

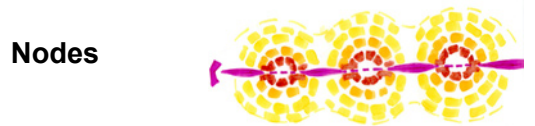
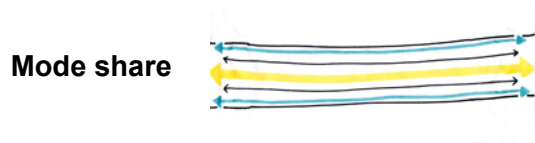
neighbourhood nodes
hastings corridor synthesis

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design principles

group 5 : neighborhood nodes

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Walkable neighbourhoods

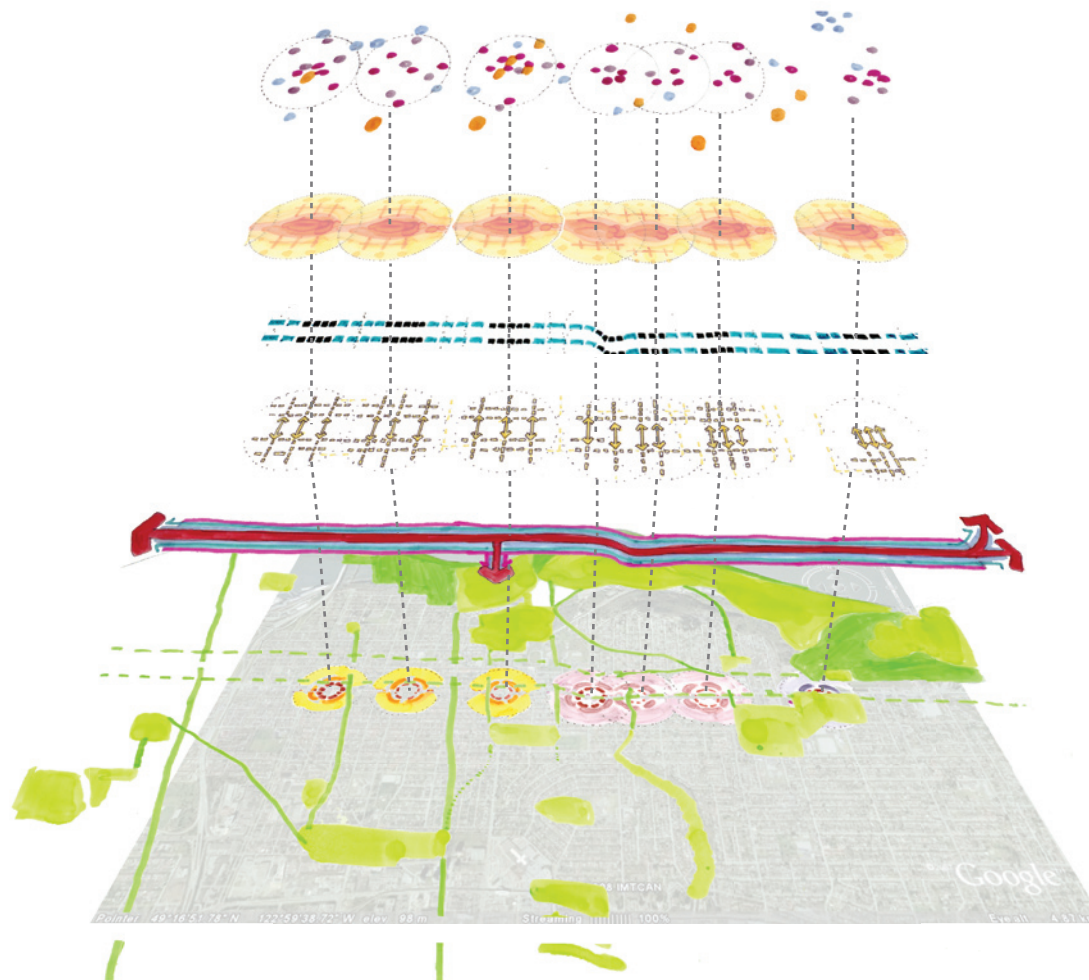


Mode share
Nodes
Increment
Walkable neighbourhoods
Green infrastructure
Homes
Jobs

Hastings street is a transportation corridor that currently limits the growth of its adjacent communities. Despite opportunities provided by local merchants, a stable residential population, and public infrastructure, little activity occurs that attracts people to stop along the corridor. Our design principles have emerged from the analysis to address this problem and other major issues facing future development. The goal of our principles is to produce a framework for fostering growth along the corridor that emphasizes the local neighbourhoods and amenities.

synthesis : design principles

group 5 : neighborhood nodes



1. Provide a **variety of job types** along the length of corridor as well as throughout residential area. Job density is highest at the nodes.

2. Provide a **wide selection of housing options** along the corridor and throughout the neighborhoods. The highest densities occur at the nodes in 6-story multi-family, or multi-use units.

3. **Small visual increments within the nodes** contribute to a human scaled and pedestrian friendly neighborhood. Larger visual increments between nodes indicate a transition between centres.

4. **Create walkable neighborhoods** that reduce the need for daily use automobiles. Amenities and housing should always be within walking distance and easily accessible. Increased visibility of north-south pedestrian connections and sidewalk/building frontage permeability.

5. Increased public transportation options will help to reduce single-occupancy vehicle use. **Mode share** is encouraged in the existing corridors to integrate pedestrian activity with other modes of transport.

6. Create **neighborhood centres along the corridor** that respond to the existing amenities and major transportation routes. These nodes support future population growth and help to create distinct neighborhoods along the corridor.

7. Implement the use of **green infrastructure** along each roadway to improve ecological function and quality of life. Green streets will connect the neighborhood to existing parkland while also creating places for outdoor activities and day to day enjoyment.

variety of job types

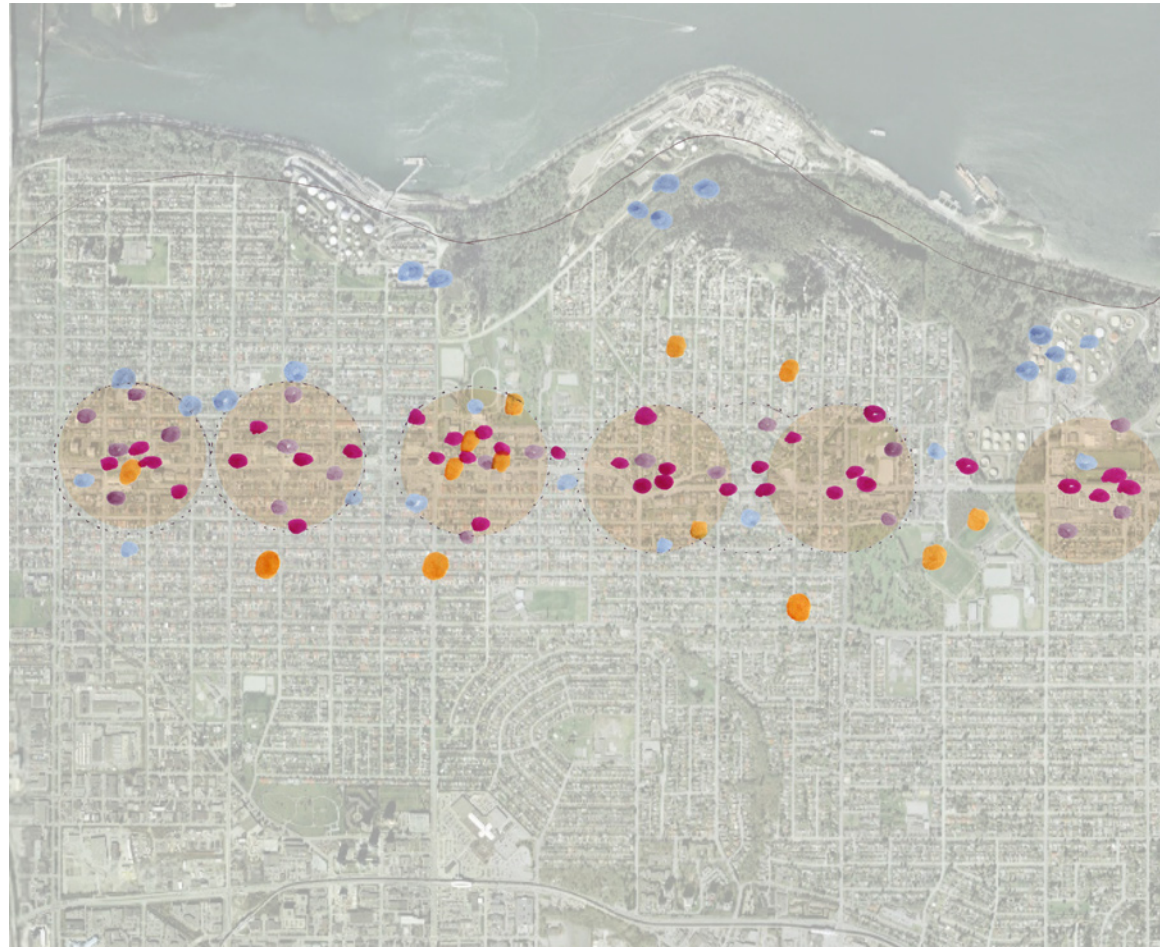
group 5 : neighborhood nodes

Jobs

On any given workday, 75% of Burnaby's workforce leaves the Burnaby municipality to work in another sub area, predominantly heading for Vancouver. Although Burnaby provides a significant amount of work opportunities, most of the job sites are located in the southern part of Burnaby. The area around Hastings Street in Burnaby provides only a limited variety of job opportunities. To reduce the need to commute to neighboring municipalities and to allow for a commute with sustainable means, the creation of job sites should be encouraged close to home and transit. We support the availability of a wide variety of jobs to foster a diverse job pool within the local community.

Work and housing types

Trying to create a variety of job opportunities for the Hastings corridor means providing varied building types and site conditions that are able to house and support different kinds of businesses. This includes building types that are able to support more than one use, like mixed use housing or live/work buildings.

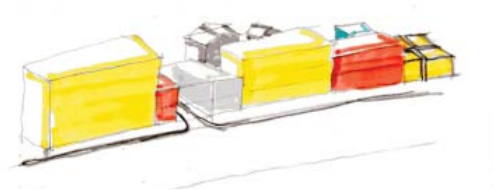
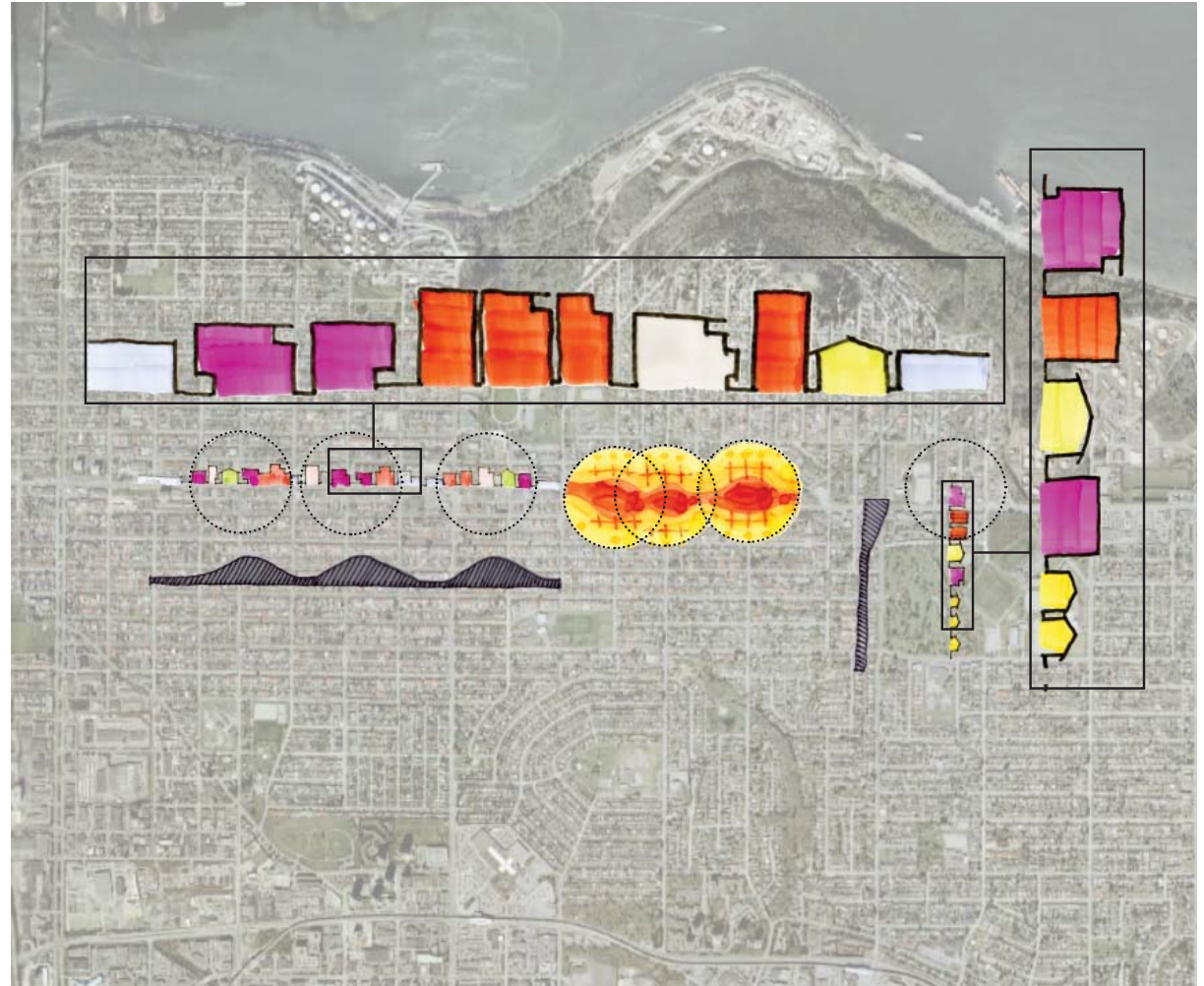


Diversity of housing types

Having a diversity of housing types provides a selection of living options for communities with different needs. Housing diversity prevents segregation between income levels and age groups while reducing aesthetic monotony within neighborhoods.

Sustainable communities depends on managing density within neighborhoods to ensure that businesses and amenities are supported. Density of housing also ensures that public transit options are available to citizens thereby reducing auto dependence. Density and diversity of housing along the corridor helps to support a vibrant commercial and cultural community.

In the Neighborhood Node design concept, density of housing would be greatest within nodes so as to create walkable neighborhoods.



Figures: Figure 1 (left) - Provide a variety of jobs;
Figure 2 (above) - Site adaptation;

Increments Based on Human Scale Rather Than Economic Profit

This design strategy is to play with the proportions and the scales of the buildings along the corridor, to create an incremental development growing out from the nodes based on human scale rather than economic profit.

In the nodes, where streets are dominated by pedestrians, the proportions of buildings can be narrower and taller, to form a more compact and walkable environment, while towards out side of the nodes, the proportions are becoming wider and lower since the streets are mostly a traffic domain.



Figures: Figure 1 (left) - Provide a variety of jobs; Figure 2 (right) - Site adaptation;

Permeability of the Street

The interstitial space of the sidewalk, between traffic and storefront, needs to be a positive space to attract people. Buildings that address the street help to create a comfortable domain on the sidewalk. Enough space is required to make people feel safe. Design strategies can create opportunities for interesting features and activities (for example: outdoor cafes, pocket parks, green streets, exhibitions, markets, etc.).

Connectivity of North/South

It is important that pedestrians have control of crossings in order to temper the dominance of the traffic on Hastings, and help connect the flows of people, activities and services around the corridor.

Distribution of Nodes

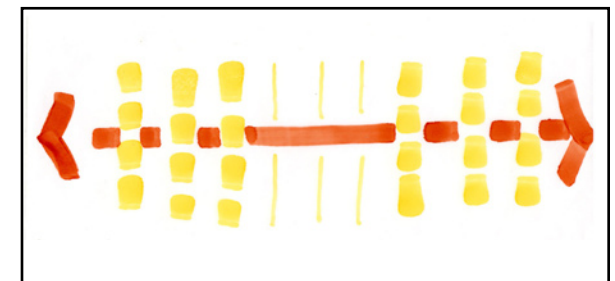
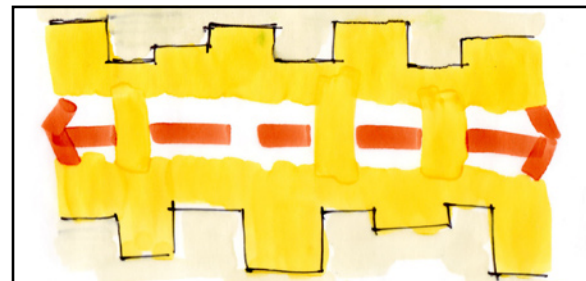
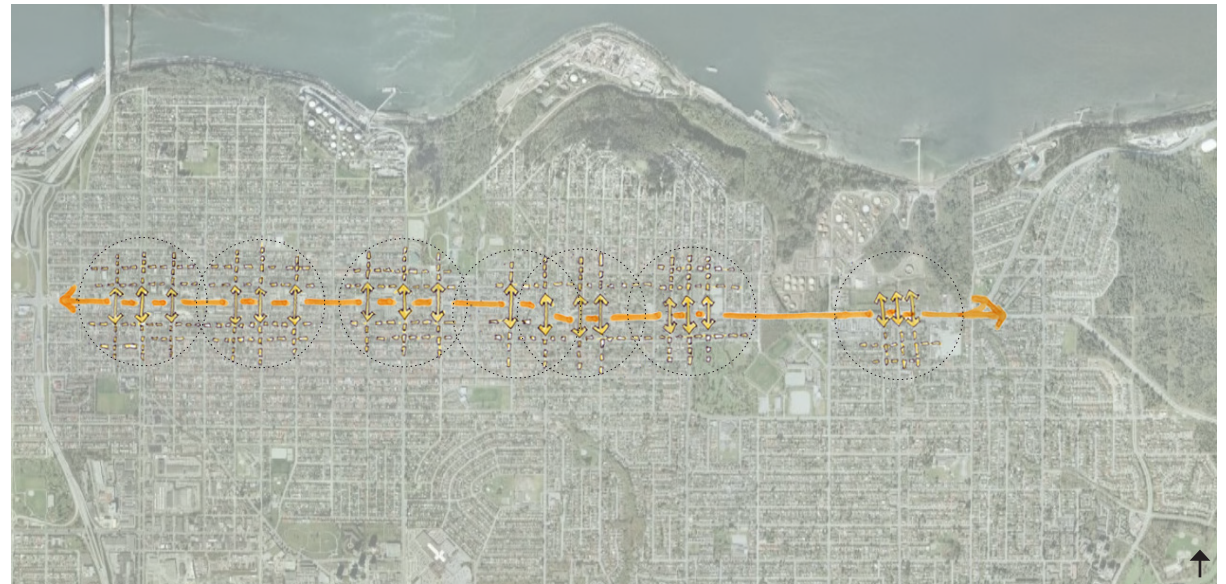
Density nodes are most effective if they are easily accessible by foot.

Distance

Walkable areas differ by the amenity provided and the user. Walkable zones need to take this into consideration throughout the neighborhood.

Pedestrian Neighbourhood

Adjacent neighbourhoods that thrive on pedestrian activities will benefit the corridor and support future growth.



Figures (clockwise from top):

Figure 1 - Site adaptation; Figure 2 - Coherent pedestrian hierarchy along and across the corridor; Figure 3 - Permeability of the street edge.

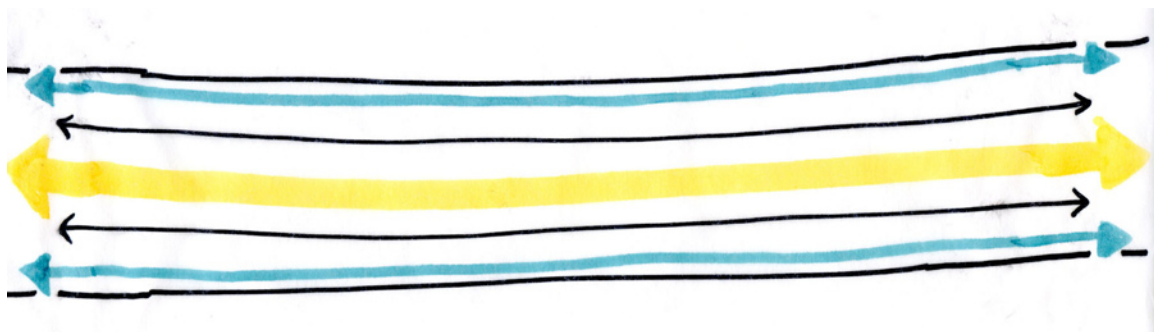
mode share

group 5 : neighborhood nodes

Along a corridor transportation modes must coexist harmoniously in order for the corridor to succeed as a channel for movement.

Currently single occupancy vehicles dominate the traffic lanes of the Hastings corridor. Though many bus routes travel along this corridor cars still dominate the street.

It is our intent to reduce single occupancy vehicles on the street and find a more compatible transportation plan for the neighborhood. Our principle strives to bring more attention to other modes of transport such as biking, bus, trolley and walking. We aim to make pedestrian traffic a predominant element along the corridor.



nodes

Recognizing the importance of nodes, we suggest the creation of several nodes along the Hastings corridor. These nodes form the nucleus of each community and are defined by an increased density of population, activity and visual stimulation. Nodes are able to break up the uniformity of an otherwise continuous, uneventful corridor strip and demand higher attention.

We are planning to correlate nodes with transit stops in order to facilitate transit use and improve access to commercial business. Pedestrian and transit systems will be given priority in the vicinity of nodes, and measures will be taken to slow and restrain car traffic. The radius of a node is variable, measured by a 5 minute walking distance but also accommodating the activity range of older / handicapped people or children. Nodes will be tuned to their neighborhood character.

The rythm of the nodes along Hastings varies and responds to existing site conditions, like the presence of major North-South connectors. .

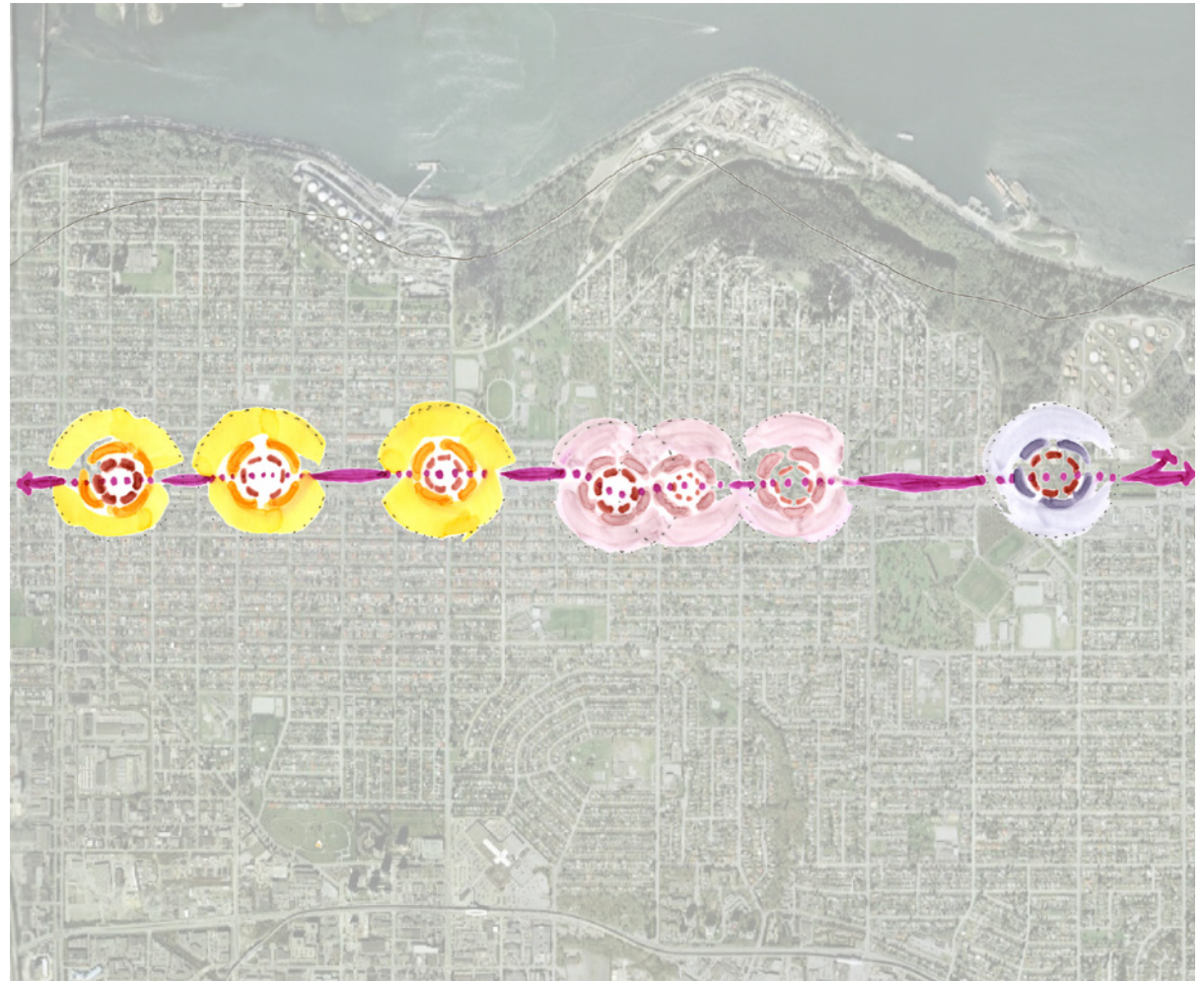
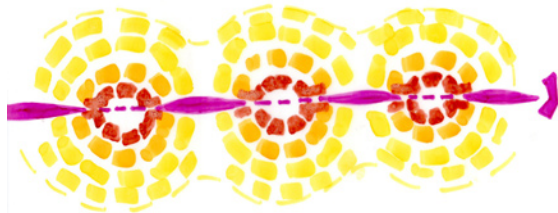


Fig. X: Nodes along Hastings Street

green infrastructure

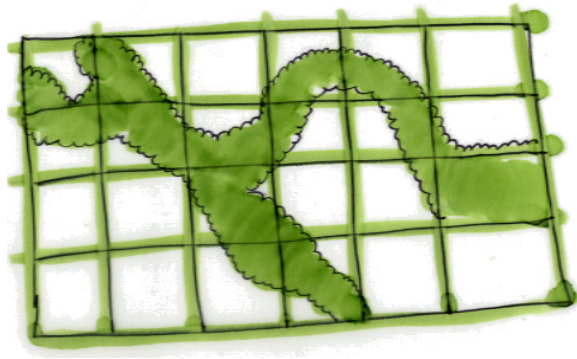
Connection between built and natural systems.

A synthesis between built form and natural systems is a key element in achieving a sustainable community. The integration of green infrastructure within a community will expand opportunities for connected green spaces both at a local and regional level. Introducing green infrastructure will help to reduce resource consumption and help to maintain and protect watershed systems. Green infrastructure also contributes to a healthy and aesthetically pleasing environment for citizens to live within.

Green infrastructure uses the site's physical character to determine where green corridors exist. Both man made streets and natural forms help to make up the system of green connections that weave through the neighborhood. These ribbons of green will help to make strong connections between exists green spaces and dense urban centres.

Reclamation of land for ecological and public infrastructure.

Similarly to the formative processes that occur in natural systems, green infrastructure also transforms and meanders throughout time. Green infrastructure follows natural systems rather than the strict geometry of the



grid. While green infrastructure can exist along linear corridors it functions in an organic manner following the topography and geology of the landscape. Introducing green infrastructure into the built landscape will demand a reexamination of existing built forms to accommodate for future green growth.

Community benefits

Green Infrastructure energizes the community with plant life and adds beneficial restorative elements to the neighborhood. In addition to fostering healthy living spaces green infrastructure has positive environmental impacts such as ground water recharge through

infiltration.

A greater sense of place is achieved through the implementation of green infrastructure by making connections to the surrounding landscape. Green systems throughout the Hastings corridor will enable strong North/South connections as well as increased opportunities for public green systems such as pedestrian corridors.