

# **Textiles and Architecture: Enhancing the Urban Fabric By Quilting**

by

Samuel Smedley

Submitted in partial fulfilment of the requirements  
for the degree of Master of Architecture

at

Dalhousie University  
Halifax, Nova Scotia  
June 2024

Dalhousie University is located in Mi'kmaq'i,  
the ancestral and unceded territory of the Mi'kmaq.  
We are all Treaty people.

© Copyright by Samuel Smedley, 2024

For Carolyn

# Contents

Abstract .....	v
Glossary .....	vi
Acknowledgements .....	vii
Chapter 1: Introduction .....	1
Textiles .....	1
Chapter 2: Concepts and History of Fabric and Quilting .....	7
Quilting .....	7
Patchwork .....	8
Quilts .....	8
Quilt Construction .....	9
Cultural Importance of Quilts .....	12
Early History of Quilts .....	13
Quilting in Canada .....	15
Quilts Socially and Politically .....	17
Chapter 3: Fabric, Quilting, and Architecture .....	21
Gender and Domestic Connotations .....	21
Semper .....	23
Words, Metaphor .....	24
Space and Geometry .....	24
Content .....	33
Quilts and the Underground Railroad .....	38
Chapter 4: Quilting Experiments .....	39
Carolyn's Quilt .....	39
Woven Basket .....	41
Fabric House .....	42
Workshop Quilt .....	43
Paper Cube .....	43
Fabric Cube and Brick .....	45
Workshop Quilt Block .....	46
Paper Quilt Blocks .....	46

Container With Two Compartments.....	48
Foundation With Walls.....	49
City of Halifax Map .....	49
Site Plan .....	55
Chapter 5: Mending the Urban Fabric .....	58
Bringing Quilting to Architecture .....	58
Site .....	58
Program.....	60
Patchwork Residential Units.....	65
Workshop Spaces.....	69
Material and Colour Choices .....	75
Chapter 6: Conclusion .....	78
Reflection and Further Work.....	78
References .....	80
Appendix A: Quilting and Architecture .....	83
Appendix B: Quilts Around the World .....	84
Appendix C: Jelly Roll Quilt Pattern.....	85

## **Abstract**

Textiles are the architectural material of choice for the temporary and small scale. They are used when architecture does not fully meet a person's need for shelter, in the form of insulating wall hangings, bedspreads, and clothing. While textiles are one of our earliest building materials, in modern times the architectural potential of textiles has largely been ignored, and textiles have been relegated to interior design. Quilts in particular hold significant architectural opportunity—they are familiar, have a long history, and are used around the world. They have a specific sequence of construction and patchwork quilts especially are often already very reminiscent of urban fabrics. Architecture has been used to inspire and inform fabric and quilts, but rarely are quilts used to inform architecture. This thesis addresses the question: how can architecture be informed and inspired by quilts and their properties and be used to enhance the urban fabric?

# Glossary

**Arm:** The upper part of the sewing machine that holds the needle and extends out over the bed.

**Basting:** The act of temporarily connecting the layers of a quilt with either loose hand stitches or pins.

**Bed:** The lower part of a sewing machine, which houses the bobbin and on which the fabric rests while sewing.

**Charm Pack and Mini Charm Pack:** Packs of forty-two pre-cut fabric squares, 5" x 5" and 2.5" x 2.5" respectively.

**Fat Quarter:** A common amount of fabric—a quarter of a yard if cut into quadrants, not columns or rows, approximately 18" x 21".

**Interfacing:** A stiff material used to stiffen fabric pieces. Sometimes comes with an adhesive that's activated with heat, usually by ironing.

**Jelly Roll:** A pack of forty-two pieces of pre-cut pieces, 2.5" wide and approximately 40" to 44" long.

**Layer Cake:** A pack of forty-two 10" x 10" fabric squares.

**Presser Foot:** A metal piece that is attached to the sewing machine which folds the fabric in place as it is fed past the needle.

**Raw Edge:** An unfinished or rough edge of fabric, prone to fraying.

**Right Side:** The side of a piece of fabric that is printed on or has a texture—the better side.

**Seam Allowance:** The area of fabric between the edge and the stitch line. The most common seam allowance is a quarter-inch.

**Wrong Side:** The side of a piece of fabric that has not been printed on or is otherwise not as good—the bottom.

# Acknowledgements

I would first like to thank my supervisor, Emanuel Jannasch, and my advisor, Michael Putman. I'd also like to thank my parents for their support over the years, and my sibling Casey. I'd like to thank Patch for their wonderful workshops, and my friends who gave me support and help, especially Liam and Nico. Special 'thanks' to Stormy the cat, who was always curious about everything I worked on, and was determined to 'help.'

# Chapter 1: Introduction

## Textiles

The term “textile” encompasses a large collection of fiber-based materials, including but not limited to yarns, threads, and fabric. It can be expanded conceptually to include things like baskets, which are woven with fibers at a larger scale, and leather, which is often used in a similar way to fabric. Textiles, specifically fabric, are typically relegated to the area of interior design and rarely factor into architectural discussions. However, the ability of textiles to expand, enfold, and contain are already architectural in nature, and fabric is already used to refer to physical space (Gordon 2011). Textiles can be expanded in all directions, either sewn together at the edges or layered on top of each other and quilted (Gordon 2011). Textiles can wrap and contain and are reusable (Gordon 2011). Flexibility is a very important feature of textiles – even baskets, which are stiff once they are completed, are woven when the fibers are wet and pliable so they can be bent (Gordon 2011). The versatility of textiles has allowed them to be useful in contexts and situations around the world and beyond, from a pair of mittens handknit in Nova Scotia to a space suit on the ISS; from a blanket fort in my living room to a yurt in Mongolia.

Textiles are the architectural material of choice for the temporary and small scale. They are used to define spaces or rooms within a large space, often for the purposes of a ceremony, ritual, or performance. Any room can be made into a temporary theater by hanging curtains to define a stage. In many wedding ceremonies, the couple are positioned underneath a canopy or other temporary fabric architecture.



In ancient Greece, the bride and groom sometimes stood under a kind of canopy—the bride's robe. The same cloth could also function as the canopy that covered the nuptial bed. Jews have been consecrating their marriage vows under a canopy, the chuppah, for thousands of years, and similar canopies are seen in India, (Gordon 2011, 50)

each defining a kind of room, a new temporary ceremonial space. In Medieval Europe, bathtubs were “at times enclosed under a cloth canopy which both provided privacy and kept the bather warm by trapping the steam rising off the hot water” (Gordon 2011, 79), creating a temporary bathing room within a larger multi-purpose room. In Japan, rooms are floored with large woven mats called tatami, and the rooms often serve many purposes and are transitioned from one to another by the addition or removal of different textiles, such as futons and bedding which transform the room into a bedroom. A similar process was common in Ottoman homes, where



A traditional Japanese tatami mat room (Photo AC n. d.).

a long cushion or divan with pillows and covers was positioned near the window of the main room. It was used for general seating and for working on light-dependent tasks such as needlework. The same space was transformed into a dining room when other textiles were brought in. A large cloth spread on the floor defined the dining area; meals were set up on a portable low table placed on the center of this fabric ... When those furnishings were removed and mattresses were spread on the floor, the space became a sleeping room. (Gordon 2011, 79).

In these examples, the program of the room changes with the introduction or removal of different textiles.

Curtains can help keep a room warm or cool, but before the wider adoption of insulation in walls, textiles were used as a layer of insulation on the inside of many buildings. Large tapestries in much of Europe were not just for decoration – they helped insulate cold, drafty stone buildings. Similarly, four-poster beds with their long, thick curtains helped create a small, insulated room for sleeping within a larger, colder,



A four-poster bed using thick curtains in a room with tapestries on the walls (Swire 2016).

often multi-purpose space (Gordon 2011). In North America, up until the early 20th century it was common for young women to prepare for marriage by compiling things they would need to manage their own independent household. These are often called hope chests, and would typically contain linen, towels, and bedding, especially quilts. Some traditions specify that women should have as many as twelve quilts made before they get married. While some of these quilts were meant for beds or chairs, many would be hung on the walls for the same purpose as old European tapestries – to insulate the interior. Textiles modify and add to the architecture of both castles and log cabins, becoming a necessary part of the functionality of the space.

Fabric is used by many nomadic groups around the world as the main material in their homes. These lightweight and portable shelters are effective even in harsh climates. Perhaps the most obvious example is the yurt. Large pieces of felt, fabric, rugs, and canvases are pulled over an expandable wooden latticework and tied down. These homes keep their residents warm even in the harsh Mongolian landscape (Gordon 2011). The Sami Lapp tents in Scandinavia are similar to the tipis in the grasslands of North America, where large hides are pulled over a conical wooden structure of poles with an opening in the center to allow smoke to escape. Dark-coloured tents made of goat hair fabric have been used from Morocco to Saudi Arabia by different nomadic groups. The black fabric provides shade while the sides can be lifted to allow air circulation, and the heat absorbed by the fabric helps keep the interior warm during cold desert nights. Some of these tents are referred to as Bedouin tents (Gordon 2011). In Africa, several types of woven houses exist. In South Africa, the



A yurt under construction (Paley n. d.).



A Bedouin tent in Morocco (Adobe Stock n. d.).

Zulu make houses called iQukwane, which are dome-shaped houses of reeds and other plant matter overtop of an intricately woven structure of sticks. In Namibia, the Nama people make houses that are covered in mats made of woven reeds, designed to be light for easy travel. The Dorze people of Southern Ethiopia create tall round houses made of woven bamboo, which can last for 10 to twenty years (Yakubu 2024). The Kaaba is a cubical stone building in Mecca, Saudi Arabia, and is the most important and holy site in Islam. It was built in 683 AD to replace the original building which was damaged. The building is covered by a huge fabric covering called the Kiswah, which is replaced each year. The kiswah is considered sacred and is composed of over six hundred kilograms of silk. The silk features intricate gold and silver embroidery. The kiswah is not structural, but it is inherently part of the architecture of the Kaaba (Gordon 2011).

There has been limited exploration of the visual and physical traits of textiles in modern architecture, often with the help of technological advancements. The Elrey B. Jeppesen



The Kaaba being covered by the Kiswah in the yearly ceremony that takes place during Hajj (The National 2023).



A model of Peter Testa's woven building (Testa Architecture and Design 2005).

terminal at the Denver International Airport features a tent-like roof structure.

Its fabric roof, which is both inspired by and visually reminiscent of Bedouin tents, is made of fiberglass and glass filament, coated with Teflon. It repels water, soil, and airborne chemicals, and absorbs sound. Because it is translucent and reflective, it also reduces the need for artificial lighting and lowers cooling costs. A model for an even more radical approach to “fabric architecture” was on display in the Extreme Textiles exhibition at the Smithsonian's Cooper-Hewitt National Design Museum in New York in 2005. Peter Testa's forty-story “woven building” was supported not by a steel framework, but a flexible skeleton—a latticework of carbon fiber. It had a mesh-like “skin” covering. (Gordon 2011, 79)

However, this area of architecture is only beginning to be explored. Most projects that focus on fabric are temporary pavilions, usually using large pieces of fabric to create shade or cover, like Blue Square by Atelier Guo in Dali Village, Guizhou, China, and Situaciones de Estar Pavilion by Veintedoce Arquitectura in Mexicali, Mexico. Completed in 2021, Blue Square incorporates indigo-dyed blue fabric shades. Indigo dye and indigo-dyed products are an important industry in the region (Atelier Guo 2024). Situaciones de Estar Pavilion is informed by seven of Christopher Alexander's patterns as laid out in *A Pattern Language*, most notably “No. 244. Canvas Roofs.”



Figure 7. A section of the Denver International Airport showing the tent-inspired roof (Madere 2016).

The project features large yellow fabric shades, which are pulled down and moved to adjust the amount of shade and shelter throughout the day (Veintedoce Arquitectura 2024). Both of these projects are using fabric as a material, and are taking advantage of the colours of fabric, but the projects themselves are not necessarily inspired by fabric's properties, history, or social value.



Blue Square, highlighting the indigo-dyed fabric that is a major industry in the region. Photo by Quingshan Wu, 2021 (Atelier Guo 2024).



The yellow fabric shades of Situaciones de Estar Pavilion are movable by users to give the space flexibility throughout the day. Photograph by Fidel Gallaga, 2023 (Veintedoce Arquitectura 2024).

## Chapter 2: Concepts and History of Fabric and Quilting

### Quilting

'Quilting' refers to the process of connecting multiple layers of textile materials together by stitching through all layers. Many things are quilted, including clothing. The word "quilt" is usually used to refer to a quilted blanket. Typically, a quilted piece is made of three layers: a top, batting, and the backing. The top may be whole cloth, patchwork, appliquéd, or a mix of different techniques, while the batting (sometimes called 'wadding') can be cotton, wool, polyester, or even recycled materials such as an old blanket, worn out clothing, or newspaper. The back is most often whole cloth or a few large pieces sewn together to appear as one, but can sometimes be patchwork (Gillespie 2010). If the piece is not meant for warmth, the insulating layer of batting is usually omitted. The stitches are referred to as 'quilting stitches' (Crossman 1999). Usually, the quilt top is constructed first, using various techniques such as piecing, embroidery, and appliquéd. The quilt is then 'basted,' meaning the backing is laid out flat, right side down. The batting is then laid out on top, followed by the quilt top. The layers are then temporarily connected by basting stitches (long hand stitches that are later removed), pins, or safety pins. The layers are then quilted together using quilting stitches, either by hand, machine, or a combination of both. Quilting stitches come in many styles, including single stitches finished with a knot on the backing side, and large repeating patterns done by hand or machine. Stiches can be in either a complimentary or contrasting colour thread. The quilt is then cut to the desired

size, excess material trimmed away, and then finished with binding around the edges.

## **Patchwork**

Patchwork is when small pieces of fabric are sewn together to create a design or pattern. Patchwork is often used to make the toppers of quilts and can be an effective way to use up small pieces of fabric. Some patchwork is done using paper in what is called “foundation” or “paper” piecing, when pieces of paper help stabilize small pieces of fabric. The fabric is stitched to the paper, stabilizing the fabric and making it easier to get precise points and corners. The paper is sometimes left to add extra insulation (Crossman 1999).

## **Quilts**

While many quilts are made with patchwork tops, not all quilts are made using leftover pieces. Both contemporary and historical quilters often bought some or all of the fabric of a quilt for that specific purpose (Witzling 2009). However, patchwork tops made of scraps remain the first thing most people think of when they hear ‘quilt.’ These patchwork quilts are the result of careful, skilled visual thinking and planning by the quilter or quilters (Witzling 2009). Complex geometry is the foundation of most patchwork patterns, both historically and today. Typically, a block will be constructed and then repeated in rows and columns. This pattern, combined with carefully chosen fabric colours, can be used to create incredibly complex images and patterns (Witzling 2009). These blocks may be spaced out using additional pieces of fabric, usually a solid colour, often white. This spacing or framing around the quilt blocks is called “sashing.” Sashing can be used to introduce negative space and contrast to the quilt. The same modular block can

be repeated with different colours in different locations to create different effects. But well-known and commonly used quilt blocks are just one way quilters create quilts. Whether they are pieced or appliquéd; use a commonly known pattern or one unique to the quilter; use new fabric or old; the visual language of quilts relies on the use and manipulation of patterns (Witzling 2009). The visual languages of quilts have been explored and expanded upon all over the world, by generations of quiltmakers.

### **Quilt Construction**

There are dozens of different ways to construct a quilt. Hawaiian quilts are made using appliqué, a technique where pieces of fabric are sewn on top of another piece. Hawaiian quilts specifically are made by taking a large piece of fabric and folding it and then cutting pieces out before unfolding it, like a paper snowflake. Patterns are usually floral, and quilters tend to use bold colours like red, yellow, and green. The large piece is then appliquéd to a solid backing piece. Mola quilts are made by the Guna people (sometimes called Kuna or Cuna) who live on the San Blas Islands off the coast of Panama using the technique of reverse appliqué. Pieces of fabric are layered on top of each other with increasingly larger patterns cut out of them, allowing for multiple thin lines of colour. Since the weather rarely requires blankets, mola quilts are usually small and are used as panels in blouses and skirts. They often feature animals or other nature themes. English paper piecing and foundation paper piecing are two similar techniques that use paper as a stabilizer for small pieces of fabric. Before the quilt is assembled, the paper is removed. In English paper piecing, small pieces of fabric are handsewn around geometric pieces of paper, most often hexagons. These



pieces of paper and fabric are then carefully sewn together before the paper is removed. In foundation paper piecing, the pieces of fabric are sewn using a sewing machine directly onto the piece of paper, ironed flat, and then the next piece is sewn on. These are just a few examples of different types of quilt construction. This thesis focuses on patchwork quilts, which can be assembled in many different ways, but I will focus on the way that my example quilts were constructed.



A "crazy quilt" made by Dorothy Tompkins between 1880 and 1890 in Yonkers, New York. Crazy quilts are made using randomly sized and shaped fabric scraps of different types. They are often used to practice different embroidery stitches.



A Hawaiian quilt titled Ka Ua Kani Lehua (The Rain That Rustles Lehua Blossoms) made by Metilda Laborio between 1925-1950 in Hawaii



A 1970-2000 Mola quilt



A pre-1850 English paper-pieced quilt

Four quilts featured in Appendix A: Quilts Around The World (International Quilt Museum n. d.).

My grandmother's quilt was constructed in a way that is very common in quilts. First, she would have decided on a pattern and calculated how many pieces of fabric and in what sizes she would need. She then would have assembled her fabrics, considering colour, material, and pattern. Some quilts use primarily or entirely purpose-bought fabric — this quilt was intended specifically to use up various scraps she had left over from making fabric masks at the beginning of the COVID pandemic. Once she had her fabrics selected, she would ensure everything was washed and ironed.



A patchwork quilt made by my grandmother in 2020. Notice the two different patterns involved - the main pattern of the blocks of sixteen squares separated by thin blue sashing, and the secondary pattern of the solid red blocks.

Washing beforehand is important because some fabrics shrink in the wash, resulting in possible rippling in the fabric or strained seams once the quilt is eventually washed. Once everything was clean and ironed, she would have cut the pieces she needed. Each square or rectangle would be a quarter of an inch larger in every direction than the intended size of the finished piece to allow for the seams. Once cut, she would have arranged the blocks in four rows of four squares. The squares would then be sewn together by taking two and placing them with the edges flush and the front or 'right' side of the fabric facing each other and the back or 'wrong' side facing out. These squares would then be sewn together. This would continue until she had four squares in a row. Once she had four rows of four squares each, she would have ironed the seams so they were flat to reduce bulk in the quilt top. The rows would then be sewn together, again with right sides together. Once the block of four-by-four squares was assembled, she would have moved to the next block. Once all the blocks were assembled, she would have sewn each row of blocks together with sashing in between each block. Then she would have sewn the row of sashing together with the little red squares, then sewn each row together with the sashing.

### **Cultural Importance of Quilts**

Quilts have existed for hundreds of years across the world. However, their history and artistry are a relatively new area of study, one that is still growing. Due to a number of factors, their history is often muddled. Quilted blankets were made primarily by women for much of history, relegating them in many cultures firmly in the realms of domestic and craft. The makers of individual surviving historical quilts are rarely identifiable. Items that would have taken hours, often hand-

stitched and by candlelight, have been sent to dusty attics and the backs of closets, if they survive at all. Their artistry has been subject to debate if not entirely ignored. While quilts are sometimes purely decorative, meant to hang on the wall, many were used every day, and fabric is not the sturdiest of materials. Over time, quilts were worn, damaged, stained, repurposed, and discarded. But for hundreds of years, quilts have also had an important role in the lives of those who made and used them.

Quilts were often the centerpiece of social occasions, allowing people to come together around a communal task. Quilts were given as wedding gifts and to newborns. They were used to mark losses, such as memorial quilts, made with pieces from the deceased's clothing, or signature quilts, often made by a group as a gift for a friend who was leaving. Quilts were frequently included in wills and as parts of dowries. In many cultures, young women would be expected to have a number of completed quilts made before getting married. They have been used as part of political movements, to express great joys or griefs, and they have been used to simply keep out the cold. They have "a social impact of society in general as well as their individual maker" (King 2001), bringing people together within individual communities as well as across time.

### **Early History of Quilts**

There is evidence that quilting has existed for thousands of years. Quilted clothing was discovered in a tomb dating from the Eastern Zhou Dynasty in China (771-221 BC) along with a quilt within the coffin. It is believed that quilting may have first appeared in China, and have existed there since at least the eighth century BC (Gillespie 2010). The

Tristan Quilt, made around 1360 in Sicily, is one of the earliest surviving European quilts. The oldest patchwork or pieced quilt in England dates back to 1708, though whole cloth quilts existed in England long before that. In some areas, quilted clothing developed before quilting for bedding. Quilted clothing was useful both for warmth and protection (Gillespie 2010). The history of quilts and quilting is sometimes difficult to track, in part because of significant exchanges of styles and techniques over time, and potential parallel but unrelated developments. Names of styles and techniques are not universal, and since surviving quilts are just a fraction of what once existed, it can be difficult to determine of what remains, what might be the beginning of something new, what might be part of a much larger style, and what might be a complete one-off.

Quilting is believed to have existed in Europe for at least one thousand years. This estimation is based mostly on historical recordings, as no quilts or quilted clothing from that early have survived. Most quilting would have been done with wool and linen initially. While some quilts may have been patchwork, it is believed that most early quilts would have been whole cloth, made with fabric purchased for the purpose of bedding. When countries like England and the Netherlands began trading with India in the sixteenth century, cotton became very popular in both clothing and quilts (Gillespie 2010). Despite different countries' attempts to ban imported cotton, it remained popular both in Europe and later in European colonies, especially in North America. Quilting was popular with women of all social classes, though the quilts produced were often vastly different. Lower class quilts used cheaper material and were meant for heavy use, while upper class quilts were often meant to be

purely decorative and show off a woman's skill. A machine called a 'cotton gin' was invented in 1793, dramatically reducing the price of cotton and making it available to a much wider audience. The first sewing machine to use a lockstitch design, the design that modern sewing machines are based on, was patented in America in 1846. This machine allows for much faster and consistent sew than was previously possible purely by hand (Gillespie 2010). Slavery was officially abolished in America in 1865, meaning that essentially all cotton produced up until that point was produced by slaves. While different patterns and techniques came in and out of style, quilting remained popular, mostly among women, until the beginning of the First World War, when many women entered the workforce and had less time or materials to dedicate to quilt making. The popularity of quilting picked up during the Great Depression due to necessity, and then decreased again during World War II. It wasn't until the 1970s that quilting would start to experience a revival in North America. As people slowly became more eco-conscious, an interest in reusing and recycling led some people back to quilting, and it has been growing in popularity since, bringing people around the world together (Gillespie 2010).

### **Quilting in Canada**

Quilting was brought to Canada by French settlers in the 1600s. Each new immigrant brought with them new ideas and knowledge about quilting, meaning Canada has developed a wide range of different quilting styles and patterns. Popular block patterns in the United States typically become popular in Canada and can be seen in many historical Canadian quilts (Gillespie 2010). However, several blocks have developed within Canada or became popular here,

including the Maple Leaf block and the Snowball block. White as a background colour is also particularly common in Canadian quilts. During the First World War, despite an overall decrease in quilt production, Canadian women produced hundreds of quilts to send overseas and to raise money to support the war effort. While quilting experienced a decline afterward, as it did in many countries, it began to become more popular again in the latter half of the twentieth century. Today there are hundreds of quilting guilds (groups of people interested in quilting) across the country. The Canadian Quilter's Association (CQA) hosted their first annual meeting in 1982 in Toronto, followed by their first conference in Ottawa the same year. Conferences offer workshops featuring quilters from all over the world. In 1984 the second annual conference was held in Halifax, where it has also been hosted in 1994, 2012, and 2023. The CQA aims to promote and celebrate quilts and quilting across Canada, "preserving the traditions of those who have come before us while looking to new and creative ways to enhance quilting for the present and future" (CQA 2024). The CQA organizes conferences, workshops, competitions, and publishes a quarterly magazine.

Different groups within Canada have developed their own styles of quilting. The Amish and Mennonites each have their own distinct style, and quilting has become very popular in many Indigenous communities, especially groups from the Prairies. As bison disappeared, handmade quilts began to take the place of bison hides both ceremonially and domestically. Though quilting was originally brought to North America by settlers, Indigenous quilters have developed their own distinct styles and motifs. Instead of blocks of repeating patterns, many Indigenous groups favour large

stars or similar motifs, demonstrating great skill in aligning the small pieces of fabric. These quilts often use bright colours and regularly feature images of animals and tipis (Gillespie 2010).

### **Quilts Socially and Politically**

Quilts have been important social pieces for centuries. Especially before the invention of sewing machines, the act of quilting layers together could be very time-consuming, and so it was often made into a social activity. Often groups of women would come together to make a quilt, sometimes to commemorate a particular milestone or event, such as a marriage, childbirth, housewarming, move, or death (King 2001). The event of coming together to make a quilt is most commonly referred to as a 'quilting bee,' but can also be referred to as a 'quilting party' or 'quilting frolic.' They became less common once sewing machines became widespread, but during the nineteenth century quilting bees were a popular and very important social event (Crossman 1999). Often if the quilting bee included the construction of the quilt top and not just the basting and quilting, the women would all bring different pieces of fabric to contribute. This was especially popular in quilts for a member of the bee who was getting married or moving away. In this way, women were connected to each other through time and space, holding on to a physical piece of the people they crossed paths with, however briefly (Witzling 2009).

Quilts have also been the centre of important political events and movements, as well as disaster situations. Susan B. Anthony often advocated for women's suffrage during quilting bees (King 2001). During war time, quilts were often made to send to soldiers or to sell to raise money



for the war effort (Youngs 2014). It is estimated that more than 250,000 quilts were made and distributed during the Civil War (Gillespie 2010). From 1915 to 1965, Red Cross records show that Nova Scotia sent over 43 thousand quilts overseas to support different causes (Crossman 1999). Immediately after the 9/11 attacks, Karey Bresenhan, co-founder of the International Quilt Festival (IQF) announced a special exhibit that raised money for victims and their families. Six weeks later, 275 quilts were displayed, and the event raised over \$250,000. When Hurricane Katrina devastated the southeastern United States, the IQF received over ten thousand quilts to be distributed to survivors, many of whom were being temporarily housed in the George R. Brown Convention Center, the first home of the IQF (Gillespie 2010).

One particularly famous quilt is the AIDS Memorial Quilt (also called the NAMES Project), which is the largest quilt in the world and includes over 50,000 panels, each three feet by six feet. The full quilt is about 120,000 m<sup>2</sup> and weighs over 54,000 kg. The quilt includes memorials to approximately 110,000 people (Howe 1997). This quilt began in 1985, when Cleve Jones, a gay rights activist in San Francisco, was participating in the annual candlelight march that he helped organize which honoured Harvey Milk and George Moscone, politicians who were assassinated in 1978 (Harvey Milk was a member of the San Francisco Board of Supervisors, where he was the first openly gay man to be elected to public office in California, and George Moscone was the mayor of San Francisco and a proponent of liberal policies). By 1985 the AIDS crisis had been raging for four years, and marchers were asked to write the names of people who had died and tape them on the Federal

Building at the end of the march. Stepping back from the ladders, Cleve Jones said

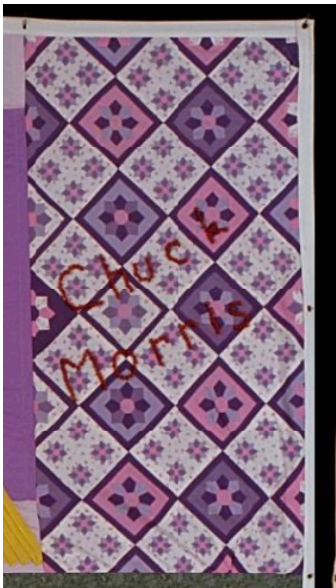
“Suddenly the names looked like a patchwork quilt, and that idea evoked such warm old memories of comfort. I had been consumed with rage and fear. Most of my old friends were dead. I felt that we lived in this little ghetto on the West Coast which would be destroyed without anyone in the rest of the world even noticing. I knew we needed a memorial.” (Shaw 2009, 305)

For many people, wherever the AIDS Quilt is temporarily displayed becomes a cemetery, a physical space meant for grief, mourning, and remembrance. Many victims of the HIV/AIDS crisis, especially in the beginning, were cremated or their bodies returned to unsupportive next-of-kin away from home, so each panel becomes like a gravesite for the loved ones left behind.



Block #1320 from the AIDS quilt. The eight names on this block are David Goodenough, Robert E. Sappenfield, Al Rinaldi, Jeffrey Wayne Davies, Gary Towlen, Jim Britt, Ed Stark, and Richard Howe (National AIDS Memorial n. d.).

The quilt now travels the world in multiple parts, often displayed laid out on the ground in large areas or hung on walls in smaller sections. Similarly to historical mourning quilts, fabrics from the clothing of the dead are also included, but as the AIDS Quilt is not meant for practicality, often entire intact pieces of clothing are used, as well as shoes, stuffed animals, cards, photographs, and sunglasses. Usually, blocks are created by the loved ones of the dead, but one notable block that commemorates Chuck Morris, a San Francisco newspaper publisher who died in 1986, was made by him. He had been working to piece together a quilt top before he died, to be used as a bedspread. He died before the quilt could be finished, leaving an existing panel that was 3 ft x 6 ft. A friend added a backing and Chuck Morris's name before submitting it to the NAMES Project. A double block commemorating Ed Stark and his partner Richard Howe features Ed's ballet shoes sewn directly on to the background, which is made of upholstery fabrics from their home (Howe 1997).



Chuck Morris' memorial  
in Block #206 from the  
AIDS quilt (National AIDS  
Memorial n. d.).

## **Chapter 3: Fabric, Quilting, and Architecture**

Textiles and fabric are already connected to architecture in Semper's theory of the four elements, and in existing fabric structures. Architects already talk about the urban fabric and curtain walls, referencing, often unknowingly, the usually overlooked importance of fabric in the architectural world. Quilts are tectonic, they provide shelter, and they have a cultural depth and value that spans time and space. They exist in conjunction and connection with architecture (see Appendix B: Quilting and Architecture). Architecture has been used to inspire and inform textiles, fabric, and quilts, but rarely are quilts used to inform architecture. This thesis addresses the question: how can architecture be informed and inspired by quilts and their properties and be used to enhance the urban fabric?

### **Gender and Domestic Connotations**

For much of the history of quilts, they have been considered the domestic labour of women. They have only recently begun to be valued by craft, material, and art historians. Textile history is a relatively new field that is still developing. Even in times and places where some parts of textile production were considered men's work, quilting still primarily falls to women. Women are often associated with textile production so firmly that "European folk tales posit women as spinners and weavers; in fact, 'good' women are usually portrayed as those who are the most skilled and industrious cloth-makers. A good spinner was the embodiment of a good housewife" (Gordon 2011, 38). But as textiles became



A 1955 advertisement referencing the importance of a sewing machine to household tasks, but also associating women with sewing and home-making (Gertie's Blog for Better Sewing 2010).

cheaper and more readily available due to industrialization, in the Western world textiles became

seen as something domestic and feminine, and textile-making as a primarily frivolous pastime pursued by women who were confined to the home. It was either identified as women's work, or, especially in the 20th century, as a kind of "non-work;" an old fashioned activity that we might grow out of or leave behind when we move on to "real" work such as medicine or law. (Gordon 2011, 6)

The sewing machine was used as a symbol for the perfect housewife during the 20th century, and many women were pushed to pursue textile skills they were not interested in. However, when textile skills were forsaken as inherently oppressive by some second-wave feminists, people of all genders lost opportunities to learn skills they may have enjoyed. Many women did not teach their children what had been taught to them, and sewing machines became a luxury instead of a necessary part of every home.

This relegation to the domestic- and women's work spheres contributed to the lack of records of existing quilts. There has been a general disinterest in them from an academic or historical standpoint for centuries. Only recently have quilts started to be appreciated for the incredible amount of work and skill that each quilt requires. This undervaluing is saddening but not necessarily surprising. In the realm of architecture, textiles have usually been relegated to interior design, the same place women have been relegated to for many years (unless the textile is considered a legitimate building material, like fiberglass or asbestos). Textiles, specifically fabric, are inherently associated with women—they are light, soft, and often considered more suited to decoration. Both women and fabric have been firmly pushed out of architecture and towards interior design, despite the important roles women and fabric hold in building

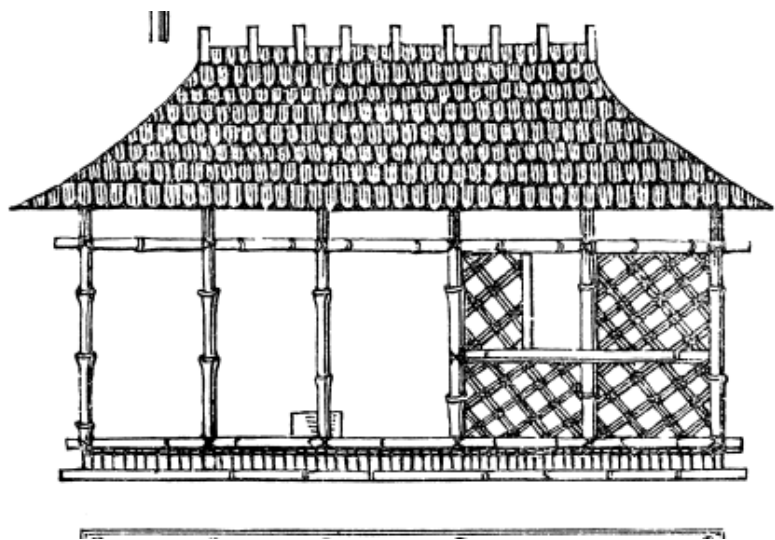
and architecture, and the great potential contributions to architecture both have.

## Semper

German architect Gottfried Semper published his book *The Four Elements of Architecture* in 1851. Semper argued that architecture could be simplified into four elements: the hearth, roof, enclosure, and mound. The origins of the enclosure, he believed, were woven materials that formed the earliest walls (Hale 2005). Architecture

originated in the primordial need to demarcate interior and exterior spaces with divides—fencing made of branches, for example, or hanging tapestries of woven grasses. Some of the earliest built structures were temporary tents of real cloth stretched over scaffoldings, (Houze 2006, 295)

as many temporary houses or the houses of nomadic people still often are. Semper argued textiles were the central to understanding the origins of architecture (Jefferies and Conroy 2006). He even argued that some geometric patterns in stone and brick were an expression of societal memory of historical woven enclosures (Houze 2006).



Semper's 1851 elevation of a Caribbean hut, highlighting the woven enclosure (Jacoby 2015).

## **Words, Metaphor**

There are many associations and metaphors that refer to textiles in English (and in other languages). We think of our connections to each other as threads or strings “tying” us together. When two things or people become one, they are “knit” together. We talk about the “urban fabric” or the “fabric of space,” with the idea that it is expandable and mendable, but also prone to be ripped or torn. In architecture we often use weaving as a metaphor for working a project into its surroundings. We describe the landscape as a ‘patchwork,’ we may even occasionally liken it to a quilt. But rarely are these metaphors or phrases actually examined beyond their use as locutions.

## **Space and Geometry**

### ***Pattern***

Sewing and quilting rely heavily on the concept of ‘pattern.’ ‘Pattern’ is used to refer to several different things in textiles. It can refer both to a set of instructions for how to create an item, such as a piece of clothing or a quilt. Sometimes, especially in garment making, instructional patterns will include pieces of paper to cut out and trace on to fabric. These pieces of paper are also referred to as a pattern. ‘Pattern’ might refer to the organization of fabric in a project, such as quilt blocks in a quilt top. A pattern may call for two or more blocks to alternate or to be spaced out with sashing. It may refer to colours and their locations when particular effect is trying to be achieved. Some quilt patterns are common enough that they were given names, such as Irish Chain quilts (which are sometimes called American Chain quilts in Ireland). ‘Pattern’ can also refer to the design



An example of portugese pavement (Depositphotos n. d.).

on the fabric itself—floral, plaid, tie-dye, striped, checked, and polka-dot, to name a few.

In architecture, pattern can be used in a similar way to fabric pattern to refer to the arrangement of tiles, bricks, or shingles. This is seen in examples such as “calçada portuguesa” (Portuguese pavement), a traditional style of pavement used for pedestrian areas in Portugal. There are many styles, often playing on shape, geometry, repetition, and contrast. Some are particularly quilt-like since they are playing with the same concepts common in quilting. Some brick patterns are similarly reminiscent of quilting patterns. By varying the size, colour, and orientation of the bricks, complex patterns are created. The potential of brickwork to mimic quilts has been recognized in some architectural projects.



The quilt-like facade of Barnato Hall. Photo by Nic Huisman and David Southwood (26'10 south Architects 2019).

The addition to Barnato Hall in 2019 by 26'10 south Architects adds over 150 rooms to an existing student residence in Johannesburg, South Africa. The brick façade “was envisaged as a beautiful, richly-textured quilt” (26'10 south Architects 2019) using a variety of bricks in different colours, shapes, sizes, and patterns. The ‘quilt blocks’ of brick are spaced with ‘sashing’ of concrete, mimicking a quilt top. House Katz, also in Johannesburg, employs a similar strategy of brick ‘quilt blocks’ spaced by exposed concrete ‘sashing’ (Gregory Katz Architecture 2020).

One particularly interesting example of quilt-inspired façade is the Casey House renovation and addition by Hariri Pontarini Architects. The Casey House is a healthcare facility in Toronto that provides specialized care for people with HIV/AIDS. The addition is a 59,000 square foot expansion of the existing Victorian brick building, a heritage property that is





The addition to Casey Hall draws inspiration from the AIDS quilt using different materials like different pieces of fabric. Photo by Doublespace Photography, 2017 (Hariri Pontarini Architects 2018).

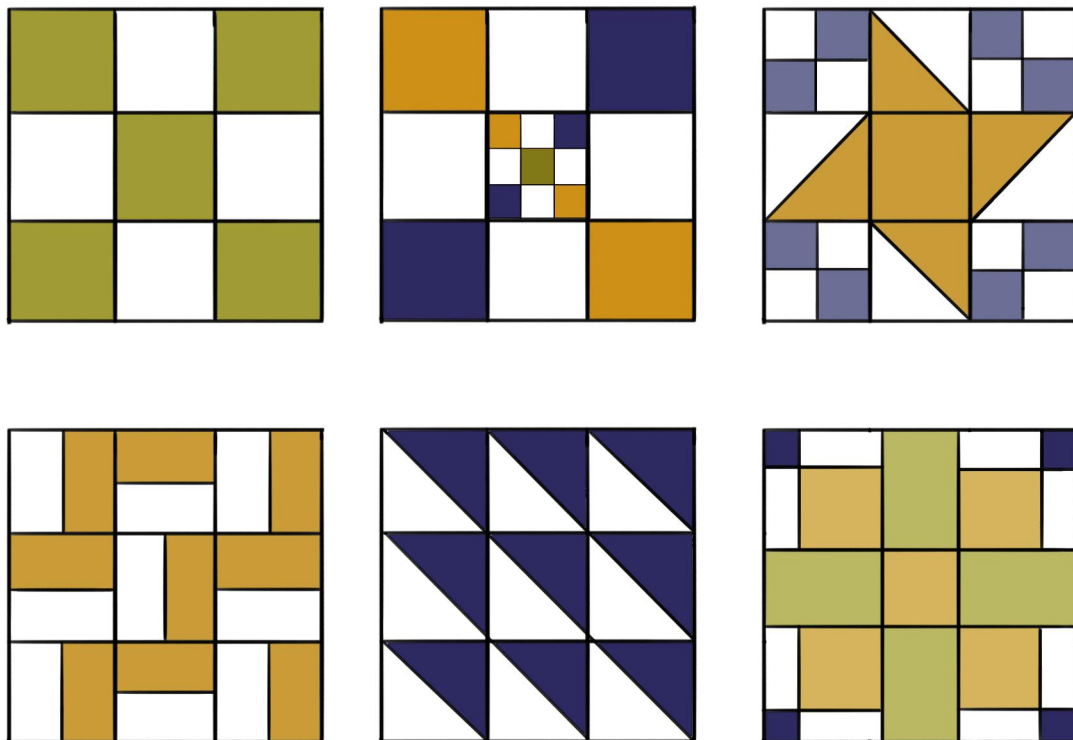
well loved but lacked the necessary space and accessibility. The addition takes inspiration from the AIDS quilt as the façade, which consists of brick, glass, and limestone. The sections of different material become “the architectural manifestation of the quilt” (Hariri Pontarini Architects 2018). Casey House does not have the concrete sashing around the façade’s ‘quilt blocks’ like the other two examples, which mimics the AIDS quilt, which also does not feature sashing.

Architecturally, pattern can also be used to refer to the patterns of inhabitation and patterns in construction, most notably as discussed in *A Pattern Language* by Christopher Alexander. Alexander argues that certain rules of thumb, called patterns, can be used to help shape spaces that humans find comfortable and enjoyable to inhabit. These patterns are based off observations about the types of spaces people seem to be drawn to. Selecting a set of patterns and following them is supposed to result in a space that is enjoyable to inhabit, according to Alexander (Alexander, Ishikawa, and Silverstein 1997). This follows the same concept as in textile patterns; following a series of

instructions ideally results in a known outcome, whether it is a comfortable neighbourhood or a quilt. The results from following the same pattern will always be a little different, even if done by the same person—every design or textile creation is new and unique. Architects and architectural practices may not follow Alexander’s patterns specifically, but their own patterns (or principles) are often clear in their work.

### ***Urban Blocks and Quilt Blocks***

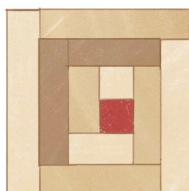
In quilting, ‘blocks’ are pieces of fabric, typically square, constructed out of smaller pieces of fabric in a pattern or motif. These blocks come in a wide range of sizes and patterns. Each block type has dozens of variations, each presenting



A small selection of different quilt blocks, all based on a nine-square. Each block would be constructed by first making each of the nine squares, then assembling the rows, then connecting the rows together. From right to left, top then bottom; nine block, nine-in-nine block, friendship star variation, fence rail, nine half-square triangles (usually combined with other half-square triangle blocks, where in each block the dark colour fabric is different, no sashing between the blocks), and a nine-square variation with no name that I developed.

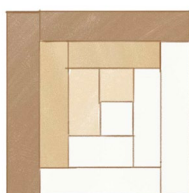
# ARCHITECTURAL QUILT BLOCKS

## LOG CABIN



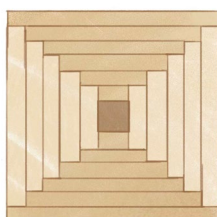
Log Cabin blocks have been popular since the mid-1800s. They were associated with the log cabins that many new immigrants and pioneers built in Canada and the US in the early to mid 1800s. The central square of the block was traditionally red to represent the hearth of the home. The block is constructed by adding pieces one at a time, starting with the red square, then adding the square above, then the rectangle to the left, and continuing until the block is the desired size. Sometimes a quilt incorporating this block would be gifted to someone to celebrate a new home. It remains a very popular block with many variations.

## BARN RAISING



This variation of the Log Cabin block became popular during the American Civil War. The block relies on the contrast between strips of fabric. These blocks can be arranged to create various shapes and effects, including zig-zags, chevrons, and spirals.

## COURTHOUSE STEPS



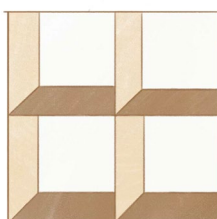
Another variation of the Log Cabin Block, this block also relies heavily on contrast. This block was also popular during the Civil War Era. Traditionally dark colours would be used for the top and bottom pieces and light colours for the side pieces.

## CATHEDRAL WINDOW



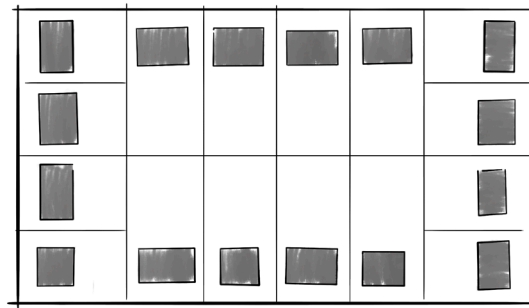
This block employs an unusual technique. The curved pieces of white are not cut as curves. Instead, four white squares are folded in half and placed with their points in the centre and folded edges towards the corners of the block. A slightly smaller coloured piece of fabric is then placed in the centre and the white edges are folded over and sewn into place. This block has existed since at least the 1900s, and was popular in the mid-1900s. Usually Cathedral Window quilts use this block exclusively, and often do not include batting as they are often used as decorative bedspreads. They are sometimes gifted to newlyweds, as the block can be seen as a reference to church windows, where many couples would have been married.

## ATTIC WINDOW

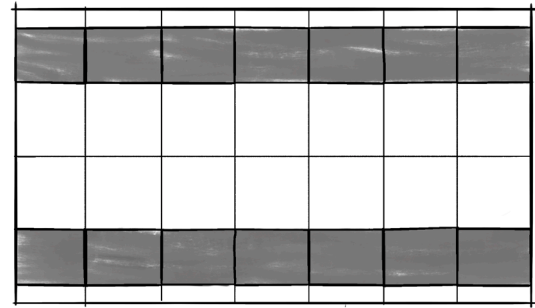


This quilt block is a type of four square block, meaning it is assembled from four smaller squares. These blocks are usually designed to be repeated multiple times in one piece. This block first appeared in the 1860s in different magazines under various names. The most popular name, Attic Windows, was established in 1973 in a book titled *The Pieced Quilt* by Jonathan Holstein. The 3D effect relies on contrast. In many quilts in the late 1800s, the squares are black or another dark colour instead of light. Several other blocks, including Cathedral Window, are sometimes referred to as Attic Window.

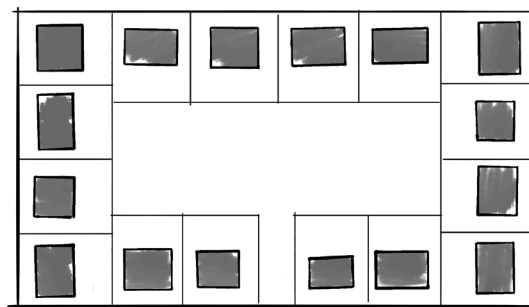
A selection of architecture-inspired quilt blocks.



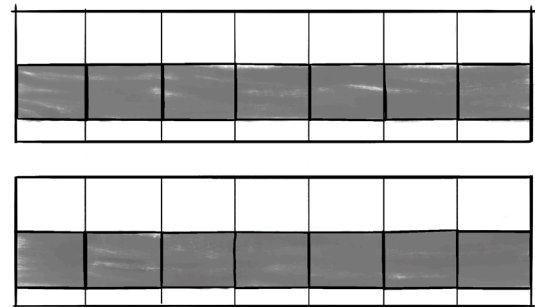
Perimeter Block



Row Block



Courtyard Block

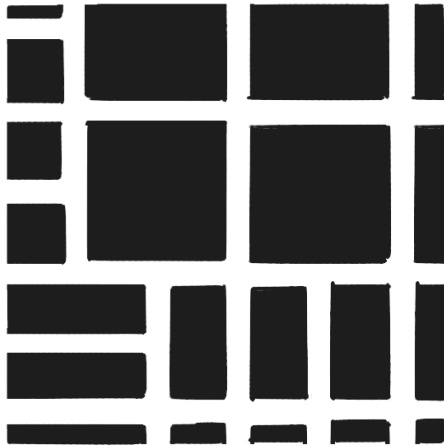


Ribbon Block

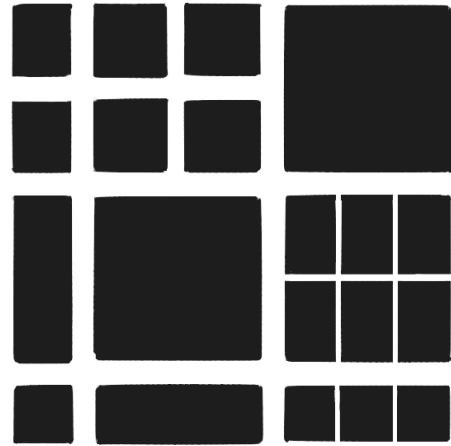
Some basic urban block types.

a new way to subtly change the basic arrangement within the block. Collections of blocks can then be sewn together, often with a strip of fabric between, called a sash or sashing, to create larger pieces such as quilt tops.

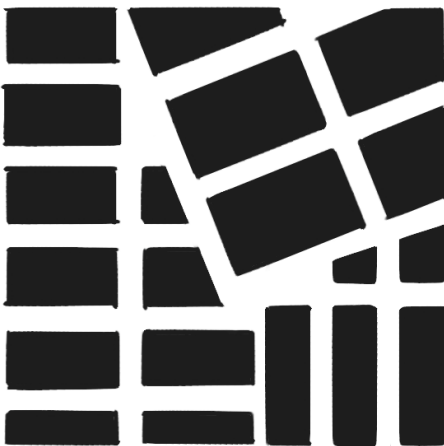
Urban blocks and quilt blocks share many similarities. The urban block comes in various shapes, though rectangles are common. The larger block is often divided into smaller sections. The placement of these internal divisions can lead to two blocks, with identical dimensions, being extremely different. Then within these divisions buildings are built at different times, with different shapes and heights and materials, leading to no two blocks being the same. These blocks are then spaced out by roads and expanded into the quilt-top of the city.



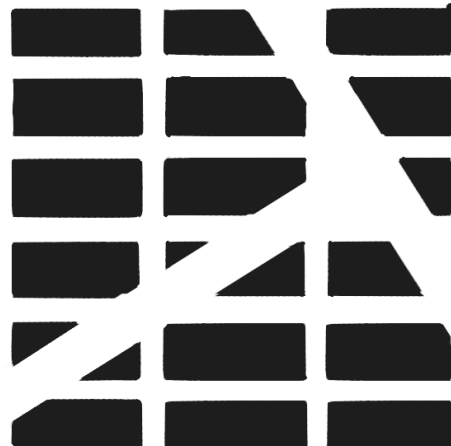
Accumulative



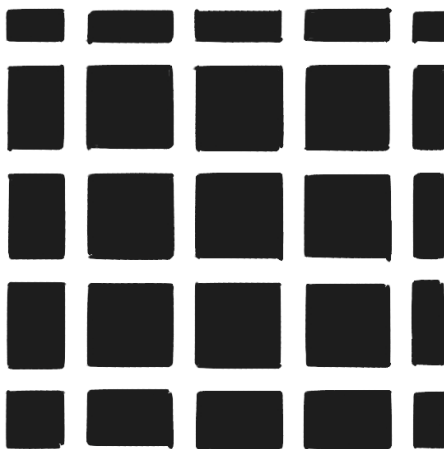
Scalar



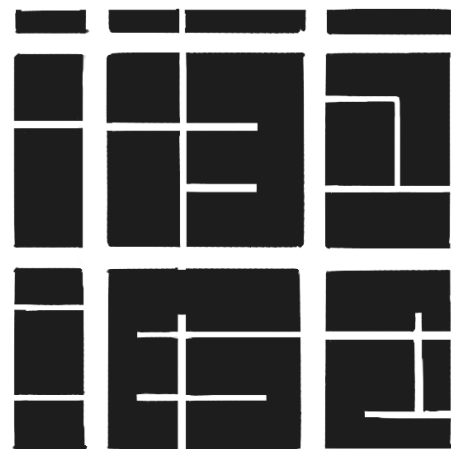
Discontinuous



Overlay



Infinite



Cellular

Six basic urban grid types found in planned grid cities.

Urban blocks come in various types, including courtyard, ribbon, point, row, and perimeter blocks. These blocks are then spread across cities, which have their own grid patterns, including accumulative, discontinuous, overlay, infinite, scalar, and cellular. While not all cities were built originally with grid systems, almost all cities now have some areas that are organized with a grid (Busquets, Dingliang, and Keller 2020).

### ***Reuse and Bricolage***

Reuse is an important element in many styles of quilting. Small scraps of fabric are usually saved, even by quilters who can afford more fabric. Patterns that make use of multiple small pieces are often referred to as ‘scrap busters.’ Reuse is an important concept in architecture as well, especially for those with an interest in environmentalism. One example of an architectural project that focuses on reuse as inspired by quilting is Patch House by ESEcolectivo Arquitectos in Quito, Ecuador. The client for the private residence is a quilter professionally, and reuse is an important part of both her work and her personal life (ESEcolectico Arquitectos 2016).



The quilting workshop in Patch House, featuring reused cabinetry. Photo by Lorena Darquea, 2016 (ESEcolectico Arquitectos 2016).

The house, which was completed in 2016, is on the site of a previous house that had to be demolished. Everything possible from the original house was recycled, including doors, windows, and cabinetry. “Everything was recycled as a patchwork design. Materials that would seemingly be considered useless or not worthy were made to work by means of different systems” (ESEcolectico Arquitectos 2016), such as putting multiple small windows together to create one large window. Visually the house does not reveal the patchwork and quilt influences, but the emphasis on reuse remains central, both to Patch House and to the work of many quilters.

In some quilts, often those meant to be decorative, bricolage is an important concept. Art quilters, especially, are often bold with choice of material, moving outside of typical textiles to use materials like paper and photographs. This can be seen in the AIDS quilt where many people have used whole items to create their quilt blocks. In architecture, bricolage is the effect of buildings from different periods and styles being close together – many quilts using scraps produce a similar effect by placing pieces of fabric of different colours, time periods, and types together.

Traditionally a lot of patchwork would use scraps of fabric and old clothing or bedding. In the 1930s in the US, during the Great Depression, flour and feed sacks were made of cotton. People in dire poverty would use this cotton once the bag was empty to make clothing, and over time feed and flour companies started purposefully printing their bags with patterns, often bright and floral, to encourage people to buy their product. The markings on the bags detailing the weight and type of product were designed to wash out while the floral pattern would stay. Today many sewers rely on

purpose-bought fabric for their quilts and clothing, in part because ‘fast fashion’ means more clothing is not 100% cotton, and when it is, it is of a much lower quality than even the cotton in 1930s flour sacks. Polyester and polyester blends do not age as well as cotton and cannot be ironed at the same temperature, meaning mixing purchased quilting fabric (high quality 100% cotton) with clothing scraps from home risks a quilt burning while ironing, or falling apart a few years down the road.

## Content

### *Gee’s Bend*

One particularly notable example of African American quilt-making comes from Gee’s Bend, Alabama. Gee’s Bend was originally a cotton plantation but is now home to about 700 people. Evidence suggests that the women of Gee’s Bend have been quilting for at least a hundred years, but likely have been active in the medium for much longer than that.



Three Gee’s Bend quilters—Ritamae Pettway, Lucy Mingo, and Revil Mosely—talk with quiltmaker and writer Joe Cunningham as they work on a quilt. They are connecting the layers of the quilt by hand using quilt stitches (Markley n. d.).



Gee's Bend is somewhat unique amongst neighbouring communities in that they benefited from a New Deal program in the 1930s that allowed the majority of residents to purchase their land and homes where previously they had been tenants. People were able to stay in Gee's Bend during economic downturns. This allowed the quilting traditions and stories to continue intact through the 1900s when many neighbouring communities were forced to disperse (Arnett 2006). Gee's Bend is very isolated – tucked into a bend of the Alabama River, the community is about 12 km from Camden, the largest city in the county. To get there, one must cross the river on the local ferry or take the long drive around to the nearest bridge. In 1965, Martin Luther King Jr visited Gee's Bend and many residents went with him to Camden to demand their right to vote. Many were arrested, and when they returned to Gee's Bend, they found the ferry had been closed until further notice. At the time, fewer than a dozen residents had a vehicle. The ferry was not reopened until the 1990s (Arnett 2006). This isolation and consistency created a tightly-knit community in which traditions like quilting were passed easily through generations.

Known for “a preference for high abstraction, the quilts of Gee's Bend look less like conventional quilt designs and more like a hybrid of quilt patterns and painting compositions” (Arnett 2006, 30). They received international recognition as a form of abstract, modern artwork in 2002 when they were featured first in the Museum of Fine Arts in Houston, and later in the Whitney Museum of American Art in New York City. These exhibits launched the quilts of Gee's Bend into the art world, and they have been displayed and admired all over the world. Compared to the work of modern artists like Rothko, Matisse, and Klee, the quilts are also heavily



Blues  
Loretta Pettway Bennett, 2007



Housetop Variation  
Louisiana P. Bendolph, 2003



Bars and String-Pieced Columns  
Jessie T. Pettway, 1950s



Housetop Fractured Medallion Variation  
Rita Mae Pettway, 1977



Work-Clothes Quilt with Center Medallion of Strips  
Annie Mae Young, 1976



Milky Way  
Nettie Young, 1971

Six Gee's Bend quilts from different quilters. Notice the use of bold colour and strong shapes (Souls Grown Deep n. d.).

inspired by architecture and the relationships between the makers (almost entirely women) and their homes. William Arnett, author of *Gee's Bend: The Architecture of the Quilt*, said of the quilts;

The patchwork quilts of Gee's Bend bear a close kinship with architecture. The people of Gee's Bend were not noteworthy builders in the conventional sense. In the first half of the twentieth century, they erected relatively few structures other than rustic log cabins and barns, virtually none of which exist today; and as sharecroppers and tenant farmers until the late 1930s, they have little incentive or formal right to build anything permanent. Yet, for the black women of Gee's Bend, who were disempowered by both race and gender within the legal system and social code of the Deep South, quilts served as a forceful vehicle of self-expression within the built environment. For these women, the quilt was the literal completion of physical architecture, insofar as the quilt enlivened and transformed the otherwise drab setting of the tenant home. In a greater metaphoric sense, quilts invested architectural space with the history, memories, and desires of the community and the individual maker. A quilt was unique—comparable only to religion and song—in its ability to link its makers to the wider ramifications of their lives. (Arnett 2006, 31)



Four fabric pieces from William Reue's Architecture School collection. From top to bottom, the fabrics are called Floor Plan - Plumb Line, The Suburbs - Winter Blues, Far & Away - Brushfire, and Far & Away - Bluegrass. Photo by the author.

In this way, for the women of Gee's Bend, quilts are architecture when conventional architecture and building has not been accessible. Quilts are the architecture you can take with you; you can give away; you can make with the little pieces of life that time leaves behind.

### **William Reue**

William Reue is an architect and fabric designer based in New York City. He went to the University of Texas at Austin and has taught at the University of Science and Technology in Zimbabwe and the University of Oklahoma. He has released two fabric collections; *Architecture School* and *Log Tavern Road*, and a third collection titled *Mosaic* will be released in July 2024. His first collection, *Architecture School*, takes inspiration from the sketches, landscapes, floor plans, and drawing instruments of architecture school. While all three

of his collections take inspiration from architecture, his architecture projects as shown on his website do not seem to draw inspiration from fabric or textiles (William Reue Architecture n. d.).

### ***Valerie S. Goodwin***

Valerie S. Goodwin is an architect and artist who grew up in Connecticut and now lives in Florida. She studied at Washington University in St. Louis and Yale University, and she taught architecture for over twenty years at Florida A&M University. In the late 1990s, Goodwin started experimenting with textiles as a form of architectural representation, creating complex architectural landscapes and maps in quilt form. Her work draws on both real and imagined landscapes. She brought some elements of her work into her teaching, explaining, “one constructs a quilt like one constructs an



Necropolis by Valerie S. Goodwin, 2008. 11" x 11.75" (Goodwin 2013).

architectural design” (Goodwin 2013). However, she, like William Reue, has used architecture as inspiration for textiles, not the other way around.

### **Quilts and the Underground Railroad**

I would like to take a moment to discuss quilts and the Underground Railroad, and why I will not be otherwise discussing them. In 1999, a book titled *Hidden in Plain View* was published, written by Jacqueline Tobin and Raymond Dobard. In this book the authors attested that “quilts using traditional patterns like Tumbling Blocks and Double Wedding Ring were used to communicate with escaping slaves from the South as they headed north to freedom” (Gillespie 2010). This theory became widely popular and has been taught in schools across North America. It has been directly referenced in many academic writings and exhibitions, including *The Secret Codes: African Nova Scotian Quilts*, a 2023-2024 exhibition on modern and historical quilts from Nova Scotia, which was displayed in the Dalhousie Art Gallery from May to August 2023. However, as popular and wildly taught as this story is, it is considered a myth by most quilt and textile historians. The evidence for this theory comes entirely from one source, Ozella McDaniel Williams, who told the authors her family’s oral history of the supposed quilts. There is no documentation or physical evidence for this story, and no additional oral histories (Gillespie 2010). This is perhaps disappointing but does not diminish the incredible work of African American and Canadian quilters outside of and unrelated to this false history.

## Chapter 4: Quilting Experiments

### Carolyn's Quilt

My grandmother, Carolyn Smedley, made this quilt and gifted it to me for Christmas in 2020. I had just moved back to Halifax for school and was struggling with the isolation. My parents were in Massachusetts, and COVID meant I was unable to go to them. I love Christmas, especially big Christmas family gatherings, and I was struggling to make Christmas feel festive. Since I had moved back to Halifax, my grandmother and I had been spending more and more time together, seeing each other at least once a week. This was the first time I had spent extended periods of time with her as an adult, and I felt like I could see very clearly the blossoming of our friendship as two adults. Opening that



A close-up of four blocks from the quilt my grandmother made.

package with my parents and siblings on my computer screen, I felt overwhelmed by the love and care Carolyn had put into creating this quilt for me. It would have taken days to assemble, and it instantly became one of my most treasured possessions.

The urban composition of some quilts is very clear here. The blocks are very reminiscent of urban blocks, and the sashing in between suggests circulation routes between blocks. The blocks themselves are varied — most of the squares of fabric are different, but each block contains two red squares. These red squares, along with the small red squares that are part of the sashing, comprise a secondary pattern throughout the quilt, bringing order to blocks



One of the blocks of the quilt. This quilt was intended to use up a bunch of scraps—the blue in the first row, third column I recognized from her guest room pillowcases. The green fabric with the white flowers in the fourth row is the same fabric she used to make masks in the spring of 2020. The turtle fabric in the third row, second column is the only square of that fabric in the whole quilt.

that are otherwise quite random. However, despite their randomness, my grandmother has taken care to ensure that no two matching squares of fabric touch each other. Squares of the same fabric are spread out across the quilt and not accidentally bunched up. Squares of unique or limited fabric are similarly spread out — squares of one-of-a-kind fabric are scattered, instead of clustered into one or two blocks where their uniqueness might draw attention. Many quilt patterns are available online, both for sale and for free. This pattern was developed by Carolyn, as are most of her quilt patterns.

### **Woven Basket**

This woven basket was made by me in March 2024. The strips are made using fabric and interfacing and are woven together to make a small basket. The strips themselves are quilted as the stitches go through several pieces of fabric and interfacing from the top to the bottom later. The base of the basket is square, but the nature of fabric means the top of the basket is more circular. If I wanted the basket to be



The woven basket.



more square, I could add some stitches in the corners to try to keep the sides from bowing out as much, but I prefer the softness of the basket as it is. Initially I wanted to experiment with weaving fabric and practice cutting long, straight strips of fabric and interfacing. I now use the little basket to hold sewing clips of various sizes. When there's a specific size I know I'm about to use, I will fish out the ones I want and clip them around the edge to save myself time digging around later. In this way, this little basket becomes a part of future making.

### **Fabric House**

This house is a modified version of a little house that I made for my cat. To make this experiment more architectural, I used neutral colours and scaled down the pattern with the intention of getting away from something that looked obviously like pet furniture. This experiment did not turn out quite like I had hoped — despite being smaller, it still looks very pet-furniture-like, and making it even smaller is beyond my current sewing skills. However, the foam batting, called



The fabric house.

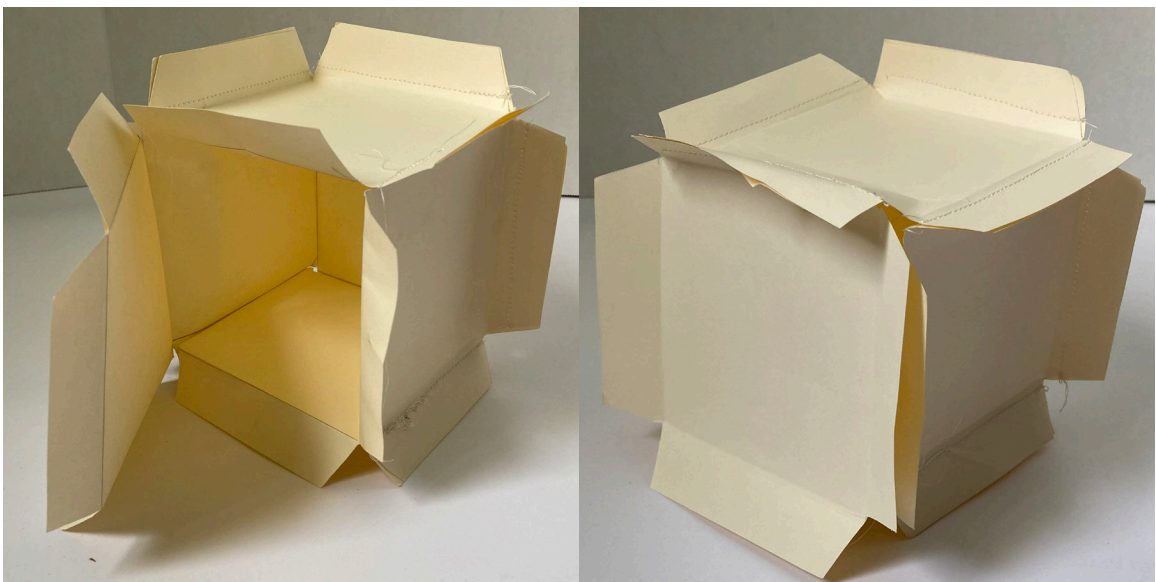
Flex-Foam, keeps it standing upright, and the different textures of fabric adds variation without having to use bold colours.

### **Workshop Quilt**

I made this quilt at a workshop hosted by Patch, a local independent fabric store in Halifax. This quilt used pre-cut fabric that comes in a set called a Jelly Roll. Quilt patterns specifically designed for pre-cut fabric sets such as Jelly Rolls are very common. They allow people who may be new to quilting, or may not have a large collection of leftovers and scraps, an easy entry into quilting. I have included a similar pattern in Appendix C: Jelly Roll Quilt Pattern.

### **Paper Cube**

I also experimented with sewing paper instead of fabric. In some ways paper is easier to use since it does not need to be ironed. I wanted to see if I could sew a paper cube. This was a more difficult goal due to one of fabric's great qualities that paper lacks—flexibility and the ability to fold and unfold



The paper cube, slightly mangled from trying to finish it.



Workshop Quilt. A similar pattern can be found in Appendix C: Jelly Roll Quilt Pattern.



The fabric cube and brick, much easier than the paper cube.

without issue. I immediately realized that without this quality there would be no way to create a sewn paper cube with the seams on the interior because I would be unable to turn the cube inside out. The dimensions of the sewing machine's arm and bed presented an obstacle as well. Fabric can be pushed and pulled around—with the paper cube, there was a limit to how far I could push it under the arm before it would start to crease. It might be possible to create a paper cube on a sewing machine, but I think the size of the cube in relation to the paper seam allowances would render the cube not particularly recognizable as a cube.

### **Fabric Cube and Brick**

After the failed paper cube experiment, I wanted to demonstrate the same ideal with fabric, taking advantage of the qualities of fabric that paper lacks. The fabric construction allowed the cube and brick to be turned inside out to hide the seams and properly completed. Like the woven basket, the sides bow out a little due to the flexibility of fabric.



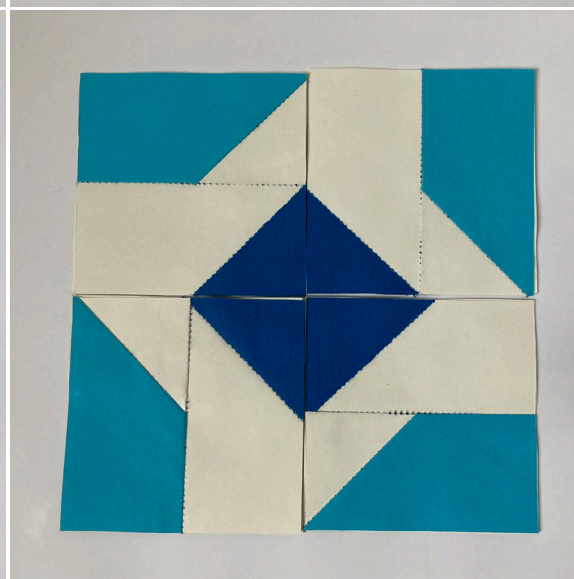
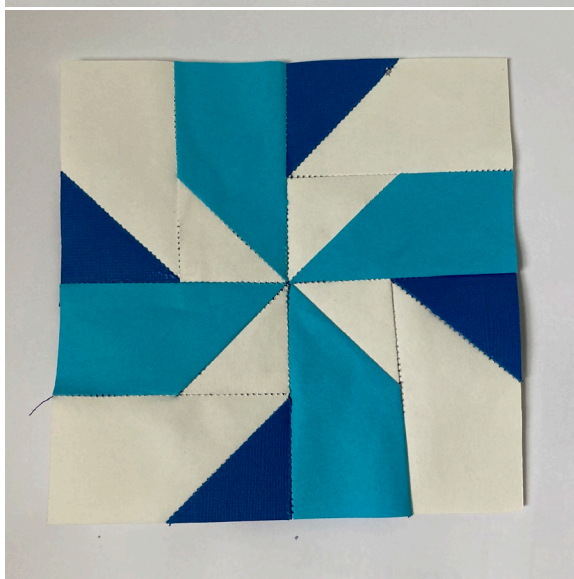
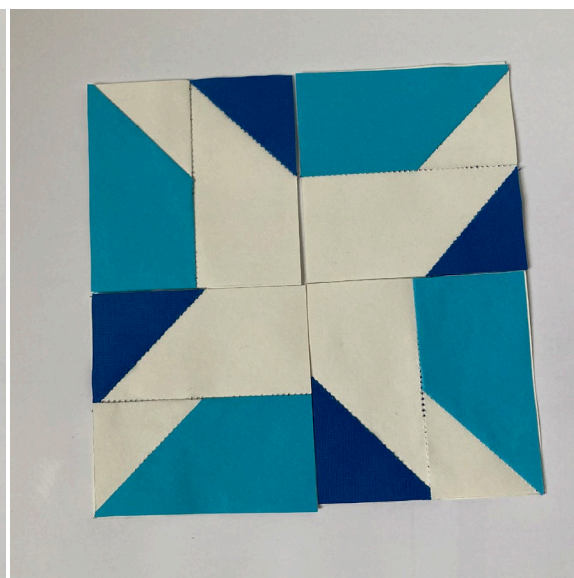
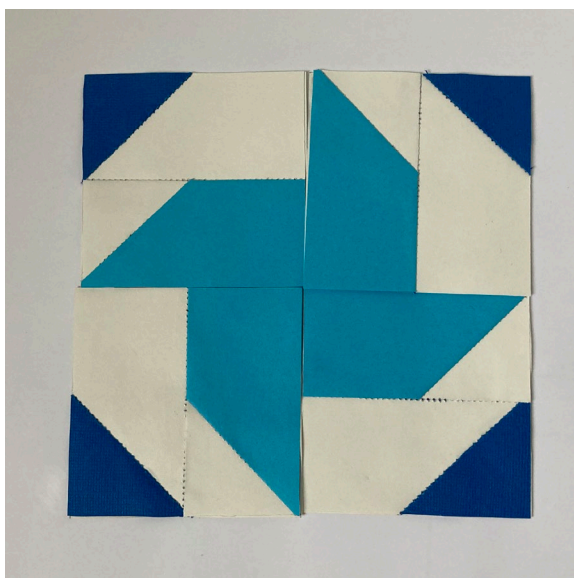
Workshop quilt block

## Workshop Quilt Block

I made this quilt block on March 2nd 2024 at a workshop hosted by Patch. It is what inspired a deeper exploration of fabric and its architectural value, and is the first patchwork project I've ever done. The seams on the back are a little untidy but overall, it is constructed well. The yellow fabric was a gift from my friend Liam MacIntosh. This block is so far unfinished—I have not decided, but I think I might make it into a throw pillow cover.

## Paper Quilt Blocks

These paper quilt blocks were made following patterns that were designed with the idea that the four pieces could be rotated to create multiple different patterns. I used paper because, while it is not flexible like fabric, for the purposes of these flat quilt blocks, I prioritized the speed of paper



Paper quilt blocks. The top four are all made of the same set of four squares, just rotated to make different blocks.

paper construction. For example, I did not have to iron the paper between each piece, I just folded the paper along the sewn lines to try to keep the back tidy. A disadvantage with the paper is that it is thicker than fabric, which limits the number of seams I could have meeting in one spot. Paper also dulls the sewing needle faster than fabric.

### **Container With Two Compartments**

In some ways this is a continuation of the woven basket, and of the fabric cube and brick. I wanted to create something with multiple spaces or 'rooms' within one exterior. The sides and bottom are stiffened with interfacing, which keeps the container from sagging. Like the cube and the woven basket, the flexibility of the fabric means that it is not quite square, even with stiffened sides. Up until this point it has been used to hold other objects I have made or collected for this thesis—going forward I will use it to hold cut pieces of fabric to keep them organized before piecing. The two



Container with two compartments.



Foundation with walls.

compartments will be useful for keeping different colours or sizes separate.

### **Foundation With Walls**

This is very reminiscent of a pet bed, but it was created while thinking about walls around a foundation. The fabric was sew together into one big piece with one opening, like a pillowcase, and then pulled over the internal foam structure before the opening was closed by hand. Its straight sides and sharp corners are made possible because of the stiffness of the interior foam structure and the use of interfacing with the fabric to help keep it flat.

### **City of Halifax Map**

I made this 1:1000 scale map of Halifax following many of the techniques that architect and art quilter Valerie S. Goodwin discussed in her book *Art Quilt Maps: Capture a Sense of Place with Fiber Collage – A Visual Guide*. Her book included a walkthrough of her methodology and had



many tips for working with fabric. She included suggestions for different types of fabric that she has found perform well in this context, fabrics to avoid, different ways to connect the fabric, how to incorporate fabric paint, and how to avoid burning or melting when using an iron). With the foundation of her expertise, I was able to make this quilt over several weeks.

Step 1. Print off a 1:1000 map of Halifax.

Step 2. Cut a piece of Flex-Foam slightly larger than the map of Halifax.

Step 3. Make the Water. To do this, I layered pieces of blue and white fabric, mostly blue. I used primarily 100% cotton quilting fabric, but I also used some denim scraps, and some drapery fabric scraps. Each piece I sewed to the foam using my sewing machine or hand sewing with embroidery thread. When I was finished sewing, I took a net-like fabric, cut a piece, and wrapped it around a piece of cardboard to use as a stamp. I stamped a mix of dark blue and green fabric paint



Peninsula map, close up. The wooden button marks the project site.

randomly. I allowed this to dry and then added more hand stitches where fabric edges were loose. This took about two days.

Step 4. Cut out a piece of interfacing a slightly larger than the Flex-Foam piece from Step 2. I used a lightweight interfacing that was thin enough I could see black ink through it.

Step 5. Trace the 1:1000 map onto the interfacing. I used different colours for streets, the coastline, and the train tracks. I also marked parks and other green spaces.

Step 6. Visually build up the land similarly to how the water was built up in layers of fabric. I used several different colours and textures of fabric, cut to random, organic shapes. I then layered these on, sewing them to the interfacing using my sewing machine and hand sewing, blending the different fabrics together. I did not follow the real contour lines of the peninsula due to scale. I added some small areas of watered down yellow-white fabric paint. The assemblage of the land, like the water, took about two days.

Step 7. Add the streets and railways. Using hand embroidery and I sewed the streets in yellow-gold, and the railways in a slightly thicker dark brown thread. I worked on these mostly in the evenings, two or three hours every night, for weeks. I followed the traced streets on the interfacing as carefully as possible

Step 8. Add the parks and green spaces. This was done by taking a piece of interfacing and ironing it to the wrong side of some green fabric. The interfacing added stability and made appliquéing easier. I then cut out pieces of fabric to the shape and size I wanted and hand-appliquéd them into place. This took about a week of evenings.

Step 9. Hand-sew along the coastline using small stitches. This was to hold the fabric in place once the peninsula was cut out.

Step 10. Cut out the peninsula. I used a small, very sharp pair of fabric scissors designed for small, precisely cutting to along the water edge.

Step 11. Baste the land into place on top of the foam water with pins. I used my sewing machine to sew all the way around the edges of the land, ovetop of the hand stitches I had made earlier to hold the land fabric to the interfacing. This kept everything firmly in place.

Step 12. Add hand stitching throughout the land, removing the basting pins as you do. At this point I also cut off any extra Flex-Foam.



Peninsula map, close up.

Step 13. Add the bridges in the same colour as the streets, and add George's Island.

Step 14. Add the backing. I cut a large piece of plain grey cotton to act as the backing. The Flex-Foam comes with a coating of adhesive on both sides that sticks to fabric with the application of heat and steam. I was able to iron the grey fabric onto the back of the foam, starting from the middle and moving outward to avoid wrinkles. The adhesive held this fabric in place.

Step 15. Add the binding. I purposefully cut the grey backing fabric much larger than needed so I could use the same piece of fabric as both the backing and the binding—a technique called 'self-binding.' Once the fabric was ironed onto the back, I laid it flat and cut it so there was about one inch of overhang all the way around the Flex-Foam. I carefully folded this overhang in half, and then folded it over the Flex-Foam. This double-fold ensures there is not a raw edge exposed in the finished piece. Using a sewing machine, I sewed around the interior edge of the binding, sewing it down through the top, the flex-foam, and the backing.

Step 16. Finishing touches. Now is a good time to go through and cut off any stray threads and add any details you might have missed, such as a forgotten pond or edge of a park. This is also when I sewed on the button marking my project site. I then gave it a final iron and a light spray of a product meant to prevent unraveling so it would be more durable when moved and handled.



The peninsula map as it was hung for my defense. The map itself is approximately 32" x 17".

## Site Plan

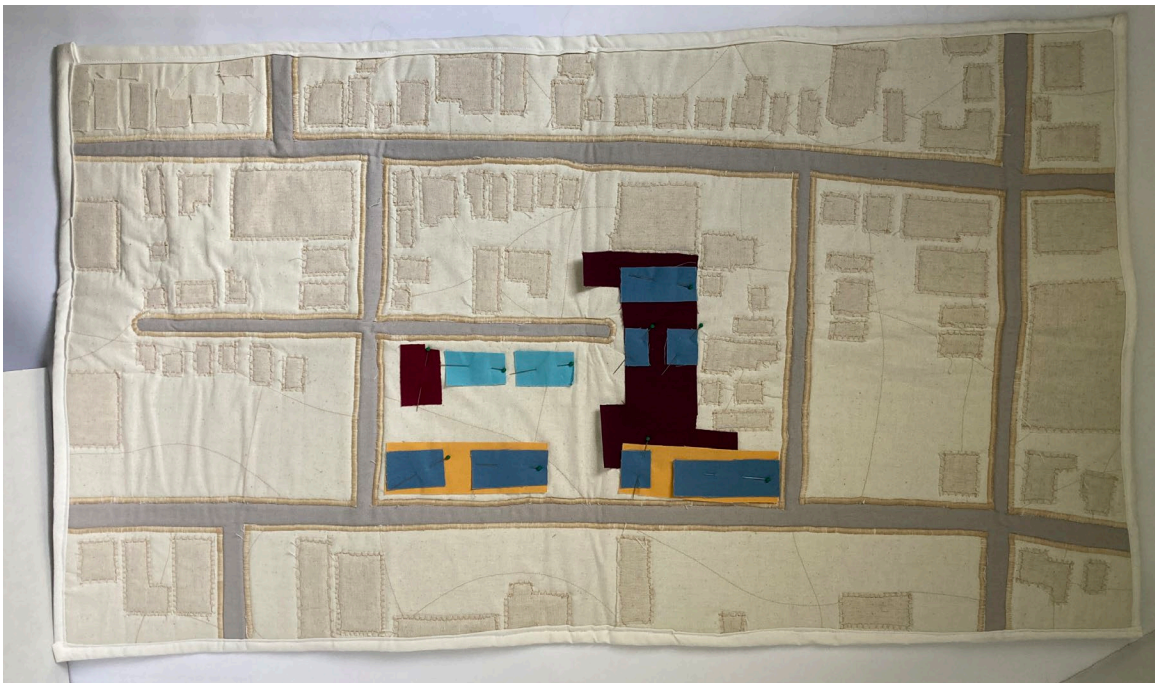
This is a 1:500 plan of my site on Robie, McCully, and May Street. This was made in a similar way to my map of Halifax, but simplified.

Step 1. Print out a 1:500 map of Halifax.

Step 2. Cut out a piece of Flex-Foam to the desired size.

Step 3. Cover the Flex-Foam in a piece of grey fabric by ironing it into place, starting from the center and working outwards. This grey will make the streets.

Step 4. Make the areas that are not street. I took large pieces of interfacing and ironed them onto the fabric I wanted to use as the lan. I then cut out rectangles and appliquéd them onto the foundation using my sewing machine. I had not appliquéd using my sewing machine on that setting before—it worked well to keep the fabric in place, but it did use an enormous amount of thread. This solid strip of stitching



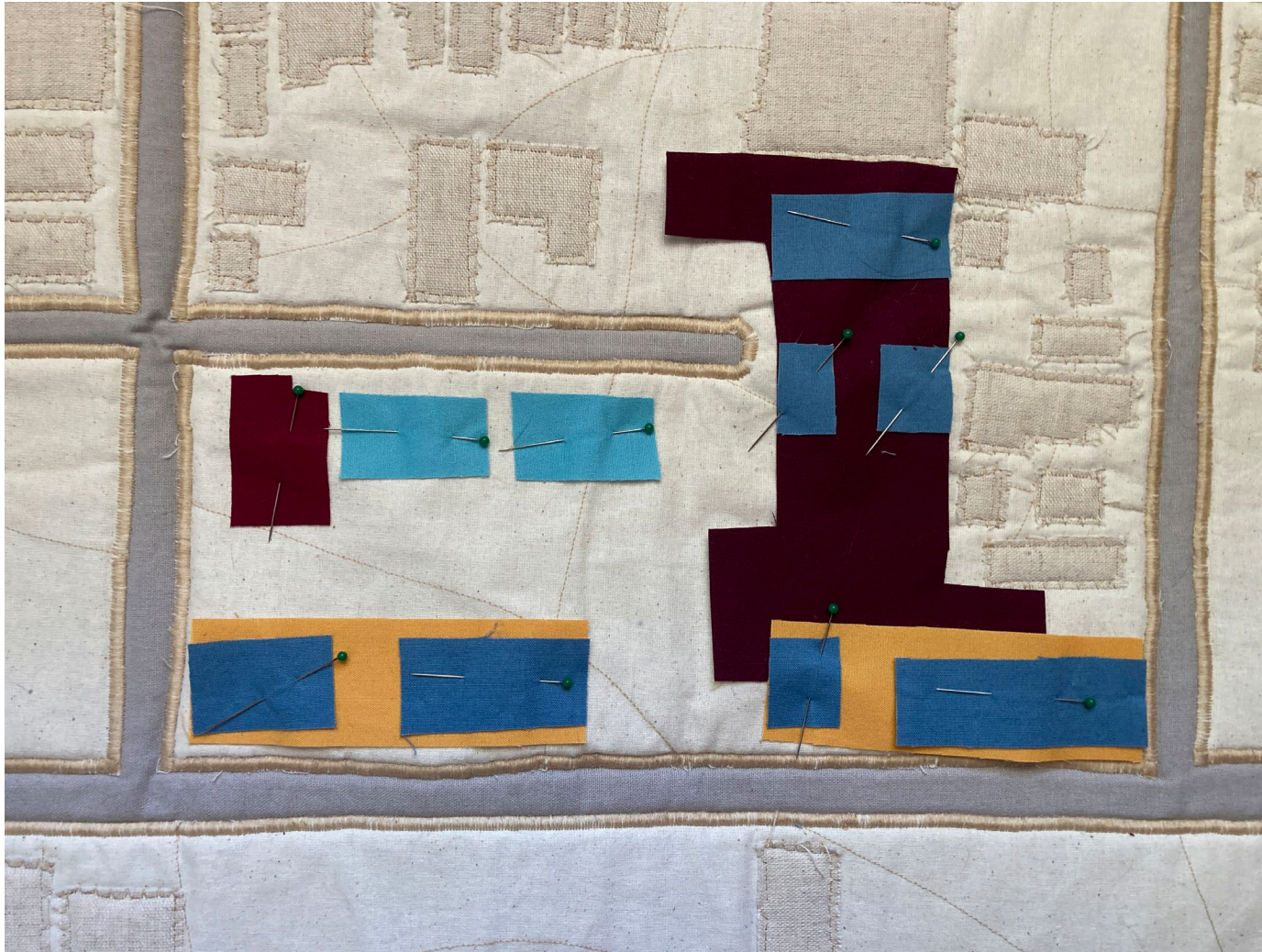
Site map.

worked as a perfect representation of the sidewalks. I also used loose, abstract stitches through the fabric to reinforce its attachment to the interfacing.

Step 5. Make the buildings. To do this I put interfacing over my 1:500 map and traced the building shapes. I then cut out the shapes and ironed them onto the fabric I chose for the buildings. I then cut the buildings out and appliquéd them into place using a different stitch type to differentiate the buildings from the land pieces. Machine appliquing the buildings was tricky because it involved a lot of short areas of stitches followed by 90 degree turns. The best way to turn a piece you are working without removing it from the machine is to leave the needle down and lift the presser foot. You can then pivot the fabric you're working on around the needle. However, this does run the risk of pulling on the needle and potentially bending or breaking it. I broke or bent two needles during this thesis.

Step 6. Cut out fabric in the colours you want your site buildings to be. I made these pieces of fabric larger than I wanted the finished pieces to be. I then ironed them onto interfacing and cut them to size.

Step 7. Pin the buildings in place and iron everything to keep it smooth. I used metal pins with glass tips because it allows me to iron directly over them. Plastic-tipped pins will melt. I also added a light mist of the anti-unraveling product I used on the Halifax Map to give it some extra protection.



Close-up of the site. The darkest red represents the original building, reused as amenity space for residents, most importantly workshop space and gallery space. The lighter red space to the left is an existing building as well, reused as a daycare. The lighter blue pieces represent single-family homes, and the darker blue are apartments above the yellow commercial space.



## **Chapter 5: Mending the Urban Fabric**

### **Bringing Quilting to Architecture**

Now that I had a foundation in quilting history and quilting technical skills, I could begin to bring quilting into architecture. I wanted to do this in two main ways—programmatically and design-wise.

### **Site**

The site I selected is the current home of a Honda dealership. The site has street frontage primarily on Robie Street, which includes a bus stop, and it has frontage on May Street and McCully Street. It also faces Fern Lane, which is a small dead-end street. I chose this site for a number of reasons. First, the general make-up of the area is very mixed-use—there is a wide variety of single detached homes, small apartment buildings, mixed-use buildings with commercial on the ground floor, and some community spaces such as the Centre for Islamic Development on the corner of Robie and St Albans. Agricola Street especially is full of shops, restaurants, and different residential buildings. But a large section of Robie is just parking and car dealerships. The Honda dealership has expanded in recent years and bought small houses that they then demolished to increase the size of the parking lot. In the midst of a housing and cost-of-living crisis, having prime peninsula real estate be relegated to car storage is not the best use of the space. The location is perfect for a new mixed-use housing project.



A diagram of the site showing the context of the area.

## Program

The programs of the buildings were selected to better reflect the mixed-use program of the area, and to better utilize the large site which is currently being used as a car lot. The current buildings will remain and be reused, as so much of quilting is about reuse. The project has been conceptualized as a co-housing or artists housing project.

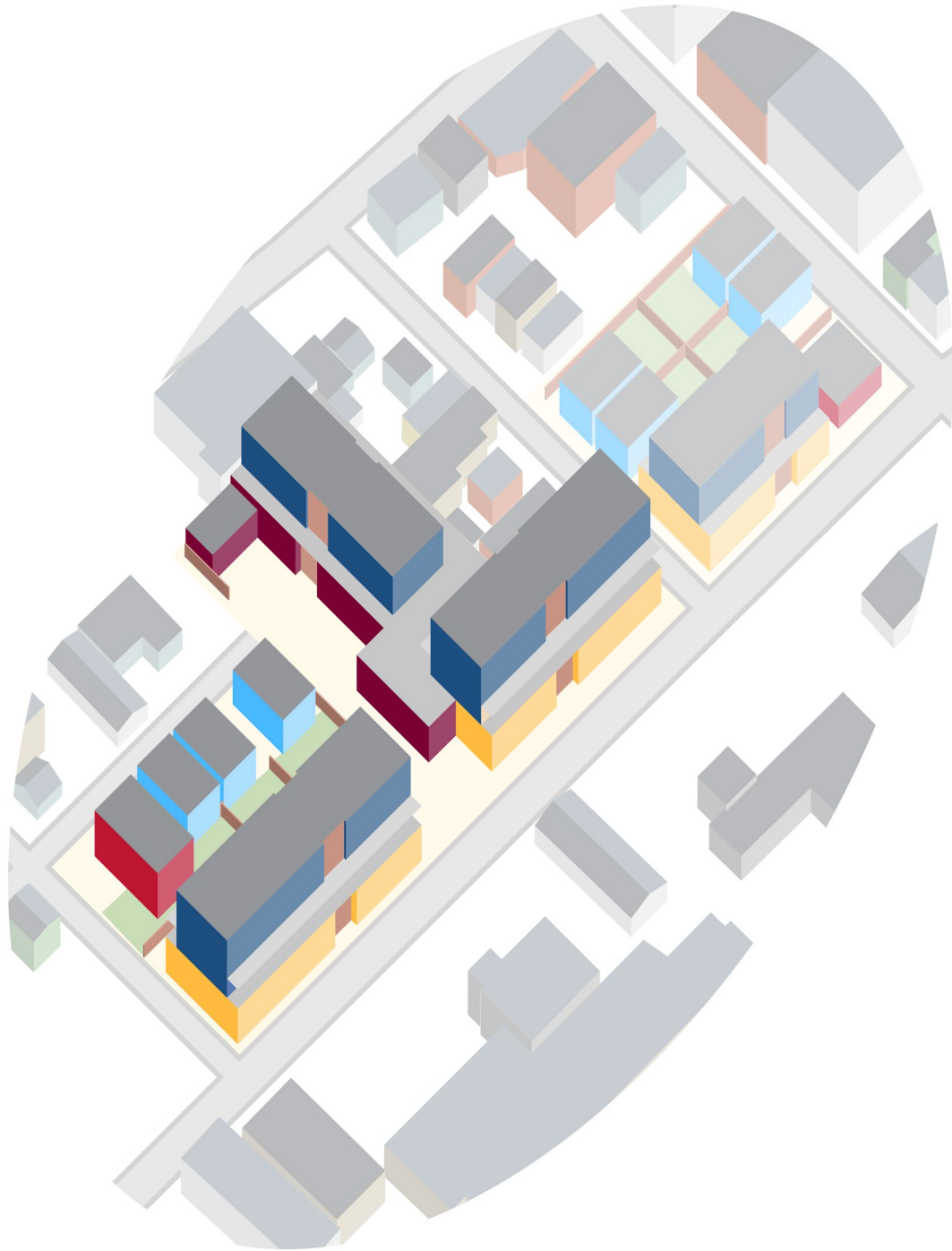
The smaller of the two existing buildings will become a daycare. This location is ideal in that it is off the main road, Robie Street, but very close to the bus stop, and it has space for pick-up and drop-off parking. I felt it was important to include a daycare because, for most of the history of quilting, it has been considered women's work. Women still do the majority of childcare, though there have been efforts to make this more equal. Women often spend more time in transit because they are taking children to daycare or school before going to work, and then picking them up on the way home. Having a daycare close by cuts down that commute and gives those women more time to pursue creative pursuits, such as quilting.

Along Fern Lane there are single family detached houses. Fern Lane is the most private of the street fronts, and has several existing single family detached houses. These provide housing for families who need a larger space or prefer more privacy. Their location in relation to the daycare is perfect for larger families who might be utilizing the daycare regularly over many years. There are five of these houses.

Along Robie street there is new commercial space. Robie is a busy street, and the high foot-traffic and bus stop create a ideal environment for commercial spaces. The commercial



A diagram of the site programming.



A massing diagram.

spaces are divided into two sections—the section near the bus stop that is completely new, and the section that is attached to the existing building. The dimensions of the commercial areas vary to facilitate different types and sizes of businesses, and the section connected to the existing building is two stories. The entirely new section has a laneway space behind it to allow for large deliveries. This means the commercial spaces in the entirely new section are better suited to businesses like restaurants and corner stores, which would be getting regular, large deliveries, and where having a second story is likely not preferred. The commercial spaces connected to the existing building which have two stories, but no dedicated loading area, are likely more suited to office space and stores that sell things like stationary or books, who would require less frequent and smaller deliveries. These spaces would also be ideal for a store offering workshops because they would have access to the classroom space that is part of the existing building's amenity spaces.

The large existing building has many different uses. It includes multiple workshop spaces to facilitate creation and collaboration. Having multiple workshops of different sizes is preferable over one large workshop due to different materials having different needs and noise levels (you wouldn't want a woodshop and a painting studio sharing the same space, for example, because you don't want sawdust in your paint). Sharing a workshop allows for better access to resources and for people to learn from each other and work together in an informal way. Sharing resources can be especially useful for things like carpentry or woodworking where some tools might be prohibitively expensive or large for an individual to purchase, but very reasonable as a purchase for a group.



Site plan.

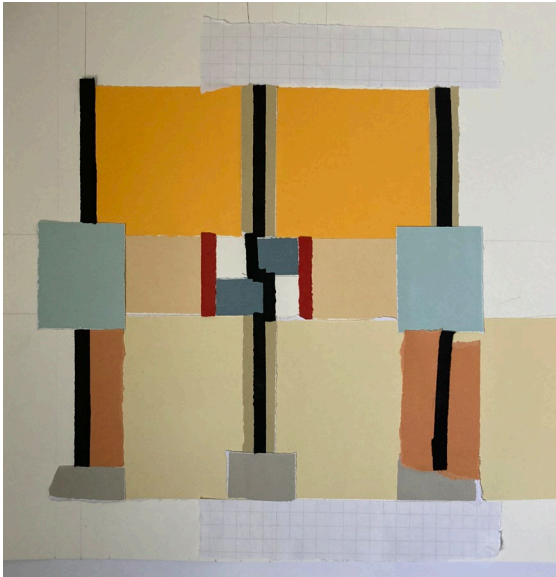
There are also classroom spaces so residents can learn from each other in a more formal setting.

### **Patchwork Residential Units**

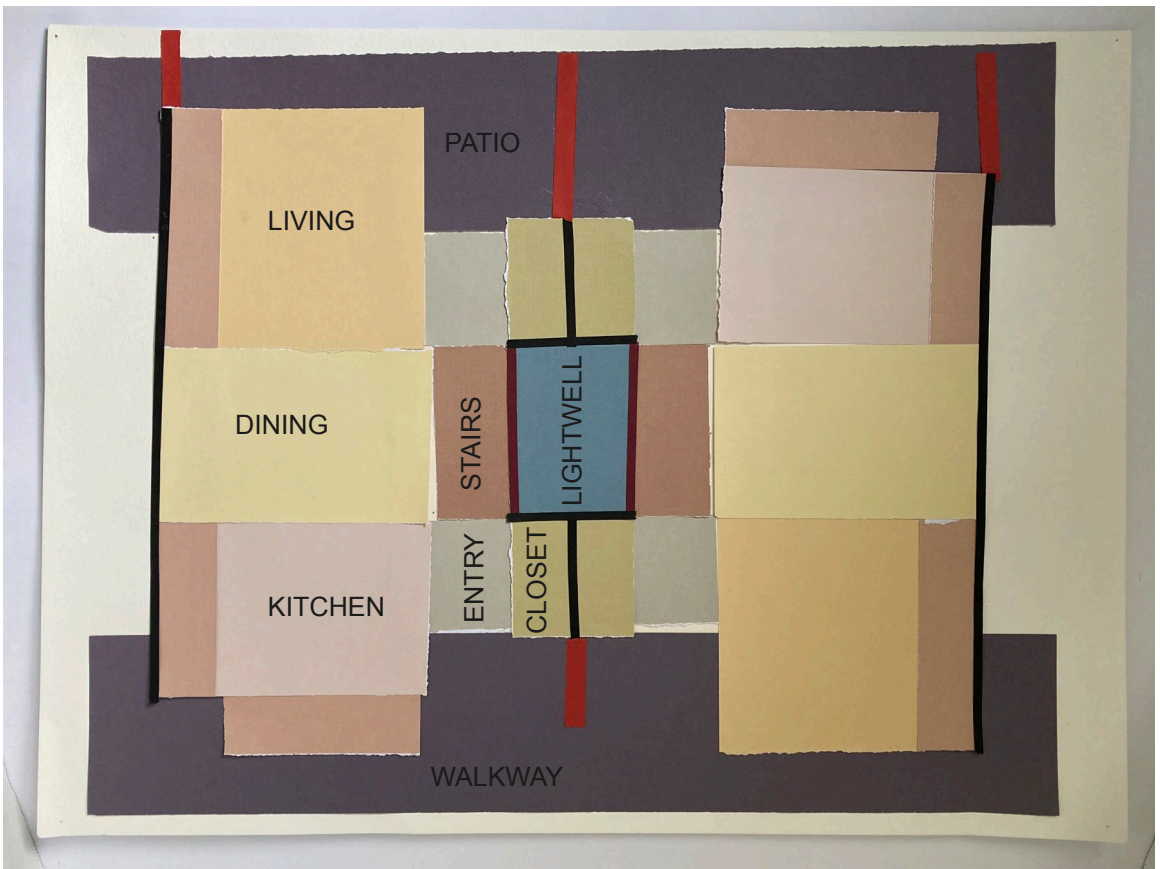
There are additional residential units above the commercial and amenity spaces. There are a total of twenty one units, each two stories with two bedrooms and two bathrooms.

These units were developed using pieces of paper like a quilter would use pieces of fabric. These pieces of paper represented areas instead of the more common technique of using lines to outline spaces. My intention was to create unit 'blocks' that could be rotated or mirrored to create a more interesting façade. I used large outdoor walkways as sashing around these residential blocks. On the side of the building facing Robie Street, the walkway is open and works as a sidewalk for the units. The sashing facing the more private interior of the site is divided into private patios for each unit. I tried several different residential block ideas before settling on one that was simple and clear, as the strongest quilt block patterns often are. I chose on a block that focused on a lightwell to help bring light to the interior of the units, and to the commercial and amenity spaces below. The main floor of each residential unit has a typical living room, dining room, and kitchen layout, but the block is designed to rotate. This means that the front room of each unit, either kitchen or living room, can swap, creating a more variable façade. The residential blocks themselves are designed with the idea of layers and borders in mind—along the exterior wall, across from the lightwell and stairwell, there is a large piece of cabinetry going through all three living spaces, acting as a strip or solid unit within the block. The entryways, stairs,

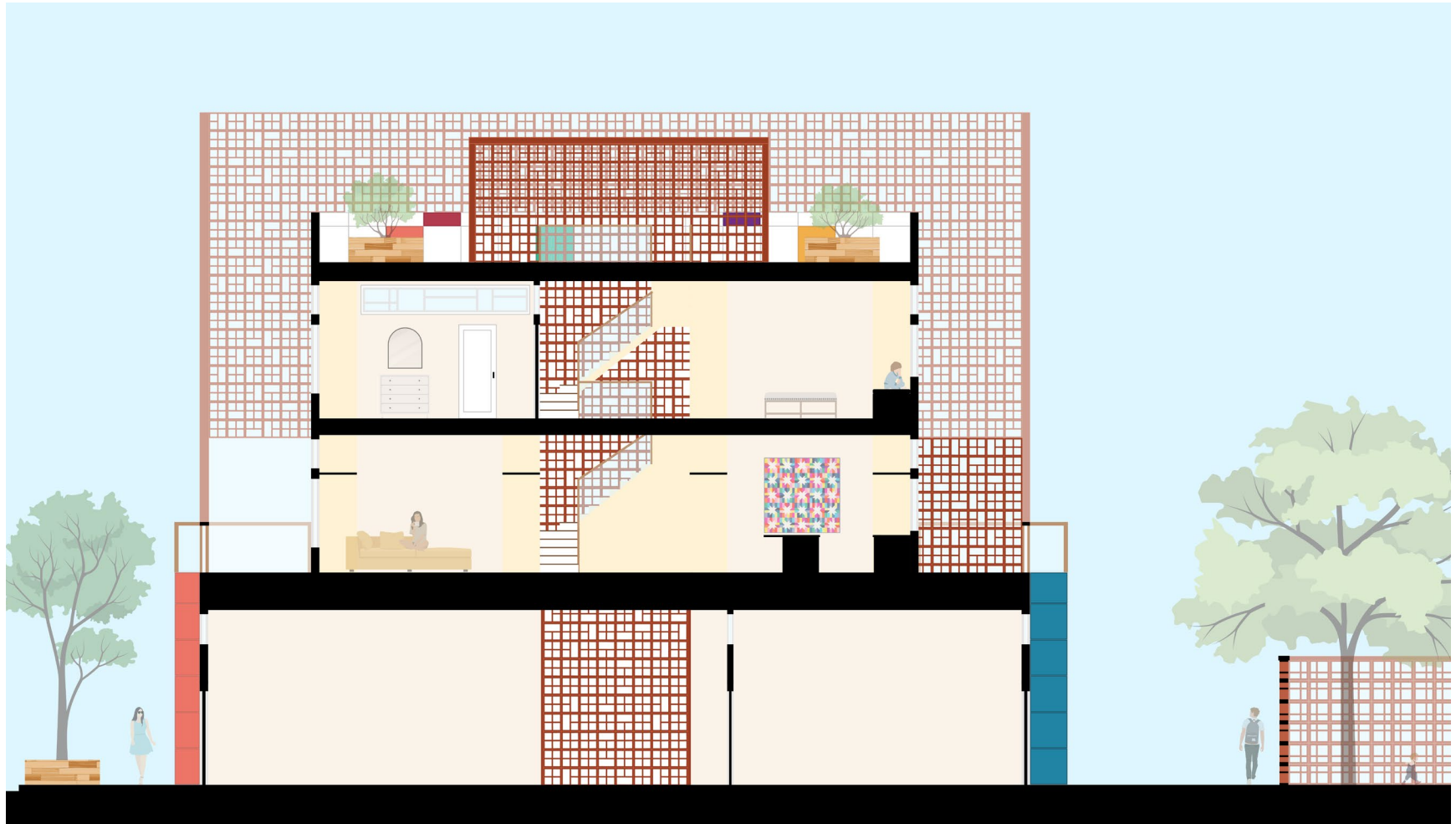




Early residential unit block experiments.



Final residential unit block.



Elevation B.

Right: Second floor of residential units.

Below: Main floor of residential units.



lightwell, and closets create a similar section on the other side, framing the living spaces in between.

Upstairs there are two bedrooms and two bathrooms and a small office space. The larger of the two bedrooms has a private bathroom, and the office space has a small window seat. From this floor there is access to the flat roof, which provides additional outdoor space for each unit, perfect for raised-bed gardening.

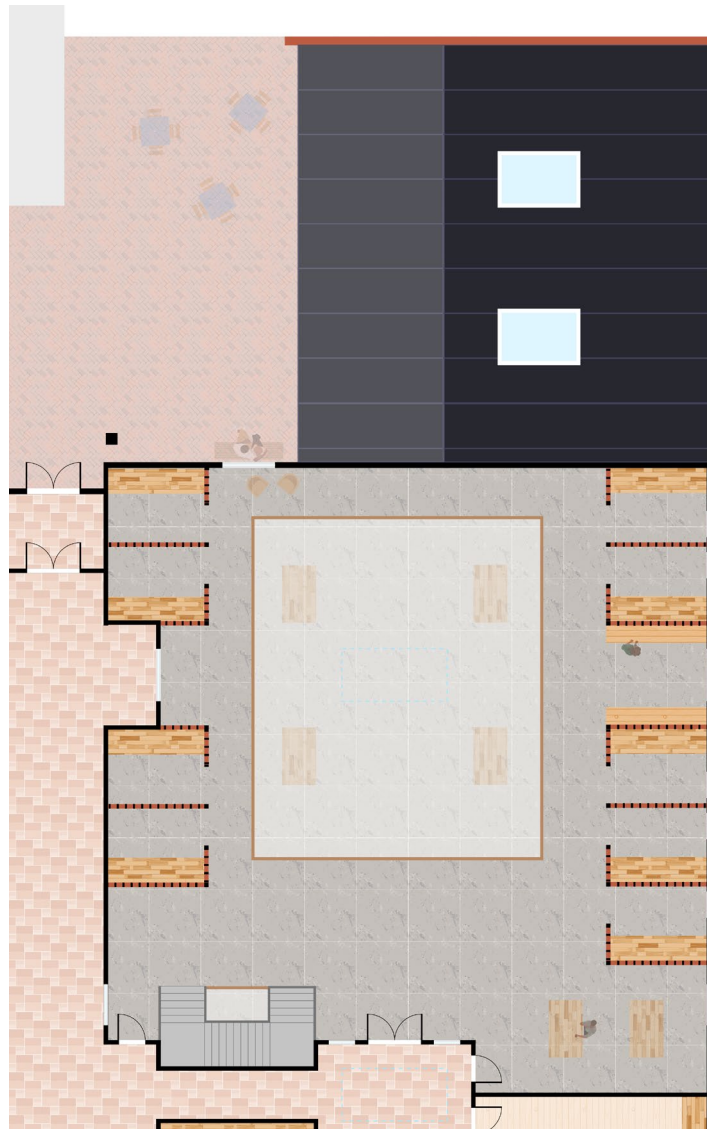
## **Workshop Spaces**

Quilting is traditionally a very social activity, and girls would, in previous centuries, learn to quilt from their mothers, grandmothers, and aunts. Today many people of all genders who learn how to sew and quilt learn it independently from family members, who may not know, themselves. Having a space where people can learn together is incredibly important. Having space to baste and quilt large projects is also helpful. Because of the social and celebrational history of quilting bees, having the kitchen right next to the quilt workshop is essential—no celebration is complete without food. The workshop features both a large central space for working together, and individual spaces for quilters to work on their projects alone.

There is a small kitchenette in the corner for quick snacks and drinks, and there are areas for storing shared materials. It is very common for quilters to acquire fabric from friends and family that they do not intend to use, or to buy fabric for a project they are no longer interested in completing. Many quilters end up with lots of scraps that are too big to throw away, but small enough to be difficult to use. It is also common to need just a little bit more of something to finish a project, and many quilters love the challenge of using up



Workshop first floor plan. Each private workspace has space for a sewing machine, self-healing cutting mat, an ironing board, and storage. There is also space to lay out smaller projects. There are larger cutting areas and layout spaces in the main workshop, and a dedicated storage space for fabric and other materials to be shared.



Workshop second floor plan.

scraps. Having a space to share and exchange material is perfect for this. This is also the perfect place to store extra thread, needles, and other notions—nothing is worse than breaking a needle mid-project and realizing all the fabric stores are closed. There are also some specialty items, like different kinds of presser feet, which can easily be shared.

There are two nearby classrooms and one room dedicated to two longarm sewing machines. Longarm quilting machines are a specialty piece of equipment that are used in machine



Workshop and Residential Units Section A.



Workshop detail: A group of five people work together to baste a quilt in the shared workshop while someone else works at a sewing machine in their own work space.

quilting. On a regular domestic sewing machine, because of the space between the arm and the body, it is difficult to machine quilt something larger than a twin sized quilt. Many people either rent time on a longarm machine, hire someone to do the quilting with a longarm machine, or hand quilt anything larger than their domestic machine can handle. Some quilters find that having someone else finish the quilt with a longarm machine makes them feel disconnected with the quilt. Longarm machines are extremely expensive—they can range from \$5000 to over \$60 000. They usually require a frame that is between eight to ten feet wide and costs another couple thousand dollars. These machines are expensive and take up a lot of space. That is why I have made sure to leave a space for two longarm machines so quilters have access to this machine, allowing for bigger and more ambitious projects.





Workshop detail: Someone works in their individual workspace to piece together a quilt. Once they're done, they'll baste it in the shared workshop with the help of others.



Workshop detail: Someone works at a sewing machine in their own workspace while someone else looks through fabric in the shared fabric storage area.

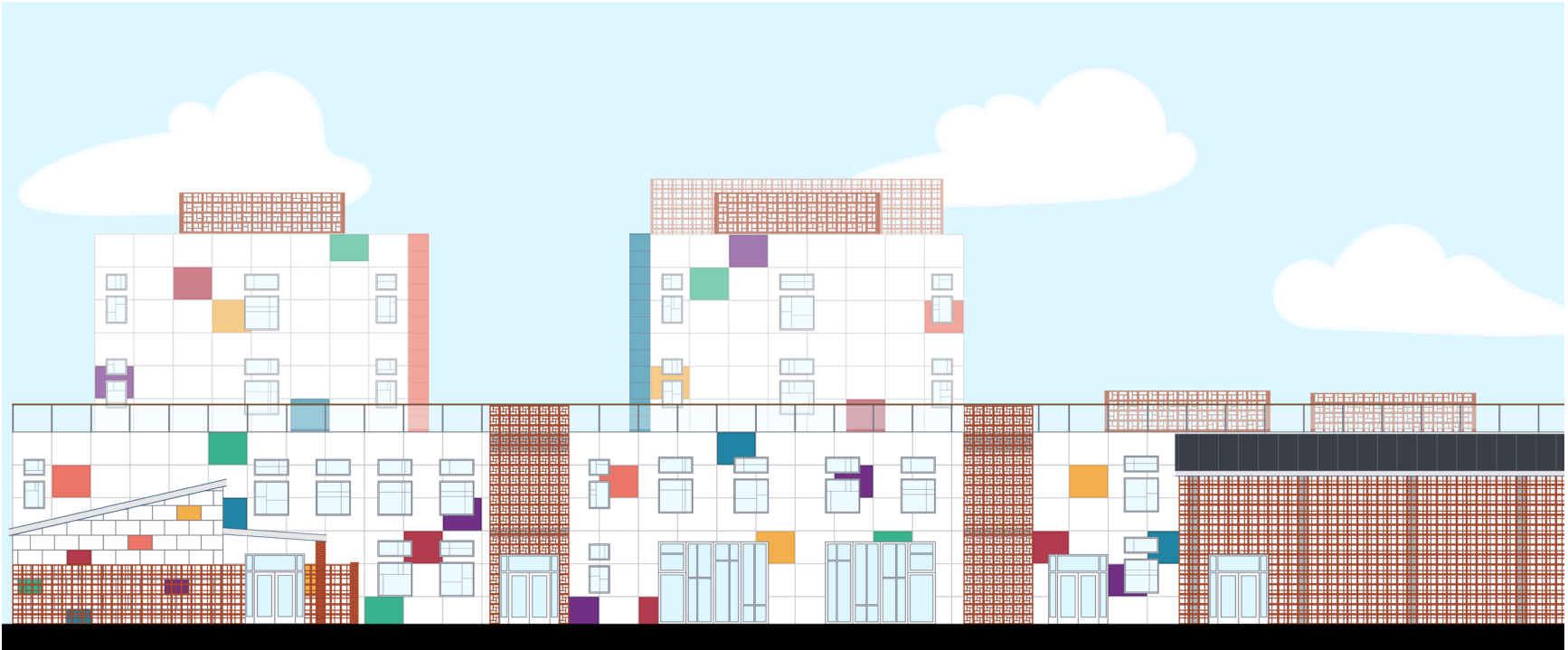
## **Material and Colour Choices**

I wanted to incorporate quilting into the exterior of the building through materials and colour.

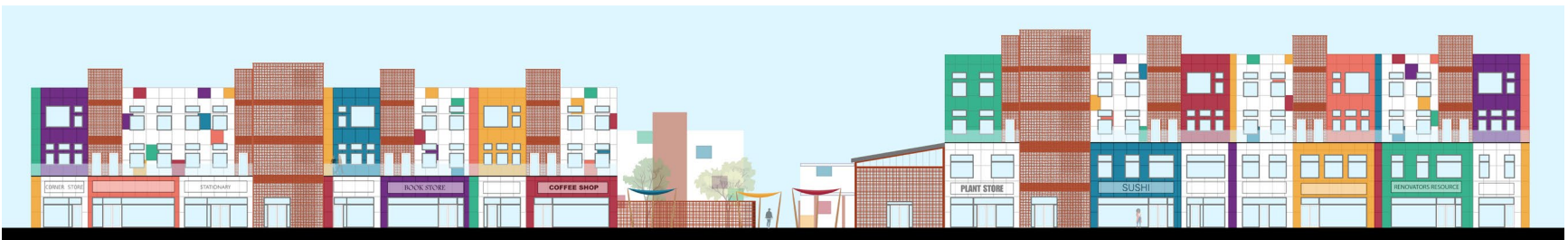
The exterior of the buildings are clad in primarily fiber cement or aluminum composite panels. These are already quilt block-like in the sense that they are solid pieces with small seams between them. On the ground floor the commercial spaces are clad in panels of all one colour or all white. Above, the residential units vary between solid colour or white mixed with single panels of colour. The intention was to create something bright and bold.

I have also used breeze blocks extensively though the project. Breeze blocks were developed in the 1930s and became popular in Mid-Century Modern design. Many of them look very similar to quilt blocks, and I are an excellent way to evoke quilts and add texture and depth. I have used them both by themselves and paired them with glass in different areas of the building.

I used breeze blocks around the lightwell to add privacy for residents and to create opportunities for different patterns of light inside. They also add a strong focal point in the unit. Combined with glass, they are used to shelter the top of the stairs and the entrance onto the roof for the units. They are also used, this time without glass, in between the patios to provide privacy and shelter while still allowing air and sun to pass through. They define the entrances to the residences, and a large section of breeze blocks defines the entrance to the residential area in between commercial areas. This area is sheltered by breeze blocks and contains the elevator and stairs. The breeze blocks provide privacy and some shelter. Different patterns of breeze blocks have been used to define

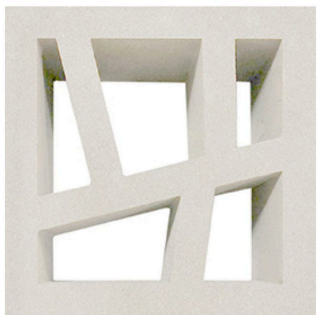
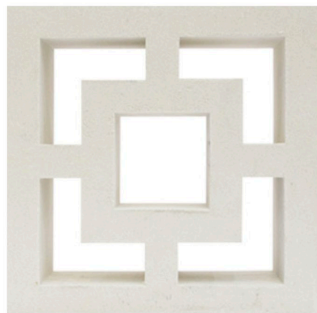
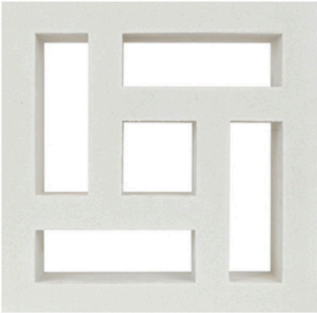
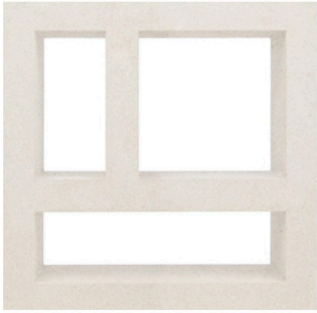


Elevation A.



Elevation B.

different areas. Finally, they have been used in the quilting workshop to section off individual quilters' areas. This allows the quilters to have an area for them to work on their own project, but allows light and air to circulate. Breeze blocks are often 4" to 6" deep, so they also provide opportunities for creative storage, and different quilters can hang curtains or quilts if they want a more or less privacy.



Examples of breeze blocks that are particularly quilt block-like (Viettiles n. d.).



A breezeblock wall (Viettiles n. d.).

## Chapter 6: Conclusion

### Reflection and Further Work

Quilts are made and used all over the world. Quilting styles and types are as diverse as cuisines or music genres. The history of quilting is not well-documented, and there is a lot we don't know and likely never will. I have focused here on the type of quilt that is most familiar to me and likely most people in North America—the patchwork quilt. But this is only one type of quilt, and within patchwork quilts there are dozens of different blocks, and hundreds of different patterns and combinations. The quilt my grandmother made is only one out of dozens of quilts she has made, and the quilt I made is hopefully just the first in dozens I will make. And for every different quilt, there are different ways to interpret it.

I was unable to fully explore all the ways quilting lends itself to architecture. Further work could happen in reuse. Projects that focused on the recycling of materials or of more complex reuse of buildings would be interesting and directly connected to quilts. I did not explore fabric as a potential building material in part due to our climate—fabric is not an appropriate enclosure material in Nova Scotia, but in other places it is perfectly viable and is something to be explored further. Fabric also has the potential to be internal dividers of space, and its properties in that capacity could be explored—researchers from MIT have recently developed a sound-suppressing silk curtain that works by vibrating in such a way that it cancels out the unwanted noise, similar to how many noise-canceling headphones work. The potential to divide spaces with fabric and have them be both visually and auditorily separate is exciting. There is potential to explore textiles outside of fabric and weaving at a larger

scale—I would love to see a façade of large but thin pieces of wood woven together with a glass curtain wall behind, allowing small views through the woven exterior. And of course, I think there's so much more that could be learned from quilts. I dove as deep as I could into the history of quilts, their social value and their complex construction, and I know I have only just scratched the surface. The more I learn, the more I will be inspired in both architecture and quilting, and the places they overlap.

## References

- 26'10 south Architects. 2019. "Barnato Hall Addition Phase 1 / 26'10 south Architects." ArchDaily. April 5 2019. [https://www.archdaily.com/914214/barnato-hall-addition-26-10-south-architects?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/914214/barnato-hall-addition-26-10-south-architects?ad_source=search&ad_medium=projects_tab)
- Adobe Stock. n. d. Photograph of a Bedouin tent. Adobe Stock. Accessed June 30th 2024. [https://stock.adobe.com/images/bedouin-tent-in-the-sahara-desert-morocco/267134482?prev\\_url=detail](https://stock.adobe.com/images/bedouin-tent-in-the-sahara-desert-morocco/267134482?prev_url=detail)
- Alexander, Christopher, Sara Ishikawa and Murray Silverstein. 1997. *A Pattern Language*. Berkeley, CA: Center for Environmental Structure
- Arnett, William. 2006. *Gee's Bend: The architecture of the quilt*. Tinwood Books.
- Atelier Guo. 2024. "Blue Square." February 5th 2024. ArchDaily. [https://www.archdaily.com/1012898/blue-square-atelier-guo?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/1012898/blue-square-atelier-guo?ad_source=search&ad_medium=projects_tab)
- Busquets, Joan, Dingliang Yang, and Michael Keller. 2019. *Urban Grids: Handbook for Regular City Design*. First edition. San Francisco: ORO Editions.
- CQA (Canadian Quilters Association). n. d. "History of CQA/ACC." Canadian Quilters Association. Accessed May 24th 2024. <https://canadianquilter.com/cqa-history/>
- Crossman, Alison. 1999 "Framing the Quilt, Historical and Contemporary Quilts of New Brunswick and Nova Scotia." National Library of Canada.
- Depositphotos. n. d. Photograph of Portuguese pavement. Depositphotos. Accessed June 30th 2024. <https://depositphotos.com/photo/exterior-streets-tiles-126434136.html>
- ESEcolectico Arquitectos. 2016. "Patch House." November 15th 2016. ArchDaily. [https://www.archdaily.com/799375/patch-house-esecolectivo-arquitectos?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/799375/patch-house-esecolectivo-arquitectos?ad_source=search&ad_medium=projects_tab)
- Fat Quarter Shop. n. d. "Jelly Roll Twirl Shortcut Quilt Pattern." Fat Quarter Shop. Accessed July 8th 2024. [https://www.fatquartershop.com/jelly-roll-twirl-quilt-pattern-free-pdf-pattern-fat-quarter-shop?utm\\_source=blog&utm\\_medium=link&utm\\_campaign=quilt-free-pattern-jelly-roll-twirl](https://www.fatquartershop.com/jelly-roll-twirl-quilt-pattern-free-pdf-pattern-fat-quarter-shop?utm_source=blog&utm_medium=link&utm_campaign=quilt-free-pattern-jelly-roll-twirl)
- Gertie's Blog for Better Sewing. 2010. "Sewing and Feminism 101." Gertie's Blog for Better Sewing. <http://www.blogforbettersewing.com/2010/04/sewing-and-feminism-101.html>
- Gillespie, Spike. 2010. *Quilts Around the World: The Story of Quilting from Alabama to Zimbabwe*. Vancouver: Voyageur Press.
- Goodwin, Valerie S. 2013. *Art Quilt Maps: Capture a Sense of Place With Fiber Collage—A Visual Guide*. Lafayette, CA: C&T Publishing Inc.

- Gordon, Beverley. 2011. *Textiles: The Whole Story: Uses, Meanings, Significance*. Thames & Hudson.
- Gregory Katz Architecture. 2020. "House Katz / Gregory Katz Architecture." October 3rd 2020. ArchDaily. <https://www.archdaily.com/948815/house-katz-gregory-katz-architecture>
- Hale, Jonathan A. 2005. *Gottfried Semper's primitive hut as an act of self-creation*. *arq: Architectural Research Quarterly* 9, no. 1: 45-49.
- Hariri Pontarini Architects. 2018. *Casey House / Hariri Pontarini Architects*. ArchDaily. September 12 2018. [https://www.archdaily.com/901842/casey-house-hariri-pontarini-architects?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/901842/casey-house-hariri-pontarini-architects?ad_source=search&ad_medium=projects_tab)
- Houze, Rebecca. 2006. "The textile as structural framework: Gottfried Semper's Bekleidungsprinzip and the case of Vienna 1900." *Textile* 4, no. 3: 292-311.
- Howe, Lawrence. 1997. "The AIDS quilt and its traditions." *College Literature* 24, no. 2: 109-124.
- International Quilt Museum. n. d. Quilt Collection. International Quilt Museum. Accessed June 30th 2024. <https://www.internationalquiltmuseum.org/collections>
- Jacoby, Sam. 2015. "Typal and typological reasoning: a diagrammatic practice of architecture," *The Journal of Architecture*: 20, no 6: 938-61. <http://www.tandfonline.com/doi/figure/10.1080/13602365.2015.1116104>
- Jefferies, Janis, and Diana Wood Conroy. 2006. "Shaping Space: Textiles and Architecture-An Introduction." *Textile : The Journal of Cloth and Culture*, 4, no 3: 233-237. <https://doi.org/10.2752/147597506778691431>
- King, Faye Lynn. 2001. "Social Dynamics of Quilting." *World Leisure Journal* 43, no. 2: 26-29.
- Madere, John. 2016. Photograph of Denver International Airport. Gettyimages. <https://www.gettyimages.ca/detail/photo/denver-international-airport-at-dusk-royalty-free-image/519877582>
- Markley, Mark. n. d. Photograph of Gee's Bend quilters. PBS. Accessed June 30th 2024. <https://www.pbs.org/craft-in-america/tv-series/industry/>
- National AIDS Memorial. n. d. "AIDS Memorial Quilt." National AIDS Memorial. Accessed June 30th 2024. <https://www.aidsmemorial.org/interactive-aids-quilt>
- Paley, Matthieu. n. d. Photograph of a yurt being constructed. National Geographic. Accessed June 30th 2024. <https://education.nationalgeographic.org/resource/yurt/>



- Photo AC. n. d. Photograph of Japanese tatami mat room interior. Photo AC. Accessed June 30th 2024. <https://photo-ac.com/photo/23943387>
- Shaw, Robert. 2009. *American Quilts: The Democratic Art, 1780-2007*. New York: Sterling Publishing Company.
- Souls Grown Deep. n. d. Photographs of Gee's Bend quilts. Soul's Grown Deep. Accessed June 30th 2024. <https://www.soulsgrowndeep.org/gees-bend-quiltmakers>
- Swire, Can Pac. 2016. "The Black and Yellow Bedroom | Burghley House." Flickr. <https://www.flickr.com/photos/18378305@N00/45869454954>
- Testa Design and Architecture. 2005. Photograph of Peter Testa's Carbon Tower model. The New York Times. [https://archive.nytimes.com/www.nytimes.com/slideshow/2005/04/11/science/20050412\\_TEXT\\_SLIDESHOW\\_2.html](https://archive.nytimes.com/www.nytimes.com/slideshow/2005/04/11/science/20050412_TEXT_SLIDESHOW_2.html)
- The National. 2023. Photograph of the Kaaba. The National. <https://www.thenationalnews.com/gulf-news/2023/07/19/kaabas-kiswah-replaced-to-mark-the-new-islamic-year/>
- Veintedoce Arquitectura. 2024. "Situaciones de Estar Pavilion." March 31st 2024 Arch Daily. [https://www.archdaily.com/1015077/situaciones-de-estar-pavilion-veintedoce-arquitectura?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/1015077/situaciones-de-estar-pavilion-veintedoce-arquitectura?ad_source=search&ad_medium=projects_tab)
- Viettiles. n. d. Photos of breezeblocks. Viettiles. Accessed June 30th 2024. <https://www.viettiles.com/catalog/ECatalougeBG2024.pdf>
- William Reue Architecture. n. d. "About." William Reue Architecture. Accessed June 30th 2024. <https://wreue.com/about/>
- Witzling, Mara. 2009 "Quilt Language: Towards a Poetics of Quilting." *Women's History Review* 18, no. 4: 619–37.
- Yakubu, Paul. 2024. "Exploring African Vernacular Huts: Weaving as a Climatic and Social Architecture." January 26th, 2024 ArchDaily. <https://www.archdaily.com/1012623/exploring-african-vernacular-huts-weaving-as-a-climatic-and-social-architecture>
- Youngs, Rosemary. 2014. *The Quilt Block Bible*. Cincinnati: KP Crafts.

3D



ENGLISH PAPER  
PIECED TOY  
BALL

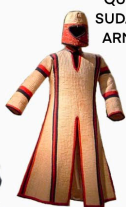


QUILTED  
CHRISTMAS  
ORNAMENT



MID 1800s  
JAPANESE  
QUILTED FIRE  
FIGHTING  
JACKET

QUILT JACKET



LATE 1800s  
QUILTED  
SUDANESE  
ARMOUR

DRAPERY



QUILTED TENT



CANOPY BED



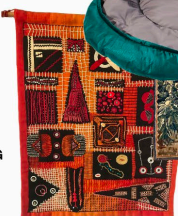
YURT



QUILTED RUG



NORTH AMERICAN  
PATCHWORK QUILT



SLEEPING BAG

DECORATIVE  
QUILT TAPESTRY



BIVY SACK

INSULATED  
CURTAIN

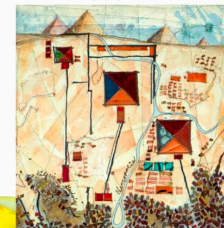


FRENCH MEDIEVAL  
TAPESTRY



KOREAN POJAGI  
CURTAIN

ART QUILT BY VALERIE S.  
GOODWIN



FABRIC BY ARCHITECT  
BILLY REUE



NORTH AMERICAN  
BARN QUILT

2D

QUILTING

ARCHITECTURE

# Appendix A: Quilting and Architecture

QUILTS AROUND THE WORLD

1 Quilt Cover  
Unknown, 1940  
Yoruba, British Columbia  
Mennonite

2 Quilt  
Six Nations of the Grand River, Ontario  
Mohawk

3 Ribbon Banner  
John Willett, 1982  
Ontario

4 Quilt  
Unknown, 1890-1900  
Quebec

5 Autograph Quilt  
Unknown, 1875-1900  
New Brunswick

6 Quilt  
Unknown, 1890  
Scotland

7 Tristan Quilt (Detail)  
Unknown, 1300-1350  
Sicily

8 Korak  
Unknown, 1875-1900  
Uzbekistan

9 Running After Birds  
Ira Kupferev, 1997  
Russia

10 Quilted Popoi  
Seon-Hee Kim, 1950-1960  
Korea

11 Pinwheel  
Margaret H. Oyster, 1833  
Chester County, Pennsylvania  
Quaker

12 Rainbow Quilt  
S. F. Schneck Hebecker, 1898  
Perry Township  
Mennonite

13 Crazy Quilt  
Dorothy Tompkins, 1880-1890  
Yonkers, New York

14 Quilt  
Unknown, 1890-1900  
New Brunswick

15 Quilt Top  
Ella J. Dunbar, 1930-1940  
Sellaften, Nova Scotia

16 Grandma's Basket  
Heather Crazevell, 2012  
New Glasgow, Nova Scotia

17 Quilt  
Unknown, Pre-1850  
England

18 Quilt  
Unknown, 1775-1780  
France

19 Infabily  
Danny Amozena, 2023  
Kaohsiung City, Taiwan

20 Quilt  
Unknown, 1950-1955  
Korea

21 Placed Word Quilt  
Jewett Washington Curtis, 1895  
Mill Plain, Washington

22 Waco Butees Blanket Quilt  
Bermye K. Courtney, 1996  
Warm Springs, Oregon  
Waco and Tlingit

23 Whig Rose  
Dell Patterson, 1895-1905  
Reynoldsville, Tennessee

24 A Rose Garden in a Blue Fence  
Kaiko Miyazaki, 2008  
Nagano, Japan

25 Quilt Cover  
Unknown, 1940-1950  
Guangxi or Guizhou, China

26 Variable Star  
Unknown, 1880-1900  
Holmes County, Ohio  
Amish

27 Briskly Quilt  
Maggie Smith, 1980  
Tulahoma, Alabama

28 Ka Ue Kani Lohoa  
(The Rain That Rustles Lohoa Blossoms)  
Maliah Leheria, 1923-1950  
Hawaii

29 Rajah Quilt  
Kerrie Hayer and Unknown Women, 1841  
Made while on the HMS Beagle on the way to  
an Australian penal colony.  
Housed in Canberra, Australia

30 Village Story Blanket  
Ko Zouq Lin, 1980  
Lanzhou, Hmong

31 Story of the Assinibain (Red Bottom Tipi Quilt)  
Aimée Buffalo Bone Jackson, 1968-1988  
Wolf Point, Montana  
Assinibain

32 Forest Walk  
Pat Durbin, 2010  
Eureka, California

33 Douglas County Bank Quilt  
The Seamstresses Union, 1987  
Lawrence, Kansas

34 Mala  
Unknown, 1970-2000  
Panama

35 Wisteria  
Mark Sherman, 2008  
Coral Springs, Florida

36 Workclothes Quilt  
Annie Mae Young, 1976  
Gee's Bend, Alabama

37 Adira Cloth Quilt  
Yemi Tamayo, 2010  
Nigeria  
Yoruba

38 Ralli  
Unknown, 1970-1990  
Sindh, Pakistan

39 Ralli  
Unknown, 1950-1960  
Gujarat, India

40 Medallion  
Unknown, 1750-1800  
India or Persia  
Mughal

## Appendix C: Jelly Roll Quilt Pattern

A pattern for a jelly roll quilt similar to the one I made in the workshop I took at Patch (Fat Quarter Shop n. d.).



Finished Size: 48 1/2" x 48 1/2"

### THROW QUILT

#### FABRIC REQUIREMENTS

- One Jelly Roll or 33 - 2 1/2" x width of fabric strips (Fabric A)  
Shop Jelly Rolls at:  
[www.fatquartershop.com/jelly-rolls](http://www.fatquartershop.com/jelly-rolls)
- 5/8 yard background
- 5/8 yard binding
- 3 1/4 yards backing

#### CUTTING

- Cut background fabric into:  
48 - 3 1/2" squares (Fabric B)
- Cut binding fabric into:  
6 - 2 1/2" x width of fabric strips (Fabric C)

Ready. Set. Sew!

#JELLYROLLTWIRLQUILT



Check out the Tutorial on YouTube

## Jelly Roll Twirl

Quilt Pattern

Fat Quarter Shop Exclusive

Use 1/4" seams and **press open** throughout except where indicated.

#### BLOCK ASSEMBLY:

Assemble three different Fabric A strips.

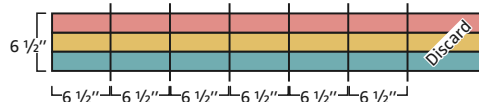
Jelly Strip Set should measure 6 1/2" x WOF.



Make eleven.

Subcut three Jelly Strip Sets into six 6 1/2" x 6 1/2" squares.

Jelly Square Unit should measure 6 1/2" x 6 1/2".

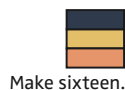
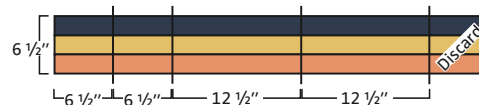


Make eighteen.

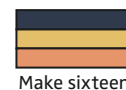
Subcut eight Jelly Strip Sets into:

2 - 6 1/2" x 6 1/2" squares (Jelly Square Unit)

2 - 6 1/2" x 12 1/2" rectangles (Jelly Rectangle Unit)



Make sixteen.



Make sixteen.

[www.FatQuarterShop.com](http://www.FatQuarterShop.com)

© 2022 Fat Quarter Shop, LLC. All rights reserved. Duplication of any kind is prohibited. This pattern may be used for personal purposes only and may not be reproduced without the express written permission from Fat Quarter Shop. This pattern may not be used for commercial purposes. This pattern may only be hosted, accessed, and downloaded from [www.FatQuarterShop.com](http://www.FatQuarterShop.com).



# Jelly Roll Twirl

Quilt Pattern  
Fat Quarter Shop Exclusive

Draw a diagonal line on the wrong side of the Fabric B squares.

With right sides facing, layer a Fabric B square on the top right corner of a Jelly Square Unit.

Stitch on the drawn line and trim  $\frac{1}{4}$ " away from the seam.

Roll Unit should measure  $6\frac{1}{2}$ " x  $6\frac{1}{2}$ ".

You will not use two Jelly Square Units.

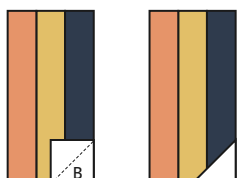


Make thirty-two.

With right sides facing, layer a Fabric B square on the bottom right corner of a Jelly Rectangle Unit.

Stitch on the drawn line and trim  $\frac{1}{4}$ " away from the seam.

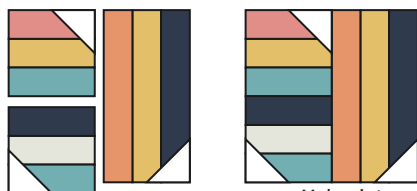
Twirl Unit should measure  $6\frac{1}{2}$ " x  $12\frac{1}{2}$ ".



Make sixteen.

Assemble Block.

Jelly Roll Twirl Block should measure  $12\frac{1}{2}$ " x  $12\frac{1}{2}$ ".



Make sixteen.



# Jelly Roll Twirl

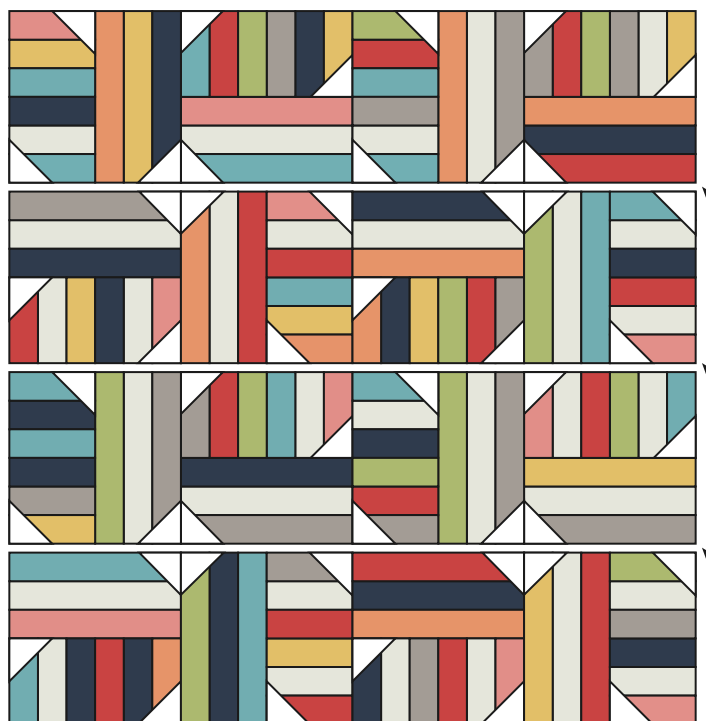
Quilt Pattern  
Fat Quarter Shop Exclusive

## Quilt Center:

Assemble Quilt Center. Pay close attention to block placement.

Press rows in opposite directions.

Quilt Center should measure 48 1/2" x 48 1/2".




---

## FINISHING:

Piece the Fabric C strips end to end.

Quilt and bind as desired.