Room to Grow – Norwalk, CT

DEMOGRAPHIC RESEARCH

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Community Based Participatory Research Initiative
and Catholic Charities of Fairfield County

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I. Mission/Executive Summary

The purpose of this research was to visually display the population distribution of, as well as linkages between our variables; with the hopes that our maps would legibly illustrate correlations and patterns between specific demographic identifiers. Thus, in doing so, the maps would highlight areas of acute need that are perhaps being unmet, and, further, prompt one to reflect and critically engage with not only the question of why social inequalities persist in these affected neighborhoods, but also confront the question of what can be implemented to better serve the everyday needs of these particularly vulnerable groups on the margins.
The American Community Survey (ACS) is an ongoing survey that annually provides demographic information on the American population. The results of the ACS and surveys of equal caliber are valuable in a number of fields, ranging from social services organizations, both governmental and non-profit, social research studies, such as this one and even potentially reaches the top—ultimately influencing the way local, state and even federal governments may allocate funding into sectors, such as labor, education, businesses, social services, public works and infrastructure. For the purposes of this research assignment, our team utilized the latest census data from the American Community Survey by geocoding it and visually displaying it via maps that illustrate patterns of, as well as interactions between, any given variables that we explored, that being: measures of poverty, immigration, education, income family composition, age, race and ethnicity.

Research Variables
Norwalk, CT

Basic Socioeconomic:

1. Median Household Income
2. Immigrant Population (% Foreign Born)
3. Persons Near Poverty (1x to 1.9x FPL)
4. Below Federal Poverty Threshold
5. Married Households
6. Single Parent Households
7. Race and Ethnicity

Dependent Population:

8. Unemployed
9. SNAP recipients
10. Children (17 years of age and under)

II. Maps

A pivotal component of our research process, our team utilized GIS-mapping as a tool to go about understanding and answering the central questions of our project. GIS-mapping, as a social research tool, is used to ask questions, visualize, analyze and interpret data to understand correlations, patterns and geographic trends. GIS-based maps and images are becoming increasingly vital to understanding what has happened, is happening and will happen in a geographic space, and has revolutionized the operations of social research on a global scale. In reality, its visual and analytical capabilities not only makes data accessible *through* maps, but facilitates the process for targeted audiences—for example, a non-scientific community, to understand *with* maps, through a familiar medium or context.

In constructing the maps, there were a number of modifications that were added in the hopes that a better picture of location, scale and dimensions can be gleaned from the Norwalk maps. To begin a scale ruler was included, and can be found in the upper right-hand corner of each map. Next, I-95 (represented in green) and Route US-7 (represented in red) displays were imposed onto each map to delineate location. A 1-mile buffer around *Room to Grow* was also included on each map to establish locale. And finally, an overlay of Norwalk's neighborhoods, which came about through GIS Shapefiles by the Norwalk Neighborhoods Association that were requested from Norwalk's GIS Department, were imposed on each map.

A Census Block Group is a geographic unit of measurement used by the Federal Census Bureau to analyze demographic data collected from groups of houses in given communities. The Census Bureau streamlines Census information to a variety of levels that are applicable for different analytical purposes. For example, given state is comprised a number of counties, which are made up of a number of cities and towns, which can then be individually broken down into census tracts and finally Census block groups, and even units as small as Census blocks. For the purposes of this research undertaking, Census block groups were selected as the unit of analysis as they are the smallest dimension, in which the most amount of census data can be extracted.

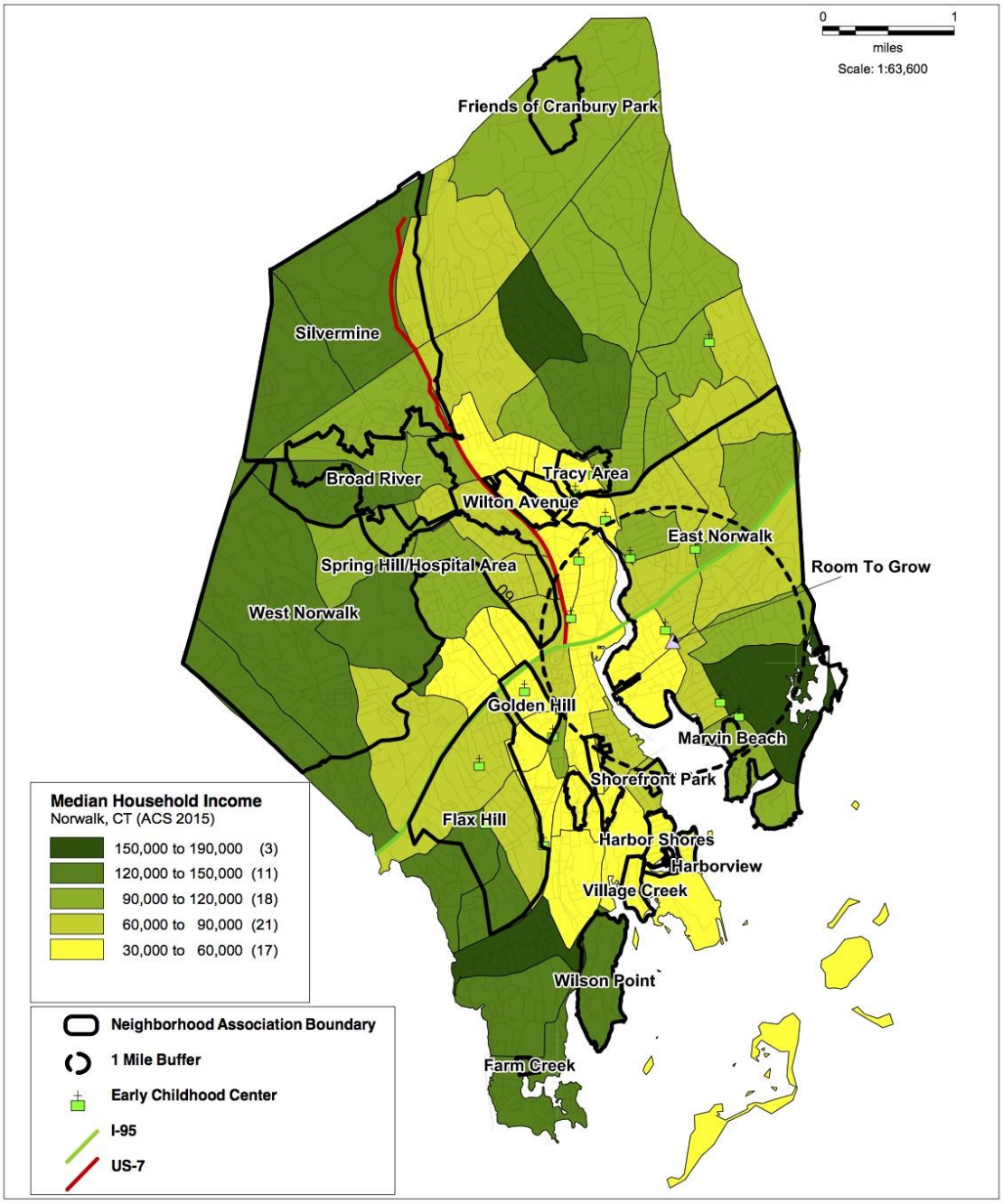
Early Childhood Education Centers in Norwalk

Room To Grow	208 East Avenue	Norwalk	CT	06850
LIL Critters Preschool	10 Lewis Street	Norwalk	CT	06851
Nitzan Nursery School	109 East Avenue	Norwalk	CT	06851
Sonshine Christian Children's Center	718 West Avenue	Norwalk	CT	06850
Carousel Preschool	23 France St	Norwalk	CT	06851
Achieve at Tracey School	20 Camp Street	Norwalk	CT	06851
Apple Tree Preschool	131 Strawberry Hill Avenue	Norwalk	CT	06851
Stepping Stones Early Learning Lab School	303 West Avenue	Norwalk	CT	06850
The Children's Playhouse INC.	112 Bouton Street	Norwalk	CT	06854
Kid's Place INC.	10 Elmwood Avenue	Norwalk	CT	06854
Growing Seeds Child Development Center	2 Trinity Place	Norwalk	CT	06854
Marvin Children's Center	60 Gregory Boulevard	Norwalk	CT	06855
Norwalk Public Schools Pre-School Program (at Wolfpit)	1 Starlight Drive	Norwalk	CT	06851
Growing Seeds Child Development Center Ben Franklin	165 Flax Hill Road	Norwalk	CT	06854
Norwalk Public Schools Pre-School Program (at Marvin)	15 Calf Pasture Beach Road	Norwalk	CT	06855
Children's Corner Learning Center	770 Connecticut Ave	Norwalk	CT	06854
Safe and Sound Day-Care	28 Scribner Avenue	Norwalk	CT	06854
Norwalk Public Schools Pre-School Program (at Brookside)	382 Highland Avenue	Norwalk	CT	06854

(List Provided by 211)

Map 1: Norwalk, CT—MHI

Median Household Income Distribution



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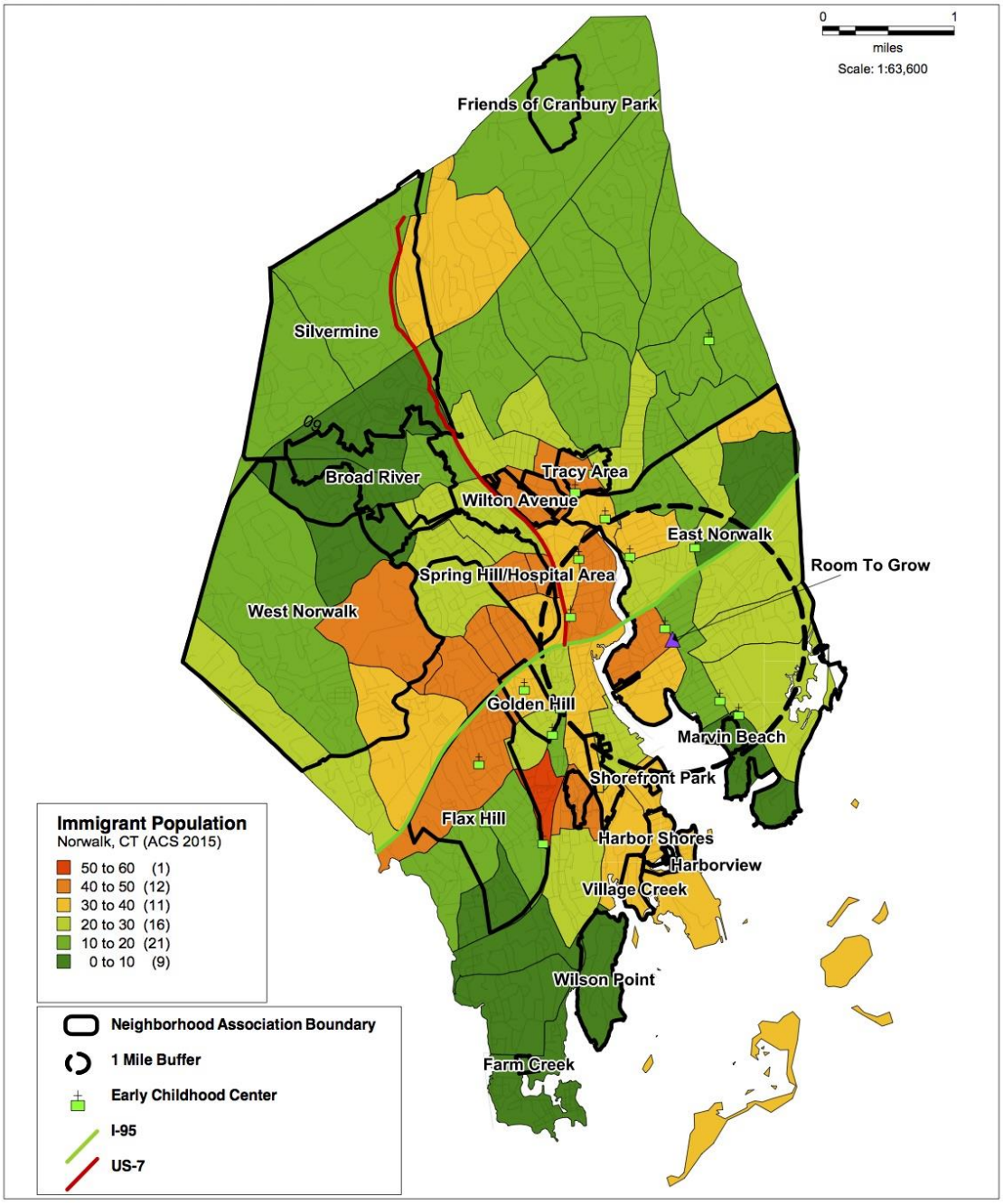
Key Findings

- Lowest median household incomes ($30,000-$60,000) are centralized in South-central block groups, particularly the Village Creek, Harbor View, Harbor Shores, Golden Hill, Wilton Ave and Tracy area neighborhoods.
- Within the one-mile radius of *Room to Grow*, there are neighborhoods that represent every tier of economic status, as indicated by household income; full median range from $30,000-$190,000—which presents a stark contrast.

Map 2: Norwalk, CT—Immigrant

Immigrant Population Distribution



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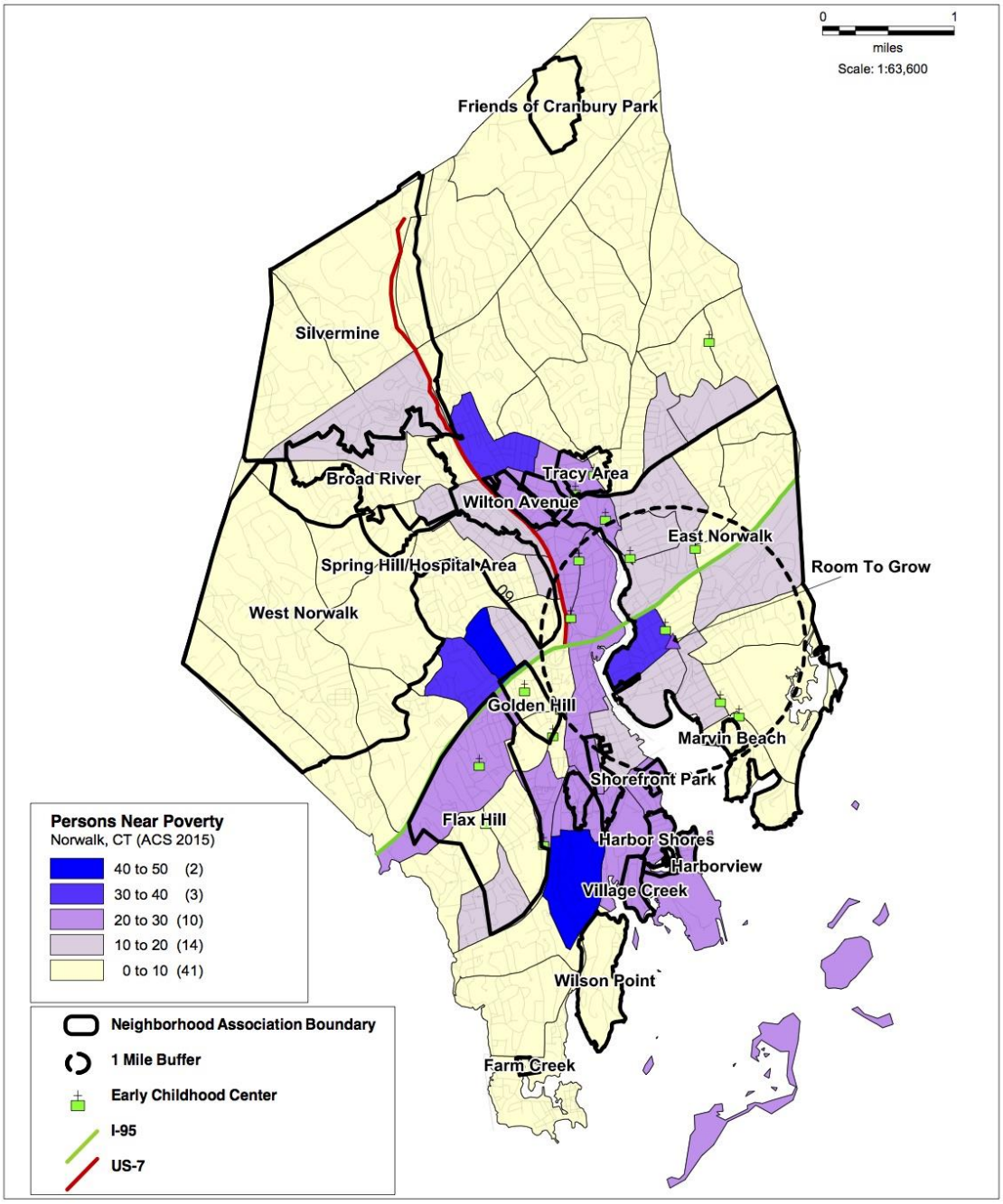
Key Findings

- To begin, it should be noted that this map illustrates the immigrant population distribution, and cannot definitively speak to the patterns and distribution of the *undocumented* population, though it nevertheless can be assumed as a rough projection of inhabited neighborhoods.
- It is observed that the more significant concentration of immigrants can be found in central-southcentral Norwalk, with a more heavily immigrant-populated block group, of upwards to 60%, between the Shorefront Park and Flax Hill Neighborhoods.
- In comparison to the last map, there is some overlay in block groups that are of low median household income and those that are significantly immigrant.

Map 3: Norwalk, CT—Near Poverty

Percentage of Population between 1 & 1.99x the Federal Poverty Level



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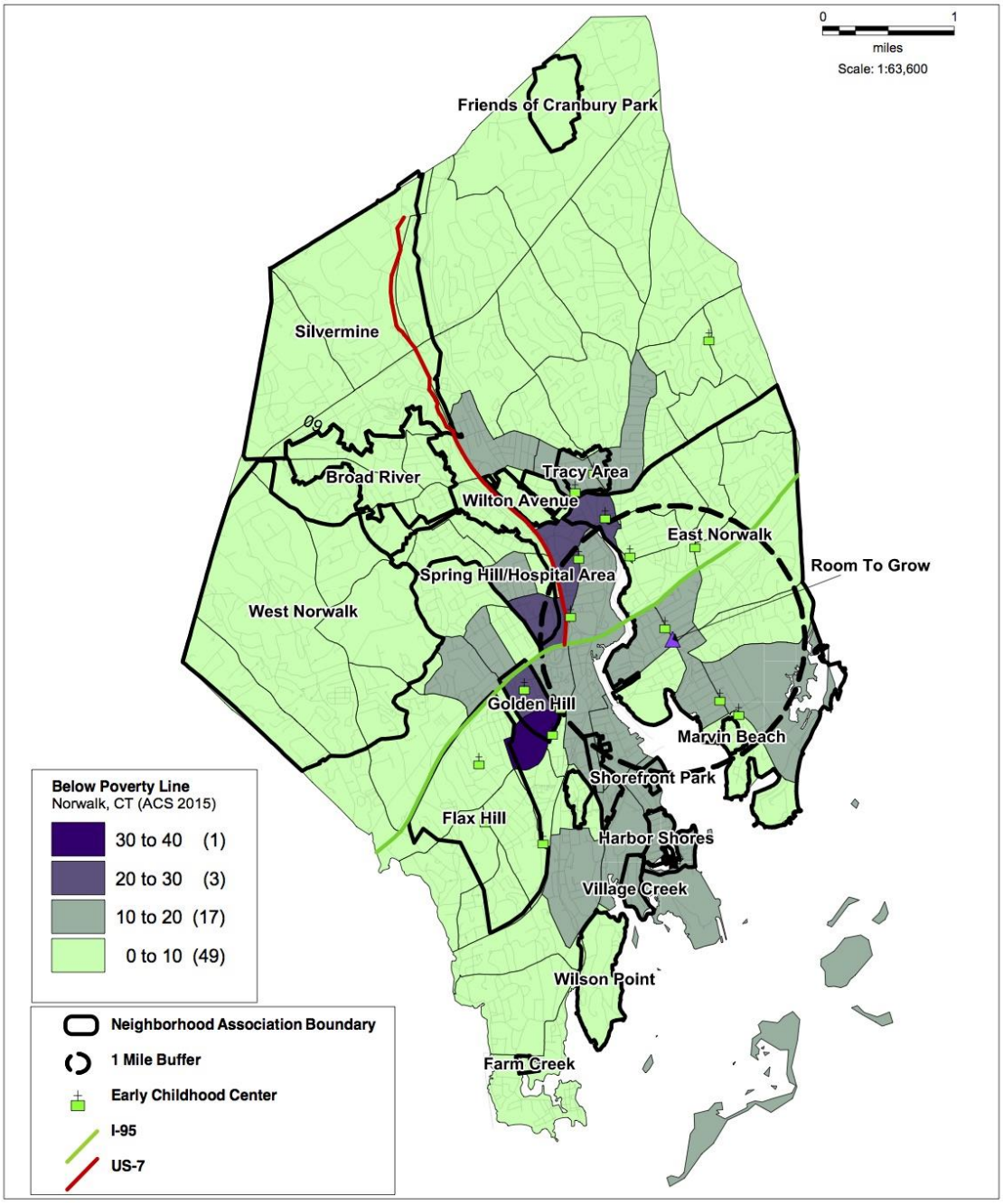
Key Findings

- Once again, when traveling from the limits of the city, inwards to the central region, one would note that the near-poverty populations become increasingly prevalent.
- Most of the central areas find about 10-30% constituted by persons near-poverty.
- There are some block groups, however, where as much as 50% are populated by persons near-poverty, those areas being, one block group north of Wilton Ave neighborhood, one in the Village Creek neighborhood, one in Golden Hill and additionally, even the block group, in which *Room to Grow*, itself, is located.

Map 4: Norwalk, CT—Below Poverty

Households that fall Below the Poverty Line



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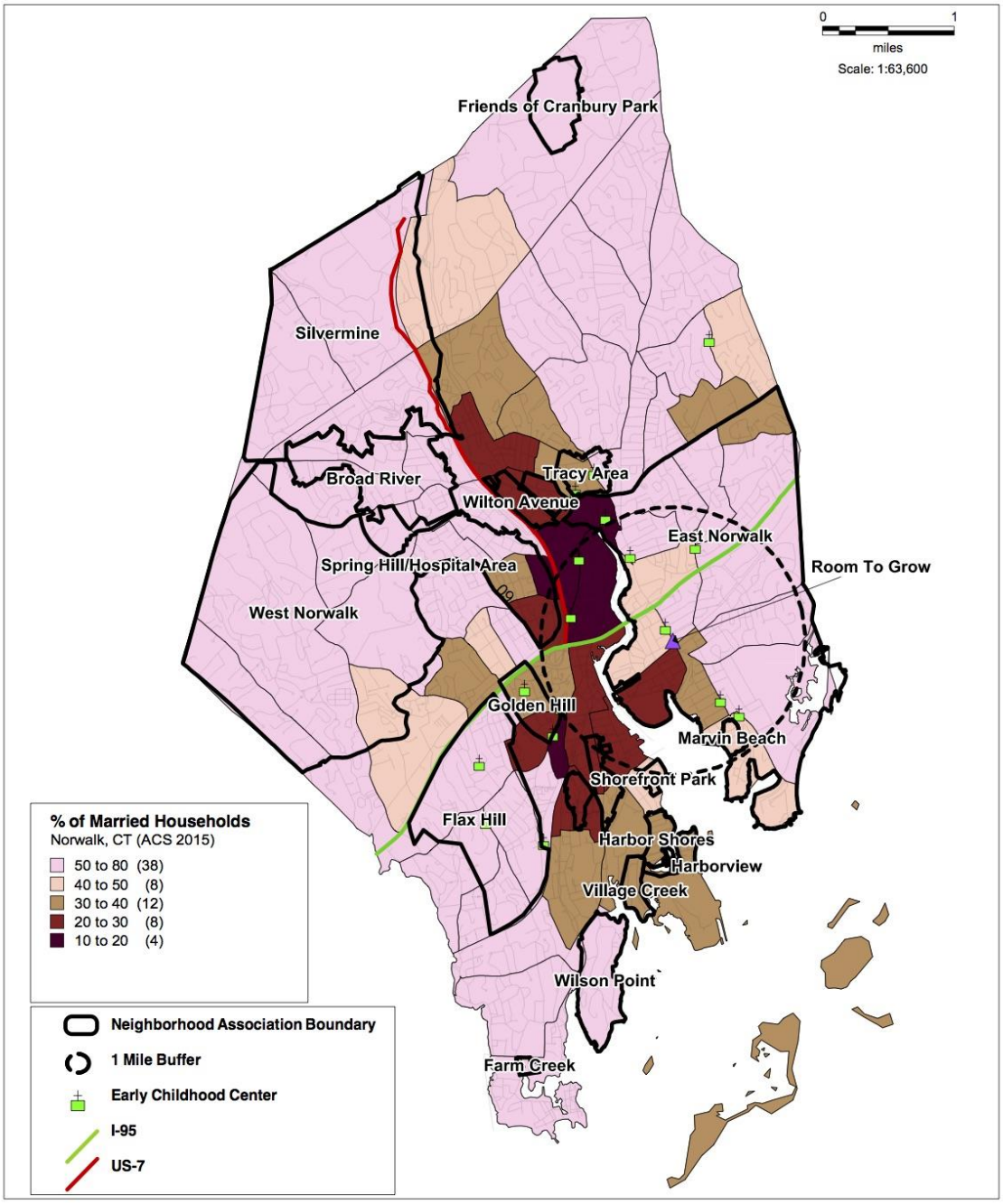
Key Findings

- What is immediately apparent from Map 4 is that the majority of the Norwalk population does not fall below the federal poverty line, as large areas have less than 10% of the population below poverty.
- Some other block groups of South Central Norwalk exhibit 10-20% of population as under the poverty line. A couple of areas in the central Spring Hill and Wilton Ave neighborhoods have as much as 30% below poverty, and only one neighborhood in the Golden Hill area demonstrates a population in which as much as 40% of persons are below the federal poverty line.

Map 5: Norwalk, CT—Married Households

Percentage of Married Households



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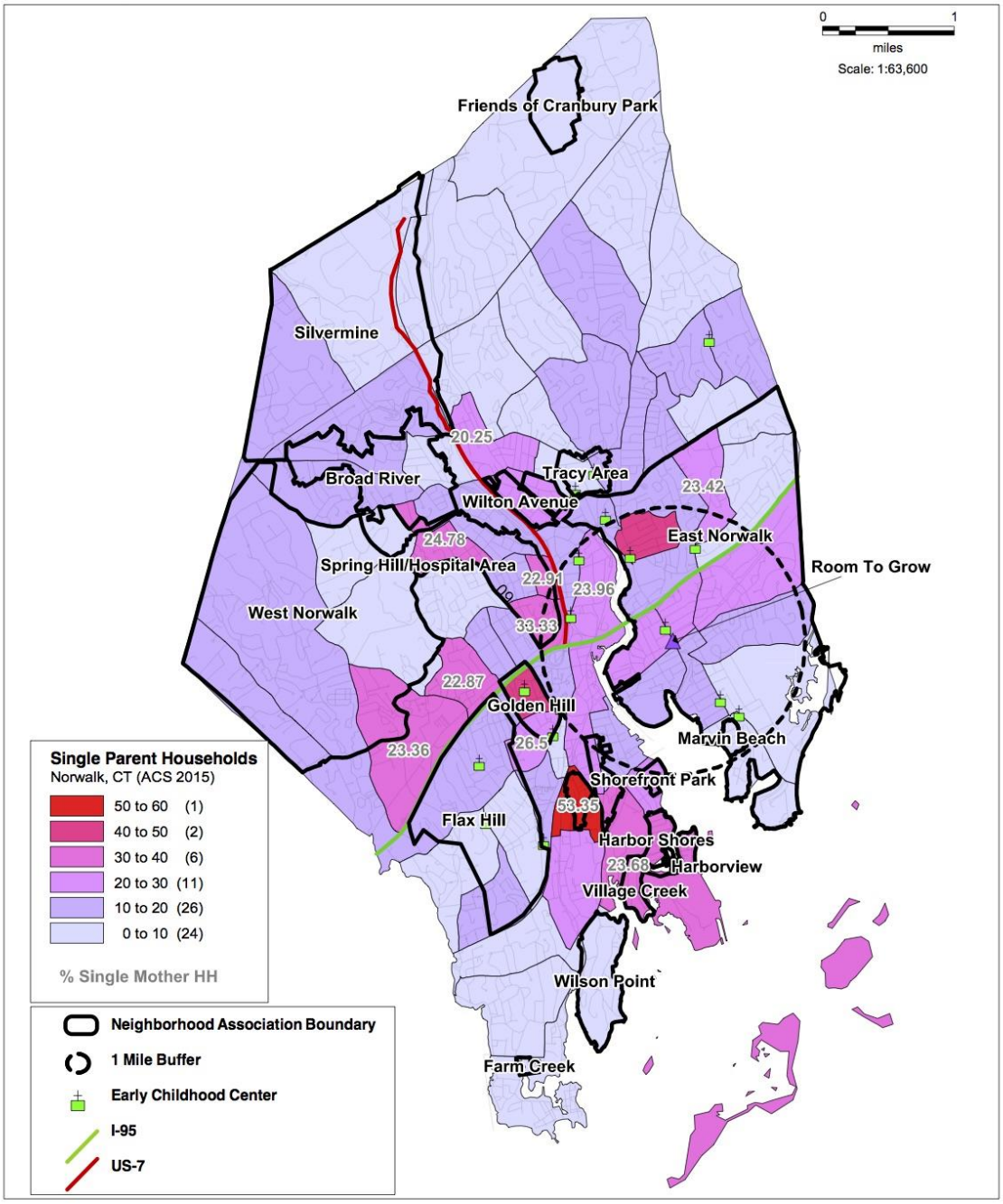
Key Findings

- Yet again, the map displays that the lowest percentages of married households are found in the southcentral belt of block groups, with less than 30% of households married for most neighborhoods. The two block groups south of Wilton Avenue, as well as one as south as Golden Hill are potentially as low as 10% when it comes to married households, in contrast to the up to 80% exhibited in the neighboring West Norwalk.

Map 6: Norwalk, CT—Single Parent Households

Percentage of Single Parent Households of Total Households



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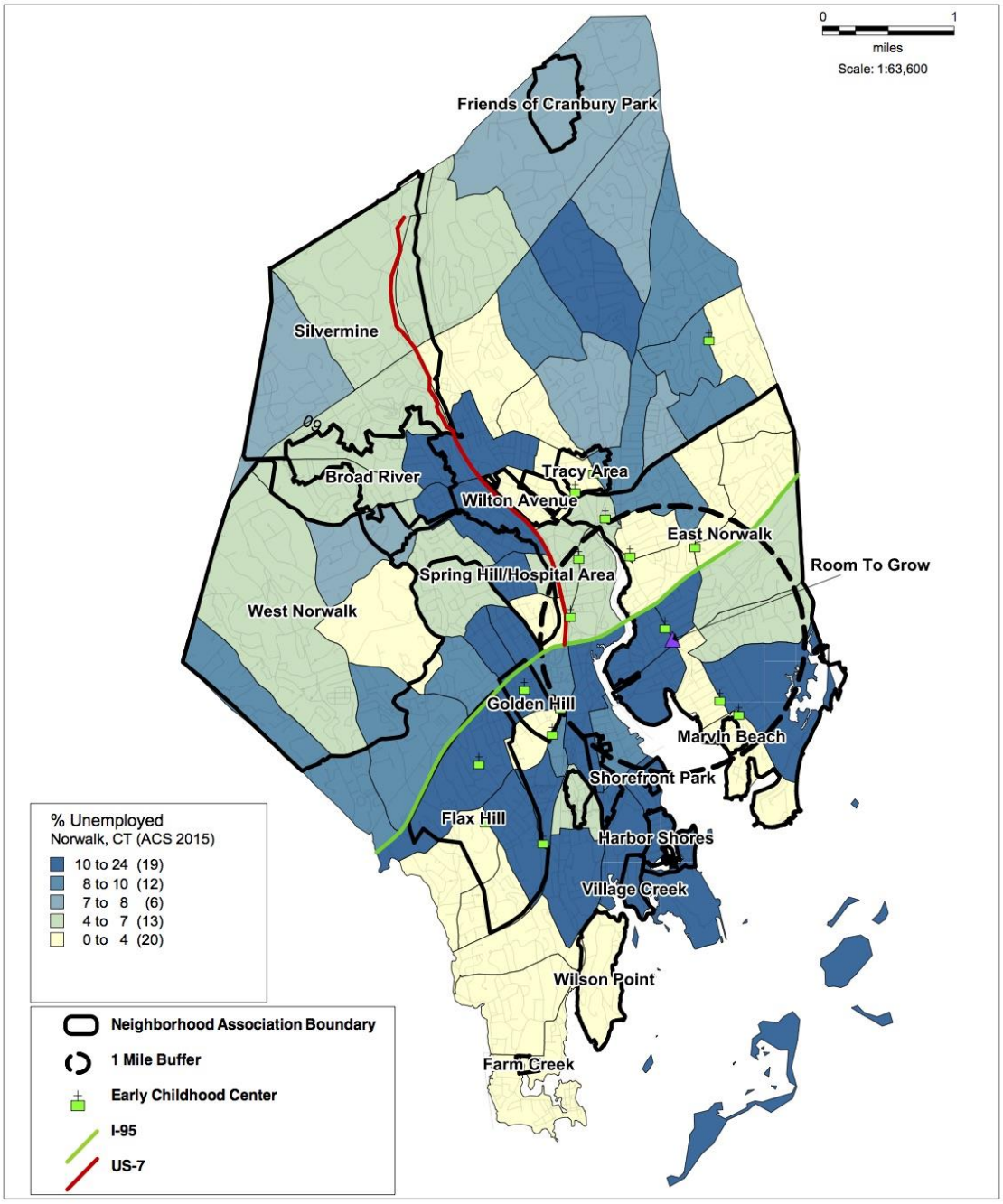
Key Findings

- Map 6 displays the distribution of single-parent households, with the percentage of single-mother-led households, specifically, compounded on top (in gray) and represented in percentages. The majority of block groups with a significant portion of single-parent households are located in the southcentral areas of Norwalk, as well; with the exception of a block group neighborhood in East Norwalk with a percent single-parent household of between 40-50%, as well as one in Golden Hill. A particular area of interest would be the southern-most Shorefront Park, Harbor Shores, Harbor View and Village Creek neighborhoods, which contains a block group which reports as much as 60% single-parent households, 53% being single-mother.

Map 7: Norwalk, CT—Unemployed

Distribution of Unemployed Population



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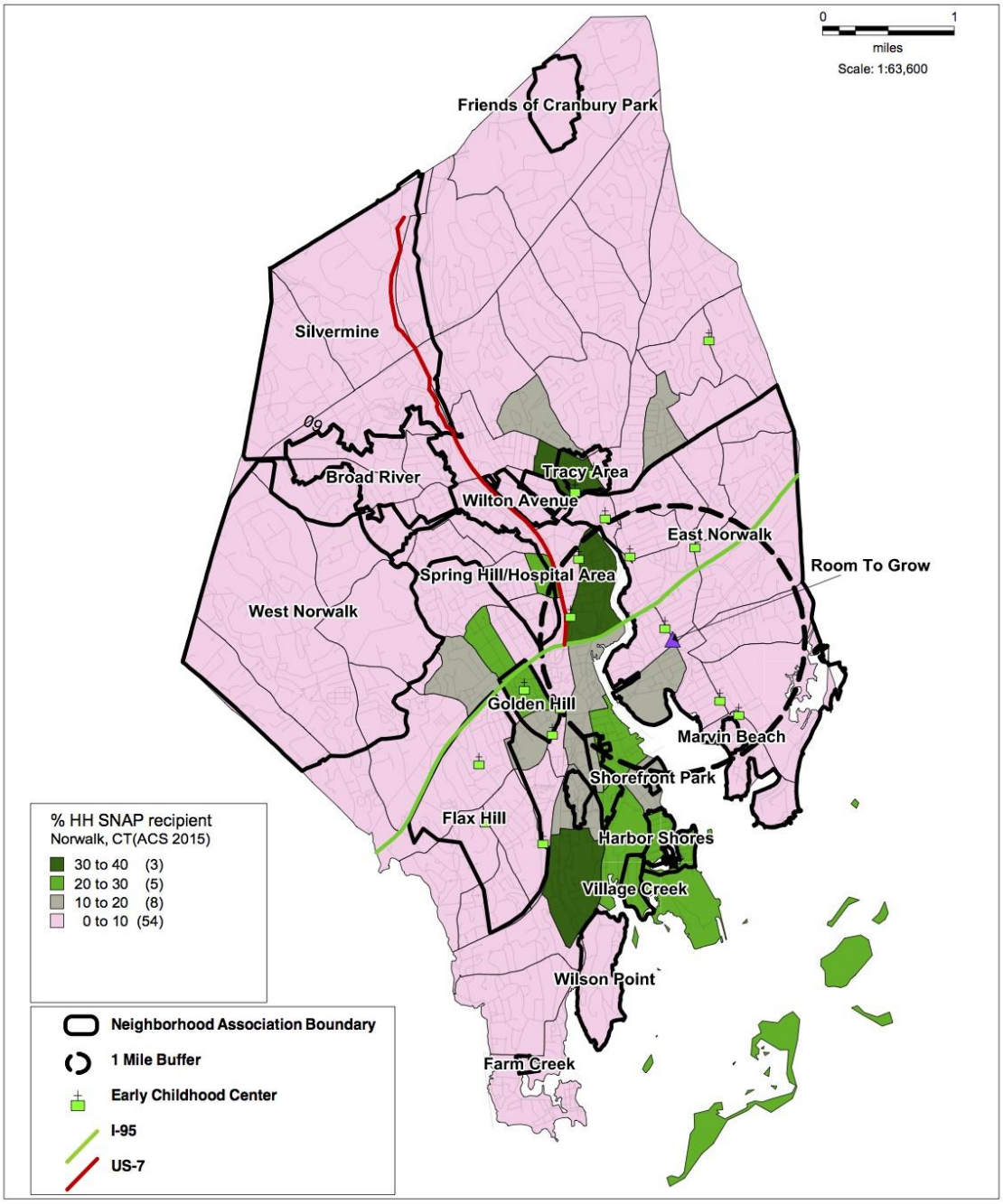
Key Findings

- Perhaps, generally unlike the majority of the other maps presented, the distribution of the unemployed population is much more dispersed throughout the city—though there is a still a significant concentration in the southcentral neighborhoods of Shorefront Park, Harbor Shore and Village Creek along the shore.
- Additionally, two neighborhoods in the more northern areas of Norwalk (Wilton Ave, as well as a block group between the Tracy Area and Cranberry Park) reports percentages of unemployment as high as 24%.

Map 8: Norwalk, CT—SNAP

Distribution of Population receiving SNAP Benefits



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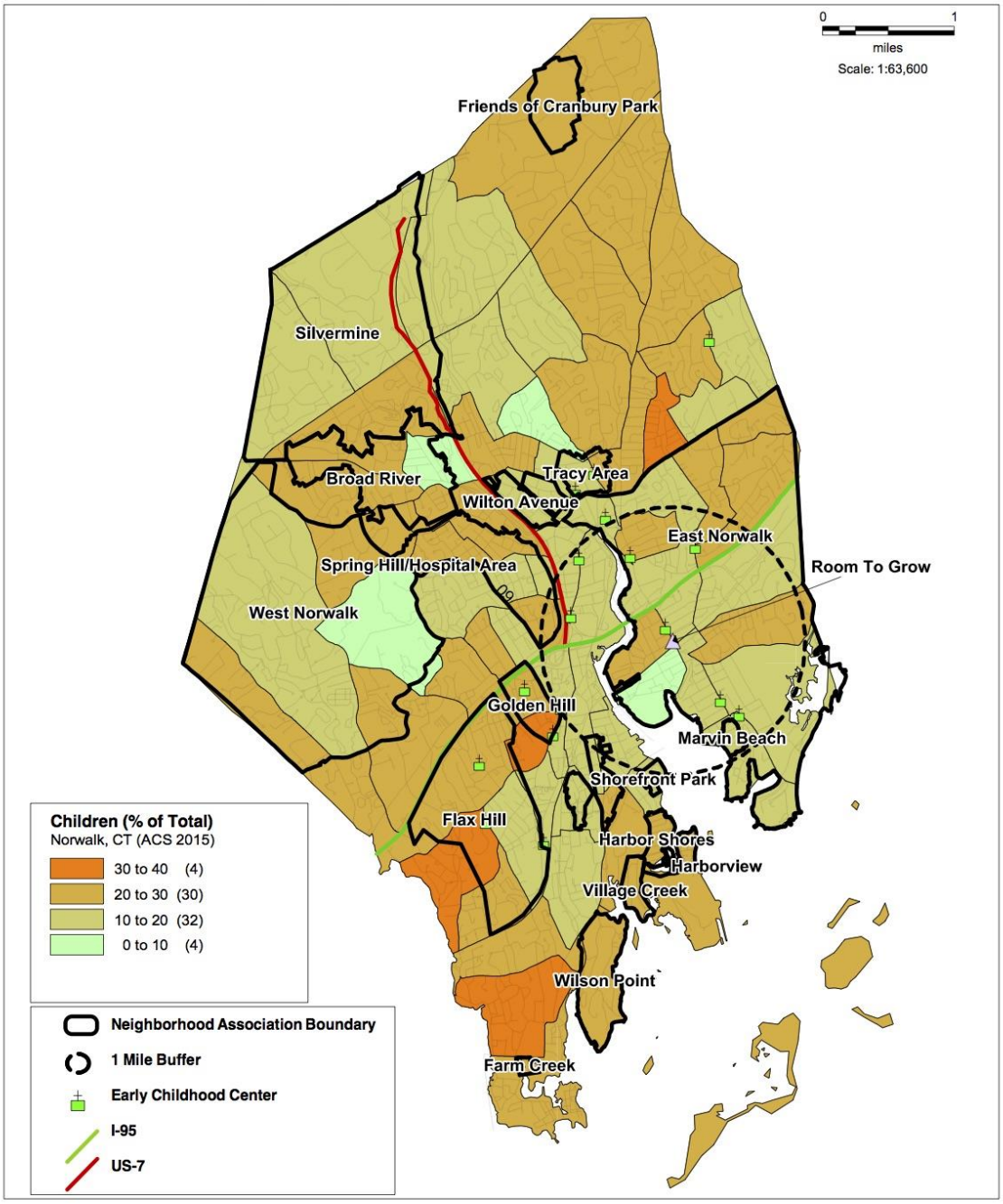
Key Findings

- Map 8 is illustrative of the distribution of the population receiving SNAP benefits, and what is immediately apparent, is that the entire concentration of SNAP recipients is located in the southcentral neighborhoods, including Spring Hill, Shorefront Park and Village Creek—potentially as high as 40% of the population.

Map 9: Norwalk, CT—Children Population

Children (17 & under) as a Percentage of Total Population



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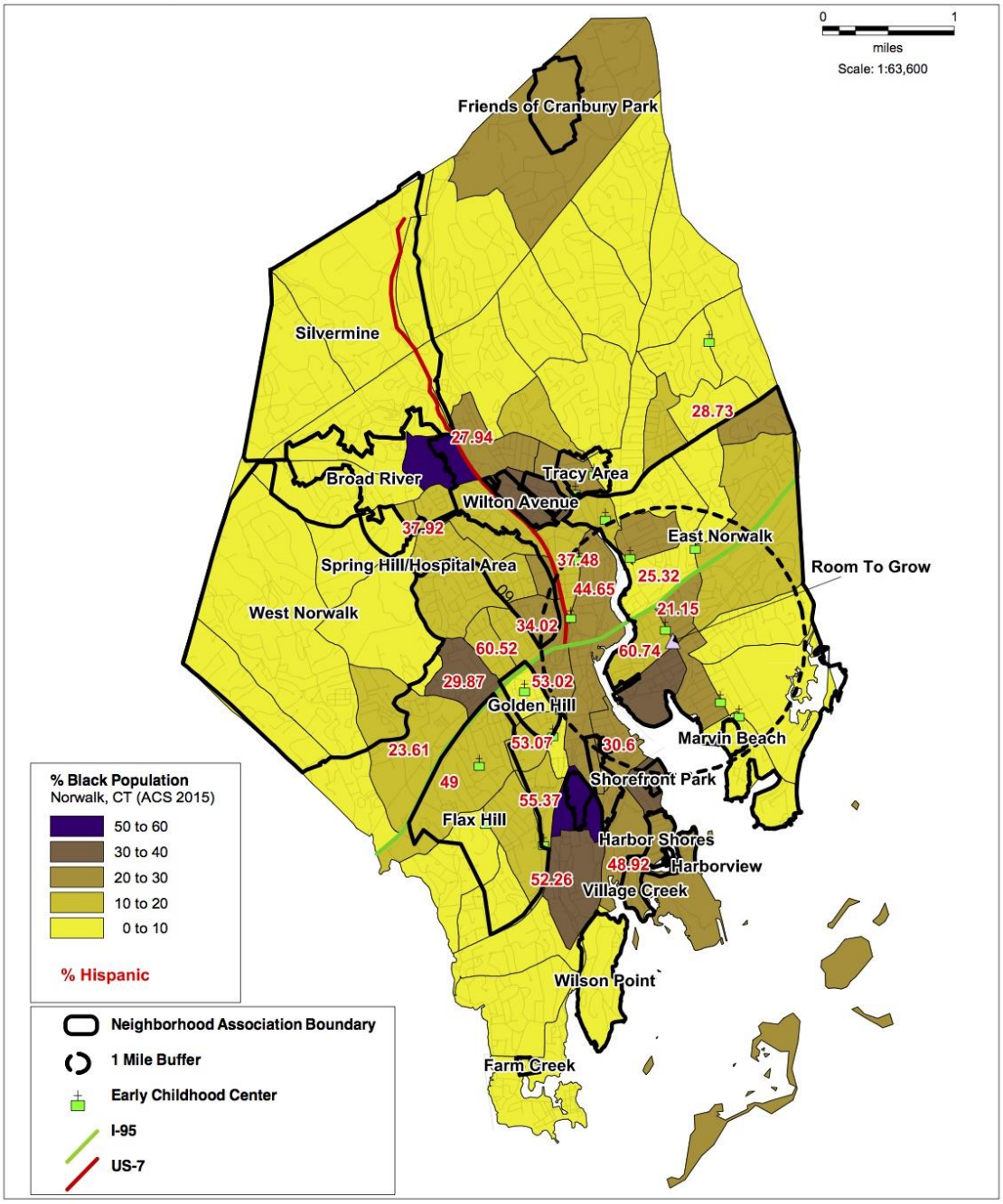
Key Findings

- Map 9's distribution of children (under 17), in terms of percentage of the total population seems to generally be independent of the social factors that influence other variables, such as Median Household Income, SNAP benefits and distribution below Poverty-line. The percentages of children seem to be more spread out: block groups with as much as 40% reached the northern-most ends of the city (Cranberry Park), and neighborhoods with the most amount of children range from the Farm Creek area to the Tracy area.

Map 10: Norwalk, CT—Race

Distribution of Black & Hispanic Population



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Key Findings

- It should first be noted that Map 10 displays the distribution of the Black population, with the percentage of population Hispanic (shown in red) by block group. What is immediately evident about the racial distribution map is that the city is majority non-Black. Large spans of the city show less than 10% black. The two most predominantly-Black block groups show up as one in the Broad River region, as well as near the Harbor Shores area, with potentially as much as 60% of the population identifies as Black or African-American.
- The majority Hispanic neighborhoods are consistent with the neighborhoods that show the highest percentages of population below Poverty, as well as the highest percentages of Single-mothers, highest numbers of SNAP beneficiaries, and lowest Median Household Incomes, which is also consistent with our team's SES indicator. One of the block groups that contains one of the highest concentration of the Hispanic population, is also where the Room to Grow center is located, in east-central Norwalk.

III. SES Indicator

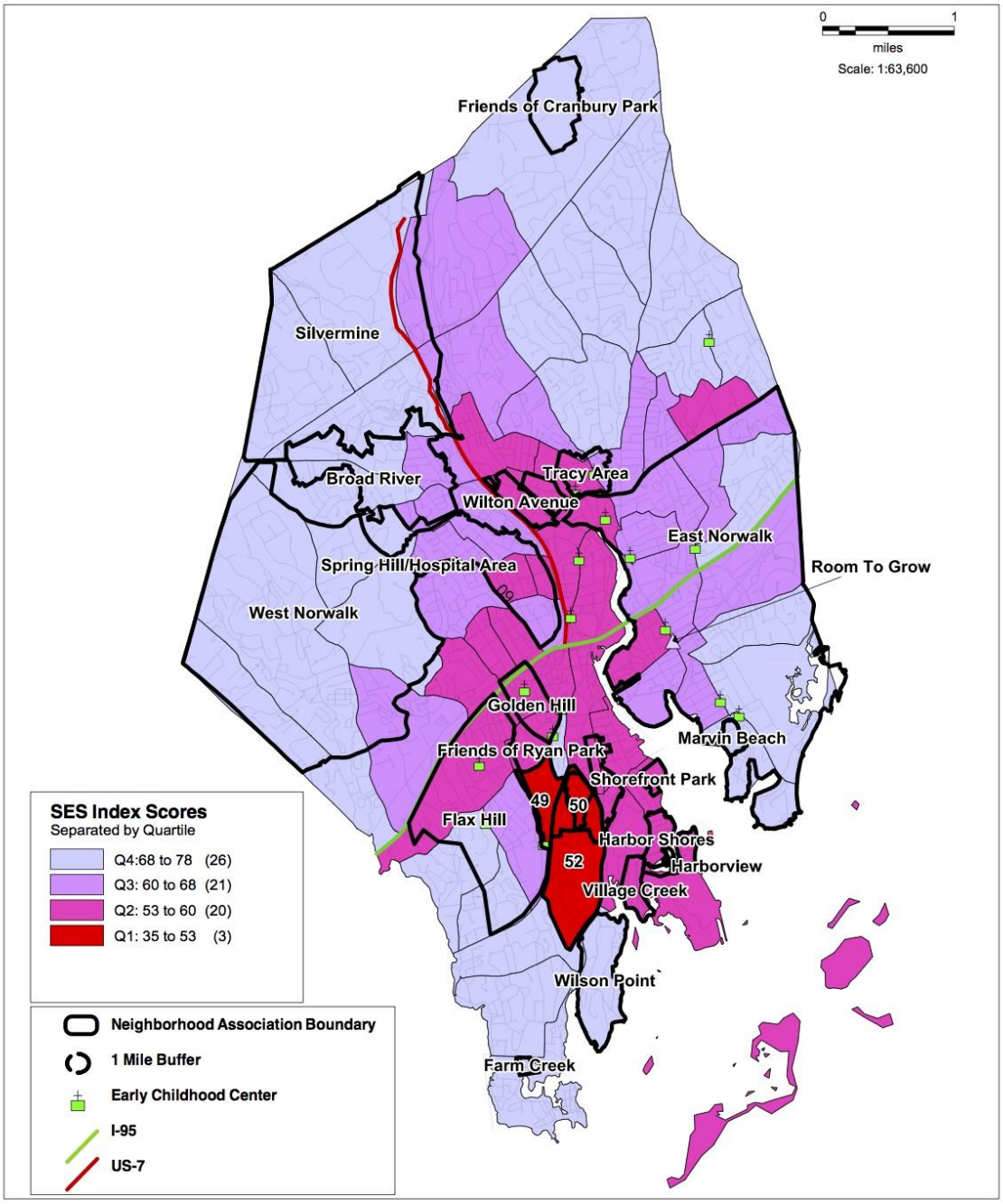
Researchers in the article, from which we modeled our own SES calculations put together a factor analysis, essentially meaning that of all the dozens of potential, indicative variables, only a few were selected to represent the target, on the grounds that they concluded the few variables to be more derivative than the others, arguably contingent on the selected variables. Next, an equation was developed to calculate the SES composite score by multiplying the percentages by their weights, which was the protocol for variables that came about in the form of percentages. However, instead of percentages, we were given raw counts for two variables: Median Household Income and Median House Value. Therefore, as a corrective measure, we opted to standardize the counts on a scale of 0 to 100, such that though they were raw values, they would be treated as percentages. Next, we encountered an issue when it came to the zeroes that were appearing as missing data. The authors of the article encountered a similar problem with their research, however their solution was to simply remove the zeroes, so it wouldn't skew the data. This was a viable option for them on account of the fact that the parameters of their study was nationwide. On the other hand, we are working with a significantly smaller area, and to remove the zeroes altogether would mean a ruined distribution. This proved a significant obstacle to our configuring of the SES scoring. Ultimately, the consensus was reached that a substitution method would have to be employed, in which we substituted every blank data point with a median the town. This was beneficial in that it enabled us to run the scoring system; however, the counter to that being that while substituting might be practical, it is not necessarily accurate in their values. For example, if Norwalk's median household value runs about $130,000, and a home downtown runs for about $70,000, there presents an inconsistency that skews the data, they would argue. However, we have reason to believe that using this composite scoring is highly beneficial in data analytics, which would outweigh the minute "inaccuracies," if any. In sum, SES scoring offers a multi-variate model that when makes identifying areas of concern a cleaner and more legible process.

Variables used to build model:

1. Percentage of households containing one or more person per room
2. Median value of owner-occupied values, standardized to range from 0-100
3. Percentage of persons below the federally defined poverty line
4. Median household income, standardized to range from 0-100
5. Percentage of persons aged $\geq$ 25 years with at least 4 years of college
6. Percentage of persons aged $\geq$ 25 years with less than a 12th-grade education
7. Percentage of persons aged 16 years or older in the labor force who are unemployed (and actively seeking work)

Map 11: Norwalk, CT—SES Indicator

Quartile Distribution of Socioeconomic Index



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Key Findings

- Although the distribution of scores appear to ascend from the center of the city outward, the lowest scoring block groups are located in the between the Flax Hill and Village Creek neighborhoods. This is the smallest group out of the quartiles being comprised of only 3 block groups.

IV. Statistics

This table was constructed to evaluate where the lowest scoring block groups stood in comparison with the City of Norwalk, Fairfield County, and the State of Connecticut. All demographic variables from the single-variate distributions are represented below.

Variable	Norwalk Quartile 1	Norwalk	Fairfield County	CT
Households that Received SNAP (%)	19.5	6.7	9.4	12.4
Civilian Unemployed (%)	16.8	8.1	9.1	9.1
Median Household Income	$ 42,900.00	$ 87,790.76	$ 105,067.29	$ 80,467.26
1 to 1.9x Federal Poverty Level (Near Poverty) (%)	29.1	11.9	12.5	13.5
Below Federal Poverty Level	11.2	8.1	9.3	11.0
White (%)	11.6	57.8	64.4	69.0
Black (%)	36.0	13.4	10.6	10.1
Hispanic (%)	49.6	22.3	17.9	14.6
Immigrant Population (%)	39.0	24.2	20.3	13.7
Married Households (%)	37.12	48.62	54.3	48.99
Single Parent Households (%)	34.8	16.3	17.0	17.9
Single Father Households (%)	6.02	3.87	4.17	4.44
Single Mother Households (%)	28.81	12.44	12.82	13.43
Children/Total Population (%)	15.61	18.86	23.57	21.44
Family Households with children under 18 (%)	22.9	28.7	36.4	31.8
Socioeconomic Index Score	50.6	64.1	64.1	60.1

Key Findings

- When compared with the rest of the city the 1st Quartile Block groups are significantly worse off in almost every category. The Median Household income is less than half of the city an the amount of households receiving food assistance, persons in near poverty and the unemployment are more than doubled the city average.
- The Hispanic and Foreign born percentages are well above the city, county and state averages.

V. Correlations

In order to understand the relationship between a set of variables, social scientists often calculate what is referred to as a correlation matrix, which is essentially a table of correlations. For the purposes of better analyzing the data, a correlation matrix was configured for our set of variables. In analyzing the data, it should be noted that a correlation coefficient above 0.500 is an indicator of a strong correlation, whereas a coefficient below 0.500 suggests a weaker correlation and a figure below zero is an indicator of a negative correlation. Our most significant findings, after having run a correlation matrix for the data, include strong correlations between: the percent of population receiving SNAP benefits and the Hispanic population (with a correlation coefficient of 0.693), the percent of population receiving SNAP benefits and the percent of single-mother households (with a correlation coefficient of 0.683), the percent of population receiving SNAP benefits and the population below the federal poverty line (with a correlation coefficient of 0.784) and the Hispanic and the population below the federal poverty line (with a correlation coefficient of 0.631). It then therefore becomes evident that the most vulnerable populations lay in the intersections between those receiving SNAP benefits, those below the poverty line, single-mother households and the Hispanic population, let alone their immigration status, which would undoubtedly increase vulnerability.

VI. Conclusions

With the multi-pronged approach used to better understand Norwalk's demographic landscape, there were many notable findings that point to a very diverse population. Norwalk has an interesting mix of middle class and poverty with a racial demographic that shows there is still room for improvement and opportunities for assistance. While the neediest block groups based on our lower than state and county average population of children under the age of 17 and family households there are staggering amounts of single parent households (34.8%), Immigrants (39%) and persons near poverty (29.1%) and a median household income less than half of the city average. These three block groups and their vicinity also house fewer of the city's early education centers, exposing what may be the largest service gap for low income residents.

VII. References

1. SES indicator model created using the following article:
   Creation of New Race-Ethnicity Codes and Socioeconomic Status (SES) Indicators for Medicare Beneficiaries: FinalReport. August 2012. Agency for Healthcare Research and Quality, Rockville, MD. http://archive.ahrq.gov/research/findings/final-reports/medicareindicators/index.html
2. Norwalk Neighborhood Association File provided by the City of Norwalk GIS Department. http://www.norwalkct.org/1397/GIS-Mapping
3. List of Early Education Centers provided by 211. https://www.211ct.org/
4. All Geocoding completed with the usage of the U.S. census Geocoder. https://www.census.gov/geo/maps-data/data/geocoder.html
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   Steven Manson, Jonathan Schroeder, David Van Riper, and Steven Ruggles. IPUMS National Historical Geographic Information System: Version 12.0 [Database]. Minneapolis: University of Minnesota. 2017. http://doi.org/10.18128/D050.V12.0