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I, Ang Li, hereby submit this original work as part of the requirements for the degree of Master of Community Planning in Community Planning.

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Comprehensive Legible Cityscape Plan for Downtown Wilmington

Student’s name: Ang Li

This work and its defense approved by:

Committee chair: Vikas Mehta, Ph.D.

Committee member: Xinhao Wang, Ph.D.
Comprehensive Legible Cityscape Plan for Downtown Wilmington

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By

Ang Li

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Committee Chair: Vikas Mehta Ph.D.
Committee Member: Xinhao Wang Ph.D.
Abstract

This paper illustrates how to use the comprehensive legible cityscape plan to revitalize a small city. The study is in Wilmington, Ohio. In the past two decades, especially in United States, lots of small cities are facing challenges, such as absorption by metropolitan cities, declining population, loss of working lands, lack of job opportunities and inactive commercial. How to solve these problems becomes one of the most important challenges for our society. By the methods of site research and analysis mapping, a comprehensive legible cityscape plan is developed. The comprehensive legible cityscape plan in this project consists of: retail store sign design, creating sense of entrance, wayfinding signs, creating or redesigning open space, main intersection redesign, bike lane and detail design, factory redesign and wall printing. The comprehensive legible cityscape plan will make the city of Wilmington more walkable, livable and legible. Moreover, it will bring back more residents, attract more visitors and create more job opportunities. As a conclusion, the comprehensive plan makes the city more legible, and revitalizing a small city reduces pressure on large cities and makes a better livable place for local residents.
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1 Introduction

In last two decades, many small cities are facing challenges, particularly the absorption by the metropolitan cities, declining rural population, loss of working lands, lack of job opportunities and inactive commercial districts. Thus bringing back the working population is the primary solution to solve the problems facing many small cities.

Those small towns with a current condition that is unable to attract more people, due to lack of attention to rural development, proper public facilities or necessary living condition are neither good enough to satisfy local residents nor to satisfy newcomers. One of the most positive aspects for small cities is environmental quality. Fewer people, with fewer cars and more tree and natural environment coverage are the features that could attract people who are looking for a quiet and better place to live. The second aspect is the convenient and easy city life style. Small cities usually have a tight relationship between residential, commercial and working places. For example in small cities, people can easily get from one place to another without wasting time. Of course, the living expense in a small city is much cheaper than in a big city.

In this thesis project, I will present a comprehensive legible cityscape plan to revitalize a small city named Wilmington, Ohio.
The City of Wilmington is located in Clinton County, Ohio, which is located between Cincinnati, Dayton and Columbus. According to the Ohio hometown locator in 2014 the population is 12,575 people with 5,905 housing units. The population has remained stable from 2010 to 2014.

The City of Wilmington was previously known for the DHL Air Park, which almost half of the local residents worked either directly or indirectly for company. But in May 2008, DHL announced that they would be moving its business form Wilmington to Cincinnati Northern Kentucky International Airport. This became a turning point for City of Wilmington, because of the disappearance of more than 7,000 jobs, and the local business that depended on the Wilmington Air Park were most likely closed, taking a serious toll on the local economy.

The thirteen blocks of Downtown Wilmington is a historic and traditional commercial area. It contains some historic buildings, retail stores, service stores and restaurants. City of Wilmington has implemented the Main Street Program, which is designed to improve all aspects of the downtown area, in order to produce a fun place to visit.
In the east portion of Wilmington there is a commercial area, which includes super markets, gas stations, retail stores and fast food restaurants. This is the primary area residents to shop locally.

![Figure 2: Relationship Between Different Areas](image)

In my opinion, different cities have different characteristics. Big cities may have more attraction, function, activity and so on, but small cities have their own advantage. In Wilmington, there are beautiful historic buildings, a commercial district, and so on. So the
problems come out. How to let people know Wilmington is better, how to make people feel safe and comfortable in Downtown Wilmington, how to attract more people back to Wilmington and how to create more jobs for local residents? Wilmington need to solve these problems, and my comprehensive legible cityscape plan is a way to solve these problems that help to revitalize the City of Wilmington.

First, I want to discuss the components of the comprehensive legible cityscape plan and how the plan can help the city.

The formation of a city needs a long time, and during the process of formation, the city should have some exclusive urban characteristic and elements. Whether is a city livable or unlivable, depends on complex factors, that are not how we usually think of as the environment, transportation, economic and cultural. A livable city should be concerned about the relationship between these factors, as well as the communication between the people and the city.

Before I do this project, I have the following questions in my mind: What is the cultural of the city? What is the original ecological makeup of the city? In order to help me know the City of Wilmington well, and allow me be part of it.

First, I need to know what do the people need in the city of Wilmington, I also need to know what kind of Downtown they will like to see and what kind of problems are in the City of Wilmington, So my opinion is to use the comprehensive legible cityscape plan to make City
of Wilmington become more livable. The visual state of urban public space has a potential impact on human behaviors and we can begin with the existing condition, and then do some adjustment or reconstruction in visual design. A good visual design or legible cityscape plan is the most important criteria for a livable city, which is the main part that my thesis I will focus on.

For example, we know signage is one of the main parts of visual design or legible cityscape plan, and unordered signage will deeply affect the quality of people’s daily life, bringing “wild” to people visually. For local residents, it will reduce the quality of people’s life. For the people that come from outside, it will create a bad perception of the city, as well as affecting the external perception. One cannot image what is a city looks like without signage. Signage is the most important factor in comprehensive legible cityscape plan, it will make city have a better visual activation, and be able to highlight cultural differences.

That is the importance of the legible cityscape plan. Of course, the comprehensive legible cityscape plan will contain many other parts, such as: Wayfinding, Architectural Detail Design, Entrance Logo Design and so on. In my thesis, I will focus on all these parts in comprehensive legible cityscape plan for the City of Wilmington.
2 The Problem

2.1 Overview Problems

2.1.1 Weakness of Downtown Area Identity and Illegible
Downtowns are always the face of any city. Better and active downtowns will give a better impression of the city. Unlike large cities, commercial, recreational, and everyday supplies are all together in the downtown. In most American small cities, everyday supplies are located outside of downtown areas. Everyday supplies are always the major reason for people going out, and if the downtowns of small cities did not have the capacity provide everyday supplies, there will be less people visiting the downtown area.

2.1.2 Job Opportunity Loss
Jobs are always the reason for residents to stay in one place. Providing enough jobs can help maintain the local workforce by giving them the option to commute from home and work, which helps to maintain the population of small cities. In most American regional cities, they usually can provide more job opportunities and better salaries. Together with the convenient transportation system and public facilities, residents from nearby small cities prefer to seek jobs in those cities rather than staying in small cities.

2.1.3 Lack of Diversity of Jobs and Stimulating Jobs
Many American small cities have only one major industry and many local residents are working for this industry or some jobs related to this industry. As an example of
Wilmington, which was a city with more than one half of the workforce employed by DHL Air Park in the beginning of the 21st century. After the shutdown of DHL Air Park, those people and their families are have experienced a hard time for family income. A small city which has more stimulating jobs and much more different types of dominate industry and will be more resilient to loss of jobs. In this way, the city can overcome quickly from this kind of disaster.

### 2.1.4 More Commuters Moving Away

Residents who did not have a job in a small city will seek for jobs in the nearby larger cities which might provide more job opportunities. At the beginning of this behavior, the commuting time from home to work will grow. As I mentioned before, the strength of the small city life is the convenience of commuting from home to work. If the small city cannot provide the convenience of commuting, why don’t people just moving out from the smaller city?

### 2.1.5 The Natural Environment not as Good as Before

Usually development of the small cities relies on a major industry. Because the city needs to meet the needs of its residents, this industry might destroy the local environment, for example, cutting down trees for warehouses and factories. Another problem is the social environment. More and more trucks and cars need to pass through the city center to reach their destinations, and this would cause CO2, noise, traffic and safety problems to the residential area within the city center.
Considering these problems, I believe the City of Wilmington needs to do some change. I will try to solve this with my thesis topic: comprehensive legible cityscape plan for Downtown Wilmington. This will be used to Downtown Wilmington friendlier and more walkable, also it may create more jobs for local people. The final goal of my thesis is bring more and more people back to working and living in a small city like the City of Wilmington.

### 2.2 Site Analysis: Individual Problem Map

Based on these problems, I think the most important one is the "Weakness of downtown area identity and illegible". At first, I will analyze the weakness in the downtown area of identity and illegible in the City of Wilmington in 9 maps:

#### 2.2.1 Site Analysis

My study area is the 13 blocks in Downtown Wilmington, the 4 main blocks in the center of the downtown are the main office and commercial area, the other 9 blocks surrounding it are a mixed use area which include residential and commercial. These 13 blocks constitute the Downtown of Wilmington.

The city is served by the Wilmington Public Library of Clinton County, and also features a weather forecast office of the National Weather Service, which serves all of Southwestern Ohio and portions of Kentucky and Indiana.
2.2.2 Public Open Space

Public open space is an important factor for a city. In the City of Wilmington, the public open space should include: setbacks, plazas and urban parks and so on.

From the map we can see that the City of Wilmington has lots of public open space, but there is almost no big green space in or around the downtown area. That means there is no area for the local residents and visitors when they want to enjoy the sunshine and nature in the downtown. There is also lack of public space for events or playground for children. That
means people cannot stay in the downtown area for a long time. At the same time, that also gives me the answer that why there are few people that walk within the downtown area.

Figure 4: Public Open Space

### 2.2.3 Parking Space

There are about 18 parking lots in the downtown area.

The street parking is free in downtown of Willington, most of them are 2 hours limited, and others are 4 hours limited.
When I walked in Downtown of Wilmington, I saw there are not too many cars on the street, and several cars parked in a parking lot, which can contain about 30 cars. So in general there are too many vacancy parking lots in the downtown area, and some of them can be used for another function.

![Figure 5: Parking Space](image)

2.2.4 Figure Ground

Downtown of Wilmington has different kinds of architectural style, some building have a very long history and still in a very good condition.
We can clearly know where is the Downtown of Wilmington is from the map without a boundary. There is not too many chance to change the building shape in downtown area, almost all blocks are full of buildings.

![Figure 6: Figure Ground](image)

### 2.2.5 Street Edges

The different width of line means different level of walkability.

The different level of walk base on the width and condition of sidewalk, tree canopy, retail store and so on. There are so many factors that can influence the level of walkability.
In Downtown Wilmington, especially in the 4 main blocks, the buildings are in good condition, the sidewalk are wide enough, and there are some places that you can sit outside to have lunch or dinner. But it still has some problem, the tree cover is not good at all, the trees are too small and cannot provide a shadow. Also, it is too small that doesn’t let you feel safe when walking on the street. Another thing is that some buildings need redesign or infill some details to make it more colorful. But in the general the streets in the four main blocks are walkable street.

Figure 7: Street Edges
2.2.6 Main Road for Entrance

The City of Wilmington is about 6 miles from the I-71. It is very convenient drive from Cincinnati, Columbus and Dayton.

There are 3 road classes for entrance for Downtown Wilmington. The first one is both good for walking and driving, the main entrance that connect I-71 to Downtown Wilmington and also has a good quality of sidewalk. The second one is good for driving, directly connect I-71 to Downtown Wilmington. The third one is better condition for a walking entrance.

Figure 8: Main Road for Entrance
2.2.7 Land Use

The Downtown of Wilmington is mainly for office and commercial, which shows in red. So it is good if one wants to build the downtown area as a mixed use area that local people or visitors can stay here both daytime and nighttime. But there is a weakness that the light industrial area is at the east of downtown. These areas have bad street view, noise and traffic.

Figure 9: Land Use
2.2.8 Traffic Signage

In Downtown Wilmington, the quantity of signage is enough, but the quality is not good enough. Most streets in the city have a problem with signage design. Almost all signage in Downtown Wilmington is for traffic, nothing for navigation.

In Wilmington some street are lacking signage. So my thesis will mainly focus on signage design and a wayfinding system in Downtown Wilmington. It should have a good legibility and wide letter proportions with proportions that have prominent ascenders to ensure a good readability.

Figure 10: Traffic Signage
2.2.9 Legibility Analysis

The Legibility analysis map tells us which street have a good street view and which is the main visual point in this area. To make a city more legible there should be continuity between salient elements of the city, and between main integrators and visible fields of the landmarks, to form a coherent structure.

Figure 11: Legibility Analysis
2.3 Site analysis: Comprehensive Problem Map

After examining the individual problem map, I will have a better understanding of Downtown Wilmington, I am going to then put these problems together to develop, come with some comprehensive problem maps.

2.3.1 SWOT Analysis

I identified six different areas for SWOT analysis: Downtown Wilmington, the industrial area, the residential area, green space, the commercial area, and the Wilmington Air Park. By completing this analysis, I can have a better understanding for the City of Wilmington, and specifically through the SOWT analysis, we can learn how to use each, how can mitigate weaknesses, how to exploit opportunities, and how to defend against threats in Wilmington.

1: Downtown Wilmington

   S: Rich architecture style, with a long history and is in good condition
   W: Too much parking space, and lack of signage design
   O: Good for a Comprehensive Legible Cityscape Plan
   T: Not too many have chosen to change the building shape

2: Industrial Area

   S: Most of buildings are vacant
   W: Bad street view
   O: Close to downtown, and easy to redesign
T: Costly to rebuild the buildings

3: Residential Area

S: Nice neighborhood, buildings are in good condition

W: Main traffic flows across the residential area, and is not walkable

O: Walking distance to Downtown Wilmington

T: Outmigration, contributing to buildings that are abandoned

4: Green Space

S: Close to Downtown Wilmington

W: No connection with Downtown Wilmington

O: Easy to visit by residents

T: Underutilized

5: Commercial Area

S: Variety of super markets

W: Not walkable to Downtown Wilmington

O: Build a bike lane

T: High speed traffic flow

6: Wilmington Air Park

S: Owned by Clinton County, with good construction

W: 20 miles drive to Downtown Wilmington

O: Built as a theme park

T: Almost abandoned
2.3.2 Signage Analysis

The first signage analysis map is for different levels of signage in Downtown Wilmington. I classify four different levels for it, which can show the current signage situation in Downtown Wilmington.

1: Good signage design, can provide enough information, but not as a system.
2: Sufficient signage, but not clear to see because some signs are too small and some signs are not obvious.

3: Not enough signs, and some buildings do not have signs.

4: Only have traffic signs, and no signs for retail stores or information

These four areas have a problem with signage, and need to be improved.

Figure 13: Signage Analysis

The second signage analysis map is to show the height of signage in two main streets. The best signage system should have different shapes, styles and heights. Also, should not block each other, and can be consider as a system.
Figure 14 shows the signs at two main streets in Downtown Wilmington (Main Street and N South Street), where mostly all retail stores and service stores locate. We can clearly see mostly all of the signs are windows signs and the quality of signs need to be improved.

Figure 14: Signage Height Analysis

The last analysis is for the evaluation for all signs in Downtown Wilmington; I classify 9 different kinds of signs, and show the number of signs in figure 15. A good signage system needs to have all different kinds of signs, but in Downtown Wilmington, it lacks a diversity of signs. The storefront window signs is the main part of signs in Downtown Wilmington. In my thesis, I will try to create all kinds of signs which are suitable for Downtown Wilmington, and not only for retail store signs, but it will also include wayfinding signs,
welcome signs, temporary signs and so on. The goal is to make Downtown Wilmington more legible and readable.

Figure 15: Signage Category Analysis

Signage is to ensure that correct information can convey an important prerequisite. Scientific and rational signage must be considered as a holistic and complete system. The signage system should be able to have some reasonable artistic elements, which will not only ensure that signs can achieve their basic functions, but also increase visual appeal and enhanced the communication between people and city.
There are two main weaknesses for the signage system in Downtown Wilmington: 1) no connection, and lacking an overall plan. 2) The design is too simple, lacking representation of the city’s character.

The signage system should have a new understanding; it should not be confined only to traffic sings. A signage system for a city that is a very large involves many areas of the city. It not only allows urban traffic to flow in an orderly fashion, but also for the name card for the city. It should demonstrate social, cultural value and area values. A good signage system should combine factors to create a “never get lost city”, so the city will become more humane, and it will narrow the distance between the people and the city.

2.3.3 Street View Evaluation

The street view evaluation map is the way to know Downtown Wilmington in details. Each picture was taken every 10 feet on each street, which shows lots of details information in Downtown Wilmington. For instance, the number of trash cans? Sidewalk condition? Tree canopy density? The street view evaluation map provides answers to these questions.

I selected four main streets in Downtown Wilmington, and have provided an evaluation summary for each picture. Figure 20 shows the zoomed in map for the main intersection.
2.3.4 Comprehensive Site Analysis Map

The comprehensive site analysis map shows all the problems and current situation together, which combines all of the factors together.

The map has two main parts:

1: Current situation: landmark, parking lot, green space, industrial area, highest building and main access.

2: Problems: no cross walk, open space not used well, no sense of entrance, bad connection and no connection.

There are two detailed maps showing the four main blocks, the first one is for the problems, and the last one is for the current situation. All three maps are the basement for idea and design.
3 Ideas

After reviewing the analysis map, there are two idea maps considering different scales that act as a transition, before design and planning, this gives an overview of the City of Wilmington’s needs.

3.1 City Scale Idea Map

The city scale idea map shows how to connect each area, such as green space, airpark, Downtown Wilmington and the commercial area. In my idea map, I want to use bike lane to connect these areas. Another point is the multi-family housing around Downtown Wilmington.

Figure 24: City scale idea map
3.2 Downtown Scale Idea Map

The downtown scale idea map reflects the problems put forth in “The Problems” section. All the designs and planning are the solutions for the problems which Wilmington facing.

The ideas include: wayfinding signs, wall printing, welcome signs, open space redesign and so on. The main goal of the ideas is to make Downtown Wilmington more diverse and legible.

Figure 25: Downtown scale idea map
4 Case Study

My thesis is about how to redesign or enhance the identity of the city, creating a comprehensive legible cityscape in Downtown Wilmington that is compatible with its historic character, and to differentiate existing and emerging districts. The goal of my thesis is to make Downtown Wilmington more walkable and improve the flow of activities. Wayfinding is the main part of the city redesign plan. Thus, I looked into some articles and projects that talk about city redesign plan and wayfinding systems. These articles and projects provided a basis to use in my overall city redesign plan.

4.1 Downtown Austin Wayfinding Master Plan

“The Wayfinding Master Plan outlines priority projects, initiatives and approaches that will help to establish a Phasing Plan for both short term and long term opportunities. Phasing is based on the complexity of the system and the funding available. “(Signage Foundation, 2013)

“The wayfinding system will establish a unifying graphic language across a wide variety of communication elements in Downtown Austin. Further awareness of the system can be achieved by creating a memorable identity for the overall Downtown Austin Wayfinding system. This will establish the wayfinding system as a helpful tool that presents Austin as an organized, thoughtful and welcoming city. “(Signage Foundation, 2013)
Project Objectives

• Promote Downtown Austin as a friendly, well-planned, organized and safe environment

• The design shall be of its place

• Build consensus through public input

• Seamlessly integrate a variety of wayfinding tools

• Gateways shall consider landscaping, lighting and public art

• Promote the “Park-Once” philosophy

• Enhance pedestrian travel and accessibility

• Support multi-modal transportation and sustainable initiatives

• Create a public outreach plan that promotes the wayfinding system

• Develop a Strategic Implementation Plan and a realistic phasing sequence

• Identify funding sources and creative strategies

• Develop a plan for long-term management and maintenance (City of Austin, Taxes, 2013)

Maps

![Wayfinding Map for Downtown Austin](image)

Figure 26: Wayfinding Map for Downtown Austin, From City of Austin, Taxes
Conclusion:

There are so many differences between Downtown Austin and Downtown Wilmington, not only the size and population, but also they are in different area. Austin is a city that is growing, while Wilmington is facing population stagnancy with rising unemployment. There are still learning opportunities from this case. The process, the goals and objectives, the map for signage and wayfinding are perfect examples.

4.2: Urban Way finding Planning and Implementation Manual

Case Study: Rockville Town Center, MD

“The Rockville Town Center is among the leading examples of a public/private partnership for the development of a new mixed-use transit-oriented development. Centered on the Rockville Town Square mixed use project, the Town Center contains a number of innovative wayfinding system approaches.” (Signage Foundation, 2013)

Planning Innovation

“Wayfinding elements including signs, gateways, street furniture, public places and directories were part of the planning process from the beginning of the site development process. This allowed these elements to be part of larger streetscape projects, which allowed for faster development due to early financing and pre-existing stakeholder groups.” (Signage Foundation, 2013)
Design Innovation

“The level of integration of design elements with the streetscape, commercial buildings and parking facilities made for both a highly complementary design (by Selbert Perkins Design), and a mix of unique fountains and public spaces.” (Signage Foundation, 2013)

Ongoing Development

“The Town Center plan is meant to be developed over decades. In recent years, a library, innovation center and apartment homes have been added. A series of guidelines including wayfinding as part of the larger urban design has maintained the cohesion of the project.” (Signage Foundation, 2013)

Photos

Figure 27: Signage Design in Rockville Town Center, M, From: Signage Foundation
Conclusion

Comparing Rockville Town Center and Downtown Wilmington, we can find a very similar situation. Both are small cities or township centers with just a few blocks in the CBD area, which means they probably do not have enough funding for the redesign plan or wayfinding system. In Rockville Town Center, more than 70% of the project was developed through private funding. Wilmington could follow suit, and they could develop a new wayfinding system with private funding.
5 Research Procedures

Research methodology
The methodology that I will use for my thesis is design and evaluation. I will do the design first based on the existing condition and analysis map, and after that I will do some analysis work that will let us know what this project will give to the city.

Instrumentation and Data
1: GIS: The GIS data will be collected from www.clintoncountyohgis.org
2: The analysis map data came from the field research in the City of Wilmington.
3: The data from meeting with Clinton County Planning Commission.

Specific Procedures
1: Based on analysis map, identify streets needing redesign
2: Establish how many local residents will go to Downtown Wilmington
3: Establish what kind of signage is needed in Downtown Wilmington
4: Create a comprehensive legible cityscape plan for the City of Wilmington
6 Design and Planning

In this section, I will provide eight different solutions for problems that the City of Wilmington is facing. It includes: retail store sign design, creating a sense of entrance, wayfinding signs, creating or redesigning open space, main intersection redesign, bike lane and detail design, factory redesign and wall printing.

6.1: Retail Store Signs Design

In today’s urban environment, especially in the city's central business district, if the signage system is not sufficiently systematic and standardized, it not only affects local people’s daily life, but also it will give a bad impression for visitors. A good signage design for retail stores is like a nametag for a city.

For Downtown Wilmington, I picked a representative street to redesign. In the design part, I made signs at different heights, colors and textures. Textures considered surfaces such as wood, stone, and metal. Meanwhile, the signage system will fully consider human visual comfort, such as height setting, font size and scale of the map.

Figure 28 and figure 29 compare the current situation and the redesign:
Figure 28: Street View without Signage Design

Figure 29: Street View with Signage Design
6.2 Create Sense of Entrance

An entrance to the city is the first impression of the city. A good entrance design is one of the most important parts for the legible cityscape plan. It is the link of the city to connect with the outside, and has an important role in the communication between inner and outer city, in terms of material energy and information and it plays an important role in shaping the city's landscape. As a cultural and historical carrier, a good entrance design can increase the character and attraction of the city and bringing prosperity and vigor to the city.

For Downtown Wilmington, I use the main entrance as the design example (N South Street). The entrance is charged with the mission to convey the city’s character, so in my design, I use the logo of Wilmington in wall printing and a welcome sign with Wilmington’s style. It maintains the continuity of the local historical context and transfers the local cultural information. I did two different designs using local flavor and Wilmington's logo.

The figure shows the comparison of the current situation and what is looks like after the redesign:
Figure 30: Comparison for Entrance Design
6.3 Wayfinding Signs

Wayfinding signs placed throughout every corner of the city provides a great convenience for people’s daily life. It provides all kinds of information to help people better understand the city. It also helps to build a richer, deeper relationship between the people and city. The wayfinding system should take the city as a whole: an entire urban environment, down to the building, each part should have its own wayfinding system, it should let local people or visitors feel comfortable in daily life and in traveling in the city.

Base on the different functions of the city’s areas, we can consider four distinct parts:
1: Traffic wayfinding system: roads, districts, subways, bus stations and so on.
2: Commercial wayfinding system: super markets, hotels, and restaurants.
3: Public information wayfinding system: government, hospital, and library.
4: Attraction wayfinding system: open space, recreational areas and forest.

In Downtown Wilmington, there are almost no wayfinding signs, and there is little attention given to it. In my design, I will implement a wayfinding system as an indispensable part of the built environment and planning of Wilmington.

In the design part, I create a series of wayfinding signs for the City of Wilmington.
6.4 Create or Redesign Open Space

Open spaces are a vital part of a city. It is the public area for daily activities, and it is also an area that shows the local history and culture. It is the main part of urban planning and of a legible cityscape plan.

In Downtown Wilmington, there are only two open spaces in the Downtown: they are the lawn around the Court House and a narrow open space between two buildings. It is not enough for people’s daily use.

In the design part, it will have more open space for local people and visitors. All open spaces in Downtown Wilmington are based on human scale and include many elements, such as: open-air structures, water features and street furniture. There are three different kinds of open spaces:

1: Parking lot redesign: In general, most parking lots in Downtown Wilmington are not fully used, so the number of parking lot will decline in order to make more area for open space. The new parking lot will have more public utilities, such as street seats, fountains and increased tree canopy.

2: Open space redesign: The new open space will have more function and more detail design, such as Sunday market, landmark and so on.
3: Vacant parcel redesign: In figure 31, it shows an abandoned gas station redesigned as a retail store building, inside the parcel there is a parking space that can contain six cars. There is also a sign that shows “parking lot inside”.

![Figure 32: Open Space Map](image)

### 6.5 Main Intersection Redesign

I picked the main intersection (Main Street and N South Street) in Downtown Wilmington for the redesign, which is the area with the most population flow. The intersection is the transfer point, both for people and cars. In the design section, I consider the entire situation that includes:
1: Pedestrian first: There are four speed bumps in the intersection and two in the middle of the street. All of them can make the traffic flow in a reduced speed to make pedestrians feel safer.

2: Wider sidewalks around intersections: The bigger intersections can make the pedestrian walking distance shorter, and it is also better marked for passing drivers.

3: More tree canopy: The tree canopy in Downtown Wilmington is lacking. Increased tree canopy blocks traffic and pedestrians, making people feel safer when they are walking.

4: Street seats: The street seat allows people to stay on the streets, and it can be considered as a micro-square on the street. During the holidays, it can also be use as a temporary booth for small businesses.

Figure 33: Main Intersection Map

Source: www.sfbetterstreets.org
6.6 Bike Lane and Detail Design

In the last two decades, bicycles have become more and more popular as use expanded into more and more areas such as leisure, fitness, social interaction and cultural experience. From the perspective of the city, the bicycle is a reflection of a spiritual civilization and the urban cityscape acts as an important window. Good and bad bicycle traffic environments reflect the city as people-oriented or not, and it becomes more and more important for people’s daily life.

In City of Wilmington, there is a “Tri-county Greenbelt Bicycle trail”. However, the bicycle trail is disconnected. People always have a short trip, because they feel unsafe when they want to cross the street. On the other hand, a complete bike lane makes each area in Wilmington have a better connection.

In the design and planning section, based on the current situation, I make some new bike lanes to connect the existing bike lanes, as well as connect other areas, such as the forest in the west, Wilmington College, the commercial areas and Downtown Wilmington. In the past, people wanting to travel to these areas had to do so by car. When the bike lane comes out, it will change people’s life style and trip mode. For the detail design, it will include: bicycle logo light boxes, bicycle traffic signs, speed bumps for coming traffic and rest areas. These designs will make people feel much safer than in past when they traveled by bicycle.
Figure 34: Bike Lane Map

Figure 35: Bike Lane Detail Design
6.7 Factory Redesign

Today, a large number of old industrial buildings faced with numerous problems: some of them need updating; some of them need reconstruction or redesign. Factory redesign has become one of the most important pieces in cityscape redesign, and we need to protect, develop and reuse old industrial buildings.

The industrial area located in the east of Wilmington is very close to downtown. Some buildings are already abandoned, and some of them are in very bad condition. Bad street views have a terrible influence on cityscape. However, on the other hand, it is also an opportunity, because the highest building for City of Wilmington is located in the industrial area. If we do more architectural detail design to make the building surface more colorful or more detailed, it will have a huge difference on street views. The abandoned factory will also become the most famous attraction for the city.

I used a Chinese case study as an example. In the design section, it also had its highest building; I added some surface design to make it stand out from other buildings making it a landmark for that area. The same situation applies in Wilmington, after a surface redesign it will become the landmark of the city. Other buildings can be used as exhibition buildings, galleries, theme restaurants and so on. The new industrial area will become a new attraction for visitors.

The figure 36 shows the model as the suggestion for the Wilmington industrial area redesign.
6.8 Wall Printing

In Downtown Wilmington, some buildings are in good condition, but with less architectural details, so wall printing is one of the best solutions to give buildings more design details. Wall printing is also a tradition in Wilmington; there are some very nice new drawings on buildings in the last two years. Wall printing will make Downtown Wilmington more vivid and more artistic.

In my design, I have two different styles of drawing for the Municipal Court Probation. The first one is local style printing and another is Chinese printing. Both of them are suitable for the building.
Figure 37: Comparison for Wall Printing
6.9 Site Map

The site map is a combination of the eight design and planning sections. All eight sections are solutions for the problems, which the City of Wilmington is facing. It shows:

**Planning and Design**
- Create or reuse Open space
- Main intersection
- Retail store signs
- Create sense for entrance
- Bike lane and Details
- Factory redesign
- Way-finding signs
- Roundabout
- Angled parking

**Problems**
- Weakness of downtown area identity
- Weakness of downtown area illegible
- Too many parking space
- No sense of entrance
- No connection for different area
- Less green space or not use well

![Site Map](image)

Figure 38: Site Map
Bibliography


