University of Central Florida
College of Community Education and Innovation
M.S Urban & Regional Planning
Capstone Class Spring 2020
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Social Determinants of Health:
Age-Friendly Recreational Needs for Populations within Orange County, Florida

Background

Park and recreational facilities are vital components within the natural and built environment, and the availability and access to these community features have great influence over the quality of life affecting an individuals' physical and mental health to affecting social relationships and connections. As a social determinant of health, increased public access to physical activity opportunities, in addition to improved nutrition through park and recreation agencies is a vital strategy to effectively improve health outcomes by combatting complicated social issues such as poor nutrition, hunger, childhood and adult obesity, physical inactivity, and social isolation (National Recreation and Parks Association, 2019).

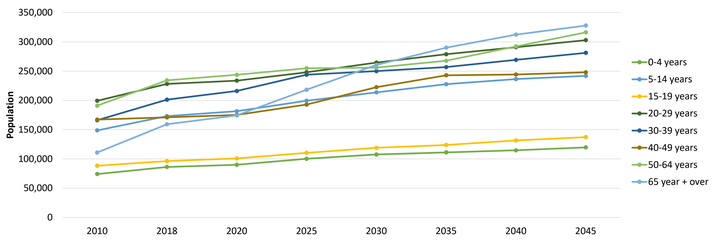
Justification

The population in Orange County, Florida is projected to increase by 11% by 2030, resulting in an increased demand for parks and recreation facilities offered by the county, especially for a rapidly growing senior population (U.S. Census, 2010). As aging-in-place becomes a more favorable option for a maturing population, Orange County will need to consider the needs of the future population to encourage active-living lifestyle through the promotion of parks and recreation facilities and programs by filling in existing park gaps for marginalized communities.

63% of Orlando live within a 10-minute walk of a park.
The national average is 54%.
Public Land Trust, 2019

Orange County projects the senior population (65+ older) is the fastest growing age group, with rapid growth indicating a need for services and programs. The elderly population will increase by approximately 62% by 2030 (BEBR, 2019), which will make up a significant portion of the future population.

Population Estimates in Orange County, Florida



Source: Bureau of Economic and Business Research

Methods

Assessment of Existing Park Facilities
- Conduct an assessment of current inventory of all park facilities in Orange County, including pocket, neighborhood, community, and district parks managed and operated by Orange County Parks and Recreation Department and other localities.
- **Identify Parks and Recreational Facilities Gaps**
- Identify census tracts of expected population growth in Orange County currently lacking parks and recreational facilities.

Gather demographic information
- Gather sociodemographic information from the U.S Census Bureau within the census tracts identified for future population growth in Orange County.

Conduct weighted analysis to identify high-need areas
- Conduct a weighted analysis using specific demographic factors within each area of growth to identify areas with children under the age 18, adults over 65 years, and high percentage of poverty-stricken families.

Select Census Tract
- A location of focus is established for a future age-friendly and inclusive park facility within the selected census tract.

Data and Analysis

Three sociodemographic factors were found to be significant in this study.
- Children under the age 18
- Adults over 65
- Families and people whose income in the past 12 months is below the poverty level

= Children (0.25) + Seniors (0.25) + Poverty (0.50)

Based on the weighted analysis, Census Tract 171.05 is the highest weighted percentage due to a high population of children and seniors. However, the percentage of individuals whose incomes are below the poverty level is lower in comparison to other census tracts. This census tract has an overall current population of 18,364 people that are served by three parks (2017 5-Year ACS Estimates).

Combining the previous quantitative analysis with a site inventory, Census Tract 135.07 as a more appropriate option for this exercise. With a population of 7,402 people, this area currently has no public parks or recreational facilities (2017 5-Year ACS Estimates). At the 2nd highest weighted percentage, the population of seniors is lower, however, the population of children under 18 years is higher.

Based on the lack of public parks within Census Tract 135.07, this area is selected as an appropriate option to further analyze selection of vacant parcel, a cost analysis, and concept plan.

Weighted Analysis - Populations of Children and Seniors & Poverty Levels for Applicable Census Tracts

Census Tract	Weighted Percentage of Children Under 18 Years Old (0.25)	Weighted Percentage of Seniors Age 65 and Over (0.25)	Weighted Percentage of Families and People Whose Income in the Past 12 Months is Below the Poverty Level (0.50)	Total of Weighted Percentages
Census Tract 171.05	7.93%	15.25%	2.50%	25.68%
Census Tract 135.07	6.25%	1.25%	13.95%	21.45%
Census Tract 179.02	3.78%	8.45%	3.90%	16.13%
Census Tract 166.01	5.48%	2.53%	6.40%	14.40%
Census Tract 168.03	4.90%	3.13%	6.20%	14.23%
Census Tract 168.06	5.35%	2.55%	6.20%	14.10%
Census Tract 167.30	7.25%	2.50%	4.30%	14.05%
Census Tract 168.07	6.43%	2.00%	5.20%	13.63%
Census Tract 166.02	6.35%	2.30%	4.15%	12.80%
Census Tract 171.04	7.58%	2.28%	2.60%	12.45%
Census Tract 178.02	5.73%	4.10%	1.95%	11.78%
Census Tract 168.04	5.40%	2.13%	4.00%	11.53%
Census Tract 167.33	4.88%	4.80%	1.50%	11.18%
Census Tract 167.34	6.13%	2.63%	2.15%	10.90%
Census Tract 168.02	6.55%	2.88%	0.95%	10.38%
Census Tract 167.28	4.58%	3.85%	1.45%	9.88%

Source: 2017 5-Year ACS Estimates, U.S. Census Bureau
Footnote: Table illustrates the weighted analysis for the census tracts located in the nine locations of need identified by the Orange County Parks Master Plan. This table is in order from the highest weighted percentages to the lowest.

Proposal

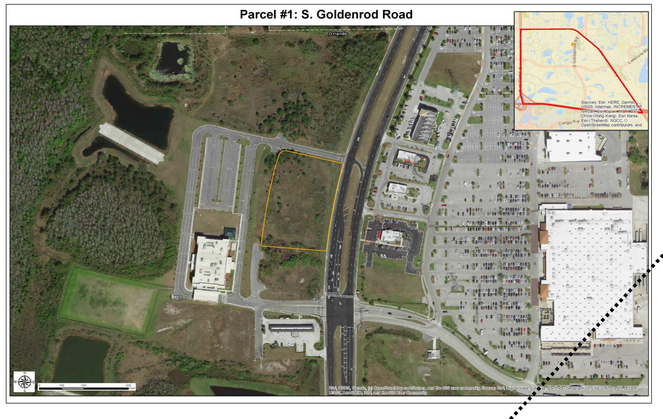
The recommendation to increase access to children, seniors, and low-income families while also meeting the need of future population growth begins with the planning for a new park facility located within Census Tract 135.07. The recommended parcel for a new park facility was selected based on the following factors:
- Access off an established roadway
- Cost
- Between 1-5 acres
- Zoning and Future Land Use
- Adjacency to residential development
- Compatibility with surrounding properties

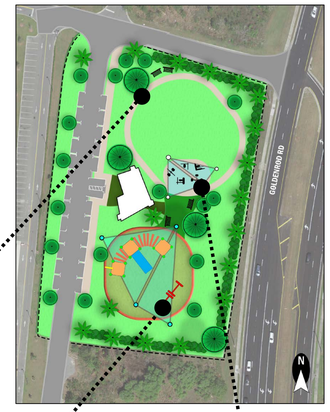
Parcel Information:
- Parcel ID: 23-23-30-3045-03-007
- 2.578 acres (S. Goldenrod Road)
- Access: Off of Goldenrod Road
- Current Market Value: $1,123.00
- DOR use Code: 1000- Vacant Commercial
- Jurisdiction: Orlando
- Zoning: PD/AN Planned Development / Aircraft Noise
- Future Land Use: Industrial
- Adjacency to Residential: 0.3 miles away from a residential area
- FEMA Floodplain: Zone A
- Adjacent to a Charter school and next to a 2nd vacant lot

Age-Friendly Park Features
- Open Space for free-form play
- Outdoor fitness equipment
- Shaded walking path
- Small park shelter with tables

Funding and Financials:
- Land Acquisition
- Partner with Advent Health or AARP for exercise park equipment to promote healthy living communities and AARP's certification of Orlando as an age-friendly city.

Parcel #1: S. Goldenrod Road





Cost Analysis for Age-Friendly Park Facility in Orange County

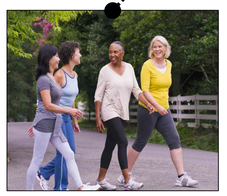
Amenities	Estimated Size	Cost
Land acquisition	2.578 acres	1,123.00
Fitness Path/Exercise Area	992 sq. ft	$20,000.00
Small Shelter	589.11 sq. ft	$25,000.00
Small Open Area	4,914 sq. ft	$7,500.00
Small Playground	1,987 sq. ft	$100,000.00
Small Picnic Area	987 sq. ft	$4,000.00
Color Design-Walkway	13,228 sq. ft	$79,794.00
Total Estimated Cost		**$237,417.00**

Source: Cost Analysis for Improving Park Facilities to Promote Park-based Physical Activity (2015)

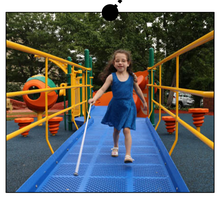
Construction Estimates

Development	Estimated Costs Per Unit	Costs
Avg. Land Grading Costs	$ 2.00	$ 224,604.62 per sq. ft
Tree Removal	$ 500.00	$1,289 per acre
Parking Lot construction	$ 300.00	$ 30,000.00 for 10-29 spaces
Parking Lot Labor	$ 3.00	$ 28,268.04 per sq. ft
Total		**$ 255,893.62**

Source: HomeAvisor.com (2020)



A fitness and walking path will allow for the elderly park patrons to walk leisurely along a trail with adequate shade and seating.



Playground equipment will be accessible to children of all ages and their families, and inclusive for children of all abilities.

Outdoor fitness equipment should be inclusive and attract park patrons of all ages and abilities. Such equipment will encourage physical activity through balance and strength exercises.

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IDS6954 Capstone II

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Introduction

The Trust for Public Land says that “everyone deserves a park within a 10-minute walk of home” (2019). This objective can be accomplished through proper planning in proximity, availability, and quality recreational facilities to appropriately serve its surrounding population demographics. Research shows that low-income and minority neighborhoods are 4.5 times more likely to not have access to public recreational facilities with quality conditions (Mowen, 2012). Although 63% of City of Orlando residents are estimated to live within a 10-minute walk of a park, compared to the national average of 54%, many low-income and low-access communities in greater Orange County remain underserved in recreational facilities, including parks, to maintain proper health (The Trust for Public Land, 2019). With this in consideration, in conjunction with demographic and socioeconomic factors within Orange County, the evaluation of recreational availability pertaining to disenfranchised groups is essential to ensuring the most beneficial social, health, and wellness outcomes for low-income and low-access populations. A comprehensive analysis of high need areas within Orange County allowed for the appropriate selection of a vacant parcel for an informative conceptual proposal and cost analysis for an all-inclusive and age-friendly park. With a lack of public recreational facilities and over 27% of households with a median income below the poverty line, Census Tract 135.07 was found to be the most suitable location for a future recreational facility to meet the demand of an increasing population within Central Florida especially pertaining to seniors, the fastest growing population group in Florida.

Background

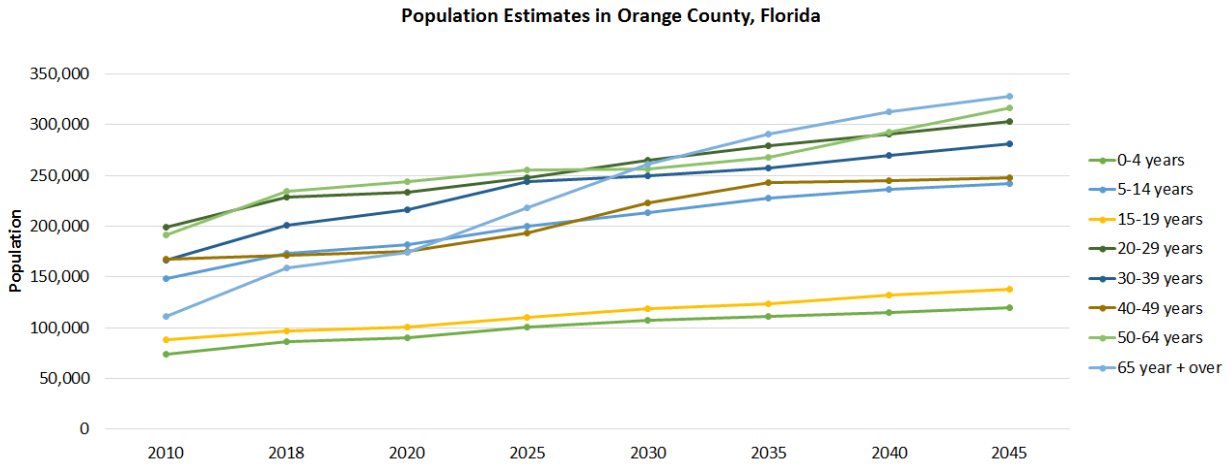
The availability and access to recreational facilities are vital to an individual's quality of life, as it influences physical health, mental health, and socialization. Recreational facilities are a social determinant of health within the natural and built environment, defined as buildings or places operated by a public, semi-public, or private organization that provide a particular recreational use or uses such as trails, fishing, camping, hunting preserves, parks, playgrounds, and other similar activities (The Free Dictionary By Farlex, 2019). Increased access to physical activities through public parks and recreational facilities has shown to be an effective strategy in improving health and combating issues like poor nutrition, hunger, childhood and adult obesity, and physical inactivity (NRPA, 2019). Additionally, increased access to recreational facilities has shown to provide opportunities for cultural, social, physical and intellectual activities, increase equity amongst individuals, improve economic prospects, and produce a sense of place within a community (Rabinowitz, 2008). Ultimately, affordable access to recreational facilities works toward preventing and improving the national epidemic of childhood and adult obesity, and better serves communities with an improved quality of life.

Justification

Within its 903 square miles, Orange County has 106 recreation facilities and nine green spaces (Orange County Government, 2016). However, these facilities are not evenly distributed within communities, especially sparse in low-income and low-access areas. According to the United States Census Bureau, Orange County is projected to have an 11% population increase by 2030 (2010). This will impact the demand for many public services, including the number of parks and recreation services offered in Orange County in low-income and low-access areas.

Figure 1

Populations estimates in Orange County, Florida



Note. Bureau of Economic and Business Research, 2019

As reported by the Orange County Planning Division's Population Study 2005-2030, the 15.6% of the county population is in poverty, a higher sum than the state average, and experiences a lack of equal access to these park facilities, prompting a need for low-income/low-access services. Additionally, the retired and elderly populations are the fastest-growing age group within Orange County and will reshape the types of recreational facilities and programs implemented throughout this jurisdiction (Orange County Government, Florida, 2016). The population of individuals 65 years and older will increase by approximately 62% by 2030 based on BEBR Population Projections, prompting a special consideration of senior services. With this expected increase in the overall population, many of whom live in impoverished conditions in low-income/low-access communities underserved by parks and programming, the focus of the analysis moving forward is geared towards policy regulations and all-inclusive interventions led by these projections (Orange County Government, Florida, 2016).

Literature Review

Neighborhood context is an important factor in the promotion of physical activity participation especially within areas where recreational facilities are provided in combination with mixed land uses, street connectivity, and higher residential densities (Astrid et. al, 2011). The World Health Organization aims to increase the percentage of community urban design plans that facilitate physical activity. This can be accomplished by obtaining commitments from local governments to increase the number of parks and recreational facilities (2007). The development of recreational opportunities within areas of higher low-income populations is especially important because these populations are often presented with barriers, including limited after-school program availability, program fees, and transportation/location accessibility (Christiana et.al, 2017).

Recreation opportunities are important for youth development. Recreation services can help to reduce behavior problems, improve physical health, and build social skills within the younger populations. The following nine results are important for youth recreation participation: contributes to the reduction in juvenile delinquency; reduces negative behaviors; exposes youth to less violence; advances children's educational performance and improves the quality of the future workforce and the national economy; decreases health care costs related to childhood obesity; increases the economic contributions of young people to society when they become adults; and aids in youth development of self-confidence, optimism, and initiative (Witt & Caldwell, 2010). Research has shown that regular physical activity in younger populations can increase brain activity and improve academic achievement (Hillman et.al, 2008).

Parks and recreation facilities and programming that cater to the senior population can have a significant impact on their physical health and welfare. As of 2016, 62.2% of Orange

County residents are overweight or obese by the age of 65 (Florida Department of Health, 2016). In 2001, the Centers for Disease Control and Prevention (CDC) surveillance data showed that about 23.1% of adults aged 65–74, and 35.9% of adults aged 75 or older are inactive, meaning they engage in no leisure time, household, or transportation physical activity (CDC, n.d). Physical inactivity can result in various health problems including, heart disease, diabetes, slower recovery times, and lowered immune systems. The Centers for Disease Control and Prevention also found that approximately 85% of adults age 65 years and over live with one or more of these six chronic conditions: diabetes, cardiovascular diseases, chronic obstructive pulmonary disease (COPD), asthma, cancer, and arthritis (CDC, 2015).

Regular physical activity is vital as primary and secondary prevention of many, if not all, of these chronic diseases (CDC, n.d). It was found that regular physical activity can substantially delay the onset of functional limitations and loss of independence. Researchers found that inactive, nonsmoking women at age 65 have 12.7 years of active life expectancy, compared with 18.4 years for highly active, nonsmoking women (CDC, n.d.). Regular exercise can also reduce medical costs especially as individuals increase in age. This was found to pertain especially to women (CDC, n.d.).

Parks and recreation services orientated toward seniors will also promote improvements to their mental health as well. Social isolation can often occur due to the lack of exposure to and declining connections with friends and acquaintances. Physical activities such as group exercise classes can be a significant component of an adult's social activity and lifestyle. Social isolation can result in depression, stress, and anxiety. Research on the effects of social isolation has shown that the lack of social connections with others can be as damaging to our health as smoking 15 cigarettes a day (Holt-Lunstad, 2015). This is a growing health concern that has been seen not

only within Orange County but throughout the nation. Investing in senior recreational programs and facilities can help offset rising health care costs while also strengthening social capital within our most vulnerable populations. Providing adequate resources to seniors will help to strengthen social ties within communities throughout Orange County.

Physical accessibility for people with mobility disabilities is also an important factor to consider when assessing current and future recreation needs. 74.6% of Orange County's senior population suffers from a disability (U.S. Census Bureau, 2013-2017) and inadequate or poorly maintained recreational facilities can not only convey a feeling of exclusion but also imposes a barrier for individuals who seek to participate in outdoor recreational activities (Williams et al., 2004). Healthy aging can be analyzed using a comprehensive whole-person wellness model, which is categorized into the following six dimensions; physical, emotional, spiritual, intellectual, occupational, and social (Russ, 2009). Community centers often focus on the physical health of seniors; however, incorporating all six dimensions of wellness can help to build more resilient senior programs, facilities, and services.

Methodology for Location Elimination

Moving forward with an identified area of focus with a catalog of best practiced planning interventions in the arsenal, further analysis will be needed to recommend probable interventions. This proposal identifies strategic steps to gain a better understanding of the identified area's specific recreational needs effectively while considering the quality and access to existing parks, facilities, and programs available. The Orange County Parks and Recreation Master Plan performed a needs assessment through multiple planning exercises and community outreach techniques in order to identify the current and future needs of Orange County residents. The strategies used included focus groups, community meetings, an online survey, commissioner

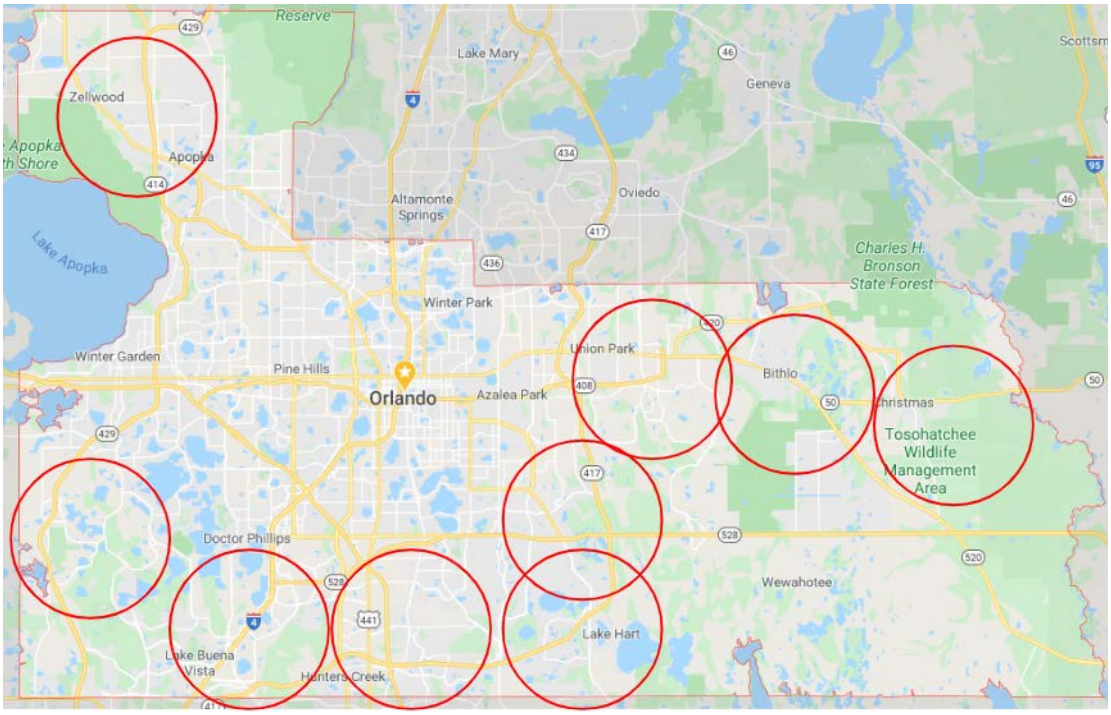
meetings, and statistically valid surveys. The consultants of the plan, Tindale Oliver, compiled their findings within a ranking system. The rankings were based on the number of times a facility or program request was made at one of the various meetings, or a facility need was voiced by 20% or more of the population through the online survey. Also, to be considered a priority was based on the importance of unmet needs on the statistically valid survey matrix which looked at the correlation between expressed facility or program needs and whether or not those demands were already being met. In conjunction with population projections on the census tract level, nine locations were identified for the future district and community park locations to meet recreational demand (OCGF, 2016).

The nine locations identified were used as a baseline for our evaluation of recreational needs pertaining to individuals of all ages. These locations included census tracts in the following areas: Apopka/Zellwood, Tidenville-Windermere-Horizon West, Meadow Woods-Taft-Southchase, Lake Buena Vista, Lake Nona, Vista East, South Alafaya, Bithlo, and Christmas (Map 1). Several of these areas were within three of the six administratively governed districts within Orange County in which youth/teen sports and senior programs were of high importance as well as natural areas, dog parks, and trails (OCGF, 2016). With the needs of all in consideration, a weighted analysis of three socioeconomic factors of significance was conducted to narrow down the census tracts within these nine areas to focus on one census tract of specific needs. The three datasets of focus were the population of children under the age of 18, the percentage of seniors ages 65 and older, and the percentage of poverty-stricken families. These datasets were significant within our analysis to provide a comprehensive and systematic way to target a specific community composed of a balanced population of children and seniors whose families are on a fixed and/or low income with zero or limited accessibility to any public

recreational facilities. This also allows for further considerations of how poverty impacts one's ability to visit and use recreational facilities in regard to transportation, disabilities, location, cost of living, etc.

Figure 2

Map of Orange County, Florida - Identification of Nine Locations of Need for Recreational Facilities



Notes. Google Maps, Orange County Government, Florida (2016). Parks and Recreation Master Plan.

By utilizing the 2017 American Community Survey (ACS) 5-Year Estimates for the applicable census tracts within the nine locations, the percentage of the current population of children under 18 years old, the percentage of the current population of individuals ages 65 years and over, and the percent of families and people whose income were below the poverty level were weighted and calculated together to indicate which census tract would be best suited for an all-inclusive recreational facility. The percentage of children under the age of 18 and the percent

of seniors age 65 and older was selected as a dataset to denote the significantly underserved youth and elderly populations within these nine locations. These datasets were weighted equally, each at 0.25, for a total of half of the weighted analysis calculations to provide a leveled approach for population. The third factor, poverty, comprised the other half of the weighted percentage as income status was a prioritized factor in the systematic evaluation to target those most in need who may not be able to afford private recreational activities or may not have funds to cover transportation costs to travel to and from recreational facilities.

Data and Analysis for Location Elimination

The weighted analysis performed provided certain implications to justify the location selection of focus for this proposal. Overall, most areas had statistically significant populations of children under the age of 18 as all census tracts had over 18% of their population within this age bracket. Based on the weighted analysis, Census Tract 171.05, located within Windermere, has the highest weighted percentage particularly due to its population of children and seniors which are much higher than the other census tracts evaluated. However, the percentage of individuals whose incomes are below the poverty level was lower in comparison to other tracts at 5 percent (Table 1). Census tracts within the Meadow Woods, Taft, and South Chase, and the Zellwood and Apopka region typically had lower to mid-range poverty levels.

Census Tract 171.05 has an overall population of 18,364 people that are served by three parks (2017 5-Year ACS Estimates). With the lower poverty level and amount of public recreational facilities in consideration, a manual analysis was applied to this systematic approach which illustrated Census Tract 135.07 as a more appropriate option for the proposal. With a population of 7,402 people, this area currently has no public parks or recreational facilities (2017 5-Year ACS Estimates) which incorporated with the weighted analysis was a significant factor

within the overall approach and intent of this exercise. As the 2nd highest weighted percentage, Census Tract 135.07 had a lower population of seniors (approximately 100 elderly individuals) yet presents opportunities for population growth which is projected to occur over the next several years. It was important to consider this as well as the population of children less than 18 years of age which is 25% (Table 1). Based on the lack of public parks within this census tract, poverty levels, current and future population, this area was selected as an appropriate option to further analyze in regard to the selection of a vacant parcel, cost analysis and concept plan.

Table 1

Weighted Analysis of Children and Senior Populations & Poverty Levels for Applicable Census Tracts

Census Tracts of Nine Locations Identified within Orange County, Florida	Percentage of Children Under 18 Years Old	Percent of Seniors Age 65 & Older	Percentage of Families and People Whose Income in the Past 12 months is below the Poverty Level	Total of Weighted Percentages
Census Tract 171.05	31.7%	61.0%	5.0%	25.68%
Census Tract 135.07	25.0%	5.0%	27.9%	21.45%
Census Tract 179.02	15.1%	33.8%	7.8%	16.13%
Census Tract 166.01	21.9%	10.1%	12.8%	14.40%
Census Tract 168.03	19.6%	12.5%	12.4%	14.23%
Census Tract 168.06	21.4%	10.2%	12.4%	14.10%
Census Tract 167.30	29.0%	10.0%	8.6%	14.05%
Census Tract 168.07	25.7%	8.0%	10.4%	13.63%
Census Tract 166.02	25.4%	9.2%	8.3%	12.80%
Census Tract 171.04	30.3%	9.1%	5.2%	12.45%
Census Tract 178.02	22.9%	16.4%	3.9%	11.78%
Census Tract 168.04	21.6%	8.5%	8.0%	11.53%
Census Tract 167.33	19.5%	19.2%	3.0%	11.18%
Census Tract 167.34	24.5%	10.5%	4.3%	10.90%
Census Tract 168.02	26.2%	11.5%	1.9%	10.38%
Census Tract 167.28	18.3%	15.4%	2.9%	9.88%

Note. 2017 5-Year ACS Estimates, U.S. Census Bureau

Notes. Table 1 illustrates the weighted analysis for the census tracts located in the nine locations of need

identified by the Orange County Parks Master Plan. This table is in order from the highest weighted percentages to the lowest.

Table 2

Calculations for Weighted Analysis for Applicable Census Tracts as Depicted in Table 1

Census Tract	Total of Weighted Percentages	Weighted Percentage of Children Under 18 Years Old (.25)	Weighted Percentage of Seniors Age 65 & Over (0.25)	Weighted Percentage of Families and People Whose Income in the Past 12 Months is Below the Poverty Level (0.50)
Census Tract 171.05	25.68%	7.93%	15.25%	2.50%
Census Tract 135.07	21.45%	6.25%	1.25%	13.95%
Census Tract 179.02	16.13%	3.78%	8.45%	3.90%
Census Tract 166.01	14.40%	5.48%	2.53%	6.40%
Census Tract 168.03	14.23%	4.90%	3.13%	6.20%
Census Tract 168.06	14.10%	5.35%	2.55%	6.20%
Census Tract 167.30	14.05%	7.25%	2.50%	4.30%
Census Tract 168.07	13.63%	6.43%	2.00%	5.20%
Census Tract 166.02	12.80%	6.35%	2.30%	4.15%
Census Tract 171.04	12.45%	7.58%	2.28%	2.60%
Census Tract 178.02	11.78%	5.73%	4.10%	1.95%
Census Tract 168.04	11.53%	5.40%	2.13%	4.00%
Census Tract 167.33	11.18%	4.88%	4.80%	1.50%
Census Tract 167.34	10.90%	6.13%	2.63%	2.15%
Census Tract 168.02	10.38%	6.55%	2.88%	0.95%
Census Tract 167.28	9.88%	4.58%	3.85%	1.45%

Note. 2017 5-Year ACS Estimates, U.S. Census Bureau. Footnote: Table 2 illustrates the weighted analysis calculations for the census tracts located in the nine locations of need identified by the Orange County Parks Master Plan. This table is in order from the highest weighted percentages to the lowest.

Utilizing the specific location elimination methods previously mentioned, as shown in Table 1, with the inclusion of manual analysis, the census tract selected was 135.07 which is the Vista East region of Southeast Orlando. Located north of the 528-Beachline Expressway, east of South Semoran Boulevard, and southwest of Narcoossee-State Road 15, Census Tract 135.07 has a lower population of seniors in comparison to other census tracts, however, has a higher percentage of children and families who are poverty-stricken. According to the U.S Census Bureau, roughly 29% of families and individuals are living below the poverty level and the overall unemployment rate in the census tract is 29.2% (U.S. Census Bureau, 2013-2017). With the consideration that there are no public recreational facilities to serve the individuals living within this area, these are significant factors that played a role when selecting the location of focus. Additionally, Census Tract 135.07 met the low-income and low-access household thresholds as defined by the United States Department of Agriculture as a food desert. Households within this boundary are low-income which is defined as having a poverty rate of 20% or greater, or a median family income at or below 80% of the statewide or metropolitan area median family income. Also, these households were categorized as low-access which is defined as having at least 500 individuals and/or at least 33% of the population living more than one mile from a supermarket or large grocery store (ten miles, in the case of rural census tracts).

Orange County is experiencing a large population growth as construction and land development continues to increase housing and businesses throughout the region. Vista East was selected as an area identified by the Orange County Master Plan as a location that will not have adequate access to public parks and facilities as population anticipated population growth is to significantly impact these communities. Not only does this census tract have no public

recreational facilities to serve its residences, the private recreational facilities in the area cater only to those living within planned communities who often are not living below the poverty line. There are several private gyms such as CrossFit and various training centers that serve the median age of 29.3 (U.S. Census Bureau, 2013-2017). There is also no senior center located within the census tract, with the closest center being located approximately 8 miles from the eastern boundary. Additionally, nearly 29.2% of individuals 65 or older within this census tract have a disability, ranging from visual, hearing, cognitive, ambulatory, self-care, and independent living difficulties (U.S. Census Bureau, 2013-2017). These factors will dictate the selection of the vacant parcel for the implementation of a specific recreational area as well as the infrastructure and accommodations within the design of said recreational facility or park.

Methodology and Criteria for Parcel Selection

As a central part of addressing age-friendly recreational needs within Census Tract 135.07, identifying adequate vacant properties for the implementation of an all-inclusive recreational facility was a key component of this proposal for the East Central Florida Planning Council. The utilization of DOR use codes and GEOcode records for Census Tract 135.07 allowed for the analysis of certain vacant properties within the Vista East area. The available vacant properties within Census Tract 135.07 were categorized based on the DOR use codes which indicate parcels of land based on their use which has implications on their taxable value. Table 3 highlights the DOR use codes that were used to capture vacant parcels within this geographic area.

Table 3

DOR Use Codes for Selection of Vacant Parcels within Census Tract 135.07

DOR Use Code	Description
0000	**Vacant Residential**
0001	**Vacant Residential**
0004	**Vacant Condo**
0019	**Vacant Homeowners Association**
1000	**Vacant Commercial**
1003	**Vacant Multi-Family (10 Units Or More)**
1004	**Vacant Condo Site**
4000	**Vacant Industrial**
7000	**Vacant Institutional**

Source: Orange County Property Appraiser's Website. Footnote: Table 3 denotes the DOR use codes utilized to identify vacant properties within Census Tract 135.07

With the use of geographic information systems (GIS) tools, initial vacant parcels were identified based on the DOR use codes identified in Table 3. The property records information used for geocoding with ArcGIS dated back to early 2019, therefore, a manual analysis of aerial views and site visits of Census Tract 135.07 occurred to further ensure the most accurate depiction of what parcels were vacant in these boundaries. Additionally, certain DOR use codes were eliminated for our analysis as these codes generated parcels which were unfit to be utilized as a park (landlocked by residential development, too small, industrial condominium locations, etc). Those DOR use codes eliminated include 0004 - Vacant Condo, 0019 - Vacant Homeowners Association, 1004 - Vacant Condo Site, and 7000 - Vacant Institutional.

In order to further narrow down the number of vacant parcels for the appropriate selection of a location for an all-inclusive recreational facility, an in-depth primary and secondary analysis of the remaining vacant parcels occurred. Based on the characteristics of Census Tract 135.07,

certain factors of the parcel were critical and a primary focus for selection. The first primary factor of consideration was access off an established roadway. Access was an important factor in the location selection to ensure that vehicular and, most importantly, pedestrian traffic was able to easily travel to the location. The parcel would need to be located off of and/or proximate to a major thoroughfare. The majority of the vacant properties within Census Tract 135.07 were industrial and commercial land uses as well as a planned development for an institutional office park. With this in consideration, it was important to select a location in which roadway improvements would be no existent or minimal to avoid additional costs. In consideration of costs, the overall acquisition of the site was a primary factor of consideration to allow for more funds to be accessible for construction and equipment costs. The Orange County Recreation Master Plan proposed purchasing land for parks at a rate of $105,000 per acre in which were utilized as our basis in comparing the market value of each parcel. Another primary factor to consider was the size of the parcel. Typically, neighborhood parks are a minimum of five acres while a pocket park ranges from 1 to 5 acres. These acreage requirements in conjunction with the other primary factors allowed for the selection of an appropriately sized parcel that was easily accessible and cost-efficient.

The secondary analysis allowed for the consideration of other important factors that were important but not the main focus in the selection of the vacant parcel for our recreational proposal. These factors include entitlements, adjacency to residential development, compatibility with surrounding properties, and flood zone classifications. The zoning and future land use of the vacant parcel is key in understanding what is permitted on the property. The focus of the recreational facility during this analysis was for a suitable site for where outdoor recreation was permitted. Whether in the City of Orlando or Orange County, the zoning and future land use was

identified for each parcel to see if outdoor recreation would be permitted. Adjacency to residential development was also another factor of consideration to allow for walkability to the location. A range from a quarter-mile to a half-mile was identified for each parcel to see how far away the nearest residential subdivision or apartment complex was located. Compatibility with surrounding properties was another factor in our secondary analysis as the location of an outdoor recreational area should be fitting with the adjacent parcels. The majority of Census Tract 135.07 is characterized by commercial, industrial, and professional businesses and uses; therefore, it was important to select a site where a park would make sense. Flood zone classifications were a consideration for the site selection, however, was not a significant factor as this characteristic would dictate certain aspects of a potential vertical construction on the parcel.

Data and Analysis for Parcel Selection

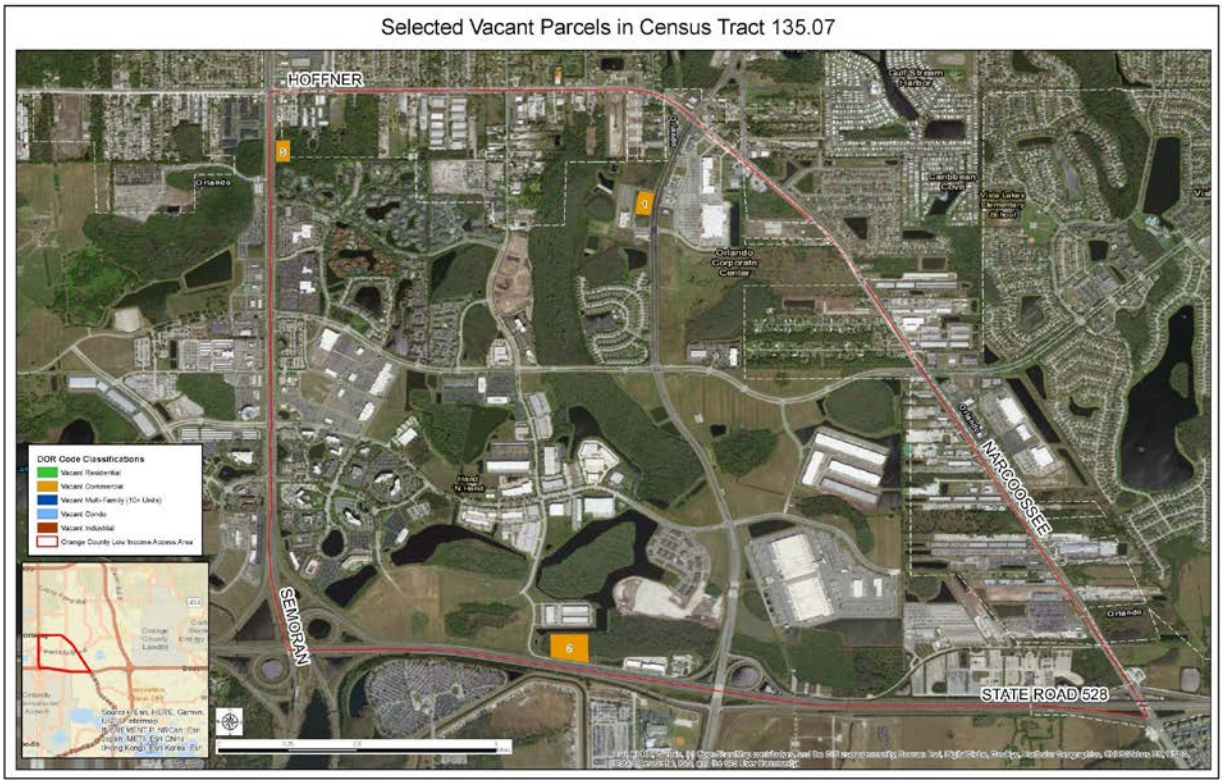
With the use of geographic information systems (GIS) tools, 54 parcels were initially identified as vacant based on the DOR use codes identified in Table 3. The manual analysis of aerial views and site visits of Census Tract 135.07 as well as the elimination of certain DOR use codes as previously mentioned allowed the list to be further narrowed down to 36 parcels which were actually vacant and more appropriate to be included for the consideration of a future park location. The in-depth primary and secondary analysis based on the specific location criteria allowed for a critical and comprehensive overview of all vacant parcels within this area in order to identify the location that would best fit the need and priorities of the end goal to establish a public park that benefits the community as a whole.

By performing this analysis with primary and secondary factors of consideration (Appendix 1), 36 parcels were narrowed down to three parcels within Census Tract 135.07 (Map 2). The suitability of each parcel was discussed based on the surrounding establishments,

infrastructure, and land cost, which led to the final choice of the proposed parcel. Located off of South Goldenrod Road, Parcel Identification Number 23-23-30-3045-03-007 (Map 3) is approximately 2.578 acres and has a current market value of $1,123.00 which accounts to $435.61 per acre. This parcel is within Orlando's jurisdiction and has a DOR use code of 1000 - Vacant Commercial. The zoning for the property is PD/AN which stands for Planned Development/ Aircraft Noise Overlay. The parcel is within the planned development known as the Orlando Corporate Center which is a master-planned commercial, industrial, and professional development to serve the Southeast Orlando area. The parcel is within the Aircraft Noise Overlay which allows for the management of locations sensitive to aircraft noise around the Orlando International Airport and Orlando Executive Airport to ensure the continued operation of these airports and airfields are not compromised and any sensitivity issues at such locations are addressed. The governing ordinances of the Orlando Corporate Center do not prohibited nor explicitly state if outdoor recreation is permitted, however, this may be resolved through a PD amendment which would add this use to the governing ordinances or by working with the City of Orlando dependent on the flexibility of their land development code to accommodate this use within this location. The future land use of the location is industrial which may require a small scale comprehensive land use change if industrial does not support this use, however, the PD zoning regulations may allow this without this change. Another factor that was significant to this location is its adjacency to residential development as well as a school site. The closest residential area is 0.3 miles away which would allow the park to be walkable. A charter school is adjacent to the property which would allow for children to better utilize this facility.

Figure 3

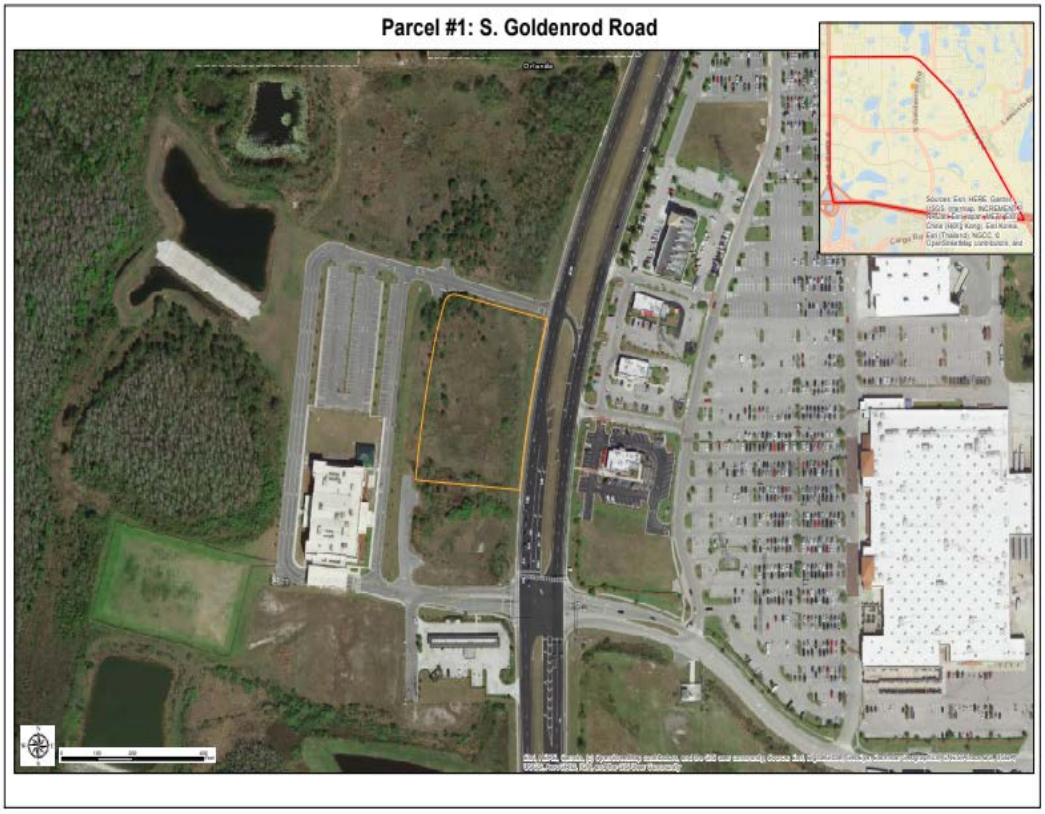
Map of “Top Three” Vacant Parcels within Census Tract 135.07



Note. Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, *Note.* Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Footnote: Map 2 showcases the top three vacant parcels that were further evaluated within Census Tract 135.07

Figure 4

Map of Selected Vacant Parcel within Census Tract 135.07



Note. Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, *Note*. Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Footnote: Map 3 showcases the selected vacant parcel within Census Tract 135.07

Industry Best Practices for Interventions and Policy Recommendations

It is intended for the area of focus to be the location of effective interventions and strategies to improve the quality and access to public parks and recreational programming. Urban planners can utilize several strategic tools and processes to intervene in focus areas, for example upgrading urban design elements and make-up that outfits a park area, collaborating with local transportation authorities to increase access to disenfranchised communities by adding bus stops

and hosting public engagement events to discuss with citizens of the public to hear explicitly their concerns and wishes for improvement (Moreno, 2017). Planners must consider implementing best practices, by using case studies and examples from other municipalities to understand how to adapt policies and programs to fit into their own needs and criteria. Using best practices from evidence-based programs can keep older adults healthy and active for years to come (National Recreation and Parks Association, 2017).

Figure 5

Proposed park features for age-friendly park

Note. Parks can serve more members of the community by adding facilities that engage multiple generations through carefully planned facilities and park equipment, like shaded playgrounds and paved walking paths. (Recreation Management, 2016)

Several evidence-based programs for older adults offered by park and recreation agencies across the United States include interventions for widely recognized health concerns, such as diabetes, fall prevention, and arthritis. 75% of park agencies in suburban and urban areas offer one or more evidence-based recreational programs for seniors in their communities, with less availability of such programs in rural areas (National Recreation and Parks Association, 2017).

Additionally, these programs take form in activity programs offered by local park agencies like Tai Chi: Moving for Better Balance to reduce falls and Enhance Fitness programs geared towards encouraging physical activity in older adults struggling with pain and stiffness resulting in chronic arthritis.

Furthering the discussion of best practices, partnerships, and collaboration efforts will be critical in implementing strategies effectively to meet the needs of the focused demographic. The Healthy Aging in Parks Survey details “more than nine in 10 park and recreation agencies partner with outside organizations (National Recreation and Parks Association, 2017)” to better serve the aging population. 63% of park agencies are working with specialized agencies that focus on aging, like the American Association of Retired Persons (AARP), to implement and market strategic programs.

Best practices for urban planners must always involve the engagement of various stakeholders involved with the planning, maintenance, operations, design, and use of existing and future parks. This engagement process typically takes on the form of an advisory board or temporary committee of a diverse group of citizen volunteers, hopefully, representative of the communities and areas of focus (University of Delaware, 2018). Public engagement, in this form, is a low cost to stakeholders; however, it is very generous with time. It will be necessary, considering the time constraints and human resources, to adapt this intervention tool to meet the capacity of the planners in practice. This may take the form of more passive engagement opportunities on-site to engage the public at the location of focus. Engaging multiple populations such as seniors or those with disabilities in conversation, practical and focused interventions may be implemented to target the specific needs of the community.

Volunteerism as a means of community engagement and increasing social activity for the benefit of a healthier lifestyle must be a priority to engage the senior population in the community that is constantly growing (AARP Livable Communities, 2018b). Working with senior living communities in these areas to encourage volunteer engagement at off-site, partnered facilities such as the public library to read children's books and community centers to teach cooking classes to the youth can have a significant effect on cognitive, physical, and social health.

Park Design and Cost Analysis

Considering the size of the selected parcel site, park design plays a critical role to maximize usage. As previously mentioned, the 2.5-acre site must be designed accordingly to ensure proper management. Analyzing parks similar in size to the selected parcel in the Orange County area, a combination of recreational facilities may be utilized in order to achieve this. A critical feature for the proposed pocket park is recognized as a small shelter area such as a gazebo with benches. This may act as a shaded gathering space for club meetings or picnics (Floyd et.al., n.d). Gathering spaces are an important design feature for all populations but provide a special opportunity for two specific age groups to congregate together: youth and seniors. A typical small shelter has dimensions of approximately "30-ft × 30-ft and includes a concrete pad, with a 6-ft × 50-ft concrete access walk, as a complete unit" (Floyd et. al, n.d). A shaded shelter area such as a small gazebo is estimated to cost approximately $3,000. Similarly, a small open space may serve multiple purposes for the community as both a place for social gatherings as well as a location for recreational activity such as running or small scrimmage games.

Regular maintenance such as lawn services would be required to preserve the space as a recreational area and the cost of this would alter depending on the size of the allotted open space. Another key feature of the proposed pocket park is the inclusion of a fitness zone or outdoor gym facility. Fitness zones are essential for supporting the overall health of the community and allow portions of the population that may otherwise be unable to afford a gym membership the

Figure 6

Conceptual Park Map for Selected Vacant Parcel within Census Tract 135.07

Note. Image Source: (VeryWell Health, 2020), (Chicago Lighthouse, 2020), (GF OutdoorFitness, 2020)

opportunity to work out. Outdoor gym facilities are designed to be ADA accessible, ensuring that all members of the community can utilize and enjoy the space. Packages include specific gym equipment that targets strength training, cardio and balance (Floyd et.al., n.d). A study conducted on park usage with fitness zones found that installing fitness equipment correlated to “absolute increases” in roughly half of the parks studied and fitness zones were associated with increasing the level of physical activity from moderate to vigorous of those utilizing the park space (Cohen et. al., 2012). Fitness zones and outdoor gyms for a pocket park this size allow for 12 units to be installed and 24 users simultaneously and an estimated cost for a fitness zone of this size is anywhere between $10,000 to $30,000. Additionally, a small shaded playground is recommended as a means to encourage inclusive play. The “inclusive play” park equipment is essential to establish opportunities for different types of sensory play. The cost of inclusive play park equipment is dependent upon the size of the playground as well as the size of the shelter implemented; however, the cost is approximately $20,000 to $39,0000 to implement.

There are a number of financing and grant opportunities to aid in the development and creation of the proposed pocket park facilities. A potential area for partnership can be found in collaborating with a local hospital or healthcare provider that may be interested in providing ADA accessible fitness zone equipment. Orlando Health is highly interested in investing in community health projects that “improve the health and quality of life” of the surrounding community (Orlando Health- Community Sponsorship Form, n.d). Examining other parks that have utilized hospital partnerships in the past, Memorial Healthcare Systems in South Florida has offered six wheelchair accessible “Memorial Fitness Zones.” Furthermore, a prominent manufacturer of outdoor fitness equipment partners with National Cooperative Leasing (NCL)

for government and educational agencies. These types of financing and funding opportunities can aid in minimizing the upfront cost.

Conclusion

The absence of public parks in the census tract of focus provides future opportunities for partnerships within the health and transportation sectors. These partnerships can help remove barriers that limit access to physical activity (AARP Livable Communities, 2018a). Strengthening public and private partnerships between the Orange County Parks and Recreation Department and area agencies on aging, retirement communities, senior meal providers, hospitals and doctors' offices, local health departments, health insurance companies, and community-based organizations can have a beneficial impact for seniors in the area (Roth, 2017). Public-private partnerships can help to expand resources and identify deficiencies and strengths within existing programs and facilities. Analyzing these strengths and weaknesses can help to identify where services are lacking and incorporate practices that have shown to be successful in other locations within the county.

The availability of recreational facilities as a social determinant of health is a significant component to the health and wellness of the entire community within all individual age groups. As the population of Orange County continues to rapidly grow with a projected increase of 11% by 2030 (US Census Bureau, 2010), the demand for recreation will also increase. By 2030, the population of individuals 65 years and older will also increase by 62%. With this growth projection in consideration, proposing strategies and policies to increase age-friendly recreational facilities and programming are vital in the preservation of social connectedness and community health.

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Appendix

Appendix 1: Primary and Secondary Location Criteria Analysis

Parcel ID	DOR Use Code	Zoning	Future Land Use	Outdoor, Recreation Permitted	Access	Acreage	Current Market Value	Adjacency to Residential	FEMA Floodplain Map
25-23-30-0000-00-046	4000 - Vacant Industrial	I-C/AN	N/A	Permitted	Off of Narcoossee	0.035	$5,020.00	N/A	N/A
25-23-30-0000-00-067	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	Access off Narcoossee	0.144	$12,789.00	N/A	N/A
23-23-30-3050-00-080	1000 - Vacant Commercial	PD/AN	N/A	N/A	Off of Hoffner	0.156	$10,133.00	about 0.2 miles away from residential subdivision	N/A
302325587704000	1004 Vacant Condo Site	IND-1/IND-5	N/A	Permitted	N/A	0.17223298	$75,000.00	N/A	N/A
14-23-30-5240-13-047	0000 - Vacant Residential	A-2	N/A	N/A	N/A	0.184	$20,000.00	less than 0.1 miles away from residential subdivision	Zone X
302325001600030	1004 Vacant Condo Site	IND-4	N/A	Permitted	N/A	0.19	$123,750.00	N/A	N/A
302325001600001	1004 Vacant Condo Site	IND-4	N/A	Permitted	N/A	0.276	$180,000.00	N/A	N/A
25-23-30-0000-00-070	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	Access off Narcoossee	0.391	$45,737.00	N/A	N/A
14-23-30-5240-26-012	1000 - Vacant Commercial	C-2	N/A	N/A	Narcoossee/ Old Goldenrod	0.459	$90,691.00	less than 0.2 miles away from residential subdivision	N/A
25-23-30-0000-00-068	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	Access off Narcoossee	0.545	$70,861.00	N/A	N/A
27-23-30-0000-00-009	4000 - Vacant Industrial	I-P/AN	N/A	Permitted		0.599	$2,056.00	less than 0.2 miles away from residential subdivision	N/A
25-23-30-3845-02-000	4000 - Vacant Industrial	I-C/AN	N/A	Permitted	Off of Narcoossee Road	0.724	$225,267.00	0.3 miles away from residential subdivision	N/A
23-23-30-3053-02-000	1000 - Vacant Commercial	PD/AN	N/A	N/A	S Goldenrod Rd	0.794	$124,548.00	about 0.1 miles away from residential subdivision	N/A
22-23-30-0000-00-043	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	Patch Road	0.873	$248,632.00	N/A	N/A
22-23-30-2026-00-030	1000 - Vacant Commercial	AC-1/AN	N/A	Permitted	N/A	0.934	$570,527.00	N/A	Zone A
22-23-30-2026-00-020	1000 - Vacant Commercial	AC-1/AN	N/A	Permitted	Access of S Semoran Blvd	0.934	$520,284.00	less than 0.2 miles away from	Zone A

								residential subdivision	
22-23-30-0000-00-040	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	N/A	0.999	$116,676.00	N/A	N/A
23-23-30-3050-00-070	1000 - Vacant Commercial	PD/AN - Orlando Corporate Aircraft Noise 58.370 - 58.384	COMM-AC - Community Activity Center	N/A	Access of Hoffner	1.013	$511,432.00	about 0.2 miles away from residential subdivision	Zone X
23-23-30-3050-00-100	1000 - Vacant Commercial	PD/AN - Orlando Corporate Aircraft Noise 58.370 - 58.384	COMM-AC - Community Activity Center	N/A	Access of S Goldenrod and Marketplace Dr.	1.067	$664,334.00	less than 0.2 miles away from residential subdivision	Zone X
14-23-30-5240-09-074	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted		1.093	$77,661.00	N/A	N/A
23-23-30-3045-02-000	1000 - Vacant Commercial	PD/AN - Orlando Corporate Aircraft Noise 58.370 - 58.384	INDUST - Industrial	N/A	S Goldenrod Rd	1.349	$839,750.00	about 0.2 miles away from residential subdivision	Zone X
27-23-30-5045-00-020	1000 - Vacant Commercial	O-2/AN	N/A	N/A	Access off Hazeltine National Drive	1.369	$266,048.00	about 0.4 miles away from residential subdivision	Zone X
25-23-30-3845-01-000	4000 - Vacant Industrial	I-C/AN - Industrial Commercial/ Aircraft Noise	INDUST - Industrial	Permitted	Off of Narcoossee Road	1.396	$434,249.00	0.3 miles away from residential subdivision	Zone X
25-23-30-0000-00-102	1000 - Vacant Commercial	IND-1/IND-5		N/A	Access off Narcoossee	1.419	$43,873.00	less than 0.2 miles away from residential subdivision	Zone X
25-23-30-0000-00-043	1000 - Vacant Commercial	AC-1/AN - Community Activity Center/Aircraft Noise 58.370 - 58.384	COMM-AC - Community Activity Center	Permitted	Lee Vista and Narcoossee	1.554	$643,979.00	less than 0.2 miles away from residential subdivision	Zone X
22-23-30-0000-00-010	1000 - Vacant Commercial	AC-1/AN/SP - Community Activity Center/Aircraft Noise 58.370-58.384/Semoran Gateway 62.409	COMM-AC - Community Activity Center	Permitted	Access off Semoran Blvd	2.131	$118,861.00	adjacent to residential	Zone A
23-23-30-3045-03-007	1000 - Vacant Commercial	PD/AN	N/A	N/A	S Goldenrod Rd	2.578	$1,123.00	about 0.3 miles away from residential subdivision	Zone X
25-23-30-0000-00-103	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	Access off Narcoossee	2.74	$344,658.00	less than 0.2 miles away from residential subdivision	Zone X
22-23-30-0000-00-024	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	Beatles Road	2.788	$197,716.00	N/A	N/A

23-23-30-3053-01-000	1000 - Vacant Commercial	PD/AN	N/A	N/A	Off of South Goldenroad Road	2.799	$1,052,086.00	0.2 miles away from Carter Glen Condominiums - 417 units	N/A
14-23-30-5240-03-061	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	N/A	2.998	$387,363.00	less than 0.5 miles away from residential subdivision	N/A
22-23-30-0000-00-006	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	N/A	3.625	$440,229.00	N/A	N/A
14-23-30-5240-13-051	4000 - Vacant Industrial	IND-2/IND-3	N/A	Permitted	N/A	3.633	$133,361.00	N/A	N/A
26-23-30-0000-00-001	4000 - Vacant Industrial	I-C/AN - Industrial Commercial/ Aircraft Noise	INDUST - Industrial	Permitted	No access	4.577	$129,431.00	adjacent to residential	Zone X
25-23-30-6160-02-001	1000 - Vacant Commercial	PD - Off Lease Only	AIR-MED - Airport Support District Med. Intensity	N/A	Intersection of Narcoossee and McCoy Road	4.894	$727,174.00	0.6 miles away from residential subdivision	Zone X
25-23-30-0000-00-056	4000 - Vacant Industrial	IND-4	N/A	N/A	Off of Narcoossee	5.191	$713,302.00	about 1.2 miles away from residential subdivision	Zone X
25-23-30-0000-00-044	1000 - Vacant Commercial	PD/AN	N/A	N/A	N/A	5.22	$363,283.00	N/A	N/A
26-23-30-5083-01-000	4000 - Vacant Industrial	I-P/AN - Industrial Park/Aircraft Noise 58.370-58.384; Lee Vista Center DRI	INDUST - Industrial	N/A	Intersection of Lee Vista and Emerald Drive	6.148	$969,416.00	only approximate to a few mobile homes	Zone X
23-23-30-0000-00-022	4000 - Vacant Industrial	I-C/AN - Industrial Commercial/ Aircraft Noise 58.370-58.384	INDUST - Industrial	Permitted	Intersection of Lee Vista and Narcoossee	6.483	$183,126.00	adjacent to residential subdivision	Zone X
23-23-30-5127-01-000	4000 - Vacant Industrial	PD/AN	N/A		Intersection of Lee Vista and South Goldenrod	6.659	$1,234,414.00	across the street from Carter Glen Condominiums - 417 units	Zone X
302335003301000	1000 - Vacant Commercial	AC-3/AN	N/A	Permitted	McCoy Road	7.244	$565,060.00	about 0.7 miles away from residential subdivision	Zone A
27-23-30-5082-01-004	1000 - Vacant Commercial	AC-3/AN/SP	N/A	Permitted	Semoran Road and Butler Rd	7.358	$2,188,957.00	0.4 miles away from residential subdivision; 0.2 miles away from hotels	Zone X

27-23-30-5040-00-010	1000 - Vacant Commercial	AC-3/AN - Metropolitan Activity Center/Aircraft Noise 58.370-58.384	MET-AC - Metropolitan Activity Center	Permitted	Access off Hazeltine National Dr	7.997	$1,658,143.00	less than 0.5 miles away from residential subdivision	Zone X
14-23-30-5240-26-051	1000 - Vacant Commercial	O-1/AN	N/A	N/A	Access off Narcoossee	8.608	$1,338,934.00	less than 0.2 miles away from residential subdivision	Zone X
23-23-30-5127-01-005	0001 - Vacant Residential	N/A	N/A	N/A	Access off Narcoossee	8.765	$200		Zone X
27-23-30-5082-02-000	1000 - Vacant Commercial	AC-3/AN	N/A	Permitted	Hazeltine National Drive and Augusta National Drive	9.23769609	$1,923,664.00	0.3 miles away from residential subdivision; 0.2 miles away from hotels	Zone X
14-23-30-5240-04-010	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	N/A	10.147	$1,033,362.00	N/A	N/A
	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	N/A	10.216	$1,516,804.00	N/A	N/A
14-23-30-5240-03-031	4000 - Vacant Industrial	IND-1/IND-5	N/A	Permitted	N/A	10.41554434	$1,810,267.00	N/A	N/A
23-23-30-3045-03-000	1000 - Vacant Commercial	PD/AN	N/A	N/A	Seminole Avenue & S Goldenrod Rd	10.475	$2,679,939.00	less than 0.5 miles away from residential subdivision	Zone X
26-23-30-5029-01-000	4000 - Vacant Industrial	I-P/AN	N/A	Conditional Use when abutting a thoroughfare; otherwise not permitted.	Emerald Dunes Drive	11.208	$1,618,444.00	N/A	N/A
25-23-30-0000-00-058	4000 - Vacant Industrial	IND-1/IND-5	N/A	N/A	Access off Narcoossee	15.338	$2,194,962.00	less than 0.2 miles away from residential subdivision	Zone X
22-23-30-6395-00-030	1003 - Vacant Multi-Family	PD/AN	N/A	N/A	Access off Semoran Blvd	19.57	$5,148,211.00	Multi-family residential	N/A
26-23-30-0000-00-002	4000 - Vacant Industrial	I-P/AN & C/AN	N/A	Conditional Use when abutting a thoroughfare; otherwise not permitted.	N/A	30.84	$1,955,665.00	0.4 miles away from an apartment complex	Zone X

Appendix 2: Estimated Costs for age-friendly park amenities and features for a selected site within Orange County, Florida

Cost Analysis for Age-Friendly Park Facility in Orange County

Amenities	Estimated Size	Cost
Land acquisition	2.578 acres	1,123.00
Fitness Path/Exercise Area	992 sq. ft	$20,000.00
Small Shelter	589.11 sq. ft	$25,000.00
Small Open Area	4,914 sq. ft	$7,500.00
Small Playground	1,987 sq. ft	$100,000.00
Small Picnic Area	987 sq. ft	$4,000.00
Color Design-Walkway	13,228 sq. ft	$79,794.00
Total Estimated Cost		**$237,417.00**

Source: Cost Analysis for Improving Park Facilities to Promote Park-based Physical Activity (2015)

Appendix 3: Estimated construction costs for age-friendly park on a selected site within Orange County, Florida

Construction Estimates

Development	Estimated Costs Per Unit	Costs
Avg. Land Grading Costs	$ 2.00	$ 224,604.62 per sq. ft
Tree Removal	$ 500.00	$1,289 per acre
Parking Lot construction	$ 300.00	$ 30,000.00 for 10-29 spaces
Parking Lot Labor	$ 3.00	$ 28,268.04 per sq. ft
Total		**$ 255,893.62**

Source: HomeAvisor.com (2020)