City of Palm Coast
Agenda
City Council Workshop

City Hall
160 Lake Avenue
Palm Coast, FL 32164
www.palmcoastgov.com

Mayor Milissa Holland
Vice Mayor Nick Klufas
Council Member Eddie Branquinho
Council Member Robert G. Cuff
Council Member Jack D. Howell, II

Tuesday, January 8, 2019 **9:00 AM** **CITY HALL**

City Staff
Beau Falgout, Interim City Manager
William Reischmann, City Attorney
Virginia A. Smith, City Clerk

> Public Participation shall be in accordance with Section 286.0114 Florida Statutes.

> Other matters of concern may be discussed as determined by City Council.

> If you wish to obtain more information regarding the City Council's agenda, please contact the City Clerk's Office at 386-986-3713.

> In accordance with the Americans with Disabilities Act, persons needing assistance to participate in any of these proceedings should contact the City Clerk at 386-986-3713, at least 48 hours prior to the meeting.

> City Council Meetings are streamed live on YouTube at https://www.youtube.com/user/PalmCoastGovTV/live.

> All pagers and cell phones are to remain OFF while City Council is in session.

A CALL TO ORDER

B PLEDGE OF ALLEGIANCE TO THE FLAG

C ROLL CALL

D PUBLIC PARTICIPATION

E PRESENTATIONS

1 PRESENTATION MAGELLAN UPDATE TO ACTION ITEMS

2 RESOLUTION 2019-XX APPROVING A WORK ORDER WITH MAGELLAN ADVISORS TO PROVIDE CONSULTING SERVICES TO SOLICIT AND SELECT A PRIVATE PARTNER FOR THE FIBERNET EXPANSION

3 PRESENTATION - UTILITY REUSE MASTER PLAN

4 PRESENTATION - MANAGEMENT OF RESERVATION REQUESTS FOR SPORTS FIELDS

5 ORDINANCE 2019-XX ANNEXATION OF 92+/- ACRE AREA GENERALLY LOCATED 1.3 MILES NORTH OF STATE ROAD 100 ON THE WESTSIDE AND EASTSIDE OF COLBERT LANE

6 RESOLUTION 2019-XX A RESOLUTION APPROVING AN AGREEMENT & PETITION FOR VOLUNTARY ANNEXATION OF 89+/- ACRES OWNED BY LIGHTHOUSE HARBOR, LLC

7 ORDINANCE 2019-XX AMENDING CHAPTER 2 ADMINISTRATION, ARTICLE 4 PLANNING AND LAND DEVELOPMENT REGULATION BOARD, SECTION 2-296, CREATION

F WRITTEN ITEMS

8 RESOLUTION 2019-XX APPROVING A CONTRACT WITH WPC CONSTRUCTORS, LLC. FOR THE CONSTRUCTION OF THE PUMP STATION "D" IMPROVEMENTS PROJECT.

9 RESOLUTION 2019-XX APPROVING MASTER SERVICE AGREEMENTS WITH MULTIPLE FIRMS FOR PROFESSIONAL UTILITY ENGINEERING SERVICES

10 RESOLUTION 2019-XX APPROVING A MASTER PRICE AGREEMENT WITH ENVIRONMENTAL LAND SERVICES INC., OF BUNNELL, FL FOR ROAD MATERIALS

11 RESOLUTION 2019-XX CONCRETE CONSERVATION, LLC. REHABILITATION OF WASTEWATER STRUCTURES

12 RESOLUTION 2019-XX APPROVING A MASTER PRICE AGREEMENT WITH HARRIS CULVERT FOR CULVERT PIPES

13 RESOLUTION 2019-XX APPROVING AN AGREEMENT WITH FLAGLER VOLUNTEER SERVICES, INC.

14 RESOLUTION 2019-XX APPROVING PIGGYBACKING THE SOURCEWELL CONTRACT WITH STAPLES CONTRACT & COMMERCIAL, INC. TO PURCHASE VARIOUS OFFICE SUPPLIES

G PUBLIC PARTICIPATION

H DISCUSSION BY CITY COUNCIL OF MATTERS NOT ON THE AGENDA

I DISCUSSION BY CITY ATTORNEY OF MATTERS NOT ON THE AGENDA

J DISCUSSION BY CITY MANAGER OF MATTERS NOT ON THE AGENDA

K ADJOURNMENT

15 CALENDAR AND WORKSHEET

16 ATTACHMENTS TO MINUTES

City of Palm Coast, Florida
Agenda Item

Agenda Date: 01/08/2019

Department	INFORMATION TECHNOLOGY	**Amount**	
Item Key	5823	**Account**	

Subject PRESENTATION - MAGELLAN UPDATE TO ACTION ITEMS

Background :

In order to further City Council's adopted Strategic Action Plan, the City engaged Magellan Advisors to update the City's Fiber Optic Business Plan. In October 2018, Magellan Advisors delivered the final report to the City. As requested by City Council, Magellan Advisors and City staff will present the executive summary of the updated Fiber Optic Plan and the necessary actions items.

Recommended Action :
Presentation and discussion.

Magellan ADVISORS

www.magellan-advisors.com

October 2018

Final

City of Palm Coast
FiberNet Broadband Business Plan

Table of Contents

Table of Figures

Table of Tables

1 Executive Summary

1.1 Cities are Getting Smart and Going Digital

The future of cities is as much in bits and bytes— smart systems and software applications—as it is physical infrastructure. All digital technology depends on bandwidth and connectivity—the ability to move information quickly and flexibly from and to most anywhere. Indeed, digital technology has become the key to effectively managing and using traditional systems even as it has opened new possibilities for business, commerce, education, healthcare, governance, public safety, and recreation.

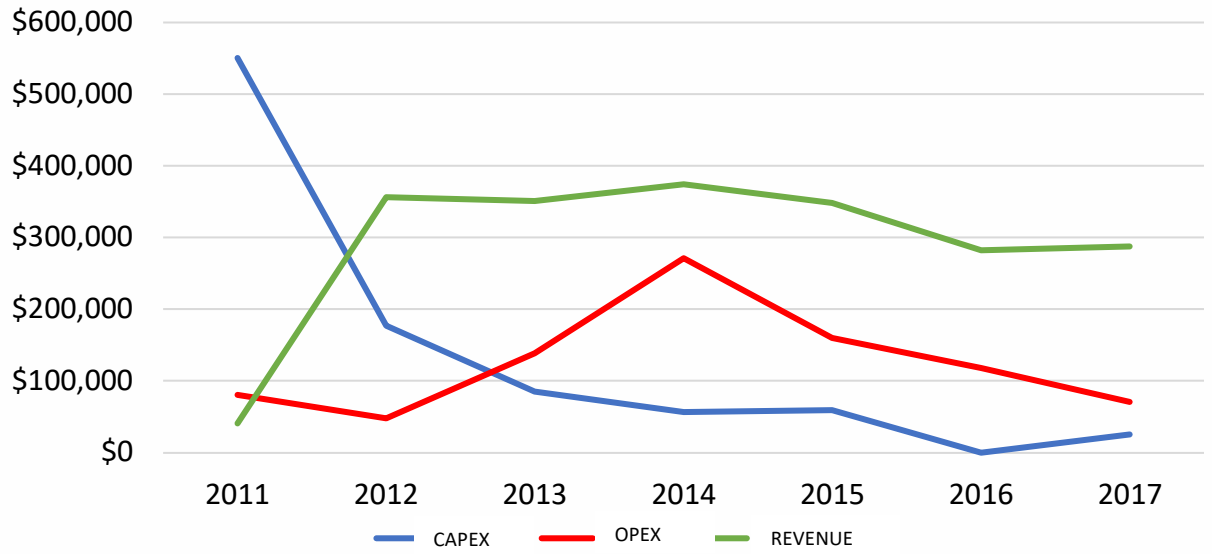
Traditionally, cities have relied on for-profit private companies to provide all their broadband needs, which comes with recurring costs, limited flexibility, and, too often, inadequate services. Cities are increasingly recognizing that broadband is another utility, just like water, sewer, gas and power. In some ways, broadband is becoming even more critical as our traditional utility systems require it to operate economically and reliably. At the same time, citizens and visitors demand better connectivity and more bandwidth. Many cities are acting on these realities by directly investing in public infrastructure to meet internal municipal requirements and make sure their businesses, institutions, and residents are well served with broadband.

1.2 FiberNet: A Great Investment Yesterday and for Tomorrow

The City of Palm Coast recognized this issue in early 2004, and commissioned the construction of Palm Coast FiberNet, a high-speed fiber-optic backbone to connect all City sites and facilities. As of today, in 2018, FiberNet's assets include nearly 60 route miles of conduit, and 54 miles of high-count fiber cable. FiberNet includes two facilities for interconnecting with other networks, the City's data center, and high-speed connections to the regional top-tier internet access point in Jacksonville, FL. As of this analysis, FiberNet had a total of 124 connections, most of which are at public facilities, including schools and traffic signal cabinets.

Palm Coast FiberNet is saving the City of Palm Coast over $310,000 per year as of 2018, and it has been doing so for nearly 10 years. Additionally, FiberNet generates excess revenue of more than $100,000 annually after covering all its costs, including those generated by meeting the City's internal operational requirements. FiberNet currently has a positive net impact on the City of at least $410,000 annually, based on net income, and internal savings realized. During this time, it has also provided fast, highly reliable, reasonably priced connections for several local businesses and community anchors. All of this has occurred with essentially no additional investment in expanding or promoting FiberNet.

Figure 1: Overview of capital and operating expenses compared to revenue for FiberNet



Today, FiberNet is solid information infrastructure for Palm Coast. The core issue for this plan is how to leverage that infrastructure for smart, sustainable growth.

1.2.1 Achieving the Palm Coast Vision

During the Broadband Business Planning process, a clear vision for Palm Coast became clear: Extensive economic development, particularly in high-value, low-impact sectors (media and software, for example), building on massive real estate investment (as many as 20,000 residential units in the next decade), leading to rapid population growth, while maintaining the natural, open, and uncongested community character. Clearly, this is an ambitious vision that can only be achieved on top of ultra-fast and reliable network infrastructure.

Palm Coast is replete with well educated, forward-thinking residents who are using technology to improve and transform how they live, work and play. Current broadband services and infrastructure are, according to the results of the Palm Coast Tech Assessment, inadequate for their purposes. As the City grows, it will attract more connected citizens and visitors. At the same time, the vast array of devices that permeates life in Palm Coast and elsewhere is only going to increase. All these changes are causing people's expectations of local governments to change, and driving demand for better connectivity. People use digital technology to interact with each other more easily, faster, and more flexibly.

The implication is simple: Palm Coast must methodically invest in technology if it hopes to attract investment and fully serve those who live, work, and visit there. Delivery of government services will rely on broadband to operate better, cheaper, and faster. New technologies will enable local governments, public safety, and utilities to be even more efficient, effective, and resilient, and will require ever more bandwidth and connectivity. The City's internal bandwidth and connectivity needs could grow exponentially as the local economy and population grow.

1.3 Investing for Growth

Palm Coast is ideally positioned to attract dynamic, high-paying technology jobs, if it has advanced world-class network services. Private companies are unlikely to make the necessary investment because this is an emerging market and they have other interests and priorities. If Palm Coast is going to prosper and avoid being eclipsed by nearby metros, it will have to be a technology leader, which means making smart investments that attract additional investment. The challenge is to balance technology investments with other fiscal needs in an era of tight budgets. Many cities are responding to this challenge via partnerships that enable innovation within their communities. Palm Coast began charting a course in this direction in 2004/2005, starting its journey in earnest a decade ago, and had the foresight to make strategic, incremental investments in its infrastructure every year since. It is well-positioned to reap further benefits from FiberNet and other technology assets.

1.3.1 FiberNet 2.0

The City of Palm Coast commissioned this Municipal Broadband Business Plan—which we have dubbed FiberNet 2.0—to map out a strategic route forward, and to guide FiberNet's evolution as a platform for innovation in Palm Coast. This Business Plan provides details about the existing broadband market, provider offerings, needs of the City, its community anchors, and the greater community, through a directed Tech Assessment. Further, the Business Plan outlines strategies whereby Palm Coast can expand FiberNet to further meet the community's connectivity needs, including that of Palm Coast's end users, through a potential Public-Private Partnership (P3) strategy.

A P3 strategy will allow the City to focus its efforts on the expansion and maintenance of the physical infrastructure, while its P3 partner focuses on lighting and operating the network for the benefit of the community. The partner would have to meet specific requirements for providing connectivity to the City enterprise, supporting future Smart City initiatives, and offering fiber-based next-generation telecommunications services across the community. Magellan Advisors has helped over 400 cities across the US with broadband planning, deployment, and funding. We pride ourselves on not just delivering a report, but a report filled with actionable insights that the City can practically implement to address its bandwidth and connectivity needs. No two cities are alike, so our recommendations are tailored to the specific needs and opportunities of Palm Coast and FiberNet.

Our recommendations to the City of Palm Coast include:

A. Address key gaps in the FiberNet infrastructure.
B. Ensure that FiberNet expansion is integrated into all relevant capital projects, particularly in Public Works and Utility, and that it is pre-planned into all greenfield[1] development opportunities.

[1] Greenfield development implicates development of undeveloped property, and negates contending with previous buildings or infrastructure.

C. Actively engage local technology leaders to guide and promote FiberNet's development, particularly in support of Palm Coast Smart City initiatives.
D. Seek a private partner to provision, operate, and maintain FiberNet, and to provide a class of next-generation retail broadband services.
E. Develop a Smart City strategy and program.

1.4 FiberNet 2.0 Feasibility

Magellan methodically assessed the current and future broadband needs of Palm Coast. We used a combination of internal and external stakeholder interviews, online Technology Assessment, and a community focus group for businesses, organizations, and area professionals/entrepreneurs. We also assessed the capabilities allocated to FiberNet and its financial performance. The goal of these assessments was to determine how current broadband services meet community needs, what role the City might play in leading, as well as meeting, broadband benchmarks. The assessment provides information about how and where FiberNet might be expanded to address those needs.

1.4.1 Internal needs and opportunities

Internal interviews were conducted with representatives from IT, Public Works, Community Development, Finance, Utilities, the City Manager's office, Sheriff, Fire, Economic Development, and other anchors and stakeholders. Each organization provided crucial feedback on their current and future connectivity needs. Short-term internal City requirements were for enhancing operations, more applications and data (bandwidth), and more pervasive wireless connectivity (FiberNet has already met most of the City's needs for wired connections). Prospective future Smart City initiatives will increase these requirements. The City of Palm Coast will likely find it economical to deploy hundreds if not thousands of sensors and servos in the future to monitor and control its systems, provide services, and respond to emergencies. All of these will need connections for sending and receiving data. Town Center could be developed to be aware and smart, which will also require wireless (as well as additional wired) connectivity.

Of course, the overall goal is to be a place people want to visit, live in, and bring their businesses. This will require superior network services. Input from internal and external stakeholders also suggest that the City will need to generate much more digital content, including translating data from its systems into meaningful information for people. The simple reality is that the City of Palm Coast simply doesn't have the capabilities for all of this. While it has many able employees, they are focused on other priorities. The goal requires the City to cultivate a range of partnerships, particularly to deliver network services to the community.

1.4.2 Broadband demand and supply

Magellan assembled an assessment of current broadband availability in Palm Coast though online research, discussions with current providers, and with the results of input provided by the Tech Assessment, focus groups, and stakeholder interviews. This assessment of the market paints a snapshot of current providers' solutions, including costs, speeds, and product availability for the different classes of users in the Palm Coast market, including business, residential, and enterprise services.

While the Palm Coast area has extensive infrastructure passing through it, the business participants that took part in the Tech Assessment were less than satisfied with their internet services, particularly its performance and price. This is not surprising because the services consistently delivered much lower speeds than contracted. On average respondents spent $239 a month on internet access, and 54% expected their spending to increase. Over half of the businesses that participated in the Tech Assessment said they were highly likely to change their physical locations for better connectivity.

1.4.3 FiberNet SWOT

Our assessment of FiberNet's strengths, weaknesses, opportunities, and threats revealed a few critical gaps in the network and only enough staff capabilities for basic network operations. FiberNet has substantial assets but the current network architecture does not use those assets efficiently, driving up costs and limiting the number of sites the network can serve. Changing to a more sophisticated architecture (Gigabit Passive Optical Network, or GPON) would greatly reduce the per connection costs to FiberNet.

FiberNet infrastructure is located adjacent to numerous commercial sites where the network has no current users. Many businesses are on-net, while more are near-net, and could be connected at marginal costs. Several major developments—Town Center being the more prominent but not the largest—are planned, and could be conditioned to include fiber-optic infrastructure. This would allow FiberNet to expand rapidly and economically. With these developments there will also be vertical opportunities to offer value-added services, such as content and security.

Table 1: FiberNet SWOT

	Have/Positive	Need/Negative
External/Future	**Opportunities**	**Threats**
	Strong regional economy, including projected demand for real estate Global destination and transit area Low cost of living, high quality of place State emphasis on job creation "Fringe" opportunities, craft and niche markets Less need for physical labor Increasing economic gains from technology	Supply of intellectual, social and technical abilities, educated and skilled persons Relatively low wages Urban sprawl and "bedroom community" syndrome State-level services and support, particularly for planning, development, and social issues Attitudes toward institutions Cyber-security: bots, breaches, hackers, viruses, etc.
Internal/Current	**Strengths**	**Weaknesses**
	Abundant network infrastructure Revenue positive with minimal effort Numerous greenfield developments Local "Smart City" type initiatives	Physical bottlenecks and gaps in the network Operational capabilities Investment in FiberNet, FiberNet subsidizing IT for other departments

Overall, FiberNet had strong financial performance. FiberNet revenue has declined in recent years, which has directly impacted total revenue for the Information Technology enterprise fund. On the other hand, capital investment in the network rapidly declined from 2011 to 2013, and has been declining slowly since with a small jump in 2014 when core networking equipment was replaced. FiberNet operations has followed a similar pattern: While overall IT staff increased and shifted to higher-skill positions, staff capacity dedicated to FiberNet decreased. Regardless, FiberNet has consistently generated excess revenue, which has been used to subsidize overall City IT costs.

The overall conclusion is that it is quite feasible to expand FiberNet's market and physical reach, and that, if done in a methodical manner, it will not only be financially viable but will provide funds for other purposes. This will require substantial increases in capital and operating expenses, particularly customer care, operations, and sales. It is not clear, given FiberNet's history, that the City of Palm Coast itself is positioned to consistently grow FiberNet and serve network customers. Several key functions—sales, specifically—are outside the City's core competencies and have essentially no capacity.

1.4.4 Roadmap

Magellan Advisors recommends a crawl, walk, run action plan for FiberNet 2.0. The City of Palm Coast should plan to invest in closing key bottlenecks and gaps in the network infrastructure, and in connecting on-net but unserved businesses. Generally, this approach should follow the City's overall business development, focusing first on areas with high density of businesses. Network growth should then follow real estate development and population growth.
In conjunction with network development, we recommend the City explore Smart City opportunities, evaluate options and technologies, and deploy the network to enable the most impactful and economical solutions. More broadly, Palm Coast should undertake a learning process to ascertain how FiberNet can be a platform for entrepreneurs and innovation. This will most certainly involve expanding wireless infrastructure, as well as extending City services virtually—into software applications and data. We recommend pursuing this path in an open manner, from engaging local citizens to conducting design events for technology leaders from across the globe.

First and foremost, the City of Palm Coast should seek a private partner to help with these objectives. Essentially, the City should become both lead customer and facility owner for a network services company to grow, maintain, and operate FiberNet. At the same time, the City should establish robust and inclusive governance for FiberNet, and clear benchmarks and metrics for FiberNet performance. The private partner should be asked to provide full capabilities—adequate, dedicated staff—to these goals and directly invest in customer connections, while the City focuses its investments on core infrastructure and Smart City solutions.

1.5 Recommended Action Items and Next Steps

1. The City should reach consensus on the approach outlined in this Plan; the City has concluded that while it sees value in ownership and expansion of FiberNet, that it desires a new plan and approach to managing the assets, serving community organizations, and in spurring innovation throughout the community.
    a. The City should immediately begin to seek a potential private partner who could function as a FiberNet Network Operator and FTTP Services Provider.
    b. The City should not expend capital to expand FiberNet until a P3 Partner has been selected, and an expansion plan/approach has been agreed to with said Partner.
    c. The City should push to structure an agreement based upon a revenue share on gross revenues generated over FiberNet assets.
    d. The City should push aid to construction costs, or connection fees to subscribers, or allow the P3 Partner to assume drop/connection costs. While City ownership of the drops should be of interest to the City, it could structure a buy back over time from the Partner.
    e. The City should be open to innovative P3 approaches. Many interested firms will have different investment requirements, differing risk profiles, operational expertise or experience. The City should be open to innovation and should adjust its Business

Plan and vision for a P3, to find the best solution that meets the City's long-term goals.

f. The City should brand the P3, as "P3 Partner, powered by Palm Coast FiberNet," and should share in the branding and marketing efforts, while supporting the partner's sales efforts. With a P3 partnership, the City will not grow its revenues unless/until the Partner does – the City should be incentivized and must assist in driving use.

g. The City should agree on business development and operations plans for the partnership, in close coordination with Town Center master developer selection process. Town Center should be targeted as an Innovation District focused as a potential pilot project.

2. As an Infrastructure Owner, the City will continue to manage OSP infrastructure, managing the design, construction, and fiber O&M on FiberNet's passive assets.
    a. The City has recently awarded contracts with Danella Construction and PCS Fiber for Fiber Construction and OSP O&M services – nothing further is required here.
    b. The City must invest in and manage a Fiber Management System, capable of integrating with ESRI GIS, and tracking of OSP assets, including fiber strand and splice details. The City should issue an RFP for this software and professional services.
        i. While the City's primary focus should be on developing a P3 as previously documented, it should continue to make its assets available strategically to the greater market.
    c. The City has excess conduit available along backbone routes and it should make this available to industry at a competitive cost.
    d. Allocate resources to and assign ownership of network facilities—buildings/cabinets, conduit, fiber, poles, etc.—deployment and maintenance. Determine final operational structure, and location of FiberNet within the City organization.
3. FiberNet needs oversight and regular checkup on strategic direction. A FiberNet Task Force or Governance committee with a cross membership from FACT and Innovation teams, should be charged with execution and governance—to ensure recommendations are agreed on and implemented.
    a. Engage external stakeholders, particularly entrepreneur, innovation, and tech people, on the task force.
4. The City should work to strategically address bottlenecks, gaps, etc., and stage the network for prospective partners.
5. Explore smart city applications, focusing on feasibility, to generate comprehensive and detailed City requirements. The City should identify key smart city applications and initiatives which can advance the City Council and community's goals.
6. Utilize FiberNet as a platform for innovation and to further entrepreneurship and workforce goals.
7. Develop a vision and design for Town Center that includes next generation technologies for energy, fitness, information, mobility, production, recreation, etc.

8. Host solution events focused on key network applications/smart city opportunities in conjunction with partners.
    a. Actively involve and promote to target customers.
    b. Use "solutions events" to show what's possible and a visioning process to focus possibilities on what's important and needed.
9. Track activities, milestones, and outcomes, share and celebrate them, too. Create and report on FiberNet performance metrics.

2 FiberNet and the Palm Coast Broadband Market

FiberNet is a City of Palm Coast asset used for internal operational purposes as well as to generate revenue and support business growth and economic development initiatives. It provides high-capacity connectivity and data communications, including internet access, for private users, Flagler County Schools, and the City. The value of FiberNet—as with any network—lies in the applications and functions it supports. This section examines FiberNet's business environment, including the City of Palm Coast's current and potential requirements based on current plans and visions, and emerging trends.

2.1 City of Palm Coast Goals and Priorities

The City of Palm Coast vision includes a multigenerational community with a diverse, sustainable economic base, supporting innovation and high-quality lifestyle. The City's purpose is to provide exceptional amenities, infrastructure, and services, while protecting the environment, enhancing the area's aesthetic beauty, and conserving natural resources. Many of the City's 2018 budget priorities directly benefit from, contribute to, or depend on FiberNet, and FiberNet plays a key role in all of the City's goals, including supporting day-to-day operations of every City department.

Economic development depends on connectivity, and this is especially true for the City of Palm Coast because of its greenfield opportunity to foster innovation-based economic development areas like Town Center, linked—economically, physically and virtually—with the entire community. Recent planning activities called for developing attractions, holding events, and establishing an innovation hub, coordinated with an experienced, visionary developer for Town Center; each of which will require, and will be greatly enhanced through, robust connectivity. The City's expansion goals require connectivity, too, and FiberNet expansion can be done most economically in conjunction with other infrastructure development. Financial goals show the City is in a strong position, and FiberNet contributes to that. Modest investments, particularly with a private partner, leverages the City's financial position to provide value-added services. This should increase FiberNet's revenue, which can then be reinvested in additional infrastructure, services, or innovation activities.

FiberNet supports the City's environmental, livability, and quality of place goals, but also enables innovative new opportunities such as smart lighting along trails that users can turn on or off or community-wide electric scooter sharing. The same is true for workforce: FiberNet

could be used to profoundly improve the community talent pool along with City employee skills and performance. Digital connectivity makes it possible for everyone to get better education and training, manage performance, and personally develop. Of course, this relates directly back to the economic development strategy for Palm Coast.

Attracting new talent, building-up the local workforce, and strengthening City employee skills are complementary activities that rely on readily available access to others and their knowledge. A technology event focused on community mobility could be integrated with analysis and simulation of emergency response, as well as community-oriented education about how tech can help people get around and stay healthy.

Clearly, FiberNet will continue to be a critical asset for City of Palm Coast to achieve its goals. For FiberNet to be viable it also needs to address local market opportunities. The general characteristics of Palm Coast's economy and population are key considerations if FiberNet is to grow and meet community needs. Detailed analysis of current broadband demand, supply, and the factors driving both are critical to a good plan for FiberNet. This information may also inform the City's development and operational plans.

2.2 Community demographics and economics

Palm Coast's population grew 14% from 2010 to 2016, to 81,000.[2] The median age was 47.6 years in 2016 and trending higher. The City had substantially more persons 65 years and older (20% of population) than the state of Florida (19%) or the United States overall (14%). This demographic grew 5.7% annually, which was nearly double the rate for the country. Population projections indicate that the City's population will double to nearly 160,000 by 2040.[3]
More housing units were owner-occupied in Palm Coast than across Florida and the U.S., and both the median value of homes and home-owner costs were lower. Meanwhile, the rental costs were higher and the rental vacancy rate (2.3) is much lower than the state (8.5) or nation (6.2). Vacancy rates are a ratio of unoccupied/unused units to total available. Therefore, a vacancy rate of 2.3 means that during the period in question 2.3% of the total units were vacant. A vacancy rate of less than 4 to 6 indicates a lack of supply. Healthy vacancy rates are typically considered to be between 6 and 8. Homeowner and rental vacancy rates fell faster, and owner-occupied units increased in Palm Coast while decreasing overall elsewhere. The local population is older and more likely to be living in their own homes, and data suggest these factors are increasing.

Relatively more of the local population had retirement and Social Security income than elsewhere in the state and nation. Median household income for Palm Coast ($49,207) was between that of Florida ($48,900) and the U.S. ($55,322) in 2016. While Palm Coast mean

[2] Source: *American FactFinder*, U.S. Census Bureau, https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml. Data come from the American Community Survey except where noted.
[3] Source: 2017 Annual Report Growth and Development Trends in the City of Palm Coast, City of Palm Coast Community Development Department, page 5.

household income was higher ($59,910) than the median, it was only 86% of the state and 77% of the nation. These statistics suggest that most Palm Coast households earned less than the mean, and less than similar households elsewhere. In 2016, the City had 20% to 30% more households earning between $25,000 and $75,000 per year than the state and nation. Table 2 shows that Palm Coasts workforce, compared to the state and nation, lacked higher-level educational credentials. College undergraduate, graduate, and professional school enrollment were substantially lower than the state and nation, too.

Table 2. Educational achievement of populations 25-years old and older compared

EDUCATIONAL ACHIEVEMENT	PALM COAST	FLORIDA	U.S.
Less than 9th grade	2.7%	5%	6%
9th to 12th grade, no diploma	6.2%	8%	7%
High school graduate or GED	34.0%	29%	28%
High school graduate or higher	91.1%	87%	87%
Some college, no degree	26.2%	21%	21%
Associate's degree	9.3%	10%	8%
Bachelor's degree	14.1%	18%	19%
Graduate or professional degree	7.5%	10%	12%
Bachelor's degree or higher	21.6%	28%	30%

Palm Coast had more jobs in retail (21% more than Florida and 40% more than the U.S.), arts, entertainment, and recreation, and accommodation and food services, and education services than other industry sectors. Arts, entertainment, and recreation, and accommodation and food services companies grew the fastest (11% annually), followed by transportation (5.7%), retail (4.2%), agriculture (3.9%) and wholesale (3.1%). Public administration contracted fastest (-4.3%), followed by construction, manufacturing, and management, professional and technical services, which all reduced employment about 1% per year between 2010 and 2016.

There were just over 1,000 establishments in Palm Coast in 2012.[4] The City had relatively more real estate and rental and leasing establishments (98), administrative and support and waste management and remediation service establishments (106), transportation and warehousing establishments (39), and health care and social assistance establishments (156) than other economic sectors. Utilities, mining, and manufacturing establishments, which are relatively scarce in Palm Coast, tend to have the greatest economic impact on communities. Of Palm Coast's sectors with relatively more establishments, healthcare and social services have the greatest economic impact.

[4] These data come from U.S. Census Bureau Economy-Wide Key Statistics, for which 2012 is the latest year. More recent data sets do not have city-level economic data.

2.3 Development plans and opportunities

Five hundred and seventy-one residential units and nearly a quarter-million square feet of non-residential space were built in 2017. That level of development is likely to continue for the foreseeable future. At the end of 2017, the City contained 16,586 vacant platted lots.[5] Over 20,000 residential units and nearly a million square feet of commercial and office space are planned for major developments by 2031. The City of Palm Coast *Prosperity 2021* plan identifies nine business districts:

- Airport Area Business District
- Downtown District
- Hargrove Business District
- Matanzas Business District
- Old Kings Business District
- Parkway East Business District
- Parkway West Business District
- Pine Lakes Business Parks
- Roberts Road Business District

And, there are major developments (DRI, developments of regional impact) within the City of Palm Coast (see Table 3).

The Area SR 100 Corridor Community Redevelopment Agency (SR100 CRA) encompasses 2,946-acres generally located east of Belle Terre Parkway and north of SR100 centerline, south of Royal Palms Parkway and 0.75-miles east of Interstate 95. It was established in 2004 and is scheduled to sunset in 2034. Over a twenty-year timeframe, the 2004 Community Redevelopment Area plan projected the SR100 CRA would generate over $181 million in Tax Increment Finance (TIF) revenues. The tax increment funding—$1,714,118 as of FY2016-2017—is to be used solely for purposes of the City of Palm Coast CRA Plan. The City of Palm Coast Community Redevelopment Agency, which is governed by the Mayor and City Council members, has a debt-service of $944,357, including outstanding loans.

Two Developments of Regional Impact (DRI) are within the CRA boundaries: the Town Center DRI and SR 100 DRI. A DRI is "any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety or welfare of citizens of more than one county."[6] There are five DRIs in Palm Coast, summarized in Table 3, and multiple smaller developments, including along Colbert Lane on the east.

[6] Section 380.06(1), Florida Statutes.

Table 3. Developments of Regional Impact in Palm Coast

	TOWN CENTER	SR 100	PALM COAST	NEOGA LAKE	OLD BRICK TOWNSHIP
Build out year			2034	2030	2031
Residential units	2,500	2,400	3,600	7,000	5,000
Office	1.4M SF	30K SF			
Commercial	1.6M SF	50K SF	2.48M SF	2.49M SF	1.15M SF
Institutional	625K SF				
Movie Theater	2,400 seats				
Lodging rooms	480 rooms	150 rooms			
Assisted Living	240 beds				
Common Area	714 acres				

**Neoga Lake and Old Brick Township do not have any immediate prospects for development and were not used in the plan, however, these two opportunities should be planned for in the future.

2.4 Broadband infrastructure, providers, and services

The City of Palm Coast is nominally served with broadband, which is currently defined by the Federal Communications Commission as 25 Mbps (megabits per second) downstream and 3 Mbps upstream throughput to the internet. Regardless, substantial portions of the City, especially to the northwest, have no broadband services, as illustrated in Figure 2. . On the other hand, Figure 3 shows only one provider offering 100+ Mbps service to a small portion the City.

Figure 2: The number of broadband providers by Census block

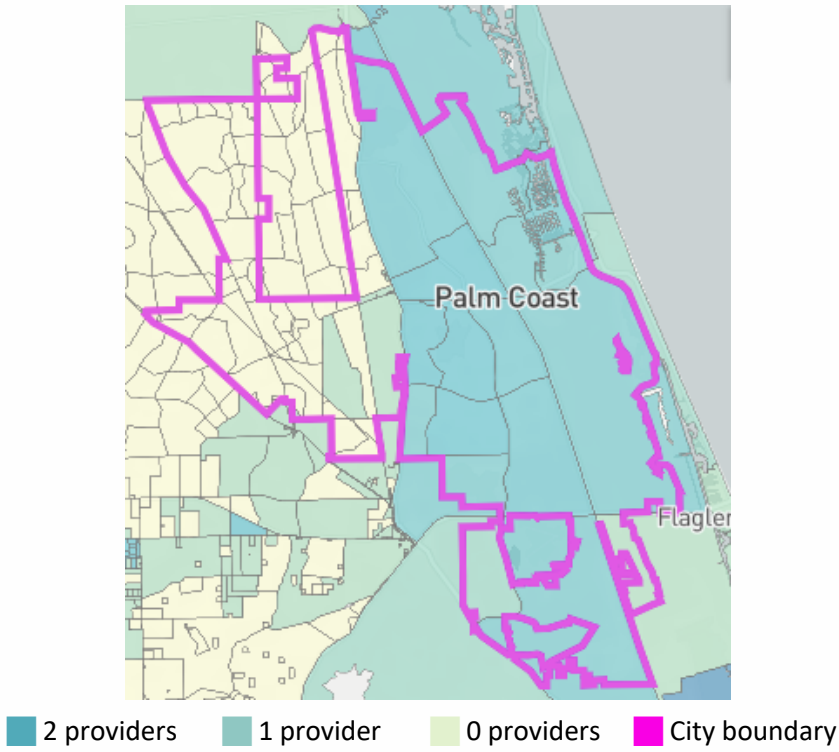
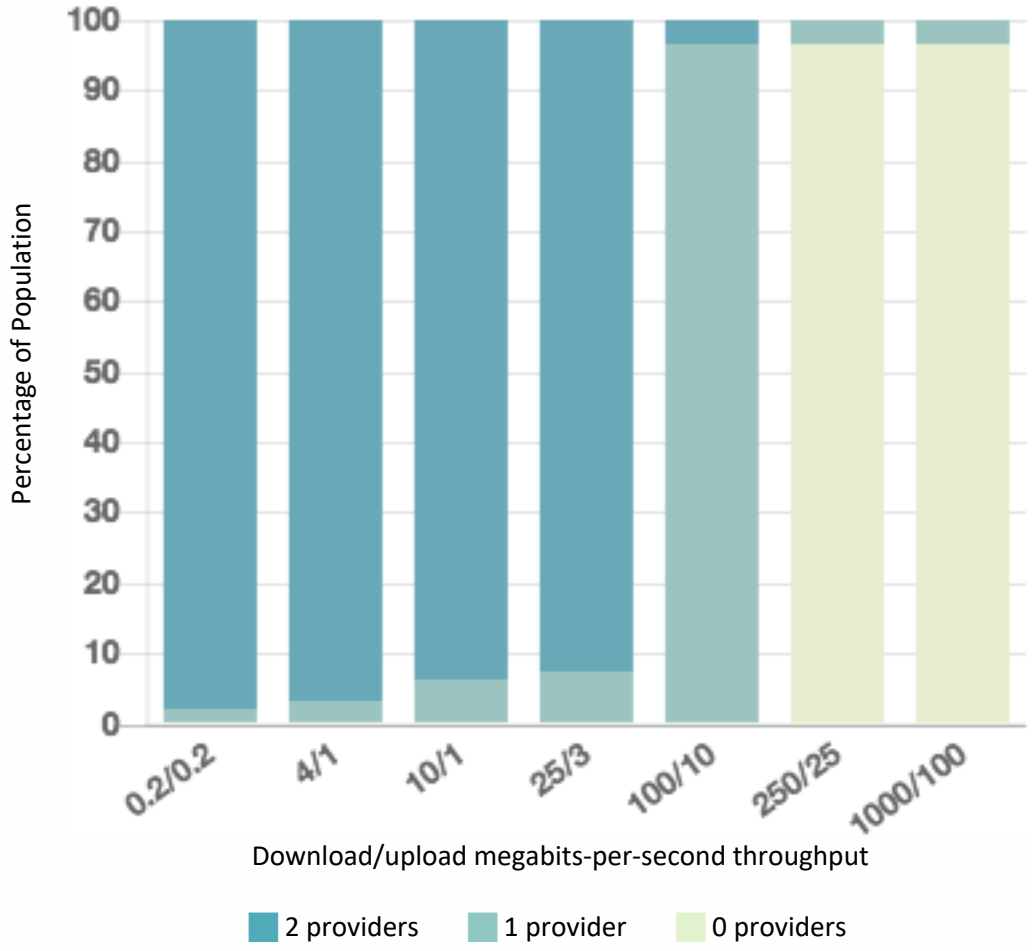


Figure 3: The number of broadband providers by throughput



Broadband providers' advertised rates, summarized in, run from about $60 to over $100 per Mbps per month. Note that FiberNet partners, Datacom and Palm Coast Internet (PCI), do not advertise rates.

Table 4. Advertised costs and speeds of internet services in the Palm Coast area

AT&T MARKET ANALYSIS			
RESIDENTIAL	**PACKAGE**	**SPEED**	**PRICE**
19 Flarestone Ct 32137	Internet Basic	Up to 5 Mbps	$40/m
	Internet 100	Up to 100 Mbps	$50/m
	9 bundles	Ranging from 5 Mbps-100Mbps	$55/m - $140/m
12 Flamingo Ct 32137	Internet 5	Up to 5 Mbps	$40/m
	Internet 100	Up to 100 Mbps	$50/m
	Internet 300	Up to 300 Mbps	$70/m
	Internet 1000	Up to 1000 Mbps	$90/m
	9 bundles	Ranging from 100 Mbps-1000 Mbps	$65-$125/m
BUSINESS	**PACKAGE**	**SPEED**	**PRICE**
1 Yacht Club Dr 32137	Internet 25	25 Mbps	$40/m
	Internet 50	50 Mbps	$50/m
	Internet 75	75 Mbps	$60/m
11 Market Ave 32164	Internet 18	18 Mbps	$40/m
11 Poppy Place 32164	Internet 18	18 Mbps	$40/m
9 Old Kings Rd N 32137	Internet Basic 3	3 Mbps	$40/m

SPECTRUM MARKET ANALYSIS

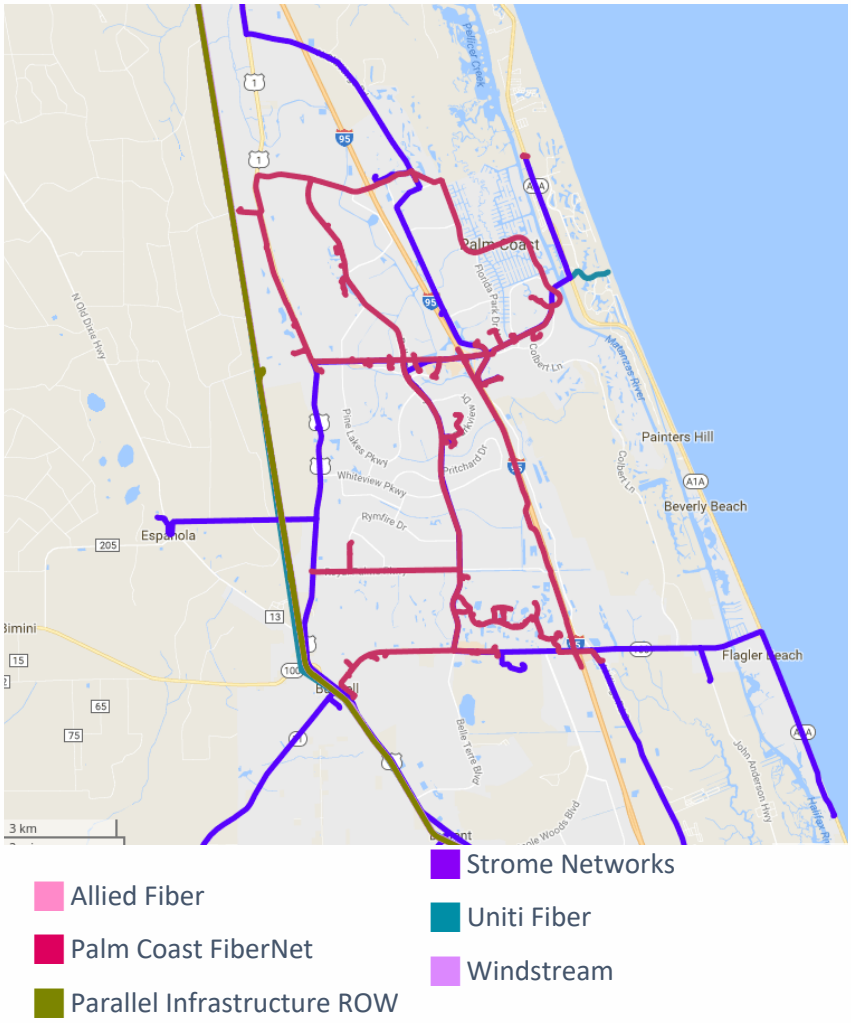
RESIDENTIAL	PACKAGE	SPEED	PRICE
339 Wellington Drive 32164	Basic Internet	Speeds starting at 100 Mbps	44.99
	Triple Play Gold	100 Mbps 200 channels, phone	$129.97
	Triple Play Silver	100 Mbps, 175 channels, phone	$109.97
	Triple Play Select	100 Mbps, 125 channels, phone	$89.97
	Not advertised - selection at checkout	400 Mbps	add $25/m
	Not advertised - selection at checkout	940 Mbps	add $60/m
BUSINESS	**PACKAGE**	**SPEED**	**PRICE**
1 Yacht Club Dr 32137	Basic	100 Mbps	$44.99
	Ultra Internet Up to a Gig - call for details	300 Mbps	$59.99
11 Market Ave 32164	Basic	100 Mbps	$44.99
	Ultra Internet Up to a Gig - call for details	300 Mbps	$59.99

2.4.1 Data Centers, Long-Haul Fiber, and Metro Networks

In addition to broadband services, numerous companies own and operate fiber-optic routes through or near Palm Coast. Figure 6.

Figure 4 shows local fiber-optic cable routes by network owner, and Figure 5 shows long-haul fiber routes at local and regional scales. There are twenty-six data centers in northeast Florida, although none are in Palm Coast. An overview map of regional data centers is included in Figure 6.

Figure 4: Palm Coast area metro/middle-mile network fiber routes[7]



[7] Fiber maps are created using Fiber Locator subscription tool. www.fiberlocator.com

Figure 5: Northeast Florida long-haul fiber routes, region (left) and Palm Coast area (right)

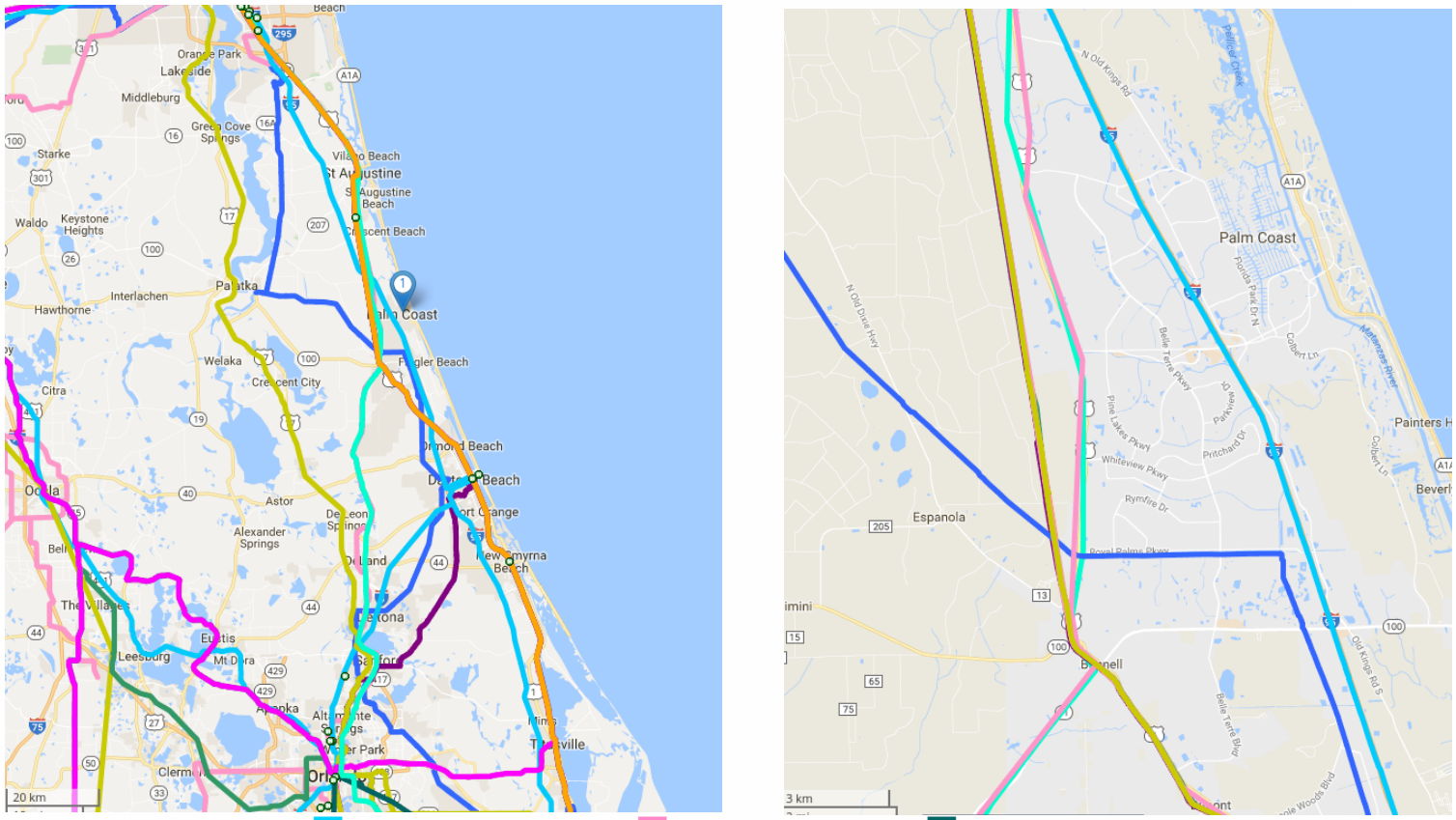
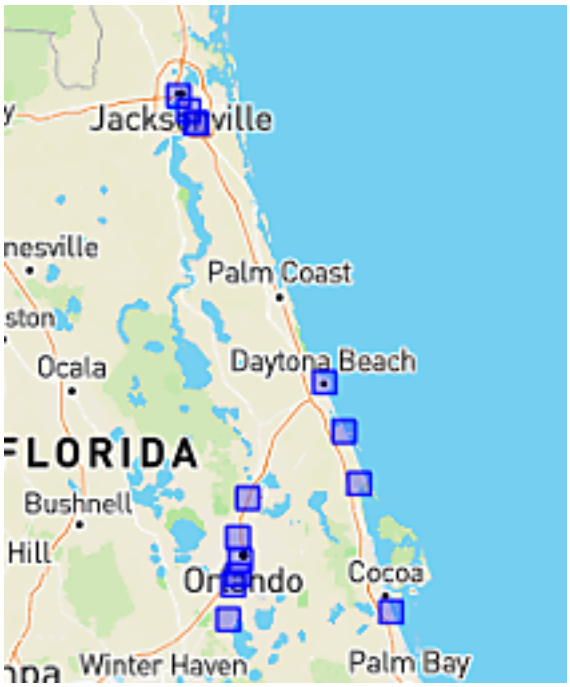


Figure 6: Data centers in northeastern Florida



The data centers in Figure 6 include but are not limited to the following:

- **Level3 (Now CenturyLink)** - 608 W Adams St, Jacksonville, FL 32204, USA and 111 N Segrave St, Daytona Beach, FL 32114: Level3, now owned by CenturyLink, operates carrier neutral data centers globally.
- **Cologix Florida** - 4800 Spring Park Rd, Jacksonville, FL 32207: Cologix operates the two leading network neutral Northern Florida data centers in Jacksonville. JAX 1 at 421 West Church Street in Jacksonville's central business district is home to Northeast Florida's largest concentration of Internet and telecommunications companies. Cologix also owns and operates the JAX2 facility at 4800 Spring Park Road, which houses the leading enterprise-grade Jacksonville data center and disaster recovery facility. Jacksonville is a significant hub in the Southeast due to two separate submarine cable systems enabling direct fiber access to Central and South America as well as the Caribbean. Leveraging Jacksonville colocation data centers as a network node allows customers to create an express route to South America without traversing through Miami, which reduces costs, latency and risk.
- **Jacksonville Data Center VIII** - 4905 Belfort Rd, Jacksonville, FL 32256: The Jacksonville Data Center is a carrier neutral data center catering to carriers such as Comcast, CenturyLink, and Peak10.
- **Cogent** - 8324 Baymeadows Way, Jacksonville, FL 32256: Cogent owns and operates 52 data centers in North America and Europe. Services provided in Cogent Data Centers include rack space, power, helping hands, state-of-the-art environmental controls and,

of course, full connectivity services (Dedicated Internet Access, IP Transit and Ethernet Point-to-Point). Cogent Data Centers also host Cogent's Utility Computing servers.

2.5 The Palm Coast Technology Assessment Results

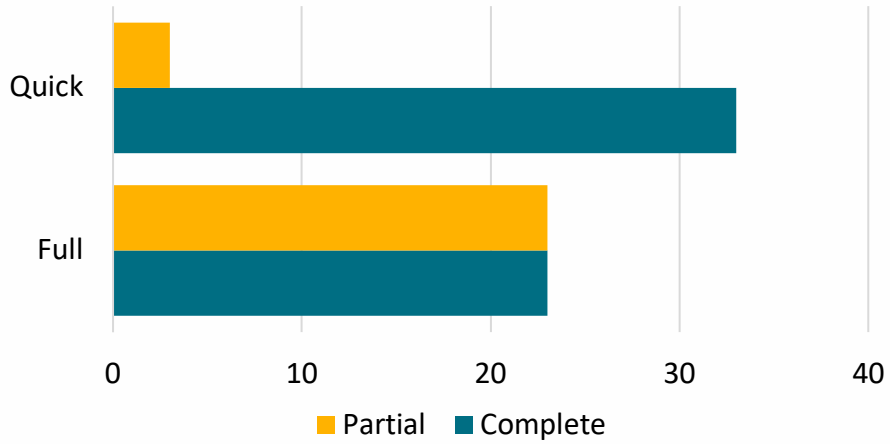
The Palm Coast Tech Assessment was conducted via a systematic online survey of local businesses and other organizations. The purpose was to understand how they are using technology today and what they need for tomorrow. It assessed both demand for and supply of commercial broadband services in the Palm Coast market, and gathered information about how and why organizations spend on technology. This information suggests where FiberNet might find opportunities to fill unmet needs and support economic growth.

A random sample of 1,000 companies was chosen from a list of all Palm Coast businesses. Letters from the City of Palm Coast, requesting participation, were sent. This was repeated a second time, not including those organizations that had already responded. Two dozen non-respondents were contacted by phone, none of whom indicated they did not participate because they felt the topic was irrelevant, however simply lacked time or interest. Finally, the survey was promoted openly via local partners and social media. While response rates were not high enough for statistically valid conclusions, the assessment results provide useful insight into needs and priorities of local organizations, particularly in key sectors.

2.5.1 Responses and participants

There were two different versions of the Tech Assessment—a Full version and an abbreviated Quick version. A total of 82 organizations participated in the Tech Assessment, over half of whom opted for the Full assessment. Overall, two-thirds of the responses were complete. Only 23 of the Full Assessments (28% of all responses) were completed, while over 90% of Quick assessments (35) were completed. See Figure 7.

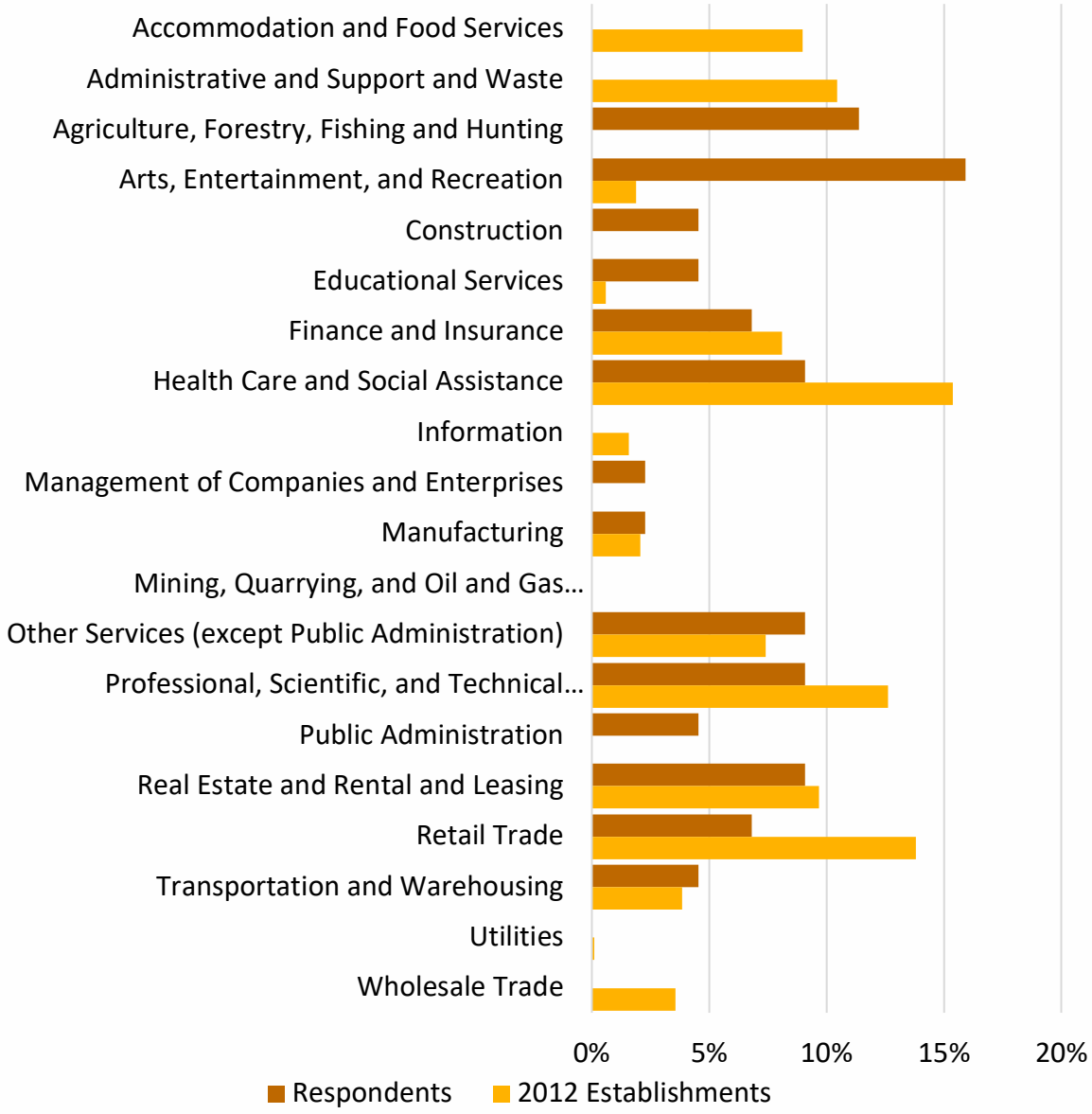
Figure 7: Tech Assessment participation by type and extent



For key sectors, participation in the Tech Assessment were on par with their presence in the local economy, in terms of the percentage of establishments in each sector.[8] Agriculture, arts, entertainment and recreation, and education organizations participated at a higher rate than they appear in the local economy. Finance and insurance, manufacturing, other services, real estate and leasing, and transportation and logistics were comparable. Organizations in health care and social assistance, retail trade, and professional, technical, and scientific services participated less than might be expected given their number of establishments. The Census Bureau did not count Construction or Public Administration establishments. No accommodation and food services, administrative, support, and waste services, information, and wholesale trade organizations participated in the Tech Assessment.

[8] Source: U.S. Census Bureau, *Community FactFinder*, https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

Figure 8: Tech Assessment participants compared to 2012 establishments



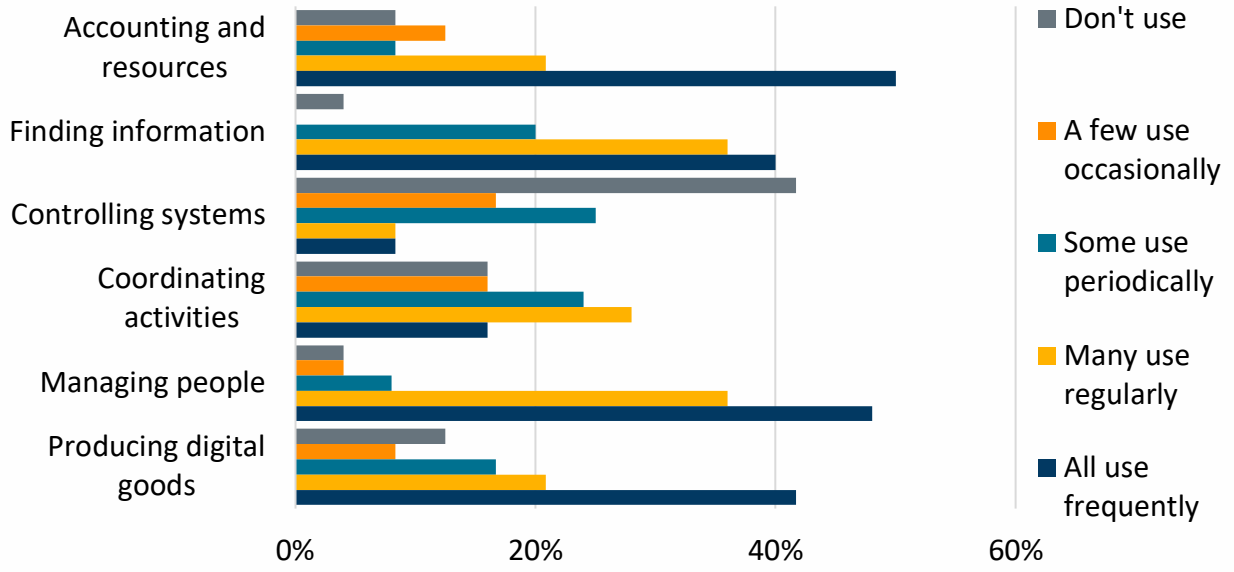
Participants represent 48 locations and 336 employees in Palm Coast and have over 500 locations and nearly 8,500 employees total. While most had only 1 employee, respondents' average size was 7.2 employees. The largest respondent employs 5,000 people. Three-quarters of the participating organizations were headquartered in the community. Most non-local headquarters were elsewhere in Florida, but participants' headquarters were widely distributed across the country.

2.5.2 Technology assets and use

Desktop computers—making up almost half of all digital devices—are still the norm for Palm Coast organizations, a large proportion of which are more powerful workstations. A fifth of all devices were laptops. Handhelds and tablets, making up 13% of devices each, are not far behind. Servers, particularly larger ones, were rare among participants.

The most common uses for digital technology were identifying and tracking people, finding and managing information, and accounting for money and tracking things (see Figure 9). Automation was the least common use, with nearly three-fifths of respondents either never or rarely using digital technology for controlling and monitoring machines/systems. While two thirds of respondents regularly create digital products, and frequent, intense technology use was indicated about 30% across all applications, about 12% of Palm Coast organizations use digital technology very little.

Figure 9: The frequency of uses of digital technology



2.5.3 Spending

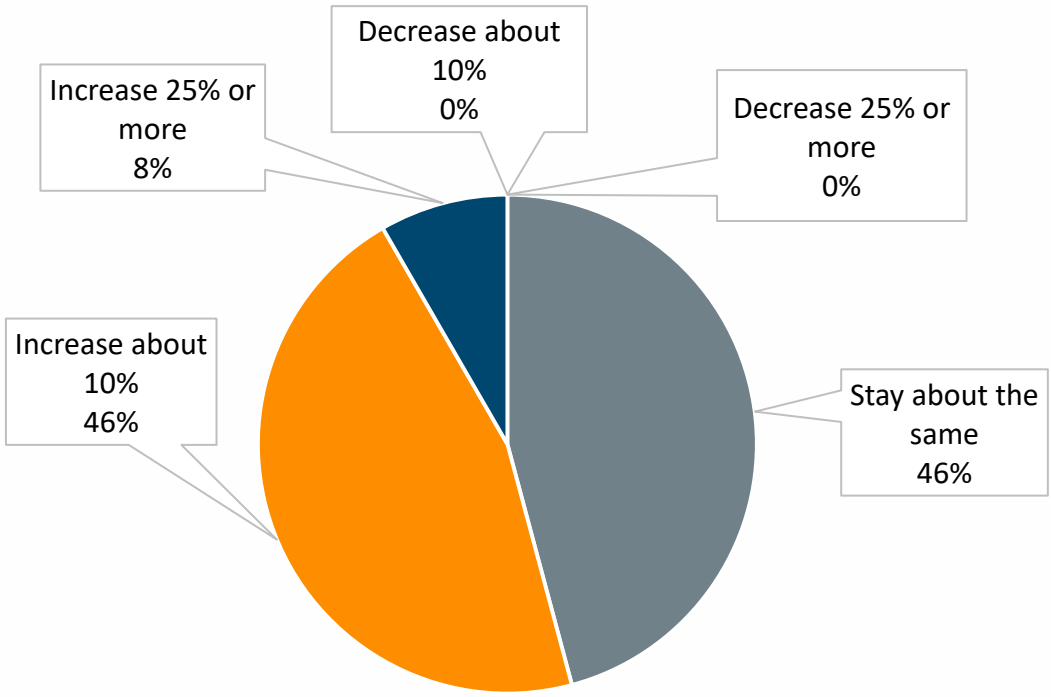
Internet access is only one component of overall technology spending, but it is inter-related with other expenses. The organizations participating in the Tech Assessment spend approximately $50,000 per month on technology. Cloud services and hosting is the largest—but relatively uncommon—overall expense, followed by telecom services, which was the most common expense. Hardware, maintenance, and software were also major expenses reported by about half of respondents. Internet access accounted for about one-tenth of organizations' spending. Only three participants noted monthly spending on training, averaging $1,250 per month, which was about 3% of expenditures for all.

Table 5. Tech Assessment participants' spending on technology

TECHNOLOGY EXPENSE	COUNT	TOTAL	AVERAGE
Cloud, hosting, online file storage	9	$11,737	$1,304
Hardware lease	2	$260	$130
Hardware purchase	12	$6,370	$531
Internet access	23	$5,490	$239
Maintenance and operations	10	$6,260	$626
Software licenses	14	$6,112	$437
Software-as-a-service subscriptions	7	$2,686	$384
Telecom services (cell/mobile, voice, WAN, etc.)	21	$7,575	$361
Training and user support	3	$1,250	$417
Video content, streaming media, television	9	$911	$101
Teleconferencing and web conferencing	3	$145	$48

While almost half of organizations expect no change in technology spending, as illustrated in Figure 10, a similar percentage foresaw increasing it by 10%. Eight percent expected their tech spending to increase by 25% or more, and none indicated it would decrease.

Figure 10: Participants' anticipated changes in technology spending



2.5.4 Connectivity

All participating organizations had internet, although 4.2% (of 48), only had access via cellphone, dial-up, satellite, or other low-speed connection. The most common internet connection was cable modem, provided by Spectrum, which has well over half of the market. A fifth of connections were fixed wireless, but these appear to be backup or internal connections rather than primary internet access (all participants with fixed wireless had other broadband connections). DSL and fiber-optic, both provided by AT&T (PCI also provides fiber-optic connections via Palm Coast FiberNet), each account for about one sixth of connections. AT&T has a third of the local broadband market.

Figure 11: Broadband providers identified by Tech Assessment participants

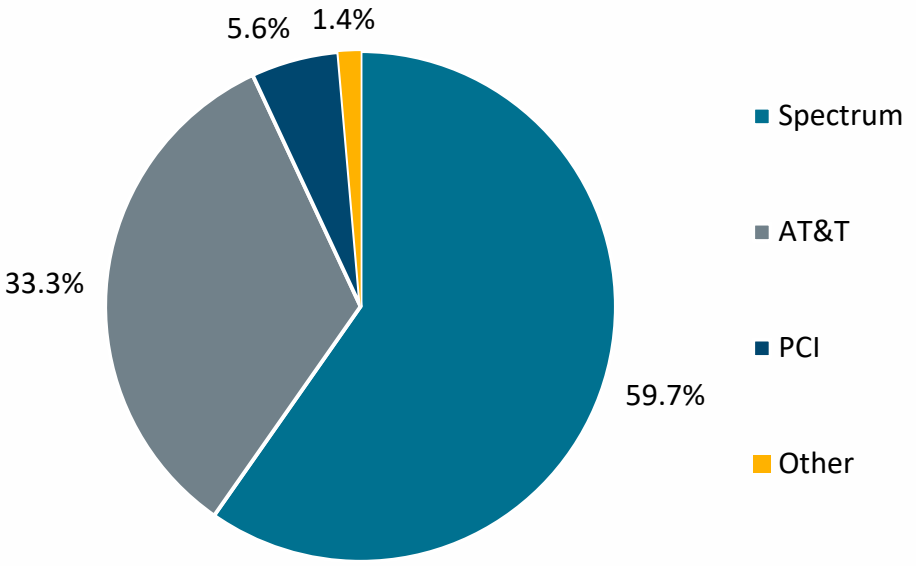
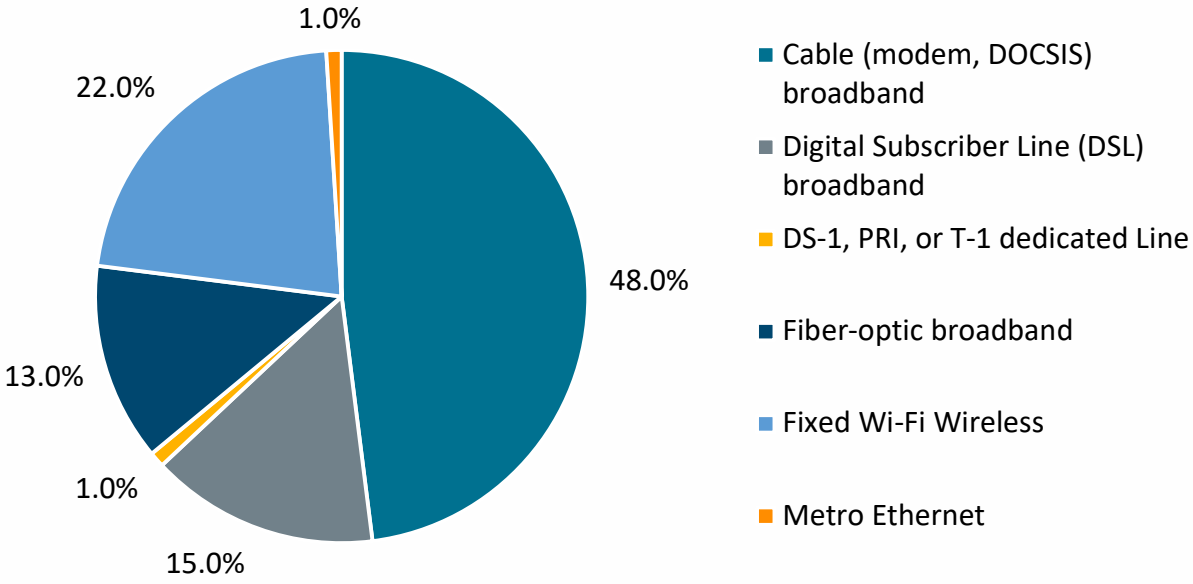


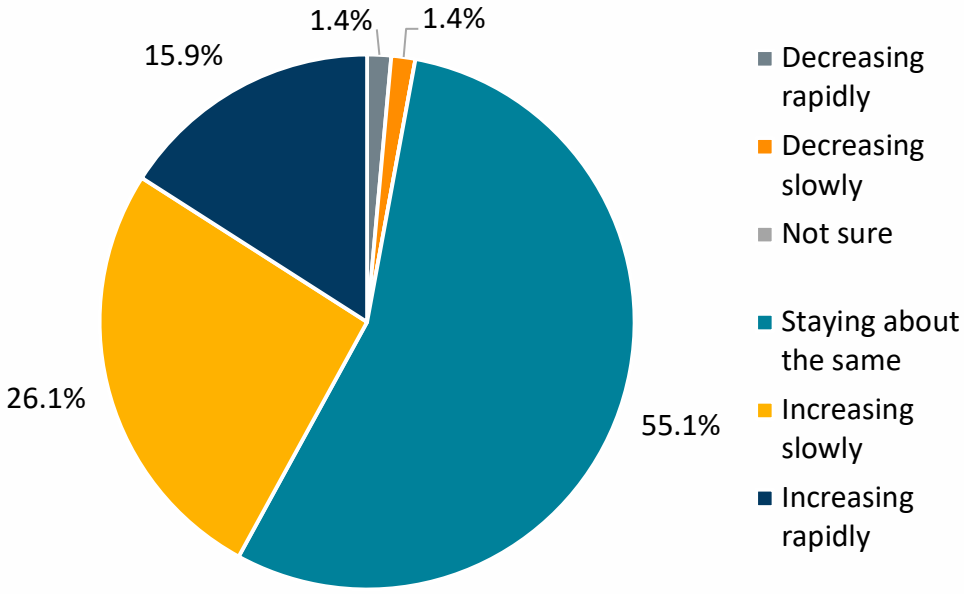
Figure 12: Connection types (n = 105)



WiFi is the most common form of connectivity—over half of participants reported using it internally and a quarter offered public WiFi connections. Of course, this is just for hyper-local access/connections, and requires some form of internet service. Over half of participants also use cellular data connections—e.g., MyFi mobile hotspots—for internet access. While more than half of participants expected their connectivity needs to stay about the same, over a

quarter expected needs to increase, and about a sixth or participating organizations expected them to grow rapidly. About 3% foresaw decreasing connectivity requirements.

Figure 13: Expected changes in connectivity requirements



The maximum contracted speed (for fiber-optic broadband) was 1 Gbps (1,000 Mbps), the most common contracted speed was 100 Mbps download and 10 Mbps upload (100/10), and the average was 157/85. In contrast, the actual speeds were 27/17 on average, and the maximum speeds were 108/241.[9] Statistics suggest the speeds experienced by most Tech Assessment participants is around 15/4, which doesn't technically count as broadband speeds!

[9] The maximum tested upload speed was for a fiber-optic connection, for which the download speed was 94 Mbps.

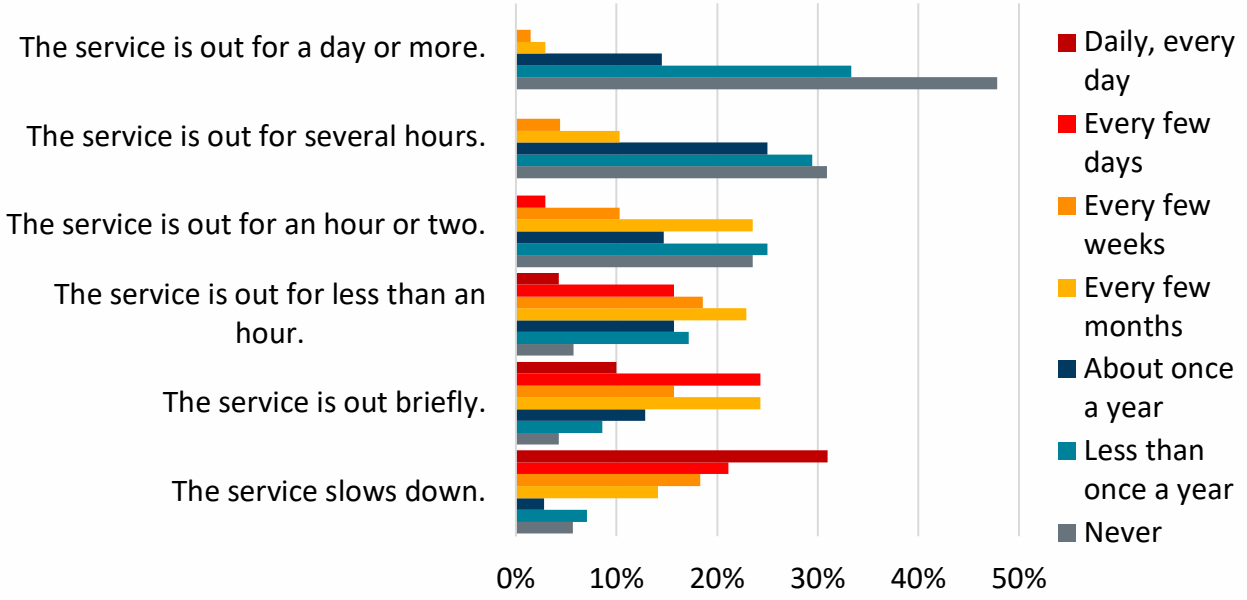
Table 6. Average tested internet access speeds (Mbps) and costs

PROVIDER	DOWNLOAD	UPLOAD	MONTHLY RECURRING COSTS TOTAL	MONTHLY RECURRING COSTS PER MBPS
AT&T	25.6	33.0	$47.92	$0.82
PCI	35.8	43.9	$381.50	$4.79
Spectrum	28.2	7.3	$104.04	$2.93
Other	5.1	1.5	n/a	n/a
CONNECTION TYPE				
Cable	22.6	5.7	$112.50	$3.98
DSL	18.2	7.6	$103.21	$4.01
Dedicated Line	21.9	5.8	$37.50	$1.35
Fiber-optic	49.7	74.0	$281.00	$2.27
Fixed Wireless	19.6	7.6	$64.29	$2.36

2.5.5 Performance

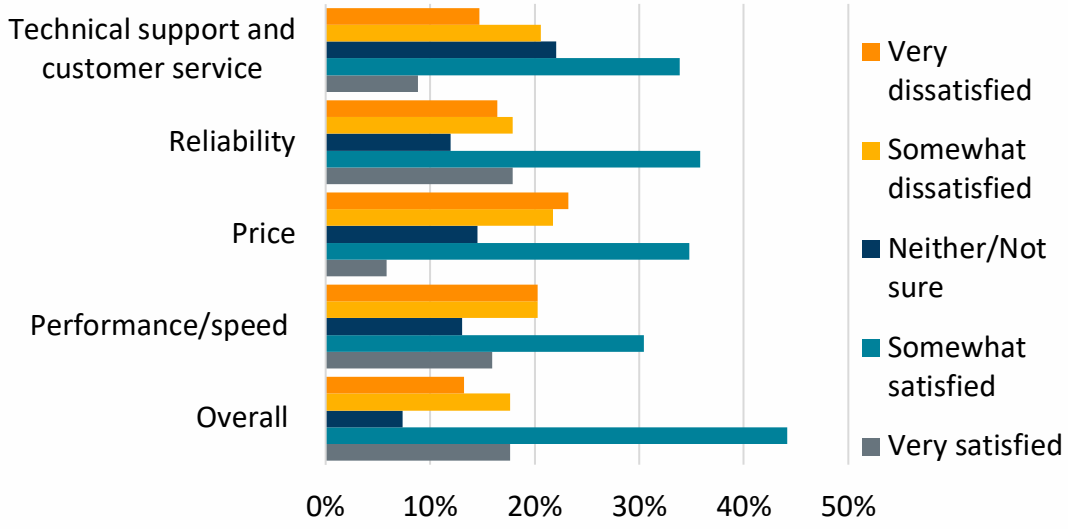
Average upload and download speeds for various providers and connection types are compared in Table 6. Fiber-optic services had the fastest speed, but not nearly where they should be based on contracted speeds. Faster average upload speeds for fiber-optics suggests providers are oversubscribed for their downstream capacity (i.e., there is not enough backhaul capacity to meet the needs of consumers.) AT&T's relatively fast speeds are because the average includes both their DSL and fiber-optic connections. On average, DSL is substantially slower than fiber-optic. The price per Mbps per month is rather high for both cable and fiber-optic, relative to other markets.

Figure 14: Internet access performance



As illustrated in Figure 14, about a third of respondents experience daily slowing in internet access. Seventy percent of respondents experienced slowed speeds on a regular basis, while 15% rarely do. About two-fifths have regular service outages, and the same portion rarely have substantial outages. Multi-hour outages regularly occurred for 4% of participants.

Figure 15: Participants' satisfaction with internet services



Regardless, a larger percentage of respondents were very or somewhat satisfied with their internet services than very or somewhat dissatisfied. Performance and price were the major areas of dissatisfaction, and overall about a fifth of organizations appear to be unhappy with their current internet service.

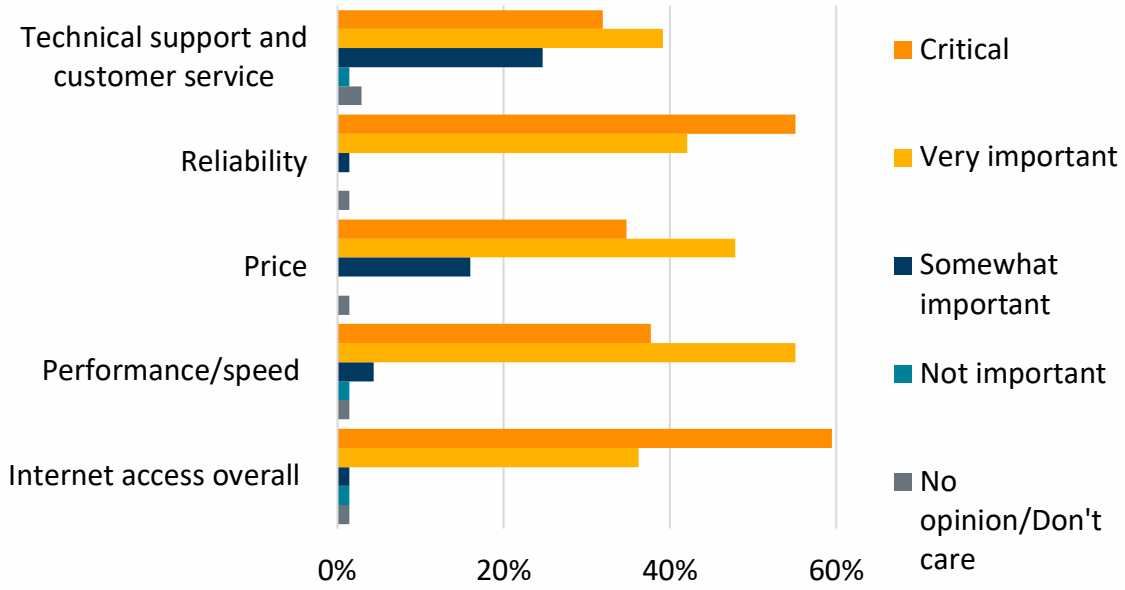
2.5.6 Costs

Palm Coast organizations spend an average of $114 per month on internet services, although most pay substantially less (the median monthly cost is only $75), and some pay as much as $500. PCI customers reported the highest monthly costs for internet access. Participants with AT&T internet access, paid about $0.82 per month for a Mbps of throughput (downstream + upstream), whereas Spectrum customers paid about $3.00, and PCI customers about $4.80.

2.5.7 Importance

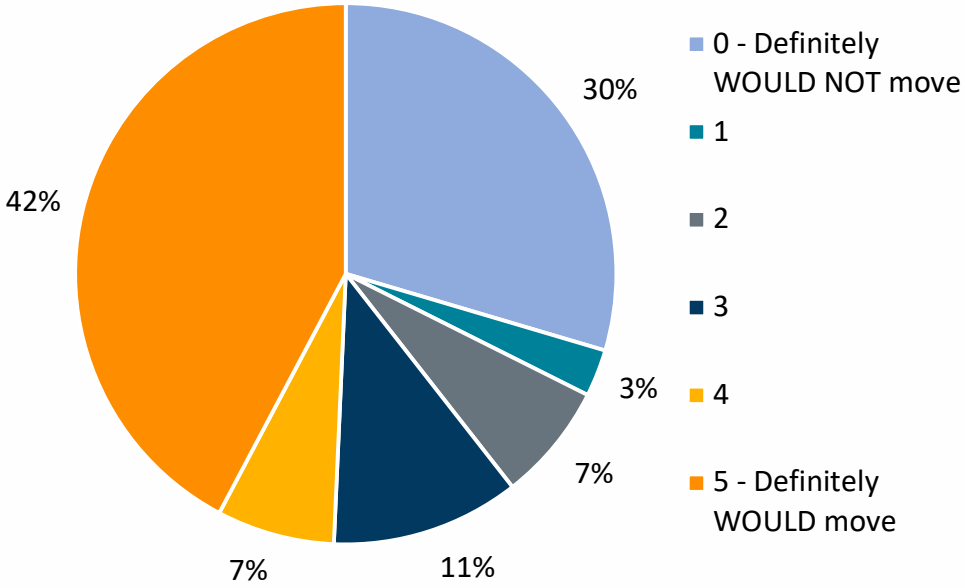
Palm Coast organizations highly value internet access overall, based on Tech Assessment results, and are especially concerned about reliability: 97% of respondents rated it as critical or very important. See Figure 16. Performance was generally seen as somewhat more important than price, with 93% and 83% giving these high importance ratings. Support was not rated as highly as other characteristics, with a quarter of participants rating it as somewhat important.

Figure 16: Importance of internet access and service characteristics



Emphasizing the importance of internet to their businesses, effectively half of participants indicated they would definitely or very likely move their companies to another building or commercial development for better broadband. About a third were very unlikely to move for broadband. A fifth of Palm Coast could go either way, based on Tech Assessment results.

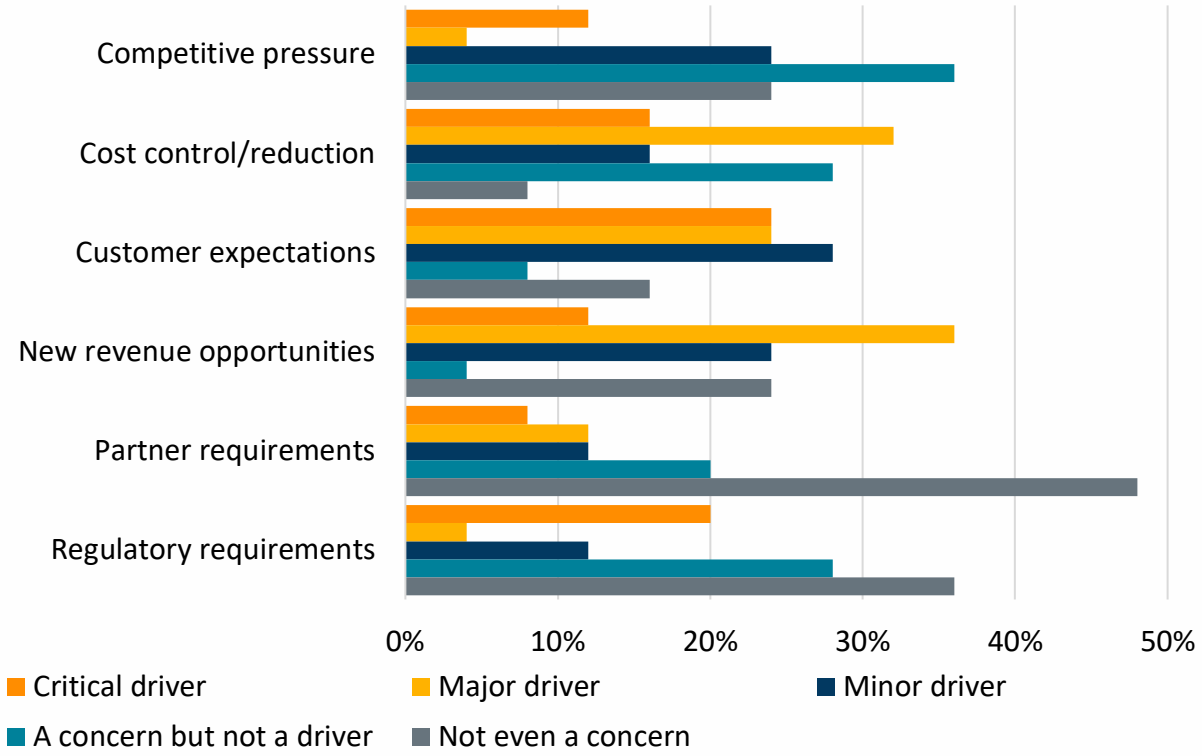
Figure 17: Percentages of participants likely to move or not for better broadband



2.5.8 Drivers, barriers, and challenges

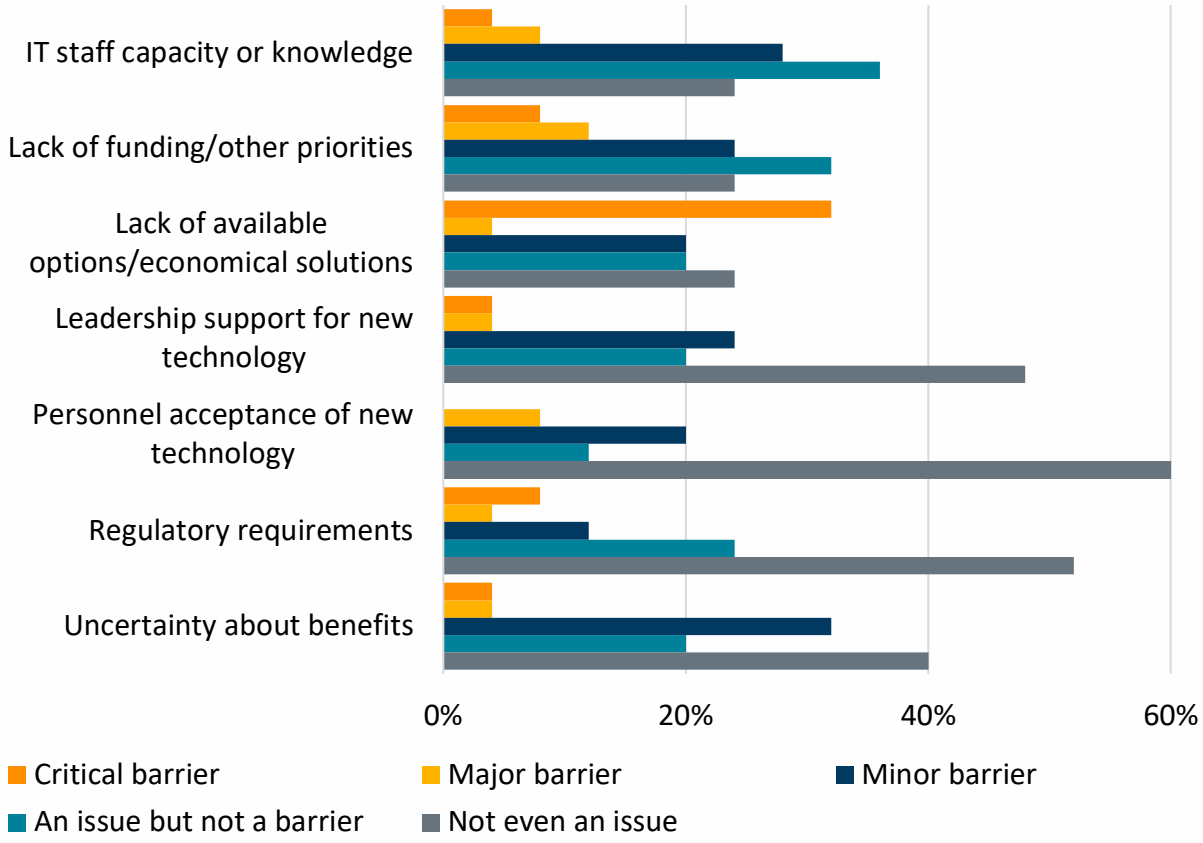
The key drivers of technology spending for Tech Assessment participants were customer expectations, new revenue opportunities, and cost reductions. See Figure 18. About half of companies indicated these as critical or very important drivers. In contrast, about two-thirds saw partner requirements, regulatory requirements, and competitive pressure as non-drivers. On the other hand, a fifth of respondents indicated regulatory requirements to be a *critical* driver.

Figure 18: Drivers of IT spending



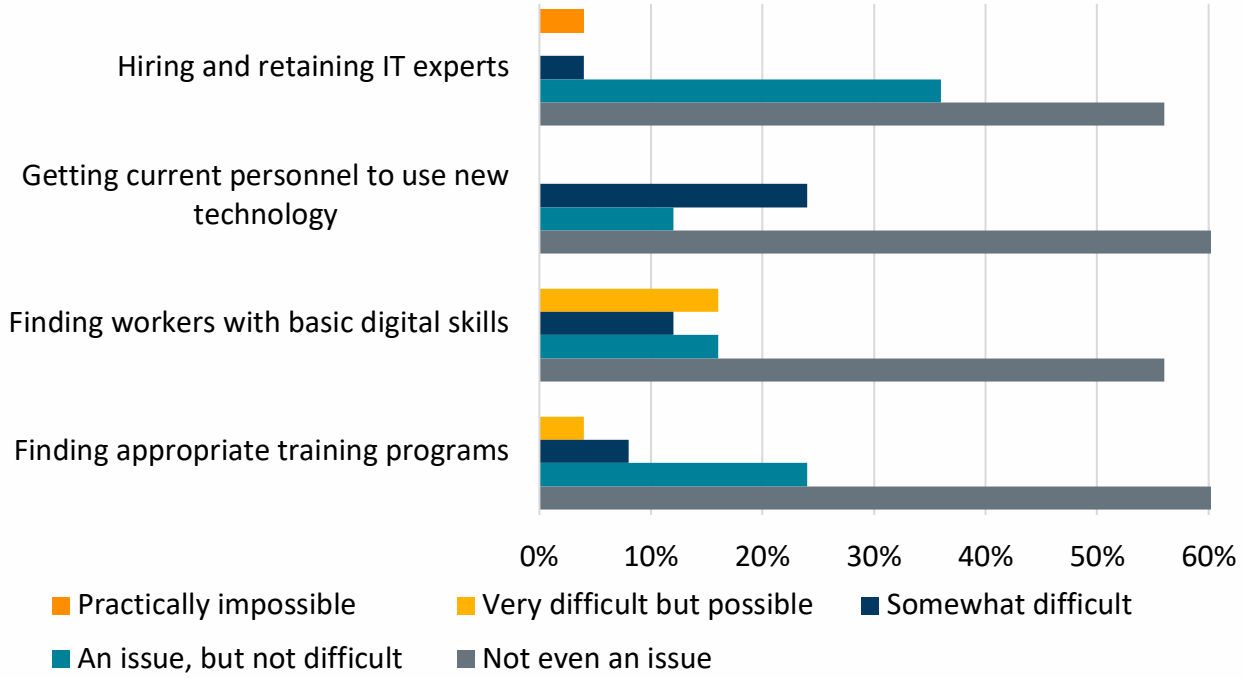
Palm Coast organizations face reasonably small barriers to technology investment, as illustrated in Figure 19. A third of participants indicated that the biggest barrier is lack of solutions. Lack of funding for technology or other priorities presented major barriers for about a fifth of organizations. Personnel acceptance of, leadership support for, and regulations were *not* barriers to technology investment for about three-quarters of participants. Uncertainty about benefits, IT staff expertise, lack of funding, and leadership support were minor barriers for a third to a quarter of participants.

Figure 19: Barriers to IT spending



The biggest technology challenge for Palm Coast organizations seems to be finding workers with basic skills. Hiring capable IT professionals and finding appropriate training were clearly challenges for some. Generally, though, there are no issues with getting personnel to use technology, and most companies have no problem hiring qualified IT staff.

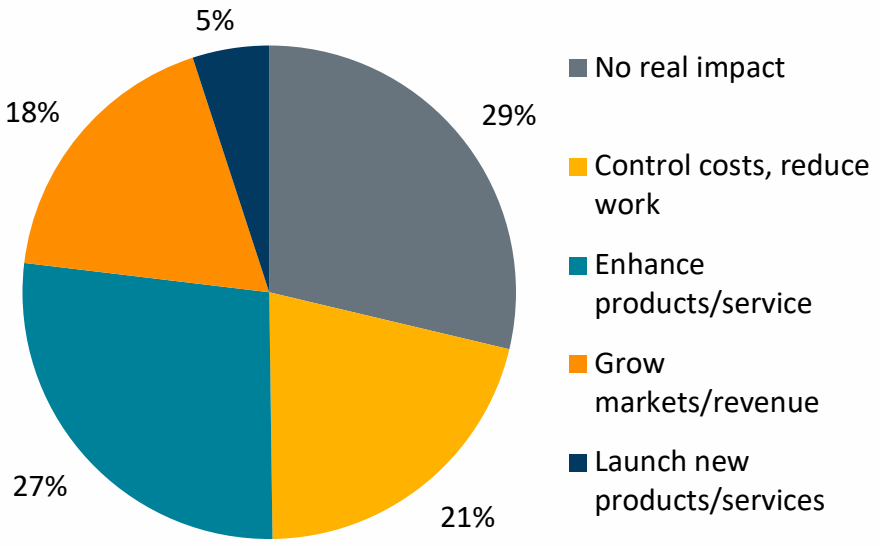
Figure 20: Technology-related workforce issues



2.5.9 Impacts

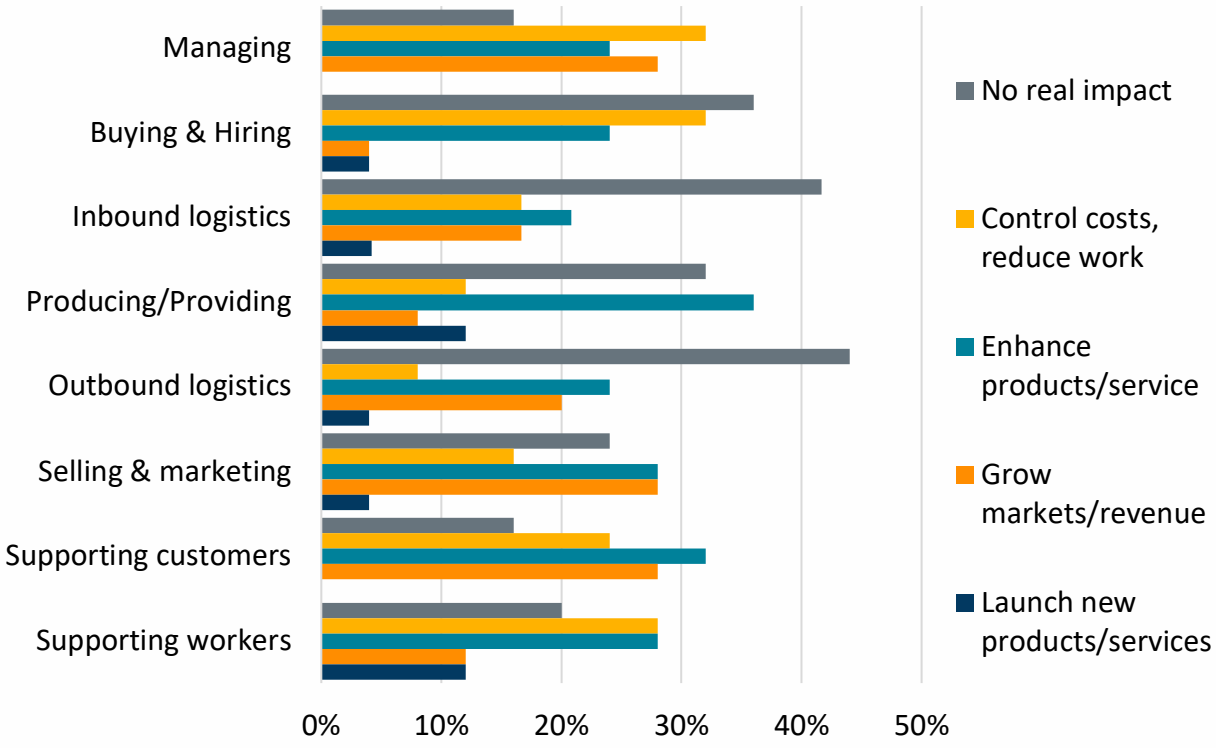
Impacts of technology spending and use may be the biggest issue for competitiveness and economic growth, and this appears particularly true for Palm Coast. As shown in Figure 21, effectively a third of organizations find no real impact from technology. About a quarter have been able to enhance their products or services with technology, and about a fifth each have been able to control costs and grow revenues. Five percent have used it to launch new products or services.

Figure 21: Impacts of technology spending and use



A deeper analysis, illustrated in Figure 22, shows the biggest impacts to be in customer support, marketing, and sales by enhancing products/services and growing revenue. Note that this comports with the heavy utilization for identifying and tracking customers, etc., discussed above, in Technology assets and use. Production and internal worker support were the largest sources of new technology-based products or services. Almost half of organizations realize no benefits for inbound and outbound logistics. Cost control has been an impact, especially in administration, buying, and hiring.

Figure 22: Impacts of technology investment by business function



2.5.10 Summary and conclusions

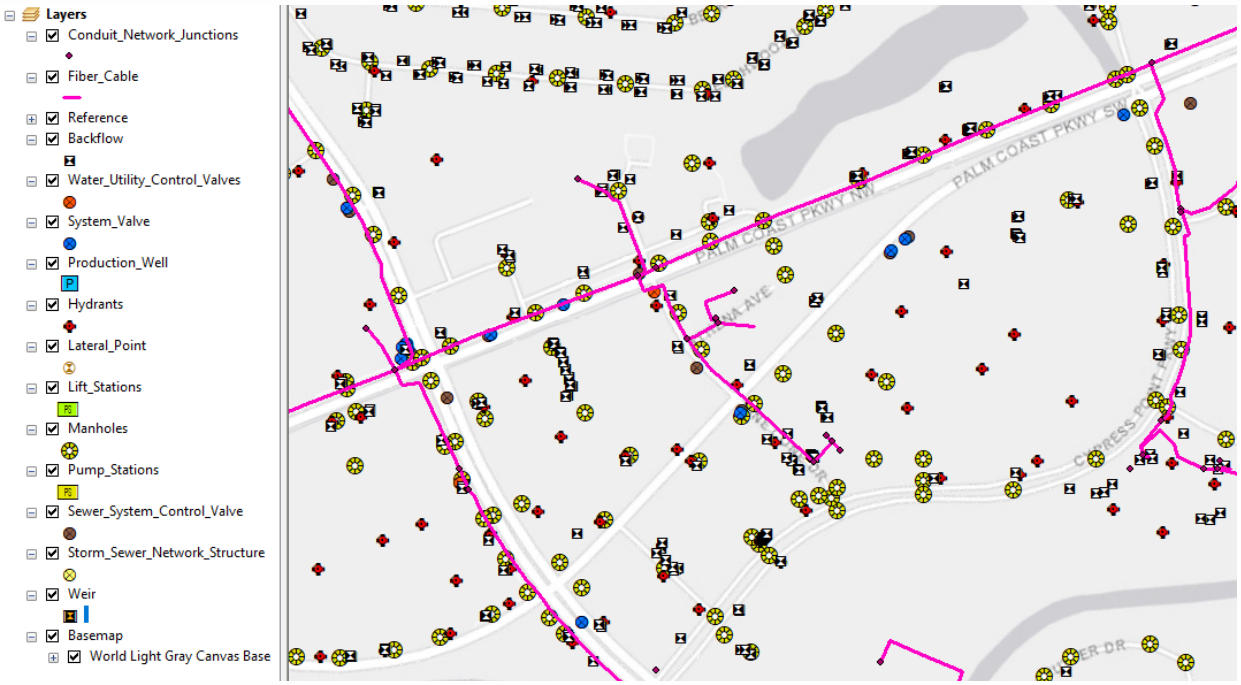
Available solutions and utilization are twin issues for technology in Palm Coast. Some of this relates to limited technology capabilities, particularly basic digital skills in the workforce, but lackluster services from broadband providers is clearly an issue. Broadband offerings are limited, they do not come close to meeting their commitments, and they have significant reliability issues. While barriers and challenges to technology use faced by Palm Coast organizations seem to be minimal, their impacts and levels of utilization are also low. Cost control has been a major impact area, but with relatively low levels of automation.

Internet and telecom services are clearly important to and a major expense for Palm Coast organizations. Customer expectations and new revenue opportunities are driving this spending, and if companies can't get what they need in Palm Coast, many are willing to look elsewhere. Possibly more importantly, Palm Coast companies may be at a competitive disadvantage due to low levels of utilization coupled with lackluster solutions. Additional education and support may be necessary for them to effectively get and use technology.

2.6 Palm Coast Smart City Opportunities

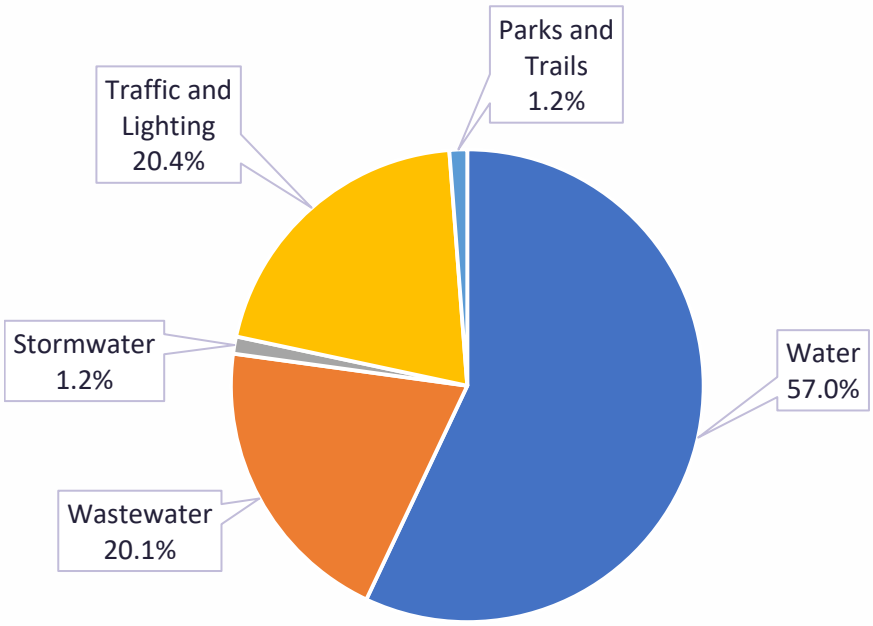
Smart City initiatives deploy digital technology to control public assets, generate data, and make municipal services—and citizens' lives—better. The results can be huge bottom-line gains from reducing energy consumption, manual labor, component failures, vandalism, and other costs. Smart Cities can also generate additional benefits and revenue by enhancing current services or offering new services. Online and self-serve rentals, data brokering, and advanced connectivity are a few examples. Needless to say, these opportunities involve substantial investments in hardware, and require workforce up-skilling. They can also have big connectivity requirements.

Figure 23: Potential locations for sensors and other devices in one area of Palm Coast



The City of Palm Coast has numerous Smart City opportunities with current infrastructure and services. Figure 23 illustrates the prospective locations of sensors and servos for monitoring and controlling City systems in just one small area. These add up quickly: There are some 33,000 devices to connect based on current facilities, the majority of which are in the Utility department. Traffic and lighting applications and wastewater applications each represent about a fifth of prospective connections. Parks and trails and stormwater have relatively small percentages, but these will likely increase with climate change, population growth, and other trends.

Figure 24: Percentage of Smart City connection possibilities by department



The financial implications of Smart Cities are staggering. If the City of Palm Coast were to connect only half of its prospective devices via third party network service providers (e.g., cellular telephone companies), it would face around $5.5 million in annual recurring charges. The twenty-year cumulative savings from using the City's own infrastructure, particularly FiberNet, could reach over $100 million.

Table 7: Potential connection costs and savings from Smart City applications in Palm Coast

	TOTAL DEVICES	POTENTIAL CONNECTION UPTAKE			
		10%	*25%*	*35%*	*50%*
Water	19,052	1,905	4,763	6,668	9,526
Wastewater	6,732	673	1,683	2,356	3,366
Storm water	392	39	98	137	196
Traffic and Lighting	6,829	683	1,707	2,390	3,414
Parks and Trails	406	41	101	142	203
Total Connections:	**33,411**	3,341	6,446	11,694	16,706

	TOTAL DEVICES	POTENTIAL CONNECTION UPTAKE			
		10%	25%	35%	50%
3rd Party Connection Cost @$35 per month	$800,184	$2,000,460	$2,800,644	$4,000,920	
	$282,744	$706,860	$989,604	$1,413,720	
	$16,464	$41,160	$57,624	$82,320	
	$286,818	$717,045	$1,003,863	$1,434,090	
	$17,052	$42,630	$59,682	$85,260	
Total Annual Savings	**$1,099,392**	**$2,748,480**	**$3,847,872**	**$5,496,960**	
20-Year Savings	$21,987,840	$54,969,600	$76,957,440	$109,939,200	

2.6.1 Smart City examples

Cities and municipalities across the nation are capitalizing on fiber broadband networks to implement smart devices for a myriad of purposes, from citizens aging in place through economic development to traffic management. Some Smart City applications have monetary benefits or cost savings for the cities while others are are off balance sheet or soft benefits.

Economic Development - LUS Fiber: Lafayette, LA

LUS Fiber has been operating for over a decade, however the organization went through arduous legal battles with telcoms to get there. While not an application or device, fiber networks assist cities in recruiting and retaining businesses and in creating jobs for its citizens. LUS Fiber is a classic case of "build it and they will come." NuComm International was searching for a location for a headquarters, including 1,000 jobs and chose Lafayette because of the "the network and the entrepreneurial spirit it represented." Additionally, a film effects company, Pixel Magic, relocated its operations to Lafayette after filming nearby – bringing 100-200 jobs with them. People have begun to move to Lafayette and sometimes even back to Lafayette, in part due to knowing they would have affordable high-speed internet. Many of these people have started small businesses, and in some cases grown them to medium or larger businesses, further enhancing the Lafayette economy. In 2011, Lafayette was ranked the 6th fastest growing economy in the nation.

Makers Spaces – Ting Makerspace: Westminster, MD

In select cities where Ting has deployed fiber internet networks, the company has also opened makerspaces. The organization feels that the creation of makerspaces is important to the local economy. They define a makerspace as "a physical embodiment of everything great about the Internet, like seeking out new ideas, sharing with a community and acquiring knowledge."[10] At

[10] https://www.tingmakerspace.com/ accessed August 13, 2018.

the Ting Makerspace, people can take classes or simply use the tools they offer. Classes are typically offered on use of the various tools and what can be created with them (i.e. Intro to capturing shapes with the 3D scanner or Laser cut a keychain). Tools such as 3D printers, laser scanners, CNC Routers, Dremel tools, and smoldering irons allow participants to be creative and innovative. While some people simply use makerspaces to have fun, many use makerspaces as a stepping stone to creating innovative small businesses. These places can be important catalysts for small business economic growth within a community, allowing people to gather, collaborate and innovate.

Innovation Districts – Canton, OH

In 2016, Ohio passed an Innovation District Law[11], allowing cities and municipalities to create Downtown Redevelopment Districts which may permit tax abatements of up to 70 percent of increased assessment in conjunction with payments in lieu of taxes. These funds can then be used to fund loans or grants for technology businesses. Innovation districts must have high-speed internet, capable of speeds up to 100 gigabits download. The City of Canton is capitalizing on this new law and redeveloping a 12-block area of their city to create an innovation district. Canton City Council voted in the fall of 2017 to develop an 11-member board of directors to assist in steering and managing the development process. Technology companies have been reaching out to the city to inquire about the innovation district and a number of companies have toured buildings. The mayor, a city council member, a Stark County commissioner, a representative from Agile Networks or the Hall of Fame technology incubator, among other local stakeholders will be on the board. The city hopes that "creating that ecosystem will hopefully lead them to finding the next Uber or the next Google or the next high-growth technology company."

The Hall of Fame Technology Incubator, the district's anchor, is under construction and will be complete in the fall of 2018. Things are moving along in Canton. Startup Stark is one of the first organizations to settle in the innovation district and they are anticipating more tech organizations opening in the future, the founders are hoping to replicate Silicon Valley in Canton. Startup Stark is in the process of becoming a non-profit and envision helping start-ups get running, while creating a database of tech-related "people, places, and things." They are hoping that more tech companies will move into their building so they can create a collaborative hive mind. "Startup Stark, which is in the innovation district, and Agile founders described an ideal 'ecosystem' for technology startups as one with amenities for living and working within walking distance."[12]

[11] https://ssti.org/blog/ohio-passes-innovation-district-law accessed August 13, 2018.
[12] http://www.cantonrep.com/news/20180811/startup-stark-encourages-tech-community accessed August 13, 2018.

Recruiting Professionals/Tech – Tullahoma, TN

Tullahoma's LighTUBe, owned and operated by the Tullahoma Utilities Board, has been serving customers in Tennessee since 2009. In 2011, J2 Software Solutions, which specializes in providing high-tech solutions to law enforcement agencies to handle dispatching, records management and other functions decided to move its headquarters to Tullahoma, and the major driver was LighTUBe's high-speed fiber-optic network. J2 employs a staff of approximately 35, has an annual revenue of over $3 million, and is located in a 6,000 square foot building in Tullahoma.

Stormwater – Chicago, IL

City Digital[13], a smart city incubator in Chicago, launched a pilot project in the north end of Chicago in 2016. The project is aimed at solving a typical urban issue, rainwater. Rainwater causes a myriad of issues for urban, suburban, rural, and waterfront locations such as Palm Coast. Not only can rainwater cause flooding, but it can cause erosion, increased pollutants, among other issues. While gray infrastructure (ie. pipes, sewers) previously served the needs of most municipalities in the past, as climates have changed, so have storm systems which are now more intense, frequent, and localized. Many are turning to green infrastructure to help solve these issues, along with technology to monitor and maintain the infrastructure.
City Digital's project in Chicago is called the Smart Green Infrastructure Monitoring Project (SGIM) and includes permeably paved roads with sensors installed under the road to monitor precipitation amounts, humidity levels, soil moisture measurements, air pressure levels, and chemical absorption rates. The program has continued to expand and now has five locations across Chicago, allowing UI Labs to analyze historical and real-time data to provide site-specific recommendations. This data will also be published on the city's data portal allowing others to utilize the data. Now, with SGIM, City Digital and Chicago hope to have a program in place to monitor green and gray infrastructure. UI Labs and City Digital also are on the lookout for other cities that would like to partner and replicate these systems to derive additional insights about stormwater issues and solutions.

Aging in Place – Beacon Hill, Boston, Massachusetts

In 2014, the Milken Institute conducted a study[14] on best big and small cities for aging in place. The small cities included: Iowa City, Iowa; Manhattan, Kansas; Ames, Iowa, Columbia, Missouri; Sioux Falls, South Dakota; Ann Arbor, Michigan, Ithaca, New York; Lawerence, Kansas; Logan, Utah; and Fairbanks, Alaska. Surprisingly, none of the cities in the rankings were located in warmer climates, typical of Florida, California, or Arizona, states that are well-known retirement

---

[13] Data-Smart City Solutions. (2017) *How Smart Cities Track Rainfall.* https://datasmart.ash.harvard.edu/news/article/how-a-smart-city-tackles-rainfall-956 Accessed on August 15, 2018

[14] Eisenberg, R. (March, 2014). The Milken Institute's Best Big and Small Cities for Successful Aging. *Forbes.* https://www.forbes.com/sites/nextavenue/2017/03/14/the-milken-institutes-best-big-and-small-cities-for-successful-aging/#62f0b8b07fef Accessed on August 15, 2018.

states. Walkability, transit and mobility, healthcare, affordable housing and community engagement were general themes that emerged.

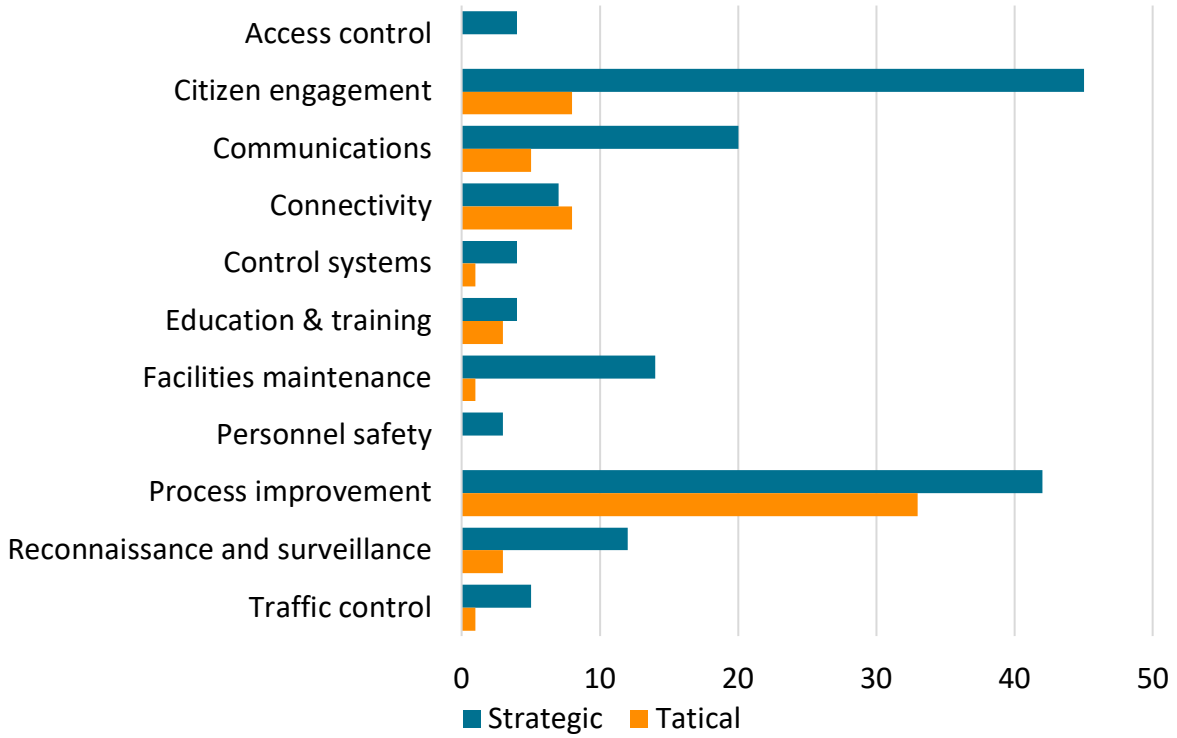
In Beacon Hill, Massachusetts a group of older people gather weekly for political discussions over breakfast. This get together, along with other outings to plays, museums and other cities is offered through a non-profit member organization called the "village." Members pay a couple hundred dollars per year to cover overhead for services ranging from grocery shopping, appointments, and to social activities. The World Health Organizations has established a network of cities, "The Global Network for Age-friendly Cities and Communities," with member cities that pledge to devise policies and initiatives to make their cities more livable for the eldery, helping them to age in place. Over 500 cities across the globe are members, and share best practices and lessons learned. Some of those projects and initiatives include: redesigning green spaces, trainings on public transportation and pushing for more housing stock with universal design principles. Smart homes come into play here, with applications or sensors to alert family members of issues within the home and applications for telehealth or telemedicine. Beacon Hill is continuously searching for more innovative ways to assist their residents to age gracefully, within their homes and neighborhoods.

2.6.2 Opportunities identified by staff and stakeholders

Magellan Advisors engaged both internal and external City of Palm Coast stakeholders to identify Smart City opportunities. We initially interviewed departmental leaders about current technology initiatives and needs. These can be seen as near-term, "tactical" precursors for Smart City initiatives. Then we conducted brief internal and external workshops. The internal workshop was followed-up with internal information gathering about longer-term, "strategic" initiatives. Information was gathered directly from participants during the external workshop. Magellan Advisors also observed activities involving City-owned assets.

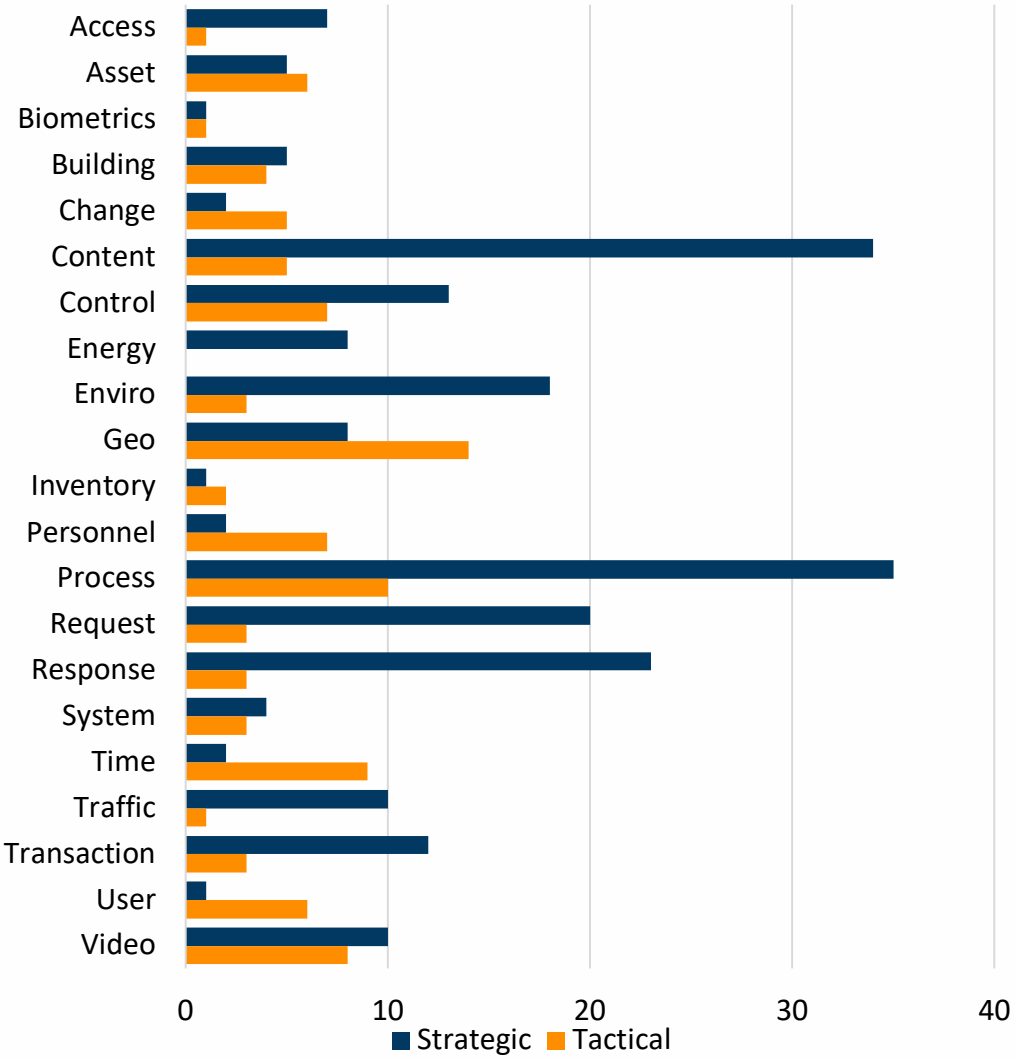
Initiatives, needs, and opportunities were coded for the type(s) of data and infrastructure they require, their general function, and general purpose. Figure 25 shows that the strategic discussions after the Smart City workshop generated more ideas addressing more functions, and that strategic initiatives would be more focused on citizen engagement, communications, facilities maintenance, and reconnaissance and surveillance than tactical initiatives. There was greater overlap between departments' inputs on strategic initiatives. The only function that was mentioned fewer times in strategic ideas than tactical ideas was connectivity.

Figure 25: Functions addressed by tech initiatives



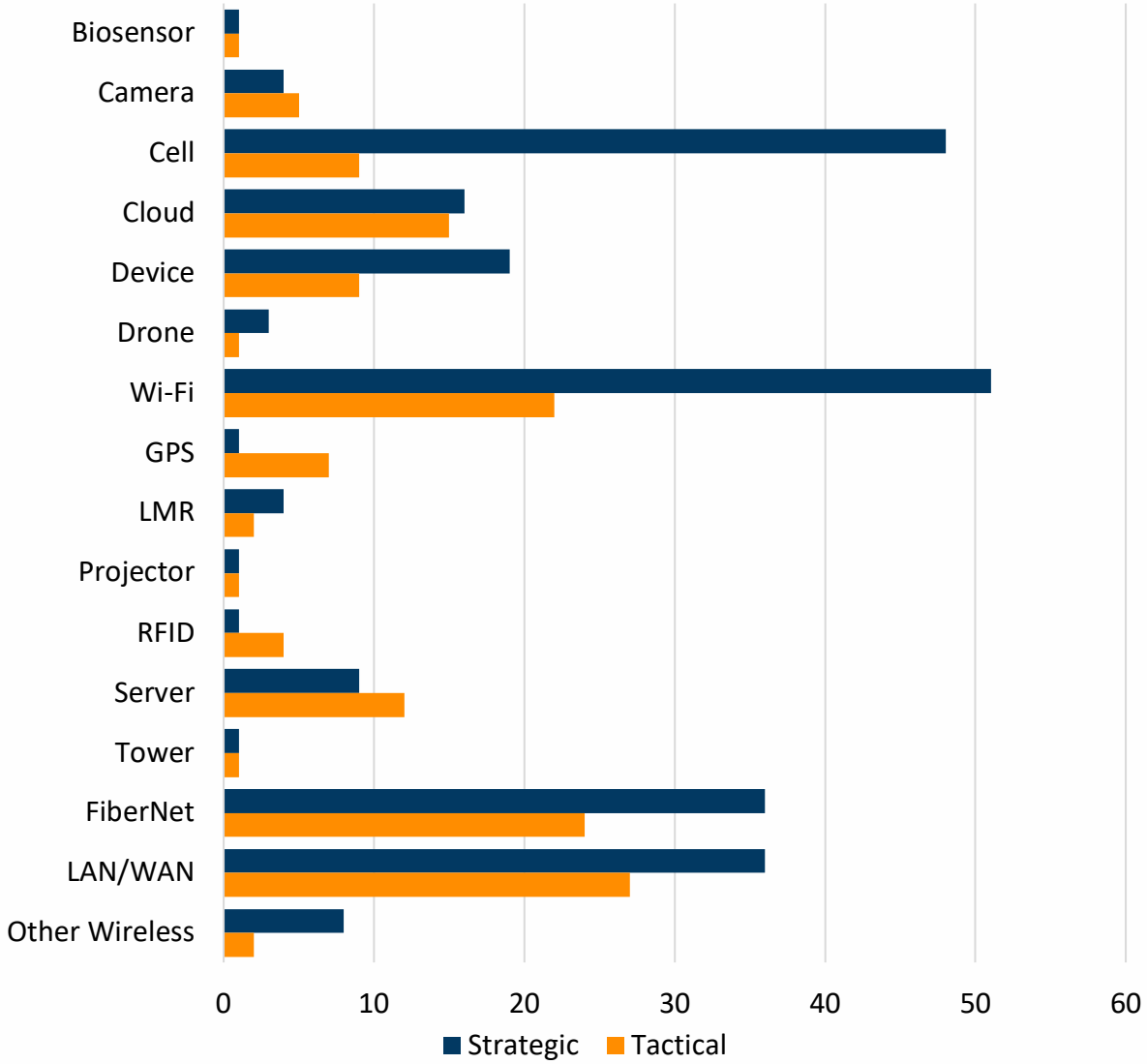
The data requirements for short-term, tactical initiatives, illustrated in Figure 26, are greatest for information about location (geo), process, time, video, personnel, assets, change, and content. Strategic initiatives have overall much greater data needs, particularly for data about processes and produced informational content. Tactical initiatives required more data on internal resources. Information about requests for local government services—emergency incidents, inspections, Open Records, etc.—and responses to those requests, energy, environment, transactions, and traffic were notably higher for strategic initiatives.

Figure 26: Types of data required by City of Palm Coast initiatives



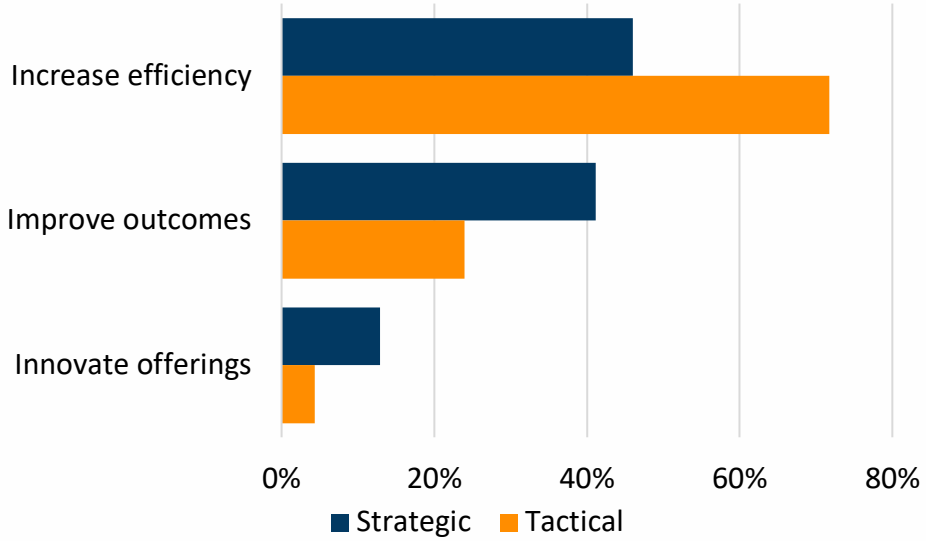
The infrastructure requirements for strategic and tactical initiatives are compared in Figure 27. Overall, the major increases are for network infrastructure, especially for cellular and/or WiFi and other wireless. Eight of the tactical issues involve cellular and/or WiFi, compared to 47 strategic initiatives. Server, GPS, RFID, and camera infrastructure will be required in tactical initiatives more so than for strategic initiatives. Eleven of the tactical initiatives require cloud and/or server infrastructure, which drops to eight for strategic initiatives.

Figure 27: Infrastructure requirements for initiatives



These findings suggest Palm Coast will become ever more network-centric, and will be especially more reliant on wireless connectivity, in spite of the fact that connectivity as a function was *less* of a focus in strategic initiatives. The City will need to generate more informational content along with more data about conditions in the City and about municipal operations. Tactical initiatives are largely intended to increase efficiency and reduce costs. Strategic initiatives were generally more focused on directly improving outcomes for citizens and offering potentially valuable new services.

Figure 28: General purpose or intended impact of initiatives



2.6.3 Smart City issues

Magellan Advisors conducted a site survey of Palm Coast to establish the locations of businesses and commercial areas, city facilities and infrastructure, and residential areas, focusing on Smart City opportunities. We also conducted a public Smart City workshop. Information gathered during this process pointed to several Smart City issues for Palm Coast.

5G small cell and WiFi Wireless

The City of Palm Coast has a clear strategy for traditional cellular, having designated City-owned sites for cell towers and out-sourced the marketing of these sites to Diamond Communications. Emerging wireless technology provide more capacity and faster connections with many more, smaller antennas. 5G (5th generation) cellular and WiFi are prime examples. Other wireless technologies such as Bluetooth, Dedicated Short Range Communications (DSRC), LPWA (low-power wide-area, including LoRa, SigFox, and others), LTE-M (long-term evolution, category M1), Wi-SUN (wireless smart utility network), ZigBee, and Z-Wave also involve placing antenna and/or other devices in the environment. Wireless connectivity requirements of Smart City opportunities should be analyzed and built into the planning process. As discussed above, these requirements are likely to increase substantially, as are the needs of the general public. Therefore, wireless may be a key area for cost avoidance and new revenue for the City. Further, WiFi is a multi-purpose Smart City tool, which can not only provide wireless access to Near-Net or Off-Net Smart City components, but it can be used as an amenity, providing both free public access, as well as high-speed connectivity for the City's mobile workforce.

Traffic monitoring for emergency response and public safety

There are numerous requirements for first responders and public safety to assess traffic flow and incidents. Intelligent control of signals can speed response times. Personnel can assess and prepare for responses in-transit or proactively. Advanced video analysis can identify persons or vehicles wanted by law enforcement. Information can be pushed to citizens and visitors for commuting, tips, and way-finding. Standards organization, including the American Association of State Highway and Transportation Officials, ASTM International, U.S. Department of Transportation, and Federal Communications Commission, have addressed traffic data. There are numerous vendors offering products and services for monitoring traffic and related activities.

Possibly the most mature of Smart City technologies, there are a plethora of intelligent traffic solutions for Palm Coast to consider. The ideal process would involve assessing current systems, including County and State, and thinking deeply and critically about goals. Citizen engagement is critical, and the key to that is meaningful information. The City should aggregate data on emergency and related service requests and responses, including timing and related traffic incidents, and share that data with citizens. The City should also establish a task force or working group, including representative citizens, to address this issue. Key roles would be to scan for solutions, promote the data to citizens, and get citizen feedback on both.

Water and wastewater management and quality monitoring

Potable water and ground water are major concerns for the City of Palm Coast. Systems for managing water—acquiring, dispersing, moving, reusing, and testing it—must be controlled and monitored to meet demand and deal with environmental issues (e.g., major weather incidents). Water systems are following in the steps of electric systems, evolving systems control and data acquisition into Smart Water Grids. A wide range of sensors for the characteristics, including the presence of water are available but must be integrated into systems that inform personnel and automatically adjust processes. Water resources can be secured while reducing energy use. Data about water resources and systems can be pushed to citizens and made available for third-party value-added applications.

The two sides of this issue are internal operations, particularly avoiding or mitigating problems, and external citizen activities. Citizens may be part of the solution as well as a solution driver. The City must provide timely, accurate, and actionable information to citizens so they can act accordingly. This could involve flooding or leaking sprinklers or any other number of related issues. New technologies are emerging to allow real-time in-line water quality testing. The City could avoid substantial risk by deploying sensors to proactively monitor manholes, PEP tanks, and water lines. It would also have to collect and analyze data in the process. Citizens might benefit from this analysis. On the other hand, the City might ask citizens to deploy technologies related to water use and waste water collection. This could be more effective as well as economical, but would require even more data sharing and connectivity.

Building and grounds maintenance

Maintenance of buildings and grounds can be expensive undertakings that are evident to citizens and visitors. From mopping and mowing to taking out the trash, it takes a lot of work to keep a city looking good! Systems for these purposes, including predictive maintenance, condition assessment, and even robotic devices, have evolved substantially in recent years, and they have become better integrated with similar systems (for appliances and vehicles, for example). There are numerous technological components involved, including various types of sensors, programmable controllers, and special-purpose robots. They are on the cusp of being economical, mass market technologies. That said, while building and grounds monitoring technology is reasonably mature, automation of actual maintenance is still evolving technology. The City of Palm Coast should study the potential impact of automation on building and grounds maintenance. While this may be a longer-term effort, it could have major budgetary and operational benefits for the City. Key questions involve the level of spending on maintenance as well as technological development and requirements. The City can capitalize on current connectivity, GIS, monitoring, and surveillance, but they will almost surely need to be enhanced. New infrastructure such as beacons and sensors may be required or useful. Sensor-based technologies used for smart garbage can and smart irrigation initiatives can assist cities in maximizing efficiencies and minimizing costs associated with these city responsibilities. Bigbelly[15] waste management systems, deployed in New York and Philadelphia, have sensors installed in trash cans to alert city staff that the bins are full and ready to be emptied, saving staff time, gas, and costs. Libelium[16] irrigation systems, deployed in Barcelona, involve deployment of sensors in the soil, allowing remote monitoring of moisture and control of irrigation systems to facilitate management of the water network. These sensor technologies assist cities in streamlining operations, beautifying public spaces, and reducing carbon footprints.

Mobility between neighborhoods and business districts

Mobility is a common Smart City challenge and was voiced as a concern by City leadership and City Council members during stakeholder interviews and meetings. Palm Coast does not have many of the mobility issues of dense urban areas, but its citizens do face challenges of sprawling suburban areas. An automobile is necessary to move around Palm Coast, to go to shop, work, or even recreate. Palm Coast needs intelligent means to move people from their homes through business districts to recreational areas. There are multiple potential solutions to this issue, including driverless (such as EasyMile[17], deployed in Gainesville, Florida May 2018) and on-demand (such as Shotl[18], deployed in Battle Creek, Michigan March 2018) shuttles. These solutions benefit from the availability and support of particular services or standards such as 5G, Dedicated Short-Range Communications (DSRC), and WiFi. While Gainesville and

[15] http://info.bigbelly.com/case-study/city-of-philadelphia?hsCtaTracking=529e1123-9a56-4fe5-a5b5-fba2c7c983d2%7C6cff5cdd-9206-433c-a617-2ed8cfc4f677
[16] http://www.libelium.com/saving-water-with-smart-irrigation-system-in-barcelona/
[17] http://www.easymile.com/ez10-driverless-shuttle-turning-heads-in-gainesville-florida/
[18] https://shotl.com/news/shotl-lauches-in-the-united-states

Battle Creek's mobility issues are drastically different from those of Palm Coast, this does not mean that Palm Coast could not locate a partner to customize a solution to serve their citizens' neighborhood mobility challenges.

There are numerous current and rapidly emerging solutions to mobility problems, and some involve little or no public investment. The City of Palm Coast should assess the cost and maturity of the solutions, and look for what is on the horizon. The critical consideration is the infrastructure they might require, particularly for wireless connectivity. As connectivity becomes more pervasive, antenna sites are becoming both more abundant and smaller. This allows for faster but also more consistent and flexible connections, which is what autonomous and on-demand vehicles require.

Mobility is primarily a citizen, rather than municipal, issue, so citizen engagement is critical to a solution. The City needs meaningful information about the trips citizens make—and those they don't make—to recreate, shop, work, etc., and whether people would use a "solution." The former requires data-gathering, which can be a fraught activity. There are also many new, less challenging ways to get this information. Assessing willingness-to-use, in contrast, requires an actual test, which would necessarily involve a private company and/or university. Therefore, the City should research citizens' local travel habits with an eye toward hosting one or more pilot projects.

Open data

A standard practice of Smart Cities is providing data openly to the general public. Of course, this means that (a) processes must be digitized to generate the data and (b) systems must be capable of serving up data using accepted standards. When deployed properly, Open Data can greatly reduce cities' operating costs, particularly for information systems. Related functions and systems can directly support layered, value-added services and even generate new revenue for the City. As a bolt-on solution to legacy systems, Open Data can be a huge challenge. The city's primary software vendor, Tyler Technologies (publisher of Munis enterprise resource planning software) has a citizen transparency service. They also just acquired Socrata, a leader in Open Data solutions/platforms. Whether it makes sense to stay with a proprietary solution or go to fully open systems depends on the City's strategic orientation. The City should consider how these options fit with its goals related to attracting talent and being a technology leader. Open Data can be a powerful tool to incentivizing development of technology and data startups.

Smart building/home platform

The City of Palm Coast City Hall received Silver level LEED certification for environmentally friendly features, supporting the City's strong commitment to strong environmental practices and programs. A number of the design points of City Hall included smart building applications such as controllability of lighting systems and indoor air delivery monitoring. Smart buildings/homes take these applications a few steps further.

Smart Buildings/Homes are simply facilities with controls, network access, and sensors integrated into them. Sub-systems, such as appliances, entrances (doors and windows), and HVAC, have similar functionality and integrate seamlessly (at least in concept) with the building operating system. The overall purposes are convenience, energy efficiency, and safety/security, but the systems also extend to entertainment, fitness, food preparation, pet care, and wide range of other domestic functions. A general purpose of a platform is to allow entrepreneurs and existing companies to develop new applications that provide additional functions. Deployment of these systems and development of such a platform can be facilitated by the City, which can also directly benefit from the technologies for City facilities. ANSI/BICSI has been the leader, along with the Environmental Protection Agency (EPA) and National Institutes for Standards and Technology (NIST), in establishing standards for Smart Buildings. IEEE has established numerous standards on building automation, controls, and sensors.

These technologies are mature and have clear operational value for the City. The City should conduct an internal assessment of standards knowledge and use among key departments. "What are we doing about this, what standards are we using, and who knows about it?" should be the guiding questions. The City should also initiate a dialog with local builders, developers, and property managers to assess knowledge and use in the community. At the same time, look at what is happening in the industry: Who are the major players? What are the most used products? Where are the emerging technologies? Again, community stakeholders in related business and industry should be actively involved in strategy to acquire solutions from—and possibly attract—smart building/smart home companies.

Palm Coast does have one home builder interested in and currently developing design plans for a model smart home in Palm Coast. Magellan Advisors had the opportunity to discuss developments with Sun Coast Realty during the Smart City workshop and a follow-up telephone discussion. As aging in place is a major factor for many citizens in Palm Coast, smart home technology coupled with telehealth and telemedicine applications could drastically benefit the aging population in Palm Coast. Sun Coast Realty could engage with the City and public safety to develop policy around keeping citizens safe through monitoring and response.

Aging in place and lifestyle support

Many Palm Coast residents are seniors. Retiring Baby Boomers are likely to find Palm Coast as a great place to live out their lives. Increasingly, people need in-home assistance and support either to avoid moving into an institution or having to pay for more intensive services. These are major focal areas for Smart Cities around the world. Healthcare robotics and telehealth applications are especially relevant, along with monitoring systems that are basically an extension of Smart Building systems mentioned below. From wearable sensors to telemedicine to sensors and other systems in the home, many of these technologies operate in private realms but could greatly benefit from public infrastructure and services. Data acquisition, analysis, and security are critical governance issues for any applications involving persons.

Standards include Health Information Protection and Privacy Act (HIPPA) requirements, as well as numerous ways to establish connections and securely share data.

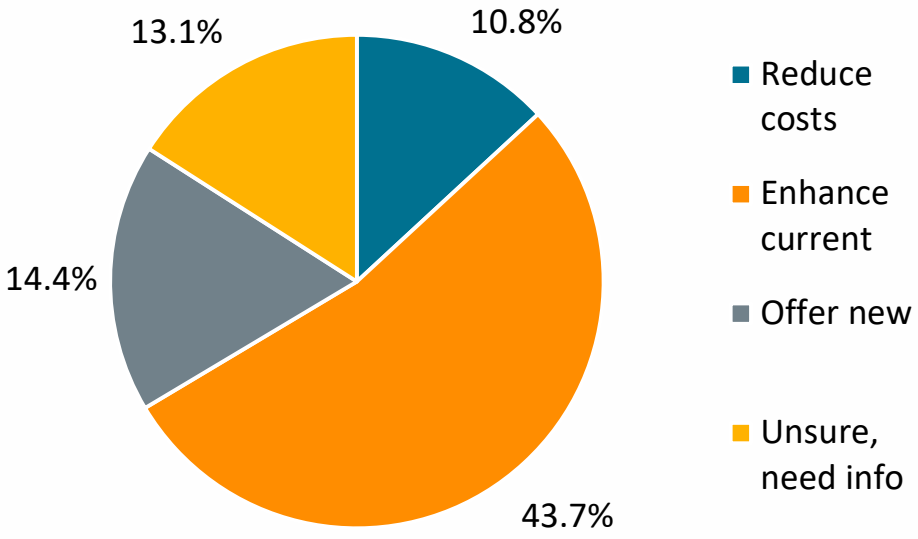
There is a reasonably long history of devices to support aging in place. (The "I've fallen and I can't get up" commercials first aired in 1989.) The emerging generation of solutions are much more complex and powerful technology. The City's role may be helping citizens make sense of the options, as well as providing supporting infrastructure and services. There are two sides to this: Understanding emerging technologies, their costs and benefits, and understanding citizens' habits, interests, and values. One practically requires the other: The best way to understand citizens is to engage them in examining the technologies. For example, the City might organize a trip to Louisville, KY for local business and civic leaders, and regular citizens, to see the technology first hand. According to Forbes Magazine[19], Louisville is becoming the Aging in Place capital, with a cluster of businesses focusing on technologies services this distinct sector. Or, it may host demonstration or research projects by companies, think tanks, and universities. In each case, the City's role is organizer, facilitator, and data platform.

2.6.4 Public technology priorities

The Palm Coast Tech Assessment also covered priorities for public technology initiatives (see Section 2.5 on page 25 for complete results). Participants were asked whether local government should focus on cost control, service enhancements, new services, or do nothing. They could also indicate that they need more information. No respondents (out of 54) indicated the government should "Do Nothing" on any of the topics. The majority of responses, as illustrated in Figure 29. While a fifth felt initiatives should reduce costs, more were for offering new services. About the same percentage indicated a need for more information.

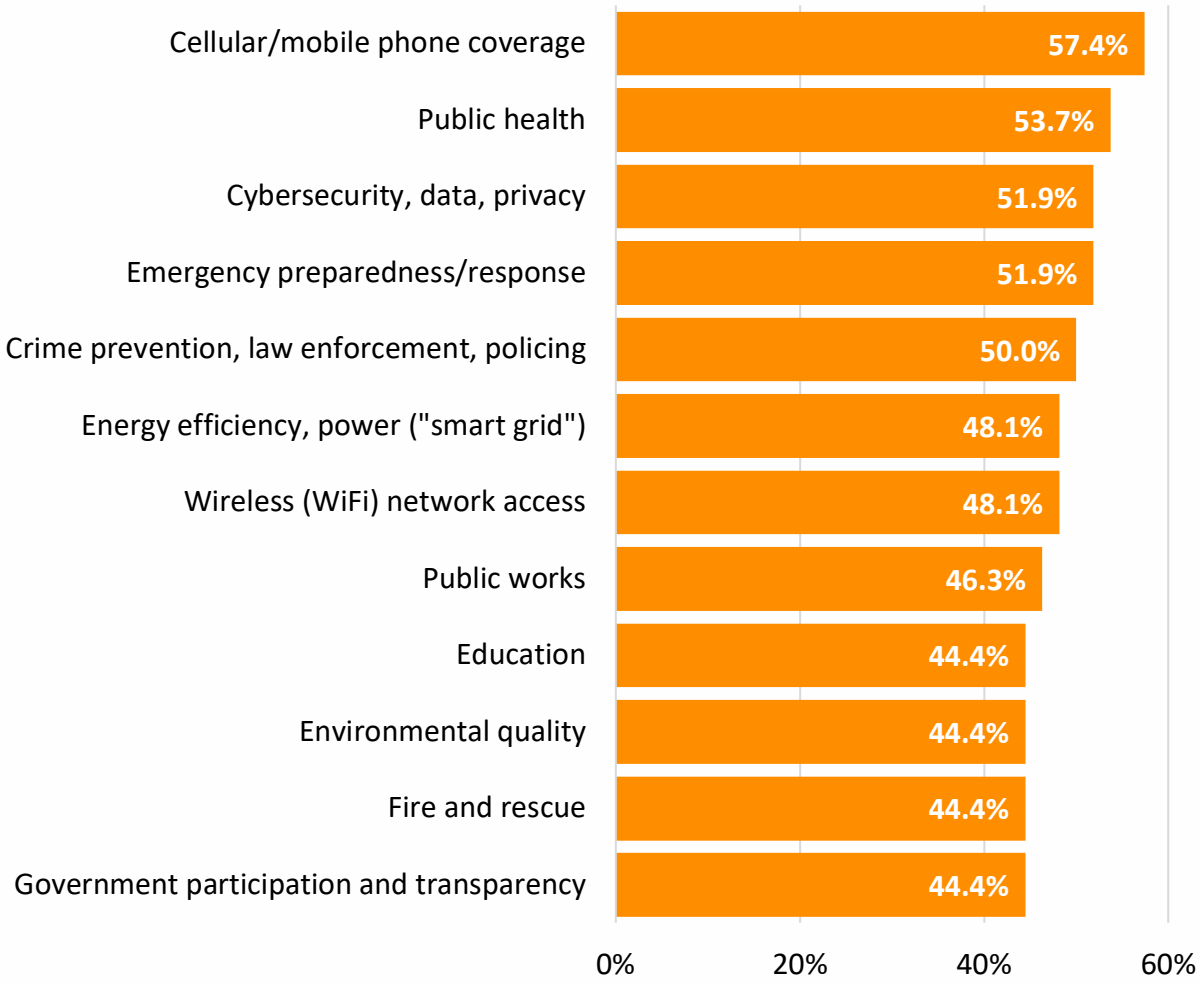
[19] Farrell, Chris. (January, 2018). Why Louisville is Becoming America's Aging Capital. *Forbes Magazine.* Accessed https://www.forbes.com/sites/nextavenue/2018/01/08/why-louisville-is-becoming-americas-aging-capital/#6ffae740315d. August 15, 2018.

Figure 29: General priorities across topics



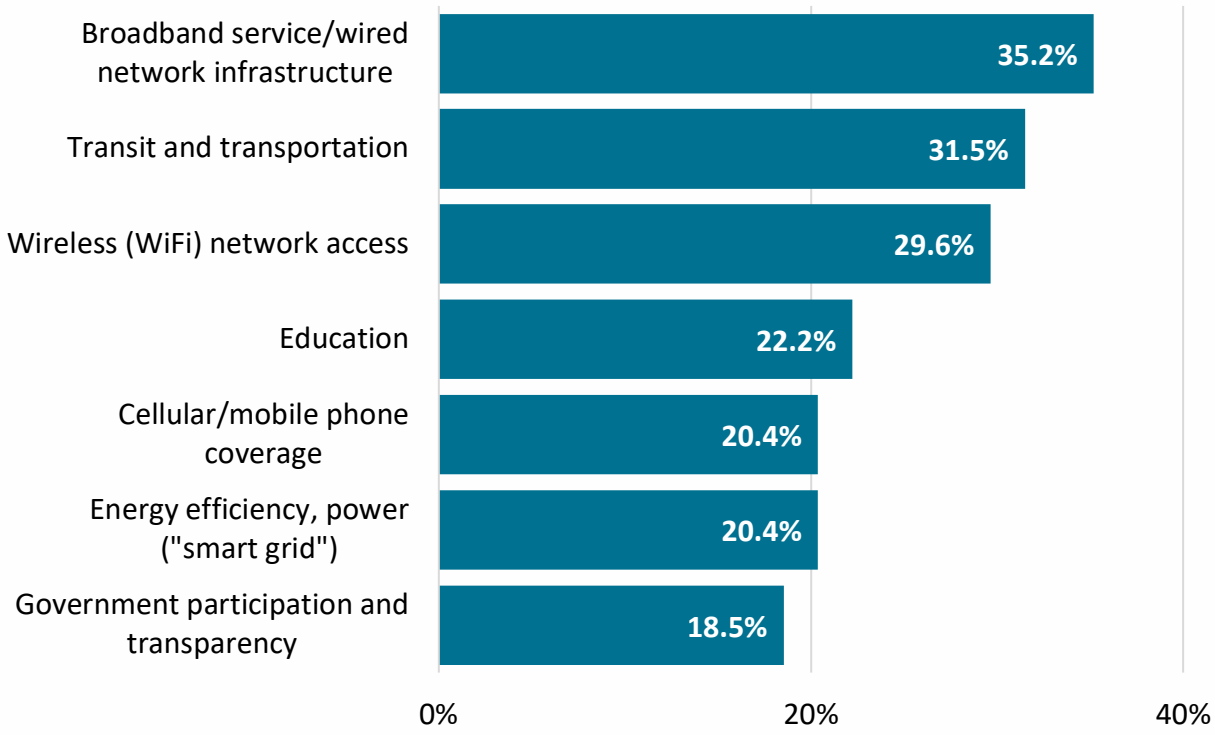
The next three figures show the items that received the most ratings of "enhance current," "offer new," and "need more information." Clearly, along with basic communications, local business people want enhancements to safety and security, illustrated in Figure 30. The City must secure its own systems, and it is possible to extend some protections to citizens. Technology can also directly enhance public health, emergency preparedness, and crime prevention, as discussed in detail above. Quality of place, workforce, and civic participation are also private leaders' priorities for tech-based enhancement.

Figure 30: Top areas for enhancement



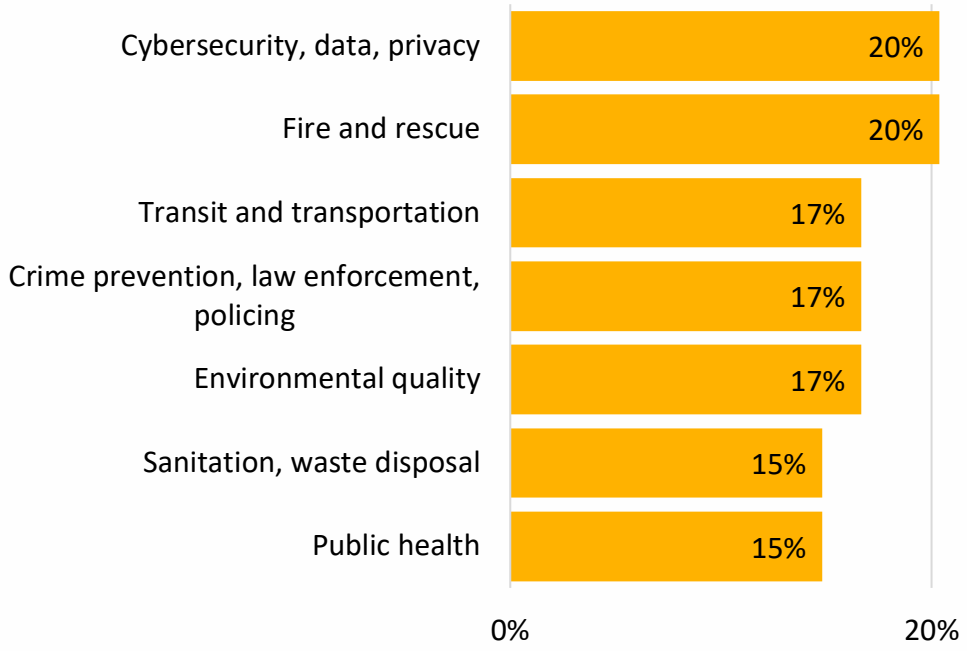
Advanced connectivity, wired and wireless, were top priorities for new offerings, along with transit and transportation, as shown in Figure 31. These results comport with other findings, particularly from City Council Members and the public Smart City workshop, that mobility is a major issue for citizens. Of course, the City of Palm Coast is already providing some of this—FiberNet, specifically—so these results suggest lack of awareness of and latent demand for faster connectivity. The prominence of cellular and Wi-Fi suggests citizens what more flexible connectivity, too.

Figure 31: Areas for new services



Finally, safety and security were top among topics about which Tech Assessment respondents wanted more information. New, online security was just as uncertain as old-school safety. These are very different domains, yet could use similar channels to inform citizens. Equal proportions of respondents wanted more information about crime, environment and transportation, which can all come from integrated monitoring infrastructure.

Figure 32: Topics about which participants needed more information



2.6.5 Technology conclusions and recommendations

The City of Palm Coast is facing major technological changes. At very least, the City will need to make major upgrades to its current information systems, particularly its enterprise resource planning (ERP) software. Advanced metering infrastructure, asset, and inventory management are just a few planned technology enhancements. Ideally, these systems should be inter-operable, if not integrated, for maximum value and minimal risk exposure. They should also be designed and deployed to accommodate Smart City applications, as should the City's physical facilities and operations.

Current departmental leaders are aware of Smart City possibilities, and that awareness is likely to grow as several key positions and people transition. Business leaders may be even more aware than current city leaders. The issues they're dealing with and their priorities for public technology show that they've had to get smart to survive and prosper in tough times. Collaboration between business and city leaders could be a powerful tactic for driving technology investments and impacts. If nothing else, it would help align City operations with community drivers while breaking down internal silos.

The City will need to change its priorities and even some basic functions. Whether responding to FOIA requests, fixing infrastructure so it never breaks, moving people around the community without congestion, or creating a downtown from the ground up, digital technology plays a critical role in a changing Palm Coast. Change management and innovation will need to be built into process if they are to be true priorities.

For all of the opportunities identified above, the City needs to both acquire and manage data and engage citizens, which actually go hand-in-hand. The Smart City assessment suggests the City will need to provide more information about its process, particularly regarding requests for services and responses. Environment and security are also key areas where citizens want information for which the City can gather data. All of this data will need to be processed into meaningful content, so the City will need to adapt its processes and reorient its workforce toward content production and publishing.

Many local organizations have already made these changes, and are almost desperate for technology resources. Being smart also involves scanning for new technology opportunities and threats for the community. This is, in effect, an entirely new municipal function that has direct economic impact. By methodically searching for new technologies and trends, the City positions itself and its citizens for greater success. At the very least, the City's role is to provide useful public information for citizens to be safe. Similar information can enable community members to use fewer limited resources, like police and water, while making greater use of abundant ones, like parks and trails.

Innovative economic development strategies are possible as the City of Palm Coast focuses on data and engagement, and as it develops new environmental scanning capabilities. Some or most are unforeseeable and will emerge over time with work. In the near-term, a key opportunity is to organize or host events that attract key demographics: relatively young, well-educated (or experienced and skilled), tech-savvy, diverse, and creative.

A related opportunity is to identify major players in industries and institutions focused on the topics touched on above, and engage them in a discussion about their needs and opportunities. Palm Coast represents their market, and a great place to invest. Note that these two opportunities are highly complementary, so the City of Palm Coast should also invite the corporations to participate in or sponsor the events, which would help attract targeted persons. Longer-term opportunities depend on both infrastructure and organizational capabilities. The City of Palm Coast must invest in both if it hopes to attract high-paying jobs and highly-skilled workers and grow sustainably. The City should choose a model and priorities for growing FiberNet, and should consider what else it can do to foster wireless connectivity. In the process, the City should develop and hire staff (or a partner) capable of operating FiberNet, and aggressively pursue FiberNet business opportunities.

FiberNet activities should feed directly into Palm Coast's new Smart City functions and roles. FiberNet technical operations should dovetail with the City's data acquisition, management, and sharing function. FiberNet marketing and sales should directly do citizen engagement, and should facilitate this function for IT and other departments. Both aspects of FiberNet should lead collaborative environmental scanning with other departments and community stakeholders. And, FiberNet excess revenue and functionality should be used to support innovative economic development activities.

The practical conclusion is that there is clear demand for FiberNet services—with the City and out in the business community. The most critical demands are currently among local businesses, and Fibernet is well-positioned to meet those needs. The City will have increasing—in amount and criticality—connectivity needs, especially as it deploys Smart City technologies. In the process, the City could leverage its other technology investments to enhance and expand FiberNet's services. By acting as an anchor tenant, the City can give a partner substantial, profitable business with little or no direct costs. High-density, mixed use development of Town Center—with leading edge, Smart technologies built-in—would also create an ideal market for FiberNet growth. All of this makes a strong business case for FiberNet, and will make it attractive to prospective partners.

2.7 FiberNet SWOT

Strengths are simply what you have, and weaknesses are what you need. Weaknesses are largely dependent on the situation. Strengths also varies depending on external demands, expectations, and needs. In other words, what you have and need are relative things. It is useful to examine the opportunities and threats first because it provides context to evaluate strengths and weaknesses.

Table 8. SWOT analysis from *Proseperity 2021* report

Strengths	*Weaknesses*
• Quality of Life • Available Workforce • Quality Schools • Affordable Housing • Geography and Climate • Transportation Network • City FiberNet • Utilities • Public/Private Partnerships • Cultural Diversity	• Availability of Industrial Land and Space • Higher Cost Industrial Land and Space • Funding for Economic Development • Lack of Specialized Workforce • Permitting Time Constraints • Economic Base/Diversity • Public Awareness (Region, Nation, Global)
Opportunities	*Threats*
• Available Land • Refocus on Industrial/Commercial • Medical Sector • Green Sector • GREAT Outdoors (Ecotourism, Sports, Active Lifestyle) • Retirees • Florida East Coast Railroad • Foreign Investment • Foreign Trade Zones • Regional and National • Marketing/Branding	• National and Global Economic Conditions • State and National Policies • Private Sector Financing • Local Budgetary Constraints • Public Awareness (Region, Nation, Global) • Water Supply

In 2011, the SWOT depicted in Table 8 was created for the *Prosperity 2021* plan. It is nearly a decade old, and more general than FiberNet's SWOT, yet many of the items are still relevant. A recent internal City of Palm Coast analysis had similar results, but found perceptions about and promotion of Palm Coast as a location for business investment and young persons to be a weakness. Recommendations from that process were to build attractions, host events, and establish an innovation hub as part of comprehensive Town Center development.

Many of the threats are actually from local sources such as political friction, lack of alignment, collaboration, and vision, and poor business climate. Whether perceived or real, the larger issue with these "threats" is they don't include possible negative ramifications of global, national, and regional trends. For example, how might the move toward more contingent, contract workforce impact the area's economic prospects? While this is beyond the scope of this project, it is important to consider these issues, so they are briefly summarized as relevant to FiberNet.

2.7.1 Opportunities and Threats for FiberNet

Opportunities and threats are situations or things outside one's control (or potential, in the future) that could impact one's mission or purpose. Opportunities potentially enable or support, while threats might interfere, impede, or hinder. Develop and pursue opportunities based on their potential value. Avoid threats and mitigate their potential impacts by preparing for them. Specific applications of these general rules depend on one's goals and objectives, and opportunities and threats one expects to face in the environment. It is advisable to continually scan the environment, set indicators for action, and test assumptions and conclusions. The following is a general assessment of apparent, "big picture" opportunities and threats. Some detail is or will be in other parts of the FiberNet business plan, as noted below.

Economy

The overall economy is growing at a reasonably strong rate, with very low unemployment and low inflation. Energy, finance, distribution, logistics, personal care, recreation, and tech sectors are all strong, especially those that are building components for others' systems. Demand for consumer goods and services is generally strong. Wages remain relatively flat, along with overall spending by businesses, particularly manufacturing. Real estate has recovered well, with strong development of single and multi-family units, although high-end housing and retail space has not followed suite. Generally, investors are not being aggressive. One reason for this is that memories of the Great Recession are still fresh, and memories of the bursting tech bubble of 2001 are not stale. While there is a strong tendency toward deregulation and free markets, enabled by tech and promoted by industries such as finance and medicine, there is also trepidation about major changes or investments.

Northeast Florida is a tourist destination and transportation hub. Jacksonville to the north is a major seaport, rail hub, and aviation center, with a relatively many firms and jobs in business and professional services. Education is a major sector, particularly with Gainesville and the University of Florida in the region. To the south of Palm Coast, Orlando is global leader in leisure and hospitality, and has strong business and professional services sectors, but its strongest recent growth has been in manufacturing. Other regional communities along the beach, particularly Daytona Beach are major destinations for motorsports and related visitors. Across the region talent attraction and development has become a major objective for economic development due to demand for highly capable workers. Generally, the State of Florida has grown employment faster than any eastern, midwestern, or southern state. A detailed analysis of local demographics and economics is included in Section 1. Local trends

generally mirror national and state trends, although the area has somewhat lower educational achievement, fewer rental units, and more constrained household income. This suggests fewer economic opportunities and less upward mobility for young professionals. Employment statistics for the area support this conclusion.

Geography/environment

Palm Coast's geographic location is ideal for tourism and trade but does face seasonal environmental challenges. Not only is the area exposed to hurricanes and other ocean-driven weather, rising sea levels mean the area may be impacted by high tides and relatively minor storms. Weather patterns are expected to be more extreme, meaning potential impacts from any given event are higher. Given the City's location, population and traffic growth are likely to impact the area. Green spaces and natural areas currently balance well with development. Palm Coast could be negatively impacted by urban sprawl outside its boundaries, especially if growth moves west into traditionally agricultural areas. Accessibility and walkability along with shelter from the elements are critical components of the built environment that can mitigate these threats.

Government/regulation

The State of Florida has a very liberal open records law, which means anyone can ask for any information without providing any information, and such requests must be met expeditiously with minimal requirements on the requester. Constitutional entities within the state government deal with conservation, criminal justice, education, and special populations, specifically seniors and veterans. Other constitutional entities are local—counties, municipalities, sheriffs, etc.—and other state functions are carried out by statutory entities under the executive branch, except for the Public Service Commission, which is under the legislator.

Executive agencies include the Florida Citrus Commission and lottery, along with the typical array of agencies. The State Agency for Technology, although under the Department of Management Services, has a separate budget and is not subject to the department. The Department of Environmental Protection has supervisory authority over local water management districts, although they each have an individual governing board. Local school districts are independent of the State Department of Education. Community, economic, and workforce development at the state level are all under the state Department of Economic Opportunity.

The current administration places major emphasis on job creation. Governmental efficiency and public safety are other major state executive branch focus areas. The state has made substantial expenditures on environmental conservation and natural disaster preparation, response, and recovery, and continues to invest in education. All of this is being done while the state is cutting taxes. The net effect is likely to be reductions in state services—particularly

health and human services—and in regulatory oversight. State law effectively prohibits cities from participating in competitive markets, specifically broadband.

There appear to be few regional governance entities in Florida. The state has ten planning regions, all coordinated and supported by the statewide Florida Regional Councils Association, whose roles are more supportive than governing. The Planning Councils are multi-purpose entities comprised of local governments. Two-thirds of board members for each council are local elected officials, and one-third of board members are appointed by the governor. Palm Coast is on the south end of the Northeast Florida planning area, and practically carved out of the north end of the East Central Florida area. While each Planning Council serves a set of core functions—economic development, emergency response, and land use planning support—how they operate and the services they provide vary greatly between councils. The bulk of the Councils' funds (60%) come from federal grants. Local funds cover about 35% of the Councils' budgets. The state provides only about 5% via contracts, and no general state funds are appropriated to the Councils.

There are also regional Community Action agencies and Councils on Aging across the state. Northeast Florida Community Action Agency administers HUD programs in the area—Community Service Block Grants, Low-Income Energy Assistance Program, and Weatherization Assistance Program. Most public seniors' services are provided by the cities and counties, or by the Florida Department of Elder Services' Division of Statewide Community-Based Services, via eleven Area Agencies on Aging. ElderSource serves and the Area Agency on Aging of Northeast Florida, but is almost entirely a coordinating role.

Society

American society is becoming more demographically and socially diverse, and is trending older particularly among persons of Asian and European descent. The culture has become less formal and more inclusive of fringe activities and groups. While traditional recreational pursuits and social institutions have seen participation erode, numerous new micro movements have gained steam. From local foods and craft beers to custom cars and mini homes, small-scale endeavors have become hugely popular in recent years. At the same time, people are more skeptical toward traditional mass institutions such as higher education, journalism, and political parties. The ascendant new mass institutions are gaming and social media. People are generally seeking more curated experiences, often as a combination of educational, recreational, and social activities.

Technology

Artificial intelligence, automation, and big data represent a major technology trend toward greater digitization of processes and things. Most anything can now be intelligent. At the same time collaborative technologies, multi-player gaming, and social media represent another technological mega trend toward increased connectivity and information access along with social fragmentation. Thanks to technology, we are less longer burdened by physical work or

limited by place. This means people can focus on creative interests and others who share those interests.

As more activities become digitized, and more value is transacted online, more cybercrime and information breaches are inevitable. Technology is essentially creating whole new areas of the economy, which must be monitored and secured, albeit in totally different ways. Digital technology is useful for monitoring things and controlling access to them. By the same mechanism, if security is breached, negative impacts can multiply. Ultimately, cybersecurity failures can undermine trust in institutions, markets, and polling places, threatening the very foundations of free-market liberal democracy. The huge increase in spending on cybersecurity and its integration at the highest strategic level of corporations and governments is no surprise. The arms race will inevitably continue as new risks emerge from artificial intelligence (AI), social media, and other tech trends.

A critical element of technology as an opportunity or threat is the capabilities required to use it. As organizations digitize to increase efficiency and speed operations, workers must upgrade their skills and move into higher-value positions. There is a substantial portion of society that is left out of the workforce—and most of the economy—due to lack of access and education. It is practically impossible to succeed today without solid technology skills and understanding. On one level, detailed technical knowledge is required for advanced roles. This knowledge base is constantly changing. On another level, general knowledge of the practical and strategic implications of technology is required of effectively everyone. It can be particularly important—and difficult—for key decision-makers and top officials to have these insights. Technology can change rapidly, but certain basic realities remain: Constantly learn or be left behind.
The other key trend in technology is connectivity. The rate at which digital, IP-based connectivity has spread is unprecedented. As more areas get connectivity, the trend to increase network capacity and throughput will accelerate. Consumers are demanding more options for connectivity, with new devices and services that deliver any form of information, anywhere, anytime. Where old local telephone systems were monopolies, today's markets and technology allow numerous entities to provide network services. For connectivity, the bottom line is determined by the density of subscribers/users within a geographic area. Areas with strong growth in high-income occupations and residences are attractive to network service providers, especially if the cost of entry can be kept low.

Summary

Generally, FiberNet has abundant external opportunities, which align with internal City of Palm Coast requirements and with Smart City opportunities, discussed on page 38 and elsewhere in this document (see cross-reference). Generally, the opportunity is to use design-oriented development events as a means to draw diverse, tech-savvy, young persons to Palm Coast, then to implement what they design. Bureaucratic inflexibility may be a barrier to this opportunity, and to associated opportunities from regional growth and technological innovation. Top-down, exclusive approaches probably won't work. Open, inclusive approaches are better.

Part of this is due to economic and geographic location between two of the state's large metropolitan areas. Palm Coast could too easily be swallowed by the region as a bedroom community to Jacksonville and Orlando. FiberNet gives the City a competitive toehold, especially in the areas of business and professional services, education, and healthcare. It can be a point of engagement, where people feel they can really make a difference, literally differentiating the community from a horde of competitors.

The key general objective for the region appears to be attracting and developing highly capable workers, particularly people relatively early in their careers. As a literal greenfield, Palm Coast can create a space tailored to this demographic. Consumers increasingly seek experience and expect to be engaged in a product or service. The opportunity is to host a collaborative design and development process, and the parallel threat is to be ignored by young independent professionals.

FiberNet itself is a design topic, as well as a key component in an overall design, and can be a means for understanding other opportunities and threat. People value that which they have a hand in designing, and that which gives them understanding. FiberNet can be a platform for both of these outcomes. The overall opportunity is for Palm Coast and FiberNet to provide a blank canvas for investors in key areas—business and professional services, education, healthcare, real estate, and technology—while guiding how and where they invest to align with local priorities and values. The best way to do this is via a broad-based, collaborative, and inclusive process rather than via traditional expert-driven, official-oriented programs.

2.7.2 Strengths and Weaknesses of FiberNet

FiberNet consists of 54 miles of fiber-optic cable, buried in 60 miles of conduit, including two spare conduits alongside the one occupied by the current FiberNet backbone cable, with 110 splice cases. It has two core carrier-class switches, one in each of two co-location facilities, and various types of Customer Premise Equipment, including media converters, and small-form Ethernet switches. FiberNet connects to the internet at Jax NAP via a 1 Gbps circuit from JoyTel (swapped for local fiber), backed up by 30 Mbps direct internet access via Spectrum Business. The City also has two other 1 Gbps circuits from JoyTel, one for disaster recovery and one interconnection with other providers.

The network currently connects 120 locations, including 45 private businesses, or about 6% of the economic base, including several cell sites. The network has grown by an average of 10 connections per year since 2006. FiberNet's primary customers are network service providers, along with other wholesale customers—the local school system and the City, itself. Several City assets and facilities—notably Water Treatment Plant 2—are not on the network, and FiberNet is terminated adjacent to (or even in) multiple business locations that are not connected to the network.

2.8 FiberNet description and issues

The City of Palm Coast FiberNet consists of 53.9 fiber-optic sheath-miles, 60 route-miles of conduit, and 110 splice cases. It has a combination of two interconnected rings to the north and a tree-and-branch architecture, with a ring around City Hall, to the south. Major road corridors were meant to be backbone routes, which required three (3) 1.25-inch conduits in the public right-of-way, and a 288-strand fiber-optic cable in one of those conduits, leaving two additional pathways. Laterals from the backbone were specified as one (1) 2-inch conduit and appropriate strand-count cable for the area or connected facility.

FiberNet incorporated two co-location facilities, or interconnection points, one on Palm Coast Parkway (west bound) at Belle Terre Parkway, directly in front of Utility WTP1, and a second on Central Ave, at Central Park in Town Center, just south of City Hall. Connections on the Palm Coast network are divided between co-location facility (Co-lo) 1 and Co-lo 2, which are centrally located in the clusters of customer locations. All customers were served with dedicated fiber pairs that home-run from their premises to one of the co-lo facilities.

As of this analysis, FiberNet had a total of 124 connections, most of which are at public facilities or traffic signal cabinets, as listed in Table 9. The City of Palm Coast budgeted $2.5 million in seed money over 5 years (2006 – 2010 @ $500,000 annually). Further, FiberNet cost the City approximately $200,000 per year from 2013 to 2017, and generated an average of $631,151. FiberNet has generated an average of 7.7% of the City of Palm Coast's Information Technology Fund expenses, while contributing an average of 12.7% of annual revenue, not including revenue from other City departments for communications services (to public facilities and traffic signal cabinets listed in Table 9.

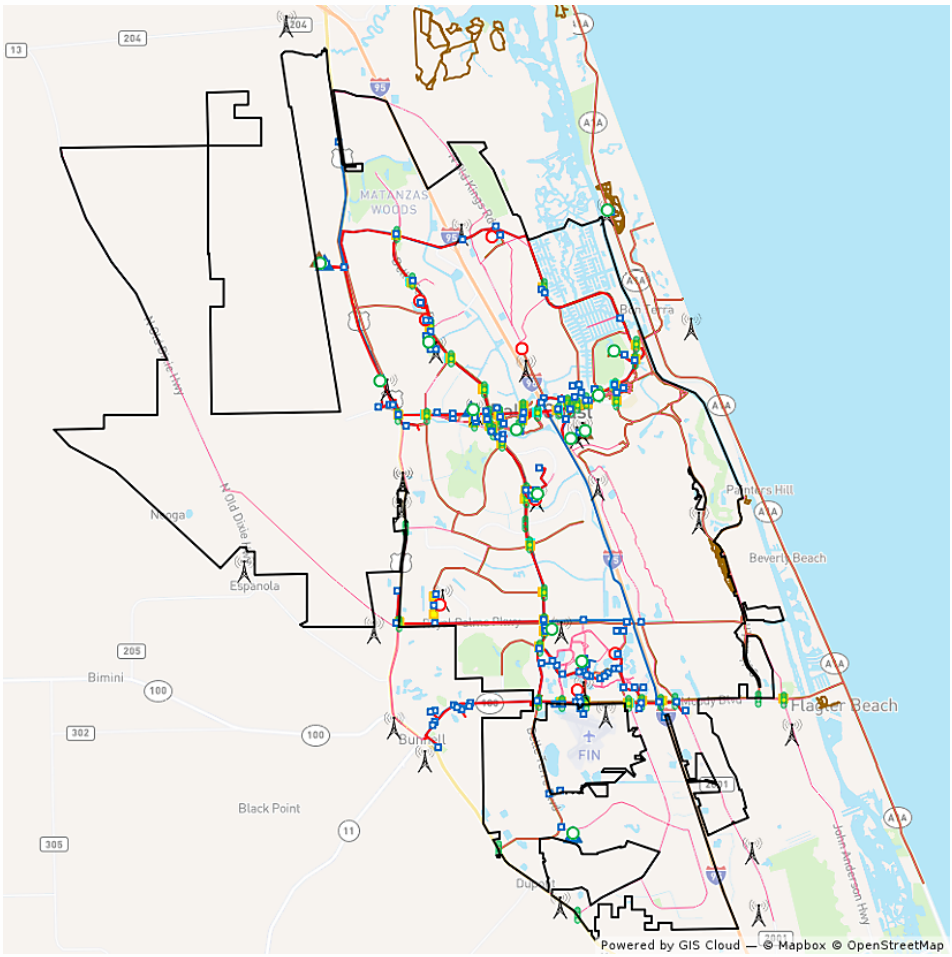
Table 9. FiberNet connection count by type

CONNECTION TYPE	COUNT
AVAILABLE-UNUSED	5
PRIVATE CUSTOMER	45
PUBLIC FACILITY	16
TRAFFIC SIGNAL CABINET	44
TOTAL	**120**

FiberNet was designed to first connect public facilities, selected strategic routes that would connect commercial and industrial areas at the same time - residential areas were never planned. Commercial, industrial, or institutional locations were provided with a lateral, and major building entries had a splice enclosure and vault. From a purely geographic perspective, the network infrastructure has current gaps on FL SR 100, far north (near A1A and I-95) and south (along Seminole Woods Rd.), along Colbert Rd., and in the northwest quadrant of the City (along Old Dixie Hwy and between it and Hwy A1A).

Figure 33 shows the fiber-optic cables (red lines) and junction points (blue squares) are located in proximity to City facilities (green circles), schools (red circles), traffic signals (orange squares and green rectangles), and utility plants (triangles). Other than in the far north and south ends of the City (black line), the fiber is adjacent to most cellular telephone tower sites. Diagrams in Figure 34 and Figure 35 show more detail for strand counts (circles) and the location of splice cases (hexagons). The clusters of connections (and customers) are along Palm Coast Parkway, to the east and west of the freeway, and along FL SR 100, with the airport to the south and downtown to the north.

Figure 33: Map of the City of Palm Coast FiberNet



There were multiple public and secure Wi-Fi access points connected to FiberNet, particularly in parks and public buildings. The City of Palm Coast was connecting traffic signals, which will involve fiber to dozens of intersections, as the time this report was being produced. The water plants, wastewater plants, and utility administrative buildings were connected but other utility infrastructure have RF-based communications rather than fiber. (As discussed above, the utility

plant networks were being moved to a physically separate network with no connection to the internet.)

The splice case at the northwest corner of Belle Terre Parkway and Palm Coast Parkway, near Co-lo 1 has limited capacity. It does not have enough slack in the enclosure and the splice case will not reach a splice trailer so any splicing will have to be done on the ground. There are effectively no available strands in the cable from the splice case to the co-lo. The 288-strand backbone cable at Palm Harbor Parkway and Forest Grove Drive, to north and on the other side of the highway, was relocated for road work. Only 48 strands were spliced to complete the ring back to Co-lo 1. The other strands were left unspliced (not connected.)

The cable along FL SR 100 (E. Moody Blvd.) between Belle Terre and Bulldog Drive is 24-strand in traffic control conduit, and has only a few spare fibers remaining in the sheath. This section should be part of a 288-strand backbone cable, buried in conduit, that continues to and along Town Center Blvd, completing a “downtown” ring. The accessibility and security of Co-lo 2 may be an issue, and may be best moved into City Hall. City Hall is currently connected by 24-strand lateral cable from the backbone.

Figure 34: Diagram of FiberNet facilities near Co-lo 1

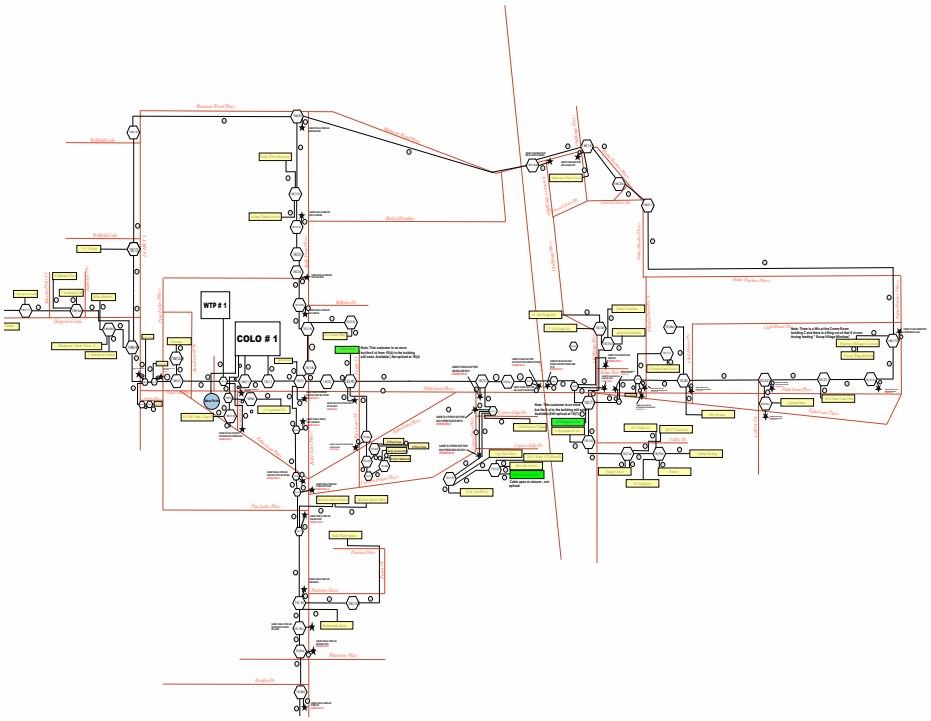
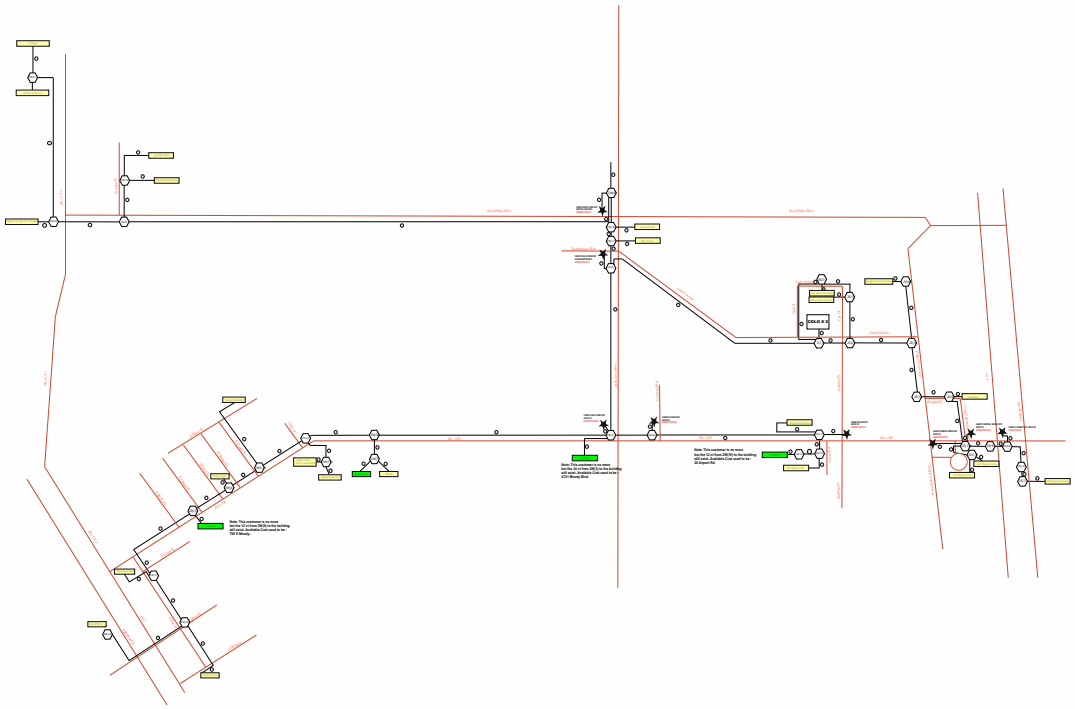


Figure 35: Diagram of FiberNet facilities near Co-lo 2



Network Operations[20]

The public FiberNet and the City's enterprise network were physically separated: They used separate strands within each fiber cable. The co-location facilities in the City (Co-lo 1 and Co-lo 2), were used by the City's enterprise wide-area network (WAN) and FiberNet to interconnect various providers and sites. The City had two internet service providers but was not load-balancing between them. A single network management system (WhatsUp Gold) was used for both networks because there are only a couple of routers on FiberNet. The City network ended up as a quasi-ring. City Hall was not on the ring, but it does not go through Co-lo 2, it homeruns to the City's current data center. It uses only 4 fibers into Co-lo 2, and is connected into the ring to Co-lo 1. The City plans to move its current data center to City Hall, but the project is on hold until a backup generator gets installed.

The cost of getting connected to FiberNet has been a concern, along with the amount of time it takes to respond to requests for service and the related issue of staff capacity. There was some belief that a different pricing model—one that covers the full cost of customer connections—might address these issues. The FiberNet business model has been to sell wholesale connections to providers who then sell retail Internet services to commercial (not residential) customers. The business approach has been reactive: planning connections only started after

[20] Most information for this sub-section came directly from City of Palm Coast IT Director Steve Viscardi as part of discussion about internal needs and plans.

customer request, and each drop had to be costed out and approved before deployment occurs. Every customer connection has been deployed as a homerun connection, with a dedicated pair of fibers to each customer from their assigned Co-lo. There has been no dedicated FiberNet network management resources, in fact, only four resources are currently in the IT Operations Division.

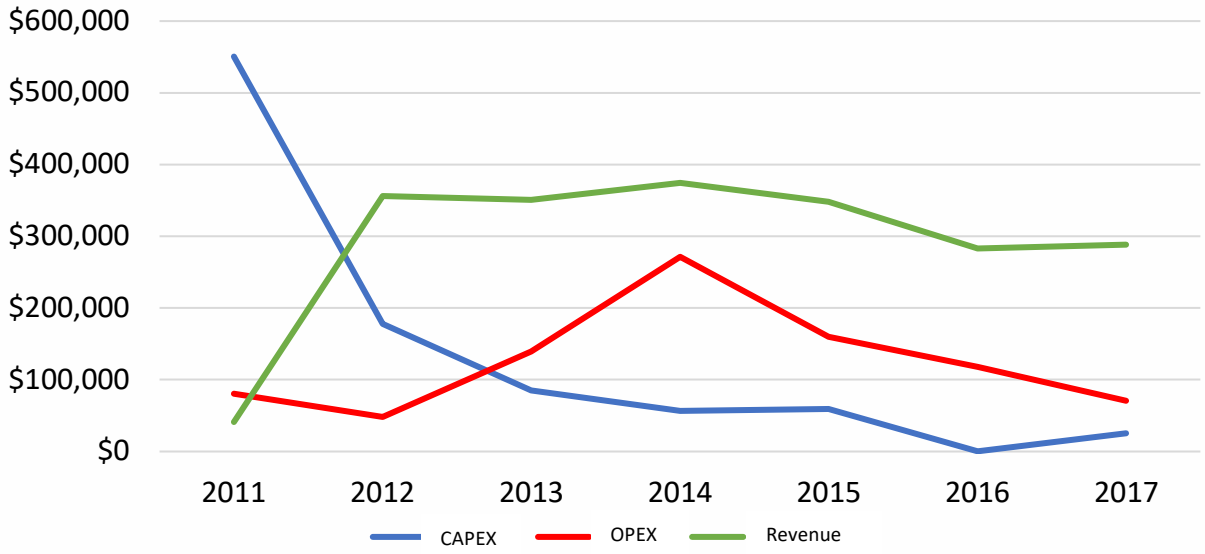
Market conditions for FiberNet have been unclear. Do many small businesses really need gigabit Internet services? There may be plenty of supply from AT&T and Spectrum, and AT&T said they would deploy fiber anywhere they had Uverse. Uniti Fiber has deployed throughout the community to reach most cell towers. Many of the local providers struggle to run their operation and manage billing, including payments due to FiberNet. The school system recently put in all their own equipment, including network units and transceivers. Most FiberNet issues seemed to be with customers getting connected to the network, but beyond that the network has required little operational support; it "practically ran itself." It has been unclear how the IT Department might help with customer issues other than offer consulting service to help people get the right network equipment.

FiberNet financial performance

FiberNet generated almost $300,000 of revenue per year, and averaged 12.7% of IT revenue (between 2013-2017). This translates to just over $5,500 of revenue per customer annually. The network has an average of $3,300 of expenses, including the costs of all public connections, per private customer. In contrast, FiberNet has only four customers, including Flagler County Schools. The three private customers generate less than $2,000 of revenue per month. Since the initial deployment in 2011-2012, overall expenses averaged $223,911 per year, or 8.8% of IT expenses. Sixty percent of these were operating expenses, with around $45,000 per year going to capital expenses. As illustrated in Figure 36, FiberNet capital expenditures have consistently declined and operating expenditures have declined since a peak in 2014. Note that revenue has been reasonably static since 2012.

FiberNet allows the City to save in approximately $310,000 in telecom costs per year. This estimate is based on the cost of a 1 Gbps connection from Spectrum for 20 sites at $1,295 per month over a 12-month period. This equates to a savings of over $3 million since 2008.

Figure 36: Overview of capital and operating expenses compared to revenue for FiberNet



The expense and revenue trends suggest that FiberNet's revenue growth has directly driven by capital investment while sustained revenue has been dependent on operating expenses. The 2012 leap in revenue occurred immediately following the peak in investment in 2011, and has been steady since. This suggests that further capital expense will be necessary to grow revenue. Revenue declined somewhat with operating expenses since 2014. It appears revenue cannot be maintained without on-going investment in operations. This analysis comports with basic business and economic principles.

Table 10. Summary expenses and revenue related to FiberNet

	OVER 5 YEARS
TOTAL EXPENSES	$15,359,662
FIBERNET EXPENSES	7.7%
OTHER IT EXPENSES	92.3%
TOTAL REVENUE	$12,988,851
FIBER REVENUE	12.7%
CELL TOWER REVENUE	10.9%
INTERNAL REVENUE	75.0%

On average over the last five years, the IT department has 10.8 full-time equivalent employees (not counting part-time/temporary). Based on Figure 38 and

Table 13, the general trend appears to have been increasing analyst and support resources, paralleled by a reduction in management and production roles. Both higher- and lower-level jobs were reduced while mid-level jobs expanded only a fraction, equivalent to one full-time pay-grade 12 position. Workforce expense and staffing numbers are translated into baselines for FiberNet fiscal and workforce capacity, summarized in Figure 40.

Figure 37: IT revenue 2013 to 2017, including all cell tower rental and FiberNet services

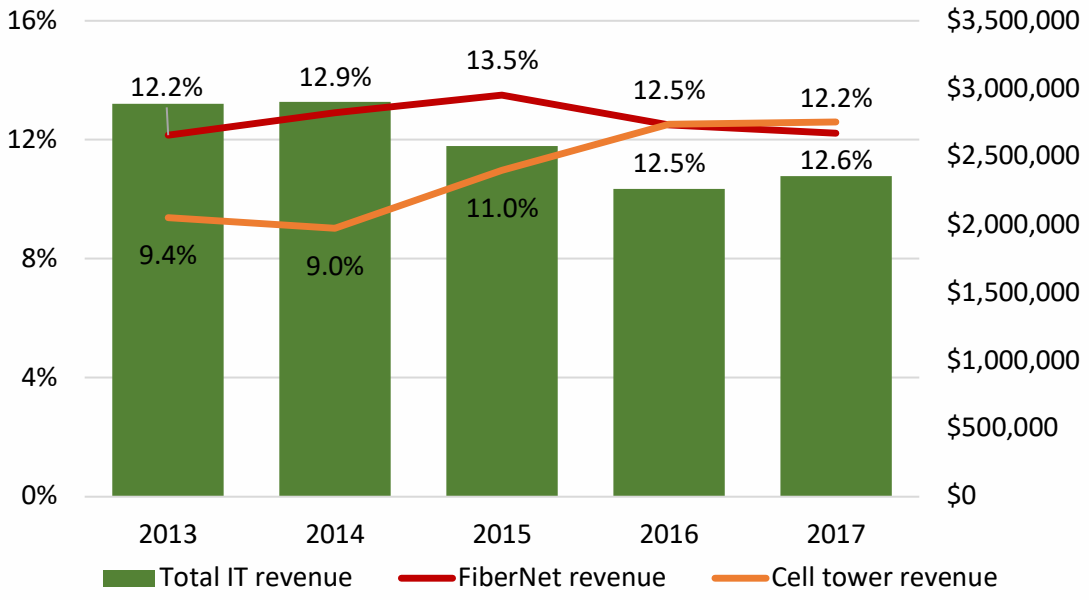
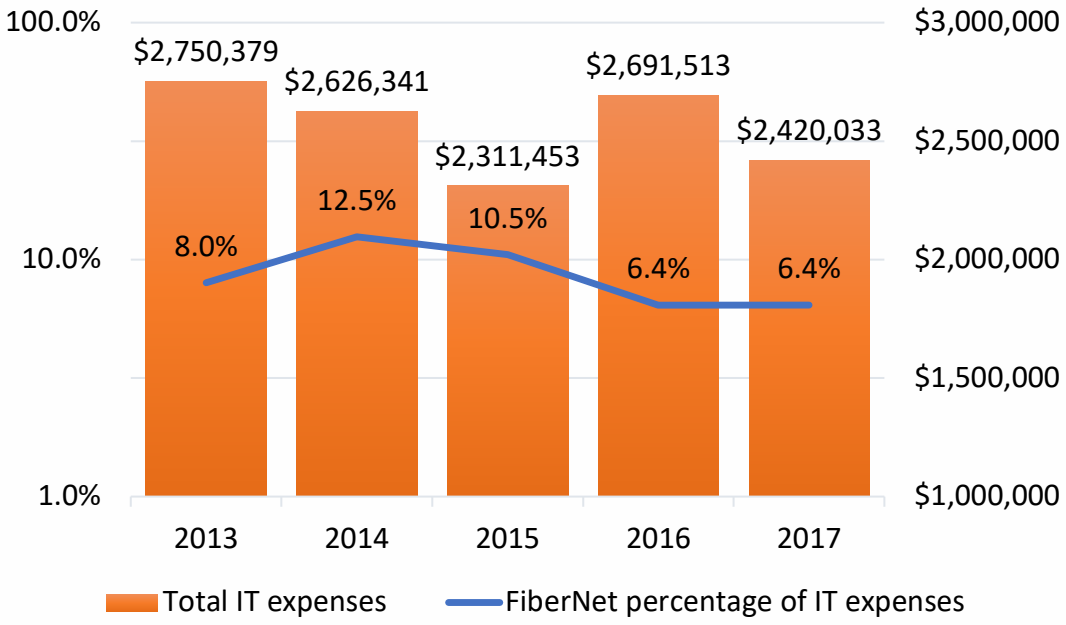


Figure 38: Total IT expenses, 2013-2017, including FiberNet



The majority of FiberNet's expenses, $89,268.61 on average, were workforce-related and for machinery and heavy equipment. Operating expenses over the last five years, minus benefits, salaries, etc., totaled $101,553.

Table 11. FiberNet cost structure 2013-2017

EXPENSE	5-YEAR AVERAGE
PERSONNEL SERVICES, INCLUDING BENEFITS AND CONTRACTORS	55.3%
ELECTRICITY	2.0%
REPAIR AND MAINTENANCE SERVICES	5.8%
ADVERTISING AND PROMOTION	0.1%
OPERATING SUPPLIES AND EQUIPMENT UNDER $5K	1.1%
MACHINERY AND EQUIPMENT OVER $5K	35.6%

Changes in IT expenditures suggest that workforce (personnel services), operating costs, and capital outlays are being reset to historical levels and to meet increasing demand for capabilities.

Table 12. IT workforce structure and change by title, 2013 -2018

CLASSIFICATION TITLE	CURRENT FTE	CURRENT FTE	PERCENT OF AVERAGE FTE 2013-2017	AVERAGE ANNUAL CHANGE 2013-2018
Application Analyst	3	23.1%	13.5%	2.6%
GIS Specialist	3	23.1%	19.2%	0.6%
Information Technology Director	1	7.7%	9.6%	-0.5%
Operations Manager	0	0.0%	5.8%	-2.0%
Senior Application Analyst	1	7.7%	9.6%	-0.5%
Senior Staff Assistant	0	0.0%	5.8%	-2.0%
Support Assistant	1	7.7%	3.8%	1.5%
Senior Support Analyst	0	0.0%	5.8%	-2.0%
Support Specialist	0	0.0%	5.8%	-2.0%
System Administrator	1	7.7%	9.6%	-0.5%
Tech Support Administrator	1	7.7%	3.8%	1.5%
Tech Support Analyst	2	15.4%	7.7%	3.1%
Total Full-time	**13**			**5.6%**

Table 13. Workforce structure by pay grade

PAY GRADE	AVERAGE FTE 2013-2018	PERCENT OF AVERAGE FTE	PERCENT OF CURRENT FTE (13)	DIFFERENCE AVERAGE AND CURRENT
22	1.00	9%	8%	-1%
18	1.50	13%	8%	-6%
17	1.00	9%	8%	-1%
16	0.67	6%	8%	2%
15	1.67	15%	23%	8%
14	1.00	9%	15%	6%
13	2.67	24%	23%	-1%
11	0.67	6%	0%	-6%
9	0.50	4%	8%	3%
8	0.50	4%	0%	-4%
	11.17			

The simple fact is that the City of Palm Coast does not have the capacity to operate FiberNet, and it is not clear it has the ability. The IT department has neither a network manager or a telecommunications technician. FiberNet personnel must be able manage customers and promote the network as well as operate it. There may be capabilities in other departments, outside of IT, but those are not assigned to FiberNet under the present arrangement. The City of Palm Coast is operating FiberNet as an enterprise network, but is not prepared to operate it as a carrier's carrier.

The provider customers—Datacom and Palm Coast Internet (PCI)—also have limited capabilities. Datacom is staffed part time by its owner who has a full-time job. PCI has a few staff, including the owner whose primary business is food services, but no dedicated sales and marketing personnel. PCI's technical staff also does PC repair and similar jobs. And, the company is in arrears with the City, so appears to have limited fiscal capacity. Basically, FiberNet's customers are barely performing as internet service providers, which is not saying much given the notoriously low service levels for the industry.

Table 14. City of Palm Coast FiberNet financial baselines based on annual averages, 2013-2018

EXPENSE OR REVENUE		AMOUNT
TOTAL OPERATING EXPENSES		$137,119
WORKFORCE EXPENSES	$116,818	
OPERATIONS & MAINTENANCE EXPENSES	$20,301	
CAPITAL EXPENSES		$86,782
TOTAL ANNUAL EXPENSES		$223,901
ANNUAL REVENUE		$328,886
EXCESS REVENUE		$104,985

FiberNet is clearly profitable, as shown in Table 14, even though revenues have been declining over recent years, as shown in Figure 37.

Excess revenue is not being reinvested in FiberNet, but is used to buy down the cost of IT services for City departments. It has the bones of an Open Access network but not back office systems, operations, and capable providers.

FiberNet needs a fund to pay for access lines (connections), so those costs don't have to be fully imputed to customers before they can connect, and it needs marketing and sales capabilities. FiberNet also requires customer service, finance, and operational capabilities, which could conceptually be provided by other City departments, but there are no policies or procedures in place to tap those resources. Even billing appears to be minimally handled by the City, based on the difficulty getting and lack of detail in customer invoices provided through this assessment.

2.8.1 Summary

FiberNet is a vital community asset, which has connected City and school sites for nearly a decade, driving down the cost of connectivity for both agencies. It has abundant opportunities due to the national and regional economy, social and demographic trends, and evolving technology, as summarized in Table 15. The threats are relatively low-impact or long-term. The two-critical threat—weak workforce supply and impending urban sprawl—can be proactively addressed together by local development. The key is activities and assets in Palm Coast to tap the opportunities while working to mitigate potential threats where possible.

Table 15. FiberNet SWOT anaylsis

	Have/Positive	Need/Negative
	Opportunities	**Threats**
External/Future	Strong regional economy, including projected demand for real estate Global destination and transit area Low cost of living, high quality of place State emphasis on job creation Fringe opportunities, craft and niche markets Less need for physical labor Increasing economic gains from technology	Supply of intellectual, social and technical abilities, educated and skilled persons Relatively low wages Urban sprawl and "bedroom community" syndrome State-level services and support, particularly for planning, development, and social issues Attitudes toward institutions Cyber-security: bots, breaches, hackers, viruses, etc.
	Strengths	**Weaknesses**
Internal/Current	Abundant network infrastructure Revenue positive with minimal effort Numerous greenfield developments Local Smart City type initiatives	Physical bottlenecks and gaps in the network Operational capabilities Investment in FiberNet, FiberNet subsidizing IT for other departments

FiberNet is a strength, in and of itself, and its position in Palm Coast is viewed as an even greater strength. It is currently generating excess revenue, has numerous low-hanging fruit business opportunities, and can be extended into new developments. City IT projects and citizen-facing Smart City initiatives also represent a strength for FiberNet, particularly to the extent that the result in new assets or demand for FiberNet. FiberNet's weaknesses can be addressed internally, via redirecting excess revenue, and through development of a P3 (public-private partnership) to support expansion and operations of the network. More importantly, the City of Palm Coast can use FiberNet to tap regional, national, and even global opportunities, while mitigating critical threats. Under-skilled workforce, urban sprawl, and cyber-security are very different threats but FiberNet could be a part of the solution to addressing all three as discussed above under "Palm Coast Smart City Opportunities."

3 FiberNet Design Issues and Options

The extent, placement, and specifications of network infrastructure depends on the City's goals, needs, and priorities. Section two detailed issues and opportunities for FiberNet, including its assets and capabilities. This section describes options for addressing infrastructure and service issues, and the implications for the City's strategy and FiberNet's potential. Bottlenecks and gaps limit the network's capacity and reach, respectively, and impede core uses for the City. Extending the network to Near-Net sites, deploying additional backbone along the way, increases the network's customer base and its reliability. The network architecture must evolve to more efficiently use the infrastructure, which means deploying technologies such as gigabit passive optical network (GPON) equipment and setting up back-end systems to manage operations. This section considers each of these options in decreasing detail: Bottlenecks and gaps are specifically addressed but GPON and FTTH, even more so, get general discussion and estimates.

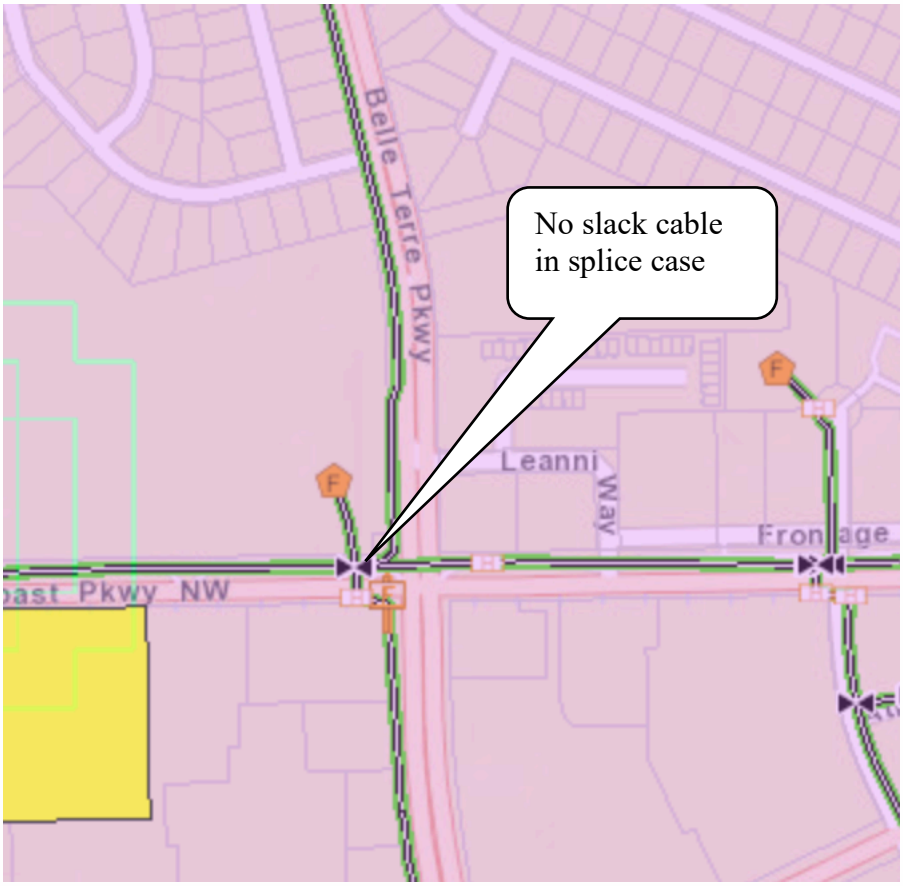
3.1 Bottlenecks and gaps

There are three major issues with FiberNet's current infrastructure:

1. Main splice case at Belle Terre and Palm Coast Parkway - Cost Estimate: $50,000

FiberNet has dual co-location "hearts," which are referred to a co-lo 1 and co-lo 2. A main splice case near co-lo 1, shown in Figure 39 at the corner of Belle Terre Parkway and Palm Coast Parkway has no available cable slack. Nothing else can be connected by splicing into the cable simply because it isn't long enough. Slack from this case had to be moved east a few years ago for an emergency restoration at Lupi Court. The bottleneck is especially severe because fiber comes into this case from four directions, interconnecting the northern and southern halves of FiberNet's infrastructure. It would cost approximately $50,000 to pull new 288-strand cable from this case to the nearest vaults in all directions to replenish slack.

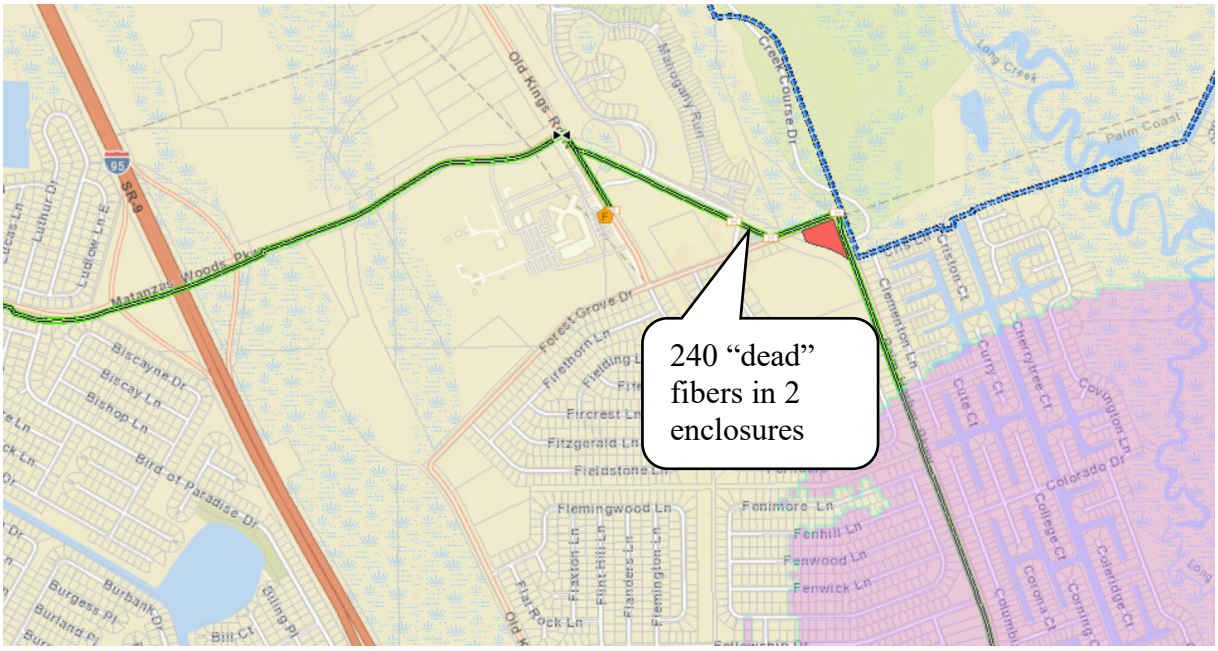
Figure 39: Bottleneck at Belle Terre Blvd and Palm Coast Parkway



2. "Dead" backbone strands on Forest Grove - Cost Estimate: $15,000

The northern portion of FiberNet consists of east and west rings. In the northeastern portion of network, near the intersection of Palm Harbor Parkway with Forest Grove Drive, 240 backbone fibers were left "dead" (not spliced together) to save money on a previous restoration. Illustrated in Figure 39. This bottleneck greatly reduces network capacity in some of the densest and rapidly growing parts of the City. It limits redundant routes along FiberNet's northeastern ring. The fibers need to be spliced in two handhole enclosures on Forest Grove Drive between Old Kings Road and Palm Harbor Parkway (see Figure 40), which will cost approximately $15,000. This issue may also accommodate, and be resolved by, extending the backbone in this area.

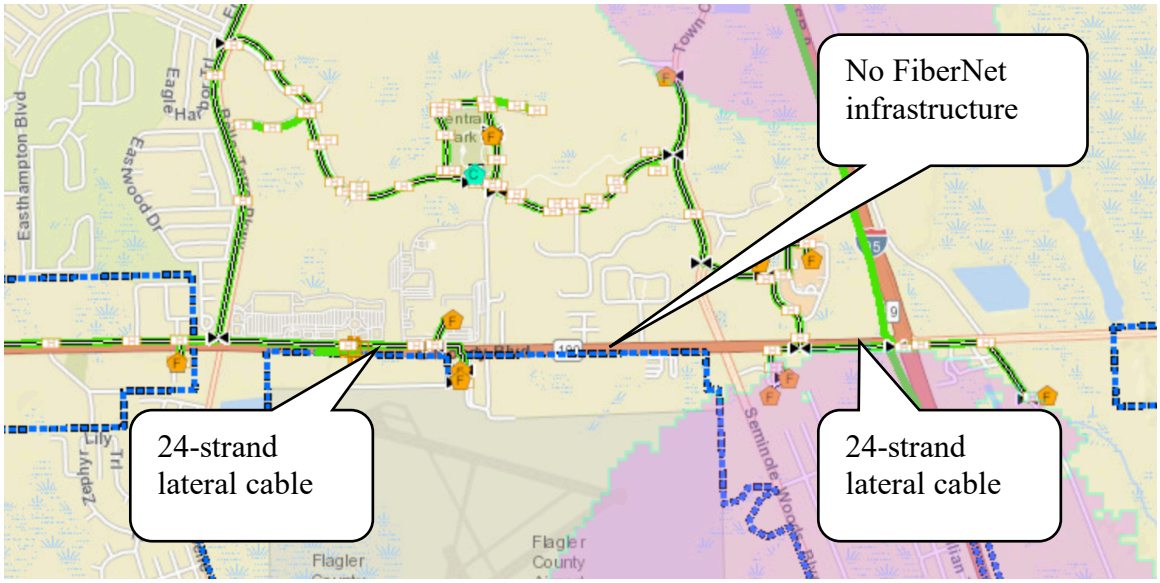
Figure 40: Fiber bottleneck at Forest Grove Drive between Palm Coast Parkway and Old Kings Road



3. Backbone gap on SR 100 adjacent to the airport and Town Center- Cost Estimate: $94,000

SR 100 is currently the southern edge of FiberNet. The City has a 24-strand fiber optic cable running east along SR 100 from Belle Terre Parkway in traffic signal system conduit to feed Flagler High School and customers along Airport Blvd. Another 24-strand fiber runs southeast from City Hall past Florida Hospital, east along 100, under I-95 to Old Kings Elementary School. The result is a gap in a ring, shown in Figure 41, that includes City Hall, co-lo 1, major customers, and most of the Town Center DRI area. All of these areas are currently on isolated network legs and would benefit from redundant routes. A backbone fiber along SR 100 would provide access to additional customers, increase overall capacity and reliability, and allow for extension east to Colbert Road. In 2017 the estimated cost to close this ring with new conduit and 288-strand fiber was approximately $94,000.

Figure 41: Gap along SR 100 between Belle Terre Parkway and Seminole Woods/Town Center



Beyond these major bottlenecks and gaps, there are four areas of the city that have no FiberNet infrastructure. Two parallel gaps in FiberNet exist along US 1/State Street and Old Kings Road between SR 100 and Palm Coast Parkway. These routes would increase redundancy and put more customer and cell tower sites on FiberNet. Depending on business goals and issues, these should be considered top priority for network expansion.

For mid-term prospects, the biggest gap in FiberNet may be the area south of the airport. It features two open economic development areas, a major residential development, numerous business and industry locations, and several approved or current cell tower sites. The eastern end of SR 100 and Colbert Lane provide a route for the network to connect several new developments and get closer to Flagler Beach and other tourism assets. It would be a major expansion but could have great value in the future.

The largest overall gaps are in the northwest portion of the City, in the Neoga Lakes and Old Brick Township areas. There is no FiberNet infrastructure in the northern part of Palm Coast adjacent to I-95, either. These areas would require extensive new backbone infrastructure and are likely long-term expansions more than three to five years in the future, likely tracking future development opportunities.

3.2 Issues with Current Business Models and Providers

The current FiberNet business model adopted in 2010 was wholesale Open-Access, and direct Government Services transport (think interlocal with schools), and has included the lease and trade for dark fiber. The business model has evolved out of necessity and opportunity, however, the previously adopted structure of providing lit Open-Access circuits has been fraught with management and business-related issues. These issues include CAPEX funding requirements, lack of risk taking by the partnering providers, and general ROI of expansion investments. While Open-Access was the intended business model of FiberNet, and it is still conceptually deployed today, the City must have partnering providers who can assist the City in growing the market and expanding the network – today's partners do neither.

Through development of this new Business Plan, FiberNet 2.0 should focus the City's attention on expanding FiberNet through a sound business case and investment roadmap, providing a high-speed fiber offering to support businesses, community anchors, and to support greater municipal connectivity, including Smart City. The City's focus towards its next business model should provide a revenue structure that supports FiberNet's expansion, passive operational requirements, and most importantly, the long-term sustainability of the network. The model should identify a partner(s) who would undertake an aggressive marketing and sales campaign to expand FiberNet's availability throughout the network's service area, and one that would provision and manage services, as a network operator on behalf of the City. Further, the City wants a partner(s) who is willing to share risk and can possibly bring capital investment to bear on the partnership.

3.3 Issues with Current Network Architecture

The current FiberNet business model and architecture was developed and deployed as an Active Ethernet (AE) service offering only. GPON, or Gigabit Passive Optical Network, technology was really in its infancy 10-years ago and was not an ideal technology for Palm Coast at the time. That has led to the use of most of the fiber strands in many of the backbone segments. Active Ethernet as deployed today requires two (2) fibers for every customer – home run back to a Colo. This aggregates to two fibers for each customer/connection in the backbone segments. Today, BiDi (bidirectional) fiber-optic transceivers are available for AE, requiring only a single (1) fiber strand, providing 50% better utilization over today's method. Further, GPON technology can aggregate 32, 64, and even 128 customer connections on a single (1) backbone fiber strand given proper placement of passive optical splitters.

These technologies would allow the City to recapture fiber strands, allowing for a better long-term fiber utilization plan. The City could potentially forego having to upgrade existing fiber backbone segments, opting for better utilization foremost, saving further fiber expansion until its truly required. The City should look to include GPON services, and the supporting technologies into the next FiberNet equipment refresh.

3.4 Evolving FiberNet's Architecture

"Architecture" refers to a network's structure, to the components that make it up, interconnections between those components, how it operates, including its capacity for customers and data traffic, and what functions it delivers. It is an important consideration as the City of Palm Coasts decides if and where to invest more in FiberNet. Network architecture constrains or enables business models. Some architectures are much more flexible and scalable than others. FiberNet's architecture is currently a combination of physical ring and logical dual-star, in which every user is directly connected via dedicated backbone fiber strands to one of two co-location facilities. This is not an economical, flexible architecture. The City of Palm Coast should consider alternative approaches that can be scaled and managed more effectively.

3.4.1 Transition to GPON

Gigabit Passive Optical Networking (GPON) is the modern standard for advanced FTTP networks. GPON allows a single backbone strand to serve numerous customers with gigabit connections, while enabling the service provider to offer tiered services. Each Optical Line Terminator (OLT) port in a central site (co-location facility) is passively split—literally light through a prism—to connect to either 32 or 64 Optical Network Terminals (ONTs) at subscribers' premises. New PON technology will soon serve 128 customers via a single 10 Gbps OLT port.

GPON could be a vast improvement over FiberNet's current homerun architecture. Currently, each customer connection requires a pair of fiber strands in the backbone between one of FiberNet's co-los and the customer's premises. Therefore, some routes are limited to 144 or fewer customers/connections in that whole portion of the network, while other portions of the fiber are stranded, unused, and in some cases "dead." GPON is better because it can serve more customers at less cost without abandoning network assets.

FiberNet would continue to utilize Active Ethernet (AE) in a multi-ring topology, as it does today, however AE would be reserved for City sites, schools, and other community anchors/organizations who require dedicated, guaranteed capacity. FiberNet should consider introducing a GPON offering targeted to the small and medium size business (SMB) market in conjunction with AE. The GPON/AE architecture allows for a broad array of services at very high speeds with maximum reliability. A GPON/AE service offering would put FiberNet ahead of local incumbent ISPs, especially if its offerings include an entry-level fiber-based service priced competitively with "best-effort" legacy services which are still prevalent throughout the Palm Coast market.

Many network component manufacturers offer FTTH/FTTP technologies that support both Active Ethernet and GPON within a single chassis solution. Companies such as Adtran, Alcatel, Calix, Cisco, and others provide solutions today that incorporate a platform of various service offerings. An Active Ethernet/GPON services platform allows a provider to easily deliver an entry level broadband offering such as GPON, with a simple straightforward option to migrate

users to a dedicated, Active Ethernet offering with superior guarantees. Systems such as these are great for today's service providers because multiple solutions are incased in the same box, limiting the total amount of hardware required to support the services.

A critical issue is whether there is pent up demand for fiber-based telecommunications services throughout the Palm Coast market. FiberNet has an opportunity to deploy a FTTP fiber distribution technology in key business areas and corridors focusing on the development of Broadband Deployment Zones within the FiberNet service area. Business districts, land use areas, and/or utility district could serve this purpose, based on strategic objectives and operational structure. For current purposes, a business district is used to assess commercial opportunities and utility districts are used to analyze FTTP opportunities.

A feeder/distribution network is required to make an area eligible for GPON services. Several districts in Palm Coast would benefit from next generation broadband services, based on the type, amount, and density of businesses that are contained within these zones. Buildout of broadband infrastructure in zones would equip them with the physical fiber-optic network capable of providing nearly unlimited bandwidth to businesses, including 1 Gbps and 10 Gbps connectivity. The City has much of the network in place to build out key business corridors and industrial and business parks.

In addition, the service areas that have been chosen for initial buildout do not preclude any additional business areas or residential areas from being included in the overall plan. These additional areas should be vetted against their potential return on investment or benefit to the region. The proposed buildout, and its supporting network components, could allow FiberNet to scale to support a region wide expansion when the timing is right.

4 FiberNet 2.0 Roadmap and Action Plan

Through interviews and discussions with community leaders, City management, and departments, we understand that FiberNet has provided significant value to the City over the last 13 years, and that continued City ownership and strategic expansion is paramount to the long-term sustainability of the network. Although the City feels strongly about its expansion, and its place in providing high-speed connectivity throughout the community, it must be expanded strategically and opportunistically.

The City of Palm Coast has the opportunity to expand FiberNet using an incremental build-out approach, focusing targeted investments at those Business/Organizations, Community Anchors, and Smart City related infrastructure and initiatives using a Palm Coast adopted Business district deployment approach. As previously documented, Palm Coast manages its City through defined districts (listed below), defined by clear boundaries – these districts are used for the structured analysis of the potential broadband zones.

The buildout analysis is intended and structured to allow Palm Coast to take an incremental build approach, using a crawl – walk – run concept. The City has been investing in, and building their fiber network since 2005, while FiberNet has formally been operational since 2010, this has afforded the City the opportunity to build an extensive network with many existing network access points – otherwise known as fiber interconnects. As we begin the analysis around buildout, Magellan recommends a strategy that targets On-Net customers first, those that are essentially on the network, and require limited fiber build, if any. The City would then make targeted investments to focus on those that are Near-Net, where some buildout is required, limited to 750 ft. Finally, the City would target buildout of an entire Zone, based upon the numbers of potential connections (customers and smart city), and the potential ROI (revenues, CAPEX, OPEX). This approach allows us to target areas with the greatest need, as defined through potential municipal connections including Smart City, and customer revenue potential.

Each District has a developed Profile Sheet which is meant to inform our collective teams about the fundamental opportunities within the districts. The following broadband planning attributes have been defined district by district:

- Existing FiberNet and Technology Assets
- Potential Municipal Connections (cost deferral)
    - City sites and facilities
    - City infrastructure components (smart city connections)
- Potential Customers (revenue opportunity)
    - Businesses
        - On-Net
        - Near-Net
        - Total in District
    - Organizations
        - Not for Profits
        - Community Anchors
    - MDU/Condos and Units
    - Towers and Cellular
- CAPEX Costs to Buildout and ROI/Financial Metrics

4.1 Broadband Deployment Zones

To determine the geographic scope of the network, Magellan has identified key corridors and business areas that are prime for network buildout based on business density. FiberNet should build out into commercial areas first because costs are generally lower and revenues per subscriber are generally higher; resulting in a more feasible business case. These networks also generate positive economic development benefits in a short amount of time by enabling local businesses to access next-generation broadband at affordable rates. Magellan would suggest using a phased approach that first brings fiber-optic broadband to Palm Coast's business corridors and, if successful, expands into Palm Coast's residential neighborhoods, and future development opportunities.

Table 16: Palm Coast broadband zones overview

ZONE	BUSINESS DISTRICT(S) AND OTHER AREAS INCLUDED
Central	Downtown, including Town Center DRI, from US 1 to Old Kings Road
East	Old Kings and Parkway East, including north Colbert Lane and Grand Haven
North	Matanzas/Palm Coast Park area
Northwest	West Palm Coast, including Neoga Lakes and Old Brick Township
South	Airport, including economic development areas, Grand Landings, and southern Palm Coast
Southeast	Southeast Palm Coast, including SR 100 DRI, the east end of 100, Colbert Lane, Roberts Road, and Marina Del Palma
West	Hargrove, Parkway West, and Pine Lakes

West Broadband Zone

Hargrove Grade, Parkway West & Pine Lakes

Facilities/Sites

	Connected	Total
City Facilities	1	2
County Facilities	0	0
Fire Stations	1	1
Parks & Rec	1	2
Wastewater Plants	0	0
Water Plants	0	1

Customer Connections

	On-Net	Near-Net	Total
Businesses	106	416	522

	Connected	Total
Organizations/ Anchors	2	2

Smart City Connections

	On-Net	Near-Net	Total
Water	108	1,181	3,375
Wastewater	30	560	2,010
Stormwater	2	18	40
Traffic	69	159	160
Street Lighting	40	579	1,586
Wireless	8	8	8
Public Safety	-	-	-

Development Opportunities

None Identified

City Assets

Fiber Backbone – 70,793 feet

FiberNet Network Access Points - 74

Wireless Towers - 4

Wireless Master Plan Parcels - 2

Buildout Requirements

Total Connections: 3,038 existing routes
Total Connection Costs: $2,609,782

Revenues:
Business: $10,648,800
Smart City: $31,783,200

Total CAPEX
$2,609,782

Total Connections
3,038

CAPEX to Revenue Ratio
8.2%

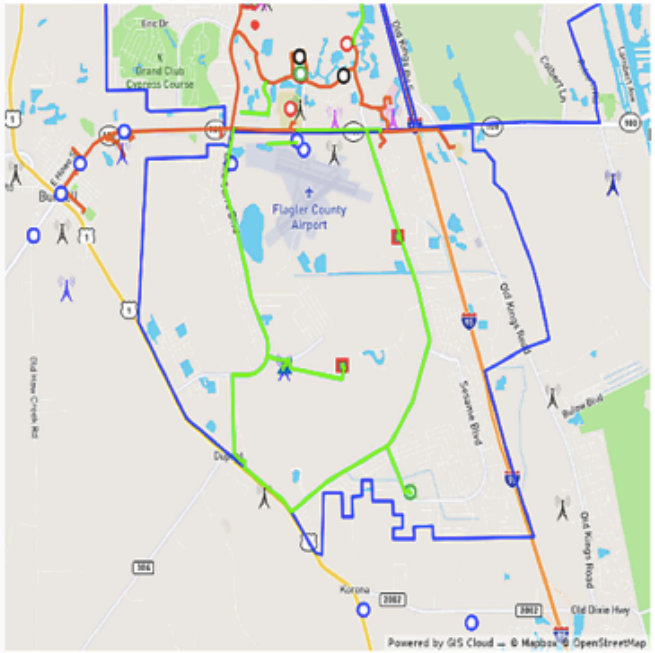
Total Revenue Potential 20-year
$31,783,200

South Broadband Zone

EDA Airport 1 & 3

Facilities/Sites

	Connected	Total
City Facilities	0	0
County Facilities	1	4
Fire Stations	0	0
Parks & Rec	0	1
Wastewater Plants	0	0
Water Plants	0	1



Smart City Connections

	On-Net	Near-Net	Total
Water	21	122	2,682
Wastewater	5	68	633
Stormwater	1	5	36
Traffic	6	14	16
Street Lighting	6	8	523
Wireless	0	0	3
Public Safety	-	-	-

Customer Connections

	On-Net	Near-Net	Total
Businesses	3	30	33

	Connected	Total
Organizations/ Anchors	0	0

Development Opportunities

	Residential	Business
None Identified		

City Assets

Fiber Backbone – 7,965 feet

FiberNet Network Access Points - 22

Wireless Towers - 0

Wireless Master Plan Parcels - 8

Buildout Requirements

Total Connections: 250 existing routes
Total Connection Costs: $201,419
Revenues:
Business: $673,200
Smart City: $1,822,800

Total CAPEX
$201,419

Total Connections
250

CAPEX to Revenue Ratio
8.1%

Total Revenue Potential 20-year
$2,496,000

North Broadband Zone

Matanzas

Facilities/Sites

	Connected	Total
City Facilities	0	0
County Facilities	0	0
Fire Stations	2	2
Parks & Rec	1	1
Wastewater Plants	1	1
Water Plants	1	1

Customer Connections

	On-Net	Near-Net	Total
Businesses	0	0	0

	Connected	Total
Organizations/ Anchors	3	3

Smart City Connections

	On-Net	Near-Net	Total
Water	33	773	3,635
Wastewater	6	217	852
Stormwater	3	11	31
Traffic	26	54	54
Street Lighting	18	479	1,225
Wireless	5	5	5
Public Safety	-	-	-

Development Opportunities

	Residential	Business
Palm Coast Park	3,600	496

City Assets

Fiber Backbone – 67,090 feet

FiberNet Network Access Points - 26

Wireless Towers - 4

Wireless Master Plan Parcels - 6

Buildout Requirements

Total Connections: 1,546 existing routes
Total Connection Costs: $773,000

Revenues:
Business: $0
Smart City: $12,986,400

Total CAPEX
$773,000

Total Connections
1,546

CAPEX to Revenue Ratio
6%

Total Revenue Potential 20-year
$12,986,400

Central Broadband Zone

Downtown/Town Center

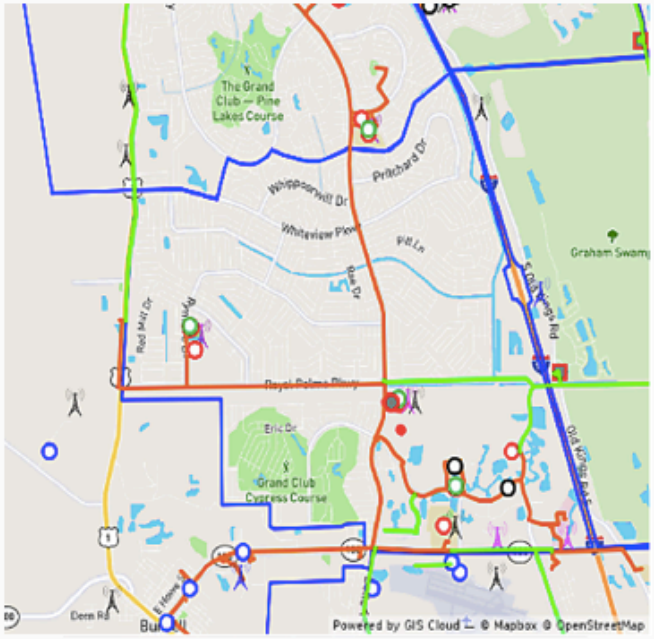
Facilities/Sites

	Connected	Total
City Facilities	0	2
County Facilities	0	0
Fire Stations	1	1
Parks & Rec	3	3
Wastewater Plants	0	0
Water Plants	0	0

Customer Connections

	On-Net	Near-Net	Total
Businesses	8	77	85

	Connected	Total
Organizations/ Anchors	0	1



Smart City Connections

	On-Net	Near-Net	Total
Water	54	995	4,922
Wastewater	28	224	910
Stormwater	3	16	195
Traffic	47	104	110
Street Lighting	129	624	1,906
Wireless	5	5	5
Public Safety	-	-	-

Development Opportunities

	Residential	Businesses
Town Center	2,500	600

City Assets

Fiber Backbone – 68,427 feet

FiberNet Network Access Points - 59

Wireless Towers - 4

Wireless Master Plan Parcels - 4

Buildout Requirements

Total Connections: 2,157 existing routes
Total Connection Costs: $1,274,787

Revenues:
Business: $1,734,000
Smart City: $68,577,600

Total CAPEX $1,274,787

Total Connections 2,157

CAPEX to Revenue Ratio 6.7%

Total Revenue Potential 20-year $19,138,800

East Broadband Zone

Old Kings & Parkway East

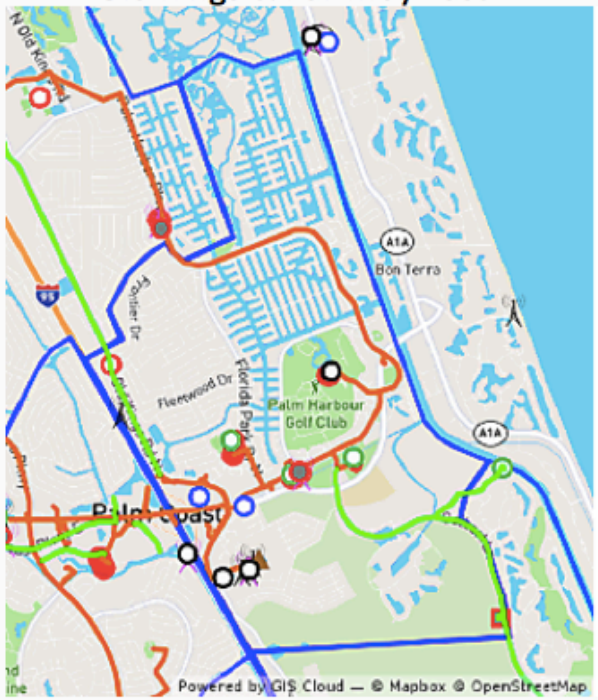
Facilities/Sites

	Connected	Total
City Facilities	3	3
County Facilities	0	2
Fire Stations	1	2
Parks & Rec	3	3
Wastewater Plants	1	1
Water Plants	0	0

Customer Connections

	On-Net	Near-Net	Total
Businesses	43	288	331
	0	0	1

	Connected	Total
Organizations/ Anchors	0	1



Smart City Connections

	On-Net	Near-Net	Total
Water	96	826	2,915
Wastewater	40	507	1,546
Stormwater	4	21	66
Traffic	24	64	68
Street Lighting	26	296	940
Wireless	13	13	13
Public Safety	-	-	-

Development Opportunities

Residential	Business
None Identified	

City Assets

Fiber Backbone - 50,641 feet

Fiber Network Access Points - 40

Wireless Towers - 2

Wireless Master Plan Parcels - 2

Zone Summary

Total Connections: 2,125 existing routes
Total Connection Costs: $1,802,981

Revenues:
Business: $6,752,400
Smart City: $15,069,600

Total CAPEX
$1,802,981

Total Connections
2,125

CAPEX to Revenue Ratio
8.3%

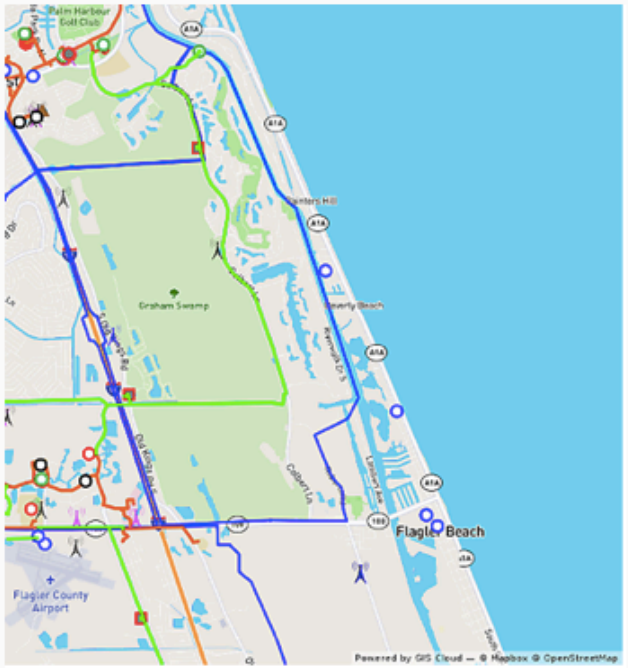
Total Revenue Potential 20-Year
$21,822,000

Southeast Broadband Zone

Colbert Lane, Roberts Road, Marina Del Palma, SR 100

Facilities/Sites

	Connected	Total
City Facilities	0	0
County Facilities	0	0
Fire Stations	0	0
Parks & Rec	0	1
Wastewater Plants	0	0
Water Plants	0	0



Smart City Connections

	On-Net	Near-Net	Total
Water	6	6	1,523
Wastewater	2	7	781
Stormwater	0	1	24
Traffic	0	0	0
Street Lighting	3	5	602
Wireless	0	0	0
Public Safety	-	-	-

Customer Connections

	On-Net	Near-Net	Total
Businesses	0	60	60

	Connected	Total
Organizations/ Anchors	0	0

Development Opportunities

	Residential	Business
Colbert Lane & Roberts Road	1,500	40
Marina Del Palma	140	0
SR 100	2,400	16

City Assets

Fiber Backbone – 0 feet

FiberNet Network Access Points - 2

Wireless Towers - 0

Wireless Master Plan Parcels - 4

Buildout Requirements

Total Connections: 79 existing routes
Total Connection Costs: $189,440
Revenues:
Business: $1,224,000
Smart City: $159,600

Total CAPEX
$189,440

Total Connections
79

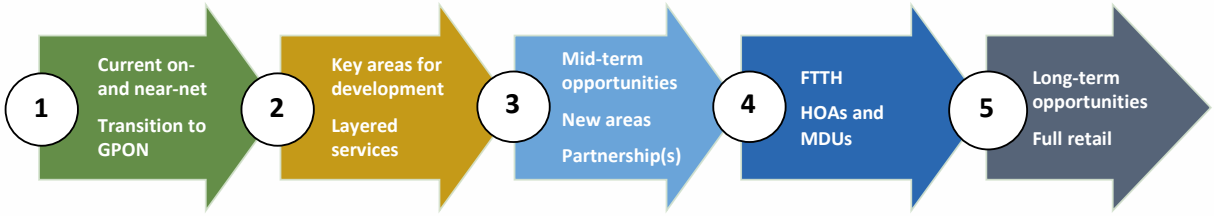
CAPEX to Revenue Ratio
13.7%

Total Revenue Potential 20-year
$1,383,600

4.2 Recommended Phasing Plan

The phasing plan presented is only one scenario that FiberNet could utilize. There are other options that FiberNet could consider based on the amount of funding available and how quickly it wants to accelerate broadband deployment, including accelerating additional zone buildouts, or extending backbone into new areas of the City. This phasing plan anticipates a Phase 1 project on one or two zones or sub-zones, which would serve as a "proof of concept" pilot. The zones or sub-zones for Phase 1 will be selected based on potential ROI, as projected from costs and customer densities. This process would validate the business case for fiber deployment and minimize FiberNet's financial risk for later expansion into the larger project.

Figure 42: General FiberNet infrastructure and services expansion process

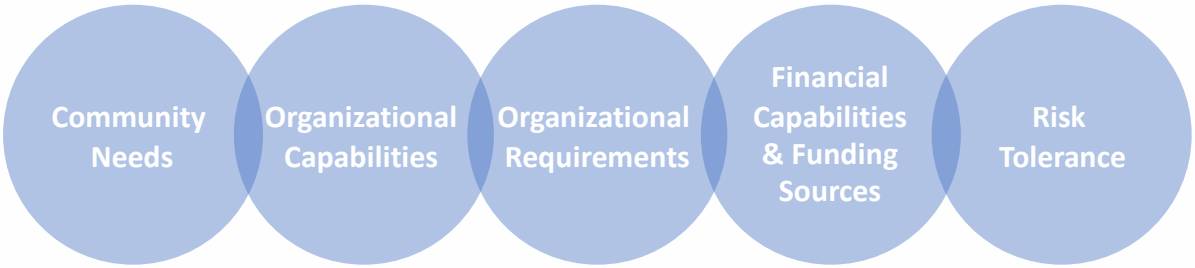


Developing a business case on the initial deployment areas allows FiberNet to determine the feasibility of investing in infrastructure. To do so on a citywide or service area basis would be a significant undertaking and at this state, there are too many variables to forecast an accurate deployment forecast. For the purpose of this report, a targeted business case was developed that could be used to acid test the feasibility of deploying within the areas identified. Lessons resulting from Phase 1 will be used to build a more refined and comprehensive business case for buildout past the pilot.

4.3 Business and operating models

The right broadband business model for a local government depends on its organizational capabilities and requirements and on local market factors. Financial resources are required for broadband, so fiscal capacity is a factor along with risk tolerance. All of these factors overlap, as illustrated in Figure 43. They must be in place and understood for a successful community broadband initiative.

Figure 43: Inputs to selecting the right broadband business model



Broadband business models fall on a continuum from low risk/low investment options to higher risk/higher investment, shown in Table 17. The City of Palm Coast can get rewards in the forms of lower costs, revenue generation, and overall community benefits, if it is willing to put in more financial investment, operational effort, and regulatory oversight. Moving up the continuum also involves greater local government participation in the delivery of broadband services.

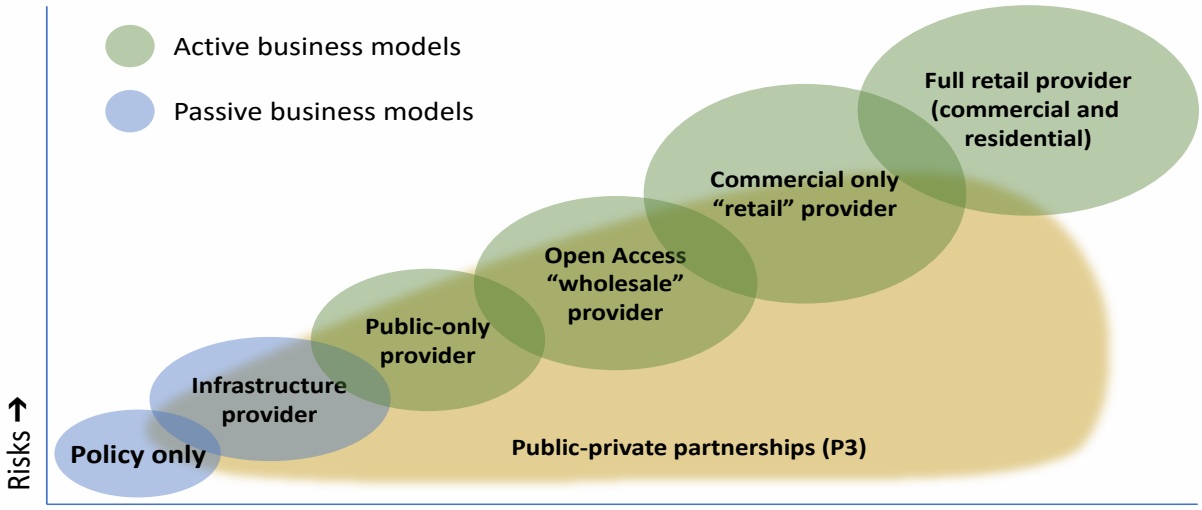
Table 17. Summary of broadband business models

BUSINESS MODEL	DESCRIPTION	EXAMPLES	SUMMARY
		Passive Models	
Policy only	City uses policy tools and standards to streamline construction and reduce the cost of building infrastructure.	• Santa Cruz County, CA • Knoxville, TN	Low risk/reward option to support incentives to accelerate broadband investment but no "quick wins" to improve services.
Infrastructure provider	City provides conduit and/or dark fiber to businesses, broadband providers, and other public organizations; City does not provide retail services.	• Santa Monica, CA • Palo Alto, CA • Lakeland, FL	Improves the cost and availability of fiber infrastructure to providers, businesses, and community organizations, not generally used for residential.

Partially Active Models			
Public-only service provider	City financed or shared financing with other public organizations. Dark fiber or data services to community organizations; sometimes retail services provided by the City to these organizations.	• Seminole County, FL • Leesburg, FL • Columbia County, GA	Improves the cost, access and collaboration among public organizations without forcing the City to compete with private broadband providers.
Open Access "wholesale" service provider	City financed and operated wholesale services only to retail broadband providers who deliver Internet, telephone, and other services.	• Danville, VA • Provo, UT	Enables more competition and choice but difficult to incentivize broadband providers to use municipal infrastructure.
Active Models			
Commercial-only "retail" service provider	City financed and operated fiber transport, Internet access, telephone, and data services to businesses.	• Fort Pierce, FL • Hudson, OH	Enables the City to directly improve services to businesses but requires the City to compete with broadband providers and operate the network.
Full retail (commercial and residential) service provider	City financed and operated fiber and sometimes cable services Internet and often television and telephone to residents and businesses.	• Bristol, VA • Morristown, TN • Ashland, OR	Enables the City to provide major improvements to residential services but requires significant investment and operational capabilities.

Public policy and infrastructure only options are passive business models: The local government does not operate a broadband network. The role of government increases along the continuum, from Public Services Provider through Open Access Provider to Retail Provider. With each of these business models, the government operates a publicly-owned broadband network. Public-private partnerships (P3) take many forms along the continuum. As Figure 44 suggests, P3's can apply to most broadband business models, reducing risks and strengthening rewards when structured correctly.

Figure 44: P3 Continuum



The continuum can be seen as a general path to community broadband goals. In many cases, a city will work through several models as its capabilities and infrastructure evolve. Some models contribute to others. Broadband-friendly policies, for example, are essentially costless means to spur broadband supply, and they lay the foundation for more active models. Other models conflict with each other: local government planning to implement a retail model probably shouldn't do public-private partnerships if it would lead to competition between the local government and one or more private partners.

Figure 44 illustrates an important point about broadband business models: The variability of risk and reward increase with the level of risk and reward. Careful planning and experienced leadership are critical for minimizing costs and maximizing benefits of broadband initiatives.

4.3.1 Policy-only

Local public policies influence how broadband services develop in a community. Permits, right of way restrictions, structural requirements, technical specifications, fees, franchises, and other local policy instruments impact the cost of constructing and maintaining broadband infrastructure. Policy-only is not really a business model, but it does affect the viability of other

business models. Municipalities that did not want to actively develop broadband have used policy to facilitate private development and spur better availability and costs for broadband.

Example: Santa Cruz County, CA

The Santa Cruz County board of supervisors in November 2013 approved an eight-month timeline to overhaul its broadband infrastructure plans and regulations. Specific areas of focus included permitting fee reductions and a proposed "dig once" ordinance that would make it easier to install new fiber-optic cables during other work on area roads or utilities lanes. "The County will continue a focus on broadband infrastructure throughout the county to enable businesses to function in the digital era, and students and households to have high quality access to information and communication.

The County will work with industry providers to develop a Broadband Master Plan to identify focus areas within the county that will be most suitable for gigabyte services, particularly as the Sunesys backbone line is constructed during 2014 and 2015. The County will work with service (last mile) providers to ensure that these focus areas are deemed a priority, in order to support streaming requirements, product development, job creation, and online selling capability."

4.3.2 Infrastructure provider

Municipalities can lease and/or sell physical infrastructure, such as conduit, dark fiber, poles, tower space, and property to broadband service providers to serve the community. The capital expenses to construct broadband infrastructure, particularly in highly developed urban environments with entrenched providers, can be a huge barrier to entry for new providers. Use of existing public infrastructure can be a cost-effective alternative to constructing private infrastructure. Utility and enterprise fund models fit well with the infrastructure model because they provide the capabilities to develop and manage broadband facilities, and offer them to broadband service providers using standardized rate structures.

Example: City of Palo Alto, CA

In 1996, Palo Alto built a 33-mile optical fiber ring routed within the city to enable better Internet connections. "Since then, we have been licensing use of this fiber to businesses. For the past decade, this activity has shown substantial positive cash flow and is currently making in excess of $2 million a year for the city. We now have that money in the bank earmarked for more fiber investments."

4.3.3 Public-only Provider

Municipal public-only broadband service providers use fiber-optic networks to interconnect multiple public organizations, often also providing wireless connectivity. Services are limited to community anchors within their jurisdiction, including local government agencies, school districts, higher education institutions, emergency services and law enforcement, utilities, and occasionally healthcare providers and non-profit social service agencies. The majority of these anchors require connectivity and often, the municipal network provides higher capacity at lower costs than these organizations are able to obtain commercially. Municipal and utility

networks across the country have been built to interconnect cities, counties, school districts, and utilities to one another at lower costs and with long-term growth capabilities that support these organizations' future needs and protect them from rising costs. In these cases, government service providers may be cities, counties, or consortia that build and maintain the network. The providers utilize inter-local agreements between public agencies to establish connectivity, rates, and the terms and conditions of service.

Example: Seminole County, FL

Seminole County owns and operates a 450-mile fiber-optic network that was installed over the past 20 years by the County's Public Works department primarily to serve the needs of transportation. Since that time, the network has grown to connect the majority of the county's facilities, five cities within Seminole County, Seminole Community College, Seminole County Schools, and other public network to a common fiber-optic backbone. The network has saved millions of dollars in taxpayer dollars across the county and has become a long-term asset that enables the county and the other connected organizations to meet their growing connectivity needs.

4.3.4 Open-access provider

Municipalities that adopt open-access generally own a substantial fiber-optic network in their communities. Open-access allows these municipalities to "light" the fiber and equip the network with the electronics necessary to establish a "transport service" or "circuit" to service providers interconnecting with the local network. Service providers are connected from a common interconnection point with the open-access network and have access to all customers connected to that network. Open-access refers to a network that is available for any qualified service providers to utilize in order to connect their customers. It allows municipalities to provide an aggregation of local customers on a single network that they are able to compete for and provide services. The concept of open-access is designed to enable competition among service providers across an open network that is owned by the municipality. The municipality retains neutrality and non-discriminatory practices with the providers who operate on the network. The municipality establishes a standard rate structure and terms of service for use by all participating service providers.

Example: City of Danville, VA

In 2004, Danville built the original network to serve government and municipal buildings, along with schools. Starting with a small start-up loan from city's electric fund, 10 years of incremental growth now has nDanville with revenues of $1.8 million in 2014, while contributing $300,000 towards the city's general fund.

A critical key to the network's early success was, and continues to be, the Mid-Atlantic Broadband Communities Corporation (MBC), which provides wholesale middle mile access to the Danville network. The nonprofit MBC covers 26 counties and 1700 route-miles and connects to nDanville to peering exchanges near Washington DC, Atlanta, and Charlotte. The partnership

allows nDanville to be sustainable, and allows MBC to reinvest excess earnings into regional economic development efforts.

The city does not directly provide services, but as an open access provider, sells middle-mile service to a local provider, Gamewood, which provides tiered broadband services to Danville customers. Danville also uses its fiber network to provide broadband access for its schools, which now generates E-Rate revenue to the tune of about $1 million annually. Incremental, low-risk strategic investments have paid off, and nDanville services are now expanding into residential areas. Network passes over 2,500 customers in a city of 26,000 homes, and this rate is increasing incrementally as well, as more revenue allows for quicker growth. Current take-rate was 20% during Year 1, and the goal was to add 5% per year after that. The city says that it is doing a good job of hitting those numbers.

Clearly, Danville is making the transition from the old to the new economy in the following ways.

- *Open-access network connecting schools, government, businesses, and homes*
- *Upgraded education services to gigabit speeds*
- *Financially sustainable, and contributing $300,000 annually to the city's general fund*
- *Enabled opportunities through fiber broadband services for local businesses*
- *Increased reliability, performance, and availability of fiber broadband across the city*
- *Reinvested system revenues leading to expansion of the network*

4.3.5 Commercial-only

Municipalities that provide end users services to business customers are considered retail service providers. Most commonly, municipalities provide voice and Internet services to local businesses. In many cases, a municipality may have built a fiber network for the purposes of connecting the city's primary sites that has been expanded to connect local businesses, in effort to support local economic development needs for recruitment and retention of businesses in the city. Municipalities that provide these services are responsible for managing customers at a retail level. They manage all operational functions necessary to connect customers to the network and providing Internet and voice services. Municipalities compete directly with service providers in the local business market, which requires the municipality to manage an effective sales and marketing function in order to gain sufficient market share to operate at a break-even or better.

Example: Fort Pierce Utilities Authority, FL

Primary FPUAnet services are Dedicated Internet Access, Fiber Bandwidth Connections, E-Rate IP Links, and Dark Fiber Links. FPUAnet services also include Wireless Broadband Internet and Wireless Bandwidth Connections, which extend FPUA's fiber through wireless communications. The FPUAnet Communications mission statement is "To help promote economic development

and meet the needs of our community with enhanced, reasonably priced communications alternatives."

It all began around 1994, when FPUA began to build a fiber-optic network to replace leased data links between its buildings in Fort Pierce. The new optical fiber system proved more reliable and cost effective and was built with sufficient capacity for external customers. In 2000, FPUA allocated separate fibers through which it began to offer Dark Fiber Links to other institutions. This soon expanded to include businesses and more service types.

4.3.6 Full retail: commercial and residential

Municipalities that provide end user services to businesses and residential customers are considered retail service providers. Most commonly, municipalities provide voice, television, and Internet services to their businesses and residents through a municipally owned public utility or enterprise fund of the city. As a retail service provider that serves businesses and residents, the municipality is responsible for a significant number of operational functions, including management of its retail voice, television and Internet offerings, network operations, billing, provisioning, network construction, installation, general operations, and maintenance. The municipality competes with service providers in the business and residential markets and must be effective in its sales and marketing program to gain sufficient market share to support the operation. Many municipalities that have implemented these services are electric utilities that serve small to midsize markets. Many of these markets are rural or underserved in areas that have not received significant investments by broadband service providers. Retail service providers must comply with state and federal statutes for any regulated telecommunications services. These organizations must also comply with state statutes concerning municipal and public utility broadband providers; a set of rules has been developed in most states that govern the financing, provision, and deployment of these enterprises.

Example: Bristol Virginia Utilities (BVU OptiNet)

BVU OptiNet is a nonprofit division of BVU, launched in 2001, that provides telecommunication services to approximately 11,500 customers in areas around Southwest Virginia. OptiNet is known for its pioneering work in the area of municipal broadband throughout the area. BVU is acknowledged as the first municipal utility in the United States to deploy an all-fiber network offering the triple play of video, voice, and data services. Offering digital cable, telephone service, and high-speed Internet from a remote-area utility provider makes BVU exceptional, even on a global level.

4.3.7 Public-private partnership

A broadband public-private partnership (P3) is a negotiated contract for a private company to offer broadband services in a given area in return for some special resources or rights from the public partner. In recent years, P3s have been increasingly implemented as more municipalities employ public broadband and utility infrastructure in conjunction with private broadband providers. P3s leverage public broadband assets, such as fiber, conduit, poles, facilities with private broadband provider assets, and expertise to increase the availability and access to

broadband services. Municipalities forgo the getting into the business of providing retail services and instead, make targeted investments in their broadband infrastructure, and make it available to private broadband providers with the goal of enhancing their communities. In this type of model, the municipality would be considered an Infrastructure Provider who maintains permanent ownership interest in the broadband infrastructure (e.g., conduit and perhaps dark fiber) that is funded by the municipality for a piece of the action, generally a negotiated revenue share paid by the provider.

Example: The City of Rancho Cucamonga, CA

In 2016, the city worked to develop a Fiber Master Plan. The city has consistently shown entrepreneurial spirit in past initiatives (starting electric utility, purchase of 16,000 street lights from California Edison), and now in the deployment of high-speed, next-generation broadband services. The plan identified ways for the City to expand their existing fiber network, its extensive traffic assets, and additional investment to create a backbone network throughout the City's primary business corridors, and economic development zones. The network will support additional use by internal departments, community anchors, partnerships with ISPs, and the support for Smart City initiatives. Rancho Cucamonga worked to develop and solicit an RFI for Public Private Partnerships, and developed a roadmap and action plan that recommended the City/Utility formalize its broadband utility as a division of Rancho Cucamonga Municipal Utilities (RCMU). Network Design and Engineering and full turnkey implementation services began in 2017, including all procurement, governance, network standup and testing, data center design, public policy, marketing and branding, and integration of all ISPs into the network platform. Network construction began in Q2 of 2018. Adoption of the Fiber Master Plan has led the City to budget $12 million to execute the plan over a 6-year period.

During 2018, Rancho Cucamonga forged an agreement with Inyo Networks for the delivery of internet services to the businesses and residents in Rancho Cucamonga. In return for use of the City's assets, Inyo networks will negotiate and provide a revenue share payment to the City based upon the total gross revenues across all service offerings that is similar in length to the agreed upon term.The agreement with Inyo includes:

- *Residential 1Gbps symmetrical BEST-EFFORT Internet*
- *Business 100 Mbps and 1Gbps symmetrical BEST-EFFORT Internet*
- *Business and Anchor 100 Mbps, 1Gbps and 10 Gbps symmetrical DEDICATED*
- *Internet with industry acceptable Service Level Agreements*
- *Voice Over IP telephone service (VOIP) – not subject to revenue share*
- *IPTV video service – not subject to revenue share*
- *Dark Fiber and Lit Transport*
- *Other TBD services*

Example: The Covenant of Rancho Santa Fe, CA

The Covenant of Rancho Santa Fe (RSF) was established in 1928 as a country residential community located in San Diego County, CA. Today it is one of the most exclusive, beautiful, and desired rural communities in the country. The community includes a world class golf course and over 1,800 homes with an average home price of approximately $3 million. Rancho Santa Fe is home to many famous people including movie stars, politicians, sports figures, and corporate executives/CEOs.

Several years ago, RSF requested an upgrade to its telecommunications facilities, specifically asking for a FTTH build. Incumbent providers agreed, however requested that RSF pay the capital required to build out the network, which was estimated at $20 million at the time. The RSF Board declined their offer, and instead undertook a FTTH Feasibility Study that outlined the options available to bring fiber-based service offerings to its community. RSF has decided to self-fund the buildout, maintaining long-term ownership of this very important community asset, and has embarked on the process to develop a Public Private Partnership.

RSF has identified numerous potential partners that would operate the network while providing its residents, businesses, and anchors with state-of-the-art fiber-based telecommunications services. RSF is currently negotiating the partnership with the selected partner and the network is due to be operational in 2017/2018.

4.4 Recommended Approach for Palm Coast FiberNet 2.0

Key to any successful expansion must include a decision on how to fund, operate, and maintain FiberNet going forward, under any scenario or option. To support this analysis, Magellan's financial models include full staffing and OPEX requirements for each model. How Palm Coast staffs these roles, through insourcing (FTEs), or outsourcing (P3 partner or contract operator) has yet to be determined, however this analysis will provide the City with potential options, and recommendations to support a successful expansion of FiberNet.

4.4.1 Funding

The City will have to look at strategic funding sources to manage the expansion of FiberNet. Its expansion will benefit the community's utilities, public safety, mobility, general city operations, as well as in providing potential revenue sources (customers, smart city cost deferral). It's arguable that some of these functions should help pay for expansion when its warranted – for instance, if traffic funds/or even grant funds could be used to expand a traffic network, this is directly a case for expansion of FiberNet assets using traffic dollars, at least proportionally. Conversely, if the City decides that FiberNet should be expanded to connect the Utility's AMI collector points, this expansion should be funded by the Utility. In the case of AMI, the Utility would be required to pay recurring monthly fees to third-party providers for connectivity, these funds could be capitalized, supporting the expansion of FiberNet further.

Funding for the commercial-like segments would have to be funded through some other mechanism such as municipal bonds or other internal loans. For locations such as Town Center,

otherwise known as the Downtown District, or other redevelopment projects, TIF, or CRA funding may be applicable to those areas' infrastructure investments. At first glance, Palm Coast does not qualify for many traditional broadband grants, or loan programs, however there are applicable funding programs that target Utilities, Healthcare, Low Income Housing, Economic Development, and Innovation related projects. As an example, Economic Development Association could be a potential source for an Innovation Grant to fund buildout and to spur potential innovation within the Downtown District. Successful, progressive cities take a holistic approach in aggregating funding to expand its network related buildout goals. You must cast a wide net when searching for available funding, while internalizing costs where appropriate. These municipalities are finding significant savings over the long term, when investments are strategic and well thought out. In addition, with appropriate planning and conditioning, communities are building vast inventories of fiber-optic networks at a significant cost savings over traditional construction methods.

Financial models in this Plan include 20-year municipal bond lending at a rate of 4.5%.

4.4.2 Operations

Paramount to any plan for expansion, is a sustainable operating model – specifically how the City will operate FiberNet, from a staffing and network operations perspective. Maintaining a lit FiberNet platform for municipal purposes, or in support of Smart City initiatives will require a level of operations and staffing, while use of the network for commercialized purposes will obviously require a much higher level of support to provide carrier class services, as defined by 99.999% uptime.

To be clear, as a fully functioning municipality, Palm Coast government will require a lit network platform to conduct City business, both site to site, and in empowering future Smart City. As previously documented, the City would spend $310,000 a year today, and going forward if FiberNet were not in place. And even if the City contracted with a third party for its connectivity, it would still have a level of network operations to manage, which would necessitate the need for staff, including a Network Engineer and/or Network Administrator. In short, the City of Palm Coast will always have to plan and manage network assets, the question is at what cost. The City decided a long time ago that FiberNet was a wise investment, and analysis provided in this document confirms this, however past operations have been troublesome.

Going forward, the City has the opportunity to decide how it should manage and staff FiberNet during this next 10-year planning cycle – FiberNet 2.0. Looking back at previous FiberNet operations experience, it does not appear as though adding internal staff specifically with the expertise to provide a carrier-class network solution was an option. FiberNet staffing/resourcing has been lean, and City leadership understands that telecommunications is not a core expertise of City government. As outlined in this Plan, an internalized function could require numerous functional operations' staff to manage an expanded FiberNet deployment.

This would mean increased head count within the IT Department, which is further outlined in more detail below.

Palm Coast also has the option to outsource or partner for a network operator who could manage their network, providing network provisioning, monitoring, customer services, billing, and other customary functions. This would be akin to an outsourced staffing service however, it would solicit a specific network operator and retail FTTP provider to deliver FibetNet's service. While this would absolve the City of managing operations, there could still be legal issues related to State of Florida municipal broadband barriers, if it appears as though the City is actually providing the services – as a City function.

The City has 3 options to consider for operating FiberNet, they are:

- Internalize – full staffing and internal operations model – FLORIDA STATE LAW ISSUES PROVIDING RETAIL "END-USER SERVICES"
- Contract – contract with a firm to operate the network – outsourced operation with City direction and guidance – "Palm Coast provided service" – FLORIDA STATE LAW ISSUES PROVIDING RETAIL "END-USER SERVICES"
- P3 – partnership with an exclusive Network Operator and Retail FTTH Provider

Internalizing the FiberNet operation will require the addition of FiberNet staff. While some roles can be shared between current IT staff, it's very questionable whether current staffing levels can provide any level of support at this time. A FiberNet Manager, Network Engineer, and supporting staff would be required, and are outlined within the financial models and staffing plans in upcoming sections. Alternatively, the City could contract with an external, third party to operate the network as an extension of the City of Palm Coast. A contracted operator would still be bound by the regulations and capabilities of the City of Palm Coast, as an outsourced operation, is simply an extension of the City's operation of a Broadband Utility. State of FL broadband laws would impact any services provided by Palm Coast, even through operation by a third-party contract operator.

A P3 (public-private partnership) could be structured much like the City's Wireless Master Plan with Diamond Communication, where the City could opt for a revenue share on gross revenues generated through the use of FiberNet's assets by its P3 partner. In recently developed broadband P3s, the private sector P3 partner leverages their operating experience, data center and supporting telecommunications assets and systems, and upstream content and national network interconnects to deliver a range of advanced IP services to community organizations (businesses and anchors), and in some cases residents. The P3 partner would provide a full range of telecommunications, entertainment, and supporting services, and would be required to light, and operate its network, as well as providing full local customer service and sales support. In some instances, communities have required the provisioning and management of municipal circuits for either site to site connectivity, or in support of smart city and WiFi initiatives.

Using a P3 arrangement, the City would invest in, and maintain passive OSP infrastructure, for the long-term benefit of the community, opting for a long-term lease agreement, IRU, or revenue share with the partner for consideration of use of the city's public assets. Revenue shares are usually a preferred payment approach by the public partner, as it provides a benefit to the City when the partnership is successful. The City has a vested interest in its partner doing well, and therefore must co-brand, co-market, and work to drive uptake of network services. Further, as the infrastructure owner, and not the operating partner, the City has the opportunity to focus on influencing beneficial public policy tools which could drive down the cost of any further network expansion. Proper planning and coordination between capital projects, or other ROW disturbances could save the City a tremendous amount of capital over traditional construction methods.

The City should also take a hard look at where FiberNet resides within the City enterprise. While FiberNet was constructed and has operated under IT since its inception, a change in direction or business model, may give way to a more ideal structure. And with a renewed focus on FiberNet expansion, FiberNet could benefit from being in a department with a keen eye toward development activities taking place throughout the community.

Magellan Advisors believes that FiberNet could be located organizationally, and managed internally by:

Information Technology – FiberNet should reside with IT if a portion of it will remain a lit network, and if it continues to directly support municipal connectivity and Smart City initiatives. A lit FiberNet network is managed no differently than the other Layer 2/Layer 3 network devices, and all lit services should be aggregated to the same network transport platform. IT could also manage all O&M and expansion projects, as they do today.

Or, FiberNet could reside in an Operating Department, such as:

Utility Department or Public Works – should FiberNet become a passive network, where network equipment is no longer supported internally, but pushed to an Outsourced Operator, or P3 Partner, the Utility or Public Works Department may be an ideal City department to manage, expand, and maintain all passive OSP infrastructure. Both Utility and Public Works have complementary operations as it relates to other City infrastructure, maintaining fleets of vehicles, underground equipment and contractors, and tasks such as underground utility locates. In addition, they work in the ROW, and have first-hand knowledge of the infrastructure and issues that exist.

4.4.3 Maintenance

The City of Palm Coast has maintained Fiber O&M, and network equipment maintenance contracts since the inception of FiberNet. It is experienced in managing its infrastructure, and related contracts/vendors. Under any scenario, capital expansion and fiber maintenance should remain with the City, to ensure the long-term viability and sustainability of the assets, as

well as public ownership. FiberNet OSP Maintenance costs will increase as the network expands incrementally, as O&M is usually budgeted at a cost of $1,500 per year per cable mile. The City should consider a Fiber Management System (FMS) to manage its fiber infrastructure going forward. An FMS would bolt on to the City's ESRI GIS platform and would give the City strand level management of the OSP. In development of this assessment, Magellan worked with Danella Construction to piece together their records for updated network diagrams, and splice matrices – IT did not readily have these available. It is highly recommended – and will be expected by any potential partners, for the City to maintain valid, up to date records down to the individual fiber strand level, including splice history.

Depending on the operating model, network equipment and software maintenance may change, with costs increasing or decreasing based on the City's role in operating any portion of the network.

4.4.4 Summary

City of Palm Coast has overwhelmingly confirmed the value of the City's network to its current municipal operation and continues to see great opportunity where FiberNet can support community technology-based initiatives. A community in the 21st century requires connectivity. The initial investment made into FiberNet has netted the City overall savings, as previously documented, and created new revenue streams from commercial use of the network. It will continue to allow the City to manage its long-term telecommunications costs well into the future, while providing a next generation connectivity platform to support the Palm Coast communities' continued evolution.

While FiberNet operates profitably, generating nearly $100k in annual free cash flow, the network has struggled to expand, and grow sustainable revenues. The issues identified through this assessment, appear to be focused in the following areas:

- **Current Business Model**
- **Current Service Provider Partners**
- **Current FiberNet Operating Model and Staffing**
- **Lack of Branding and Marketing**

Through development of this Business Plan, FiberNet 2.0 should focus the City's attention on expanding FiberNet through a sound business case and investment roadmap, providing a high-speed fiber offering to support businesses, community anchors, and to support greater municipal connectivity, including Smart City initiatives. Palm Coast must decide how to staff FiberNet under any business model, or deployment scenario, and must commit to funding the operational components identified in its role to ensure success.

While Open-Access was the intended business model of FiberNet, and it is a concept still used today, you must have partnering providers who can assist the City in growing the market and expanding the network – today's partners do neither. An exclusive broadband/FTTP P3 would absolve the City of many of its operational challenges and would keep the City out of the

competitive market place, focusing its responsibilities solely on expanding and maintaining this very important infrastructure.

FiberNet 2.0 should focus on providing next-generation connectivity throughout Palm Coast's corridors, Business Districts, and expanded focus areas. To do so, it can look toward internalizing and providing services directly, or through the use of a P3. Both are completely diverse business models, where one is internalized, and network services are provided by the City of Palm Coast, while the other is provided by an industry partner charged with expanding, lighting, operating, and managing FiberNet, providing retail services to customers under the partner's brand, and with their operations. Many municipalities will participate in branding, for example, RCMU Fiber (City of Rancho Cucamonga), and its partner Inyo Networks use, "Inyo Networks, powered by RCMU Fiber," as its brand and image.

Table 18: Proposed Business Model Comparison

Full Retail Model	Infrastructure Provider – P3
City staffed, and operated	City invests in, and maintains infrastructure
Deploy network equipment, systems, and upstream services	Partner operates and provides services
REGULATORY BARRIERS EXIST	City receives revenue share or lease fee for use of public assets
	City and Partner co-brand, co-market, and drive use of assets

Table 19: Operating Model Comparison

Full Retail Model	Infrastructure Provider – P3
Internalize 5 roles (Mgr, Network Engineer, Sales/Marketing, Customer Support, OSP/GIS – staff grows as subscriber base grows)	Services would include Broadband only*
24x7 NOC, and After-Hours Support contracts	City maintains fiber construction and O&M contracts
Maintain Enterprise Fund and separate accounting	No further operational requirements

Figure 45: Broadband partnerships

P3's for Broadband Partnerships are a balancing act between how much RISK the City is willing to take, understanding their desired amounts of CONTROL, and expectations around REWARD or payoff. In short, the greater REWARD and CONTROL the City desires, the greater RISK they must assume. In many cases, P3 partners are willing to bring capital investments to the table, for long-term stable relationships, or for partial ownership/long-term interest in the developed assets. The City should be prepared to be open to innovative opportunities that could limit its operating requirements, while maximizing potential revenue and technology opportunities.

4.5 FiberNet 2.0 – Potential Connections Analysis

Through complex GIS analysis of the existing FiberNET routes, we analyzed various types of connections, by Broadband Zone (Business Districts). We looked for potential On-Net (within 150 ft. of existing interconnect point) Businesses, Near-Net (within 750 ft. of existing network assets) Businesses, and On-Net Smart City, Near-Net Smart City connections. We also reviewed those that were off-net, simply too far off the network assets to serve – those were removed from the model as Capital Expenditures to expand the backbone to serve those off-net as this cannot be justified at this time. However, the City could take another look at these areas should a strategic fiber build occur, i.e., building fiber to a new fire station or utility extension.

Figure 46: Example - Map of Potential Smart City Connections

Table 20: Total market along existing routes

TOTAL MARKET ALONG EXISTING ROUTES

BROADBAND ZONE	ON-NET BUSINESS	NEAR-NET BUSINESS	ON-NET SMART CITY	NEAR-NET SMART CITY	TOTAL POTENTIAL CONNECTIONS
EAST	43	288	210	1,584	2,125
CENTRAL	8	77	284	1,788	2,157
NORTH	-	-	86	1,460	1,546
SOUTH	3	30	39	178	250
SOUTHEAST	-	60	15	4	79
WEST	106	416	252	2,264	3,038
TOTAL:	160	871	886	7,278	9,195

Preference was given to those Broadband Zones which have the greatest impact and were relatively easy to serve. These were considered low-hanging fruit and provided a positive ROI when compared to project expansion costs within the respective Zone. To calculate ROI, we used a Capital/Revenue Potential Ratio to determine the Zones that required the least Capital Funding but provided the most financial opportunity (return). For purposes of this modeling exercise, these Broadband Zones, and Connection Types made up FiberNet's market – the total potential market from which connection uptake (take rates) were determined.

While East, Central and West Broadband Zones were prioritized in these models, this is only because of current densities which are dictated by areas built out within Palm Coast. Palm Coast should focus efforts to expand FiberNET when possible into other Zones, or through strategic alignment of Capital Projects or Private Development. Further, as density increases in these areas, the ROI metrics will change. The North, South and Southeast just do not have many FiberNet assets at this point, and they are up and coming areas for development within the City.

4.6 FiberNet 2.0 CAPEX Analysis

While Palm Coast's goal is to maintain long-term ownership of any FiberNet assets, it is likely that it will shoulder most capital expansion costs. In many cases, network betterment or improvements, fiber drop premise connections, including CPE could be passed onto the selected P3 Partner, under the right agreement. Under these models, Palm Coast would invest over $7 million in a Retail Model, while a P3 would cost nearly $5.2 million, where the City is only investing in passive infrastructure and assets, such as conduit, boxes, and fiber-optic cable.

Table 21: CAPEX comparison

CAPEX CATEGORIES	RETAIL MODEL	P3
FIBER FEEDER/DISTRIBUTION	$ 2,587,000	$2,587,000
FIBER PREMISE CONNECTIONS	$ 1,960,849	$1,960,849
HEADEND EQUIPMENT/PM	$ 1,590,000	$ 565,000
GENERAL EQUIPMENT	$35,000	$35,000
WIRELESS EQUIPMENT	$1,000,000	$ -
TOTAL:	**$7,172,849**	**$5,147,849**

Under the P3 model, the City would invest in Fiber Feeder/Distribution, Fiber Premise (drops), project deployment, oversight, and general equipment related to managing passive infrastructure. The City should work to push the drop costs to the P3 partner, allowing them to work to collect customer construction fees when possible, passing them back to the City as capital expansion fees are incurred. This would further reduce the City's capital requirements, and is standard practice in the industry today.

Additionally, a core recommendation of the FiberNet 2.0 Business Plan is to incorporate a wireless (WiFi) component from which the City can provide wireless internet services as an amenity in corridors and locations of the City, while it would serve a dual purpose of connecting the City's mobile workforce, and as a secure platform to further enable Smart City.

4.7 FiberNet 2.0 OPEX Analysis

Palm Coast FiberNet's future Operating Expenses (OPEX) are vastly different given Retail Operations vs. that of a P3. Further, both of the OPEX scenarios outlined below are very different than the models used to support the operation of FiberNet.

Table 22: OPEX comparison

OPEX CATEGORIES	RETAIL MODEL	P3
STAFFING	3 + ($250K YR 1)	0-1
DATA CENTER RACK & POWER	$2,500 YR	$0
BROADBAND TRANSPORT & INTERNET	$60,000 YR	$0
OWNERS REP/CONSULTING	$50,000 YR	$175,000
FACILITIES MAINTENANCE, POWER, ENV.	$5,000 YR	$5,000 YR
MISC.	1% OF REV.	1% OF REV.
NETWORK & HEADEND MAINT.	$12,000 YR	$0
SOFTWARE MAINTENACE	15% OF SOFTWARE	$0
FIBER O&M	$30,000 - $60,000	$30,000 - $60,000
SG&A	$36,500/ 2% BAD DEBT	$36,500/ 2% BAD DEBT
NOTES:	EXPENSES INCREASE WITH ADDITIONAL SUBS	EXPENSES INCREASE WITH MORE NETWORK ASSETS

Under a Retail Model, the City would have to add at least three staff at a cost of over $250,000 in Year 1 to operate the current FiberNet network, and to support the planned expansion. These positions would include a Manager/Director, Network Engineer, Sales/Marketing, Customer Service, and OSP/GIS. In addition, FiberNet would incur charges for data center racks and power, broadband transport and internet, owners rep/consulting services, facilities maintenance, power and environmental controls, network and headend maintenance, software maintenance., fiber Operations and Management (O&M), and Sales, General, and Administrative (SG&A). The City would be staffing a new Fiber Utility division, adding City staff to manage the day to day administration and operations.

Under a P3 Model, staffing is kept to a minimum, focusing only on roles around network expansion and maintenance, and P3 contract oversight and performance, which can be mostly outsourced. The City would not incur any costs for data center or facilities, broadband transport and internet, software, or network headend maintenance.

Under both models, costs will increase over time, however the drivers for cost increases are much different. In a Retail Model, FiberNet's expenses increase as additional subscribers (users) are added to the network, while in a P3 Model, FiberNet expenses increase due to an increase in the amount of network assets the City owns and manages.

4.8 FiberNet 2.0 Financial Model Assumptions

Broadband Financial Models are heavily dependent on assumptions. As noted below, assumptions have been developed for modeled services and pricing, adoption and connection rates, as well as revenue share potential. Each of these assumptions is a key factor in the models (retail and P3), and each can be adjusted upward or downward to adjust the model.

Table 23: Financial model assumptions

ASSUMPTION DESCRIPTION	ASSUMPTION
BUSINESS 1GBPS BEST EFFORT INTERNET	$325
BUSINESS 100 MBPS BEST-EFFORT	$85
BUSINESS 1GBPS DEDICATED	$1,295
BUSINESS 100 MBPS DEDICATED	$350
SMART CITY CONNECTION FEE	$35
BUSINESS ADOPTION RATE	60% OVER 4 YRS
SMART CITY CONNECTION RATE	70% OVER 4 YRS
P3 REVENUE SHARE %	40%

** Note that this would be a change from current operations that use FiberNet at no-cost.

The services outlined in this model represent a Low Tier (100 Mbps Service), and High Tier (1 Gbps Service), service offering, both in a dedicated (guaranteed, reserved), and best-effort service level. These suggested rates are comparable to the market in Palm Coast, and represent high quality, high-speed data transport and internet services. The Smart City Connection Fee is derived from the City's current Verizon MiFi device costs, and is assumed to replace the need for third party connectivity, rather than funding connectivity through an internal service, either City supplied fiber or wireless. This line item represents a cost deferral opportunity, whereby the City is self-serving its connectivity needs through enhanced use of FiberNet.

The Business Adoption Rate identifies the rate at which customers would take service over time, and only from the available market (on-net, near-net). For Business Adoption Rates, the model targeted 60% adoption over a 4-year period. For Smart City Connection Rates, the adoption is 70% of on-net devices over the same 4-year period, again, only of the available markets defined.

Finally, the P3 Revenue Share percentage is the amount of revenue the City could expect to receive from a P3 provider given final negotiations and agreements. We believe the City could likely receive a revenue share of approximately 40%, perhaps as high as 50%, depending on the potential provider and the City's ability to fund infrastructure expansion. In short, the more

Risk the City assumes, the greater revenue share it should expect. Conversely, the City could receive smaller proposed revenue shares from partners, however, they may assume more capital investment requirements, or larger roles in managing/expanding FiberNet, and therefore would keep more of the revenues generated. The City should be open and inclusive to all proposals and should look toward innovative partnerships which can lead the City to meeting its long-term vision and goals.

4.9 FiberNet 2.0 Financial Model Projections and KPIs

Financial Model projections and KPIs, Key Performance Indicators, were developed for both FiberNet expansion models (Retail, P3), and various financial metrics and KPIs have been determined to support this analysis.

While the table below provides the financial metrics that could be expected through FiberNet's expansion, this does not identify or detail the internal efficiencies or community benefits realized. These represent the soft benefits gained through continued use of the network, which are very real returns for local government and community organizations.

Table 24: KPI comparison

KPIs	RETAIL MODEL	P3
BUSINESS ADOPTION RATE (60%)	615 CONNECTIONS	615 CONNECTIONS
SMART CITY CONNECTION RATE (70%)	620 CONNECTIONS	620 CONNECTIONS
TOTAL CONNECTIONS	1,235	1,235
20-YEAR CUMULATIVE REVENUES	$29,262,137	$19,838,883
20-YEAR CUMULATIVE GROSS PROFIT	$21,831,101	$14,527,169
20-YEAR CUMULATIVE EBITDA	$16,301,442	$13,074,558
20-YEAR CUMULATIVE NET-INCOME	$6,642,894	$7,076,674
YEAR POSITIVE EBITDA	YR 1	YR 1
YEAR POSITIVE NET INCOME	YR 4	YR 1
20-YEAR CAPITAL EXPENDITURES	$7,172,849	$5,147,849
20-YEAR PAYMENT IN LIEU OF TAX	$2,711,544	$3,690,796
20-YEAR FREE CASH FLOW (CASH + RESERVES)	$2,529,361	$1,983,888
FUNDED RESERVES AT YEAR 20	$2,050,000	$3,000,000

As we look at Business and Smart City Connections, these grow to 615 business connections, and 620 Smart City connections over time. This is the same under both modes, as they use the same uptake assumption. Total connections equal 1,235.

Revenues generated under the Retail Model are much higher than the P3 for the simple fact that under the Retail Model, 100% of the revenue is retained. Under the P3, only 40% is projected at this point under an assumed revenue share. The Retail Model's cost of operations will eat into gross profit, EBITDA, and net-income KPIs, allowing the P3 to have a greater cumulative net income by nearly $7 million over 20 years. Under both models, PILOT (payments in lieu of tax), and reserve funding is appropriated as well.

Over the 20-year period, the Retail Model includes nearly $7.2 million in capital expenditures, over $2.5 million in PILOT payments to the City's general fund and includes free cash flow and funded reserves at over $2.5 million. The P3 requires nearly $5.2 million in capital expenditures, includes nearly $3.7 million in PILOT payments, and free cash flow and funded reserves total over $1.9 million.

In short, this exercise helps us to understand that in using a P3 approach the City would be required to spend less capital, and will end a 20-year period with over $1.9 million cash in the bank, nearly $3 million in PILOT payments, all while increasing the City's broadband asset inventory by nearly $1.9 million of new infrastructure.

4.10 Breakeven Scenario

Magellan also provided a break-even scenario that analyzed the minimum Business Adoption Rates required to breakeven, over a 20-year period, under similar assumptions. These break-even scenarios do include funding renewal and replacement reserves which are necessary to sustain the network over the long term.

Table 25: Breakeven comparison

KPIs	RETAIL MODEL	P3
BUSINESS ADOPTION RATE (→)	420 CONNECTIONS (41%)	256 CONNECTIONS (25%)
SMART CITY CONNECTION RATE (70%)	620 CONNECTIONS	620 CONNECTIONS
TOTAL CONNECTIONS	1,040	876
20-YEAR CUMULATIVE REVENUES	$25,793,834	$17,230,861

KPIs	RETAIL MODEL	P3
20-YEAR CUMULATIVE GROSS PROFIT	$18,397,481	$11,945,228
20-YEAR CUMULATIVE EBITDA	$12,937,188	$10,544,777
20-YEAR CUMULATIVE NET INCOME	$3,937,186	$5,261,598
YEAR POSITIVE EBITDA	YR 1	YR 1
YEAR POSITIVE NET INCOME	YR 6	YR 1
20-YEAR CAPITAL EXPENDITURES	$6,648,524	$4,184,104
20-YEAR PAYMENT IN LIEU OF TAX	$659,953	$1,723,086
20-YEAR FREE CASH FLOW (CASH + RESERVES)	$2,103,873	$2,676,465
FUNDED RESERVES AT YEAR 20	$2,050,000	$2,050,000

Under these scenarios, capital expenditures are reduced primarily due to less overall connections, resulting in less fiber drops. Revenues, and other associated 20-year calculations also all decrease.

In order for the Retail Model to breakeven, it must hit a 41% uptake on business services, whereas the P3 requires a breakeven uptake rate of 25%.

4.11 FTTH Scenario

Magellan also ran projections at the City's request to show potential FTTH deployment to 100% of the existing platted lots within the City of Palm Coast – this covered over 35,000 lots, and did not include future residential development areas at this time. In order for Palm Coast to be able to provide FTTH services, it would have to enhance current capacity, and extend FiberNet along every City corridor and neighborhood street, comparable to the way the water distribution network is architected – each home would require a connection. At a 45% adoption rate over 20 years, and with 2% growth, the City would connect nearly 22,000 residential customers, in addition to the business and Smart City connections identified previously, for a total of 23,478 network connections.

Once GPON is established for business, buildouts to residential neighborhoods, within or outside the proposed areas, may be considered for FiberNet services as well. The GPON network connection to a residential unit is the same to that of the proposed business connections. FiberNet could utilize the Fiberhood buildout concept, allowing the City to expand its fiber network in areas where there is enough demand. In this model, FiberNet would assess the interest level of a particular neighborhood or area and extend FiberNet's network and services once enough residential subscribers have signed up. FiberNet should develop a program to selectively install extra conduit when the undergrounding of other utilities takes place. This would allow FiberNet to provide service in new communities undergoing development and would allow them to do so at a substantial savings. It would also provide FiberNet with a captive market that would likely choose advanced FTTP infrastructure over legacy copper offerings. The overall process for building to residential subscribers is exactly the same as for businesses, using feeder/distribution networks, drops, OLT (optical line termination) ports, and ONTs (optical network termination) at the subscriber premise.

Table 26. Preliminary Fiber-to-the-Home cost estimates (Passive OSP only)

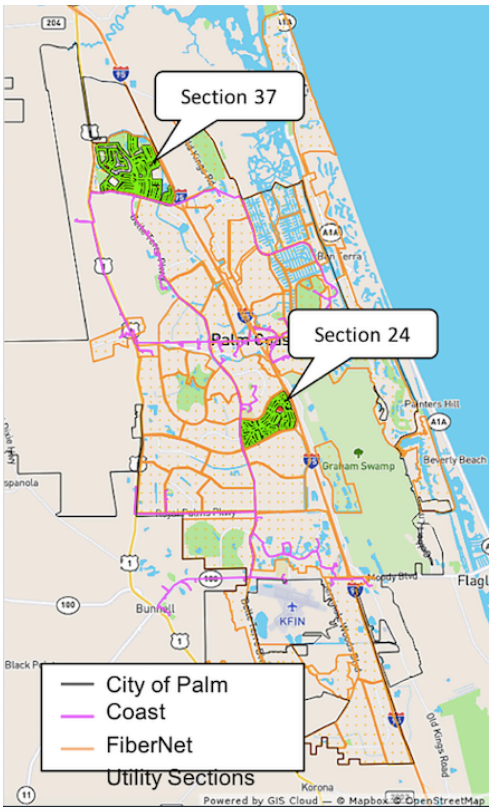
EST.	PRICE/ PASSING	CONSUMERS	FTTH NO DROPS[21]	DROP COST	FTTH WITH DROPS
HIGH	$1,800.00	35,363	$63,653,400	$34,478,925	$98,132,325
LOW	$1,500.00	35,363	$53,044,500	$34,478,925	$187,523,425

As shown in Table 26, it will require between $130 million and $145 million to deploy a full FTTH OSP infrastructure in Palm Coast. It will cost between $1,500 and $1,800 on average to connect a customer with FTTH. Drops from the access network to the Optical Network Terminals and into premises constitute some 35% to 40% of those expenses. Backbone and distribution network account for about 60% to 65% of FTTH deployment costs.

These estimates were generated from common FTTH cost components and levels applied to two representative City of Palm Coast Utility sections, shown in Table 26. The ratio of road miles to area was calculated, along with number of consumers, and those were generalized to other sections to calculate total network mileage and number of drops. These figures presume no infrastructure is in place, and do not consider any infrastructure that might be deployed as part of conditioning new developments, to serve commercial areas, or to address City needs and opportunities.

[21] All installation would be 100% underground. Estimates do not include headend equipment, permit fees, or drop cost, and assume no environmental issues.

Figure 47: Utility sections used for estimating FTTH costs



These estimates also do not include any network equipment, back office systems, ongoing operations, and other potential funding requirements needed to deploy a fully operational FTTH network and operations.

Under the P3 Model, which is the only sustainable FTTH option, 20-year FTTH revenues surpass $137 million, while 20-year cumulative net income is over $37.5 million. The FTTH P3 hits positive EBITDA by Year 1, and positive net income in Year 4. The City would be poised to spend nearly $70 million in capital expenditures over the same 20-year period, excluding customer drops, which would have to be passed onto the P3 partner, as the City could not sustain drop charges as well.

Table 27: FTTH KPIs

KPIs	FTTH
RESIDENTIAL ADOPTION RATE (45%)	21,997 – 2% GROWTH
BUSINESS CONNECTION RATE (60%)	861 CONNECTIONS
SMART CITY CONNECTION RATE (70%)	620 CONNECTIONS
TOTAL CONNECTIONS	23,478 CONNECTIONS
20-YEAR CUMULATIVE REVENUES	$137,158,479
20-YEAR CUMULATIVE GROSS PROFIT	$130,538,569
20-YEAR CUMULATIVE EBITDA	$126,739,566
20-YEAR CUMULATIVE NET INCOME	$37,571,164
YEAR POSITIVE EBITDA	YR 1
YEAR POSITIVE NET INCOME	YR 4
20-YEAR CAPITAL EXPENDITURES (P3 HANDLES DROPS)	$69,999,943
20-YEAR PAYMENT IN LIEU OF TAX	$6,122,582
20-YEAR FREE CASH FLOW (CASH + RESERVES)	$18,158,648
FUNDED RESERVES AT YEAR 20	$10,000,000

Over the 20-year period, the PILOT totals that would be contributed to the City's general fund surpass $6.1 million, in addition to over $18 million in free cash flow and funded reserves. While a P3 FTTH could provide a healthy revenue stream to the City, it is by far the riskiest option available due to the shear amount of capital investment and borrowing that would be required. Alternatively, the City could look to push more of the investment requirements onto

the partner to push the FTTH initiative, however the City should expect a smaller revenue share, and much less control, as the total capital investments required to move forward with this option are substantial.

4.12 FiberNet 2.0 Future Development Opportunities and Capital Projects

The City of Palm Coast also has a tremendous opportunity to solidify its development codes, requiring thorough development conditioning, the construction of underground conduit and telecommunications systems as new greenfield[22] developments begin buildout. Using a master planned approach, the City would require backbone, feeder/distribution, and drop infrastructure to be installed as portions of the planned communities are built out.

Table 28: Development opportunities analysis

SUBSCRIBERS			DEVELOPER	ANNUAL REVENUE POTENTIAL			20-YR
DEVELOPMENT	*RESIDENTS*	*BUSINESS*	*BACKBONE/FEEDER/DIST*	*DEVELOP DROP COSTS EST.*	*RESIDENTS*	*BUSINESS*	REVENUE
Town Center	2,500	600	$4.65M	$2.325M	$2.07M	$612K	$53.54M
Palm Coast Park	3,600	500	$6.15M	$3.075M	$2.98M	$10K	$69.816M
Colbert Ln/Roberts Rd, Marina Del Palma, SR 100	4,046	56	$6.153M	$3.076M	$3.35M	$7.12K	$68.144M
Total Potential			$16.953M	$8.476M	$8.4M	$1.179M	$191.6M

Costs:	
Residential Internet	$69
Business Internet	$85
Per Passing Cost	$1,500
Drop Cost 100% Premise	$750

Using assumptions of $69 per Residential Internet Customer, $85 per Business Internet, $1,500 per passing cost (average CAPEX per household passed), and a drop cost of $750, we are able to project total Developer Backbone/Feeder/Distribution Costs, as well as drops, and total annual revenue potential. Further, between the City's planned development projects, Town Center, Palm Coast Park, and Colbert Lane/Roberts Road, over 10,000 new residential subscribers and over 1,100 new business subscribers would enter the market. As these are long-term development plans, the City would have to understand the developer's absorption schedules to determine actual buildout timelines and premise counts – in short, not all subscribers would be

[22] Greenfield development refers to property not previously used for residential or commercial purposes, providing a blank canvas for the developer and minimizing redevelopment or demolition costs.

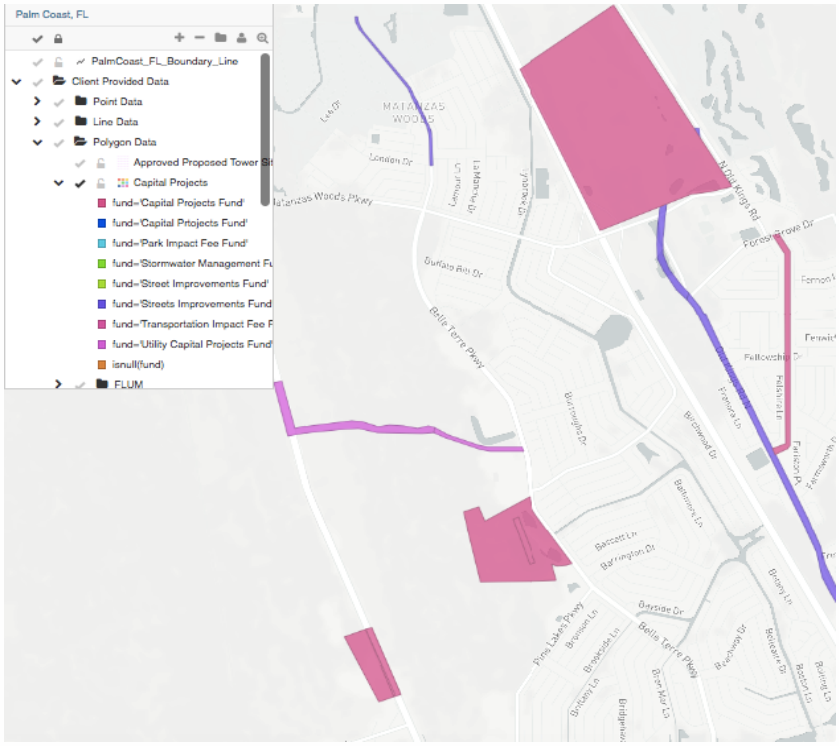
available to take service in Year 1, therefore actual revenue will be more delayed, being realized as development of subscriber units occur.

This Development Opportunities Analysis shows us that Palm Coast could receive in new infrastructure assets (or could save from having to deploy), over $25 million of new conduit, fiber and boxes, while having the opportunity to participate in nearly $192 million of potential telecom spend projected over the 20-year period. Given the proper broadband utility structure, the City would add significant assets to its balance sheet, and participate in future revenue opportunities without having to expend large amounts of capital. Under these assumptions, and through a P3, $192 million in revenue would not be realized by the City, but only a portion, subject to the P3 revenue share that would be agreed upon.

4.12.1 Capital Projects

The City of Palm Coast has an extensive Capital Improvements Program (CIP), including road widenings/maintenance, utility extensions, intersection improvements, and development of new City sites and facilities. Each of these types of projects lends itself to potential coordination and collaboration for the deployment of underground conduit and fiber systems. As depicted on the left, Palm Coast has utilized its GIS capabilities to identify all CIP projects within the 5-year planning forecast. Municipalities who adopt underground conduit and fiber systems specs and standards, find great success in including these into other municipal capital projects. Municipalities can save a tremendous amount of money through this coordination. The City should work through each capital project item that could incorporate FiberNet standards, and begin to incorporate those requirements into the work plans, taking into account the incremental costs that would be attributed to these initiatives. Again, as previously outlined in the funding discussion, the City should look to departments to jointly fund this infrastructure if there is truly project or department benefit that can be derived through it.

Figure 48: Example - Capital Projects



5 Recommendations and Action Plan

1. The City should reach consensus on the approach outlined in this Plan; the City has generally concluded that while it sees value in ownership and expansion of FiberNet, that it desires a new plan and approach to managing the assets, serving community organizations, and in spurring innovation throughout the community.
    a. The City should immediately begin to seek a potential private partner who could function as a FiberNet Network Operator and FTTP Services Provider.
    b. The City should not expend capital to expand FiberNet until a P3 Partner has been selected, and an expansion plan/approach has been agreed to with said Partner.
    c. The City should push to structure an agreement based upon a revenue share on gross revenues generated over FiberNet assets.
    d. The City should push aid to construction costs, or connection fees to subscribers, or allow the P3 Partner to assume drop/connection costs. While City ownership of the drops should be of interest to the City, it could structure a buy back over time from the Partner.
    e. Be open to innovative P3 approaches. Many interested firms will have different investment requirements, differing risk profiles, operational expertise or experience. The City should be open to innovation and should adjust its Business Plan and vision for a P3, to find the best solution that meets the City's long-term goals.
    f. The City should brand the P3, as "P3 Partner, powered by Palm Coast FiberNet," and should share in the branding and marketing efforts, while supporting the partner's sales efforts. With a P3 partnership, the City will not grow its revenues unless/until the Partner does – the City should be incentivized and must assist in driving use.
    g. Agree on business development and operations plans for the partnership, in close coordination with Town Center master developer selection process. Town Center should be targeted as an Innovation District focused as a potential pilot project.
2. As an Infrastructure Owner, the City will continue to manage OSP infrastructure, managing the design, construction, and fiber O&M on FiberNet's passive assets.
    a. The City has recently awarded contracts with Danella Construction and PCS Fiber for Fiber Construction and OSP O&M services – nothing further is required here.
    b. The City must invest in and manage a Fiber Management System, capable of integrating with ESRI GIS, and tracking of OSP assets, including fiber strand and splice details. The City should issue an RFP for these services.
    c. While the City's primary focus should be on developing a P3 as previously documented, it should continue to make its assets available strategically to the greater market.
        i. The City has excess conduit available along backbone routes and it should make this available to industry at a competitive cost.
    d. Allocate resources to and assign ownership of network facilities—buildings/cabinets, conduit, fiber, poles, etc.—deployment and maintenance. Determine final operational structure, and location of FiberNet within the City organization.

3. FiberNet needs oversight and regular checkup on strategic direction. A FiberNet Task Force or Governance committee with a cross membership from FACT and Innovation teams, should be charged with execution and governance—to ensure recommendations are agreed on and implemented.
    a. Engage external stakeholders, particularly entrepreneur, innovation, and tech people, on the task force.
4. The City should work to strategically address bottlenecks, gaps, etc., and stage the network for prospective partners.
5. Explore smart city applications, focusing on feasibility, to generate reasonably comprehensive and detailed City requirements. The City should identify key smart city applications and initiatives which can advance the City Council and community's goals.
6. Utilize FiberNet as a platform for innovation and to further entrepreneurship and workforce goals.
7. Develop a vision and design for Town Center that includes next generation technologies for energy, fitness, information, mobility, production, recreation, etc.
8. Host solution events focused on key network applications/smart city opportunities in conjunction with partners.
    a. Actively involve and promote to target customers.
    b. Use solutions events to show what's possible and a visioning process to focus possibilities on what's important and needed.
9. Track activities, milestones, and outcomes, share and celebrate them, too. Create and report on FiberNet performance metrics.

6 Appendix A - Glossary

3G – Third Generation	The third generation of mobile broadband technology, used by smart phones, tablets, and other mobile devices to access the web.
4G – Fourth Generation	The fourth generation of mobile broadband technology, used by smart phones, tablets, and other mobile devices to access the web.
ADSL – Asymmetric Digital Subscriber Line	DSL service with a larger portion of the capacity devoted to downstream communications, less to upstream. Typically thought of as a residential service.
ADSS – All-Dielectric Self-Supporting	A type of optical fiber cable that contains no conductive metal elements.
AE – Active Ethernet	Active Ethernet uses
AMR/AMI – Automatic Meter Reading/Advanced Metering Infrastructure	Electrical meters that measure more than simple consumption and an associated communication network to report the measurements.
ATM – Asynchronous Transfer Mode	A data service offering that can be used for interconnection of customer's LAN. ATM provides service from 1 Mbps to 145 Mbps utilizing Cell Relay Packets.
ARIN	American Registry for Internet Numbers
Bandwidth	The amount of data transmitted in a given amount of time; usually measured in bits per second, kilobits per second (kbps), Megabits per second (Mbps), and Gigabits per second (Gbps).
Bit	A single unit of data, either a one or a zero. In the world of broadband, bits are used to refer to the amount of transmitted data. A kilobit (Kb) is approximately 1,000 bits. A Megabit (Mb) is approximately 1,000,000 bits. There are 8 bits in a byte (which is the unit used to measure storage space), therefore a 1 Mbps connection takes about 8 seconds to transfer 1 megabyte of data (about the size of a typical digital camera photo).
BPL – Broadband over Powerline	A technology that provides broadband service over existing electrical power lines.
BPON – Broadband Passive Optical Network	BPON is a point-to-multipoint fiber-lean architecture network system which uses passive splitters to deliver signals to multiple users. Instead of running a separate strand of fiber from the CO to every customer, BPON uses a single strand of fiber to serve up to 32 subscribers.
Broadband	A descriptive term for evolving digital technologies that provide consumers with integrated access to voice, high-speed data service, video-demand services, and interactive delivery services (e.g. DSL, Cable Internet).
CAD – Computer Aided Design	The use of computer systems to assist in the creation, modification, analysis, or optimization of a design.
CAI – Community Anchor Institutions	The National Telecommunications and Information Administration defined CAIs in its SBDD program as "Schools, libraries, medical and healthcare providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and entities". Universities, colleges, community colleges, K-12 schools, libraries, health care facilities, social service providers, public safety entities, government and municipal offices are all community anchor institutions.
CAP – Competitive Access Provider	(or "Bypass Carrier") A Company that provides network links between the customer and the Inter-Exchange Carrier or even directly to the Internet

	Service Provider. CAPs operate private networks independent of Local Exchange Carriers.
Cellular	A mobile communications system that uses a combination of radio transmission and conventional telephone switching to permit telephone communications to and from mobile users within a specified area.
CLEC – Competitive Local Exchange Carrier	Wireline service provider that is authorized under state and Federal rules to compete with ILECs to provide local telephone service. CLECs provide telephone services in one of three ways or a combination thereof: 1) by building or rebuilding telecommunications facilities of their own, 2) by leasing capacity from another local telephone company (typically an ILEC) and reselling it, and 3) by leasing discrete parts of the ILEC network referred to as UNEs.
CO – Central Office	A circuit switch where the phone lines in a geographical area come together, usually housed in a small building.
Coaxial Cable	A type of cable that can carry large amounts of bandwidth over long distances. Cable TV and cable modem service both utilize this technology.
CPE – Customer Premise Equipment	Any terminal and associated equipment located at a subscriber's premises and connected with a carrier's telecommunication channel at the demarcation point ("demarc").
CWDM – Coarse Wavelength Division Multiplexing	A technology similar to DWDM only utilizing less wavelengths in a more customer-facing application whereby less bandwidth is required per fiber.
Dark Fiber	Un-used or un-lit fiber-optic cable.
Demarcation Point (“demarc”)	The point at which the public switched telephone network ends and connects with the customer's on-premises wiring.
DDOS	Distributed Denial-of-Service is a disruptive cyber-attack where the perpetrator uses more than one unique IP address, often thousands of them.
Dial-Up	A technology that provides customers with access to the Internet over an existing telephone line.
DLEC – Data Local Exchange Carrier	DLECs deliver high-speed access to the Internet, not voice. Examples of DLECs include Covad, Northpoint and Rhythms.
Downstream	Data flowing from the Internet to a computer (Surfing the net, getting E-mail, downloading a file).
DSL – Digital Subscriber Line	The use of a copper telephone line to deliver “always on” broadband Internet service.
DSLAM – Digital Subscriber Line Access Multiplier	A piece of technology installed at a telephone company’s Central Office (CO) and connects the carrier to the subscriber loop (and ultimately the customer’s PC).
DWDM – Dense Wavelength Division Multiplexing	An optical technology used to increase bandwidth over existing fiber-optic networks. DWDM works by combining and transmitting multiple signals simultaneously at different wavelengths on the same fiber. In effect, one fiber is transformed into multiple virtual fibers.
E-Rate	A Federal program that provides subsidy for voice and data circuits as well as internal network connections to qualified schools and libraries. The subsidy is based on a percentage designated by the FCC.
EON – Ethernet Optical Network	The use of Ethernet LAN packets running over a fiber network.
EvDO – Evolution Data Only	EvDO is a wireless technology that provides data connections that are 10 times as fast as a traditional modem. This has been overtaken by 4G LTE.

FCC – Federal Communications Commission	A Federal regulatory agency that is responsible for regulating interstate and international communications by radio, television, wire, satellite and cable in all 50 states, the District of Columbia, and U.S. territories.
FDH – Fiber Distribution Hub	A connection and distribution point for optical fiber cables.
FTTN – Fiber to the Neighborhood	A hybrid network architecture involving optical fiber from the carrier network, terminating in a neighborhood cabinet with converts the signal from optical to electrical.
FTTP – Fiber to the premise (or FTTB – Fiber to the building)	A fiber-optic system that connects directly from the carrier network to the user premises.
GIS – Geographic Information Systems	A system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.
GPON- Gigabit-Capable Passive Optical Network	Similar to BPON, GPON allows for greater bandwidth through the use of a faster approach (up to 2.5 Gbps in current products) than BPON.
GPS – Global Positioning System	A space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.
GSM – Global System for Mobile Communications	This is the current radio/telephone standard developed in Europe and implemented globally except in Japan and South Korea.
HD – High Definition (Video)	Video of substantially higher resolution than standard definition.
HFC – Hybrid Fiber Coaxial	An outside plant distribution cabling concept employing both fiber-optic and coaxial cable.
ICT – Information and Communications Technology	Often used as an extended synonym for information technology (IT), but it is more specific term that stresses the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information.
IEEE – Institute of Electrical Engineers	A professional association headquartered in New York City that is dedicated to advancing technological innovation and excellence.
ILEC – Incumbent Local Exchange Carrier	The traditional wireline telephone service providers within defined geographic areas. Prior to 1996, ILECs operated as monopolies having exclusive right and responsibility for providing local and local toll telephone service within LATAs.
IP-VPN – Internet Protocol-Virtual Private Network	A software-defined network offering the appearance, functionality, and usefulness of a dedicated private network.
IPv6 – Internet Protocol Version 6	This is the most recent version of the Internet Protocol, providing location and computer identification for computers on the Internet.
ISDN – Integrated Services Digital Network	An alternative method to simultaneously carry voice, data, and other traffic, using the switched telephone network.
ISP – Internet Service Provider	A company providing Internet access to consumers and businesses, acting as a bridge between customer (end-user) and infrastructure owners for dial-up, cable modem and DSL services.
ITS – Intelligent Traffic System	Advanced applications which, without embodying intelligence as such, aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated, and "smarter" use of transport networks.
IVR – Interactive Voice Response	Technology that allows a computer to interact with humans through the use of voice and DTMF tones input via keypad.
Kbps – Kilobits per second	1,000 bits per second. A measure of how fast data can be transmitted.

L2 Network Architecture	Layer 2 Network Architecture – refers to the data link layers concerned with moving data across the physical links in the network.
L3 Network Architecture	Layer 3 Network Architecture – refers to the network layer; routers and switches perform these functions.
LAN – Local Area Network	A geographically localized network consisting of both hardware and software. The network can link workstations within a building or multiple computers with a single wireless Internet connection.
Last Mile Fiber	Telecommunications technology that carries signals from the telecommunication backbone along the relatively short distance to the home or business.
LATA – Local Access and Transport Areas	A geographic area within a divested Regional Bell Operating Company is permitted to offer exchange telecommunications and exchange access service. Calls between LATAs are often thought of as long distance service. Calls within a LATA (IntraLATA) typically include local and local toll services.
LEC – Local Exchange Carrier	The term for a public telephone company in the U.S. that provides local service.
Local Loop	A generic term for the connection between the customer's premises (home, office, etc.) and the provider's serving central office. Historically, this has been a copper wire connection; but in many areas it has transitioned to fiber optic. Also, wireless options are increasingly available for local loop capacity.
MAN – Metropolitan Area Network	A high-speed intra-city network that links multiple locations with a campus, city or LATA. A MAN typically extends as far as 30 miles.
Managed Network Services	Network services that include monitoring, fault analysis, performance management, provisioning of network and network devices, and maintaining the quality of service.
Mbps – Megabits per second	1,000,000 bits per second. A measure of how fast data can be transmitted.
MPLS – Multiprotocol Label Switching	A mechanism in high-performance telecommunications networks that directs data from one network node to the next based on short path labels rather than long network addresses, avoiding complex lookups in a routing table.
ONT – Optical Network Terminal	Used to terminate the fiber-optic line, demultiplex the signal into its component parts (voice telephone, television, and Internet), and provide power to customer telephones.
Overbuilding	Building excess capacity. In this context, it involves investment in additional infrastructure projects to provide competition.
OVS – Open Video Systems	OVS is a new option for those looking to offer cable television service outside the current framework of traditional regulation. It would allow more flexibility in providing service by reducing the build out requirements of new carriers.
PBX	Private branch exchange, a private telephone switchboard
PON – Passive Optical Network	A Passive Optical Network consists of an optical line terminator located at the Central Office and a set of associated optical network terminals located at the customer's premise. Between them lies the optical distribution network comprised of fibers and passive splitters or couplers. In a PON network, a single piece of fiber can be run from the serving exchange out to a subdivision or office park, and then individual fiber strands to each building or serving equipment can be split from the main

	fiber using passive splitters / couplers. This allows for an expensive piece of fiber cable from the exchange to the customer to be shared amongst many customers, thereby dramatically lowering the overall costs of deployment for fiber to the business (FTTB/FTTP) or fiber to the home (FTTH) applications.
PRTG	PRTG is a network software that uses lookups for some sensor types and for some sensors with custom channels. In general, lookups make data more human friendly because they map status values as returned by a device (usually integers) to more informative expressions in words that show you the status of a monitored device as a clear message.
QOS – Quality of Service	QoS (Quality of Service) refers to a broad collection of networking technologies and techniques. The goal of QoS is to provide guarantees on the ability of a network to deliver predictable results, which are reflected in Service Level Agreements or SLAs. Elements of network performance within the scope of QoS often include availability (uptime), bandwidth (throughput), latency (delay), and error rate. QoS involves prioritization of network traffic.
RF – Radio Frequency	A rate of oscillation in the range of about 3 kHz to 300 GHz, which corresponds to the frequency of radio waves, and the alternating currents which carry radio signals.
Right-of-Way	A legal right of passage over land owned by another. Carriers and service providers must obtain right-of-way to dig trenches or plant poles for cable systems, and to place wireless antennae.
RMS – Resource Management System	A system used to track telecommunications assets.
RPR – Resilient Packet Ring	Also known as IEEE 802.17, is a protocol standard designed for the optimized transport of data traffic over optical fiber ring networks.
RUS – Rural Utility Service	A division of the United States Department of Agriculture, it promotes universal service in rural unserved and underserved areas of the country with grants, loans, and financing. Formerly known as "REA" or the Rural Electrification Administration.
SIP – Session Initiation Protocol	A communications protocol for signaling and controlling multimedia communication sessions.
SCADA – Supervisory Control and Data Acquisition	A type of industrial control system (ICS). Industrial control systems are computer controlled systems that monitor and control industrial processes that exist in the physical world.
SLA – Service Level Agreement	Service level agreement common within the terms of contracts with customers to define the level(s) of service being sold in plain language.
SNMP – Simple Network Management Protocol	An Internet-standard protocol for managing devices on IP networks.
SONET – Synchronous Optical Network	A family of fiber-optic transmission rates.
Streaming	Streamed data is any information/data that is delivered from a server to a host where the data represents information that must be delivered in real time. This could be video, audio, graphics, slide shows, web tours, combinations of these, or any other real time application.
Subscribership	Subscribership is how many customers have subscribed for a particular telecommunications service.

Switched Network	A domestic telecommunications network usually accessed by telephone, key telephone systems, private branch exchange trunks, and data arrangements.
T-1 – Trunk Level 1	A digital transmission link with a total signaling speed of 1.544 Mbps. It is a standard for digital transmission in North America.
T-3 – Trunk Level 3	28 T1 lines or 44.736 Mbps.
Threat Actor	A person, actor, entity or organization that initiates a security scenario, (Hacktivists, Cybercriminals, Disgruntles insiders, Nation States, Careless employees, Nature)
UNE – Unbundled Network Element	Leased portions of a carrier's (typically an ILEC's) network used by another carrier to provide service to customers. Over time, the obligation to provide UNEs has been greatly narrowed, such that the most common UNE now is the UNE-Loop.
Universal Service	The idea of providing every home in the United States with basic telephone service.
Unmanaged Network Services	Network services that do not include monitoring, fault analysis, performance management, provisioning of network and network devices, and maintaining the quality of service.
Upstream	Data flowing from your computer to the Internet (sending E-mail, uploading a file).
UPS – Uninterruptable Power Supply	An electrical apparatus that provides emergency power to a load when the input power source, typically main power, fails.
USAC – Universal Service Administrative Company	An independent American nonprofit corporation designated as the administrator of the Federal Universal Service Fund (USF) and E-Rate program by the Federal Communications Commission.
VDSL – Very High Data Rate Digital Subscriber Line	A developing digital subscriber line (DSL) technology providing data transmission faster than ADSL over a single flat untwisted or twisted pair of copper wires (up to 52 Mbps downstream and 16 Mbps upstream), and on coaxial cable (up to 85 Mbps down and upstream); using the frequency band from 25 kHz to 12 MHz.
Video on Demand	A service that allows users to remotely choose a movie from a digital library whenever they like and be able to pause, fast-forward, and rewind their selection.
VLAN – Virtual Local Area Network	In computer networking, a single layer-2 network may be partitioned to create multiple distinct broadcast domains, which are mutually isolated so that packets can only pass between them via one or more routers; such a domain is referred to as a Virtual Local Area Network, Virtual LAN or VLAN.
VoIP – Voice over Internet Protocol	An application that employs a data network (using a broadband connection) to transmit voice conversations using Internet Protocol.
VPN – Virtual Private Network	A virtual private network (VPN) extends a private network across a public network, such as the Internet. It enables a computer to send and receive data across shared or public networks as if it were directly connected to the private network, while benefitting from the functionality, security and management policies of the private network. This is done by establishing a virtual point-to-point connection through the use of dedicated connections, encryption, or a combination of the two.
WAN – Wide Area Network	A network that covers a broad area (i.e., any telecommunications network that links across metropolitan, regional, or national boundaries) using private or public network transports.

WiFi	WiFi is a popular technology that allows an electronic device to exchange data or connect to the Internet wirelessly using radio waves. The Wi-Fi Alliance defines Wi-Fi as any wireless local area network (WLAN) products that are based on the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 standards."
WiMax	WiMax is a wireless technology that provides high-throughput broadband connections over long distances. WiMax can be used for a number of applications, including “last mile” broadband connections, hotspot and cellular backhaul, and high speed enterprise connectivity for businesses.
Wireless	Telephone service transmitted via cellular, PCS, satellite, or other technologies that do not require the telephone to be connected to a land-based line.
Wireless Internet	1) Internet applications and access using mobile devices such as cell phones and palm devices. 2) Broadband Internet service provided via wireless connection, such as satellite or tower transmitters.
Wireline	Service based on infrastructure on, in or near the ground, such as copper telephone wires, coaxial cable, or fiber cables underground or on utility poles.
WLAN – Wireless Local Area Network	Wireless computer network that links two or more devices using a wireless distribution method (often spread-spectrum or OFDM radio) within a limited area such as a home, school, computer laboratory, or office building. This gives users the ability to move around within a local coverage area and still be connected to the network, and can provide a connection to the wider Internet.

7 Appendix B - Financial Model Supporting Information

Magellan Advisors' Legal Disclaimer

This report (including any enclosures and attachments) has been prepared for the exclusive use and benefit of the Client and solely for the purpose for which it is provided. Unless Magellan Advisors provides express prior written consent, no part of this report should be reproduced, distributed or communicated to any third party. Magellan Advisors does not accept any liability if this Report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

These materials have been prepared for informational purposes only and concern hypothetical and/or historical situations. The information is not intended as and should not be construed to provide any legal advice as Magellan Advisors does not provide legal services. Magellan Advisors and its directors, employees, contractors or associates shall not be liable for any direct or indirect consequential loss suffered by any person or organization as a result of using or relying on any statement in or omission from this Report (including any enclosures and attachments).

Magellan Advisors' Disclaimer on Financial Information, Assumptions, Forecasts and Risks

Magellan Advisors' financial models, estimates, forecasts and related financial and business risk analyses have been prepared for use solely by Magellan's Client in understanding the financial aspects of proposed broadband and telecommunications projects. Magellan accepts no responsibility or liability towards any third party in respect of this information or related content in this Report. This information is subjective in many respects, and, thus, susceptible to multiple interpretations and periodic revisions based on actual experience and business developments.

The financial information contained in this Report contains a significant number of subjective forecast assumptions including, but not limited to, subscriber take rates, rate structures, fixed and variable costs, costs of capital and related assumptions. Any deviation from the subjective forecast assumptions is likely to lead to results that are significantly different than those projected in the Report. Additionally, other events that are not explicitly allowed for in the Report and financial analysis may lead to significantly different returns or values.

Neither the financial information contained herein nor its outputs necessarily represent the opinion of value or future investment returns that are achievable. The financial information prepared by Magellan Advisors in this Report is provided for the sole purpose of indicative results based on a given set of assumptions. Neither Magellan Advisors itself, nor its directors, employees, contractors or associates shall be liable for any direct or indirect consequential loss suffered by any person or organization as a result of using or relying on any statement in or omission from this financial information or any information provided in connection herewith.

Cumulative Demand

	0	0								
umulative Uptake (from Assumptions)	15%	35%	40%	40%	40%	40%	40%	40%	40%	40%
Year #	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Cumulative Demand Summary	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Subtotal: Residential Demand	-	-	-	-	-	-	-	-	-	-
Subtotal: Business Demand On-Net	22	50	63	70	71	73	74	76	77	79
Subtotal: Business Demand Near-Ne	-	273	340	378	386	393	401	410	417	426
Subtotal: Large Enterprise/Dedica	-	-	-	-	-	-	-	-	-	-
Subtotal: Smart City Nodes	35	195	346	496	620	620	620	620	620	620
TOTAL DEMAND - ALL SERVICES	57	518	749	944	1,077	1,086	1,095	1,106	1,114	1,125
Percentage of Total Market - Resi	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Percentage of Total Market - Busi	20.0%	7.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Percentage of Total Market - Busi	0.0%	38.0%	46.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%
Percentage of Total Market - Larg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Percentage of Total Market - Smar	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Internet Service Demand - R	-	-	-	-	-	-	-	-	-	-
Total Internet Service Demand - B	22	50	63	70	71	73	74	76	77	79
Total Internet Service Demand - B	-	392	489	544	554	566	577	589	600	613
Total Internet Service Demand - L	-	-	-	-	-	-	-	-	-	-
TOTAL DEMAND - INTERNET SERVICES	22	442	552	614	625	639	651	665	677	692
Total Smart City Nodes - On-Net	35	195	346	496	620	620	620	620	620	620

Cumulative Demand

umulative Uptake (from Assumptions)	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Year #	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
Cumulative Demand Summary	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Subtotal: Residential Demand	-	-	-	-	-	-	-	-	-	-
Subtotal: Business Demand On-Net	80	82	83	86	87	89	90	92	94	96
Subtotal: Business Demand Near-Ne	434	443	452	461	470	480	490	499	509	519
Subtotal: Large Enterprise/Dedica	-	-	-	-	-	-	-	-	-	-
Subtotal: Smart City Nodes	620	620	620	620	620	620	620	620	620	620
TOTAL DEMAND - ALL SERVICES	1,134	1,145	1,155	1,167	1,177	1,189	1,200	1,211	1,223	1,235
Percentage of Total Market - Resi	0.0%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percentage of Total Market - Busi	9.0%	9.0%	9.0%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Percentage of Total Market - Busi	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%
Percentage of Total Market - Larg	0.0%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percentage of Total Market - Smar	0.0%	0.0%	70.0%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Total Internet Service Demand - R	-	-	-	-	-	-	-	-	-	-
Total Internet Service Demand - B	80	82	83	86	87	89	90	92	94	96
Total Internet Service Demand - B	624	637	650	663	676	690	703	717	732	746
Total Internet Service Demand - L	-	-	-	-	-	-	-	-	-	-
TOTAL DEMAND - INTERNET SERVICES	704	719	733	749	763	779	793	809	826	842
Total Smart City Nodes - On-Net	620	620	620	620	620	620	620	620	620	620

Service Area Population Growth Rate

2.00%	Subscriber Growth

Uptake by Customer Type	Residential	Business	ırge Enterpri:	Smart City Nodes
Year	% of Premises			Smart City Nodes
2019	15.00%	20.00%	0.00%	20.00%
2020	20.00%	25.00%	5.00%	35.00%
2021	5.00%	10.00%	5.00%	10.00%
2022	0.00%	5.00%	5.00%	5.00%
2023	0.00%	0.00%	0.00%	0.00%
2024	0.00%	0.00%	0.00%	0.00%
2025	0.00%	0.00%	0.00%	0.00%
2026	0.00%	0.00%	0.00%	0.00%
2027	0.00%	0.00%	0.00%	0.00%
2028	0.00%	0.00%	0.00%	0.00%
2029	0.00%	0.00%	0.00%	0.00%
2030	0.00%	0.00%	0.00%	0.00%
2031	0.00%	0.00%	0.00%	0.00%
2032	0.00%	0.00%	0.00%	0.00%
2033	0.00%	0.00%	0.00%	0.00%
2034	0.00%	0.00%	0.00%	0.00%
2035	0.00%	0.00%	0.00%	0.00%
2036	0.00%	0.00%	0.00%	0.00%
2037	0.00%	0.00%	0.00%	0.00%
2038	0.00%	0.00%	0.00%	0.00%
Total Uptake	40.00%	60.00%	15.00%	70.00%

Operating Cost Assumptions

	Type	Per Unit	Annual Change
Cost of Services			
Data Center Rack and Power (UM)	Fixed Annual	$ -	1.0%
Broadband Transport & Internet Costs	Fixed Annual	$ -	1.0%
Owners Rep/Business Consulting	Fixed Annual	$ 175,000	0.0%
Dark Fiber Operations & Maintenance	Fixed Annual	$ 60,000	3.0%
Facilities Maintenance, Power, Environmental	Fixed Annual	$ 5,000	1.0%
Miscellaneous	% of Revenue	1%	1.0%
Network & Headend Maintenance	% of Equipment	$ -	1.0%
Programming Costs Per Subscriber + Virtual Headend	Per Customer	$ -	1.0%
Software Maintenance	% of Software	15%	1.0%
Utilities	Fixed Annual	$ 5,000	0.25%
Vehicle Maintenance	% of Vehicles	0%	1.0%
Network Operations Outsource Contract	Per Customer	$ -	1.0%
Pole attachments	Fixed Annual	$ -	0.0%
			0.0%
Sales, General & Administrative Expenses			
Cost Allocation for City Services	Fixed	$ -	2.0%
Professional & Legal Fees	Fixed	*$ 15,000*	2.0%
Sales Commissions & Marketing Expense	% of Revenue	0.00%	0.0%
Reporting & Compliance	Fixed	$ 6,000	2.0%
Travel & Entertainment Expense	Fixed	$ 6,000	2.0%
Office Expense	Fixed	$ 3,000	2.0%
General Overhead	Fixed	$ 14,000	2.0%
Bad Debt Expense	Fixed	2.00%	0.0%

	B	C	D	E	F	G	H	I
2	Capital Plan			#REF!				
3								
4	Capital Plan							
5	Distribution Network Overlaid on Existing Fiber Routes	Year #		1	2	3	4	5
55	Premises Connected			2019	2020	2021	2022	2023
56								
57	Materials Cost Combined with Labor below							
58	Residential Drop Fiber Cost per Passing	Materials						
59	Commercial Drop Fiber Cost per Passing (Included in Lal	Materials						
60	Premise Inside Wiring Per Passing	Materials						
61	Other Materials	Materials						
62	Private Provider Partner to provide CPE							
63	Equipment Cost							
64	Commercial Optical Network Terminal + Power Supply	Equipment						
65	Residential Optical Network Terminal + Power Supply	Equipment						
66	Residential Gateway	Equipment						
67	Settop Boxes - 2.5 Per Subscriber @ 245 ea.	Equipment						
68								
69	Labor & Materials Cost Per Subscriber							
70	Commercial Drop Fiber Splicing, Installation and Terma	Labor	$1,960,849	$ 39,126	$ 926,251	$ 289,212	$ 195,843	$ 86,975
71	Residential Drop Fiber Installation, Splicing Termin	Labor						
72	Premise Equipment Installation	Labor						
73	Premise Inside Wiring Installation	Labor						
74								
75	Headend Equipment / PM			2019	2020	2021	2022	2023
76	Core switch routers	Equipment						
77	Encoders/Transcoders	Equipment						
78	Fiber termination panels	Equipment	$ 25,000	$ 25,000.00				
79	Firewalls	Equipment		$ -				
80	Internet routers	Equipment		$ -				
81	Intra-facility cabling	Equipment	$ 20,000	$ 20,000.00				
82	Ladder/raceway	Equipment	$ 10,000	$ 10,000.00				
83	OLTs	Equipment		$ -				
84	Racks/cabinets	Equipment	$ 10,000	$ 10,000.00				
85	Switches, servers, storage	Equipment		$ -				
86	IP TV Middleware	Equipment						
87	Video On Demand	Equipment						
88	Network Management Systems	Equipment		$ -				
89	Provisioning Systems	Equipment		$ -				
90	Billing Systems	Equipment		$ -				
91	Installation & Project Management	Labor	$ 500,000	$ 250,000.00	$ 250,000			
92								
93	Building Improvements			2019	2020	2021	2022	2023
94	Data Center Building Improvements	Materials						
95	NOC Improvements	Materials						
96	Administrative Offices	Materials						
97								
98	General Equipment			2019	2020	2021	2022	2023
99	Vehicles & Outfitting (2 @35K)	Equipment	$ 35,000	$ 35,000				
100	Splicing Trailer	Equipment						
101	OTDRs	Equipment						
102	Mobile Test Sets	Equipment						
103	Fusion Splicers	Equipment						
104	Toolkits	Equipment						
105	Miscellaneous Equipment	Equipment						
106								
107	Wireless Equipment			2019	2020	2021	2022	2023
108	Wireless RF Overlay on Exsting Fiber Network	Equipment	$ -					
109	Line & Antenna Equipment	Equipment						
110	Attachment Hardware	Equipment						
111	Miscellaneous Wireless Equipment	Equipment						
112								
113	Subtotal Categories Annual		Totals	2019	2020	2021	2022	2023
114	Feeder & Distribution Fiber Design & Construction		$2,587,000	$ 1,587,000	$ 1,000,000			
115	Premises Connected		$1,960,849	$ 39,126	$ 926,251	$ 289,212	$ 195,843	$ 86,975
116	Headend Equipment / PM		$ 565,000	$ 315,000	$ 250,000			
117	Building Improvements		$ -					
118	General Equipment		$ 35,000	$ 35,000				
119	Wireless Equipment, SW Licenses & Installation		$ -					
120								
121	Cumulative by Year Categories		Totals	2019	2020	2021	2022	2023
122	Feeder & Distribution Fiber Design & Construction		$2,587,000	$ 1,587,000	$ 2,587,000	$ 2,587,000	$ 2,587,000	$ 2,587,000
123	Premises Connected		$1,960,849	$ 39,126	$ 965,377	$ 1,254,589	$ 1,450,432	$ 1,537,407
124	Headend Equipment / PM		$ 565,000	$ 315,000	$ 565,000	$ 565,000	$ 565,000	$ 565,000
125	Building Improvements		$ -					
126	General Equipment		$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000
127	Wireless Equipment, SW Licenses & Installation		$ -					
128								
129	Subtotal Type Annual		Totals	2019	2020	2021	2022	2023
130	20 Year Lifetime (Materials / Labor)		$5,047,849	$ 1,876,126	$ 2,176,251	$ 289,212	$ 195,843	$ 86,975
131	10 Year Lifetime (Equipment)		$ 100,000	$ 100,000				
132								
133	Subtotal Type Cumulative			2019	2020	2021	2022	2023
134	20 Year Lifetime (Materials / Labor)		$5,047,849	$ 1,876,126	$ 4,052,377	$ 4,341,589	$ 4,537,432	$ 4,624,407
135	10 Year Lifetime (Equipment)		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
136								
137	Total Annual Capital		$5,147,849	$ 1,976,126	$ 2,176,251	$ 289,212	$ 195,843	$ 86,975
138	Total Cumulative Capital		$5,147,849	$ 1,976,126	$ 4,152,377	$ 4,441,589	$ 4,637,432	$ 4,724,407
139								
140	Depreciation			2019	2020	2021	2022	2023
141								
142	20 Year Lifetime (Materials / Labor)							
143	2019		$1,500,901	$ 75,045	$ 75,045	$ 75,045	$ 75,045	$ 75,045
144	2020		$1,653,951		$ 87,050	$ 87,050	$ 87,050	$ 87,050
145	2021		$ 208,233			$ 11,568	$ 11,568	$ 11,568
146	2022		$ 133,173				$ 7,834	$ 7,834
147	2023		$ 55,664					$ 3,479
148	2024		$ 13,775					
149	2025		$ 13,986					
150	2026		$ 15,058					
151	2027		$ 10,548					
152	Total:		$3,605,289					
153								
154								
155	10 Year Lifetime (Equipment)			2019	2020	2021	2022	2023
156	2019		$ 100,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000
157	2020		$ -					
158	2021		$ -					
159	2022		$ -					
160	2023		$ -					
161	2024		$ -					
162	2025		$ -					
163	2026		$ -					
164	2027		$ -					
165	Total:		$ 100,000					
166								
167								
168	Total Depreciation		$3,745,859	$ 87,064	$ 174,115	$ 185,685	$ 193,519	$ 196,999
169								
170								
171								

Pro Forma

Year #	1	2	3	4	5	6	7	8	9	10
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Service Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	8,520	27,360	42,636	51,175	54,015	55,227	57,567	58,803	60,039	62,501
Businesses Near-Net on Existing Fiber Routes	-	102,924	128,112	145,044	148,471	151,103	157,021	160,729	163,414	170,464
Large Businesses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	2,940	19,320	45,444	70,728	93,744	104,160	104,160	104,160	104,160	104,160
Rents - Cell Towers	296,798	305,702	314,873	324,319	334,049	344,070	354,392	365,024	375,975	387,254
Existing FiberNet Fiber-optic Revenues	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082
Subtotal: Service Revenues	**587,340**	**734,388**	**810,147**	**870,349**	**909,361**	**933,642**	**952,223**	**967,799**	**982,670**	**1,003,461**
Installation Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	-	-	-	-	-	-	-	-	-	-
Businesses Near-Net on Existing Fiber Toutes	-	-	-	-	-	-	-	-	-	-
Large Businesses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	-	-	-	-	-	-	-	-	-	-
Subtotal: Installation Revenues	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Equipment Rental Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	-	-	-	-	-	-	-	-	-	-
Businesses Near-Net on Existing Fiber Toutes	-	-	-	-	-	-	-	-	-	-
Large Businesses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	-	-	-	-	-	-	-	-	-	-
Subtotal: Equipment Rental Revenues	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL REVENUES	**587,340**	**734,388**	**810,147**	**870,349**	**909,361**	**933,642**	**952,223**	**967,799**	**982,670**	**1,003,461**
Cost of Services										
Direct Staffing	-	-	-	-	-	-	-	-	-	-
Data Center Rack and Power (UM)	-	-	-	-	-	-	-	-	-	-
Broadband Transport & Internet Costs	-	-	-	-	-	-	-	-	-	-
Owners Rep/Business Consulting	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-
Facilities Maintenance, Power, Environmental	5,000	5,050	5,100	5,150	5,200	5,250	5,300	5,350	5,400	5,450
Miscellaneous	115	1,496	2,162	2,669	2,962	3,105	3,187	3,237	3,276	3,371
Network & Headend Maintenance	-	-	-	-	-	-	-	-	-	-
Pole attachments	-	-	-	-	-	-	-	-	-	-
Software Maintenance	-	-	-	-	-	-	-	-	-	-
Utilities	5,000	5,013	5,025	5,038	5,050	5,063	5,075	5,088	5,100	5,113
Network O&M	30,000	60,000	61,800	63,654	65,564	67,531	69,556	71,643	73,792	76,006
Subtotal: Cost of Services	**215,115**	**246,559**	**249,087**	**251,511**	**253,776**	**255,948**	**258,119**	**260,318**	**262,569**	**264,940**
GROSS PROFIT	**372,225**	**487,829**	**561,060**	**618,837**	**655,585**	**677,693**	**694,104**	**707,481**	**720,101**	**738,520**
Sales, General & Administrative Expenses										
Administrative Staffing	-	-	-	-	-	-	-	-	-	-
Professional & Legal Fees	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926
Sales Commissions & Marketing Expense	-	-	-	-	-	-	-	-	-	-
Reporting & Compliance	6,000	6,000	6,120	6,242	6,367	6,495	6,624	6,757	6,892	7,030
Travel & Entertainment Expense	6,000	6,000	6,120	6,242	6,367	6,495	6,624	6,757	6,892	7,030
Office Expense	3,000	3,000	3,060	3,121	3,184	3,247	3,312	3,378	3,446	3,515
General Overhead	14,000	14,000	14,280	14,566	14,857	15,154	15,457	15,766	16,082	16,403
Cost Allocation for City Services	-	-	-	-	-	-	-	-	-	-
Bad Debt Expense	11,747	14,688	16,203	17,407	18,187	18,673	19,044	19,356	19,653	20,069
Subtotal: Sales, General & Administrative Expenses	**55,747**	**58,988**	**61,389**	**63,496**	**65,199**	**66,625**	**67,954**	**69,245**	**70,540**	**71,974**
EBITDA	**316,479**	**428,841**	**499,671**	**555,341**	**590,387**	**611,068**	**626,150**	**638,236**	**649,561**	**666,547**
Depreciation & Amortization										
Depreciation	**87,064**	**174,115**	**185,685**	**193,519**	**196,999**	**197,919**	**198,919**	**200,078**	**200,958**	**200,959**
Amortization	-	-	-	-	-	-	-	-	-	-
Subtotal: Depreciation & Amortization	**87,064**	**174,115**	**185,685**	**193,519**	**196,999**	**197,919**	**198,919**	**200,078**	**200,958**	**200,959**
EBIT	**229,415**	**254,726**	**313,987**	**361,822**	**393,387**	**413,150**	**427,231**	**438,158**	**448,603**	**465,588**
Interest										
Borrowings	**226,622**	**215,323**	**203,505**	**191,144**	**178,216**	**164,693**	**150,550**	**135,756**	**120,283**	**104,099**
Subtotal: Interest Expense	**226,622**	**215,323**	**203,505**	**191,144**	**178,216**	**164,693**	**150,550**	**135,756**	**120,283**	**104,099**
NET INCOME	**2,793**	**39,403**	**110,481**	**170,678**	**215,171**	**248,456**	**276,682**	**302,402**	**328,320**	**361,489**
Debt Principal Payments										
Borrowings	**245,947**	**257,245**	**269,063**	**281,424**	**294,353**	**307,875**	**322,019**	**336,812**	**352,285**	**368,469**
Subtotal: Principal Payments	**245,947**	**257,245**	**269,063**	**281,424**	**294,353**	**307,875**	**322,019**	**336,812**	**352,285**	**368,469**
Reserve Fund Requirements										
Operating Reserve Fund										
Renewal & Replacement Fund										
Capital Expansion Fund										
General Fund Reserve										
Subtotal: Annual Reserve Fund Requirements	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Subtotal: Cumulative Reserves	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Spending										
Capital Budget	1,976,126	2,176,251	289,212	195,843	86,975	22,959	24,975	28,957	21,976	28,957
Other										
Subtotal: Capital Spending	**1,976,126**	**2,176,251**	**289,212**	**195,843**	**86,975**	**22,959**	**24,975**	**28,957**	**21,976**	**28,957**
TOTAL NON-OPERATING, CAPEX AND RESERVES	**2,222,073**	**2,433,496**	**558,275**	**477,267**	**381,328**	**330,834**	**346,994**	**365,769**	**374,261**	**397,426**

Pro Forma

Year #	11	12	13	14	15	16	17	18	19	20
	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Service Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	63,762	65,022	67,609	69,115	70,622	73,346	74,658	75,970	79,057	80,624
Businesses Near-Net on Existing Fiber Routes	173,418	177,201	184,602	187,837	191,694	199,688	203,849	207,784	216,183	220,426
Large Businesses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	104,160	104,160	104,160	104,160	104,160	104,160	104,160	104,160	104,160	104,160
Rents - Cell Towers	398,872	410,838	423,163	435,858	448,934	462,402	476,274	490,562	505,279	520,437
Existing FiberNet Fiber-optic Revenues	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082	279,082
Subtotal: Service Revenues	**1,019,294**	**1,036,303**	**1,058,616**	**1,076,052**	**1,094,492**	**1,118,678**	**1,138,022**	**1,157,557**	**1,183,760**	**1,204,729**
Installation Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	-	-	-	-	-	-	-	-	-	-
Busiensses Near-Net on Existing Fiber Toutes	-	-	-	-	-	-	-	-	-	-
Large Busineses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	-	-	-	-	-	-	-	-	-	-
Subtotal: Installation Revenues	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Equipment Rental Revenues										
Residential	-	-	-	-	-	-	-	-	-	-
Businesses On-Net on Existing Fiber Routes	-	-	-	-	-	-	-	-	-	-
Busiensses Near-Net on Existing Fiber Toutes	-	-	-	-	-	-	-	-	-	-
Large Busineses Dedicated Service	-	-	-	-	-	-	-	-	-	-
Smart City Nodes	-	-	-	-	-	-	-	-	-	-
Subtotal: Equipment Rental Revenues	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL REVENUES	**1,019,294**	**1,036,303**	**1,058,616**	**1,076,052**	**1,094,492**	**1,118,678**	**1,138,022**	**1,157,557**	**1,183,760**	**1,204,729**
Cost of Services										
Direct Staffing	-	-	-	-	-	-	-	-	-	-
Data Center Rack and Power (UM)	-	-	-	-	-	-	-	-	-	-
Broadband Transport & Internet Costs	-	-	-	-	-	-	-	-	-	-
Owners Rep/Business Consulting	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-
Facilities Maintenance, Power, Environmental	5,500	5,550	5,600	5,650	5,700	5,750	5,800	5,850	5,900	5,950
Miscellaneous	3,413	3,464	3,564	3,611	3,665	3,772	3,827	3,879	3,994	4,052
Network & Headend Maintenance	-	-	-	-	-	-	-	-	-	-
Pole attachments	-	-	-	-	-	-	-	-	-	-
Software Maintenance	-	-	-	-	-	-	-	-	-	-
Utilities	5,125	5,138	5,150	5,163	5,175	5,188	5,200	5,213	5,225	5,238
Network O&M	78,286	80,635	83,054	85,546	88,112	90,755	93,478	96,282	99,171	102,146
Subtotal: Cost of Services	**267,325**	**269,787**	**272,368**	**274,970**	**277,652**	**280,465**	**283,305**	**286,225**	**289,290**	**292,386**
GROSS PROFIT	**751,969**	**766,516**	**786,248**	**801,082**	**816,840**	**838,213**	**854,718**	**871,333**	**894,470**	**912,343**
Sales, General & Administrative Expenses										
Administrative Staffing	-	-	-	-	-	-	-	-	-	-
Professional & Legal Fees	18,285	18,651	19,024	19,404	19,792	20,188	20,592	21,004	21,424	21,852
Sales Commissions & Marketing Expense	-	-	-	-	-	-	-	-	-	-
Reporting & Compliance	7,171	7,314	7,460	7,609	7,762	7,917	8,075	8,237	8,401	8,569
Travel & Entertainment Expense	7,171	7,314	7,460	7,609	7,762	7,917	8,075	8,237	8,401	8,569
Office Expense	3,585	3,657	3,730	3,805	3,881	3,958	4,038	4,118	4,201	4,285
General Overhead	16,731	17,066	17,407	17,755	18,110	18,473	18,842	19,219	19,603	19,995
Cost Allocation for City Services	-	-	-	-	-	-	-	-	-	-
Bad Debt Expense	20,386	20,726	21,172	21,521	21,890	22,374	22,760	23,151	23,675	24,095
Subtotal: Sales, General & Administrative Expenses	**73,329**	**74,728**	**76,253**	**77,704**	**79,198**	**80,826**	**82,382**	**83,966**	**85,705**	**87,365**
EBITDA	**678,640**	**691,788**	**709,995**	**723,379**	**737,643**	**757,387**	**772,335**	**787,367**	**808,765**	**824,978**
Depreciation & Amortization										
Depreciation	**190,960**	**190,961**	**190,962**	**190,963**	**190,964**	**190,965**	**190,966**	**190,967**	**190,968**	**190,969**
Amortization	-	-	-	-	-	-	-	-	-	-
Subtotal: Depreciation & Amortization	**190,960**	**190,961**	**190,962**	**190,963**	**190,964**	**190,965**	**190,966**	**190,967**	**190,968**	**190,969**
EBIT	**487,680**	**500,827**	**519,033**	**532,416**	**546,679**	**566,422**	**581,369**	**596,400**	**617,797**	**634,009**
Interest										
Borrowings	**87,172**	**69,467**	**50,948**	**31,579**	**11,320**	**108,352**	**86,345**	**63,327**	**39,252**	**14,071**
Subtotal: Interest Expense	**87,172**	**69,467**	**50,948**	**31,579**	**11,320**	**108,352**	**86,345**	**63,327**	**39,252**	**14,071**
NET INCOME	**400,508**	**431,361**	**468,085**	**500,837**	**535,359**	**458,069**	**495,024**	**533,072**	**578,545**	**619,938**
Debt Principal Payments										
Borrowings	**385,397**	**403,102**	**421,620**	**440,989**	**461,248**					
Subtotal: Principal Payments	**385,397**	**403,102**	**421,620**	**440,989**	**461,248**	**-**	**-**	**-**	**-**	**-**
Reserve Fund Requirements										
Operating Reserve Fund										
Renewal & Replacement Fund						100,000	100,000	100,000	100,000	100,000
Capital Expansion Fund						500,000	500,000	500,000	500,000	500,000
General Fund Reserve										
Subtotal: Annual Reserve Fund Requirements	**-**	**-**	**-**	**-**	**-**	**600,000**	**600,000**	**600,000**	**600,000**	**600,000**
Subtotal: Cumulative Reserves	**-**	**-**	**-**	**-**	**-**	**600,000**	**1,200,000**	**1,800,000**	**2,400,000**	**3,000,000**
Capital Spending										
Capital Budget	24,975	28,957	27,974	29,940	27,974	31,956	30,973	28,957	31,956	31,956
Other										
Subtotal: Capital Spending	**24,975**	**28,957**	**27,974**	**29,940**	**27,974**	**31,956**	**30,973**	**28,957**	**31,956**	**31,956**
TOTAL NON-OPERATING, CAPEX AND RESERVES	**410,372**	**432,059**	**449,594**	**470,929**	**489,222**	**631,956**	**630,973**	**628,957**	**631,956**	**631,956**

Pro Forma

Cash Flow:	2019 Yr 1	2020 Yr 2	2021 Yr 3	2022 Yr 4	2023 Yr 5	2024 Yr 6	2025 Yr 7	2026 Yr 8	2027 Yr 9	2028 Yr 10
Beginning Cash	-	2,956,899	663,482	320,358	120,253	60,160	82,337	115,722	155,653	212,403
Add: Net Income	2,793	39,403	110,481	170,678	215,171	248,456	276,682	302,402	328,320	361,489
Add: Depreciation	87,064	174,115	185,685	193,519	196,999	197,919	198,919	200,078	200,958	200,959
Add: Loan Proceeds	5,147,849	-	-	-	-	-	-	-	-	-
Less: Principal Payments	(245,947)	(257,245)	(269,063)	(281,424)	(294,353)	(307,875)	(322,019)	(336,812)	(352,285)	(368,469)
Less: Capital Expenditures	(1,976,126)	(2,176,251)	(289,212)	(195,843)	(86,975)	(22,959)	(24,975)	(28,957)	(21,976)	(28,957)
Less: In Lieu of Taxes (10% of Gross Revenues)	(58,734)	(73,439)	(81,015)	(87,035)	(90,936)	(93,364)	(95,222)	(96,780)	(98,267)	(100,346)
Less: Funded Reserves	-	-	-	-	-	-	-	-	-	-
Ending Cash	2,956,899	663,482	320,358	120,253	60,160	82,337	115,722	155,653	212,403	277,078

Pro Forma

Cash Flow:	2029 Yr 11	2030 Yr 12	2031 Yr 13	2032 Yr 14	2033 Yr 15	2034 Yr 16	2035 Yr 17	2036 Yr 18	2037 Yr 19	2038 Yr 20
Beginning Cash	277,078	356,245	442,877	546,468	659,733	787,385	692,595	633,810	613,136	632,317
Add: Net Income	400,508	431,361	468,085	500,837	535,359	458,069	495,024	533,072	578,545	619,938
Add: Depreciation	190,960	190,961	190,962	190,963	190,964	190,965	190,966	190,967	190,968	190,969
Add: Loan Proceeds	-	-	-	-	-	-	-	-	-	-
Less: Principal Payments	(385,397)	(403,102)	(421,620)	(440,989)	(461,248)	-	-	-	-	-
Less: Capital Expenditures	(24,975)	(28,957)	(27,974)	(29,940)	(27,974)	(31,956)	(30,973)	(28,957)	(31,956)	(31,956)
Less: In Lieu of Taxes (10% of Gross Revenues)	(101,929)	(103,630)	(105,862)	(107,605)	(109,449)	(111,868)	(113,802)	(115,756)	(118,376)	(120,473)
Less: Funded Reserves	-	-	-	-	-	(600,000)	(600,000)	(600,000)	(600,000)	(600,000)
Ending Cash	356,245	442,877	546,468	659,733	787,385	692,595	633,810	613,136	632,317	690,796

City of Palm Coast, Florida

Agenda Item

Agenda Date : 1/08/2019

Department	Information Technology	**Amount**	$97,500.00
Item Key		**Account**	65052525-051020

Subject RESOLUTION 2019-XX APPROVING A WORK ORDER WITH MAGELLAN ADVISORS TO PROVIDE CONSULTING SERVICES TO SOLICIT AND SELECT A PRIVATE PARTNER FOR THE FIBERNET EXPANSION

Background :

As outlined in the updated Fiber Optic Business Plan, the City is looking to expand FiberNet further through a public/private partnership.

This Scope of Work (SOW) has two major phases: Phase 1. Develop the RFS for potential Private partners, and Phase 2. Development and Negotiations with the P3 selection. Total estimated time for both phases is five months.

Magellan Advisors provided a scope and fee not-to-exceed amount of $97,500 (Phase 1: $52,500 & Phase 2: $35,000, plus $10,000 in expenses). City Council requested that City staff engage Magellan Advisors for these services and delay the hiring of an IT Project Manager until next fiscal year. Funds for this project will be reallocated from personnel expenses in the FY2019 IT Enterprise Fund.

SOURCE OF FUNDS WORKSHEET FY 2019

IT Enterprise Fund: 54702525-012000	**$ 1,333,160.00**
Total Expenses/Encumbered to date	$ 485,028.33
Pending Work Orders/Contracts	$ 97,500.00
Balance	**$ 750,631.67**

Recommended Action :
Adopt Resolution 2019-XX approving a work order with Magellan Advisors to provide consulting services to seek and select a Fiber to the Premise, Public Private Partnership (FTTP P3).

RESOLUTION 2019 -____
MAGELLAN
FIBERNET EXPANSION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING THE TERMS AND CONDITIONS OF WORK ORDER WITH MAGELLAN, TO PROVIDE CONSULTING SERVICES TO SOLICIT AND SELECT A PRIVATE PARTNER FOR THE FIBERNET EXPANSION; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE THE CONTRACT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Magellan, desires to provide consulting services for the City of Palm Coast; and

WHEREAS, the City Council of the City of Palm Coast desires to contract with Magellan, for the above referenced services.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF WORK ORDER. The City Council of the City of Palm Coast hereby approves the terms and conditions of a Work Order with Magellan as referenced herein and attached hereto as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby, authorized to execute the Contract as depicted in Exhibit "A."

SECTION 3. SEVERABILITY. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of any other section or part of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby, repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby, authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon adoption by the City Council.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit "A" – Work Order with Magellan.

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

WORK ORDER # 2019-T1
PO #: _____

DATE: ____/____/20 19

Project Manager's Initials CDB

SUPPLIER INFORMATION		BID DETAILS	
Name	Magellan Advisors, LLC	**Project Title**	Development of RFX for Fiber to Premise (FTTP) P3
Street	999 18th Street, Ste 3000	**Bid #**	
City, State, Zip	Denver, Colorado 80202	**City Council Approval date**	

TOTAL COST: $ 97,500
(must equal amount of PURe Order)

1. **INCORPORATION BY REFERENCE** The provisions of the agreement dated February 22, 2018 ("Agreement") are hereby expressly incorporated by reference into and made a part of this Work Order.

2. **METHOD OF COMPENSATION (chose one):** (●) **FIXED FEE** ( ) **NOT TO EXCEED***
Fixed - *Amount Proposed is set amount for services – will not change regardless of time.* Not to exceed -: *Spend over time shall not exceed Total Cost without approved change order*

***If "NOT TO EXCEED", then TOTAL COST is (chose one):** ( ) **UNIT BASED** ( ) **PERCENT OF FIXED FEE**___%

3. **PRICING (chose one):** (●) **ATTACHED** ( ) **INCLUDED IN CONTRACT**

4. **SCHEDULE (chose one):** ( ) **AS NEEDED BASIS** (●) **SHALL BE COMPLETED BY -** 8/31/20 19

5. **DESCRIPTION OF SERVICES (chose one):** (●) **ATTACHED** ( ) **INCLUDED IN CONTRACT**

6. **OTHER ATTACHMENTS TO THIS WORK ORDER:** (●) **No** ( ) **Yes** **If yes, identify below:**
This PO is for Task 1 only

7. **TIME IS OF THE ESSENCE:** The obligation of Supplier to perform services shall commence upon execution of this Work Order and shall be completed as set forth above. Time is of the essence. Failure to meet the completion date shall be a material default and may be grounds for termination of this Work Order and the Agreement.

8. **CONFLICT.** In the event of a conflict between the terms and conditions of the Agreement and this Work Order, the terms of the Agreement shall govern unless otherwise agreed to in writing by all parties. In the event of a conflict between the terms and conditions of this Work Order and any attachments, the terms of this Work Order shall govern unless otherwise agreed to in writing by all parties. Text

WITNESS WHEREOF, the parties hereto have made and executed this Work Order on this _____ day of _____, 20_____, for the purposes stated herein.

SUPPLIER APPROVAL

By: _____

Print: Courtney S. Violette

Title: COO

Date: 12/26/2018

CITY APPROVAL

By: _____

Print Name: _____

Title: Assistant City Manager or Designee

Date: _____

Statement of Work

Magellan proposes to perform the following tasks while providing expert consulting services including the development of an RFx for a Fiber-to-the-Premise (FTTP) P3, and selection and final negotiations of any resulting partnerships.

The City of Palm Coast has invested in next-generation telecommunications infrastructure over the last 15 years, including not only conduit and fiber, but also a colocation facility, city data centers, and in network transport connectivity into Jacksonville. It has managed FiberNet, the City's open-access network internally during this time, however it has struggled to partner with providers that can adequately expand the market and provide a consistent revenue stream back to the City for use of its assets. Further, the City of Palm Coast, as an advanced full-service municipal government, will require more connectivity than is available today, both additional fiber and wireless buildout.

With proper technology planning, and further investments to expand the City network, Palm Coast is poised to continue its leadership role in being one of the most connected communities in the US. In addition, FiberNet will support future innovations throughout Palm Coast for decades to come. With its infrastructure, and potential future investments, Palm Coast will need to position itself with industry partners who can complement the City's goals and capabilities, while bringing operating and management value to the partnership. Value can be measured in terms of functionality (features and services), revenue generation, shared investment/risk opportunities, and operating/maintenance models, among others.

With the inventory of existing assets, and a history of ownership and operation of FiberNet, Palm Coast is ready to begin structuring the business relationships necessary to light the network, in order to provide next-generation broadband services (both wired and wireless) to the City's residents, visitors, and area organizations.

Through this engagement, Magellan will develop an RFx for a Fiber-to-the-Premise (FTTP) P3, and will work with the town to solicit industry partners who can help the City drive further FiberNet use throughout the community. Magellan will work with Palm Coast through the entire process in an effort to drive maximum value for benefit of Palm Coast businesses and its residents. Our teams will lead the identification, selection and negotiation of all P3 partners and resulting agreements. Magellan proposes to manage the P3 agreement, through expansion and construction, network integration, and execution of retail services over the Palm Coast FiberNet network. Magellan is structured to provide project oversight and management through standup of the network, and integration of all service provider partner(s).

Task 1: Develop the RFx for FTTP P3 Service Provider

Magellan understands the City's intent is to provide, through a P3, transformative, next-generation broadband services to its businesses, community anchors, and possibly its residents who are located in Palm Coast. Magellan proposes to assist the City through this next phase of preparing and soliciting an RFx, along with evaluation and selection of the most responsive broadband provider identified. We will work with the City to solicit appropriate submittals from industry, developing the framework for a potential partnership with service provider(s) that can execute on delivering world-class fiber-based telecommunications services throughout the City.

The tasks will include:

Task 1: Define the requirements of the City for a P3, including types of services, speeds, service areas, capital requirements, operating requirements and other aspects that are important to Palm Coast.

a. Meet with City leadership and staff to define the City's goal and objectives in the partnership.
b. Define a set of criteria – negotiable and non-negotiable factors in the partnership.
c. Document the results for inclusion into the RFx.

Task 2: Assist the City in the preparation and solicitation of an RFx to garner responses from broadband providers willing to partner with the City of Palm Coast.

a. Gather documentation on the City's current and planned conduit and fiber infrastructure.
b. Create an appendix to be attached to the RFx with this information.
c. Develop the solicitation document, language, and terms and conditions.
d. Work with the City to ensure the solicitation document meets the City's procurement policies.
e. Develop the evaluation and scoring criteria for the RFx.
f. Identify the channels for release of the RFx, in compliance with the City's procurement policies. Identify individual providers and industry associations who will receive the solicitation as well.

Task 3: Release the RFx & Provide Initial Evaluation.

a. Hold pre-bid conference calls or meetings if necessary.
b. Respond to Q&A posed by respondents.
c. Receive submissions.
d. Ensure submissions meet minimum requirements.
e. Seek clarifications from respondents.
f. Meet with the City team to discuss and evaluate submissions.
g. Score submissions and rank respondents with the City team.
h. Shortlist respondents.

Task 4: Evaluate and Select Most Responsive Bidder.

a. Notify shortlisted bidders and schedule onsite interviews.
b. Notify bidders that did not make the shortlist.
c. Onsite interviews with shortlisted bidders.

d. Due diligence of shortlisted bidders (corporate, financial, operational, litigation) or wait for selection.
e. Meet with the City team to discuss and evaluate shortlisted bidders.
f. Select most responsive bidder.
g. Create a summary report of the process and selection for City leadership and the Commission.

Task 1: Task Costs and Timelines

Consulting Services:	$52,500
Expenses:	Billed as incurred – 10% markup
Timeline:	3 Months beginning 12/1/18
Cost of Service Type and Rate	Telecom/Broadband Planning - $175/hr.
Estimated Task Hours	300 hours

Task 2: P3 Development and Negotiations

Magellan Advisors will work directly with the City of Palm Coast to rank and select potential partners, and work toward development of a memorandum of understanding (MOU) with a partner or partners. Magellan will work with the City through the selection, negotiation and in development of final P3 agreements to work towards a definitive agreement. The task includes the following:

- Based on the most responsive bidder, determining the appropriate process toward development of a public-private partnership that meets the City's needs;
- Working on behalf of the City with staff and City-appointed legal counsel to negotiate a memorandum of understanding with the selected broadband provider(s);
- Assisting City staff through the due diligence process on key business, technical, financial and operational issues pertaining to the service provider(s) capabilities;
- Assisting City staff to determine the optimal plan with the service provider(s) for buildout of the broadband network; and,
- Assisting City staff and City-appointed legal counsel on development of the definitive agreement to memorialize the terms and conditions of the public-private partnership.

Task 2: Task Costs and Timelines

Consulting Services:	$35,000
Expenses:	Billed as incurred – 10% markup
Timeline:	4 Months beginning 3/1/18
Cost of Service Type and Rate	Telecom/Broadband Planning - $175/hr.
Estimated Task Hours	200 hours

*Experience shows that negotiations and legal review can exceed 4 months. The City will have to be prudent in expediting these processes where possible

Cost Proposal

The total cost of the project is $97,500 and includes all work to be completed by Magellan for the City of Palm Coast as stated in this Proposal **over the next 7 to 9 months**.

The billing rate for this engagement is $175 per hour, consistent with the 2018 Palm Coast broadband consulting services contract awarded to Magellan Advisors.

Tasks	Description	Rate	Hours	Price
1	Develop RFX for FTTP P3 Service Providers	$175	300	$52,500
2	FTTP P3 Development and Negotiations	$175	200	$35,000
	Estimated Expenses			$10,000
	Total			**$97,500**

Payment Milestones

Tasks	Description	Price
1	Develop RFx for FTTP P3 Service Providers	Milestone 1 – Project Kickoff (25%) Milestone 2 – Draft RFx Delivered (25%) Milestone 3 – Review and Rank Proposals (25%) Milestone 4 – Interviews and Selection (25%)
2	FTTP P3 Development and Negotiations	Milestone 1 – Negotiation Kickoff (25%) Milestone 2 – Draft MOU Approved (25%) Milestone 3 – Draft Term Sheet and Agreement (25%) Milestone 4 – Approved P3 Agreement (25%)
	Expenses	**Billed Monthly as Incurred**

Project Timeline

We estimate that over the 7-month duration of the project, approximately 2 days onsite each month will be required for successful completion of the project, through selection and negotiation of each P3 partner. During this time, Magellan will meet with City staff, hold meetings with stakeholders, and performing site visits. In addition, our team will make presentations to the City project teams as well as other activities to be determined between the City and Magellan. Schedules will be determined cooperatively between the City and Magellan. Magellan will require City resources to gather relevant City data, in conducting interviews with City staff, and to participate on status calls, onsite meetings, and any final presentations.

Tasks	Description	Month →	1	2	3	4	5	6	7	8	9
1	Develop RFX for FTTP P3 Service Providers										
2	FTTP P3 Development and Negotiations										

City of Palm Coast, Florida

Agenda Item

Agenda Date: 01/08/2019

Department	Utility Department	**Amount**	
Item Key	Wastewater Division	**Account #**	

Subject Presentation – Utility Reuse Master Plan

Background *:*
The City's wastewater treatment plants produce effluent that is of suitable quality to be reclaimed and used for irrigation purposes. Inasmuch as it would be impractical and too costly to distribute reclaimed water to the entire city, reuse is and will be available only in select areas.

Over the past several years, the utility has built a basic infrastructure to distribute reclaimed water to certain areas, currently referred to as the reuse service areas, which have been identified in the *Reuse Master Plan*. These reuse service areas are also included in each of the wastewater treatment plant operating permits as issued by the Florida Department of Environmental Protection. To ensure a logical and efficient expansion of the reuse system, the utility developed the *Reuse Master Plan*. The plan covers the existing service areas and system capacity as well as future customers.

Since the completion and startup of Wastewater Treatment Plant #2 this past summer, staff has updated the *Reuse Master Plan* and will present a summary of the plan.

Recommended Action :
Presentation and discussion


PALM COAST
2018
Reuse System
Master Plan
city of
PALM COAST

Table of Contents

Executive Summary

The City of Palm Coast Reuse System Master Plan and Expansion Schedule has been prepared for the purpose of evaluating community requirements for reuse capacity, evaluating alternatives for providing the needed capability, and selecting the most feasible alternative. The primary goal for the Reuse System Master Plan and Expansion Schedule is to identify opportunities for the City of Palm Coast to maximize the beneficial uses of reclaimed water for irrigation and other non-potable reuse water applications within the City's utility service area.

Introduction

The City of Palm Coast, located in Flagler County, Florida was incorporated in 1999 and acquired the previously private-owned local water and wastewater utility system in October of 2003. The City of Palm Coast's Utility Department currently operates two Wastewater Treatment and Reuse Facilities. WTRF No. 1 located at 26 Utility Drive and WTRF No. 2 is located at 400 Peavey Grade Road. The combination of the two facilities is designed to provide wastewater treatment for the entire City of Palm Coast utility service area. As the City of Palm Coast continues to grow with commercial and residential developments, water demand and increased wastewater treatment capacities must be addressed along with additional reuse water pumping and distribution systems. The expansion of the reuse water system will eventually lead to 100% beneficial application of reclaimed water during arid weather conditions thus further reducing potable water consumption and groundwater withdrawals within the region.

Mission Statement

The City of Palm Coast Utility Department is comprised of a highly trained professional staff that is prepared to provide the best level of service to the community today and into the future. Utilizing the latest technology along with proven industry standards the City of Palm Coast Utility Department will continue to provide safe reclaimed water for the growing community in order to help conserve water resources.

City Code of Ordinances and Compliance

City Code of Ordinance

The City adopted a Reclaimed Water System and Wastewater System Utilities Policy (Article III of Chapter 49 of the Codes and Ordinances of the City of Palm Coast, Florida) which provides definitions, policies and procedures pertaining to the reclaimed water service provided by the City of Palm Coast.

Compliance

The City of Palm Coast Reuse Program must meet the following listed compliance requirements:

- Reclaimed water shall comply with all Florida Department of Environmental Protection requirements of FAC Chapter 62-610.
- The environmental aspects of existing and proposed facilities shall satisfy all state and federal rule requirements.
- The recommended actions shall be consistent with the latest version of the Palm Coast Comprehensive Land Use Plan
- The recommended actions shall be in compliance with Florida Statute 403-064, “Reuse of Reclaimed Water” and the St Johns River Water Management District Rule 40C-23-001, “Water Conservation Area.”

Goals and Objectives

Goals

- Continue to supply our customers with a safe and beneficial product
- Continue to offer our customers a friendly and responsive service
- Conservation of water as a valuable resource
- 100% reuse of reclaimed water for beneficial applications

Objectives

- To study and evaluate the need for future reuse system expansions
- To plan, construct and operate future reuse system expansions for the beneficial use of reclaimed water within the utility service area.
- The continued development of a reliable and effective reclaimed water system

Water Conservation

Water Conservation Policy

The City Council of the City of Palm Coast adopted a Water Conservation Policy (Article V of Chapter 24 of the Codes and Ordinances of the City of Palm Coast, Florida) on May 20th 2009 which provides for year round levels of water conservation and water usage practices. Landscaping with plants that have low water requirements are encouraged through information provided by the City of Palm Coast website and public outreach programs. The City Council of the City of Palm Coast adopted Resolution No. 2006-25 on November 1, 2008 which implemented the City's first water conservation rate structure. Under this structure the consumption amount affects the unit rate for domestic water, wastewater and reclaimed water.

Development of Alternative Reclaimed Water Sites

The need for additional sources of water in a community is usually determined through local, regional and state planning processes using water facilities or water resource master plans or other planning documents. The State of Florida requires that reclaimed water for public access or restricted access be integrated as a planned source of water and that documents produced must evaluate how public access or restricted access reclaimed water can play into the development of local water supply systems.

Reclaim Water Definition and Usages

What is Reclaimed Water?

Reclaimed water is the byproduct of domestic wastewater that has received secondary treatment and basic disinfection so that it can be safely used for irrigation and other non-potable applications. In order to ensure and protect public health and the environment reclaimed water must meet strict water quality requirements that have been established by the Florida Department of Environmental Protection (FDEP) in Chapter 62-610 of the Florida Administrative Code. Although reclaimed water meets most of the drinking water standards and is safe, it is not drinking water and as a precaution contact should be avoided.

Identifying Reclaimed Water

Due to the fact that reclaimed water has the same general appearance as potable drinking water, the best way to identify it is by the use of standard color code Pantone Purple 522C for piping and fittings that are used to distribute the reclaimed water to the reuse service location along with other identifying labeling or tags as required or needed.

Why Use Reclaimed Water?

The use of reclaimed water helps provide conservation of our natural resources and helps reduce the demand on our potable drinking water supplies for non-potable applications, mainly irrigation. It also helps reduce the non-beneficial discharge of usable treated reclaimed water to FDEP approved surface waters.

Benefits of Reclaimed Water

The main benefits of using reclaimed water is the conservation of a valuable natural resource. An added benefit of irrigating with reclaimed water is the nutrients, Nitrogen and Phosphorus that are retained in the reclaimed water after the treatment process. The beneficial nutrients that are in the reclaimed water help to encourage plant growth and reduce the need for supplemental fertilizers.

Approved Non-potable uses of Reclaimed Water can include:

- Irrigation of golf courses, parks, residential lawns, commercial properties, highway medians, cemeteries and other landscaped areas.
- Irrigation of pasture lands, grasslands and nurseries.
- Wetland restoration and enhancement.
- Commercial Car Wash process water
- Industrial cooling or process water.

Prohibited Uses of Reclaimed Water

- DO NOT DRINK / NO Beber.
- NO Swimming / NO Nadar.
- NO Filling of swimming pools, wading pools, hot tubs or outside showers.
- NO Filling of children's water toys
- NO Connecting to a dwelling for household use.
- NO Interconnecting with potable water lines.
- NO Recreational activities in which the reclaimed water contacts your skin.
- NO Washing of pets, equipment, structures, driveways or vehicles.
- NO Connection to any aboveground hose bibs.
- NO Direct contact irrigation with fruits or vegetables that are not to be peeled, skinned or cooked before eating.

Types of Reclaimed Water Usage

There are many different uses for reclaimed water within a developing area which include but are not limited to the following:

1. Urban Reuse
2. Industrial Reuse
3. Agricultural Reuse

The quantity and quality of the reclaimed water for each of the above uses as well as any special considerations required vary by the approved usage.

Urban Reuse

An urban reuse system provides reclaimed water for various uses, and probably represents the greatest volume of water that can be reused within the City of Palm

Coast's Utilities Services Area. Examples of urban reuse within the City consist of the following:

- Irrigation of parks, recreation centers, athletic fields, schools, roadway medians, landscaped and green space areas, etc.
- Golf Course irrigation.

- Irrigation of residential and multi-family yards and landscaping.

- Irrigation of commercial green space and landscaped areas.

- Commercial uses, such as vehicle washing facilities and irrigation at plant nurseries.

There are many other potential uses, such as ornamental landscape fountains, fire protection, toilet and urinal flushing; however these uses are generally considered minor and basically would require the construction of facilities that would be partially funded by customers.

Of the 50 states, Florida represents the largest user of reclaimed water under this category of urban reuse. In Florida, approximately 43% of the reclaimed water produced is used for residential, 36% for golf courses, and the remaining percentage for other usages. The primary considerations for urban landscape systems using reclaimed water at unrestricted public access areas, includes all public health concerns and the reliability of treatment (water quality). Retrofitting an existing developed urban area with a reuse distribution system is expensive and in most cases is not economically feasible, even with the benefits realized for conserving potable water. However, in developing areas, substantial savings may be realized by installing the reuse distribution system along with another existing infrastructure.

Industrial Reuse

Industrial reuse has increased substantially since reuse systems have been in operation. This type of reuse has gained popularity for the same reasons that urban reuse has gained popularity, conservation and cost. The water quality and quantity required for reclaimed water will vary depending upon the type of industry or application. Most industries in the United States are required to meet more stringent environmental goals such as zero liquid discharge (ZLD). However in areas that do not have a high industrial development such as the City of Palm Coast, most of the industrial uses would be for make-up water or cooling water. This is the most popular method of industrial reuse.

Agricultural Reuse

Agricultural use of reclaimed water is also beneficial due to the nutrients Nitrogen and Phosphorus that remain in the reclaimed water after the wastewater treatment processes. Urban areas such as the City of Palm Coast typically do not have any large scale agricultural applications.

Cross-Connection Control

To ensure the public's health is protected potable water systems must be kept separate from all non-potable water sources and all cross connections are prohibited. Cross-connection is any arrangement of pipes, fittings, fixtures or devices that connect a non-potable system to a potable system through which backflow and contamination of the potable water supply could occur. Non-potable water sources include reclaimed water and private wells. The City requires that approved backflow devices be installed on all potable water services. Backflow devices are installed directly after the service meter to help safeguard the potable water supply against any possible cross-connection. However

it is up to the utility customer to ensure that the water service lines located on private and commercial properties that supply potable water to their home or business do not have any unsafe plumbing or cross-connections.

City of Palm Coast Wastewater Treatment and Reuse Facilities

The City of Palm Coast Utility Department currently has two Wastewater Treatment and Reuse Facilities that provide all of the required wastewater treatment and reclaimed

water for the City of Palm Coast Utility Customers.

Wastewater Treatment and Reuse Facility (WTRF) No. 1

The City of Palm Coast WTRF No.1 located at 26 Utility Drive is staffed and operated in accordance with the Florida Department of Environmental Protection Wastewater Permit No. FL0116009 (Major), issued on April 30, 2017.

WTRF No. 1 Treatment & Capacity

The WTRF No. 1 currently has a permitted treatment capacity of 6.83 million gallons per day (MGD) and treats with advanced secondary treatment, tertiary filtration and high-level disinfection. The treated wastewater effluent generated at this facility is currently used as reclaimed water for reuse applications for irrigation of unrestricted public access areas or disposed of in restricted access sites. Reclaimed water used for irrigation of unrestricted public access areas currently must meet advanced secondary treatment with CBOD5 concentrations not to exceed 20 mg/L (annual average), 30 mg/L (monthly

average), 45mg/L (weekly average), 60 mg/L (single sample), effluent filtration so that Total Suspended Solids concentrations do not exceed 5 mg/L for any single sample and high-level disinfection to maintain a minimum total chlorine residual of 1 mg/L.

WTRF No. 1 Reclaim Water Onsite Storage

The WTRF No.1 has one 6 million gallon ground storage tank located onsite at the facility. The ground storage tank is used to store excess reclaimed water during periods of low reuse demand or wet weather conditions. The stored reclaimed water is then used during periods of high demand or drought conditions.

WTRF No. 1 Reclaimed Water & Effluent Disposal

The Palm Coast WWTF No. 1 currently has the ability to utilize three different methods of discharge as a means of beneficial reuse of reclaimed water or effluent disposal. The first and preferred method is Public Access Reuse of reclaimed water for irrigation of residential lawns and commercial properties due to the fact that it gives residents and businesses a low cost alternative to potable water while limiting groundwater withdraws.

The second method is the use of the State Permitted Restricted Access Effluent Disposal Sites which include **R**apid **I**nfiltration **B**asins (RIBs) and spray-fields.

The Restricted Access Effluent Disposal Sites help to recharge the groundwater levels surrounding them when the discharged effluent percolates into the soil which is considered to be a beneficial reuse of plant effluent.

The last type of discharge used by the WTRF is the Limited Wet Weather Discharge.

The purpose of the Limited Wet Weather Discharge is to provide a means of effluent disposal during times of excessive wet weather when the public access reuse sites have less of a demand for reclaimed water and the restricted access sites have reached their capacity. Effluent disposed of by using the Wet Weather Discharge is not considered a beneficial reuse and is therefore used as a last resort.

WTRF No. 1 Reclaim Water Pumping Capacity

Located onsite at WTRF No. 1, is a high service reclaimed water pump station equipped with four high pressure pumps that maintain a system pressure in the range of 70 to 80 psi on the reuse system. Reclaimed water is pumped from the high service pump station to the reuse sites.

Each of the four pumps has a designed flow rate of up to 2500 gallons per minute. The reclaimed water pump station was designed to accept up to 16 additional pumps as needed to increase the reclaimed water pumping capacity for future developments. There is a WTRF service reclaimed water pumping station onsite with three service pumps that supply reclaimed water for irrigation and wash-down water at the WTRF. The plant service pumps also act as booster pumps for the reclaimed water distribution system during periods of low demand when it is not economical to run the larger pumps.

Cigar Lake Control Valve Station, Storage Pond and Pump Station

The City has a permitted reclaimed water storage location named Cigar Lake. Cigar Lake is a large man made body of water located just north of Royal Palms Parkway and along the east side of the Bellaire Waterway. Cigar Lake holds approximately 65 million gallons of surface water and reclaimed water blend. The reclaimed water from WTRF No. 1 is pumped into Cigar Lake by use of the 20" reclaimed water main that extends south from Oak Trails Boulevard along Old King's Road south then west under I-95 then west to the Cigar Lake fill station where it can be discharged into the lake if needed.

At the north end of the lake, there is a valve station that consists of an automatic control bypass valve, a butterfly isolation valve and a pressure sustaining control valve that opens to fill the lake and closes when the lake level reaches pre-set levels. This is accomplished with the use of a remote telemetry unit (RTU) that transmits the lake level and control valve status to the WTRF No. 1 control center. The 20 inch reclaimed water main extends south from the lake fill station and connects to the Cigar Lake Pump Station discharge piping and continues south to Royal Palms Parkway.

Cigar Lake Pump Station

A reclaimed water pumping station located at the south end of Cigar Lake pumps water from the storage lake into the reuse distribution system.

The Cigar Lake Pump Station currently consists of three high service pumps that are set to maintain pressure on the reuse system when called for with a flow rate capability of 350 to 2500 gallons per minute. The lake water filtration is accomplished by the use of an intake screen to remove large debris before the pumps and two skids of 130 micron turbo filters that remove algae and other small solids after the pumps and before discharge. Chemical storage capacity and feed pumps have been provided so that liquid hypochlorite (strong bleach) can be added for disinfection in order to meet reclaimed water quality standards before it is pumped into the reclaimed water distribution system. A remote telemetry unit (RTU) at the Cigar Lake Pump Station conveys operational data to the WTRF No. 1 control center for process management. The Cigar Lake pump station was designed to accept two additional high capacity pumps, four additional filter skids and the required controls needed to accommodate future reuse system growth.

Wastewater Treatment and Reuse Facility (WTRF) No. 2

The City of Palm Coast WTRF No. 2 located at 400 Peavey Grade Road is staffed and operated in accordance with the Florida Department of Environmental Protection Wastewater Permit No. FL071008-006 (Minor), effective on May 16, 2016.

WTRF No. 2 Treatment & Capacity

The WTRF No. 2 has a permitted treatment capacity of 2.00 million gallons per day (MGD) and treats with Flat Sheet Membrane Bio-reactor process technology and high-level disinfection. Construction began on WTRF No.2 in May of 2016 and was completed in August 2018. This facility was designed and constructed in order to help meet the rising demand for wastewater treatment and reclaimed water for new commercial and residential developments of Palm Coast. The treated wastewater effluent generated at this facility will be used as reclaimed water for reuse applications such as irrigation of unrestricted public access areas or disposed of at FDEP permitted sites. Reclaimed water used for irrigation of unrestricted public access areas currently must meet advanced secondary treatment with CBOD5 concentrations not to exceed 20 mg/L (annual average), 30 mg/L (monthly average), 45mg/L (weekly average), 60 mg/L (single sample), effluent filtration so that Total Suspended Solids concentrations do not exceed 5 mg/L for any single sample and high-level disinfection to maintain a minimum total chlorine residual of 1 mg/L.

WTRF No. 2 Reclaimed Water Storage

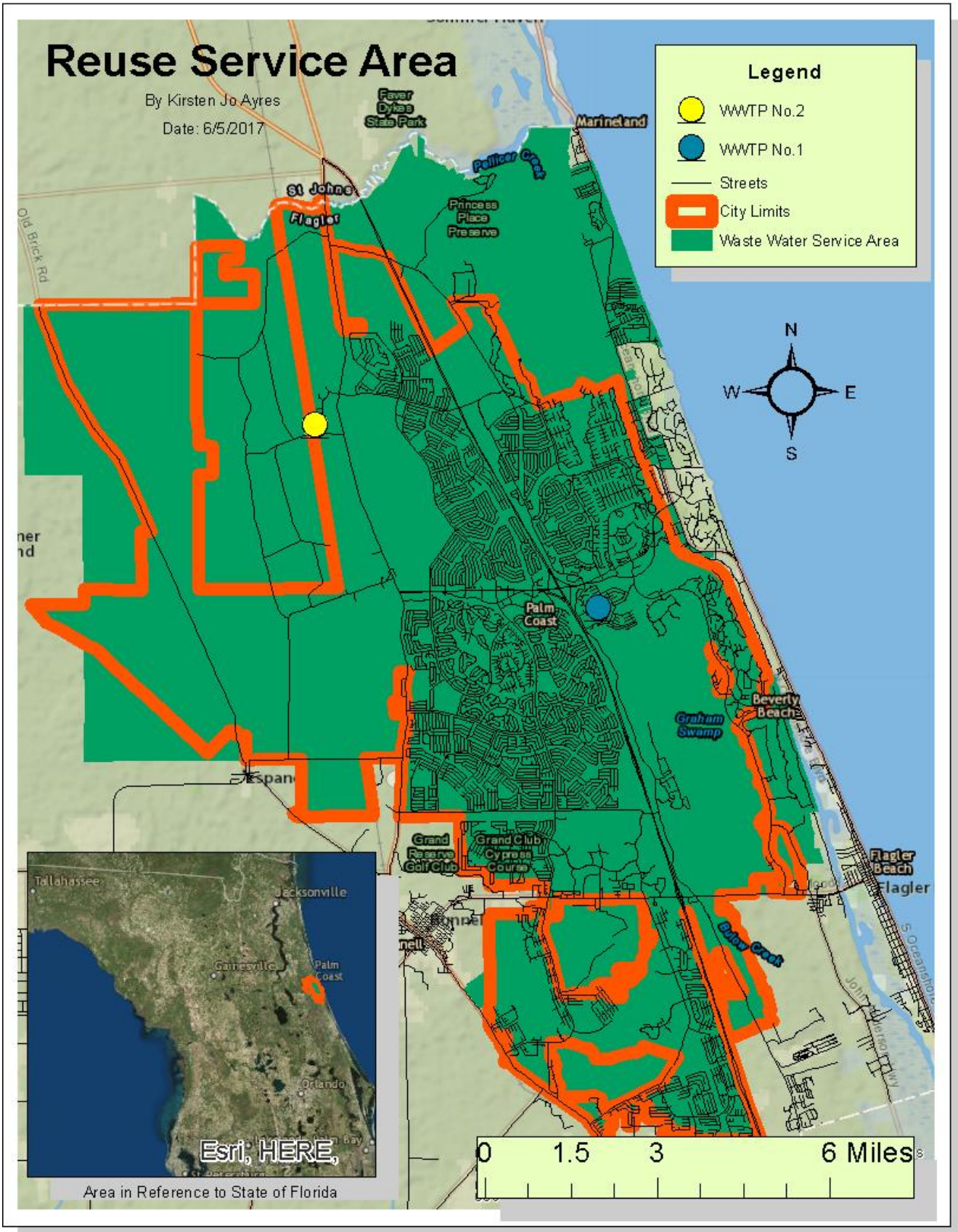
The WTRF No. 2 has one 2 million gallon ground storage tank located on site at the facility. The ground storage tank is used to store excess reclaimed water during periods of low reuse demand or wet weather conditions. The stored reclaimed water is then used during periods of high demands or drought conditions.

Wastewater Treatment Reject Pond & Wetland Discharge for WTRF No. 2

The operating permit for WTRF No. 2 includes the option to discharge treated effluent directly to Hulett Swamp. This will be utilized during wet weather periods or any time effluent produced exceeds the demand for reclaimed. In addition, Wastewater Treatment Facility No. 2 has an onsite reject pond to receive treated effluent any time the effluent does not meet reclaimed water quality standards. This reject pond will also function as a percolation pond for plant effluent if reclaimed water is not in demand.

US Highway 1 (US 1) Reclaimed Water Irrigation

The area running along both sides of US 1 from Wellfield Grade to north of Matanzas Woods Parkway was built as a linear park and will be a feature of the future Palm Coast Park development. The area is mostly grassed with the occasional tree or shrubs and there are 10' wide paved multi-use paths running the length of the area on both sides of the highway. The utility has recently installed an irrigation system within these linear parks, not for the purpose of enhancing landscapes but as a method disposing of excess reclaimed water that will directly help recharge the underlying aquifers. It is estimated that up to 1 million gallons per day can be applied to land directly over the aquifers that provide source water to Water Treatment Plant No. 1 and Water Treatment Plant No. 3. See US 1 Irrigation and Wetland Discharge Proposed Plan on next page to see the layout of US 1.


Reuse Service Area
By Kirsten Jo Ayres
Date: 6/5/2017
Legend
WWTP No.2
WWTP No.1
Streets
City Limits
Waste Water Service Area
N
W
E
S
Fever Dyke's State Park
Marineland
Pellicer Creek
St Johns
Flagler
Princess Place Preserve
Old Brick Rd
Palm Coast
Graham Swamp
Beverly Beach
Grand Reserve Golf Club
Grand Club Cypress Course
Flagler Beach
Flagler
Bulow Creek
Tallahassee
Jacksonville
Gainesville
Palm Coast
Orlando
Esri, HERE,
Area in Reference to State of Florida
0
1.5
3
6 Miles

Public Access Reuse Infrastructure

Existing Infrastructure

The public access reuse water distribution system is interconnected between WTRF No. 1 and WTRF No. 2 consists of the following:

- 30” Main from the WTRF No. 1 west to the corner of Oak Trails Blvd. and Old Kings Rd. This 30” main connects to a 20” main at Oak Trails Blvd and Old Kings Rd. South. The 20” main continues south to Cigar Lake and the Town Center Development.
  A 16” main connects to the 30” main at Oak Trails Blvd and Old Kings Rd. South and continues north to Matanzas Woods Parkway, Old Kings Road N. and the Palm Harbor Extension.
- 12” Main from the WTRF No. 1 to the Grand Haven Reuse Storage Pond (This pond and pumping facility is owned and operated by the Grand Haven Community Development District and the Grand Haven Golf Course).
- 12” Main to The Hammock Dunes Golf Course Reuse Storage Ponds (This main is owned by the Dunes Community Development District)
- 16” Main from the WTRF No. 2
- 10” Main Along U.S. 1 in Palm Coast Park
- 16“ Main on U.S. 1 in Palm Coast Park for Irrigation

Old Kings Road North

The Old Kings Road North public access reuse distribution system provides reclaimed water for irrigation which currently includes the Marriot Fairfield Inn, the Palm Coast Parkway & I-95 Interchange, Palm Coast Parkway medians east of I-95, the Palm Coast Car Wash, ABC Store # 197, CVS Store # 3249, The Island Walk Shopping Center, Sunshine Store # 308, Starbucks Coffee # 10728, Holland Park, Matanzas High School, Sable Palms Senior Living, The Hammock Dunes Creek Course Golf Course pond system and The Conservatory Golf Course & Community pond systems.

Old Kings Road South

The Old Kings Road South public access reuse distribution system provides reclaimed water for irrigation which currently includes most of the Town Center Development, the medians of SR 100 within Palm Coast, the medians of Old Kings Road South Phase I, the residential developments of Toscana, Hidden Lakes and Grand Landings. Future connections will be made to residential and / or commercial customers and medians to be constructed as part of the Old Kings Road Expansion Phase II.

US 1

Public access reuse distribution system will provide reclaimed water to Palm Coast Park and future developed areas along US 1. The distribution main currently is installed from north of Matanzas Woods Pkwy south to Wellfield Grade. The system will be used

for irrigation of common areas, golf courses, residential and commercial areas in Palm Coast Park, along with irrigation on US 1 from north of Matanzas Woods Parkway south to Wellfield Grade.

Sites Served By Public Access Reuse

A Reuse Service Area Report was prepared in November of 2007 and submitted to the Florida Department of Environmental Protection. At that time two separate Reuse Service Areas were identified, the WTRF No. 1 Service Areas and the future WTRF No. 2 service area. The future WTRF No. 2 Reuse Service Area will be described in **Section 5.** The City of Palm Coast reuse service area includes developments within the boundary of the City, areas outside the City that were served by the former utility system and areas the City has agreed to serve. **Figure 1** "Reuse Service Area Map" shows the City Limits for the City of Palm Coast. Developments currently served by WTRF No. 1 are Hammock Dunes, The Grand Haven Golf Course & Community and The Crossings at Grand Haven and Wild Oaks at Grand Haven, Toscana, Hidden Lakes, Grand Landings, and The Palm Coast Town Center.

Grand Haven Golf Club & Communities and the Crossings at Grand Haven

The Grand Haven Golf Club and Community are located between Colbert Lane and the Intracoastal Waterway. The City of Palm Coast pumps up to 1.0 MGD of reclaimed water into a holding pond located within the development. The development owns and operates a reuse pump station for distribution of the reclaimed water for irrigation of the Grand Haven Golf Course and common areas within Grand Haven and The Crossings at Grand Haven Communities.

Hammock Dunes

The Hammock Dunes development is located outside the City of Palm Coast between the Intracoastal Waterway and the Atlantic Ocean. Hammock Dunes is a bulk customer of public access reuse water supplied by the City of Palm Coast. The City of Palm Coast pumps up to 2.6 MGD of public access reuse to holding ponds located at the Dunes Community Development District Wastewater Treatment Plant. Hammock Dunes has an advanced secondary wastewater treatment facility that provides treatment for wastewater generated by its service area. The reclaimed water that is generated by its own plant, combined with the reclaimed water from Palm Coast, is used in the Dunes Community Development District for irrigation of residential areas, common areas and at the Hammock Dunes and Ocean Hammock Golf Courses.

Grand Landings Development

The Grand Landings Development is located two miles south of State Road 100 on Seminole Woods Parkway and currently consists of 89 residential lots and common area with reclaimed water irrigation. This development is currently expanding and will ultimately have 146 residential lots.

Wild Oaks at Grand Haven

The Wild Oaks at Grand Haven Development consists of approximately 137 residential lots that are provided reclaimed water. There are currently twenty-one residential customers receiving public access reclaimed water directly from Palm Coast WTRF No. 1 for irrigation applications. The common areas within Wild Oaks are also irrigated with reclaimed water.

The Hidden Lakes Development

The Hidden Lakes Development is located on the east side of Old Kings Road, north of Town Center and consists of approximately 380 lots that are provided reuse water. There are currently 237 residential reuse customers as well as common areas receiving public access reclaimed water for irrigation applications.

The Toscana Development

The Toscana Development is located on Old Kings Road north of Hidden Lakes and consists of approximately 200 lots that are provided reclaimed water. There are currently seven residential reuse customers as well as common areas receiving reclaimed water for public access irrigation applications.

The Palm Coast Town Center

The Palm Coast Town Center Development consists of various commercial multiuse tracts that will be receiving reclaimed water for unrestricted access irrigation applications. The Town Center Community Development District currently irrigates all of the common areas with approximately 100,000 gallons per day of reclaimed water that is being supplied from the Cigar Lake Pump Station or bypass. There are currently four commercial complexes, two residential complexes, Central Park, all roadside rights of way areas, the Flagler Palm Coast High School Tree Farm/Sports Fields, and the Imagine Charter School receiving public access reclaimed water. One commercial complex within Town Center, the Palm Coast Landings (Target) shopping center, uses a temporary well for irrigation. A temporary variance was given to this complex for use of wells for irrigation since the reuse system has yet to be extended to that complex.

Restricted Access Reuse Capacities

Restricted Access and Public Access Reuse Capacities

The Palm Coast WTRF No. 1 currently has available a permitted land application reuse capacity of 13.634 MGD. Restricted access reuse accounts for 3.07 MGD and the current available permitted public access reuse irrigation accounts for 10.564 MGD. The majority of the reclaimed water is used for irrigation for golf courses, landscaping, and general public access.

Restricted Access Treatment Requirements

The excess reclaimed water produced at WTRF No. 1, that needs to be disposed of can either flow by gravity from the 6.0 MG ground storage tank to the restricted access rapid infiltration basins (RIBs) or be pumped by high pressure transfer pumps to the restricted access effluent spray fields. The RIB and spray field sites are located approximately 1.7 miles south of the WTRF No. 1 and east of Old Kings Road. Reclaimed water disposed of at the RIB and spray field sites must receive, at a minimum, -secondary treatment and basic disinfection to maintain a minimum chlorine residual of 0.5 mg/ L and nitrate [NO3] shall not exceed 12 mg/L for any single sample. Total Suspended Solids and CBOD5 may have up to 20 mg/L on a monthly average. Since the limits for CBOD5, TSS and chlorine residual are less stringent than Public Access Reuse, these sites are also used to reject water from the treatment facility when effluent quality standards are not being met.

The Restricted Access Reuse sites act as a backup to the Public Access Reuse Sites during periods of reduced or low demand for Public Access Reuse. Although Public

Access Reuse is the preferred method of effluent disposal, it is necessary to have alternate sites for effluent disposal due to storage limitations.

Restricted Access Spray Irrigation Fields

Currently the Palm Coast WTRF No. 1 operates two Spray Irrigation Fields that total 60 acres. Much like the Rapid Infiltration Basins, the Spray Irrigation Fields are built upon sandy soil. The Spray Fields have sprinkler heads roughly spaced ninety feet apart and each head is capable of supplying 75 gallons of effluent per minute. The Spray Irrigation Fields are also considered a beneficial reuse since they recharge the ground water as well.

Restricted Access Rapid Infiltration Basin Sites (RIBs)

Currently the Palm Coast WTRF No. 1 utilizes three Rapid Infiltration Basins. The RIBs have been constructed on deep layers of sandy soil which allows a rapid infiltration of the treated effluent into groundwater around the RIBs. Five feet high berms contain the effluent until ample time has been given for it to percolate into the groundwater. The RIBs are considered a beneficial reuse of effluent water since a recharge of the groundwater supply occurs. Quarterly sampling of the groundwater is performed to detect any negative impact to the groundwater supply.

Table 1 Palm Coast Wastewater Treatment and Reclamation Facility Effluent Disposal Capacity		
Site Location	**Area Irrigated (Acres)**	**Capacity (MGD/AADF)**
Restricted Public Access Irrigation Systems and Rapid Rate Infiltration Basins		
Palm Coast Spray Fields	60.0	0.60
Palm Coast RIB No. 1 (North)	8.0	1.00
Palm Coast RIB No. 2 (South)	12.5	0.92
Palm Coast RIB No. 3 (West)	17.0	0.55
R-001 CAPACITY =		**3.07**
Public Access Irrigation Systems (Currently Used Systems)		
Grand Haven Golf Course	127.0	0.726
Grand Haven Common Areas	45.0	0.274
Hammock Dunes Golf Course	96.0	0.35
Dunes Residential Service Area	254.0	1.00
Ocean Hammock Golf Course	96.0	0.35
Ocean Hammock Residential	100.0	0.90
DCDD Creek Course	128.9	0.35
Conservatory Development	179.0	0.49
Matanzas High School landscape Area	18.4	0.05
Residential Developments	147.3	0.40
Hidden Lakes Residential Area	102.4	0.28
Grand Haven Estates Residential Area	44.2	0.12
South of Airport (Residential Areas)	869.2	2.36
Old Kings Road Median / ROW South of WWTP No. 1	28.5	0.08
Old Kings Road Median / ROW North of WWTP No. 1	23.3	0.06
State Rd 100 – Central Ave. to Colbert Ln		0.01
Hidden Lakes Office Complex (Landscape Areas)	60.0	0.19
Palm Coast Parkway Median (Landscape Areas)	2.8	0.011
WWTP No. 1 (Landscaped Areas)	8.4	0.02
Town Center – **Current**	115.7	0.40
Total Current System Users	**2446.1**	**8.421**

Site Location	Area Irrigated (Acres)	Capacity (MGD/AADF)
Town Center – **Future**	289.4	1.0
FPL Row Residential - **Future**	92.1	0.25
FPL ROW South of WWTF No. 1 - **Future**	128.6	0.35
Palm Harbor (Golf Course) - **Future**	120.0	0.470
Bulow Woods LLC - **Future**	816.5	2.2
Iroquois LLC - **Future**	117	0.316
Total Future System Users	**1,563.6**	**4.586**
R-002 CAPACITY = Current + Future	**3076.2**	**13.007**
WTRF #2 Public Access Irrigation Systems (Future Systems)		
Palm Coast West N-010 (Residential and Office/Commercial)	118.0	0.41
Palm Coast West N-020 (Residential)	4.0	0.01
Palm Coast West N-030 (Industrial and Mixed Use)	18.1	0.06
Palm Coast West N-040 (Commercial and Office)	9.2	0.03
Palm Coast West N-050 (Residential, Commercial/Industrial, Institutional)	8.8	0.03
Palm Coast West N-060 (Residential and Commercial/Industrial)	27.7	0.10
Palm Coast West N-070 (School, Parks)	28.8	0.10
Future Development West of the Railroad	424.0	1.15
Sawmill Creek Residential	268.4	1.04
Rayonier Property (Mixed Use)	787.0	2.14
Old Brick (Residential and Commercial)	527.0	1.43
Three Lakes (Residential and Commercial)	580.0	1.58
US Hwy1 Multiuse Path Reuse Irrigation	62.9	1.20
R-001 CAPACITY =	**2863.9**	**9.28**

Surface Water Discharge Outfall

Palm Coast WTRF No. 1 currently has one permitted surface water discharge outfall. Outfall D-001 is a Limited Wet Weather Discharge that is permitted for an annual average of 1.6 MGD to the Intracoastal Waterway. The discharge outfall is located under the west section of the Hammock Dunes Bridge and enters the waterway just south of the bridge pilings. The limiting factors are the Annual Mass loading which are Total Nitrogen of 111,190 pounds and Total Phosphorous of 24,461 pounds. The plant effluent must be de-chlorinated prior to discharge to the Intracoastal Waterway. Flow measurement equipment and a chlorine residual meter are housed within a fenced area near the point of discharge. Wet weather flows discharged into the Intracoastal Waterway must be measured and recorded. Effluent disposed of through the surface water discharge is not considered reuse since it has no beneficial value except for disposing of effluent.

Wetland Discharge

Palm Coast WTRF No. 2 currently has a permitted surface water discharge. The discharge is limited to 0.6 MGD or 219 million gallons annually to Hulett Swamp a Class III fresh water. The discharge is located between US1 and Belle Terre Parkway in Hulett Swamp. The reuse water passes through a dechlorination facility on the way to the discharge. The dechlorination facility injects a chemical into the reuse water to remove remaining chlorine. The dechlorination facility monitors the chemical injection process to make sure that an appropriate amount of chemical is used to remove all residual chlorine. The automated facility makes corrections to the process to make sure an overfeed or underfeed chemical situation does not occur. Samples are also collected at the facility using a method known as composite sampling. The composite sample consists of several samples taken based on time and flow rate. The composite sample is collected and sent to an independent laboratory where it is analyzed for TSS, CBOD5, Total Nitrogen and Total Phosphorous. The samples must comply with 5,5,3,1 rule set forth by the FDEP. The 5,5,3,1 is one of the state's most stringent regulations. The 5s stand for 5 mg/L of TSS and CBOD5, the 3 is for 3 mg/L of Total Nitrogen and the 1 is for 1 mg/L of Total Phosphorous. This discharge will be used when reuse demand has slowed and no other options are available for WTRF No. 2.

Wastewater Treatment and Reuse System Flow Evaluations

Average Flow per Equivalent Residential Connections (ERCs)

Wastewater flows described below are based on the latest Wastewater Capacity Analysis Report as prepared by the City of Palm Coast dated August 2018. Wastewater flow projections are calculated by multiplying the projections of equivalent residential connections (ERC) by the historical average flow per ERC to obtain the annual average daily flow. **Table 2** tabulates the average flow per ERC using data from 2013 through 2018. The ERC values and the corresponding annual average daily flows (AADF) to the existing WTRF No. 1 were obtained from **Table 2**. AADF values are for July 1st of each year to correspond with the mid-year ERC's. The Ratio of the Maximum Three-Month Average Daily Flow (TMADF) to the Annual Average Daily Flow (AADF) represents the seasonal variation in the wastewater influent flows compared to the yearly average. The historical TMADF/AADF ratios from the last eight years are tabulated in **Table 3**. The average TMADF/AADF Ratio from 2018 through 2031 was 1.033 this factor is used to calculate the projected TMADF flows.

Table 2 Palm Coast Wastewater Service Average Flow Per Equivalent Residential Connection			
Year	**Yearly Average ERC**	**AADF (MGD)**	**Average Flow per ERC (GPD)**
2013	32,502	5.741	177
2014	32,917	5.834	177
2015	33,455	6.136	183
2016	34,432	5.834	169
2017	34,843	6.013	173
2018	35,734	6.537	183
		Average =	**177**

Future Wastewater Flow Projections

Projected Wastewater Flows, as included in the 2018 Wastewater Facilities Capacity Analysis Report, are presented in **Table 3.** The flow projections are based on Projected ERC's and Average Flow per ERC from **Table 2**. These wastewater flow projections are mid-year (July 1st) projections. It is projected that the existing WTRF No. 1 will be expanded from the current capacity of 6.83 MGD to 9.1 MGD by the year 2030. Projected Wastewater Flows are plotted in **Table 4** along with the existing wastewater treatment capacity and the projected future wastewater treatment plant construction and / or expansions. In addition to wastewater population and flow projections an additional estimate of current, future and ultimate wastewater flows was performed based on land development within the City.

Table 3 Palm Coast Wastewater Flow Projections						
	Total Service Area		**AADF / ERC**	**AADF**	**TMAADF / AADF**	**TMAADF**
Year	**ERC**	**Population**	**(gal/ERC)**	**(MGD)**	**(MGD)**	**(MGD)**
2018	35,734	88,077	177	6.328	1.033	6.537
2019	36,624	92,266	177	6.486	1.033	6.700
2020	37,515	96,454	177	6.644	1.033	6.863
2021	39,227	98,347	177	6.947	1.033	7.176
2022	40,940	100,242	177	7.250	1.033	7.490
2023	42,653	102,135	177	7.553	1.033	7.803
2024	44,366	104,029	177	7.857	1.033	8.117
2025	46,079	105,923	177	8.160	1.033	8.430
2026	47,614	106,724	177	8.432	1.033	8.711
2027	49,148	107,525	177	8.704	1.033	8.991
2028	50,683	108,326	177	8.976	1.033	9.272
2029	52,218	109,127	177	9.247	1.033	9.553
2030	53,752	109,928	177	9.519	1.033	9.834
2031	55,243	111,579	177	9.783	1.033	10.106

Table 4 **Facility Expansion Based on Flow Projections**		
Facility Name	Construction / Expansion	Completion Schedule
WTRF No. 2 (current capacity 2.00 MGD)	Major Expansion to 4.0 MGD	2024
WTRF No. 1 (current capacity 6.83 MGD)	Major Expansion to 9.1 MGD	2030

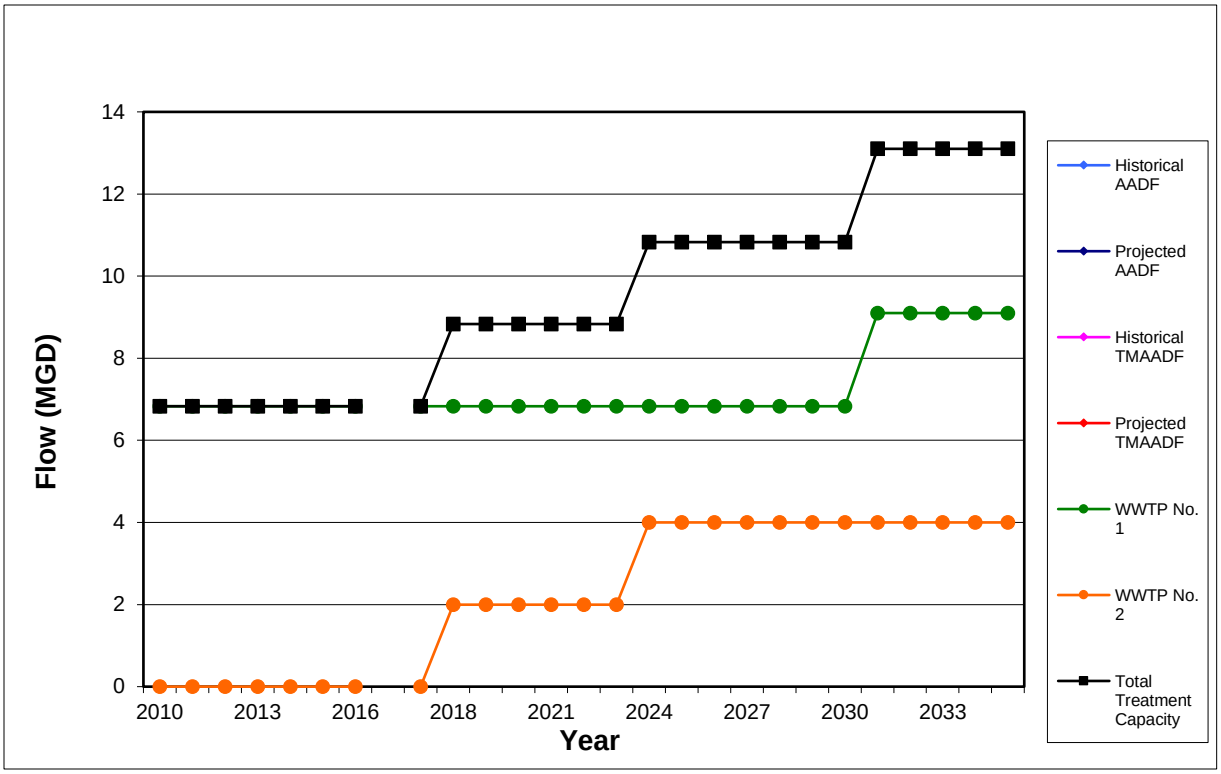
Depending on future populations and flows, the construction and expansion of individual wastewater treatment facilities may vary from the projected dates.

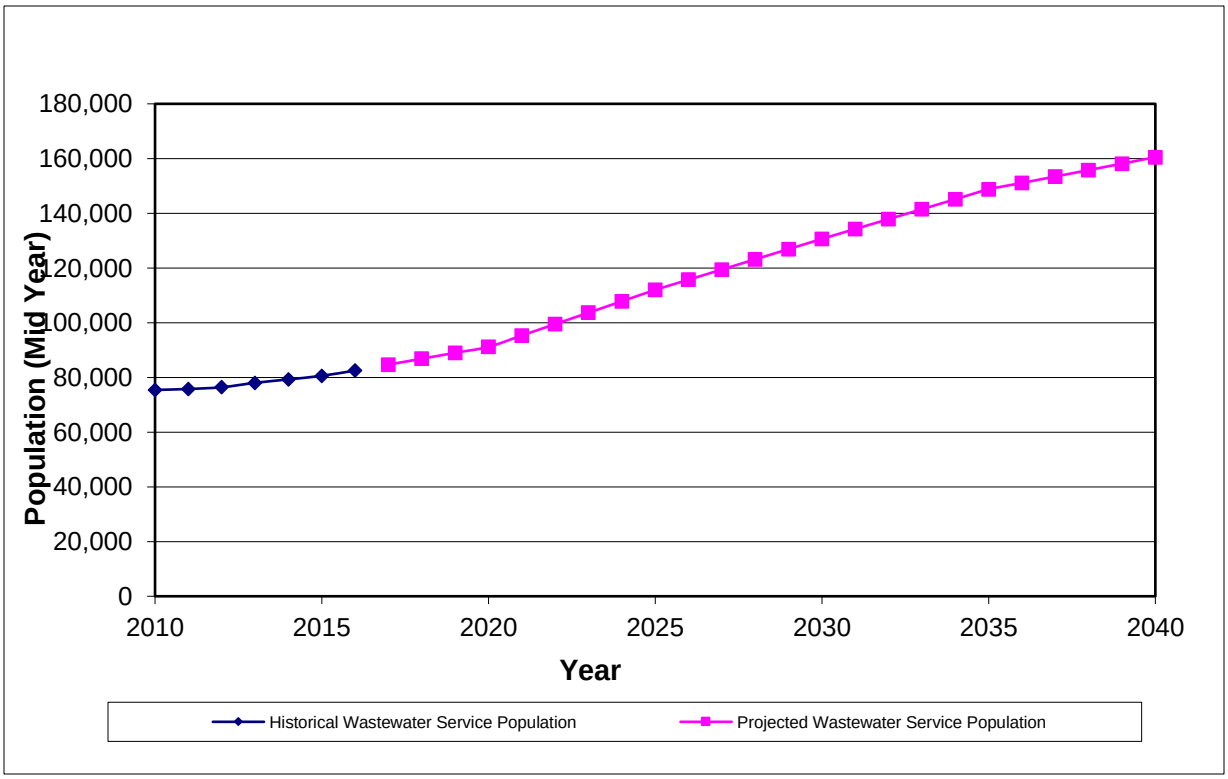
Recommended Plans for Future Reuse System Expansion

Statement of Recommendations

All recommendations and assumptions are subject to change. The sequence of construction of new wastewater treatment facility capacity is only estimated at this time. Recommendations are based on current available data and are proposed using best available technologies. Review and analysis of each option is required as future system capacity increases and newer technologies become available.

Based on the population and wastewater flow projections presented in **Table 4** it is expected that expansions will be needed at both of the existing facilities by 2030.


Flow (MGD)
14
12
10
8
6
4
2
0
2010
2013
2016
2018
2021
2024
2027
2030
2033
Year
Historical AADF
Projected AADF
Historical TMAADF
Projected TMAADF
WWTP No. 1
WWTP No. 2
Total Treatment Capacity


Population (Mid Year)
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
2010
2015
2020
2025
2030
2035
2040
Year
Historical Wastewater Service Population
Projected Wastewater Service Population

Recommendation for Reuse System Expansion

This Reuse System Master Plan recommends the following system improvements and expansions based on current available data and system growth projections:

1. Constructing Backup Surface Water Discharge for WTRF No.1
2. Planning for Public Access Reuse Water Mains to serve proposed western developments including Neoga Lakes and Old Brick Township.
3. Expand WTRF No. 2 Treatment Capacity to 4.0 MGD

Proposed Backup Surface Water Discharge for WTRF No.1

The existing Limited Wet Weather Discharge from WTRF No.1 utilizes the 12-inch Reuse Water Main to the Hammock Dunes Development. Additional discharge capacity is needed to handle peak flow situations. The city is currently evaluating using an existing discharge point designated for Water Treatment Plant #3 or constructing a new line from Wastewater Treatment Plant #1 to the Intracoastal Waterway. Each of these options will increase the instantaneous discharge capacity while keeping the Annual Average Daily Flow at 1.6 MGD.

Proposed Town Center Improvements

The Palm Coast Town Center Development currently has portions of the reuse water distribution system completed and operational. The reuse system in the remainder of the areas in Town Center will be expanded along with development. When development begins to occur, requiring construction of a secondary entrance, a reuse main will be extended to the Palm Coast Landings at which time the use of groundwater for irrigation can be discontinued.

Planning for Public Access Reuse to Three Lakes and Old Brick Townships

Three Lakes and Old Brick Townships are conceptual developments which final designs have not yet been completed. The Three Lakes Township is estimated to have 580 acres of irrigated area requiring 1.58 MGD of reclaimed water. Old Brick Township is estimated to have 527 acres of irrigated area requiring 1.43 MGD of reclaimed water.

Planning for Public Access Reuse to new Developments south of State Road 100

There are currently developments in the planning stage inside the City service area south of State Road 100 that would be served by extending the existing 16” reuse main at the intersection of Old Kings Road and State Road 100. Properties outside the City Service would require a FDEP Permit modification.

Proposed Upgrade WTRF No. 1

The next major expansion to WTRF No. 1 will include increasing the treatment capacity from 6.83 to 9.10 MGD by adding an additional Oxidation Ditch, two additional Secondary Clarifiers and installing additional filter elements to the existing Disc Filters.

Proposed Palm Harbor Golf Course Public Access Reuse Water Main

The Palm Harbor Golf Course currently irrigates utilizing storm water pumped from Ribbon Lake just west of Florida Park Drive. The decision to switch from storm water to wastewater reuse will depend on many factors including economics and availability of future consumptive use permit

Implementation and Compliance

Implementation Responsibility

The City of Palm Coast has included all future sites in the FDEP operating permits so reuse can be implemented as the sites are developed.

Implementation Schedule

The Palm Coast Reuse Expansion Master Plan Implementation Schedule to be accomplished within the next five years is included in **Table 5.**

Table 5
Proposed 5 –Year Capital Improvement Plan for Reuse 2017-2022

Project	Year	Estimated Cost
WTRF No. 1 16” Discharge to Intercostal Waterway with study	2017-2022	$1,800,000
Cigar Lake Water Quality Improvement	2017-2018	$1,600,000
WTRF No.2 Potable Reuse Investigation	2018	$30,000

WTRF No. 1 Aerial

WTRF No. 2 Aerial

Project Funding and Cost Summary

Financing Proposed Projects

This Reuse System Master Plan addresses the planning necessary to implement improvement and expansion of the City of Palm Coast Wastewater Treatment Reuse Facilities and distribution systems. Financing for the proposed improvements listed in this master plan will be accomplished with a combination of low interest funds from the State of Florida revolving fund loan program, utility system revenue bonds, wastewater system capacity fees, revenues collected from the sale of reuse water and/or funds budgeted for renewals and replacements (R & R funds). The Utility will also seek financing made available through state and federal grant opportunities. The City of Palm Coast Wastewater Treatment and Reuse Facilities improvements as listed in the 5 – Year Capital Improvement Plan, are expected to be constructed within the next 5 years but may need to be extended beyond the 5 year mark based on development and financing.

Conclusions

It is the objective of The City of Palm Coast to continue to develop a reliable and effective Wastewater Treatment and Reuse distribution system in order to provide a safe and economical irrigation alternative. Using reclaimed for irrigation will reduce the amount of potable water used for irrigation. This in turn will help conserve a valuable natural resource by reducing the rate of groundwater withdrawal.

The construction of the Wastewater Treatment and Reuse Facility No.2 (WTRF) is now complete and operational. In addition to the new and upgraded Wastewater Treatment Facilities, reclaimed water and disposal improvements will be continued and constructed. WTRF No. 2 has supporting projects for wastewater collection, transmission, reclaimed water distribution, and a surface water discharge. Overall, The City of Palm Coast is currently focusing on future advancement, anticipating population growth, while still providing the best possible customer service to fit the needs of the residents and businesses.

Exhibit: City of Palm Coast Water Conservation Policy

Glossary

1. **Access Control & Advisory Signs** are provisions established by FDEP rule 62-610.468 for the identification of reclaim water service areas where reclaim water is practiced using appropriate signage.

2. **Advanced Waste Treatment** is the treatment of wastewater that is beyond secondary treatment and basic disinfection which involves nutrient removal and high level disinfection.

3. **Cross-Connection** is any arrangement of pipes, fittings, fixtures or devices that are connected in a manner that would allow a non-potable water source such as reclaim water to contact and contaminate a potable water source thus creating a potential health issue.

4. **Cross-Connection Control** is an inspection program implemented by the Utility Department in order to verify that no cross-connections exist between the City potable water system and any non-potable water sources.

5. **Department** or **FDEP** is known as The State of Florida Department of Environmental Protection

6. **Direct Contact Irrigation** and **Direct Application** is an irrigation method, such as spray irrigation, resulting in reclaimed water directly contacting an edible crop.

7. **Disinfection** means the selective destruction of pathogens in wastewater effluents, reclaimed water, and domestic wastewater residuals.

8. **Effluent** is water that is flowing out of any treatment facility or other works used for the purpose of treating, stabilizing, or holding wastes.

9. **Fecal Coliform** is a group of coliform bacteria used in wastewater treatment as an indicator for proper treatment and disinfection monitoring.

10. **Ground Water** is the water located below the land surface in the zone of saturation where water is at or above atmospheric pressure.

11. **Land Application** is the reuse of reclaimed water or the utilization or disposal of effluents or wastewater residuals on, above, or into the surface of the ground through spray irrigation, land spreading, or other methods.

12. **Monitoring well** is a strategically located well from which ground water levels are measured and samples are withdrawn for water quality analysis.

13. **Nutrients** is the biological treatment process where beneficial microorganisms are used to partially stabilize (oxidize) organic matter.

14. **Operator** any person who is principally engaged in and is in charge on-site of the actual treatment plant operation and includes the person who is in charge of treatment plant operation for a shift or period of operation during any part of the day, as certified in accordance with Chapter 62-602, F.A.C.

15. **Operating Protocol** is a document which describes how a domestic wastewater facility is to be operated to ensure that only reclaim water that meets applicable standards is released to a reuse system

16. **Outfall** means the outlet or structure through which effluent is finally discharged to a receiving water.

17. **Pathogens** means disease-producing organisms.

18. **Public Access Reuse Site** means an area that receives reclaimed water that is intended to be accessible to the general public; such as golf courses, cemeteries, parks, landscape areas, hotels, motels, and highway medians. Public access areas include private property that is not open to the public at large, but is intended for frequent use by many persons. Public access areas also include residential dwellings.

19. **Reclaimed Water** is water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a wastewater treatment facility.

20. **Restricted Access Reuse Site** means that access to the reuse site by the general public is controlled and that access to the reuse site by the public is infrequent. Such sites are accessible to authorized personnel only.

21. **Reject Water** Treatment Plant effluent that does not meet the treatment requirement standards for reclaimed water.

22. **Reuse** means the deliberate application of reclaimed water in compliance with Department and District rules for a beneficial purpose.

23. **Secondary Treatment** is the biological treatment process where beneficial microorganisms are used to partially stabilize (oxidize) organic matter.

24. **Total Suspended Solids** (TSS) means solids that either float on the surface of, or are suspended in, water or wastewater; the quantity of material removed from a sample in a laboratory test referred to as non-filterable residue, as determined using approved methods.

25. **Total Chlorine Residual** means the chlorine remaining in water or wastewater at the end of a specific contact period as combined and free chlorine, measured analytically by approved methods as combined chlorine residual.

City of Palm Coast, Florida
Agenda Item

Agenda Date: 1/8/2019

Department	PARK & RECREATION	**Amount**	
Item Key	5595	**Account**	

Subject PRESENTATION - MANAGEMENT OF RESERVATION REQUESTS FOR SPORT FIELDS

Background :
The Parks and Recreation Department receives requests for use of sports fields within City limits. In order to provide a fair and proper structure, the Sports Alliance was created. City Council previously requested a presentation outlining how City staff handled and prioritized field requests. The presentation will speak to the history and purpose of the Sports Alliance, field usage priority, how fields are allocated, economic impact, field inventory, facility usage report and participation report.

Recommended Action :
Presentation and discussion.

City of Palm Coast, Florida
Agenda Item

Agenda Date: 01/08/2019

Department	PLANNING	**Amount**	
Item Key	5802	**Account #**	

Subject ORDINANCE 2019-XX ANNEXATION OF 92+/- ACRE AREA GENERALLY LOCATED 1.3 MILES NORTH OF STATE ROAD 100 ON THE WESTSIDE AND EASTSIDE OF COLBERT LANE

Background: The property owners, Lighthouse Harbor, LLC, and Palm Coast Holdings, LLC have provided signed petitions for the annexation of an approximately 92+/- acres of vacant developable land generally located 1.3 miles north of State Road 100 on the westside and eastside of Colbert Lane.

The annexation of the subject area is being accomplished in accordance with Florida Statutes, Chapter 171. Consistent with F.S. Chapter 171, the character of the area to be annexed is:

- The property is reasonably compact, is not part of another incorporated municipality and will be used for urban purposes.
- The proposed annexation will not create an enclave.
- At least 60% of the property's boundaries are contiguous to the City's existing boundary.

Recommended Action:
Adopt Ordinance 2019-XX approving the annexation of 92+/- acres owned by Lighthouse Harbor, LLC and Palm Coast Holdings, LLC.

ORDINANCE 2019-_____
VOLUNTARY ANNEXATION
LIGHTHOUSE HARBOR LLC

AN ORDINANCE OF THE CITY OF PALM COAST, FLORIDA, ANNEXING BY VOLUNTARY PETITION PROPERTY LOCATED CONTIGUOUS TO THE CITY OF PALM COAST IN ACCORDANCE WITH THE VOLUNTARY ANNEXATION PROVISIONS OF SECTION 171.044, FLORIDA STATUTES; REDEFINING THE BOUNDARIES OF THE CITY OF PALM COAST TO INCLUDE A PORTION OF THE PROPERTIES OWNED BY LIGHTHOUSE HARBOR LLC AND PALM COAST HOLDINGS, INC. LOCATED GENERALLY 1.3 MILES NORTH OF STATE ROAD 100 ON THE WESTSIDE AND EASTSIDE OF COLBERT LANE; GENERALLY CONSISTING OF APPROXIMATELY 92 ACRES, AS MORE PARTICULARLY DESCRIBED HEREIN; PROVIDING FOR FINDINGS; REDEFINING THE CORPORATE LIMITS OF THE CITY OF PALM COAST, FLORIDA; PROVIDING FOR THE TAKING OF ADMINISTRATIVE ACTIONS; PROVIDING FOR SEVERABILITY, NON-CODIFICATION AND AN EFFECTIVE DATE.

WHEREAS, there has been filed with the City of Palm Coast, Florida, a petition containing the names of all of the property owners in the area described hereinafter requesting annexation to the corporate limits of the City of Palm Coast, Florida and requesting to be included therein; and

WHEREAS, the Property Appraiser of Flagler County, Florida, has certified that there are two property owners in the area to be annexed, and the City Council of the City of Palm Coast has determined that said property owners have signed a Petition for Annexation either directly or through their agents; and

WHEREAS, it has been determined that the property described hereinafter is reasonably compact and contiguous to the corporate areas of the City of Palm Coast, Florida, and it has further been determined that the annexation of said property will not result in the creation of any enclaves, and it is further determined that the property otherwise fully complies with the requirements of State law; and

WHEREAS, the City of Palm Coast, Florida, is in a position to provide municipal services for and to the property described herein, and the City Council of the City of Palm Coast, Florida, deems it in the best interest of the City to accept said petition and to annex said property; and

WHEREAS, the City Council of the City of Palm Coast, Florida, has taken all actions in accordance with the requirements and procedures mandated by State law; and

WHEREAS, the legal description and map included in this Ordinance as Exhibits "A" & "B" shows, describes and depicts the properties which are hereby annexed into the City of Palm Coast.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA:

SECTION 1. LEGISLATIVE AND ADMINISTRATIVE FINDINGS - ANNEXATION OF PROPERTY. The recitals set forth above in the "whereas clauses" are hereby adopted as legislative findings of the City Council of the City of Palm Coast. The property as described and depicted in Exhibit "A" & "B" attached hereto, situated in Flagler County, Florida, be and the same is hereby annexed to and made a part of the City of Palm Coast, Florida, pursuant to the voluntary annexation provisions of Section 171.044, Florida Statutes.

SECTION 2. EFFECT OF ANNEXATION. Upon this Ordinance becoming effective, the property owners and any and all residents on the property described herein shall be entitled to all the rights and privileges and immunities as are from time-to-time granted to residents and property owners of the City of Palm Coast, Florida, as further provided in Chapter 171, Florida Statutes, and shall further be subject to the responsibilities of residence or ownership as may from time to time be determined by the governing authority of the City of Palm Coast, Florida, and the provisions of said Chapter 171, Florida Statutes.

SECTION 3. ADMINISTRATIVE ACTIONS. This Ordinance shall be filed with the Clerk of Circuit Court (Land Records/Recording), the chief administrative officer of Flagler County (the County Manager) and with the Florida Department of State within seven (7) days after the adoption of this Ordinance.

SECTION 4. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance.

SECTION 5. NON-CODIFICATION. The provisions of this Ordinance shall not be codified, but the annexed property shall be incorporated and included in all appropriate maps of the City Limits of the City of Palm Coast.

SECTION 6. EFFECTIVE DATE. This Ordinance shall become effective immediately upon its passage and adoption.

APPROVED on first reading the 15th day of January 2019 at a public hearing.

ADOPTED on second reading after due public notice and hearing this _____ day of _____ 2019.

CITY OF PALM COAST, FLORIDA

_____
MILISSA HOLLAND, MAYOR

ATTEST:

_____
VIRGINIA A. SMITH, CITY CLERK

Approved as to form and legality

_____
William Reischmann Jr. Esq.
City Attorney

Exhibit A
ANNEXATION AREA - METES AND BOUNDS DESCRIPTION

PARCEL 518 (WEST OF COLBERT)
A PARCEL OF LAND LYING WITHIN GOVERNMENT SECTION 3, TOWNSHIP 12 SOUTH, RANGE 31 EAST, FLAGLER COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;
A POINT OF REFERENCE BEING THE SOUTHEAST CORNER OF SAID GOVERNMENT SECTION 3, THENCE NORTH 01° 13'06" WEST ALONG THE EAST LINE OF SECTION 3 A DISTANCE OF 2431.75 FEET, THENCE DEPARTING SAID EAST LINE OF SECTION 3 SOUTH 88° 46' 54" WEST A DISTANCE OF 178.83 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION, THENCE NORTH 62°22'17" WEST A DISTANCE OF 144.46 FEET, THENCE NORTH 44° 03'30" EAST A DISTANCE OF 145.36 FEET, THENCE NORTH 19°06'24" WEST A DISTANCE OF 261.31 FEET, THENCE NORTH 45°29'28" WEST A DISTANCE OF 718.28 FEET, THENCE NORTH 12°43'31" WEST A DISTANCE OF 300. 18 FEET, THENCE NORTH 57°42'47" WEST A DISTANCE OF 283.53 FEET, THENCE NORTH 29° 15'12" EAST A DISTANCE OF 219.88 FEET, THENCE NORTH 44°29'22" EAST A DISTANCE OF 990.73 FEET, THENCE NORTH 83°27'24" EAST A DISTANCE OF 220.37 FEET TO A POINT ON THE WEST LINE OF A PROPOSED 15' WIDE BIKE PATH RIGHT-OF-WAY SAID POINT BEING ON A CURVE, THENCE 1179. 75 FEET ALONG THE ARC OF A CURVE TO THE RIGHT (CONCAVE WESTERLY) HAVING A CENTRAL ANGLE OF 08°59'24", A RADIUS OF 7519.00 FEET, A CHORD BEARING OF SOUTH 01°44'21" EAST AND A CHORD DISTANCE OF 1178.54 FEET, THENCE DEPARTING SAID 15' RIGHT-OF-WAY NORTH 86°56'05" WEST ALONG THE BOUNDARY OF A STORM WATER RETENTION SITE FOR COLBERT LANE A DISTANCE OF 204.98 FEET TO A POINT OF CURVATURE, CONCAVE SOUTHEASTERLY, THENCE WESTERLY A DISTANCE OF 119.32 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 89°43'16", A RADIUS OF 76.20 FEET, A CHORD BEARING OF SOUTH 48°12'17" WEST AND A CHORD DISTANCE OF 107. 50 FEET TO A POINT OF REVERSE CURVATURE, CONCAVE WESTERLY, THENCE SOUTHERLY A DISTANCE OF 322.05 FEET ALONG THE ARC OF SAID CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 02°32'58", A RADIUS OF 7237.80 FEET, A CHORD BEARING OF SOUTH 04°37'08" WEST AND A CHORD DISTANCE OF 322.02 FEET TO A POINT OF REVERSE CURVATURE, CONCAVE NORTHEASTERLY, THENCE SOUTHEASTERLY A DISTANCE OF 119.32 FEET ALONG THE ARC OF SAID CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 89°43'16", A RADIUS OF 76.20 FEET, A CHORD BEARING OF SOUTH 38°58'01" EAST AND A CHORD DISTANCE OF 107.50 FEET TO A POINT OF TANGENCY, THENCE SOUTH 83°49'39" EAST A DISTANCE OF 204.98 FEET TO A POINT ON A NON-TANGENT CURVE, CONCAVE WESTERLY, THENCE SOUTHERLY A DISTANCE OF 225.28 FEET ALONG THE ARC OF SAID CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 01°43'00", A RADIUS OF 7519.00 FEET, A CHORD BEARING OF SOUTH 07°20'24" WEST AND A CHORD DISTANCE OF 225.28 FEET TO A POINT OF TANGENCY, THENCE SOUTH 08° 11'55" WEST ALONG THE WEST RIGHT-OF-WAY LINE OF SAID 15' WIDE BIKE PATH A DISTANCE OF 405.30 FEET TO THE POINT OF BEGINNING.
EXCEPT 15' BIKE PATH RIGHT-OF-WAY RECORDED IN OFFICIAL RECORDS BOOK 474, PAGES 820 THROUGH 823, OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA, OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA,
PARCEL CONTAINING 25.9199 ACRES MORE OR LESS.
BEARINGS REFER TO THE MERCATOR GRID SYSTEM OF THE EAST ZONE OF FLORIDA AND LOCALLY REFERENCED TO THE EAST LINE OF THE SOUTHEAST QUARTER (1/4) OF GOVERNMENT SECTION 3, TOWNSHIP 12 SOUTH, RANGE 31 EAST, BEING NORTH 01° 13'06" WEST.

AND
GRAND HAVEN MARINA PARCEL 1: LOTS I, 2, 3, 4, 5, II, 12, 13 AND 17, TOGETHER WITH PART OF LOT 6, PALM COAST INTRACOASTAL INDUSTRIAL PARK, PHASE 1, AS RECORDED IN MAP BOOK 29, PAGES 33 AND 34, AS PARTIALLY VACATED BY OFFICIAL RECORDS BOOK 1203 PAGE 170, OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA, TOGETHER WITH A PART OF SECTION 2, TOWNSHIP 12 SOUTH, RANGE 31, EAST OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
FOR A POINT OF REFERENCE, COMMENCE AT THE SOUTHWEST CORNER OF PALM COAST PLANTATION PUD UNIT 2, AS RECORDED IN MAP BOOK 33, PAGES 54-61 OF SAID PUBLIC RECORDS SAID POINT LYING ON THE EASTERLY RIGHT-OF-WAY LINE OF COLBERT LANE (A 200.00 FOOT

RIGHT-OF-WAY AS NOW ESTABLISHED); THENCE SOUTH 18'24'09" EAST, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 1,040.94 FEET TO THE POINT OF CURVE OF A CURVE, CONCAVE WESTERLY, HAVING A RADIUS OF 7,734.00 FEET; THENCE SOUTHERLY, ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 1,415.84 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 13°09'29" EAST AND A CHORD DISTANCE 1,413.86 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID RIGHT-OF-WAY LINE NORTH 89°10'59" EAST, A DISTANCE OF 1,717.09 FEET; THENCE SOUTH 25°14'03" EAST, A DISTANCE OF 156.53 FEET; THENCE SOUTH 00°I6'47" EAST, A DISTANCE OF 98.64 FEET TO A POINT ON THE MEAN HIGH WATER LINE OF THE LEHIGH CANAL; THENCE SOUTH 00°16'47" EAST, ALONG SAID MEAN HIGH WATER LINE, A DISTANCE OF 82.17 FEET; THENCE SOUTH 20°18'43" EAST, CONTINUING ALONG SAID MEAN HIGH WATER LINE, A DISTANCE OF 105.38 FEET; THENCE NORTH 89°59'40" EAST, CONTINUING ALONG SAID MEAN HIGH WATER LINE, A DISTANCE OF 77.21 FEET; THENCE NORTH 78°58'54" EAST, CONTINUING ALONG SAID MEAN HIGH WATER LINE, A DISTANCE OF 46.21 FEET; THENCE NORTH 00°32'52" EAST, CONTINUING ALONG SAID MEAN HIGH WATER LINE, A DISTANCE OF 30.02 FEET; THENCE NORTH 89°11'31" EAST, CONTINUING ALONG SAID MEAN HIGH WATERLINE, A DISTANCE OF 135.05 FEET; THENCE DEPARTING SAID MEAN HIGH WATER LINE SOUTH 00°24'21" EAST, A DISTANCE OF 198.17 FEET; THENCE SOUTH 59°02'59" WEST, A DISTANCE 227.35 FEET TO THE NORTHEAST CORNER OF SAID LOT I, PALM COAST INTRACOASTAL INDUSTRIAL PARK, PHASE I; THENCE SOUTH 00°46'14" EAST, ALONG THE EASTERLY LINE OF SAID LOTS 1,2 AND 3, A DISTANCE OF 776.70 FEET; THENCE SOUTH 46°38'27" EAST, A DISTANCE OF 161.39 FEET TO A POINT ON THE NORTHERLY LINE OF THE SEA RAY INDUSTRIES ENTRANCE DRIVE, ALSO BEING A POINT ON A CURVE, CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 630.00 FEET; THENCE SOUTHWESTERLY, ALONG SAID DRIVE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 107.30 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 38"28'46" WEST AND A CHORD DISTANCE OF 107.17 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 33°35'53" WEST, CONTINUING ALONG SAID DRIVE, A DISTANCE OF 256.96 FEET TO THE POINT OF CURVE OF A CURVE, CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 620.00 FEET; THENCE SOUTHWESTERLY, CONTINUING ALONG SAID DRIVE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 364.83 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 50"21'19" WEST AND A CHORD DISTANCE OF 359.59 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 25.00 FEET; THENCE NORTHWESTERLY, ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 39.43 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 67°35'40" WEST AND A CHORD DISTANCE OF 35.47 FEET TO THE POINT OF TANGENCY OF SAID CURVE AND A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF ROBERTS ROAD, A VARIABLE RIGHT-OF-WAY AS NOW ESTABLISHED; THENCE NORTH 22"24'07" WEST, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 245.11 FEET TO THE POINT OF CURVE OF A CURVE, CONCAVE EASTERLY, HAVING A RADIUS OF 209.47 FEET; THENCE NORTHERLY, ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 159.72 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 00°33'31" WEST AND A CHORD DISTANCE OF 155.88 FEET TO THE POINT OF TANGENCY OF SAID CURVE, ALSO BEING A POINT OF THE EASTERLY RIGHT-OFWAY LINE OF DOCKSIDE DRIVE, A VARIABLE RIGHT-OF-WAY AS NOW ESTABLISHED; THENCE NORTH 21°17'06" EAST, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 559.96 FEET TO THE POINT OF CURVE, OF A CURVE, CONCAVE WESTERLY, HAVING A RADIUS OF 790.00 FEET; THENCE NORTHERLY, CONTINUING ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 203.45 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 13°54'24" EAST AND A CHORD DISTANCE OF 202.88 FEET TO A POINT ON SAID CURVE; THENCE DEPARTING SAID EASTERLY RIGHT-OFWAY LINE SOUTH 89'14'50" WEST, A DISTANCE OF 80.73 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF SAID DOCKSIDE DRIVE, SAID POINT LYING ON A CURVE, CONCAVE WESTERLY, HAVING A RADIUS OF 710.00 FEET; THENCE SOUTHERLY, ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 172.61 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 14'19'04" WEST, AND A CHORD DISTANCE OF 172.18 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 21'17'06" WEST, CONTINUING ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 175.00 FEET TO THE MOST EASTERLY CORNER OF LOT 16 OF SAID PALM COAST INTRACOASTAL INDUSTRIAL PARK, PHASE 1; THENCE NORTH 40'05'55" WEST, LEAVING SAID RIGHT-OF-WAY LINE AND ALONG THE NORTHEAST LINE OF SAID LOT 16, A DISTANCE OF 153.95

FEET TO THE SOUTHEAST CORNER OF LOT 14 OF SAID PALM COAST INTRACOASTAL INDUSTRIAL PARK, PHASE I; THENCE NORTH 20'25'47" WEST, ALONG THE NORTHEASTERLY LINE OF SAID LOT 14, A DISTANCE OF 222.41 FEET; THENCE NORTH 68'56'49" WEST, CONTINUING ALONG SAID LOT 14, A DISTANCE OF 62.18 FEET; THENCE SOUTH 62'36'53" WEST, CONTINUING ALONG SAID LOT 14, A DISTANCE OF 76.11 FEET TO A POINT LYING ON A CURVE, CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 110.00 FEET; THENCE SOUTHWESTERLY CONTINUING ALONG SAID LOT 14 AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 77.84 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 59'20'22" WEST AND A CHORD DISTANCE OF 76.23 FEET TO A POINT ON SAID CURVE; THENCE SOUTH 67'50'39" WEST, CONTINUING ALONG SAID LOT I4, A DISTANCE OF 181.56 FEET; THENCE SOUTH 37'54'38" WEST, CONTINUING ALONG SAID LOT 14, A DISTANCE OF 12.60 FEET TO A POINT LYING ON A CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 310.00 FEET; THENCE SOUTHEASTERLY, ALONG THE WESTERLY LINE OF SAID LOT 14 AND LOT 15 OF SAID PLAT, AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 389.09 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 16'07'51" EAST AND A CHORD DISTANCE OF 364.05 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 40.00 FEET; THENCE SOUTHEASTERLY, CONTINUING ALONG SAID LOT 15 AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 54.70 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF SOUTH 19'21'15" EAST AND A CHORD DISTANCE OF 50.54 FEET TO A POINT OF CUSP, SAID POINT LYING ON THE AFOREMENTIONED NORTHEASTERLY RIGHT-OF-WAY LINE OF ROBERTS ROAD. SAID POINT ALSO LYING ON A CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 1,063.00 FEET; THENCE NORTHWESTERLY, ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 541.87 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 73'08'13" WEST AND A CHORD DISTANCE OF 536.02 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 87'44'26" WEST CONTINUING ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 407.63 FEET TO THE POINT OF CURVE OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 50.00 FEET; THENCE NORTHWESTERLY, CONTINUING ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 77.96 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 43'04'18" WEST AND A CHORD DISTANCE OF 70.30 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE AND A POINT ON THE AFORESAID EASTERLY RIGHT-OF-WAY LINE OF COLBERT LANE, SAID CURVE HAVING A RADIUS OF 7,734.00 FEET; THENCE NORTHERLY, ALONG SAID RIGHT-OF-WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 1,283.79 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING OF NORTH 03'09'30" WEST AND A CHORD DISTANCE OF 1,282.32 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS OVER, ON, UPON AND ACROSS THE EASEMENT PROPERTY AS DESCRIBED IN THE NON-EXCLUSIVE ACCESS EASEMENT AGREEMENT BY THE SCHOOL BOARD OF FLAGLER COUNTY FOR THE BENEFIT OF FLAGLER MARINE CENTER, LLC, A FLORIDA LIMITED LIABILITY COMPANY RECORDED IN O.R. BOOK 1166, PAGE 1002, OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA.

AND
TOGETHER WITH A NON-EXCLUSIVE EASEMENT OVER THE EASEMENT PROPERTY AS DESCRIBED IN THAT CERTAIN WARRANTY DEED RECORDED IN O.R. BOOK 1646, PAGE 89 OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA.

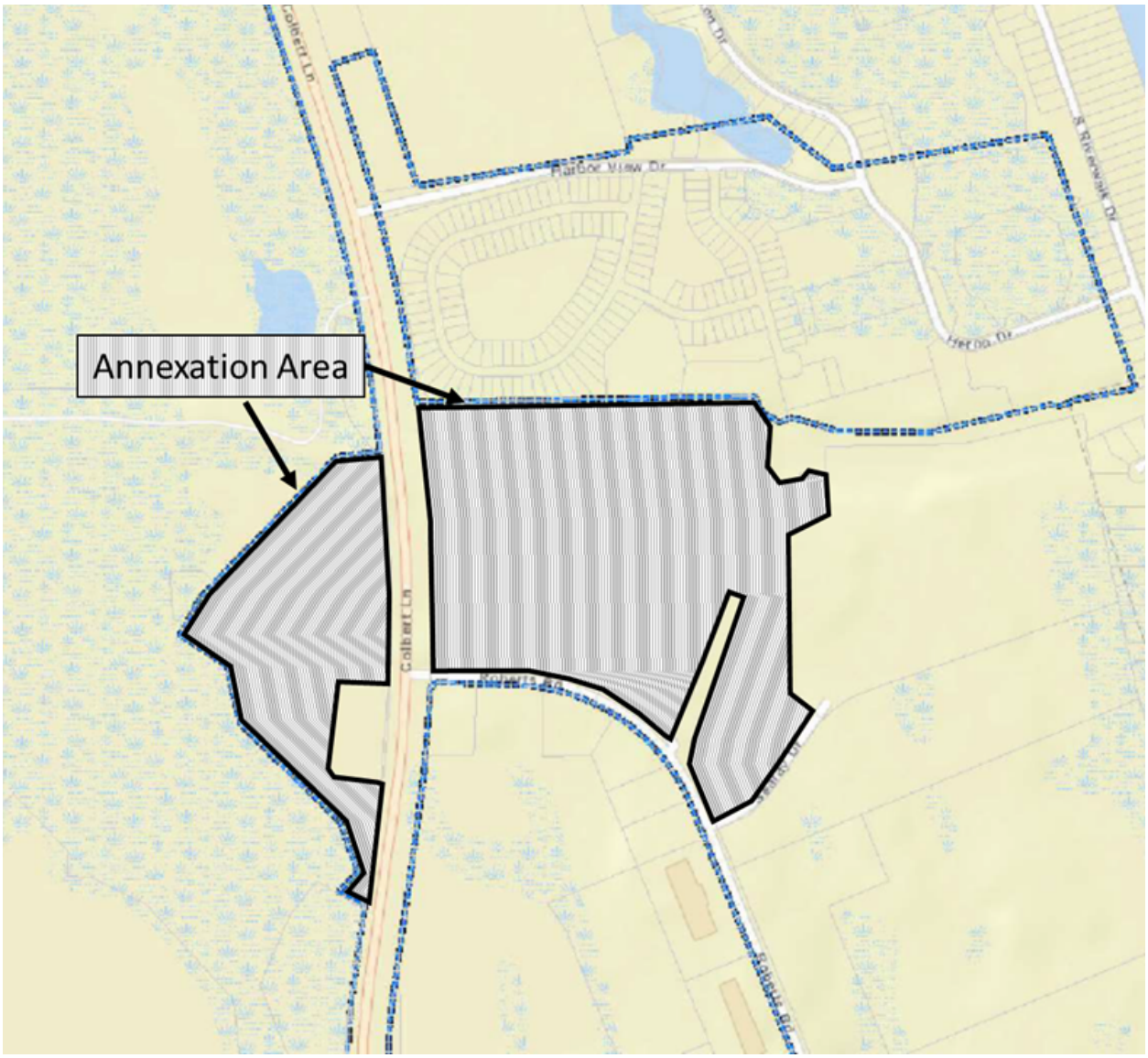
AND
LOTS 14, 15 & 16, PALM COAST INTRACOASTAL INDUSTRIAL PARK, PHASE I, A SUBDIVISION AS RECORDED IN MAP BOOK 29, PAGE 34, OF THE PUBLIC RECORDS OF FLAGLER COUNTY, FLORIDA, TOGETIIER WITH THAT PORTION OF LEHIGH COURT VACATED BY RESOLUTION 2005--07, DA TED 01/18/2005 AND THAT PORTION OF DOCKSIDE DRIVE VACATED BY RESOLUTION 2005-07, DATED 01/18/2005, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

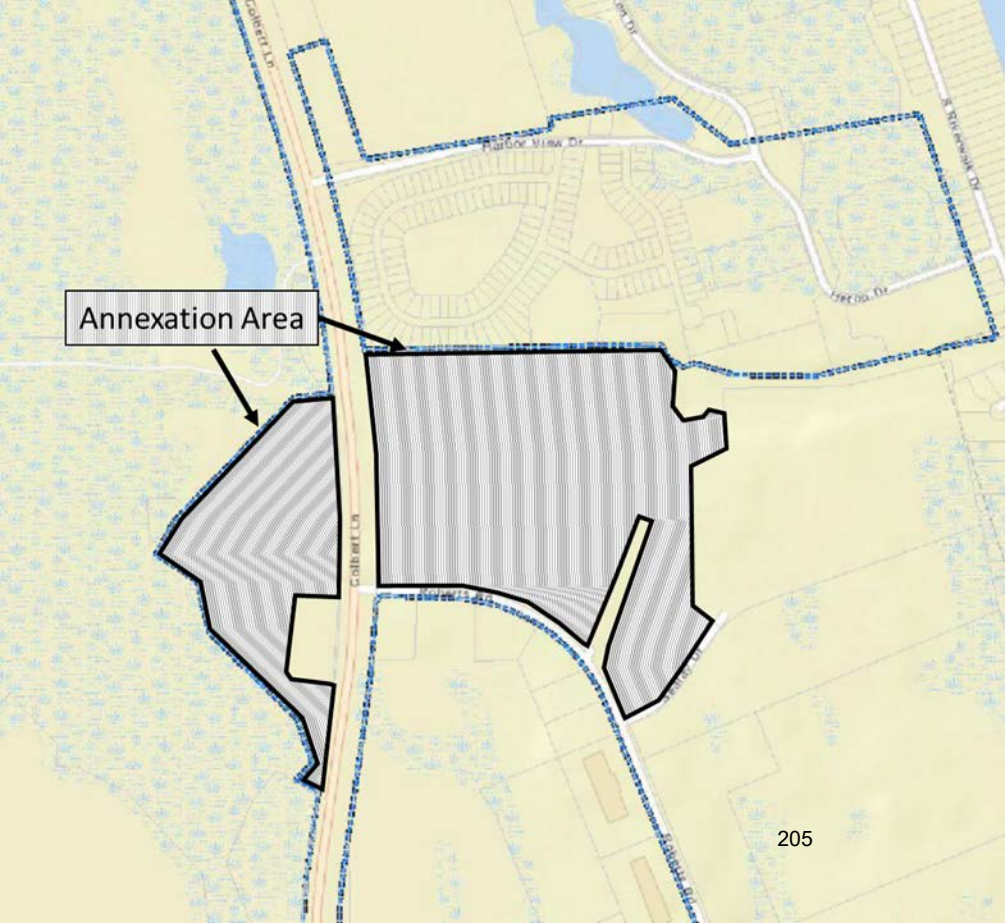
COMMENCE AT THE NORTHEAST CORNER OF LOT 16, PALM COAST INTRACOASTAI. INDUSTRIAL PARK, PHASE I, AS THE POINT Of BEGINNING; THENCE S40°05'55"E ALONG THE EAST LINE OF SAID

LOT 16, A DISTANCE OF 153.95' TO THE WESTERLY RIGHT-OF-WAY OF DOCKSlDE DRIVE (VARIABLE R/W), NOW VACATED; THENCE S68°31'16"E A DISTANCE OF 40.00' TO THE CENTERUNE OF DOCKSIDE DRIVE (VARIABLE R/W); THENCE ALONG SAID CENTERLINE S21°17'06"W A DISTANCE OF 195.53'; THENCE S21°20'59"W A DISTANCE OF 179.99', TO A POINT OF CURVATURE,SAID CURVE HAVING A CENTRAL ANGLE OF 28°26'35", A RADIUS OF 189.94', A DISTANCE OF 94.29', CHORD BEARING OF S35°30'34"W AND CHORD DISTANCE OF 93.33', TO A NON-TANGENT INTERSECTION WITH A CURVE ON THE NORTHERLY RIGHT-OF-WAY OF ROBERTS ROAD (80' R/W), THENCE ALONG SAID RIGHT-OF-WAY. FOLLOWING A CURVE, SAID CURVE HAVING A CENTRAL ANGLE OF 05°59'12", A RADIUS OF 1063.00', A DISTANCE Of 111.07', A CHORD BEARING OF N41°53'07"W AND CHORD DISTANCE OF 111.02', THENCE CONTINUING ALONG THE RIGHT-OF-WAY OF ROBERTS ROAD (80' R/W), FOLLOWING A CURVE, SAID CURVE HAVING A CENTRAL ANGLE OF 13°39'18", A RADIUS OF 1063.00'. A DISTANCE OF 253.34', A CHORD BEARING OF N51°41'01"W AND CHORD DISTANCE OF 252.74'; THENCE CONTINUING ALONG THE RIGHT-OF-WAY OF ROBERTS ROAD (80' R/W), FOLLOWING A CURVE, SAID CURVE HAVING A CENTRAL ANGLE OF 03°28'39", A RADIUS OF 1063.00', A DISTANCE OF 64.52'. A CHORD BEARING OF N60° 16'11"W AND A CHORD DISTANCE OF 64.51', TO A NON-TANGENT POINT OF INTERSECTlON OF THE NORTHERLY RIGHT-OF-WAY OF ROBERTS ROAD (80' R/W) WITH THE CENTERLINE OF LEHIGH COURT (60' R/W), NOW VACATED; THENCE ALONG THE CENTERLINE OF LEHIGH COURT (60' R/W), NOW VACATED. FOLLOWING A CURVE, SAID CURVE HAVING A CENTRAL ANGLE OF 77°40'30", A RADIUS OF 280.00', A DISTANCE OF 379.59', A CHORD BEARING OF N13°15'04"W AND A CHORD DISTANCE OF 351.18'; THENCE N37°54'41"E ALONG A RADIAL EXTENSION A DISTANCE OF 30.00' TO A POINT ON THE EASTERLY RIGHT-OF-WAY OF LEHIGH COURT (60' R/W), SAID POINT BEING THE NORTHWEST CORNER OF LOT 14, PALM COAST lNTRACOASTAL INDUSTRIAL PARK. PHASE I; THENCE DEPARTING SAID RIGHT-OF-WAY OF LEHIGH COURT (60' R/W), NOW VACATED, N37°54'38"E A DISTANCE OF 12.60' ALONG THE NORTHERLY BOUNDARY LINE OF LOT 14; THENCE N67°50'39"E A DISTANCE OF 181.56' TO A NON-TANGENT INTERSECTION IN THE NORTH LINE OF LOT 14; THENCE ALONG A CURVE HAVING A CENTRAL ANGLE OF 40°32'48", A RADIUS OF 110.00', A DISTANCE OF 77.84', A CHORD BEARING OF N59°20'22"E AND CHORD DISTANCE OF 76.23' TO A NON-TANGENT INTERSECTION IN THE NORTH LINE OF LOT 14; THENCE N62°36'53"E A DISTANCE OF 76.11': THENCE S68°56'49"E A DISTANCE OF 62.18'; THENCE S20°25'47"E A DISTANCE OF 222.41', TO THE POINT OF BEGINNING.

LESS AND EXCEPT ANY PORTION OF THE ABOVE DESCRIBED PROPERTY LYING WITHIN THAT PORTION OF LEHIGH COURT VACATED BY RESOLUTION 2005-07, DATED 01/18/2005.

EXHIBIT "B"
DEPICTION OF ANNEXATION AREA




Annexation Area
Colbert Ln
Harbor View Dr

City of Palm Coast, Florida
Agenda Item

Agenda Date: 01/08/2019

Department	PLANNING	**Amount**	
Item Key	5801	**Account #**	

Subject RESOLUTION 2019-XX APPROVING AN AGREEMENT & PETITION FOR VOLUNTARY ANNEXATION OF 89+/- ACRES OWNED BY LIGHTHOUSE HARBOR, LLC

Background: Lighthouse Harbor LLC, owner of 89+/- acres located 1.3 miles north of State Road 100 on the westside and eastside of Colbert Lane is requesting annexation into the City of Palm Coast. The attached Agreement & Petition for Voluntary Annexation serves as Lighthouse Harbor LLC's voluntary petition to annex into the City of Palm Coast. This agreement outlines the provision of public facilities, as well as the conceptual land use classifications and zoning designations.

Recommended Action:
Adopt Resolution 2019-XX approving an agreement and petition for Voluntary Annexation of 89+/- acres owned by Lighthouse Harbor, LLC.

RESOLUTION 2019 - ____
LIGHTHOUSE HARBOR, LLC
AGREEMENT & PETITION FOR VOLUNTARY ANNEXATION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING THE AGREEMENT & PETITION FOR VOLUNTARY ANNEXATION WITH LIGHTHOUSE HARBOR, LLC; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE SAID AGREEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Lighthouse Harbor, LLC, is requesting annexation into the City of Palm Coast; and

WHEREAS, the City of Palm Coast desires to approve the Agreement & Petition for Voluntary Annexation; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF THE AGREEMENT FOR AGREEMENT & PETITION FOR VOLUNTARY ANNEXATION. The City Council of the City of Palm Coast hereby approves the terms and conditions of the Agreement & Petition for Voluntary Annexation with Lighthouse Harbor, LLC, as attached hereto and incorporated herein as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Resolution are severable, and if any phrase, clause, sentence, paragraph or section of this Resolution shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon its passage and adoption.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit "A" – Agreement & Petition for Voluntary Annexation

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

Prepared by:
Michael D. Chiumento III, Esq.
Chiumento Dwyer Hertel Grant & Kistemaker, P.L.
145 City Place, Suite 301
Palm Coast, Florida 32164

AGREEMENT AND PETITION FOR VOLUNTARY ANNEXATION

THIS AGREEMENT AND PETITION FOR VOLUNTARY ANNEXATION ("Agreement") is made and entered into by and between the **City of Palm Coast**, a municipal corporation organized and existing under the laws of the State of Florida (hereinafter referred to as the "City"), whose address is 160 Lake Avenue, Palm Coast, Florida 32164 and **LIGHTHOUSE HARBOR, LLC, a Florida limited liability company, c/o James T. Cullis, Manager**, having an address of 2298 Colbert Lane, Palm Coast, FL 32137 (hereinafter referred to as the "Owner") this _____ day of _____, 2019, (the "Effective Date").

W I T N E S S E T H

WHEREAS, the Owner owns certain real property located in Flagler County, Florida, consisting of approximately 89 acres, which real property is more particularly described in **Exhibit "A"** attached hereto (hereinafter referred to as the Property"); and

WHEREAS, the Property is designated Mixed Use: High Intensity and Mixed Use: Low Intensity on the Future Land Use Map of the Flagler County Comprehensive Plan; and

WHEREAS, the Property is zoned PUD as provided for in the Land Development Code of Flagler County; and

WHEREAS, under Section 171.044(1), *Florida Statutes*, owners of property in an unincorporated area of a county that is contiguous to a municipality and reasonably compact may petition the municipality for annexation; and

WHEREAS, the Property is reasonably compact and contiguous and will not result in the creation of any enclaves as defined in Section 171.031(13), *Florida Statutes*, and will otherwise satisfy all requirements for municipal annexation set forth in Chapter 171, *Florida Statutes*; and

WHEREAS, Section 171.062(1), *Florida Statutes*, provides as follows:

> An area annexed to a municipality shall be subject to all laws, ordinances and regulations in force in that municipality and shall be entitled to the same privileges and benefits as other parts of that municipality upon the effective date of the annexation.

WHEREAS, Section 166.021(9), (b) and (c), *Florida Statutes*, specifically states, with regard to economic development, that:

> (b) The governing body of a municipality may expend public funds to attract and retain business enterprises, and the use of public funds toward the achievement of such economic

development goals constitutes a public purpose. The provisions of this chapter which confer powers and duties on the governing body of a municipality, including any powers not specifically prohibited by law which can be exercised by the governing body of a municipality, shall be liberally construed in order to effectively carry out the purposes of this subsection.

and

(c) For the purposes of this subsection, it constitutes a public purpose to expend public funds for economic development activities, including, but not limited to, developing or improving local infrastructure, issuing bonds to finance or refinance the cost of capital projects for industrial or manufacturing plants, leasing or conveying real property, and making grants to private enterprises for the expansion of businesses existing in the community or the attraction of new businesses to the community.

and

WHEREAS, the City desires to ensure that the development of the Property and adjacent City land uses are compatible with surrounding land uses as represented on the City's Zoning Map and FLUM, that adequate public facilities exist or will be placed concurrent with the impact of such development in the manner required by applicable law, and that such development and the City's Comprehensive Plan are or will be consistent; and

WHEREAS, the City and the Owner shall implement land use densities and intensities that are compatible with the beneficial economic development of the City and the appropriate development of the Property for its highest and best use, taking into account best management practices of land planning and business principles, and in a manner compatible with the planned and projected reasonable uses for its adjacent environs; and

WHEREAS, the City and the Owner agree that development of the Property in the manner described herein can and shall be appropriately timed to avoid urban sprawl and the inefficient use of facilities, public resources and infrastructure; and

WHEREAS, the City and the Owner agree that adequate public facilities and services shall be available at the time of development, in accordance with applicable laws regarding concurrency; and

WHEREAS, the City desires to provide water and wastewater services to the Property; and

WHEREAS, the parties agree that all development of the Property will be accomplished in a manner which protects and preserves important and valuable natural and cultural resources; and

WHEREAS, the purpose of this Agreement is to set forth the understandings and agreements of the parties with respect to the foregoing, and other matters as set forth herein; and

WHEREAS, this Agreement is authorized by, permitted by, and consistent with the provisions of the City's Home Rule Charter; the City's Comprehensive Plan, Chapter 163, *Florida Statutes*; Chapter 166, *Florida Statutes*; the State Comprehensive Plan (Chapter 187, *Florida Statutes*); Article VIII, Section 2(b), *Constitution of the State of Florida*, Chapter 171, *Florida Statutes*; and other applicable law; and serves and advances a vital public purpose; and

WHEREAS, the City has found and determined that the City's interest will be best served by annexing the Property into its municipal boundaries and by entering into this Agreement to ensure that the proposed development of the Property is in accordance with the City's Comprehensive Plan and land development regulations; and

WHEREAS, Owner seeks to obtain for the Property the benefits and privileges of inclusion within the boundaries of the City, which includes the designation of the Property as Mixed Use on the City's Future Land Use Map (the "FLUM Map Amendment") and the incorporation of appropriate policies into the City's Comprehensive Plan to allow the most appropriate development of the Property (collectively the "Comprehensive Plan Amendment"), and the provision of all services, facilities, and utilities as are available to all residents of the City; and

WHEREAS, upon the Parties' compliance with their respective obligations under this Agreement, the development of the Property will be consistent with the City's Comprehensive Plan and land development regulations.

NOW, THEREFORE, for and in consideration of the Owner's request to the City to annex the Property pursuant to Section 171.044, *Florida Statutes*, the mutual covenants and agreements contained herein, and other good and valuable consideration each to the other provided, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

Section 1. Recitals. The above recitals are adopted as findings of the City of Palm Coast City Council. Moreover, said recitals are true and correct, are incorporated into this Agreement by reference thereto, and form a material part of this Agreement upon which the parties have relied, including, but not limited to, the assertions that the Owner owns the subject Property and is empowered to enter into this Agreement and make binding commitments.

Section 2. Annexation. This Agreement, upon execution by the Owner, shall serve as and constitute the Owner's voluntary petition to annex the Property into the City pursuant to Section 171.044, *Florida Statutes*.

Section 3. No Annexation Fees. It is understood and agreed that no fees, costs or expenses will be charged to or become due from the Owner to the City or to any other governmental authority, private individual or entity on account of or in connection with the City's review and processing of the annexation petition or the annexation of the Property into the corporate limits of the City; provided, however, that the Owner shall pay its own attorney's fees and consulting fees.

Section 4. Development Conditions and Public Facilities.

(A) The City and the Owner agree that the City shall provide water and sanitary sewer services to the Property, subject to the provisions of the Settlement Agreement with Flagler County recorded on April 11, 2007 at OR Book 1560, Page 471 of the Public Records of Flagler County, Florida, and pursuant to separate utility agreements between the City and the Owner. The City agrees that it shall design, permit and construct the necessary improvements to provide water services to the Property in a timely manner. This Agreement shall not be construed to provide specific service to any given parcel until all regulatory approvals are received; construction plans have been approved by the City; a Utility Service Agreement/Permit to Connect has been fully executed by Owner; and all applicable fees have been paid to the City.

(B) Solid waste collection services are available to serve the demands generated by the Property, and may be provided as they are to any other owner of City property, and will be available concurrent with the impacts of the development of the Property. If reasonably possible, the Owner shall utilize the City's solid waste collection franchisee.

(C) Surface water and stormwater issues relating to the development of the Property and the impacts of surface water and stormwater shall be addressed in accordance with applicable State law and any other applicable regulatory requirements.

(D) The City will provide fire (having a first response agreement with Flagler County as part of its service network), police (through the Flagler County Sheriff), and EMS facilities, equipment and services necessary to serve the Property. All such public services will be available to support the development of the Property.

(E) Transportation issues and transportation impacts shall be addressed in accordance with the City's concurrency management system, and Chapter 163, *Florida Statutes*.

(F) Permitting and Permit Review. As provided herein, the Parties recognize and agree that certain provisions of this Agreement will require the City and its boards, departments or agencies, acting in their governmental capacity, to consider certain changes in the City Comprehensive Plan or other applicable City codes, plans or regulations, as well as to consider other governmental actions as set forth in this Agreement. All such considerations and actions shall be undertaken in accordance with established requirements of State statute and City ordinances, including notice and hearing requirements, in the exercise of the City's jurisdiction under its police power. Nothing in this Agreement is intended to limit or restrict the powers and responsibilities of the City in acting on applications for Comprehensive Plan, rezoning requests and applications for other development. The Parties further recognize and agree that these proceedings will be conducted openly, fully, freely, and fairly in accordance with law, and with both procedural and substantive due process to be accorded the applicant and any member of the public. Nothing contained in this Agreement shall entitle Owner to compel the City to take such actions, except to timely process such applications.

Section 5. General Obligations.

(A) The City will evaluate the suitability of the site for development of a mixed-use community consistent with the City's Comprehensive Plan and land development regulations, and generally depicted in **Exhibit B**, which includes residential uses (single family and multifamily), retail, and marina. This Agreement does not constitute a land use approval of any kind.

(B) The parties acknowledge that the City cannot contract to approve specific Comprehensive Plan amendments and rezoning requests; provided, however, that this provision shall not serve to otherwise limit the terms of this Agreement. The City's only obligation with respect to the Comprehensive Plan amendment and subsequent request(s) to rezone all properties encumbered with this annexation agreement, is to process the applications, and make decisions to approve or deny the applications based upon the legal standards that govern actions by local governments when considering amendments to comprehensive land use plans; provided, however, that the City acknowledges the provisions of this Agreement as they relate to the Property.

(C) The City agrees that all concurrency requirements related to the Property will be reviewed in accordance with the City's Concurrency Management System, and Chapter 163, *Florida Statutes*, and other applicable regulatory requirements. Notwithstanding, the City shall honor any vested concurrency requirements the Owner presently has through the County.

(D) The City agrees that offsite traffic improvements shall be determined for the development of the Property pursuant to process in Chapter 163, *Florida Statutes*, and in the City's land development regulations, and to provide safe and adequate ingress and egress to the Property.

(E) The Owner will submit to the City such applications and such other planning and engineering documentation and supporting data and analysis required to support the annexation and the FLUM amendment, and subsequent request(s) to rezone all properties encumbered with this annexation agreement, and shall comply with all procedures as adopted by the City and as may be set forth in the City's land development regulations as are normally and customarily required for any Owner-requested proposed amendments to the City's Comprehensive Plan, rezoning proposals, and applications for any and all other development approvals, orders and permits. The City shall file the Comprehensive Plan Amendment to incorporate the Property into the City's Comprehensive Plan as called for in this Agreement. The Owner acknowledges and agrees that the City shall not be responsible for any fees, costs, expenses or other financial expenses resulting to the Owner if the Owner's applications are denied in accordance with the provisions of the City's land development regulations and State law.

(F) The City agrees that, if requested by the Owner or its affiliates or designees, it will promptly process for City Council consideration annexation of any other lands of Owner or its affiliates consistent with the terms of this Agreement and State law.

(G) The City recognizes that the development of the Property will occur over time and may be developed in phases, and that various portions of the Property, which are not required by Owner for active development, may continue in its current use. Nothing in this Agreement requires the Owner to develop the Property, and the

parties recognize that the Owner may determine to continue its existing uses on all or part of the Property for an extended period of time.

Section 6. Duty to Cooperate/Comprehensive Plan Amendment, Etc.

(A) The Owner has obtained certain vested development rights and entitlements on the Property as provided in **Flagler County Ordinance 2008-35 recorded on September 27, 2013 at OR Book 1967, Page 1108 of the Public Records of Flagler County, Florida** ("Current Entitlements'). The City shall honor the Current Entitlements until such time the City acts on a Comprehensive Plan Amendment, rezoning request or other application for development of the Property. This good faith cooperation by the City and the Owner shall extend to the acquisition by the Owner of all applicable necessary local, State and Federal permits, development orders, licenses, easements and other approvals or rights in connection with the Current Entitlements; provided, however, that the Owner recognizes the City's continued ability to charge Owner application or review fees for permits or approvals issued by the City (other than annexation) based on the City's adopted fee schedule.

(B) The City shall, at no cost to the Owner, develop the Comprehensive Plan Amendment contemplated by this Agreement, and the Owner will cooperate with the City by providing the City with all requested data and analysis to include the annexed property in the City Comprehensive Plan. The City will promptly consider the proposed Comprehensive Plan Amendment.

Section 7. Limitation of Funding Obligations. Notwithstanding anything to the contrary stated elsewhere in this Agreement, the City shall have no monetary obligation to Owner under this Agreement other than to provide water and sewer services to the Property.

Section 8. Further Assurances. In addition to the acts recited in or set forth in this Agreement, the City and the Owner agree to perform or cause to be performed, in a timely manner, any and all further acts as may be reasonably necessary to implement the provisions of this Agreement, including, but not limited to, the execution and recordation of further instruments; provided, however, that the City's obligations shall be subject to such limitations of law as may be applicable to municipalities.

Section 9. Limitation of Remedies. The parties hereby agree not to pursue an award of monetary damages for a breach of or non-performance by the other party under this Agreement. The only remedies of the other party available against the non-performing party under this Agreement shall be either to withhold further performance under the Agreement until the non-performing party or parties cure the non-performance or to seek a court order from the Circuit Court of the Seventh Judicial Circuit in and for Flagler County, Florida, requiring the non-performing party to fulfill its obligations under the Agreement. However, nothing in this Agreement shall be construed to limit the right of either the Owner or the City to pursue any and all available remedies, if any, under non-tort or constitutional law related to a party's non-performance under the Agreement. The City shall not be deemed to have waived sovereign immunity in any manner or respect, provided this provision shall not limit the City's contractual obligations under this Agreement.

Section 10. Disclaimer of Third Party Beneficiaries. This Agreement is solely for the benefit of the formal parties to this Agreement, and no right or cause of action shall accrue by reason hereof to or for the benefit of any third party not a formal party hereto. Nothing in this Agreement, expressed or implied, is intended or shall be construed to confer upon or give any person or entity any right, remedy or claim under or by reason of this Agreement or any provisions or conditions hereof, other than the parties hereto and their respective designated representatives, successors and assigns.

Section 11. Effectiveness of Agreement. This Agreement shall serve as the Owner's petition to annex the Property pursuant to Section 171.044, *Florida Statutes*, which may be relied on by the City in accordance with the terms of this Agreement upon the Owner's execution of the Agreement, but shall become effective as an agreement between the Owner and the City upon its being duly executed by the City.

Section 12. Time of the Essence. Time is of the essence of the lawful performance of the duties and obligations contained in this Agreement. The parties covenant and agree that they shall diligently and expeditiously pursue their respective obligations set forth in this Agreement.

Section 13. Successors and Assigns. This Agreement and the terms and conditions hereof shall be binding upon and inure to the benefit of the City and the Owner and their respective successors in interest.

Section 14. Applicable Law. This Agreement and the provisions contained herein shall be construed, controlled and interpreted according to the laws of the State of Florida.

Section 15. Binding Effect. Each party hereto represents to the other that it has undertaken all necessary actions to execute this Agreement, and that it has the legal authority to enter into this Agreement and to undertake all obligations imposed on it.

Section 16. Recording. Upon full execution of this Agreement, the City shall record this Agreement in the Public Records of Flagler County, Florida, at the sole cost and expense of the Owner.

Section 17. Choice of Law and Venue. Florida law shall govern the interpretation and enforcement of this Agreement. In any action or proceeding required to enforce or interpret the terms of this Agreement, venue shall be in Flagler County, Florida.

Section 18. Effect on Change in Law. If State or Federal laws are enacted after execution of this Agreement which are applicable to and preclude the parties' compliance with the terms of this Agreement, this Agreement shall be modified or revoked as is necessary to comply with the relevant State or Federal laws and the intent of the parties.

Section 19. Construction or Interpretation of the Agreement. This Agreement is the result of bona fide arm's length negotiations between the City and the Owner and all parties have contributed substantially and materially to the preparation of the Agreement. Accordingly, this

Agreement shall not be construed or interpreted more strictly against any one party than against any other party.

Section 20. Permits, Conditions, Terms or Restrictions. The failure of this Agreement to address a particular permit, condition, term or restriction existing at the time of execution of this Agreement shall not relieve Owner of the necessity of complying with the law governing said permitting requirement, condition, term, or restriction.

Section 21. Attorneys' Fees and Costs. In the event of any action to enforce the terms of this Agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees, paralegals' fees, and costs incurred, whether the same be incurred in pre-litigation negotiation, litigation at the trial level, or upon appeal or any bankruptcy or collection proceedings.

Section 22. Captions/Exhibits.

(A) The headings or captions of the sections and subsections contained in this Agreement are used for convenience and reference only, and do not, in themselves, have any legal significance and shall not be afforded any.
(B) The exhibits to this Agreement are hereby incorporated into this Agreement and are an integral part of this Agreement.

Section 23. Parties Bound. Following the recordation of this Agreement, the benefits and burdens of this Agreement shall become a covenant running with the title to the Property, and all parts thereof, and this Agreement shall be binding upon and inure to the benefit of both the City and the Owner, and its successors in interest to said Property, and all parts thereof.

Section 24. Severability. If any provision of this Agreement, the deletion of which would not adversely affect the receipt of any material benefits by either party to the Agreement or substantially increase the burden of either party to the Agreement, shall be held to be unconstitutional, invalid or unenforceable to any extent by a court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and the same shall not affect in any respect whatsoever the validity or enforceability of the remainder of the Agreement.

Section 25. Notices. Any notice that is to be delivered hereunder shall be in writing and shall be deemed to be delivered (whether or not actually received) when (i) hand delivered to the official hereinafter designated; (ii) upon receipt of such notice when deposited in the United States mail, postage prepaid, certified mail, return receipt requested; or (iii) upon receipt of such notice when deposited with Federal Express or other nationally recognized overnight or next day courier, addressed to the parties as follows (facsimile transmittal is not acceptable as a form of notice in this Agreement):

To the City:
City Manager
City of Palm Coast
City Hall
160 Lake Avenue

Palm Coast, Florida 32164

To the Owner:
Lighthouse Harbor, LLC
c/o James T. Cullis, Manager
2298 Colbert Lane
Palm Coast, FL 32137

With copies to:
Michael D. Chiumento III, Esq.
Chiumento Dwyer Hertel Grant & Kistemaker, P.L.
145 City Place, Suite 301
Palm Coast, Florida 32164

Section 26. Entire Agreement. This Agreement constitutes the complete and entire agreement between the City and the Owner with respect to the subject matter hereof, and supersedes any and all prior agreements, arrangements or understandings, whether oral or written, between the parties relating thereto with respect to the terms of this Agreement, all of which have been integrated herein.

Section 27. Modification. This Agreement may not be amended, changed, or modified, and material provisions hereunder may not be waived, except by a written document, of equal dignity herewith approved by the City.

Section 28. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same document.

ATTEST:

CITY OF PALM COAST, FLORIDA

_____
Virginia Smith, City Clerk

_____
Beau Falgout
Interim City Manager

OWNER'S CONSENT AND AGREEMENT

IN WITNESS WHEREOF, the Owner consents and agrees to the terms and conditions of this Annexation Agreement and has hereto set the Owner's hand and seal, the day and year below written.

WITNESSES:

Lighthouse Harbor, LLC, a Florida limited Liability company

_____
Print Name:_____

By:_____
James T. Cullis, Its Manager

_____
Print Name:_____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2019, by James T. Cullis, Manager of Lighthouse Harbor, LLC, a Florida limited liability company, who is personally known to me and who executed the foregoing.

_____
Notary Public
My Commission Expires:

City of Palm Coast, Florida
Agenda Item

Agenda Date : 01/08/2019

Department	CITY CLERK	**Amount**	
Item Key	5662	**Account #**	

Subject ORDINANCE 2019-XX AMENDING CHAPTER 2 ADMINISTRATION, ARTICLE 4 PLANNING AND LAND DEVELOPMENT REGULATION BOARD, SECTION 2-296, CREATION.

Background :
In 2000, City Council adopted Ordinance 2000-39 creating the Planning and Land Development Regulation Board. Currently, City Council appoints seven (7) members to the PLDRB. Action by the PLDRB must be taken in a timely manner and absences from PLDRB meetings can result in the delay of consideration and ultimate action by the PLDRB due a lack of quorum.

Staff is recommending amending the code to include the addition of two alternate PLDRB members be appointed to the PLDRB to help ensure there is a quorum for PLDRB meetings and allow for the PLDRB to conduct its' business in a timely manner.

Recommended Action :
Adopt Ordinance 2019-XX amending Chapter 2 Administration, Article 4 Planning and Land Development Regulation Board, Section 2-296, Creation.

ORDINANCE 2019-____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AMENDING CHAPTER 2, ADMINISTRATION, ARTICLE 4, PLANNING AND LAND DEVELOPMENT REGULATION BOARD, SECTION 2-296, CREATION, OF THE *CODE OF ORDINANCES OF THE CITY OF PALM COAST*, TO CREATE TWO ALTERNATE MEMBERS FOR THE PLANNING AND LAND DEVELOPMENT REGULATION BOARD; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICTS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, City Council adopted Ordinance 2000-39 creating the Planning and Land Development Board (PLDRB); and

WHEREAS, action by the PLDRB must be taken in a timely manner and absences from PLDRB meetings can result in the delay of consideration and ultimate action by the PLDRB due a lack of quorum; and

WHEREAS, currently the PLDRM consists of 7 members that are appointed by City Council; and

WHEREAS, the addition of two alternate PLDRB members will help to ensure there is a quorum for PLDRB meetings and allow for the PLDRB to conduct its' business in a timely manner.

NOW, THEREFORE, IT IS HEREBY ORDAINED BY THE CITY OF PALM COAST, FLORIDA:

SECTION 1. LEGISLATIVE AND ADMINISTRATIVE FINDINGS. The above recitals (whereas clauses) are hereby adopted as the legislative and administrative findings of the City Council.

SECTION 2. AMENDMENT TO SECTION 2-296, CREATION, OF THE *CODIFIED CODE OF ORDINANCES OF THE CITY OF PALM COAST.* Section 2-296, subsection (c), *Creation*, of the *Code of Ordinances of the City of Palm Coast* is amended as follows, with deletions being shown in strikethrough and additions shown in underline:

***

(c) *Membership~~, place of residence, terms of office~~*. ~~The board shall have seven members appointed by the City Council No elected official or employee of the City government shall be appointed to serve on the board.~~ The City Council shall appoint a Planning and Land Development Regulation Board with seven regular members and two alternate members. Alternate members shall vote only when a regular member is unable to attend a meeting, hear a particular case, or is absent during a vote at a meeting. Alternate

members may attend any meeting and sit without participating or voting unless they are required to vote as provided herein. No elected official or employee of the City government shall be appointed to serve on the board.

***

SECTION 3. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance.

SECTION 4. CODIFICATION. It is the intention of the City Council of the City of Palm Coast, Florida, and it is hereby ordained that the provisions of this Ordinance shall become and be made a part of the Code of Ordinances of the City of Palm Coast, Florida; that the Sections of this Ordinance may be renumbered or re-lettered to accomplish such intention; that the word, "Ordinance" may be changed to "Section," "Article," or other appropriate word.

SECTION 5. CONFLICTS. All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed.

SECTION 6. EFFECTIVE DATE. This Ordinance shall become effective immediately upon its passage and adoption.

Approved on first reading this _____ day of _____ 2019.

Adopted on second reading after due public notice and hearing this _____ day of _____ 2019.

CITY OF PALM COAST, FLORIDA

ATTEST: _____
MILISSA HOLLAND, MAYOR

_____
VIRGINIA A. SMITH, CITY CLERK

Approved as to form and legality

_____
William Reischmann Jr. Esq.

City of Palm Coast, Florida

Agenda Item

Agenda Date: 01/08/2019

Department	Community Development	**Amount**	$491,700.00
Item Key	4432	**Account**	54029082-063000-85003

Subject RESOLUTION 2019-XX APPROVING A CONTRACT WITH WPC CONSTRUCTORS, LLC. FOR THE CONSTRUCTION OF THE PUMP STATION "D" IMPROVEMENTS PROJECT.

Background :
City staff performed sanitary sewer modeling to determine where improvements were most needed after recent storm events caused power outages and sanitary sewer overflows. Pump Station D at 311 Palm Coast Parkway NE is a prime candidate for upgrades since it has been in service since 1980. In addition, upgrading Pump Station "D" will assure it will meet current service demands, accommodate wastewater flows from future development and reduce sewage over flow caused by storm water flooding and power outages in the area. The primary improvements to the pump station will include: larger pumps, new plumbing, a new top slab and hatches, upgraded power supply, and new control panels.

The Construction Management & Engineering Division advertised the project (ITB-CD-19-02) and on December 20, 2018 received bids from four pre-qualified contractors. City staff recommend awarding the contract to the low bidder WPC Industrial Contractors, LLC of Jacksonville, FL, for $447,000.00 and a 10% contingency (44,700.00). The notice of intent to award and the project bid overview are attached.

This project is in the utility 5-Year Capital Improvement Plan and the construction is budgeted for Fiscal Year 2019.

SOURCE OF FUNDS WORKSHEET FY 2019

UTILCAPPRJ WWCOLL IMP LIFT STN REP 54029082-063000-85003	**$**1,000.000.00
Total Expenses/Encumbered to date	$ 51,707.53
Pending Work Orders/Contracts	$
Current Work Order	$ 491,700.00
Balance	**$ 948,292.47**

Recommended Action :
Adopt Resolution 2019-XX approving a contract with WPC Industrial Contractors, LLC, in the amount of $491,700.00 including a 10% contingency for the construction of the Pump Station "D" Improvements Project.

RESOLUTION 2019-____
PUMP STATION D IMPROVEMENTS

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING THE TERMS AND CONDITIONS OF A CONSTRUCTION CONTRACT WITH WPC CONSTRUCTORS, LLC., IN THE AMOUNT OF $491,700.00 (INCLUDING A 10% CONTINGENCY), FOR THE PUMP STATION "D" IMPROVEMENTS PROJECT; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE THE CONTRACT; PROVIDING FOR SEVERABILITY, PROVIDING FOR CONFLICTS, PROVIDING FOR IMPLEMENTING ACTIONS, AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Palm Coast desires construction of the Pump Station "D" Improvements project; and

WHEREAS, the City Council of the City of Palm Coast desires to contract with WPC Industrial Contractors, LLC, for the above referenced services.

NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE CITY OF PALM COAST, FLORIDA:

SECTION 1. APPROVAL OF CONTRACT. The City Council hereby approves the terms and conditions of a contract with WPC Constructors, LLC, for the Pump Station "D" Improvements project, as attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute any necessary documents.

SECTION 3. SEVERABILITY. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impart the validity, force or effect of any other section or part of the Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall become effective immediately upon its adoption by the City Council.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on the 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST: _____
MILISSA HOLLAND, MAYOR

_____
VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit A –Contract with WPC Constructors, LLC.

Approved as to form and legality

_____
William E. Reischmann, Jr., Esq.
City Attorney

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

NOTICE OF INTENT TO AWARD

Project: Pump Station "D" Improvement - ITB-CD-19-02

Date: 12/21/2018

Appeal Deadline: Appeals must be Filed by 5:00 PM on 12/28/2018

Firm	Pricing
WPC Industrial Contractors, LLC Jacksonville, FL	$447,000.00
PBM Constructors, Inc. Jacksonville, FL	$447,935.00
Danus Utilities, Inc. Sanford, FL	$493,890.00
Hinterland Group, Inc. Riviera Beach, FL	$496,400.00

The intent of the City of Palm Coast is to award Pump Station "D" Improvement to WPC Industrial Contractors, LLC

Cc: Contract Coordinator, Project Manager, ASED Director, Department Director

Bid protests arising under City Bidding Documents or Procedures shall be resolved under the City of Palm Coast Central Service Division's Bid Protest procedures.

A proposer may protest matters involving the award of this Bid within three (3) business days from the posting of this recommendation to award. Failure to protest to the City's Administrative Services and Economic Development Director, Beau Falgout (bfalgout@palmcoastgov.com) shall constitute a waiver of the protest proceedings.

RFSQ-CD-19-02 / ITB-CD-19-02 - Pump Station “D” Improvement

Project Overview

Project Details	
Reference ID	RFSQ-CD-19-02 / ITB-CD-19-02
Project Name	Pump Station “D” Improvement
Project Owner	Kelly Downey
Project Type	ITB
Department	Procurement
Budget	$0.00 - $0.00
Project Description	The City of Palm Coast is requesting proposals from qualified vendors. The contractor shall furnish all labor, material, equipment, tools supervision, and any other items required for the construction of improvements to one of the City’s sewage pump stations. Improvements include new pumps, electrical equipment, conversion of power from 208V to 480V wet well top slab, and piping. Other items include the installation of a line stop, new manhole, forcemain connection to wet well, temporary bypass connection, bypass pumping assembly and restoration of site.
Open Date	Oct 17, 2018 8:00 AM EDT
Intent to Bid Due	Dec 17, 2018 2:00 PM EST
Close Date	Nov 21, 2018 2:00 PM EST

Awarded Suppliers	Reason	Score

WPC Industrial Contractors LLC		**100 pts**

Seal status

Requested Information	Unsealed on	Unsealed by
Qualification Forms Section 00100 (A - M)	Nov 21, 2018 2:01 PM EST	Kelly Downey
Financials Form N	Nov 21, 2018 2:01 PM EST	Kelly Downey
Contractors License	Nov 21, 2018 2:01 PM EST	Kelly Downey
Addenda	Nov 21, 2018 2:01 PM EST	Kelly Downey
Section 00200 Bid Forms	Dec 20, 2018 2:02 PM EST	Kelly Downey
Pricing	Dec 20, 2018 2:02 PM EST	Kelly Downey
Forms 5 and 6	Dec 20, 2018 2:02 PM EST	Kelly Downey
Addendum # 6	Dec 20, 2018 2:02 PM EST	Kelly Downey

Conflict of Interest

Declaration of Conflict of Interest You have been chosen as a Committee member for this Evaluation. Please read the following information on conflict of interest to see if you have any problem or potential problem in serving on this committee. ## Code of Conduct All information related to submissions received from Suppliers or Service Providers must be kept confidential by Committee members. ## Conflict of Interest No member of a Committee shall participate in the evaluation if that Committee member or any member of his or her immediate family: * has direct or indirect financial interest in the award of the contract to any proponent; * is currently employed by, or is a consultant to or under contract to a proponent; * is negotiating or has an arrangement concerning future employment or contracting with any proponent; or, * has an ownership interest in, or is an officer or director of, any proponent. Please sign below acknowledging that you have received and read this information. If you have a conflict or potential conflict, please indicate your conflict on this acknowledgment form with information regarding the conflict. I have read and

understood the provisions related to the conflict of interest when serving on the Evaluation Committee. If any such conflict of interest arises during the Committee's review of this project, I will immediately report it to the Purchasing Director.

Name	Date Signed	Has a Conflict of Interest?
Kelly Downey	Nov 21, 2018 2:02 PM EST	No
Mary Kronenberg	Nov 21, 2018 2:04 PM EST	No
Alex Blake	Nov 21, 2018 2:12 PM EST	No
Helena Alves	Nov 27, 2018 3:42 PM EST	No

Project Criteria

Criteria	Points	Description
Pre-Qualification Forms	Pass/Fail	Pre-Qualification Forms A - N
Pre-Qualification Review	Pass/Fail	Pre-Qualification Review
Financials (Form N)	Pass/Fail	Financials Form N
Section 00200 bid forms	Pass/Fail	Section 00200 bid forms
Pricing	100 pts	Pricing
Forms 5, & 6	Pass/Fail	Forms 5 and 6
Total	**100 pts**	

Scoring Summary

Active Submissions

	Total	Pre-Qualification Forms	Pre-Qualification Review	Financials (Form N)	Section 00200 bid forms
Supplier	**/ 100 pts**	**Pass/Fail**	**Pass/Fail**	**Pass/Fail**	**Pass/Fail**
WPC Industrial Contractors LLC	100 pts	Pass	Pass	Pass	Pass
PBM Constructors, Inc.	99.79 pts	Pass	Pass	Pass	Pass
Danus Utilities, Inc	90.51 pts	Pass	Pass	Pass	Pass
Hinterland Group, Inc.	90.05 pts	Pass	Pass	Pass	Pass

	Pricing	Forms 5, & 6

Supplier	/ 100 pts	Pass/Fail
WPC Industrial Contractors LLC	100 pts ($447,000.00)	Pass
PBM Constructors, Inc.	99.79 pts ($447,935.00)	Pass
Danus Utilities, Inc	90.51 pts ($493,890.00)	Pass
Hinterland Group, Inc.	90.05 pts ($496,400.00)	Pass

City of Palm Coast, Florida

Agenda Item

Agenda Date: 1/08/2019

Department	Community Development	**Amount**	
Item Key		**Account**	

Subject RESOLUTION 2019-XX APPROVING MASTER SERVICE AGREEMENTS WITH MULTIPLE FIRMS FOR PROFESSIONAL UTILITY ENGINEERING SERVICES

Background :
The Utility Department utilizes engineering firms to complete studies, plans, permitting and other engineering related functions on a regular basis. The current continuing engineering services contracts are expiring. Staff advertised a Request for Qualifications RFSQ-CD-19-12 (RFSQ) for professional utility engineering services, to include but not necessarily be limited to: design of water and wastewater treatment plant improvements, lift stations, pump stations, collection systems, system modeling, design of potable, waste and reclaimed water systems, construction engineering services, preparation of applicable easements, right-of-way acquisition documents, processing of project and consumptive use permits, design services and acquisition of State Revolving Fund loans.

In accordance with the City's Purchasing Policy and Florida Statutes, specifically the Consultants' Competitive Negotiation Act, City staff received qualification packages from 9 firms, all of which were determined to be responsive and responsible. The qualifications were reviewed by a committee consisting of five City staff. The proposals were evaluated based on their project understanding, experience, project innovation, project team, and location of the firm. After reviewing the qualifications, staff ranked and are recommending contract award to the top five (5) firms as follows:

Firm Name	**Location**
CPH, Inc.	Palm Coast, FL
McKim & Creed,	Palm Coast, FL
GAI Consultants, Inc.	Jacksonville, FL
Jacobs Engineering Group, Inc.	Jacksonville, FL
Four Waters Engineering, Inc.	Jacksonville Beach, FL

City staff will present City Council with work orders for consideration as services are needed and in accordance with the City's Purchasing Policy.

Recommended Action :
Adopt Resolution 2019-XX approving master service agreements with multiple firms for professional utility engineering services.

RESOLUTION 2019- _____
CONTINUING SERVICE AGREEMENTS
FOR PROFESSIONAL UTILITY ENGINEERING SERVICES

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA AUTHORIZING THE CITY MANAGER TO APPROVE THE CONTINUING SERVICES AGREEMENTS FOR PROFESSIONAL UTILITY ENGINEERING SERVICES; AUTHORIZING EXECUTION OF SAID AGREEMENTS; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, numerous firms have expressed a desire to provide utility engineering services throughout the City of Palm Coast; and

WHEREAS, staff has ranked the firms that have responded to the City's Request for Qualifications (RFQ); and

WHEREAS, CPH, Inc., McKim & Creed, Inc., GAI Consultants, Jacobs Engineering Group, Inc., and Four Waters Engineering, Inc. have been ranked, in accordance with the controlling requirements of State law, as the five (5) top ranked firms; and

WHEREAS, the City Council of the City of Palm Coast desires to negotiate contracts with the top five (5) ranked firms for professional utility engineering services throughout the City of Palm Coast.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA AS FOLLOWS:

SECTION 1. APPROVAL OF AGREEMENTS. The City Council of the City of Palm Coast hereby authorizes the City Manager to negotiate contracts with CPH, Inc., McKim & Creed, Inc., GAI Consultants, Jacobs Engineering Group, Inc., and Four Waters Engineering, Inc. for professional utility engineering services. If terms cannot be reached with these firms, the City Manager is authorized to negotiate with the next ranked firm.

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the agreements as depicted in Exhibit "A".

SECTION 3. SEVERABILITY. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of any other section or part of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the actions taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon adoption by the City Council.

DULY PASSED and approved by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

Milissa Holland, Mayor

Virginia A. Smith, City Clerk

Attachments:
Exhibit "A" – Agreements CPH, Inc., McKim & Creed, Inc., GAI Consultants, Jacobs Engineering Group, Inc., and Four Waters Engineering, Inc.

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

NOTICE OF INTENT TO AWARD

Project: RFSQ-CD-19-12 - Professional Utility Engineering Services

Date: December 10, 2018

Appeal Deadline: Appeals must be filed by 5:00 PM on December 12, 2018.

Firm	Ranking Order
CPH, Inc. Palm Coast, FL	1
McKim & Creed Palm Coast, FL	2
GAI Consultants Jacksonville, FL	3
Jacobs Engineering Group Inc. Jacksonville, FL	4
Four Waters Engineering, Inc. Jacksonville Beach, FL	5
Kimley-Horn Jacksonville, FL	6
Infrastructure Solution Services Melbourne, FL	7
Mead & Hunt, Inc. Port Orange, FL	8
Reiss Engineering, Inc. Winter Springs, FL	9

Intent to Award: The intent of the City of Palm Coast is to award RFSQ-CD-19-12 to CPH, Inc, McKim & Creed, GAI Consultants, Jacobs Engineering Group, Inc. and Four Waters Engineering, Inc.

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

Award protests arising under City Bidding Documents or Procedures shall be resolved under the City of Palm Coast Central Service Division's Bid Protest procedures.

A proposer may protest matters involving the award of this Request within three (3) business days from the posting of this recommendation to award. Failure to protest to the City's Administrative Services and Economic Development Director, Beau Falgout (bfalgout@palmcoastgov.com) shall constitute a waiver of the protest proceedings.

RFSQ-CD-19-12 - Professional Utility Engineering Services

Project Overview

Project Details	
Reference ID	RFSQ-CD-19-12
Project Name	Professional Utility Engineering Services
Project Owner	Kelly Downey
Project Type	RFSQ
Department	Procurement
Budget	$0.00 - $0.00
Project Description	This Request for Statement of Qualifications is issued for the purpose of establishing a three (3) year contract, with two (2) additional one (1) year renewal options with firms capable of providing professional Utility engineering services.
Open Date	Oct 24, 2018 8:00 AM EDT
Intent to Bid Due	Nov 29, 2018 2:00 PM EST
Close Date	Nov 29, 2018 2:00 PM EST

Awarded Suppliers	Reason	Score
Jacobs Engineering Group Inc.		**87.2 pts**

GAI Consultants		**88.6 pts**
Four Waters Engineering, Inc.		**84.2 pts**
McKim & Creed		**92 pts**
CPH, Inc.		**96.6 pts**

Seal status

Requested Information	Unsealed on	Unsealed by
Proposal	Nov 29, 2018 2:03 PM EST	Kelly Downey
Forms 1, 2, 3, & 4	Nov 29, 2018 2:03 PM EST	Kelly Downey
Signed Addendum #1	Nov 29, 2018 2:03 PM EST	Kelly Downey
Signed Addendum #2	Nov 29, 2018 2:03 PM EST	Kelly Downey
Signed Addendum #3	Nov 29, 2018 2:03 PM EST	Kelly Downey

Conflict of Interest

Declaration of Conflict of Interest You have been chosen as a Committee member for this Evaluation. Please read the following information on conflict of interest to see if you have any problem or potential problem in serving on this committee. ## Code of Conduct All information related to submissions received from Suppliers or Service Providers must be kept confidential by Committee members. ## Conflict of Interest No member of a Committee shall participate in the evaluation if that Committee member or any member of his or her immediate family: * has direct or indirect financial interest in the award of the contract to any proponent; * is currently employed by, or is a consultant to or under contract to a proponent; * is negotiating or has an arrangement concerning future employment or contracting with any proponent; or, * has an ownership interest in, or is an officer or director of, any proponent. Please sign below acknowledging that you have received and read this information. If you have a conflict or potential conflict, please indicate your conflict on this acknowledgment form with information regarding the conflict. I have read and understood the provisions related to the conflict of interest when serving on the Evaluation

Committee. If any such conflict of interest arises during the Committee's review of this project, I will immediately report it to the Purchasing Director.

Name	Date Signed	Has a Conflict of Interest?
Kelly Downey	Nov 29, 2018 2:04 PM EST	No
Mary Kronenberg	Nov 29, 2018 2:06 PM EST	No
Alex Blake	Nov 29, 2018 2:16 PM EST	No
Danny Ashburn	Dec 03, 2018 8:43 AM EST	No
Peter Roussell	Dec 01, 2018 7:50 AM EST	No
Brian Matthews	Nov 29, 2018 4:25 PM EST	No

Project Criteria

Criteria	Points	Description
Forms 1, 2, 3, 4	Pass/Fail	Forms 1, 2, 3, & 4
Table of Contents	Pass/Fail	Table of Contents
Project Understanding & Proposal	30 pts	Project Understanding & Proposal
Project Innovation	15 pts	Project Innovation
Experience with Similar Projects, Technical Capability, and Qualifications	25 pts	Experience with Similar Projects, Technical Capability, and Qualifications
Project Team	25 pts	Project team
Location of Responding Firm Office	5 pts	Location of Responding Firm Office
Total	**100 pts**	

Scoring Summary

Active Submissions

	Total	Forms 1, 2, 3, 4	Table of Contents	Project Understanding & Proposal	Project Innovation
Supplier	**/ 100 pts**	**Pass/Fail**	**Pass/Fail**	**/ 30 pts**	**/ 15 pts**
CPH, Inc.	96.6 pts	Pass	Pass	29 pts	14 pts
McKim & Creed	92 pts	Pass	Pass	27 pts	14.4 pts
GAI Consultants	88.6 pts	Pass	Pass	26.6 pts	13.8 pts
Jacobs Engineering Group Inc.	87.2 pts	Pass	Pass	26.6 pts	13.2 pts
Four Waters Engineering, Inc.	84.2 pts	Pass	Pass	24.8 pts	12.2 pts
Kimley-Horn	84.1 pts	Pass	Pass	24.5 pts	12.8 pts

	Total	Forms 1, 2, 3, 4	Table of Contents	Project Understanding & Proposal	Project Innovation
Supplier	**/ 100 pts**	**Pass/Fail**	**Pass/Fail**	**/ 30 pts**	**/ 15 pts**
Infrastructure Solution Services	84 pts	Pass	Pass	24.8 pts	13.8 pts
Mead & Hunt, Inc.	81 pts	Pass	Pass	24.2 pts	11.8 pts
Reiss Engineering, Inc.	79.4 pts	Pass	Pass	23.4 pts	12.2 pts

	Experience with Similar Projects, Technical Capability, and Qualifications	Project Team	Location of Responding Firm Office
Supplier	**/ 25 pts**	**/ 25 pts**	**/ 5 pts**
CPH, Inc.	24 pts	24.6 pts	5 pts

	Experience with Similar Projects, Technical Capability, and Qualifications	Project Team	Location of Responding Firm Office
Supplier	**/ 25 pts**	**/ 25 pts**	**/ 5 pts**
McKim & Creed	24 pts	21.6 pts	5 pts
GAI Consultants	22 pts	24.2 pts	2 pts
Jacobs Engineering Group Inc.	22.8 pts	22.6 pts	2 pts
Four Waters Engineering, Inc.	22.2 pts	23 pts	2 pts
Kimley-Horn	22.2 pts	22.6 pts	2 pts
Infrastructure Solution Services	21.4 pts	22 pts	2 pts
Mead & Hunt, Inc.	21 pts	22 pts	2 pts

	Experience with Similar Projects, Technical Capability, and Qualifications	Project Team	Location of Responding Firm Office
Supplier	**/ 25 pts**	**/ 25 pts**	**/ 5 pts**
Reiss Engineering, Inc.	20.2 pts	21.6 pts	2 pts

City of Palm Coast, Florida
Agenda Item

Agenda Date :01/08/2019

Department	Public Works	**Amount**	
Item Key	5661	**Account**	

Subject RESOLUTION 2019-XX APPROVING A MASTER PRICE AGREEMENT WITH ENVIRONMENTAL LAND SERVICES INC., OF BUNNELL, FL FOR ROAD MATERIALS

Background :

The Public Works Department is responsible for maintenance and repair of streets and roadways throughout the City on an as-needed basis.

City staff advertised and solicited bids for various road materials in accordance with the City's Purchasing Policy. City staff recommends that the City Council approve a master price agreement with Environmental Land Services Inc., of Bunnell, FL. The notice of intent to award and project bid overview are attached to this agenda item.

Since the underlying contract is a price agreement, City staff will purchase items on an as – needed basis using budgeted funds appropriated by City Council. The Fiscal Year 2019 Budget includes available funding in the City's individual department budgets to purchase road materials. The City staff estimates that the City will expend approximately $50,000 +/-___ annually under this agreement.

Recommended Action :
Adopt Resolution 2019-XX approving a master price agreement with Environmental Land Services Inc., of Bunnell, FL for Road Materials

RESOLUTION 2018-____
ENVIRONMENTAL LAND SERVICES

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING A PRICE AGREEMENT WITH ENVIRONMENTAL LAND SERVICES INC., FOR ROAD MATERIALS; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE SAID AGREEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Environmental Land Services., has expressed a desire to provide road materials to the City of Palm Coast; and

WHEREAS, the City Council of the City of Palm Coast desires to enter into a price agreement with Environmental Land Services Inc., for the above referenced items.

NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF PRICE AGREEMENT. The City Council of the City of Palm Coast hereby approves the terms and conditions of a price agreement with Environmental Land Services Inc., which is attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Resolution are severable, and if any phrase, clause, sentence, paragraph or section of this Resolution shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall become effective immediately upon its passage and adoption.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit "A" – Price agreement with Environmental Land Services Inc., for Road Materials

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

NOTICE OF INTENT TO AWARD

Project: ITB-PW-19-15 - Road Materials (Road Base, Stone, Shell and Rock) Master Price Agreement Contract

Date: 12/7/2018

Appeal Deadline: Appeals must be filed by 5:00 PM on 12/12/2018

Firm	Bid
Environmental Land Services of Flagler County, Inc. Bunnell, FL	$277,520.00
Green Dream International, LLC Alexandria, VA	$353,382.50

The intent of the City of Palm Coast is to award ITB-PW-19-15 to Environmental Land Services of Flagler County, Inc.

Cc: Contract Coordinator, Project Manager, ASED Director, Department Director

Bid protests arising under City Bidding Documents or Procedures shall be resolved under the City of Palm Coast Central Service Division's Bid Protest procedures.

A proposer may protest matters involving the award of this Bid within three (3) business days from the posting of this recommendation to award. Failure to protest to the City's Administrative Services and Economic Development Director, Beau Falgout (bfalgout@palmcoastgov.com) shall constitute a waiver of the protest proceedings.

ITB-PW-19-15 - Road Materials (Road Base, Stone, Shell and Rock) Master Price Agreement Contract

Project Overview

Project Details	
Reference ID	ITB-PW-19-15
Project Name	Road Materials (Road Base, Stone, Shell and Rock) Master Price Agreement Contract
Project Owner	Jesse Scott
Project Type	ITB
Department	Procurement
Budget	$0.00 - $0.00
Project Description	This Invitation to Bid is issued for the purpose of securing firm pricing for Road Materials (Road Base, Stone, Shell, and Rock). These are materials used by our Public Works Department as needed throughout the Fiscal Year. A Master Price Agreement Contract will be issued for these materials.
Open Date	Oct 31, 2018 8:00 AM EDT
Intent to Bid Due	Nov 29, 2018 1:00 PM EST
Close Date	Nov 29, 2018 2:00 PM EST

Awarded Suppliers	Reason	Score

Environmental Land Services, Inc		**0 pts**

Seal status

Requested Information	Unsealed on	Unsealed by
Required Forms	Nov 29, 2018 2:01 PM EST	Jesse Scott
Price Schedule	Nov 29, 2018 2:02 PM EST	Jesse Scott

Conflict of Interest

Declaration of Conflict of Interest You have been chosen as a Committee member for this Evaluation. Please read the following information on conflict of interest to see if you have any problem or potential problem in serving on this committee. ## Code of Conduct All information related to submissions received from Suppliers or Service Providers must be kept confidential by Committee members. ## Conflict of Interest No member of a Committee shall participate in the evaluation if that Committee member or any member of his or her immediate family: * has direct or indirect financial interest in the award of the contract to any proponent; * is currently employed by, or is a consultant to or under contract to a proponent; * is negotiating or has an arrangement concerning future employment or contracting with any proponent; or, * has an ownership interest in, or is an officer or director of, any proponent. Please sign below acknowledging that you have received and read this information. If you have a conflict or potential conflict, please indicate your conflict on this acknowledgment form with information regarding the conflict. I have read and understood the provisions related to the conflict of interest when serving on the Evaluation Committee. If any such conflict of interest arises during the Committee's review of this project, I will immediately report it to the Purchasing Director.

Name	Date Signed	Has a Conflict of Interest?
fred vitagliano	Dec 04, 2018 2:01 PM EST	No
Arthur Strojny	Dec 04, 2018 8:18 AM EST	No
Jesse Scott	Nov 29, 2018 2:02 PM EST	No

andy hyatt	Nov 29, 2018 2:15 PM EST	No

Project Criteria

Criteria	Points	Description
Required Forms	Pass/Fail	Completed as requested
Required Forms	Pass/Fail	Technical Review
Pricing Review	0 pts	Total Pricing from spreadsheet. Enter Grand Total.
Total	**0 pts**	

Scoring Summary

Active Submissions

	Total	Required Forms	Required Forms	Pricing Review
Supplier	**/ 0 pts**	**Pass/Fail**	**Pass/Fail**	**/ 0 pts**
Green Dream International LLC	0 pts	Pass	Pass	0 pts ($353,382.50)
Environmental Land Services, Inc	0 pts	Pass	Pass	0 pts ($277,520.00)

City of Palm Coast, Florida

Agenda Item

Agenda Date: 1/08/2019

Department Wastewater Collection	**Amount** $75,000.00
Item Key	**Account** #54029083 063000 85005

Subject RESOLUTION 2019-XX APPROVING MASTER SERVICES AGREEMENT WITH CONCRETE CONSERVATION, LLC. FOR REHABILITATION OF WASTEWATER STRUCTURES.

Background :
Utility Wastewater Collection Department currently has an ongoing process to identify and eliminate sources of infiltration and inflow (I&I) into the central sewer system. Through this process, an annual program was initiated to rehabilitate failed concrete structures such as; gravity sewer manholes, pump stations, and other structures as needed. This program identifies wastewater system structures in need of repair by City staff through closed-circuit television video (CCTV) inspection. Failed structures are recorded and prioritized based on the current condition. Concrete Conservation, LLC process begins with hydroblasting the structure to remove failed material cause by hydrogen sulfide gasses. The material removed is then replaced with a modified polymer material that coats the entire structure. This process carries a ten year warranty on materials and workmanship and increases the lifespan of the structure well beyond this time.

In accordance with the City's Purchasing Policy, City staff advertised and solicited bids for rehabilitation of wastewater structures. The City received three (3) bids, two of which were responsive and responsible and one that was deemed non-responsive by Central Services. The project bid overview and notice of intent to award are attached. Staff recommends City Council approving master services agreement with Concrete Conservation, LLC.

The annual contract amount for these services is $75,000.00. The Fiscal Year 2019 Budget includes $75,000.00 within Utility Operations to purchase these services.

SOURCE OF FUNDS WORKSHEET FY 2019

General Plant R&R 54029083 063000 85005	$2,020,000.00
Total Expended/Encumbered to Date……	588,179.08
Current (WO/Contract)……	75,000.00
Balance……	**$1,356,820.92**

Recommended Action :
Adopt Resolution 2019-XX approving a master services agreement with Concrete Conservation, LLC for rehabilitation of wastewater structures.

RESOLUTION 2019-____
CONCRETE CONSERVATION, LLC.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING A MASTER SERVICES AGREEMENT WITH CONCRETE CONSERVATION, LLC. FOR WASTEWATER STRUCTURES REHABILITATION; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE SAID CONTRACT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Concrete Conservation, LLC. has expressed a desire to provide wastewater structures rehabilitation services to the City of Palm Coast; and

WHEREAS, the City Council of the City of Palm Coast desires for Concrete Conservation, LLC. to provide the rehabilitation of wastewater structures.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF AGREEMENT. The City Council of the City of Palm Coast hereby approves the terms and conditions of the master services agreement with Concrete Conservation, LLC., for the rehabilitation of wastewater structures, as attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of any other section or part of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon adoption by the City Council.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST: MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit "A" – Master Services Agreement- Concrete Conservation, LLC.

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

NOTICE OF INTENT TO AWARD

Project: ITB-UT-19-16 - Rehabilitation of Wastewater Structures (Manholes, Wetwells and other Wastewater Structures)

Date: 12/7/2018

Appeal Deadline: Appeals must be filed by 5:00 PM on 12/12/2018

Firm	Bid
Concrete Conservation, LLC Jacksonville, FL	$59,792.36
TV Diversified, LLC West Palm Beach, FL	$74,286.00
Professional Services Group, LLC Deland, FL	Non-Responsive

The intent of the City of Palm Coast is to award ITB-UT-19-16 to Concrete Conservation, LLC

Cc: Contract Coordinator, Project Manager, ASED Director, Department Director

Bid protests arising under City Bidding Documents or Procedures shall be resolved under the City of Palm Coast Central Service Division's Bid Protest procedures.

A proposer may protest matters involving the award of this Bid within three (3) business days from the posting of this recommendation to award. Failure to protest to the City's Administrative Services and Economic Development Director, Beau Falgout (bfalgout@palmcoastgov.com) shall constitute a waiver of the protest proceedings.

ITB-UT-19-16 - Rehabilitation of Wastewater Structures (Manholes, Wetwells, and other Wastewater Structures)

Project Overview

Project Details	
Reference ID	ITB-UT-19-16
Project Name	Rehabilitation of Wastewater Structures (Manholes, Wetwells, and other Wastewater Structures)
Project Owner	Jesse Scott
Project Type	ITB
Department	Procurement
Budget	$0.00 - $0.00
Project Description	This Invitation to Bid is issued for the purpose of securing a Master Services Agreement Contract for the rehabilitation of wastewater structures (manholes, wetwells and other wastewater structures).
Open Date	Oct 31, 2018 8:00 AM EDT
Intent to Bid Due	Nov 28, 2018 2:00 PM EST
Close Date	Nov 29, 2018 2:00 PM EST

Awarded Suppliers	Reason	Score
Concrete Conservation, Inc.		**0 pts**

Seal status

Requested Information	Unsealed on	Unsealed by
Required Forms and Documents	Nov 29, 2018 2:05 PM EST	Jesse Scott
Price Schedule Spreadsheet	Nov 29, 2018 2:05 PM EST	Jesse Scott
Reference Spreadsheet	Nov 29, 2018 2:05 PM EST	Jesse Scott

Conflict of Interest

Declaration of Conflict of Interest You have been chosen as a Committee member for this Evaluation. Please read the following information on conflict of interest to see if you have any problem or potential problem in serving on this committee. ## Code of Conduct All information related to submissions received from Suppliers or Service Providers must be kept confidential by Committee members. ## Conflict of Interest No member of a Committee shall participate in the evaluation if that Committee member or any member of his or her immediate family: * has direct or indirect financial interest in the award of the contract to any proponent; * is currently employed by, or is a consultant to or under contract to a proponent; * is negotiating or has an arrangement concerning future employment or contracting with any proponent; or, * has an ownership interest in, or is an officer or director of, any proponent. Please sign below acknowledging that you have received and read this information. If you have a conflict or potential conflict, please indicate your conflict on this acknowledgment form with information regarding the conflict. I have read and understood the provisions related to the conflict of interest when serving on the Evaluation Committee. If any such conflict of interest arises during the Committee's review of this project, I will immediately report it to the Purchasing Director.

Name	Date Signed	Has a Conflict of Interest?
Danny Ashburn	Dec 03, 2018 8:46 AM EST	No
ralph hand	Nov 30, 2018 7:03 AM EST	No
Jesse Scott	Nov 29, 2018 2:06 PM EST	No

Project Criteria

Criteria	Points	Description
Required Forms	Pass/Fail	Completed as requested
Required Forms and Documents	Pass/Fail	Technical Review
References	Pass/Fail	References reviewed and checked
Price Schedule	0 pts	Total from Pricing Spreadsheet in format $000.00
Total	**0 pts**	

Scoring Summary

Active Submissions

	Total	Required Forms	Required Forms and Documents	References	Price Schedule
Supplier	**/ 0 pts**	**Pass/Fail**	**Pass/Fail**	**Pass/Fail**	**/ 0 pts**
Professional Services Group, LLC	0 pts	Fail	Fail	Fail	0 pts ($32,566.00)
Concrete Conservation, Inc.	0 pts	Pass	Pass	Pass	0 pts ($59,792.36)
TV Diversified, LLC	0 pts	Pass	Pass	Mixed	0 pts ($74,286.00)

City of Palm Coast, Florida
Agenda Item

Agenda Date: 1/8/2019

Department	PUBLIC WORKS	**Amount**	
Item Key	5660	**Account**	Various accounts & amounts

Subject RESOLUTION 2019-XX APPROVING MASTER PRICE AGREEMENT WITH HARRIS CULVERT FOR CULVERT PIPES

Background :

The Public Works Department is responsible for replacing and maintaining various types of drainage pipe throughout the City on an as-needed basis.

City staff advertised and solicited bids for culvert pipes in accordance with the City's Purchasing Policy. City staff recommends that the City Council approve a master price agreement with Harris Culvert, Inc., of Palm Coast, FL. The notice of intent to award and project bid overview is attached to this agenda item.

Since this is a price agreement, City staff will purchase items on an as-needed basis using budgeted funds appropriated by City Council. The City staff estimates that the City will expend approximately $100,000 +/- annually under this agreement

Recommended Action :
Adopt Resolution 2019-XX approving a master price agreement with Harris Culvert, Inc., for culvert pipes.

RESOLUTION 2019-____
HARRIS CULVERT, INC.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING A PRICE AGREEMENT WITH HARRIS CULVERT, INC., TO PURCHASE VARIOUS TYPES OF CULVERT PIPE; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE SAID AGREEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Harris Culvert, Inc., has expressed a desire to provide various types of drainage pipes to the City of Palm Coast; and

WHEREAS, the City Council of the City of Palm Coast desires to enter into a price agreement with Harris Culvert, Inc., for the above referenced items.

NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF PRICE AGREEMENT. The City Council of the City of Palm Coast hereby approves the terms and conditions of a price agreement with Harris Culvert, Inc., which is attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Resolution are severable, and if any phrase, clause, sentence, paragraph or section of this Resolution shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall become effective immediately upon its passage and adoption.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: Exhibit "A" – Price agreement with Harris Culvert, Inc., for Culvert Pipes

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

ITB-PW-19-17 - Culvert Pipes (Aluminized Corrugated Metal and High Density Polyethylene - HDPE)

Project Overview

Project Details	
Reference ID	ITB-PW-19-17
Project Name	Culvert Pipes (Aluminized Corrugated Metal and High Density Polyethylene - HDPE)
Project Owner	Jesse Scott
Project Type	ITB
Department	Procurement
Budget	$0.00 - $0.00
Project Description	This Invitation to Bid is issued for the purpose of soliciting bid proposals for a one year Price Agreement Contract for Culvert Pipes , both Aluminized Corrugated Metal and High Density Polyethylene.
Open Date	Nov 14, 2018 8:00 AM EST
Intent to Bid Due	Nov 28, 2018 2:00 PM EST
Close Date	Nov 29, 2018 2:00 PM EST

Awarded Suppliers	Reason	Score
HARRIS CULVERT INC.		**0 pts**

Seal status

Requested Information	Unsealed on	Unsealed by
Required Forms	Nov 29, 2018 2:07 PM EST	Jesse Scott
Price Proposal Worksheet	Nov 29, 2018 2:08 PM EST	Jesse Scott

Conflict of Interest

Declaration of Conflict of Interest You have been chosen as a Committee member for this Evaluation. Please read the following information on conflict of interest to see if you have any problem or potential problem in serving on this committee. ## Code of Conduct All information related to submissions received from Suppliers or Service Providers must be kept confidential by Committee members. ## Conflict of Interest No member of a Committee shall participate in the evaluation if that Committee member or any member of his or her immediate family: * has direct or indirect financial interest in the award of the contract to any proponent; * is currently employed by, or is a consultant to or under contract to a proponent; * is negotiating or has an arrangement concerning future employment or contracting with any proponent; or, * has an ownership interest in, or is an officer or director of, any proponent. Please sign below acknowledging that you have received and read this information. If you have a conflict or potential conflict, please indicate your conflict on this acknowledgment form with information regarding the conflict. I have read and understood the provisions related to the conflict of interest when serving on the Evaluation Committee. If any such conflict of interest arises during the Committee's review of this project, I will immediately report it to the Purchasing Director.

Name	Date Signed	Has a Conflict of Interest?
Arthur Strojny	Nov 29, 2018 3:16 PM EST	No
Jesse Scott	Nov 29, 2018 2:08 PM EST	No
andy hyatt	Nov 29, 2018 2:18 PM EST	No

Project Criteria

Criteria	Points	Description
Required Forms	Pass/Fail	Completed as requested
Required Forms	Pass/Fail	Technical Review
Pricing	0 pts	Enter Grand Total from Pricing Spreadsheet
Total	**0 pts**	

Scoring Summary

Active Submissions

	Total	Required Forms	Required Forms	Pricing
Supplier	**/ 0 pts**	**Pass/Fail**	**Pass/Fail**	**/ 0 pts**
HARRIS CULVERT INC.	0 pts	Pass	Pass	0 pts ($176,433.00)

city of PALM COAST
Administrative Services & Economic Development
Central Services Division
160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

NOTICE OF INTENT TO AWARD

Project: ITB-PW-19-17 - Culvert Pipes (Aluminized Corrugated Metal and High Density Polyethylene – HDPE)

Date: 12/7/2018

Appeal Deadline: Appeals must be filed by 5:00 PM on 12/12/2018

Firm	Bid
Harris Culvert, Inc. Palm Coast, FL	$176,433.00

The intent of the City of Palm Coast is to award ITB-PW-19-17 to Harris Culvert, Inc.

Cc: Contract Coordinator, Project Manager, ASED Director, Department Director

Bid protests arising under City Bidding Documents or Procedures shall be resolved under the City of Palm Coast Central Service Division's Bid Protest procedures.

A proposer may protest matters involving the award of this Bid within three (3) business days from the posting of this recommendation to award. Failure to protest to the City's Administrative Services and Economic Development Director, Beau Falgout (bfalgout@palmcoastgov.com) shall constitute a waiver of the protest proceedings.

City of Palm Coast, Florida
Agenda Item

Agenda Date : 01/08/2018

Department	CITY CLERK	**Amount**	$30,000.00
Item Key	5803	**Account**	10018099-082002

Subject RESOLUTION 2019-XX APPROVING AN AGREEMENT WITH FLAGLER VOLUNTEER SERVICES, INC.

Background :

The City of Palm Coast has partnered with Flagler Volunteer Services for 17 years. Consistently, the City of Palm Coast has maintained $25,000 of funding supporting the agency. Because of increasing costs and funding cuts in several grants the agency depends upon, Flagler Volunteer Services requested and City Council approved a $5,000 increase during the budget process. This agenda item implements the City Council action taken during the budget process.

Recommended Action :
Adopt Resolution 2019-XX approving an agreement with Flagler Volunteer Services, Inc.

RESOLUTION 2019-____
FLAGLER VOLUNTEER SERVICES, INC.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING THE AGREEMENT WITH FLAGLER VOLUNTEER SERVICES, INC.; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE SAID AGREEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Flagler Volunteer Services serves volunteers of all ages that serve a vital role to government agencies, nonprofits, and healthcare facilities; and

WHEREAS, the recruits and places volunteers with 40 agencies that are located in the City of Palm Coast as well as provides volunteer support for special local events and programs held within the City of Palm Coast; and

WHEREAS, the Flagler Volunteer Services, through the use of grant funds provided by the City and funds invested by the Flagler Volunteer Services shall accomplish certain activities and programs as set forth herein.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF AGREEMENT. The City Council of the city of Palm Coast hereby approves of the terms and conditions of the agreement with Flagler Volunteer Services, Inc., as attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of any other section or part of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon adoption by the City Council.

DULY PASSED and ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST: MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

THE FLAGLER VOLUNTEER SERVICES, INC. AND CITY OF PALM COAST AGREEMENT FOR ASSISTANCE

THIS AGREEMENT made and entered into this ___ day of _____, 2019, by and between the CITY OF PALM COAST, FLORIDA (hereinafter referred to as the "CITY"), a municipal corporation of the State of Florida, whose address is 160 Lake Avenue, Palm Coast, Florida 32164, and the FLAGLER VOLUNTEER SERVICES, INC. (hereinafter referred to as the "FVS"), a non-profit corporation of the State of Florida, whose address is P.O. Box 353755, Palm Coast, Florida 32135-3755.

WITNESSETH:

WHEREAS, the FVS serves volunteers of all ages that serve a vital role to government agencies, non-profits and healthcare facilities; and

WHEREAS, the FVS recruits and places volunteers with 30 agencies that are located in the City of Palm Coast as well as provides volunteer support for special local events and programs held within the City of Palm Coast; and

WHEREAS, the FVS, through the use of grant funds provided by the CITY and funds invested by the FVS shall accomplish certain activities and programs as set forth herein, and

WHEREAS, the City has concluded that the investment of public funds in the subject activities, programs and support services in the amount set forth herein is in the public interest and the City Council of the CITY has concluded that the activities, programs and support services as set forth herein, are in the public interest and provide for and accomplish a public purpose; and

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY and the FVS agree as follows:

SECTION 1. RECITALS. The above recitals are true and correct and form a material part of this Agreement upon which the parties have relied.

SECTION 2. PURPOSE. Subject to the terms and conditions hereinafter set forth, CITY shall provide grant funding to the FVS and shall provide the activities and programs set forth in Section 3 of this Agreement.

SECTION 3. ACTIVITIES & PROGRAMS PROVIDED BY THE FVS/COSTS.

(a) The activities, programs and support services that the FVS shall provide to the CITY and the community shall be provided under the terms and conditions of this Agreement and the Memorandum of Understanding attached hereto and incorporated by reference herein, and shall occur or be located within the CITY Limits of the CITY.

(b) The FVS will make every effort to repeat the activities, programs and support services accomplished by the FVS in the last several fiscal years.

(c) The CITY shall provide FVS the total annual sum of $30,000.00 in the form of equal quarterly installments of $7,500.00, the initial quarterly installment to be invoiced in October 2018 for expenses based on the deliverables described in this Section.

(d) The FVS shall provide a monthly report outlining all activities consistent with the requirements herein and for which CITY funds have been used.

SECTION 4. LIABILITY. The FVS agrees to indemnify and hold the CITY harmless from and against all liability, claims for damages, and suits for any injury to any person or persons, of any kind whatsoever, or damages to any property, of any kind whatsoever, arising out of or in any way connected with the services, programs and activities of the FVS provided to the CITY as set forth in this Agreement relating to the services, programs, projects, operations or activities of the FVS and with regard to any act or omission of the FVS. To the fullest extent permitted by law, the FVS shall indemnify, hold harmless and defend the CITY, its officials, officers, agents, servants, and employees, or any of them, from and against all claims, damages, losses, and expenses including, but not limited to, attorneys' fees and other legal costs such as those for paralegal, investigative, and legal support services, and the actual cost incurred for expert witness testimony, arising out of or resulting from the performance of this Agreement. In accordance with Section 725.06, *Florida Statutes*, adequate consideration has been provided to the FVS for this obligation, the receipt and sufficiency of which is hereby specifically acknowledged. Nothing herein shall be deemed to affect the rights, privileges, and immunities of the CITY as set forth in Section 768.28, *Florida Statutes*. In claims against any person or entity indemnified under this Section by an employee of the FVS or its agents or subcontractors, anyone directly or indirectly employed by the FVS or anyone for whose acts the FVS may be liable, the indemnification obligation under this Section shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the FVS or its agents or subcontractors, under Workers' Compensation acts, disability benefits acts. The FVS' employees and contractors shall not be deemed to be CITY employees in any way or be eligible for any benefit of CITY employment.

SECTION 5. TERM. This Agreement shall become effective on October 1, 2018 (the date of execution by the parties notwithstanding), and shall continue in effect until September 30, 2019.

SECTION 6. NOTICES.

(a). Any notice required or allowed to be delivered hereunder shall be in writing and be deemed to be delivered when either (1) hand delivered to the official hereinafter designated, or (2) upon receipt of such notice when deposited in the United States mail, postage prepaid, certified mail, return receipt requested, addressed to a party at the address set forth opposite the party's name below, or at such other address as the party's name below, or at such other address as the party shall specify by written notice to the other party delivered in accordance herewith.

(b). Notices shall be given as follows:

THE CITY:

Beau Falgout, Interim City Manager
City of Palm Coast
160 Lake Avenue
Palm Coast, Florida 32164

THE FVS:

Suzy Gamblain, Executive Director Flagler Volunteer Services, Inc. P.O. Box 353755
Palm Coast, Florida 32135-3755

SECTION 7. GOVERNING LAW. This Agreement and the provisions contained herein shall be construed, controlled, and interpreted according to the laws of the State of Florida. Venue for any legal proceeding related to this Agreement shall be in the Seventh Judicial Circuit Court in and for Flagler County, Florida.

SECTION 8. NO GENERAL CITY OBLIGATION. In no event shall any obligation of the CITY under this Agreement be or constitute a general obligation or indebtedness of the CITY, a pledge of the *ad valorem* taxing power of the CITY or a general obligation or indebtedness of the CITY within the meaning of the *Constitution of the State of Florida* or any other applicable laws, but shall be payable solely from legally available revenues and funds. Neither the FVS nor any other party shall ever have the right to compel the exercise of the *ad valorem* taxing power of the CITY.

SECTION 9. RECORDS AND AUDITS.

(a) The GRANTEE shall maintain books, records, documents, time and costs accounts and other evidence directly related to its performance under this Agreement. All time records and cost data shall be maintained in accordance with generally accepted accounting principles. The GRANTEE shall maintain and allow access to the records required under this Section for a period of five (5) years after the completion of this Agreement and date of final payment for said services, or date of termination of this Agreement. The CITY may perform, or cause to have performed, an audit of the records of the GRANTEE before or after final payment to support final payment hereunder. This audit shall be performed at a time mutually agreeable to the GRANTEE and the CITY subsequent to the close of the final fiscal period in which the Agreement is performed. Total compensation to the GRANTEE may be determined subsequent to an audit as provided for in this Section, and the total compensation so determined shall be used to calculate final payment to the GRANTEE. In the event of any audit or inspection conducted reveals any overpayment by the CITY under the terms of this Agreement, the GRANTEE shall refund such overpayment to the CITY within thirty (30) days of notice by the CITY of the request for the refund.

(b) GRANTEE agrees that this Agreement is subject to and governed by the laws of the state of Florida, including without limitation Chapter 119, Florida Statutes, which generally make public all records or other writings made or received by the parties. GRANTEE acknowledges its legal obligation to comply with § 119.0701, Florida Statutes. The GRANTEE shall keep and maintain public records, as that phrase is defined in the Florida Public Records Act, that would be required to be kept and maintained by the CITY in order to perform the scope of services. The GRANTEE shall provide public access to the public records on the same terms and conditions that the CITY would provide the records and at a cost that does not exceed the cost allowed by law. The GRANTEE shall not disclose public records that are exempt or confidential and exempt from public records disclosure unless specifically authorized by law. The GRANTEE shall comply with all requirements for retaining public records and shall transfer, at no cost to the CITY, all public records in the possession of the GRANTEE upon termination or expiration of this Agreement. The GRANTEE shall destroy any duplicate public records that are exempt, or confidential and exempt, from public records disclosure requirements. All public records stored electronically must be provided to the CITY in a format that is compatible with the information technology systems of the CITY. Notwithstanding any other provision of this Agreement to the contrary, failure to comply with this requirement shall result in the immediate termination of

the Agreement, without penalty to the CITY. Further, the GRANTEE shall fully indemnify and hold harmless the CITY, its officers, agents and employees from any liability and/or damages, including attorney's fees through any appeals, resulting from the GRANTEE's failure to comply with these requirements.

SECTION 10. DEFAULT.

(a) In the event of default by the FVS, the CITY shall be entitled to any and all legal remedies available under Florida law.

(b) Each of the parties hereto shall give the other party written notice of any defaults hereunder and shall allow the defaulting party thirty (30) days from the date of receipt to cure such defaults.

SECTION 11. ASSIGNMENT. This Agreement shall be binding in the parties hereto and their representatives and successors. Neither party shall assign this Agreement or the rights and obligation to any other party.

SECTION 12. COMPLIANCE WITH LAWS AND REGULATIONS. The FVS shall obtain and possess, throughout the term of this Agreement, all licenses and permits applicable to its operations under Federal, State and local laws and shall comply with all fire, health, and other applicable regulatory codes.

SECTION 13. ATTORNEYS FEES. In the event it becomes necessary to institute legal action to enforce any of the terms of this Agreement, the prevailing party shall be entitled to recover all out-of-pocket expenses and costs and all reasonable attorneys fees, paralegal fees and associated fees and costs from the date of filing until the termination of litigation whether incurred at trial, on appeal, or otherwise.

SECTION 14. NONDISCRIMINATION. The FVS agrees that it will not discriminate against any employee or applicant for employment for work under this Agreement because of race, color, religion, sex, age, national origin or disability and will take affirmative steps to insure that applicants are employed and employees are treated during employment without regard to race, color, religion, sex, age, national origin or disability. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or their forms or compensation; and selection for training, including apprenticeship. The FVS, moreover, shall comply with all the requirements as imposed by the *Americans with Disability Act*, the regulations of the Federal government issued thereunder, and any and all requirements of State law related thereto.

SECTION 15. CONFLICT OF INTEREST. The FVS agrees that it will not engage in any action that would create or cause a conflict of interest in the performance of its obligations pursuant to this Agreement with the CITY or which would violate or cause others to violate the provisions of Part III, Chapter 112, *Florida Statutes*, relating to ethics in government or create or cause a violation of said provisions of law by an officer, employee or agent of the CITY.

SECTION 16. INTERPRETATION. The CITY and the FVS agree that all words, terms and conditions contained herein are to be read in concert, each with the other, and that a provision contained under one (1) heading may be considered to be equally applicable under another in the interpretation of this Agreement. This Agreement is the result of a *bona fide* arms length negotiations between the CITY and the FVS and all parties have contributed substantially and materially to the preparation of the Agreement. This Agreement shall not be construed more strictly against either party on the basis of being the drafter thereof, and both

parties have contributed to the drafting of this Agreement. All provisions of this Agreement shall be read and applied in *para materia* with all other provisions hereof.

SECTION 17. FORCE MAJEURE. The CITY's obligations hereunder shall be subject to the concept of *force majeure*. Accordingly, in the event of Acts of God, riot, weather disturbances, permitting, war, terrorism, civil disobedience, geologic subsidence, electrical failure, malfunctions, and events of a similar nature, the CITY shall be excused from providing continual utility service until the cause or causes thereof have been remedied.

SECTION 18. FURTHER DOCUMENTS. Each of the parties hereto hereby agree that they will execute and deliver such further instruments and do such further acts and things as may be necessary or desirable to carry out the purpose of this Agreement.

SECTION 19. FAILURE TO ENFORCE NOT WAIVER OF RIGHT. Failure by the CITY to enforce any provision contained herein shall not be deemed a waiver of the right to do so thereafter as to the same breach or as to any breach occurring prior or subsequent thereto.

SECTION 20. CAPTIONS. Sections and other captions contained in this Agreement are for reference purposes only and are in no way intended to describe, interpret, define, or limit the scope, extent or intent of this Agreement, or any provision hereto.

SECTION 21. DISCLAIMER OF THIRD PARTY BENEFICIARIES. This Agreement is solely for the benefit of the formal parties herein, and no right or case of action shall accrue upon or by reason hereon, to or for the benefit of any third party not a formal party hereto.

SECTION 22. SEVERABILITY. Each provision of this Agreement is intended to be severable. If any term or provision hereof is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the remainder of this Agreement.

SECTION 23. ENTIRE AGREEMENT. This instrument constitutes the entire agreement between the parties and supersedes all previous discussions, understandings, and agreements between parties relating to the subject matter of this Agreement. Amendments to and waivers of the provisions herein shall be made by the parties in writing by formal amendment.

SECTION 24. MODIFICATION. This Agreement may not be amended, changed, or modified, and material provisions hereunder may not be waived, except by a written document, of equal dignity herewith, approved by the parties to this Agreement.

SECTION 25. COUNTERPARTS. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same document.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the day and year first above written.

CITY OF PALM COAST, FLORIDA

By:_____
Beau Falgout, City Manager

Date: _____

FLAGLER VOLUNTEER SERVICES, INC.

By:_____
Suzy Gamblain, Executive Director

Date: _____

Volunteer!
Flagler Volunteer Services

Flagler Volunteer Services, Inc.
PO Box 353755
Palm Coast, FL 32135-3755
Phone: 386-597-2950
www.flaglervolunteer.org
Located at 5400 E. Highway 100, Palm Coast, FL

July 8, 2018

City of Palm Coast
Jim Landon, City Manager
c/o Beau Falgout
Purchasing & Contract Management Division
160 Lake Avenue
Palm Coast, FL 32164

Dear Mr. Landon,

Flagler Volunteer Services is asking for $30,000 in funding from the City of Palm Coast for the 2018-2019 fiscal year. This is an increase that is needed by our agency due to funding cuts in several grants our agency depends upon to provide the volunteer support that we do in our community.

The City of Palm Coast has been a great partner and maintained a $25,000 funding for our agency for the past 17 years. This would be the first increase we have received in that time. Although I recognize the difficult budget year the county is facing I cannot express the importance of additional funding to support volunteerism.

In the past couple years, Flagler Volunteer Services has greatly stepped up to support the volunteer needs of the community during both Hurricane Matthew & Irma. This was at a cost to our agency to provide both staff and volunteer time focused on disaster response, recovery and preparedness efforts that are continuing to this day. Although we pray that we will not face another disaster in the coming years for us to be able to respond in the same way we will need additional funding to support our staffing who oversees these volunteer efforts.

We want to assure you that Flagler Volunteer Services is run as efficiently as possible. Managing the ongoing volunteer needs of this community currently requires more than 280 hours of staffing per week. The workload is equal to 7 full time employees. Flagler Volunteer Services is currently managing this with the equivalent of only 3 paid full time employees by making best use of experienced office volunteers. What allows us to effectively meet the different and changing needs of our community is the professional and experienced staff that we have in place. Without continued funding, we will be forced to reduce staff and cut programs. This will have a detrimental impact for all the agencies we serve in the City of Palm Coast as well as the community that receives services through the volunteer support we provide.

Our agency provides volunteer recruitment, orientation & training, referrals, matching, coordination, and placement, as well as volunteer recognition to local non-profits and government agencies. You will find our volunteers working for the Palm Coast Fire & Rescue, Flagler County Sheriff's Palm Coast Sub-Station, School District, Florida Hospital - Flagler, local Hospices, State Parks, over 50+ locations in total. Additionally, many of our volunteers donate their time to improve the quality of life for residents of our community through the many programs that have been developed and managed by Flagler Volunteer Services. (Please see attachment for a breakdown of our programs.)

In 2017 Flagler Volunteer Services coordinated a record 3.885 volunteers who served over 194,996 hours at 48 government and non-profit agencies in Flagler County. More than 25,000 hours were devoted to disaster preparedness, relief, response and recovery activities. Based on the Independent Sector's Value in Florida -$23.56 the volunteer hours served is valued at $4,594,106! The value of volunteerism is undeniable. The importance of having an organization to assist that volunteer effort is critical to the effectiveness of volunteerism in our community.

Our goal is not only to maintain the level of services that we currently provide to agencies in the City of Palm Coast but to also continue to develop and maintain programs to meet emerging needs.

Please consider the worthiness of this agency to you, to the community, and also to the volunteers who are so dedicated to giving of their time and resources.

Thank you.

Sincerely,

Suzanne Gamblain, Executive Director
Flagler Volunteer Services, Inc.
(386) 597-2950

Flagler Volunteer Services - Community Programs

RSVP Program: This program encourages seniors to utilize their skills and talents to assist local organizations in meeting priority needs in our community. Our primary focus areas for RSVP are Education, Veterans & Military Families, Environmental Stewardship, Disasters, and Economic Improvement.

Reading Programs: Our ReadingPals program (grades Pre-K-3rd) focuses on improving literacy skills of our youth. Through this programs volunteers visit the same students, each week, and work with them one-on-one or in a very small group setting to encourage them to read aloud. As a result, teachers have reported improved grades and students have developed a love for reading. Learning to read is so vital to a child's education, the volunteers in these programs make lasting impacts on our youth!

The Giving Store: This holiday event allows economically disadvantaged children to "shop" for new Holiday gifts for each family member living in their household. The experience is at no charge for the child, and brings an enormous reward to their lives. Children who would have otherwise been unable to afford to buy holiday gifts for their family members select gifts free of charge at the Giving Store. This event requires more than 100 volunteers and helps to increase the child's self-esteem by giving them the opportunity to experience "The Joy of Giving".

Flagler County Blanketeers: This program is made up of over 60 volunteers who make thousands of blankets and other handmade items for people facing crisis. Distribution includes teen mothers, patients receiving cancer treatments, dialysis, or end of life care through hospice, victims of crime, survivors of natural disasters and even our troops!

SWAT Team (Support Workers Available Today): Volunteers are always on call to assist with local special events, fundraisers, and one-time needs. The volunteer support provided by the SWAT Team has helped local non-profits to raise money and to provide services to Flagler County Residents. Here are some of the agencies and events we have provided support to in the past year:

Back to School Jam- Education Foundation
Feed Flagler
Access Flagler First
FC Schools – special events, concession stands
Washington Oaks – special events
Fantasy of Lights, Home Show & Service Fair, Relay For Life, Surfers for Autism, and many other community events….

Emergency Support Services: This program ensures that there are trained volunteers available to serve before, during or after any disaster that could impact our community.

Flagler County School Volunteer Coordination: Our agency provides the F.C. School District with assistance in volunteer coordination, placement, and tracking. We maintain their school volunteer database which contains information on over 4,000 school volunteers.

City of Palm Coast, Florida
Agenda Item

Agenda Date: 01/08/2019

Department	ADMINISTRATIVE SERVICES	**Amount**	$55,000
Item Key		**Account**	Various

Subject RESOLUTION 2019-XX APPROVING PIGGYBACKING THE SOURCEWELL CONTRACT WITH STAPLES CONTRACT & COMMERCIAL, INC. TO PURCHASE VARIOUS OFFICE SUPPLIES

Background :
On an as-needed basis, City staff need to purchase various office supplies. The City of Palm Coast currently utilizes a piggybacked Lee County Contract (# RFP140256), which is set to expire January 3, 2019.

City staff is recommending that City Council approve piggybacking the Sourcewell (formerly National Joint Powers Alliance – NJPA) Contract (# NJPA01615) with Staples Contract & Commercial, Inc. through August 1, 2019. Piggybacking existing competitively bid contracts is advantageous since the pricing is generally better than what the City could obtain on its own, and the City does not incur the expense and delay of soliciting a bid. Switching from the Lee County Contract (which is expiring January 3, 2019) to the Sourcewell Contract will provide the City with more price options (i.e.price matching with lowest quote) and offers IT products not available under the Lee County Contract.

Since the underlying contract is a price agreement, City staff will purchase items on an as – needed basis using budgeted funds appropriated by City Council. The Fiscal Year 2019 Budget Includes available funding in the City's individual department budgets to purchase office supplies. City staff estimate that the City will expend approximately $55,000 annually under this Piggyback contract.

Recommended Action :
Adopt Resolution 2018-XX approving piggybacking the Sourcewell Contract with Staples Contract & Commercial, Inc. to purchase various office supplies.

RESOLUTION 2019 - ____
SOURCEWELL CONTRACT WITH STAPLES

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, APPROVING PIGGYBACKING THE SOURCEWELL CONTRACT WITH STAPLES CONTRACT & COMMERCIAL, INC., FOR THE PURCHASE OF OFFICE SUPPLIES CITY-WIDE; AUTHORIZING THE CITY MANAGER, OR DESIGNEE, TO EXECUTE THE NECESSARY DOCUMENTS; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; PROVIDING FOR IMPLEMENTING ACTIONS AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Palm Coast purchases office supplies City-wide as needed; and

WHEREAS, Sourcewell has Contract # NJPA01615 with Staples Contract & Commercial, Inc., for office supplies; and

WHEREAS, the City of Palm Coast desires to piggyback the above referenced contract for the purchase of office supplies.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PALM COAST, FLORIDA, AS FOLLOWS:

SECTION 1. APPROVAL OF PIGGYBACK CONTRACT. The City Council of the City of Palm Coast hereby approves piggybacking the Sourcewell Contract # NJPA01615 with Staples Contract & Commercial, Inc., to purchase office supplies, as attached hereto and incorporated herein by reference as Exhibit "A."

SECTION 2. AUTHORIZATION TO EXECUTE. The City Manager, or designee, is hereby authorized to execute the necessary documents.

SECTION 3. SEVERABILITY. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this Resolution are severable, and if any phrase, clause, sentence, paragraph or section of this Resolution shall be declared unconstitutional by the valid judgment or decree of a court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Resolution.

SECTION 4. CONFLICTS. All resolutions or parts of resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION 5. IMPLEMENTING ACTIONS. The City Manager is hereby authorized to take any actions necessary to implement the action taken in this Resolution.

SECTION 6. EFFECTIVE DATE. This Resolution shall take effect immediately upon its passage and adoption.

DULY PASSED AND ADOPTED by the City Council of the City of Palm Coast, Florida, on this 15th day of January 2019.

CITY OF PALM COAST, FLORIDA

ATTEST:

MILISSA HOLLAND, MAYOR

VIRGINIA A. SMITH, CITY CLERK

Attachment: – Exhibit A –Piggyback Contract between SourceWell Contract #NJPA01615 and Staples Contract & Commercial, Inc.

Approved as to form and legality

William E. Reischmann, Jr., Esq.
City Attorney

city of PALM COAST

Administrative Services & Economic Development
Central Services Division

160 Lake Avenue
Palm Coast, FL 32164
386-986-3730

November 15, 2018

Scott Baker
Contract Administrator
Staples Advantage
16501 Trojan Way
La Mirada, CA 90638

RE: Engagement Letter Authorizing Piggyback

Office, School, and Other Workplace Related Supplies and Services
Contract Name

RFP 010615
Contract Reference

Dear Scott Baker,

The City of Palm Coast, Florida requests permission to utilize your company's above referenced contract in accordance with the approved pricing, terms and conditions. If agreed, please indicate approval by electronically signing below.

All invoices should be sent to the Accounts Payable Department, City of Palm Coast, 160 Lake Avenue, Palm Coast, Florida 32164, or to ap@palmcoastgov.com. Likewise, legal notices should be sent to the attention of the City Manager at the same address.

If you should have any questions, please don't hesitate to contact me the email address below.

Sincerely,

DocuSigned by:
Rose Conceicao
9C4ED497E51242A...

Rose Conceicao
Risk Management & Contract Coordinator
rconceicao@palmcoastgov.com

Engagement Letter Authorizing Piggyback
Office, School, and Other Workplace Related Supplies and Services

Contract Name

RFP 010615

Contract Reference

CITY OF PALM COAST	Staples Advantage
	DocuSigned by: Scott Baker 7AA0C054E51C489...
Signature	Signature
	Scott Baker
Print Name	Print Name
	Nov 15, 2018 | 11:54 AM PST
Date	Date

CONTRACT EXECUTIVE OVERVIEW
(Non-Construction)

Vendor Name Staples Advantage

Project Name: **Office, School, and Other Workplace Related Supplies and Services**

Bid/Reference # **RFP 010615**

Contract Type: Piggyback

Contract Value $ 55000.00

Resolution # _____ **City Council Approval Date:** _____

Standard Contract Template (Y/N): N/A - Piggyback

If No, then Reviewed by City Attorney: N/A - Piggyback

Length of Contract: 08/01/2019

Renewable (Y/N): Y

If Yes, # and length of renewals: 1 Year

City's Project Manager Rose Conceicao

Brief Description/Purpose:

To utilize the pricing on the Sourcewell contract with Staples to purchase Office Suuplies and other work place related supplies and services (including technology items).

Approvals:

Responsible Dept. Director _____ **Date:** _____

City Finance _____ **Date:** _____

City Attorney _____ **Date:** _____

ASED Director _____ **Date:** _____

City Manager _____ **Date:** _____

scott.baker@staples.com

STAPLES Advantage

Form D – Formal Offering of Proposal

Contract Award

RFP #010615

(To be completed Only by Proposer)

OFFICE, SCHOOL, AND OTHER WORKPLACE-RELATED SUPPLIES AND SERVICES

In compliance with the Request for Proposal (RFP) for OFFICE, SCHOOL, AND OTHER WORKPLACE-RELATED SUPPLIES AND SERVICES the undersigned warrants that I/we have examined this RFP and, being familiar with all of the instructions, terms and conditions, general specifications, expectations, technical specifications, service expectations and any special terms, do hereby propose, fully commit and agree to furnish the defined equipment/products and related services in full compliance with all terms, conditions of this RFP, any applicable amendments of this RFP, and all Proposer's Response documentation. Proposer further understands they accept the full responsibility as the sole source of responsibility of the proposed response herein and that the performance of any sub-contractors employed by the Proposer in fulfillment of this proposal is the sole responsibility of the Proposer.

Company Name: Staples Contract & Commercial, Inc., operating as Staples Advantage

Date: 12-19-14

Company Address: 500 Staples Drive

City: Framingham State: MA Zip: 01702

Contact Person: Don Hasch Title: Senior Manager/Vertical Markets

Authorized Signature (ink only): Christine T Komola

Name printed: Christine T. Komola
EVP and Chief Financial Officer

Staples Contract & Commercial, Inc., operating as Staples Advantage

LEGAL APPROVED AS TO FORM DATE

Form E

Contract Acceptance and Award

(To be completed only by NJPA)

NJPA 010615 # OFFICE, SCHOOL, AND OTHER WORKPLACE-RELATED SUPPLIES AND SERVICES

STAPLES CONTRACT & COMMERCIAL, INC. OPERATING AS STAPLES ADVANTAGE
Proposer's full legal name

Your proposal is hereby accepted and awarded. As an awarded Proposer, you are now bound to provide the defined product/equipment and services contained in your proposal offering according to all terms, conditions, and pricing set forth in this RFP, any amendments to this RFP, your Response, and any exceptions accepted or rejected by NJPA on Form C.

The effective start date of the Contract will be August 1, 20 15 and continue for four years from the board award date. This contract has the consideration of a fifth year renewal option at the discretion of NJPA.

National Joint Powers Alliance® (NJPA)

NJPA Authorized signature: _____ Dr. Chad Coauette
NJPA Executive Director (Name printed or typed)

Awarded this 20th day of January, 20 15 **NJPA Contract Number 010615-SCC**

NJPA Authorized signature: _____ Scott Veronen
NJPA Board Member (Name printed or typed)

Executed this 20th day of January, 20 15 **NJPA Contract Number 010615-SCC**

Proposer hereby accepts contract award including all accepted exceptions and NJPA clarifications identified on FORM C.

Vendor Name Staples Contract & Commercial, Inc., operating as Staples Advantage

Vendor Authorized signature: _____ Christine Komola
(Name printed or typed)

Title: EVP and Chief Financial Officer

Executed this 11th day of February, 20 15 **NJPA Contract Number 010615-SCC**

NATIONAL JOINT POWERS ALLIANCE (NJPA) AWARDED VENDOR

REQUIRED FEDERAL CONTRACT PROVISIONS CERTIFICATION

When a National Joint Powers Alliance (NJPA) Member seeks to procure goods and services using funds under a federal grant or contract, specific federal laws, regulations, and requirements may apply in addition to those under state law and local rule. This includes, but is not limited to, the procurement standards of the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, 2 CFR Part 200 (also referred to as the "Uniform Guidance" or "EDGAR").

NJPA awarded Vendors must complete this certification regarding Vendor's willingness and ability to comply with certain requirements which may be applicable to specific NJPA Member purchases using federal grant or contract dollars. NJPA Members may also require Vendors to enter into ancillary agreements, in addition to the NJPA contract's general terms and conditions, to address the Member's specific contractual needs, including contract requirements for a procurement using federal grants or contracts. NJPA reserves the right at any time within a contract term to require an awarded Vendor to reaffirm or resubmit proper documentation relating to these requirements.

Note: The numbering and identification contained herein is only for reference purposes and does not identify any actual Federal designation or location of the rule. Rules are located in 2 CFR Part 200.

Appendix II to Part 200 Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

(A) Contracts for more than the simplified acquisition threshold currently set at $150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

Pursuant to Rule (A) above, National Joint Powers Alliance reserves all rights and privileges under the applicable laws and regulations with respect to this procurement process in the event of breach of contract by either party.

Yes — CTK

Vendor Agrees (YES or NO) — Initials of Authorized Representative

(B) All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

Pursuant to Rule (B) above, National Joint Powers Alliance reserves the right to terminate any agreement resulting from this procurement process pursuant to National Joint Powers Alliance RFP #010615 sections 7.13 and 7.17. Prior to any termination for cause, the NJPA will provide written notice to the Vendor, opportunity to respond and opportunity to cure. National Joint Powers Alliance reserves the right to terminate any agreement resulting from this procurement process without cause with a required 60-day written notice of termination. Termination of Contract shall not relieve either party of financial, product or service obligations incurred or accrued prior to termination.

Yes — CTK

Vendor Agrees (YES or NO) — Initials of Authorized Representative

(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment

Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." This provision is hereby incorporated by reference into all applicable contracts.

Pursuant to Rule (C) above, the equal opportunity clause is incorporated by reference herein.

Yes — CTK

Vendor Agrees (YES or NO) — Initials of Authorized Representative

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. This provision is hereby incorporated by reference into all applicable contracts.

Pursuant to Rule (D) above, Vendor will be in compliance with all applicable Davis-Bacon Act provisions.

Yes — CTK

Vendor Agrees (YES or NO) — Initials of Authorized Representative

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. This provision is hereby incorporated by reference into all applicable contracts.

Pursuant to Rule (E) above, Vendor certifies that Vendor will be in compliance with all applicable provisions of the Contract Work Hours and Safety Standards Act during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process.

Yes — CTK

Vendor Agrees (YES or NO) — Initials of Authorized Representative

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

Pursuant to Rule (F) above, Vendor certifies that during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process, Vendor agrees to comply with all applicable requirements as referenced in Rule (F) above.

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387) Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non- Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401- 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251- 1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). This provision is hereby incorporated by reference into all applicable contracts.

Pursuant to Rule (G) above, Vendor certifies that during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process, Vendor agrees to comply with all applicable requirements as referenced in Rule (G) above.

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

(H) Debarment and Suspension (Executive Orders 12549 and 12689) A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

Pursuant to Rule (H) above, Vendor certifies that during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process, Vendor certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency.

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

(I) Byrd Anti-Lobbying Amendment, as amended (31 U.S.C. 1352). Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

Pursuant to Rule (I) above, as applicable, Vendor agrees to file all certifications and disclosures required by, and otherwise comply with, the Byrd Anti-Lobbying Amendment (31 USC 1352).

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

Record Retention Requirements

Vendor certifies that during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process, Vendor will comply with the record retention requirements detailed in 2 CFR § 200.333. The Vendor further certifies that Vendor will retain all records as required by 2 CFR § 200.333 for a period of three years after grantees or subgrantees submit final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

Energy Policy and Conservation Act Compliance

To the extent applicable, Vendor certifies that during the term of an award for all contracts by National Joint Powers Alliance resulting from this procurement process, Vendor will comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

Yes CTK

Vendor Agrees (YES or NO) Initials of Authorized Representative

Buy American Provisions Compliance

To the extent Vendor has agreed to comply with applicable provisions of the Buy American Act with a particular public entity, Vendor certifies that Vendor is in compliance with all applicable provisions of the Buy American Act. Purchases made in accordance with the Buy American Act shall follow the applicable procurement rules calling for free and open competition.

CTK

Yes

Vendor Agrees (YES or NO) Initials of Authorized Representative

Access to Records (2 C.F.R. § 200.336)

Vendor agrees that duly authorized representatives of the Agency shall have access to any books, documents, papers and records of Vendor that are directly pertinent to Vendor's discharge of its obligations under the Contract for the purpose of making audits, examinations, excerpts, and transcriptions. The right also includes timely and reasonable access to Vendor's personnel for the purpose of interview and discussion relating to such documents.

CTK

Yes

Vendor Agrees (YES or NO) Initials of Authorized Representative

Vendor agrees to comply with federal, state, and local laws, rules, regulations and ordinances, as applicable. It is further acknowledged that Vendor certifies compliance with provisions, laws, acts, regulations, etc. as noted above.

This certification shall be effective through the term of the Vendor's NJPA awarded contract.

Vendor:	Staples Contract & Commercial, Inc
Contract number:	010615-SCC
Category:	School & Office Equipment/Supplies
Description:	OFFICE, SCHOOL, AND OTHER WORKPLACE-RELATED SUPPLIES AND SERVICES
Maturation date:	08/01/2019
Address:	500 Staples Drive
City, state, zip code:	Framingham, MA 01702
Phone number:	(508) 253-5000
Printed name and title of authorized representative:	Christine T. Klomula, CFO
Signature of authorized representative:	Christe TKenoh
Date:	7-21-17

Meeting Calendar for 1/9/2019 through 1/31/2019

1/9/2019 10:00 AM
Code Enforcement Board
City Hall

1/9/2019 5:00 PM
Leisure Services Advisory Committee
Community Center

1/15/2019 9:00 AM
City Council
City Hall

1/16/2019 5:30 PM
Planning & Land Development Regulation Board
City Hall

1/22/2019 9:00 AM
Special Council Workshop
City Hall

1/24/2019 5:00 PM
Beautification and Environmental Advisory Committee
City Hall

1/29/2019 9:00 AM
City Council Workshop
City Hall

Meeting Calendar for 1/9/2019 through 1/31/2019

1/9/2019 10:00 AM
Code Enforcement Board
City Hall

1/9/2019 5:00 PM
Leisure Services Advisory Committee
Community Center

1/15/2019 9:00 AM
City Council
City Hall

1/16/2019 5:30 PM
Planning & Land Development Regulation Board
City Hall

1/22/2019 9:00 AM
Special Council Workshop
City Hall

1/24/2019 5:00 PM
Beautification and Environmental Advisory Committee
City Hall

1/29/2019 9:00 AM
City Council Workshop
City Hall

File #	Item	Title	Staff
		Business 01/15/2019	
	Resolution	Culvert Pipes	Abreu
	Resolution	Road Materials	Abreu
	Resolution	MSA Rehab of Wastewater Structures	Adams/Ashburn
	Resolution	Pump Station D Improvements	Blake
	Resolution	Professional Utility Engineering Services	Blake
	Resolution	3P Consulting Services	Burkhart
	Resolution	Piggyback Staples	Conceicao
	Resolution	Volunteer Services	Cullen
	Resolution	Master Site Plan Town Center Multi-family project	Meehan
	Resolution	Project Price is Right Incentive Agreement	Newingham
	Resolution	Lighthouse Harbor PreAnnexation	Papa
	Ordinance	Lighthouse Harbor Annexation	Papa
	Ordinance 1st	Amend Ch 2 Boards (PLDRB)	Smith
		SPECIAL Workshop 01/17/2019	
		SGR-City Manager Search	Thomas
		SPECIAL Workshop 01/22/2019	
	Presentation	Unfunded Priorities-Pavement Mgmt Program and PW facility	Alves/Abreu/Cote
		Workshop 01/29/2019	
	Presentation	Unfunded Priorities-Pavement Mgmt Program and PW facility	Staff
	Resolution	FEMA Generators	Blake
	Resolution	2019 Sanitary Sewer Lining	Blake
	Resolution	WO WWTP Blair Castle Dr project	Blake
	Resolution	City Wide Security Assessment and Master Plan	Burkhart
	Presentation	Fl. Park Drive Traffic /Environment study	Cote
	Ordinance	Animal Control amendment	Grossman
	Presentation	High Tech Corridor	Newingham
	Resolution	CPH Water Quality Improvement Study	Roussell
		Business 02/05/2019	
	Resolution	FEMA Generators	Blake
	Resolution	2019 Sanitary Sewer Lining	Blake
	Resolution	WO WWTP Blair Castle Dr project	Blake

	Resolution	City Wide Security Assessment and Master Plan	Burkhart
	Ordinance 1st	Animal Control amendment	Grossman
	Presentation	Employee Calendar Contest Winners	Mini
	Ordinance 2nd	Amend Ch 2 Boards (PLDRB)	Smith
		Future	
	Resolution	Piggyback MRO supplies	Adams
	Resolution	Master Plan SCADA Telemetry Standardization	Adams/Roussell
	Resolution	Annual Fire Inspection Fees	Alves
	Resolution	Permit compliance with NECGA (MOU and Conservation easement)	Bevan
	Resolution	Interlocal Mala Compra Storm Drain Project	Blake/Kronenberg
	Resolution	Whiteview Parkway Force Main Improvements	Blake/Kronenberg
	Resolution	Pine Lakes Pkwy Forcemain and Lift Station Improvements	Blake/Kronenberg
	Resolution	Equip 3 Wells and Raw Water Main, PH 3	Blake/Kronenberg
	Resolution	City Hall Generator	Cote
	Resolution	BBI GMP Contract	Cote
	Resolution	Project Price is Right Incentive Agreement	Newingham
	Presentation	Sheriff's presentation	Staly

City of Palm Coast, Florida
Agenda Item

Agenda Date : 1/8/2019

Department	CITY CLERK	**Amount**	
Item Key	5830	**Account #**	

Subject ATTACHMENTS TO MINUTES

Background :

Recommended Action :

FiberNet Expansion Business Plan

Council Update

Information Technology Team
January 08, 2019

Background

Magellan completed FiberNet Expansion Business Plan in October 2018.

- Extensive plan with many action items and initiatives
- Multiple Business Models were analyzed:
  - Policy Only
  - Infrastructure Provider
  - Public-only Service Provider
  - Open Access “wholesale” Service Provider
  - Commercial-only “retail” Service Provider
  - Full retail (commercial and residential) Service Provider
  - Public/Private Partnership (P3)

Recommended Business Model

Public-Private Partnership (P3)

- Negotiated contract with a private company to offer broadband services in return for some special resources or rights from the City

Advantages

- Keeps City out of Regulatory “crosshairs”
- Minimal investment
- Leverages existing assets/infrastructure
- Minimal additional headcount required
- Private partner handles all "day-to-day" activities such as installation, maintenance, and billing
- Revenue comes as a percentage of Private Partners revenue

Disadvantages

- Loss of control
- Contracts are typically long (10-20 years)

Approach

- Close “gaps” in current infrastructure and policy
  - Close infrastructure gaps (e.g. SR100 between Airport and Town Center)
  - Dig Once Policy
- Walk, Crawl, Run Approach to FiberNet
  - Use current infrastructure assets to start
  - Next, grow FiberNet into areas that have revenue potential
  - Then, grow FiberNet to areas lacking in coverage
- Public-Private Partnership
  - Solicit Private Partner
  - Co-brand the Marketing as “P3 Partner, powered by Palm Coast FiberNet”
  - City focus on managing and expanding the FiberNet backbone to include a NOC (24x7) operation
  - Private Partner focuses on bringing bandwidth and services in to the community and end users
- Upgrade FiberNet Technology
  - GPON/AE Technology to improve bandwidth and scaling
  - Add FMS bolt-on to ESRI to give City strand-level management
  - Set up KPIs to measure managed circuits and even perhaps non-managed resident circuits
  - Expand on Smart City Apps that are feasible and can advance the City

Next Steps

- Solicit Private Partner
  - Work Order with Magellan to assist with finding and Negotiating with Private Partner
- Continue working to close gaps
  - Infrastructure
  - Policy
- Enter into Partnership with Private Partner

THANK YOU

Questions?

FiberNet P3 Development

Fiber to the Premise (FTTP)
Magellan Partnership

Information Technology Team
January 08, 2019

Background

- Magellan developed FiberNet Expansion Business Plan in October 2018
- Most significant recommendation was to enter into a Public-Private Partnership (P3) to:
  - Expand FiberNet to further meet community’ s connectivity needs
  - For businesses, residents and institutions

PHASE 1 – Develop RFx

1. Define the requirements of the City for a P3.
2. Assist the City in Preparation and Solicitation RFx.
3. Release the RFx & Provide Initial Evaluation.
4. Evaluate and Select Most Responsive Bidder.

PHASE 2 – Development and Negotiations

1. Define appropriate processes.
2. Negotiate memorandum of understanding and deal term sheet.
3. Assist with due-diligence on selected partner.
4. Determine optimal plan for buildout of the network.
5. Assist with development of the definitive agreement.

Phase 1 - Task Cost and Timeline	
Consulting Services	**$52,500**
Timeline	**3 Months from Approval to Start**
Cost of Service Type and Rate	**Telecom/Broadband Planning - $175/hr.**

Phase 2 - Task Cost and Timeline	
Consulting Services	**$35,000**
Timeline	**4 Months from Approval to Start**
Cost of Service Type and Rate	**Telecom/Broadband Planning - $175/hr.**

Sample Fiber Term Sheet Deal Points	
Marketing, Sales and Customer Sign Up	Fiber Drop and Connection/Activation Fees
Potential Additional Charges, Optional Services	Subscriber Contract Term Requirements
Easements and Access Agreements	Network Equipment and OSP Maintenance Costs and Fees
P3 Contract Term	Partnership Funding
P3 Reporting Requirements	Proposed Services and Rates
Permitting, Laws and Regulation	Annual Insurance Policies and Costs
P3 Revenue Share	Service Level Agreements (SLAs)
Town Transport and Connectivity Needs	Carrier WiFi Services
Video Franchise Fee (if applicable)	Property/Tangible Taxes

BROADBAND PARTNERSHIP

Successful partnerships balance each partner's needs. Tradeoffs will be inevitable but with proper balance, rewards can be adventageous.

Other Municipal Broadband P3s	
Town of Longboat Key, FL – Fiber (in process)	City of Santa Cruz, CA – Fiber
Town of Longboat Key, FL – Smart Street Lighting (in process)	Garrett County, MD - Fiber
City of Ft. Lauderdale, FL – Enterprise Fiber	City of Minden, LA - Fiber
City of Rancho Cucamonga, CA – Fiber	City of New Braunfels, TX – Fiber (in process)
City of Vallejo, CA – Fiber	City of Westminster, MD – Fiber
Covenant of Rancho Santa Fe, CA – Fiber	Holly Springs, NC – Fiber
City of Centennial, CO - Fiber	MTEMC, TN - Fiber

Next Steps

- Present and Seek Approval in January 2019
- Kick-off meeting with Magellan Team in January 2019
- Phase 1 Completion by April 2019
- Phase 2 Completion by August 2019

THANK YOU

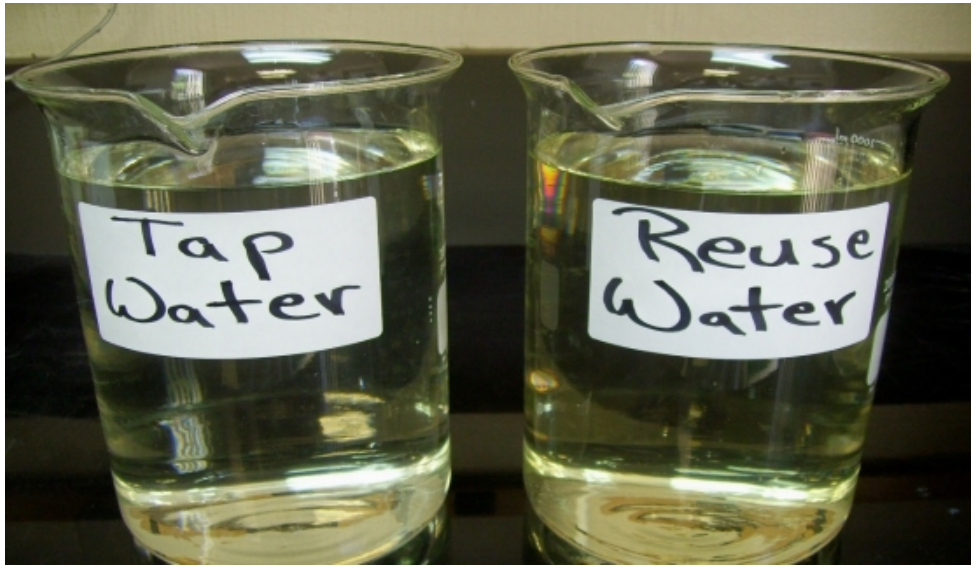
Questions?

REUSE MASTER PLAN

2019

Utility Department

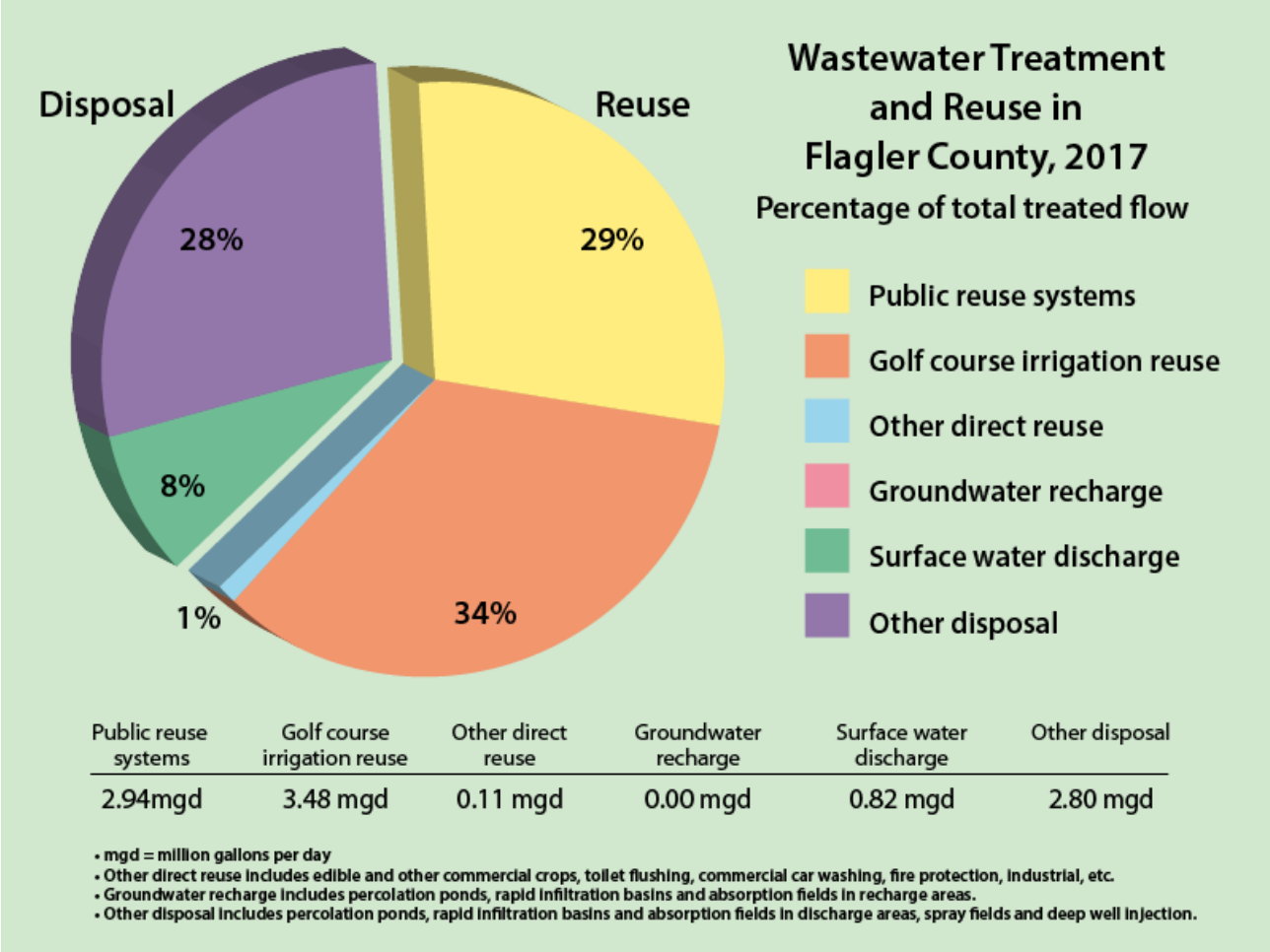
What is Reclaim and Reuse?



- Reclaim Water is wastewater effluent that has been treated in order to meet the requirements of Florida Administrative Code Chapter 62-610.
- Reuse is the application of reclaim water in regards to the way it is used or applied. The reclaim water that is produced from the COPC Treatment Facility meets the requirement of FAC 62-610 Part III and makes it suitable for Public Access Areas, Residential Irrigation and other non-potable uses.

Statewide Usage

- In 2016 Flagler County finished 6th in the state utilizing 78.67 gpd/person.



Public reuse systems	Golf course irrigation reuse	Other direct reuse	Groundwater recharge	Surface water discharge	Other disposal
2.94mgd	3.48 mgd	0.11 mgd	0.00 mgd	0.82 mgd	2.80 mgd

- mgd = million gallons per day
- Other direct reuse includes edible and other commercial crops, toilet flushing, commercial car washing, fire protection, industrial, etc.
- Groundwater recharge includes percolation ponds, rapid infiltration basins and absorption fields in recharge areas.
- Other disposal includes percolation ponds, rapid infiltration basins and absorption fields in discharge areas, spray fields and deep well injection.

Public Access Reuse

- Public Access Reuse is treated effluent water that meets a 1.0 mg/L chorine residual for 15 minutes with less than 2.8 NTU (Nephelometric Turbidity Unit) turbidity and 75% of samples with less than < 1 fecal coliform

Benefits of Reuse

- Conservation and the reduced usage of treated potable water for non-potable applications
- Safe alternative to surface water, groundwater or potable water
- Reduces the need to buy large tracts of land for additional disposal
- Reduces the amount of fertilizer needed for landscaping

Ways that Public Access is Utilized

- Landscaping
- Golf Courses
- Sports Fields
- Car Wash
- Jet cleaning of gravity sewers
- Mobile irrigation of medians

Identification and Notification of Reclaim Water Systems

- Reclaim water piping should be identifiable with the Pantone Purple shade. This color is used throughout the world as an identifier for Reuse Water

- Public Access Reuse areas must also post signs advising the public not to drink the irrigation water

Reuse Pumping Facilities

- Wastewater Plant #1 Pumping Facility has a pumping capacity of 7500 gallons per minute
- Waste Plant #2 Pumping Facility has a pumping capacity of 3700 gallons per minute

Cigar Lake Pumping Facility

- The Cigar Lake Pumping Facility supplies Town Center with Public Access Reuse from Cigar Lake
- Public Access Reuse from the Wastewater Plants is stored in Cigar Lake and then used as needed
- Cigar Lake Pumping Facility has a pumping capacity of 3700 gallons per minute and can be expanded in the future with an additional capacity of 5200 gallons per minute

Current Public Access Reclaim Water Customers

- Hammock Dunes Community Development District
- Grand Landings
- Grand Haven Community Development District & Wild Oaks
- Town Center
- Hidden Lakes
- Toscana
- FPC & Matanzas High Schools
- Medians & Businesses Located Around SR 100, Old Kings Road, Palm Coast Parkway, and Belle Terre Parkway

Restricted Access Effluent Disposal Sites

- Effluent water that does not meet the criteria to be Public Access Reuse (Reject Water) must be disposed of in areas where access is restricted to the general public

Restricted Access Sites

- Spray Irrigation Fields

- Although the effluent is not directly reused, it is still considered a beneficial use since it recharges the groundwater supply

Outfall for Wastewater Plant #1

- When Restricted Access Sites are reaching capacity and Public Access Sites demand for reuse is low the water is disposed of in the Intracoastal Waterway using a multi-port diffuser which injects the effluent in multiple spots which spreads and slows the flow over a larger area. The diffuser heads close while not in use to keep wildlife out.
- During periods of extreme wet weather such as hurricanes, tropical storms and extended rainfall events, the additional pumping capacity is needed to keep up with influent flow

Wastewater Plant #2

- Wastewater Plant #2 has a current reuse treatment capacity of two million gallons per day
- Effluent is filtered by a membrane treatment process to remove Total Suspended Solids and viruses
- Effluent is treated to Advanced Waste Treatment Standards

Outfall for Wastewater Plant #2

- WWTP 2 – Uses a large spillway to slow flow and distribute over a larger area

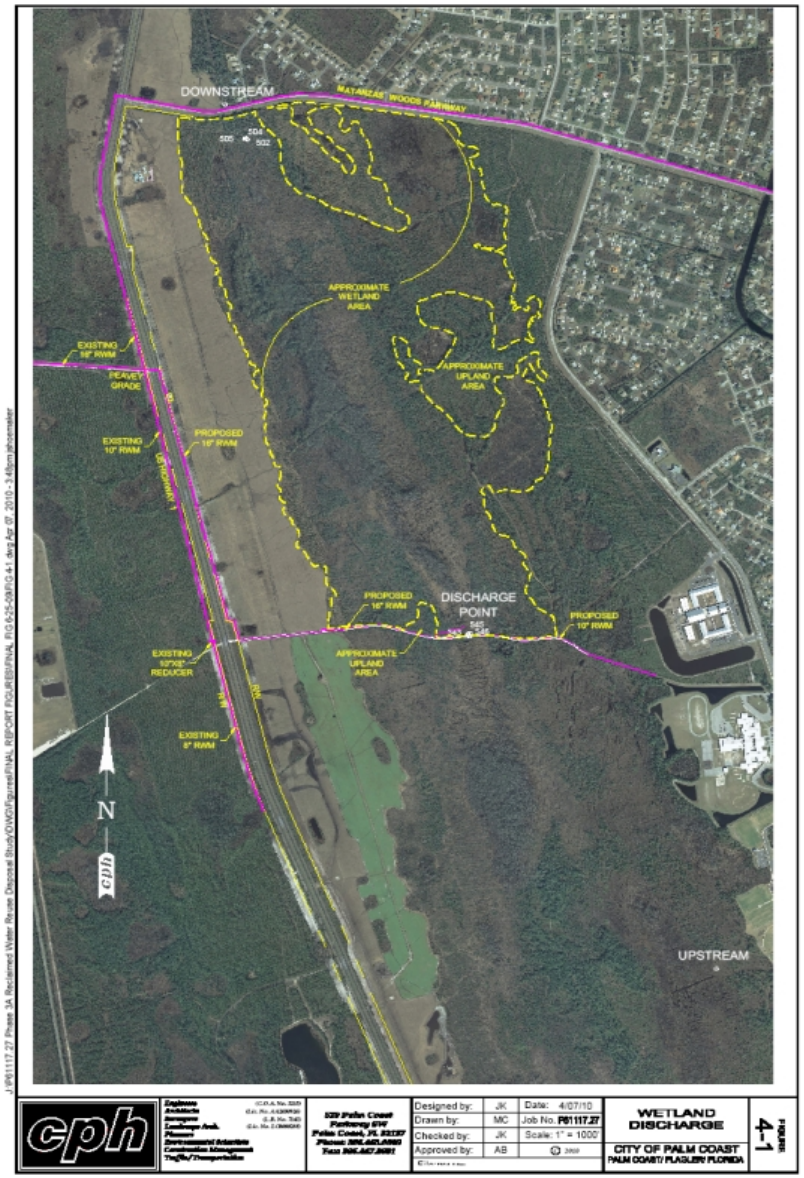
Public Access Reuse at Wastewater Plant #2

- Supply Public Access Reuse to the new developments along US #1 in the northwest portion of the city
- Supplies the northern Belle Terre medians and city operated sports fields (project in current Capital Plan)
- Matanzas Woods Parkway Reuse Main interconnects between Wastewater Plants #1 and #2 at Conservatory

Wastewater Plant #2 Effluent Disposal

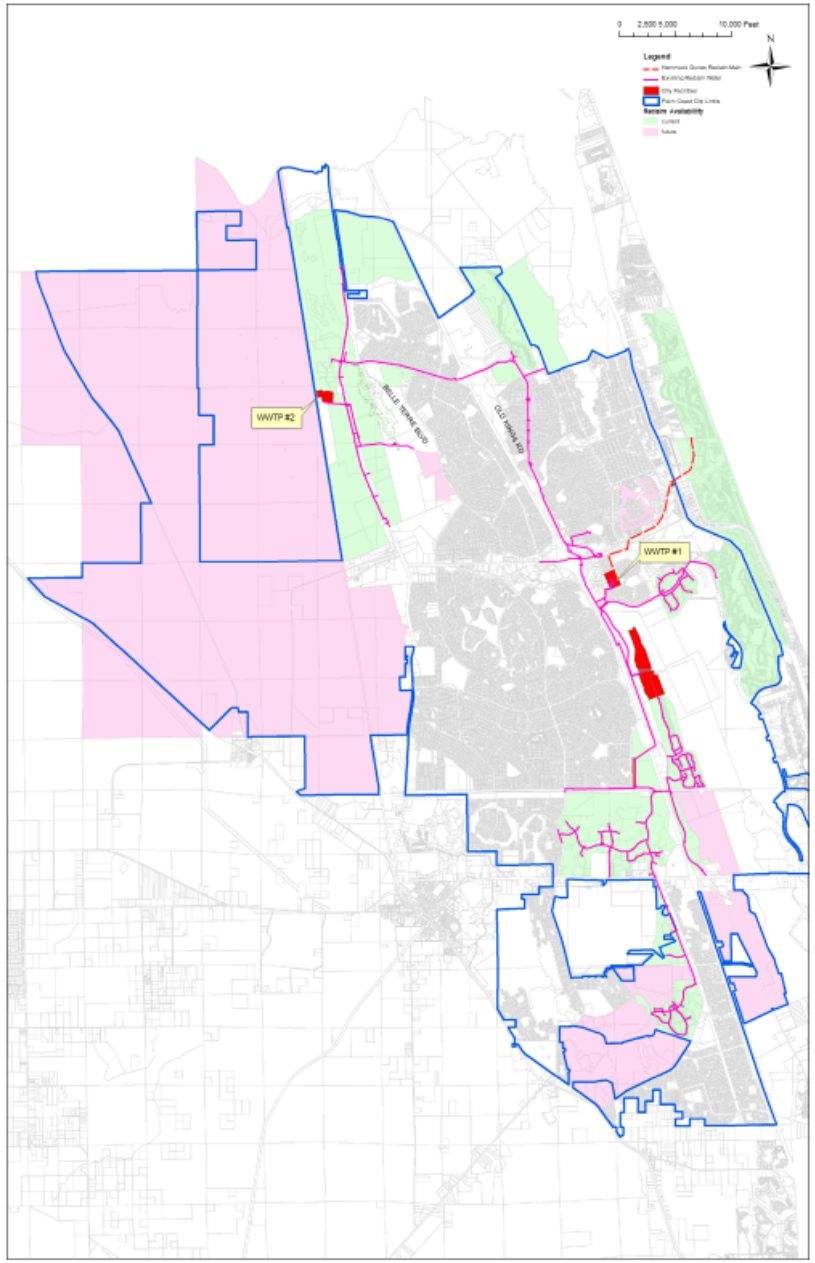
- Is located between U.S. 1 and North Belle Terre Parkway

- Recharges wetlands area for aquifer recharge



Service Area Map

- The City is looking to modify the existing DEP permit to encompass the reuse service territory to equal the existing wastewater service territory developed in the Masterplan



Service Area Table From Masterplan

Table 1 Palm Coast Wastewater Treatment and Reclamation Facility Effluent Disposal Capacity		
Site Location	**Area Irrigated (Acres)**	**Capacity (MGD/AADF)**
Restricted Public Access Irrigation Systems and Rapid Rate Infiltration Basins		
Palm Coast Spray Fields	60.0	0.60
Palm Coast RIB No. 1 (North)	8.0	1.00
Palm Coast RIB No. 2 (South)	12.5	0.92
Palm Coast RIB No. 3 (West)	17.0	0.55
R-001 CAPACITY =		**3.07**
Public Access Irrigation Systems (Currently Used Systems)		
Grand Haven Golf Course	127.0	0.726
Grand Haven Common Areas	45.0	0.274
Hammock Dunes Golf Course	96.0	0.35
Dunes Residential Service Area	254.0	1.00
Ocean Hammock Golf Course	96.0	0.35
Ocean Hammock Residential	100.0	0.90
DCDD Creek Course	128.9	0.35
Conservatory Development	179.0	0.49
Matanzas High School landscape Area	18.4	0.05
Residential Developments	147.3	0.40
Hidden Lakes Residential Area	102.4	0.28
Grand Haven Estates Residential Area	44.2	0.12
South of Airport (Residential Areas)	869.2	2.36
Old Kings Road Median / ROW South of WWTP No. 1	28.5	0.08
Old Kings Road Median / ROW North of WWTP No. 1	23.3	0.06
State Rd 100 – Central Ave. to Colbert Ln		0.01
Hidden Lakes Office Complex (Landscape Areas)	60.0	0.19
Palm Coast Parkway Median (Landscape Areas)	2.8	0.011
WWTP No. 1 (Landscaped Areas)	8.4	0.02
Town Center – **Current**	115.7	0.40
Total Current System Users	**2446.1**	**8.421**

Site Location	**Area Irrigated (Acres)**	**Capacity (MGD/AADF)**
Town Center – **Future**	289.4	1.0
FPL Row Residential - **Future**	92.1	0.25
FPL ROW South of WWTF No. 1 - **Future**	128.6	0.35
Palm Harbor (Golf Course) - **Future**	120.0	0.470
Bulow Woods LLC - **Future**	816.5	2.2
Iroquois LLC - **Future**	117	0.316
Total Future System Users	**1,563.6**	**4.586**
R-002 CAPACITY = Current + Future	**3076.2**	**13.007**
WTRF #2 Public Access Irrigation Systems (Future Systems)		
Palm Coast West N-010 (Residential and Office/Commercial)	118.0	0.41
Palm Coast West N-020 (Residential)	4.0	0.01
Palm Coast West N-030 (Industrial and Mixed Use)	18.1	0.06
Palm Coast West N-040 (Commercial and Office)	9.2	0.03
Palm Coast West N-050 (Residential, Commercial/Industrial, Institutional)	8.8	0.03
Palm Coast West N-060 (Residential and Commercial/Industrial)	27.7	0.10
Palm Coast West N-070 (School, Parks)	28.8	0.10
Future Development West of the Railroad	424.0	1.15
Sawmill Creek Residential	268.4	1.04
Rayonier Property (Mixed Use)	787.0	2.14
Old Brick (Residential and Commercial)	527.0	1.43
Three Lakes (Residential and Commercial)	580.0	1.58
US Hwy1 Multiuse Path Reuse Irrigation	62.9	1.20
R-001 CAPACITY =	**2863.9**	**9.28**

THANK YOU

Questions?

Palm Coast Sports Alliance

Field Usage

Palm Coast Sports Alliance

Palm Coast Sports Alliance

- Established in 2013
- Created for City's economic development plan "Prosperity 2021"
- Primary focus of collaboration of Local and Tourism usage
- Growth of Economic Impact through Sports Tourism
- MOU Created with TDC and Flagler County Schools

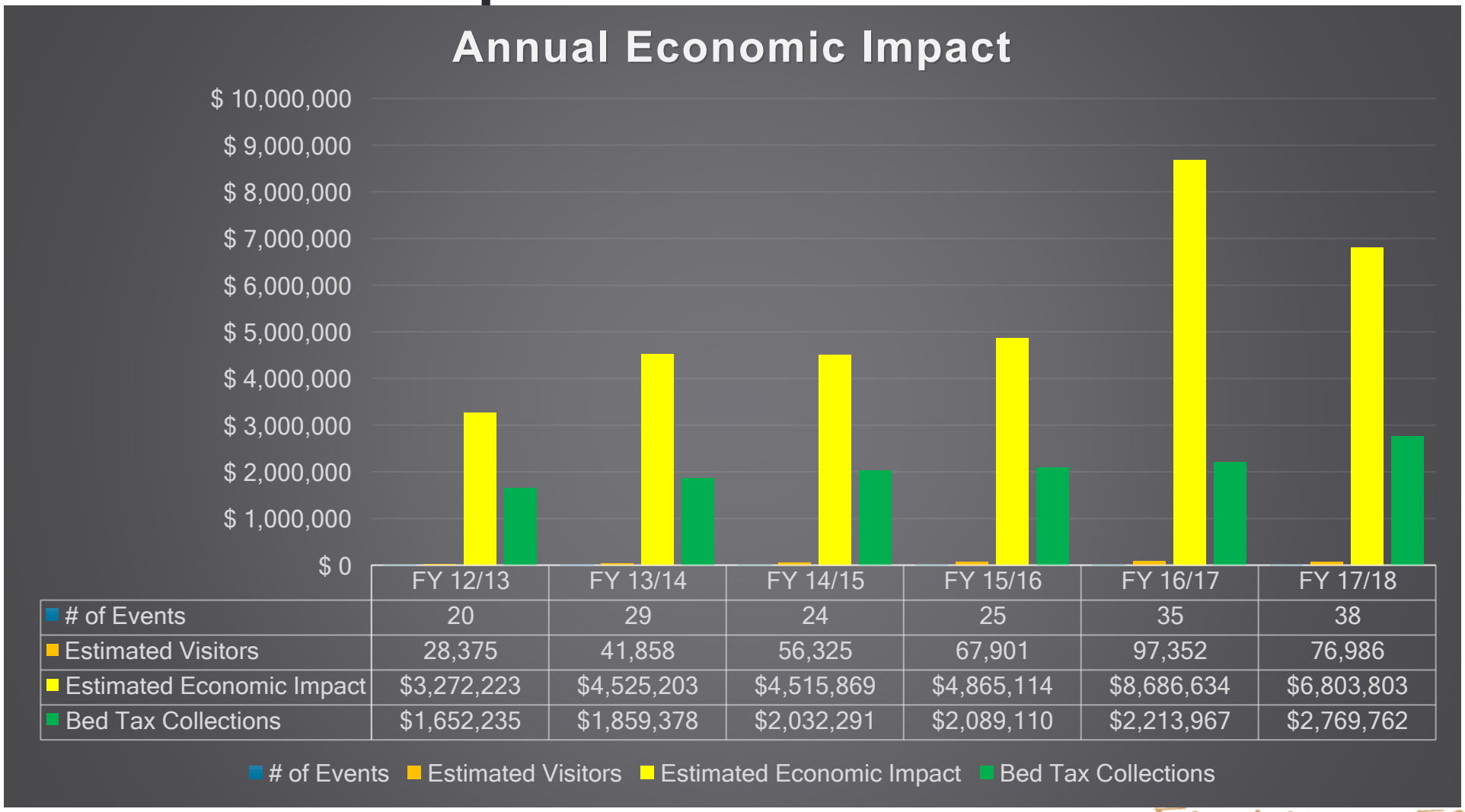
Palm Coast Sports Alliance

- 2015 Performance Measure to Create Field Usage Policy/Priority

<u>Scheduling Priority</u>

- Priority 1- City Use/ Intergovernmental Agreements
- Priority 2- Tournaments/Economic Impact
- Priority 3- Sports Alliance Members
- Priority 4- Individual Organizations/Private Reservations for Fee
- Priority 5- Specialized Play

Economic Impact



	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18
# of Events	20	29	24	25	35	38
Estimated Visitors	28,375	41,858	56,325	67,901	97,352	76,986
Estimated Economic Impact	$3,272,223	$4,525,203	$4,515,869	$4,865,114	$8,686,634	$6,803,803
Bed Tax Collections	$1,652,235	$1,859,378	$2,032,291	$2,089,110	$2,213,967	$2,769,762

Field Usage Request Process

Seasonal Permits

Schedule Window

Permit Dates	Request Dates
Fall: Aug. 1-Dec. 31, 2018	June 1-July 1 Request Window
Winter/Spring: Jan. 1-May 31, 2019	Nov. 5- Nov. 28 Request Window
Summer: June 1-July 31, 2019	May 1-May 20 Request Window

Field Usage Request Process

- To reserve field space for tournaments, camps, or clinics,
- To reserve for practices or league games,

Field Usage Participant Requirements

- 1 Primary Point of Contact
- Current COI
- Copy of Team Rosters and League Schedules

Additional possible requests:

- League/Organization Practice Schedules

Field Inventory

Palm Coast Field Inventory

Baseball/Softball Fields

			Permitted Season		
	Permitted	**Lighted**	**Fall**	**Winter/Spring**	**Summer**
Baseball ITSC 1	Yes	Yes	Yes	Yes	Yes
Baseball ITSC 2	Yes	Yes	Yes	Yes	Yes
Baseball ITSC 4	Yes	Yes	Yes	Yes	Yes
Baseball HP 1	Yes	No	Yes	Yes	Yes
Softball ITSC 3	Yes	Yes	Yes	Yes	Yes
Softball HP 1	Mon-Sat	No	Yes	Yes	Yes

Palm Coast Field Inventory

Multi-Purpose Fields

			Permitted Season		
	Permitted	**Lighted**	**Fall**	**Winter/Spring**	**Summer**
RC 1	Yes	Yes	Oct.-Dec.	Yes	No
RC 2	Yes	Yes	Oct.-Dec.	Yes	No
BT 1	Yes	No	Aug.-Oct.	March-May	Based on Conditions
BT 2	Yes	No	Aug.-Oct.	March-May	Based on Conditions
SW 1	Yes	No	Aug.-Oct.	March-May	Yes
HP 1	No	No	N/A	N/A	N/A
HP 2	No	No	N/A	N/A	N/A

Palm Coast Field Inventory

Sports Complex Fields

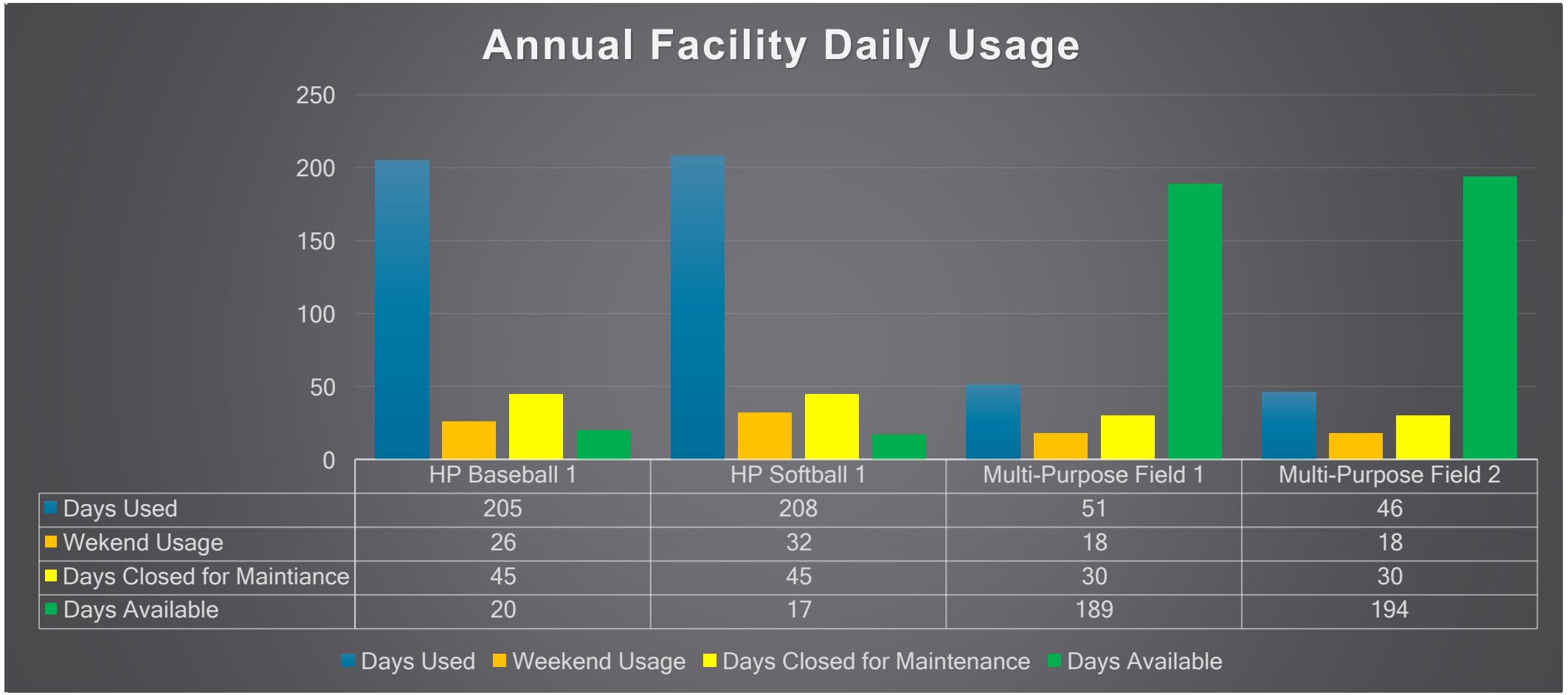
	Permitted	Lighted	Permitted Season		
			Fall	Winter/Spring	Summer
ITSC 1	Yes	Yes	Yes	Yes	Tournament Only
ITSC 2	Yes	Yes	Yes	Yes	Tournament Only
ITSC 3	Yes	Yes	Yes	Yes	Tournament Only
ITSC 4	Yes	Yes	Yes	Yes	Tournament Only
ITSC 5-7	Yes	Yes	Yes	Yes	Tournament Only
ITSC 8	Yes	No	Yes	Yes	Tournament Only
ITSC 9	Yes	No	Yes	Yes	Tournament Only
ITSC 10	Yes	No	Yes	Yes	Tournament Only

Field Usage Report

Field Usage Report

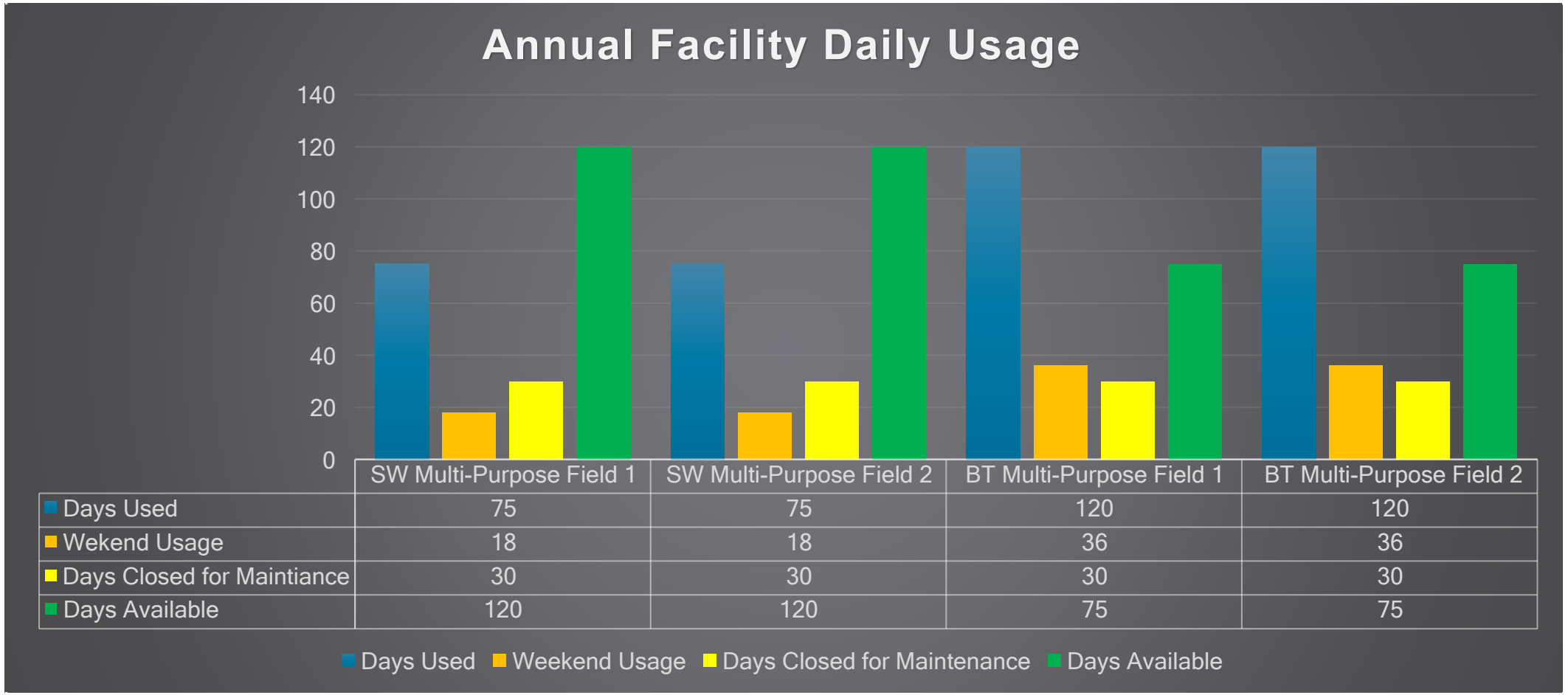
- Field Usage by Location
- Participation Report

Holland Park



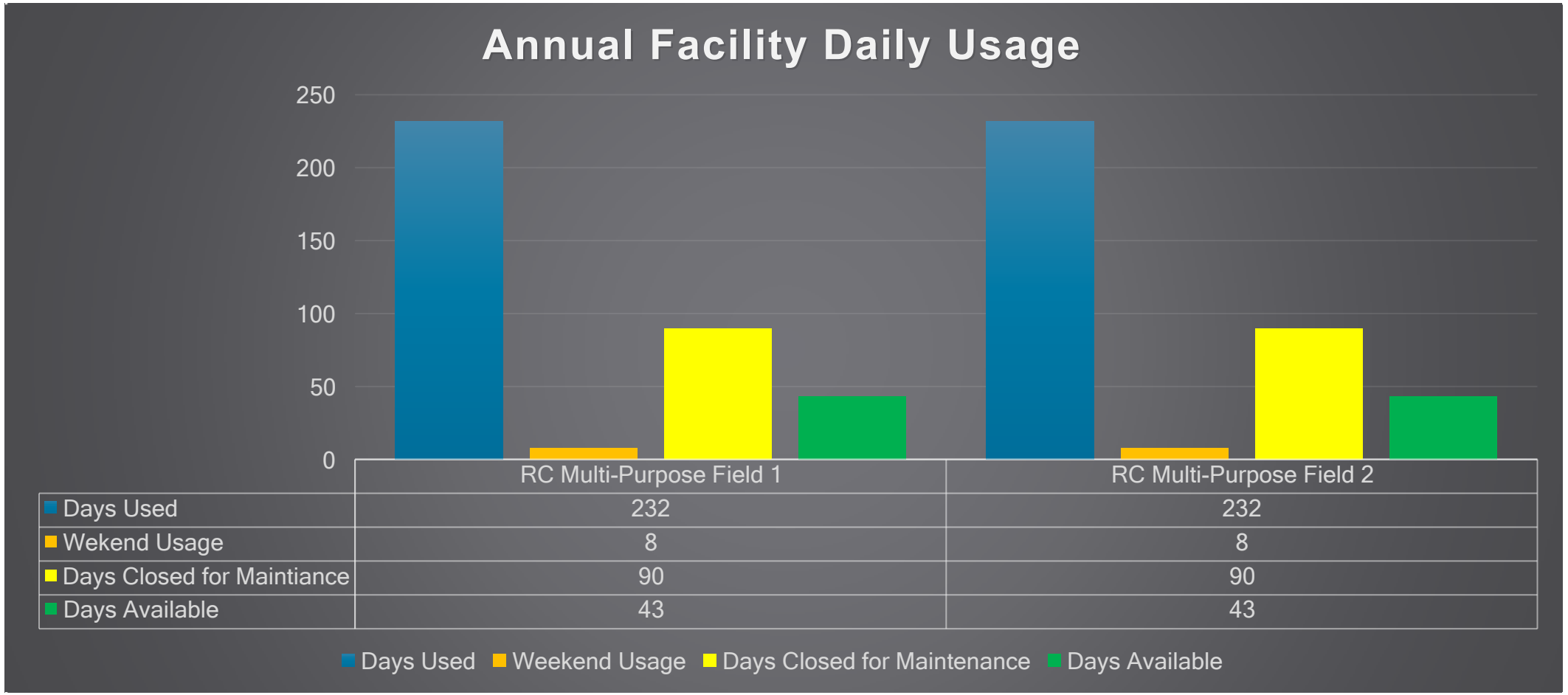
Field availability average of 225 days due to DLS

Belle Terre & Seminole Woods Parks



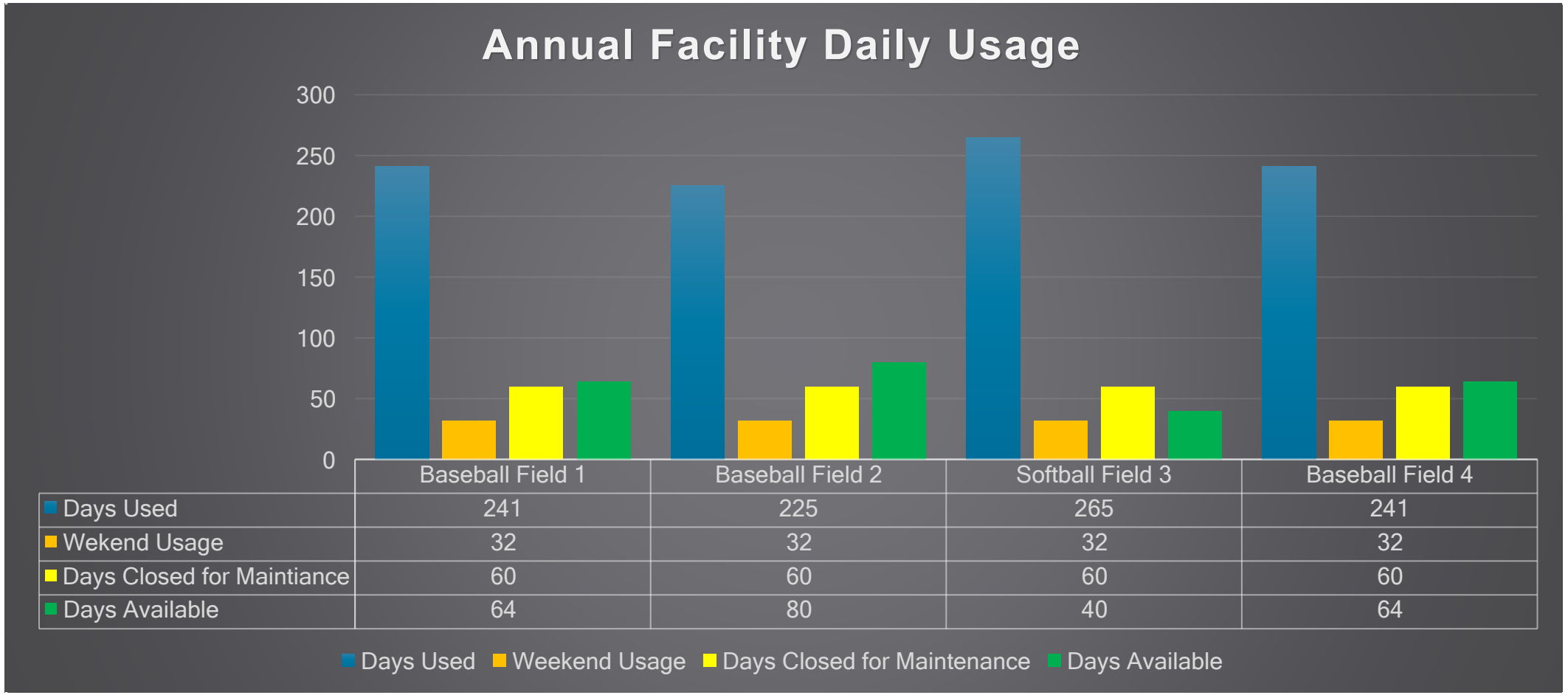
Field availability average of 225 days due to DLS

Ralph Carter Fields



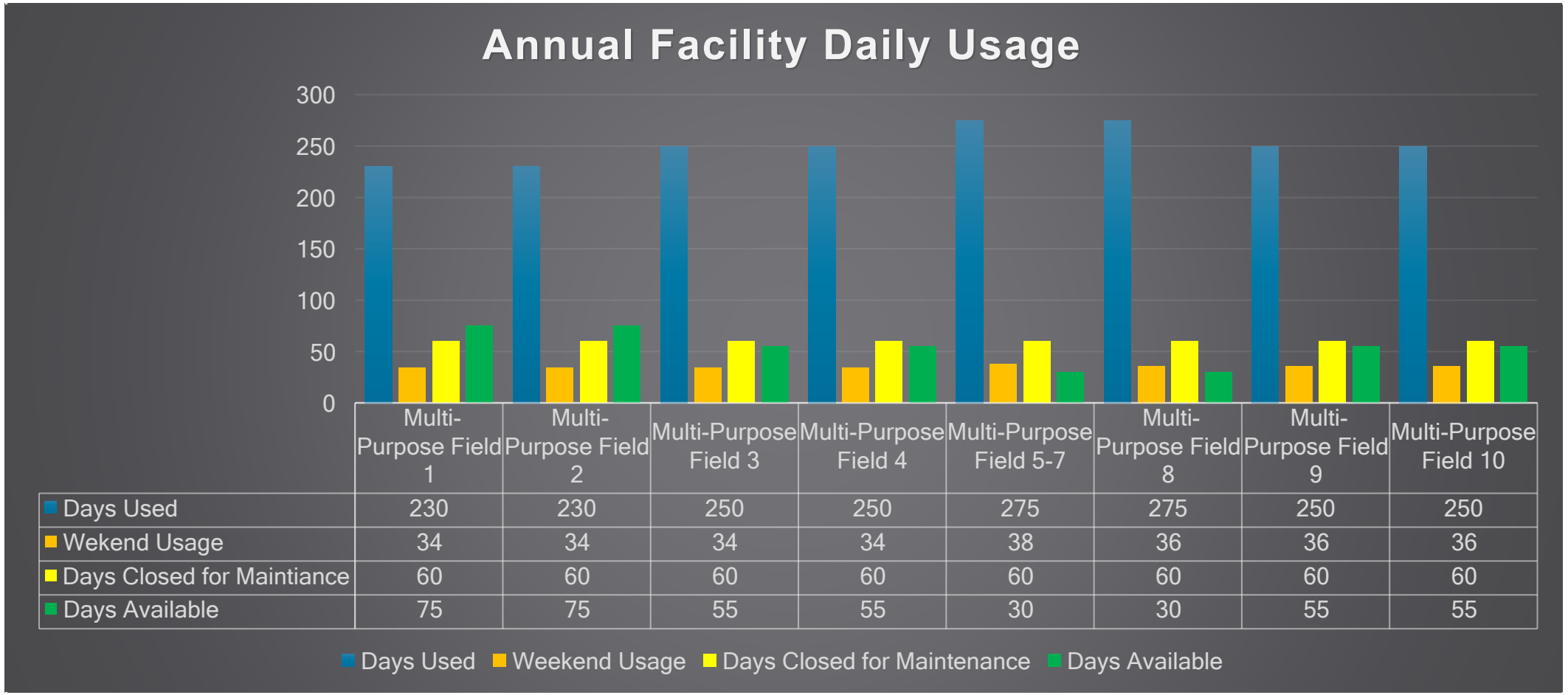
Fields permitted Oct.-May (available days Fri, Sat, Sun)

Indian Trails Baseball/Softball



	Baseball Field 1	Baseball Field 2	Softball Field 3	Baseball Field 4
Days Used	241	225	265	241
Wekend Usage	32	32	32	32
Days Closed for Maintiance	60	60	60	60
Days Available	64	80	40	64

Indian Trails Sports Complex

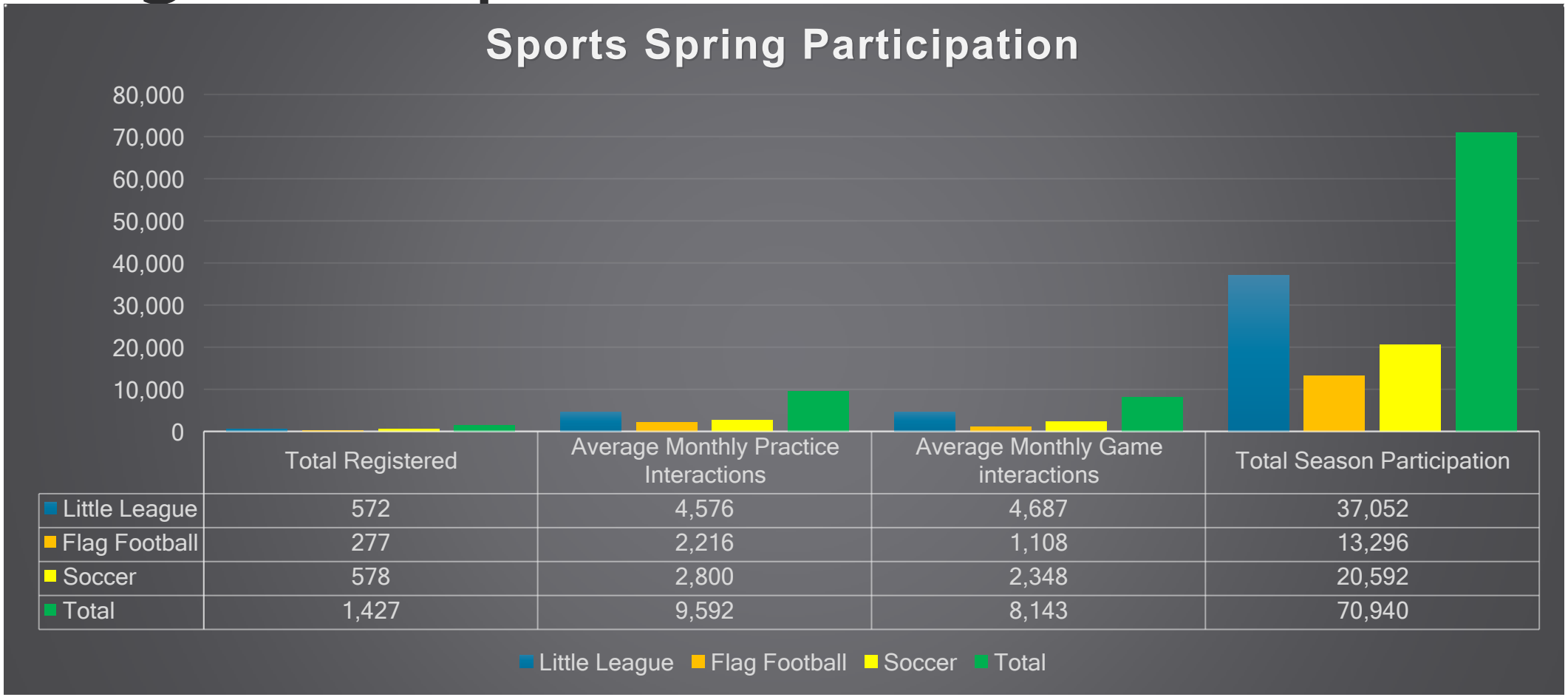


	Multi-Purpose Field 1	Multi-Purpose Field 2	Multi-Purpose Field 3	Multi-Purpose Field 4	Multi-Purpose Field 5-7	Multi-Purpose Field 8	Multi-Purpose Field 9	Multi-Purpose Field 10
Days Used	230	230	250	250	275	275	250	250
Wekend Usage	34	34	34	34	38	36	36	36
Days Closed for Maintiance	60	60	60	60	60	60	60	60
Days Available	75	75	55	55	30	30	55	55

Fields are on a 3-month rotation

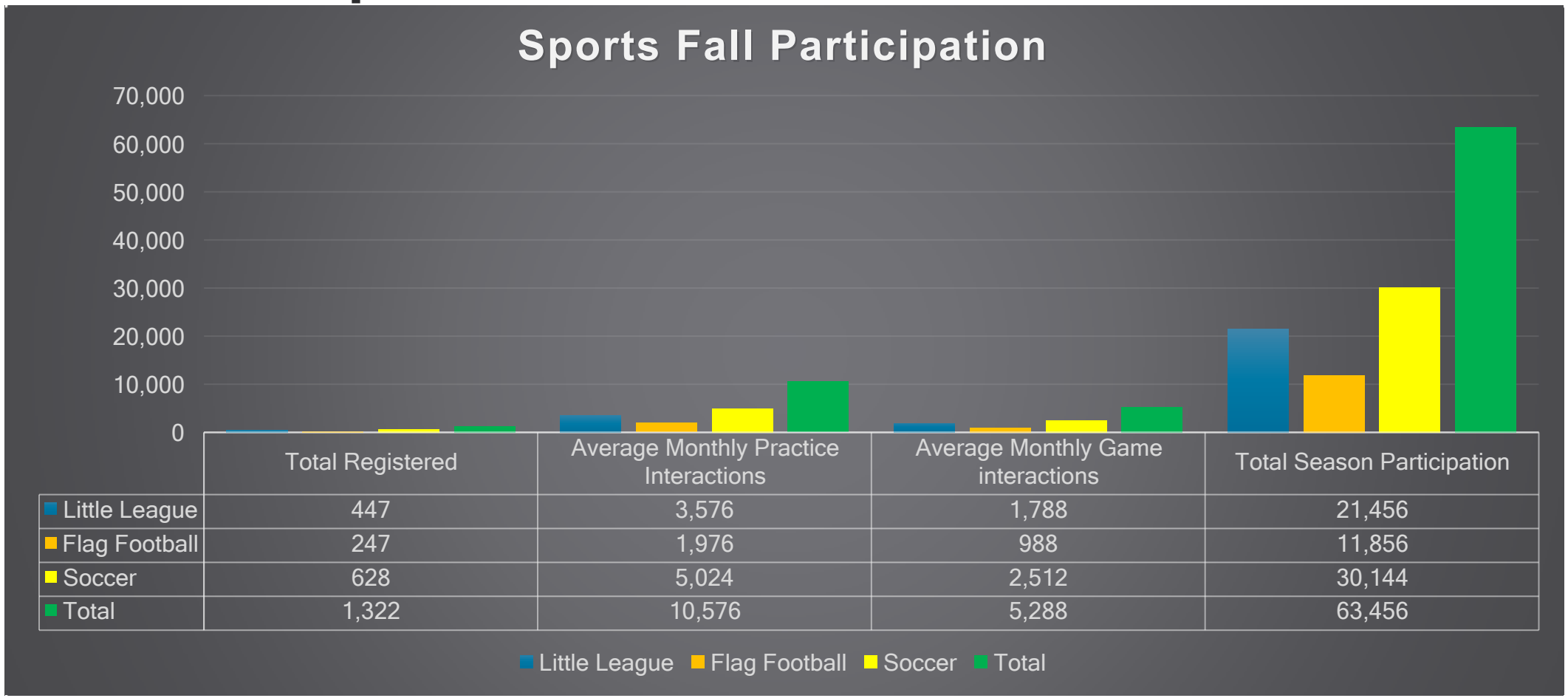
Participation Report FY 18

Spring Participation 2018



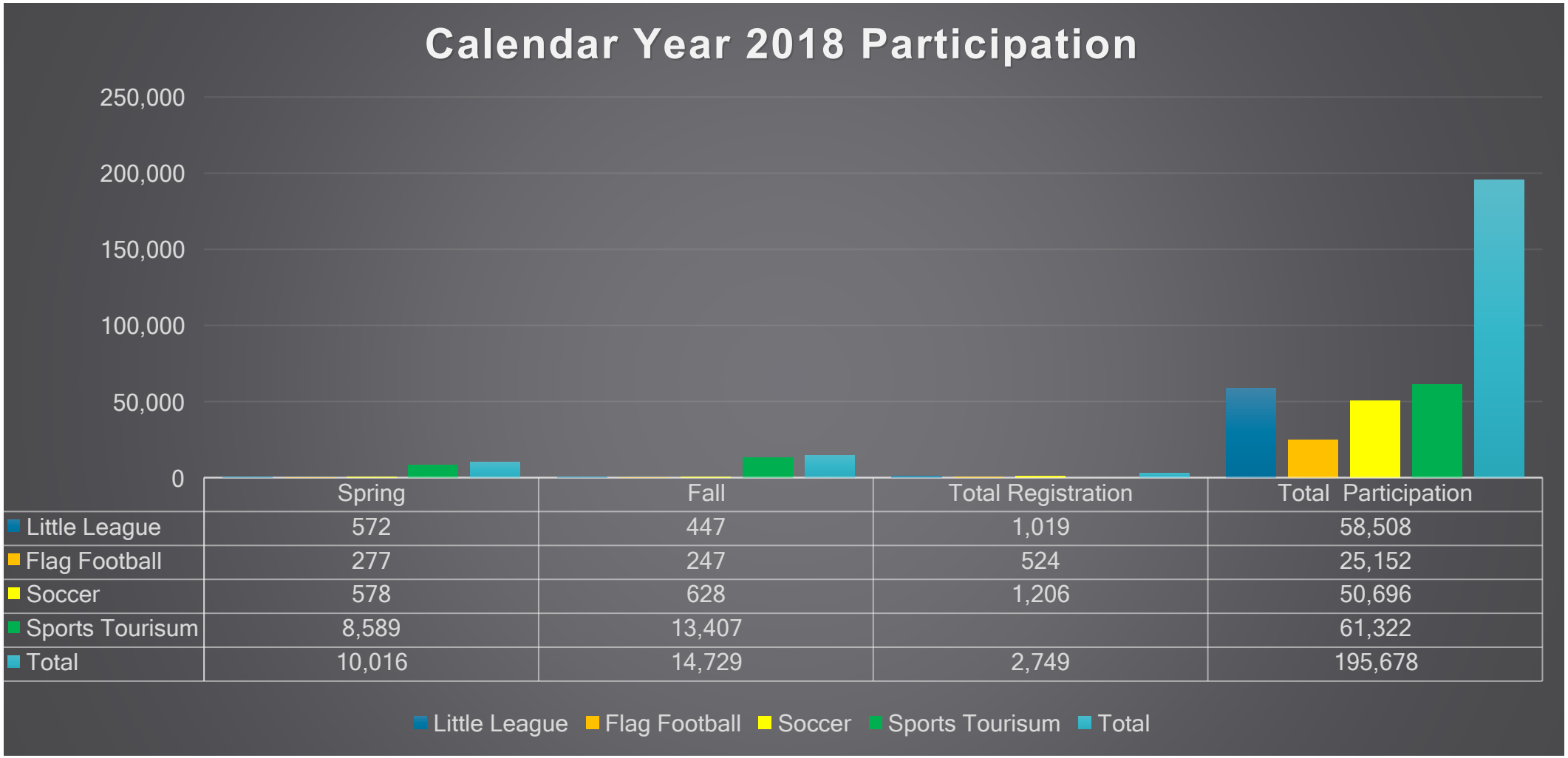
	Total Registered	Average Monthly Practice Interactions	Average Monthly Game interactions	Total Season Participation
Little League	572	4,576	4,687	37,052
Flag Football	277	2,216	1,108	13,296
Soccer	578	2,800	2,348	20,592
Total	1,427	9,592	8,143	70,940

Fall Participation 2018



	Total Registered	Average Monthly Practice Interactions	Average Monthly Game interactions	Total Season Participation
Little League	447	3,576	1,788	21,456
Flag Football	247	1,976	988	11,856
Soccer	628	5,024	2,512	30,144
Total	1,322	10,576	5,288	63,456

Total Participation FY 2018



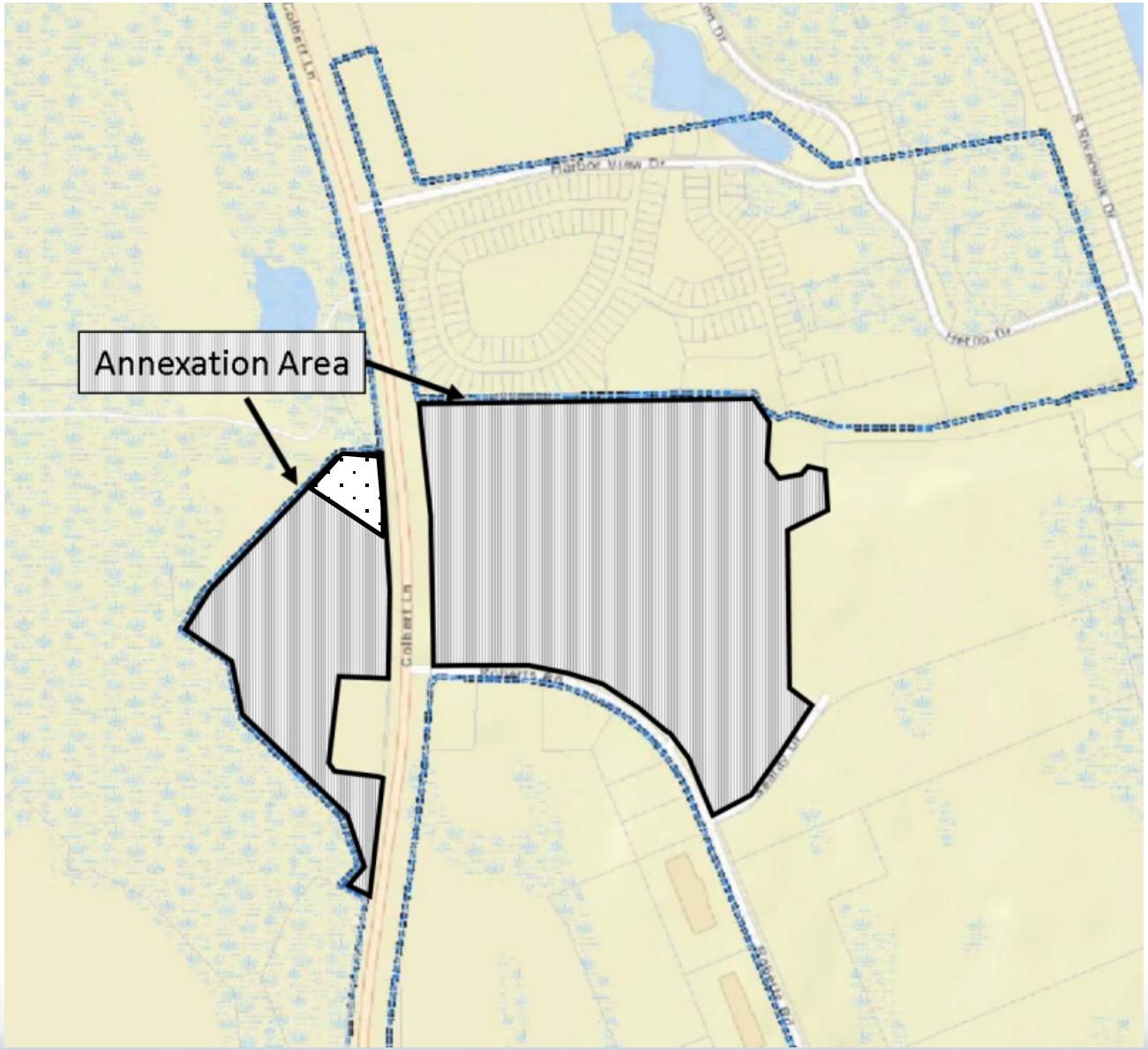
	Spring	Fall	Total Registration	Total Participation
Little League	572	447	1,019	58,508
Flag Football	277	247	524	25,152
Soccer	578	628	1,206	50,696
Sports Tourisum	8,589	13,407		61,322
Total	10,016	14,729	2,749	195,678

THANK YOU

Questions?

Lighthouse Harbor, LLC & Palm Coast Holdings Inc. Annexation

Find Your Florida


Annexation Area
Colbert Ln
Harbor View Dr

Questions?

Planning and Land Development Regulation Board Proposed Code Amendment:

(c) *Membership~~, place of residence, terms of office~~.* ~~The board shall have seven members appointed by the City Council No elected official or employee of the City government shall be appointed to serve on the board.~~ The City Council shall appoint a Planning and Land Development Regulation Board with seven regular members and two alternate members. Alternate members shall vote only when a regular member is unable to attend a meeting, hear a particular case, or is absent during a vote at a meeting. Alternate members may attend any meeting and sit without participating or voting unless they are required to vote as provided herein. No elected official or employee of the City government shall be appointed to serve on the board.

QUESTIONS?