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GIS Project Final – La Crescenta and Smart Growth Sustainability Strategies

La Crescenta-Montrose is an unincorporated area of Los Angeles located just twelve miles north of Downtown, Los Angeles. The community is bordered by Glendale to the south and west, La Canada Flintridge to the east, and the Angeles National Forest to the north. Despite having a high median income, I believe that La Crescenta lacks many commonly accepted principles in the smart growth planning field. This project looks at different types of “Smart Growth” urban planning strategies to see if they are missing from La Crescenta and considers how they may be incorporated in the future (4). In particular, this project looks at access to transportation, access to parks and open spaces, zoning, and parking lot placement. This project examines how Foothill Boulevard and La Crescenta can be redeveloped in a way that maintains the small-town character of La Crescenta while providing greater connectivity and opportunities for local businesses and residents.

Background Information

La Crescenta-Montrose has a population of approximately 20,400 people. Over 50% of the population has a college degree. La Crescenta’s median household income is over \$100,000 (1). Figure 1 shows La Crescenta’s median income compared to the surrounding areas. Despite the community having an above average household income, many local businesses struggle to stay



open. There is frequent turnover and many vacant buildings. The boulevard is also lined with parking lots, creating unattractive living spaces. With a Walk Score of 16, La Crescenta is also highly car dependent (2). 84% of households have at least two cars, with thirteen percent of households having at least four cars (3). Almost all activities require a car. The average commute time is twenty-eight minutes and eight-five percent of people drive alone to work

rather than carpooling or taking public transportation. Most people live in the mountain above or below Foothill Boulevard and do not have access to public transit. The hills and car dependency also make it difficult to ride bikes or pursue other forms of exercise and over thirty percent of the population is obese. La Crescenta needs planning that supports connectivity, green streets and open spaces, and economic vitality.

Geographic Information Systems (GIS)

GIS is an appropriate tool for this approach because it can be used to show the population’s lack of access to transportation and open spaces. GIS can also be used to show how zoning and the placement of parking lots takes away from the connectivity of Foothill Boulevard. Using these findings, I can recommend different smart growth planning related strategies to increase the quality of life in La Crescenta.

Data Sources

For this project I used several data files from the County of Los Angeles Data Catalog to create five maps:

Figure	Title	Data Source	Data
Figure 1	La Crescenta Income Compared to Surrounding Area	County Address Mapping System (CAMS) CENSUS	Zip Codes (Parcel Specific) Census Tracts Medium HH Income (2010)
Figure 2	La Crescenta Transportation Access	Metropolitan Transit Authority (MTA) CAMS	Metro Bus Stops Zip Codes (Parcel Specific)
Figure 3	La Crescenta Park and Open Space Access	LA County Dept. of Parks and Rec.	Countywide Parks and Open Space Half Mile Walk From Park
Figure 4	Foothill Boulevard Zoning	Southern California Association of Governments (SCAG)	Countywide Zoning
Figure 5	Recommended Foothill Boulevard Zoning	SCAG	Countywide Zoning
Figure 6	Foothill Boulevard Parking	SCAG	Countywide Zoning

Figure 1. La Crescenta Income Compared to Surrounding Area

For this map I used the Zip Code shapefile to highlight La Crescenta’s boundaries. I combined this shapefile with the Census Tract Medium Household income shapefile to create a thematic map that shows how La Crescenta has a high median income level compared to surrounding areas. I wanted to use these files to provide some basic background information to show the

area's level of wealth and spending power and to later contrast this to the community's lack of access to transportation options, parks, and other smart growth elements.

Figure 2. La Crescenta Transportation Access

Mobility is one component of smart growth and sustainable land use. I created this map by combining the Zip Code shapefile with MTA's bus stop shapefile to show transportation access in La Crescenta. By creating a ¼ mile buffer around the bus stops, this map shows how much of La Crescenta doesn't have access to public transportation. I chose a ¼ mile buffer because research shows that most people are willing to walk five to ten minutes to a transit stop (11). Residents within a quarter-mile of a facility are 5 to 7 times more likely to walk to the station than other passengers. Therefore, to encourage transit use, bus stops should be provided within ¼ mile.

Figure 3. La Crescenta Park and Open Space Access

Access to open and green spaces is another component of smart growth. I used shapefiles from the County that show where parks are located and that map out a half-mile walk from the park. Research supports the validity of a half-mile distance goal as people are willing to walk slightly further for recreational activities and facilities than they are for transit stops (12). This map shows how a large portion of La Crescenta is not within a half-mile walk from a park.

Figures 4-6. Foothill Boulevard Zoning, Recommended Foothill Boulevard Zoning and Foothill Boulevard Parking

For the next three maps, I used SCAG's Countywide Zoning shapefiles to show the mix of zoning types and parking lot placement along Foothill Boulevard. Sustainable land use emphasizes a greater mix of zoning types and placing parking lots off the main street to improve walkability. For Figure 4, I created a categorical map to show the different types of zoning along foothill boulevard. I edited the data to only show a few blocks north and south of Foothill Boulevard. In Figure 5 I edited the data to create a recommended zoning scheme that emphasizes mixed use and higher density residential areas. Figure 6 highlights the amount of parking lots along

Foothill Boulevard. For this map I used SCAG's Countywide Zoning shapefile to get parcel level data. I then edited the file to get only the parcels on Foothill Boulevard. Then I used the selection tool to create a new shapefile of parcels with parking lots along Foothill Boulevard.

Data Limitations

I wanted to do an analysis of what types of businesses were more successful in La Crescenta so that I could see if I could identify any types of planning elements that contributed to the business' success (ie proximity to a public transit stop, walk score, etc). However, I was only able to get spending and sales data at the block group level, not at the individual business level. If I were to pursue this research further, I would also try to compare and contrast La Crescenta with a similar neighborhood to see what planning elements work in other places.

Conclusion

In the end, I think these maps show that the residents of La Crescenta lack access to a range of smart growth principles: mobility, parks and open spaces, a mix of zoning types, and a high-quality street scape.

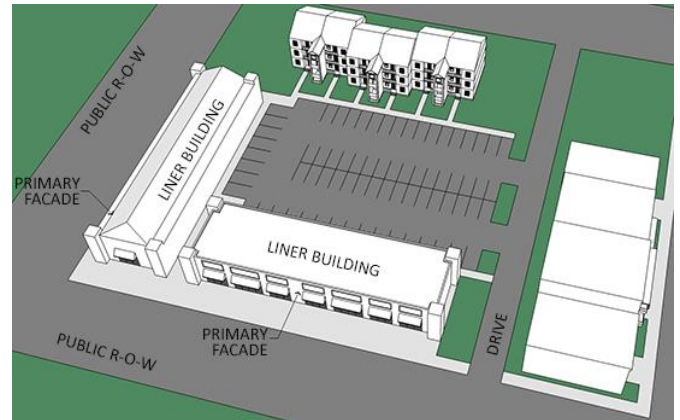
Figure 2 shows how a large portion of the town does not have access to public transportation. This adds to the area's dependence on cars which has negative consequences for the environment and public health. A smart growth strategy might involve adding a couple more bus stops north of Foothill Boulevard to give more residents access to public transportation.

Figure 3 shows the portions of La Crescenta that are not within a half-mile walk of a public park or open space. Again, this contributes to car dependency because people must drive to the park. The lack of access to public parks may also deter people from going to a park altogether. The County of Los Angeles can increase the amount of public and open spaces by requiring new developers to include small green spaces in development projects.

Figure 4 shows how La Crescenta does not have a diverse range of zoning uses. Smart growth emphasizes a mix of uses to meet the rich and diverse needs of a community's residents. Figure 4 shows that single residence housing makes up most of the housing around Foothill Boulevard.

Having a richer mix of housing and more multi-family housing would create more affordable housing and more foot traffic for the businesses on Foothill Boulevard. In Figure 5 I created a recommended zoning scheme that creates more mixed use buildings and more multi-family residential homes. This helps to locate people closer to commercial needs and transit stops.

Finally, Figure 5 shows how many parking lots are located on Foothill Boulevard. Parking lots break up the street scape and detract from the pedestrian walking experience. Figure 5 shows how over half of Foothill Boulevard is lined with parking lots. There are various strategies that can be used to minimize the impact of parking lots in the future. First of all, zoning regulations can be



changed to remove minimum parking requirements. Additionally, larger parking lots can be retrofitted with “lot liner” buildings, as in the image above, to create a more connected streetscape.

GIS helps to provide a visual display of La Crescenta’s planning deficiencies. This data can be used to support better planning decisions in the future so that La Crescenta has better access to mobility options, access to parks and open spaces, and a more walkable and viable commercial corridor.

Figure 1

La Crescenta Income Compared to Surrounding Area

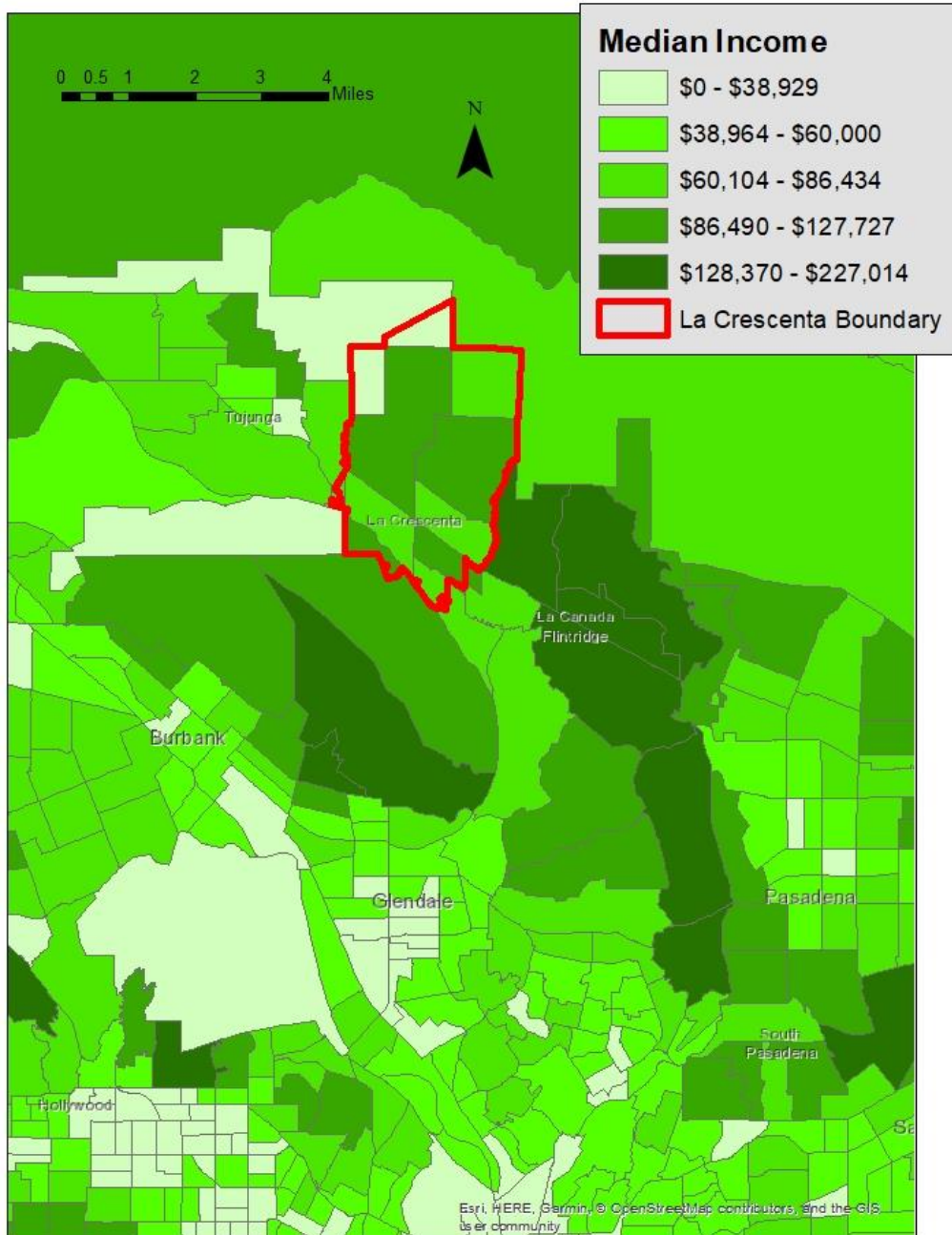


Figure 2

La Crescenta Transportation Access

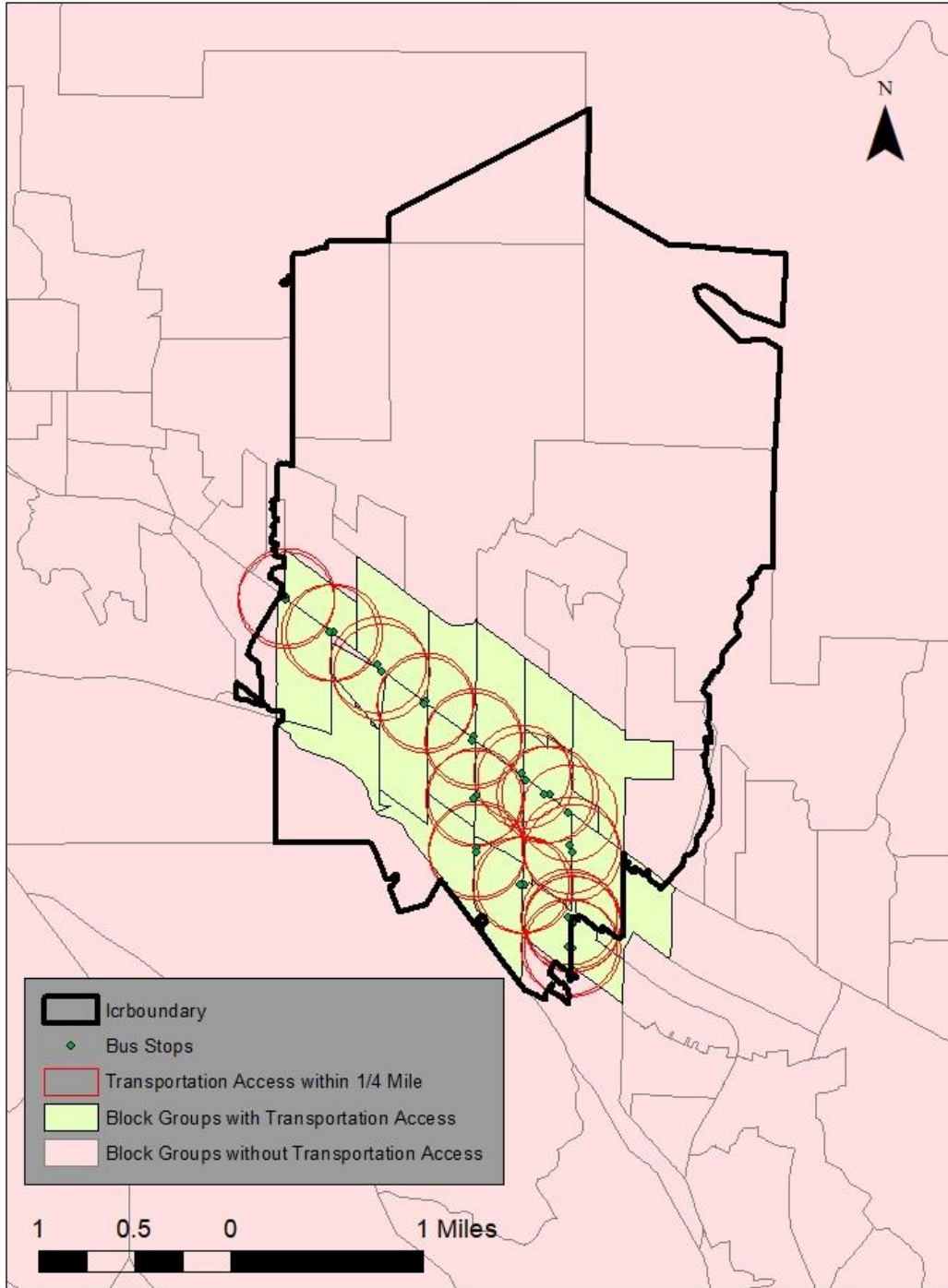


Figure 3

La Crescenta Park and Open Space Access

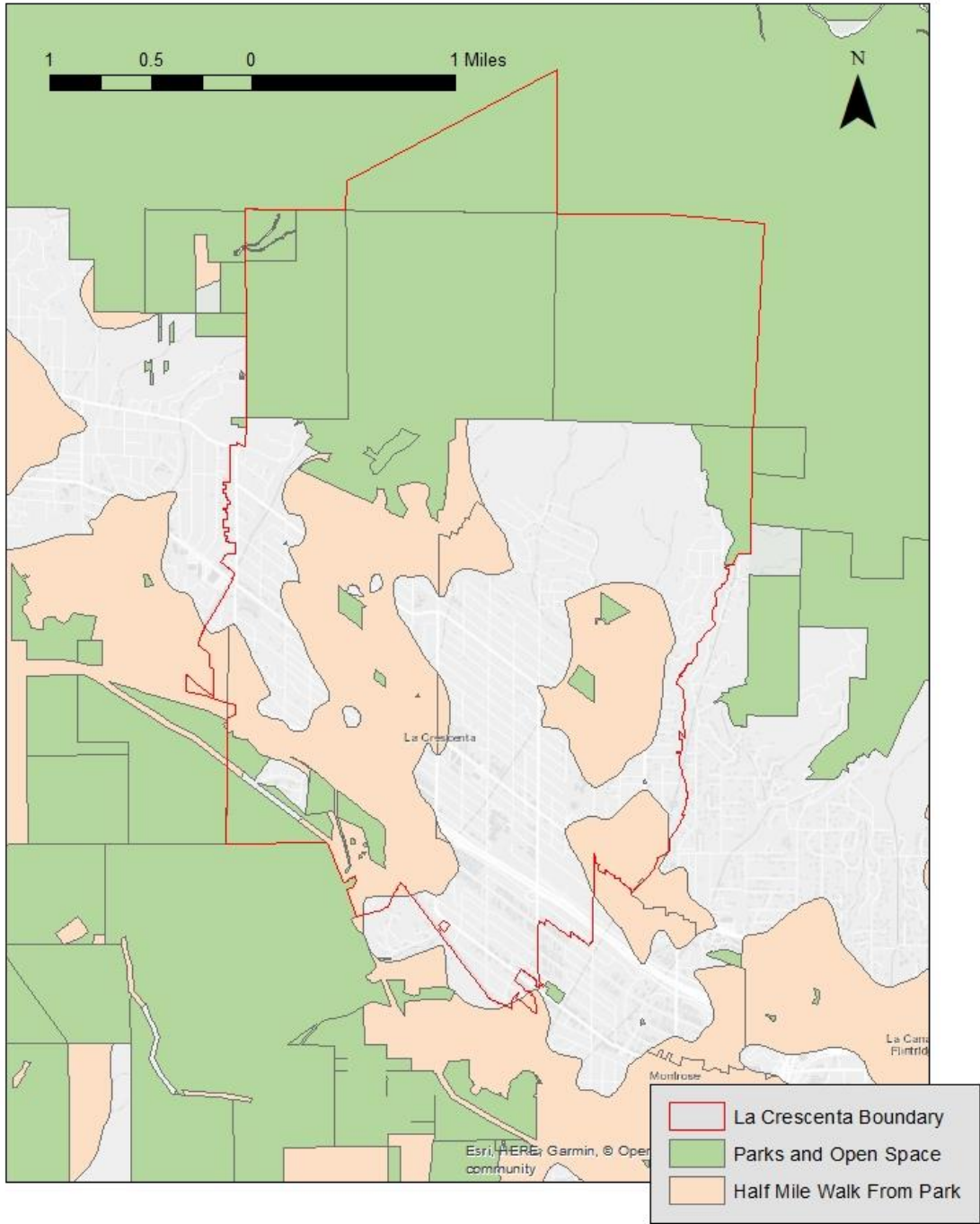


Figure 4

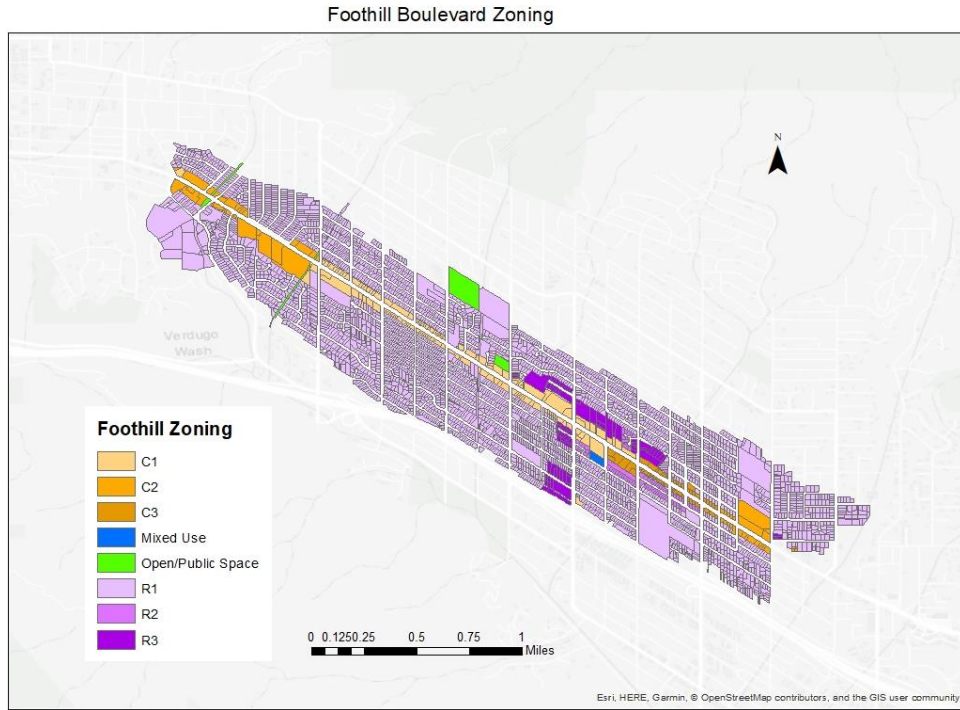


Figure 5

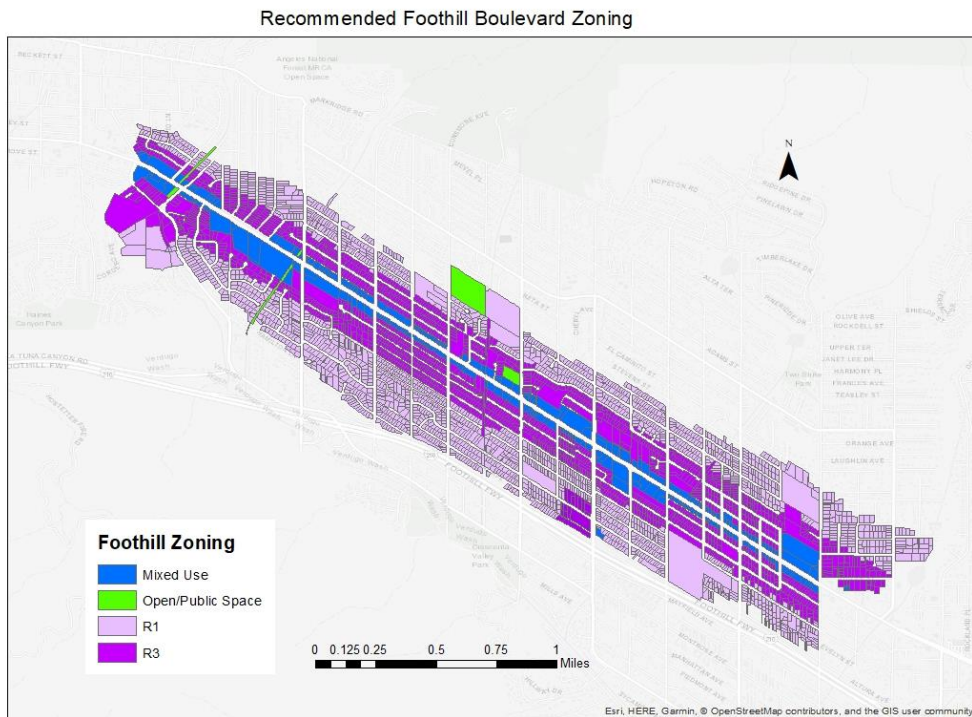
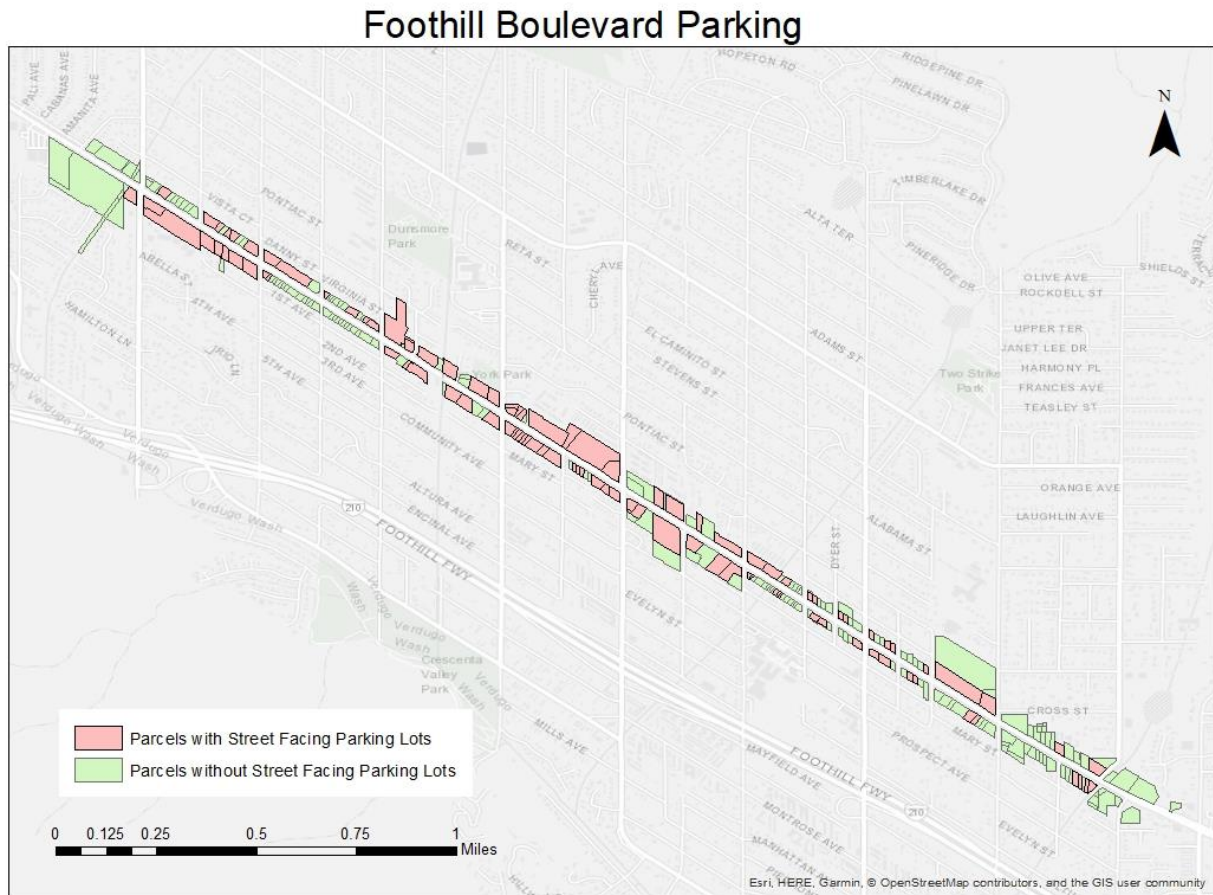


Figure 6



Sources

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