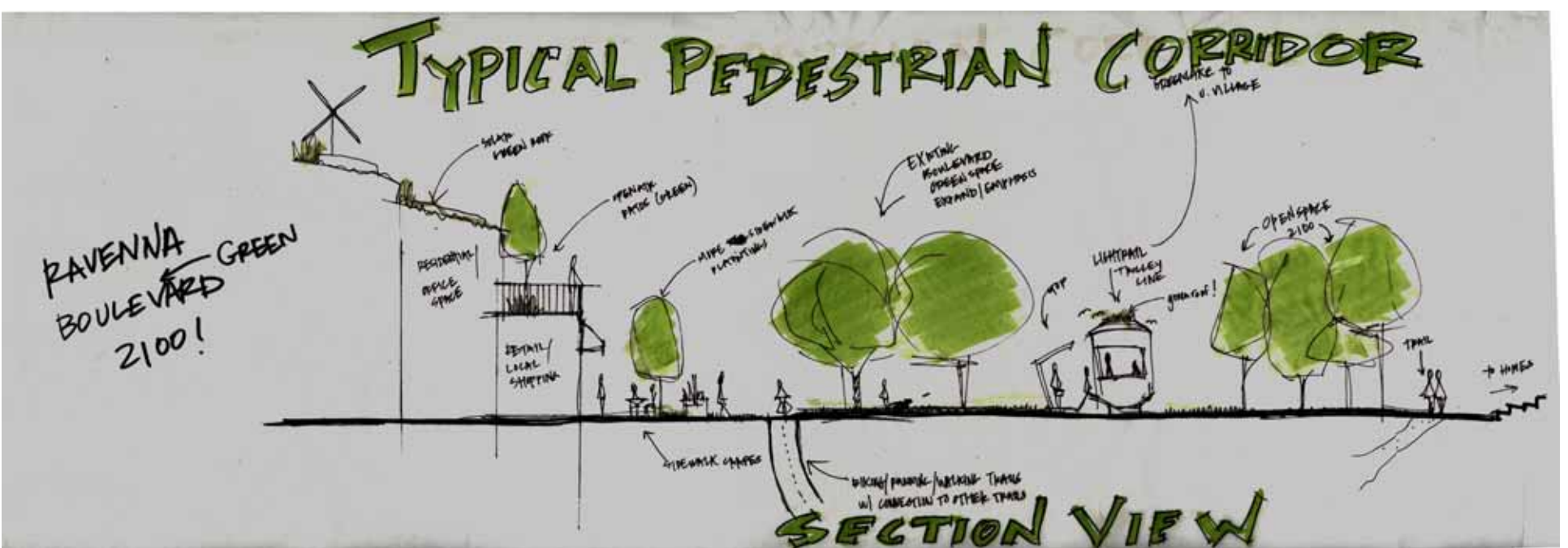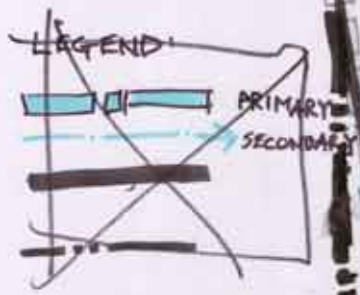
HYDROLOGY

WATER FIRST

- RESOURCE DRIVEN DEVELOPMENT

NOTES:
- ALL NATURAL STREAMS ARE PROPOSED TO BE RESTORED TO THEIR ORIGINAL ROLE; THEY CLEAN, TRANSPORT, & PROVIDE A HOME FOR RIPARIAN SPECIES.

HISTORIC BOG

PRIMARY DRAINAGE TO BE ESTABLISHED BY ADJACENT STUDY AREA TEAM

AURORA AVE.

LICTON SPRINGS CREEK

BREAK POINT

90TH

85TH

80TH

GREEN LAKE

I-5

RAVENNA CREEK

CONNECTS TO ADJACENT U. DISTRICT STUDY AREA

LEGEND:
PRIMARY
SECONDARY

LEGEND:
PRIMARY DRAINAGE
SECONDARY DRAINAGE
WATERSHED BOUNDARY
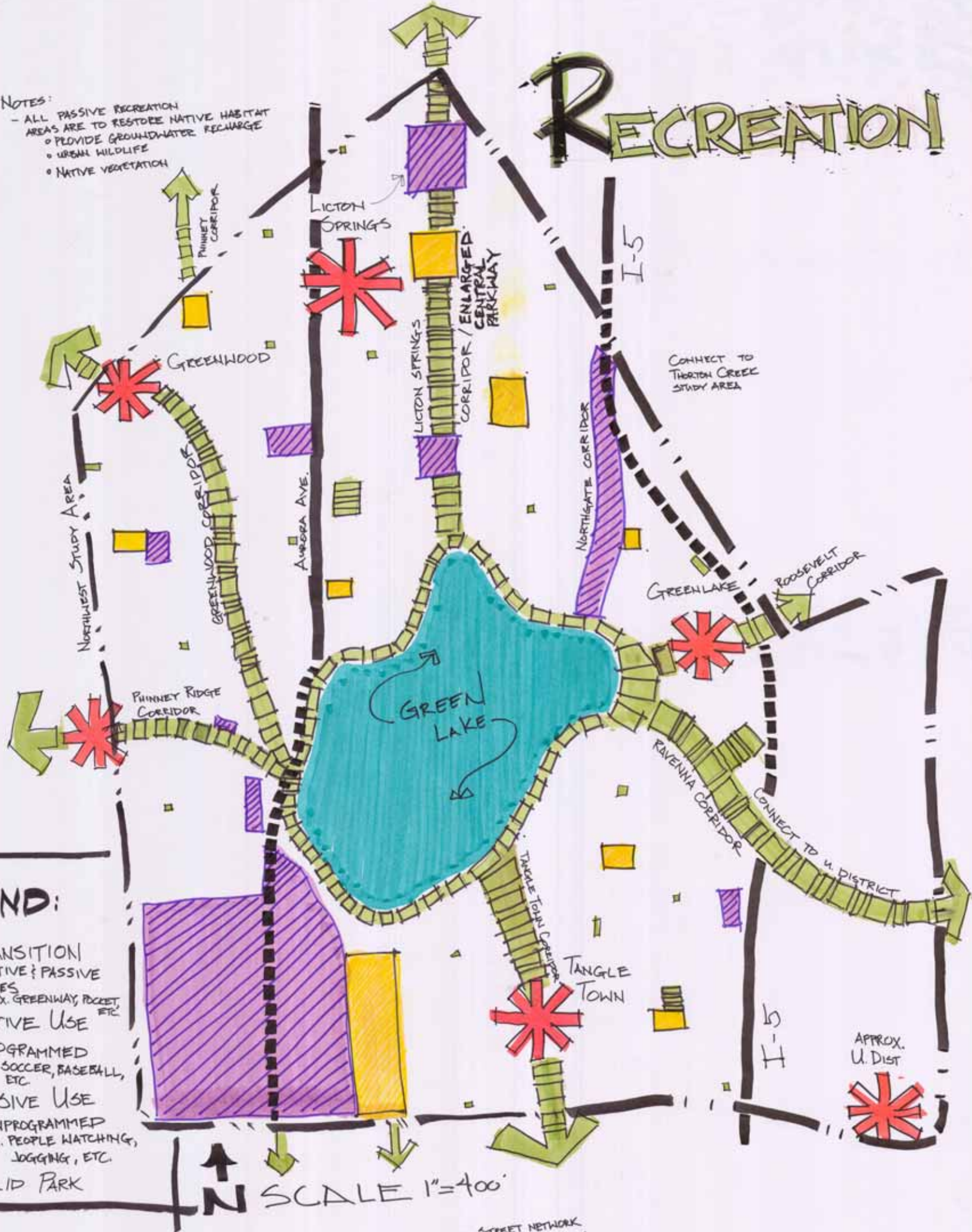STUDY AREA BOUNDARY

N

SCALE 1"=400'

RECREATION

NOTES:
- ALL PASSIVE RECREATION AREAS ARE TO RESTORE NATIVE HABITAT
  - PROVIDE GROUNDWATER RECHARGE
  - URBAN WILDLIFE
  - NATIVE VEGETATION

PHINNEY CORRIDOR

LICTON SPRINGS

GREENWOOD

CORRIDOR / ENLARGED CENTRAL PARKWAY

LICTON STRINGS

I-5

CONNECT TO THORTON CREEK STUDY AREA

NORTHWEST STUDY AREA

GREENWOOD CORRIDOR

AURORA AVE.

NORTHGATE CORRIDOR

GREENLAKE

ROOSEVELT CORRIDOR

PHINNEY RIDGE CORRIDOR

GREEN LAKE

RAVENNA CORRIDOR

CONNECT TO U. DISTRICT

TANGLE TOWN CORRIDOR

TANGLE TOWN

I-5

APPROX. U. DIST

LEGEND:

- TRANSITION
  - ACTIVE & PASSIVE USES
  EX. GREENWAY, POCKET ETC.
- ACTIVE USE
  - PROGRAMMED
  EX. SOCCER, BASEBALL, ETC.
- PASSIVE USE
  - UNPROGRAMMED
  EX. PEOPLE WATCHING, JOGGING, ETC.
- LID PARK

N

SCALE 1" = 400'

GREEN STREET NETWORK FROM LAKE UNION STUDY AREA CONNECTIONS TO THE SOUTH

Transportation

NOTES:
REFER TO PEDESTRIAN
CORRIDOR SECTION.

TO N. SEATTLE & BEYOND

TO GREENWOOD

AURORA
URBAN
(HIGH DENSITY)

GREENWOOD

LICTON SPRINGS CORRIDOR

TO I-5
GREEN LID

GREENWOOD CORRIDOR

INTER-URBAN TRAIL

AURORA AVE →

NORTHGATE CORRIDOR

ROOSEVELT
CORRIDOR
TO I-5
GREEN
LID

FINNEY AVE →

GREEN
LAKE

GREEN LAKE

TO BALLARD

PHINNEY RIDGE
CORRIDOR

RAVENNA CORRIDOR

I-5

TANGLE TOWN
CORRIDOR

TANGLE
TOWN

TO LAKE UNION / DOWNTOWN

LINK TO
LAKE UNION
TROLLEY

U-DISTRICT

LEGEND:

URBAN VILLAGE

MASS TRANSIT COORIDOOR

PEDESTRIAN COORIDOOR

LIMITED VEHICLE CIRCULATION

STUDY AREA BOUNDARY

N

SCALE 1"=400'

20 YEAR PROGRAM

100 YEAR PROGRAM

(BLUE) GREENLAKE

20 YEARS

N

To U.W

(BLUE) GREENLAKE

2100

N

- LIGHT RAIL ROUTE
- HIGH DENSITY MIXED-USE
- PEDESTRIAN TRAIL/ BICYCLE TRAIL
- GREENSTREED PARK/OPEN SPACE
- MEDIUM DENSITY RETAIL/MIXED USE DISTRICT
- LOWER DENSITY RESIDENTIAL DISTRICT

Problems

- Understanding that population will potentially double
- Mixed Use will be a primary solution
- We will see less of the single family housing model
- I-5 will come to an extreme turning point
- Expansion and densification will consume the existing urban village
- The automobile will be less significant
- Open/Park space will be threatened by density and the adjoining development
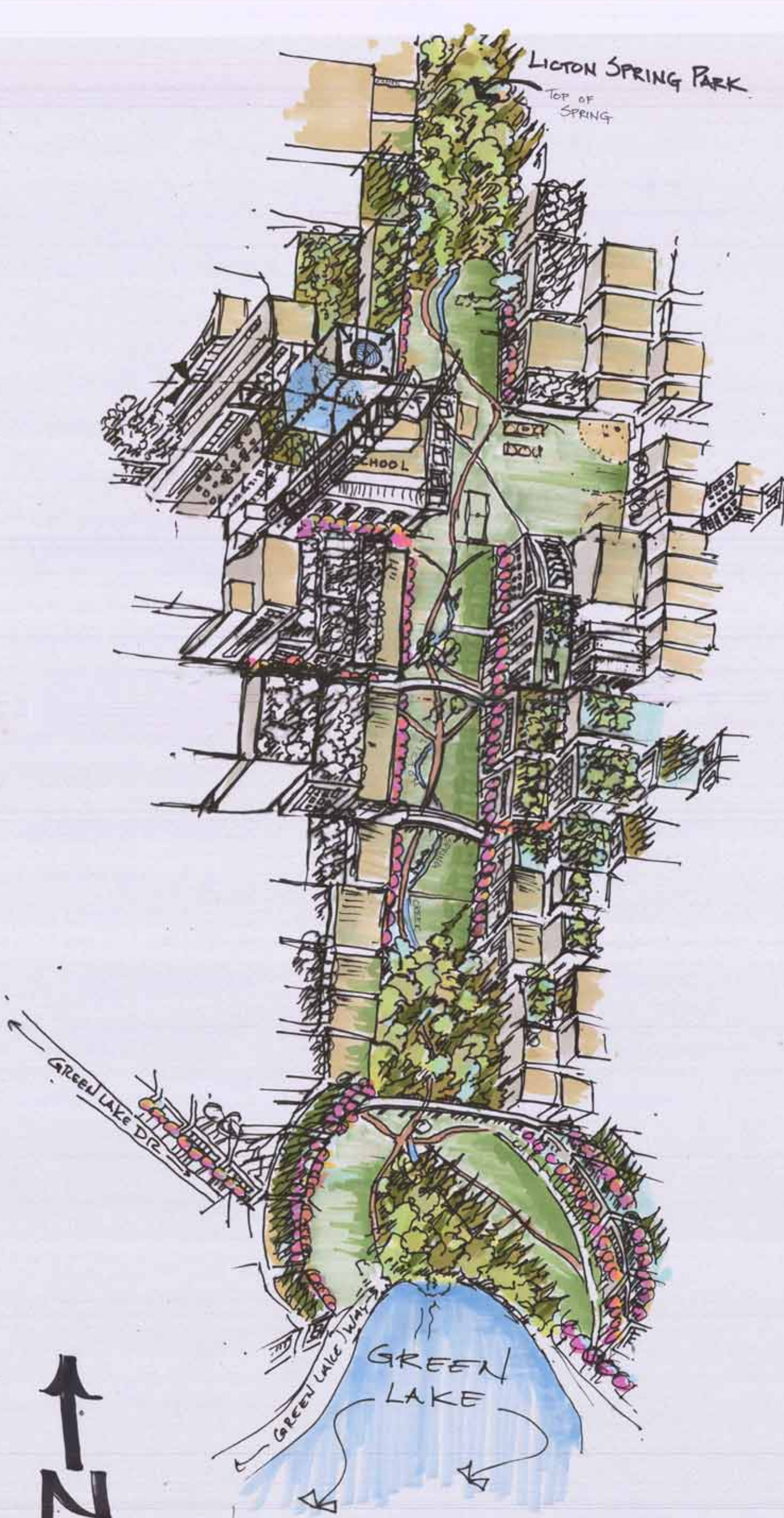- Water preservation will become extremely relevant

Goals

- Preserve and restore natural waterways
- Expand/create more open space
- Encourage mixed use in higher density areas
- Reduce traffic congestion and emissions by minimizing use of automobiles
- Switch to rail/bus systems
- Use existing grid and street system and
- Give more life to the existing street, sideways
- Cap I-5 to allow for more open space and reduce urban heat island effect
- Green Streets
- SEA Streets – nourish urban ecology
- Reduce surface water runoff
- Pocket Parks

Solutions – Plans – Implementation

- Widened Ravenna Boulevard:
- Large "Green" Corridor w/ pedestrian and bicycle paths
- Daylight Ravenna Creek
- Lid Parks over I-5
- Green Lake Way becomes a green Street w/ little to no auto traffic
- Move primary traffic loop around Green Lake to block behind with frequent bus/ streetcar service
- Increase density from existing "urban village"
- Design mixed-use green developments to accommodate densification
- Design Green Fingers extending from lake and connecting to important public & private nodes.
- Layer transport below I-5
- Use green infrastructure to maximize open and green space

LICTON SPRING PARK

TOP OF SPRING

SCHOOL

GREEN LAKE DR

GREEN LAKE WAY

GREEN LAKE

N

2 1 0 0

LICTON SPRING CORRIDOR

TEAM GREENLAKE
2/4/06

IMPLEMENTATION TIMELINE

• Short Term (3-5 Years)
• Funding for SEA Streets
• Acquire small neighborhood parks (start with steep street R.O.W.s)
• P-Patches
• Chicken coop co-ops
• Active & Passive Recreation
• Establish transit loops and spokes
• Increase frequency of service for convenience, reliability
• Daylight stream corridors/trails in phases/segments
• R.O.W.s where available/acquisition when appropriate and opportune
• coordination w/ private owners

Middle Term (20-50 years)
• Lid Parks over I-5
• Woodland Park zoodoo program becomes part of an electricity generation facility
• Ongoing linkage of daylighting and trail segments

Ongoing/Long Term
• Incorporate new filtration technologies in SEA Streets
• Streams and regional trails are fully linked
• Periodic reassessment of stream and lake water quality
• Regular audits of habitat quality