



GROWING SQUAMISH

seeding an urban foodculture

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UBC - SCHOOL OF ARCHITECTURE AND LANDSCAPE ARCHITECTURE

Charlotte Drache-Lambert

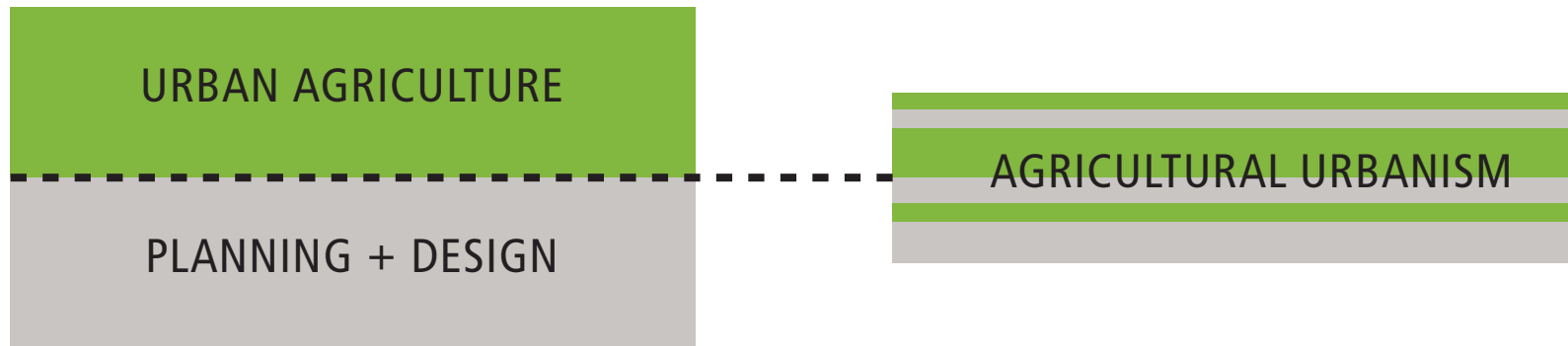
thank you!

**sala mentors and profs, colleagues,
friends and family**

extra special thanks:

**Kara Singbeil
Mahsa Azari
Mark Francis**

seeding an urban foodculture



celebrate the growing, selling and enjoyment of local food to encourage resilience and economic growth in Squamish

THE PROBLEM

THE FOOD SYSTEM

GLOBAL

The cost and impact of global food markets is too high and unsustainable

PEAK OIL
CLIMATE CHANGE
POPULATION GROWTH

REGIONAL

Industrialized agriculture marginalizes farmers, larger operations are increasingly costly to operate

CAPITALISM
FREE TRADE

CITY

Local healthy food is not widely available or well distributed

PLANNING + DESIGN

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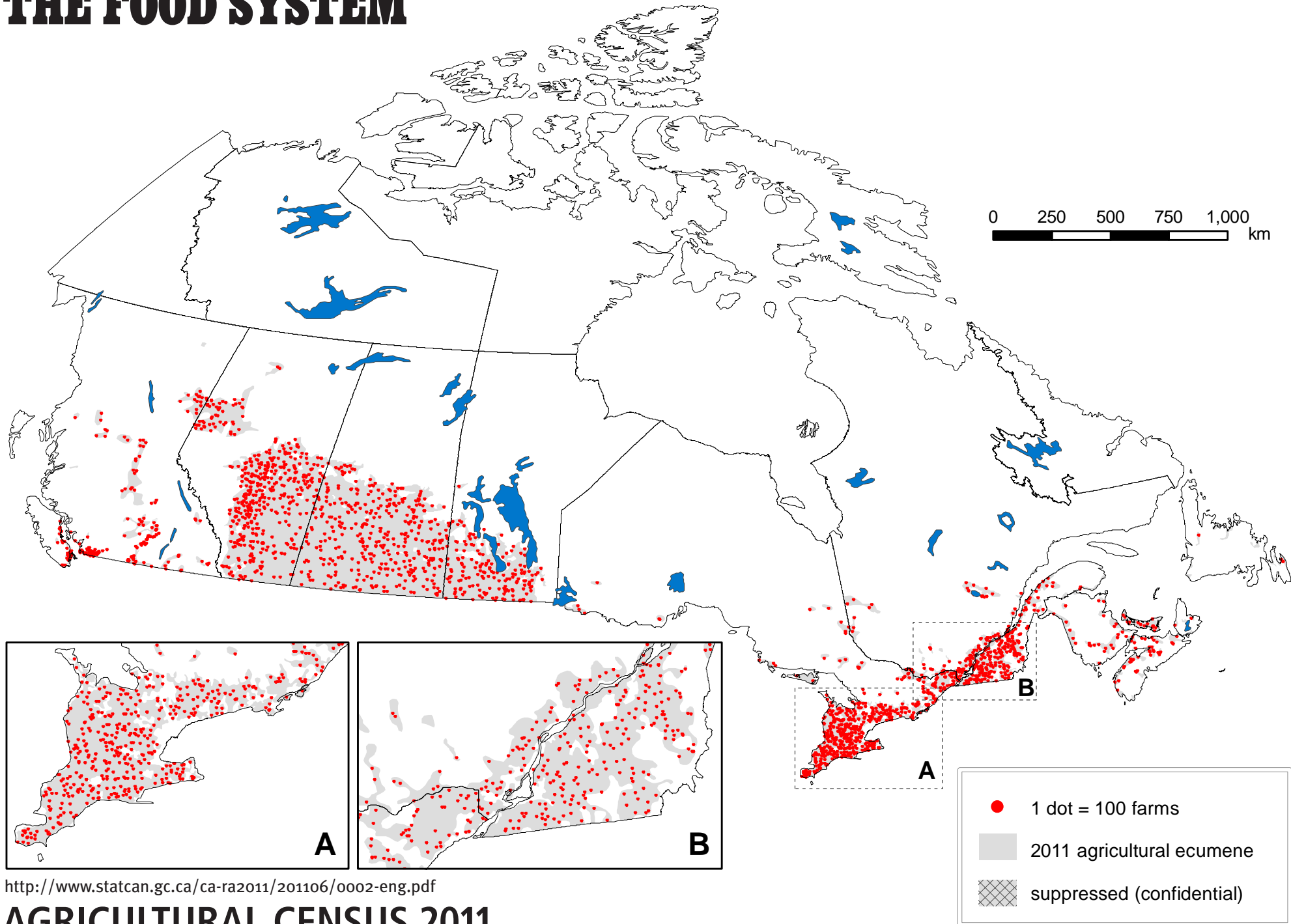
GLOBAL + REGIONAL PROBLEMS

The current food system has severely disadvantaged small-scale producers because it “is configured and operated to capture all of the value after the product leaves the farm through processing, distributing and retailing.” (Mullinix, 2006)

Today farmers earn less than 8 cents of every food dollar while 50 years ago they were earning 40 cents of every food dollar.

The current food system is energy-intensive and unsustainable due to its reliance on fossil fuels, water and chemicals.

THE FOOD SYSTEM



<http://www.statcan.gc.ca/ca-ra2011/201106/0002-eng.pdf>

AGRICULTURAL CENSUS 2011

THE FOOD SYSTEM

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LOCAL PROBLEMS

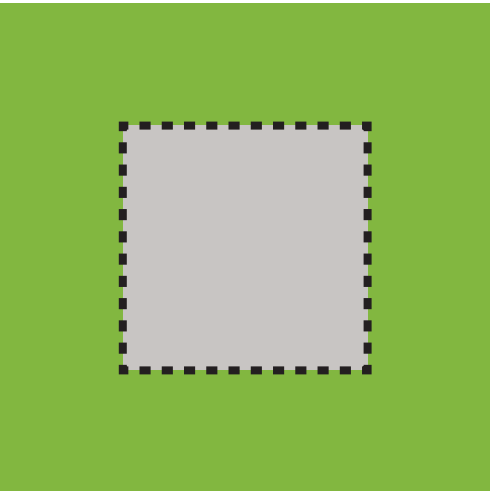
In Squamish, most food services are planned in proximity to the highway or a few major arterials

Small businesses must compete with large competitors in all aspects of food services from cafes to grocery stores

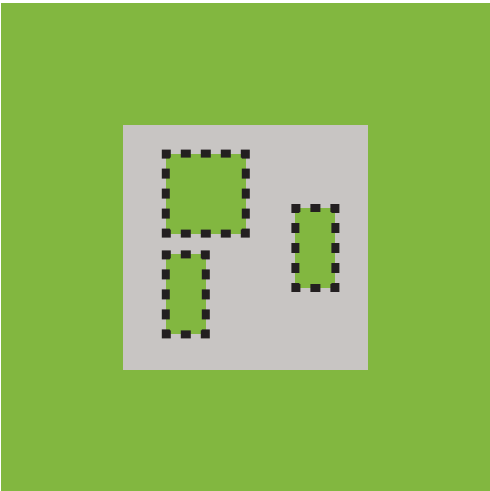
Many residents of Squamish are forced to drive to the grocery store as there are no places to buy groceries within a 5 or 10 minute walk

Access to local and regional food is limited

URBAN / AGRICULTURE

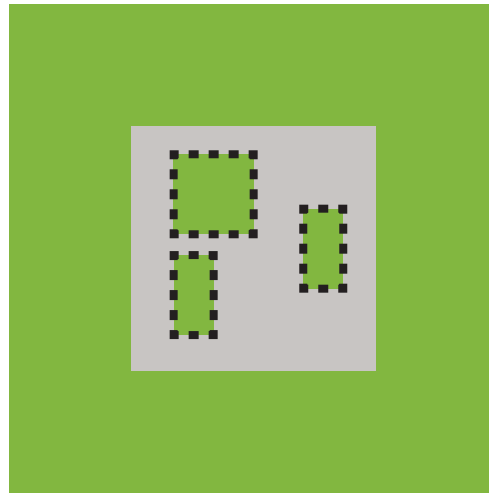


an urban divide...



new edge conditions

URBAN / AGRICULTURE



CLIMATE, GROWING CONDITIONS, SCALE

PUBLIC OPEN SPACE NETWORK

DISTRIBUTION OF CITIZENS

PROJECT GOALS

seeding an urban foodculture

LOCAL CRAFT

LOCAL FOOD

LOCAL ECONOMY



celebrate the growing, selling and enjoyment of local food to encourage resilience and economic growth in Squamish

SITE ANALYSIS

AN ABUNDANT REGION

POPULATION (2011): 38,171

JURIDISTICTIONAL AREA: 1,669,370 ha

AGRICULTURAL LAND RESERVE: 25,470 ha

TOTAL AREA FARMED (2001): 15,155 ha

OF REPORTING FARMS: 121

AVERAGE FARM SIZE: 125 ha

FARMLAND USE

CROPS: 2,808 ha

SUMMERFALLOW: 106 ha

PASTURE (MANAGED): 1,526 ha

PASTURE (UNMANAGED): 2,531 ha

OTHER: 8,184 ha

TOTAL FARM CAPITAL: \$86,399,932

 AGRICULTURAL LAND RESERVE

 MUNICIPAL BOUNDARY

<http://www.al.gov.bc.ca/resmgmt/sf/agbriefs/Squamish-Lillooet.pdf>

SQUAMISH-LILOOET REGIONAL DISTRICT



AGRICULTURAL CAPACITY

SOIL CLASSES

CLASS 1, 2, 3: SUITABLE FOR AGRICULTURAL CROPS
CLASS 4, 5, 6, 7: SUITABLE FOR HAYING, PASTURE
AND LIVESTOCK GRAZING.

SQUAMISH/PEMBERTON

DAILY MEAN TEMPERATURE (C): 9.0/6.3

DAILY MAXIMUM TEMPERATURE (C): 13.7/11.4

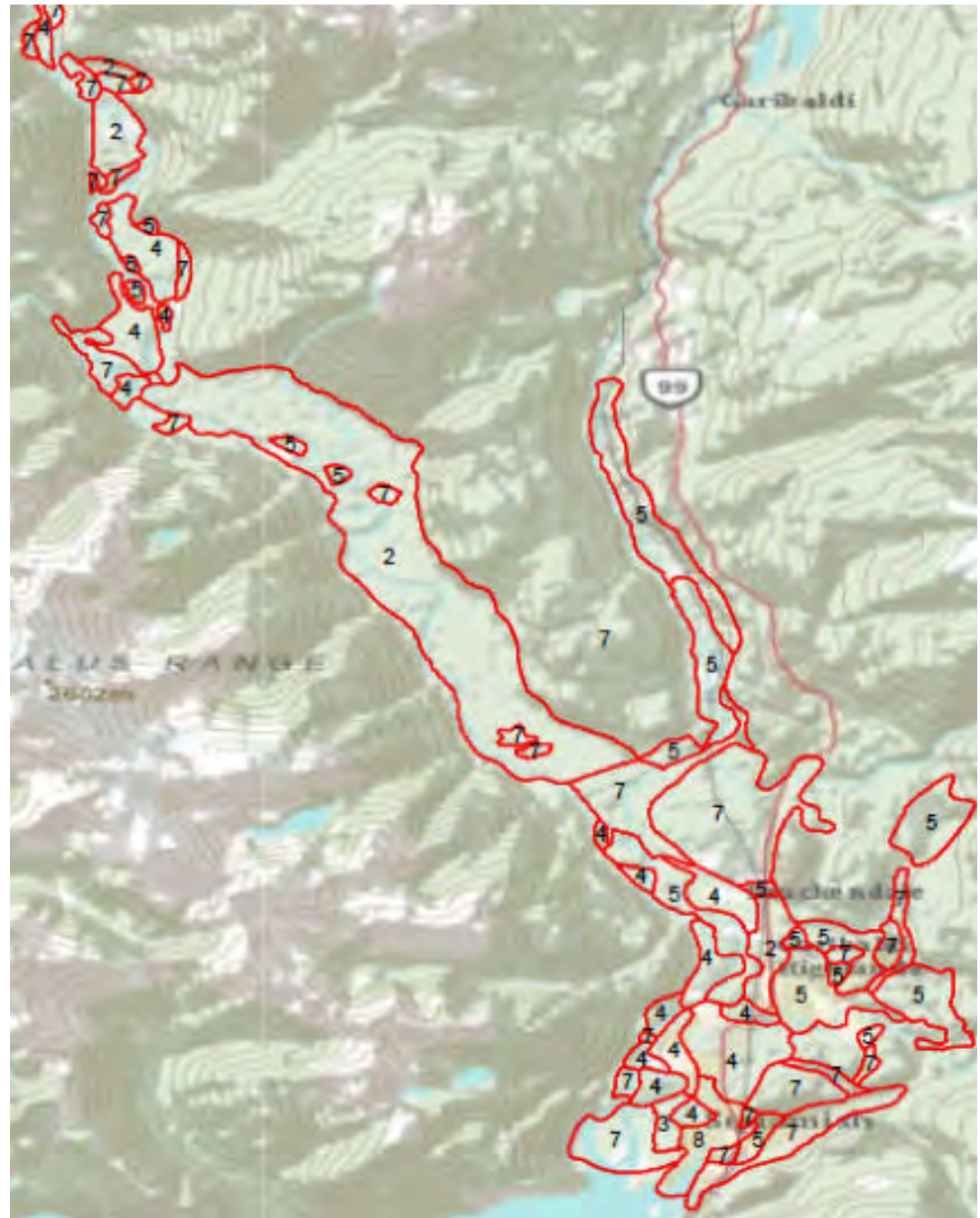
NUMBER OF FROST FREE DAYS: 160-180/60-80

MEAN TOTAL PRECIPITATION (MM): 2367/1229

LAST FROST IN SPRING: MAY 1 - MAY 15/MAY 15-JUNE 1

KILLING FROST: NOV 1 - NOV 15/MAY 15-JUNE 1

http://climate.weatheroffice.gc.ca/climate_normals/index_e.html



25 ACRES

URBAN AGRICULTURE POTENTIAL

25% Self-reliance (16a)

- Asparagus
- Beets
- Broccoli
- Brussels Sprouts
- Cabbage
- Carrots
- Garlic
- Lettuce
- Pak Choy
- Pole Beans
- Pumpkins
- Snow Peas
- Spinach
- Yellow Onions

50% Self-reliance (16a)

- Broccoli
- Cabbage
- Carrots
- Garlic
- Lettuce

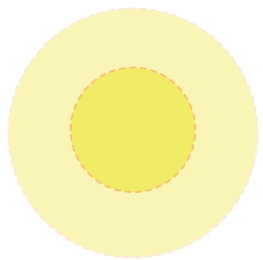
100% Self-reliance (16a)

- Lettuce
- Garlic

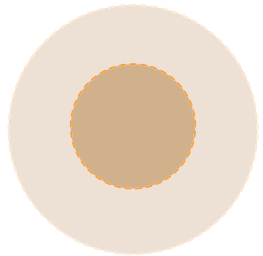
Further 300ha of ALR lands within city boundary



UNEQUAL DISTRIBUTION



FOOD OASIS



FOOD DESERT



AGRICULTURAL LAND RESERVE



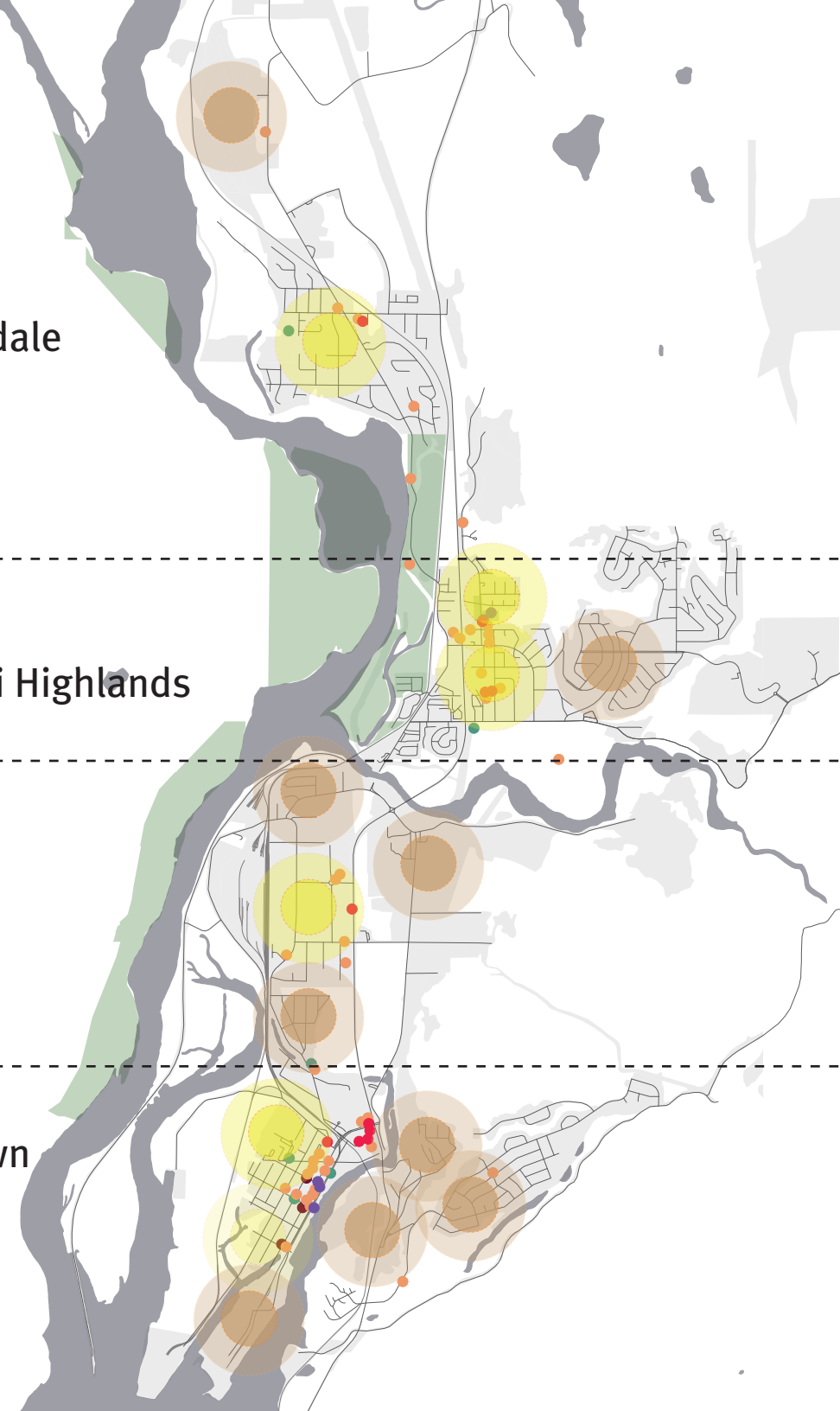
URBANIZED

Brackendale

Garibaldi Highlands

Dentville

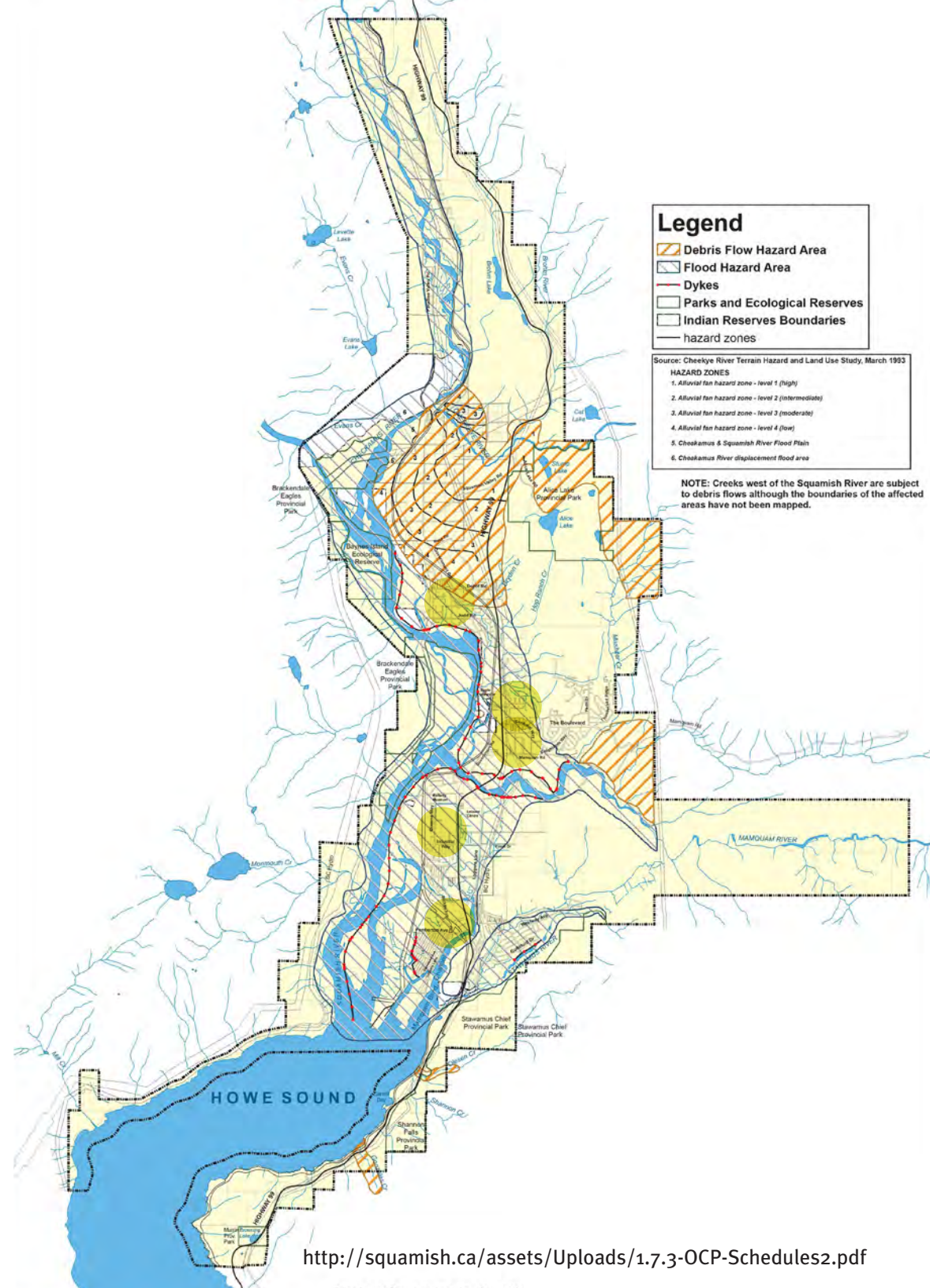
Downtown



HAZARDS

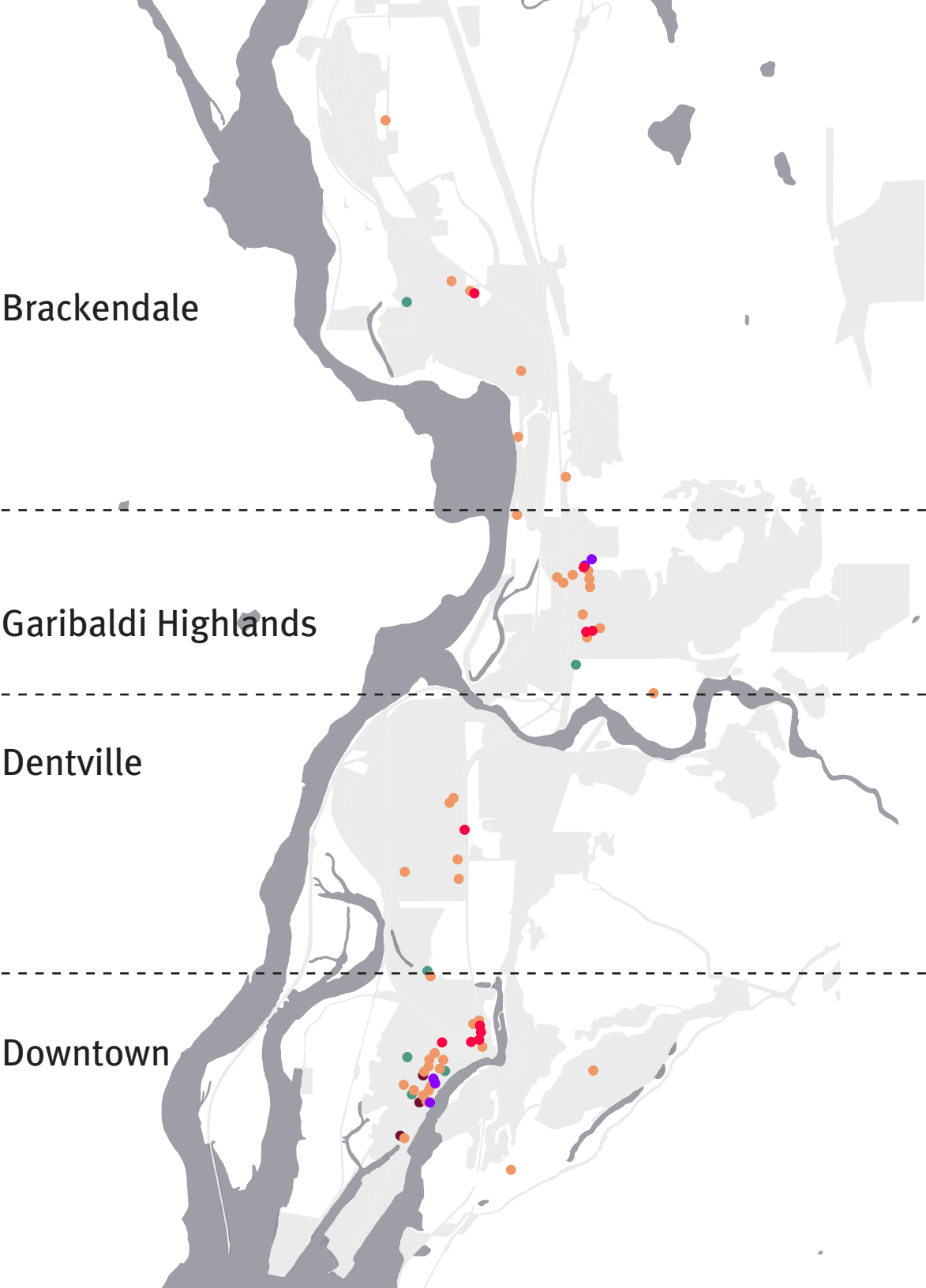
 FOOD OASES

DEBRIS FLOW, FLOODS, EARTHQUAKE...



FOOD SERVICES

- GROCERY
- RESTAURANT/CAFE
- MARKET
- FOOD PROCESSING
- COMMUNITY GARDEN
- URBANIZED



Brackendale

Garibaldi Highlands

Dentville

Downtown

GROCERY

BRACKENDALE GENERAL STORE

KITCHEN QUICKIES ORGANIC GROCER



M&M MEAT SHOPS

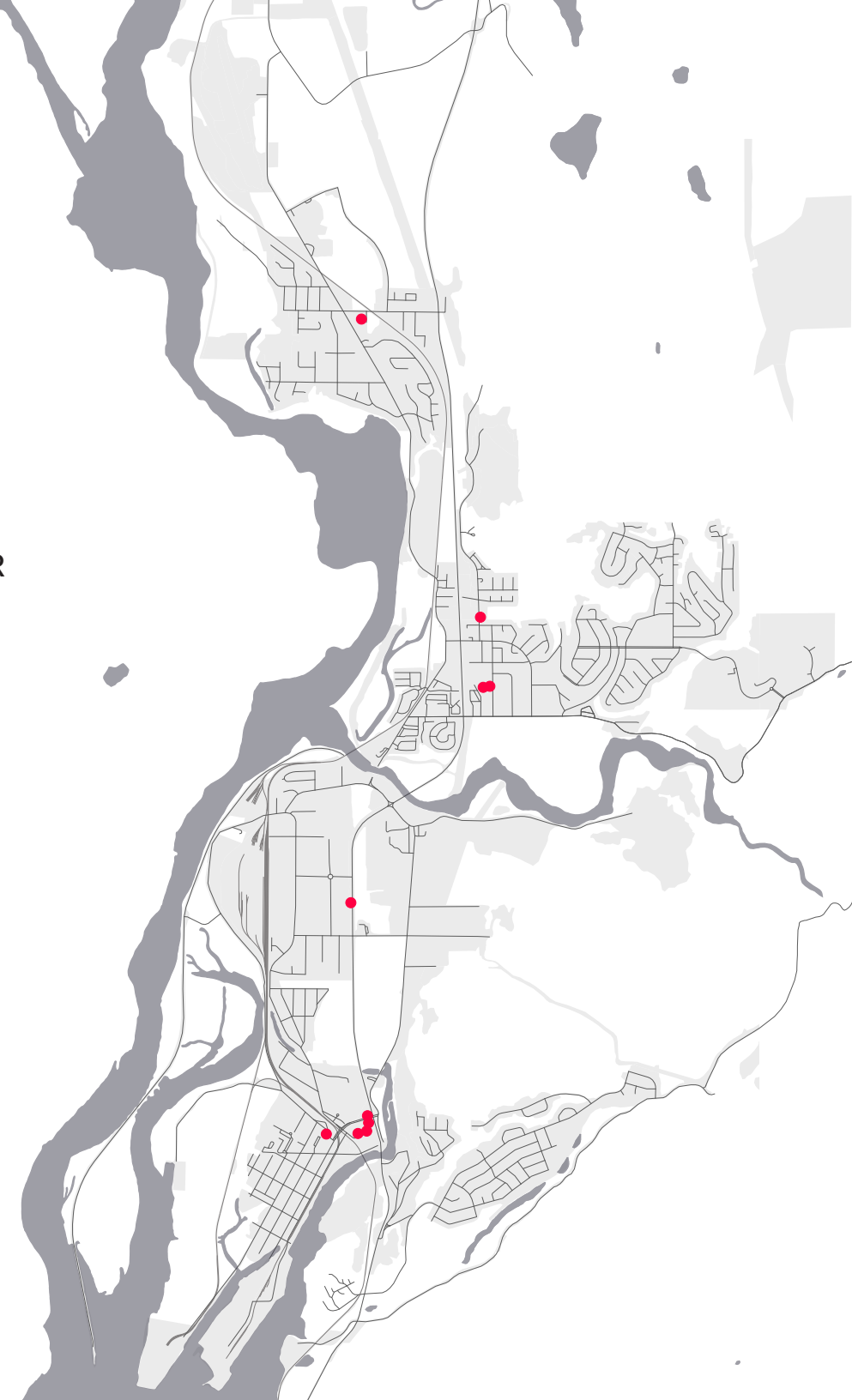
WAL-MART (8000m²)

7-ELEVEN

NESTERS MARKET (1600m²)

SAVE-ON FOODS (4400m²)

 GROCERY
 URBANIZED



RESTAURANTS + CAFES

THE RED BENCH

BEAN AROUND THE WORLD

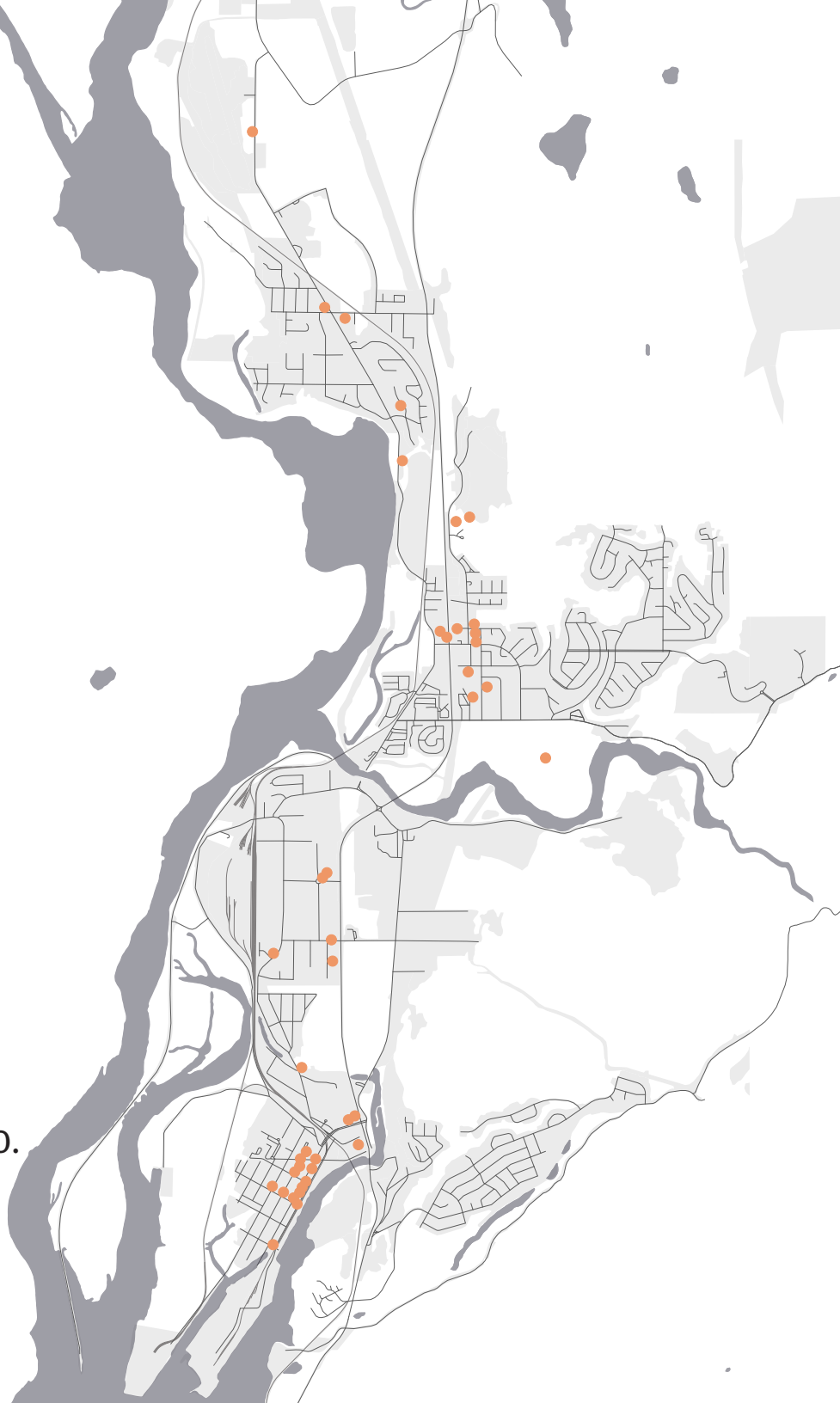
SUBWAY
ESSENCE OF INDIA

SQUAMISH GOLF AND COUNTRY CLUB

WENDYS


MCDONALDS
STARBUCKS
HOWE SOUND JUICE CO.
CAMPFIRE GRILL


- RESTAURANT/CAFE
- URBANIZED



PROCESSING

- PLANET GRAPE
- THE GRATEFUL BREAD BAKERY
- XOXOLATL CHOCOLATE CREATIONS
- HOWE SOUND BREWERY

 FOOD PROCESSING

 URBANIZED



MARKETS + COMMUNITY GARDENS

SQUAMISH NATION YOUTH CENTRE
COMMUNITY GARDEN

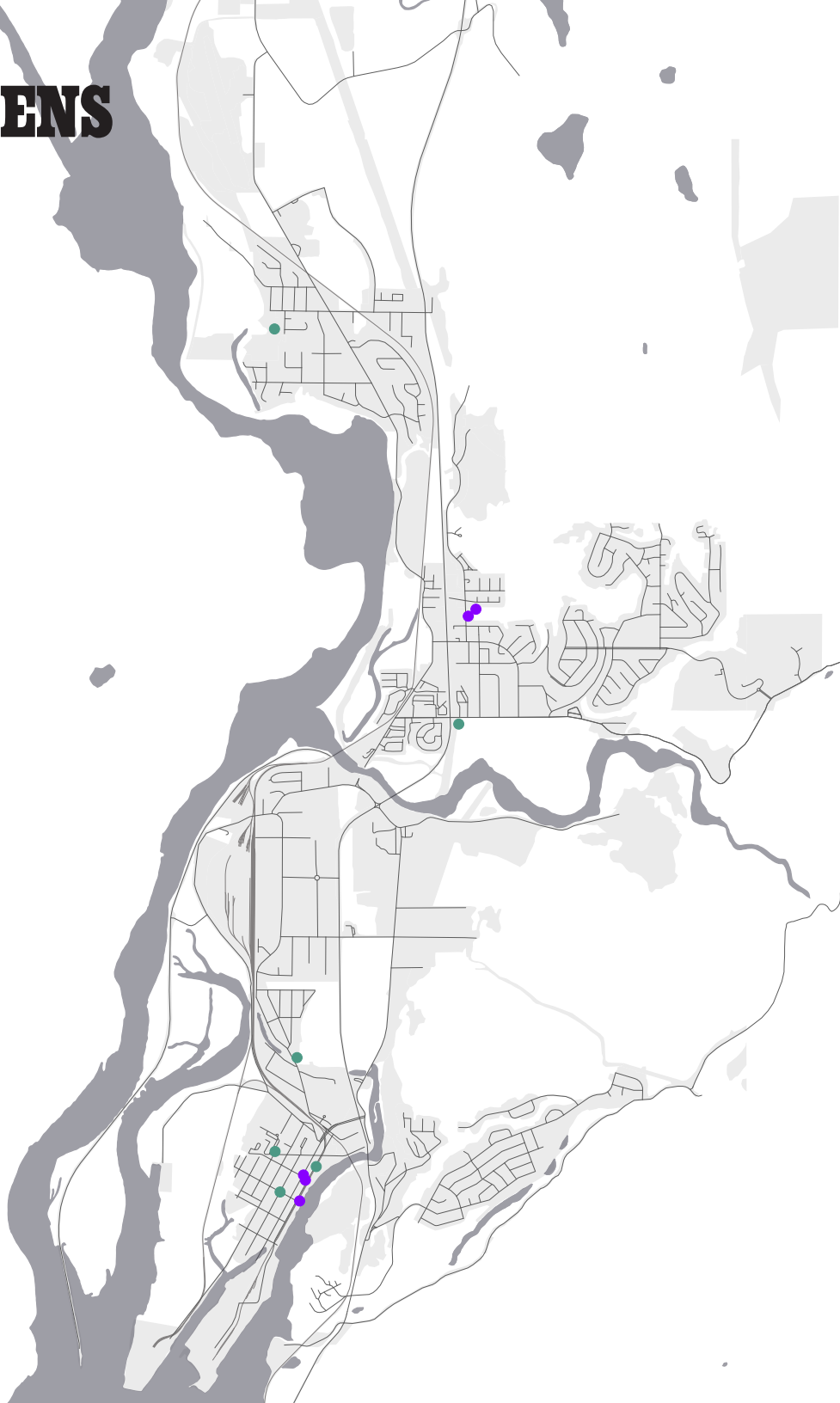


ROTARY CLUB COMMUNITY GARDEN
DIAMOND HEAD FISH MARKET



SQUAMISH FARMERS MARKET
IRIS PLACE COMMUNITY GARDEN
NEWPORT MARKET

- MARKET
- COMMUNITY GARDEN
- URBANIZED



FARMERS MARKET

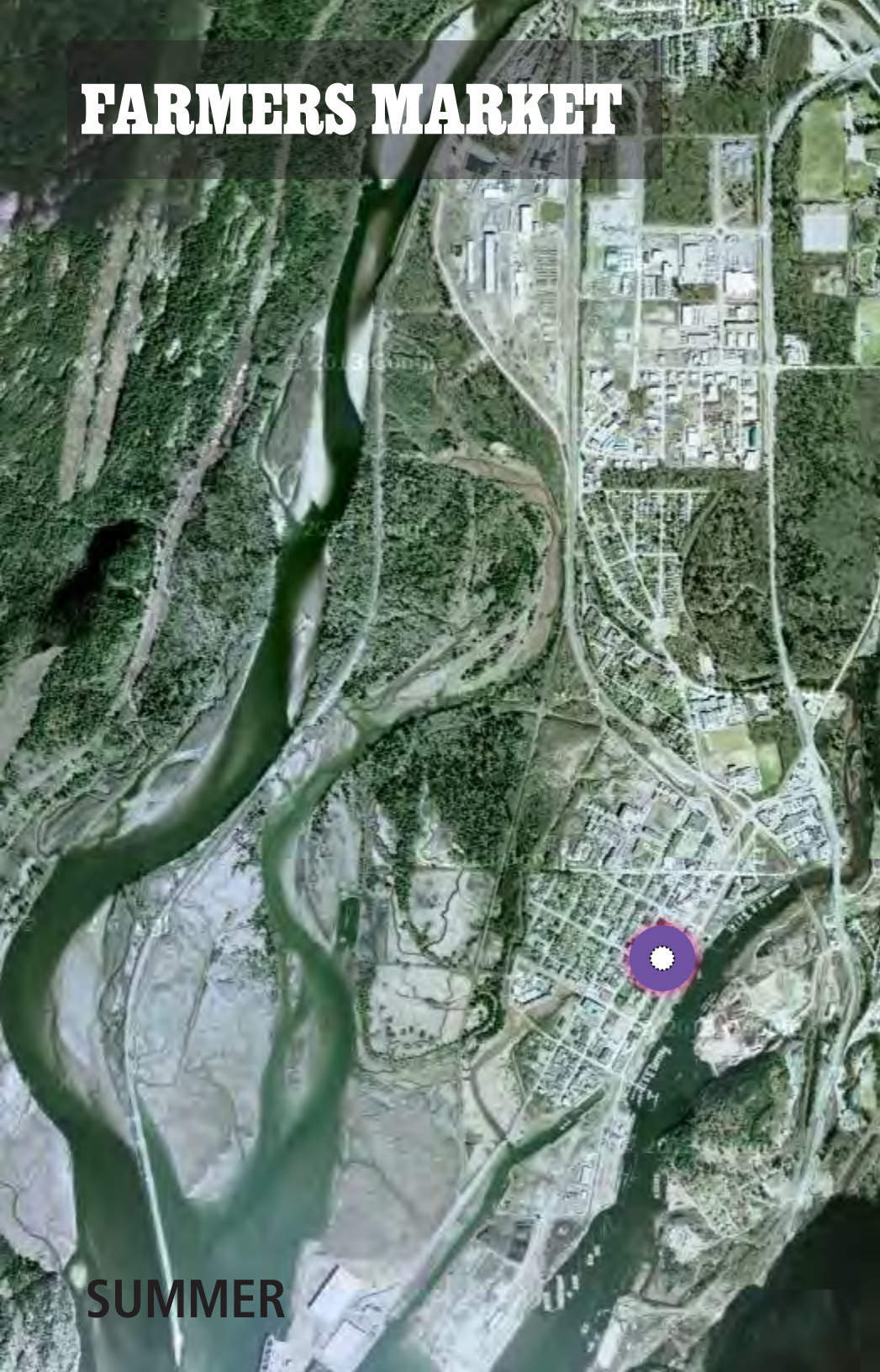
1.8 million dollar contribution
to local economy of Squamish

58,000 annual visitors

90% will do more
shopping in the area



FARMERS MARKET

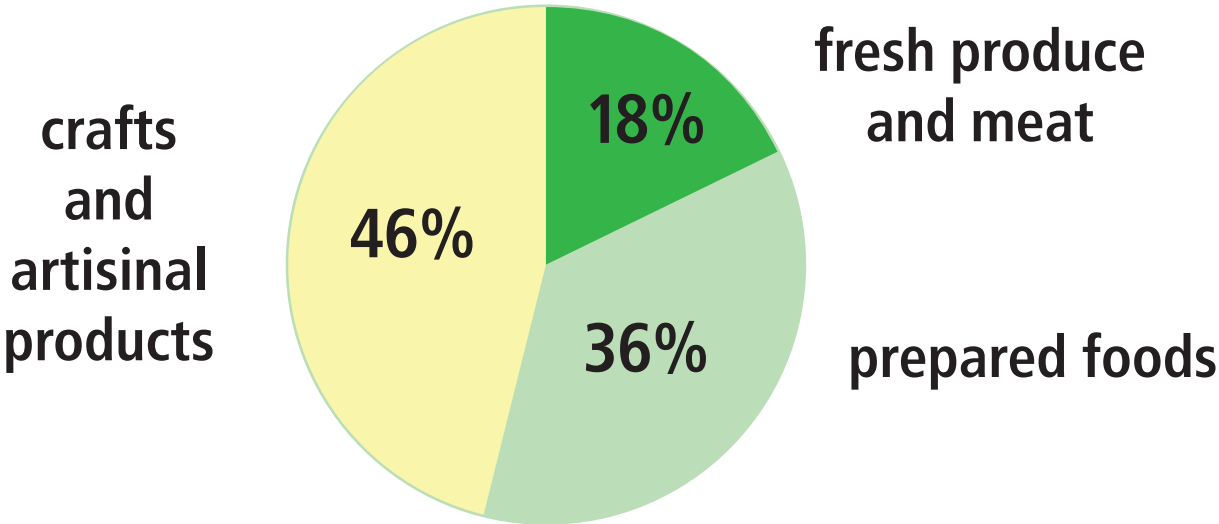


SUMMER

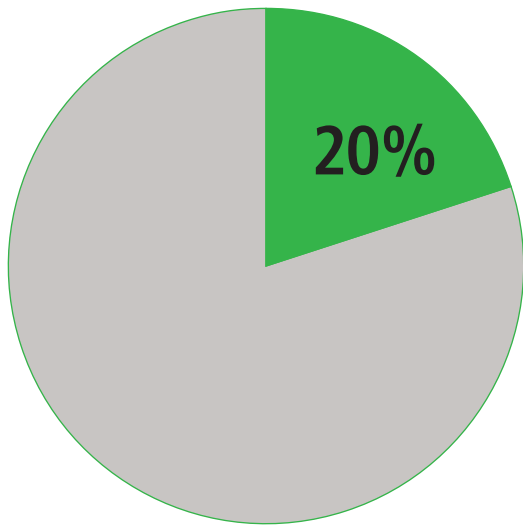


WINTER

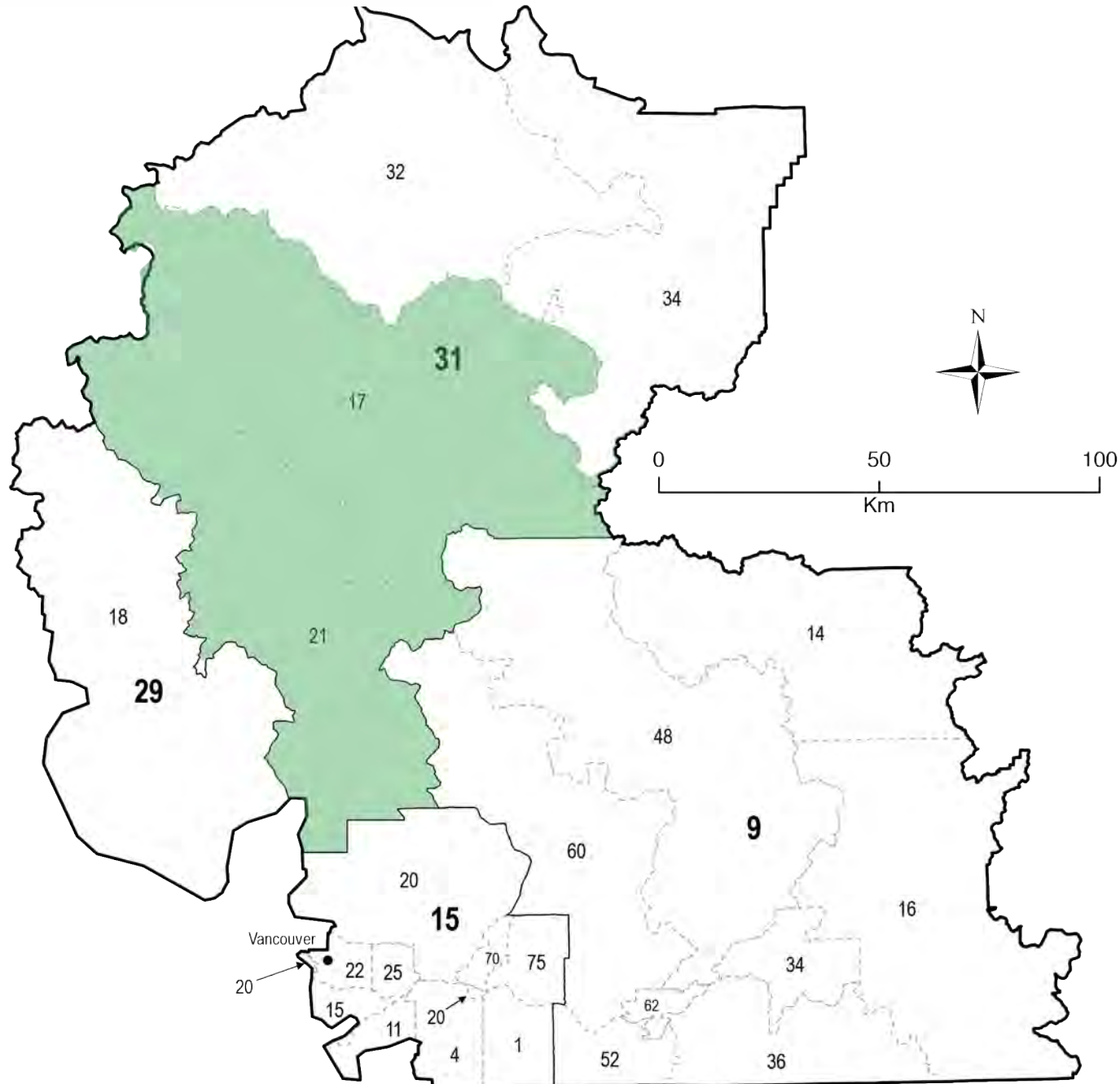
FARMERS MARKET



92 FARMS WITHIN 100 MILES



of these regional farms
sell produce at the
Squamish Farmers market



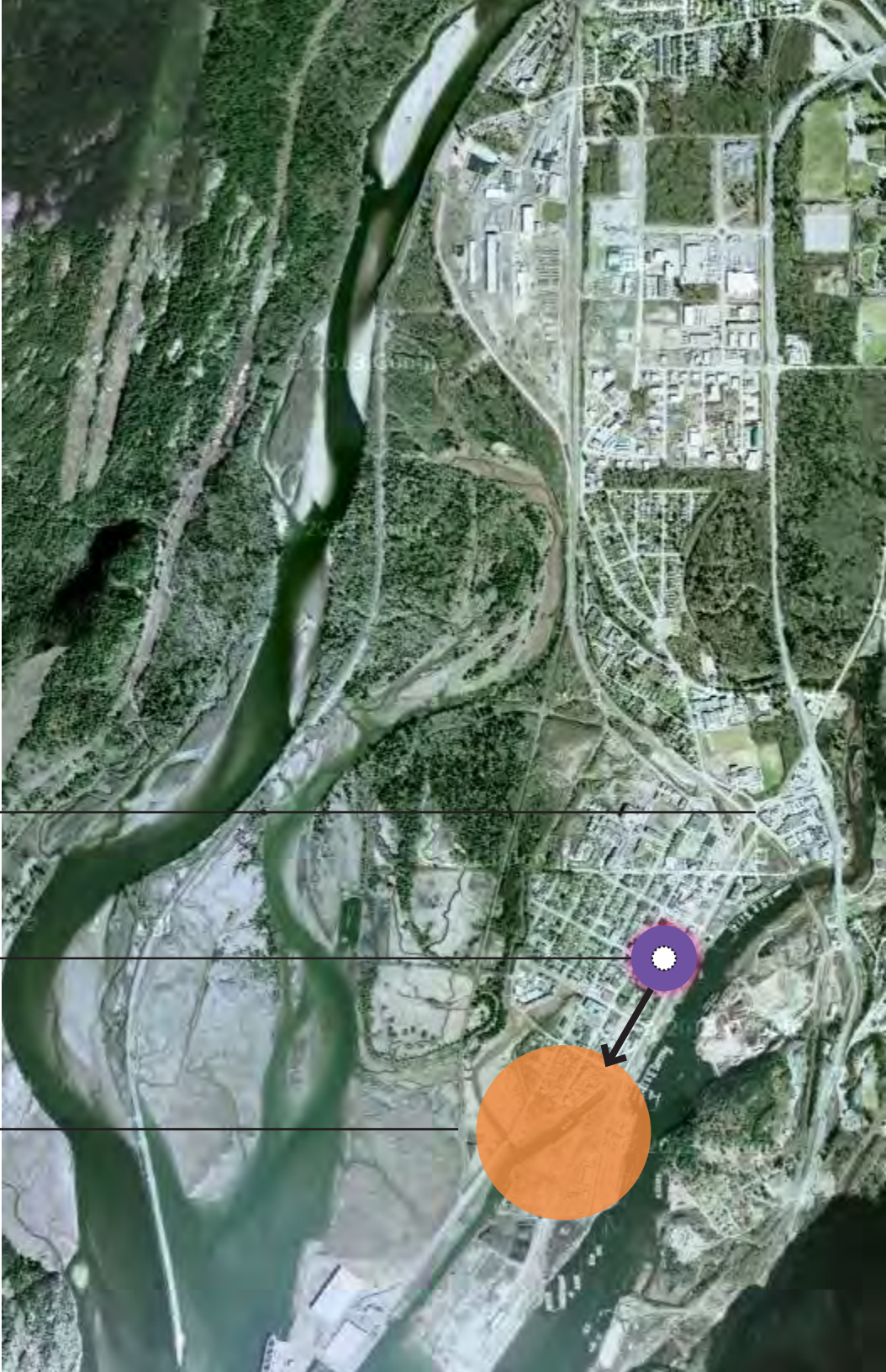
SITE SELECTION

SOUTH DOWNTOWN

DOWNTOWN ENTRANCE

SQUAMISH FARMERS MARKET

SOUTH DOWNTOWN



ADJACENT DEVELOPMENT

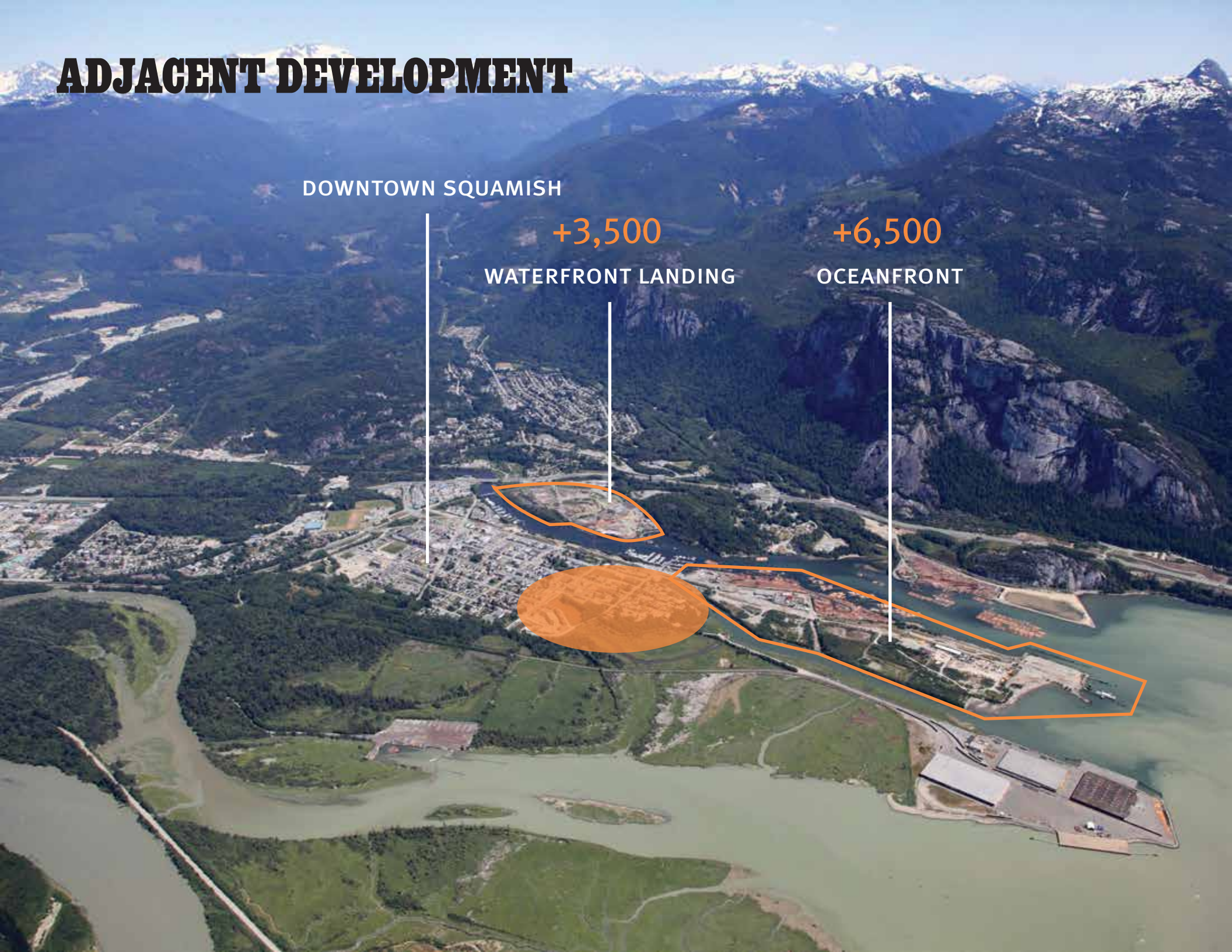
DOWNTOWN SQUAMISH

+3,500

WATERFRONT LANDING

+6,500

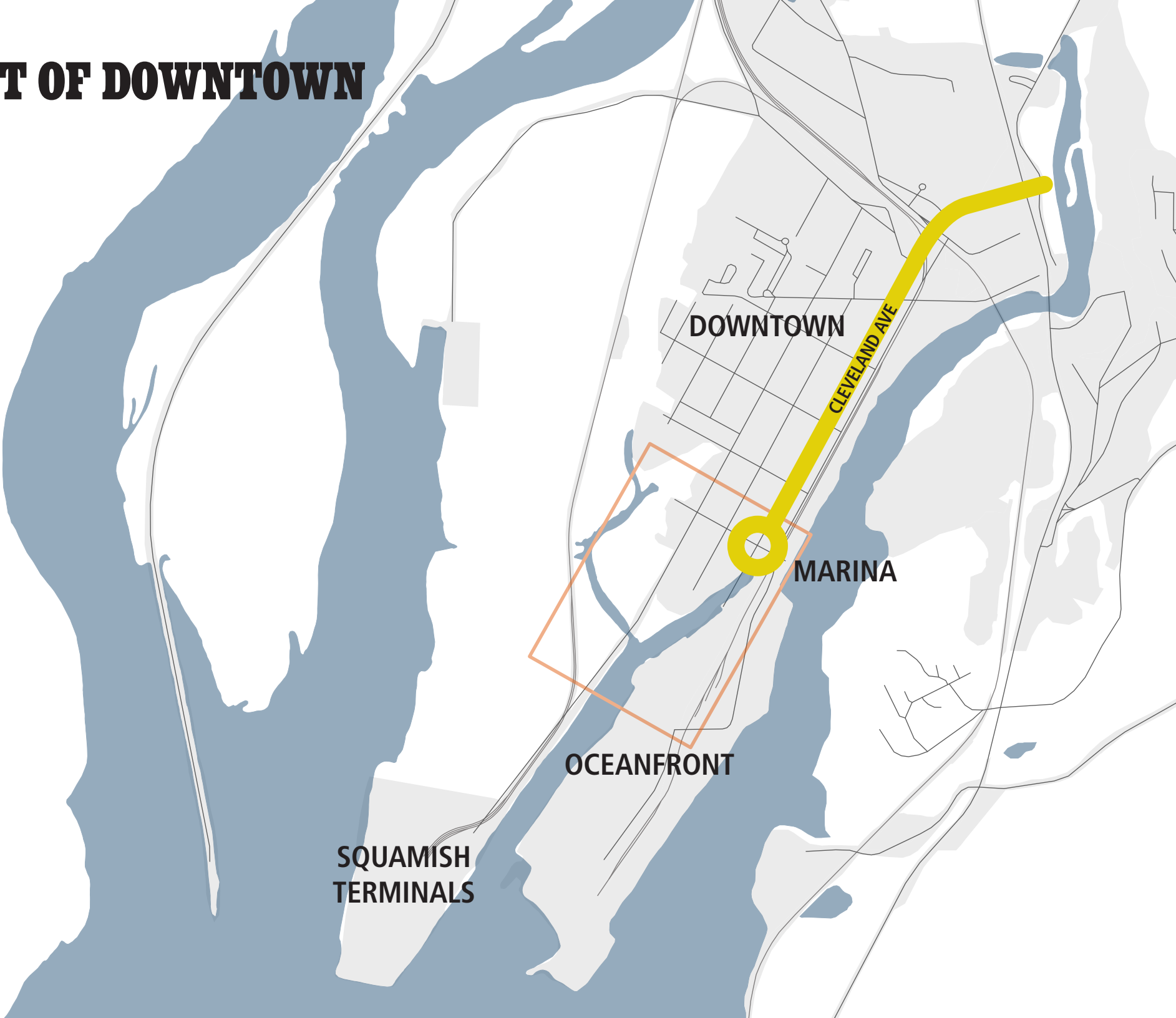
OCEANFRONT



CITY CONTEXT



FOOT OF DOWNTOWN



DOWNTOWN

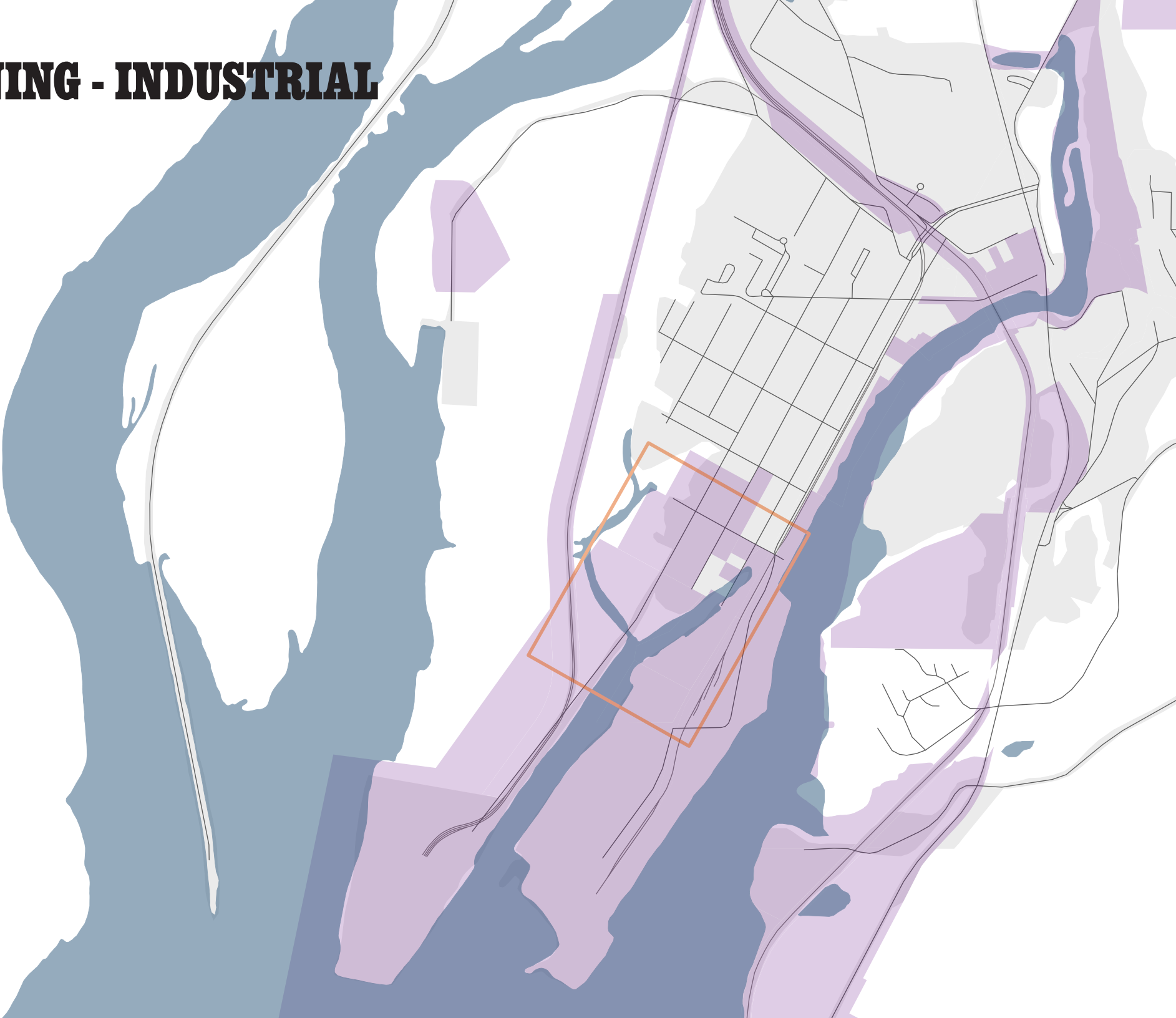
CLEVELAND AVE

MARINA





OCEANFRONT

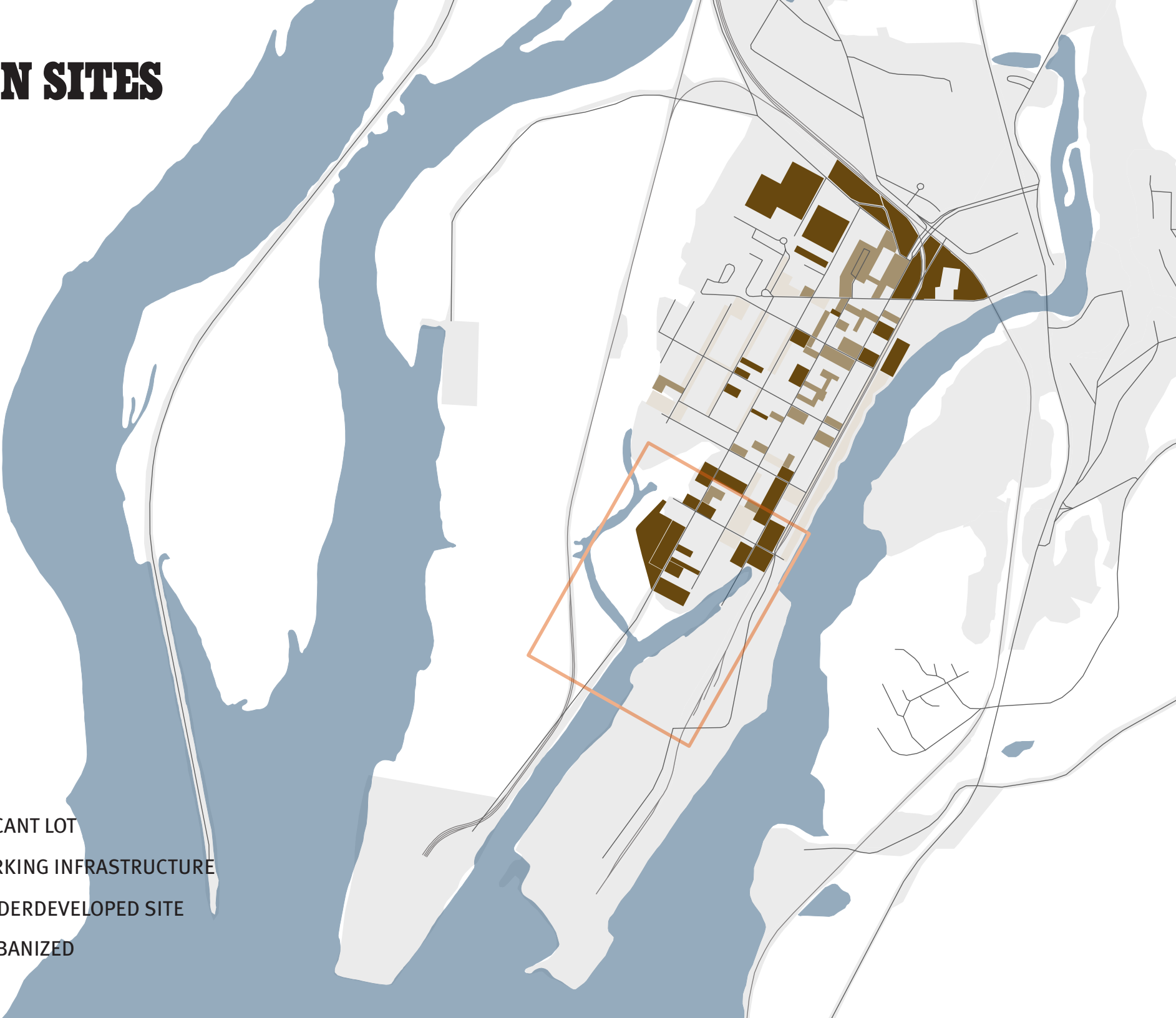
SQUAMISH
TERMINALS

ZONING - INDUSTRIAL

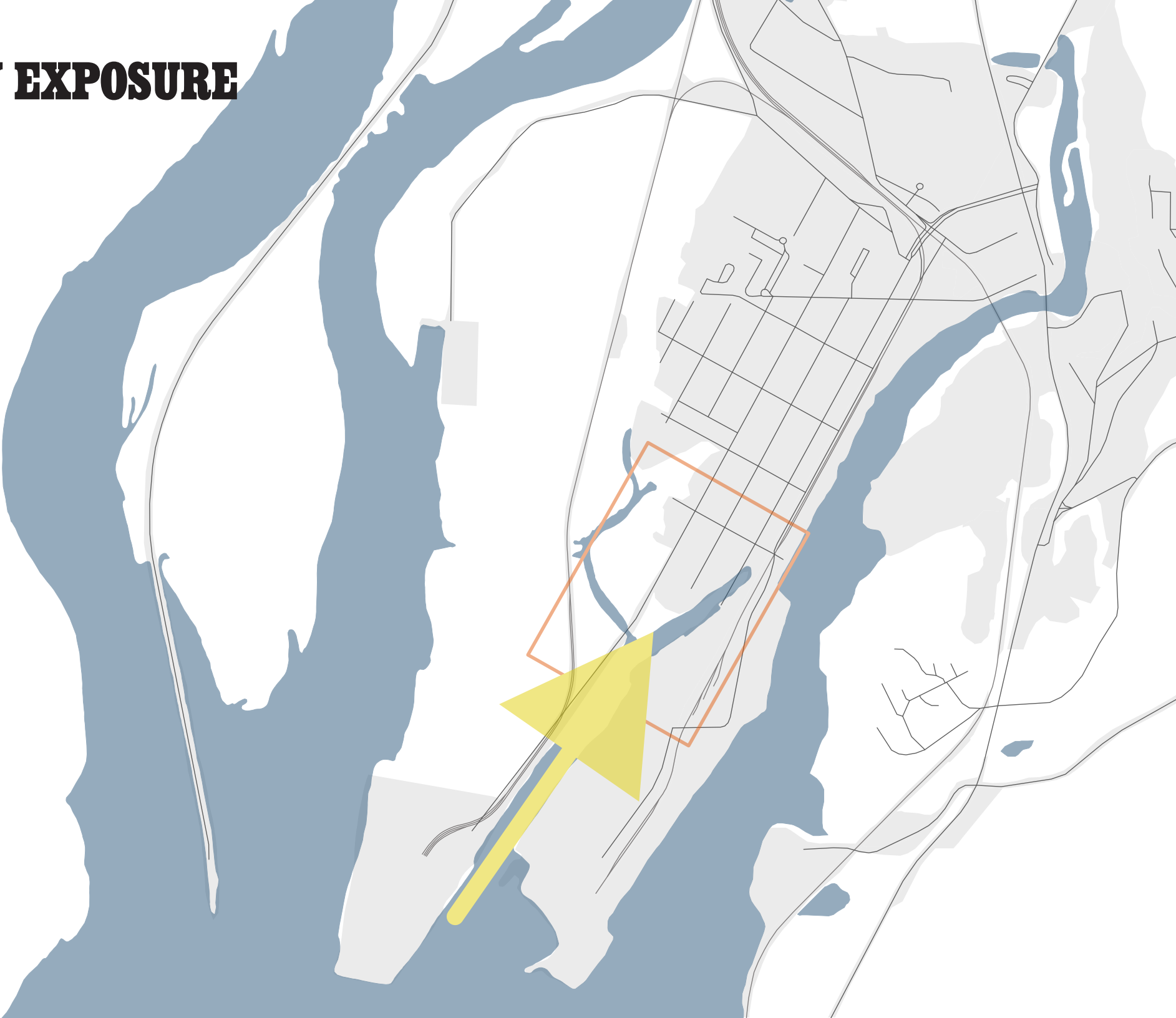


OPEN SITES

-  VACANT LOT
-  PARKING INFRASTRUCTURE
-  UNDERDEVELOPED SITE
-  URBANIZED



SUN EXPOSURE



VIEWS



CATTERMOLE SLOUGH



NORTH



SOUTH

CHARACTER

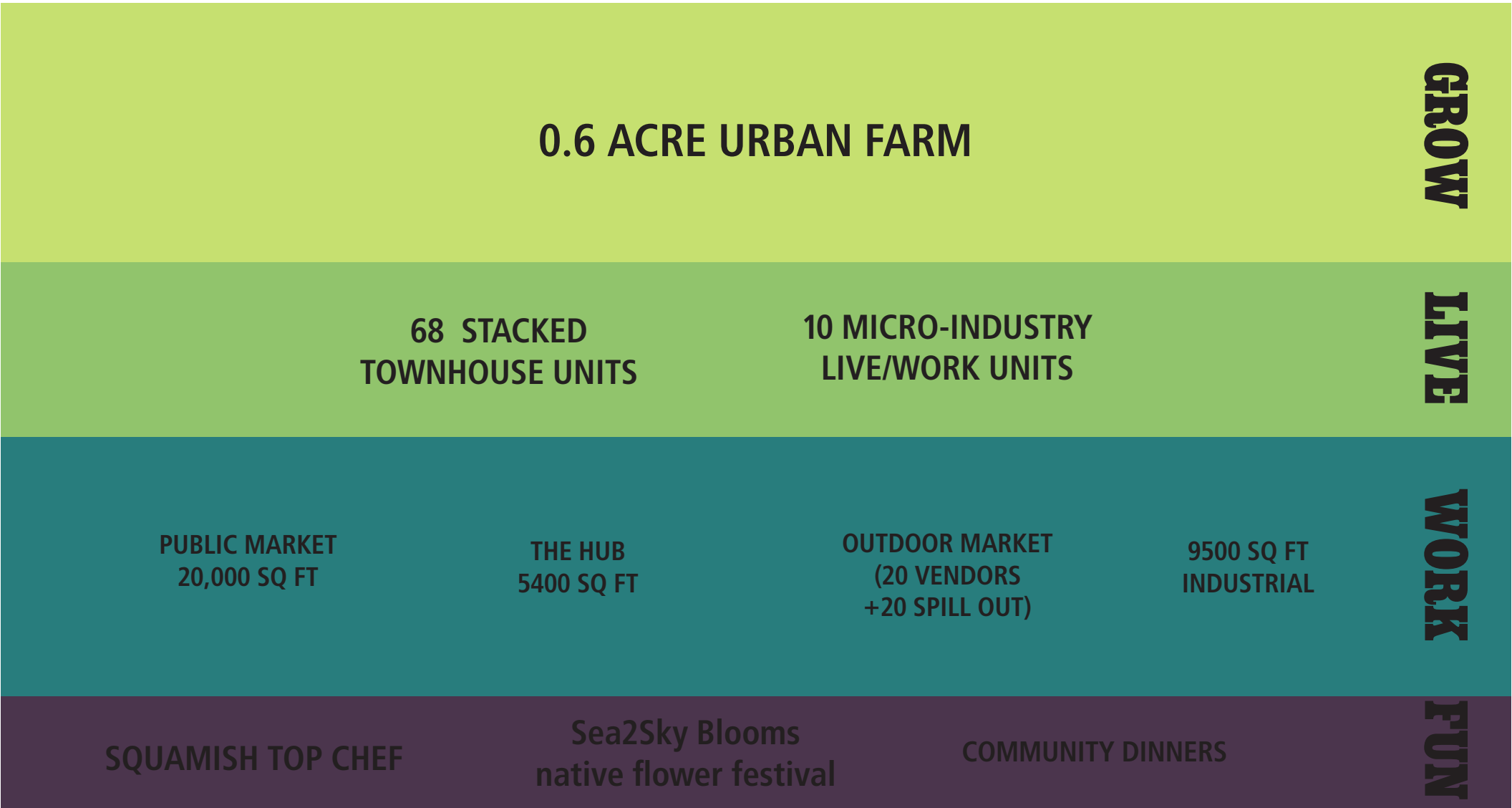


CHARACTER



PROGRAM

PROGRAM



0.6 ACRE URBAN FARM

GROW

68 STACKED
TOWNHOUSE UNITS

10 MICRO-INDUSTRY
LIVE/WORK UNITS

LIVE

PUBLIC MARKET
20,000 SQ FT

THE HUB
5400 SQ FT

OUTDOOR MARKET
(20 VENDORS
+20 SPILL OUT)

9500 SQ FT
INDUSTRIAL

WORK

SQUAMISH TOP CHEF

Sea2Sky Blooms
native flower festival

COMMUNITY DINNERS

FUN

MARKET ARCHITECTURE



MATERIALS AND CHARACTER



USERS



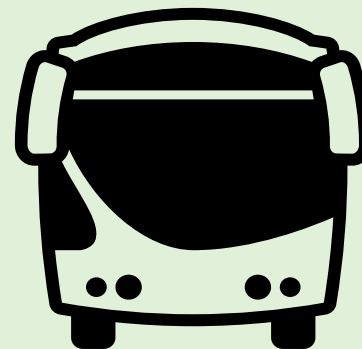
ÜBER LOCAL

1-3x per week



LOCAL

1x per week



VISITOR

occasional
1x per month

PROJECT GOALS

seeding an urban foodculture

LOCAL CRAFT

LOCAL FOOD

LOCAL ECONOMY



celebrate the growing, selling and enjoyment of local food to encourage resilience and economic growth in Squamish

PRINCIPLES

**create an urban heart for an
embedded local food network
in Squamish**

**which encourages local businesses and community ties,
strengthens connections to local and regional food,
relates to the natural context,
reflects the city's goals to create
a more attractive downtown,
connects future neighbourhoods.**

STRATEGIES

POLYVALENT SPACES

accommodate events of varying size and intensity

FOOD-SPECIFIC GROUNDPLANE

design to facilitate food market activities

ELEVATE THE FOOT (WITH FOOD)

occupy a prominent place in Squamish for pedestrians, not cars

PLACES TO WORK AND WATCH PEOPLE WORK

stimulate economic growth and activate the site

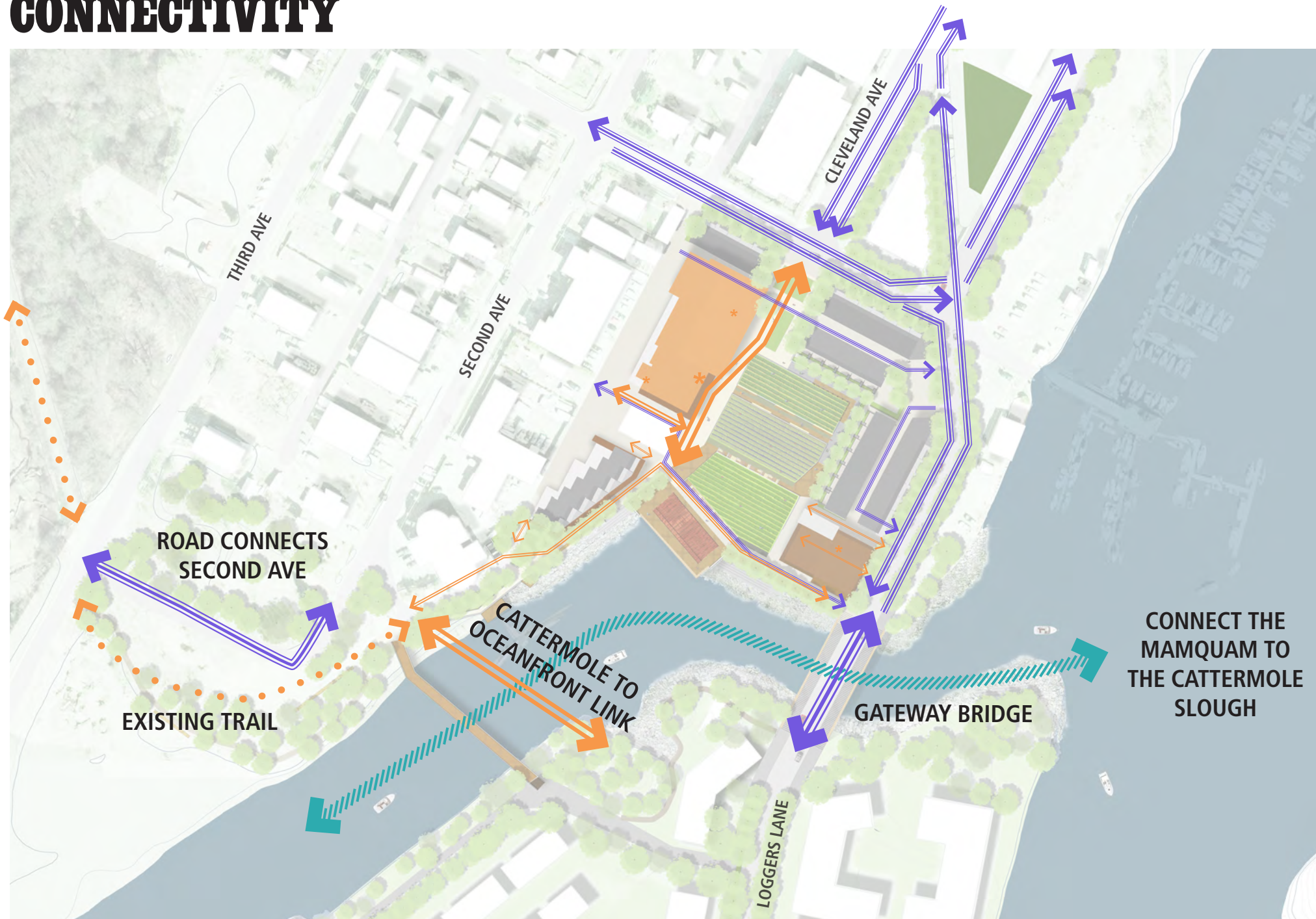
An architectural rendering of a city design. The scene is viewed from an elevated perspective, showing a grid of streets and numerous rectangular buildings. In the foreground, there is a river or canal with a bridge crossing it. The background features a range of mountains, with a prominent, snow-capped peak. The word "DESIGN" is overlaid in the center of the image.

DESIGN

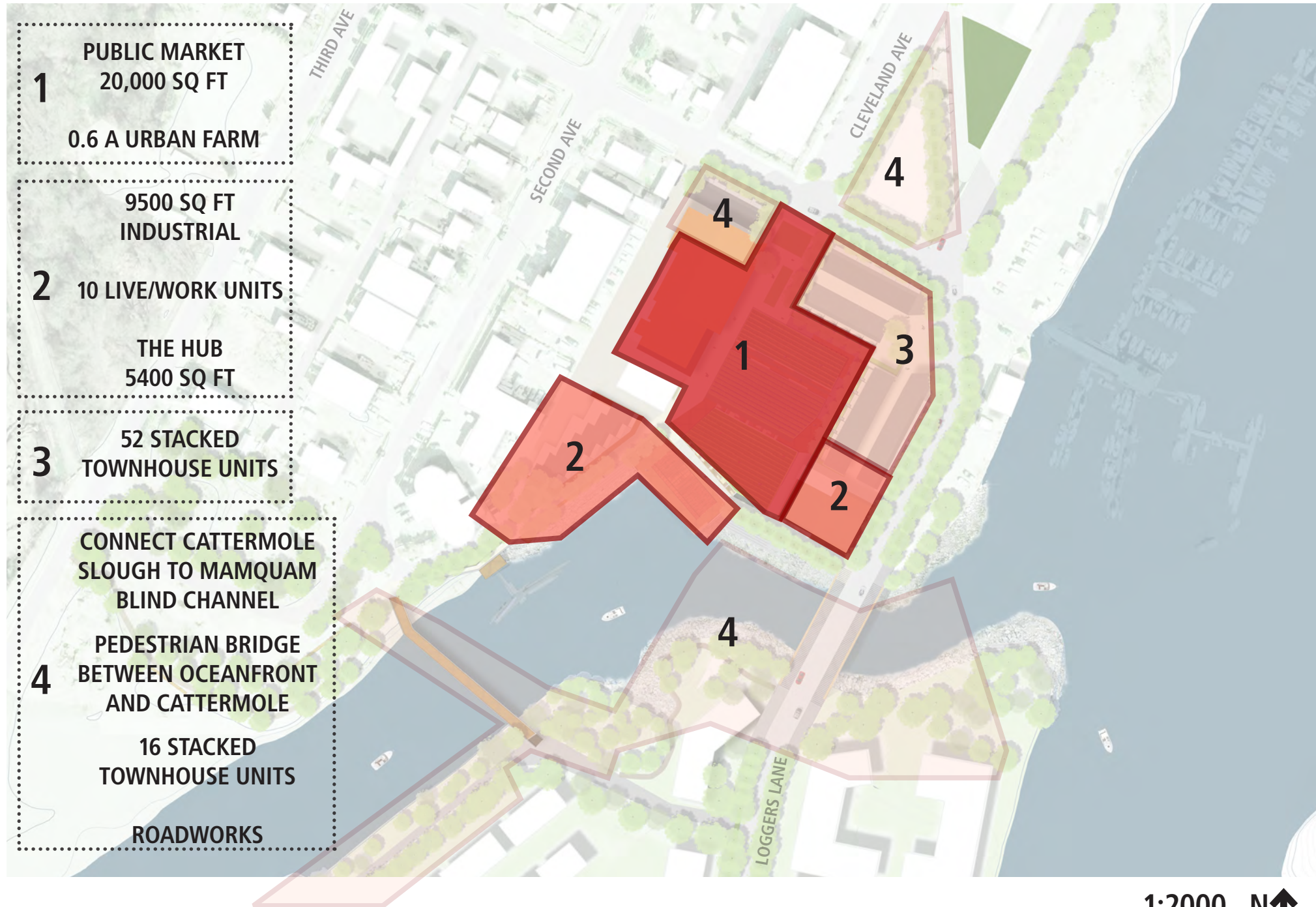
SITE PLAN



CONNECTIVITY



PHASING



SITE PLAN



CLEVELAND AVE

PUBLIC MARKET

HOP GARDEN

SLOUGH MEWS

TOWNHOUSES
LIVE/WORK

ARTISAN
STUDIOS

PUBLIC ART

URBAN
FARM

PUBLIC ART

THE HUB

OUTDOOR
MARKET

VEHICLE +
PEDESTRIAN
BRIDGE

PEDESTRIAN
BRIDGE

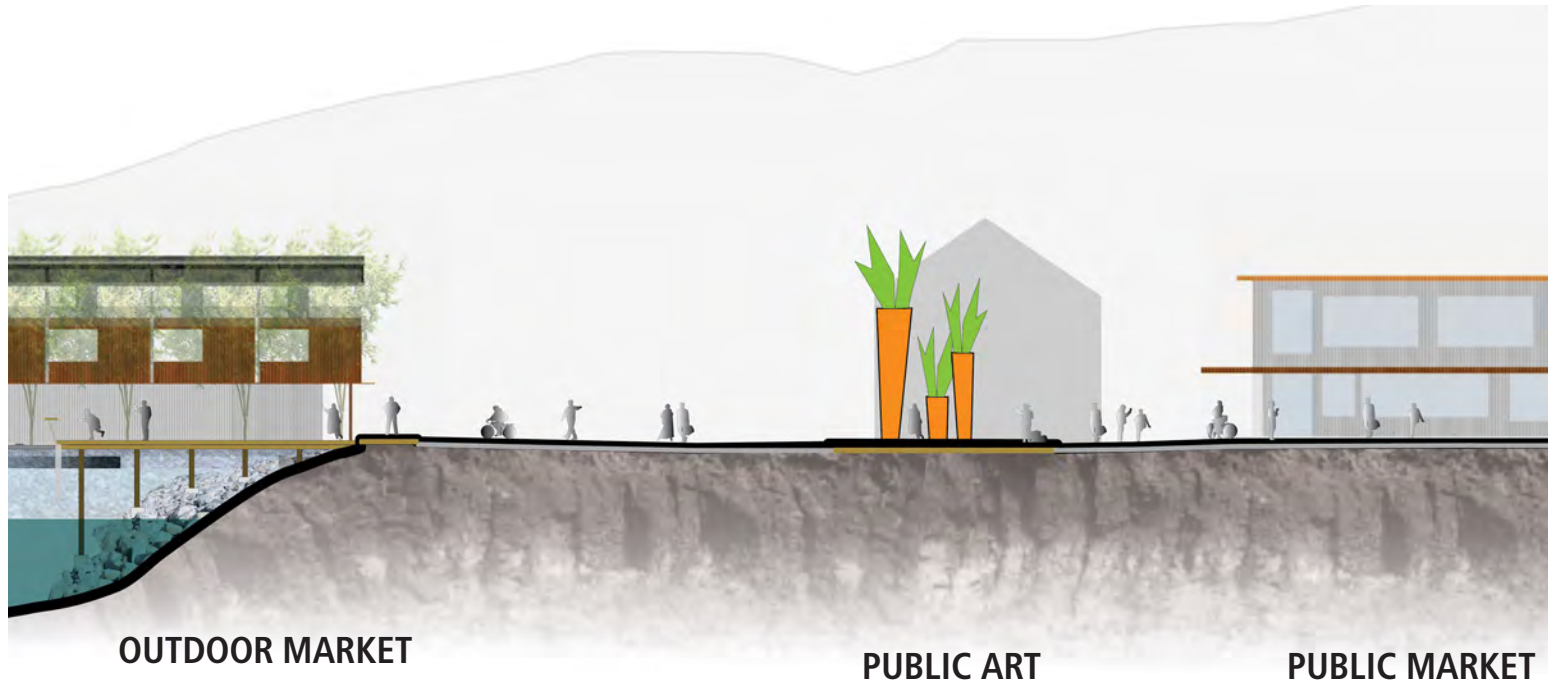
1:1000 N ↑



ENTRANCE FROM CLEVELAND AVE

SECTION - SLOUGH MEWS



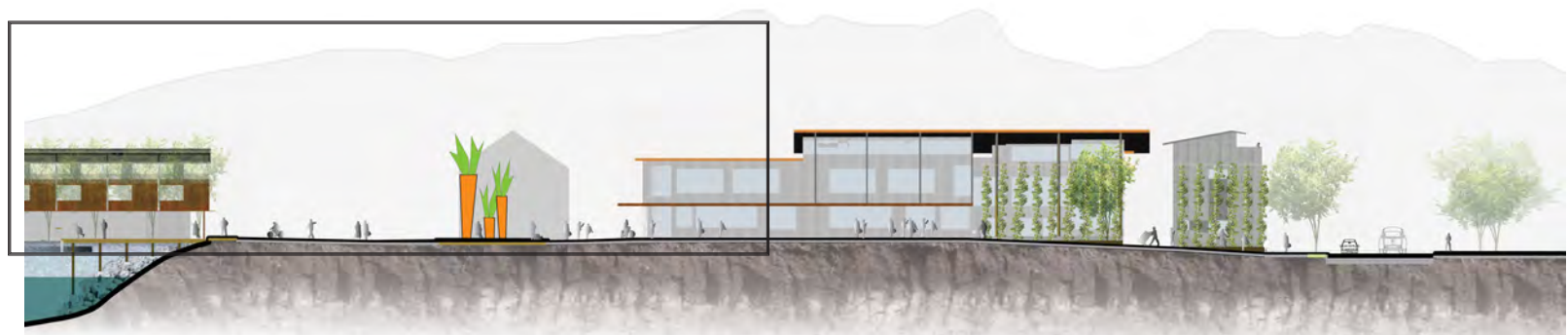


OUTDOOR MARKET

PUBLIC ART

PUBLIC MARKET

1:500



CATTERMOLE SLOUGH

SLOUGH MEWS

MARKET

VANCOUVER ST

SECTION B-B' - SLOUGH MEWS 1:1000



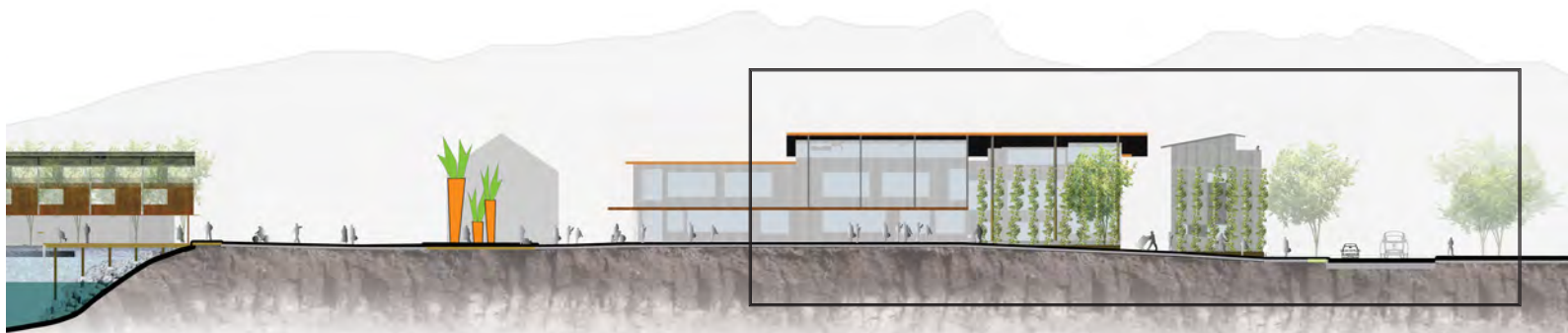
PUBLIC MARKET

HOP GARDEN

**LIVE/WORK
TOWNHOUSE**

VANCOUVER ST

1:500



**CATTERMOLE
SLOUGH**

**SLOUGH
MEWS**

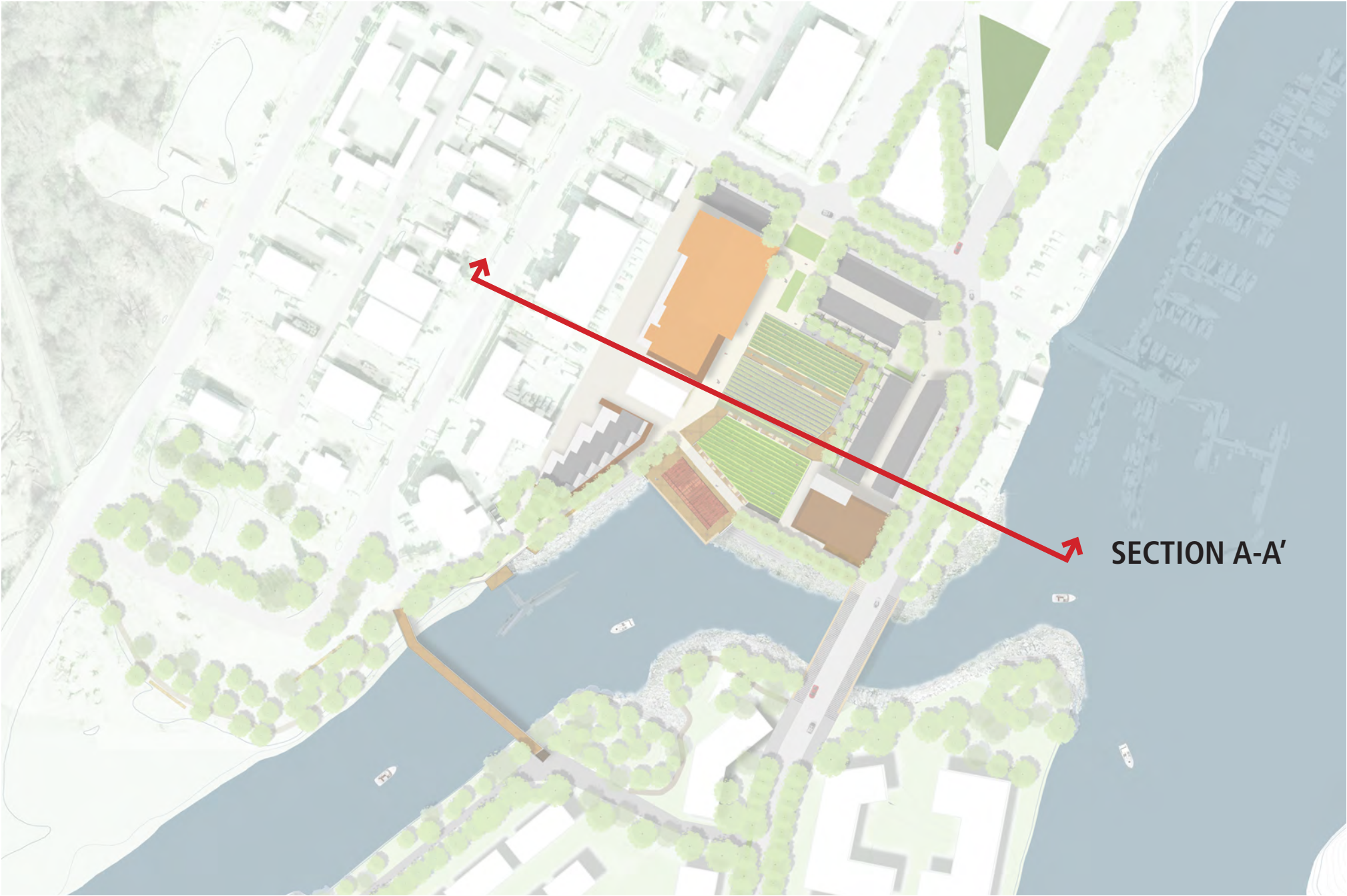
PUBLIC MARKET

VANCOUVER ST

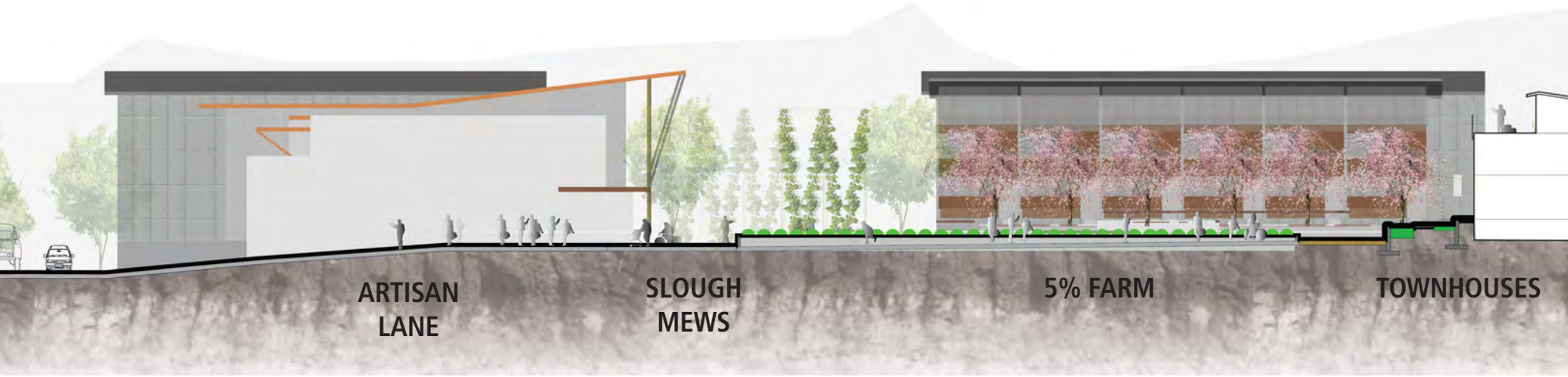
SECTION B-B' - SLOUGH MEWS 1:1000



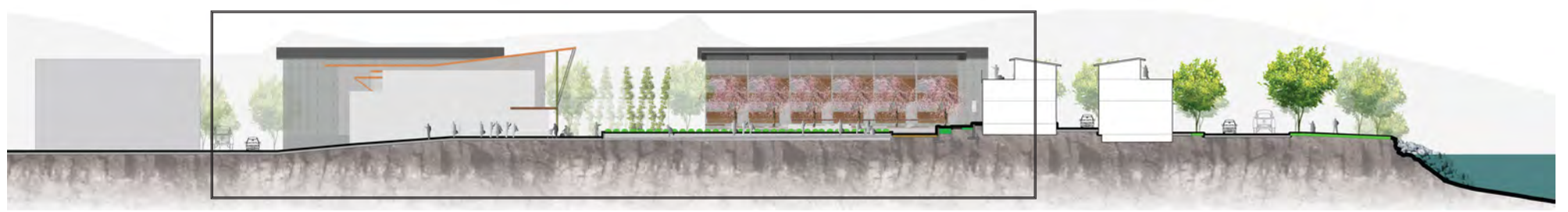
SECTION - TOWARDS DOWNTOWN



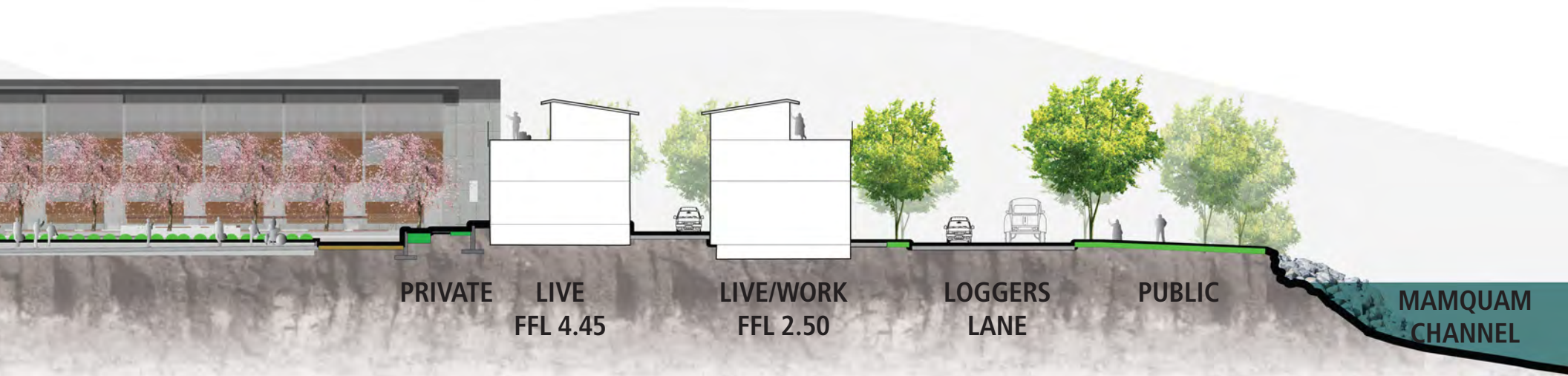
SECTION A-A'



1:500

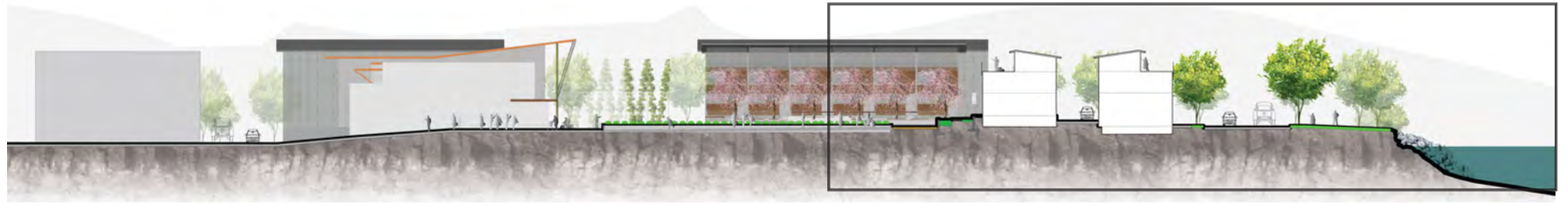


SECTION A-A' - TOWARDS DOWNTOWN 1:1000



PRIVATE LIVE FFL 4.45 LIVE/WORK FFL 2.50 LOGGERS LANE PUBLIC MAMQUAM CHANNEL

1:500

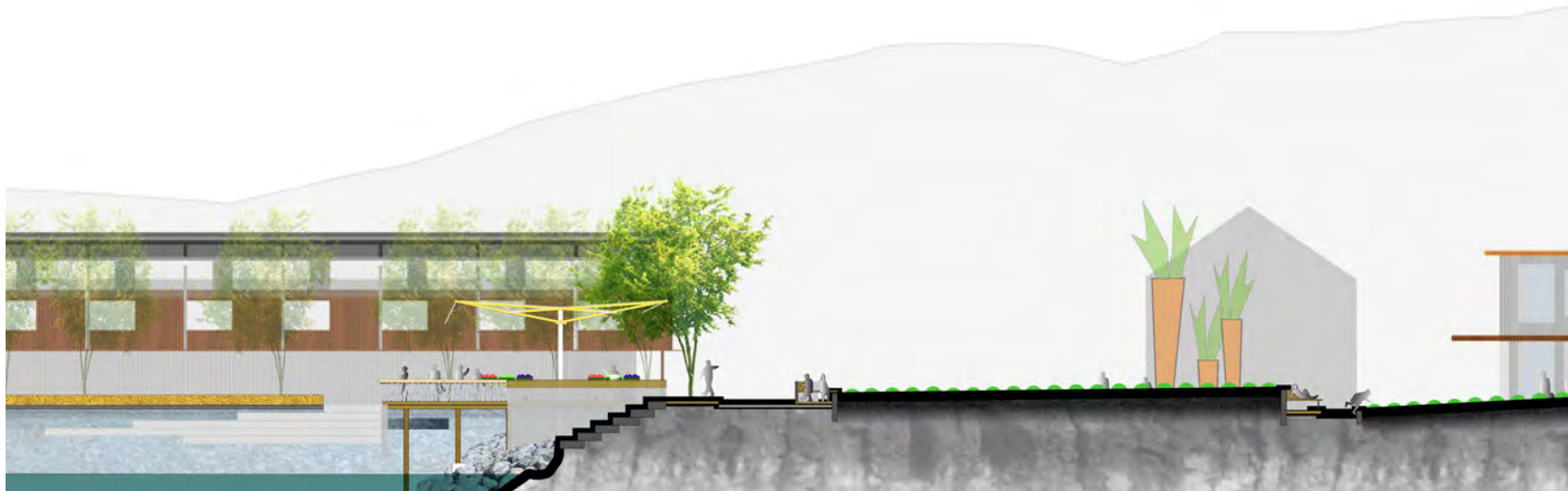


ALLEY PUBLIC MARKET HOP GARDEN 5% FARM TOWNHOUSES LOGGERS LANE MAMQUAM CHANNEL

SECTION A-A' - TOWARDS DOWNTOWN 1:1000

SECTION - THE FARM





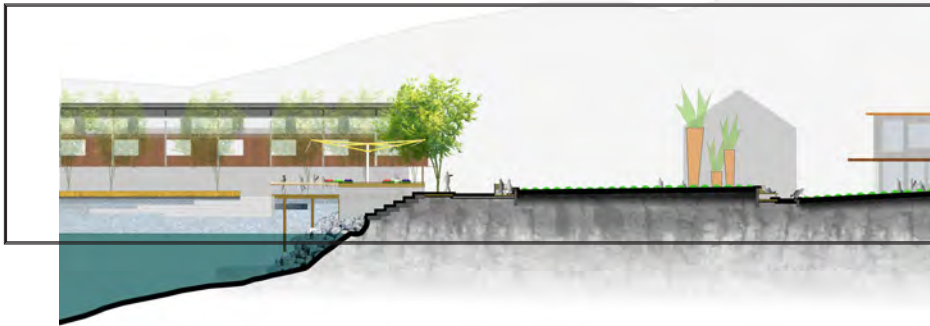
SLOUGH
STEPS

SLOUGH
STEPS

3% FARM

5% FARM

1:500



OUTDOOR MARKET

URBAN FARM

TOWNHOUSES

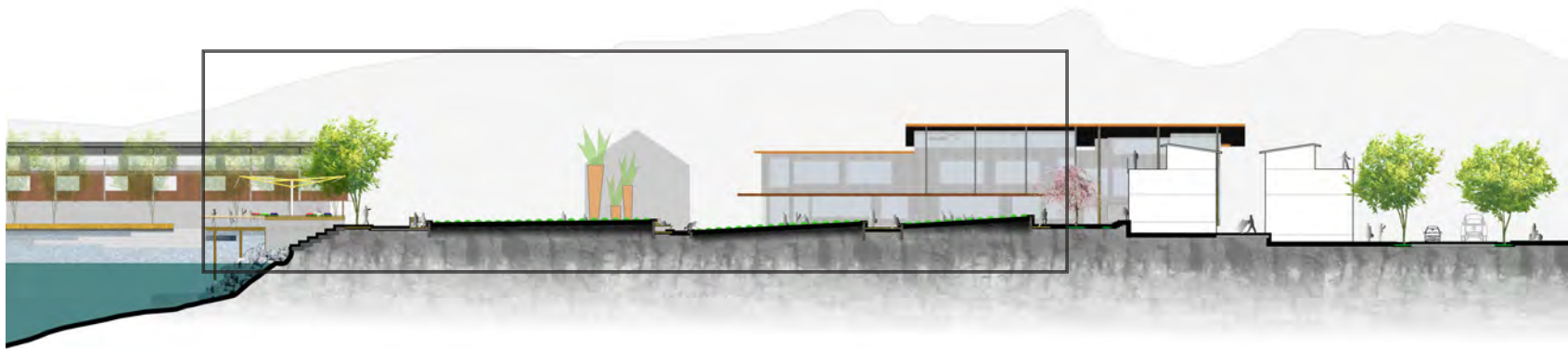
VANCOUVER ST

SECTION C-C' - THE FARM 1:1000



FARM LOUNGE 3% FARM FARM LOUNGE 5% FARM SEATING 7% FARM SALAD BAR

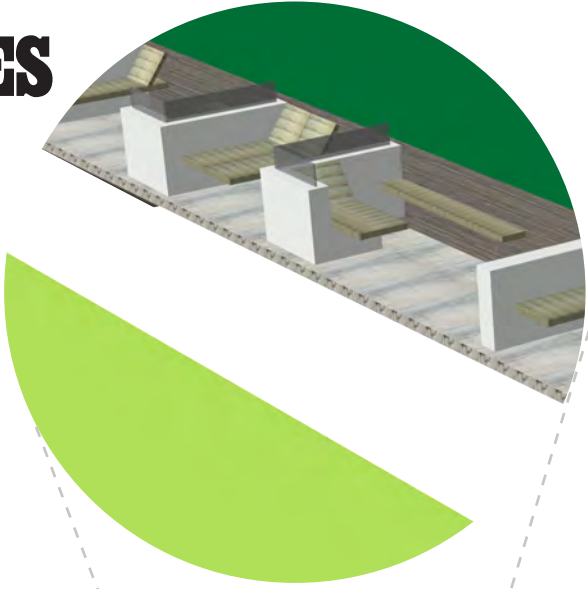
1:500



OUTDOOR MARKET URBAN FARM TOWNHOUSES VANCOUVER ST

SECTION C-C' - THE FARM 1:1000

URBAN FARM EDGES



FARM LOUNGE



3% FARM

5% FARM

7% FARM

FARM LOUNGE

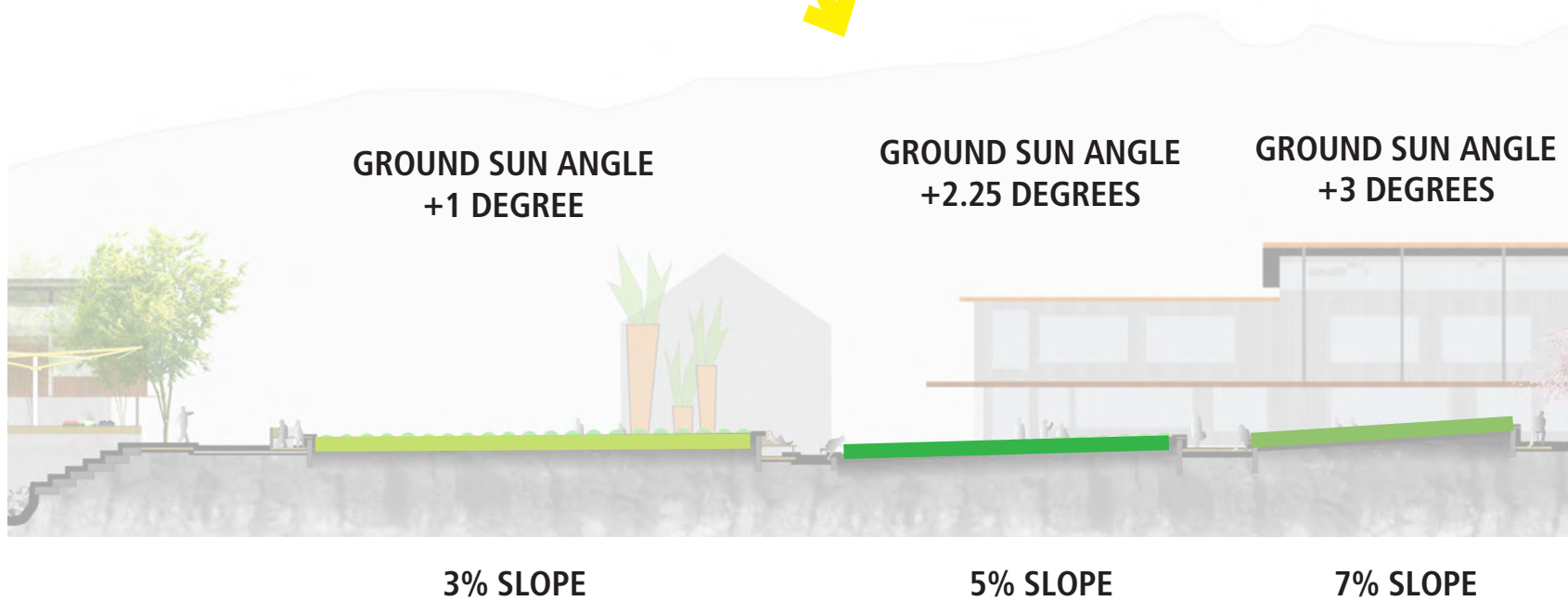
FARM LOUNGE

SEATING

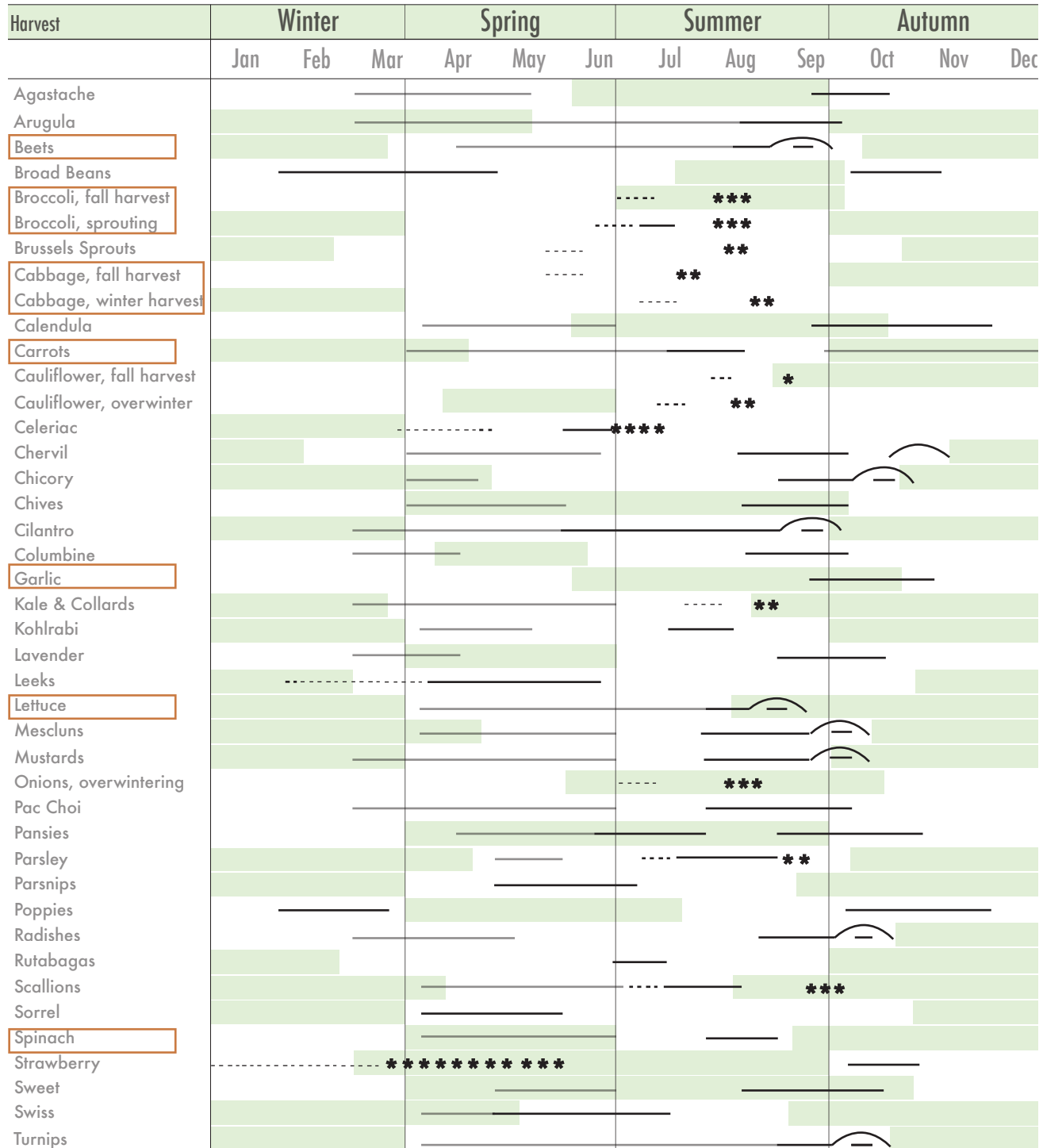
SALAD BAR

GROW

AVERAGE SOLAR HEAT GAIN = 0.53 CAL/CM²



GROW



LEGEND - - - - - start indoors — direct-sow summer harvest — direct-sow fall/winter harvest *** transplant — cover



URBAN FARM



URBAN FOODCULTURE

An aerial photograph of a city and river valley, overlaid with a semi-transparent text box. The city is situated along a river, with a large stadium-like structure in the foreground. The surrounding landscape is lush green, with mountains in the background. The text is white and centered in the upper right quadrant.

“The relationship between food and cities is endlessly complex, but at one level is utterly simple. Without farmers and farming, cities would not exist”

Carolyn Steel in *Agricultural Urbanism*