Redefining Urban Alleywalls:
Urban Design for Active Public Space in Maynard Alley, Chinatown-International District, Seattle

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The network of alley is valuable social resource especially in dense urban area with limited space for public life. Projects are emerging across the world to turn the previous ignored “back of buildings” into safe, clean, and lively public spaces. This thesis typically focuses on the potential of physical improvement in supporting such spaces, with a purpose to understand how the physical form is related to the performance of the alley as a public space such that it encourages daily uses and supports multiple functions at the same time.
This thesis tries to answer the question through a combination of research and design. As an output from a series of literature study and case studies, the framework is created with the purpose to guide planners and designers to understand the spatial characteristics of an alley space, and how these relate to the social, cultural, and built context on beyond the site. The framework proposes a typomorphological method to understand how the alley space is formed and how different compositions affect the experience of users in different ways.

In the design part, one alley space, Maynard Alley in Chinatown-International District, is selected for a thorough analysis of its characteristics and potential of adapting to future changes. With the guidance of the framework, the site study looks at the social, historic, and built fabric on the site, block, and neighborhood level. This leads to the design manual providing site-specific suggestions on how Maynard Alley can be reactivated as a shared space for everyday uses. It is a pool of design ideas in response to Maynard Alley’s current issues and future opportunities, including the ongoing Maynard Alley Revitalization Project and possible new alleywalls added in future redevelopment project adjacent to the site. This thesis is not proposing an ideal and final design of Maynard Alley, but explores possibilities of future new developments that are supposed to take alley reactivating as part of the design strategy especially when designing the back wall of the building. The site study and design manual for Maynard Alley provide basis to trigger further discussion along the process.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Figures</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>v</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>v</td>
</tr>
<tr>
<td><strong>Chapter 1. Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Purpose of this Study</td>
<td>5</td>
</tr>
<tr>
<td>1.3 Methodology</td>
<td>8</td>
</tr>
<tr>
<td><strong>Chapter 2. Literature Study:</strong></td>
<td>12</td>
</tr>
<tr>
<td>The Wall and the Space It Defines</td>
<td></td>
</tr>
<tr>
<td>2.1 Space and Life between Buildings</td>
<td>12</td>
</tr>
<tr>
<td>2.2 Wall/Interface/Façade:</td>
<td>16</td>
</tr>
<tr>
<td>A Potential Subject for Design Prototype</td>
<td></td>
</tr>
<tr>
<td>2.3 Quality of Space: the Method of Measurement</td>
<td>20</td>
</tr>
<tr>
<td><strong>Chapter 3. A framework for analysis and design</strong></td>
<td>25</td>
</tr>
<tr>
<td>3.1 The Criteria</td>
<td>25</td>
</tr>
<tr>
<td>3.2 Identification of Type by Context Study</td>
<td>27</td>
</tr>
<tr>
<td>3.3 Measurement of Scale</td>
<td>29</td>
</tr>
<tr>
<td>3.4 A Decomposition of Alley Space</td>
<td>32</td>
</tr>
<tr>
<td><strong>Chapter 4. The Site: Maynard Alley</strong></td>
<td>37</td>
</tr>
<tr>
<td>4.1 C-ID: Neighborhood history and context</td>
<td>37</td>
</tr>
<tr>
<td>4.2 Maynard Alley: History and Context</td>
<td>41</td>
</tr>
<tr>
<td>4.3 The Built Fabric</td>
<td>46</td>
</tr>
<tr>
<td>4.4 Alley Analysis</td>
<td>52</td>
</tr>
<tr>
<td>4.5 Issues, Opportunities and Visions</td>
<td>64</td>
</tr>
<tr>
<td><strong>Chapter 5. Maynard Alley Design Manual:</strong></td>
<td>67</td>
</tr>
<tr>
<td>Redefine the Space and Explore the Potential of Alleywalls</td>
<td></td>
</tr>
<tr>
<td>5.1 The Ground</td>
<td>68</td>
</tr>
<tr>
<td>5.2 The Extended Ground</td>
<td>74</td>
</tr>
<tr>
<td>5.3 The Wall</td>
<td>82</td>
</tr>
<tr>
<td><strong>Chapter 6. Reflection</strong></td>
<td>86</td>
</tr>
<tr>
<td>6.1 Lessons Learned</td>
<td>86</td>
</tr>
<tr>
<td>6.2 Limitations and Improvements</td>
<td>87</td>
</tr>
<tr>
<td>6.3 Future Work</td>
<td>88</td>
</tr>
<tr>
<td>Bibliography</td>
<td>90</td>
</tr>
<tr>
<td>Appendix A</td>
<td>93</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>City of Seattle neighborhood alley activation effort map</td>
<td>5</td>
</tr>
<tr>
<td>1-2</td>
<td>The approach taken</td>
<td>11</td>
</tr>
<tr>
<td>2-1</td>
<td>Relationship between the quality of outdoor spaces and the rate of occurrence of outdoor activities.</td>
<td>15</td>
</tr>
<tr>
<td>3-1</td>
<td>Typology of alleys in Seattle proposed in the Seattle Integrated Alley Handbook</td>
<td>28</td>
</tr>
<tr>
<td>3-2</td>
<td>Alleys in blocks of different form</td>
<td>29</td>
</tr>
<tr>
<td>3-3</td>
<td>The changes in range of view according to the position of the object</td>
<td>31</td>
</tr>
<tr>
<td>3-4</td>
<td>The decomposition of alley space into three aspects</td>
<td>32</td>
</tr>
<tr>
<td>4-1</td>
<td>Neighborhood context: the C-ID</td>
<td>39</td>
</tr>
<tr>
<td>4-2</td>
<td>1912, 1936, 1969 and 2016 snapshots of buildings in the National Register Historic District in the C-ID</td>
<td>42</td>
</tr>
<tr>
<td>4-3</td>
<td>“Florence Eng, far right, raised her four siblings and four children in this 1,200 sq. ft. Maynard Alley apartment. Sometimes she treated them to a nickel ice-cream cone that they shared... while perched on the steps.”</td>
<td>43</td>
</tr>
</tbody>
</table>
Figure 4-4 Wah Mee Club and Liem's Aquarium. 44
Photo by Joe Mabel

Figure 4-5 Mermaid of Liem's. Photo by Joe Mabel 44

Figure 4-6 The Built Fabric in Maynard Alley Block 47

Figure 4-7 Rex Hotel from S King Street. Photo by Joe Mabel 48

Figure 4-8 Eastern Hotel from Maynard Ave S. 48
Photo by Joe Mabel

Figure 4-9 Sing Keong Family Association from Maynard Ave S. Photo from Google Street View 49

Figure 4-10 Tai Tung Parking Lot from Maynard Ave S and S Weller St. Photo from Google Street View 49

Figure 4-11 Eclipse Hotel from 7th Ave S and S Weller Str. Photo from Google Street View 50

Figure 4-12 Gee How Oak Tin Hotel from 7th Ave S. 50
Photo by Joe Mabel

Figure 4-13 Louisa Hotel from S King Street. Photo by Joe Mabel 51

Figure 4-14 Measurement and calculation of the variables of scale 53

Figure 4-15 The human field of view (FOV) 54

Figure 4-16 The the two types of view shed from alley entrance 55

Figure 4-17 Existing connections in Maynard Alley 57

Figure 4-18 Sections of existing direct connections 58

Figure 4-19 West alleywalls elevation analysis 60

Figure 4-20 East alleywalls elevation analysis 62

Figure 5-1 The ground in Maynard Alley 68

Figure 5-2 Basic activities and the space they require 68

Figure 5-3 The 15 ft. –wide Maynard Alley has full potential in its capacity 69

Figure 5-4 Waster Management Clear Alleys User Guidelines by Seattle Public Utility 70

Figure 5-5 Options for where the dumpsters can be 70

Figure 5-6 The depth of garage entrance and how the ground level uses can be influenced 71

Figure 5-7 Alley pavement design for Pioneer Square alleys 72

Figure 5-8 Flamingo Cafe in Winn Lane, Australia 72

Figure 5-9 Bike Detection Sign 72
Figure 5-10 Ryder’s Alley in NYC 73
Figure 5-11 Chicago Bar Project in Passageway 73
Figure 5-12 Seattle Post Alley 73
Figure 5-13 Ohama Old Market District 73
Figure 5-14 EaCa Alley in LA 73
Figure 5-15 The existing extended ground in Maynard Alley 74
Figure 5-16 Alternatives to create permeable edge zone at the 1st and the 2nd floor level 74
Figure 5-17 A summary of possible connections 75
Figure 5-18 Variations of extended zone 76
Figure 5-19 Variations of transparent zone 77
Figure 5-20 Variations of setback zone i 78
Figure 5-21 Variations of setback zone ii 79
Figure 5-22 Variations of elevated zone i 80
Figure 5-23 Variations of elevated zone ii 81
Figure 5-24 The existing walls in Maynard Alley 82
Figure 5-25 Massing options for future development in Maynard Alley 82
Figure 5-26 The Hegeman, low-income residential community in Brooklyn 83
Figure 5-27 Block A Noordstrook, a residential regeneration project in Amsterdam 83
Figure 5-28&29 Elandshof 6 houses in Amsterdam 83
Figure 5-30 Wooden Housing Building, a social housing project in France 83
Figure 5-31 New light installed in Pioneer Square alley 84
Figure 5-32 Glowing furniture 84
Figure 5-33 Fiber optic lighting on the ground 84
Figure 5-34 Dallas Alley with neon tubes on steel arch lighting up the pedestrian corridor lined with restaurants and nightclubs. Design and photo by the 84
Figure 5-35 String lights in Nord Alley, Seattle. Photo 84
Figure 5-36 Neon signage in an alley in Japan 84
Figure 5-37 Neal’s Yard, London. 85
Figure 5-38 Art+green installations in Nord Alley 85
Figure 5-39 Mural and suspended art+lighting in a Sydney’s Chinatown lane, Kimber Lane 85
Figure 5-40 Kurt Perschke’s Redball Art Project, Taipei. 85
| Table 2-1 | Three types of outdoor activities | 14 | C-ID: Chinatown-International District, Seattle |
| Table 2-2 | Seven qualities, their significance, and the physical elements included; Proposed by Bentley (1985) | 22 |
| Table 2-3 | Analytical framework of pedestrian-oriented city proposed by Caliandro (1986) | 24 |
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DEDICATION

To my parents
Alley reactivation is a hot topic and appeals to the personal interest of a planning student with a passion for urban design and place making. I have long asked the questions: why do alleys in modern cities have different form, functions, and type of uses from alleys in ancient cities? What makes modern alleys dark, uninviting and even unnoticed spaces? Through the design of the underutilized public spaces in the Pike/Pine neighborhood in an urban design and preservation studio, I came to understand the value of alleys in North American cities as public resources that need to be reclaimed, as well as the necessity to maintain their utility functions, such as garbage collecting and loading. By conducting a pre-research into the alley reactivation movement, I became amazed at the efforts in the City of Seattle, especially the community-based projects in two historic district in South Downtown area: Pioneer Square and Chinatown-International District. Previous UW graduate students’ thesis works on alleys, including Ching Chan’s thesis on Canton Alley in C-ID and Michael Pickford’s thesis on Clear Alleys Program, helped me further understand the process, issues, and potential of urban alleys in neighborhoods with unique characteristics. At the same time, when taking site visits to some of the successfully reactivated alleys in Seattle and Austin, I found that the alley is not exactly the same as the picture online. There is little foot traffic when there are no planned events, especially in seasons with bad weather. Another question came to mind: how can design make a difference in alley improvement to not only provide room for programmed events, but also trigger everyday uses? Chapter 1
is a more detailed introduction of why and how I would answer the above questions. This chapter is structured into four parts: the background of alley reactivation, purpose of study, the conceptual model, and the methodology and approach taken to achieve a better understanding of the topic.

1.1 Background

Why alleys matter

People often define alley as a narrow lane in between or behind buildings, existing and functioning quite differently from a main city street. Alleys around the world differentiate from each other by the forming mechanism, age, scale, use, adjacent built fabrics, and even what they are called (Fialko & Hampton 2011). Alleys in Western cities can be a part of the planned city grids and be with public ownership for pedestrians or services. An alley in traditional Asian cities can be the bone upon which the neighborhood grows organically, and the shared living room full of everyday uses.

The spatial characteristics of an alley are unique enough to be distinct from other open spaces between the built massing in a city. The “narrow linearity” formed by the building walls on both sides create an image of the stage, where the human figure is highlighted by the constrained backdrop and direct lighting (Fialko & Hampton 2011). At the same time, one feels enclosed with all senses heightened. Moreover, the narrow linearity forms a vertical and horizontal channel where human, manmade structures and natural flows move smoothly through (Fialko & Hampton 2011), while the building walls suck in and push out these flows as a sponge. There are many stories to tell in such space with an intimate, mysterious, yet risky atmosphere: encountering, following, or even vanishing.

Due to these spatial characteristics, alleys possess exciting potentials to become vibrant open spaces, create neighborhood connection, and form fine-grained networks with multiple functions. As opposed to the more formal streets, parks, and playgrounds, the “back-alley” is recognized as “interior neighborhood open space” rather than “exterior”, producing “semi-public, intimate setting for casual social interactions” at a block scale (Martin 2002). Alleys as a network complement the scattered and rare public spaces in dense city areas. The network also has a great significance in the urban infrastructure
system, providing pedestrian and cycling alternatives and spaces for utility services.

**Alleys in North America**

In the 19th century in North American cities, alleys grew out of the grid upon which cities expanded for the “easy sale of land”, with an intention to hide unwanted elements to the rear of the buildings (Karlo 2013). Alleys often occupy the bottom of the status hierarchy of the street network, which is partially a result of the social perception of front and back (Allen 1993). Though playing a significant role in American urbanism, especially in low-income and dense neighborhoods, alleys are disgraced by negative social associations (Pickford 2010). Over the years, alleys gradually became deserted places for illicit activities and negative uses such as garbage, parking, delivering, plumbing, and mechanical services (Chan 2015). As a result, people more and more perceived alleys as unsafe and unclean places to be.

The New Urbanism movement in the early 1990s brought alleys back to center stage through its efforts to promote fine-grained and mixed-use urban environments (Karlo 2013). Grassroots power to reclaim and reactivate alley spaces has emerged in the last 10-15 years driven by concerns about public safety, sanitation, and environmental issues (Chan 2015). Numerous community-based clean-up programs and reactivation projects emerged across the country aiming to turn alleys, through physical improvements, into public spaces that encourage foot travel, local businesses, and community building. Local governments also empower these movements either by making long-term alley reactivating plans at the city scale, or by providing incentives and support for project financing, consulting, and process streamlining. Through the nationwide as well as worldwide movement, alleys are recognized as critical neighborhood resources and are programmed and branded diversely based on their context and characteristics. Some of the trendy keywords include historic alley, public space alley, market alley, alley identity, green alley initiative, interconnected alley network, public art programs, community programs, places to explore, and open façade (Fialko & Hampton 2011).
Alleys in Seattle

The network of Seattle’s streets and alleys is recognized as the “primary physical characteristic defining the City’s public realm”, and the intricate alley system that enriches the functional grid remains largely intact over history (Seattle 2001). The City adopts conservative policy toward alley vacation petitions to protect the grid. However, most of the alleys in Seattle, especially in the downtown area, prioritize automobile and utilitarian uses (Chan 2015). Post Alley located in Pike Place Market is the most thriving and famous one, with shops and restaurants all along it, built in 1970s because of a “save the market” historical preservation movement.

It was not until the last decade that the value of alleys as a secondary public realm was rediscovered together with the citywide public space reactivation movement (Chan 2015). The alleys in downtown Seattle take approximately 217,500 sf of space, which can potentially, if transformed into usable space, increase the downtown public space by 50% and create a more enjoyable, walkable and playful downtown (Fialko & Hampton 2011). The City initiated the Clear Alleys Program in 2009 to “clear the way” for physical improvements by incentivizing
throwing away less, alley cleaning, and frequent collection of trash (Pickford 2010). The City’s 2009 program was successful and was responded by many neighborhood-organized clean parties. In the last five years, grassroots efforts emerged from neighborhoods in downtown Seattle such as Pioneer Square and the Seattle Chinatown-International District (C-ID), which are dedicated to reactivating the cleared-up alleys into pedestrian-friendly community gathering spaces that also provide business opportunities. Nord Alley in Pioneer Square and Canton Alley in C-ID are the most successful cases that have received neighborhood commitment, public attention, and continuous improvements. Figure 1-1 illustrates alley activation efforts in Seattle.

1.2 Purpose of this Study

A comprehensive evaluation of alley activating

The worldwide enthusiasm of alley reactivating has turned some of the previously ignored spaces into popular spots for people to gather, play, and explore. There seem to be infinite possibilities in creating something innovative in this intimate narrow lane. It is widely recognized that there are economic, social, and environmental benefits associated with high-performing alleys in dense urban areas, which are the result of the collective reactivating efforts including physical improvements, creative programming, and committed partnerships among the community (Michel 2012). A successfully reactivate alley is able to attract more pedestrians activities compared to alleys without interventions, especially for non-transportation and non-work-oriented activities (Wolch et al. 2010; Seymour and Trindle 2015). The direct economic benefits can be quantified by the increase of sales tax, land value, as well as the reduction of waste management service costs and crime costs (Michel 2010). During the process, the community can be brought together regardless of their ethnic groups, age, professions, which is of high value in a culturally diverse neighborhood (Chan 2015). The environmental benefits are tied more to the green alley initiatives, making network improvements including storm water management, underground water replenishment, and ecological diversity (Michel 2010; Newell et al. 2013).
The critical elements and indicator for high performance

Though there are multiple elements that shape a successful alley project as well as multiple criteria for evaluating the efficiency and effectiveness as a public space, both theorists and practitioners agree that the quality of the space and sense of place are the fundamental and critical elements for a successful alley. Furthermore, the most important indicator for high-performance is that the alley naturally attract pedestrians to explore and invite them to linger and stay without “planned programming” (Chan 2015). That is to say, the alley itself should be basically safe and clean. In addition, the alley should originally have or be gradually improved to have the quality to produce daily activities and adapt to multiple uses. An ideal alley as public space in a dense urban area should be a shared living room for users from the block, a gathering place for neighborhood activities, a destination for curious tourists and visitors, and a place to encounter unexpected experience for city wanderers. However, no alley is perfect and the manner in which to achieve high performance while still including community values remains a challenge.

Challenges and issues

There are quite a lot of programming and design manuals that go into the details of “how to do” and “what to consider”. In practice, it is a common scene that an alley are packed with visitors when there is a planned party or event, but remains quiet and unnoticed most days of the year especially in unpleasant seasons. Even if there is a good combination of retail options in an alley, it is mostly likely that the site is adjacent to the most popular city core, leading to less frequent uses by people who live on the block. In the research field, there is not much discussion on what kinds of features of an alley space are effective in triggering everyday uses on a site-specific and type-by-type basis. Moreover, although considered in most of the alley design processes, there is no study focusing on the physical essence of the alley, or the way it creates a different sense of space and experience by everyday and occasional users. This thesis is an effort to understand the missing piece of the jigsaw.

By abstracting alley space as narrow, linear, and intimate space defined by the walls on both sides, this thesis is an experiment on one underutilized alley to explore the potential
of form in catalyzing daily uses and adapting to multiple functions. The alley I am focusing on is Maynard Alley, a historic alley located in the center of a high-density, mixed-use, and multicultural neighborhood, the C-ID. It is a good sample to look at for several reasons. First, Maynard Alley is a typical downtown alley with 6-storey historic buildings defining the 15 ft. wide space. Second, Maynard Alley is rich in context. There are multiple uses around that alley including local businesses, apartments, institutions, and parking. The old buildings not only tell stories of the past, but also provide the unique historic sense, and represent a part of the cultural identity of the neighborhood. Most importantly, temporal and spatial changes are intertwined in Maynard Alley. Historically Chinatown alleys acted as the living room for the pan-Asian immigrants living in adjacent tiny apartments, which indicates that the existing façade and layout keep some of the characteristics that are friendly to daily uses. Moreover, Maynard Alley is located in the block that is changing and has high potential of changing in the future as well. The alley is getting clean up and there are new storefronts designed in a redevelopment project. In the future, there can be refurbishment of underutilized historic buildings, redevelopment of low-rise buildings, and new development on an existing vacant lot used for parking. It is the right time to consider, in each situation, how the changes of buildings and their functions can accommodate a high performing alley.

In particular, the study is an analysis of the form of an alley space and the relationship between the form of the space and the level of uses. First, the study tries to provide a new angle to look at an alley as a space defined by the walls on both sides. Based on the characteristics of the space, a framework will be created, which includes the physical elements related to daily uses, and the criteria measuring how the space is performing. Moreover, a series of variation of the walls are created to consider how future changes can better accommodate the alley as a frequently used public space.

The thesis is for planners, landscape architects, and urban designers who are interested in making physical improvements in alleys that facilitate and promote more daily uses in the alley spaces. The peripheral audience include developers, project outreach leaders, and direct stakeholders (business owners, property owners, and residents). This thesis would better inform them of the importance of the form of the space and the
necessity to organize capital for physical improvement. Moreover, as Maynard Alley has recently received federal funding for the star-up capital, the thesis also provides site-specific information and recommendations for possible physical improvements in Maynard Alley, taking consideration of the possible changes in the future.

Research question
How does the form of an alley space relate to the performance of the alley as a public space such that it encourages daily uses and supports multiple functions at the same time?

Research sub-questions
What are the characteristics of an alley space that make it different from other public spaces, such as streets, parks, and playfields?
What are the elements of an alley space that are friendly to daily uses and multiple functions?
How can an alley be further activated as a public space used on a daily basis if future developments make physical changes to the alley especially the walls that define the alley space?

1.3 Methodology
The Overall Approach
The research question of this study is how the form of an alley space relates to the performance of the alley as a public space that is friendly to daily uses and multiple functions. One alley space, Maynard Alley, is selected for a thorough analysis of its characteristics and potential of adapting to future changes. Using the method of urban morphology, the study tries to abstract the alley space and related physical elements. The method of typology is also adopted as a strategy to test variations of the form that will adapt to future changes.

To provide support for the analysis, a framework is created in Chapter 3, which includes the elements and measurements of an alley space that is friendly to daily uses and multiple functions. The framework is a summary of literature related to intimate space design, street wall design, and successful alley examples in Chapter 2. Based on this framework, the existing physical elements will be recorded and assessed. Moreover, assumptions are made as to how the form will change if there is redevelopment or new development on the block.
Another support for the analysis is the site study in Chapter 4, which involves information gathering, site survey, interviews, and mapping. The data searching process is to collect secondary data related to the alley, such as historic photos and maps, first floor plan of each buildings, permitting and planning documents, and property information. In two major site surveys, primary data on the current physical elements and use conditions of the alley are recorded through photographing and sketching. Interviews serve as supporting materials on who are using the alley, how the alley is used by adjacent business owners and residents, and what future changes are possible in the immediate area. Mapping is critical in visualizing the gathered information on the physical form of Maynard Alley through graphics and maps.

The main product of this approach is a design manual for Maynard Alley reactivation presented in Chapter 5. The design manual primarily uses the language of images, graphics, and maps to interpret what improvements are suitable for Maynard Alley. The design ideas are illuminated by a wide range of case studies, including alley reactivation best practices, pedestrian-level street design, human-scale design, and culturally sensitive design. The design manual is tailored to Maynard Alley, but it also provides suggestions on physical improvements for other alleys with similar context and scale.

**Interviews**

In order to get a comprehensive understanding of the condition of the built and social fabric of the block where the alley locates, information from people who are familiar with the place because they live, work, own property, or own business in that block would be necessary in supporting information gathered through site surveys and data searching. Ching Chan, the Design Lab Coordinator at IDEA Space, is my lead contact to the neighborhood and the Maynard Alley Revitalization Project, who provides an initial list of contacts as potential participants and refers me to those participants for interview. The ideal group of interview participants would include business owners, residents, property managers or owners, or leader of community-based organizations.

The interview consists of two parts: the questions and walk tour. The interview questions are in an open fashion that encourages interviewees to share their knowledge and
experience of the historic information, current situation, and user experience in Maynard Alley. Planners and developers would have additional questions about their visions for future development and alley improvement in the neighborhood. Probe questions are also designed to trigger thoughts when the question itself is not self-explanatory enough. After the question session that takes 20-30 minutes, the interviewee will be asked if he/she is willing to offer a walking tour of the alley, during which they would associate information or memories with the physical features and elements. The interview contents are listed in Appendix A. The result of the interviews would be recorded in words or on map, which would be integrated into the site analysis part of the thesis.

As it is difficult to reach out to residents and property owners of some of the adjacent buildings within the time frame of the thesis, only four interviews are conducted. However, these four interviews have already provide key information and help ground-truth what is known through site survey and information gathering.
Figure 1-2 The approach taken
Chapter 2 is an effort to understand the nature of the alley space and the spatial characteristics of an alley space with good quality. However, there are few literatures focused specifically on the physical aspect of alleys. Research emphasis is placed more on streetscapes a similar type of public space with alley. The topics of literatures selected for the research include public space, streets design, façade, intimate space, and human scale design. The literatures are organized into three general categories. The first category includes studies on the nature of public spaces, which is often interpreted as the space between buildings. The second category contains literatures that interpret the wall as a transition and media, and abstract it as a prototype for design. The third category introduces works with a focus on how to measure the quality of a public space.

2.1 Space and Life between Buildings

Ellis (1986) tells the story of a morphological relationships between the buildings and the streets, the functions of streets, and the negative and positive scenarios when considering how the configuration of the street is defined. The fundamental relationship between the built and the open can be abstracted as “solid” and “void”, and the street can be seen as the “void,” defined by fractions of building facades. This “structure of spaces” functions not only as road where traffic continuously flows, but at the same time as “elongated courtyard” that implies enclosure. When considered an entity with volume, the street differentiates itself from other spaces in the city, and the façades are more likely to be belonging to the street rather than the interior spaces.
From a similar perspective, Schumacher (1986) abstracts the space between buildings as “configuration” that is defined by abutting vertical surfaces, and that it should be better understood and carefully manipulated. In his analysis, he first pointed out the fact that the interior environment and the channeled movement in the exterior environment are easily understandable, while in a repressive outdoor environment, the rest of public open space is often an undefined void, the form of which is hardly perceived as meaningful, thus leading to no specific social activities. In this context, he provides insights on how the understanding of space can be extended to the public realm. On one hand, he argued that the building itself is considered to possess a territory around it, and an effective “ground-level land-use distribution” which would sponsor outdoor public activities. On the other hand, the concept of “ambiguity” is proposed, referring to the shared space that is neither absolutely private or absolutely public, but a transition in between where pedestrians are free to access without ownership or allowance. He further points out that “ambiguity” is achieved by adding “extension and subdivision” to the existing understanding of the open as linearity, which implies the importance of street design that creates well-defined yet interdependent spaces.

Different from the literatures above that try to abstract a prototype of the space between buildings and discuss its relationships with other qualities of the adjacent buildings, Ford (2000) gives a more descriptive historic overview of the physical evolvement of the space between buildings in Western cities and the actual elements that promote a better social environment. By case studies combined with historical research, he identifies physical elements that establish identities in the exterior spaces of the buildings. First, he points out the importance of intensity of uses along the street, where large numbers of small storefronts, doors, and display windows foster good connections of activities between the interior and the exterior. Moreover, a transition that is defined by physical design elements is critical in establishing the actual connections in a smooth way, such as the porches, steps, and balconies. Second, he emphasizes the significance of the existence of a recognizable territory which he refers to as a “special-purpose activity zones”, where the functions in the buildings can be enhanced. This is done through an intentional expansion of the
### Three types of outdoor activities

<table>
<thead>
<tr>
<th>Necessary Activities</th>
<th>Possible activities in general outdoor spaces (Gehl 1987)</th>
<th>Possible activities in alleys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to school or work</td>
<td>Going to work or home if entrance only facing the alley</td>
<td>Everyday services if there are storefronts, such as grocery and laundry</td>
</tr>
<tr>
<td>Shopping</td>
<td>Collecting garbage</td>
<td></td>
</tr>
<tr>
<td>Waiting spots for transit or people</td>
<td>Maintaining infrastructure</td>
<td></td>
</tr>
<tr>
<td>Running errands</td>
<td></td>
<td>Going to work or home if entrance only facing the alley</td>
</tr>
<tr>
<td>Distributing mail</td>
<td></td>
<td>Collecting garbage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintaining infrastructure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Logistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional Activities</th>
<th>Possible activities in alleys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a walk for recreation</td>
<td>Going to work or home if entrance only facing the alley</td>
</tr>
<tr>
<td>Standing around</td>
<td>Collecting garbage</td>
</tr>
<tr>
<td>Sitting</td>
<td>Maintaining infrastructure</td>
</tr>
<tr>
<td>Sunbathing</td>
<td>Logistics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Activities</th>
<th>Possible activities in alleys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children at play</td>
<td>Gathering for greetings and conversations</td>
</tr>
<tr>
<td>Greetings and conversations</td>
<td>Seeing and hearing other people</td>
</tr>
<tr>
<td>Communal activities of various kinds</td>
<td>Communal activities such as parties, workshops, shows, concerts, presentations, sport activities, games et al.</td>
</tr>
<tr>
<td>Seeing and hearing other people</td>
<td></td>
</tr>
</tbody>
</table>

Indoor spaces to outdoor, in which case businesses, such as newspaper stands, book stores, flower shops, cafes, grocery stores, and clothing emporia, take up spaces outside the buildings and decorate the street by setting up fences, stands, potted plants, and lighting fixtures. Though it seems to be perfect, Ford takes a conservative attitude for it is hard to achieve without the support from the municipality for permits, license, and streamlining.

The space between buildings and the social life it supports are closely related and interdependent. No literature talks.
about space without a discussion of the activities. However, Gehl (1987) takes a direct look at the activities at the first place, and from that perspective develops his systematic approach of studying space and life between buildings. He defines life between buildings as a self-reinforcing process, where someone starts doing something, leading others to join in. Table 2-1 lists the three types of outdoor activities categorized by Gehl and the applications to alley spaces, while Figure 2-1 represents the quality of outdoor spaces and the rate of occurrence of the three types of outdoor activities. He argued that the physical environment has a varying impact on the level of liveliness. He pointed out that necessary activities include those that are everyday tasks and require the least amount of participation, thus are independent of the exterior environment. In comparison, the optional activities are more likely to require the optimal conditions, among which whether the place is inviting is a key factor. The social activities require the commitment of a certain number of participants and rely heavily either on program planning or on the close social relationships of the everyday users. As a result, the quality of space is not as important as for optional activities.

2.2 Wall/Interface/Façade: A Potential Subject for Design

Prototype

The walls of buildings not only define the territory of the interior functions and activities from a perspective of architectural design, but are also something that defines the territory of the exterior; something in between. There are various ways to name this entity that represent various perspectives on how the wall functions in the urban area. The wall is referred to as a streetwall because of its ability to define the streets. It is an interface that connects and displays indoor and outdoor activities, and a façade that contains the physical characteristics and pattern of the exterior surface. Similar to the street, the alley is also defined by the walls of the buildings around with a variation of the width. However, the discussion around the wall included in this thesis is not focused on the actual width of the street, but rather the wall itself and the territory that it includes on a block scale.

The wall as an edge

Edge is one of the most recognizable characteristics of the wall, but it is a more abstract one rather than the image of a...
concrete line that differentiates public from private and indoor from outdoor. Its level of intensity varies according to the degree of understandability of the form, and it often possesses a horizontal “zone” rather than a single line, and a vertical “zone” rather than the surface. According to the four roles the streetwall plays in between the buildings and the streets provided by Scherr (1992), the edge of the wall supports its function as “transition” and “internal conditioning”. Transition is considered to be the act of entry, as well as the quality of an entity or space that acts as the threshold where one may have sequential experience of walking through, with the change of light, noise, activities, and so on (Scherr 1992). This transition is important so that one does not have to experience the abrupt shift between the buildings (which is more structured and intimate) and the city’s open space (which is more loose and random). Interior conditioning, on the other hand refers to the role of the streetwall to enhance the relationship between the interior and the exterior, which leads to a conceivable “habitat zone” rather than a “a constricted edge”

When talking about “edge”, a consensus can be found among literatures is that the edge should be carefully defined and easily comprehended in order to enrich the experience of linearity that is often unconsciously conceived by users on the streets. When a user is able to perceive the street as a figure in a short time, the “sense of enclosure and orientation” would be better promoted and the “territory of public realm” would be better delimited as well as the vertical surfaces abutting the immediate area (Schumacher 1986). Bentley (1985) interpreted the significance of a well-designed and easily understandable built environment as something that maximizes the choices of people. In his argument, the wall acts not only as the physical fabric, but also as representative of “the way it is managed that sets constraints on what you can and cannot do”.

As is mentioned above, an edge with a preferable quality is not a constricted line or surface, but a “zone” or “buffer” that is full of potential, especially concentrated on the ground level supported by many doors, display windows, porches of restaurants, and outdoor café or dining areas. Such quality is sometimes defined as “soft-edged”. Streets with soft-edge provide possibilities for “transient and stationary” activities, and create “a gentle flow of life between public and private spaces”, while hard-edged ones are more likely for “brief comings and
goings”, which take a considerable proportion of the public activities in the outdoor area in the multistory buildings (Gehl 1987). To differentiate soft from hard, Gehl (2010) provides a framework consist of measurements such as scale and rhythm, transparency, appeal to many sense, texture and details, mixed functions, and vertical façade rhythms.

Another similar quality to the “soft-edge” is permeability. Bentley (1985) considered the access from public to private as limited, thus making permeability a “visual concern” for the exterior activities. He argued that the visual permeability between public and private has a significant impact on the public realm, and the degree of permeability should depend on the degree of privacy, which is heavily related to the use of the indoor space. Besides, physical permeability created by entrances to the buildings largely enriches the public life by increasing the “level of activities around the edges”, especially at the back of the buildings. He also pointed out that negative effects of permeability to the private realm could be reduced through design control.

“When a conscious effort is made to relate building facades to the public space thereby defined, the perception of that space as an outdoor room is further intensified.”

Thomas Schumacher
Buildings and Streets: Notes on Configuration and Use
The wall as a surface

It is easily recognizable that the wall seen from the street is a surface with a wide range of details of physical elements, including what’s presented by the indoor activities. These elements are aligned along the pattern of the wall, composed of the façades of buildings after building. The presentation and arrangement of these elements give clues to people on the street who associate certain possible uses or activities with the form of the building. These elements include the vertical and horizontal rhythms, windows, doors, ground level details such as furniture, signage, and infrastructures, and wall details such as materials, colors, and patterns (Bentley 1985). Being concrete and measurable, these elements are also manageable through legislation for a better and more informative design framework or process.

The surface as a display also implies its role in presenting “narrative content”. Architecture languages, the elements mentioned above, can be the carrier of the content expressed by the façade as a whole, establishing associations to the “cultural characteristics of a particular place or time” (Scherr 1992). The façade is the carrier for another form of presentation through the unconscious or intended expression of everyday life, cultural identity, or resistance, with initiatives by individuals or groups. By adding the dimension of time, the changes from stratifications on the surface. The contrast between different surfaces that form a continuous streetwall tells the story of the economic and social changes on a single site. The streetwall at any time bears the responsibility to connect adjacent forms and uses that are disparate, unrelated, or even incompatible (Scherr 1992).

Design method

Scherr (1992) provides a typomorphological analysis as a refinement of the descriptive and theoretical method that explores the potential of the streetwall and various strategies for designing the form of the edge. By thickening the streetwall into a zone, a wide range of needs and implications that cannot be fulfilled within the framework of two-dimensionality get responses from the well-defined zone. The zone possess volume that allows multiple roles in enhancing connections between the public and private with varying degrees of enclosure, privacy, and narrative contents”, and it is limited
within the line of property where the building stands. These roles are categorized as typology of streetwall and implications of characteristics of the form at the same time, including additive, subtractive, layering and contextual relationships.

2.3 Quality of Space: the Method of Measurement

Quality of space is a concept that represents the awareness of the importance of good design. The quality has multiple dimensions including the physical quality of space, the atmosphere and identity a space expresses through its arrangement and representation. Quality of space not only means space with good quality, but also the method to measure what is good and how to make that a reality. An alley space, even underutilized and deserted, has its own quality that has the potential for multiple uses. A more urgent issue is how to improve the physical environment of the alley space where negative qualities exist, and trigger liveliness that would in turn foster better quality of space. The literatures included in this section provide different perspectives of the measurement of quality and the method to achieve it by discussing various types of open spaces.

Perceiving public space in conjunction with the buildings, Gehl (1987) argues that a good quality of space is to assemble rather than to disperse, to integrate rather than to segregate, to invite rather than to repel, and to open up rather than to close in. He underlines three points that support uses to be sited close to buildings. First, there should be easy access in and out the buildings without any additional layers of space, which impairs the legibility of the space, such as a corridor or a second door between public and private spaces. Second, there should be places to gather and sit in front of the entrance door to support public life between buildings. It should be a place protected from rain and wind, and a place that has a good view of the street. Last but not least, there should be something to do or work with directly in front of the buildings. These three points resonate with how public life on a daily basis can be supported in alley space, where accesses should be easily comprehended and transparent, and the outer spaces should be designed in a flexible fashion to support individualization.

Another quality for a successful public space is safety, which is fundamental from a user’s perspective and determines whether a space will be actively used or not. Jacobs (1961)
proposes the concept of “eyes on the street”, suggesting that neighbors, together with strangers, possess a collective power of surveillance, which is not structured, but rather casual and incidental. The more “eyes one the street”, the safer the public space will be, which indicates that a place is safer by gathering people together rather than dispersing people away. Jacobs also lists three qualities that makes a street safer: a clear definition of public and private, intensity and diversity of uses, and the degree of pedestrian activities. Newman (1996) used the term of “defensible space” to emphasize the role of the ability to claim the space around homes in creating a safe living environment. This suggests that the degree to which people in the buildings are willing to and able to use the space would impede unwanted activities. Another important concept related to public safety is the “broken windows” by Wilson and Kelling (1982), who point out that “untended properties” lead to “untended behavior” that takes over the control of the public space from the community. This serves as justification for improving the overall physical quality of the alley.

In addition to the discussion of public life and public safety, there are more literatures that define good quality from a unique perspective and develop mature frameworks to measure the quality and design of the space.

Bentley (1985) believed that the quality of space has an impact on how the space can be used, and defined the kind of built environment that provides “an essentially democratic setting” as “responsive”, where the degree of “choices” available is maximized for individuals. By adopting a typological approach, he generalized seven key qualities that enhance the responsiveness of the built environment, or in other words, affect choice. Based on this framework, Bentley created a visual-heavy design manual that illustrates how to create responsive urban spaces through a detailed morphological analysis on scales that range from room to neighborhood. Using various representation tools, such as charts, diagrams, sketches, and architectural drawings, he places considerable emphasis on the relationship between public life and urban design elements, such as layout, scale, arrangement, connections, and façade. Besides form, the economic feasibility and equity issues are also considered key elements that support responsive environments. Table 2-2 shows the seven qualities.
Table 2-2 Seven qualities, their significance, and the physical elements included; Proposed by Bentley (1985)

<table>
<thead>
<tr>
<th>Quality</th>
<th>How it affects choice</th>
<th>Physical Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permeability</td>
<td>It affects where people can go and cannot go</td>
<td>• Visual and physical permeability through the public/private interface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Moderate to small scale block sizes and street scales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Enhanced links and routes that relate different spaces and uses</td>
</tr>
<tr>
<td>Variety</td>
<td>It affects the range of uses available as to both type of uses and time of uses, range of experiences of the physical form and the meaning behind.</td>
<td>• Variety of types and forms of buildings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mixed uses that are economically feasible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relating incompatible uses</td>
</tr>
<tr>
<td>Legibility</td>
<td>It affects whether the users can easily comprehend the choices offered by the built environment.</td>
<td>• Lynch’s approach: the comprehensive mind map of nodes, paths, landmarks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Human perception when walking along a path: path enclosure, spatial definition, sequence</td>
</tr>
<tr>
<td>Robustness</td>
<td>It affects the degree to which a given place can be used for multiple purposed.</td>
<td>• Active building fronts: small shops, residential entrances, front yards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A soft or flexible edge of the space that can be achieved by level change, horizontal distance, and edge shapes, et al. The soft edge can be terraces, display areas, arcades et al.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shared streets for pedestrians and vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Furniture and installations designed for multiple form of activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Microclimate</td>
</tr>
<tr>
<td>Visual Appropriateness</td>
<td>It affects the degree to which people can easily be aware of the choices provided through the detailed appearance of the built environment.</td>
<td>• Contextual cues: visual elements representing the relationship between the new and the old, including materials, windows, doors, ground level details, vertical and horizontal rhythms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use cues: visual elements that invoke association from contextual cues as to how the space can be used.</td>
</tr>
<tr>
<td>Richness</td>
<td>It affects the choices of sensory experiences.</td>
<td>• Visual richness, which can be affected by time, distance, materials, and visual contrasts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Non-visual richness, including the sense of motion, smell, hearing, touch, sight.</td>
</tr>
<tr>
<td>Personalization</td>
<td>It affects the extent to which that people can make personal changes to the built environment.</td>
<td>• A buffer zone that links different people’s domain, where the values of a person or a group are present.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Windows and balconies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The appearance of external surfaces</td>
</tr>
</tbody>
</table>
Focusing on how pedestrian-oriented urban environment can effectively support social life, the quality of space is interpreted by Caliandro (1986) through a comprehensive analysis of the built and the open, in which context the ideal or optimal combination of characteristics is replicable. He places considerable emphasis on “recognizable and identifiable order of streets” that would support pedestrian-level activities in the public realm. He also points out that these pedestrian-oriented characteristics should be coupled with a consideration of the building types. In a word, the pedestrian context and the buildings are interdependent, which is expressed through the descriptive and analytic methodology he developed when taking a survey of the American street types to explore the potentials and issues for a pedestrian-oriented city (Table 2-3).

A special focus on the quality of street design is fully interpreted in the Great Street by Jacobs (1995), who identifies eight qualities that will foster public life on the streets, which in turn support a better quality of the streetscape in a non-physical sense. The first quality is that the street should be designed to be safe, pleasant, and enlightening to invite more walking for leisure. Second, the physical comfort should be ensured for pedestrians. There should be places open to sunshine as well as shades. There should be shelter from wind and rain. The third quality is a well-defined edge, which is the essential element for creating a sense of place. The fourth quality works in a way to engage the eye, which requires that the eye-level view be interesting in details and appropriate as a whole. Transparency is another quality that establishes connections between pedestrians and the indoor activities. The importance of storefronts, display windows, and welcoming doorways cannot be emphasized enough. Complementarity is the quality defined as the hiding details, including materials, size, cornice lines, and rhythms that influence how the built environment is perceived. Finally, the quality of construction and maintenance are important to provide basic needs in a public setting, such as cleanliness and smooth surfaces.
Table 2-3 Analytical framework of pedestrian-oriented city proposed by Caliandro (1986)

<table>
<thead>
<tr>
<th>Analytic Categories</th>
<th>Contents</th>
<th>Elements/Typologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>General built from in terms of dominant land use.</td>
<td>• Scope of goals: range of activities (type and time)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intensity of goals: proximity of uses, and the level of understandability of choices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Context movement: available modes and choices for mobility and accessibility</td>
</tr>
<tr>
<td>Built-Form Characteristics</td>
<td>Ground level analysis of built form and open spaces using figure/ground diagrams</td>
<td>• Spatial hierarchy: street types and spatial distribution (sections and mapping)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Enclosure: level of continuity of façades, ratio of façade height to street width, uniformity of façades</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Link qualities: degree of linearity, ability to link goals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Place qualities: the correspondence from the form of the open to the social needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pedestrian potential: ability to generate and maintain pedestrian flow</td>
</tr>
<tr>
<td>Circulation</td>
<td>The existence and intensity of different movement systems</td>
<td>• Automobile conflict: conflicts between pedestrian and automobile flow + parking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Local traffic: pedestrian-dominated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• District traffic: automobile-dominated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pedestrian flow: connections to goals</td>
</tr>
<tr>
<td>Active Setting</td>
<td>Public spaces for social interactions</td>
<td>• Activity types: group/individual activities, structured/random activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Activity location: distribution of activities</td>
</tr>
<tr>
<td>Private/Public Use Boundary</td>
<td>The interface between the public and private domain</td>
<td>• Public-use boundary: how it is defined</td>
</tr>
</tbody>
</table>
Chapter 3 is an output from a series of literature studies and case studies. The framework is proposed with the purpose of guiding planners or designers to understand the spatial characteristics of an alley space, and how these relate to the social, cultural, and built context on a larger scale. The framework provides a typomorphological method to understand how the alley space is formed and how different compositions affect the experience of users in different ways. It was not specifically created for the Maynard Alley project, but for a wider use to understand alley space with various context and scale. The framework has four sections: the criteria, identification of type by context study, measurement of scale, and the decomposition of alley space. The criteria section sets goals for any physical improvement of an alley space. The other sections are guidance for the analysis of Maynard Alley in Chapter 4. Furthermore, the fourth section in the framework sets the structure of the design manual in Chapter 5. By decomposing the alley into three spatial aspects, potential physical improvements in Maynard Alley are categorized into the three aspects.

3.1 The Criteria

Based on the literature studies on quality of space, especially under a street design setting, and the case studies of best practices on alley project or plan, nine criteria are created to measure the current physical condition or potential in fostering an intensively used space on a daily basis, as well as a flexible space compatible for multiple functions. These criteria
reflect the expectations for a high-performing urban alley as a neighborhood with unique history and culture. These criteria should be kept in mind when conducting the site study and creating a design manual for Maynard Alley. Each improvement action should achieve at least one of the criteria. These nine criteria include safety, cleanliness, legibility, permeability, visual enjoyment, flexibility, friendliness to daily uses, sense of ownership, and cultural identity. The nine criteria are arranged below from very basic to higher expectations.

a. Safety
A safe alley space discourages illicit activities and encourages more pedestrian travel and lingering. Safety means adequate night lighting and well-managed garbage areas. It also means the safety one feels in the alley by relaxing the pressure of linearity and narrowness, making the space transparent and comprehensible, and adding eyes on the street.

b. Cleanliness
A clean alley is tidy clean, and free of odor. The garbage bins should be located and managed carefully.

c. Legibility
Legibility refers to the quality that makes a space where one can easily understand the forms and the uses. A legible alley should have the ability to inform where it starts and ends, what is for public or private use, which spot is appropriate for standing, sitting, walking, cycling, or driving.

d. Permeability
Permeability refers to the ability of an alley to make connections between the indoor and outdoor spaces and activities. A permeable alley draws pedestrians into the buildings, and encourages the extension of the interior activities.

e. Visual enjoyment
The visual enjoyment is the richness and appropriateness one experiences in the alley. It refers to the intuitive image and observation of details that provide a sense of harmony as well as attractiveness. Having visual enjoyment also means understanding more about what the space is for, and what is expressed through the built environment.

f. Flexibility
A flexible alley space is full of possibilities for different uses and users. The capacity of a flexible alley space is high, so that a section of the alley can be shared. Flexibility also refers to a flexible zone around the wall that allows some ambiguity in private and public uses, so that they are not simply defined by the property line.

g. Friendliness to daily uses
An alley friendly to daily uses is a space that is necessary and closely related to the daily life in the buildings. It may provide daily services such as garbage and delivery. There may be storefronts that attract customers on a daily basis. It may also be the “lobby room” connecting the interior space to the main street for adjacent residents. In this case, it acts as a transition from private to public that a street is not able to fulfill. In addition, daily foot travel in the space can also trigger public life in the space.

h. Sense of ownership
A sense of ownership refers to the ability to identify a private territory and express the identity of the direct users of the alley space. A strong sense of ownership means a strong control of the space by the direct users, which can support more daily uses.

i. Cultural identity
Cultural identity refers to the historic, social, and cultural fabric that is rooted and expressed through the built fabric around the alley space. The space should be culturally sensitive and celebrate the neighborhood characters through physical elements, such as façade, artwork, and signage.

3.2 Identification of Type by Context Study
An alley space is defined by the built fabric around it and often varies in scale. Surrounding use and function, scale of the block, and the characteristics of the neighborhood distinguish one alley from another. The process to identify an alley space as a distinct type is to learn the context of the alley on the block and neighborhood level. By identifying the type, one can understand the quality and potential of an alley space and what improvements might work according to the context.

On the neighborhood level, there are two group of elements that make an alley different:
a. Overall neighborhood characteristics, including neighborhood history, cultural identity expressed through the built environment and neighborhood process, and the level of awareness/interests in public space or alley reactivating projects.

b. Location of the alley in the neighborhood, especially the connectivity to the neighborhood resources, such as transit, business core, public spaces, and other public services.

On the block level, there are two elements that set a unique context for the alley:

a. Use and function of the surrounding built fabric, which can provide information such as the types and density of potential users, existence of storefronts, level of connections, the sense of closure, and time of uses.

b. Block size, which is determined by the historic grid from which the city grows. An historic alley in the Seattle Chinatown has different scale, use, and level of liveliness from an alley in the San Francisco Chinatown or New York City (Figure 3-2), for the size of the block varies, determining the size of the lot, the arrangement

These factors can be summarized as the level of attractiveness. In the Integrated Alley Handbook, the use and function of the surrounding buildings are considered factors that determine alleys that have different potentials. At the forefront of the analysis, Seattle alleys are categorized in to six types: high density mixed use, low density mixed use, nightlife district, commercial district, multifamily residential, single family residential (Figure 3-1).

Figure 3-1 Typology of alleys in Seattle proposed in the Seattle Integrated Alley Handbook (Fialko & Hampton 2011)
of the buildings, and thus the number of storefronts and entrances.

Besides the two spatial levels, an additional dimension of time is necessary to understand the uniqueness of an alley, which distinguishes alleys that are historically formed with historic buildings around from alleys that are recently formed or historically formed but are surrounded with new buildings. The historic buildings and the historic uses of the alley provide insights into how the alley can function as an active space for adjacent users. Moreover, it is more likely that the alley is in a more complex context where both the new and the old need to be expressed, and development and preservation need to be reconciled.

3.3 Measurement of Scale

Alleys are different from other types of public spaces in their scale, their unique atmosphere, and the supporting role they play in the urban area. Among these characteristics, the scale is the primary factor that creates the atmosphere and determines what types of functions it can support, such as delivery, garbage, maintenance and many other potential
activities. The fact that the alley is designed with a certain width is largely a result of the consideration for fireproofing, ventilation, and daylighting when the grid of the city was mapped. For the maximum interest in development, the buildings adjacent were built to the full envelope, defining the alley more or less a linear space. Getting to know the scale of the alley is to understand the formation of the alley, the positive and negative human experience in the space, and the potential to create a unique sense of place.

In order to understand the scale of the alley, six variables need to be measured or calculated. They are:

a. Width of the alley
   The width of the alley is measured to understand the human experience of the space and the capacity of the alley for different traffic flows or types of activities. As the pedestrian-level width of the alley may vary on a single site caused by the non-linear configuration of the buildings, the width here should be within the absolute public realm, which is limited by the rear property line of the adjacent buildings.

b. Length of the alley
   The length of the alley is another dimension to understand the human experience in the space. As the alley is mostly narrow and linear, the length of the alley may add to the pressure and dullness when walking in the alley. It also influences the range of view of the alleywalls.

c. Percentage of closure
   The percentage of closure is measured as the ratio of the length of existing alleywall on one side to the length of the alley, which represents the existing sense of closure in the alley. It should also be explained if there is a fraction in the alley where there is no wall on either side.

d. Height to width ratio
   The ratio of building height to width is a critical indicator to the human experience of the space, which together with length of alley and percentage of enclosure, determine the level of introvert and mysteriousness in the alley, and the range of details that can be sensed. A high ratio may indicate a lack of safety in the space.
e. Depth of surrounding buildings
The depth of building is measured as the distance between the street wall facing the parallel street and the alley wall facing the alley, which can be used to determine the potential of activities that has a direct connection to the alley from the adjacent buildings or even the parallel and perpendicular streets.

f. The view shed
Moreover, a proper range of view can also make the place conceived as being safer. The view shed is defined in this thesis as the range of view one can see from an alley space. It is measured by both the human field of view and the dimensions of the alley, especially the length and width. The range of view determines the level of details that is visible and the intuitive capture of the space. Theoretically, the narrower the alley, the more details one can see. Moreover, the further away the object is, the larger portion of an object can be seen (Figure 3-3). Specifically, when in the narrow and linear alley space, one can see details of the eye-level portion of alley wall that is near, and can capture the whole picture of the alley walls that are far away. As a result, there are two types of view shed: the view shed with detailed and the view shed with the complete picture.
3.4 A Decomposition of Alley Space

Though varying in context and scale, alley space is similar in its composition. Intuitively, the space is defined by the three surfaces: the ground and the building walls on both sides. These surfaces are made up of detailed elements that have multiple variations. These elements can be improved for a safer, cleaner, and livelier alley. In order to have a systematical overview of what the elements are, and a better understanding of how they affect the experience in the alley, the alley space is decomposed into three spatial aspects, representing three types of force from the built environment on user experience of the space. These three aspects are: a. the ground; b. the extended ground; c. the wall (Figure 3-4).

The ground – the passage and the yard

The ground is territory defined by the foot of the building. It can be in or out the property line. It is also the surface where people or their transportation tools pass through or stay around. These happen at different times, with different frequencies, at different speeds, and with different purposes. It is a passage for all kinds of flows, where pedestrians, cyclists, and drivers share the same street section and find their way to

Figure 3-4 The decomposition of alley space into three aspects
the main street by the two entrances. At the same time, it has the potential as a yard for activities and events, where people enjoy the public social life. The ground should be designed in a flexible fashion that is able to relax conflicts of the dynamic and the static, and the conflicts of flows of different directions. It should also be tolerant for a variety of users and uses.

- **The configuration of the surface:** The foot of the alleywalls defines the configuration of the surface. The configuration also defines the territory that is usable for public without invitation or allowance. The configuration should be easily conceivable without dark corners for people to hide.
- **Pavement, painted line or temporary installations:** Make use of these elements to define spaces for different uses and users. The three elements decrease progressively in the level of temporality.
- **The “wasted” space:** Make use of the space around the foot of the wall left by the default distance that one kept when walking along a wall.
- **Green space:** Leave space for plants and green infrastructures.
- **Garage entrance:** Pay attention to the location and design of the garage entrances to relax the conflicts between pedestrian and vehicles.
- **Alley entrances:** As a passage, the alley also connects to the main street with entrances on both sides. The entrance should be carefully defined to attract attention and create the sense of invitation.
- **Alley furniture:** Alley furniture is not an indispensable element for the narrow alley space. It can be movable or flexible, and have multiple functions.
- **Garbage:** The garbage should be located and managed to alleviate the visual and non-visual disturbance it currently creates.

**The extended ground - spaces connected by the permeable edge zone**

The extended ground is the conceivable continuation of the surface of the alley space, which is composed of the alley ground, the alleywalls, and the interior spaces. On the extended ground, the section of the alleywall at eye level act as a crucial element that provides a well-defined transition and connects indoor and outdoor activities. The transition and connection
have two directions, the inward and outward. On one hand, the wall should provide visual and physical connections to people on the alley, so that people who are inside are visible, conceivable, and accessible. On the other hand, the wall should provide possibilities for the extension of life or activities to the exterior space, so that the direct users get the sense of ownership. Under certain occasions, it is even possible to take up the public property temporarily for the extension. The transition and connections have three levels that increase progressively in depth: visual, direct use, and indirect use. The visual level refers to transparency of the wall in both directions. The direct use level refers to the connections between the alley ground and the interior spaces that are directly adjacent. The indirect use level refers to the connections between the alley ground and interior spaces not directly adjacent.

- The direct and indirect connected space: the edge zone formed by the wall and the territory it defines connect alley space to the indoor space. The space can be directly or indirectly connected. It is important to identify the uses of the spaces and the depth and height of the connection.
- Entrance to workplace or home: The existence of entrances is based on the existence of living and working space adjacent to the alley, and the requirement of the most direct connections. The entrance should be easily identifiable and transparent. The entrance has its own territory in control, which is a mix of allowance for public use and a sense of ownership.
- Storefront and display window: The storefront supports uses on a daily basis and attracts users from other places. The display window provides visual interests and connections.
- Exit-only door: The exit-only door serves as secondary exit for businesses or homes that already have main entrances facing the main streets. The exit is perceived as a far less positive space connected by long corridors and secondary stairway. The issue is how to encourage more uses of the exit-only doors.
- Set back: Though it is not economically preferable, the foot of the wall can be set with a distance to the property line, leaving spaces for other elements with environments or social value.
- Porch: The porch acts as the in-between space between the
absolute exterior and interior space. It is also a transition from absolute public to private. Porches adjacent to businesses provide spaces for extension of the indoor activities.

- Canopy: Canopies are important elements that can help define the territory of the active sections of the alleywall, such as entrances and storefronts.
- Steps: Steps can help define the space that belongs to the building when the transition from public to private is too abrupt. The elevation differences from indoor to outdoor spaces add some privacy to the indoor activities.
- Stairway and corridor: Stairway and corridor should be avoided when connecting direct indoor uses to the alley. However, it also serves as the connecter to the indirect indoor uses.

The wall— the visual display

Except for the elements that allow for indoor and outdoor connection, and private and public transition, the alley wall acts as a display of visual information. Elements ranging from the material to the style of the window tells the story of the building and neighborhood. The arrangement of these elements not only affects the visual appropriateness, but also the relationship between the new and the old. Elements such as windows and balconies reinforce the indoor and outdoor interaction. In addition, many other objects can be attached to the wall to create a safer and more interesting space.

- Windows: The number, shape, size, and style of the window provide information on the uses of the interior space, and the history of the building. The window also allows for extra eyes on the street. One issue for windows in alleys is the lack of privacy because of the small distance between the two walls. Another issue is how the alignment of new building windows corresponds to the rhythm of the old walls, and how the material, size, and shape contrast with the old.
- Balconies: Balconies also provide extra eyes on the street. It is also an extension of the interior space that allows for personalization. The issue is that the projection of the balcony should be within the property line, which requires intentional design of the wall.
- Material and color: The material and color are parts of the
details that can be seen in the alley space, and part of the intuitive image one captures. The material and color, together with the alignment of other elements help determine the overall impression as harmony or contrast between buildings of different age.

• Rhythms: The rhythm of the alleywall affects the visual appropriateness. Both a sense of continuity and interval should be added to the arrangement. The parallel lines make the space deeper, while the vertical lines alleviate the pressure in the alley. Visual stimuli are also important to make the space more interesting.

• Lights: Lighting improvement is one of the most critical tasks in an alley project. Lights can be attached to the alleywall and other fixed furniture in the alley. Lights can be combined with signage. Lights can also be artworks.

• Signage: Signage is important in identifying places. Not only stores and offices, but also homes need signage for a sense of ownership as well. Signage at night can provide lighting.

• Artworks: The alleywall is a good place for artworks and installations, which provide opportunities for the community to express their values and concerns. Artworks also provide good reasons to stay and appreciate the creativity.
Chapter 4 is a thorough analysis of Maynard Alley and the social, cultural, and built fabric on the block and neighborhood level. The framework in Chapter 3, which requires context study, scale measurement, and spatial analysis on the three decomposed spatial aspects, guides this analysis. This chapter also provides a basis for the design manual created in Chapter 5. The site study informs what can be effective physical improvements and design suggestions for alleywalls, taking into consideration the characteristics of the site. This chapter is structured in five sections: context of the neighborhood, history of Maynard Alley, the built fabric on the block level, the analysis of Maynard Alley, and the take-away from this analysis, including issues, opportunities, and visions.

4.1 C-ID: Neighborhood history and context

Maynard Alley is located in the core of the Seattle Chinatown-International District, lying south of the Seattle Downtown business core. A major proportion of the 40-block neighborhood is within the boundary of a historic district on the National Register of Historic Places (Chin, 2001). The neighborhood serves as the “waystation” for immigrants, and it is home to Asian American residents and businesses (Abramson et al. 2006). As the commercial, social, and cultural center for multiple ethnic groups, C-ID is still a source of identity and famous for its multicultural vibrant, rich history, abundant market and food, strong community organizations, housing affordability, and unique architecture and open spaces.
The C-ID is the only pan-Asian American neighborhood on the United State mainland. The history of the district is the immigration history of Chinese, Japanese, Filipinos, African Americans and Vietnamese immigrants who settled and built the neighborhood together (Seattle.gov, n.d.). The first Asian immigrants arrived in Seattle during the mid-1800s and were mostly single men, working as miner, cannery workers, and railroad workers (Chin 2001). The land where C-ID located was once a muddy wasteland, which was filled and re-graded during the city’s gigantic project in the 1990’s ("International District - Neighborhoods | Seattle.Gov" 2016). After that, the Chinese immigrants and their businesses clustered along King Street in the 1920s, and the Japanese settled to the north, Nihonmachi on Main Street (Kalthoff and Abramson 2012). The softened immigration policy brought another population boom to the district, where hotels offering single room units are overcrowded. The neighborhood suffered a major setback caused by the construction of I-5 that cut through the neighborhood, and the construction of the Kingdome on the west edge of the district. Young Chinese, Japanese and Filipino activists led protests against the disruption of the City’s major infrastructure. At the same time, many neighborhood groups started to call more attention to recognition of the neighborhood, and lobbied for low-income housing, historic preservation, and bilingual social service programs (Chin 2001, "International District - Neighborhoods | Seattle.Gov" 2016). With growing attention from the public authorities and more public funding, the neighborhood groups were able to renovate streets and hotels, build senior housing and community service center ("International District - Neighborhoods | Seattle.Gov" 2016). Together with the City’s building boom in the 1990s, the district witnessed developments that gradually changed the physical environment of the neighborhood. These changes include two stadia replacing the Kingdome, the Link Light Rail and streetcar on Jackson Street, new mixed-use development on vacant lots and renovation of historic buildings from hotel uses to subsidized housing.

Unlike many Chinatowns where the original residents and businesses serving them moved out of the area due to fast pace changes, the C-ID still keeps its physical characteristics, the people using the neighborhood spaces, and the lifestyle shared through generations. The preservation of the neighborhood
Figure 4-1 Neighborhood Context: Chinatown-International District

Selected Community Assets
1. Chinatown Gate
2. Uwajimaya Village
3. Hing Hay Park
4. SCIADA
5. Inter*Im
6. Denny Wo Community Garden
& Kobe Terrace Park
7. Wing Luke Museum
8. Chong Wa Hall
9. International Children's Park
10. C-ID Library and Community Center
11. Community Health Services
characteristics on the other hand reveals the situation of stagnation in the district. With the original residents passing away or gradually moving out of the neighborhood, the neighborhood is slowly losing its original residents. On the other hand, many of the single room occupancy in the historic hotels are no longer considered as preferred and livable housing spaces. Old hotel buildings without renovation remain vacant on their upper floors. Moreover, the joint property ownership by family associations rather than individuals add complexity to redevelopment transactions (Abramson et al. 2006).

Another critical reason for the slow changes is the rather strict limitation on the physical changes to the neighborhood from the City. The International Special Review District and Board, that contains the Seattle Chinatown National Register Historic District, was formally established by the City through a 1973 ordinance aiming at neighborhood preservation and revitalization ("International District - Neighborhoods | Seattle.Gov" 2016). Changes in building use, changes to the public right-of-way, changes to the exterior of buildings, and new development must receive a Certificate of Approval from the Director of the Department of Neighborhoods with the review and recommendations from the Special Review Board (Kalthoff and Abramson 2012). The Design Review Guidelines were adopted in 1988, and the Secretary of the Interior’s Standards for Rehabilitation introduced by the National Park Service is another limitation to how the historic buildings can be changed in order to earn rehabilitation tax credit.

The multicultural nature caused decades of debates, which also hindered the development of the neighborhood. The cultural differences among the various ethnic groups caused contests of identity, and conflicts over the meanings and uses of places within C-ID, causing problems “achieving consensus and mobilizing people” to address the district’s issues (Abramson et al. 2006). There have been debates on what the neighborhood should be called and what area can be tagged with which name since “Chinatown” was removed from the district name by Mayor William Devin in 1951 (Abramson et al. 2006). Meanwhile, the ethnic groups in the neighborhood, with the support of neighborhood-based non-profit agencies, have tried hard to work together on the community development process. Along the way, more and more people realize that the distinct identities can co-exist without setting specific boundaries for
each ethnic group, and the pan-Asian movement has more power in attracting attention, support, and resources (Abramson et al. 2006).

4.2 Maynard Alley: History and Context

Maynard Alley in history

Maynard Alley is a north-south alley passing through two blocks surrounded by S. King Street and S. Weller Street to the north and south, and Maynard Ave S. and 7th Ave S. to the west and east, respectively. It is one of three historic alleys in Seattle, including Canton Alley in C-ID and Post Alley in Pike Place Market. This thesis focuses on the northern part of the alley, which has a richer background, receives more public attention, and is closer to the district’s core. The northern part of Maynard Alley was established in the 1900’s when six adjacent buildings were built out of the seven parcels on the block, and the historic buildings remain standing today. It is the only alley in the neighborhood whose scale and percentage of closure remain the same since its establishment. In the nomination of the historic district to be on the National Register of Historic Places, the “Period of Significance” was identified between 1907 and 1937. Figure 4-2 outlines the buildings established before, within, and after the period in the snapshot of 1910s and 2010s.

Very similar to Canton Alley, the adjacent buildings providing only single room units built in the 1900’s were perfect housing option for the early Asian Pacific immigrants (Chan 2015). They were mostly married male laborers who came to the US alone and sent money back to their families left behind in their hometowns. As a result, their only requirement for housing is a bed and a bathroom. Due to the limited living space on the upper floors, the alley serves as a common public space for the nearby residents, as well as a space for activities that were beyond the capacity of the single occupancy. Moreover, it is also a place that people recalled as home and associated with community memories. The Chinn family, who own the Rex Hotel and used to run a grocery store at the north entrance corner of Maynard Alley, had been residents to Maynard Alley since childhood before they finally bought a house and moved out of the neighborhood. Their home was “1,200 square feet in Maynard Alley: a tin tub, a pot-bellied stove, a clothesline stretched across fire escapes, and flowerpots decorating back-
Figure 4-2 1912, 1936, 1969 and 2016 snapshots of buildings in the National Register Historic District in C-ID. These graphics only illustrate buildings within the district. Buildings in the 1969 and 2016 snapshots are colored according to whether it was built before, after, or during the period of significance (POS, 1907-1937). The POS was identified at the nomination of the district to be on the National Register of Historic Places.

Data source: 1912 snapshot is based on 1912 Basist Map from http://www.edge-archive.com/maps/baist/Plates/23.pdf; other snapshots are based on online aerial maps from http://www.historicaerials.com/ & http://maps.google.com; the data of the built year of building is from King County Assessor (http://localscape.property/#kingcountyassessor/)
alley door” (Bock 1994). Florence Eng, the eldest sister of the eight-child family recalled Maynard Alley as a reliable community, where sometimes “eight children perched on the back-alley steps sharing a nickel ice cream cone, a few licks each (Figure 4-3)” (Bock 1994).

Over the years, alleys in C-ID gradually gave away to garbage picking, loading, and vehicular travel especially during the 1980’s when introduction of large dumpsters serving first floor businesses and the increase of automobile use accelerated the deterioration (Chan 2015). Poor lighting also led to less and less pedestrian travel, and more and more crime and illicit activities. The historic alleys, Canton Alley and Maynard Alley, were no long the same as they used to be: a shared “living room” full of daily activities. Though three buildings adjacent to Maynard Alley had major renovations during the 198’s and 1990’s, the new walk-in housing and office units facing the alley were not able to bring the historic vibrancy back. However, there was one storefront that remained open during that time; it was occupied by the Liem’s Pet Shop since 1979, which is recognized as one of Seattle alley’s monuments (“Maynard Alley | Daniel Toole Architecture & Urbanism Blog” 2016). The owner

Figure 4-3 “Florence Eng, far right, raised her four siblings and four children in this 1,200 sq. ft. Maynard Alley apartment. Sometimes she treated them to a nickel ice cream cone that they shared... while perched on the steps.” Photo taken in 1939. Source: Bock, Paula. 1994. “Winding Down King Street: Who’s Left and What’s Next?” Seattle Times.
of the pet shop is a blood uncle of the children of the Woo family who own the Louisa Hotel since the 1940s. The store is where they played with their cousins. The store was recognized as the community hub of the neighborhood where residents came to visit regularly, sometimes just to say hi. The store has disappeared with the entire western wall of the Louisa Hotel, which was removed after a terrible fire on Christmas Eve of 2013. Also removed is the Wah Mee Club that was the site of the 1983 massacre. It is a memory that most of the old residents of Maynard Alley prefer not to mention. Interestingly, the site of the club has attracted large numbers of curious ghost hunters. Even today, there are people driving through to see the site, but only find a hollow space with cute panda paintings on the preserved inner wall.

Maynard Alley now remains quiet and unattended, with the 100-year-old buildings adjacent but no storefronts actively functioning. The walk-in units are mostly vacant and the backdoors connecting upper units (half of them are also vacant) are seldom used. Some of the old residents pass away, while others have moved out of the district. Original residents have envisioned the alley to be “a nice clean place for old-timers to
live a simple life” (Bock 1994). However, the block is still home to many long-operating neighborhood businesses, new and growing businesses, and low-income tenants. They are all direct users of the alley space. Maynard Alley still possesses the potential to return to the once thriving space shared by the residents and community. The reactivation of Maynard Alley would not succeed without the incremental redevelopment of the defunct building and underutilized properties, as well as the preservation of the historic cultural landscape, and a careful treatment of the meaningful but also painful history associated with the space.

Maynard Alley Revitalization Project

Alley reactivation has been on the list of prioritized improvement in C-ID’s many community and neighborhood plans over the past 15 years (Chan 2015). In the 1998 Chinatown International District Strategic Neighborhood Plan, it was emphasized to “develop active yet safe public spaces including parks, sidewalks, streets, alleyways, and parking lots.” Maynard Alley was prioritized as one of the important streetscape improvement projects in late 2009, provoked by the King Street Visioning Project (2009) with a combined effort from the community, neighborhood agencies, and professors and students from the University of Washington. The community recognized the alley as “connections” where the “real and perceived safety” should be improved (Courses.washington.edu, n.d.). However, another prioritized historic alley, Canton Alley, which received more organized power and interest, became the pilot historic alley reactivation project in the district. Canton Alley, located in the block immediately to the east of Maynard Alley block, is also the first historic alley in Seattle reactivated by community groups (Chan 2015). During the Canton Alley project, the Chinatown Historic Alley Partnership (CHAD) was founded in 2012 to bring together stakeholders who share the same goal to “clean, beautify, and activate” Canton Alley. The stakeholders included property owners, family associations, and staff from local agencies (Chan 2015).

The Maynard Alley Revitalization Project was re-initiated by the recently received funding from the National Endowment of the Arts’ Our Town grant program, which is the startup money for the design and planning phase of the improvement project.
(SCIDpda 2016). The community is now seeking a design team or professionals to develop a conceptual design that highlights aesthetic improvement, social and cultural significance, and foot travel stimulation (SCIDpda 2016). The CHAD will continue taking the leadership role in the Maynard Alley project, with the partnership of IDEA Space, who has spearheaded and kept committed and invested since the very beginning of the Canton Alley project (Chan 2015).

4.3 The Built Fabric

The built fabric refers to the buildings adjacent to an alley space and how the space is formed by them. Their history, form, and function provide information on the intensity of uses and the overall atmosphere in the block. The built fabric is also home to the direct users of an alley, including residents, business owners, and office workers.

The northern part of Maynard Alley is a mixed-use, multi-family residential and historic alley defined by the historic building in the 240 ft. by 135 ft. block. The six existing buildings in Maynard Alley block were all built in the 1900’s, when there was much construction in the neighborhood and most of the wood structures were replaced by masonry structures. The modest façade with light red bricks and metal cornices, high first floor with big display plate windows, and small and compact upper floor windows give a rich sense of history and unity. These buildings were all three or four-story workingmen’s hotels with retail space and hotel entrances facing the main street. Over the years, the retail spaces are still active, while the upper units have become vacant or have been renovated into low-income housing units. The existing buildings are all built to the full envelope with their back walls defining a 15-feet-wide alley space.

**Rex Hotel**

The Rex Hotel was historically a typical hotel building with first floor retail facing King St. and single room units on the second to fourth floors. The Chinn family owns the building. And they used to have their family grocery store, Wa Sang market, on the northeastern corner, which is now occupied by a neighborhood clinic (Bock 1994). The building is also home to two other stores, a milk tea store called Gossip Espresso & Tea and Tai Tung Restaurant, the oldest continuously operating
THE ALLEY

Ground
Fences
Alleywalls

THE BUILDINGS

<table>
<thead>
<tr>
<th>Name</th>
<th>Owner</th>
<th>Year Built</th>
<th>Present Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rex Hotel</td>
<td>The Chinn family</td>
<td>1909</td>
<td>Apartment(Subsidized)</td>
</tr>
<tr>
<td>Eastern Hotel</td>
<td>Inter*im &amp; the Chinn family</td>
<td>1909</td>
<td>Historic Prop (Residence)</td>
</tr>
<tr>
<td>Sing Keong Family</td>
<td>Sing Keong Family Association</td>
<td>1904</td>
<td>Restaurant/Lounge</td>
</tr>
<tr>
<td>Parking for Tai Tung</td>
<td>The Chinn family</td>
<td>1908</td>
<td>Parking lot</td>
</tr>
<tr>
<td>Eclipse Hotel</td>
<td>The Dong family</td>
<td>1907</td>
<td>Retail Store</td>
</tr>
<tr>
<td>Gee How Oak Tin Hotel</td>
<td>Gee How Oak Tin Family Association</td>
<td>1907</td>
<td>Apartment(mixed use)</td>
</tr>
<tr>
<td>Louisa Hotel</td>
<td>The Woo family</td>
<td>1909</td>
<td>Vacant</td>
</tr>
</tbody>
</table>

THE PARCELS

- Active streetwall
- Closed historic storefront
- Removed historic storefront
- Entrances to upper levels
- Parking entrance
- Seattle landmarks

Zoning and District Info
- International District Mixed-75-85
- Urban Center Village
- Historic District
- Downtown Fire District
- Frequent Transit Corridor

Figure 4-6 The built fabric in Maynard Alley block
Chinese restaurant in C-ID, founded in 1935. The upper floor had been vacant for decades before a major renovation in 1993, turning them into “nice clean apartments for low-income tenants” (Bock 1994). In the 1990’s the project was considered significant in a neighborhood that “lurches between fear of yuppie condos and fear that nothing will happen at all” (Bock 1994). There are no storefronts facing the alley, only backdoors for apartments and retail

**Eastern Hotel**

Eastern Hotel was designated as an official Seattle Landmark by the Seattle Landmarks Preservation Board in 1978. It is an example of the earliest typical multistory hotel apartments in the neighborhood. There were first floor retail spaces facing the street and the alley façade and single room units on the upper floors. The building went through its most recent renovation in 1998, after it was bought by Interim Community Development, a C-ID based non-profit housing developer. The project involves 46 new low-income apartments, renovated retail spaces, and carefully restored historic details, such as the wall and interior common spaces.
The building now has three storefronts facing the street: The Eastern Hotel lobby, the Eastern Café, and the Seattle Pinball Museum. There are also three walk-in loft units facing the alley, one of which is an office space occupied by the International District Emergency Center (IDEC). The other two units are now vacant.

**Sing Keong Family Association**

The Sing Keong Family Association is the oldest of the low-rise commercial buildings in the district, where there used to be three storefronts with large display windows. There have been alterations in an “unsympathetic manner using inappropriate materials” including the removal of a painted sign which had been on the southern wall since the 1930’s (“National Register of Historic Places Inventory - Nomination Form”). The original building is not built to full envelope. However, there are added structures at the rear, which serve as kitchen space to the restaurant, with three doors facing Maynard Alley. Currently the Sing Keong Society and the Honey Court Seafood Restaurant facing the South Maynard Street occupy the building.
**Eclipse Hotel**

The Eclipse Hotel is a modest three-story working man’s hotel with six active storefront bays facing Weller St. and 70 single room units on the second and third floors, which are currently vacant ("National Register of Historic Places Inventory - Nomination Form"). The Dong Family own the property. The older generation of the family are not interested in reopening the building as a “vibrant place to live and work” (Ho 2005). The five functioning storefronts are occupied by Duk Li Dim Sim, Ton Kiang Barbeque Noodle house, A&B Café, Real Home Network and J Sushi. There are currently no storefronts facing Maynard Alley, except for backdoors to the upper floor units.

**Gee How Oak Tin Hotel**

The Gee How Oak Tin Hotel is one of the earliest workingman’s hotel in the district, with two storefronts and the entrance of the Gee How Oak Tin Family Association facing 7th Ave, and 60 single room units on the second and third floors ("National Register of Historic Places Inventory - Nomination Form"). The building is home to the Gee How Oak Tin Family Association, the oldest Chinese family association in
Washington State. It has provided housing, cultural activities and other services to its members since its establishment in 1900 (Data Source: Wing Luke Asian Museum). The building went through a major renovation in the 1980s, including the construction of a mezzanine on the first floor, interior and exterior alterations to the building, the change of hotel use to apartments, and the change of first floor private club to apartments (Data Source: Permit Records from Seattle Department of Construction & Inspections). The existing active storefronts are occupied by Deng’s Studio and Art Gallery and Hair to You, a barber shop. There are four walk-in housing units facing Maynard Alley, as well as a backdoor leading to the upper units. The façade facing Maynard Alley keeps its original look while the interior space and the building massing changed in the 1980s renovation.

Louisa Hotel

The 106-year-old Louisa Hotel is owned by the Woo family for more than 50 years. It is a three-story building with retail space on the first floor and single room units on the upper floors, which has been vacant for more than 50 years. The
Seattle Landmark, Bulletin Board, is located on the eastern wall of the building. The board was established in the 1960’s when there was no Chinese newspaper in the neighborhood ("National Register of Historic Places Inventory - Nomination Form"). There was one storefront facing the Maynard Alley, historically occupied by the Liem’s Pet Shop. The entrance of the Wah Mee Club was also located in the alley. The place is locally known as the crime scene of the 1983 Wah Mee Massacre where three men shot fourteen people in the basement of the building. Before the fire that damaged the western half of the building (also facing the alley) in 2013, the site was home to the neighborhood’s longest operating business including Mon Hei bakery and Sea Garden Restaurant, and associated with memories of the neighborhood’s vibrant past ("Louisa Hotel Update: After the Fire" 2014). Now the building is entirely vacant with its west wall facing Maynard Alley removed, a small portion of which was preserved for its architectural significance. The Woo family are very active in restoring the building and in other historic neighborhood business, and providing new low-income housing units through redevelopment. The property has received permits to change the use from hotel building to 85 residential units above first floor commercial space. A fifth floor will be added as well as 25 parking space below grade ("669 S KING ST" 2016).

4.4 Alley Analysis

Scales

Figure 4-14 illustrates the variables to measure the scale of Maynard Alley. The alley is 15 ft. wide and 240 ft. long. The height of buildings adjacent range from 8 ft. to 65 ft. New development in this area can be as high as 85 ft. The depth of buildings is 120 ft., which means that only a portion of the ground level in the building can be directly connected to the alley space. The height to width ratio is different at different sections. As there are two parcels without buildings and one parcel underdeveloped, Maynard Alley provides a mild sense of enclosure. If there are new developments in the future, it should be taken into consideration the change of height to width ratio in the alley. The massing and façade design should alleviate the sense of pressure and allow more light into the alley.
Figure 4-14 Measurement and calculation of the variables of scale: alley width, alley length, alleywall height, height to width ratio, depth of adjacent buildings and percentage of closure
**View shed**

As was introduced in the previous chapter, there are two types of view shed in an alley space, the view shed with detail and view shed with the complete picture. The former is the range where people see details of what’s on the alleywall. It is also the range in which to place visual stimulation and adopt the concept of permeable alleywalls. The latter refers to the range where one gets the overall image of the adjacent buildings, including the massing, color, and the rhythm of façade. Based on these parameters of field of view (FOV) and the scale of Maynard Alley, the view shed with detail and the view shed with the complete picture can be calculated roughly in the specific site.

According to the many studies on human field of view (Figure 4-15), the range of visual field of human eye is 124 degree horizontally, and 120 degree vertically. There are two ranges within the limit that matter to pedestrians. One is symbol recognition range (30 degrees on both sides), where people can see symbols detailed to texts. The other is the range of optimum eye rotation (25 degrees up and 30 degrees down);

Figure 4-15 The human field of view (FOV). Data source: Tilley 2002
Figure 4-16 The two types of view shed from alley entrance at S Weller Street (left) and entrance at S King Street (right)
where people do not have to raise their head up and down to see. In the 15 ft.-wide and 240 ft.-long Maynard Alley, if standing in the middle without moving the head, one can start to see symbols and other details on the alleywall 13 ft. away. If standing on the edge of the alley, one can start to see details on the alleywall 25 ft. away. Within the optimum eye rotation range, one can naturally see as high as 12 ft. when the object is 13 ft. away, and 18 ft. when the object is 25 ft. away. As a result, the view shed with detail in Maynard Alley contains the first level, the mezzanine level, and the second level. As for the view shed with the complete picture, if the alleywall is 75-85 ft. in height, one can see the whole alleyway from a distance between 140 ft. to 170 ft., which is roughly half the length of Maynard Alley. The view sheds change as one moves along the alley, Figure 4-16 illustrates the two view sheds when one stands on the two entrances of the alley

Ground analysis

The alley ground is well defined by the foot of building walls and fences. The 15’-wide corridor allows one garbage truck to drive through. Some space at the edge of the ground is taken by garbage bins, steps to entrances/exits, and two telephone poles. Only one building, the Sing Keong Family Association’s one-story commercial building, has a 6 ft. setback from property line, which leave space for garbage bins and parking for the restaurant. However, these uses often cross the property line and take space in the public corridor of Maynard Alley. The alley has cement pavement. There is an oil tank below the alley ground dating back to the 1900s when the alley was formed. The location and depth of the oil tank is unknown, as well as the level of severity of environmental and safety issues it poses. Figure 4-16 also shows the current situation of the alley ground.

Extended ground analysis: connections

Figure 4-17 illustrates the type of existing connections. The elements currently existing in Maynard Alley that create direct indoor and outdoor connections are doors, windows, porches, and stairways. The spaces directly connected are walkout units for living or working, electrical room, garbage room, and the kitchen of the restaurant. There are no storefronts in Maynard Alley now, except for a side door to a business facing S King St.
Figure 4-17 Existing connections in Maynard Alley
Figure 4-18 Sections of existing direct connections
The indirect connections include the connection between the private walk-out units and the storefront facing Maynard Ave S through door and corridor, and the connection between the upper floor units and the alley through exit only doors, which are seldom used. Figure 4-18 illustrate the existing direct connections in Maynard Alley. Due to elevation difference between the street and alley, the alley is often connected to the mezzanine level or first floor through a stairway of the buildings facing Maynard Ave S, and to the basement level through a stairway for the buildings facing 7th Ave S.

**Façade analysis**

The alleywalls along Maynard Alley are mostly more than 100 years old. The upper level of the alleywalls are typical flat back walls with nothing over the air hanging on the wall. People can fell the rich sense of history maintained on these façades. All the historic buildings have light red brick walls, and the crowded window tells how small the interior rooms are or used to be. The ground level of two buildings have been renovated over the past 30 years. Eastern Hotel and Gee How Oak Tin Hotel both have walkout units on the ground floor facing the Alley, but the façades are designed in different fashions. The former one adopts an 8 ft. setback for a front door porch, connecting to the entrance wall with big plate window and glass door. The latter is a flat 18 ft.-high window front with no setback. The renovated part of the alleywalls are both carefully designed in color (dark green in contrast with the historic wall) and division of wall. Overall, the alleywalls give an impression of modesty and integration. Figure 4-19 and 4-20 show the sketches of the east and west alleywalls with details such as doors, windows, fences, signage, and lights. It also shows the spectrum of color existing on the alleywall and their comparative proportion.
Figure 4-19 West alleywalls elevation analysis
preserved wall with historic windows on the commercial level boarded in the 1940s

fences and preserved inner wall of Louisa Hotel

Colors on the wall (the comparative length represents the proportion of the color)

Figure 4-20 East alleywalls elevation analysis
4.5 Issues, Opportunities and Visions

Issues

Maynard Alley is currently an underutilized space that is mainly for garbage collection and pickup, loading, and some unwanted parking. There is light vehicle traffic and seldom foot travel. The indoor and outdoor connections are weak and passive. The renovated ground level units are designed in a way that can foster direct daily uses of the alley. However, the intensity of the uses is still low due the small population of users.

The vacancy issue is quite a common issue in this neighborhood. Located in a dense downtown area and within mid-rise and mixed-use multifamily housing, the alley is expected to be a shared space for a large population. The low occupancy rate is in line with the stagnation of the neighborhood. The Maynard Alley block housed some of the neighborhood’s early efforts that turned single room occupancies into various types of more livable units for low-income residents. The Rex Hotel, Eastern Hotel, and Gee How Oak Tin Hotel are all almost fully occupied. However, residents in these buildings are often outsiders of the neighborhood.

There is weak sense of ownership and identity possessed by the direct users of the space, and the building is not designed to be accessible to the large number of residents living upstairs. Moreover, Eclipse Hotel has a low occupancy rate upstairs, and there are three more parcels, which are now underdeveloped. A second potential issue common in most projects or planning processes that involve physical changes to the neighborhood is the contested identity. Maynard Alley is historically significant to multiple ethnic groups including Chinese, Japanese and Filipinos. A discussion of what cultural identity should be represented by the physical elements is unavoidable. Another issue related to alley reactivating is the general low pace of regeneration in the district, which would end up in a long process of alley reactivating as well.

Opportunities

The city encourages flexible but more residential focused development in the district (Kalthoff and Abramson 2012). The existing zoning policy allows 75-85 ft. mixed-use development in the Maynard Alley block. 75 ft. height limit is the base height, with a FAR limit of 3 for commercial uses, and 6 for hotels. A
development can achieve the maximum height of 85 ft. if it includes more than 50% of residential uses. Among the three underdeveloped parcels, only Louisa Hotel which was partly destroyed by the 2013 fire has proposed redevelopment with first floor for commercial, underground parking, and low-income units on the upper floors. Still, it is highly possible that there will be redevelopment of the parcel that houses a historic one-story commercial building with its façade largely altered, and new development on the parcel that is currently a private parking lot for a restaurant. Moreover, Eclipse Hotel might possibly undergo renovation that would change the situation of upstairs vacancy. As a result, the physical form of Maynard Alley will be greatly changed by these possibilities. And the population of potential users of the alley will be doubled.

Even for the historic buildings, there is still possibility for renovation due to the city-wide policies that affect the properties in the district. The city is developing a policy for the unreinforced masonry (URM) that is brick building without steel reinforcements, ties, and connections required by modern building codes. The Eclipse Hotel and Rex Hotel are all URM buildings that need seismic retrofits in the future. In addition, the Rental Registration and Inspection Ordinance (RRIO) requires all rental housing in Seattle to be safe and meet basic housing maintenance requirements. The rental housing cannot be rented unless it is registered and inspected every 10 years. As some of SROs on the upper level of the historic hotels do not meet the requirements, these rental housing are not able to be on the market without renovation of the interior space.

The renovation and redevelopment possibilities mentioned above are all opportunities to make physical improvements in the alley as well as the alleywalls, and to increase the population living and working in the block. Besides, the neighborhood has prioritized Maynard Alley as an important streetscape and public space project in the neighborhood. It has received federal funding as the starting money. There are also ready resources such as the experience working on Canton Alley, and the commitment of Chinatown Historic Alley Partnership (CHAD) and IdeaSpace from SCIDpda. The project is moving forward to outreaching, oral history, and physical improvement, which would all help to inform what the space should be like and be used. The existing alleywalls of historic...
buildings would have opportunities to be improved during the process.

**Visions**

The vision for Maynard Alley should be a shared living room for residents and business in adjacent buildings. It should also provide opportunities to attract foot travel by patrons of businesses and curious city wanderers. Moreover, it is also something shared by the whole community as a gathering place. These goals cannot be reached without the improvement of the built fabric in the block and the physical quality of the alley space itself. The ideal urban alley should be safe, clean, legible, permeable, visually enjoyable, flexible for various activities, friendly to daily uses, expressing a sense of ownership, and culturally identifiable. The physical improvement of Maynard Alley is an incremental process phased by series of acupunctural changes in the future. These changes include renovation and redevelopment projects, as well as proper programming and outreaching that keep commitments and the sense of ownership among interested groups.
Chapter 5 is a design manual providing site-specific (scale and context) suggestions on how Maynard Alley can be activated as a shared space for everyday uses, and with the ability to adapt to multiple functions at the same time. The design manual is a response to Maynard Alley’s current issues, opportunities and visions summarized at the end of Chapter 4, and as a pool of ideas for future changes in the alley, including the physical improvement aspect in the Maynard Alley Revitalization Project and the new alleywalls created in future property renovation or redevelopment. The framework created in Chapter 3 guides the manual, which consists of three parts: the ground as passage and yard, the extended ground as spaces connected by permeable edge zones, and the wall as visual display. The design manual identify the alleywall as the core element in providing rooms, connection spaces, and expressing information in the linear and narrow space. Most of the ideas in this manual focuses on alleywall design. And the ideas are illuminated by a wide range of case studies, including alley reactivation best practices, pedestrian-level street design, human-scale design, and culturally sensitive design. The design manual is tailored to Maynard Alley, but it also provides suggestions on physical improvements for other alleys with similar context and scale.
5.1 The Ground

The ground is defined by the foot of the alleywalls. It is the space where various traffic flows pass through and people linger or enjoy all kinds of activities. It is also a space that provides room for green elements, services, and outdoor furniture. The ground can be measured and manipulated in its dimensions, materials, functions, and in the way it is defined. The elements included in these sections are capacity and dimensions, garbage spots, garage entrance location, pavement/painted lines/temporary installations, and alley entrance.

ALLEY WIDTH AND CAPACITY

The width of the alley determines the capacity of activities and the experience under different circumstances. Walking, cycling, driving, and social activities require certain spaces around their movement. Walking, cycling, and daily social spaces should be prioritized. There should be flexibility for more intensive occasional events and controlled automobile traffic. The 15 ft.-wide Maynard Alley has full potential in its capacity.

Figure 5-1 The ground in Maynard Alley

Figure 5-2 Basic activities and the space they require. The human experience of space can be measured by the human interaction zone (Hall 1959), according to which Maynard Alley is a perfect space for both intimate social activities and public life.
Figure 5-3 The 15 ft.-wide Maynard Alley has full potential in its capacity. The series of alley sections illustrate variations in the combination of different traffic flows and activities, and how the limited space should be managed among all the possibilities.
GARBAGE

With the introduction of large dumpsters for commercial uses in the 1980s, the alley gradually gave space away to garbage. The spillover and odor it causes give the impression of uncleanliness. Maynard Alley has the same problem to solve. The alley is wide enough for a garbage truck and dumpsters adjacent to one side of the wall. It is encouraged through the Clear Alleys program to adopt pre-paid garbage bags combined with frequent collection to get rid of large dumpsters and the unpleasant environment they create (Seattle Public Utility 2013). Besides there are other options where the responsibility can be borne both by the public and by private. It should be encouraged to have a garbage room designed at the rear of the building, in which case the alley can be free of dumpsters. Moreover, dumpsters can be located within the property line when the building is not built to full envelop. It is negotiable to locate dumpsters within currently vacant parcels with compensation to the owner. Fences should be used to screen visual unpleasantness. There should be more frequent collection, especially in warm seasons, to avoid unpleasant odor.

Figure 5-5 Options for where the dumpsters can be placed.
GARAGE ENTRANCE

Considering that the capacity of Maynard Alley for vehicular travel ranges from cars to garbage trucks, it is unavoidable to incorporate garage entrance design in the alley when there is new mixed use development in the block. Frequent vehicular traffic limits the possibility of the extension of indoor activities, such as outdoor cafés, dining space, and open air market. Moreover, safety issues emerge due to the conflict between automobiles and pedestrians. Consequently, the location of the garage entrance ends up being crucial in that it greatly influences the quality of space and the efficiency of space uses. The depth of garage entrances should be limited to be as small as possible, and the route a vehicle takes should be controlled to the shortest distance to the alley entrance. Besides traffic in and out of the underground garage, there should not be any other vehicular traffic except for garbage pickup, loading, and emergencies. Moreover, it is encouraged to minimize the number of garage entrances in a single alley, in which case a shared underground space may be preferred. Safety and order can be further enhanced by other supplementary means, such as pavement, ground lines, outdoor convex mirror (CA-G), and voice alert.

When located at the alley entrance, the garage entrance’s influence is minimized. However, it deters the use of the streetwall and fails to create active and inviting alley entrance.

Leaving space for active uses at the entrance of alley is preferred. The garage entrance creates vehicular traffic limit the extension of the alley entrance activities. It can be solved through ground level setback at the alley entrance.

When the garage is located deeper in the alley, there will be larger portion of the ground space taken away and ground level activities disturbed.

Figure 5-6 The depth of garage entrance and how the ground level uses can be influenced.
PAVEMENT/GROUND PAINTING/TEMPORARY INSTALLATIONS

Pavement, ground painting, and temporary installation help define spaces for different uses on the ground. Pavement can be used to identify concrete differences, such as space for driving, in front of entrances, or within the property line. Many historic alleys restored the old pavement using historic material combined with new. Ground painting is a less permanent and more figurative way to indicate who can use, and how to use the alley. Pedestrians and cyclists are better aware of vehicular traffic by painted signs and lines for cars driving in and out of the underground garage. The lines also direct cars in certain direction without disturbing other uses. Temporary installations are flexible in identifying activity spaces in the alley and leaving space for regular traffic flows at the same time.

Intentional paving design to define different zones. 1) corridor for traffic in the lane and to the entrances; 2) blending zone emphasizing the edge of wall; 3)mixed zone defining alley space for activities.

Temporary installation, such as carpet, furniture, chairs, and sunshade to define the territory that can be used for indoor activity extension.

Painted lines or signs to identify and direct various traffic flows.

Figure 5-7 Alley pavement design for Pioneer Square alleys. Source: http://file:///I:/SCHOOL/Thesis/alley%20related/alley%20related/pioneer%20square_alliey%20design%20manual.pdf.

Figure 5-8 Flamingo Cafe in Winn Lane, Australia. Source: http://blog.posse.com/2013/06/05/8-best-brisbane-brunches/

Figure 5-9 Bike Detection Sign. Source: http://www.smgov.net/Departments/PCD/Transportation/Bicyclists/Lanes-Facilities-Parkings/
THE ALLEY ENTRANCE

The alley entrance is where street and alley meet. It defines the territory of alley as a space very different from the street. The alley and the uses in the alley would not be recognized if there was no effort to identify or shape the entrance. A well-designed alley entrance can attract attention from pedestrian on the street and alter their route by signage, arch, and public artwork, which at the same time give a strong identity to a specific alley. The alley entrance can house multiple active uses together with the street either on the ground or in the buildings. Outdoor cafés, outdoor dining spaces, stores, and pocket parks are all good choices to make the alley space more inviting and create a smooth transition from street to alley. Based on the level of private uses in the alley, an alley gate closed at certain hours is a possible choice.

Figure 5-11 Chicago Bar Project in Passageway. Photo by A.S.V. http://www.chibarproject.com/Reviews/Neo/Neo.htm
Figure 5-12 Seattle Post Alley. Photo by Mieko Van Kirk
Figure 5-13 Omaha Old Market District. Photo source: http://midwestwanderer.com/exploring-omas-old-market-district/
Figure 5-14 EaCa Alley in LA. Photo by Alissa Walker. Source: http://www.laweekly.com/arts/alleys-suck-not-anymore-hollywoods-new-east-cahuenga-eaca-alley-2373798

Intensive use at the entrance (store/porch)
5.2 The Extended Ground

The extended ground refers to the connected alley space and indoor space, as well as connectors in between. The use and function in adjacent buildings that are effectively connected with the alley space create the magnetic draw foot travel on a daily basis. In this case, the alleyway acts as a transition between indoor and outdoor spaces, or sometimes private and public realm. This transition is not a simple line without doubt, but a zone that has volume and can vary in width, height, and depth. When designing an alleywall, it is negotiable whether the zone should be in or out of the property line, what the volume should be, and to what extent it can be used publicly/privately.

The permeable edge zone is proposed in this section as a method to create variations of transition from alley to indoor uses especially on the 1st, mezzanine and 2nd level, which is also within the detailed view shed of pedestrians. Based on the different relationship between the zone and the alley, the variations of alleywall design are categorized into four basic types: the extended zone, the transparent zone, the setback zone, and the lifted zone. The elements to be considered are: direct and indirect connected space, entrance to workplace or home, storefront and display window, exit-only door, setbacks, porch, canopy, steps, stairway and corridor.

Figure 5-15 The existing extended ground in Maynard Alley

Figure 5-16 Alternatives to create permeable edge zone at the 1st and the 2nd floor level.
CONNECTIONS

Connections are physical elements closely related to the concept of the permeable edge zone. Connections refer to the spaces on both side of the zone (interior and exterior), and elements in the zone creating the connection. Connections can be further categorized into direct connections and indirect connections according to if it is a walkout type of space to the alley. The depth of connection determines the strength of connection. The various elements creating connections can be categorized as positive or negative, based on the depth and level of transparency. In Maynard Alley, directly connected spaces with recognizable, transparent, and effective elements are encouraged when designing alleywalls.

Figure 5-17 A summary of possible connections
EXTENDED ZONE

The extended zone is the space outside the property line, where a portion of the alley space is taken for the extension of the indoor activities in the adjacent buildings. The extended zone can also mean the space outside the residence’s entrance, where a sense of the ownership is expressed. The space can be defined by pavement, canopy, or portable installations. The extended zone cannot be created without an agreement between the private and public property owner, in which case a permit would be required to make it happen. The dimension, the use time, and uses are also limited by this agreement. Moreover, the extended zone should be limited without disturbing the traffic flow in the alley, and be flexible to give the space back to the alley when necessary.

FULL EXTENSION
Business owners and residents from the adjacent buildings can extend their territory in front of the entrance or storefront, but leaving enough space for occasional vehicle traffic.

LIMITED EXTENSION
Limited extension takes smaller portion of the alley space. Though defined by canopy, pavement or portable furniture, there is still flexibility in expanding the space by personalization.

Figure 5-18 Variations of extended zone
TRANSPARENT ZONE

The transparent zone is a passive approach in making connections between indoor and outdoor activities without creating a specific space. It is suitable for cases where it is not possible or preferable to create a setback space or use the public alley. The transparent zone should be emphasized on the first and second floor level, where the indoor activities can be seen from the alley, and outdoor activities can be seen from the building. Transparent entrances and big windows can all function to add liveliness and eyes on the street.

OPEN STOREFRONTS
Open storefronts create full transparency between indoor and outdoor activities without providing extra space within or beyond the property line.

BIG PLATE WINDOW ON PEDESTRIAN ELVEL
Big plate windows help create visual interactions between interior and exterior spaces in the alley. They also allow more light into the interior space facing the shaded alley.

Figure 5-19 Variations of transparent zone
SETBACK ZONE

The setback zone is created by an alleywall that is not built to the full envelope. The space is privately owned and can serve multiple public uses. The depth of the space is variable, and provides different levels of flexibility. It adds more space to the alley and supports uses directly connected to the indoor activities. In some cases, the setback space is created negatively without frequent uses related to the building, but provides space for occasional and intensive social activities. The setback on the second floor creates a balcony that supports eyes on the street. The setback at the entrance of the alley is critical in identifying and activating the space.

SETBACK FOR BETTER VIEW
Slight setback with an angle provides better views from the building and from the alley as well. It is suitable for window displays and other art on the wall.

SETBACK FOR ACTIVITIES
The combination of setbacks and storefronts provides space for intense outdoor activities. The space is also suitable for movable furniture. The second-floor setback space serves as a balcony.

Figure 5-20 Variations of setback zone
SERVICE SETBACK
The service setback is negative for activities, but can serve as loading, bicycle parking, garbage pick-up, or passive green space. The space is also flexible for programmed activities that require space of higher capacity.

GARDEN SETBACK
A garden setback creates more positive public space with higher capacity for activities. It is suitable to be located at the entrance, combined with storefronts.

ENTRANCE CORNER SETBACK I
The setback space at the entrance corner can serve as a shared lobby for office, business, or residence uses in the building. The inner portion can be used for garage entrance.

ENTRANCE CORNER SETBACK II
The entrance corner setback can also serve as a transformative space between the alley and the main street, with connections to first floor retail or office space.

Figure 5-21 Variations of setback zone ii
ELEVATED ZONE

The lifted zone is similar to a setback zone in that they both provide a recognized space between the pure public and private within the property line. The difference is that the lifted zone adds certain limits to who, and under what circumstances, someone can use the space. The space can be rather active when there are well-programmed activities or it is adjacent to intensive business or office use. Compared to a setback zone, the lifted zone is less flexible for it naturally excludes public use without a purpose. However, it creates the possibility of diverse private uses directly facing the alley, such as walk-out housing units.

RETAIL PORCH
A porch at the entrance of the alley that serves as an outdoor dining space makes the alley space safer and more inviting.

RESIDENCE PORCH
Adding porch space to the walkout units in the alley makes the edge between the public and private spaces softer. It also provides possibilities for daily social activities.

Figure 5-22 Variations of elevated zone i
SETBACK CONNECTING MAZZANINE
Using stairway to connect the mezzanine creates both ground-level and upper-level open spaces, which support multiple active uses.

Figure 5-23 Variations of elevated zone ii

TERRACE
The terrace supports activities that are not directly related to the alley, but add liveliness to it. The setback provides visual relief and invite more sunlight into the alley.
5.3 The Wall as Visual Display

While the eye-level alleywall shapes the level of liveliness in the alley, the alleywall as a whole is a visual display of information. The physical features and elements on the alleywall tell the story of the alley. In Maynard Alley, the light red brick and crowded windows with wood frame are symbols of typical historic hotels. The first-floor walkout units indicate the renovation in the 1990s. Moreover, the neighborhood character and cultural identity can be expressed through material, color, artwork, and signage. The decorated window and entrance can be signs of who is using the building and has direct access to the alley.

There are three parcels possessing redevelopment potential. It should be taken into consideration what aspect can the new alleywall echo or contrast with the historic fabric in material, color, and rhythm. Moreover, the massing of new building should foster perceived safety and alleviate the sense of pressure caused by the high height to width ratio (>5:1) and let more natural light into the alley (Figure 5-25). The alleywall should also be compatible with signage, artwork, and lightings, each of which should have its own evolving design guidelines.

![Figure 5-24 The existing walls in Maynard Alley](image)

![Figure 5-25 Massing options for future developments in Maynard Alley](image)
FAÇADE DESIGN

The alleywall is often seen as the back of a building that does not need extra design effort. However, a well-designed alleywall can be modest and simple in form, but create high quality interior space facing the alley and create public value. Façade design in Maynard Alley is a process of culturally sensitive plane composition that fosters perceived safety and public life. The new alleywall should not disturb the overall atmosphere expressed by the historic fabric, but also identify itself as a different type in material, color, and rhythm. The more detailed elements such as balconies, windows, porches and terraces should be emphasized on the façade. In addition, the form should follow the contemporary aesthetics and technology, and resonate with the historic legacy at the same time. In the narrow and linear alley space, the alleywall should try to express a sense of amiability, transparency and lightness by intensive use of glass and wood. Figure 5-26 to 5-30 show examples of different levels of differences of the new alleywall.

A. Figure 5-26 The Hegeman, low-income residential community in Brooklyn. Design by and photo from Cook+Fox Architects. Source: http://www.archdaily.com/266687/update-the-hegeman-cook-fox

B. Figure 5-27 Block A Noordstrook, a residential regeneration project in Amsterdam. Design by Dick van Gameren architecten. Photo by Marcel van der Burg. Source: http://www.archdaily.com/167540/block-a-noordstrook-dick-van-gameren-architecten

C & D. Figure 5-28 Elandshof 6 houses in Amsterdam. Design by Bastiaan Jongerius Architecten. Photo by Milad Palleh. Source: http://www.archdaily.com/410962/elndshof-6-houses-cpo-bastiaan-jongerius-architecten

E. Figure 5-30 Wooden Housing Building, a social housing project in France. Design by JTB.architecture. Photo by Luc Boegly. Source: http://www.archdaily.com/603513/wooden-housing-building-jtb-architecture
LIGHTING

Lighting in alley includes natural lighting and night lighting. More natural lighting should be invited into alleys and interior spaces facing the alley, which requires certain extent of setback and transparency of the façade. Night lighting is crucial in creating inviting and safe route. The type and the level of intensiveness is positively related to the types and intensiveness of uses in the alley. For example, neon signage appear in alleys lined with nightclubs and restaurants. Moreover, night lighting can be customized to the needs of events and holidays.

There are different kinds of lights illuminating in different ways. The Pioneer Square Alley Lighting Guidelines proposes a typology of night lighting in alley according to the function. The three types of night lightings respectively emphasize architectural assets (arching windows, historic material, et al.), alley room, and alley entrance. The Guideline also provides lighting options with different effects, such as fixtures for intensive lighting at the entrance, wall mounted light or strip lighting creating accents, and string lighting shaping the alley room.

Glowing furniture  Fiber optic lighting on the ground  Neon tubes archs and ground reflection  Overhanging LED string lighting

Figure 5-32 Photo source: http://www.digsdigs.com/40-creative-and-original-outdoor-lamps-and-lights/pictures/8179/
Figure 5-33 Photo source: http://rugged-life.com/2012/12/25/diy-kits-for-fibre-optic-lighting-on-a-path-or-a-deck/
Figure 5-34 Dallas Alley with neon tubes on steel arch lighting up the pedestrian corridor lined with restaurants and nightclubs. Design and photo by the SWA group.
Figure 5-35 String lights in Nord Alley, Seattle. Photo by AXIS Pioneer Square. Source: http://axispioneersquare.com/events/rates-faq/
Figure 5-36 Typical intensively used alley in Japan crowded by neon signages and street lights hanging away from the wall. Photo by Daniel Toole. Source: https://alleysofseattle.com/category/japan/
ARTWORKS AND PERSONALIZATION

The alleywall is a visual display expressing identity and value. The ownership of the alley space by the adjacent users and the wider neighborhood or cultural group can be represented either in a formalized way as public art, or as an everyday expression through personalized changes. Public art in alley includes programmed art projects and permanent installations or artworks, such as murals, ground paintings, and old-fashioned neon. The alleywall should be designed to embrace the possibility for an alley as gallery or as an artwork itself. Personalization refers to the everyday expression by the direct users of the space. These include window decorations, hanging flags, plants and furniture on balcony or porch, and personalized area in front of the entrance.
6.1 Lessons Learned

This thesis is not proposing an ideal and final design of Maynard Alley, but rather explores possibilities of future new developments that are supposed to take alley reactivating as part of the design strategy, especially when designing the back wall of the building. The idea behind these possibilities is that when talking about physical improvements of an alley space, there are more beyond the improvement of the ground of the alley. Moreover, the potential of a permeable, culturally sensitive alleywalls with volume should be explored to the fullest extent. By creating a framework for analysis and design, this thesis also tries to propose a method to understand any alley by looking at the nature of the space.

By looking closely at successful public space activating cases, it is easy to find that clean, safe, and lively public spaces full of daily uses share similar characteristics in their physical form, which are generalized as the nine criteria in Chapter 3. However, only creating spaces that are friendly to daily uses and support multiple functions does not mean there will actually be intense daily uses. There are many other factors that support an “ideal” alley. First, the healthy overall atmosphere of the neighborhood would indicate more possibilities. Healthy atmosphere can mean steady pace of development, investment preference in local business and affordable housing, high level of community awareness in the public realm, and so on. Moreover, higher density adjacent to an alley would mean
more users of the space. Second, the physical improvement of an alley would be an incremental process with an unknown time line that would be phased by funding opportunities and adjacent new developments. The long-time commitment of people is the key element to keep the project going. There should be people taking initiative, engaging the community, and making programs to keep it progressing. There should also be people from the community that would be direct users of the alley space to find it meaningful to stick to the project and take ownership of the space.

6.2 Limitations and Improvements

The approach taken in this thesis reflects a practical process to understand an alley step-by-step from a general framework as guidance, to a specific test on the selected Maynard Alley. However, there are limitations to the methodology that affect generalization of the framework, the accuracy of knowledge and the feasibility of the proposed design manuals.

The framework is based on case studies of best practices on alley improvement, and a literature study with an emphasis on streetscapes, a similar type of open space as alley. The topics of the selected literatures include public space, façade, intimate space, and human scale design. As a result, the framework is a summary of the available resources and an initial effort to understand the alley space. It does not qualify for generalization at the moment, but acts as a good start of self-improvement through practice. The test on Maynard Alley has provided some feedbacks. First, for a historic alley like Maynard Alley, the context study should try to include an analysis of the evolution of the form of built fabric and the changes in building uses and population density through time. Though there is often incomplete data, a rough analysis also works to reflect the relationship between density and liveliness in alley space. Second, through more future applications of the framework, there should be interpretation on how the scale measurements relate to the experience in an alley space. Third, there might be more elements categorized into the three spatial aspects, such as vertical landscaping and green infrastructures.

As for the case study on Maynard Alley, the main problem is the lack of data and information on either the historic evolution or the current situation. The original residents of
Maynard Alley either passed away or moved out of the buildings adjacent to the alley. Some even are not willing to recall the memory of the alley because of the 1983 massacre. There is little documentation of the physical forms of the alley as well. The limitation to data and information leads to an incomplete understanding of how Maynard Alley was used historically, and how the uses change together with the physical form of the alley, especially the back walls of the buildings. Even for the current situation, with time limitations, it is not manageable to reach out to the manager, owner, or users of every building to understand who are living adjacent to Maynard Alley, and the exact physical relationship between the interior and exterior space. As the Maynard Alley Revitalization Project is carried forward, there will be more available resources to obtain the missing information.

The design manual also needs improvement in several aspects. First, the proposed ideas for physical improvements are categorized into the three spatial aspects framed in Chapter 3. However, images that illustrate the overall effects of these improvements are also necessary. Though the design manual is not targeted on a final design of Maynard Alley, by putting together the ideas the audience can better understand how the elements work together especially in Maynard Alley. In order to keep it an open question what Maynard Alley would look like in the future, it is preferable to use a combination of sketches with the existing pictures of the alley. Second, it should also be tested through practice whether the manner of idea visualization is easy to comprehend by not only designers, but also the general public, for the manual is also a preparation for a readable design guideline that would guide property development. Third, the decisions of which physical improvements are suitable for Maynard Alley are based on an understanding of the context, scale, and current situation, but not what the general public would prefer. Again, the design manual is not the final design but a collection of ideas that would trigger discussion and expand what’s considered possible by the neighborhood.

6.3 Future Work

This thesis is typically focused on the potential of physical improvement in supporting clean, safe, and lively urban alleys. There is less discussion on policy, partnership, programming,
and engagement, which are crucial to whether the design ideas can be put into reality. Future works would include research and practice on two levels: the Maynard Alley Revitalization Project and the alley network improvement in the neighborhood.

For the Maynard Alley Revitalization Project, the site study and design manual already provide basic information and a collection of ideas, which would be useful in community engagement and design workshops. Future works should focus on prioritization of the design ideas, which may require identification of the key stakeholders and their preferable improvements, a study of the current policy and regulations on neighborhood and city level, and a recognition of possible resources, including partnerships and funding opportunities.

To the alley network improvement in the C-ID, The city should recognize the need to frame the alleywall design into the existing design guidelines of the neighborhood that was adopted in 1988 and has not been modified much since. It is too often that buildings are designed as a reflection of the codes but not the broader needs of the neighborhood. The most effective and straightforward way to negotiate with developers on an investment in a well-designed alleywall is through the design review process. This thesis does not provide specific guidelines that generally apply to the neighborhood, but takes Maynard Alley as an example to understand and illustrate the potential of alleywalls in creating a lively, safe, and clean alley space.

Though it is important to create guidelines or regulations that are generally applicable, it is still not fully understood by designers and the general public what kind of alleywall design is effective and feasible in a specific context. The economic, social, and environmental potential of intentional alleywall design still need to be tested through practice. However, without the awareness of the importance of alleywall design by the general public, there is no possibility to incorporate the element into real world design projects. This thesis is also written for the community and neighborhood based organizations to arm them with negotiating power for more public value in a private design project adjacent to the alley. Future work may have a focus on the communication of what one can expect in an alley improvement project, as well as a development that would change the alley space by changing the alleywalls.
BIBLIOGRAPHY


APPENDIX A

Interview Contents: Questions and Walking Tours

HISTORIC INFORMATION
1. How long have you lived or worked in or with housing or businesses along the Maynard Alley?
2. How is the Maynard Alley historically used and what is the most significant difference according to your knowledge?
3. What do you think the Maynard Alley means for the neighborhood?
4. How has the back wall of the building changed over time? (Height of wall, adjacent uses, entrances and exits, storefronts, windows, dumpsters, et al.)

CURRENT SITUATION
5. Who are now using the building, including businesses, institutions, and residents?
   i. Probe: which space do you occupy?
   ii. Probe: how is the vacancy situation in this building?
6. How is the Maynard Alley connected to the first floor of the building and the above?
   i. Probe: is alley visible from inside the building?
      From what rooms? How often can you see what is going on in the alley when you are at home or at work?
ii. Probe: how is the alley linked to the stairs that connect to the upper level of the building?

iii. Probe: which of the space on the first floor is directly linked to the alley, or has an exit/entrance facing the alley?

iv. Probe: how is the alley connected to the front street entrances on the first floor?

7. Is the Maynard Alley the only, or primary, access to your space in the building? (What is that space? Your home? Business? Other activity?)

**USERS EXPERIENCE**

8. For what purpose do you use or stay in Maynard Alley?
   i. Probe: any recent memory of using the alley?

9. How frequently do you use or stay in the Maynard Alley and for how long?
   i. Probe: either regular or occasional uses will provide valuable information.

10. From which street or door do you usually enter the Maynard Alley?

11. How do you feel when you are in the Maynard Alley?

i. Probe: either positive feelings or negative feelings are valuable information

ii. (depending on what they say) Would you feel more comfortable/safe if the alley were more visible from within the buildings?

12. What improvements would make you use more frequently or stay longer in the Maynard Alley?
   i. Probe: any thoughts on the pavement/garbage collecting/entrances and exits for residents/green elements/balconies/storefronts/office-fronts/parties and events/concerts? Anything you can think of!

   ii. Probe: is there anything you like about the alley?

   What is the features of the alley that you think should be kept?

13. How do you feel about the Maynard Alley, even when you are not in it?

14. What improvements or elements would make you want to start using the space?

**VISIONS** (questions 15-18 are for planners and developers)
15. What kind of changes might there be if the adjacent buildings are to be renovated?
   i. Probe: is there a good example of renovated building that is already built or being built in this neighborhood?

16. What kind of changes might there be if the adjacent property is to be redeveloped?
   i. Probe: is there a good example of renovated building that is already built or being built in this neighborhood?

17. What kind of new development will be acceptable and feasible in this neighborhood?
   i. Probe: is there a good example of renovated building that is already built or being built in this neighborhood?

18. What is your/the neighborhood’s vision for alleys in the Chinatown-International District?

WALKING TOUR (for respondents who are willing to give me a “tour” of the alley)

I will ask them to point out various features in the Maynard Alley and take notes on a map as we walk.