San Giovanni

Living Next to a Transit Corridor

Brooke Shin
Madeleine Galvin
Raphael Laude
Shareef Hussam

00

Introduction

San Giovanni in the urban context of Rome

Outline

Contents

Graphics / Tables

Images

Introduction

The Rome Workshop is a fieldwork-based course that takes students from the classroom to the city streets in order to conduct a physical assessment of neighborhood quality. Determining the child and age-friendliness of public spaces and services was the main goal of this assessment. The San Giovanni neighborhood starts at the Porta San Giovanni and continues over two kilometers south, but this study focused specifically on the area that flanks the Aurelian Walls, from the Porta San Giovanni gate to the Porta Metronio gate. Main points of assessment for the physical quality of the neighborhood were its building typologies, walkability, and public spaces. Another important factor came to light after a few days in the field, which was the extensiveness of the transit network in the neighborhood. The 1962 Master Plan of Rome introduced the concept of polycentrism and attempted to draw out the city in a manner that creates eighteen distinct centers, linked together in a mutualistic relationship by an intensely developed transit network (Morassut 1). The primary area of San Giovanni is representative of one of these centers, given that various lines of the metro, bus, and tram service it. A problematic feature of this connectedness is that non-residents, who may not be invested in the physical quality and livability of the neighborhood, often use the neighborhood services and resources.

La Basilica San Giovanni in Laterano right outside the neighborhood

A secondary area of the neighborhood was identified with the assistance of Mario Spada, a local resident and planner, to allow for a basis of comparison. This secondary area closely parallels the primary area in regard to its physical characteristics, but lacks the abundance of transportation options. In order to make comparisons between the two, a livability audit was conducted on both the primary and secondary area. This provided a method to assess the physical attributes of both areas, as this audit is mainly concerned with the conditions of the neighborhood space. Another large factor in the livability of the San Giovanni primary and secondary areas is the quality and type of the services offered. One troubling aspect of the primary area is the decline of local and historic services, indicating the neighborhood's difficulty in developing a concrete form of local identity. This is attributed to the transient population of San Giovanni that uses the neighborhood as an accessible means to commercial services. To allow for the formation of local community in the primary area, its livability must be brought to the level of the secondary area, which means increasing the quality of the physical space and community-targeted services, while bearing in mind the fact that the transportation will continue to bring a number of non-residents to the neighborhood. This is particularly important for the focus populations of this study, children and elders, as the physical characteristics that affect the livability of San Giovanni -- such as the quality of open spaces and the number of crosswalks -- can have even more drastic effects upon these groups.

The major intersection of *Porta San Giovanni*

Where is San Giovanni?

◻ San Giovanni

A Connected Neighborhood

⊙ minutes to	🚋 by transit	🚗 by car
🔵 Termini Station	~12	~12
🟡 Porta Maggiore	~15-20	~10
Historic Center	~15-35	~15-20
Trastevere	~30-35	~15-20
EUR	~15-25	~45

Two Areas of Study

.2km   .5km

n

By comparing the primary and secondary areas, it was possible to understand the factors contributing to the livability of the neighborhod.

Primary Area

This area is bounded by Via Magna Grecia to the east, Via Gallia to the south, and the Aurelian Walls (between Porta San Giovanni and Porta Metronio) to the north-west. It has a residential core circled by services, the most notable include a soccer club, tennis club, flea market, and food market. It also hosts a school and is the site of significant C-Line construction.

Secondary Area

This area is bounded by Via Britannia and Acaia to the east, Via Vetulonia to the south, and the Aurelian Walls (between Porta Metronio and Porta Latina) to the south-west. It has a residential core bounded by services to the north and east and by green space to the south-west. The secondary area hosts two schools and a variety of other services.

Green Space

Aurelian Wall

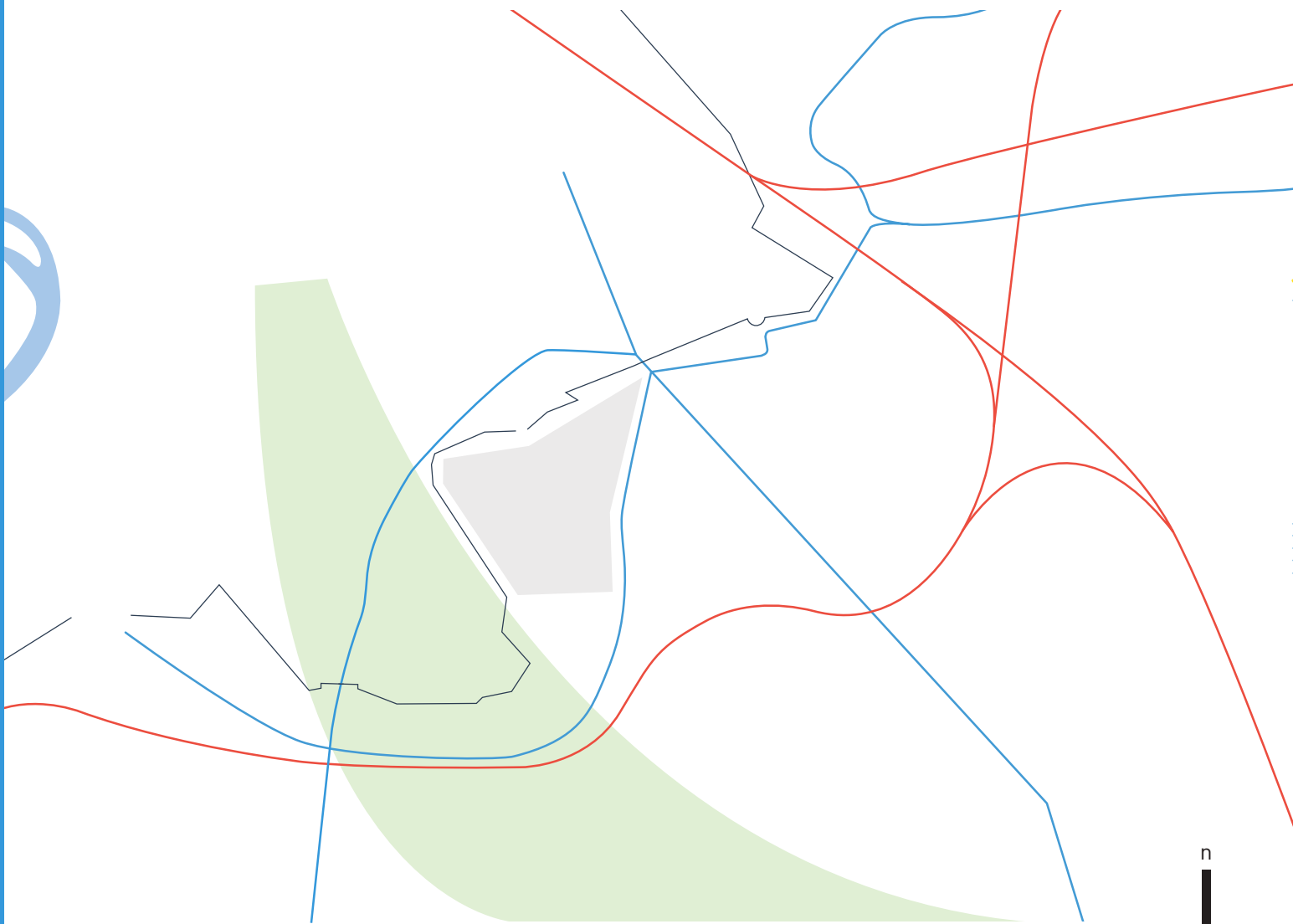C-Line Construction

Porta San Giovanni

Porta Metronio

Porta Latina

Broader Transit Network

Legend:

- San Giovanni
- Green Space
- Tiber
- Aurelian Wall
- Rail Network
- Important Auto Corridors

The map above details the important heavy-rail and auto corridors surrounding San Giovanni, connecting it to a broader transit network.

The neighborhood is located along a major transit corridor — Via Magna Grecia— that terminates in a major transit node, at the Porta San Giovanni. This corridor acts as an essential link between two highways:

To the north, it feeds into the Tangenziale Est, which is the highway to Stazione Tiburtina, and the Via Prenestina.

To the south, it feeds into Via Cristoforo Colombo, the highway to EUR (Rome's CBD), in addition to Viale Marco Polo, the road to Pyramide and one of only two roads through the significant green space pictured above.

As such, this corridor hosts considerable traffic, despite its high density urban setting.

Moreover, the Porta San Giovanni is a stop on the Metro A line and the terminus of Via Appia, an ancient and heavy-traffic corridor leading south out of Rome.

Local Public Transportation Network

Legend:

- — Metro Line A
- — FR 1, 3, & 5
- — 3 Tram
- -- Planned Metro Line C
- — Bus Routes

- ⬜ San Giovanni
- ☐ Porta San Giovanni Transit Node

- 🔴 Metro Stop
- 🟣 Regional Train Stop
- 🟢 Tram Stop
- ⚪ Planned Stop
- 🟦 Bus Terminal

The graphic above (not to scale) details the important public transportation network surrounding San Giovanni.

Many of these transit options are focused through the Porta San Giovanni, creating a transportation node from which much of Rome can be reached.

Two planned stops for the extended Metro Line C are in construction, detailed in dashed yellow.

Methodology

The main methodologies employed in our assessment of San Giovanni can be divided into five overarching components: historical analysis, statistical research, service audit, survey of built form, and neighborhood engagement. Together, the histories, data, graphics, and narratives these methodologies yield provide a fuller understanding of San Giovanni's origins, transformations, and prospects.

1

Historical Analysis

Analyzing San Giovanni's origins, planning, and development provides us with a fuller understanding of the neighborhood today. Most research was conducted online, focusing on Rome's Master Plans from 1909 to the present. By assessing the changes brought by each plan, an outline of the area's urban history was configured. Additional context came from the physical design of many of the buildings, with their architectural styles serving as a proxy for the building period.

Finally, additional pieces of information about the development of San Giovanni and its various services came from key interviews with neighborhood figures and residents. Opening dates for the majority of commercial sites along Via Magna Grecia and Via Gallia were obtained by speaking with shop owners and workers, providing insight into the changing character of these key paths.
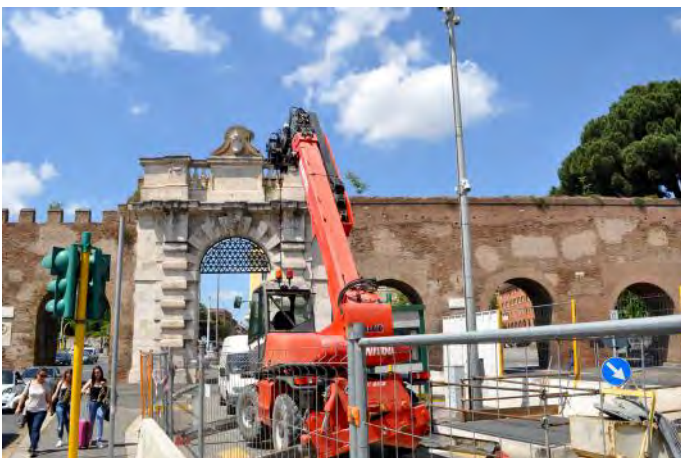
Construction for the Metro C Line in front of the *Porta San Giovanni*, the historical entrance to the city that joins the Aurelian Walls

2

Statistical Research

To conduct a statistical analysis of San Giovanni, Census data from the 2001 and 2011 surveys were gathered from the Italian National Institute of Statistics (ISTAT) website. These data were then formatted and organized into a Microsoft Excel spreadsheet, separated for three different areas: the primary study area, secondary study area, and for Rome.

Homes inside of a public courtyard in the secondary area of the neighborhood. This courtyard is wheelchair accessible.

3

Built Form Survey

This next stage of research was a survey of San Giovanni's built form, done in order to understand the neighborhood's physical infrastructure and how this affects livability for residents. Architectural styles, building typologies, street typologies, and public spaces were identified, categorized, and mapped. A survey of San Giovanni's sidewalks and intersections provided the basis for the assessment of neighborhood walkability. Adobe Illustrator was the main tool used in the creation of these visual representations of the neighborhood.

4

Service Audit

Preliminary research on the services in the San Giovanni neighborhood was based on the information provided by Google Earth and the Roma Capitale website. On-site research and interviews with residents and shopkeepers were conducted during fieldwork to revise and substantiate the service inventories. Types of services were determined based on the interviews and on-site research. Community targeted services consist of restaurants, bars, grocery stores, schools, churches, banks, medical services, nursing homes and a culture center. Transient services include bed and breakfasts, beauty salons and clothing stores, tattoo parlors, travel agencies, and automobile repair shops. A few key services were identified as being major community actors, and these are the services that were visited and engaged with the most.

Top and right: typical apartment blocks found in San Giovanni

5

Engagement

To better understand how San Giovanni's services and built form affect the lives of its residents, stakeholder meetings were held, intercept interviews were conducted, and Lynch mapping exercises were completed. To provide a basis of comparison between the primary and secondary areas and investigate the deeper effects of neighborhood proximity to a transit corridor, a transit-specific livability audit was done. This audit was created by Deni Ruggeri and is called the Field Audit for Measuring Livability at the Transit Stop (1). It consists of twenty-eight questions that have been divided into six different categories: Imageability; Transparency, Safety Perceptions, and Maintenance; Enclosure; Human Experience; Vitality; and Connectivity. The meaning of these concepts are as follows:
   • Imageability: the physical qualities that make the space memorable.
   • Transparency, Safety Perceptions, and Maintenance: the quantity of private activity as seen from the street, as well as the perception of safety risks in the space.
   • Enclosure: the vertical elements on the street.
   • Human Experience: presence of elements that have human function.
   • Vitality: the liveliness of the neighborhood, especially in regard to its commercial diversity.
   • Connectivity: the ease at which pedestrians can use the streets to walk or bike.

This livability audit provided the method of analysis for the engagement research done in San Giovanni.

Hypotheses and Summary of Findings

?

How does neighborhood proximity to a major transit corridor affect livability, especially for children and elders?

Hypotheses

Three potential effects have been identified in response to this question and include an increase in traffic congestion and pollution, declined maintenance of public spaces, and a shift in the mix of services. All three of these effects are implicated in the livability of San Giovanni and relate directly to the proximity of the primary area to a major transit node:

The *Via Magnagrecia* is a traffic corridor that hugs the side of the neighborhood and connects with other highways. Right: Five roads meet at the *Piazza Tuscoluso*, forming a huge and busy intersection

1

Congestion and Pollution

The increase in pollution and traffic congestion that results from the neighborhood's proximity to a major transit corridor is an effect felt by all residents of San Giovanni. One of the main roads of the primary area, the Via Magnagrecia, is a major connector of key automobile corridors in Rome, and therefore receives a heavy influx of traffic at all times of day. On top of individual cars, the area is heavy in bus lines, which traverse the Via Magnagrecia and contribute to its heavy congestion.

The situation is exacerbated by the lack of parking in the area; as the only major parking garage shut down a year and a half ago, there are always many cars parked in illegitimate spots on the street, which narrows the road for those in transit and slows the flow of traffic even further. Therefore those living in close proximity to this street must deal with the continual noise and inconvenience of a high quantity of cars and buses. In addition, the quantity of traffic has created issues of pollution in the neighborhood, such as poor air quality, especially during the afternoon hours.

2

Maintenance of Public Spaces

Poorly maintained public space in the San Giovanni neighborhood effects livability in that it decreases the quality of the built environment. This is especially relevant in regard to green spaces, in which a significant difference can be seen between the primary and secondary areas. Due to the ongoing Metro C line construction in the primary area, the green spaces along the Aurelian Walls have been since destroyed. In their place is an unsightly and poorly maintained construction site that has lead to serious issues of maintenance, as trash is often thrown in this area and not picked up. Across the street from this construction is the only public green space in the area, Piazzale Ipponio, which is unused by residents due to its state of disarray.

Piazza Ipponio as it appears during the day

This is extremely different from the well-maintained park in the secondary area. As a whole, the neighborhood lacks designated public space, which has since transformed the sidewalks into a major point of social interaction for residents, but is hindered in the primary area by the presence of informal stands that consume over half of the sidewalk space. These informal vendors are not usually residents of San Giovanni, and choose to set up in the area because of its connectedness to the Roman periphery and center.

3

Shift in Service Mix

The shift in the mix of services in the neighborhood is due to the proximity of the primary area to a major transit node that hosts cars, buses, and the metro. Given this proximity, there is a constant influx of transient users in the area. The neighborhood is located in a part of Rome that is considered very central, even though it is technically not part of the city center, making it an excellent place for visitors to stay. This fact is emphasized by the connectedness of the transit system, as well as the neighborhood's proximity to St. John in Lateran, one of the four papal cathedrals of Rome, which is a huge tourist attraction. These characteristics have attracted many transient users to San Giovanni and may have contributed to an increase in commercial stores that have pushed out some of the more community-oriented services.

Two of the markets in the primary area, which are historically community based and primarily Italian, have experienced rapid decline in the past years, due in part to a lack of municipal funding – which instead goes to transit -- as well as the occurrence of other commercial enterprises. The primary area now hosts a number of commercialized chain stores and food shops, as well as hotels. In contrast with the secondary area, where services are 1) more abundant and 2) more community oriented, it is clear that the population of neighborhood users has impacted the services of San Giovanni.

These are the main points of interest in the study of the livability of San Giovanni. They are all interconnected and often overlap, forming complex layers in the neighborhood that must be deciphered first on their own, and then in the larger context of the urban environment.

01

History

Conceived in the 1909 Master Plan as a residential neighborhood, San Giovanni has since transformed into a hub of transportation and commerce.

Early History

The San Giovanni neighborhood gets its name from the basilica located just inside of the Aurelian Walls, San Giovanni in Laterano. This cathedral was consecrated in 324 AD and is the oldest of the four major papal basilicas in Rome ("Cenni Storici" 1). As the population of Rome diminished during the Middle Ages, the area around the cathedral continued to be inhabited, and was one of the few areas within the Aurelian Walls to remain as such during this large period of Roman history (Gregorovius 222).

A sketch of the papal basilica

1909 Plan

Demolition for road widening

New neighborhood in construction

Gardens

Villini (two-story homes)

The San Giovanni neighborhood as outlined in the 1909 plan

The *Piano Regolatore di Roma* laid out a large-scale plan for the entire city in 1909, including massive urbanization projects for the areas immediately outside of the Aurelian Walls (Morassut 4). Prior to this point, the majority of development in Rome had taken place within the walls and had left the bordering regions in their natural state, which included informal villages mainly comprised of cottages and green space. The 1909 plan laid out the primary area of San Giovanni in a regular block style, part of which can be seen today starting from Porta Metronio, following along the Aurelian Walls until Via Apulia. This development was in the form of *villini*, which is a low-density style of housing that initially accommodated two families in each residence. These *villini* were occupied mainly by *ferrovie operai* – railway workers. The 1909 plan was not completely followed through, as development was halted due to World War One, and not resumed until the early 1920's. During this decade, the original plan was modified slightly, and included an increased amount of large apartment blocks intended to provide housing for the burgeoning population of Rome (Glendinning 166).

Residential Developments

San Giovanni in the 1931 plan

In 1926 there was an expansion of the Porta San Giovanni, which added two entrances on either side of the original door, creating a wide portal linking the inner city to the neighborhood. There was another plan of the city in 1931 that laid out the San Giovanni neighborhood as it is seen today. This corresponded with the Fascist-style housing that began to appear in the city-center, and eventually reached San Giovanni, primarily along the side streets in the western part of the neighborhood. Gradual expansion of the city population led to the construction of additional housing during the 1950's and 60's, which completely tapered off by the 70's ("Basi territoriali e variabili censuarie").

Transit Developments

Image of the construction currently taking place in San Giovanni for the Metro C
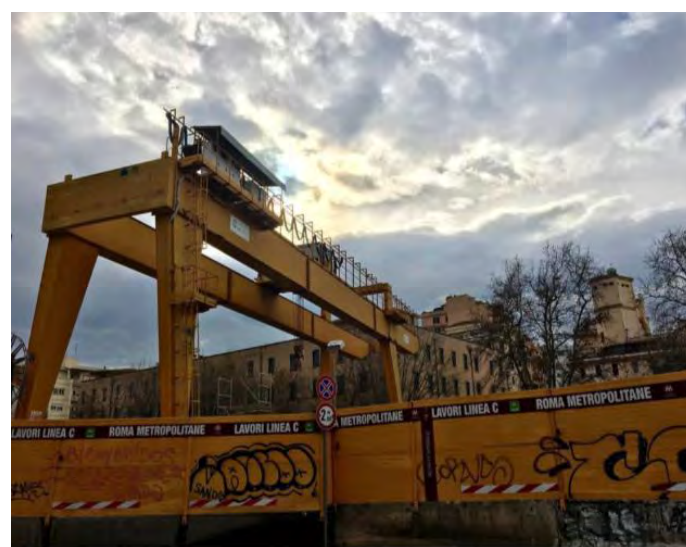
The construction has created many issues with maintenance in the neighborhood

As the population of Rome rapidly grew during the 20th century, so did the city's need for an efficient transportation system. The metro A line opened in San Giovanni in 1980, at the beginning of the Via Magnagrecia, and linked the neighborhood with Termini, one of the major train stations of Rome, as well as a variety of other key spots in the historic center, such as the Piazza di Spagna (Goltri 1). The metro was developed in addition to eleven different bus lines and two tram lines, which already serviced the area ("Le mappe del trasporto pubblico di Roma" 1). Most recently, an extension of the metro C line has been made in San Giovanni, replacing a large amount of the green space in the primary area with construction. These 20th century developments all contributed to turning the primary area of San Giovanni into a major transit corridor for people transiting in from all over the city, which has fractured the original residential fabric of the primary area and harmed the vitality of the local community.

02

Statistics

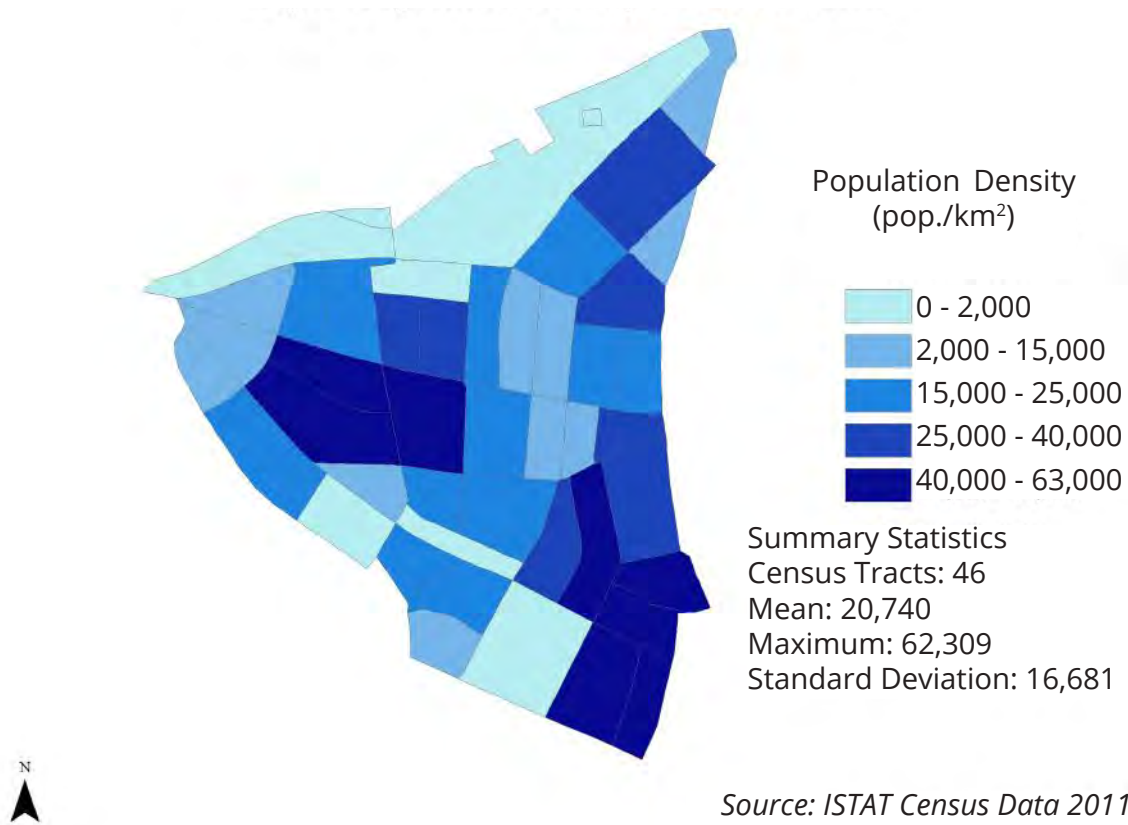A numerical glimpse into San Giovanni

Introduction

The statistical profile of San Giovanni exhibits key differences between both the neighborhood as a whole and the *Comune di Roma* - city of Rome, and between the primary and secondary study areas. For the purposes of this study, particular emphasis was placed on statistics that indirectly reflect the livability and age friendliness of the neighborhood within the broader context of economic and social development of the areas. For reference, Tables S1 and S2, in the appendix of this report present all the data cited, which is in a Row, Column format after each statistic.

Population and Families

While the citywide profile is generally representative of San Giovanni, there are several crucial differences. The neighborhood has a much higher population density, with 20,910 residents per square kilometer in 2011 compared to a Roman average of 2,032/km2. Population growth in San Giovanni from 2001 to 2011 averaged 4.8% (R1), while Rome grew comparatively slowly at 2.8% (X1). The dense and fast growing population of San Giovanni is primarily concentrated along Via Gallia, a bustling hub of commercial activity and the dividing boundary between the primary and secondary areas.
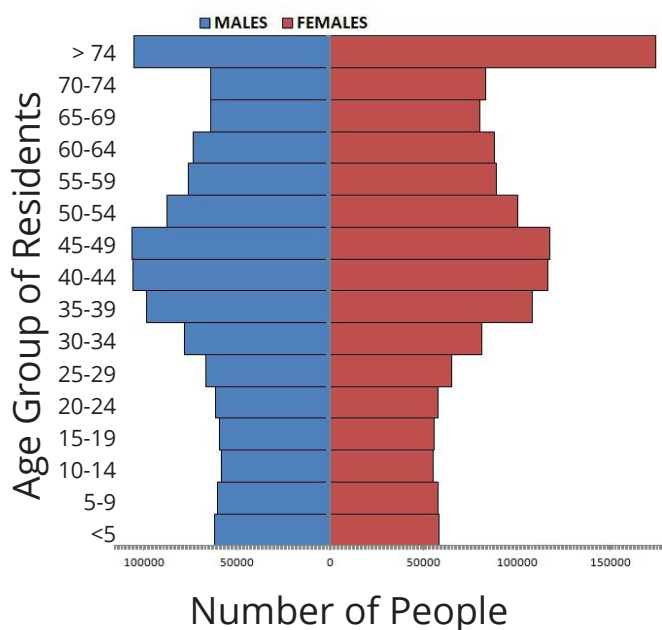
Population Density of San Giovanni

Population Density
(pop./km^2)

0 - 2,000
2,000 - 15,000
15,000 - 25,000
25,000 - 40,000
40,000 - 63,000

Summary Statistics
Census Tracts: 46
Mean: 20,740
Maximum: 62,309
Standard Deviation: 16,681

Source: ISTAT Census Data 2011

In regard to the population age distribution, 26.1% (P3) of San Giovanni's population is older than 65 and 11.1% (P2) under the age of 15, in contrast to Rome's averages of 21.9% (V3) and 13.4% (V2), respectively. San Giovanni thus has a higher dependency ratio of 59.2 (O6) compared to Rome at 54.5 (U6).

The population profiles of the primary and secondary areas are similar mainly in terms of proportions. For example, approximately 11.2% (B2) of the population in the primary area is under the age of the 15, while a nearly identical 11.0% (J2) in the secondary area is in the same age bracket. However, population growth in the primary area was a

Population Pyramid of Rome

Number of People

Population Pyramid of San Giovannni
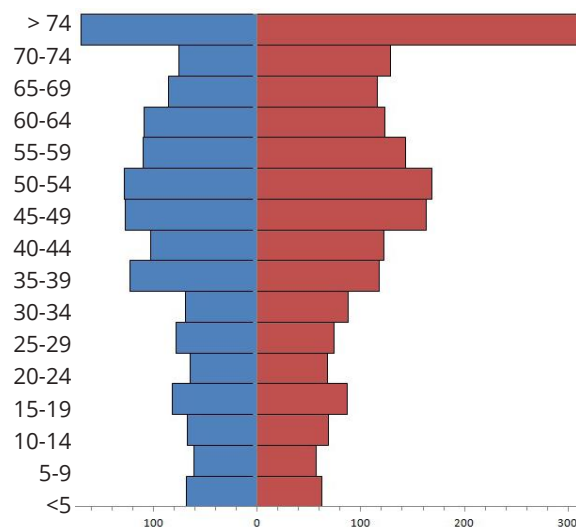
Source: ISTAT Census Data 2011

negative 3.1% (F1) from 2001 to 2011 while the secondary area posted positive change of 8.3% (L1).

When controlling for population growth by looking at changes in the percent total over time, the differences between the two neighborhoods are also clear. For example, in 2001 residents over the age of 65 represented 26.3% (B3) of the primary area and 24.0% (H3) of the secondary area populations. By 2011, these percentages had changed to 26.2% (D3) and 26.0% (J3) respectively, reflecting changes of -0.1% (E3) and 2.0% (K3). These trends appear to indicate either a) a growing preference for the secondary area over the primary area or b) an equilibrating effect whereby the two areas are reaching parity in terms of statistical profiles. Both scenarios indicate Romans' strong desire to live secondary area relative to the primary and in this case, population growth can be inferred as a proxy for relative liveability.

Although household sizes average to about 2.1-2.2 (A7-U7) for all of the compared areas, San Giovanni overall features a higher percentage of single person households, with 48.5% of families having only one member compared to 38.7% in Rome. While household data by age is unavailable, it can be inferred from fieldwork that a large proportion of these single person households are elderly living alone. 13.9% (P4) of neighborhood residents are over the age 74, whereas in Rome only 10.7% (V4) of the population is in the oldest ISTAT age group.

The San Giovanni neighborhood can be characterized by having an older, denser, and faster growing population than the city of Rome as a whole. While the two areas have similar population pyramids, the secondary area experienced much faster growth during the period of 2001 to 2011.

Educational Attainment

	% Post Secondary	% Secondary School	% Middle School	% Primary School
Rome	19.1	33.9	22.3	13
Primary Area	33.3	33.7	14.8	9.4
Secondary Area	29.5	34.5	16.5	10.3

● % Post Secondary   ● % Secondary School   ● % Middle School   ● % Primary School

Source: ISTAT Census Data 2011

Educational Attainment

Residents of San Giovanni are on average better educated than Romans, with 30.6% (P8) holding post-secondary qualifications compared to 19.1% (V8) citywide. From 2001 to 2011, the percentage of total residents with college degrees increased by 7.8 (Q8) percentage points in San Giovanni while in Rome the increase was smaller at 5.0 (W8) percentage points. Unemployment in San Giovanni was also lower at 7.8% (P13) compared to 9.5% (V13) of the city workforce. Taken together with many residents' preferences to patronize local establishments, this data seem to indicate a positive economic outlook for the neighborhood economy. When comparing the primary and secondary area, educational attainment of residents were different by 4 percentage points: 33.3% (D8) in the primary and 29.5% (J8) in the secondary areas held post-secondary qualifications. The lower primary area unemployment rate of 7.3% (D13) - which may be driven by the proximity to employment opportunities along the business and services hub of Via Magnagrecia or the preference for workers to reside closer to transit - stands in contrast to the higher rate of 8.1% (J13) rate in the secondary zone. Trends from 2001 and 2011 also indicate that the primary area population has become more employed and better educated than the secondary. In conclusion, the population of San Giovanni is better educated and more likely to be employed than the Roman population.

The primary area, which is near the transit node, has higher education levels and lower unemployment.

Housing and Development

Homeownership is quite common in San Giovanni, with 75.7% (P15) of residents owning their home in comparison to 71.2% (V15) in Rome. Demand for existing homes in San Giovanni is also very high, with a 56.9% (R16) decrease in the number of empty homes from 2001 to 2011, compared to a Rome-wide increase of 7.7% (X16) during the same time period. Controlling for the number of homes, there was a 6.3 (Q16) point decrease in the percentage of the total that empty homes represent. These trends appear to indicate either a) a growing preference for the secondary area over the primary area or b) an equilibrating effect whereby the two areas are reaching parity in terms of statistical profiles. Both scenarios indicate Romans' strong desire to live secondary area relative to the primary and in this case, population growth can be inferred as a proxy for relative liveability.

The primary and secondary areas both have similar rates of homeownership at 75.8% (D15) and 75.6% (J15), respectively. However, in a trend also found with other statistical indicators, homeownership rate grew more in the secondary area from 2001 to 2011 than in the primary area. In brief, homeownership rates are higher in San Giovanni and there is demand to occupy existing infrastructure through both legal and illegal means.

Homeownership

	% Other	% Rented	% Owned
Rome	7.6	21.2	71.2
Primary Area	11.6	12.6	75.8
Secondary Area	9.7	14.7	75.6
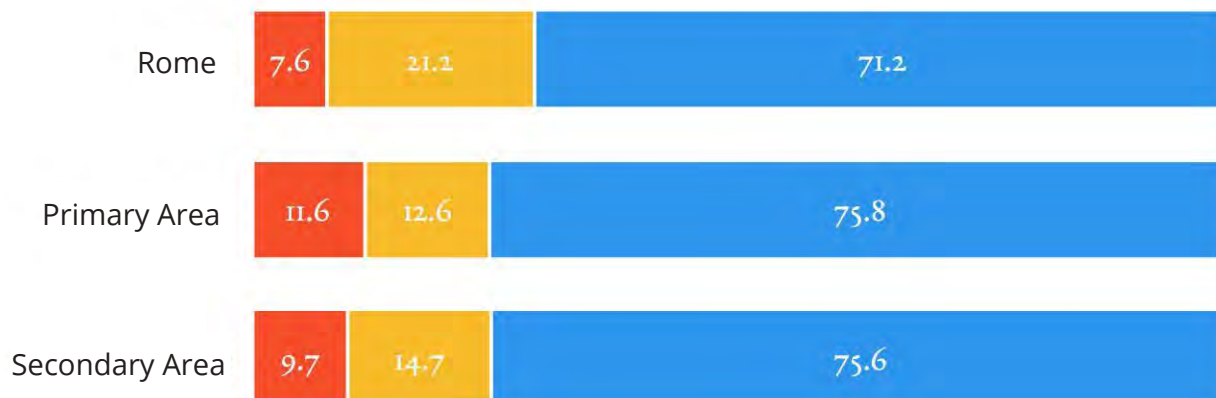
● % Owned   ● % Rented   ● % Other

Source: ISTAT Census Data 2011

The residential fabric of the secondary area

Conclusion

Overall, the statistical data points to the conclusion that San Giovanni and Rome are demographically different in several indicators of key interest to this study. Meanwhile, while the primary and secondary area feature relatively similar profiles, the secondary area grew more from 2001 to 2011.

Differences such as those between the primary and secondary areas are small enough that they could be due to a wide variety of factors. The factor that is the most interesting is that this difference in growth could be attributed to the building style of the secondary area. It is generally denser, with more apartment buildings and less space taken by construction and busy intersections. Therefore the difference in growth could be due to there being a greater selection of living options for incoming residents.

03

Built Form

How San Giovanni's buildings, spaces, and paths affect livability

Introduction

?

What role does the built form of a city play in the daily lives of its inhabitants?
Are these physical features more or less important in determining livability than social ones?

1

Buildings

Architectural Styles

Building Typologies

2

Spaces

Public Spaces

Porta San Giovanni Transit Node

3

Paths

Sidewalk Use

Flows

Street Typologies

Spaces / Paths Porta San Giovanni Transit Node

Legend:

- ▬ Metro A
- ▬ Planned Metro C
- ▬ Metro C Construction Site
- ▬ 3 Tram
- ■ Bus Terminal
- ●●● Metro/Tram Stops

Three high volume corridors meet at the Porta San Giovanni, a portal in the Aurelian Walls. While this ancient architectural feature adds to the character of the neighborhood, it acts as a bottleneck, funneling a high volume of vehicles through a small opening. The result of this funneling is congestion, pollution, and dangerous crossings.

This intersection is the site of a Metro A stop, and will soon host a Metro C stop as well. This crossing of metro lines will make the transit node even busier.

Buildings Typologies

	Palazzo		Palazzini
	Villino		Container
	Miscellaneous One-Story		

.2km   .5km

San Giovanni's buildings can be classified into four types.

The most common is the **Palazzo**, a four to eight story apartment block. Their ground floors are usually occupied by retail spaces, making them mixed use buildings. Palazzi often have interior courtyards, either created in the central open space of a circular floor plan or between multiple palazzi. The height of this building type is generally greater along high volume corridors.

Next are the **Palazzini**, an apartment building style similar to the Palazzo, but smaller. In San Giovanni, Palazzini are only three to four stories. The vast majority of the neighborhood's buildings of this type form a complex in the primary area's southeast corner. This complex is fenced, with courtyard spaces between the buildings.

The Villino is a two-story building style containing two homes, laid out symmetrically. In San Giovanni, these were originally 'popular' (public) housing designed for railroad workers. These are spacious homes with enough room for numerous children and grandparents. Moreover, San Giovanni's Villini are surrounded by fenced, verdant courtyard spaces, providing the opportunity for leisure and dinning in a safe, intimate space.

Our final typology is the **Container**, a non-residential, single-purpose building style. These have a large footprint, though are only one to four stories. The primary area has six containers. These are occupied by a school, a produce market, a flea market, a (vacant) gym, a department store, and a theater.

Buildings Architectural Styles

.2km   .5km

■ Villini (1920-1940)

■ Rationalist (1930-50)

■ Miscellaneous / Unclassifiable

■ Renaissance Revival (1920-1940)

■ Modern or Postmodern (1950-80)

A *Palazzo* in the Renaissance Revival style.

A *Palazzo* in an amalgamated Rationalist / Postmodern

Public Spaces

■ Public Space

San Giovanni has few **public spaces**. The most significant of these flanks the Aurelian Walls in the secondary area. Areas that were formerly green space in the primary area have been taken over by the municipality as sites of Metro Line C construction, which has caused issues of trash and poor maintenance.

Piazza Ipponio is a popular public space in the secondary area, often used by children in the afternoon to play. We might credit the space's success to the many cafés and restaurants bordering the space, providing a social space for parents and children.

Parco Mura Latina is a linear park popular amongst elders, who use the area for reading the newspaper or chatting with friends. The park is also popular amongst runners, parents pushing strollers, and children.

Paths Sidewalk Maintenance and Use

— Easily used by all

— Difficult to use for some

— Impossible to use by many

Via Ipponio

Via Magnagrecia

Via Gallia

.2km   .5km
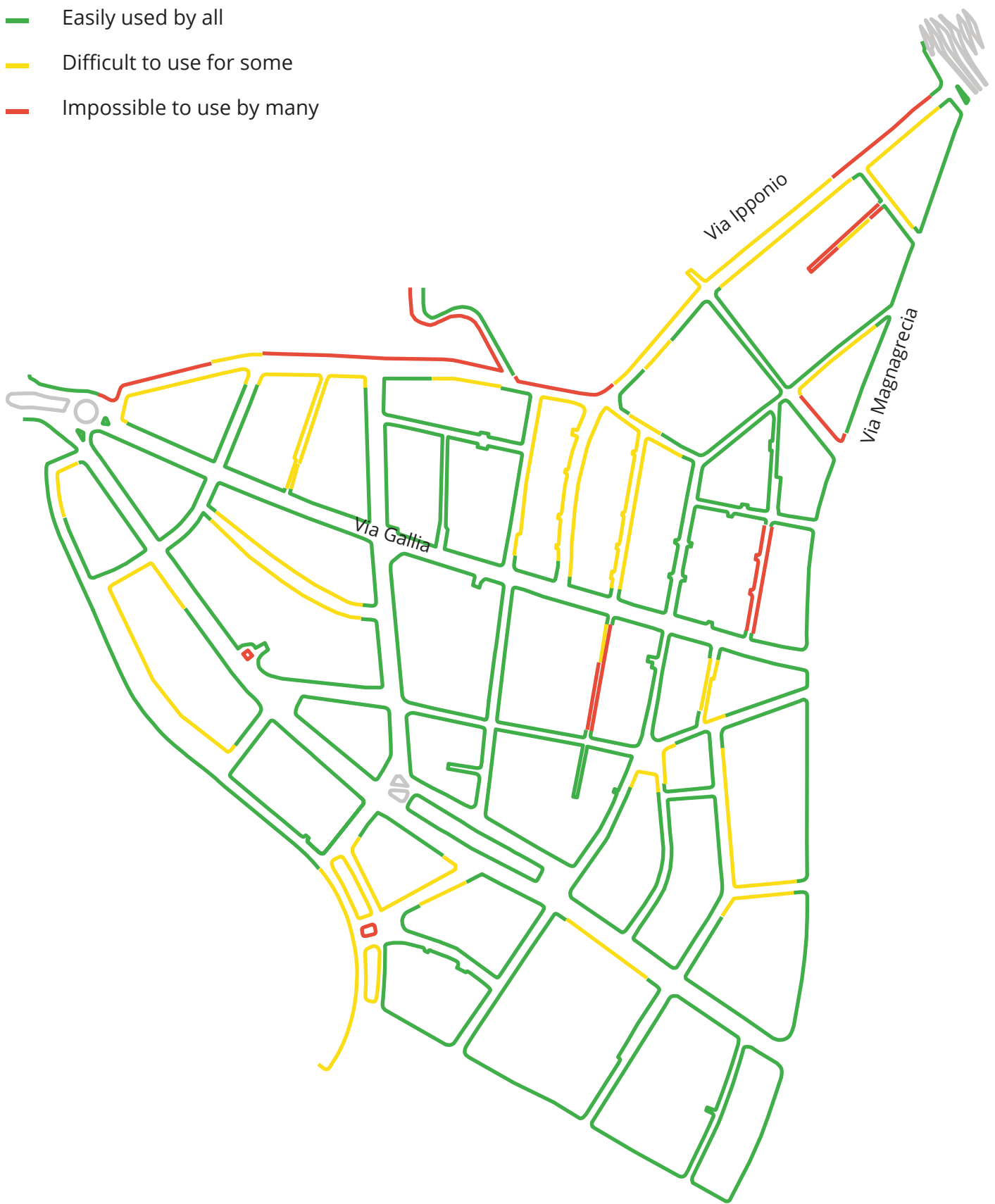
Sidewalks in San Giovanni are usually wide and well designed. However, some sidewalks are poorly maintained and used illegally as parking (especially by motorcycles). These failures make otherwise good sidewalks difficult to use for some of San Giovanni's residents, especially elders.

←——

The **Sidewalk Maintenance and Use** map to the left suggests the primary area's sidewalks are more dilapidated than those in the secondary area. This is surprising given the greater flow within the primary area (see local transit map).

The poor quality of sidewalks along Via Ipponio, the northern border of the primary area, can be attributed to Metro C construction along this corridor.

Via Gallia, the bisector of the study area, has excellent, well designed, well maintained sidewalks.

Many of the neighborhood's smaller streets suffer from a lack of maintenance, suggesting the municipality is more focused on maintaining heavily used sidewalks.

Illegal parking makes many sidewalks **impossible to use by many**, a common norm of use in the study area.

Sidewalk along Via Ipponio

Paths Street Typologies

Artery
Via Magna Grecia

Corridor
Via Gallia

Local
Via Olbia
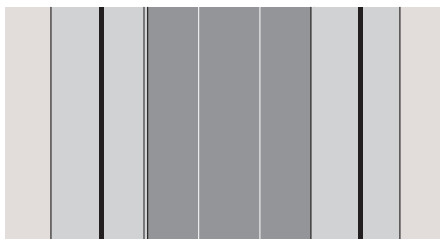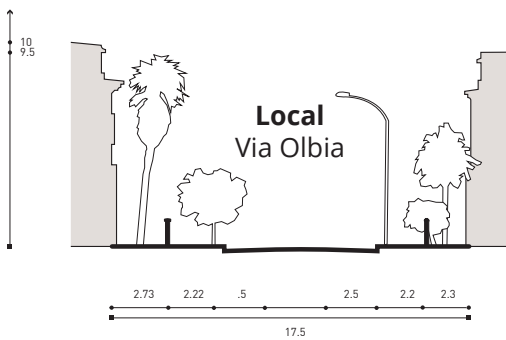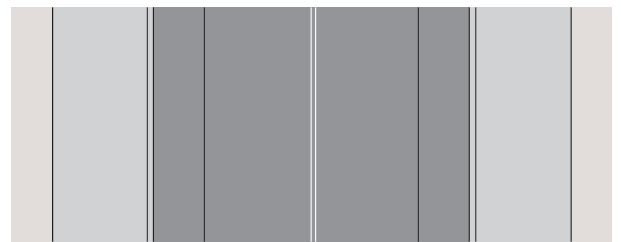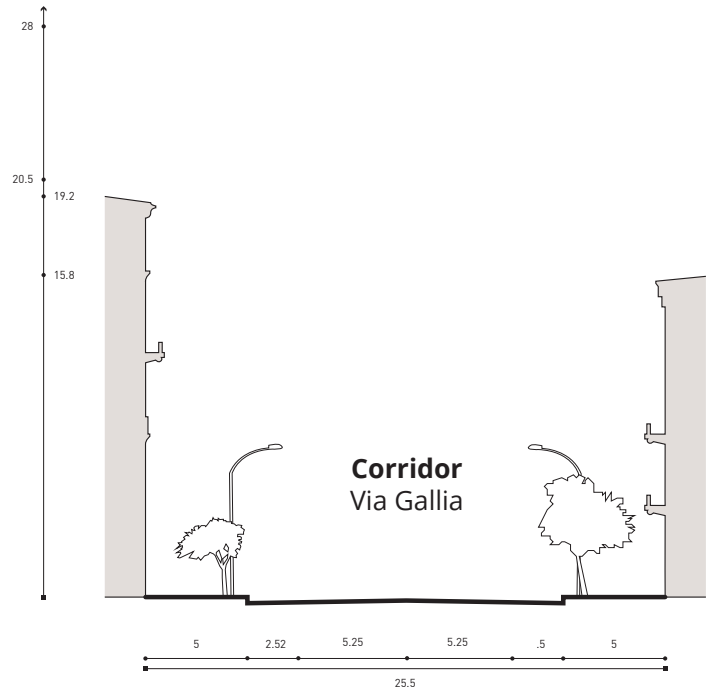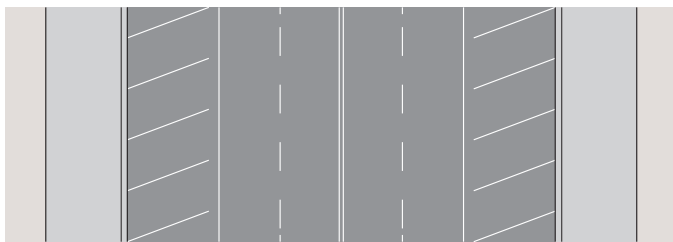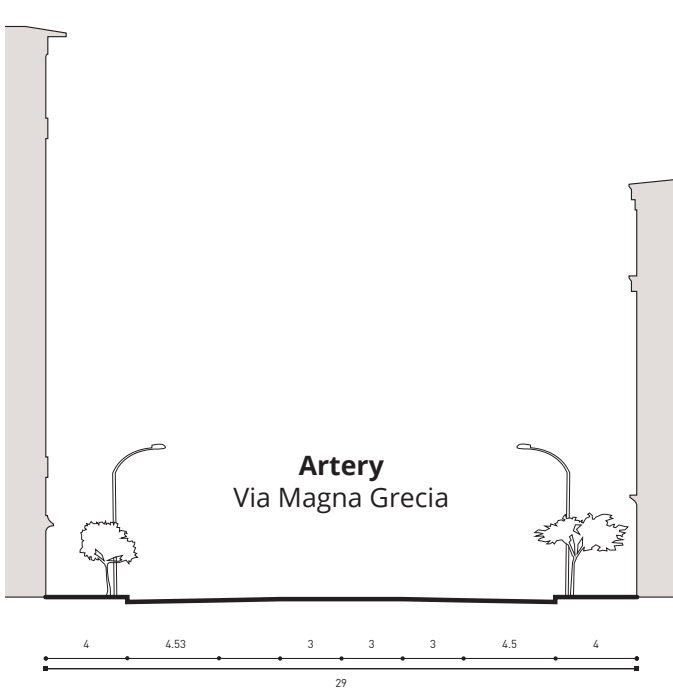
Three main street typologies are found in our study area:

(1) The **Artery** is a wide, high volume road flanked by tall buildings. It is an important road in the broader transit network of the city. The only **Artery** in the tudy area is Via Magnagrecia, which forms a strong edge along the neighborhood's eastern border.

(2) The **Corridor** is a wide, two-lane road which sees fewer cars than the Artery. It is an important road within the broader neighborhood of San Giovanni. Via Gallia is the best example of this type, with broad sidewalks, wide lanes, and tall trees.

(3) The **Local** typology is a single-lane road which sees very low flow. These roads are primarily used by residents. Roads of this type generally have narrow sidewalks which are poorly maintained, as noted on page thirty-six.

Paths Flows

The Flows map above depicts each lane with a black line, illustrating the prevalence of **Local** roads within the primary area's interior. It is likely because of this characteristic that the primary sees such low flow. As such, use of the interior's roads as paths from one place to another is discouraged. Instead, these **Local** roads act as feeders for residents towards **Corridors** and **Arteries**.
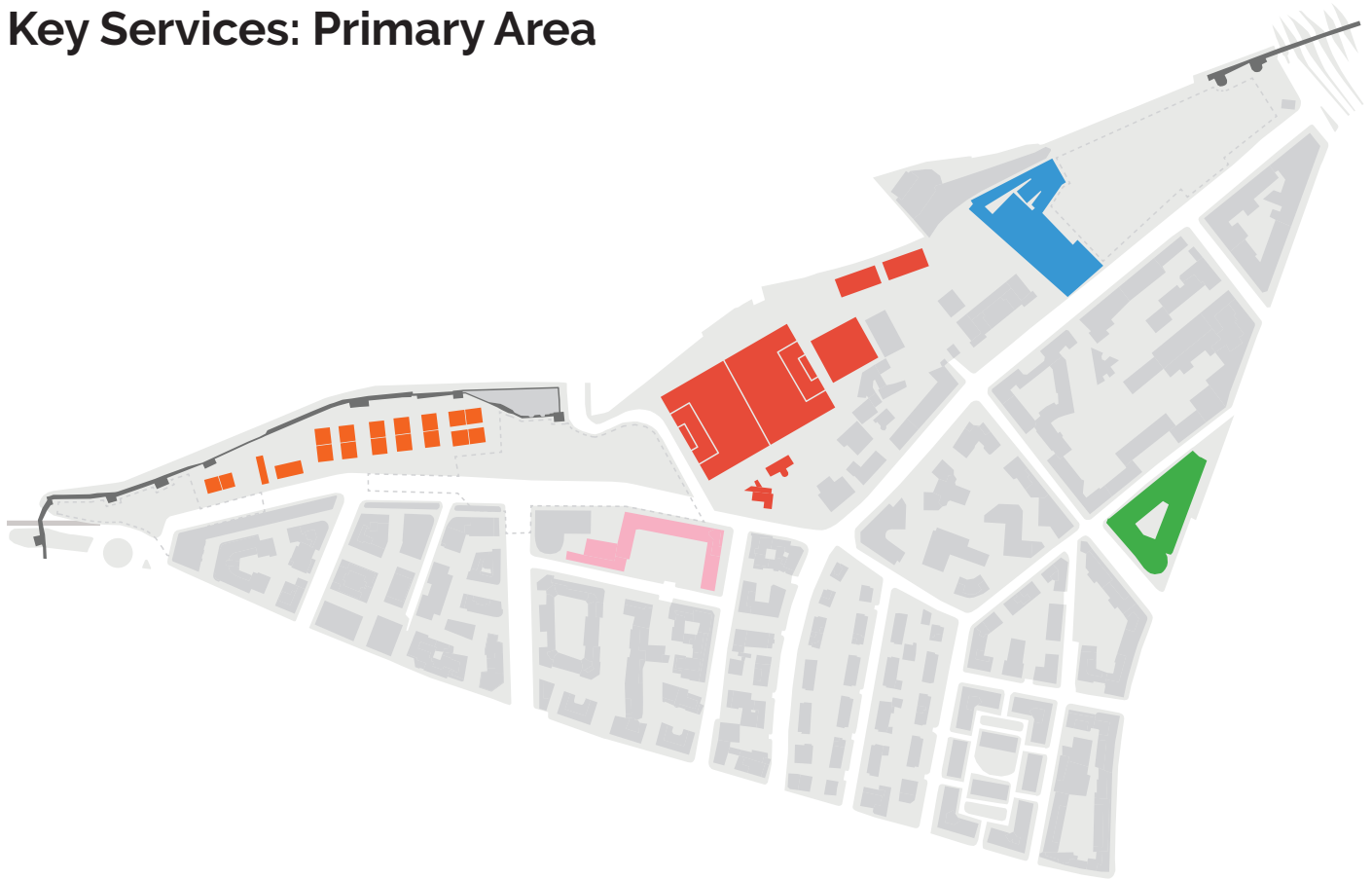

Via Magnagrecia, an Artery.

Via Luni, a Local road.

04

Services

Impacts of TOD on the neighborhood service mix.

Key Services: Primary Area

.2km   .5km

Mercato Metronio
The avant-garde corkscrew parking garage designed by Morandi in the 1950's used to attract many people to Mercato Metronio, as it was easy to find parking and transport heavy produce. The garage has been out of service for a year and a half now, while the market is struggling to stay afloat with currently sixteen vendors out of the original one hundred and fifty. One of these vendors, Da Massimo, has been in the family since the 1960's and its long history is proudly displayed on the wall of the small shop. Today both the daughter and son work at the shop, selling cheese and meats to a diminishing clientele.

Scuola Media Giovanni Pascoli
The middle school is characterized by its large mural of Francesco Totti, who is the captain of the A.S. Roma soccer team. Totti is a former student of the school and resident of San Giovanni. The school hosts a variety of enrichment programs for students to get involved with, such as outdoors exploration courses and music lessons, as a way to keep them busy until work hours finish and parents can take them home.

Mercato Sannio
This second-hand clothes market was developed in the 1950's, during the time when San Giovanni was becoming increasingly commercial. It is a place where people may buy inexpensive clothing from over one hundred and forty vendors, and is famous to both Romans and tourists. Giancarlo Tommaso Justi, the president of Mercato Sannio, described the city's inattention in terms of funding the well-known market. Instead of helping the market renovate, the city has chosen to pour money into new projects such as the metro line.

Societa Sportiva Romulea
This soccer club has been in existence since the 1920's and is hugely famous amongst Romans as it is the site where Francesco Totti, the captain of the A.S. Roma team, trained as a youth. It is also part of the Inter league and attracts children from all over the city to play soccer in San Giovanni.

Tennis Roma A.S.D
The tennis center of San Giovanni boasts an extremely diverse clientele. It has been in existence since the mid-20th century and has an older population that has been using the facility for decades as a place for exercise and social activity.

Key Sites: Secondary Area

IIS Confalonieri De Chirico
This high school in the secondary area of San Giovanni is located just across the street from the green space by the Aurelian walls on one side and the Mercato Latino on the other.

Parrochia Nativita di Nostro Signore Gesu Cristo
This is the parish church of the San Giovanni area and is conveniently located on the Via Gallia. Some residents of the neighborhood use the church for religious purposes, but many others view the church as a social resource and place for interaction, especially amongst elders.

Mercato Latino
This is a much newer market, located in the secondary area of San Giovanni. It has been thriving since its reopening in 2007, as it had been temporarily displaced a few blocks from its original location and is situated above a parking garage with one hundred and fifty spaces, not unlike the Mercato Metronio. This market has a diverse blend of options, from a wine seller, to a hairdresser, and is often packed with community members during the morning and early afternoon hours.

IC Alessandro Manzoni
This primary school is known throughout Rome and is considered to be very good, providing a great resource to the families with young children in the secondary area.
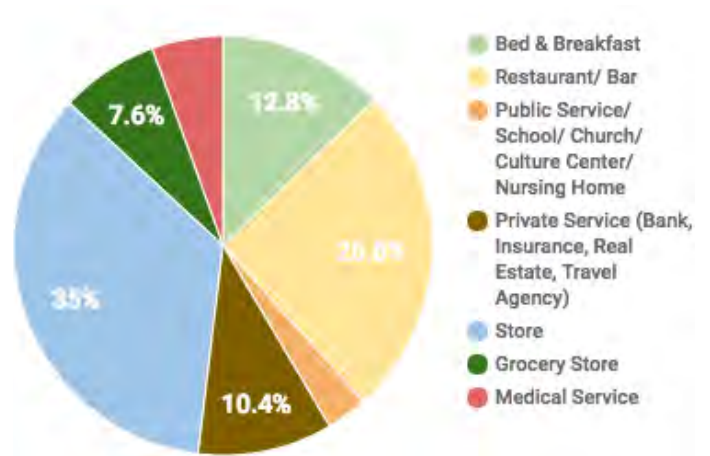
.2km   .5km
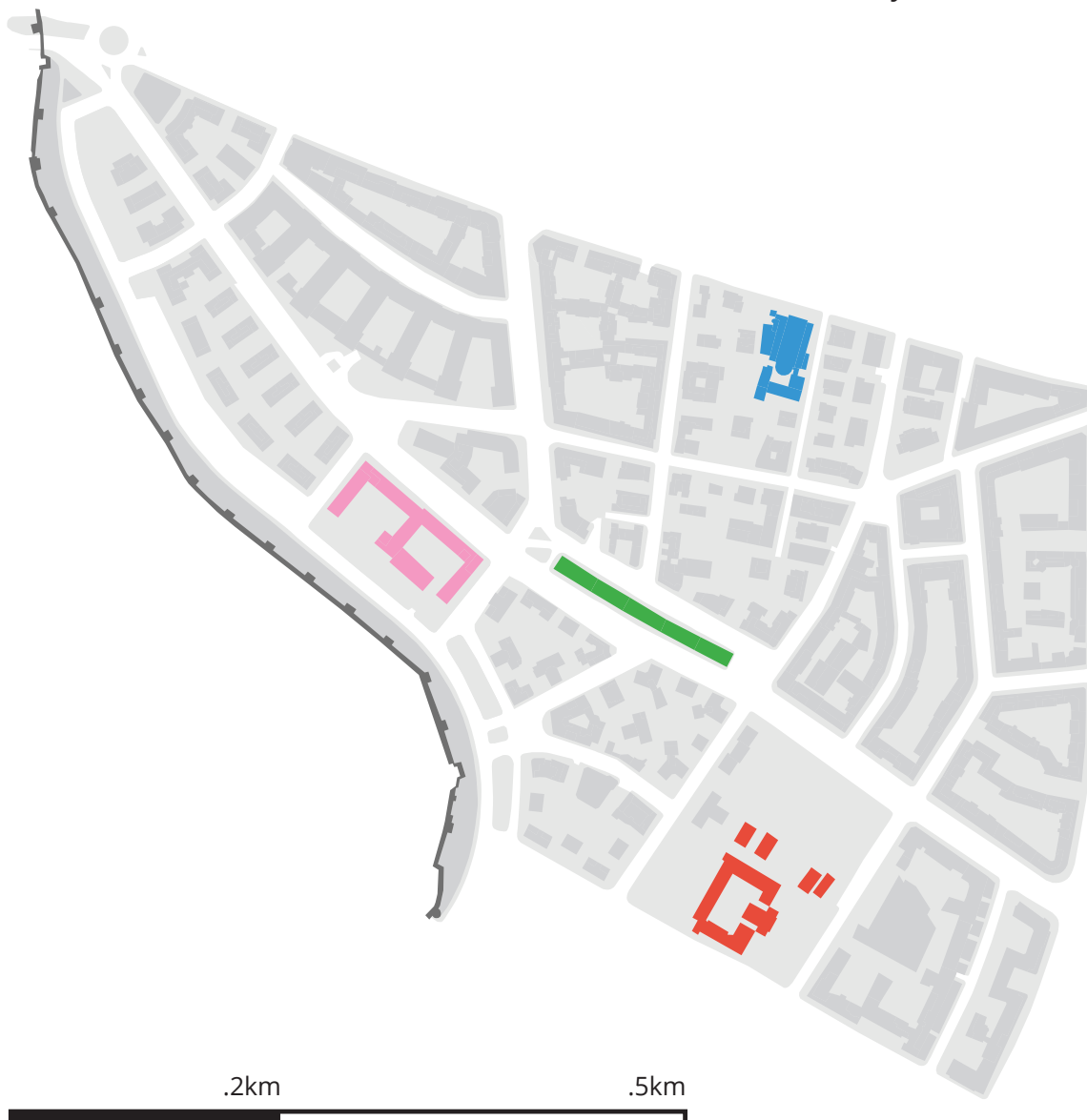
Summary

The San Giovanni neighborhood has a wide variety of services that range from everyday, community-targeted grocery stores to a department store and a tennis club that attract people from all over the city. Adjacent to the main transit corridor on Via Magnagrecia, the primary area of San Giovanni has a great number of commercial services that cater to the transient population. This focus on commercial activity might have a negative impact on the livability of the primary area, as transient users are often less interested in the quality of the neighborhood. In one of the intercept interviews, a flower shop keeper on Via Gallia said that he walks from the Metro along Via Sannio to get to his business every day yet does not care much about the quality of the street, let alone make an effort to improve it. On the other hand, the secondary area has more community-targeted services and institutions that contribute to keeping the neighborhood livable as well as maintaining a stronger sense of community among its residents.

Primary Area

Secondary Area

Primary Area pie chart legend:
- Bed & Breakfast
- Restaurant/ Cafe/ Bar
- Store (clothing, stationery, furniture, beauty, etc)
- Public Service/ School
- Medical Service
- Private Service (Bank, Insurance, Real Estate, Travel Agency)

Values: 21%, 22.6%, 41%, 8%

Secondary Area pie chart legend:
- Bed & Breakfast
- Restaurant/ Bar
- Public Service/ School/ Church/ Culture Center/ Nursing Home
- Private Service (Bank, Insurance, Real Estate, Travel Agency)
- Store
- Grocery Store
- Medical Service

Values: 12.8%, 20.0%, 10.4%, 35%, 7.6%

Ground-Floor Use Map

Legend:

- Commercial
- Mixed-Use
- Residential
- School
- Public Space / Greenery
- Sports Comlex
- Miscellaneous

n

The number of grocery stores is used to compare the primary and secondary areas. There are 0.58 grocery stores per 1,000 population in the primary area, whereas there are 2.04 grocery stores per 1,000 population in the secondary area. Grocery stores are more frequented by local residents than transient users, and the larger number of them in the secondary area indicates that the secondary area is more residentially oriented than the primary area.

Grocery Store

n

Primary Area
Daily Use Service Map

- ○ Grocery Store
- ● Medical Service
- ● Gas Station / Automobile Repair Shop
- ● Hair Salon / Beauty Salon
- ● Restaurant / Cafe
- ● Bank / Real Estate Agency

n

.2km   .5km
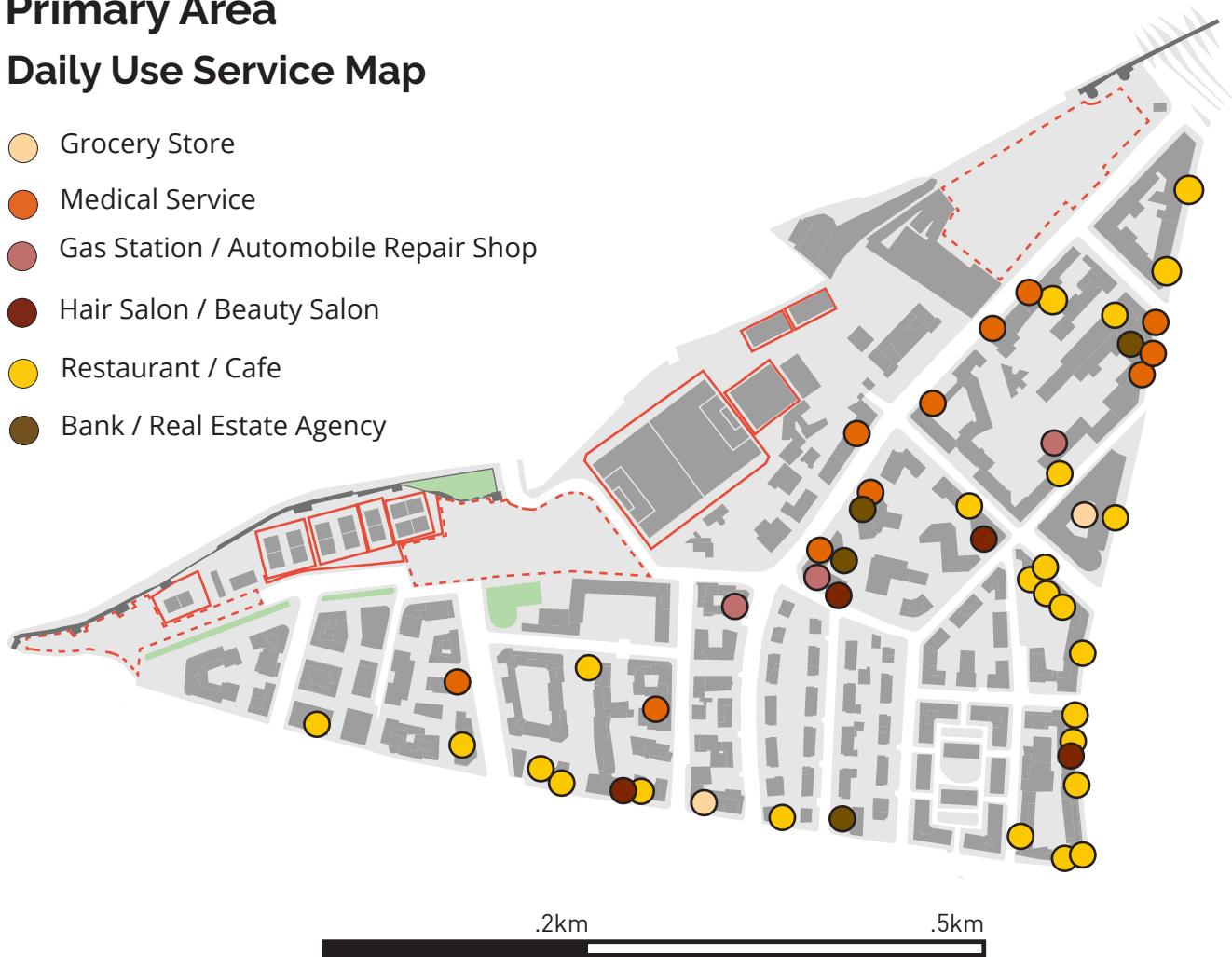
The primary area features over one hundred and twenty commercial services, half of which are more beneficial to transient users as opposed to residents. There are more than twenty five bed and breakfasts, which indicates that the neighborhood serves as a stop for tourists and other temporary visitors. While the abundance of commercial activities keeps the neighborhood lively, it is debatable whether it makes the neighborhood a livable place, as some of the residents responded in interviews that they identify the secondary area as their core neighborhood and spend more time there, partly due to the heavy traffic and influx of people transiting through Via Magnagrecia.

There are two markets and a department store in the primary area. The markets have gone through a rapid decline in recent years, whereas the department store has been thriving. Located next to the main transportation corridor of San Giovanni on the beginning of Via Magnagrecia is Coin, one of the largest department stores in Rome. Due to its proximity to the metro A line and the bus stop Piazzale Appio, where five bus lines are connected, Coin is highly accessible to non-

residents as well as residents of San Giovanni. On Via Sannio right behind Coin is Mercato Sannio, a second-hand clothes market run by a mix of Italian and immigrant vendors. The market is frequented by both residents and non- residents looking for inexpensive clothes, but it has been declining due to the lack of funding from the city and has not been able to make many of the much-needed structural rehabilitations. Mercato Metronio, a food market on Via Magnagrecia, is also facing a similar challenge. Once a lively community institution with one hundred and fifty diverse vendors, where a wide range of residents shopped and socialized, the market now has only sixteen vendors and is deteriorating both physically and financially. Depletion of local community services such as the Mercato Metronio affects the community as a whole, but elders in particular, especially those who have limited mobility and cannot travel outside their neighborhood to shop and socialize.
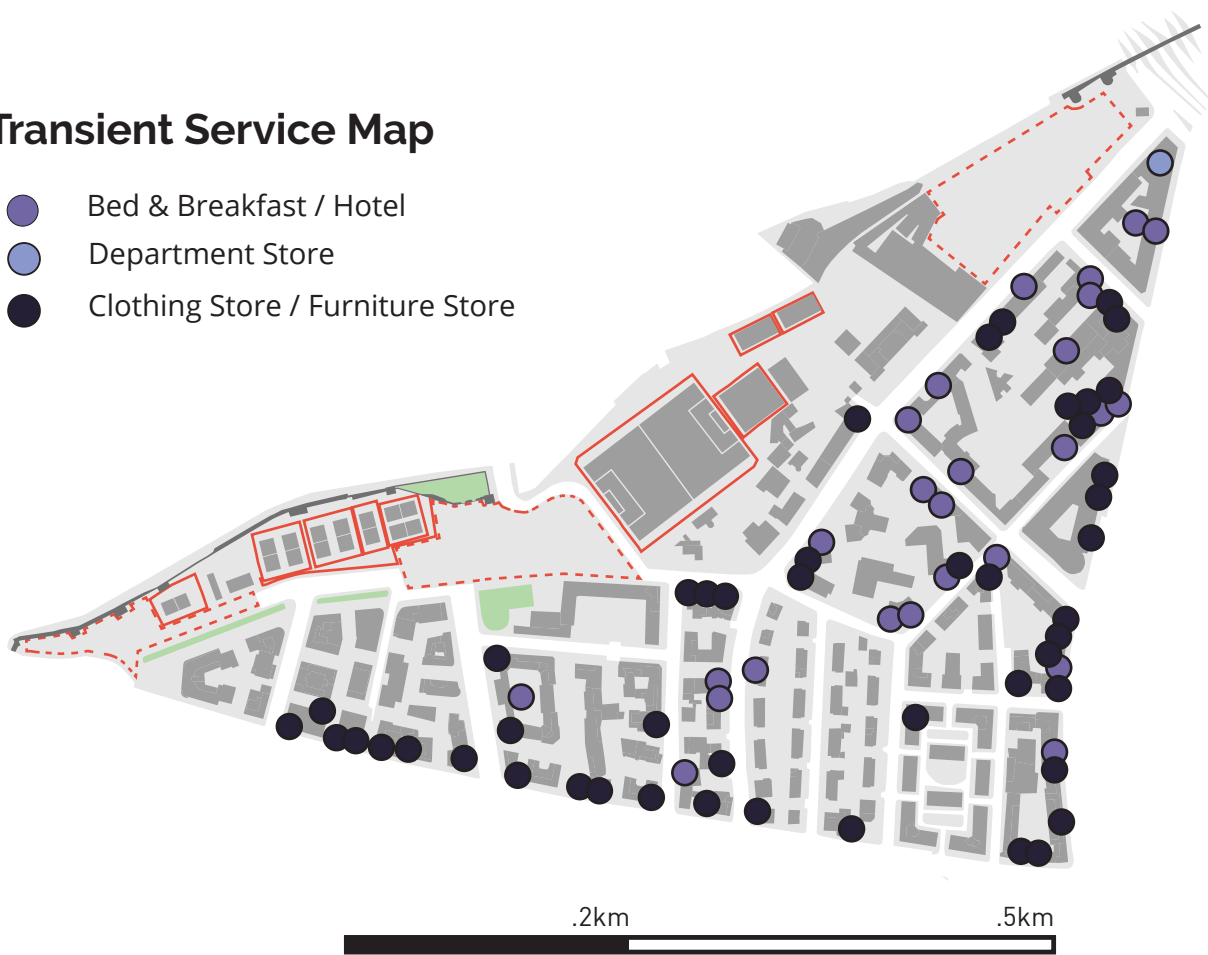
Community Service Map

- 🔴 School
- 🔴 Post Office
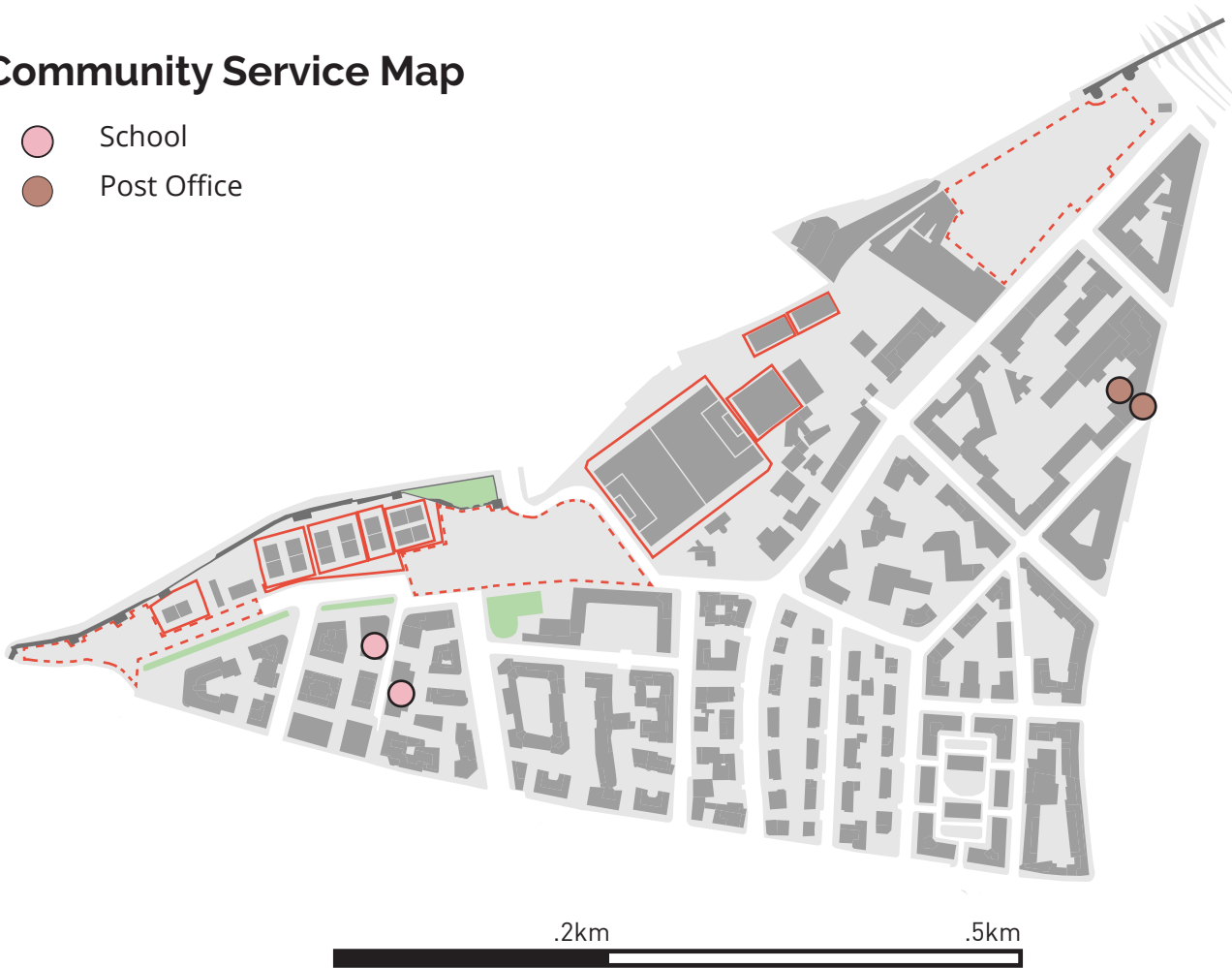
.2km   .5km

n

Transient Service Map

- 🔵 Bed & Breakfast / Hotel
- 🔵 Department Store
- ⚫ Clothing Store / Furniture Store

.2km   .5km

n

# Daily Use Service Map

- 🔴 Hair Salon / Beauty Salon
- 🟡 Grocery Store
- 🟠 Medical Service
- 🔴 Gas Station / Automobile Repair Shop
- 🟡 Restaurant / Cafe
- 🟤 Bank / Real Estate Agency

.2km   .5km

n

Community Service Map

- 🔴 Post Office
- 🟡 Elders' Center
- ⚫ Church
- 🩷 School
- 🔴 Nursing Home

.2km   .5km

n

Secondary Area

Two hundred and nineteen identifiable services are located in the secondary area including bed and breakfasts, restaurants, bars, banks, legal offices, doctors' offices, schools, a nursing home, a culture center, and churches. Roughly seventy percent of them are everyday, community-targeted services, with only sixty eight services utilized more frequently by transient populations than residents. The secondary area offers a greater number of services for daily use as well as community institutions such an elders' center (*Centro Anziani*) and parish church.

It is important to note that the major difference between the primary and the secondary areas does not come from their physical environments but from the presence of large scale community institutions. The two areas have similar built environments, but the secondary area provides a number of community institutions that play a crucial role in creating neighborhood rapport by accommodating its residents, especially elders, for

community activities on a daily basis. For example, Parrochia Nativita di Nostro Signore Gesu Cristo is a parish church on Via Gallia that residents frequent not only for religious purposes but also for social interaction and community resources. The parish church offers weekly services such as free meals for the homeless, legal and financial assistance, and free clothes giveaways. Community institutions in the secondary area provide both the primary and sedondary areas places to socialize and access to resources.

Transient Service Map

- 🟣 Bed & Breakfast / Hotel
- 🔵 Department Store
- ⚫ Clothing Store / Furniture Store

n

.2km   .5km

05

Engagement

Engaging the residents of San Giovanni to gather insight on how the neighborhood works

Livability Audit

Livability Audit Key
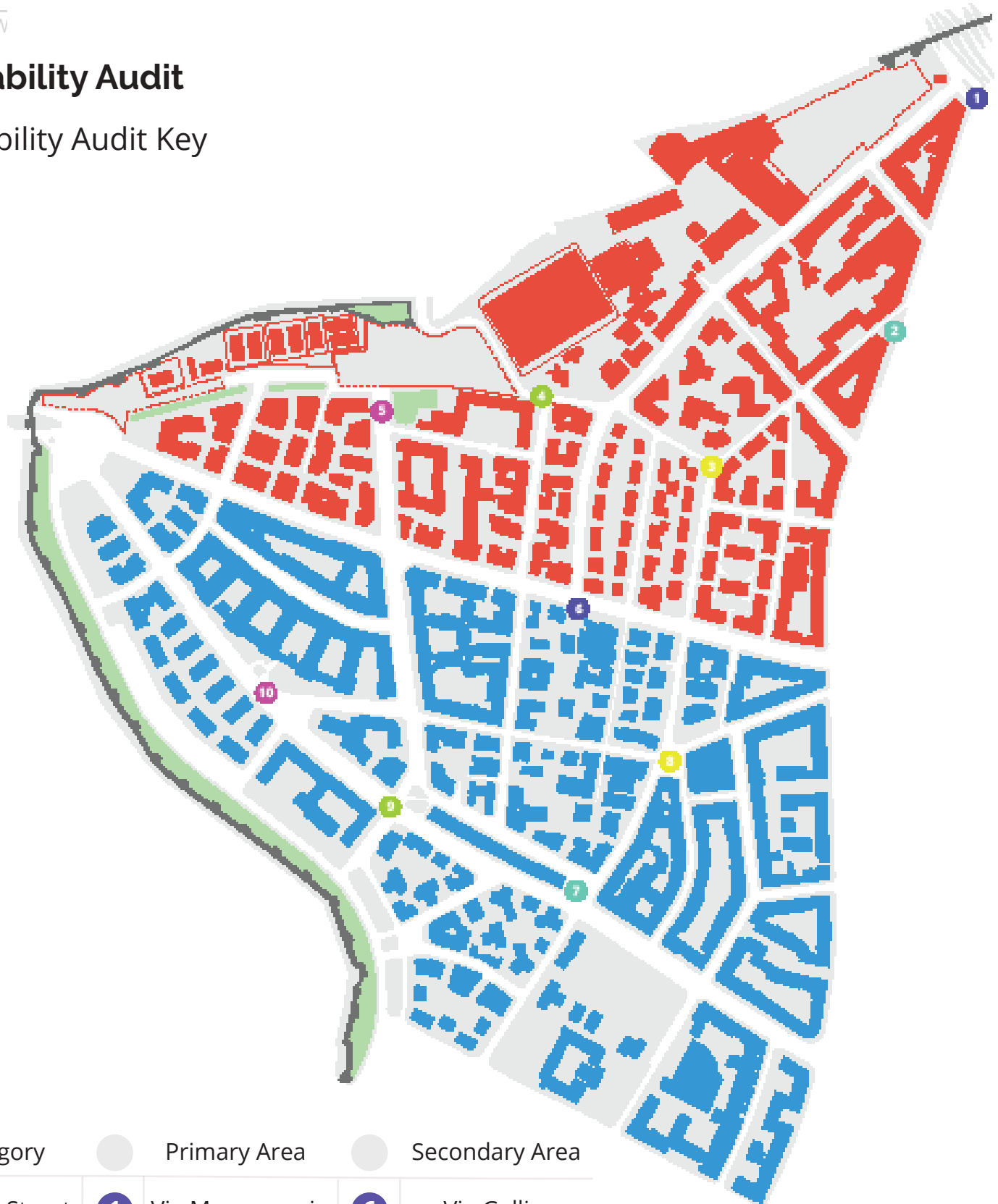
Category		Primary Area		Secondary Area
Major Street	1	Via Magnagrecia	6	Via Gallia
Market	2	Mercato Metronio	7	Mercato Latino
Residential Intersection	3	Via Veio, Via Luni, Via Marruvio	8	Piazza Pompeii
School	4	Scuola Media Giovanni Pascoli	9	IIS Confalonieri De Chirico
Public Space	5	Piazzale Ipponio	10	Piazza Pannonia

Figure 1

Component	Primary Area
Imageability	1.68
Transparency	1.7
Enclosure	1.45
Human Experience	1.3
Vitality	1
Connectivity	0.533

Figure 2

Component	Secondary Area
Imageability	2.14
Transparency	2.15
Enclosure	1.45
Human Experience	1.65
Vitality	1.33
Connectivity	0.733

Figure 3

Component	Difference (%)
Imageability	11.5
Transparency	15
Enclosure	0
Human Experience	8.75
Vitality	12.37
Connectivity	11.24

Fig. 1 Livability Audit Scores for the Primary Area of San Giovanni

Fig. 2 Livability Audit Scores for the secondary area of San Giovanni

Fig. 3 Percent Difference between the Livability Audit Scores of the Primary and Secondary Areas

Deni Ruggeri's Audit for Measuring Livability at the Transit Stop can be found in the Appendix.

In conducting the audit, the twenty-eight questions were answered at ten different places in the neighborhood, five in the primary area and five in the secondary area. The places were chosen to parallel each other in both areas to provide the most accurate possible results. The specific spaces audited were piazzas, residential intersections, schools, main transit streets, and markets. The data from each question was normalized to a four-point scale, with the exception of a few questions that were on a negative four-point scale. Averages for both the primary and secondary areas and the percent difference between the livability scores were calculated.

The most prominent result is that the livability of the secondary area is more livable than the primary area. This is a trend that is seen across five of the six categories, with the exception of the Enclosure category. This is due to the fact that the vertical elements of both neighborhoods are the same – they have multi-story apartment buildings, which often disrupt users' perspectives from the street level.

Since the Enclosure score of the neighborhoods was the same, it means that the largest contributor to the differences in livability of the areas must be on the street level. This is clearly represented in the large disparity in the Transparency section of the audit, which indicates that there is a greater sense of safety, maintenance, and "eyes on the street" for the secondary area of San Giovanni. For children and elders, this is an extremely important area because it represents a sense of community and mutual care in the neighborhood.

In addition, this is represented in the Vitality section, which also had a much higher score in the secondary area and refers to the quantity of street-based social and commercial interaction. One last important feature to mention is the Imageability of the areas; the primary area was greatly affected in this category by the poor quality of their only public open space, the Piazza Ipponio. The effect of the poor maintenance of this piazza is clearly represented by the fact that it is very often empty, or only used by people for unsavory activities.

Engagement Summary

I. Summary

After investigating the physical effects of living next to a transit node on neighborhood livability, the next point of interest was how this specifically affects the elder and child populations of San Giovanni.

Two interconnected methods were used to investigate the age-friendliness of the neighborhood. The first of these methods was cognitive mapping, also referred to as Lynch mapping (16), which involved having participants draw maps of their neighborhood, using just their memory and sense of place. This was used to get a better sense of important boundaries and hubs in the area, as well as the overall territorial range. The second was a livability audit specific to the child and elder populations that assessed the primary and secondary area for their age-friendliness. These techniques were used in tandem in order to inform and validate each other; the maps were employed to determine territorial range for services and public space, while the audit was used as a means to understand particular patterns of use and movement in the neighborhood. In addition to the mapping exercise, San Giovanni residents were interviewed and asked a set of questions related to transport in order to assess the quality and demand for transportation in the area.

Mapping territorial range is crucial to this study because it indicates the mobility of different age groups in the neighborhood, the importance of quality services within the local area, and the role of transportation in accessing services. These characteristics are direct features of livability, as mobility is often a result of physical characteristics, such as unbroken sidewalks and adequate crosswalks, while services are often responsible for giving a neighborhood character and vibrancy. Questions about transport are also an important sector of the engagement research because the San Giovanni neighborhood is very well connected for commuters, but may not contribute to the age-friendliness of the neighborhood as a whole.

II. Intercept Interviews and Cognitive Mapping Methodology

The cognitive mapping exercise was designed primarily to engage residents in a description of the positive and negative features of their neighborhood in regard to the quality of the infrastructure, maintenance, transportation, and services. Therefore in addition to completing their map and denoting particular spots of interest, informants were engaged in conversations about San Giovanni and allowed to express their ideas on the aforementioned features. These informal interviews allowed for trends to appear for the various aspects of community life. Examples of questions that were asked in each interview:

Services and Community:
Where do you go for a coffee?
Do you go to church? If so, where?
Where do you go grocery shopping? Why?
Where do you like to meet friends?

Infrastructure and Maintenance:
What should be improved about your neighborhood?
Is your neighborhood clean?
Do you walk around your neighborhood?
Where do you go for green space?

Transit and Traffic:
Do you take public transportation?
Which street do you prefer, Via Gallia or Via Magnagrecia?
What do you think about the metro C line construction?
Do you have a car?

During this exercise, the key informants were elderly residents of the neighborhood and parents of young children.

The interviews were essential in the understanding of informants' territorial range, as their mode of transport and opinions about mobility directly impacted the distances that could be easily traveled to reach their needs.

Key Informant - Comitato Mura Latine

The Comitato Mura Latine (Committee of the Latin Walls) is a local community organization founded in 2014 in the secondary area of the neighborhood. This group has several objectives, including interaction with youth and children of the area, promoting cultural and social activities, and improving the physical form of the secondary area. One particularly important public green space in this area of San Giovanni, the Parco delle Mura Latine (Park of the Latin Walls) is managed by the committee.

As part of the community engagement, Federica Martella, Vice President of the Comitato, was interviewed to get a better sense of the committee's work as it relates to children and the elderly. The group is crucial in the secondary area of the neighborhood because it maintains the park at the most basic level and fosters community involvement through events. Martella explained that the Municipal Gardens Office does not conduct basic maintenance activities in the park, and only occasionally is present to fix larger infrastructure such as streetlights or potholes, therefore leaving the majority of maintenance to the committee. After citizens grew fed up with the amount of litter in the park, they self-organized to begin regular maintenance, including, in some cases, door-to-door trash collection. Without such maintenance, the park would be unsafe for children to play.

In addition to maintenance, the Comitato also encourages local residents to become involved in their community -- at one point some 300 people from the neighborhood came together for an art project in partnership with the local high school. Martella explained that the group's work has inspired the elderly to leave their apartments and join the community in beautifying the park. Elderly residents now enjoy the park fully and provide an added benefit of 'eyes on the street,' which preserves a sense of security in the space. The committee has also organized markets and community events in the park, helping establish a critical socalization space for residents of all ages. This organization is of huge importance to the whole community and demonstrates the key residential fabric that the primary area does not have.

Residents of all ages enjoy the park -- it serves as a meeting place and hangout spot for the whole community

Lynch Maps & Interviews

Twenty-five interviews and cognitive mapping exercises were conducted with residents, local shop owners, and community leaders. From these interviews, a variety of themes became apparent. These can be divided into traffic, transportation, services, pollution, and public space.

Traffic

Traffic was by far the most commonly mentioned issue in the interviews. Generally this subject came up when asked if residents liked their neighborhood or thought that anything needed to change. Most people were happy with their neighborhood and described it as tranquil and nice, but disliked the heavy flow of traffic, particularly at intersections and on Via Magnagrecia. Some elderly residents expressed their desire to take the bus, but they said it would be too slow given the amount of traffic on the major roads that the buses often take.

• In an interview with a middle-aged male resident, he said that his ride to work is fifteen minutes with a motorcycle, but almost an hour by car due to the difficulty in getting out of the San Giovanni area.
• Another resident, an elderly woman, spoke of an instance in which the Red Cross could not bring in a stretcher because there was too much traffic in the way and the Porta San Giovanni had been blocked.
• In an interview with a man with two toddler-aged children, he complained about the parking in the area and said that there was no clear system. This, he said, contributed to the traffic in the area because cars parked randomly in the street and blocked those in transit.

Transportation

When asked about transportation, elderly residents often expressed disinterest. Many claimed that it did not work well; one resident said that the right bus never comes, while another said that the metro station does not have an elevator and is inaccessible. Many residents expressed doubt that the Metro C Line construction would ever be finished. Families with young children generally preferred walking to public transport. When they had to go outside of the neighborhood, they tended to take the car.

• A few of the elders who were interviewed said that they did not use public transportation at all, and preferred to use their cars, even with the large amount of traffic in the neighborhood.
• An older man in the secondary area said that a more integrated rail system would fix the traffic problem, which he said was particularly bad on Via Magnagrecia.
• A middle-aged woman said that in order to take the bus, one must have extra time and be willing to allow for late or slow service.

Top: The Porta San Giovanni forms a continuous entry point for traffic into the neighborhood
Right: The Metro A station does not have an levator or escalator, making it unusable for elders
Top right: The traffic corridor continues.

Services

In general, the primary area was reported to have a lack of informal meeting places, while the secondary area had more locations available for community gatherings.

• An elderly woman mentioned that she visits the elders' center and the parish church in the secondary area to see friends. She mentioned that her husband likes to go to the tennis center to play cards with his friends, but in order to get there he takes the Via Gallia, as opposed to walking through the primary area.

• A man with his children said there are good services for his two boys, both of whom are under ten years old. He is a resident and both kids attend the Alessandro Manzoni Primary School, which he mentioned had good sports programs. He said that he preferred these services as opposed to the soccer school in the primary area because it is known for being competitive. He also said that his family goes to programs at a church in the secondary area and uses the swimming pool nearby.

Interviewees often chose supermarkets for convenience of location; they are not generally considered a place to socialize but rather a place to do shopping, while the larger markets are generally more expensive, but have an aspect of human interaction that elders tended to appreciate.

• One resident said that his mother, who is eighty years old, often goes to the Mercato Metronio because it has become her habit after decades of living in San Giovanni.

There has been a notable increase in transient people in the primary area. A few residents mentioned this and related it to issues of cleanliness in the area. There has also been an increase in the immigrant population in the area. Some are full-time residents and shop owners, and have tried to integrate themselves into the community, while others are only interested in their informal business and have not made attempts to integrate. This is especially common around the Mercato Sannio, where a number of immigrant vendors have set up outside of the historic market to sell their own goods.

• One vendor at the Mercato Sannio complained about immigrant vendors deteriorating the quality of the market because they don't have good business techniques and are often too aggressive, which scares away customers

• One local businessman in the primary area described an increase in foreigners and B&Bs, which he attributed to the central location of the neighborhood.

Pollution and Public Space

The air quality in the public spaces around the Via Magnagrecia was mentioned in several interviews as being a serious issue. Smog in the area bad for families with young children, and is often most pronounced during the mornings and late afternoons when people are commuting to work by car. Smog has even become a problem for residents of the secondary area and they must leave the neighborhood to get fresh air. Some mentioned using the green space around the Aurelian Walls, but many others prefer to go to the Villa Celimontana or the Appia Antica Park, both of which are outside the San Giovanni neighborhood. Another popular location for people to go for open space is Parco della Caffarella, which is slightly further away.

The new service mix of San Giovanni includes informal vendors that have set up outside of the Mercato Sannio

The Mercato Metronio has been in decline for years and can no longer service the community.

06
Conclusion

Key Takeaways

Summary

San Giovanni is a neighborhood that has become increasingly central during the course of its urban lifetime. For a neighborhood that started as a quiet, residential haven for a population of working class users in the early 1900s, it has changed radically to arrive where it is today – connected, socially mobile and popular amongst Romans and tourists alike. The neighborhood has become a prime living spot for students and young workers, if they can manage to afford the rent.

Yet the qualities that make the neighborhood a desirable place to live amongst the young and mobile have been found to be in conflict with the population of residents that currently lives in San Giovanni, which is generally families with young children and the elderly. For these groups of residents, the wide variety of transit options that create the connectivity of the neighborhood do not always add positive features to their lives; in fact, these residents may actually find the community unable to meet their needs in terms providing services and companionship within a geographical range that is feasible for them.

The primary area's proximity to the transit node at the Porta San Giovanni has been shown to have detrimental effects upon the community. Residents and users of this area have expressed on multiple occasions, their desire for certain transit related aspects of the community to change. Their testimonies aligned extremely closely with the physical assessment conducted in the *Field Audit for Measuring Livability at the Transit Stop*. The three reoccurring and most detrimental themes that became apparent during our research include 1) congestion and pollution, 2) maintainance of public space, 3) a shift in the service mix. These issues have manifested themselves in the primary area of San Giovanni due to its development as a site of many transit options. In effect, the neighborhood's less mobile population of children and elders is facing the deterioration of livability in their community. Initiatives must be taken to counteract this conundrum and preserve some of the initial residential qualities of the neighborhood in order for the elders and children of San Giovanni to continue to feel comfortable and supported by the place where they live.

Residents engaged in daily-life activities

A mother walks with her two children

A group of boys goes to play soccer after school

Residents enjoy time outside

Policy Recommendations

In order to mitigate negative consequences of transit node proximity and improve livability in the primary area for children and elders, there are several policy measures that can address the following three challenges: 1) congestion and pollution, 2) maintenance of public spaces, 3) a shift in service mix. The suggestions below endeavor to be holistic and applicable to different contexts - that is, useful for public and private actors at all levels and in diverse contexts.

1

Parking, Bus Lanes, Safer Crosswalks, Green Initiatives

Traffic congestion and pollution are the most widespread problems of the area, and efforts to support carbon-producing automobile usage through policy are subject to significant political and public relations' considerations. First with regards to parking issues, governments may consider direct public investment in a limited parking capacity to alleviate shortages, carefully monitoring the market so as not to incentivize greater automobile usage. For governments with tight budgets such as in Italy, tax incentives for privately run parking garages to improve their service quality are a possibility. In San Giovanni, the few parking garages available are privately owned but unused because of safety concerns. Any efforts to implement more parking should be accompanied with property security measures and should be regulated as to avoid creating more issues with traffic.

A parking lot in the secondary area that is well-maintained by its owners

Second, the concentration of traffic on high-vol- ume corridors, such as Via Magnagrecia, can also be addressed with more strategic distribution of public transit load or dedicated bus lanes. Many major Roman streets, such as Via Arenula, already have special tram lanes that are also used by buses and taxis. On a larger scale, infrastructure for green transportation options such as hybrid vehicles should be built, and users of environmentally-friendly transit should be prioritized and rewarded.

For cash-strapped governments, policy measures such as free battery charging or access to priority lanes can incentivize electric vehicle usage, thereby reducing pollution. Finally, the San Giovanni neighborhood needs to have more pedestrian-friendly crosswalks, as there are few places in which elders and children can safely cross the major transit roads in the neighborhood. These crosswalks could consist of islands to break up the length of the street and provide a place for people to take a break while crossing.

Even just increasing the quantity of crosswalks in the neighborhood would be beneficial to residents

Policy Recommendations Cont.

2

Gov't Subsidies of Local Organizations

To address the issue of poor maintenance and the subsequent deterioration of public spaces, there are several potential responses. First, governments should fully support local organizations that have taken up the offloaded responsibilities. The Parco delle Mura Latine in San Giovanni, for example, is fully maintained by a local citizens' organization. The municipal government interferes with the ability of the organization to manage the park by blocking it from hosting events and making large changes that could benefit the park's infrastructure, but should instead allow residents to have greater autonomy. While governments may seek to hold on to public assets as collateral for their debt, they would be wise to release these assets to local cooperatives which put them to best use, such as the Comitato Mura Latine, which has shown its dedication as a grassroots community organization. This strategy is particularly useful in the Italian context, where austerity has decimated municipal infrastructure budgets for years. In these cases, reinvestment in maintenance is often financially infeasible, and reallocation of funds is politically difficult. Second, adding street furniture such as benches and trash cans can greatly improve the quality of existing public spaces. Highly successful areas such as Piazza Pannonia in San Giovanni feature ample seating place and are well-kept. In addition, bus stops should have sitting spaces for elderly who often wait a long time.

Above: The well-maintained park on the historical walls
Right: The Mercato Latino continues to serve the secondary area

3

Provision of Community Spaces

Finally, there are several strategies to help support community services that are crucial for local children and elders. First, public sector policy can encourage the placement of services oriented towards locals - such as those selling family goods or groceries - through tax incentives and low-interest loans. This policy can help reduce that rate at which businesses selling commercial goods to transient users and tourists - such as hotels and bed & breakfasts - displace community enterprises in the primary area. Second, governments can help increase service provision by providing rent-free space for community events, or by assisting organizations already serving residents. Although these policies may decrease municipal revenue and cause decision-makers to hesitate about their implementation, in the long-term, the investment in children will pay off for the locality. Finally, the comune di Roma needs to make substantial deals with the historical services it says it will fund. The Mercato Sannio in San Giovanni was supposed to receive funding for the revitalization of its infrastructure, but it never ended up seeing this money.

In conclusion, while the policy measures proposed have significant and complex considerations, they help ameliorate consequences of transit proximity that severely decrease neighborhood livability for children and elders. The short-term challenges of implementing these suggestions are significant - however, the repercussions for inaction on behalf of these vulnerable populations are far more severe.

Bibliography

"Cenni Storici." Archbasilica Papale San Giovanni in Laterano. April 5. www.vatican.va/various/basil iche/san_giovanni/index_it.htm

Glendinning, Miles. The Conservation Movement: A History of Architectural Preservation. New York: Routledge, 2013. Print.

Goltri, Mattia. "La Linea A Della Metropolitana di Roma." Metro Roma, April 4. www.metropolitanadiro ma.it

Gregorovius, Ferdinand. History of the City of Rome in the Middle Ages. New York: Cambridge Univer sity Press, 1900. Print.

Italy. Istituto nazionale di statistica. "Basi territoriali e variabili censuarie." Censimento 2001. Roma: Istituto nazionale di statistica, 11 Jan. 2017. Web. 24 Feb 2017. www.istat.it/it/archivio/104317

Italy. Istituto nazionale di statistica. "Basi territoriali e variabili censuarie." Censimento 2011. Roma: Istituto nazionale di statistica, 11 Jan. 2017. Web. 24 Feb 2017. www.istat.it/it/archivio/104317

"Le mappe del trasporto pubblico di Roma." ATAC. April 4. www.atac.roma.it

Lynch, Kevin. The Image of A City. Cambridge: Harvard University Press, 1960. Print.

Morassut, Robert. "Rome and the New Master Plan." UCL Department of Italian. April 4. www.homep ages.ucl.ac.uk/~ucljlca/rome/downloads/morassut.doc.

Ruggeri, Denise. "The Study of Perceived Livability at the Transit Stop." Norwegian University of Life Sciences. National Institute for Transportation and Communities, 2015.

07
Appendix

Statistical Tables
Livability Audit Data
Cognitive Maps
Bibliography

Statistical Table S1

TABLE S1

Row	Column	INDICATOR	A 2001	B % of Total	C 2011	D % of Total	E % Total Change 2001-2011	F % Change 2001-2011	G 2001	H % of Total	I 2011	J % of Total	K % Total Change 2001-2011	L % Change 2001-2011
			PRIMARY AREA						SECONDARY AREA					
1	POPULATION & FAMILIES	Total Resident Population	3,543	100.0	3,432	100.0	n/a	-3.1	7,678	100.0	8,319	100.0	n/a	8.3
2		Total Resident Population (<15 years)	397	11.2	384	11.2	0.0	-3.3	795	10.4	917	11.0	0.7	15.3
3		Total Resident Population (>65 years)	932	26.3	899	26.2	-0.1	-3.5	1,841	24.0	2,165	26.0	2.0	17.6
4		Total Resident Population (>75 years)	492	13.9	492	14.3	0.4	0.0	965	12.6	1,136	13.7	1.1	17.7
5		Total Foreign Resident Population	154	4.3	232	6.8	2.4	50.6	403	5.2	632	7.6	2.3	56.8
6		Dependency Ratio	60.0	n/a	59.7	n/a	n/a	n/a	52.3	n/a	58.9	n/a	n/a	n/a
7		Average Household Size	2.2	n/a	2.0	n/a	n/a	n/a	2.1	n/a	2.0	n/a	n/a	n/a
8	EDUCATION & EMPLOYMENT	Residents with Post-Secondary Education	895	25.3	1,142	33.3	8.0	27.6	1,662	21.6	2,453	29.5	7.8	47.6
9		Residents with Secondary Education	1,222	34.5	1,155	33.7	-0.8	-5.5	2,863	37.3	2,871	34.5	-2.8	0.3
10		Residents with Middle School Education	644	18.2	507	14.8	-3.4	-21.3	1,408	18.3	1,374	16.5	-1.8	-2.4
11		Residents with Primary School Education	434	12.2	321	9.4	-2.9	-26.0	998	13.0	856	10.3	-2.7	-14.2
12		Illiterate Residents	3	0.1	11	0.3	0.2	266.7	25	0.3	39	0.5	0.1	56.0
13		Unemployed Residents	80	8.4	91	7.3	-1.1	13.8	189	8	231	8.1	0.1	22.2
14	HOUSING & DEVELOPMENT	Rented Homes	269	16.7	221	12.6	-4.1	-17.8	687	19.2	628	14.7	-4.5	-8.6
15		Owned Homes	1224	76.1	1331	75.8	-0.3	8.7	2648	74.0	3238	75.6	1.6	22.3
16		Empty Homes	217	11.5	137	6.9	-4.6	-36.9	423	10.1	139	3.1	-7.0	-67.1
17		Number of Buildings or Building Complexes	160	100.0	179	100.0	n/a	11.9	198	100.0	244	100.0	n/a	23.2
18		Number of Residential Buildings	145	90.6	128	71.5	-19.1	-11.7	187	94.4	189	77.5	-17.0	1.1
19		Number of Commercial/Industrial Buildings	8	5.0	51	28.5	23.5	537.5	1	0.5	53	21.7	21.2	5200.0
20		Number of Buildings in Optimal Condition	NDA	NDA	42	32.8	n/a	n/a	NDA	NDA	11	5.8	n/a	n/a
21		Number of Buildings in Good Condition	NDA	NDA	76	59.4	n/a	n/a	NDA	NDA	161	85.2	n/a	n/a
22		Number of Buildings in Mediocre Condition	NDA	NDA	10	7.8	n/a	n/a	NDA	NDA	15	7.9	n/a	n/a
23		Number of Buildings in Poor Condition	NDA	NDA	0	0.0	n/a	n/a	NDA	NDA	2	1.1	n/a	n/a

Formulas:

% Total Change 2001-2011 = % Total 2001 - % Total 2011 | ex. E2 = D2 - B2

% Change 2001-2011 = (# 2011 - # 2001) / #2001) × 100 | ex. F2 = ((C2 - A2)/A2) × 100

Source: All data sourced from the Italian National Institute of Statistics (ISTAT), census years 2001 and 2011. See ISTAT in bibliography.

Statistical Table S2

TABLE S2

Category	Row	Indicator	SAN GIOVANNI 2001 (M)	% of Total (N)	2011 (O)	% of Total (P)	% Total Change 2001-2011 (Q)	% Change 2001-2011 (R)	ROME 2001 (S)	% of Total (T)	2011 (U)	% of Total (V)	% Total Change 2001-2011 (W)	% Change 2001-2011 (X)
POPULATION & FAMILIES	1	Total Resident Population	11,212	100.0	11,751	100.0	n/a	4.8	2,546,804	100.0	2,617,175	100.0	n/a	2.8
	2	Total Resident Population (<15 years)	1,192	10.6	1,301	11.1	0.4	9.1	327,048	12.8	351,702	13.4	0.6	7.5
	3	Total Resident Population (>65 years)	2773	24.7	3064	26.1	1.3	10.5	484,990	19.0	571,973	21.9	2.8	17.9
	4	Total Resident Population (>75 years)	1457	13.0	1628	13.9	0.9	11.7	207,631	8.2	279,837	10.7	2.5	34.8
	5	Total Foreign Resident Population	557	5.0	864	7.4	2.4	55.1	98,427	3.9	224,408	8.6	4.7	128.0
	6	Dependency Ratio	54.7	n/a	59.1	n/a	n/a	n/a	46.8	n/a	54.5	n/a	n/a	n/a
	7	Average Household Size	2.1	n/a	1.9	n/a	n/a	n/a	2.4	n/a	2.2	n/a	n/a	n/a
EDUCATION & EMPLOYMENT	8	Residents with Post-Secondary Education	2,557	22.8	3,595	30.6	7.8	40.6	359,651	14.1	500,515	19.1	5.0	39.2
	9	Residents with Secondary Education	4,085	36.4	4,026	34.3	-2.2	-1.4	823,755	32.3	886,516	33.9	1.5	7.6
	10	Residents with Middle School Education	2,052	18.3	1,881	16.0	-2.3	-8.3	627,792	24.7	583,531	22.3	-2.4	-7.1
	11	Residents with Primary School Education	1,432	12.8	1,177	10.0	-2.8	-17.8	427,632	16.8	341,051	13.0	-3.8	-20.2
	12	Illiterate Residents	28	0.2	50	0.4	0.2	78.6	12,895	0.5	11,033	0.4	-0.1	-14.4
	13	Unemployed Residents	269	8.1	322	7.8	-0.3	19.7	83,106	11.1	78,126	9.5	-1.6	-6.0
HOUSING & DEVELOPMENT	14	Rented Homes	956	18.4	849	14.1	-4.4	-11.2	287,824	28.3	241,249	21.2	-7.1	-16.2
	15	Owned Homes	3872	74.6	4569	75.6	1.0	18.0	656,599	64.6	809,937	71.2	6.6	23.4
	16	Empty Homes	640	10.5	276	4.3	-6.3	-56.9	110,018	7.9	118,531	10.3	2.4	7.7
	17	Number of Buildings or Building Complexes	358	100.0	423	100.0	n/a	18.2	146,517	100.0	176,178	100.0	n/a	20.2
	18	Number of Residential Buildings	332	92.7	317	74.9	-17.8	-4.5	127,713	87.2	137,021	77.8	-9.4	7.3
	19	Number of Commercial/Industrial Buildings	9	2.5	104	24.6	22.1	1055.6	8,454	5.8	36,156	20.5	14.8	327.7
	20	Number of Buildings in Optimal Condition	NDA	NDA	53	16.7	n/a	n/a	NDA	NDA	47,977	35.0	n/a	n/a
	21	Number of Buildings in Good Condition	NDA	NDA	237	74.8	n/a	n/a	NDA	NDA	71,667	52.3	n/a	n/a
	22	Number of Buildings in Mediocre Condition	NDA	NDA	25	7.9	n/a	n/a	NDA	NDA	14,993	10.9	n/a	n/a
	23	Number of Buildings in Poor Condition	NDA	NDA	2	0.6	n/a	n/a	NDA	NDA	2,384	1.7	n/a	n/a

Formulas:

% Total Change 2001-2011   % Total 2001 - % Total 2011 | ex. E2 = D2 - B2

% Change 2001-2011   ((# 2011 - # 2001) / (#2001)) * 100 | ex. F2 = ((C2 - A2)/ A2) * 100

Source: All data sourced from the Italian National Institute of Statistics (ISTAT), census years 2001 and 2011. See ISTAT in bibliography.

Primary Area Livability Audit Results

PRIMARY AREA	Mercato	Porta San Giovanni	Three-way Intersection	Scuola Media Giovanni Pascoli	Piazza Ipponio	
Imageability						average
Q 1	1	0	2	0	1	0.8
Q 2	0	0	0	0	0	0
Q 3	2	5	2	5	2	3.2
Q 4	1	1	1	2	3	1.6
Q 5	2	6	3	1	2	2.8
Q 6	4	4	0	1	9	3.6
Q 7	1	1	6	10	10	5.6
Q 8	5	8	7	5	2	5.4
Q 9	6	3	1	0	0	2
Q 10	0	0	0	1	0	0.2
Transparency						average
Q 11	0	-1	0	-1	0	-0.4
Q 12	1	2	1	1	1	1.2
Q 13	4	4	4	3	2	3.4
Q 14	2	6	3	2	2	3
Enclosure						average
Q 15	1	3	1	1	1	1.4
Q 16	1	1	1	1	1	1
Q 17	1	0	2	0	0	0.6
Q 18	3	3	2	3	3	2.8
Human Experience						average
Q 19	1	1	3	1	4	2
Q 20	8	8	5	5	3	5.8
Q 21	18	25	12	13	14	16.4
Q 22	1	2	0	0	0	0.6
Vitality						average
Q 23	-1	-1	0	-1	-2	-1
Q 24	3	1	3	1	1	1.8
Q 25	4	4	2	6	4	4
Connectivity						average
Q 26	3	3	3	3	3	3
Q 27	-3	-4	-3	-3	0	-2.6
Q 28	0	6	0	1	1	1.6

Secondary Area Livability Audit Results

SECONDARY AREA	Church	Piazza Pompeii	Mercato Latino	High School	Via Pannonia	
Imageability						average
Q 1	1	1	2	3	1	1.6
Q 2	0	0	0	1	0	0.2
Q 3	1	2	2	4	3	2.4
Q 4	3	3	4	2	3	3
Q 5	3	4	4	4	4	3.8
Q 6	2	1	3	2	5	2.6
Q 7	13	3	9	13	6	8.8
Q 8	3	2	2	4	3	2.8
Q 9	2	2	2	2	2	2
Q 10	1	0	0	0	0	0.2
Transparency						average
Q 11	-1	0	0	0	-1	-0.4
Q 12	2	1	1	1	3	1.6
Q 13	4	4	4	3	4	3.8
Q 14	3	3	4	5	5	4
Enclosure						average
Q 15	1	2	2	2	1	1.6
Q 16	1	1	2	1	1	1.2
Q 17	1	0	1	1	0	0.6
Q 18	2	3	2	2	3	2.4
Human Experience						average
Q 19	2	3	1	1	2	1.8
Q 20	6	3	7	6	8	6
Q 21	15	18	24	30	19	21.2
Q 22	2	0	0	0	4	1.2
Vitality						average
Q 23	0	0	0	0	0	0
Q 24	0	0	0	0	0	0
Q 25	7	5	6	6	5	5.8
Connectivity						average
Q 26	3	3	3	3	1	2.6
Q 27	-4	-3	-3	-4	-1	-3
Q 28	5	1	3	2	3	2.8

Cognitive Maps

Cognitive Maps
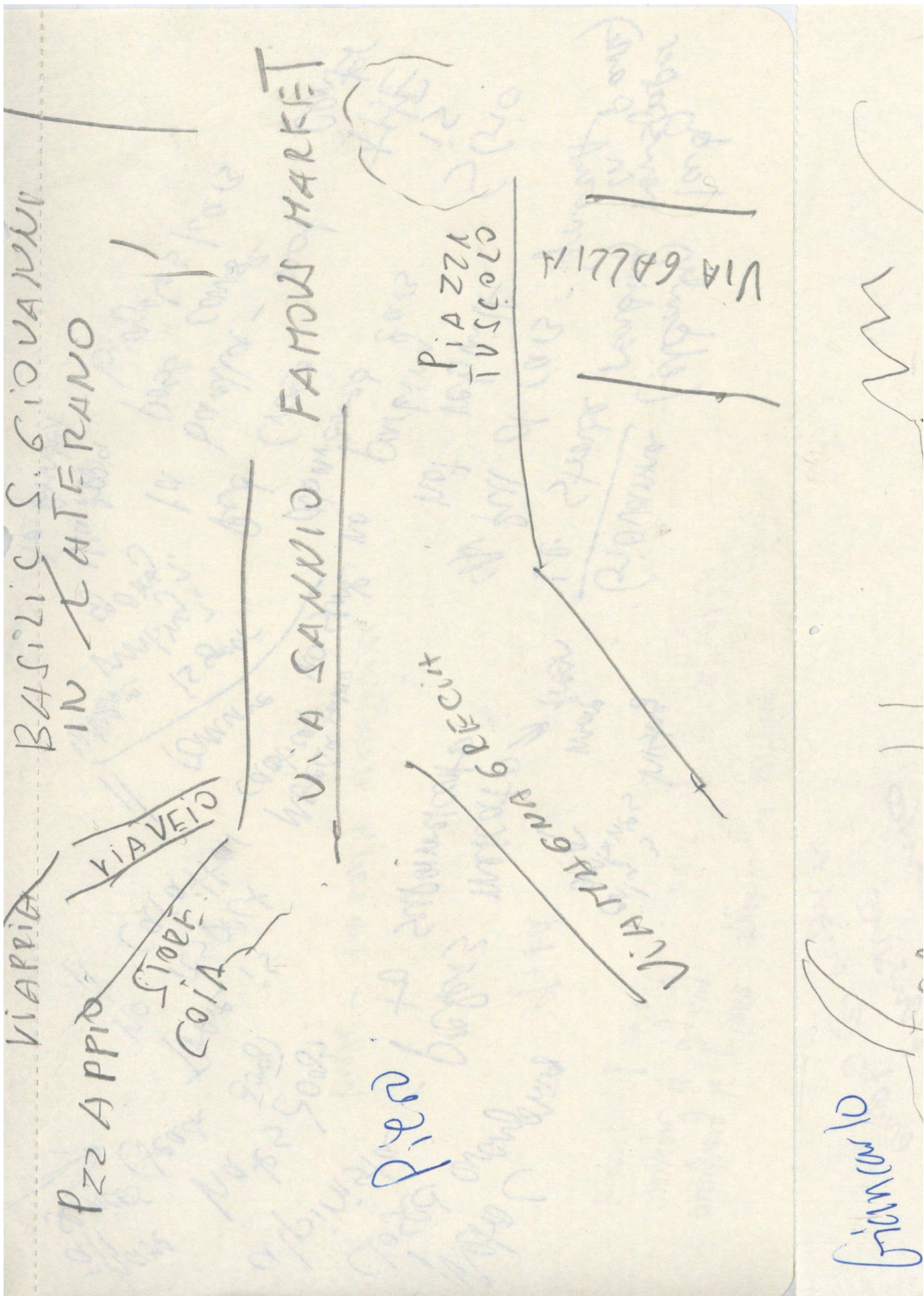
Cognitive Maps

Cognitive Maps
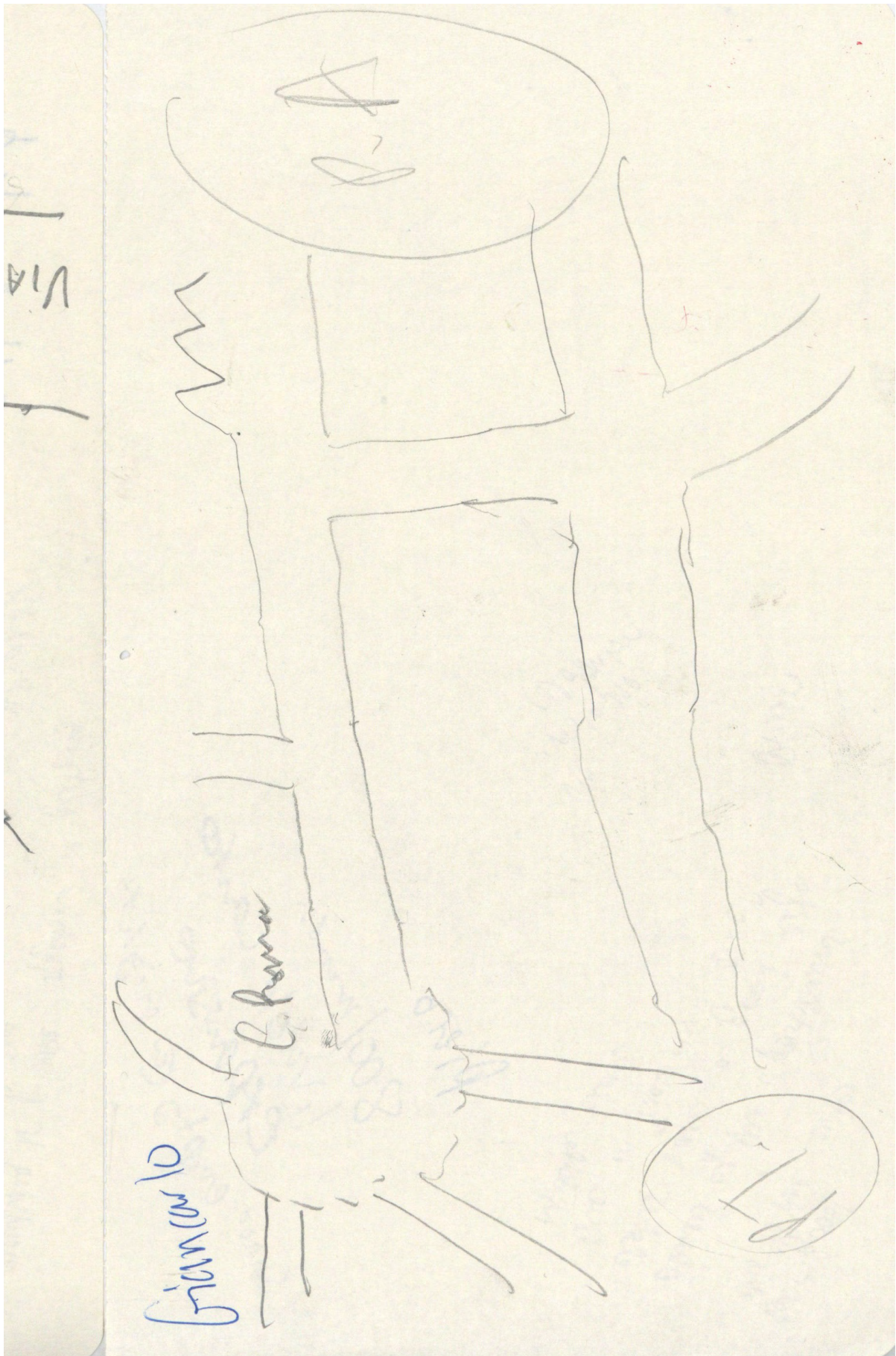
Name:		**Date:**	
Bus Location Street()s:		**Bus Line/s #:**	
Check Weather Conditions	☐ **sunny**	☐ **rainy**	☐ **cloudy**
Check Time	☐ **morning**	☐ **noon**	☐ **afternoon** ☐ **evening**

Section #1. Imageability

1. Count the total number of courtyards, parks, and plazas within view. ☐

2. Count the total number of large-scale natural landscape landmarks within view. ☐

3. Count the total number of unique buildings within view. ☐

4. Check the proportion of the architecture with a common style/form/aesthetic?

   ☐ 0-25%   ☐ 26-50%   ☐ 51-75%   ☐ 76-100% of the buildings have the same character

5. Count the total number of wayfinding elements visible in the study area. ☐

6. Count the total number of buildings with high use intensity/ use singularity value within view. ☐

7. Count the total number of freestanding buildings within view. ☐

8. Count the total number of buildings with complex shape within view. ☐

9. Count the total number of buildings with distinct (memorable) facades within view. ☐

10. Count the number of sculptural, pictorial, or architectural artistic elements within the view. ☐

Section #2. Transparency, Safety Perceptions, and Maintenance

11. Count the total number of locally undesirable land uses as liquor stores, pawn shops, abandoned buildings or parking lots within the view. ☐

12. Check the proportion of the buildings with transparent facades within the view.

    ☐ 0-25%   ☐ 26-50%   ☐ 51-75%   ☐ 76-100% of the buildings have transparent facades

13. Rate your satisfaction with the level of cleanliness and maintenance by placing an X along the continuum.

    Very Dissatisfactory [   ] Very Satisfactory

14. Check all of the following transit infrastructure that is present at or within 10' of the stop:

    ☐ Signage deterring non-transit vehicles   ☐ Marked pedestrian crossings   ☐ Four stop signs
    ☐ Emergency call-boxes to report incidents   ☐ Curb ramps/ADA accessible ramps   ☐ City maps
    ☐ Adequate lighting   ☐ Speed bumps   ☐ Electronic displays
    ☐ Recycling bins   ☐ Timetables

15. Using the bulls eye question format below, please record the depth of your sight lines.
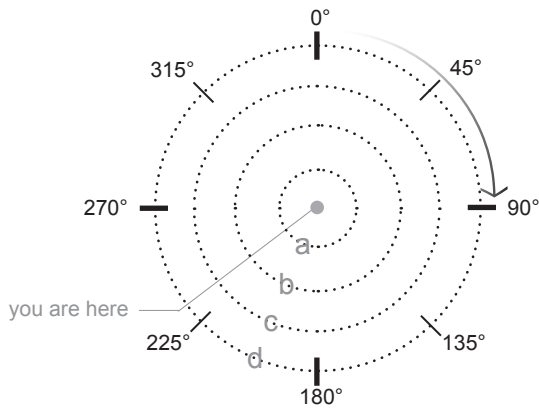
Depth of sight lines example
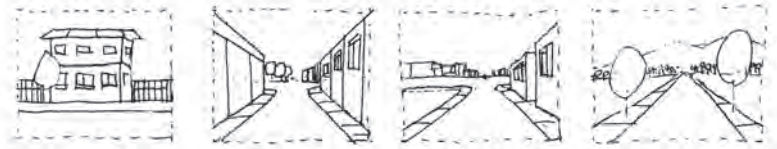
a. 0-125'   b. 126-250'   c. 251- 500'   d. 501'+

16. Using the bulls eye question format please record the proportion of sky you are able to see.
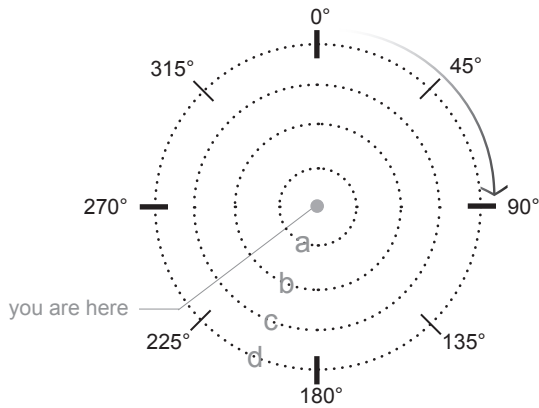
Visible sky example
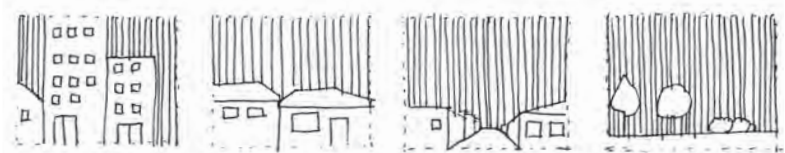
a. 0% - 20%   b. 21% - 50%   c. 51% - 80%   d. 80% - 100%

17. Record your observations regarding the edges present within 10' from the transit stop in the checklist below.

☐   A fence or wall   If it is 5' high or higher.
☐   Shrubs   If they are above 4'.
☐   Buildings   If there are no visible windows.
☐   Transit kiosk wall   If it is not transparent.

18. Using the bulls eye question format record the heights of the buildings. Only count buildings that are directly fronting the street you are standing on.
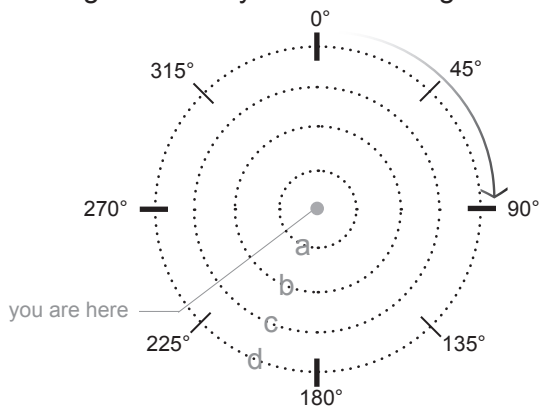
Building height example

a. 1-2 stories   b. 3-5 stories   c. 5-7 stories   d. 7 + stories

Section #4. Human Experience

19. Rate the consistent noise level rating in the study area by placing an X along the continuum.

Very Noisy   [   ]   Very Quiet

20. Check all of the visible street furniture within view. Do not record furniture in enclosed parks, gardens, plazas, and courtyards:

- ☐ Tables (without associated chairs)
- ☐ Chairs (without associated tables)
- ☐ Food stands
- ☐ Hanging plants
- ☐ Benches
- ☐ Lean posts
- ☐ Flower pots
- ☐ Kiosks
- ☐ Phone booths
- ☐ Public trash bins

- ☐ Newspaper boxes
- ☐ Public mail boxes
- ☐ Bike racks
- ☐ Bollards
- ☐ Hydrants
- ☐ Flags
- ☐ Banners
- ☐ Merchandise stands
- ☐ Pedestrian-scale street lights
- ☐ Recycling trash bins

- ☐ Tall street lights
- ☐ Planters
- ☐ Seating areas
- ☐ Entry monuments
- ☐ Water fountains
- ☐ Umbrellas
- ☐ Maps
- ☐ Street artists
- ☐ Traffic signals
- ☐ Other...................

21. Count the number of mature street trees present within a 360 degree viewshed. Do not count yard and frontyard trees.

22. Count the number of overhangs (if any) within 10' of the designated audit location. Record the total number in the box provided.

Section #5. Vitality

23. Count the total number of ground level vacancies, for sale or for rent signs within a 360 degree viewshed. Record the total number in the box provided.

24. Count the total number of signs of new development, buildings under construction or renovation within a 360 viewshed. Record the total number in the box provided.

25. Check all land uses you are able to observe within a 360 degree viewshed.

- ☐ Low density residential
- ☐ Medium density residential
- ☐ High density residential
- ☐ Mixed commercial/residential
- ☐ Mixed office/retail
- ☐ Mixed residential/public
- ☐ Retail "mom and pop"

- ☐ Retail big box
- ☐ Offices
- ☐ Open space
- ☐ Public facilities
- ☐ Industry
- ☐ Light industry
- ☐ Education

- ☐ Parking
- ☐ Sport fields
- ☐ Warehouses
- ☐ Vacant sites
- ☐ Underground parking
- ☐ Structured parking
- ☐ Other........................
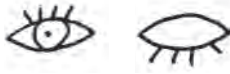
Section #6. Connectivity
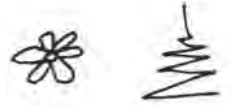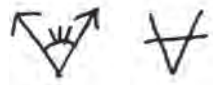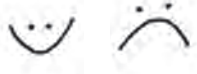
26. Check all modes of transportation in you are able to observe within a 360 degree viewshed. Do not count the bus as a mode of transportation as it is a given at the transit stop.

- ☐ Train
- ☐ Light rail
- ☐ Motorcycle
- ☐ Park and ride

- ☐ School bus
- ☐ Bike trails
- ☐ Sidewalks
- ☐ Bike share

- ☐ Car pooling
- ☐ Car share

27. Count the total number of streets within a 360 degree viewshed with heavy traffic.

28. Count the total number of crosswalks within a 360 degree viewshed.

29. On the map below please illustrate your observations of the specific place using the provided icons:

Sounds/Noises	Smells	Depth of Views	Path Continuity	Safety
Pleasant Unpleasant	Pleasant Unpleasant	Long Close	Walk through No walk	Safe Unsafe

Lighting	Slope	Maintenance	Habitat	Visual interest
Sun Shade	Steep Flat	Messy	Yes	Distinctive Generic

30. Label each icon with a brief description of what it indicates (for example, pleasant sound could be labeled as " **birds**.")
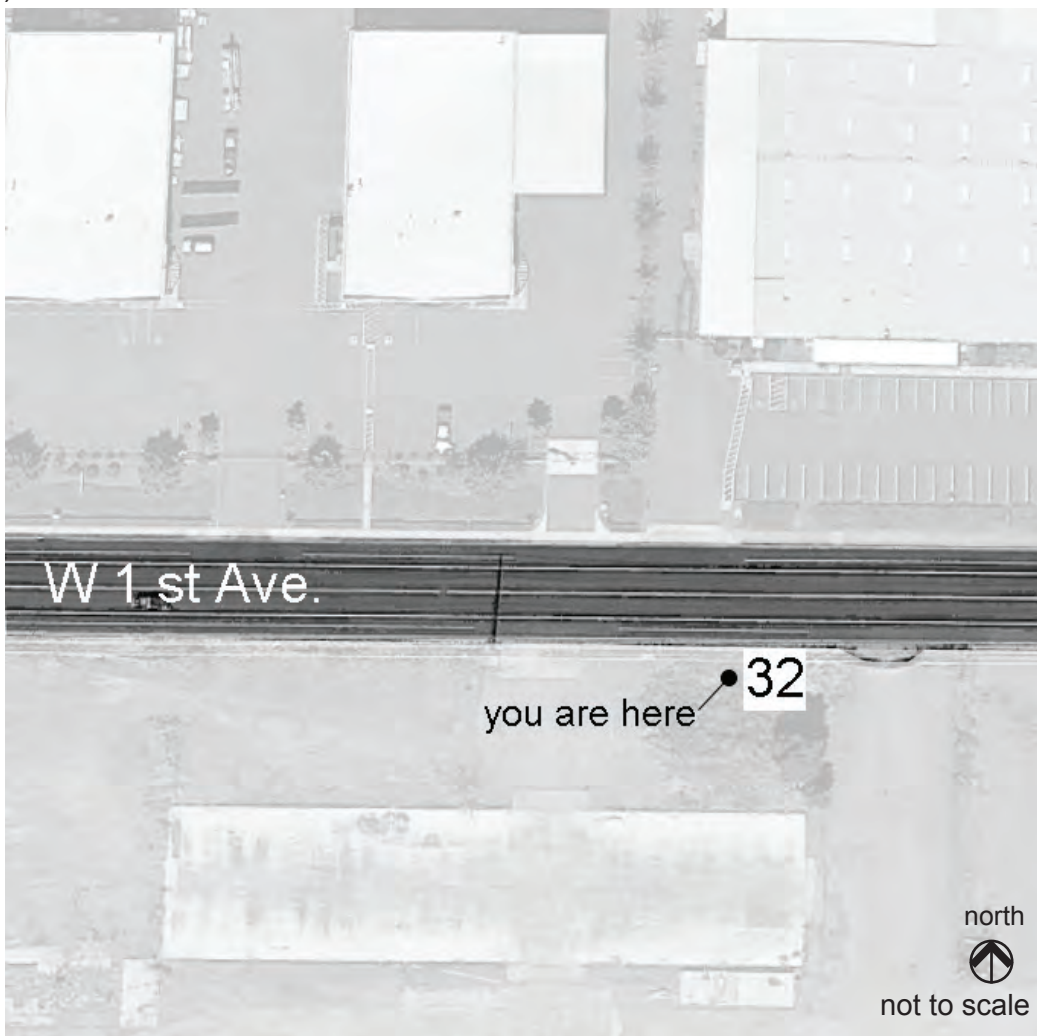
Additional Notes: ....
....

Did you :

_____ Write your name on the audit form?
_____ Write the date and time of audit?
_____ Write the transit stop location including cross streets and bus lines served?
_____ Record weather conditions during the audit?
_____ Order your digital images?

4

Ruggeri, Denise. "The Study of Perceived Livability at the Transit Stop." Norwegian University of Life Sciences. National Institute for Transportation and Communities, 2015.