

**ENGINEERING & PUBLIC WORKS
FY 2016 ANNUAL REPORT**

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SECTION I
MANAGEMENT PLAN



**MANAGEMENT PLAN –
ENGINEERING, PARKS & PUBLIC WORKS
September 30, 2016**

Vision	A key partner on stewardship of infrastructure, landmarks, and parks to preserve the unique character of Jupiter.
Mission	To provide exceptional customer service and value through design, construction and maintenance of facilities, infrastructure and parks within the Town of Jupiter. Restoring facilities, infrastructure, and parks after man-made or natural disasters.
Department Values	<p>Honesty: Conducting our business in a factual and straightforward manner.</p> <p>Respect: Having a special regard for the Town’s customers and being attentive to their needs.</p> <p>Accountability: Accepting responsibility for our work and meeting our commitments.</p> <p>Commitment to Improve: Improving by benchmarking, sharing information, technology, and ideas.</p> <p>Ethical Relationships: Conducting our business with the honesty and integrity.</p>
Goals	<p>Unique, Small Town Feel: Improved neighborhood infrastructure from streets to streetscapes</p> <p>Organizational Excellence: Workforce committed to serving our customers</p> <p>Organizational Excellence: Well trained and professional workforce</p> <p>Organizational Excellence: Implement Best Practices from APWA Accreditation Document</p> <p>Fiscal Responsibility: Process Improvement and Cost Control</p> <p>Green, Blue and Open Spaces: Street Trees and Sidewalks and Park Work Needs</p>
Objectives	<p>Biennial Infrastructure Inspections</p> <p>Maintain the Condition of the Town’s Roadway Pavements</p> <p>Reduce the Number of Sidewalk Trip and Fall Hazards</p> <p>Improve Town Signage to Comply with MUTCD</p> <p>Improve Town Roadway Markings and Striping</p> <p>Utilize the Town’s Citizen’s Survey to Assess Operations and Customer Service</p> <p>Conduct Annual Employee Survey</p> <p>Monthly Safety Training</p> <p>Develop and Implement APWA Recommended Best Practices</p> <p>Implement Parks Maintenance Cost Control</p> <p>Implement Public Works Cost Control</p>

Improve Neighborhood Infrastructure from Streets to Streetscapes
Town's Strategic Theme: Unique, Small Town Feel

Objectives	Activities	Performance Measures (Biannual)	Progress (current status)	Results	Responsible Parties
Implement Infrastructure Inspections	<ol style="list-style-type: none"> 1. Perform infrastructure inspections on the established basis (Biennial) as per policy. 2. Develop a facilities and parks work needs infrastructure criteria/form for implementation in FY2015. 	Work needs survey	<ol style="list-style-type: none"> 1. Biennial completed in 2015; 2. Parks staff reviewing parks and facilities 	<p>Completed</p> <p>Completed (2016)</p>	Tom D., Dave R., Jim W., Laurie
Improve the condition of the Town's pavement inventory	<ol style="list-style-type: none"> 1. Employ contract labor to survey current conditions of roads requiring overlay. 2. Prioritize overlay projects. 3. Set schedule of roads to be overlaid. 4. Benchmark improvement for this objective. 5. Develop Capital Improvement Project (CIP) 2016-2020 6. Manage roadway rehabilitation 	4. PCI 75	<ol style="list-style-type: none"> 1. Completed 2. Completed 3. Completed 4. Completed 5. Completed 6. In progress <p>Long-Term, Town-wide PCI FY 2020</p>	FY 2016 Pavement rehabilitation completed	Scott, Doug, Laurie
Reduce the number of damaged sidewalk trip & fall hazards	<ol style="list-style-type: none"> 1. Survey current conditions. 2. Add new damaged sidewalks as they are discovered or reported. 3. Request additional budget funding for more contract labor to assist with the removal of tree roots causing sidewalk damage. 4. Benchmark improvements in this objective. <ol style="list-style-type: none"> a. Reduce personal injury claims by the number of sidewalk trip and falls. 5. Develop an alternative material to concrete (pervious concrete and other). 	4. Reduced Trip and Fall claims	<ol style="list-style-type: none"> 1. Work Needs Survey 2. In progress 3. In progress 4. Completed 5. In progress-precast sidewalk panels; plastic sidewalk panels; pervious rubber sidewalk materials 	<p><u>Sidewalk Trip and Falls:</u></p> <p>FY 2015 – (4)</p> <p>FY 2016 – (2)</p> <p>5. Completed</p>	Scott, Laurie, David
Improve Town signage to comply with MUTCD	<ol style="list-style-type: none"> 1. Survey current conditions. 2. Inventory and map 3. Benchmark improvements for this objective. Establish benchmark(s) for this objective <ol style="list-style-type: none"> a. Height, lateral, offset, reflectivity b. Repair sign inventory 	3. a. MUTCD/FDOT Design Index	<ol style="list-style-type: none"> 1. Work Needs Survey 2. Baseline Completed; updated for new inventory 3. In progress <ol style="list-style-type: none"> a. Completed b. In progress 	Completed	CJ, Rodney

Improve Town roadway markings and striping	<ol style="list-style-type: none"> 1. Survey current conditions. 2. Benchmark improvements for this objective. Prioritize areas of improvement <ol style="list-style-type: none"> a. MUTCD b. % of substandard markings 3. Inventory and map. 	2. a. MUTCD/FDOT Design Index	<ol style="list-style-type: none"> 1. Work Needs Survey 2. Completed 3. In progress 	Completed	CJ, Rodney
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Workforce Committed to Serving Our Customers
Town's Strategic Theme: Organizational Excellence

Objectives	Activities	Performance Measures	Progress (current status)	Results	Responsible Parties
Utilize the Town's citizen's survey to assess operations & customer service	Combine, analyze, and evaluate responses to coordinate customer service needs and make recommendations regarding service changes or needed training on a quarterly basis	Maintain a "Much Above" in the National and Florida Comparisons	Survey in FY 2016	FY 2016 National Citizen Survey; Street & Sidewalk Maintenance Higher than National Benchmark	Tom D., Chrystal, Diane

Well Trained and Professional Workforce
Town's Strategic Theme: Organizational Excellence

Objectives	Activities	Performance Measures	Progress (current status)	Results	Responsible Parties
Monthly Safety Meetings and Training	Monthly safety training meetings or Kiosk	<ol style="list-style-type: none"> a. Staff completion: one class per month per employee. b. Reduce recordable & lost time accidents 	In progress	<ol style="list-style-type: none"> a. 93% Attendance at scheduled safety meetings b. 1 Lost Time FY2016 	Jim W., Dave R., Daisy S.
Conduct Annual Employee Survey	Conduct and Annual Engineering and Public Works Employee Survey	Teamwork 75% Supervisory 75%	FY 2016 Survey Complete	Teamwork: 75% Supervisory: 79%	Tom D., Diane

Implement Best Practices from APWA Accreditation Document
Town's Strategic Theme: Organizational Excellence

Objectives	Activities	Performance Measures	Progress (current status)	Results	Responsible Parties
Develop and Implement Recommended Best Practices	<ol style="list-style-type: none"> 1. Develop policies and procedures 2. Add Parks in FY2017 3. Add Stormwater FY2017 	<ol style="list-style-type: none"> 1. % complete 2. % complete 	In progress	Pending; Project delayed due to Energov, Lucity and Work Needs	Tom D., Doug, Jim W., Dave R., Laurie

Process Improvement and Cost Control
Town's Strategic Theme: Fiscal Responsibility

Objectives	Activities	Performance Measures	Progress (current status)	Results	Responsible Parties
Implementation of Work Orders, Asset Management, and Fleet Software Systems	<ol style="list-style-type: none"> 1. Implementation of modules. 2. Employee training on use of new system 3. Develop & define reporting & job costing data. 		<ol style="list-style-type: none"> 1. Q2 FY2016 2. TBD 3. In progress 	<ol style="list-style-type: none"> 1. Completed Q3 FY 2016 2. Completed 	Laurie
Implement Park Maintenance Cost Control	<ol style="list-style-type: none"> 1. Define benchmark cost 2. Monitor cost 3. Continuous improvement to maintain or reduce cost 	Comparison of benchmark to actual	<ol style="list-style-type: none"> 1. FY2015 Target \$8,600.00 2. In progress 3. In progress 	FY 2016 Actual: \$9,291.	Jim W.
Implement Public Works Cost Control	<ol style="list-style-type: none"> 1. Define benchmark cost 2. Monitor cost 3. Continuous improvement to maintain or reduce cost 	Comparison of benchmark to actual	<ol style="list-style-type: none"> 1. In progress 2. In progress 3. In progress 		Dave R.

**ENGINEERING SERVICES
PERFORMANCE MEASURES FY 2016**

<i>DESCRIPTION OF FY 2015 PERFORMANCE MEASURE</i>	<i>FY 2016 GOAL</i>	<i>FY 2016 ACTUAL</i>	<i>NOTES</i>
Complete Engineering Division review of <u>land subdivision plat</u> submittals within 28 days of receipt & distribution of plat 95% of the time	95% of submittals within 28 days	13 of 14 = 92.8% within 28 days	Below Target
Complete Engineering Division review of land development <u>engineering plan and permit</u> submittals within 28 days of receipt & distribution of plat 95 % of the time	95% of submittals within 28 days	320 of 334 = 95.8% within 28 days	Achieved Target
Complete Engineering Division review of P&Z Division <u>DRC review package</u> submittals within 14 days of receipt 95 % of the time	95% of submittals within 14days	139 of 157 = 87.8% within 14 days	Below Target
Stress and implement safety programs and awareness to reduce lost time due to on the job accidents	Zero (0) lost time accidents	Zero (0) lost time accidents	Achieved Target
Engineering Division Contract Cost Adjustment	100% of all projects were completed within the established CIP Budget	91% of Substantially Competed in FY 2016 were within CIP Budget; overall total project costs were under budget by 8.6%	Below Target
Engineering Contract Time Adjustments	90% completed within no more than 20% increase from the original contract time	85% of Projects completed with 20% of established time; overall time adjustments were 3.2%	Below Target
Engineering Construction Quality Control	Established material quality control assurance & inspection process	No major material deficiencies on substantially completed projects, FY 2016	Achieved Target

PUBLIC WORKS DIVISION
PERFORMANCE MEASURES 2015-2016
End of Fiscal Year Status Report

DESCRIPTION OF 2015-2016 PERFORMANCE MEASURE	FY 2015-2016 GOAL	FY 2015-2016 ACTUAL	NOTES
Perform Town mowing of all major road corridor rights-of-way (Central Boulevard, Alternate A1A, Indiantown Road, U.S.1) so the grass does not exceed 10 inches.	10 inches	Q4 – Exceeded 10 inches (13 inches)	Below target
Stress and implement safety programs and awareness to reduce lost time due to on the job accidents. Continue to focus on safety in 2014 through the use of a professional trainer.	Zero (0)	1 Lost time injuries 0 Carryover	Below target
Complete trimming of vegetation hanging over Town roads or sidewalks within 14 days of discovery or notification. 14' over roadways. 10' over sidewalks & pathways.	95% of trimming completed within 14 days of discovery or notification 100% within 45 days.	70% of 14 day goal / 95% of 45 day goal	Below target
Fleet management Downtime/Police Vehicles.	85% of downtime less than six hours	90.8% of goal	Achieved target
Fleet Maintenance and Repair Cost Per Mile.	Below (Not to Exceed) \$.19/mile annually	\$0.243 per mile	Below target
Repair damaged corners and shoulders on Town roads within 21 days of discovery or notification.	95% of Shoulder and corner repairs completed within 21 days of discovery or notification, 100% within 45 days	70% within 21 days 76.7% within 45 days	Below target
Average Fleet Maintenance Expenditure Per Vehicle.	Below the FBC Median Value (FM-45) of \$2,268.76	\$1,107.55 for 12 months ended 9/30/16	Achieved target
Parks Maintenance Cost Per Acre.	Below FBC High Quartile (PR-21) of \$7,792.72	\$9,291.02 as of 9/30/16	Below target

PUBLIC WORKS DIVISION
PERFORMANCE MEASURES 2015-2016
End of Fiscal Year Status Report

DESCRIPTION OF 2015-2016 PERFORMANCE MEASURE	FY 2015-2016 GOAL	FY 2015-2016 ACTUAL	NOTES
Employee Survey: Teamwork Dimension	Exceed 75% of Respondents rating "Agree"	Achieved 75% of goal	Achieved target
Employee Survey: Supervisory/Leadership Dimension	Exceed 75% of Respondents rating "Agree"	Achieved 79% of goal	Achieved target
Bermuda Turf Management: Perform park sport turf mowing at all Town parks at a minimum of 1 inch.	Height of grass not to exceed 1.5 inches. No more than 5 complaints per year by Town user groups.	Height within 1.5 inches – no complaints	Achieved target
Athletic Field Maintenance: Maintain Town athletic fields to a high level of standard.	Score at least 90% or better on recreation user survey for Town athletic programs facility line item.	Achieved 105% of target	Achieved target
Maintain Sports Field Lighting at safe and acceptable levels.	Bi-weekly sport light inspections. No more than 3 individual lights out at one time on any given light pole (Inclement weather could compromise measure)	Achieved goal	Achieved target

Engineering, Parks & Public Works

	Agree	Neutral	Disagree
1	100.00%	0.00%	0.00%
2	100.00%	0.00%	0.00%
3	58.80%	35.30%	5.90%
4	76.50%	17.60%	5.90%
5	76.50%	11.80%	11.80%
6	76.50%	17.60%	5.90%
7	11.80%	41.20%	47.10%
8	76.50%	17.60%	5.90%
9	76.50%	23.50%	0.00%
10	76.50%	11.80%	11.80%
11	88.20%	11.80%	0.00%
12	82.40%	11.80%	5.90%
13	70.60%	17.60%	11.80%
14	76.50%	17.60%	5.90%
15	70.60%	17.60%	11.80%
16	76.50%	17.60%	5.90%
17	64.70%	29.40%	5.90%
18	52.90%	29.40%	17.60%
19	41.20%	35.30%	23.50%
20	70.60%	11.80%	17.60%
21	82.40%	5.90%	11.80%

- Teamwork Dimension:
- Supervisory Dimension:
- Individual Dimension:
- Organizational Dimension:

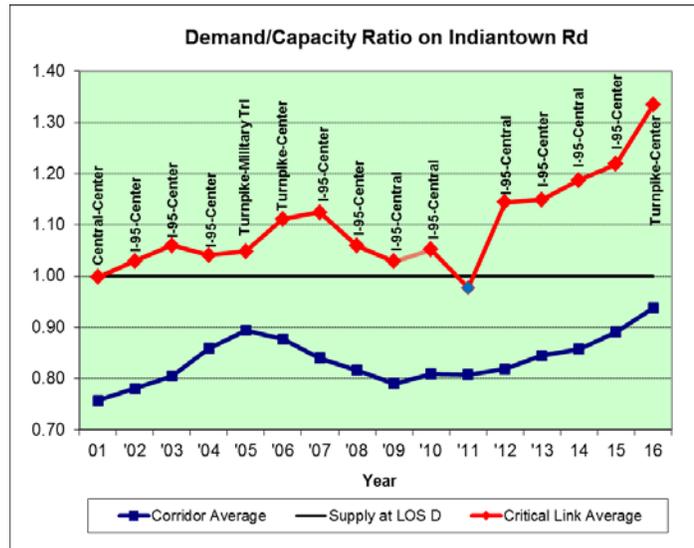
75% Target: Exceed 75% of Respondents rating Agree
79% Target: Exceed 75% of Respondents rating Agree
84% Target: Exceed 75% of Respondents rating Agree
53% Target: Exceed 75% of Respondents rating Agree
Total Responses: 17

- 1) I always try to complete the work that is assigned to be each day.
- 2) I am able to do quality work on a daily basis
- 3) I would like to obtain more on-the-job training.
- 4) I get along well with individuals that I work with.
- 5) Teamwork is a big part of the success of the department.
- 6) My coworkers treat me with respect.
- 7) My coworkers have a positive attitude towards the Town
- 8) My annual evaluation accurately rated my performance.
- 9) My supervisor communicated on my performance and the Town's expectations during performance checkpoints.
- 10) My supervisor clearly communicates work assignments and expectations.
- 11) My supervisor treats me with respect.
- 12) My supervisor challenges me to work smarter and more efficiently.
- 13) My supervisor creates a positive work environment for our team.
- 14) My supervisor knows my skills and abilities.
- 15) I am familiar with my Departments (or Divisions) Mission Statement.
- 16) I am familiar with my Departments (or Divisions) Goals and Objectives.
- 17) The Town is a great place to work.
- 18) The Town kept employees well informed and updated during the budget development process.
- 19) In light of current economic conditions, the Town treated employees fairly when developing the FY budget.
- 20) My team is empowered to make decisions that will improve the outcome of our work.
- 21) My supervisor is willing to help me remove obstacles that may hinder my performance.

SECTION II
TOWN TRAFFIC

Section Summary

- A total of 309.2 million annual VMT (Vehicle Miles Travelled) is recorded on the entire arterial system within the Town in 2016, which accounts for 79.9% of LOS D service volume on the average, a 7.6% increase over the past three-year average.
- In a similar trend with the economy upturn, traffic on Indiantown Rd *between Turnpike and Center St.* exceeds LOS E daily service volume, an increase of 12% compared to 2015. The volume-to-capacity ratios on this critical link (1.33) and the whole Indiantown Rd corridor (0.94) climb to a record high since the beginning of the twentieth century.



- Indiantown Rd has become the *busiest* six-lane arterial carrying over 67,000 daily and 5,900 two-way peak hour traffic in Palm Beach County. The traffic during both AM and PM peak periods in the most critical segment exceeds the physical capacity (LOS E) of arterial and creates temporary recurrent congestion on an almost daily basis.
- The signalized intersection is evaluated using the critical intersection volume-to-capacity ratio. A ratio of 0.85 or less corresponds to LOS D or better, and a ratio of 0.85 to 0.95 corresponds to LOS E.

Intersection		Total entering volume in peak hour (vph)	Critical intersection v/c* (LOS)
Major Rd	Cross Rd		
Indiantown Rd	Central Blvd	6,590 (AM)	0.93 (E)
Indiantown Rd	Center St	5,100 (PM)	0.84 (D)
Indiantown Rd	Island Way	6,040 (AM)	0.80 (D)
Indiantown Rd	Alt. A1A	5,720 (PM)	0.78 (D)

Note: *Sum of critical flow ratios (saturation flow rates = 1710/1620 vphpl for through/left) divided by (1-L/C), where L = total lost time and C = cycle length. Peak hour factor is assumed 0.95

Quick Facts on Town-wide Crashes in 2016

- A total of 2179 crashes occurred in 2016 calendar year, including 383 injury crashes and 5 fatal crashes (3 on I-95).
- The town-wide vehicular crash *fatality* and *injury* crashes per 100 million VMT are rated 1.0 and 76.4, respectively, in comparison with 1.13 and 78, respectively in the County.
- In addition to parking lot incidents (26%), the majority types of crashes are rear-end (31%), off-road (9%), sideswipe/head-on (7% each). See Table 1.
- The majority of crashes occur within the influence area of the signalized intersections (see Figure 2). Intersection crash frequency increases as a quadratic function of total entered vehicles (see Figure 1). More than 60% of intersection crashes are rear-ends.
- The most dangerous intersections in terms of both crash frequency and rate (crashes per million entered vehicles) are ITR/Alt. A1A (67, 2.54), ITR/Central (72, 2.48), ITR/US-1 (37, 2.08), ITR/Island

Way (51, 1.93), Frederick Small/Military Trl (26, 1.66) and Donald Ross/Central (29, 1.58).

Table 1. Crash type vs. severity

Injury type \ Crash type	PDO	Injury	Fatality
Right Angle	58	24	
Head on	144	13	
Rear end	546	140	
Left turn	88	58	
Right turn	20	3	
Roll over	16	4	1
Sideswipe	150	12	
Off road	135	54	3 (2 on I-95)
Single vehicle	63	22	
Bicycle	11	15	
Pedestrian	3	12	
Backed into	550	24	
Other/unknown	7	2	1 (I-95)
Total	1791	383	5

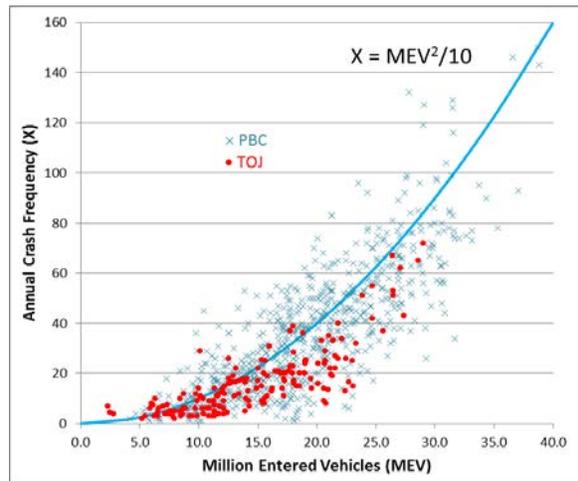


Figure 1. Crash frequency vs MEV

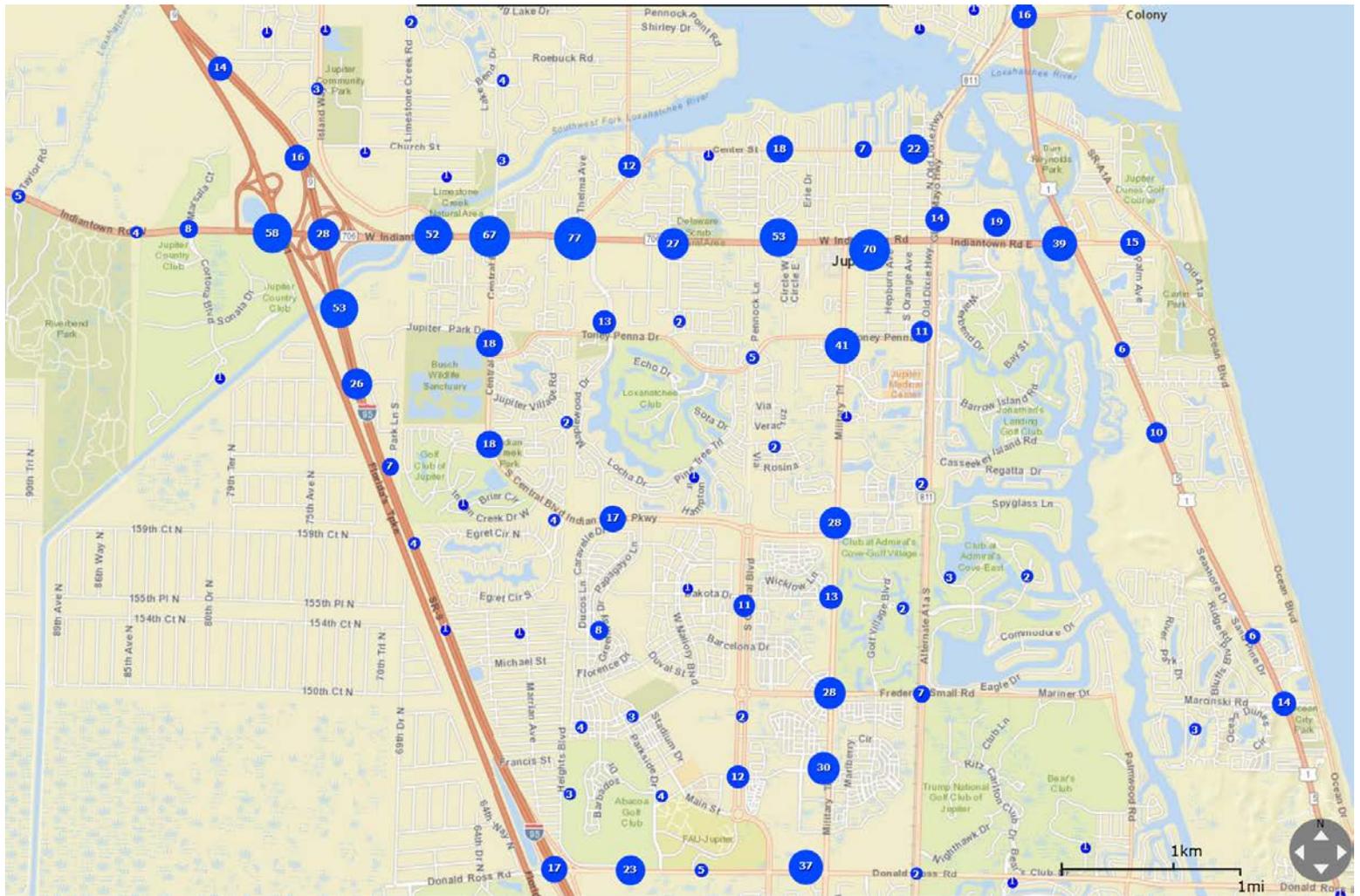


Figure 2. Geographical locations of crashes

SECTION III
COMMUNITY INVESTMENT PROGRAM

**FY 2016 ENGINEERING DIVISION COMMUNITY INVESTMENT PROGRAM
SUMMARY TABLE - COMPLETED PROJECTS from 10-1-15 to 9-30-16**

TYPE	PROJECT DESCRIPTION	CIP BUDGET	TOTAL PROJECT COSTS	CONSTRUCTION COSTS	DESIGN & ENGINEERING COSTS	DATE OF COMPLETION
CIP	A1A from Jupiter Beach Road to US 1 LAP Phase Construction	\$3,627,704	\$3,352,249	\$2,954,249	\$398,000	6/30/16
	Abacoa Community Park Hockey Rink Surface Upgrades	\$170,000	\$113,100	\$113,100	In-House	10/16/15
	Abacoa Community Park Phase II Building Concession Windows	\$10,000	\$12,100	\$12,100	In-House	11/23/15
	Toney Penna Drive Shared Use Pathway	\$300,000	\$260,346	\$258,726	\$1,620	9/13/16
	Softball Four-Plex Fence Replacement	\$32,610	\$32,610	\$32,610	In-House	12/21/15
	Dune Crossover Maintenance & Repairs	\$25,000	\$23,000	\$23,000	In-House	2/9/16
	Annual Asphalt Overlay	\$582,150	\$500,553	\$500,553	In-House	7/15/16
	Asphalt Pathway Seal Coating Application & Repairs	\$16,368	\$16,368	\$16,368	In-House	9/30/16
	** - Denotes Survey, Testing & Misc. Design Costs	\$16,378	\$16,378	\$16,378	In-House**	9/30/16
Subtotal	\$4,780,210	\$4,326,704	\$3,927,084	\$399,620		
Sidewalks	Annual Miscellaneous Concrete*	\$326,743	\$17,660	\$17,660	In-House	9/30/16
	* - Denotes Work Orders 1 & 3					
Subtotal	\$326,743	\$17,660	\$17,660	\$0		
Traffic Management	Annual Miscellaneous Striping**	\$100,000	\$28,182	\$28,182	In-House	9/30/16
	Jupiter River Estates Speed Humps and Table	\$100,000	\$26,969	\$26,969	In-House	6/1/16
	** - Denotes Work Order 1					
	Note: Some minor projects and work orders have been combined for simplified reporting					
Subtotal	\$200,000	\$55,151	\$55,151	\$0		

GRAND TOTAL \$5,306,953 \$4,399,515 \$3,999,895 \$399,620

SECTION IV
ENGINEERING SERVICES

ENGINEERING SERVICES

The Engineering Division staff performs various technical and administrative tasks related to Engineering Division projects, support of other Departments, assisting the general public, and inter-agency coordination. These tasks include, but are not limited to:

- * Coordination of transportation improvement projects by Developers, TOJ, PBC, FDOT, and FEC
- * New development and redevelopment reviews including site plan, engineering plan, subdivision plat, traffic analyses, right-of-way turnover documents, easements, etc.
- * New development and redevelopment infrastructure inspections
- * Administration of solid waste collection/disposal contract
- * General public assistance – phone / email / walk-in
- * Research for public, developers, engineers, contractors, and other departments
- * Support of other Town divisions/departments – research, engineering & surveying issues, easements, agreements, mapping, graphics, details, specifications
- * Traffic studies, traffic analyses, and traffic reports, plans, etc.
- * Preparation and maintenance of engineering standards, details, GIS based maps, and other maps, plans etc.
- * Coordination with and oversight/management of consultant engineers, geotechnical testing services, surveying and platting services, and similar services performed under contract with/for the Town
- * In-house preparation of engineering plans, specifications, contracts, easements, agreements, and other documents to support construction, bidding, grants coordination, etc. for numerous small and large CIP projects
- * Preparation of new development right-of-way turnover documents, including bills of sale, easements, agreements, warranty deeds and similar, as well as coordination with developers engineers, surveyors and attorneys for preparation of same
- * Right of Way Equity Program - HOA roadway, sidewalk and drainage right-of-way equity inspections and turnover document preparation and coordination with HOAs
- * Disaster debris management and recovery services

During Fiscal Year 2016, the Engineering Division continued to devote significant staff effort in reviewing, commenting, coordinating, meeting, permitting, and/or inspecting on a variety of development or redevelopment projects, of which a few are: Walmart Expansion, Windsor Park residential, Sonoma Isles residential, Braman BMW, Institute for Healthy Living, Barcelona Commercial, Jupiter Country Club residential, Botanica residential, Auto Zone, Love Street, Chasewood expansion, and numerous other private development projects.

The Town's Traffic Engineer has invested time in evaluating and analyzing projected traffic impacts on local, collector and arterial roadways from proposed smaller scale and larger scale projects both inside and outside of the Jupiter municipal boundaries.

Staff has invested substantial time in performing infrastructure inspections, and preparing right of way turnover documents for new developments. Similarly, staff invested substantial time in performing infrastructure inspections, and preparing right of way turnover documents, as well as coordination with various HOAs regarding the HOA Right-of-Way Equity Turnover program wherein the Town assumes ownership and/or maintenance responsibilities for roadway, sidewalk, drainage, signage and striping, as well as for a portion of the cost of street lighting, within neighborhoods whose infrastructure was dedicated to the HOAs, and those HOAs have petitioned the Town to take over certain infrastructure from the HOAs.

A brief discussion of some of the major engineering service activities are outlined in the following subsections.

Subsection A. Transportation Improvement Projects

Several transportation improvements projects were completed in FY 2016. In addition, several transportation improvement projects were started in FY 2016 and are in process of being planned, designed or constructed in FY 2017-18. The listings below summarize some of these projects.

1. Completed Transportation projects completed in FY 2016

PROJECT DESCRIPTION	AGENCY
2016 ANNUAL ASPHALT RESURFACING & RESTRIPIING (Townwide)	TOJ
2016 ANNUAL SIDEWALK PROGRAM (ADA tactile strips, Shores)	TOJ
2016 DUNE CROSSOVER REPAIRS/REPLACEMENT	TOJ
PAVING ON RADIO ROAD	TOJ
2016 ANNUAL STRIPING AND MARKINGS	TOJ
TRAFFIC CALMING IN JUPITER RIVER ESTATES	TOJ
A1A BIKE CORRIDOR IMPROVEMENTS – JUPITER BEACH ROAD TO US 1	TOJ
TRAFFIC CALMING ON NORTH DELAWARE	TOJ
HEIGHTS BLVD AND DONALD ROSS ROAD	DEVELOPER

2. Transportation projects in process during FY 2016 and/or Planned for FY 2017 or later

PROJECT DESCRIPTION	AGENCY	NOTES
TONEY PENNA DRIVE AND OLD DIXIE INTERSECTION IMPR	PBC	CONST 2016-2017
CENTRAL BLVD AND INDIANTOWN RD INTERSECTION IMPR.	PBC	CONST TBD
CINQUEZ PARK – CENTRE PARK CROSS ACCESS DRIVE	TOJ	CONST 2017
ANNUAL ASPHALT RESURFACING	TOJ	CONST 2017
ANNUAL NEIGHBORHOOD SIDEWALKS	TOJ	CONST 2017
ANNUAL ASPHALT STRIPING & MARKINGS	TOJ	CONST 2017
ISLAND WAY SOUTH (design & ROW acquisition)	TOJ	CONST TBD
INDIANTOWN RD IMPROVEMENTS – east of US 1	TOJ	TBD
PAVING OF SEVERAL GRAVEL ROADS (PUBLIC ROWs)	TOJ	CONST 2016
INDIANTOWN ROAD AND I-95/TURNPIKE LANDSACPING	FDOT	CONST 2016-2017

Subsection B. New Development/Project Site, Engineering & Plat Reviews and Engineering Permits

1. P&Z Application Reviews by Engineering Division - The Engineering Division reviewed **157** submittal applications transmitted from P&Z to DRC members. Many of these applications included substantial site plans, preliminary engineering, and traffic analyses for review by the Engineering Division staff, including coordination with FDOT and PBC as well as for applicants' consultants.
2. Engineering Plan & Related Document Submittal Reviews - The Engineering Division reviewed **334** engineering plan & related document submittals. These submittals are related to new site development, roadway improvements, CIP, and site redevelopment, and included plans, calculations, maintenance of traffic plans, record plans, and similar documents related to securing engineering utility (EU) permits. Review efforts included distribution of plans to other departments.
3. Plat Reviews – The Engineering Division reviewed **14** plat submittals related to land subdivision associated with either new land development or redevelopment of existing properties. The plats range from large subdivisions to small single or multi-lot subdivisions. Review effort included distribution of plats to other departments, FPL, and to a consultant surveyor. Plat process also includes preparation of Agenda package for council as well as recordation of plat after approval.
4. Engineering Utility (EU) Permits – the following summary defines the total number of Engineering Utility Permits issued this year and in previous years. These permits range from large land developments such as Windsor Park to driveway modifications. Engineering Div. staff performs inspections for these permits.

FY 2006	192 EU Permits	FY 2012	116 EU Permits
FY 2007	170 EU Permits	FY 2013	166 EU Permits
FY 2008	178 EU Permits	FY 2014	186 EU Permits
FY 2009	115 EU Permits	FY 2015	238 EU Permits
FY 2010	117 EU Permits	FY 2016	190 EU Permits
FY 2011	164 EU Permits		

5. Franchise Utility Permits – the following summary defines the total number of Franchise Utility Permits (FPL Fibernet, Hotwire, Comcast, FPL and Bellsouth) issued this year and in previous years. Engineering Division staff performs inspections for these permits.

FY 2006	28 EU Permits	FY 2012	38 EU Permits
FY 2007	51 EU Permits	FY 2013	36 EU Permits
FY 2008	55 EU Permits	FY 2014	51 EU Permits
FY 2009	56 EU Permits	FY 2015	37 EU Permits
FY 2010	83 EU Permits	FY 2016	40 EU Permits
FY 2011	42 EU Permits		

6. Engineering Utility Permit Fees Collected– the following summary defines the total permit fees collected for Engineering permits this year and in previous years.

FY 2006	\$243,989	FY 2012	\$175,045
FY 2007	\$86,208	FY 2013	\$317,608
FY 2008	\$92,780	FY 2014	\$216,051
FY 2009	\$37,368	FY 2015	\$348,265
FY 2010	\$94,716	FY 2016	\$119,642
FY 2011	\$211,677		

7. Engineering Division EU Permit Inspections – The Engineering Division staff performs inspections for all EU Permits as well as grading inspections for houses and pools. The majority of the EU Permit inspections are scheduled through the Energov “call-in” system. Based on prior collected time log data stratification, approximately 50% of our inspectors’ time is related to new development or redevelopment inspections called in to the Energov system or scheduled by contractor directly with inspector. Additional inspections are performed for new development projects that are pre-scheduled by phone or as courtesy or preliminary inspections. The remainder of inspector’s time is used on administrative work, CIP project inspection and observation, special inspection assignments, surveying, research, public contact-communications and other similar tasks.

FY 2006	2199 HTE inspections	FY2012	1832 HTE inspections
FY 2007	2362 HTE inspections	FY 2013	1747 HTE inspections
FY 2008	1832 HTE inspections	FY 2014	1588 HTE inspections
FY 2009	1747 HTE inspections	FY 2015	1600 HTE inspections
FY 2010	2199 HTE inspections	FY 2016	1279 ENERGOV inspections
FY 2011	2362 HTE inspections		

Subsection C. Solid Waste Operations

The Engineering Division staff is functionally responsible for the solid waste franchise agreement in the Town. The Town’s Franchise Agreement with Waste Management for Multi-Material Recycling and Vegetative Waste Collection was approved by the Town Council and renewed for five years commencing March 01, 2012 and ending February 28, 2017. A summary of this rate information is as follows:

FY 2015-2016 RATES WITH CPI ANNUAL RATE ADJUSTMENT		
Services	Curbside Service (Residential)	Residential Multifamily (per unit)
Solid Waste	\$5.69 (2x/wk)	\$5.69 (2x/wk)
Vegetative	\$3.55 (2x/wk)	\$3.55 (2x/wk)
Recycling	\$2.67 (1xwk)	\$2.67 (1x/wk)
Total	\$11.91	\$11.91

We monitor payments, contract issues and perhaps most critically, complaints by residents and businesses on the service provided by Waste Management. During FY 2016, a total of 199 complaints were reported from approximately 21,000 residential solid waste customers for a complaint ratio of 0.95% which is under the contract allowance of 2% per year. No contract penalties were assessed.

Subsection D. Development and Neighborhood Equity Right-of-Way Turnover Programs

EQUITY PROGRAM

- A. The following neighborhood/community EQUITY PROGRAM right of way turnovers were completed in FY 2016:
1. Clocktower Hammock
 2. Cambridge at Abacoa
 3. Hammock Trace
- B. The following neighborhood/community EQUITY PROGRAM right of way turnovers have been received and are in process as of 10-01-2016
1. Somerset at Abacoa
 2. The Colony
 3. Indian Creek - Stillwater
 4. Osceola Woods
 5. Sims Creek

NEW DEVELOPMENT

- A. The following new development right of way turnovers & agreements were completed in **FY 2016**
1. Allure at Abacoa (Town Center Phase 4)
 2. Braman BMW – ROW maintenance agreement
 3. Villa Diamante – Old Jupiter Beach Road improvements
 4. Mangrove Bay Apartments – ROW maintenance agreement
- B. The following new development right of way turnovers and agreements are expected to occur in **FY2017**:
1. Greenwich at Abacoa
 2. Botanica
 3. Sea Plum Residential
 4. Harbourside (Coastal Way redevelopment)
 5. Windsor Park Phases 1, 2 and 3
 6. Institute for Healthy Living – Innovation Way right of way
 7. Walmart – decorative street lighting on Ind Rd
 8. Chasewood – decorative street lighting on Ind Rd
 9. Braman – decorative street lighting on Ind Rd
 10. McDonalds west – decorative street lighting on Ind Rd
 11. FPL Service Center – public easements and decorative street lighting on Ind Rd

SECTION VI
PARKS AND PUBLIC WORKS

**Town of Jupiter
Parks and Public Works**

10/01/15 - 09/30/16

Work Category	Employee Hours	Completed Tasks	Labor Cost (WO's)	Equipment Cost (WO's)	Materials (Munis)	Total Cost	Units Completed	Cost Per unit	Unit of Measure
Asphalt Repair (potholes)	1047	83	\$ 24,929	\$ 60,444	\$ 9,123	\$ 94,495	112.39	\$841	Ton
Building & Facility Maint. (PMs,HVAC,ELE, JAN.)	8846	845	\$ 237,484	\$ 133,895	\$ 443,001	\$ 814,379	8846	\$27	Manhour
Fleet	5563	1322	\$ 138,680	\$ -	\$ 38,580	\$ 177,260	5563	\$25	Manhour **
Fleet Fuel Consumption					\$ 359,248	\$ 359,248	2132558	\$0.17	Per Mile
Grounds Maint (Debris, Trimming, Trash, Etc)	1875	406	\$ 42,944	\$ 50,774	\$ 22,550	\$ 116,268	1875	\$23	Manhour
Landscape	1774	204	\$ 47,597	\$ 95,698	\$ 715,252	\$ 858,547	1774	\$27	Manhour
Athletic Fields and Courts	9579	755	\$ 226,145	\$ 509,071	\$ 151,860	\$ 887,076	60	\$14,785	Acre
Parks Grounds Maint.	13945	1077	\$ 283,707	\$ 704,129	\$ 71,203	\$ 1,059,040	156.5	\$ 6,767	Acre
Admin/Shop Maint/Shop Safety Inspections	6125	397	\$ 221,193	\$ 113,328	\$ -	\$ 334,521	6125	\$36	Manhour
Mowing, litter removal, edging & sweeping	156	49	\$ 3,497	\$ 4,114	\$ 101,694	\$ 109,305	3032.69	\$36	Acre
Roads & Signage	2864	507	\$ 75,124	\$ 117,417	\$ 49,051	\$ 241,592	2864	\$26	Manhour
Sidewalks	3470	298	\$ 71,448	\$ 142,997	\$ 48,068	\$ 262,514	1277.7	\$205	Sq.Yrd.
Total	55240	5943	\$ 1,372,749	\$ 1,931,868	\$ 2,009,628	\$ 5,314,245			

Unit of Measure:

Fleet Fuel Consumption: Total for Town Fleet based on fuel consumption by department
 Parks - 216.5 acres (Total with Open Space 271.8) (Athletic Fields 60 acres (turf), Passive Parks 66.5 acres, Grounds 90 acres)
 Mowing - Total Acres mowed by contractor = 3000 (contract period Oct. - Sept.)(30 mows) 6 months 1500
 (internal acres maintained based on reporting 10/01/15 - 9/30/16 total acres maintained 32.69)
 (Mowing includes: mowing, litter removal, edging & sweeping - this also includes some small bed areas that require some hand weeding).
 Sidewalks - Square yards completed (includes root pruning, repair & replace, and grinding)
 Asphalt repairs - 69 Asphalt patches, 52 potholes, 13 Shoulder repairs
 &Materials (Munis) includes contractor/contract costs.

****Mechanics:**

Vehicle Equivalent Units	MH/VEU	FTE
	424	17.51

The Vehicle Equivalent Unit is based on a multiplier for normal light cars and trucks and a higher multiplier for police vehicles. (1.0 light cars & trucks, 2.0 PD) (273 vehicles)

**Town of Jupiter Parks and Public Works
Annual Contracts and Service Agreements**

Service For:	Contract or Agreement #	Vendor	Vendor #	Frequency	Cost Per Service	Annual Cost
Access Control System	EPW 2014-26	SimplexGrinnell	2449	As needed	varies	\$11,462.72
Bermuda Grass Maintenance Athletic Fields (JCP)	EPW 2014-45	ABM Landscape	6435	Monthly	\$1,741.66	\$3,999.99
Clock Tower	none	Verdin Company	3862	Semi- Annual	\$910.00	\$910.00
CCTV Maintenance for Town Hall (paid out of general fund)	EPW 2014-21	Diebold Security (formerly Atcom)	5619	Quarterly	\$4,771.87	\$19,087.49
Community Center Flat Roof	none	Latite Roofing & Sheet Metal Co., Inc.	5090	Semi-Annual	\$875.00	\$875.00
Elevator (TH, CC, RC)	EPW 2016-09	Oracle Elevator	1844	Quarterly	\$1,125.00	\$4,600.00
Fire Alarm (Civic Center)	none	Farmer & Irwin	447	Annual	\$180.00	\$180.00
Fire Alarm (TH, CC, RC, SJCP)	EPW 2016-10	SimplexGrinnell (Fire Alarm)	2449	Quarterly	\$2,221.81	\$8,887.27
Fire Extinguisher Annual Inspection	none	Rye-Barker		Annual	varies	\$1,000.00
Fire Protection Equip/Service (Civic Center)	none	Guardian Alarm	6184	Quarterly	\$193.75	\$775.00
Fire Sprinkler System (TH, CC, RC)	EPW 2016-08	Life Safety Systems	4255	Quarterly	\$425.00	\$1,700.00
Generators (TH, CC, CT, MF,Big Red)	EPW 2012-37	Power Pro-Tech	7272	Quarterly	\$2,098.63	\$7,004.52
Heavy Equipment Rental w/ Operator	EPW 2015-20	John Brown and Sons, Inc.	940	As needed	varies	\$9,993.75
Janitorial (TH)	EPW 2016-03	Image Janitorial	7003	Monthly	\$3,900.83	\$46,810.00
Janitorial (CC)	EPW 2016-06	W & G Maintenance	1167	Monthly	\$3,641.67	\$43,700.00
Landscape & Irrigation (West & East sections)	EPW 2015-07-A-B	Down To Earth Lawn Care	1065	Monthly	varies	\$396,610.00
Landscape & Irrigation (West)	EPW 2016-26-A	Property Works (Batallan)	1229	Monthly	\$11,066.77	\$132,801.25
Landscape & Irrigation (East)	EPW 2016-26-B	Sunshine Land	3346	Monthly	\$10,679.08	\$128,148.90
Landscape & Irrigation (Utilities section)	EPW 2015-07-C	Terracon Services, Inc.	2657	Weekly/varies	varies	\$85,870.00
Landscape & Irrigation (JBR to US1)	EPW 2016-38	Terracon Services, Inc.	2657	Monthly	\$350.00	\$4,200.00
Lift Station Inspection (JCP)	none	Jupiter Plumbing	1479	Quarterly	\$85.00	\$340.00
Lighting (Parks,TH,CC,RC Parking lots, & Bridge)	EPW 2016-44	Davco Electrical	649	As needed	varies	\$46,000.00
Lightning Prediction System maintenance (JCP)	none	Sterpal, Inc. (Thorguard)	6790	Annual	\$625.00	\$1,250.00
Maint. Facility Copier	none	Halsey & Griffith	5704	Quarterly	varies	\$1,700.00
Maint. Facility Copier Lease	none	Wells Fargo (Ricoh Copier Lease)	6179	Monthly	\$259.53	\$3,281.27
Maint. Facility Janitorial	EPW 2014-09	Image Janitorial	7003	Weekly/varies	\$672.74	\$8,072.90
Maint. Facility Waste Water System	none	RGF Environmental	801	Bi-Monthly	\$532.00	\$3,192.00
Maint. Facility Mats & Shop Towels	EPW 2016-11	UniFirst	5905	Weekly/varies	\$18.75	\$975.00
Park Lake/Canal Maintenance	none	Aquagenix	4407	Monthly/Quarter	varies	\$1,936.00
Park Lake Intake Maintenance (Diver)	none	Henry Middleton	1784	Quarterly	\$400.00	\$1,600.00
Park Maintenance (mowing)	EPW 2015-19	Lawn & Order Landscape	1078	Monthly	\$1,157.63	\$23,177.13
Park Maintenance	EPW 2016-34	Vincent & Sons	7266	Annual	\$9,266.64	\$9,266.64
Park Maintenance (Sims & Jones Creek)	none	Vincent & Sons	7266	Monthly	\$525.00	\$6,300.00
Parks Palm Pruning	EPW 2016-13	Palm Coast Professional Tree Svc	2055	Monthly	\$1,547.33	\$18,568.00
Parks Washer Rental/Service - Parks/Fleet	none	Safety Kleen	5134	Annual	\$7,500.00	\$7,500.00
Pest Control at TH, CC - Insect, Termite, Rodent	none	Bates Exterminating	3426	Bi-Monthly	\$357.00	\$2,142.00
Pest Control at Civic Center and Skate Park	none	Palm Coast Pest Control	720	Monthly	\$110.00	\$1,722.00
Right of Way / Easement Maintenance	EPW 2016-14	Property Works (Batallan)	1229	Monthly	\$7,987.50	\$91,133.37
Sidewalk trip hazard removal	EPW 2015-13	Florida Sidewalk Solutions	899	Annual	\$20,000.00	\$23,158.40
Shop Air Compressor preventive maintenance	none	Air Compressor Works	52	Quarterly	\$474.14	\$1,896.55
State Required Mercury Bulb Recycling	none	AERC.Com, Inc.	9265	As needed	varies	\$500.00
Chillers & A/C (TH, CC)	EPW 2016-02	Precision Air Systems	4707	Quarterly	\$1,893.75	\$7,575.00
Town Hall Tracer (A/C)	EPW 2015-08	South Florida Trane	2495	Quarterly	\$2,941.68	\$11,766.72
Town Hall Halon System Inspections	EPW 2016-07	Life Safety Systems	4255	Semi-Annual	\$1,250.00	\$2,500.00
Total Annual Cost of Contracts and Service Agreements						\$1,184,168.87

Service Provided by Public Works:	Entity	Frequency	Income per Service	Annual Income
Mowing - FDOT	FDOT	Annual		\$26,216.00
Mowing - PBC	PBC	Quarterly	\$1,650.00	\$6,600.00
Total Annual Income				\$32,816.00

**Town of Jupiter
Parks and Public Works**

Fuel Consumption By Department

10/01/15 - 09/30/16

Department	Quantity	Total Cost	Miles Traveled	Miles Per Gallon	Cost per Mile
Building	4,758.00	\$ 9,149.68	58,554.0	12.31	\$ 0.16
Business Tax Receipts	8.70	\$ 16.04	149.0	17.13	\$ 0.11
Engineering	2,792.40	\$ 5,356.57	24,153.0	8.65	\$ 0.22
Parks	10,169.70	\$ 19,596.65	83,535.0	8.21	\$ 0.23
Planning & Zoning	235.40	\$ 452.55	3,733.0	15.86	\$ 0.12
Police Admin	116,180.87	\$ 222,944.60	1,444,828.0	12.44	\$ 0.15
Police Code Compliance	3,122.90	\$ 6,027.06	29,516.0	9.45	\$ 0.20
Public Works	10,102.60	\$ 19,387.07	100,485.0	9.95	\$ 0.19
Recreation	1,356.90	\$ 2,640.78	22,696.0	16.73	\$ 0.12
Special Projects	0.00	\$ -	0.0	0.00	\$ -
Stormwater - Admin	280.80	\$ 543.98	3,497.0	12.45	\$ 0.16
Stormwater - Field	5,827.20	\$ 11,187.78	41,019.0	7.04	\$ 0.27
Water - Admin	1,990.50	\$ 3,811.54	26,379.0	13.25	\$ 0.14
Water - Field	24,950.20	\$ 47,925.01	231,066.0	9.26	\$ 0.21
Water - Plant	5,322.80	\$ 10,227.13	62,948.0	11.83	\$ 0.16
Total for Town Fleet	187,098.97	\$ 359,266.44	2132558.00	11.40	\$ 0.17

Estimated Impact of Improved Fleet Fuel Economy

Fleet MPG	Annual Mileage	Fuel (Gallons)	Cost @3.00/Gal	Estimated Savings
11.40	2,132,558	187,066	\$ 561,199	\$ -
12	2,132,558	177,713	\$ 533,140	\$ 28,060
13	2,132,558	164,043	\$ 492,129	\$ 69,071
14	2,132,558	152,326	\$ 456,977	\$ 104,223
15	2,132,558	142,171	\$ 426,512	\$ 134,688
16	2,132,558	133,285	\$ 399,855	\$ 161,345
17	2,132,558	125,445	\$ 376,334	\$ 184,866

**TOWN OF JUPITER
VEHICLE REPAIRS AND MAINTENANCE
FISCAL YEAR 2016**

	Parts	Labor	% Total Labor
Town Council	\$ -	\$ -	
Town Manager	\$ -	\$ -	
Neighborhoods	\$ -	\$ -	
External Affairs	\$ -	\$ -	
Finance	\$ -	\$ -	
I. S.	\$ -	\$ -	
H. R.	\$ -	\$ -	
Planning and Zoning	\$ -	\$ 240.84	0.12%
Police	\$ 219,880.59	\$ 130,161.98	64.30%
Business Tax Receipts	\$ -	\$ 1,099.83	0.54%
Code Compliance	\$ 3,901.72	\$ 5,432.24	2.68%
Engineering	\$ 5,079.71	\$ 4,099.26	2.03%
Public Works and Parks	\$ 56,857.51	\$ 27,113.87	13.39%
Recreation	\$ 2,343.39	\$ 1,727.48	0.85%
Subtotal - General Fund	<u>\$ 288,062.92</u>	<u>\$ 169,875.50</u>	
Water Administration	\$ 3,219.40	\$ 2,824.25	1.40%
Water Plant	\$ 7,230.64	\$ 5,123.38	2.53%
Water Field	\$ 22,508.39	\$ 15,413.34	7.61%
Subtotal - Water System	<u>\$ 32,958.43</u>	<u>\$ 23,360.98</u>	
Stormwater Administration	\$ 906.27	\$ 381.53	0.19%
Stormwater Field	\$ 11,247.63	\$ 3,656.40	1.81%
Subtotal - Stormwater	<u>\$ 12,153.90</u>	<u>\$ 4,037.93</u>	
Building	<u>\$ 5,644.36</u>	<u>\$ 5,146.54</u>	2.54%
CRA (Special Projects)	<u>\$ 3.99</u>	<u>\$ -</u>	0.00%
Fleet Shop Overhead Charge		<u>\$ -</u>	0.00%
TOTAL PARTS (4601)	<u>\$ 338,823.60</u>		
TOTAL LABOR (PAYROLL)		<u>\$ 202,420.95</u>	100.00% **
GRAND TOTAL	<u>\$ 541,244.55</u>		

**Percentage is based on DPSI applied labor