

symbiotic urbanism
hastings corridor masterplan

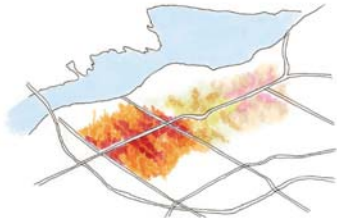
kari dow / david guenter / shalea oretzky / heather maxwell / alia johnson / seela amaratunga

sustainable urbanism : the hastings corridor

ubc urban studio : fall 2008

design principles

symbiotic urbanism



define districts through scale, variety + character



amplify the inherent intensity of intersections



challenge the stigma of single-family/single-use



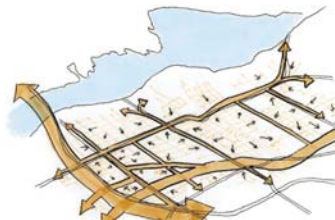
context-informed corridors



look to the land



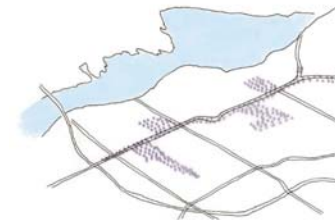
equitable use of the street



recognize the regional role of arterials



recognize the importance of the journey



maximize interaction with the street



design participatory + didactic green infrastructure

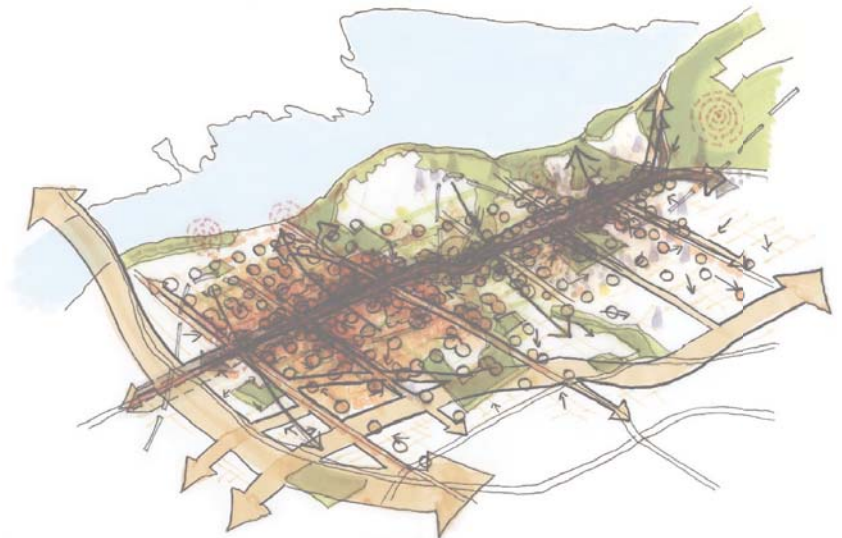
symbiosis

[n. pl. sym•bi•o•ses]

[1] The living together of unlike organisms in a close, long-lasting association.

[2] The close association of two different kinds of living organisms where there is a benefit to both or where both receive an advantage from the association.

Symbiotic urbanism creates a mutually-enhancing relationship between the corridor and the neighbourhood. The Principles that follow build a palette of solutions, recombined + reconfigured as needed to identify and enhance opportunities for symbiotic intersections of form. The solutions to Hastings Street lie not only within the corridor, but within its associated neighbourhoods.



Symbiotic Urbanism

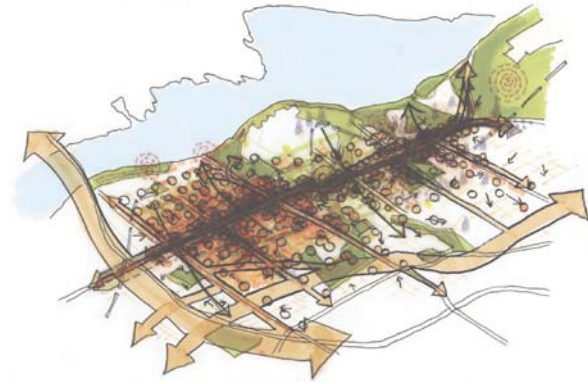
As designers and urban planners seeking to anticipate how the Hastings area will absorb increased immigration over the next forty years, the purpose of this proposal is to suggest a set of issues that will allow the corridor and surrounding urban fabric to grow in ways that are mutually beneficial. As a point of departure, we have identified that in its current state North Burnaby's urban space suffers from a singular and insular conception of urban space: most areas of the city have been set up to facilitate a very limited amount of activities and uses—even if they are clearly defined—and they often exclude the possibility of interaction or adaptation to others. In a sense, this insufficiency is proved by the fact that a zoning map, with its binary indication of land uses, does a fairly adequate job of describing the lay of the land.

With this in mind, our proposal seeks to expand the implications of densifying the Corridor beyond an allotment of larger numbers of people living within a given areas, or a greater amount of business taking place in other specifically defined areas. Besides anticipating how density might be facilitated, this proposal investigates how density has

the potential to change people's experience of urban space beyond the singularity of the zoning map. The urban quality of density carries the potential to make the actual quality of urban space thicker: filled with a great number of coexisting uses and experiences.

More specifically, in regard to our zoning map decisions, by proposing the addition of a streetcar system on the corridor, we anticipate that Hastings Street will be opened up to a wider set of uses than efficient automobile transportation. The continued addition of mixed-use buildings in the Heights district encourages a wide range of commercial and public establishments that also accommodate that residential density that is necessary to sustain them. The significant number of recreational and public buildings that already give definition to the Saddle district are augmented with facilities that bring them into direct proximity with the corridor. The formally distinct residential fabric that exists as a consequence of Capitol Hill's unique topography has been used to inform isolated and sporadic insertions of development, with commercial and public building proposals born out of conditions that are as unique as the various available sites they are found on. Finally, the Kensington district has been

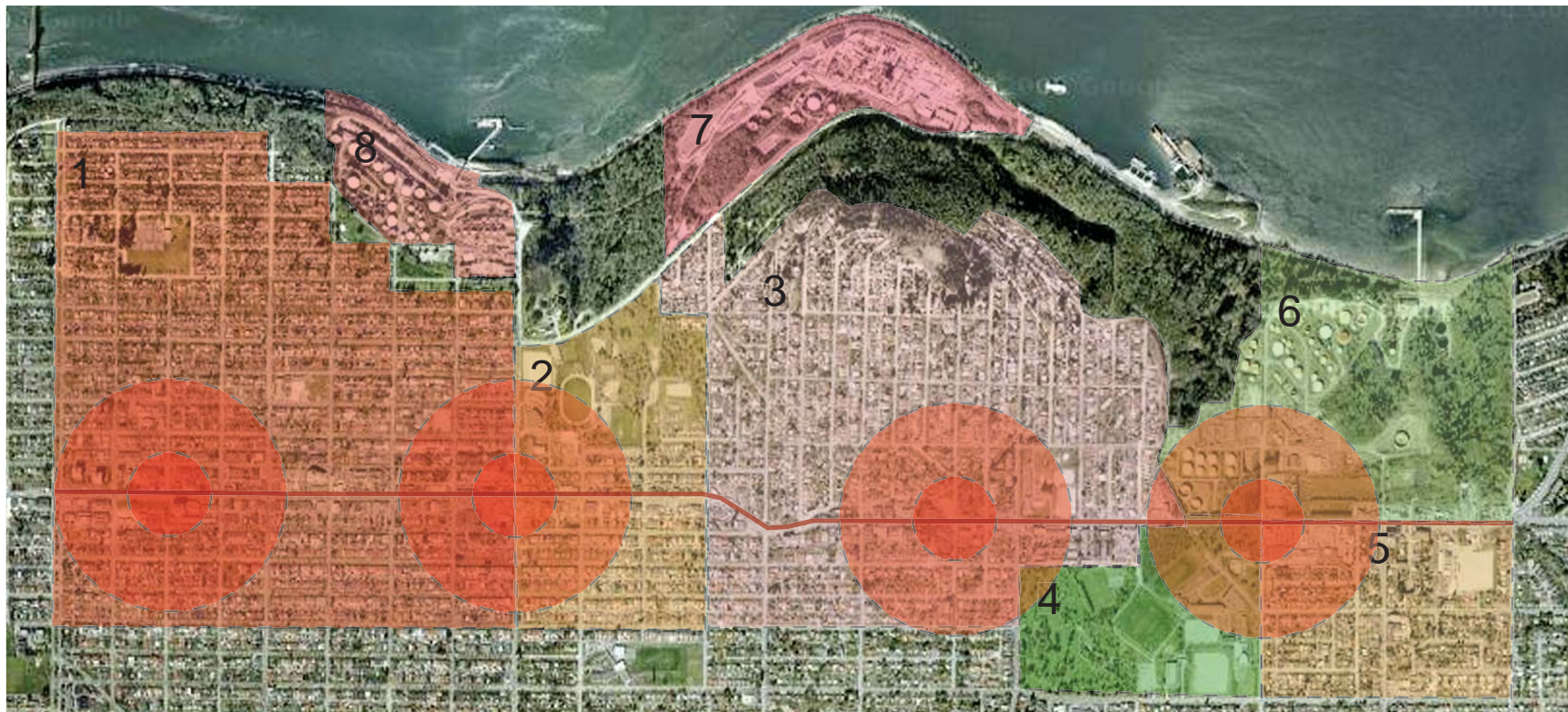
imagined as a second major concentration of commercial and residential development, with new possibilities for public space incurred by major changes to the uses of industrial dominant land, and augmented interaction between public transit infrastructure and commercial space.



From this proposal it should be clear that however the Hastings corridor develops in the future, its success as a viable public space will in large part depend on its creative incorporation of wider ranges uses within concentrated areas. We affirm that the terms of this concentration can occur from a symbiotic process of encouraging growth that facilitates greater urban interaction. From an urban design perspective, increases in numbers are only the beginning of the discussion of what "density" means for the urban experience.

DISTRICTS:

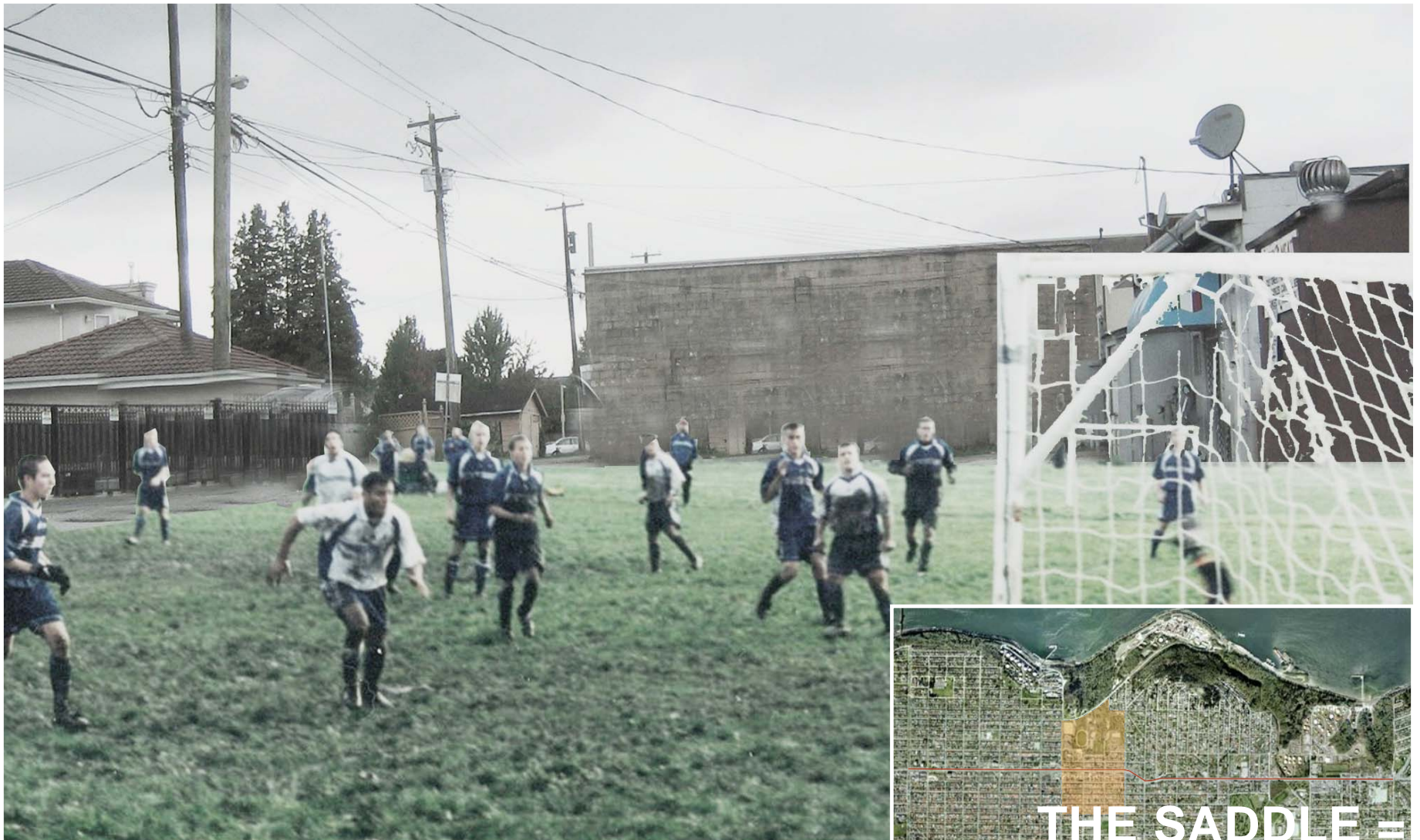
In defining districts through scale, variety, and character, consideration was given to recognizing and enhancing individual neighbourhood characteristics and to creating the corridor as a destination.



- | | |
|---|--|
| <p>1 THE HEIGHTS is characterized with pedestrian centred one-storey commercial along Hastings St., lane oriented residential, 3-4 storey walk-ups, and community gardens.</p> <p>2 THE SADDLE could be considered the civic polis of the corridor, the centre for community recreation, sports clubs, civic institutions, with a strong residential base.</p> <p>3 CAPITOL HILL retains its residential character with retrofitting for live-work conversions with mixed use/commercial core on Hastings, and a strong N-S green network.</p> <p>4 THE GREENWAY preserves the existing open space and enhances ecological processes, while incorporating civic uses, and multi-family residential.</p> | <p>5 KENSINGTON is characterized by the LRT transportation hub, public plaza and programmable space, and commercial centre serving the neighbouring residential.</p> <p>6 ECO-BUSINESS PARK + LARGE SCALE URBAN AGRICULTURE is the job hub, supporting local processing, food & energy production, and supports an energy alternative development.</p> <p>7 GREEN WATERFRONT DEVELOPMENT is an energy alternative, sustainable residential and mixed-use development at the water's edge, with linked transportation network.</p> <p>8 GREEN WATERFRONT DEVELOPMENT, these reclamation lands provide the opportunity for a sustainable residential development, closely linked to the green network and districts.</p> |
|---|--|



spontaneous programming+street interaction+equity+thickening of experience



recreation+community building+family interaction+civic-institutional core



adaptation over time+layering of uses+scattered commercial intervention+views



layered uses+symbiotic intersections+gathering of transit food jobs people



community gardens+intensive harvesting+rural park+public-private partnerships



local jobs+local food+commercial+sustainable energy+university partnerships

RESISTANCE & CHANGE:

Some neighbourhoods are most resistant to change and will be harmed by drastic measures, while others could benefit dramatically from the new oppotrtnites change could bring.



- 1-3 The future of the industrial areas is uncertain; re-development could reconnect Burnaby to the waterfront and forest ecosystems.
- 4-5 These long-standing neighbourhoods have not seen change in decades and are likely to resist change unless it is sensitively scaled.

- 6 The Hastings Corridor would benefit from changes that respect the scale of the historic development but allow contemporary approaches.
- 7 This area, at the base of SFU, could be revitalized by catering to the local energetic student population and developing a distinct character.

AREAS READY FOR CHANGE
 AREAS RESISTANT TO CHANGE

HOUSING DENSITY:

Single Family



15 du/ac

50%

3750 units

Multi-Family (<4 ST)



30 du/ac

32%

2400 units

Multi-Family (>4 ST)



45 du/ac

18%

1350 units

TOTAL = 7500 units

New housing is added by working within the existing neighbourhoods and capitalizing on the established character and amenity found therein.



Single Family

Half of the 7500 new dwellings could easily be accommodated within the existing suburban fabric. By subdividing large single-family dwellings and adding laneway housing, the density of the suburbs could double. This intervention would require no additional infrastructure and would maintain the existing character and pedestrian-friendly environment of the long-standing communities that will be resistant to change.



Multi-Family (<4 ST)

Ground-orientated housing and small apartment buildings add tremendous density without overshadowing the pedestrian atmosphere. These buildings can be built economically and provide affordable housing for students, seniors and small families.



Multi-Family (>4 ST)

Taller and denser building will be grouped around major intersections to provide density and establish major landmarks.

SINGLE FAMILY HOMES:

The density of an average block could easily double and still retain its character by adding laneway housing and by splitting of large single-family homes into 2 or 3 units.

BEFORE

FRANCES

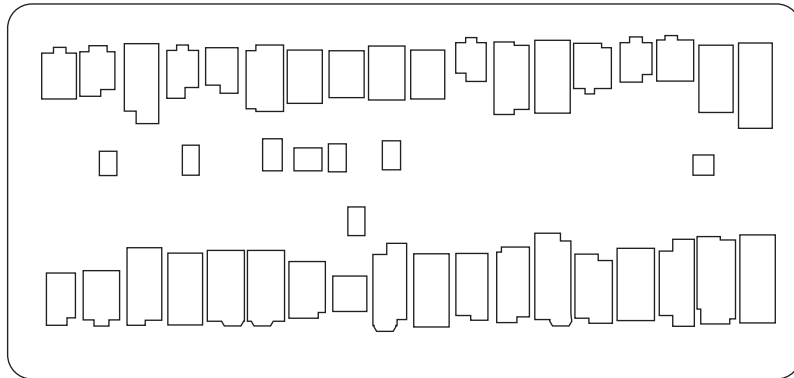


GEORGIA

CARLETON

MADISON

36 dwellings



At this given density, Burnaby cannot handle the influx of new residents nor support local business.

AFTER

FRANCES

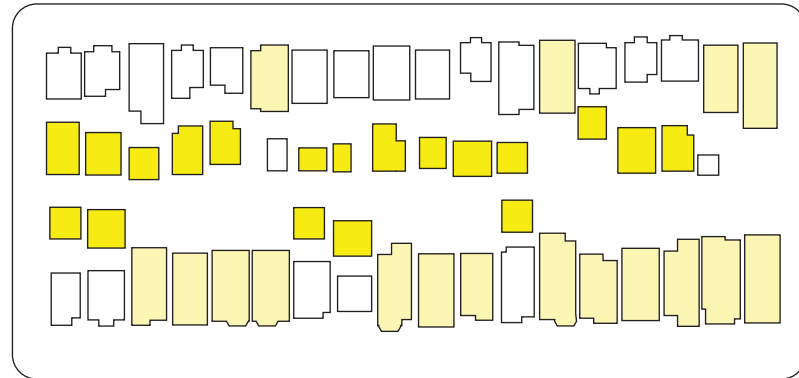


GEORGIA

CARLETON

MADISON

72 dwellings (x2)



By changing 55 blocks to this new form of density, Burnaby could handle 50% of the new 7500 units.

- ADDITION (1 unit)
- RENOVATION (add 1 unit)

MULTI-FAMILY - 4ST OR LESS:

New small-scale apartment buildings add density near the corridor, creating a walkable community that respects the increment and character of adjacent developments

BEFORE

PANDORA



ALBERT

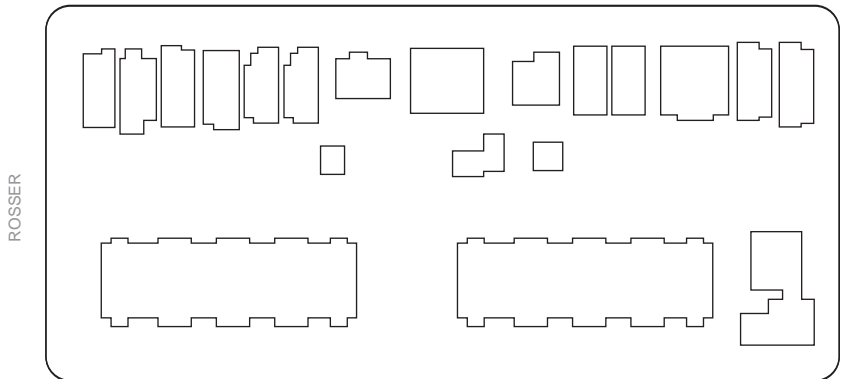
AFTER

PANDORA



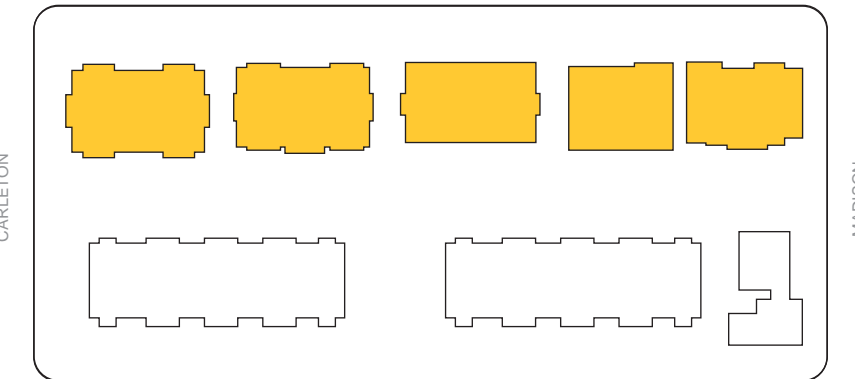
ALBERT

84 dwellings



These large apartment blocks do not mesh well with adjacent single-family homes. This level of density cannot support business.

136 dwellings (x1.6)



New apartments within a 5 min. walking distance to transportation, shopping and recreation create a more resilient neighbourhood. ADDITION AT 30 du/ac

MULTI-FAMILY - 4ST OR MORE:

Residences located on the corridor are not desirable due to volume of traffic on Hastings
Apartments on the next block increase density while providing a habitable environment.

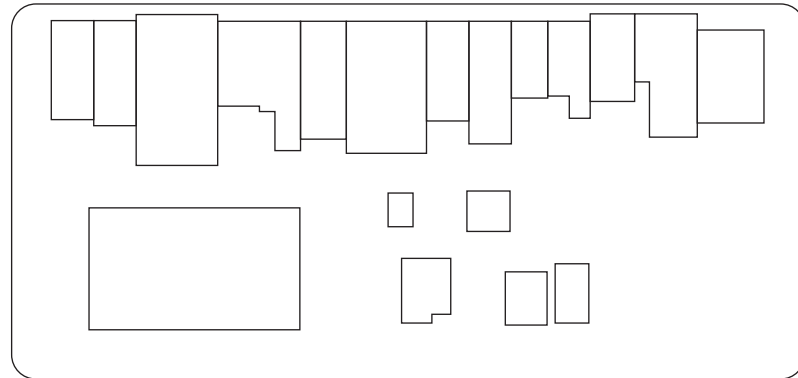
BEFORE

HASTINGS



PENDER

3 dwellings



There are only 3 dwellings on this block (about 3du/ac).
A substantial portion of the site is devoted to parking lots.

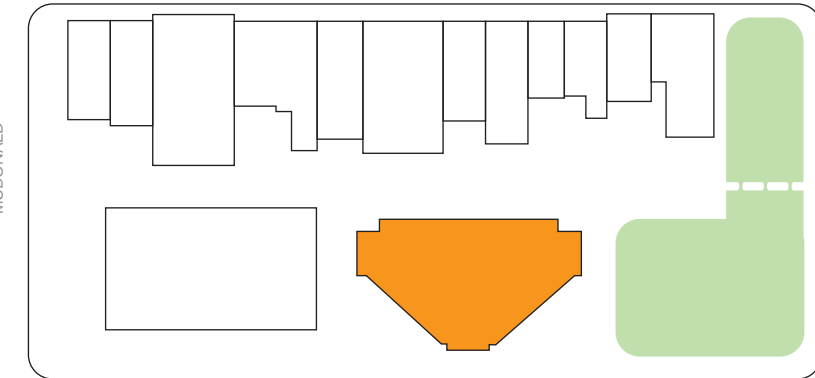
AFTER

HASTINGS



PENDER

36 dwellings (x12)



Apartments more than 4 ST are located off Hastings, to provide
a pedestrian-scaled main street. Empty spaces become parks.

ADDITION at 45 du/ac

MODIFIED STREET TYPOLOGIES:

Streets are the city's largest public spaces; as such, sustainable streets should make natural processes more visible, be used to connect both ecological and urban systems, and provide equitable opportunity for all types of movement through the community.

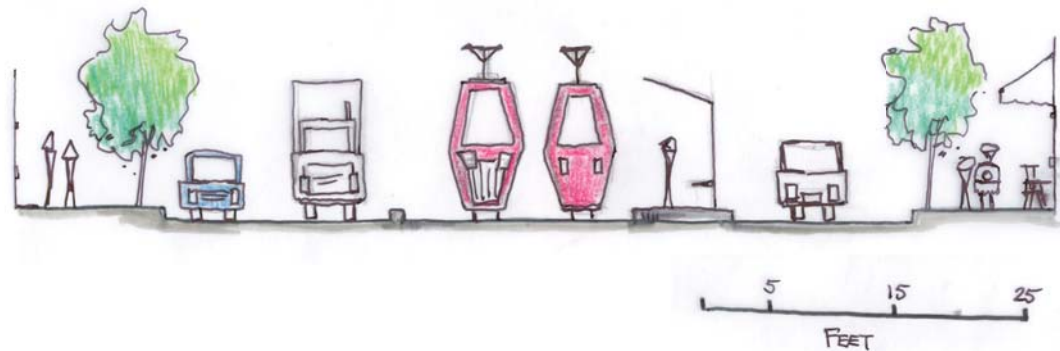


- 1 HASTINGS STREET ———
- 2 DEEP GREEN QUEUING STREETS - - - - -
- 3 PEDESTRIAN GREEN STREET - · - · -
- 4 PEDESTRIAN/GREEN ALLEYS · · · · ·
- 5 PERMEABLE ALLEYS - - - - -
- 6 EXISTING GREEN ———



HASTINGS STREET

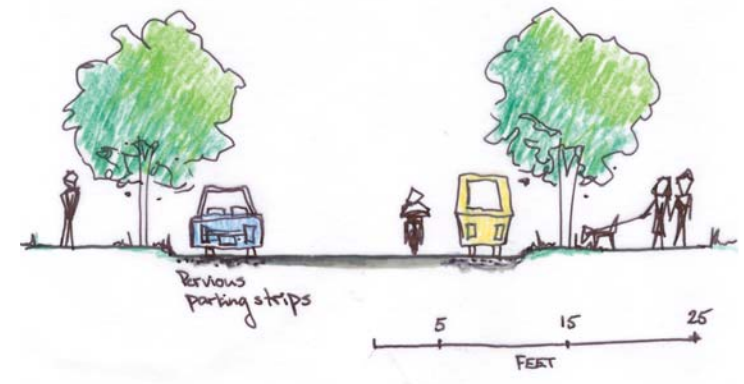
This arterial supports higher flows of multiple modes of movement down Hastings Corridor. The Street Car encourages a pedestrian friendly environment, increasing and reviving the activity and street life along the corridor.





DEEP GREEN QUEUING STREETS

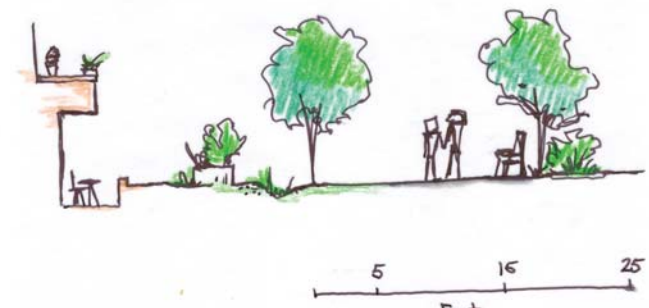
A network of deep green streets is used to connect the existing green spaces, and supplement the grey infrastructure with green infrastructure. Employing spaces that aid stormwater and gray water management applications. These streets serve as visual learning experiences displaying natural processes at work, and as indicators for Burnaby's larger green systems.





PEDESTRIAN GREEN STREET

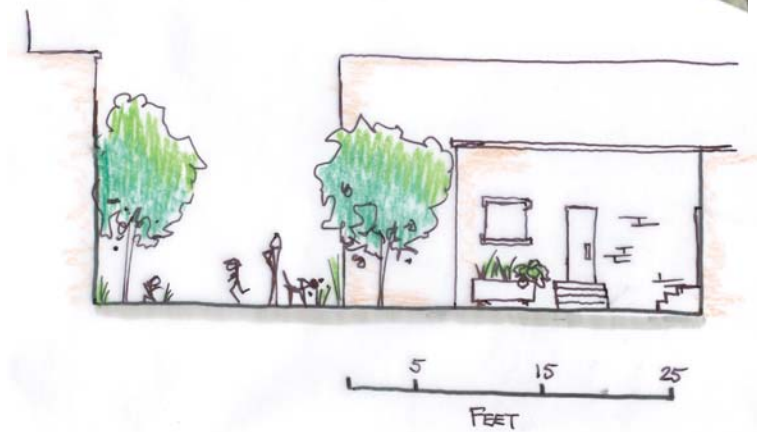
Pedestrian streets are used to add connectivity in areas where block size and shape begins to isolate and discourage pedestrian activity and usability. These streets allow for small allotments of green infrastructure, open space, and pedestrian-scaled commercial activities.





PEDESTRIAN/GREEN ALLEY

Alleys begin to take on more of a role both ecologically and socially. Permeable paving and plantings intercept and infiltrate stormwater, and beautify commonly hidden spaces. Creating opportunity for small alley-facing commercial outlets, enhanced alleys increase pedestrian traffic and social interactions. These changes begin to modify these alleys into pedestrian streets over time.





PERMEABLE ALLEYS

Gradually, as paving and infrastructure needs repair, all alleys will be modified with permeable paving materials, ensuring surfaces that infiltrate water.

