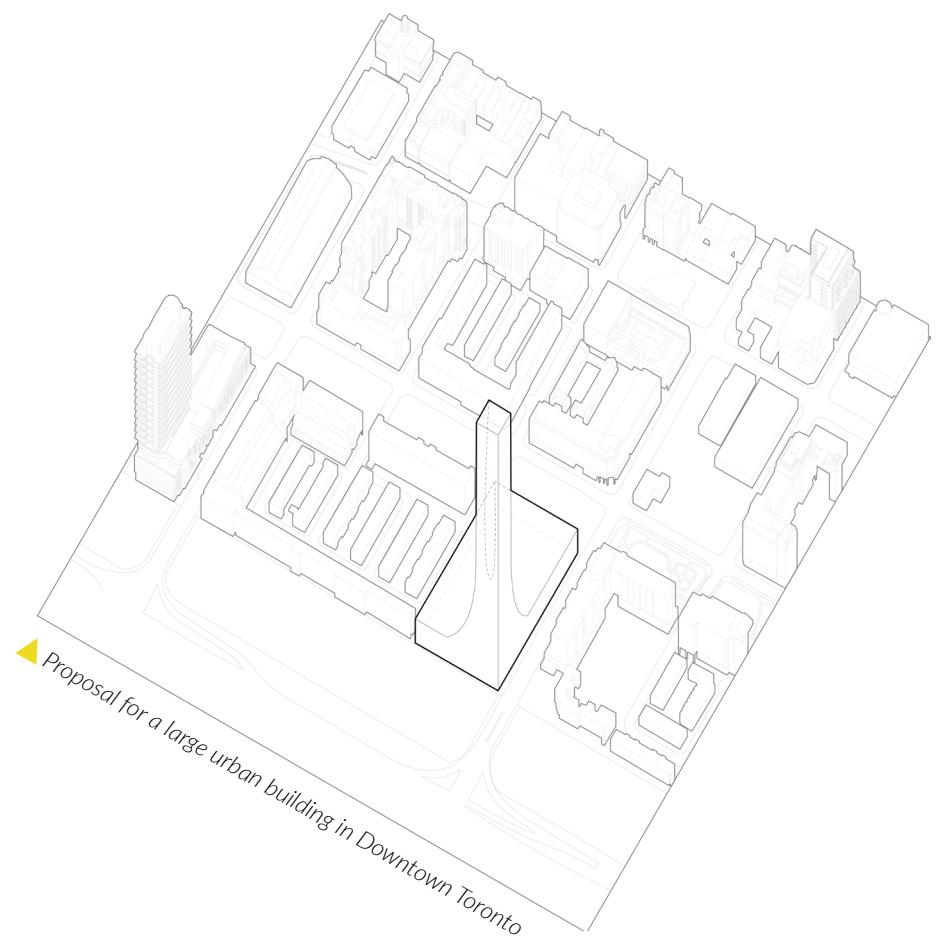


# [PORTFOLIO]

• *suzanne f. r. merchant* •

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# PROSCENIUM

ARCHITECTURE + INTERIORS INC.

1 WEST 7TH AVENUE  
VANCOUVER BC V5Y 1L4 CANADA

P 604.879.0118  
F 604.879.1486

[www.proscenium.ca](http://www.proscenium.ca)

December 19, 2014

Dear Sir/Madam,



## Re: Reference for Suzanne Merchant

We were pleased to have Suzanne work for our firm from September to December 2014 at which point she left to return to her studies at the University of Waterloo.

During her time with us as a student architect, Suzanne became a valuable member of our team. Her contributions covered many aspects of project design and contract documentation. She proved herself a quick learner, eager to expand her knowledge.

Many of the projects Suzanne worked on were demanding and complex for a student architect. Suzanne to her credit had the confidence and determination to take on these projects, her involvement as a team member on the West First Theatre Center was productive and valuable to Proscenium.

Suzanne has developed a good understanding of what is required when putting together a contract documentation drawing set. She is very intelligent and capable and in her short time with us seamlessly integrated herself into our office. Given the skill set she demonstrated and her design acumen, we feel that she can offer a lot to any firm.

We have no hesitation in recommending Suzanne for another position. Should you have any questions please do not hesitate to contact me. We wish her the best of luck as she pursues her education.

Sincerely,

Hugh Cochlin, Architect AIBC, MRAIC, LEED® AP  
Principal

## SUZANNE MERCHANT



### Summary of Qualifications:

- has experience working in AutoCAD & REVIT
- has excellent visual and verbal communication skills
- has a working knowledge of building & structural systems
- resourceful and innovative worker

### CONTACT

e : [suzannemerchant@gmail.com](mailto:suzannemerchant@gmail.com)  
p : +1 (226) 600 8321

References provided upon request.

## WORK EXPERIENCE

September 2014 - December 2014

**Proscenium Architecture and Interiors / Vancouver, CA**

Student Designer

January 2014 - April 2014

**Hughes Condon Marler Architects / Vancouver, CA**

Architecture Co-op Intern

## EDUCATION

September 2012 - Present

**University of Waterloo / Cambridge, CA**

Candidate for Hons. B. Architectural Studies

January 2015 - December 2015

### Gap Year

## TECHNICAL SKILLS

### Adept & Continuously Improving

Adobe Suite  
Illustrator/ Photoshop/InDesign  
AutoCAD  
Rhinoceros  
SketchUp  
Lasercutting  
Processing/Arduino  
Hand drafting & sketching  
Hand modelling

### Learning & Continuously Improving

REVIT  
3DS Max  
GIS  
Rhinoceros + VRay  
Python  
HTML/CSS  
CNC  
Machine and hand sewing

## AWARDS

### 2012 - Present

University of Waterloo - Excellent Academic Standing

### 2013

Publication of Studio Project for UWSA Projects Review

### 2012

University of Waterloo President's Scholarship  
British Columbia Provincial Examinations Scholarship  
Point Grey Academic Medal and Scholarship  
Point Grey Yearbook Award and Scholarship

### 2010

Shad Valley Alumna - Université Laval 2010

## EXTRACURRICULARS

### May 2016 - June 2016 (Expected)

RADIUS+SFU: Local Economic Development Lab - Graphic Design Volunteer

### July 2011 - August 2015

UBC Farm - Urban Farming Volunteer

### May 2014 - August 2014

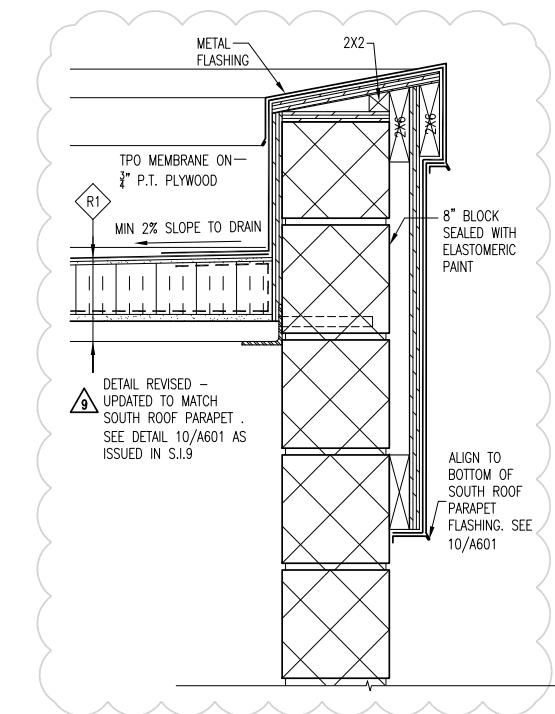
Waterloo Architecture Student Association - Junior Secretary

Professional practice term  
from September - December  
2014

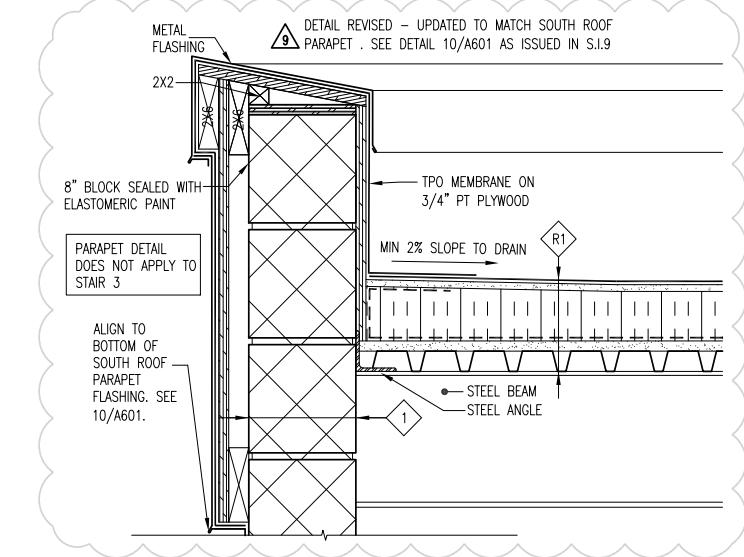
## [co-op: proscenium]

As per the requirements of the University of Waterloo, I undertook a co-operative work term at Proscenium Architecture + Interiors where I mainly worked on construction drawings for a theatre/office project for Arts Club Theatre and Bard on the Beach. I also worked on construction drawings for a few other smaller projects that the firm had.

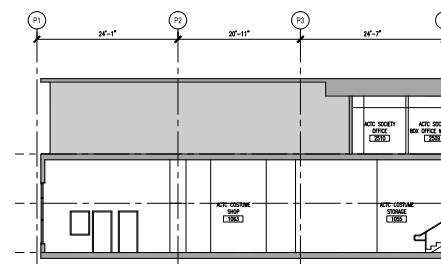
The drawings shown on the next page are a few of the construction drawings that I had worked on during my time at Proscenium.



1 4/A601: PARAPET DETAIL  
 $1\frac{1}{2}'' = 1'-0''$



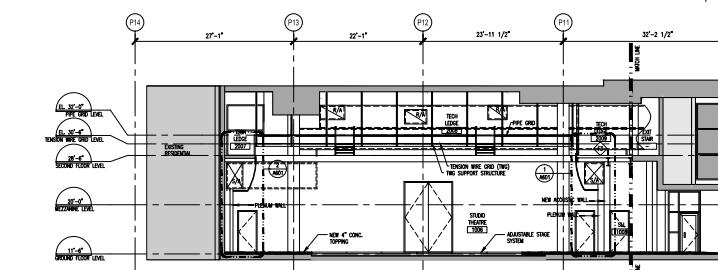
2 17/A601: PARAPET DETAIL  
 $1\frac{1}{2}'' = 1'-0''$



1 10/A601: LONGITUDINAL SECTION  
 $1\frac{1}{2}'' = 1'-0''$



2 10/A601: LONGITUDINAL SECTION  
 $1\frac{1}{2}'' = 1'-0''$



▲ Roofing details for a large storage building | Set of cross-sections through theatre space for Arts Club Theatre



### [screened courtyards]

This project called for a set of homes to be built in a “junk” space in Cambridge that could be redeveloped later. Our solution comprised of three light steel framed apartment buildings which surround an internal courtyard. Each home is equipped with a three tier screening system that allows the residents to control shading and public exposure.



**Exterior render of homes with courtyard**



**Interior view of screening system**



▲▼ Longitudinal section below, corresponding plan above



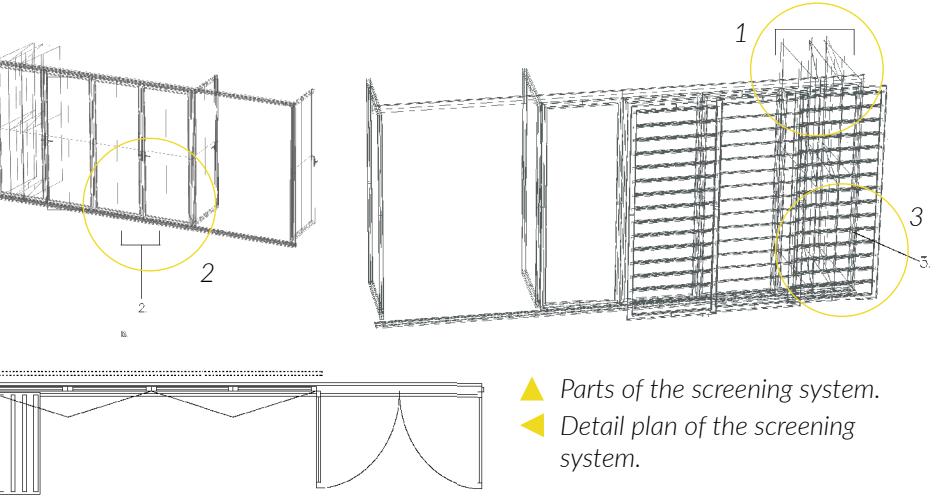
▲ West elevation of buildings

### 3 TIER SCREENING SYSTEM

Three tier privacy system consists of:

1. Folding translucent paper screens
2. Movable glass doors
3. Operable exterior louvres

This system allows the residents to manipulate their surroundings with regards to both privacy and thermal comfort by opening and closing different combinations of the screening system. The dynamic facade creates a more urbane environment.



▲ Model of screening system

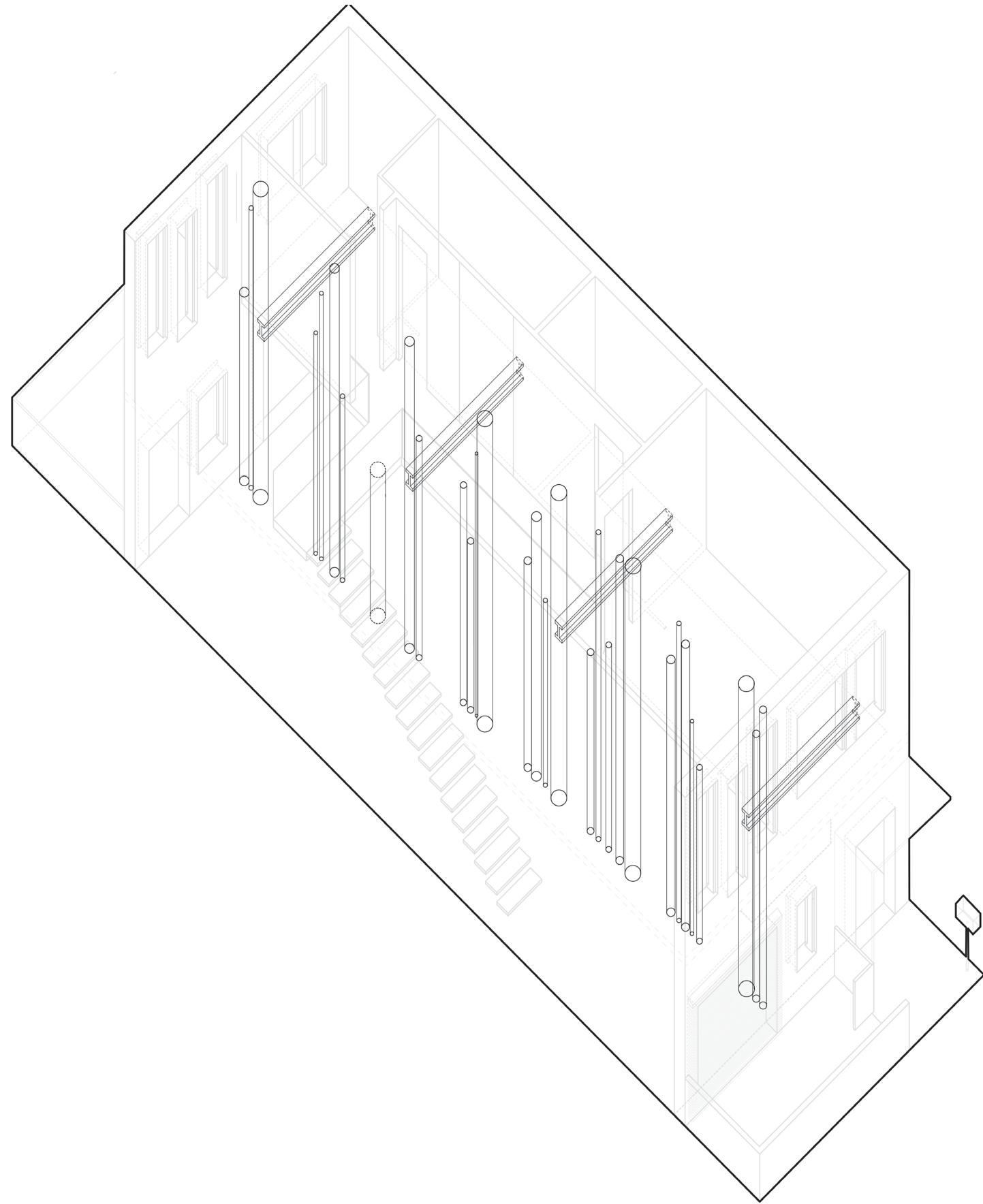


▲ Model of South elevations

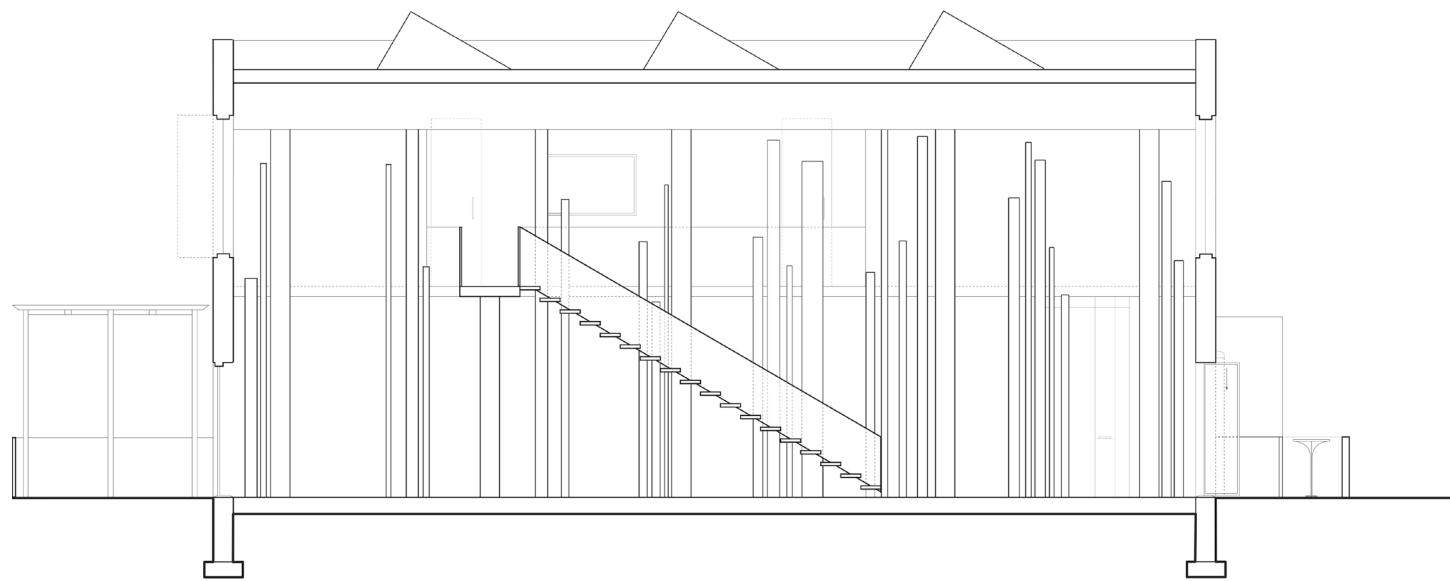


### **[columnar forests]**

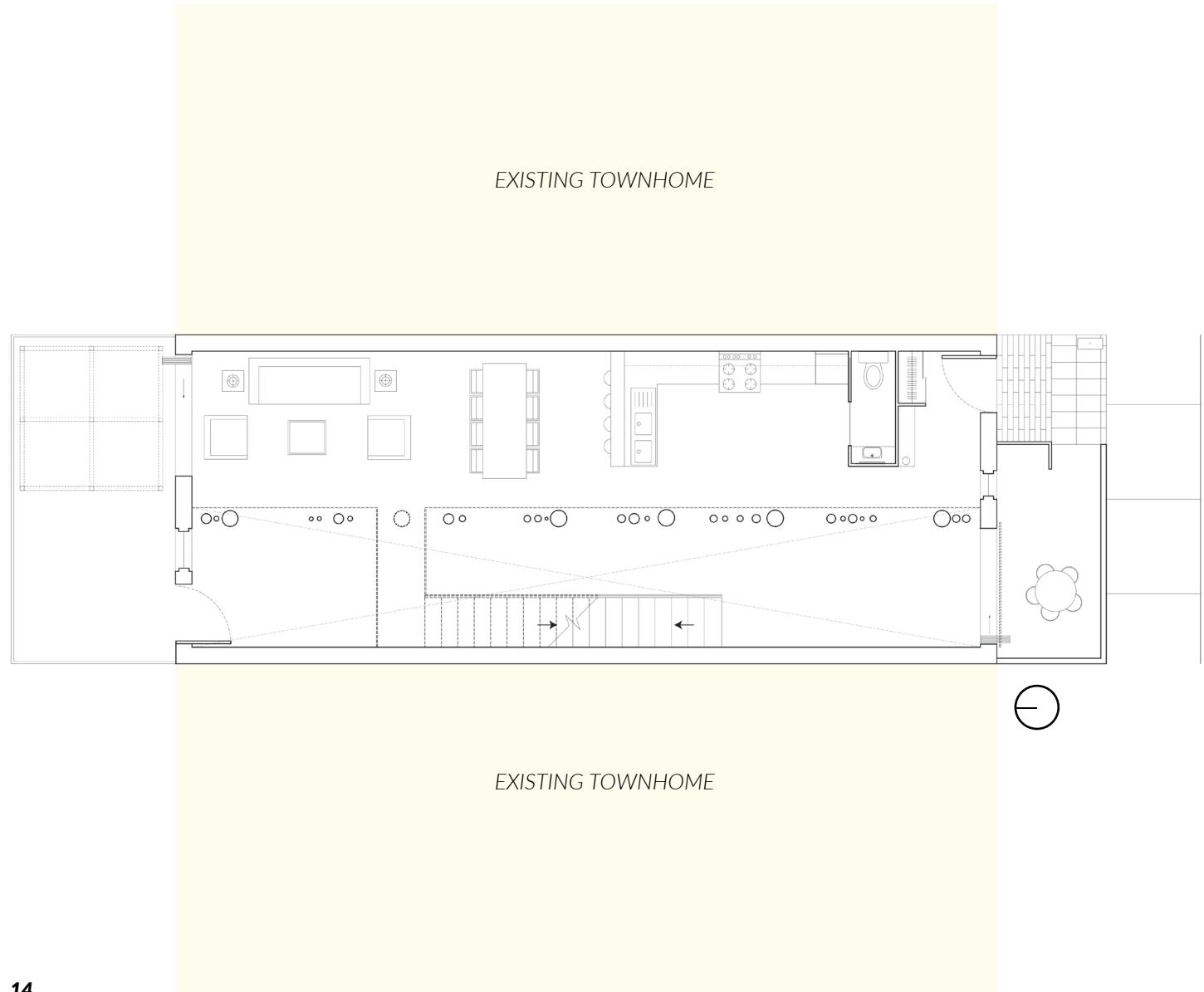
Located in downtown Cambridge, the (imaginary!) clients of this home wished to create a home that catered to both their love of socializing and the forests of their old home. As such, the focus of this tiny little townhouse is in the beautiful, long atrium which is separated and connected to the living spaces by a screen of wooden columns (designed out of recycled cardboard) that are reminiscent of the forests of the clients' previous home.



▲ Structural axonometric - structural columns are paired with the steel beams to provide stability to the 2nd floor.



▲▼ Longitudinal section with corresponding ground floor plan below



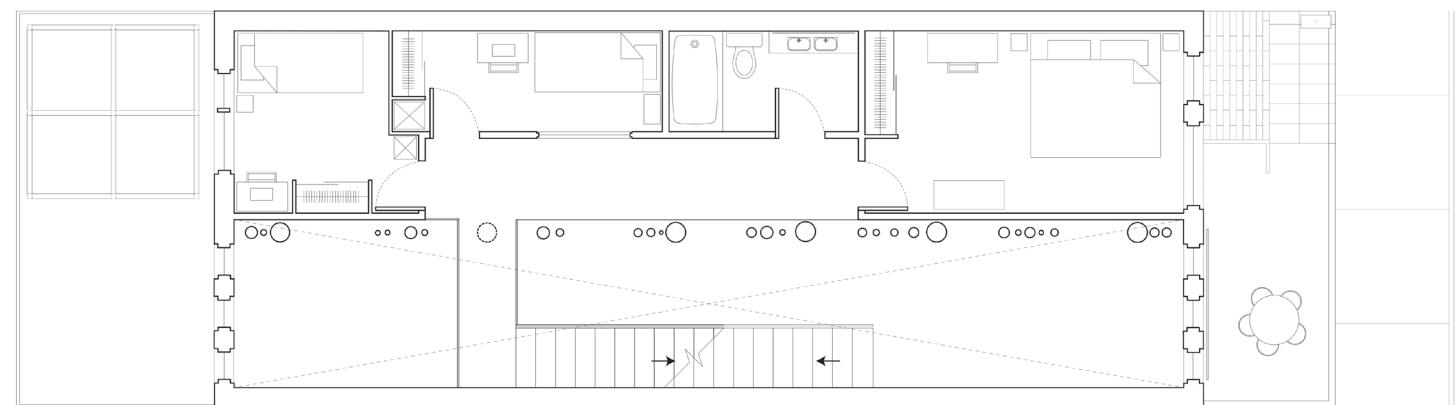
14



▲ North elevation | South elevation | Building crossection respectively

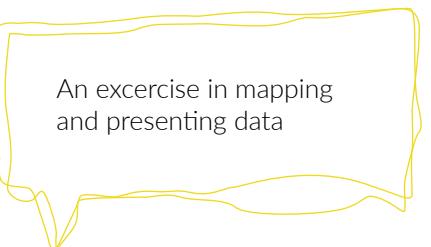


▲ Vignette | Rough initial elevation model | Interior model of columns and stairs



▲ Second floor plan

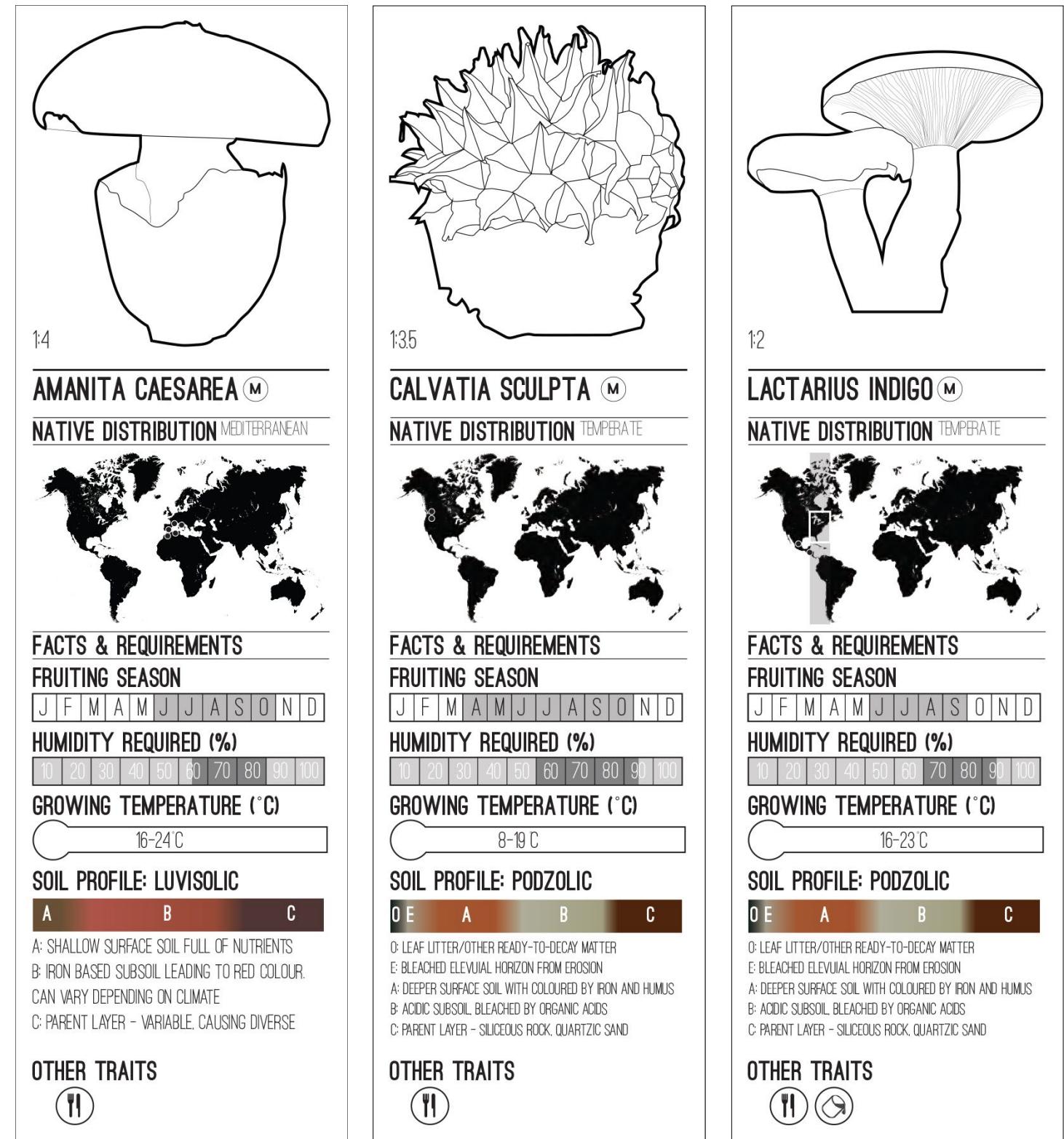
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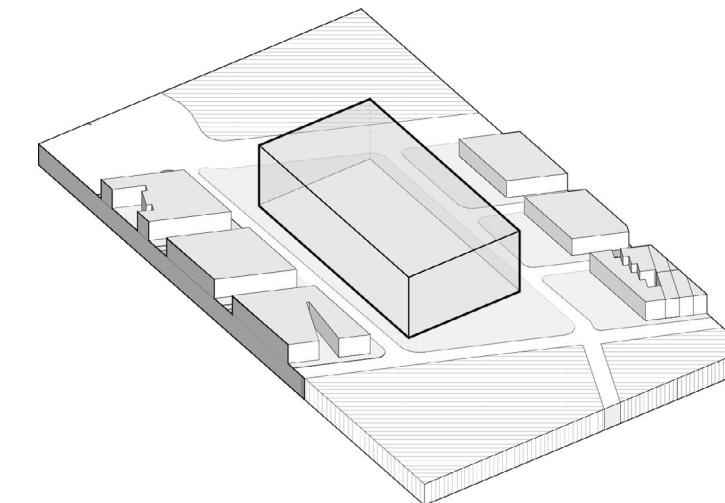
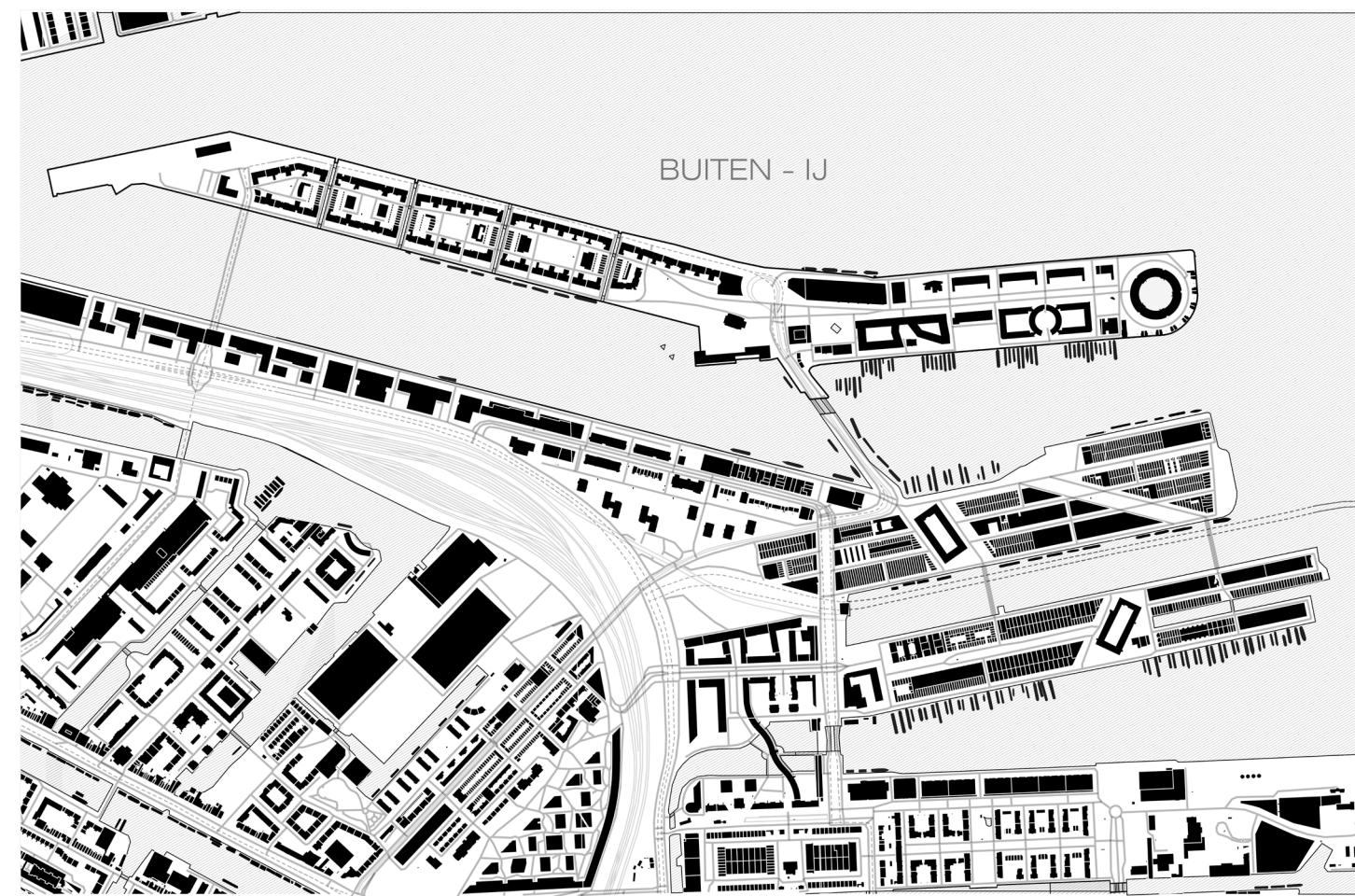
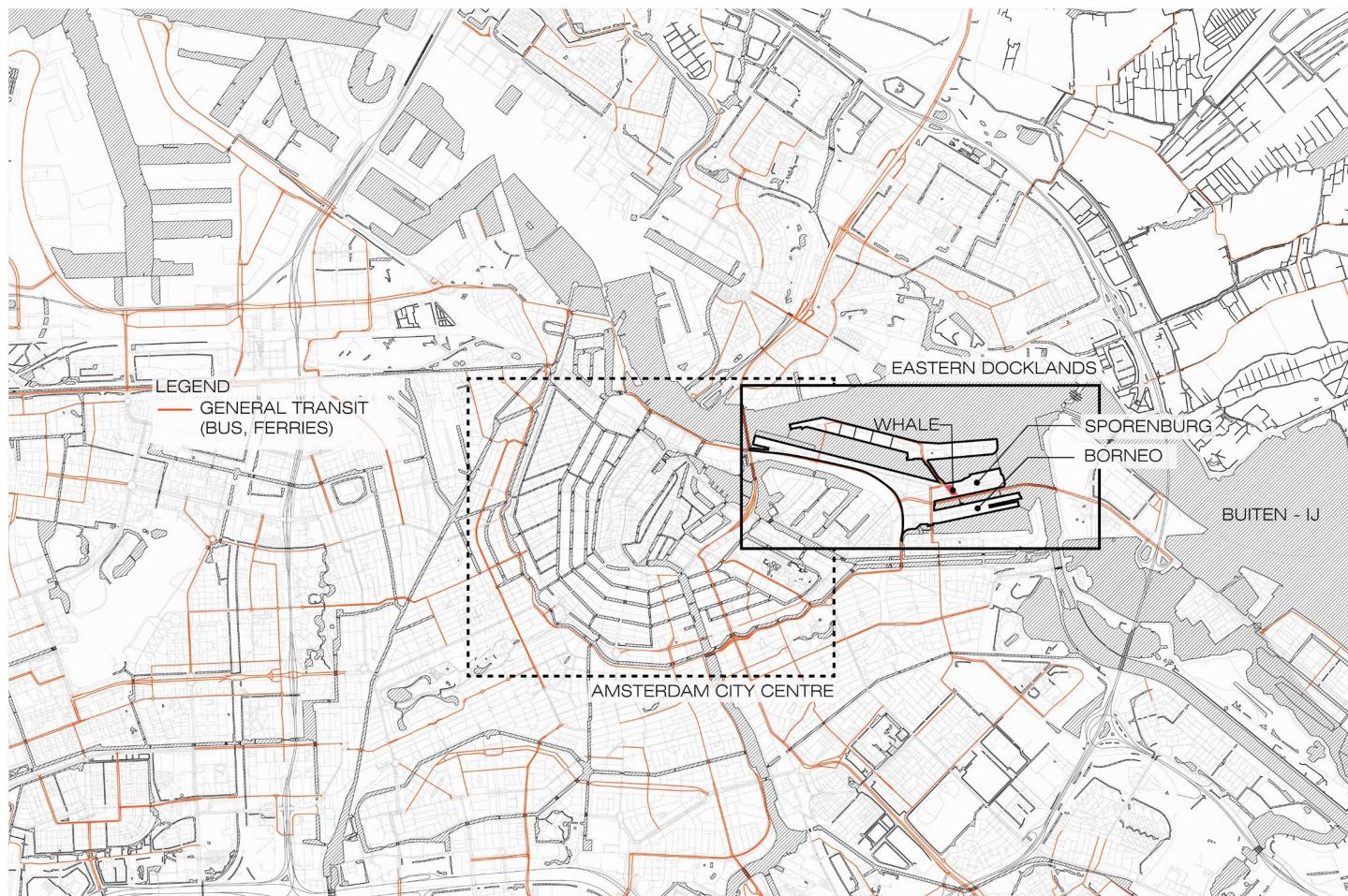


### [diagrams + mapping]

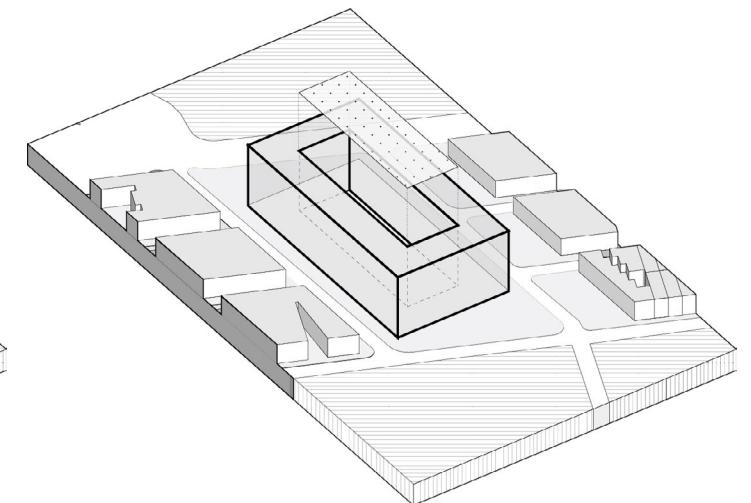
Right: A sample of infographics that detailed the growth requirements of different species of mychorrhizal fungi that would be grown in a horticultural centre in a soon-to-be-abandoned quarry in Ontario.

Next: The Whale Housing Complex by de Architekten Cie is a superblock that I had to research for my current studio which deals with creating large, mixed-use urban buildings. The following pages show some of the diagrams and maps I produced for the case study.

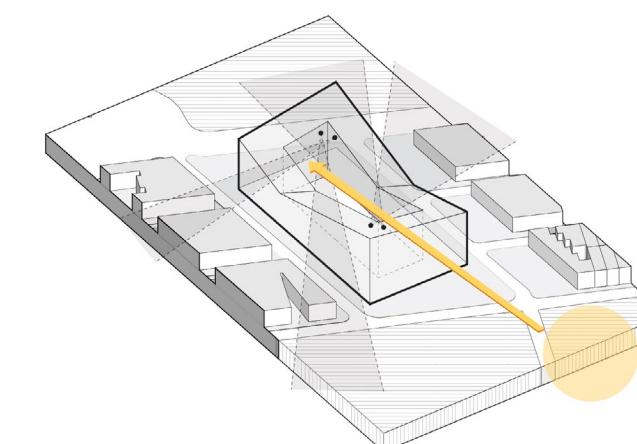




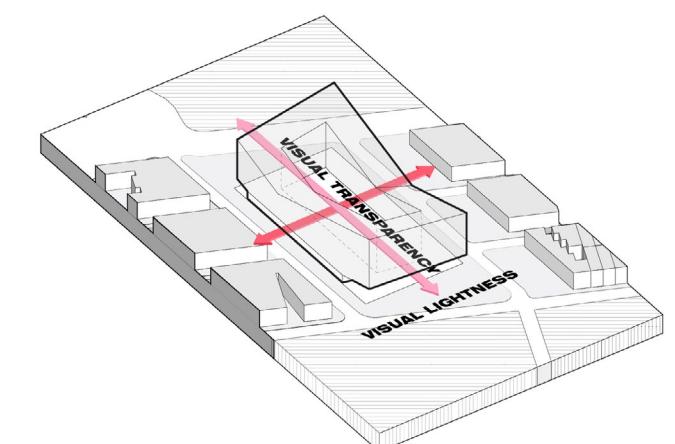
Begin with a typical block on site.



Hollow the block to create a typical perimeter block with a courtyard.

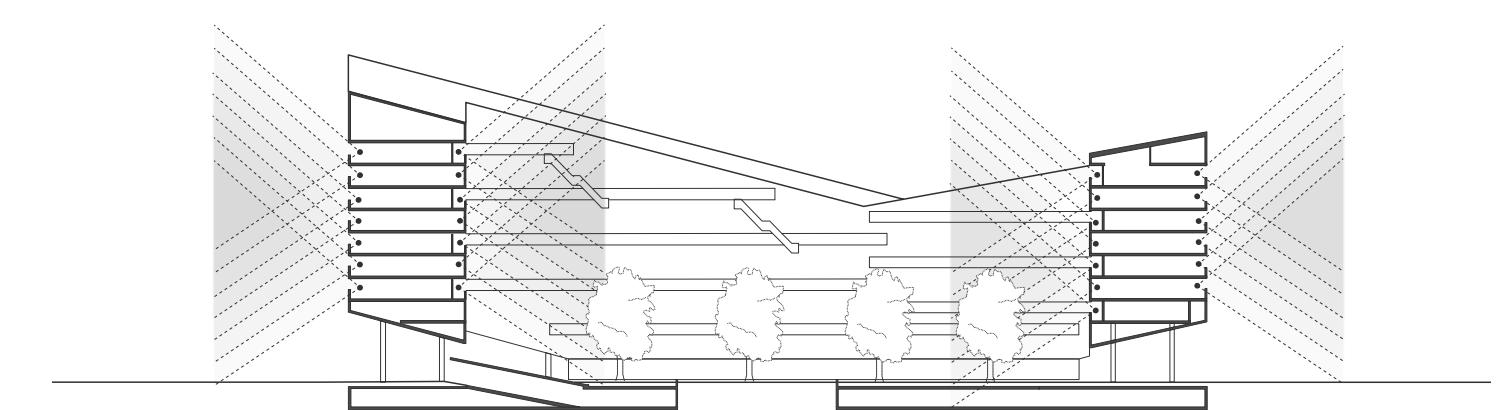


Raise corners to allow sunlight in and create views for apartments.



Raise building off of ground to create visual transparency through the courtyard axis, and visual lightness at ground level.

▲ 3D massing diagrams



▲ Sectional parti diagram

▲ Above: Map of Amsterdam including key locations + transit  
Below: Nolli map of the Borneo-Sporenburg area

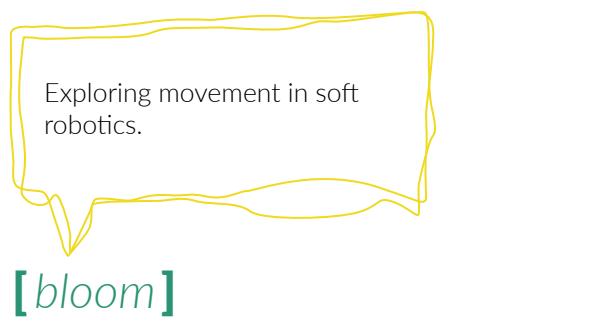
A portable classroom used for teach about food/horticulture, located in the Pacific Northwest.

### [learning blocks]

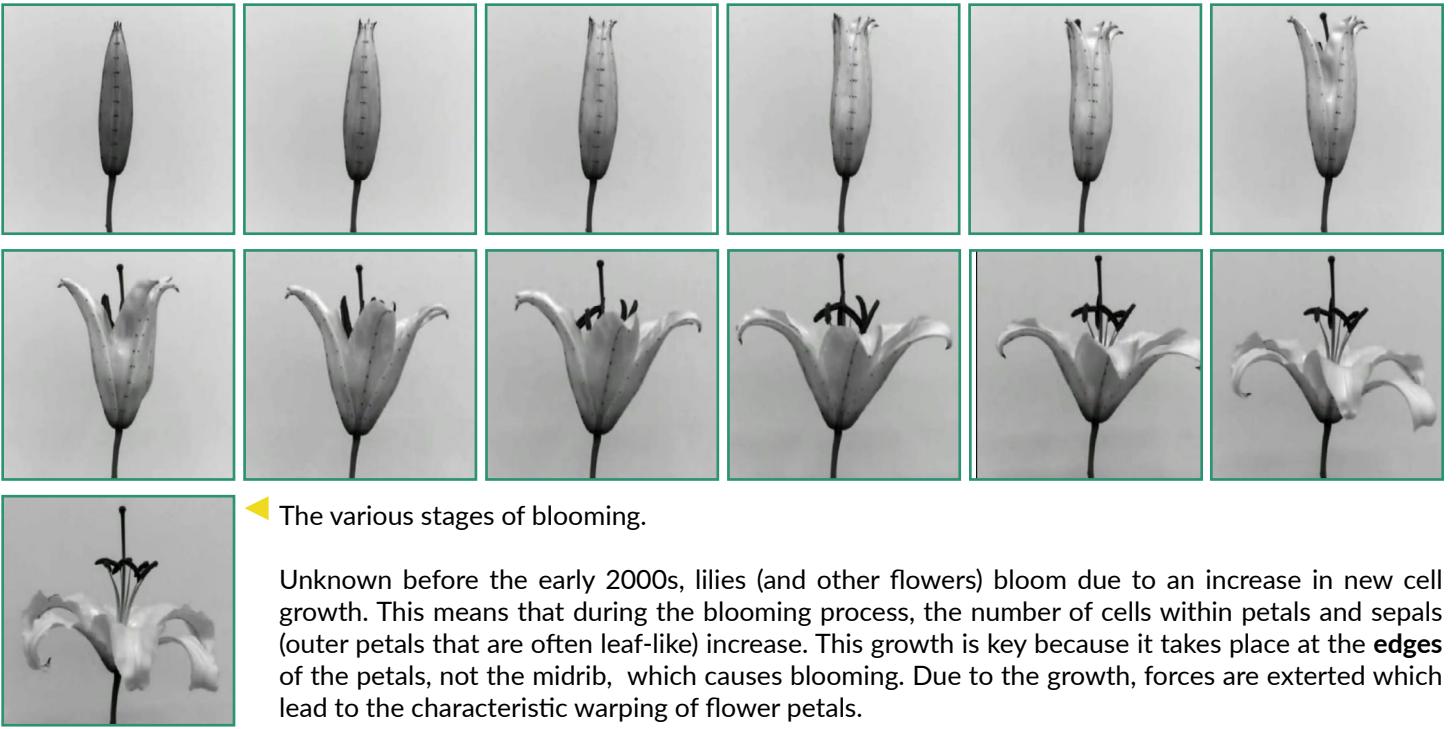
Learning Blocks is a portable classroom that aims to incorporate the classroom into urban, community areas such as parks to teach about agriculture, horticulture and food systems to the general public with the hopes of increasing awareness and promoting good health.



## SELF-GUIDED



Living things are in constant motion. Yet, when we think of motion we rarely think of the subtle movements that plants undergo. *bloom* is my exploration of a flower's (specifically, a lily) blooming mechanisms and its faithful reproduction (in movement) with robotics. As I have just started, these are my ideas of how to make *bloom*, which I hope to use in a larger installation sometime in the future.

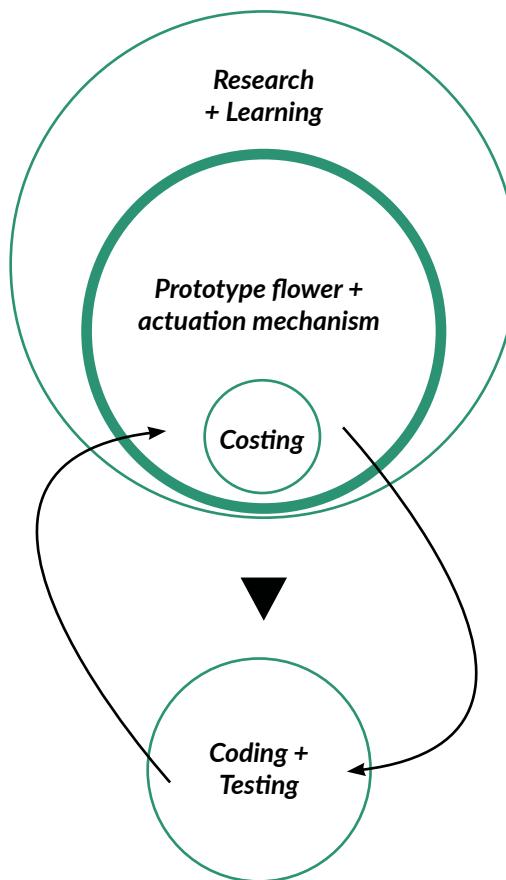


◀ The various stages of blooming.

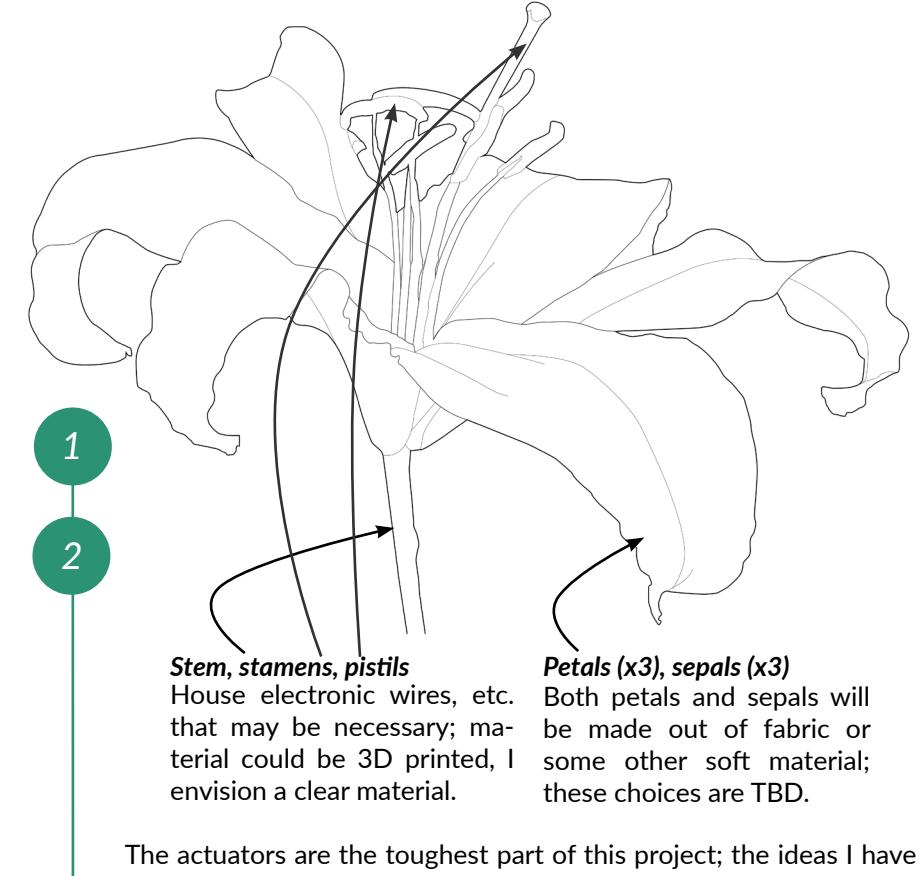
Unknown before the early 2000s, lilies (and other flowers) bloom due to an increase in new cell growth. This means that during the blooming process, the number of cells within petals and sepals (outer petals that are often leaf-like) increase. This growth is key because it takes place at the edges of the petals, not the midrib, which causes blooming. Due to the growth, forces are exerted which lead to the characteristic warping of flower petals.

## Anticipated Process

## Ideas for Actuation & Materials

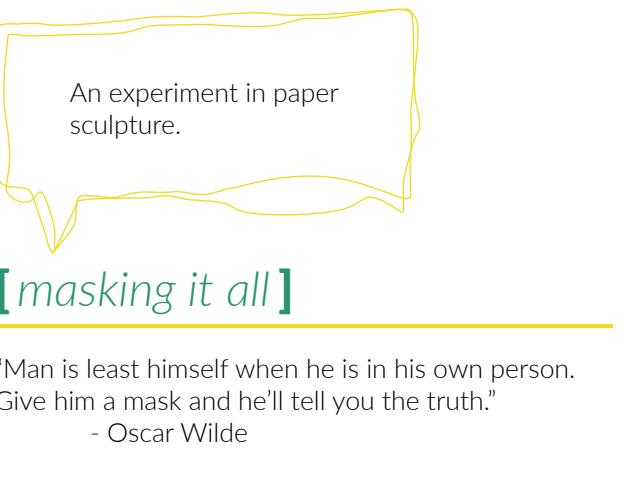


I assume that the bulk of project time will be used in learning new concepts and directly applying them to the prototyping. I believe I am looking at a time frame of 4-6 months, and budget that is TBD.



The actuators are the toughest part of this project; the ideas I have are thus.

1. Use a shape memory alloy (SMA) covered in cloth. As the SMA is annealed to a particular shape, when the metal is reheated, it will respond by reverting to the shape it was first heated to.
2. A pneumatic or hydro-based (which is more accurate to the physiology of a plant) actuator - this requires more research.



"Man is least himself when he is in his own person.  
Give him a mask and he'll tell you the truth."  
- Oscar Wilde



▲ Top view of completed mask | 1st trial of mask form | 2nd trial of mask form | Test of paper shapes on mask

# PHOTOGRAPHY

*Tiny flower, big detail*





Fields of light flowers in a dark wood, Queen Elizabeth Park



***Thank you for your time!***

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