Seattle

Walkable Cities

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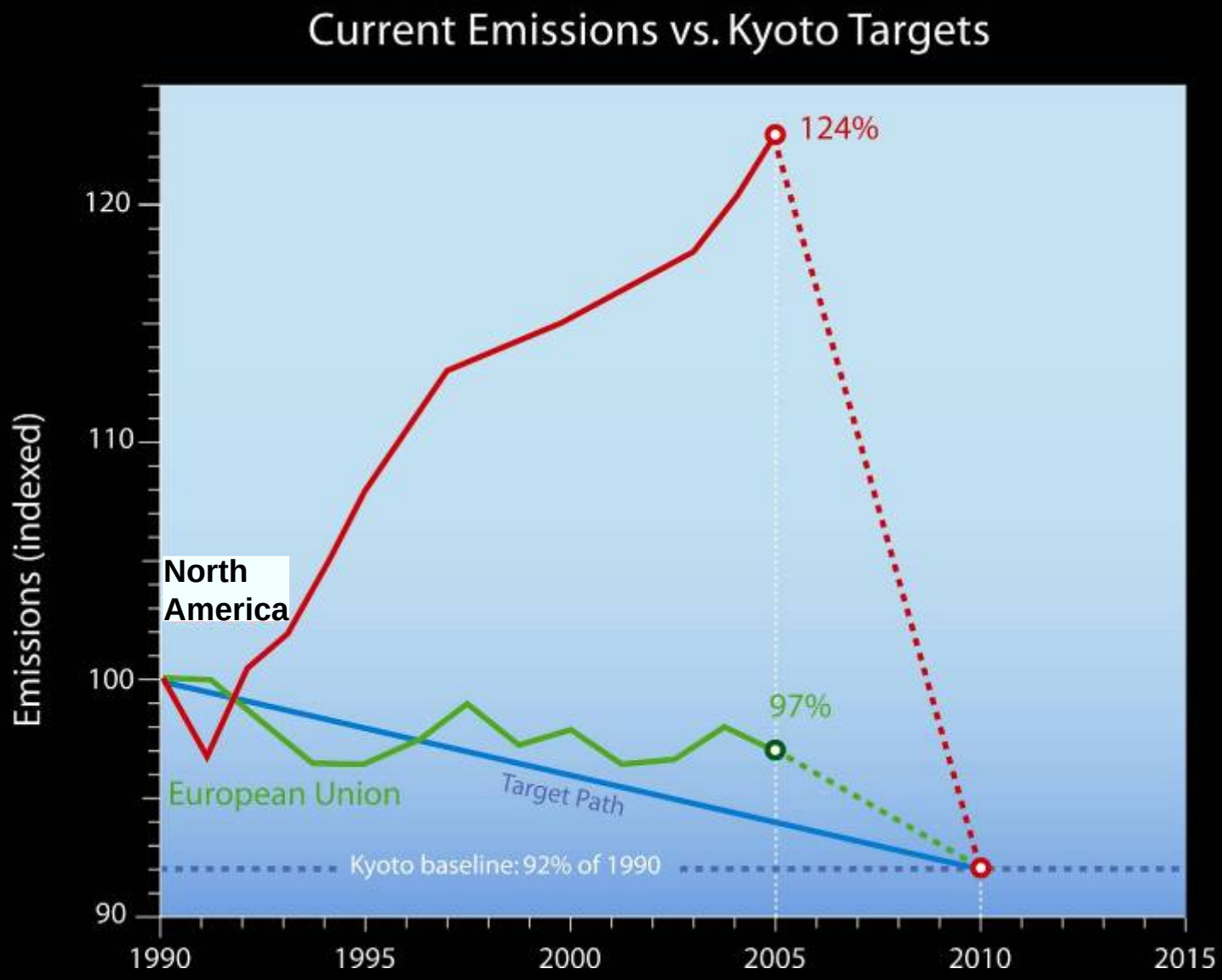
Ideas + building that honour the broader goals of society

1220 Homer Street, Vancouver, BC, Canada
www.busbyperkinswill.ca

Climate change - the urgency



Review

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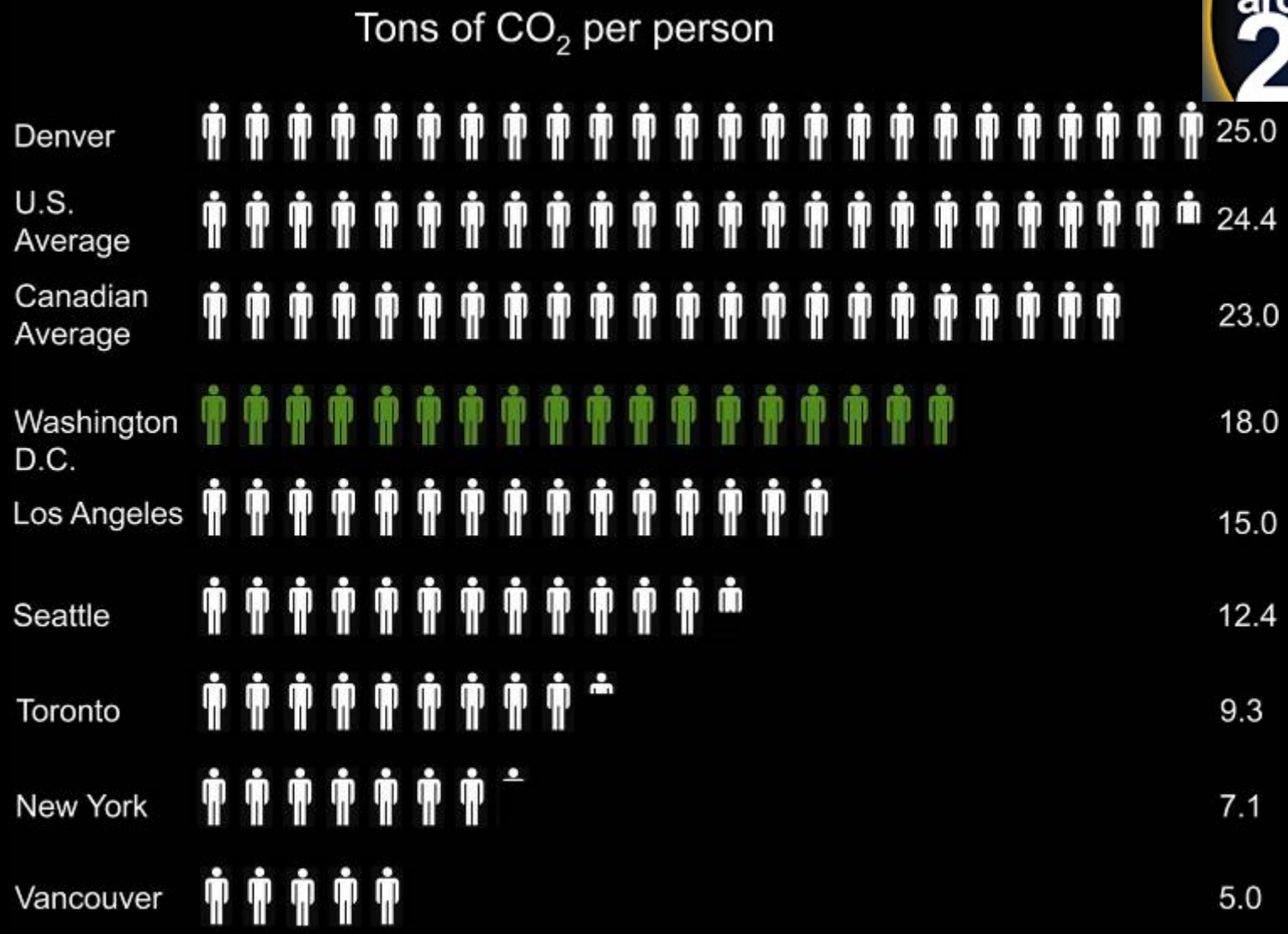
Current GHG Emissions



A call to action

Institute for Local Self Reliance:
"Lessons from Pioneers: Tackling Global Warming at the Local Level"

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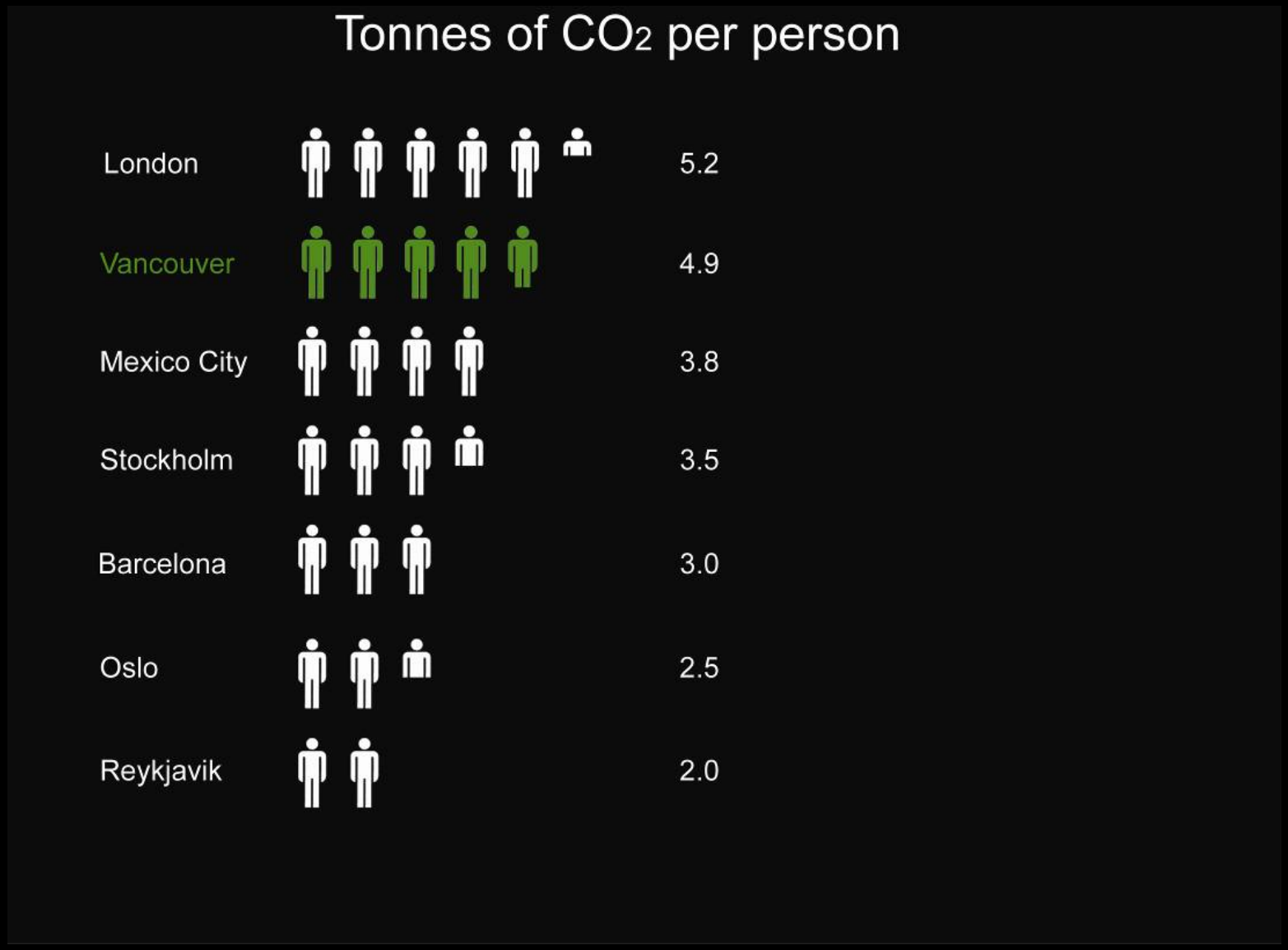

RELATIVE TO OTHER LEADING CITIES

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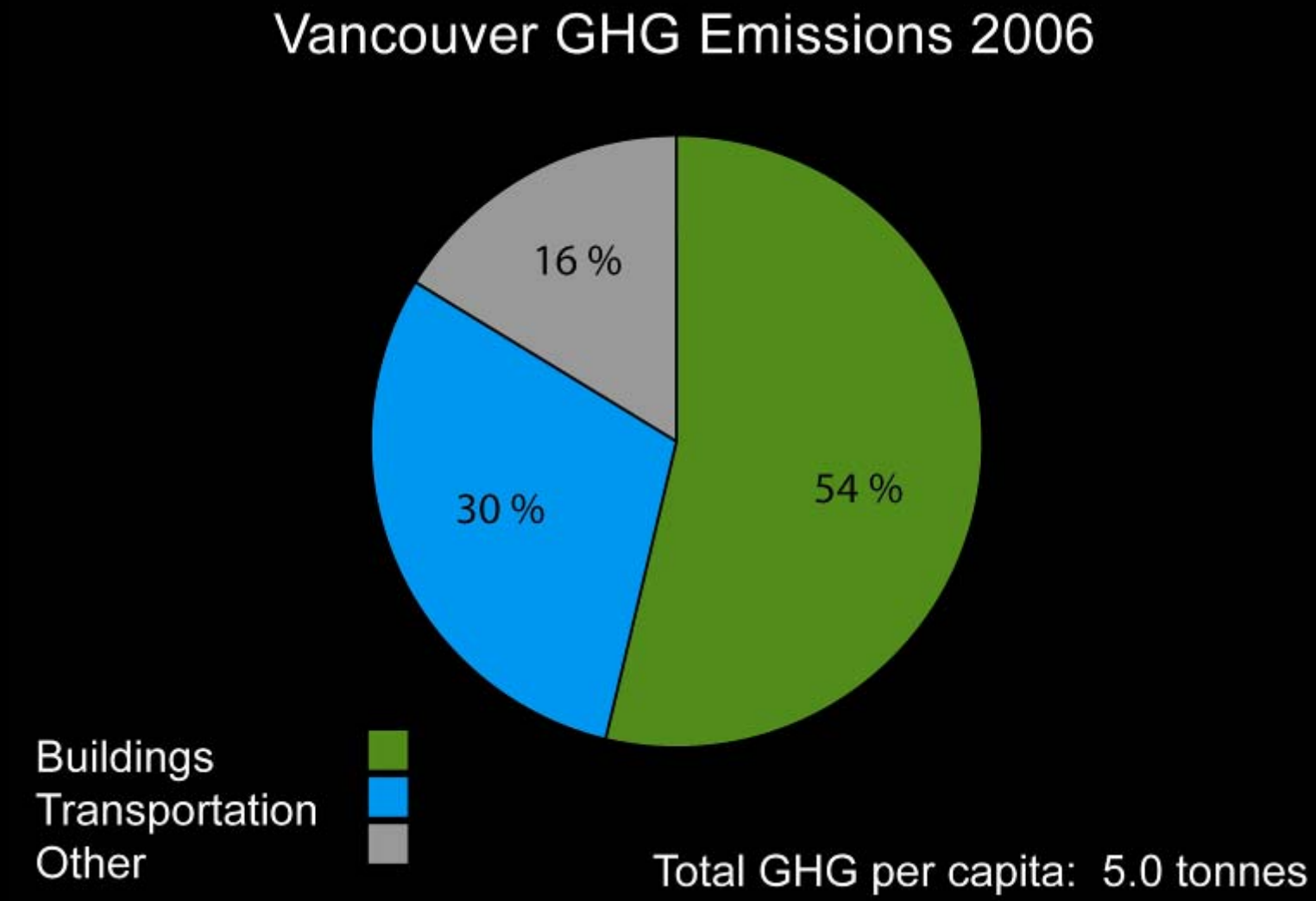
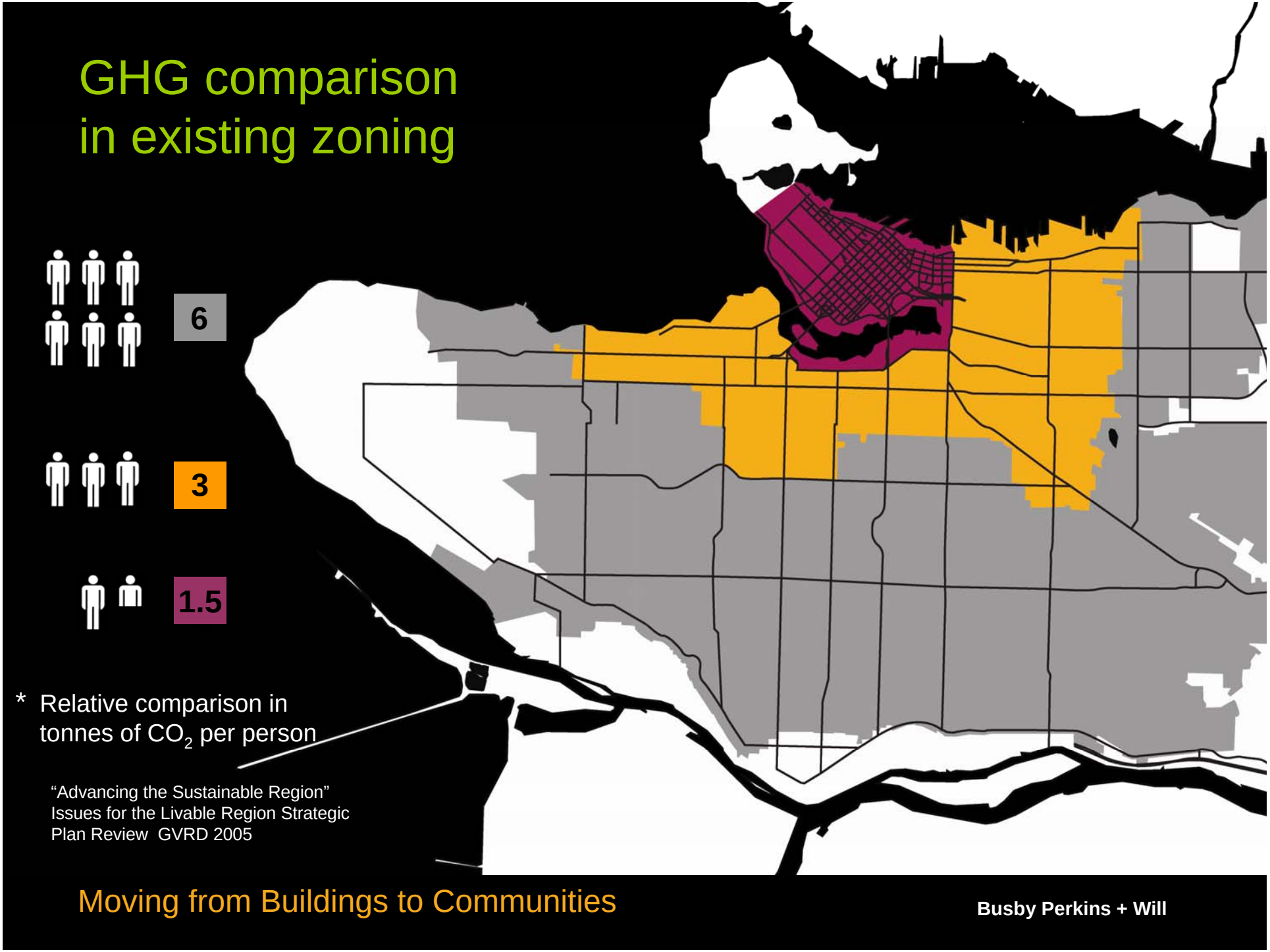
GHG emissions - the culprits



A call to action

Climate Protection Progress
Report 2007 City of Vancouver

GHG comparison in existing zoning



* Relative comparison in tonnes of CO_2 per person

"Advancing the Sustainable Region" Issues for the Livable Region Strategic Plan Review GVRD 2005

Moving from Buildings to Communities

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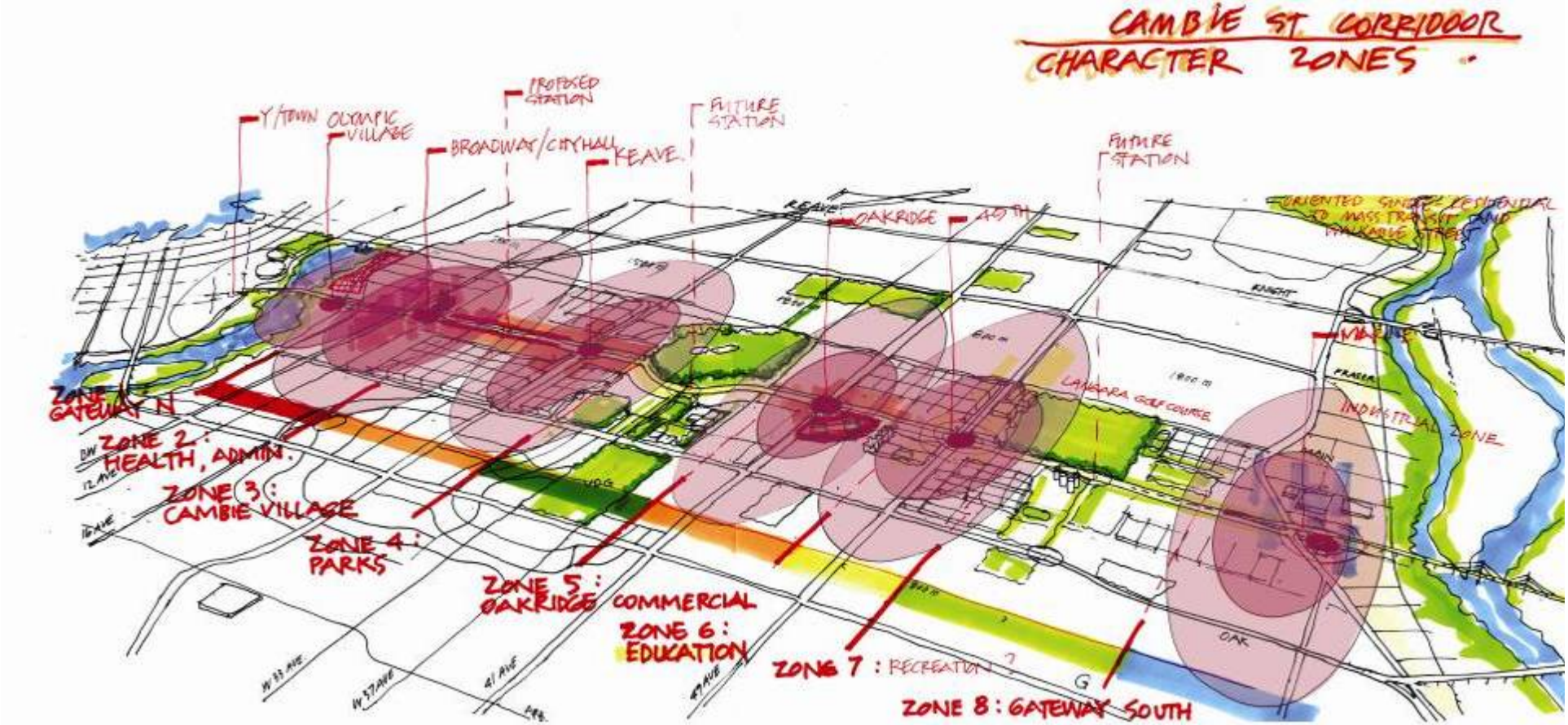
Rapid Transit Line:
Nodes of development

Total = 34,000 residents
21,000 units
16,000 jobs



Moving from Buildings to Communities

Busby Perkins + Will

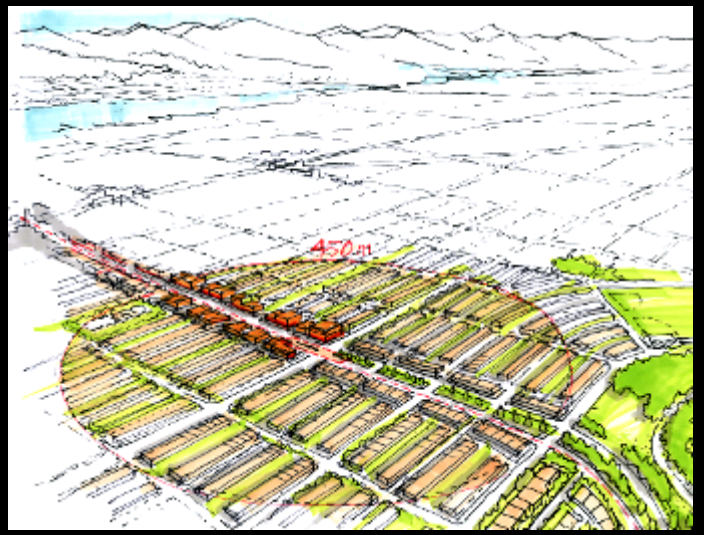
Typical Transit Station: Nodal Development

2008

- largely single family houses
- minimal commercial activity

Nodal development requires:

1. Balanced communities
2. Improved public amenities
3. Deep green development



Moving from Buildings to Communities

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“Village” node

2031

- balance of jobs and housing
- diversity of housing types promotes affordability
- new school and community amenities
- carbon neutral buildings
- district energy
- waste and water treatment
- new neighbourhood parks

Low density

High density

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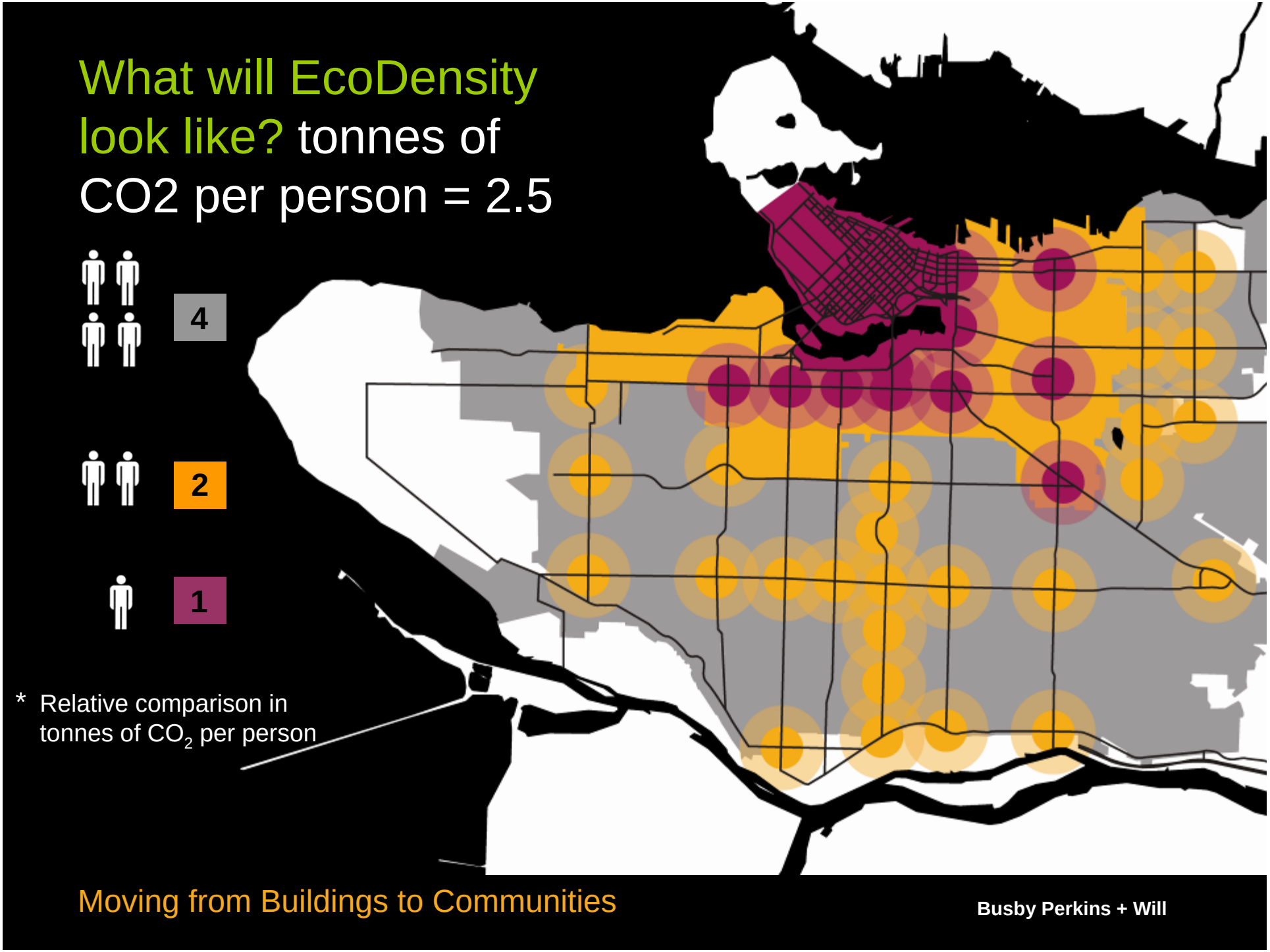
What will EcoDensity look like? tonnes of CO2 per person = 2.5



Dockside Green: Victoria, Canada

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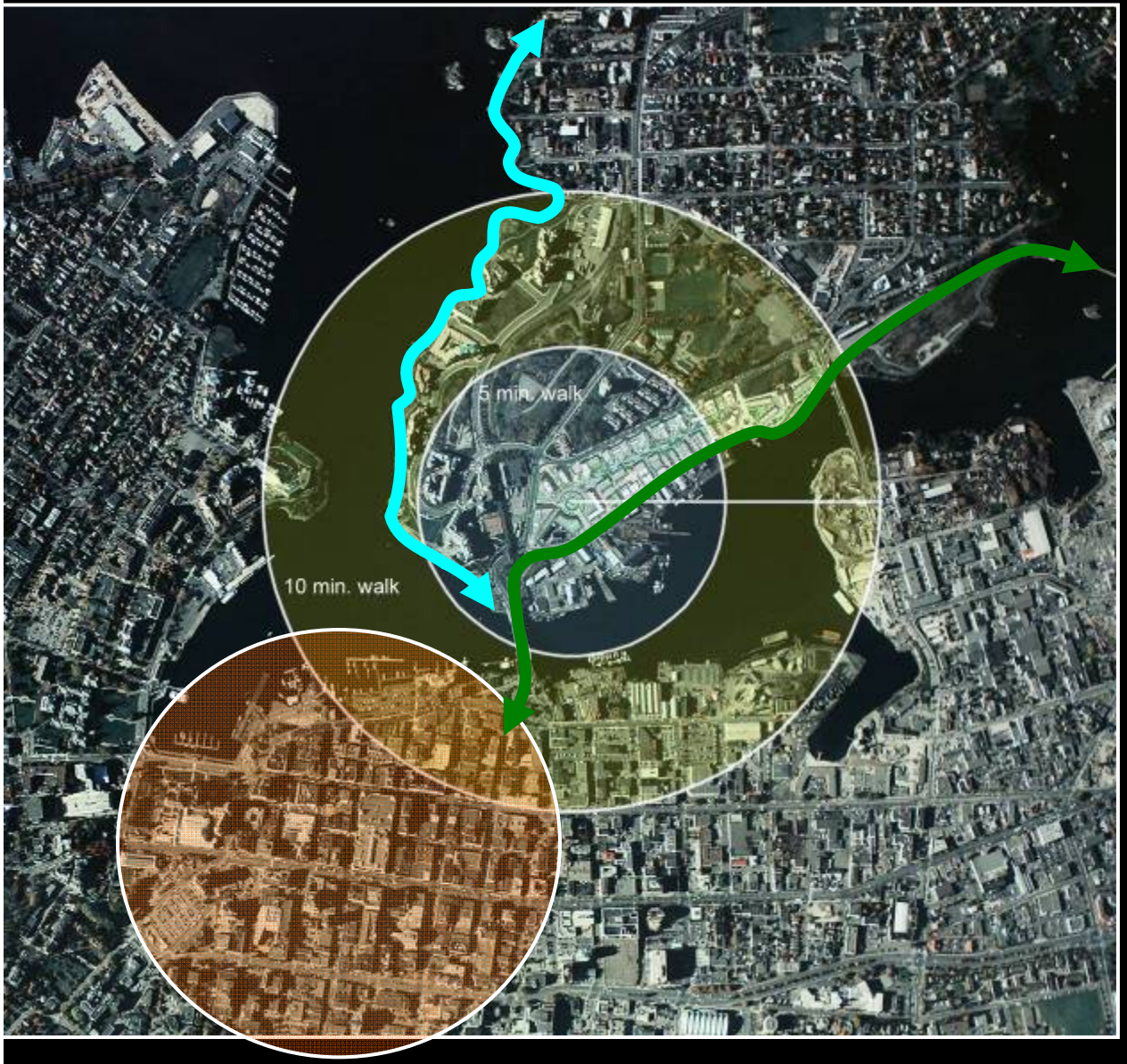
Location: Victoria British Columbia, Canada



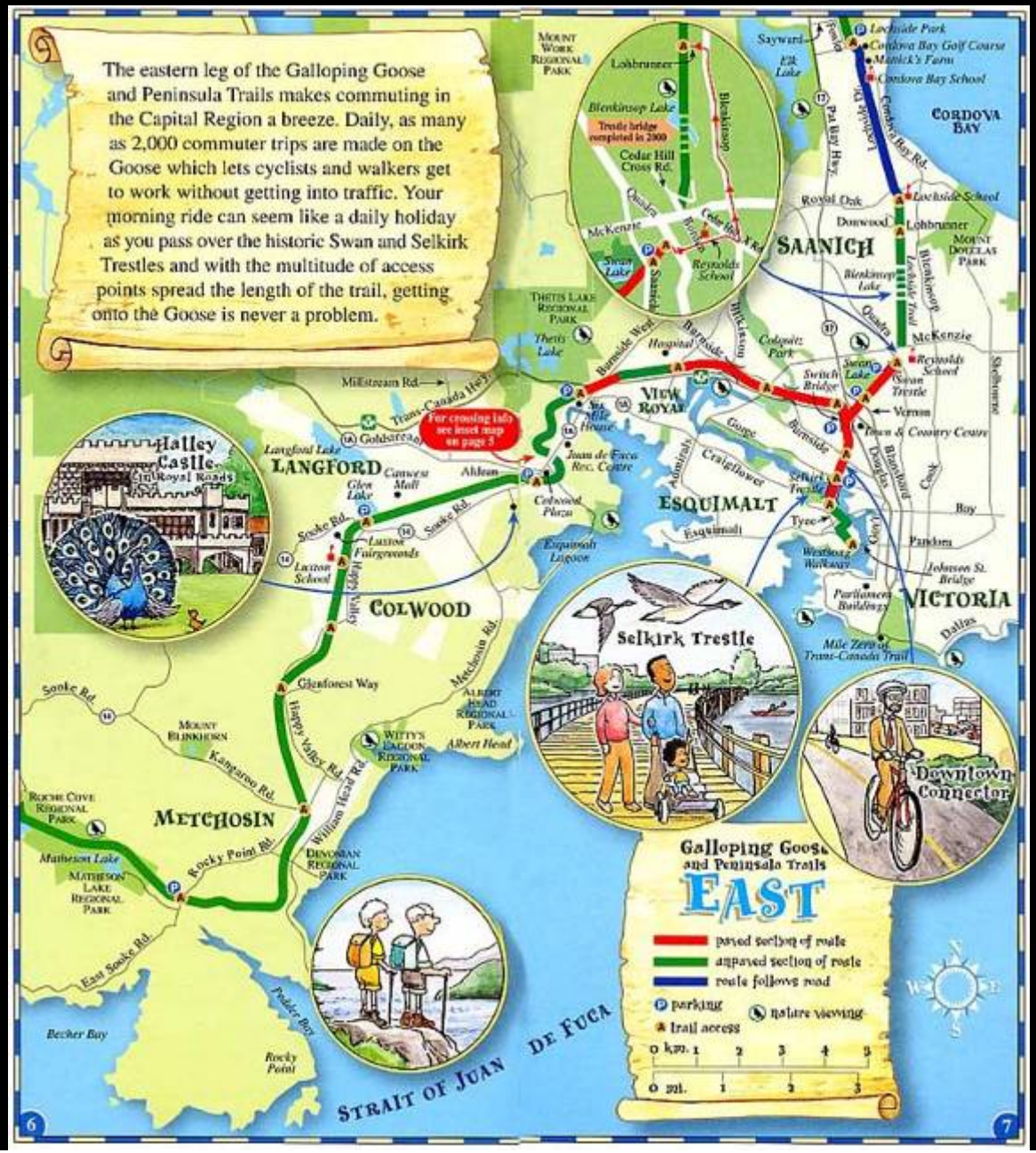
Downtown Victoria

Galloping Goose Trail

Sea Wall

Busby Perkins + Will

GALLOPING GOOSE TRAIL



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Former Brownfield Site

Conceptual Design

Overall Site Area	= 11.6 Acres
Commercial Area	= 71,044 sq ft
Residential Area	= 671,926 sq ft
Seniors Res. Area	= 54,897 sq ft
Amenity Area	= 9,149 sq ft
Social Housing	= 48,331 sq ft

Commercial Area	= 71,044 sq ft
High Tech Office	= 75,350 sq ft
High Tech Industry	= 101,089 sq ft
Industrial Housing	= 45,209 sq ft
Site FSR	= 2.0 FSR
Gross Floor Area	**= 1,010,894 sq ft**
Parking	= 1,285 Spaces

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Conceptual Design – Phasing

Phase 1 - Synergy

Phase 2

Phase 3

Phase 4

CI-1

CI-2

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Conceptual Design – Galloping Goose Trail

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Conceptual Design – Galloping Goose Trail

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Galloping Goose Trail

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Conceptual Design – Greenway

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Conceptual Design – Greenway

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Phase 1: Greenway

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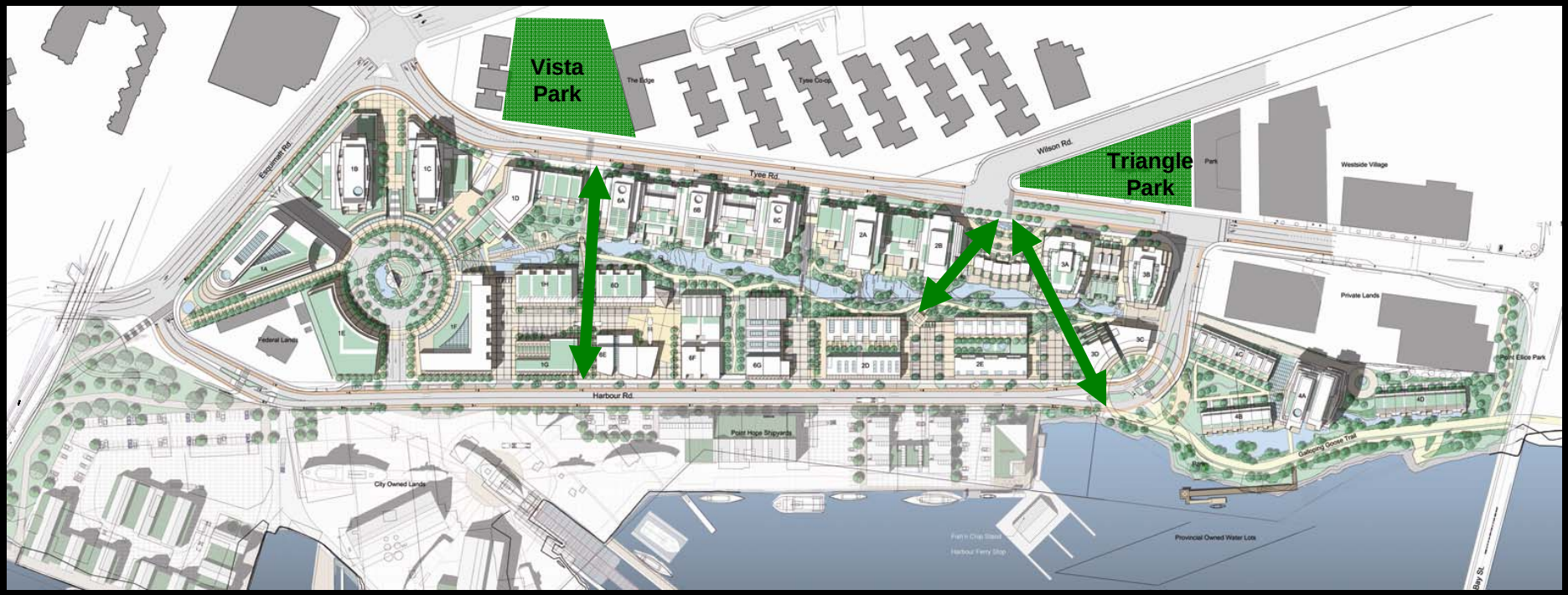
Conceptual Design – Through Site Connections



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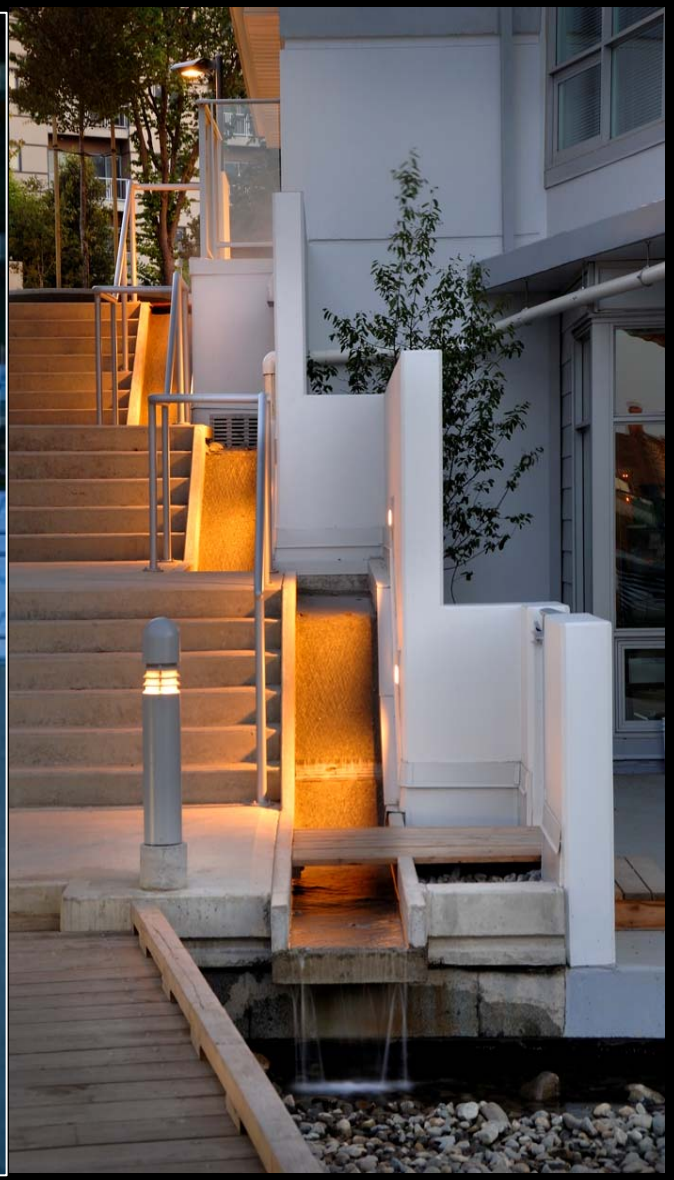
Through Site Connections



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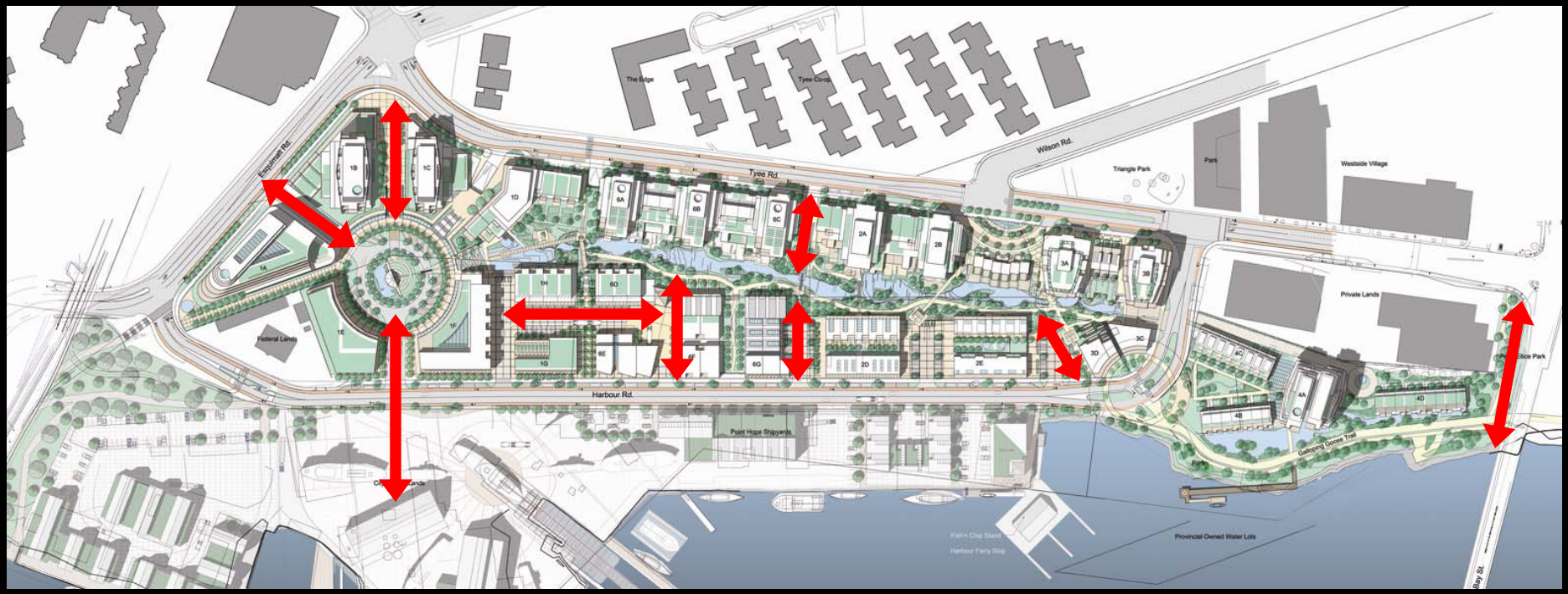
Conceptual Design – Mews Walkways



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Harbour Road Industrial Office Area

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Dockside Plaza Character Area

Conceptual Design – Tyee Road Bike Route

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Tyee Road Character Area

Tyee Road: Phase 1

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Introduction
Project Team
Conceptual Design
LANDSCAPE, OPEN SPACE & AMENITIES
Sustainable Features
Your Future




Shoreline Enhancement

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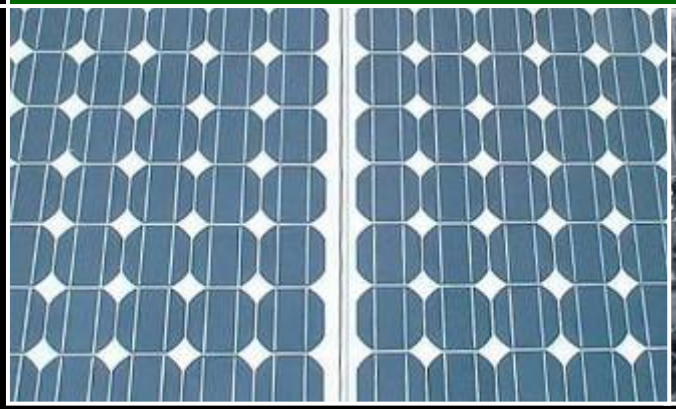
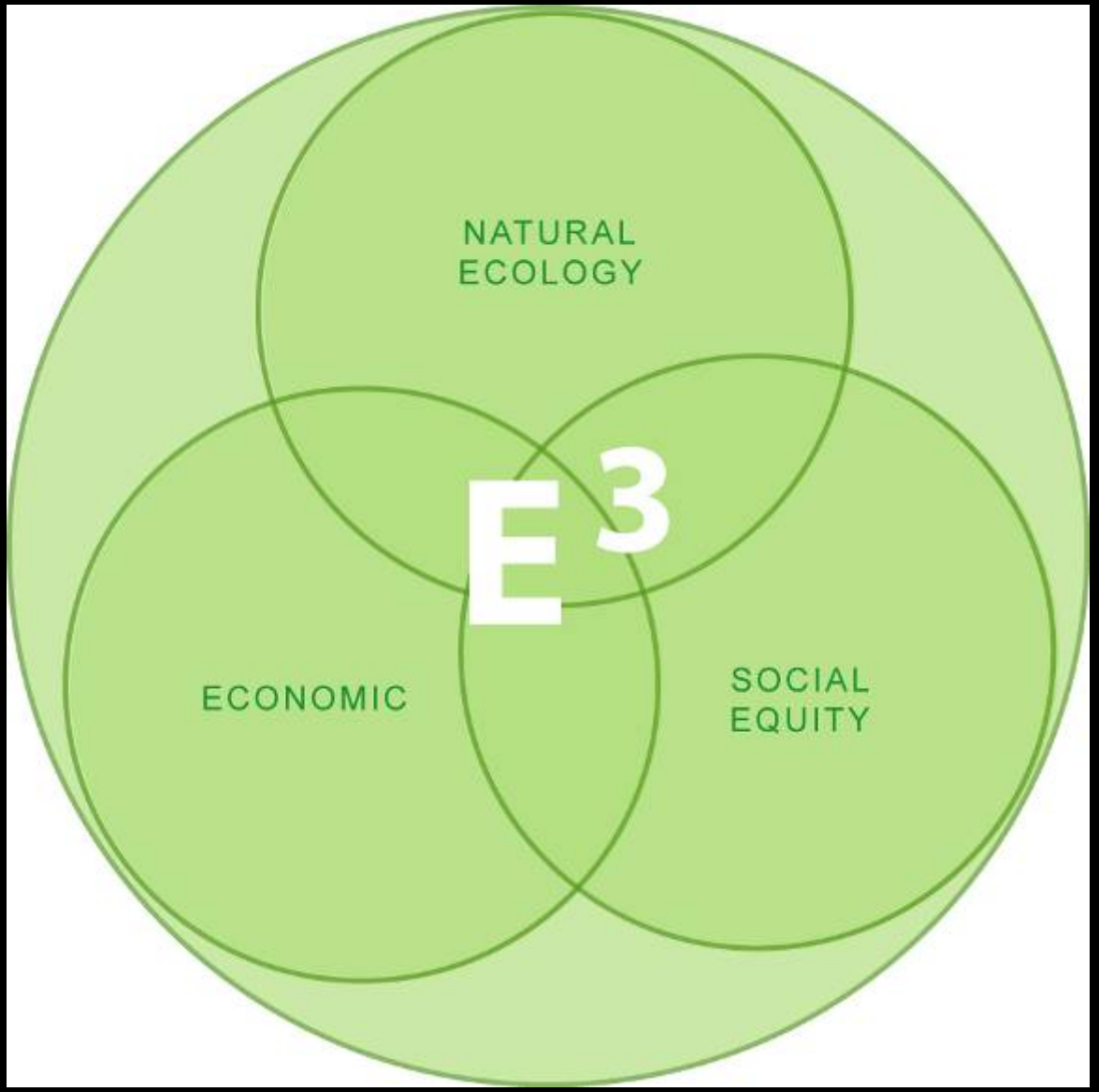
Introduction
Project Team
Conceptual Design
Landscape, Open Space & Amenities
SUSTAINABLE FEATURES
Your Future



Sustainable Features

Triple Bottom Line



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Economies of scale

Parcels of development over 1,000,000 sf create opportunities for district infrastructure

- **district heat**
- **renewable energy**
- **cogeneration**
- **waste treatment**
- **water treatment**

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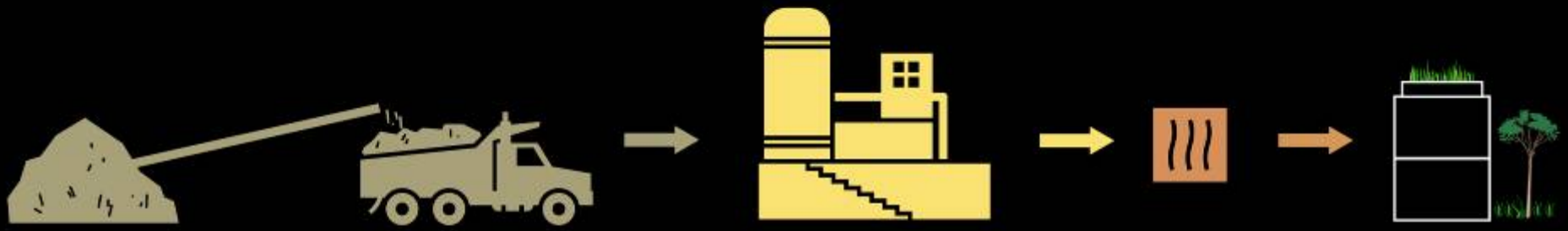
Biomass Energy System

WASTE WOOD SOURCE PILE



UNTREATED WOOD AND MILL RESIDUE

SCRAP WOOD IS DELIVERED TO THE BIOMASS GASIFICATION PLANT

BIOMASS GASIFICATION CONVERTS SCRAP WOOD TO PROVIDE USABLE GRADE HEAT

HEAT

100% OF ON-SITE HEAT FOR DOCKSIDE

Energy and Atmosphere

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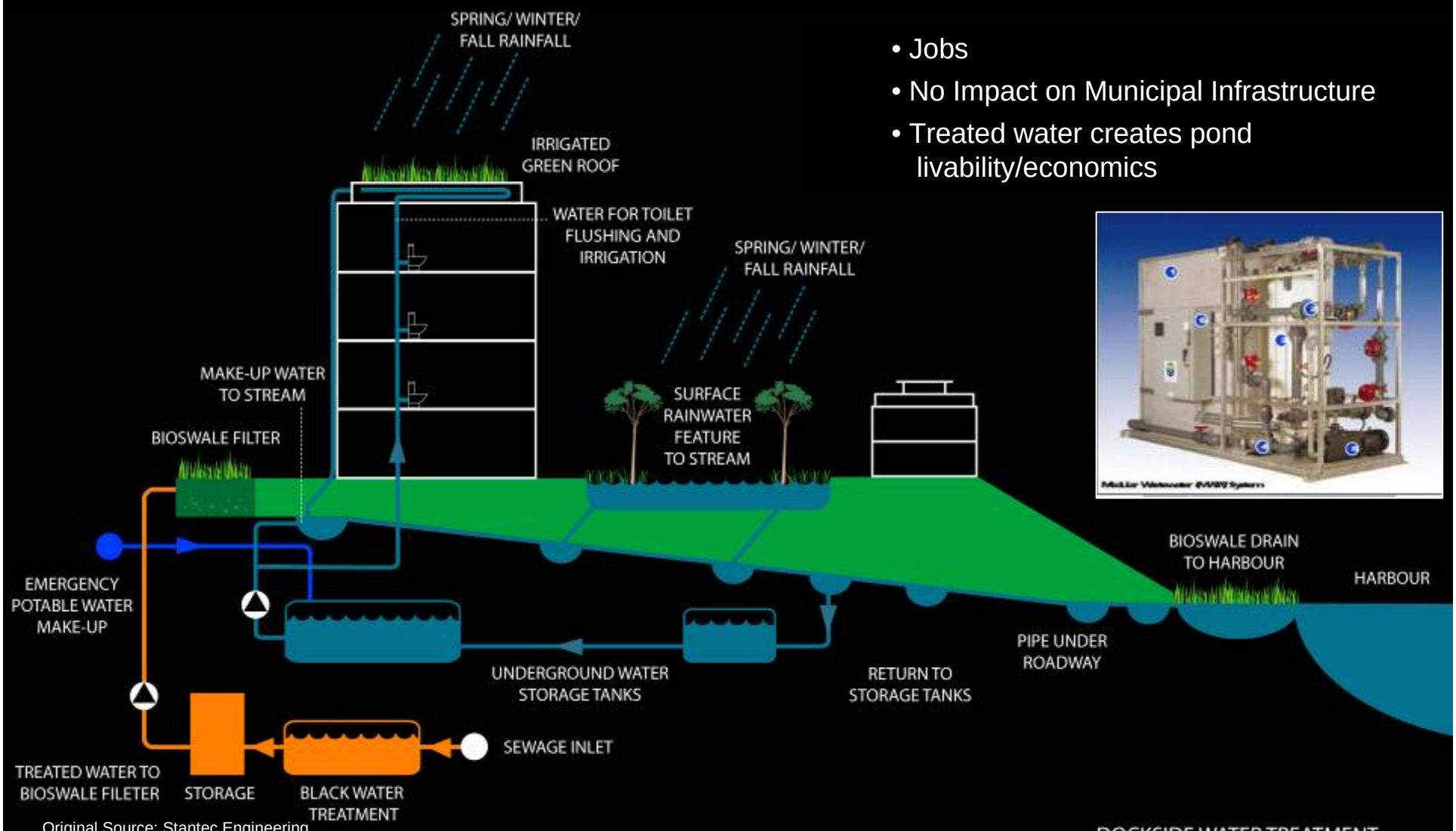
Storm water / Ecology



- Jobs
- No Impact on Municipal Infrastructure
- Treated water creates pond livability/economics

Original Source: Stantec Engineering

Treated Black Water System Adds Water Reuse Capacity

DOCKSIDE WATER TREATMENT
CIRCULATION CROSS-SECTION

Water Efficiency

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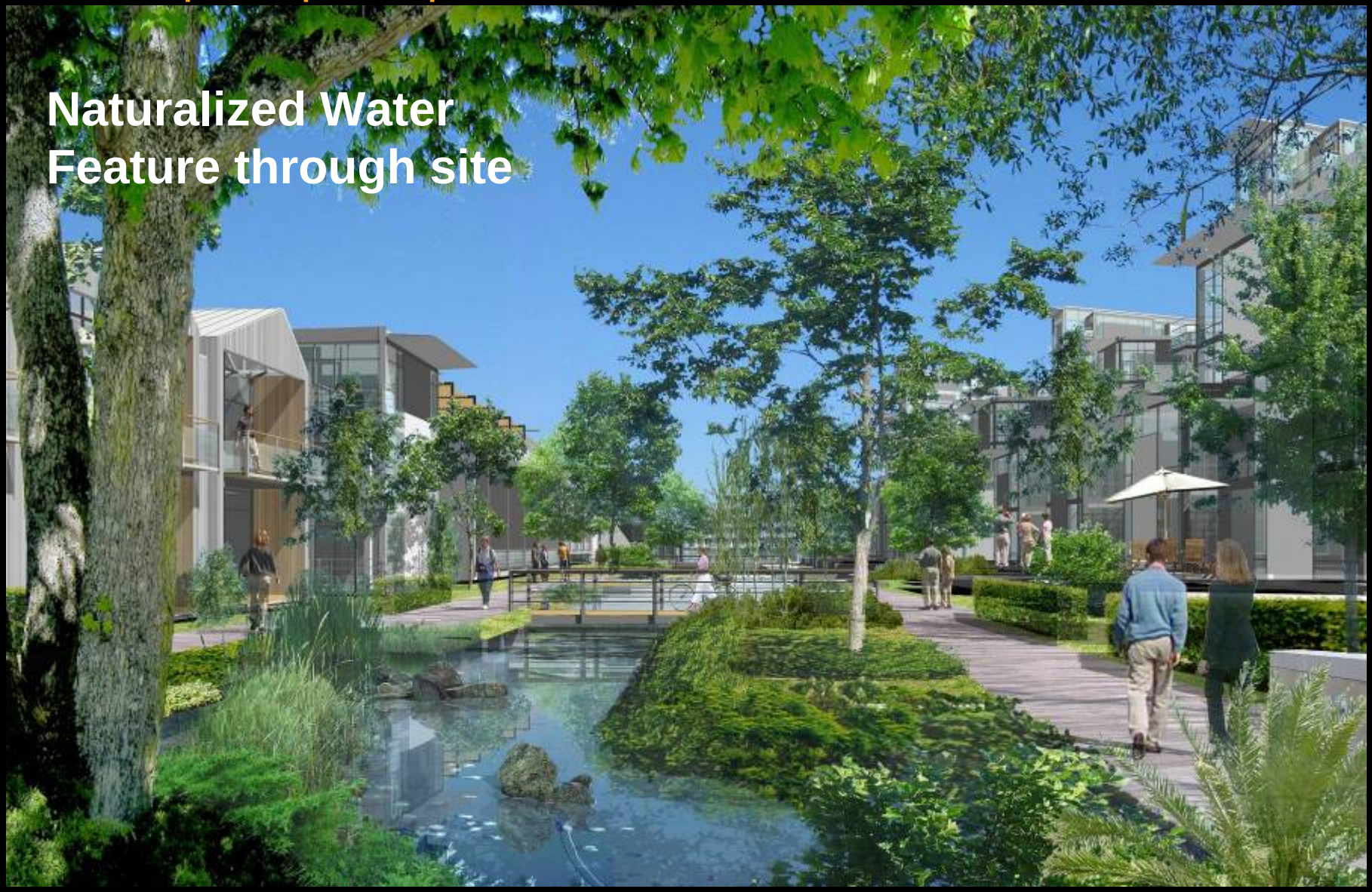
Landscape, Open Space & Amenities



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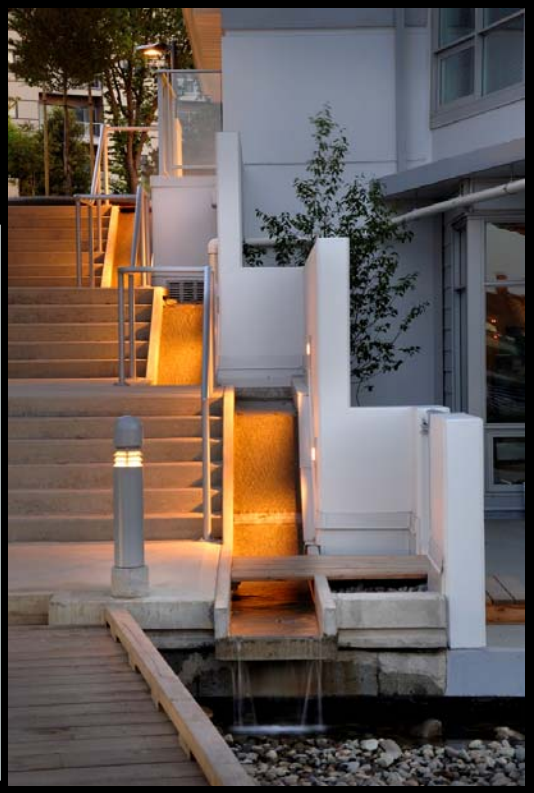
Site Strategies

- Brownfield redevelopment
- Provision of bicycle storage & City Car sharing
- Green and high albedo roofs
- Native landscaping
- Site-wide storm water management



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Sustainable Transportation Features

ALTERNATIVE TRANSPORTATION STRATEGIES

- Car Co-op
- Mini-Transit in addition to extended bus connections
- Harbour Ferry
- Galloping Goose Bicycle/Walking Trail
- Education (transit, carshare, minitransit, bicycle)
- Parking
  - Max 1 stall per residential unit (.3 for senior/affordable housing)
  - Min .5 stalls for smaller units/ zero for affordable housing units

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Water Conservation

- 67% reduction in potable water
- 100% on-site wastewater treatment
- 100% rainwater for landscape irrigation

Water Efficiency

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Energy Conservation Design Features

- Heat recovery ventilation
- Walls: R-29 insulation
- Windows: thermally broken aluminum, double glazed, air/argon filled with low-e coating.
- Roofing: R-40 insulation, green roofs, high albedo surfaces
- Lighting: T8 fixtures and compact fluorescent bulbs.
- Lighting power density: 8.69 W/sm
- Appliances: Energy Star

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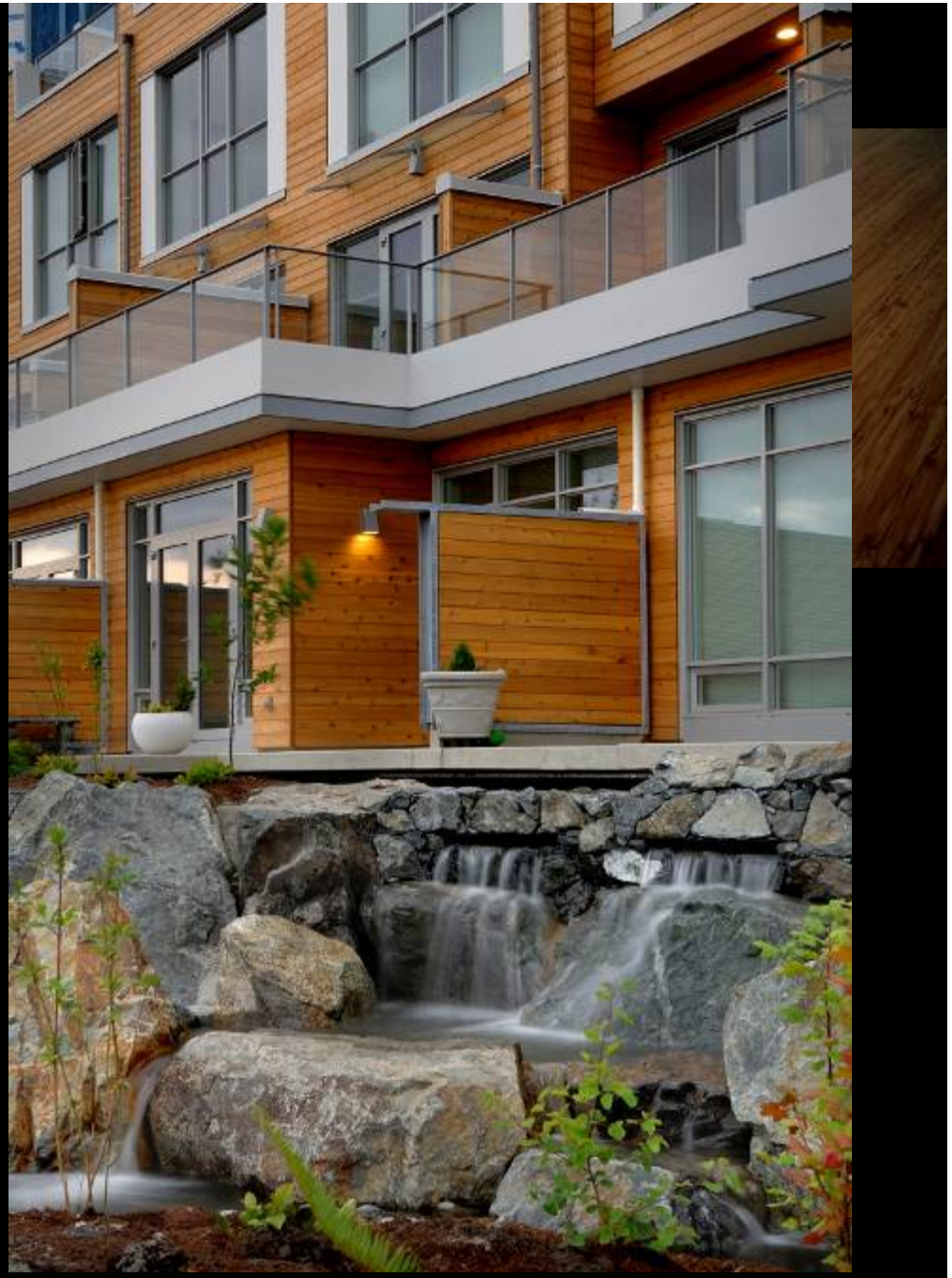
Materials

- Bamboo countertops & floors
- Low-emitting paints, adhesives, coatings
- High Fly-ash concrete
- 23% regional materials
- 17% recycled content materials



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Green Housekeeping & Education Programs

Innovation in Design

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The Achievement

LEED Platinum

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Dockside Green Sets New High for LEED Platinum

July 22, 2008

VICTORIA, BC-The award-winning Dockside Green, with a front-row seat on the Pacific Coast, has earned another LEED Platinum certification in its push to become the first fully certified mixed-use community in the world. The off-grid undertaking, now surpassing $80 million of construction, will take eight to 10 years to complete.

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LEED Platinum

Sustainable Sites

Total Credits	Total Possible
14	14

Materials

Total Credits	Total Possible
7	14

Water Efficiency

Total Credits	Total Possible
5	5

Indoor Air Quality

Total Credits	Total Possible
15	15

Energy

Total Credits	Total Possible
17	17

Certified 26-32
Silver 33-38
Gold 39-51
Platinum 52+

Innovation

Total Credits	Total Possible
5	5

Total Credits = 63

Highest ever achieved

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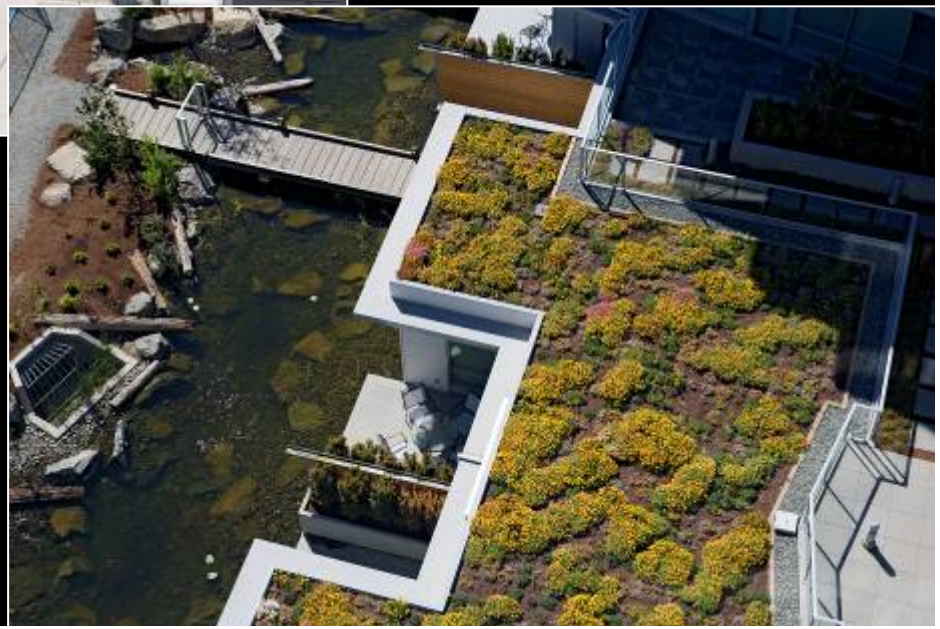
Green Roofing System

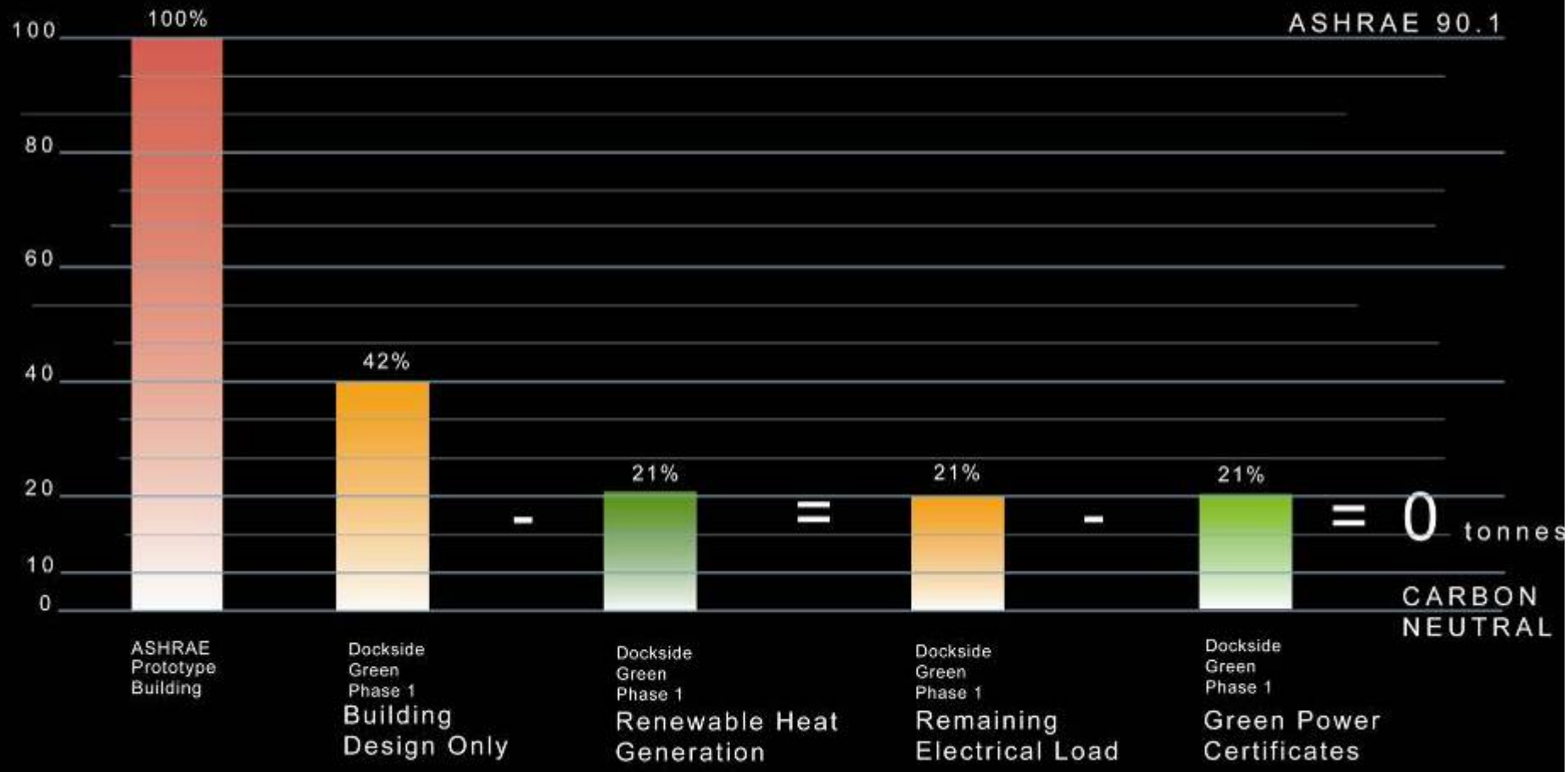


Sustainable Sites

Rainwater Collection & Reuse

Water Efficiency

Reaching Carbon Neutrality



Energy and Atmosphere

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Questions and Discussion

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