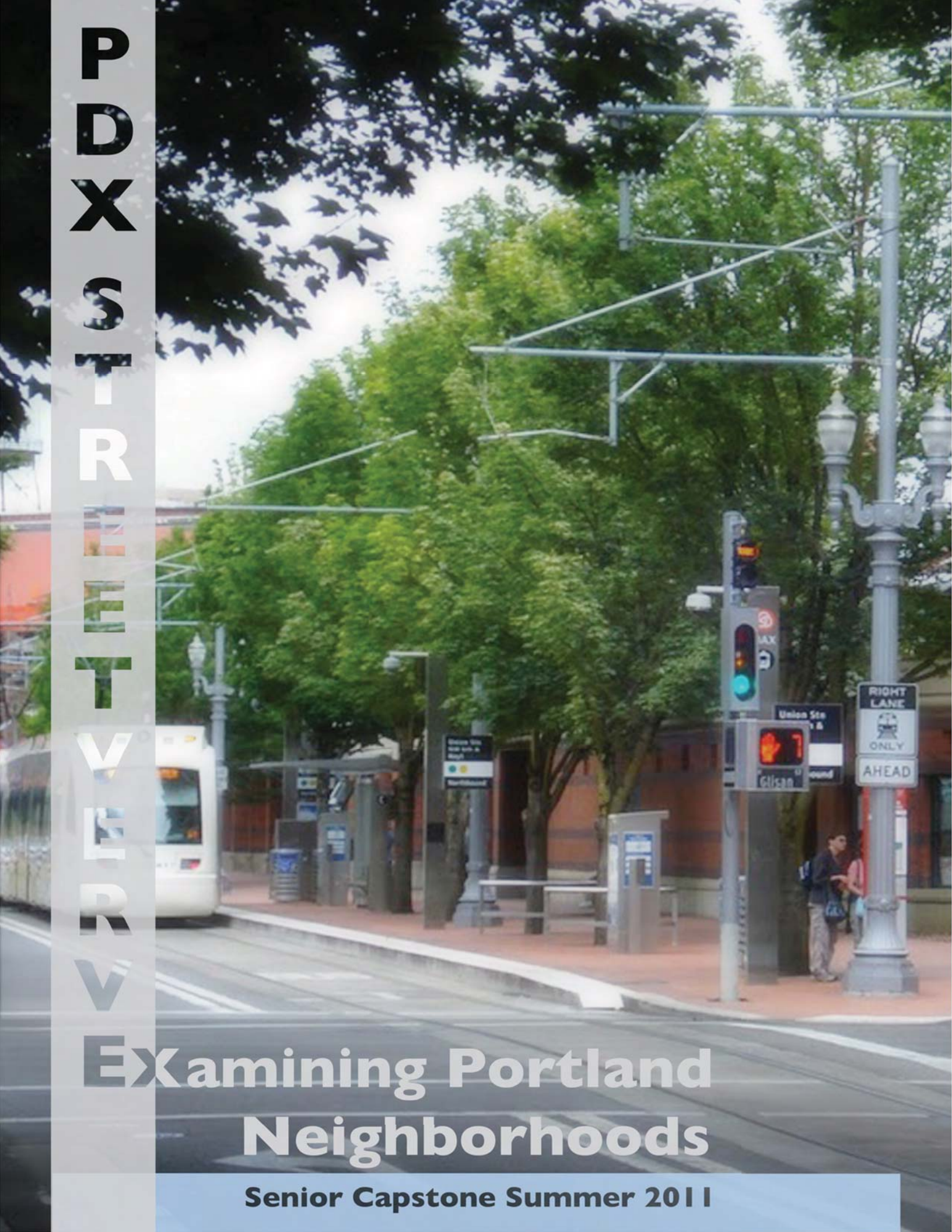
PDX STREETVIEW



Examining Portland Neighborhoods

Senior Capstone Summer 2011

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Mission Statement

The Portland Neighborhood Almanac Project is an exploratory pilot project with the mission of collecting high quality micro-level quantitative and qualitative data about selected Portland neighborhoods. The pilot will also test GIS, internet and mobile applications as tools of data collection, analysis and dissemination.

Partners

Institute of Portland Metropolitan Studies, Portland State University

The Institute of Portland Metropolitan Studies (IMS) at Portland State University is one of the many service institutes located in the College of Urban and Public Affairs. The mission of the IMS is to advance the economic, environmental, and social goals of the Portland metropolitan region by gathering and disseminating credible information, convening regional partners, and stimulating dialogue and action about critical regional issues. In doing so, the institute conducts research about the region to build a common base of information and understanding among diverse community members. One of its primary goals is to facilitate the creation and sharing of this information, using appropriate methods and technology (IMS Mission Statement, 2011).

Portland State University Senior Capstone

Portland State University (PSU) has a long history of engagement with community partners. Its motto -- Let Knowledge Serve the City -- is exemplified in the Senior Capstone, a community-service course that all graduating seniors are required to take. The purpose of the Capstone is "to further enhance student learning while cultivating crucial life abilities that are important both academically and professionally, establishing connections within the larger community, developing strategies for analyzing and addressing problems, and working with others trained in fields different from one's own" (Senior Capstone Description, 2011).

In support of the PDX Streetverve Project, The PSU Senior Capstone contributed to the process as provided in the Capstone Mission Statement: The PDX Streetverve Project is an exploratory pilot project with the mission of collecting high quality micro-level quantitative and qualitative data about selected Portland neighborhoods. The pilot will also test GIS, internet and mobile applications as tools of data collection, analysis and dissemination.

Literature Review

The PDX Streetverve project is informed by different collaborative methodologies. "Collaborative methodologies" are techniques that individuals use to work together. These are just a few examples of methodologies that we drew from, and combined to make what is now the PDX Streetverve project.

One of these methodologies is Photovoice, a process in which people can document and represent their community through photographs. In essence, Photovoice is exactly what it sounds like – giving a voice to communities through photography. The three main goals of Photovoice are:

1. To enable people to record and reflect their community's strengths and concerns
2. To promote critical dialogue and knowledge about important community issues through large and small group discussion of photographs
3. To reach policymakers

Visual images can be useful tools for change. Pictures force neighborhood residents to think critically about the region around them and analyze what is important to their lives, or what would make their lives better. The main advantage to Photovoice is that you don't need to be literate, speak English, be wealthy, or be highly educated to take a photograph. Almost anyone can learn to camera, making Photovoice a useful technique to give a voice to minority populations - especially women, workers, children, immigrants, and people who have a social stigma assigned to them. Photovoice is a democratic process.

In the article "Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment," Wang describes one of the earliest efforts to empower a community through photography by Worth and Adair in 1972. Navajo citizens were trained to film their social lives based on what they wanted to document. Photovoice gives researches "the possibility of perceiving the world from the viewpoint of the people who lead lives that are different from those traditionally in control of the means for imagining the world." (Wang 372) Wang mentions how when Photovoice was implemented in Yunnan, the village women were often asked by people on the street why they were taking pictures. By creating this interaction between the village women and other villagers, the women were given "ownership" of the project and could engage in meaningful dialogue with the community.

In the article "Can Public Health Researchers and Agencies Reconcile the Push From Funding Bodies and the Pull From Communities?" researchers explain the changing paradigm from top-down research methods to the more democratic, participatory research methods. This not only provides more applicable data for the community but allows the community to get involved and learn about the project. A more democratic method of research means that the community is more likely to be receptive to changes made.

Another technology that informed the Streetverve project was the City of Boston's recent attempts to create mobile reporting applications. Boston has been on the forefront of using new technology to track neighborhood repair projects. In 2009, the Mayor's Office of New Urban Mechanics launched the "Citizens Connect iPhone app" which claims to "help residents make their neighborhoods even better." The app allows citizens to report potholes, graffiti, and other service issues directly to the city of boston. The app allows users to send pictures, descriptions, and locations of problems. Last February, the City of Boston announced another app called Street Bump, which will automatically report potholes to the city by sensing when a car has hit a bump. The app would be sensitive enough to identify the smallest cracks and divots in the road. The City of Portland has its own take on this with an app called "PDX Reporter," a way to create reports with categories, pictures, locations, and comments.

Methodology

The goals for this project entailed collecting both quantitative and qualitative data about selected neighborhoods in Portland. The quantitative data included photo documentation of all buildings and lots (e.g. parking lots or vacant lots) within the study areas. Other empirical data collected included the address(es) of the buildings, the number of stories and/or mailboxes, land use categories such as commercial or residential (including exclusive as well as mixed use categories), the name and type of business, and the spatial coordinates of the building (latitude/longitude). This data was collected in order to provide an objective "picture" of the neighborhood at a given point in time and assess the ability to map and analyze this micro-level data using GIS (geographic information systems).

Qualitative data included documentation of aspects of the neighborhood that captured the interest of the student researchers. Students documented the "streetscape" using digital media such as photos, comments, tweets, audio, and video. Instructions were minimal for this part of the project. Students were asked to capture their "experience" in real-time -- what they felt was interesting or unique about the neighborhood. This intentionally subjective data gives an indication of the character of a neighborhood from the viewpoint of someone on the ground. It provides details and depth about a place that would normally be missed if concentrating solely on collecting specific pieces of information. The qualitative data collection was also used to test various social media tools for collecting real-time, on-the-ground data about a neighborhood and, ultimately, exploring options for the dissemination of the data.

Manual field sheets were used to collect data for this pilot phase of the project in order to better understand the nature of data at a micro-level (see Appendix A). The data were then transferred to various formats including spreadsheets, ArcGIS, Picasa, Google Earth, Soundcloud, and Crowdmap. The benefits and limitations of these various formats and tools will be discussed further in the technology section followed by a discussion of lessons learned.

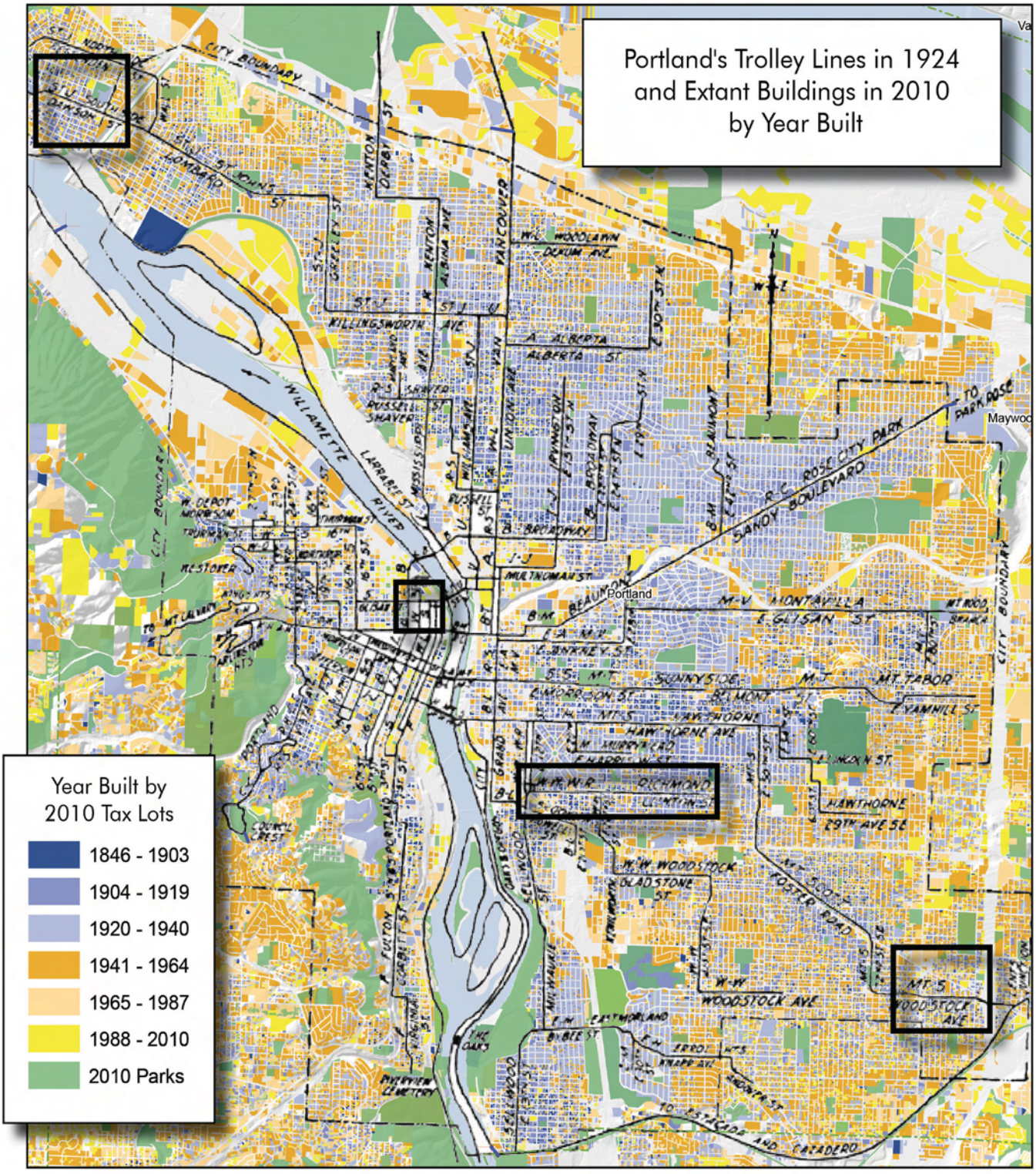
Study Areas

Four teams were created to canvas four different neighborhoods in Portland. These included SE Division Street (14th to 34th Ave.), the Lents neighborhood (Foster from 82nd to 92nd Ave.), a commercial section in the St. Johns Neighborhood (Lombard from Philadelphia to St. Louis Ave.) and the Oldtown/Pearl District (bounded by 10th, Hoyt, 4th and Burnside).

These areas were selected for the following reasons:

1. The neighborhoods are all older, former trolley, neighborhoods that contain (or contained) defined commercial districts surrounded by residential areas.
2. Each neighborhood has a different history and is experiencing different levels of transition. Some, like Division Street, have been undergoing gentrification for some time. Lents is in an urban renewal district. The Oldtown/Pearl study area represents a transition zone between the historic Chinatown and the newly developing Cultural District. St. Johns, given its distance from Portland's city center, has historically been an area with its own unique identity.

3. The study areas also represent different demographic characteristics and histories. These will be more fully explored in the next two sections.
4. Each study area has similar "walkability" characteristics. Students were on foot, looking at details in the neighborhoods. Areas needed to be selected that allowed for easy and safe access.



NORTHEAST

G1

ST. JOHNS NEIGHBORHOOD

RESEARCH TEAM

Kale Brewer
Teresa Hanna
Brian Slaughter

Team Experiences

The St Johns Theater and Pub. A business that is a mainstay in this neighborhood.

Classic barbers pole at Wayne's

Neighborhood History

Nestled o the peninsula formed by the convergence of Oregon's two largest rivers, St. Johns is one of Portland's most historic and culturally rich neighborhoods. The Columbia River borders St. Johns to the northeast, separating it from Hayden Island. The Willamette River marks the neighborhoods western border and to the southwest, the North Portland railroad cut divides St. Johns from the University Park, Portsmouth, and Kenton neighborhoods. Downtown St. Johns expands from the intersection of Lombard and Philadelphia and is the area's main business district.

St. Johns founder, James "Jimmy" John, moved to Linnton during the winter of 1845-1846 and became a developer and promoter. Anticipating a population decline in Linnton, John decided to move across the Willamette to the Peninsula. On May 25, 1846, he took up a provisional land claim on the area where William Clark camped upon his return to the Lewis and Clark expedition from Waud's Bluff and a Native American encampment once existed.

James John laid out the original town site which consisted of only four blocks along the waterfront and 2 1/2 blocks in depth, bound on the north by Burlington Avenue and on south by Richmond Avenue. On Oct. 7, 1852 the area was platted and aptly entitled "St. Johns on the Willamette" after John.7 According to local legend, the St. in St. Johns arose from John's refusal to visit the local brothel.

Just before the Civil War, industry came to St. Johns. The Oregon Barrel Co. became the largest manufacturing plant in the area. Cottonwood flourished along the local sloughs providing raw materials for barrels, wash tubs, chair rungs, and other wood products.

Other industries followed and by the time St. Johns was finally incorporated in 1903, the A.B. Douglass & Sons Planning Mill , Rankin's (electrical) sawmill, Portland Manufacturing Co., and the Port of Portland's dry dock were already established. That same year, electric streetcars replaced the steam engine driven passenger trains connecting Portland to St. Johns when a booster transformer was installed at the Piedmont substation. As times changed and technology improved trackless trolleys and buses supplanted the electric streetcars, but the routes closely followed the steam trains original routes.7

In 1911, St. Johns voters approved annexation into the City of Portland, but the Oregon Supreme Court ruled the election to be unconstitutional. As a result, the 1913 Oregon Legislature drafted a constitutional amendment granting them the power to set guidelines for future annexations. The amendment passed and a local election was held on April 4, 1915. 799 out of the 1,298 adult male residents of St. Johns voted in favor of annexation. Merger ballots held for

June 7, 1915 and they both became part of Portland the next day.

By the 1920's the ferry between the St. Johns and Linnton carried 1000 vehicles a day.2 Local business owners and residents began lobbying for a bridge to connect the communities and in November of 1928, voters approved a $4.25 million bridge bond. The steel suspension bridge was designed by master bridge engineer David B. Steinman. Construction began on Sep. 3, 1929, more than a month prior to the stock market crash and provided employment for residents during the Great Depression. Work was completed 21 months later in May 1931, but in order to make the bridge the centerpiece of the 23rd Rose Festival, the dedication ceremony was postponed until June 13, 1931.

At a cost of $4,000,000 the structure became the eighth and longest Willamette River Bridge in Portland at the time of its construction. It also set engineering records while featuring significant engineering innovations including the use of the world's largest and longest prestressed twisted rope strand cables which represented a departure from traditional parallel wire construction.

In the shadow of the St. Johns Bridge, Cathedral Park lies on the east bank of the Willamette River. The "honorary mayor" of St. Johns in the early 1970's, Howard Galbraith, grew tired of the junkyard state under the east end of the bridge. He organized a drive that eventually raised $7.5 million to build a park from community fundraising, combined with state, county and city funding over 8 years. On May 3, 1980 a community celebration dedicated the 23.09 acre park. Throughout the summer the park hosts many cultural events including the St. Johns Jazz Festival and Symphony in the Park.

Cathedral Park is only one of the many natural areas around St. Johns. Kelley Point forms the tip of the peninsula where the Columbia and Willamette Rivers merge.5 Pier Park amenities include an 11,070 square feet skate park originally developed by the Army Corp of Engineers in 2001, and later renovated by Dreamland Skateparks.4 Smith and Bybee Wetlands is one of the largest urban freshwater wetlands in the United States and home to a wide variety of wildlife including beaver, bald eagles and western painted turtles.6

The beautiful natural areas are an asset to the community, but the affordability of the area attracts new residents. Newcomers can still find reasonably priced housing and the numerous bus lines ensure they can easily get to work or school. Most everything else a person needs is within walking distance.

SOUTHEAST

G2 DIVISION STREET

RESEARCH TEAM

Krystle Alconcel
Kevin McGowan
Ryan Bueler

Team Experiences

Food Carts are a mainstay along Divsion Stree.

Portland Loves Schools, was posted on every side of this residence. It represents the demographics of this neighborhood.

A vacant lot in the neighborhood. one of many spots along Division, that show it is hasn't been completely gentrified.

Neighborhood History

The real pioneers of Hosford-Abernathy neighborhood were Clinton Kelly, Gideon Tibbett, James B. Stephens & William S. Ladd. Present day Richmond neighborhood is approx. 600 acres from Hawthorne to Powell between SE 29th and 52nd avenues. The first person to develop around the Hosford-Abernathy neighborhood was Clinton Kelly, him and his family came from Kentucky in 1847. Shortly after moving to the Portland area Clinton Kelly bought a 1 square mile land that ran from Division to Holgate and from 26th to 42nd Avenue. In 1849 the Kelly family began building their home at 29th and Powell, soon after in 1858 Kelly donated land to for the present site of Cleveland High School. After his death in 1875, Clinton's son Richmond Kelly began residential development in the land as well. That's when the Richmond School was built followed by the Richmond neighborhood itself; which, was created in 1910. Primarily residential and commercial developments are now what occupy the space.

The next person who helped develop the Hosford-Abernathy neighborhood was Gideon Tibbett, his land stretched from the river to what is now 26th Avenue and Division St. After he finished developing his residence, Tibbett agreed to let a new railroad line crisscross in his land. Walking along 26th Avenue and Division Street the original railroad still exists today. As the railroad became better established, the city's population began to grow. This expansion of people created the need for more housing and commercial development. In order to develop land needed to be accessible in that area James B. Stephen came along.

James B. Stephens owned land and operated the first Willamette river ferry. In 1869 Stephens purchased more acres of land in East Portland and began developing on it. This became known as the Stephens Addition. This new neighborhood stretched from Hawthorne to Division from North to South and from the river to 12th Ave from East to West.

Later in the years a man named William S. Ladd purchased Stephen's Addition. Ladd was the Mayor of Portland several times and prominent businessman. In 1891 East Portland merged with Portland. Ladd used the merger as an opportunity to subdivide his land. This area then provided more residential space for the growing population of pioneers and immigrants that traveled. Ladd designed a unique neighborhood that used a diagonal "wagon wheel" arrangement of streets, like what he had seen while visiting Washington DC. It was also due to the increase of railroad usage in that area.

In the early 1900's records showed that Italian immigrants and others had initially came to Portland to work on the railroads. As the availability of land for residential and farming uses began to grow, Italian Americans began moving to the East side. Ladd's Addition and areas near became prime real estate for these immigrants. Some Italian influences began showing up in the community including St. Philip Neri Church, which was built in 1913.

Besides the railroads, streetcars and the automobile had begun to show tremendous influence on the neighborhood in the 1900's. In 1914, the Ford Motor Company opened a plant at the intersection of Division and 11th, where they assembled Model T's using Ford's innovative assembly line techniques. Few years later other industrial influences began to pop up all over Portland area. In 1920's had huge increases

in bridge building and in 1926 the Ross Island Bridge was opened. The bridge crosses the Willamette River and connects South East Portland with the Downtown Portland. The Ross Island Bridge lead to more automobile traffic on Powell Boulevard and permanently divided Tibbett's Addition. By 1940, most areas of the neighborhood were developed; however in the years following World War II, many residents began moving to the suburbs. This had led to the Hasford-Abornathy neighborhood to deteriorate. The biggest threat to the area was the expansion of Portland's freeway network. For 20 years, residents fought to preserve their neighborhoods. With the help of local politicians and activists, they were ultimately successful, but even though the freeway was halted, there were still significant impacts on the neighborhood especially when the construction project of the Mt. Hood Freeway surfaced.
During the 1970's the Hosford-Abernethy Neighborhood around SE Division Street experienced a few changes in how the neighborhood functioned. The Hosford-Abernethy Neighborhood Development Association, or HAND, began to organize and establish itself during this time. The purpose of the Hosford-Abernethy Neighborhood Development Association was to "better communicate with local government, business leaders and each other (handpdx.org)." During 1976, HAND became involved with other political activists to help stop the controversial construction project of the Mt. Hood Freeway. This freeway project would have been built right through the Hosford-Abernethy Neighborhood and many people including HAND had helped to defeat this purposed project.

With the help of revitalization efforts in the late 70's and 80's from organizations like HAND and the Office of Neighborhood Associations, created in 1974, the neighborhood once again started to have a stronger voice in city government. During this time many of the housing prices fell which caused a younger generation of families to move into the neighborhood, further increasing its revitalization. As more transportation services were added, the neighborhood became further revitalized and new transportation services, like improved rail lines, continues to be a topic and issue for the neighborhood today.

The Hosford-Abernethy Neighborhood today along SE Division St. contains a wide array of land uses including housing, industry and businesses. During the 1990's town homes and apartment complexes were being added and then around the year 2000 condominiums were being established. The Ladd's Addition of the Neighborhood was declared a historic district in 1977, with the numerous older style housing contributing to the decision. Currently along SE Division there features many shops/markets, restaurants/bars, coffee houses, schools, religious centers, and other small businesses. SE Division is also a very busy traffic area for vehicles, bikes, pedestrians, and public transportation. Some of the parks that are located in the Area include Piccolo Park, acquired in 1989, Sewallcreast Park, acquired in 1940, and the famous Ladd Circle Park & Rose Gardens, acquired in 1981, which features many flowers and a unique compass shape grid unlike other Portland areas.

SOUTHEAST

G3

LENTS NEIGHBORHOOD

RESEARCH TEAM

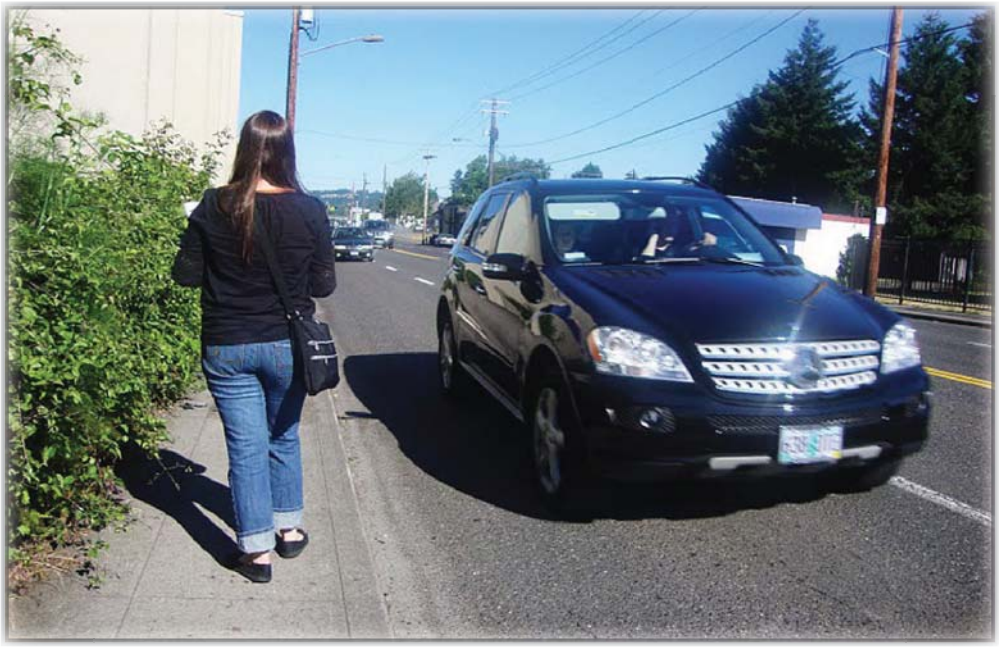
Zoe Richerson
Yolanda Sanchez

Team Experiences

Our field project took us to SE Foster road from 82nd to 92nd Avenue up to Harold Street, which is known as the Lents neighborhood here in Portland, Oregon. We observed that this section of Lents is made up of residential and commercial buildings. The ethnicity is predominately Asian and Hispanic with an emphasis on the Asian. Even though there were a few Hispanic businesses such as auto mechanic, body shop, tax agency, a market, and a church, most of the businesses and advertisements were directed to the Asian community, a multitude of those businesses were auto service shops —"Everything for your auto!"

-Yolanda Sanchez

Resting spot at the corner of 92nd Ave & SE Foster Rd



Showing a dangerous sidewalk at 82nd Ave & SE Foster Rd. It is very narrow, and cars drive pass by at over 40 miles an hour on this often congested street.

Neighborhood History

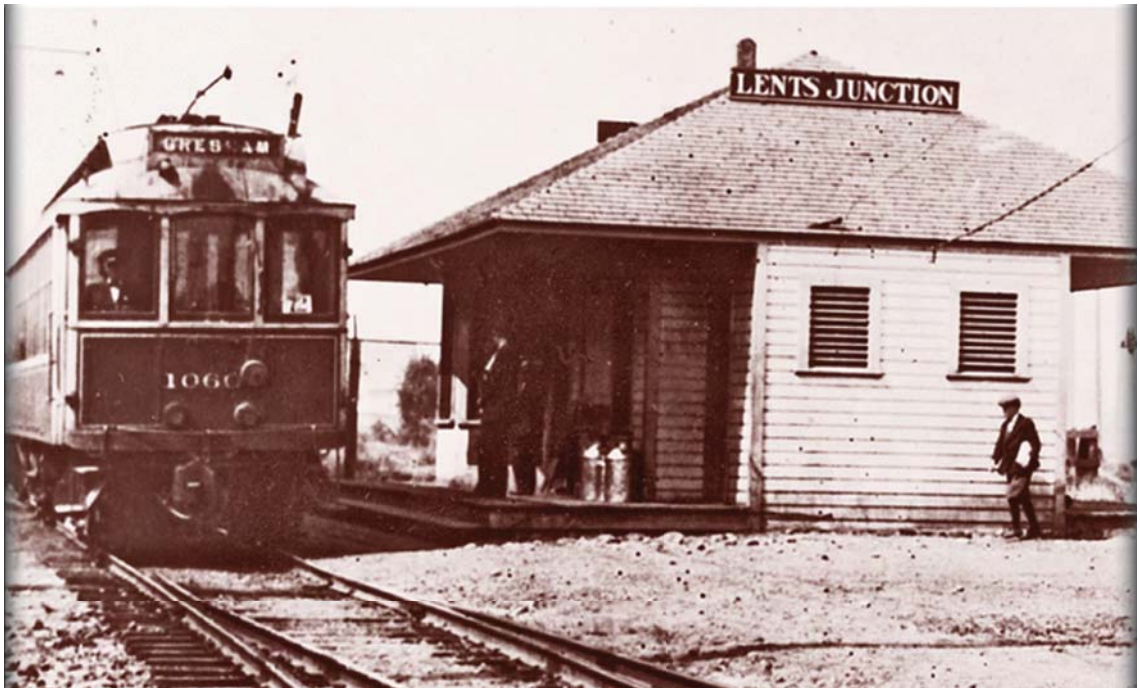
Lents neighborhood is in the Southeast section of Portland. It is bordered by SE Powell Boulevard on the north, Clackamas County line on the south, SE 82nd to the west, and roughly SE 112th on the east. Lents is a diverse neighborhood, with many Asians, Russian/Eastern European, and Latino immigrants. As of the 2010 Census data, Lents had a population of 20,156. It was 60.1% white, 15.8% Hispanic or Latino, 14.1% Asian, 4.5% black, 1% Native American, and with 3.7% of census respondents identifying as two or more races. The original town site of Lents was platted in August 1892 and given the family name by George Lent in honor of his father Oliver P Lent, a stonemason who came to Oregon in the 1850s to farm a 190-acre land claim. On November 5, 1912, with a rapidly growing population, the town of Lent voted to be annexed to the city of Portland. Lents began as a streetcar suburb and small satellite community with rural character outside city limit. It evolved into a neighborhood just inside the city limits but because of its distance from central Portland and lower income class, it was repeatedly neglected by the city in terms of street and sewer improvements.

In the early 1970's, the historic downtown Lents District and the neighborhood were split in two by the construction of the I-205 freeway, which ran right through the middle of Lents.

Presently, Lents has one of Portland's most comprehensive transportation systems, with an Interstate 205 highway, light rail access - The MAX Green Line- and three of Portland's important arterial roads: Powell Boulevard, Foster Road and 82nd Avenue.

In September 1998, the City Council established a Lents Town Center Urban Renewal Area with the goals of generating family wage jobs, assisting new and existing business, improving local infrastructure such as streets and parks improve existing housing and construct new housing. Ten years later, on June 25, 2008, the Portland City Council amended the Lents Town Center Urban Renewal Area boundaries and increased funding by another $170 million dollars for neighborhood improvements.

Lents furniture store. The building is still in use today.



Gresham train at lents Junction, circa 1910.

NORTHWEST

G4

OLD TOWN/CHINATOWN

RESEARCH TEAM

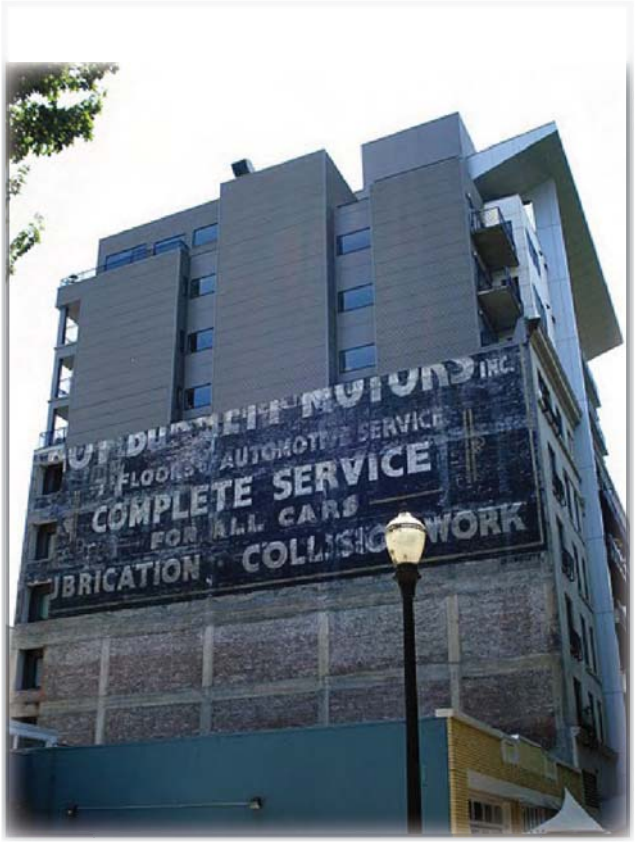
Andy Landolt
Scott Flodin
Jonathan Albano
Brandon Christensen
Jesse Crofutt

Team Experiences

Our team was tasked with collecting information about an area of downtown Portland bounded by NW 4th and 10th Avenues and Burnside and NW Hoyt Street including and in between parts of the Pearl District and Old Town/China Town. This "in between" area has yet to acquire a moniker as it lacks any sort of cohesion, unity, or identity of it's own. The five members of our team, as a matter of convenience, divided the area into sections like colonial powers carving up a continent, and took to the field to see what we would see.

-Jesse Crofutt

An old building being torn down. It used to house the legendary Satyricon nightclub.



looking south at the side of the Park loft Apartments. The building is a mix of old and new.

Bud Clark Commons. This SRO development, is one of the newest additions to old town.

Neighborhood History

In 1943 two men: a pioneer and adventurer from Tennessee named William Overton and a Boston lawyer named Asa Lovejoy, filed a claim on 640 acres West of the Willamette River. The property was adjacent to a natural clearing used by traders seemed a natural place for a larger settlement. After deciding the name over a coin toss the two began selling parcels of their original claim to friends and other settlers and the process of platting the land into city blocks began. By 1850 over 800 people called Portland home with more arriving every day, among them Chinese immigrants, who began settling in the area around SW 2nd avenue and Alder forming Old Chinatown.

Portland grew quickly after the Civil War, its port and docks busy moving lumber, fish, wheat and produce to San Francisco and the rest of the world. From 1850-1890, the Old Town/Chinatown area was near the center of business activity. With the construction of Pioneer courthouse further inland to escape a flooding river the commercial core of the city shifted away leaving the area around Old/Town Chinatown in a bit of a limbo. Soon the Chinese business community began leasing properties near NW Fourth Avenue and Everett Street, establishing the area as New Chinatown, though it was also home to Japanese, African American, Greek, and other arrivals. By the end of the 19th Century, Portland was home to 90,000 residents and was the largest city in the Northwest and the busiest port north of San Francisco.

The rapid growth in the last half of the 19th century was nothing compared with that still to come. In 1905 Portland hosted the Lewis and Clark Expo, its first and to date only World's fair. The Expo brought over one million visitors to the city at a time when airplanes, automobiles, and the freeway system would have been science fiction. Impressed by the fair and the city itself flush with decades of growth and success, people began arriving in droves. In the decade between 1900 and 1910 Portland added over 100,000 people to its population and another 100,000 in the following two decades. This population influx led to necessary upgrades in sanitation, water supply, the park system, and the streetcar system, which at one point was the largest in the country. The area between Chinatown and Present day Pearl District was built up with warehouses and factories and the North Park blocks given a Playground, Tennis Courts and Restrooms. Despite improvements to the neighborhood, when the city's implemented it's first zoning efforts in 1924 there was no provision or protection for residential nearby. Without a critical mass of families, women, and children, the park assumed an unsavory character and was frequented mostly by men who worked in the area.

An 1890's aerial map showing downtown

By 1950 Chinatown had almost completely migrated from South of Burnside to North Chinatown; the area now know as simply Chinatown. West of Union Station, were warehouses serving Portland's rail commerce from the North and the East. Immediately surrounding the station were about 40 acres of rail yards light industry, commerce, and freight transfer facilities. Burnside had earned a reputation as Portland's "skid row" featuring a seedy assortment of single room occupancy hotels, bars, small markets, and rescue missions.

In 1962, the head of a local business family, Bill Naito, purchased a historic building and opened his first import store. Based on success of this venture, he proceeded to purchase and restore historic properties around Old Town/Chinatown - one of earliest efforts to revitalize and preserve the historic character of a neglected downtown district. Spurred partially by Naito's success in Old Town, in its 1972 Downtown Plan the city voiced a desire to redevelop the area with mixed office and residential use, new housing, and social services, with existing residents having high priority. The Northwest Industrial district received little of this attention. The Area continued to be mixed use commercial and suffer from social ills of poverty and substance abuse. Drug dealing was first noted as a problem for the area in the 1970's. As rail yard use declined through the 1970's and 80's, so too did use of some of the warehouse and industrial spaces to the West. Somewhere in that time frame, artists started to move in to the empty, low-rent warehouses and use them for studios. By the late 1980's, the area became a local destination for gallery walks, and soon re/development interest began to grow around the former warehouse district, railroad yards, and brewery blocks.

As a result from the early nineties on, the near NW industrial area experienced a renaissance. Local resident Thomas Augustine coined the phrase "Pearl District" to describe the new development amongst what appeared to him as "crusty old oysters." Under the Portland Commission Plan of 1990 massive re-development began to transform the area. The Pearl District Neighborhood Association was created in 1991 to represent new investment. Projects such as the removal of the Lovejoy Viaduct, the mixed use Brewery Blocks, multiple condo towers, and completion of the Portland street car transformed the area to

The Chinatown gate

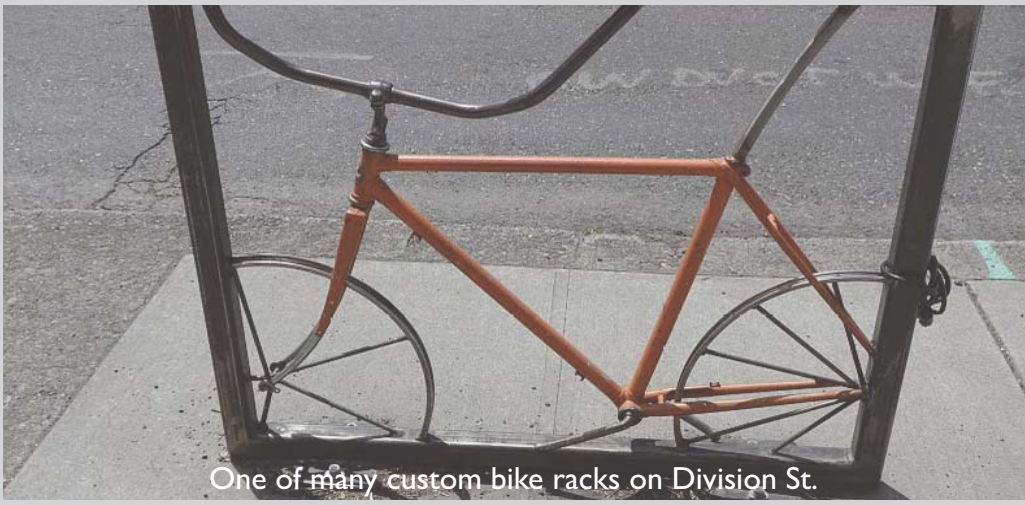
NEIGHBORHOOD SIDEWALK ART

St Johns Mural

Sidewalk at North Lombard and Chicago

suspended bike art Oldtown

Division St. wall mural


One of many custom bike racks on Division St.

Garden and koi pond in Lents

Windows of an Oldtown abandoned building

Introduction

The senior capstone focused on the Neighborhood Almanac Data Project. We were split into four groups: St. Johns, Pearl/Oldtown Chinatown, Lents Neighborhood, and Division Street. Each group went out to their assigned area and gathered data. Teams observed buildings and collected data such as the number of stories, addresses, mailboxes, land use, mix use, and physical/social attributes within the area. Opinions, comments, internet devices, cameras, and photo shots were other options of observing the area. Groups also did a research report based on their area's history. Gathering data and researching were basic techniques of citations.

I produced these maps to help better understand neighborhood dynamics in the Portland metro area. People, researchers, and other resources want to know the importance of spatial distribution in a location. Environmental, physical, and social conditions/attributes are key components to understanding a sense of place. As data collectors and analysts, we want to see what features will help Portland neighborhoods and community to grow and become a "livable place."

Demographics: Race and Ethnicity

To make these maps, we put together all four groups data into one datasheet in excel and transported it into a ArcGIS database. We also used picasa (a photo/video website that helps connects with maps and location) and google earth (Found Longitude and Latitude points) to help contribute to data collection. The information helped with analyzing data on demographics and racial composition in the four areas focused in Portland.

For these maps, RLIS shapefiles, provided by Portland State University were used. The neighborhood boundaries and census demographic layers of Portland were added, then the Arctoolbox clip method was used to only view census demographics of Portland Neighborhoods of North Portland, Northeast Portland, Northeast Central Portland, Southeast Portland, Southwest Portland, East Portland, and Northwest Portland. The quantities method was used to see the distribution of each ethnic background (individually) within the area. There were a total of seven maps that displayed White, African Americans, Asians, Native Americans, Polynesians, and other races. We also viewed information for the Hispanic population. For the other two maps, the pie chart method was used to show the comparison and density of each race in all four study areas.

The seven maps (Demographics):

-The white population dominates throughout the Northwest, Southwest, and Southeast areas.
-The black population dominates in the North and Northeast parts of Portland.
-The asian population dominates majority of the Northwest and East parts of Portland.
-The Native Americans are mostly located in the North, Northeast, Southeast, and East of Portland.
- Other races, Polynesians and Native Hawaiians are located in the North and East sides of Portland.

The two maps (Racial Composition):
-The white population dominates throughout all four neighborhoods especially on Division St.
-The minority population is evenly distributed in the Lents neighborhood.
-Asian population is growing in the Lents neighborhood and parts of Oldtown Chinatown and Pearl District.
-African Americans are commonly distributed in the St. Johns neighborhood.

Racial Composition In the Four Study Areas

Division St. Neighborhood

Lents Neighborhood

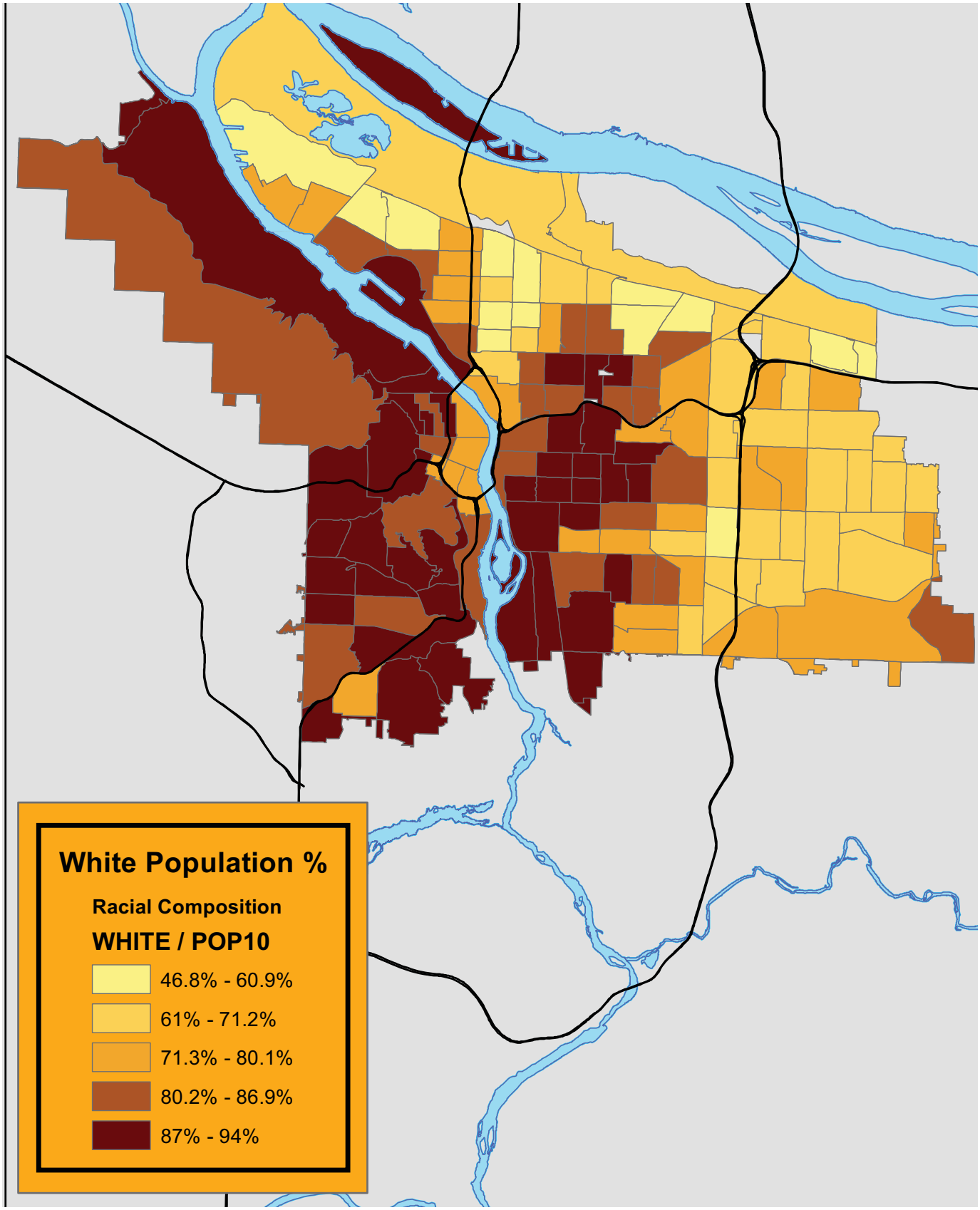
St. Johns Neighborhood

Old Town/China Town Pearl

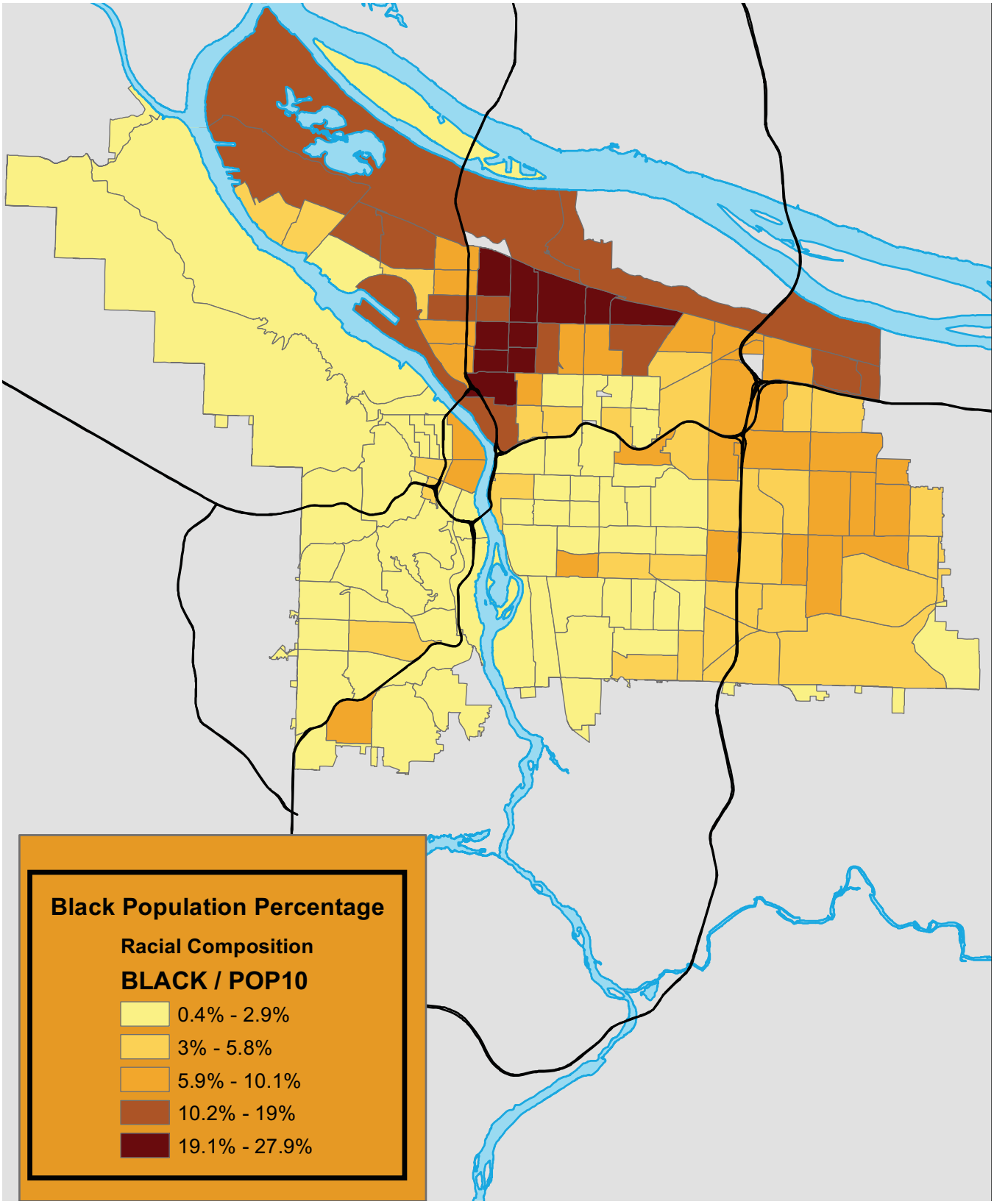
Racial Composition

- WHITE
- BLACK
- AIAN
- ASIAN
- NHPI
- OTHER_RACE

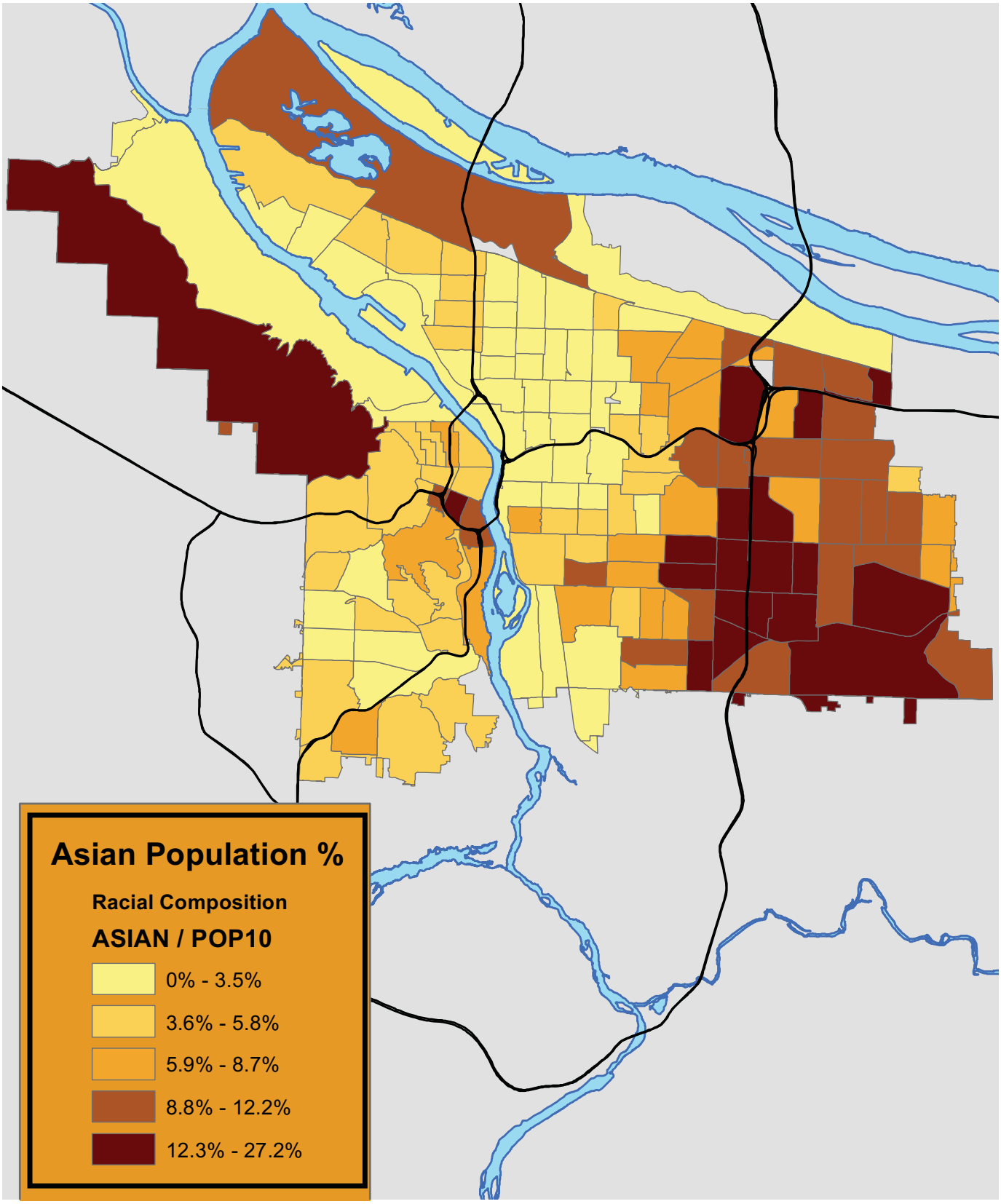
White Population Percentage 2010



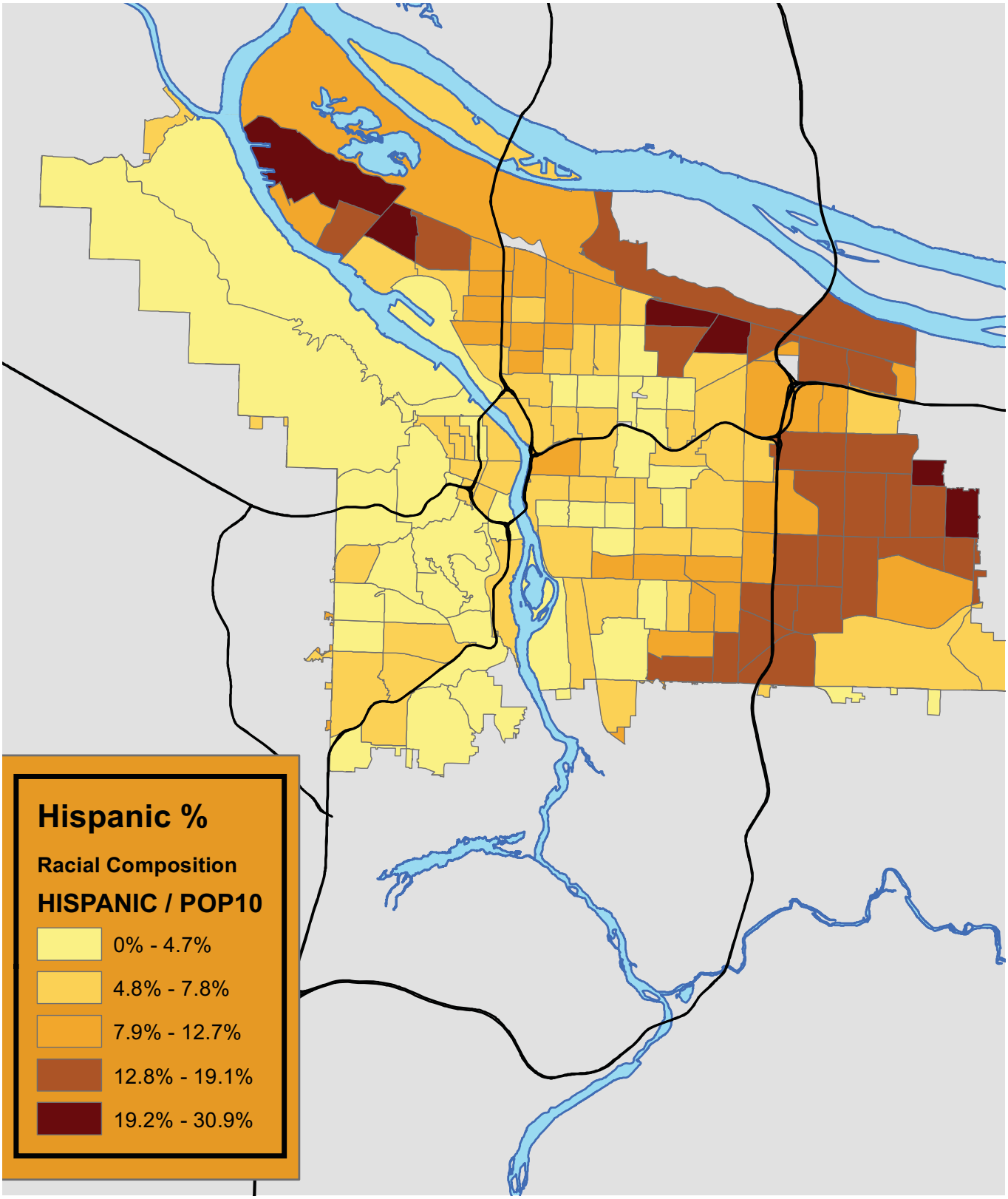
Black Population Percentage 2010



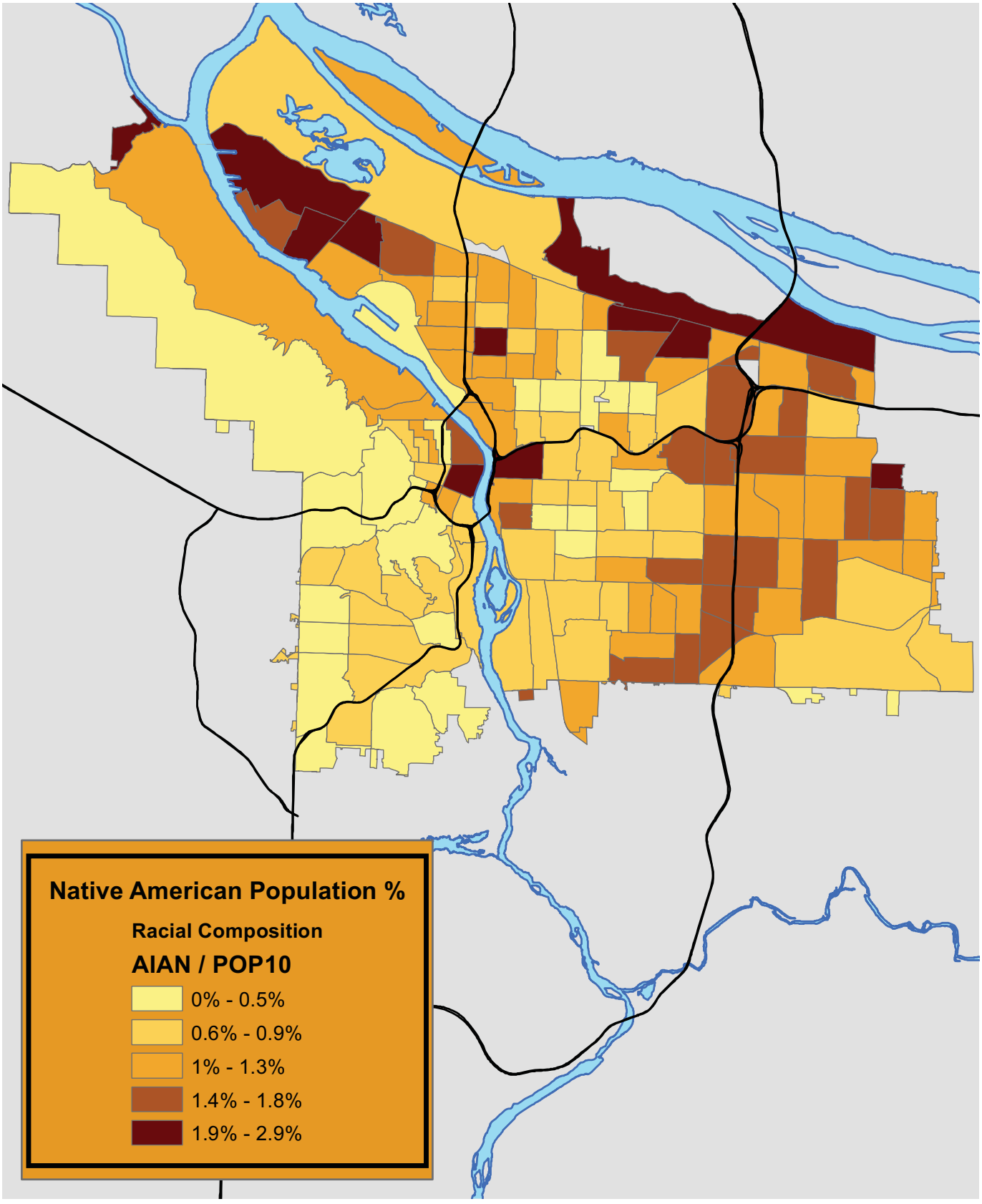
Asian Population Percentage 2010



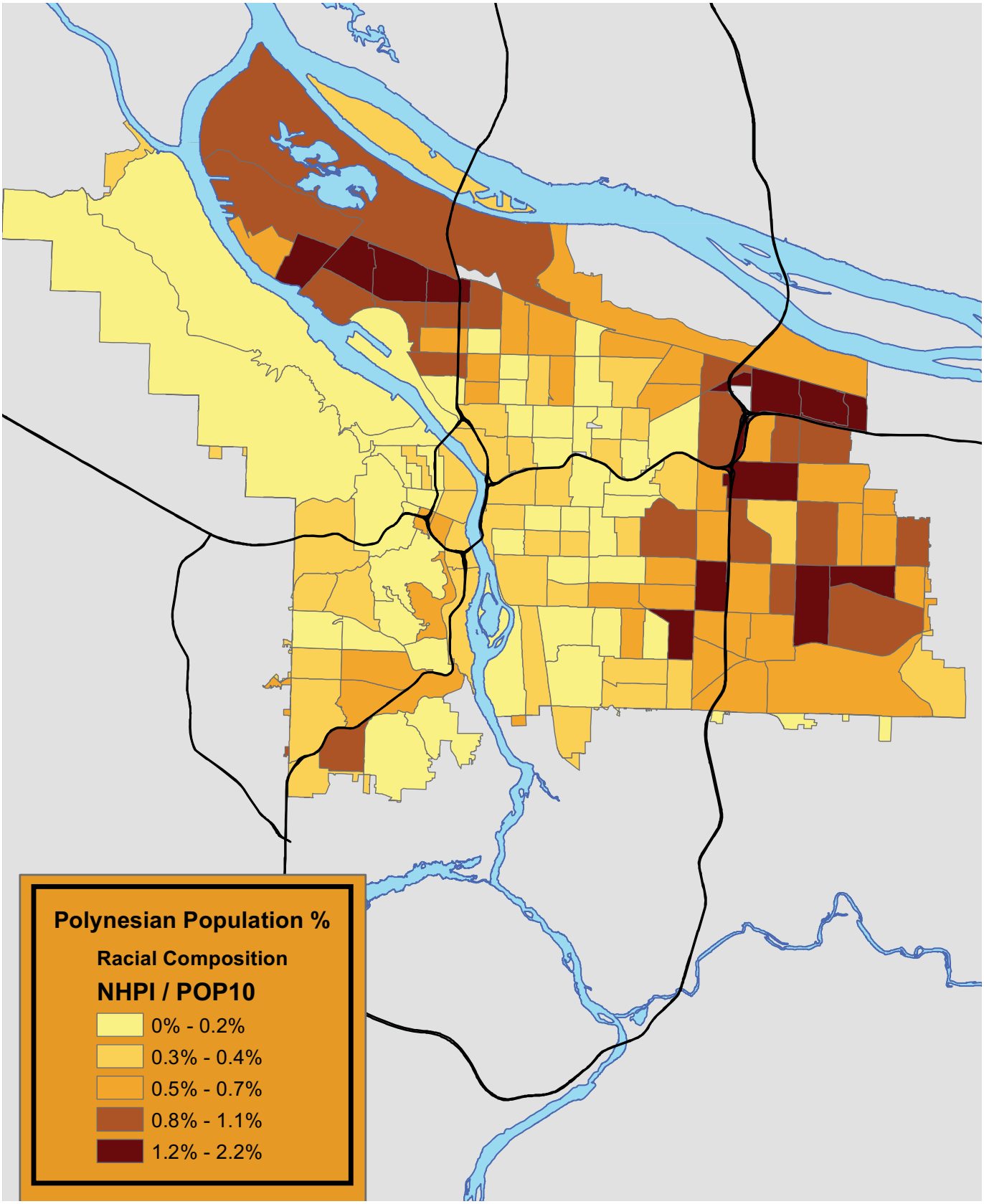
Hispanic Population Percentage 2010



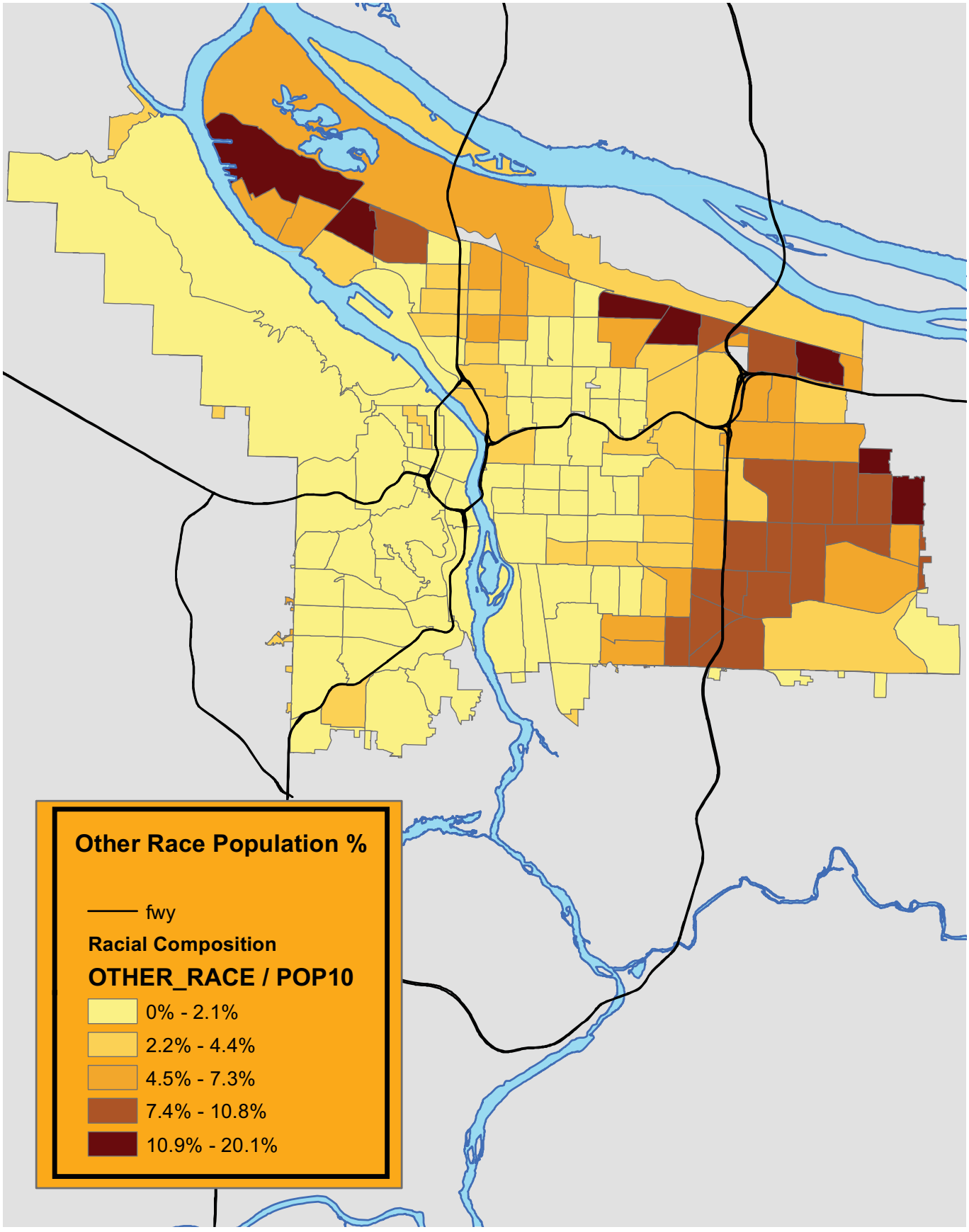
Native American Population Percentage 2010



Polynesian Population Percentage 2010



Other Race Population Percentage 2010



Empirical Data Analysis

Business Types

The following series of maps show the business types and their distributions throughout the St. Johns, Old Town, Lents, and Division neighborhoods. Before all our data was compiled into a single spreadsheet, each person assigned their addresses a business code from the North American Industrial Classification System (http://www.census.gov/eos/www/naics). Using ArcMap to map the business type data, we quickly realized that the sheer number of individual business codes produced maps with little useful information. As a group, we solved the problem by developing our own business type categories:

- Arts-Culture—Museums, Galleries, Theaters, etc.
- Grocery—Any business that sold food
- Industrial Services—Janitorial, Painting Contractors, etc.
- Other—Other or Vacant
- Parking
- Professional Services—Marketing Firms, Lawyer Firms, Salons, etc.
- Public-Ed-Health—Public and Government Buildings, Fire stations, Schools, Health Clinics, etc.
- Religion-Church—Any House of Worship or Spiritual Center.
- Restaurant-Bar
- Retail
- Wholesale—Restaurant Supplies

I assigned each address a business code based on the name of the business and business type recorded during the data collection process. Some of the address lacked data or were residential. To account for those address, I added an additional category, N-A. With the business type categories, I mapped each neighborhood on an individual layer allowing me to examine the businesses distribution throughout each neighborhood and how the neighborhoods compared to one another.

	St. Johns	Old Town	Lentz	Division
Arts-Culture	1	24	1	1
Grocery	3	2	5	3
Industrial Services	1	0	2	1
Other	11	35	3	1
N-A	7	9	0	5
Parking	1	19	0	2
Professional Services	10	54	14	17
Public-Ed-Health	5	18	3	6
Religion-Church	1	1	3	3
Restaurant-Bar	12	27	5	19
Retail	7	29	11	10
Wholesale	0	7	0	0

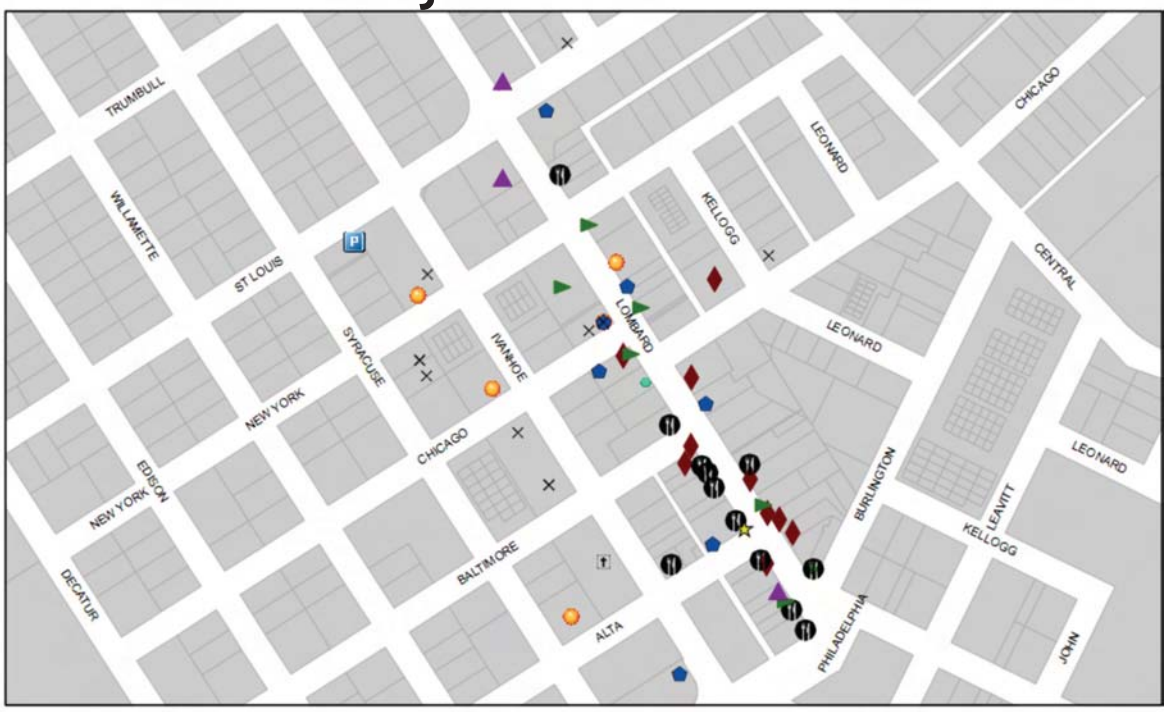
The concentration of businesses per block was highest in Old Town and businesses were on all sides of the block unlike the other neighborhoods, where most businesses flanked the main streets. There was no discernable pattern to the locations of certain categories, they were intermixed.

Old town held the most Parking businesses, which suggests that Old Town businesses lack adjoining parking lots. Mixed use buildings with businesses and residences are more common in Old Town than any other neighborhood. Old Town was the only neighborhood with Wholesale businesses and it also dominated the Arts-Culture Category. The top business categories are Professional Services, Restaurant-Bar, and Retail. The least prevalent business categories varied by neighborhood and no neighborhoods contained businesses in all the categories.

Business Categories

- ARTS-CULTURE
- GROCERY
- INDUSTRIAL SERVICES
- N-A
- OTHER
- PARKING
- PROFESSIONAL SERVICES
- PUBLIC-ED-HEALTH
- RELIGION-CHURCH
- RESTAURANT-BAR
- RETAIL
- WHOLESALE

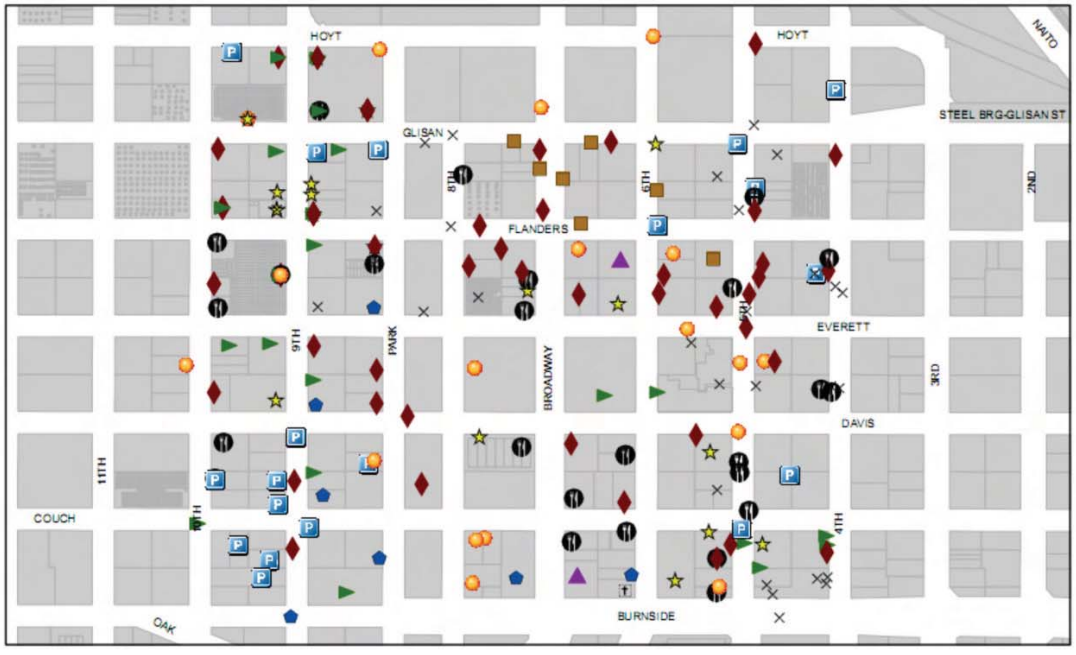
St. John's Businesses



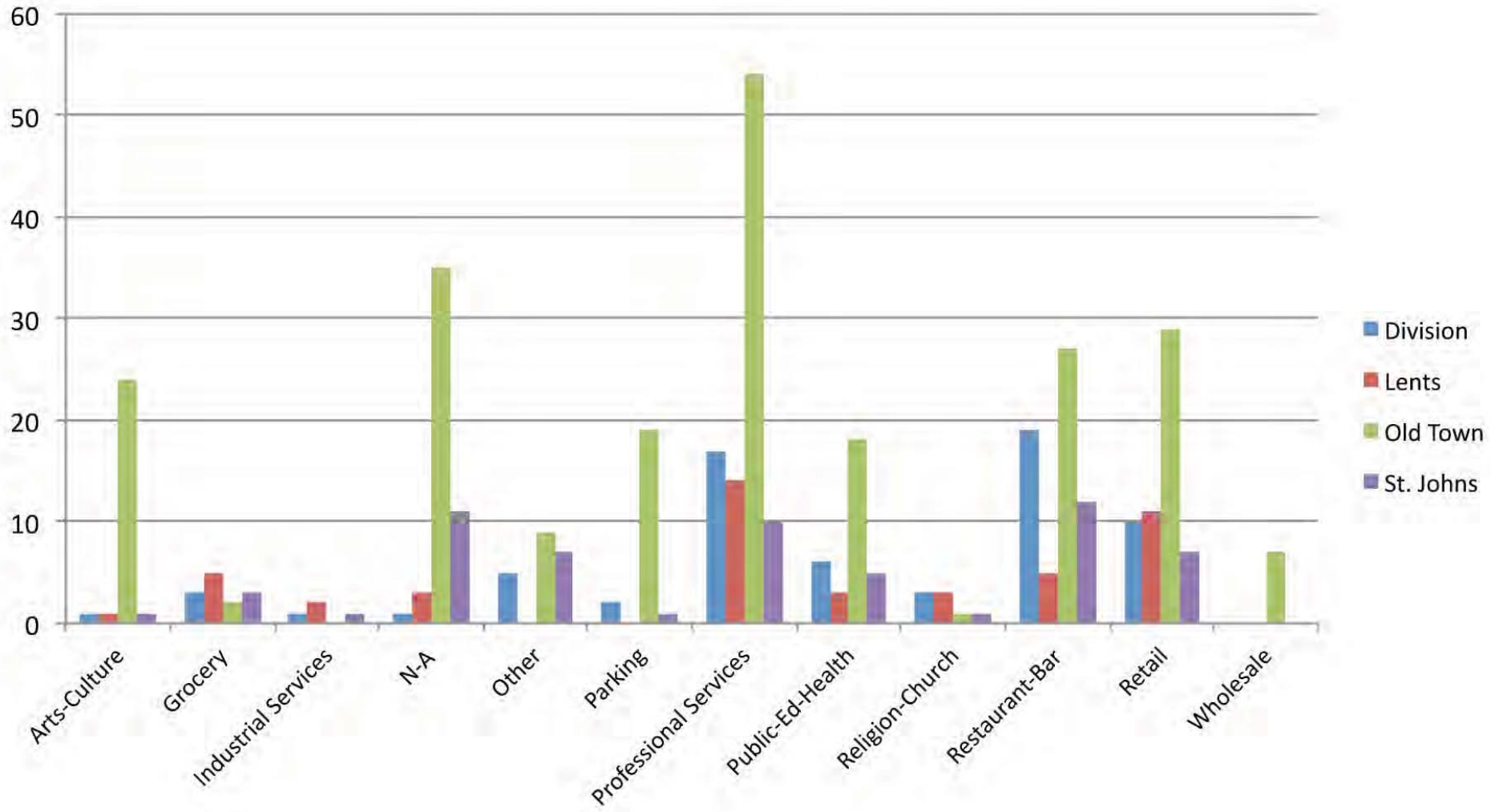
Business Categories

- ARTS-CULTURE
- GROCERY
- INDUSTRIAL SERVICES
- N-A
- OTHER
- PARKING
- PROFESSIONAL SERVICES
- PUBLIC-ED-HEALTH
- RELIGION-CHURCH
- RESTAURANT-BAR
- RETAIL
- WHOLESALE

Old Town Businesses



Business Distribution



Number of Stories

The numbers of stories maps were produced using the point data we collected in the field and compiled into a shapefile using latitude and longitude values from Google Earth. The taxlots, building footprints, and street names came from RLIS data May 2011 and were used for reference. The numbers of stories maps give a sense of the landscape and skyline of the neighborhood. Lents and St Johns are the "flattest" areas with the least amount of stories per building and Old Town/Northwest is the "tallest" area with the greatest amount of stories per building. This also helps to give a sense of the density of the area by illustrating which areas go up rather than out.

SE Division from SE 14th to SE 25th

SE Division from SE 25th to SE 34th

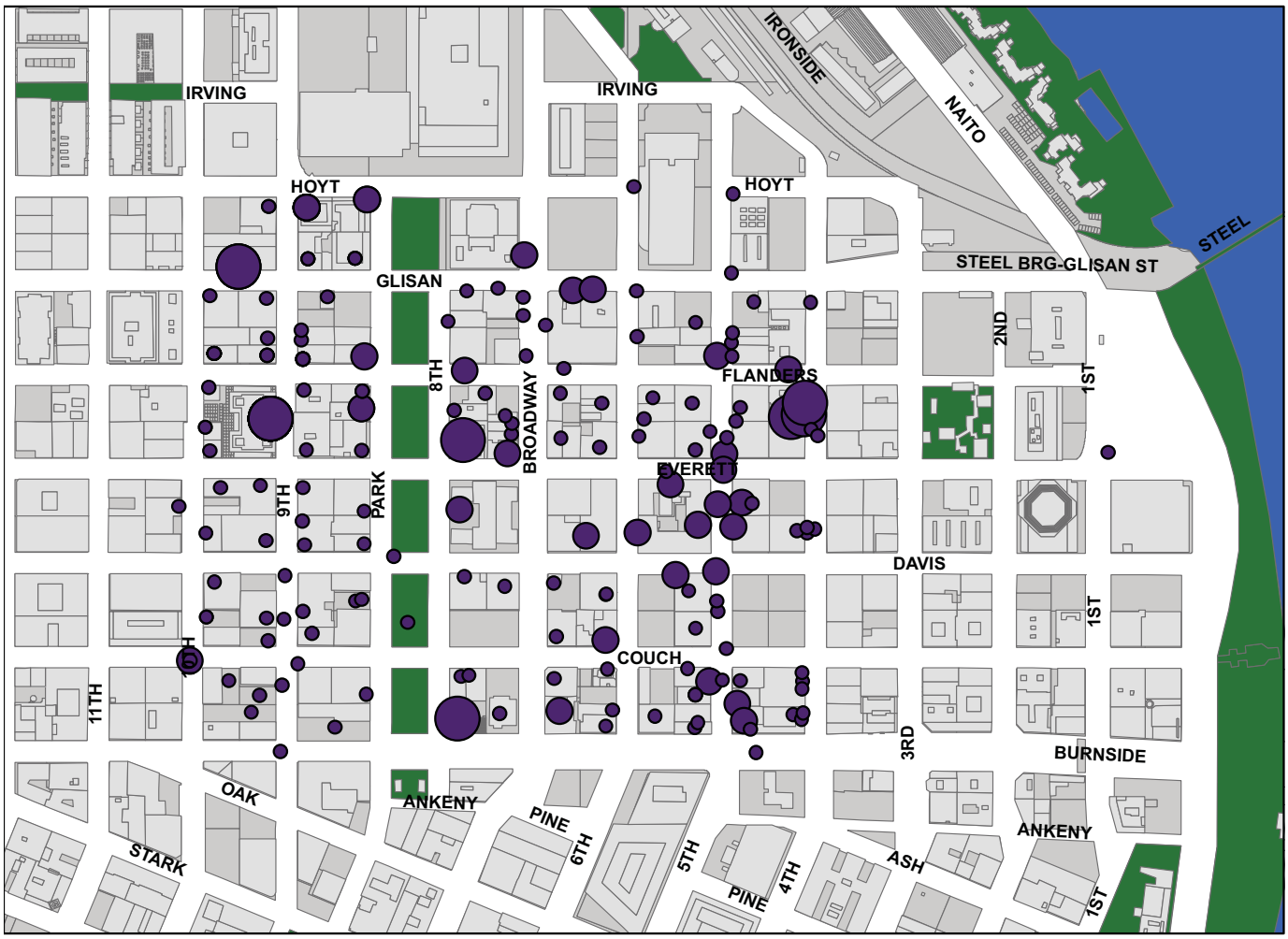
St. Johns

Number of stories in buildings

1
2
3

0 125 250 500 Feet

Old Town/China Town



Number of Mailboxes

The numbers of mailbox maps were produced using the point data collected in the field and compiled into a shapefile using latitude and longitude values from Google Earth. The taxlots, building footprints, and street names came from RLIS data May 2011 and were used for reference. The numbers of mailbox maps give a sense of the density of the neighborhood, in regards to both businesses and residential buildings. The data was not separated by type of building or business. Lents is the least dense area with a maximum of 7 mailboxes per building and the majority being one. The densest area is Old Town/Northwest with some buildings having over 100 mailboxes (most of these being condos/apartment complexes).

Number of Mailboxes

- 1 - 2
- 3 - 5
- 6 - 7

0 125 250 500 Feet

SE Division from SE 14th to SE 25th

SE Division from SE 25th to SE 34th

Number of Mailboxes

- 1 - 2
- 3 - 13
- 14 - 29

0 125 250 500 Feet

St. Johns

CATLIN
TRUMBULL
LOMBARD
KELLOGG
LEONARD
NEW YORK
CENTRAL
CHICAGO
ST LOUIS
IVANHOE
NEW YORK
WILLAMETTE
CHICAGO
NEW YORK
EDISON
SYRACUSE
DECATUR
BALTIMORE
ALTA
PHILADELPHIA
IVANHOE
JOHN
LEAVITT
KELLOGG
BURLINGTON
LEONARD
Number of Mailboxes
1 - 4
5 - 10
11 - 48
0
125
250
500 Feet

Old Town/China Town

Number of Mailboxes

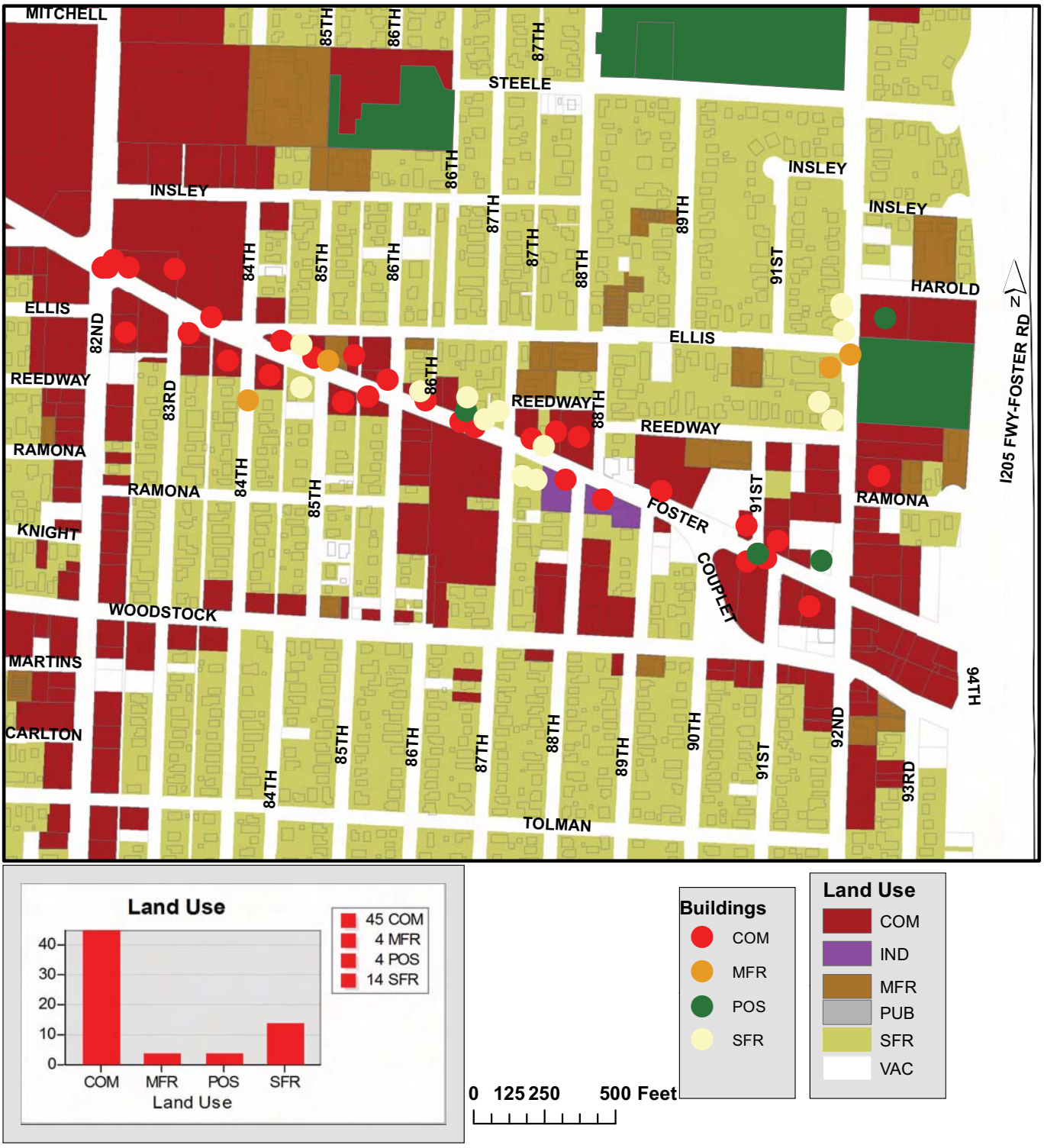
- 1 - 5
- 6 - 23
- 24 - 118
- 119 - 194

0 125 250 500 Feet

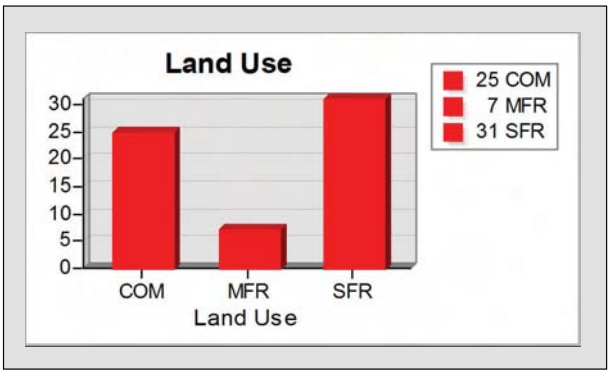
Land Use

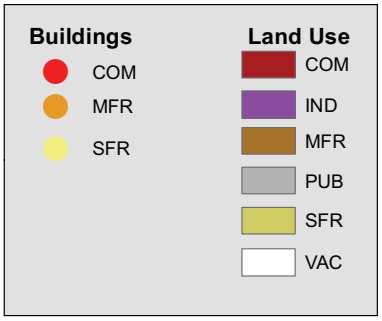
The land use maps were produced using point data collected in the field and compiled into a shapefile using latitude and longitude values from Google Earth. The background polygon data came from Metro's Regional Land Information System (RLIS) data from May 2011, taxlots shapefile. The land use maps give a visual interpretation of the character and use of the neighborhood. We found that St Johns is mostly commercial, Division has the most residential buildings, and Old Town has the greatest variance among types of land use, including buildings that are both residential and commercial.

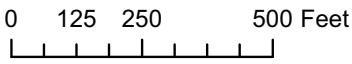
Lents



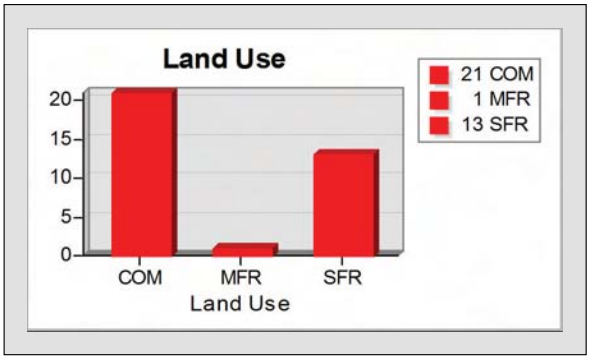
SE Division from SE 14th to SE 25th

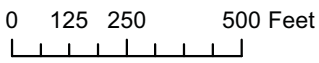


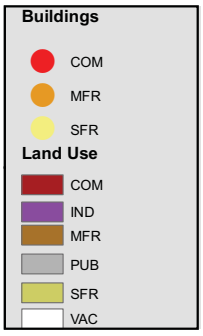




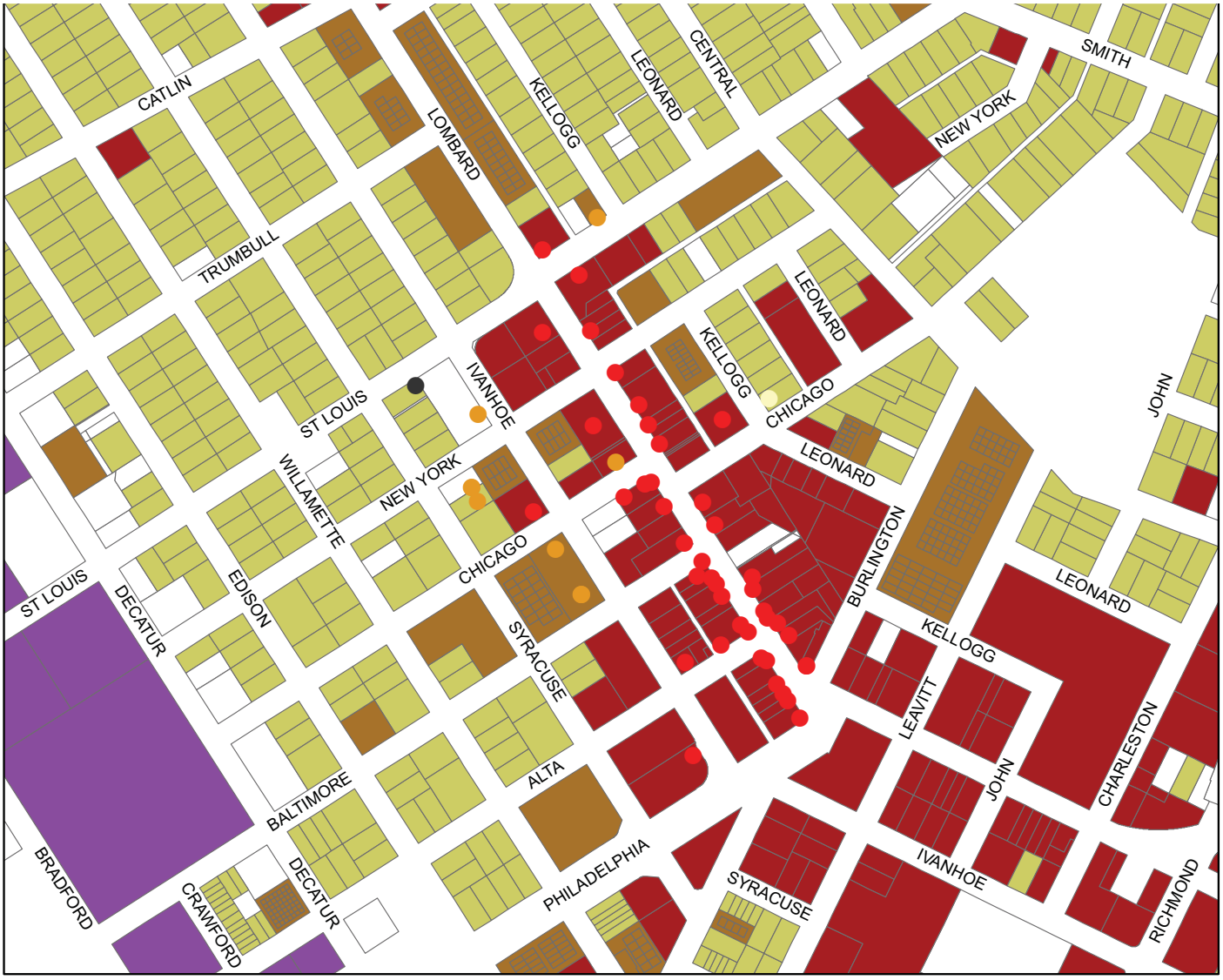
SE Division from SE 25th to SE 34th

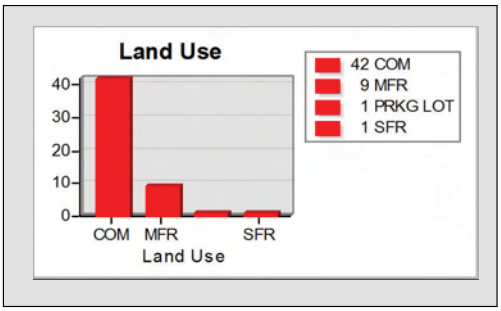






St. Johns



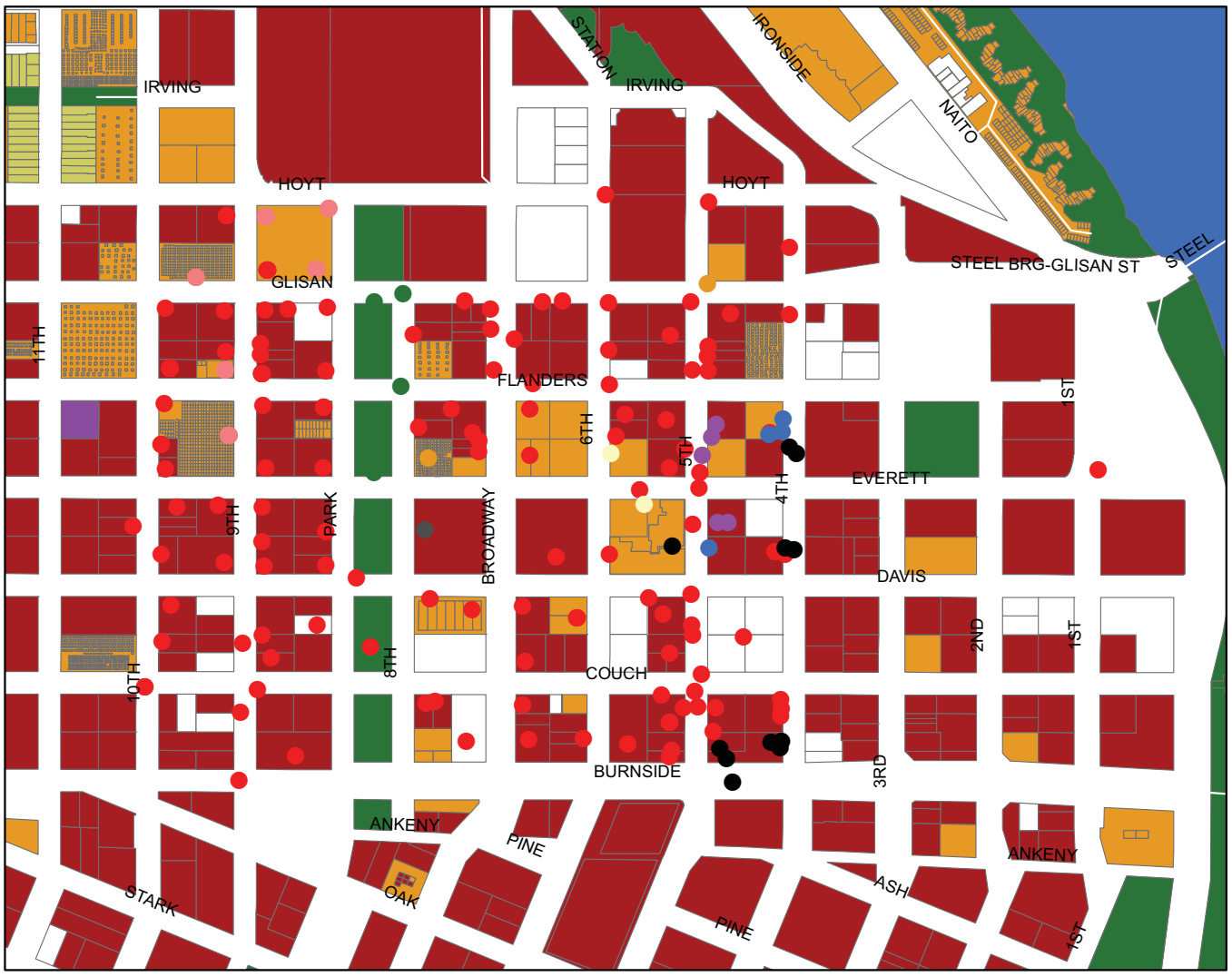


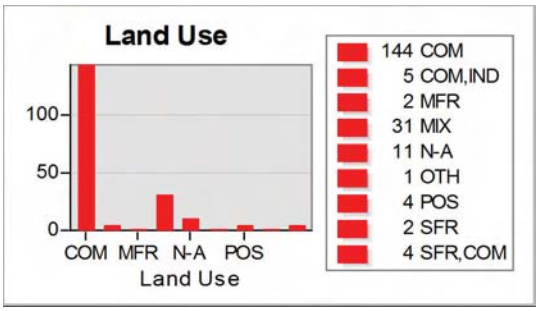
Buildings
- COM
- MFR
- PRKG LOT
- SFR

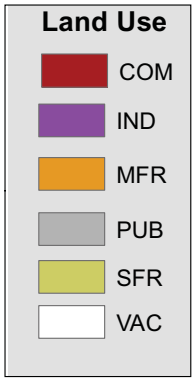
Land Use
- COM
- IND
- MFR
- PUB
- SFR
- VAC

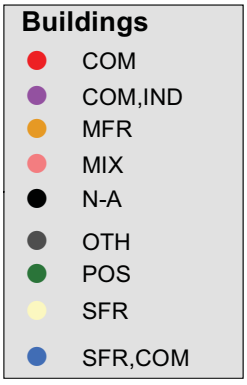
0 150 300 600 Feet

Old Town/China Town









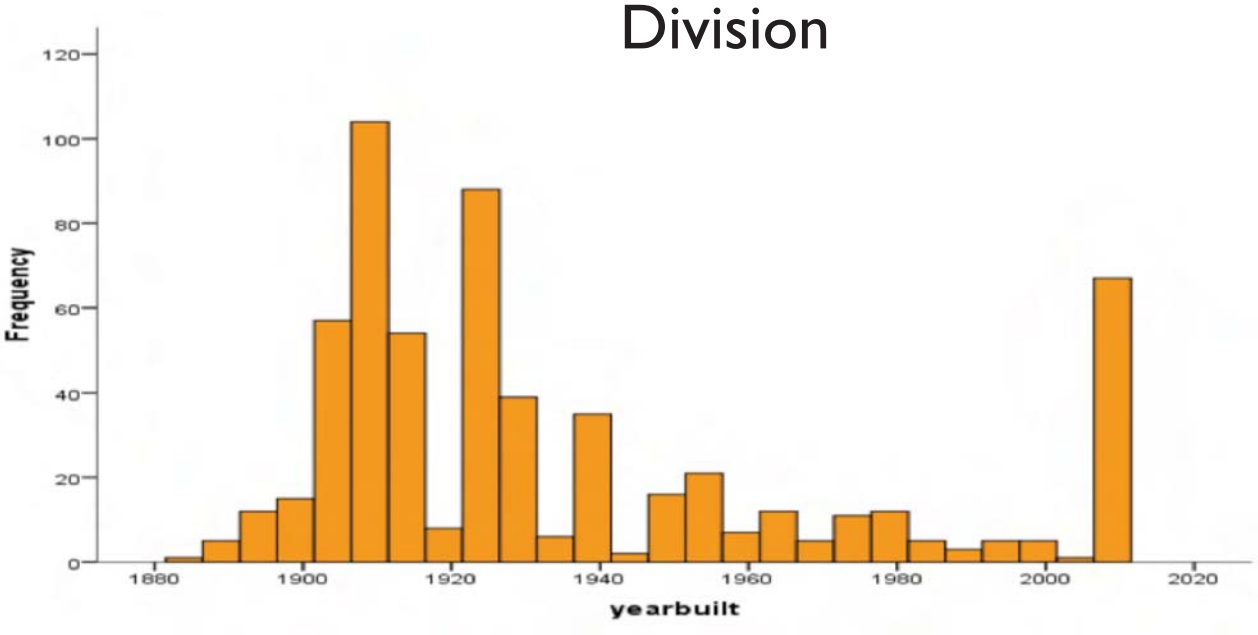
Year-Built

The data for the year built section of the quantitative data were gathered from the RLIS database. A shape file associated with each neighborhood was added to a basemap representing the tax lots of each area. From each basemap representing each study area, the tax lots were grouped according to an arbitrary division chosen by ArcGIS depicting year built. Each year division was color coded and applied to each tax lot to visually represent the year built associated with each lot. From this data, attribute tables were produced for each study area to gather information to produce histograms depicting frequency of buildings and year built.

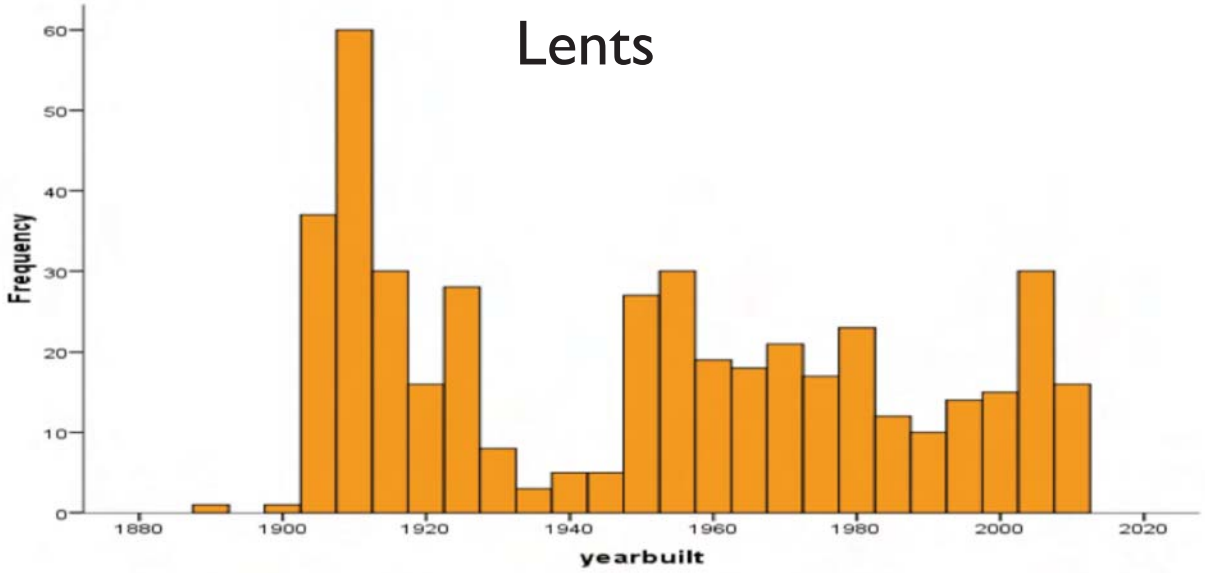
Old Town shows a bimodal distribution in relation to year built. The peaks are at the turn of the last century and this century. There was relatively little building of buildings over the last hundred years. It should be noted that the extreme spike in year built in this area is due to several condo buildings built in the area with separate tax lots for each unit. This skews the scale of the histogram for this area.

Lents shows a peak at the turn of the last century and an even distribution of throughout the century with a slight peak in the new millennium.
Division again shows a peak at the pioneering turn of the last century and a decline of building until the condo boom of 2005.

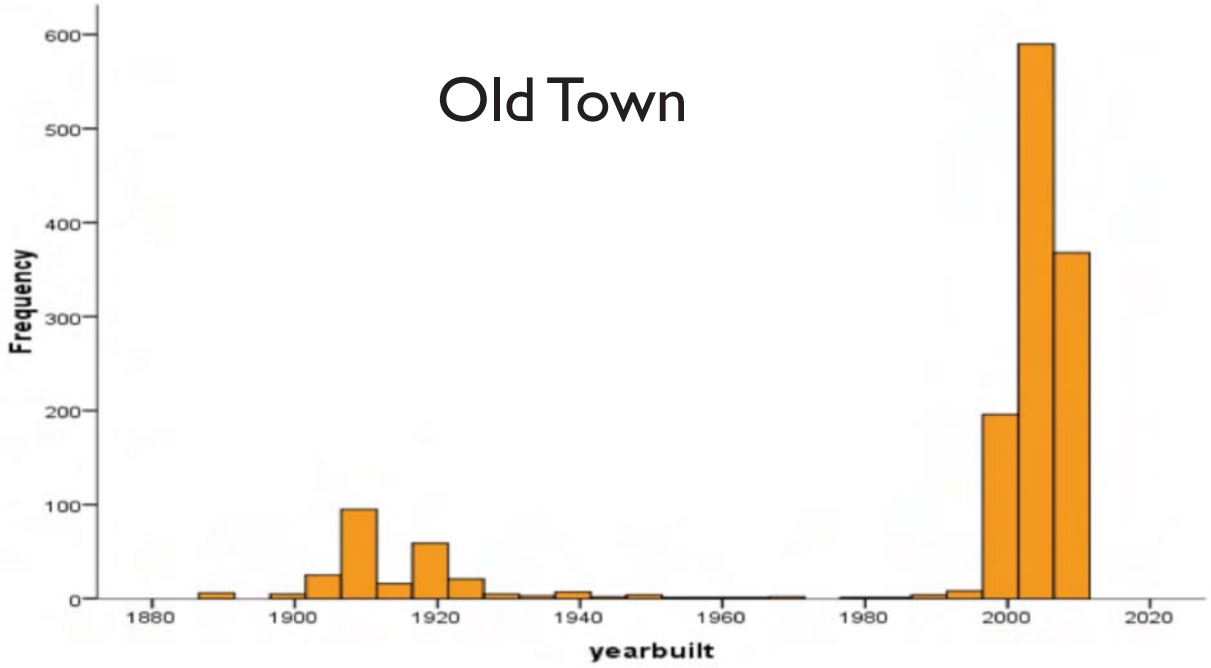
St. Johns has a relatively even distribution of year built tax lots. There is not a large spike at 1900 as in the other study areas. The largest spike in the histogram for St. Johns occurs around 1970 and a slight bump in the 2005-2010 condo boom.



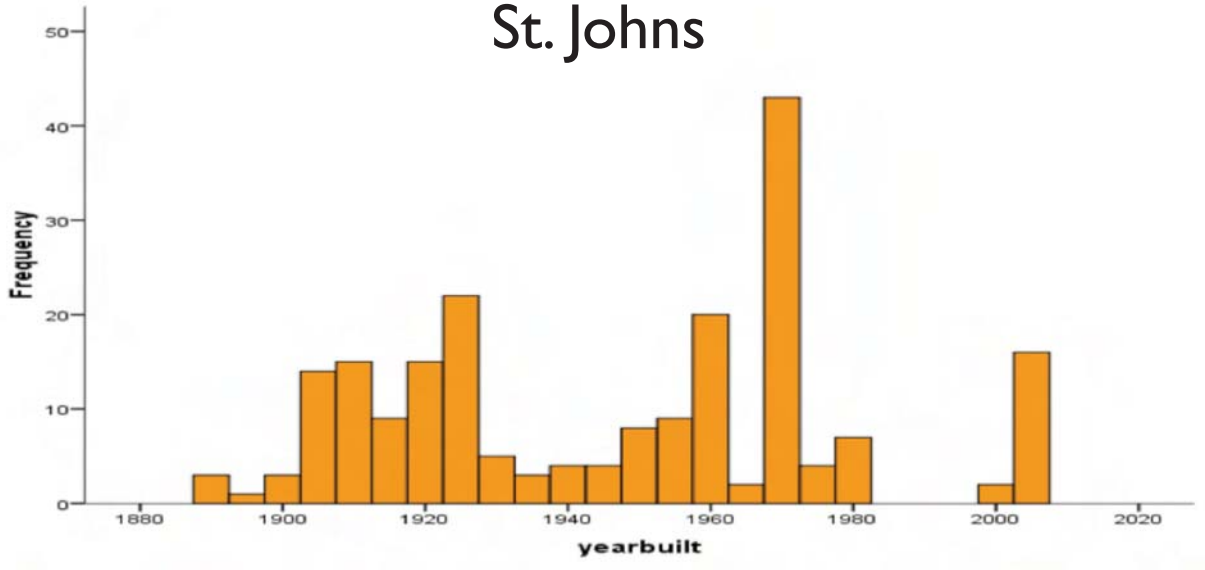
Lents

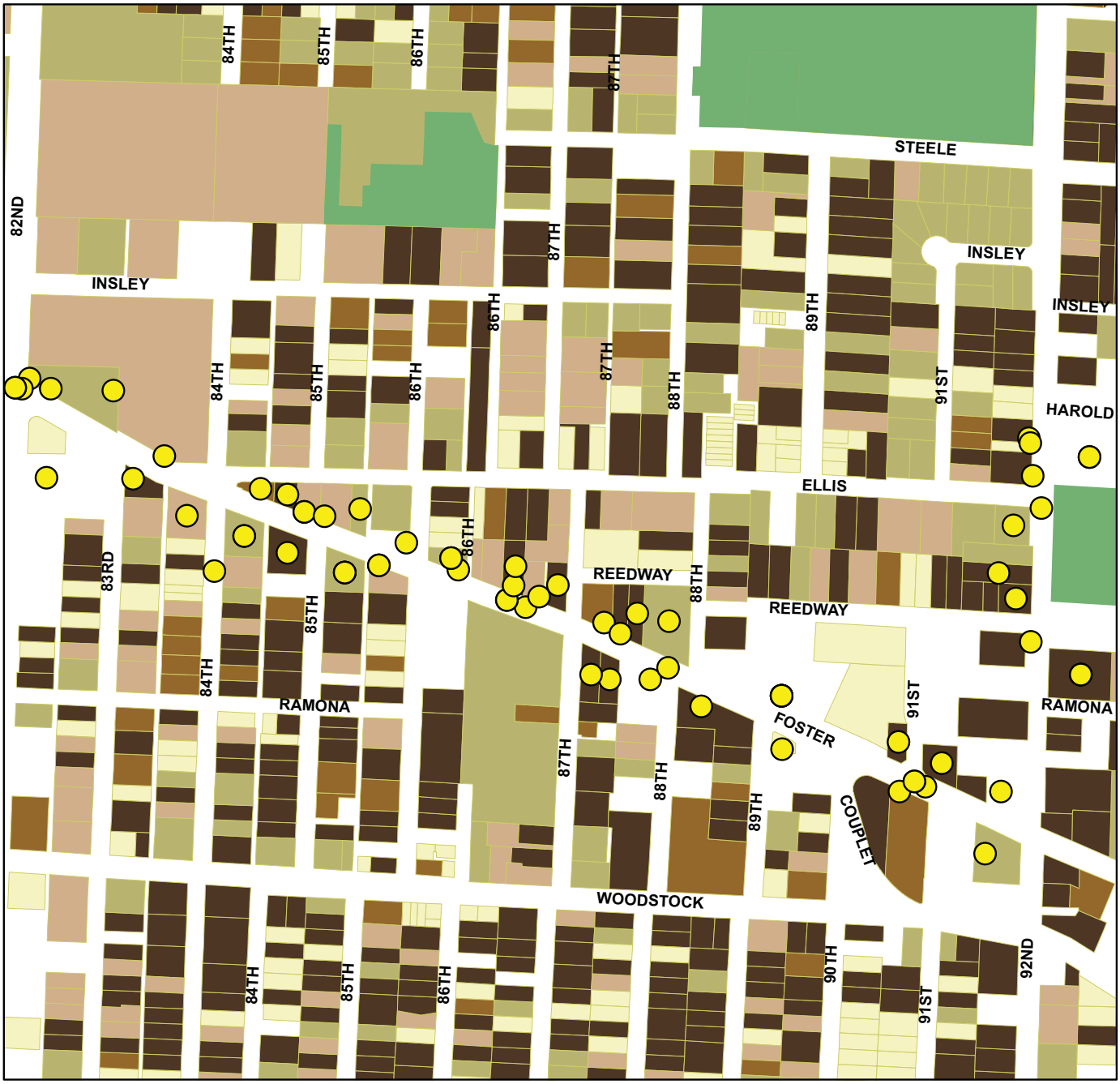


Old Town



St. Johns



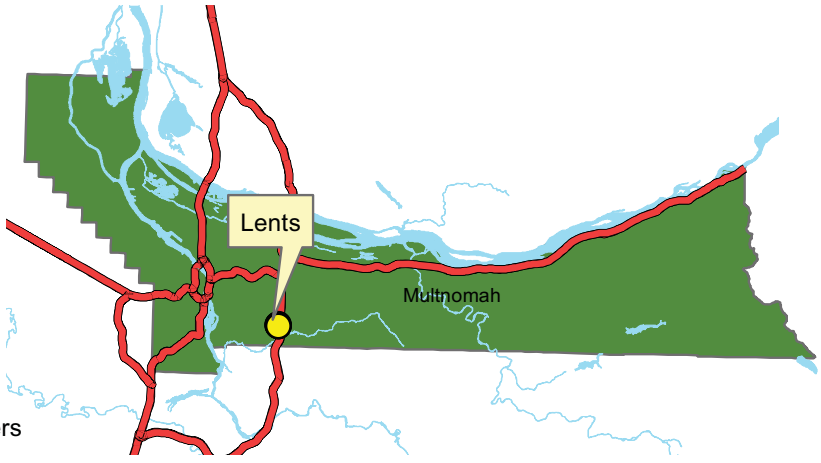


TAXLOTS

YEARBUILT

- 1871 - 1931
- 1932 - 1951
- 1952 - 1968
- 1969 - 1986
- 1987 - 2011

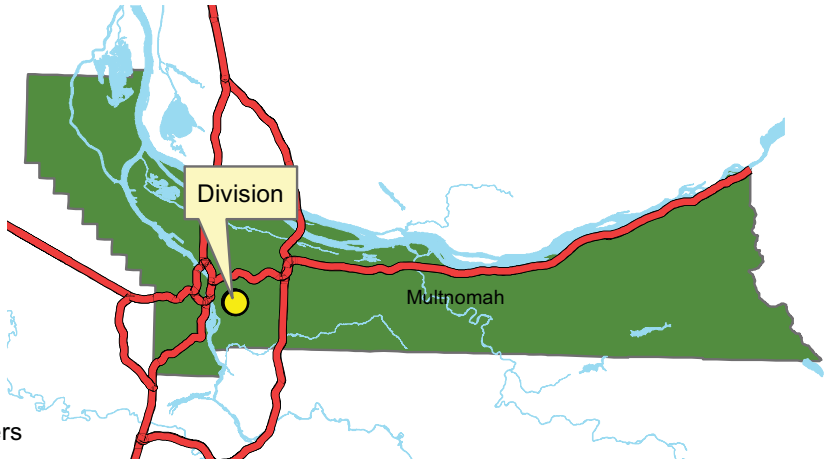
0 37.5 75 150 225 300 Meters



TAXLOTS
YEARBUILT

- 1871 - 1931
- 1932 - 1951
- 1952 - 1968
- 1969 - 1986
- 1987 - 2011

Meters
0 37.5 75 150 225 300



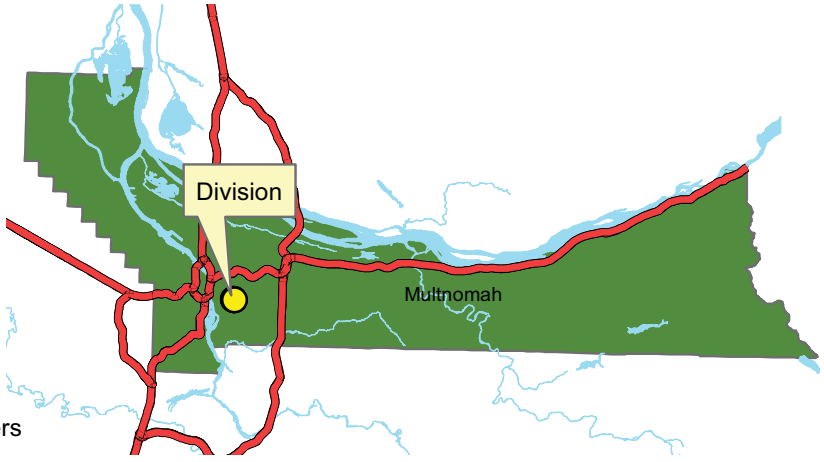
TAXLOTS

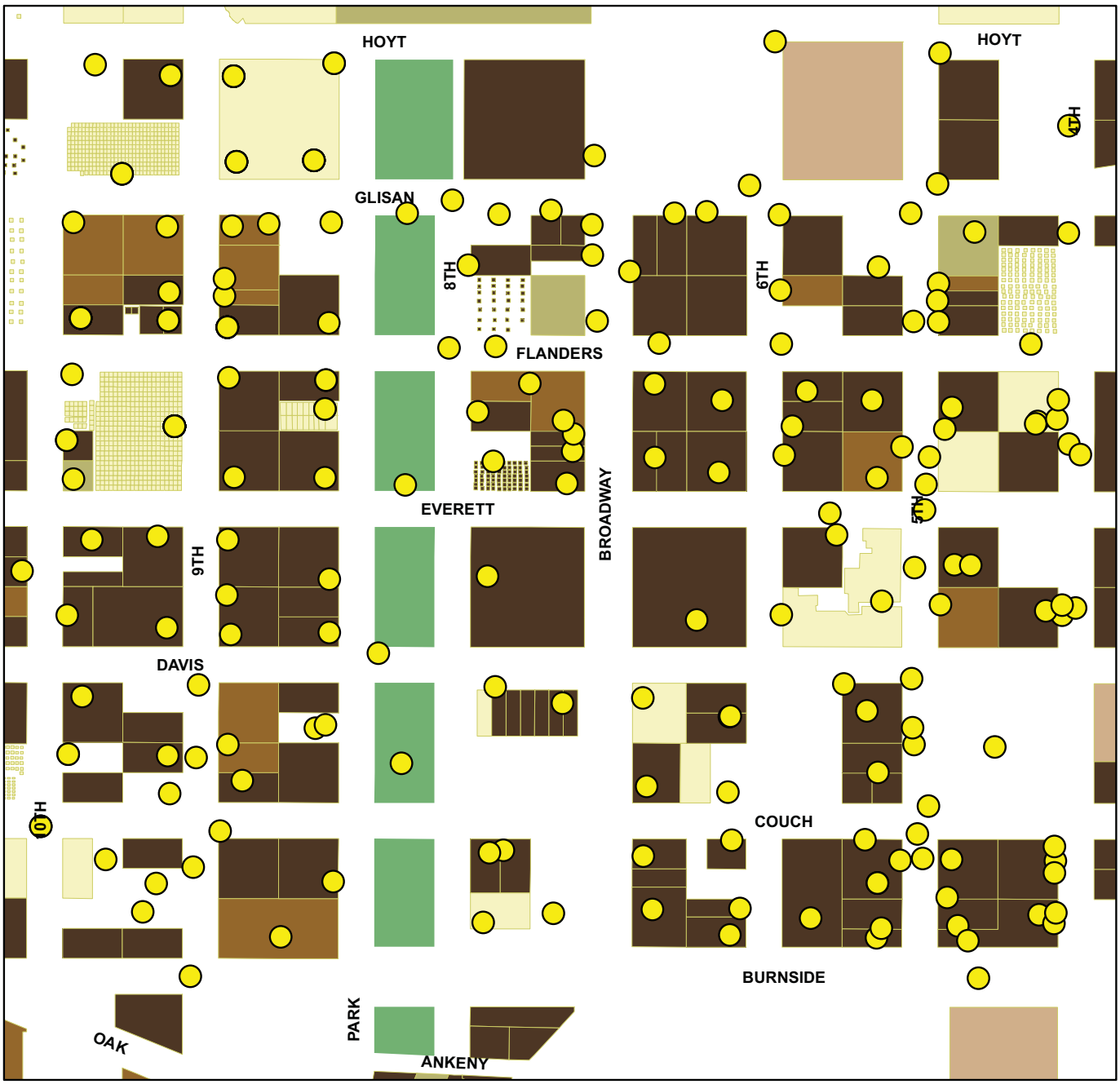
YEARBUILT

- 1871 - 1931
- 1932 - 1951
- 1952 - 1968
- 1969 - 1986
- 1987 - 2011

Meters

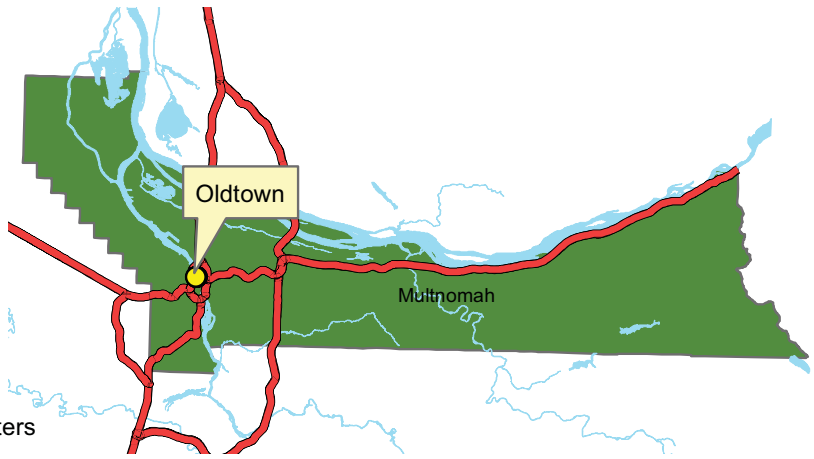
0 37.5 75 150 225 300





TAXLOTS
YEARBUILT

- 1871 - 1931
- 1932 - 1951
- 1952 - 1968
- 1969 - 1986
- 1987 - 2011



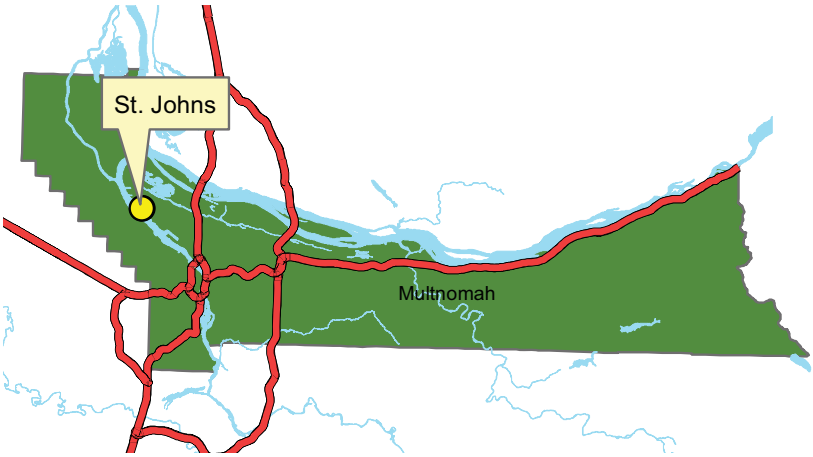
0 25 50 100 150 200 Meters

TAXLOTS
YEARBUILT

- 1871 - 1931
- 1932 - 1951
- 1952 - 1968
- 1969 - 1986
- 1987 - 2011

N

Meters
0 15 30 60 90 120



Qualitative Analysis

After our data was collected and compiled, we sought a method for some sort of analysis of the qualitative data that we had gathered from the project. However, a substancial barrier to this process was the drastic spectrum of written comments that were recorded. During our data collection in the field, individuals and groups experienced varying levels of difficulty in collecting both quantitative data, images, and written qualitiative observations. This resulted in some groups collecting a considerable amount of observations in writing, some collecting none, and each individual expressing a totally different perspective on what a written comment should contain.

All of these factors have the potential to be overcome in future projects through the implementation of a pre-existing methodology for recoding comments prior to data collection.
For our attempt at a qualitative analysis, knowing that we had such a spectrum of data, we wanted a way to look at all of the written comments we had, and find a way to synthesisze them into some kind of meaning. For this purpose, we chose to use Many Eyes, a free website developed by IBM Research and the IBM Cognos software group that hosts data visualization tools and a forum for users to discuss their visualizations.

Many Eyes allowed us to create a data set for the written comments from each of the Lents, Oldtown and St.Johns areas and visualize it through the "Phrase Net" visualization tool. "A phrase net diagrams the relationships between different words used in a text" (IBM). The visual results represent the relationships in the language that made up our comments, and the occourance of those rhetoric patterns; essentially visualizing our overall feel of the areas through our own language.

Tool: Many Eyes
http://www-958.ibm.com/

Many Eyes is an experiment brought to you by IBM Research and the IBM Cognos software group that was created in 2007. It provides data visualisation tools from IBM that let users explore data using their eyes. The site "is set up to allow the entire internet community to upload data, produce graphic representations, visualize it, and talk about their discoveries with other people."

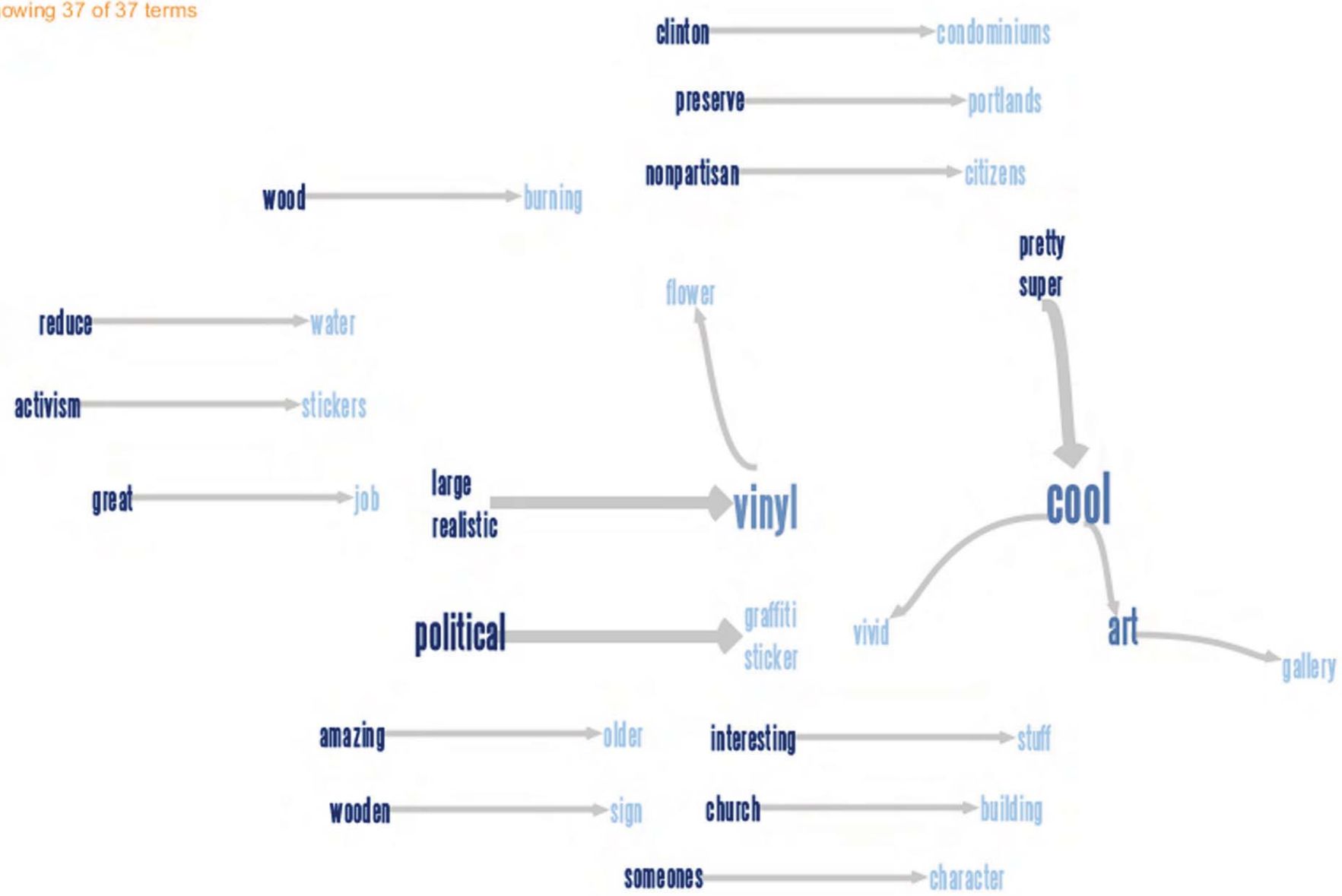
On Many Eyes anyone can:

1. View and discuss visualizations
2. View and discuss data sets
3. Create visualizations from existing data sets

If you register for free, you can also:

4. Rate data sets and visualizations
5. Upload your own data
6. Create and participate in topic centers
7. Select items to watch
8. Track your contributions, watchlist, and topic centers
9. See comments that others have written to you

Showing 37 of 37 terms



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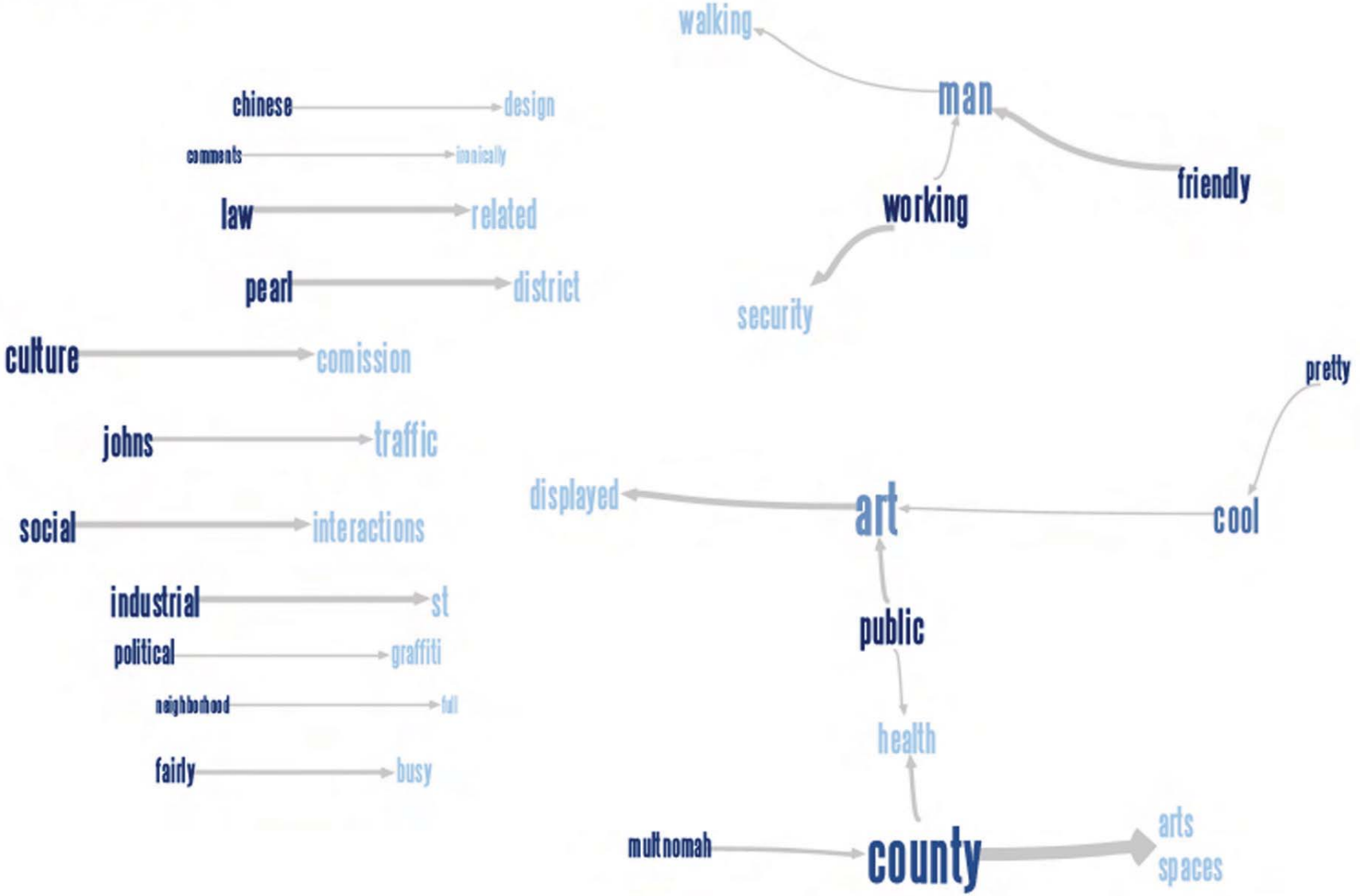

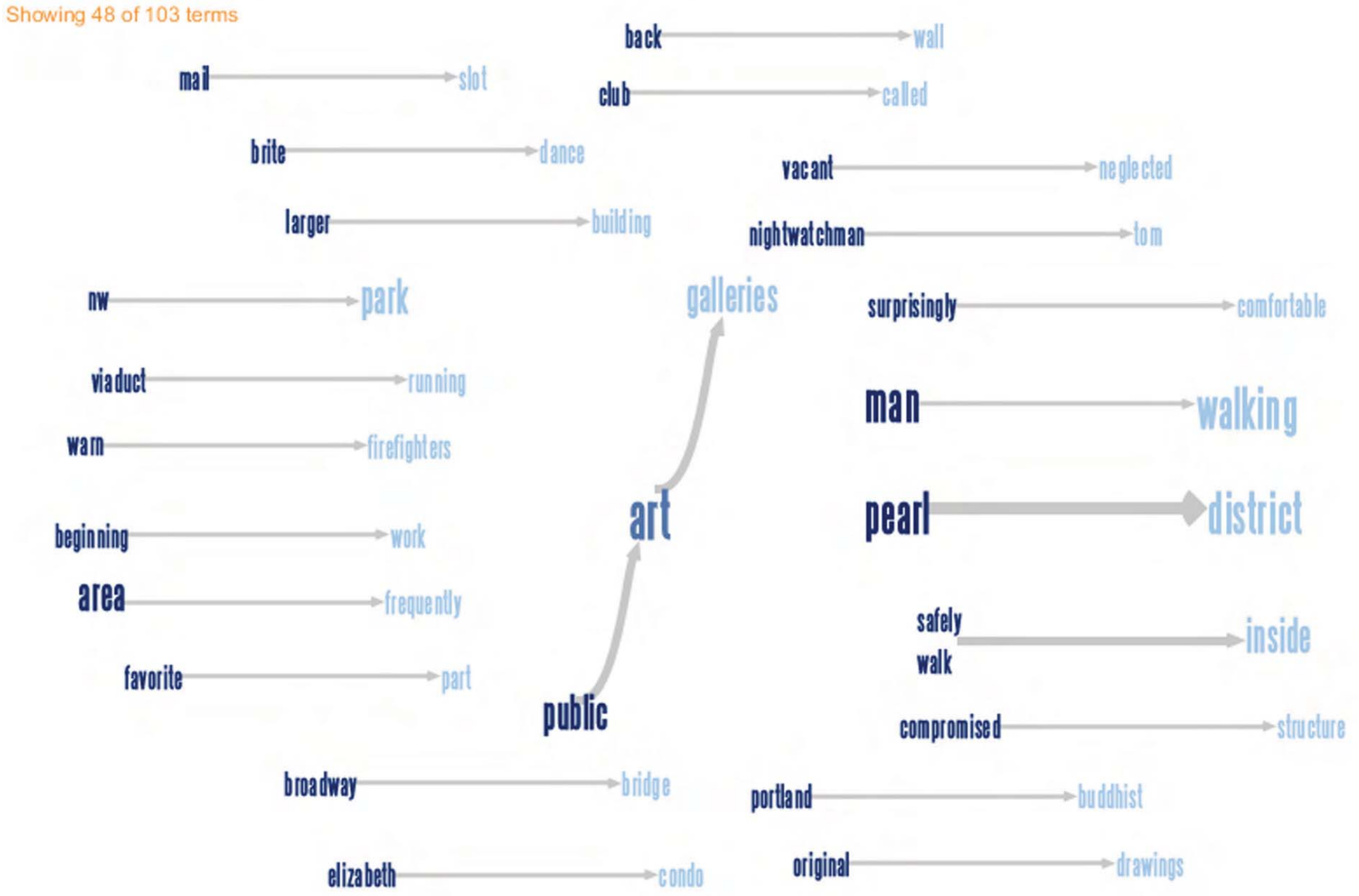
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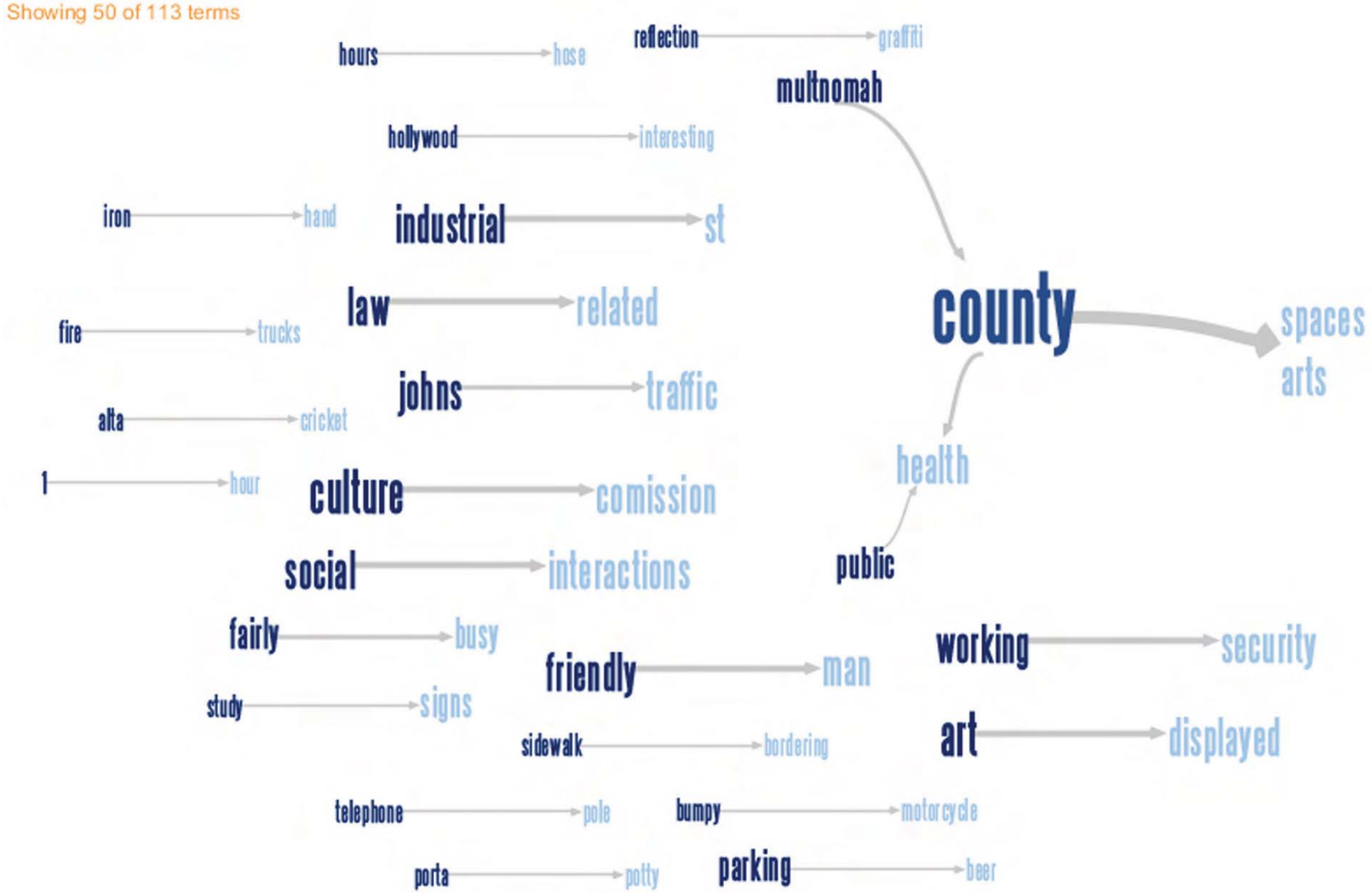
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alta
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health
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hour
culture
comission
social
interactions
public
fairly
busy
working
security
friendly
man
study
signs
art
displayed
sidewalk
bordering
telephone
pole
bumpy
motorcycle
porta
potty
parking
beer

Technology

GOOGLE PLUS
https://plus.google.com

Google Plus is a social media platform still in beta testing. This technology is a cross between Facebook and Twitter but adds some of Google's signature functionality and ease of use. Google Plus allows you to create "Circles", which allow members to divide people up into groups. This allows them to keep things private, limit to family/friends, or expand to the general public. Google Has made this task as simple as "drag and drop". Google Plus does require a Gmail account. Once an account is created you will also have access to Picasa Web Albums. This integration of systems would allow you to geo locate pictures, organize them into albums in Picasa, then Google Plus would allow you to link to any of the Picasa albums and allow users to comment on the photos. Google Plus is also available for viewing on mobile phones via website or by the very easy to use App. The mobile App allows individuals to take photos, add a location, and comment all in one step. Then other users in your circle or the general public could see and comment on the photos. The mobile features of Google Plus would make field work a lot easier and more stream-lined. Google Plus is still in beta testing but already is a very well integrated platform for allowing users to upload pictures and allow for real-time comments and discussions.

GOOGLE PANORAMIO
http://www.panoramio.com/

Google Panoramio is a geo-location oriented photo sharing website. It allows users to upload photos and attach geo-locations. Panoramio also allows users to use "tags" which allows other users to search for specific types of photos with the same tags. In Panoramio users aren't limited to viewing pictures of people they know. All photos are accessible to everyone and everyone has the ability to comment on the photos. The benefit to Panoramio is that it is strictly a photo geo-location website. Unlike Google Plus, it cannot get cluttered up with other posts and messages of friends, family, or acquaintances. Panoramio also has very easy integration into Google Earth. The biggest downfall to Panoramio is the lack of mobile access. It does not have a mobile website for viewing on mobile phones. It does have an Iphone App but it is limited to taking pictures and uploading them with a very limited and inaccurate geo-location. For fieldwork this service would not be ideal unless they improved the mobile functionality. Panoramio also does not allow for photos to be placed into albums. So if you have many photos from multiple users uploaded to one account, it would be difficult to differentiate the photos of each member.

GOOGLE PICASA
http://picasa.google.com

Google Picasa encompasses two free photo services:

- Picasa 3.8 is a free desktop photo editing software from Google currently available for Windows XP/VISTA/7
- Picasa Web Albums is a free web-based software for organizing, editing and printing your photos, which is what we used for this project and refer to as Picasa throughout this report. Picasa Web Albums can be accessed for free by going to the "Photos" service once a user has logged into their Google

For implementation of photos with Crowdmap, photos can be hosted on the web at any location of a user's choosing. They just have to be hosted (aka "live") at some url on the web. For this project, after a brief trial with a free Flickr account where we quickly reached our upload limit (on a per month basis), and arrived at Picasa as our photo service of choice.

Picasa also allows users to upload short videos, like the video of the St. Johns streetscape taken from a motorcycle. Picasa's video capabilities allow us to demonstrate what a neighborhood looks like as one drives through, most definitely a different perspective.

Slideshows and video demonstrate the importance of capturing neighborhood data at a micro-level in order to really see the detail.

Benefits of Picasa

- Ease of use. Very easy to upload photos/videos and group them into albums.
- Seamless integration with many other visualization tools (e.g. Google Maps/Earth, Photosnack Slideshow).
- Storage capacity. We had trouble with Flickr due to the monthly quotas.
- Privacy Control. Albums can be public or not. Though the streetverve albums are not public yet, they can be configured to be openly shared on the internet by the account administrator.
- Comment Capability. Visitors to the site can click on any photo and add a "comment". This provides an easy way to gather additional community input in this project. Comments will be automatically shared on Google+. Google+ is discussed more in the report.
    - o The downside to commenting function in Picasa is that comments will not automatically be recorded in the Crowdmap site.
- Can upload Short Videos.

Mapping Locations

- Picasa allows us to do see individual photos hyperlinked with their actual locations in a Google Map, a capability that Crowdmap does not currently have.
- Albums of photos can then be viewed together as thumbnail images overlayed in a representation of the physical space they were taken.
- Picasa also offers a convenient portal to Google Maps and Google Earth, where the photos are linked to their actual location.

GOOGLE MAP & GOOGLE EARTH

http://maps.google.com
Google Maps can be accessed by any user with internet access. It provides a "clean" way to see the photo album for an area of interest. A user can also click on the photo to get back to Picasa and add a comment.

- Google Maps offers Web & Mobile Versions, the My Maps maker and Navigation.
- Free and Easy to use.

http://earth.google.com
Google Earth is designed to deliver "the world's geographic information at your fingertips."

- Fly to any place around the world.
- See 3D buildings, imagery, and terrain.
- Find cities, places, and local businesses.

Google Earth provides a bit more sophisticated interface for viewing a Picasa album in conjunction with an aerial view. It is also easier to toggle back and forth between the photo and map view to add comments.
Further, for the purpose of creating the GIS maps from our data, inside Google Earth we were able to collect latitude and longitude points for each image in its properties which we compiled into our database before importing data into ARCmap.

- Google Earth offers Desktop, Mobile, and 3D Versions.

- Free & Easy to Use.

PHOTOSNACK
http://www.photosnack.com/

For this project we used Photosnack to compile each buildings streetscape photo into a slideshow of the area as a whole. It was very easy to use with our photos stored in Picasa. It allowed us to show what a neighborhood looks like at the micro-level by showing selected photos from a Streetscape Album. In a streetscape slideshow one can see details, the "personality" of the streetscape, the juxtaposition of old & new, what is in the alleys and backyards, etc.

In this way a slideshow tool can add to the value of qualitative analysis: "Generally, team members were surprised at the content of a neighborhood that they lived so close to and thought that they knew. Driving…through the area, it is easy to miss much of the detail and texture of the built environment, and even more so movements of the people who live and work there…The act of choosing, composing and framing a shot requires an evaluation of the surroundings…The photographs help to focus attention on details as well as their relationship to the surrounding context." (Oldtown Group Experience Report).

Photosnack is a slideshow tool that allows user to:

- add photos from Facebook, Flickr, Picasa, Photobucket and SmugMug.
- add music to photo slideshows
- 24 slideshow templates
- Free and easy to use.

SOUNDCLOUD
http://soundcloud.com/

Us: http://soundcloud.com/pdxalmanac

"SoundCloud is a platform that puts your sound at the heart of communities, websites and even apps. Watch conversations, connections and social experiences happen, with your sound as the spark." Visual representation through photos and video aren't the only thing that can be captured at the micro-level. Audio can represent encounters between researchers and an event, or as a narrative of a qualitative observation.

CROWDMAP
http://crowdmap.com

Crowdmap is a tool that allows you to crowdsource information and visualize it on a map and timeline. For our purposes, we were given the crowdmap framework as our bottom line to congregate all of our different types of data. Although we did not use Crowdmap to export a database file of all reports of different kinds, the potential for that use in for analysis is something to consider in future projects. Crowdmap works when data is entered into the crowdmap site in a report called an "incident." Though "incidents" in the pdxstreetverve crowdmap site were not generally entered in "real-time" for this pilot study, it does serve as a convenient portal to access data about the neighborhoods studied.
Benefits

A. ONE-STOP SHOP for data entry. Important location information, comments and associated links to images/audio/video can be attached to an "incident" record in real-time using one interface. Capturing data via the manual field sheets required much more work after the fact; getting lat/long coordinates and transcribing onto a spreadsheet for further analysis. Comments can be entered for each digital file. In Picasa, only a photo caption can be recorded, need comments for qualitative data analysis.

B. DATA PORTAL…Serves as a convenient portal to organize and disseminate multiple kinds of digital data about a single entity (a neighborhood).

a. Crowdmap was designed to capture data about a single "event" (e.g. a natural disaster)…we are exploring its use in the capacity of more general data collection and documentation.

b. Need further study into how crowdmap can be organized so that a visitor to the site can easily look at the data for a neighborhood of interest (e.g. do we need a Crowdmap interface for each neighborhood?).

C. COMMUNITY INPUT…has the capability, though we did not explore this to solicit further community input regarding each neighborhood through their own submission of images and comments. It provides an interface for the community to both respond to what has been submitted as well as submit their own material.

a. What do they "see" in their neighborhood?
b. How does it compare to what "researchers" see?
c. Do they feel that the "incidents" are truly reflective of their neighborhood?

D. FREE, FREE, FREE…Crowdmap does not require a host server although it does require an administrator. This is in contrast to most of the other avenues for collection of micro-level community data (e.g. those hosted by cities as was described in an earlier slide). All technology tools demonstrated here are free to the public and easy to use.

Limitations:

A. Incident forms need to have much more capability for customization in order to enter and organize different kinds of data (create hyperlink fields, check-box fields, etc.).

B. Each "form" is one record – this is challenging for the administrator who must accept/verify and ultimately organize all the data about a neighborhood (e.g. on average, a streetscape contained over 100 images).

Crowdmap was created by Ushahidi, a non profit tech company that was created in 2008 during Kenya's "post election fallout", where many reports of violence had occurred. Ushahidi means testimony in the Swahili language and many peace efforts, violence, and other events were able to be reported with the help of this collaborative project. Ushahidi's purpose was to increase transparency, remove barriers, and allow people to be able to report/share their information and experiences. Crowd map was created by Ushahidi to play a role for data collection and provide the ability for people to share information at real-time. Users can upload reports, photos, and other data on Crowd map which then could be shared to others. Crowd map can also take this information and put it on visual Medias like maps and timelines where it can be tracked over time. Crowd map can be a useful tool for this capstone project because it provides the ability to create real-time reports, share media, and create discussions through comments.

Group Experiences and Lessons Learned

Introduction

As a pilot study, the PDX Streetverve Project set out to explore how to go about collecting high-quality micro-level neighborhood data, both quantitative and qualitative. In doing so, various strategies and tools were employed to gauge effectiveness and challenges of different data collection methods. Student researchers also recorded their individual impressions and experiences as they walked the neighborhood, through field notes, photographs, video and audio. Following is a synopsis of written reports submitted by each of the four field teams detailing issues and challenges surrounding the data collection process and personal comments about the field work experience.

Data Collection Process

A major goal of the pilot project was to document in detail each building and lot (e.g. vacant or parking lots) in the selected study areas through photographs and field notes. Empirical data was collected for each building/lot including the business name and type, physical address(es), number of stories and/or mailboxes, and land use (exclusive land use or mixed use). Field sheets were provided (see Appendix A) as an option to manually collect this data in order to more fully understand the challenges and benefits of collecting micro-level data without the added complication of technology use (e.g. crowdmap – a modified report form could not be effectively created prior to a good understanding of the nature of the data). Generally, the field teams experienced the following challenges and benefits:

1. Need a clear system for capturing and organizing empirical data; too many items to carry and organize; need to eliminate need for entering data in many different places (one-stop-shop for data entry).

One of the goals of this pilot project was to gain a better understanding of the nature of collecting neighborhood data at the micro-level. For the empirical data collection, each building or lot was documented. Buildings with multiple addresses proved particularly problematic. From a database perspective, this involves a one-to-many relationship. A single photo of a building was attached to several records (one for each address/business). Since the field data was manually entered into a spreadsheet for this pilot, the photo link field was simply repeated for each business record. However, if an online interface such as crowdmap will be used in the future to collect this data in real-time, further thought into how to organize the data entry form is needed. If an efficient and simple interface for data entry is desired, then each "incident form" should be attached to a single linked photo. The form, then, would require data entry fields for multiple businesses within a single building (e.g. business type 1, business type 2, etc.).

A second issue in the collection of empirical data concerned the business type categories. On the spreadsheets, business type was categorized using the US Census NAICS coding system.

From a reporting and mapping perspective, this resulted in too many different codes. A more general classification system was devised after the fact. For consistent documentation (of additional neighborhoods or a repeat of a neighborhood at a different point in time), an easier and more standardized coding system is required. Such a typology should probably be field tested to make sure that the classes are comprehensive, exclusive and understood.

2. Difficulty linking manual field sheet data to external media (digital photos, audio and video clips, tweets); learning curve and technology issues.

Access to technology and the learning curve required to link comments or tweets with photos was also a problem. Not all persons have access to a smartphone in which to directly input data and link photos in the field. Even those with smartphones are often less than proficient toggling through different online interfaces and linking photos with text, tweets, or other digital media. Until we are squarely in the age of digital-only communication (not in the foreseeable future), it will be necessary to take into consideration equipment availability and different levels of techno-knowledge.

Linking comments or tweets to photos proved to be an additional challenge. Commenting was most appropriate for the gathering of the individual subjective data. However, since the student researchers were collecting both objective and subjective information on manual data entry sheets, many resorted to simple photo documentation with few comments or tweets. As the Division Street Group reported, "with Twitter, we found it to be almost a burden to stop our data collection and pull out our phone and write something…when we attempted to tweet we found it rather difficult to link the comments with the photos taken." The Oldtown/Pearl Group noted that "tweeting occurred, but was unsatisfying…the information we were collecting seemed to lack both the urgency and superficiality characteristic of a tweet. Most of what we photographed was not going anywhere anytime soon and, if they [the buildings] had a story to tell at all, they needed more than a few lines of text or seconds of media to tell it." In a study such as this, using visual media to document a real place, it is important to highlight the importance of creating context for the photos through commenting. Part of the purpose of the subjective data is to capture an individual's perception of the place. As the photovoice methodology attests, captioning or providing a comment linked to a photo is important to effectively communicate what the photo is saying and why it has meaning. In addition, the technical challenges with linking photos to comments in real-time need to be resolved for more substantive collection of narrative data.

3. Interaction with neighborhood residents; privacy issues.

Except for a few isolated cases, the field teams did not experience significant issues with collecting this kind of "street" data. Passer-bys would inquire about the cameras and clipboards and were generally satisfied with the explanation. One team (St. Johns) was "flipped off" when taking a picture of a café front by a patron sitting in one of the sidewalk tables. The pair canvassing the Lents neighborhood were approached by a man, initially unwelcome and a bit "scary" but who turned out to be friendly enough. Many of the encounters were a welcome opportunity to speak with residents. A few audio files stored in Soundcloud record some of these impromptu conversations. On the flip side, the student researchers themselves often felt like they were "invading people's privacy." The Division Street group, in particular, felt somewhat uncomfortable taking pictures of private homes, which were numerous in this study area. It is one thing to take a picture of a business that is publicly accessible and quite another to record photos of a private dwelling. Should one ask permission first? Following are some lessons learned and recommendations:

- Conduct the research either individually or in pairs. Large groups attract attention.
- Be discrete when taking photos. Take a picture from the other side of the street. Do not enter private property to take a picture.
- Be prepared to answer questions from passer-bys about the nature of your research. Have contact information handy.
- Do not confront anyone who has an issue with your activities. Respect the wishes of the residents and business owners.

Having "outsiders" record information about a community does present problems with regard to privacy issues. Do these "outsiders" have a right to be there? Is the data they are collecting truly reflective of the community? Ideally, however, this data collection method and technology can be adapted so that the residents themselves can document their own neighborhood. This would likely reduce or eliminate feelings of "invasion" by allowing the residents themselves to own both the process and the product.

Personal Experiences

The second goal of the pilot project involved recording personal impressions and experiences surrounding the streetscape. Each student researcher was asked to record, through photographs and comments/tweets, items of interest as they walked along the street. No other instructions were given. This qualitative, or subjective, data supplemented the empirical data by providing on-the-ground details and an indication of the "character" of the streetscape. Generally, the field teams experienced the following challenges and benefits:

1. Noticing detail; perceptions of place.

The instructions to "observe" and "photograph" helped to make details about the streetscape visible, details that might have been overlooked otherwise. In general, students gained an understanding and appreciation for the communities they studied. "I've never visited St. Johns. Like many other people, the neighborhood provided me a shortcut to my east side destinations…Through this experience, I've gained an appreciation for what makes St. Johns a unique community and one I'll be visiting again" (St. Johns Group Report).

Walking along the street and focusing on individual perceptions proved vitally important in order to capture the unique character of a neighborhood. These subjective impressions documented the hidden detail and dynamic nature of these areas. "By walking through these communities, you get a better sense of what makes up a community and all the aspects that contribute to it. You also get to see some really interesting pieces of art, architecture, and historical landmarks that you really never noticed before" (Division Street Group Report).

These personal experiences were also a reality check. Expectations about a community, from advertisements or other types of media, did not always pan out on the ground. The Lents neighborhood, for example, is part of an urban renewal district. Advertising, on websites and pamphlets, indicated that much effort was being applied in the area to improve conditions, services, and community pride. What the Lents team discovered, however, proved quite different. "Our reality about the Lents neighborhood didn't meet our expectations. Prior to our fieldwork, we were eager to explore what was advertised as a growing, friendly neighborhood, and what we discovered disappointed us. We found a neglected Lents. It didn't live up to its advertised reputation" (Lents Group Report).

2. Value of qualitative data collection (the comments).

Team vs. Individuals: "Working individually allowed team members time to dwell on particular aspects of the landscape at their convenience and their time frame. A composite of individual perceptions capture details and interesting aspects about a neighborhood that might be missed. However, there could be negative consequences to this as well. Excessive attention on areas of individual interest might come at the expense of the "whole" picture. Collection of data as a group likely results in a more consistent and objective picture of the neighborhood of interest to a general audience." (Oldtown Group Report)

Importance of comments for comprehensive qualitative analysis: Because of the challenges of collecting both quantitative and qualitative data on manual field sheets, photos were not always captioned or commented on in great detail. Comments were often the first to be eliminated in order to capture other data. However, when analyzing the data at the conclusion of the field work, it became apparent how important the comments were to provide needed context to the photos taken (for the individual experience) – the more text available to analyze, the more reliable the qualitative data analysis results. The lessons learned from this experience is the following:

- Require commenting as a part of the data collection.
- Research and test an easier method to link comments to photos in the field.

Crowdmap Effectiveness and Potential

A final goal of this pilot project was to assess the benefits and limitations of the crowdmap interface for collecting micro-level real-time neighborhood data. With a greater understanding of the challenges with collecting this kind of data, we determined that the crowdmap on line interface has great potential, but still needs more capabilities. The benefits and limitations of this tool are outlined below:

1. Crowdmap can serve as a convenient "portal" for compilation and dissemination of neighborhood-level digital data in many different formats (text, tweets, photos, video, audio, slideshows). This kind of "one-stop-shop" does not exist currently on the internet.
2. In theory, if information of all different types is included on a single "incident form" (representing a single record), it should be possible to export a comprehensive report from crowdmap that can then be used for further analysis (SPSS, GIS, etc.). This would eliminate repeat entry of data.
3. To do this, however, there is a need to create a custom "incident form" for collecting specific kinds of data. Crowdmap needs to have more capability for customization (e.g. for other kinds of hyperlinked data such as photos, number and text fields). Also, in order to organize/categorize data for report generation, there needs to be a "required" field that specifies a "neighborhood." The benefit to this is that the moderator/administrator of the crowdmapsite can edit submitted incident forms in order to standardizethese labels for report generation.

- Limitation: Each "incidence form" represents one record – on average, the study areas had over 100 photos/data entry forms. This requires a lot of "accept/verify" from the administrator of the site.

Crowdmap has great potential as a one-stop data entry and data dissemination portal but needs more sophistication in its ability to be customizable. It is recommended that Ushahidi be made aware of this project, how it differs from the traditional "event" based use of Ushahidi's crowdmap site, its potential for grassroots use in collecting neighborhood data, and a wish-list of possible plug-ins or upgrades to the crowdmap interface that would make the tool more useful.

How the Data Can Be Used

1. Visual record of a neighborhood at a given point in time – document change over time (good for neighborhoods in transition).
2. Building of both an objective and subjective record of a community – what is actually there and what people's impressions of the community are.

SECTION: Recommendations for the Next Stage

Data Collection:

1. Customizing Crowdmap. Need the ability to customize report fields including creation of hyperlink fields, both text and number fields, and check-box fields (such as that used for the selection of categories).
2. Determine how to compile/organize data. How can the data be effectively organized and how should reports be compiled for each neighborhood? Do we need a different crowdmap interface or each neighborhood studied?
3. How to handle quantitative/empirical vs. qualitative/subjective data? Do we need a different report form?

Continuing Neighborhood Documentation:

1. Expand the boundaries of the neighborhoods studied in this project or select additional neighborhoods. Begin to compile a comparative picture of Portland neighborhoods using both quantitative and qualitative analysis techniques.
2. Employ a "photovoice-type" project where different demographic groups record their impressions of the same neighborhood (e.g. teens, homeowners/residents, business owners, "outsiders") – this will demonstrate how individuals perceive these neighborhoods differently/the same.

Advertising the Crowdmap Site – Getting Community Input:

1. Design an advertising strategy to disseminate the existence of the PDX Streetverve Crowdmap Site.
2. Determine how best to solicit community input (what information do we want).

    - What are the technical challenges (linking media files, using the internet, access to smartphones)?
    - Streamlining what information should be solicited. Do we want a free-for-all approach where community members can enter whatever they want or do we want to seek certain kinds of information?

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SECTION: Appendices

Appendix A: Field Worksheets (Empirical and Individual)

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