



REGULAR CITY COUNCIL MEETING

6:30 PM – COUNCIL CHAMBERS – CITY HALL

APRIL 2, 2024

AGENDA

ALL CITIZENS DESIRING TO ADDRESS THE PORT ORANGE CITY COUNCIL DURING PUBLIC PARTICIPATION SHOULD COMPLETE THE SPEAKER CARD WHICH IS LOCATED ON THE STANDS OUTSIDE COUNCIL CHAMBERS. AFTER COMPLETING THE SPEAKER CARD, PRESENT IT TO THE CLERK.

A. OPENING

1. Invocation by Pastor Mike Swingle of First Baptist Church of Harbor Oaks
2. Pledge of Allegiance
3. Roll Call

B. RECOGNITION AND PROCLAMATIONS

4. Fair Housing Month Proclamation

C. CONSENT AGENDA

5. Public Comments on Consent Agenda Items Only
6. Agenda Approval
7. Approval of Minutes
 - a. March 19, 2024 - Regular City Council Meeting
8. Bid Awards and Contract Items
 - a. Approval of Woodhaven Traffic Enforcement Agreement
 - b. Approval of Task Authorization No. 11 with Pegasus Engineering, LLC to provide assistance in preparing and submitting a grant application for the FEMA Hurricane Idalia Hazard Mitigation Grant Program (HMGP) Application for the Acquisition and Demolition of 4 Flood-Prone Homes
9. Authorization for County of Volusia, Mosquito Control Division to perform low-level flights to provide aerial mosquito control services
10. Approval of Memorandum of Understanding (MOU) with the International Association of Firefighters (IAFF)

11. Resolution No. 24-06 – Hurricane Idalia Hazard Mitigation Grant Program (HMGP) Application to Request Funds to Acquire four (4) homes
12. Resolution No. 24-07 - Edward Byrne Memorial Justice Assistance Subgrant Agreement for \$110,365.00 from the Florida Department of Law Enforcement
13. Resolution No. 24-08 - Approval of the Grant Application for Florida Inland Navigational District (FIND) for construction of the South Causeway Boat Ramp and Floating Docks Improvements

D. PUBLIC PARTICIPATION (Non-Agenda – 20 minutes)

E. COUNCIL COMMENTS

14. Comments/Concerns from Council Members

F. SPECIAL REPORTS

15. FY2023 Audit Discussion with James Moore & Company

G. BOARD APPOINTMENTS, INTERVIEWS, AND REPORTS

16. Environmental Advisory Board Appointment

H. TABLED ITEMS

17. Selection of Alternate Member to serve on the River To Sea Transportation Planning Organization (TPO) Board (Tabled on March 19, 2024)

I. PUBLIC HEARING

18. First Reading - Ordinance No. 2024-04 - Adoption of the City of Port Orange Comprehensive Plan 2022-2045
19. First Reading - Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations

J. ADDITIONAL ITEMS

20. City Attorney
21. City Manager

K. COUNCIL COMMITTEE REPORTS

22. City Council Committee Reports
 - a. River to Sea TPO - Councilman Reed Foley

L. ADJOURNMENT

NOTICES – PURSUANT TO SECTION 286.0105 OF THE FLORIDA STATUTES, IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE CITY COUNCIL WITH RESPECT TO ANY MATTER CONSIDERED AT THIS PUBLIC MEETING OR HEARING, SUCH PERSON WILL NEED A RECORD OF THE PROCEEDINGS, AND THAT, FOR SUCH PURPOSE, SUCH PERSON MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. THE CITY DOES NOT PREPARE OR PROVIDE SUCH A RECORD.



FOR SPECIAL ACCOMMODATIONS, PLEASE NOTIFY THE CITY CLERK'S OFFICE (PHONE: 386-506-5563) AS FAR IN ADVANCE AS POSSIBLE, BUT PREFERABLY WITHIN 2 WORKING DAYS OF YOUR RECEIPT OF THIS NOTICE OR 5 DAYS PRIOR TO THE MEETING OR HEARING DATE.



HELP FOR THE HEARING IMPAIRED IS AVAILABLE THROUGH THE ASSISTIVE LISTENING SYSTEM RECEIVERS CAN BE OBTAINED FROM THE CITY CLERKS' OFFICE.

IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), IF YOU ARE A PERSON WITH A DISABILITY WHO NEEDS AN ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS PROCEEDING, YOU ARE ENTITLED, AT NO COST TO YOU, THE PROVISION OF CERTAIN ASSISTANCE. PLEASE CONTACT THE CITY CLERK FOR THE CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA 32129, TELEPHONE NUMBER 386-506-5563, CITYCLERK@PORT-ORANGE.ORG, AS FAR IN ADVANCE AS POSSIBLE, BUT PREFERABLY WITHIN 2 WORKING DAYS OF YOUR RECEIPT OF THIS NOTICE OR 5 DAYS PRIOR TO THE MEETING OR HEARING DATE. IF YOU ARE HEARING OR VOICE IMPAIRED, CONTACT THE RELAY OPERATOR AT 7-1-1 or 1-800-955-8771.

UPON REQUEST BY A QUALIFIED INDIVIDUAL WITH A DISABILITY, THIS DOCUMENT WILL BE MADE AVAILABLE IN AN ALTERNATE FORMAT. IF YOU NEED TO REQUEST THIS DOCUMENT IN AN ALTERNATE FORMAT, PLEASE CONTACT THE CITY CLERK WHOSE CONTACT INFORMATION IS PROVIDED ABOVE.

ANY INVOCATION THAT IS OFFERED BEFORE THE OFFICIAL START OF THE CITY COUNCIL MEETING SHALL BE THE VOLUNTARY OFFERING OF A PRIVATE PERSON, TO AND FOR THE BENEFIT OF THE CITY COUNCIL. THE VIEWS OR BELIEFS EXPRESSED BY THE INVOCATION SPEAKER HAVE NOT BEEN PREVIOUSLY REVIEWED OR APPROVED BY THE CITY COUNCIL OR THE CITY STAFF, AND THE CITY IS NOT ALLOWED BY LAW TO ENDORSE THE RELIGIOUS BELIEFS OR VIEWS OF THIS, OR ANY OTHER SPEAKER. PERSONS IN ATTENDANCE AT THE CITY COUNCIL MEETING ARE INVITED TO STAND DURING THE OPENING INVOCATION AND PLEDGE OF ALLEGIANCE. HOWEVER, SUCH INVITATION SHALL NOT BE CONSTRUED AS A DEMAND, ORDER, OR ANY OTHER TYPE OF COMMAND. NO PERSON IN ATTENDANCE AT THE MEETING SHALL BE REQUIRED TO PARTICIPATE IN ANY OPENING INVOCATION THAT IS OFFERED. A PERSON MAY EXIT THE CITY COUNCIL CHAMBERS AND RETURN UPON COMPLETION OF THE OPENING INVOCATION IF A PERSON DOES NOT WISH TO PARTICIPATE IN OR WITNESS THE OPENING INVOCATION.

REGULAR CITY COUNCIL MEETING MINUTES
COUNCIL CHAMBERS – CITY HALL
1000 CITY CENTER CIRCLE
PORT ORANGE, FLORIDA
MARCH 19, 2024

THE REGULAR CITY COUNCIL MEETING of the City of Port Orange was called to order by Mayor Donald O. Burnette at 6:30 p.m.

Invocation by Pastor Nathan Buker of Victorious Life Church

Pledge of Allegiance

Roll Call	Present:	Councilman Reed Foley Councilman Drew Bastian Vice Mayor Scott Stiltner Mayor Don Burnette
	Absent:	Councilman Tracy Grubbs
	Also Present:	Wayne Clark, City Manager Matthew Jones, City Attorney Tracee Cody, Deputy City Clerk

STATE OF THE CITY

Staff provided a video showing the City's accomplishments in 2023 and projects for 2024.

Council thanked Staff, Department Heads, City programs, and the active and engaged citizens.

City Council recessed at 7:11 p.m. to hold the Eastport CRA and Port Orange Town Center CRA meetings, minutes of which are under separate cover.

EASTPORT CRA REGULAR MEETING

TOWN CENTER CRA REGULAR MEETING

Council reconvened at 7:17 p.m. to hold the regular City Council meeting.

RECOGNITION AND PROCLAMATIONS

4. Police Officer of the Year - Officer Eric Meislahn
5. Firefighter of the Year - Firefighter Tyler Simmons

Mayor Don Burnette announced that the Police Officer and Firefighter of the Year were unavailable but their recognitions will be on a future agenda.

6. Government Finance Professionals Week Proclamation

Mayor Burnette read the Government Finance Professionals Week Proclamation and presented it to Assistant City Manager/Finance Director Jonathan McKinney and Assistant Finance Director Linda Truitt.

CONSENT AGENDA

7. Public Comments on Consent Agenda Items Only

Robert Reinghagen, resident, commented on Item #13 to suggest the property be sold to be used for affordable housing.

8. Agenda Approval

Vice Mayor Scott Stiltner requested to move the Public Hearing portion of the agenda, Item #19, to be heard right after the Consent Agenda vote.

Motion to approve the agenda as amended was made by Vice Mayor Scott Stiltner and seconded by Councilman Drew Bastian. Motion carried unanimously by voice vote.

9. Approval of Minutes

- a. March 5, 2024 - Regular City Council Meeting

10. Bid Awards and Contract Items

a. Approval to Award RFSQ #23-18 Professional Engineering Services to seven firms: Baxter & Woodman Inc., CPH, LLC, Kimley-Horn & Associates Inc., Lassiter Transportation Group, Inc., Mead & Hunt, Inc., Stanley Consultants, Inc., and Zev Cohen & Associates Inc.

11. Approval to Co-Sponsor a Job Fair Event with Port Orange/South Daytona Chamber of Commerce

12. Approval of Community Development Fee Modifications

- a. Resolution No. 24-03 - Building Permit Fees
- b. Resolution No. 24-05 - Development Application Fees

13. Resolution No. 24-04 - Authorizing the sale of City-owned real estate on the south side of Reed Canal Road, east of Atlantic High School

Motion to approve the Consent Agenda as presented was made by Vice Mayor Scott Stiltner and seconded by Councilman Drew Bastian. Motion carried unanimously by roll call vote.

City Council recessed at 7:29 p.m. for a short break and reconvened at 7:33 p.m. to hold the Joint Annual Meeting of Members, Directors and Design Review Board of Port Orange Property Development, Inc., minutes of which are under separate cover.

ANNUAL CORPORATE MEETING

14. Port Orange Property Development, Inc. Joint Annual Meeting of the Members, Directors and Design Review Board

The Annual Corporate meeting adjourned at 7:37 p.m. and Council reconvened to the regular City Council meeting.

PUBLIC PARTICIPATION (Non-Agenda – 20 minutes)

Tracy Keller with Port Orange/South Daytona Chamber thanked Council for the continued support and briefly announced some upcoming events.

Larry Powers with the Port Orange Railway Society provided updates on the Port Orange Railway Depot.

Scott Pettit, resident and board member of the Canalview Place Condominiums, commented about the street lights being out along Nova Road to Herbert Street toward Dunlawton Avenue. He expressed they are a safety concern and would like to know when they will be fixed.

COUNCIL COMMENTS

15. Comments/Concerns from Council Members

Councilman Reed Foley spoke to the public comment about the lights and agreed they are a safety concern. He explained that City staff has been trying to get answers but it is a joint responsibility of Florida Power & Light and Florida Department of Transportation. Councilman Foley also recommended anyone with children to take a stroll on the Parks & Recreation “Storybook Stroll” and commented that he’s glad to see repairs are going to be made at Memorial Park.

Vice Mayor Stiltner complimented Parks & Recreation staff for a successful baseball opening day.

Mayor Burnette attended the groundbreaking for the Halifax Emergency Room opening on the south end of Williamson Boulevard near Airport Road. He noted that the planning and the infrastructure of this new location will help alleviate traffic and get emergency services to people who are in need in that area.

16. Fiscal Year 2023 - 2024, First Quarter Financial Report

Jonathan McKinney, Assistant City Manager/Finance Director, provided a brief report on the First Quarter Financial Report of Fiscal Year 2023-2024.

BOARD APPOINTMENTS, INTERVIEWS, AND REPORTS

17. Citizen Advisory Committee for TPO

Bobby Ball wasn't able to attend the meeting and had no report.

18. Selection of Alternate Member to serve on the River To Sea Transportation Planning Organization (TPO) Board

Councilman Foley explained there wasn't a quorum at the last meeting and that led TPO to consider having alternate members to serve on behalf of a member that can't attend physically and/or not allowed to attend virtually.

Motion to table the item to a date certain of April 2, 2024 was made by Councilman Reed Foley and seconded by Vice Mayor Scott Stiltner. Motion carried unanimously by voice vote.

PUBLIC HEARING

19. Approval of the Christ the King Community Church Conditional Use Extension Case No. CUSE-24-0001)

Motion to approve the extension of the Christ the King Church Conditional Use through July 2027, subject to the conditions in the Staff Report, was made by Councilman Reed Foley and seconded by Vice Mayor Scott Stiltner.

Penelope Cruz, Planning Manager, provided further details of the request.

Pastor Scott Kirschner, Applicant, thanked Council for their support and consideration.

Vice Mayor Stiltner commended Pastor Kirschner and church members for taking care of the property and being good stewards of the community.

Motion carried unanimously by roll call vote.

ADDITIONAL ITEMS

20. City Attorney

There was nothing further.

21. City Manager

Wayne Clark announced that three years ago he was interviewed and hired as the City Manager by Council and thanked all the members for keeping him on and staff for their support. He also spoke to the public comment regarding the traffic lights and thanked residents for their patience. Mr. Clark's intention is to have City staff, FPL, and FDOT all meet and get answers and a solution.

COUNCIL COMMITTEE REPORTS

22. City Council Committee Reports

a. Port Orange/South Daytona Chamber of Commerce - Mayor Don Burnette

Mayor Burnette reiterated the upcoming events announced by Tracy Keller's public comment.

b. Roundtable of Elected Officials - Mayor Don Burnette

Mayor Burnette provided details from their recent meeting.

c. Arthaus - Councilman Tracy Grubbs

Councilman Tracy Grubbs was absent.

Mayor Burnette brought up the students of Atlantic High School's Law and Government Academy that were in attendance and had them introduce themselves.

ADJOURNMENT – 8:09 p.m.

Mayor Donald O. Burnette

Attest:

Robin Fenwick, MMC
City Clerk



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C8a) Approval of Woodhaven Traffic Enforcement Agreement

DEPARTMENT: Police Services

GOAL: 1 - Public Safety

RECOMMENDED MOTION: Move to approve a Traffic Enforcement Agreement with Woodhaven at Port Orange Property Owners' Association, Inc. and authorize the Mayor and City Clerk to execute the agreement and any other related documents.

SUMMARY: The purpose of the Woodhaven Traffic Enforcement Agreement is to allow the Port Orange Police Department to patrol and enforce municipal and state traffic laws within the Woodhaven - Phase 1 Subdivision, as described in the Plat recorded in Plat Book 60, Pages 49-57, of the Public Records of Volusia County, Florida. Florida Statute allows the police department to enforce traffic laws on the privately owned roads of the association's boundaries under a written agreement. The police department will utilize special detail patrols, radar, and other methods of traffic enforcement if violations are observed while patrolling.

In addition, this agreement also requires the association to acquire and install street and traffic signage at the locations listed in Exhibit "B". The association is also responsible for the maintenance of the signage for the duration of this agreement.

If approved, this agreement will be in effect for five years, with subsequent renewals, not to exceed two years each, after that.

PRESENTER: Manuel Marino

ATTACHMENTS:

1.	Woodhaven Traffic Enforcement Agreement	Woodhaven Traffic Enforcement Agreement.pdf
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Paula Andrews
Manuel Marino
John McKinney
Matthew Jones
Wayne Clark

Created/Initiated - 2/29/2024
Approved - 3/6/2024
Approved - 3/7/2024
Approved - 3/11/2024
Approved - 3/21/2024

Tracee Cody

Final Approval - 3/21/2024

TRAFFIC ENFORCEMENT AGREEMENT

THIS AGREEMENT is made and entered this _____ day of _____, 2024, by and between the CITY OF PORT ORANGE, FLORIDA, a Florida municipal corporation, whose address is 1000 City Center Circle, Port Orange, Florida 32129, hereinafter referred to as "CITY," and WOODHAVEN AT PORT ORANGE PROPERTY OWNERS' ASSOCIATION, INC., a Florida non profit corporation, whose address is c/o South Atlantic Communities, 2422 S. Atlantic Ave., Daytona Beach Shores, FL 32118, hereinafter referred to as "ASSOCIATION."

WITNESSETH:

WHEREAS, the CITY may exercise jurisdiction over any private road or roads located within the CITY's boundaries under written agreement as authorized by Section 316.006(2)(b), Florida Statutes; and

WHEREAS, the CITY is empowered to enforce the State Uniform Traffic Control provisions in the City of Port Orange under Section 316.008(2), Florida Statutes; and

WHEREAS, the ASSOCIATION has elected, by a majority vote of its board of directors, to have state traffic laws enforced by the CITY on private roads that are controlled by the ASSOCIATION; and

WHEREAS, the CITY and the ASSOCIATION, in the interest of the public health, safety, and welfare, desire to establish terms and conditions for the enforcement of the State Uniform Traffic Control provisions on the private roads owned and controlled by the ASSOCIATION.

NOW, THEREFORE, in consideration of the mutual understandings and agreements set forth herein, the CITY and the ASSOCIATION agree as follows:

SECTION 1. PURPOSE. The purpose of this Agreement is to establish the terms and conditions under which the CITY will provide State Uniform Traffic Control enforcement over the private roads under the ownership and control of the ASSOCIATION, including all roads listed on Exhibit "A" attached.

SECTION 2. TERM. This Agreement shall become effective upon execution by both parties, and shall expire five (5) years after that, and may be renewed thereafter for successive periods not to exceed two (2) years each, upon mutual agreement of the CITY COUNCIL and the ASSOCIATION, unless earlier terminated as provided herein.

SECTION 3. PRIVATE ROADS. The CITY is authorized to enforce the State Uniform Traffic Control provisions over the private roads under the ownership and control of the ASSOCIATION as identified on the attached Exhibit

“A” that is incorporated by reference into this Agreement.

SECTION 4. TRAFFIC SIGNAGE.

a. The ASSOCIATION shall acquire and install, at its sole cost, the street/traffic signage to be installed at the locations listed in Exhibit “B”.

b. Upon the ASSOCIATION'S written request and upon CITY availability, the CITY may provide signage and charge the ASSOCIATION for all actual costs incurred, in accordance with Section 6.(c) below.

c. The ASSOCIATION shall also provide for maintenance of the signage at its sole cost and in accordance with all CITY policies. It shall be the ASSOCIATION's sole and exclusive obligation to replace lost, stolen or damaged traffic signage with replacement traffic signage. Furthermore, it is the ASSOCIATION's responsibility to perform routine inspections of all traffic signage. The ASSOCIATION shall keep record of all maintenance activities relative to said street/traffic signage and shall furnish copies of said logs to the Chief of Police upon request.

d. The ASSOCIATION shall not make any modifications (except for normal maintenance activities) to the signage or replace any of the signage without the CITY's prior written approval or in clear emergency situations in which case the CITY shall be immediately notified. It is expressly understood and agreed by the parties hereto that the effect of the signage must be such that traffic will be properly handled. Necessary modifications or replacements may be made by the ASSOCIATION, after written approval by the CITY, to accommodate the changing needs of traffic. The CITY reserves the right to make any and all final decisions for all street/traffic signage installations such as, by way of example and not limitation, multi-way stop locations, stop locations, reduction or increase of speed limits. Requests for permission to install the above-referenced signage must be made in writing by the ASSOCIATION to the CITY and the following information must be included in the request:

1. the type of signage requested;
2. the requested location of the signage; and
3. the authorized signature of the person making the request on behalf of the ASSOCIATION.

e. The ASSOCIATION shall provide to the CITY, upon request, the proposed design plans and specifications for all traffic signs to be installed and the CITY shall review the plans and specifications for conformance to the Manual for Uniform Traffic Control Devices and respond appropriately. The CITY shall be the sole and exclusive party with approval authority as to all final plans and

specifications. Prior to commencement of any installation activities by the ASSOCIATION, the CITY's written approval must be obtained.

f. The ASSOCIATION shall comply with all CITY standards for signage installation. The CITY's Chief of Police shall be solely responsible for all signage determinations.

SECTION 5. TRAFFIC ENFORCEMENT.

a. The CITY may exercise its jurisdiction for municipal traffic control and enforcement on the private roads identified on the attached Exhibit "A". Traffic control and enforcement shall include applicable provisions of Chapters 316, 318, 320 and 322, Florida Statutes, as may be amended.

b. The CITY currently provides routine patrols for enforcement of criminal violations of the Florida Statutes within the ASSOCIATION. The CITY shall be solely responsible for the means and methods of enforcement of the State Uniform Traffic Control laws, including but not limited to the use of radar or other methods of enforcement. The CITY in its sole discretion shall have the right to perform traffic control and enforcement if violations are observed concurrently while performing routine patrols. Upon execution of this Traffic Enforcement Agreement routine patrols shall continue at the same rate and frequency unless the CITY determines otherwise and shall include traffic enforcement along with criminal law enforcement.

SECTION 6. COMPENSATION.

a. Traffic enforcement shall be performed during routine patrol within the ASSOCIATION and the CITY shall not charge for said routine patrol and traffic enforcement occurring during the routine patrol.

b. If the ASSOCIATION, after entering into this Traffic Enforcement Agreement, seeks off-duty or extra-duty, special detail police services of the POPD, the ASSOCIATION shall be required to enter into a separate Special Detail Agreement with POPD.

c. As part of this Traffic Enforcement Agreement, the ASSOCIATION may submit a written request to the CITY for the installation of traffic signage. shall consist of the actual costs incurred by the CITY. CITY shall respond with a written quote to include the rate for labor and materials relating to the installation of said traffic signage, which shall consist of the actual costs incurred by the CITY. The ASSOCIATION shall reimburse the CITY for all actual costs resulting from the installation of the ASSOCIATION's traffic signage, pursuant to Section 7., hereinbelow.

SECTION 7. PAYMENT AND BILLING.

a. If the CITY has provided services to the ASSOCIATION that necessitate payment, the CITY shall render to the ASSOCIATION an itemized invoice describing the services rendered, the cost of the services, and other information required by this Agreement at the close of each calendar month.

b. The costs of services of the CITY shall be invoiced to the ASSOCIATION. Payment by the ASSOCIATION shall be made to the CITY within thirty (30) days of receipt of the CITY's invoices. Bills paid later than thirty (30) days after receipt of the CITY's invoice shall be assessed a TEN DOLLAR (\$10.00) penalty, and the unpaid balance shall accrue interest at ONE PERCENT (1%) per month until said balance is paid. If any such fee, rate or charge is not paid as and when due and is in default for twenty-five (25) days or more, the unpaid balance thereof and all interest accrued thereon, together with a collection fee, as established by resolution, may be referred to a collection agency. If any such fee, rate or charge is not paid as and when due and is in default for twenty (20) days or more, the unpaid balance thereof and all interest accrued thereon, together with attorneys' fees and costs, may be recovered by civil action. In addition to any other remedies or penalties provided herein, failure to pay such charges promptly when due shall subject ASSOCIATION to discontinuance of further CITY services without notice.

SECTION 8. INDEMNIFICATION.

a. The ASSOCIATION shall, at all times hereafter, indemnify, hold harmless and defend the CITY, its officers, agents, servants, volunteers and employees, individually and collectively, from and against any claims, damages, injuries, losses, liability, causes of action, costs and expenses, including attorneys fees and costs, arising out of, resulting from, or in any way connected with the CITY's performance of duties and obligations under this Traffic Enforcement Agreement, the services provided by the ASSOCIATION pursuant to this Agreement, the condition of the private roads including any signage, or the performance of operations under this Traffic Enforcement Agreement. This provision shall survive the termination or expiration of this Agreement.

b. For purposes of liability, the CITY is subject to sovereign immunity in accordance with state law. This Agreement shall not constitute a waiver of sovereign immunity by the CITY as to any matter to which such immunity would apply, except to the limited extent set forth in Section 768.28, Florida Statutes. Neither the existence of this Agreement nor anything contained herein shall give rise to any greater liability on the part of the CITY than that which the CITY would ordinarily be subjected to when providing its normal police services.

SECTION 9. INSURANCE.

a. The ASSOCIATION shall, at the ASSOCIATION's own cost,

procure the insurance required under this section and maintain such insurance in effect during the term of this Agreement.

b. The ASSOCIATION shall furnish the CITY with a Certificate of Insurance signed by an authorized representative of the insurance company evidencing the insurance required by this section. The Association shall provide the CITY not less than thirty (30) days written notice prior to the cancellation, nonrenewal, amendment or restriction of coverage. The ASSOCIATION shall provide the CITY with a renewal or replacement Certificate of Insurance not less than thirty (30) days before expiration or replacement of the insurance for which a previous certificate has been provided.

c. In addition to providing the Certificate of Insurance, if required by the CITY, the ASSOCIATION shall, within thirty (30) days after receipt of the request, provide the CITY with a copy of each of the policies of insurance providing the coverage required by this section.

d. Neither approval by the CITY nor failure to disapprove the insurance furnished by the ASSOCIATION shall relieve the ASSOCIATION of the ASSOCIATION's full responsibility for liability, damages and accidents.

e. **INSURANCE COMPANY REQUIREMENTS.** Insurance companies providing the insurance under this Agreement must meet the following requirements:

(1) Companies issuing policies must be authorized by maintaining Certificates of Authority issued to the companies by the Department of Insurance of the State of Florida to conduct business in the State of Florida.

(2) In addition, such companies shall have and maintain a Best's Rating of "A-" or better and a Financial Size Category of "VII" or better according to A.M. Best Company.

(3) If, during the period which an insurance company is providing the insurance coverage required by this Agreement, an insurance company shall: lose its Certificate of Authority, fail to maintain the Best's Rating and Financial Size Category, the ASSOCIATION shall, as soon as the ASSOCIATION has knowledge of any such circumstance, immediately notify the CITY and immediately replace the insurance coverage provided by the insurance company with a different insurance company meeting the requirements of this Agreement. Until such time as the ASSOCIATION has replaced the unacceptable insurance company with an insurance company acceptable to the CITY, the ASSOCIATION shall be deemed to be in default of this Agreement.

f. **SPECIFICATIONS.** Without limiting any of the other obligations or liability of the ASSOCIATION, the ASSOCIATION shall, at the ASSOCIATION's sole expense, procure, maintain, and keep in force amounts and types of

insurance conforming to the minimum requirements set forth in this subsection. Except as otherwise specified in this Agreement, the insurance shall become effective prior to the commencement of the Agreement and shall be maintained in force until the termination date of this Agreement. The amounts and types of insurance shall conform to the following minimum requirements:

(1) Comprehensive General Liability.

Liability insurance, including coverage for premises/operations and personal injury coverage shall be obtained. This liability insurance shall include contractual liability insurance applicable to the ASSOCIATION'S obligations under this Agreement. The limits of liability shall be no less than \$1,000,000.00 for injury or death to any one person and no less than \$2,000,000.00 for injury or death to two or more persons as a result of any one occurrence and no less than \$100,000.00 for property damage to one or more persons as a result including, but not limited to, attorney's fees, arising out of or resulting from the performance of this Agreement. The City of Port Orange must be listed as an additional insured on the policy for activities as it relates to this Agreement. Proof of proper insurance must be provided upon request to the CITY within 48 hours of a request.

g. OBLIGATIONS. Compliance with the foregoing insurance requirements shall not relieve the ASSOCIATION, its officers, employees, servants or agents, of liability from any obligation under a section or any other portions of this Traffic Enforcement Agreement.

SECTION 10. TERMINATION. This Traffic Enforcement Agreement may be terminated by either party at any time, with or without cause, upon not less than thirty (30) days' written notice delivered to the other party or, at the option of the CITY, immediately in the event any of the terms, covenants or agreements of this Agreement have been violated.

SECTION 11. ASSIGNMENT. No party to this Traffic Enforcement Agreement shall assign this Agreement, nor any interest arising herein, without the written consent of the other party.

SECTION 12. INDEPENDENT CONTRACTOR. It is agreed by the parties that, at all times and for all purposes within the scope of this Traffic Enforcement Agreement, the relationship of the ASSOCIATION and employees and independent contractors thereof, to the CITY is that of independent contractor and not that of agent or employee. No statement contained in this Traffic Enforcement Agreement shall be construed so as to find the ASSOCIATION an agent or employee of the CITY, and the ASSOCIATION shall be entitled to none of the rights, privileges or benefits of CITY employees.

SECTION 13. ENTIRE AGREEMENT.

a. It is understood and agreed that the entire agreement of the parties is contained herein and that this Traffic Enforcement Agreement supersedes all oral agreements and negotiations between the parties relating to the subject matter hereof as well as any previous agreements presently in effect between the parties relating to the subject matter hereof.

b. Any alterations, amendments, deletions, or waivers of the provisions of this Traffic Enforcement Agreement, shall be valid only when expressed in writing and duly signed by the parties.

SECTION 14. NOTICES. Whenever either party desires to give notice to the other, notice shall be sent by certified mail, return receipt requested, to:

FOR CITY: City Manager
 City of Port Orange
 1000 City Center Circle
 Port Orange, Florida 32129

FOR ASSOCIATION: DICK SMITH, President
 WOODHAVEN AT PORT ORANGE
 PROPERTY OWNERS' ASSOCIATION, INC.
 2422 S. Atlantic Ave.
 Daytona Beach Shores, FL 32118

and

 South Atlantic Communities, Registered Agent
 2422 S. Atlantic Ave.
 Daytona Beach Shores, FL 32118

Either party may change, by written notice as provided herein, the address or person for receipt of notices.

SECTION 15. PUBLIC RECORDS LAW. The parties acknowledge the obligations under Chapter 119, Florida Statutes, to release public records to members of the public upon request. The parties acknowledge that the CITY is required to comply with Chapter 119, Florida Statutes, in the handling of the materials created under this Traffic Enforcement Agreement and that said statute controls over the terms of this Traffic Enforcement Agreement.

IN WITNESS WHEREOF, the parties have executed this Traffic Enforcement Agreement on the dates indicated below.

WOODHAVEN AT PORT ORANGE
PROPERTY OWNERS'
ASSOCIATION, INC.,
a Florida nonprofit Corporation

CITY OF PORT ORANGE,
a Florida municipal corporation

By: _____
Dick Smith, President

By: _____
Mayor Donald O. Burnette

Attest: _____
Ben Wormeck, Secretary

Attest: _____
Robin L. Fenwick, MMC
City Clerk

Date: _____

Date: _____

Exhibit "A"

WOODHAVEN PHASE I SUBDIVISION

Private Roads

Woodhaven - Phase 1, per Plat Book 60, Pages 49 – 57, of the Public Records of Volusia County, Florida:

Woodhaven Village Drive

Hanfield Drive

Hanfield Lane

East Fallsgrove Lane

West Fallsgrove Lane

Crosswind Way – Limited to that portion of Crosswind Way, located within the boundaries of Woodhaven - Phase 1, Plat and described as follows: Emergency Access Easement/Utility Easement located between Lot 151 and Lot 150 as depicted on Plat Book 60, Page 50, Public Records, Volusia County, Florida.

Sterling Chase Drive – Limited to that portion of Sterling Chase Drive, located within the boundaries of Woodhaven – Phase 1, Plat and described as follows: Emergency Access Easement/Utility Easement located between Lot 147 and Lot 84 as depicted on Plat Book 60, Page 50, Public Records, Volusia County, Florida.

Woodhaven Phase I

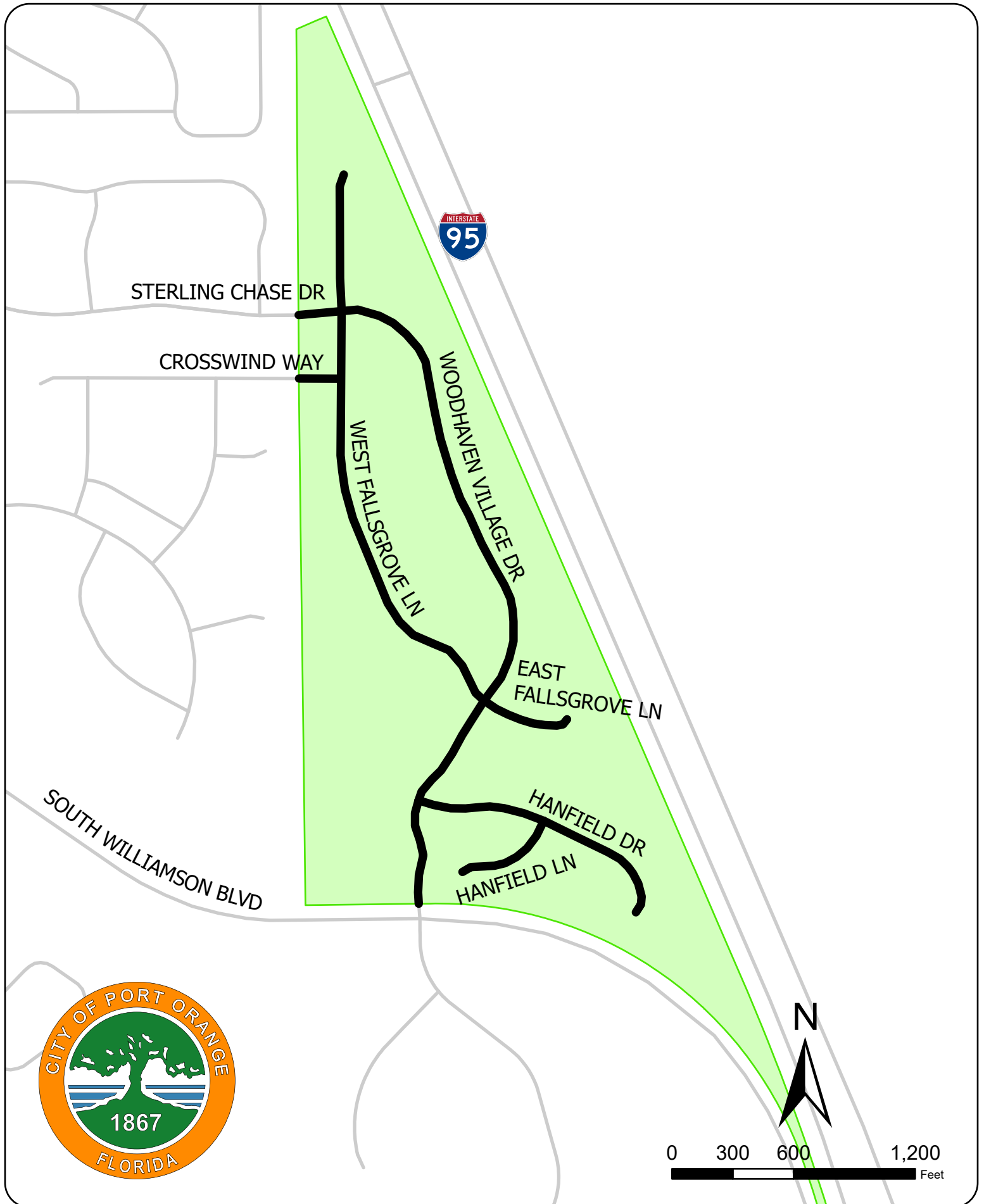


Exhibit "B"

Inventory of Street Signs

Woodhaven - Phase 1 Subdivision

11 Stops signs:

Stop signs located on the following streets that intersect Hanfield Dr. / Woodhaven Village Dr.

Stop signs located on the following streets that intersect Hanfield Ln/ Hanfield Dr.

Stop sign located Woodhaven Village Dr. E. Fallsgrove Ln. / W. Fallsgrove Ln.

Stop sign at intersection of Woodhaven Village Dr./ W. Fallsgrove Ln./ Sterling Chase Dr.

Stop sign located Crosswind Way / W. Fallsgrove Ln.

1 Speed Limit sign:

Speed Limit 25 MPH with Neighborhood attached sign located on Woodhaven Village Dr.

2 No Outlet signs:

No Outlet sign located on Hanfield Ln. and W. Fallsgrove Ln.



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C8b) Approval of Task Authorization No. 11 with Pegasus Engineering, LLC to provide assistance in preparing and submitting a grant application for the FEMA Hurricane Idalia Hazard Mitigation Grant Program (HMGP) Application for the Acquisition and Demolition of 4 Flood-Prone Homes

DEPARTMENT: Community Development

GOAL: 1 - Public Safety; 2 - Infrastructure; 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Task Authorization No. 11 with Pegasus Engineering, LLC and authorize the Mayor and City Clerk to execute all associated documents, subject to the approval of Resolution 24-06.

SUMMARY: Pegasus Engineering, LLC has an existing contract with the City to provide assistance in preparing and submitting FEMA grant applications. Staff is requesting the services of Pegasus Engineering, LLC to prepare and submit a FEMA Hurricane Idalia Hazard Mitigation Grant Program (HMGP) application to the State of Florida Division of Emergency Management (FDEM) in order to secure FEMA funding to offset the costs associated with the implementation of the proposed acquisition and demolition of four (4) flood-prone homes. The location of the homes is shown on the attached Exhibit A.

Task Authorization No. 11 is subject to the approval of Resolution No. 24-06 which is a request to apply for Hurricane Idalia HMGP funding to acquire and demolish four (4) flood-prone homes. Task Authorization No. 11 will not exceed \$30,870. Upon being selected for HMGP funding, the Pegasus fee will be eligible for reimbursement from FEMA as pre-award costs under a Sub-Recipient Management Cost allocation (100% Federal match).

HMGP is a cost reimbursement grant that can provide 75% of the acquisition cost if the project is determined to be cost effective from a Benefit-Cost Analysis.

PRESENTER: Tim Burman

ATTACHMENTS:

1.	Pegasus Engineering LLC RFSQ 23-11 Task Authorization No. 11	Pegasus Engineering LLC RFSQ 23-11 Task Authorization No. 11.pdf
2.	Pegasus Proposal for Grant Services for 4-home Acquisition Project (03-08-	Pegasus Proposal for Grant Services for 4-home Acquisition Project (03-08-24).pdf

	24)	
3.	Exhibit A HMGP Idalia Acquisitions Maps	Exhibit A HMGP Idalia Acquisitions Maps.pdf

Margaret Tomlinson	Created/Initiated - 3/13/2024
Tim Burman	Approved - 3/18/2024
Tom DiEulio	Approved - 3/18/2024
John McKinney	Approved - 3/21/2024
Shannon Balmer	Approved - 3/22/2024
Wayne Clark	Approved - 3/22/2024
Tracee Cody	Final Approval - 3/22/2024

TASK AUTHORIZATION NO. 11
Contract for Services dated May 16, 2023
Between the City of Port Orange, Florida and Pegasus Engineering, LLC

THIS Task Authorization is entered into by and between the **CITY OF PORT ORANGE, FLORIDA**, a chartered municipal corporation with its principal place of business at 1000 City Center Circle, Port Orange, Florida 32129 (the "City") and **PEGASUS ENGINEERING, LLC** ("Contractor"), a Florida limited liability corporation with its principal place of business at 301 West State Road 434, Suite 309, Winter Springs, Florida 32708, and hereinafter collectively referred to as the "Parties," and is to that certain Contract for Services dated as specified above, and any amendments thereto, hereinafter collectively referred to as the "Contract." The Parties, in exchange for the mutual covenants contained herein and in the Contract, agree as follows:

1. This Task Authorization expressly modifies the Contract and in the event of a conflict, the terms and conditions of this Task Authorization shall prevail.
2. In addition to all other terms and conditions contained in the Contract, Contractor shall provide services relating to Grant Application Development for the Acquisition and Demolition of four (4) Flood-Prone Homes as part of the Hazard Mitigation Grant Program ("HMGP") under Hurricane Idalia (DR-4734-FL), and as more particularly described in Contractor's Proposal, attached hereto and incorporated herein as Task Authorization Exhibit "1."
3. Contractor shall complete the services to be provided herein within two (2) years of the date of written notice by the City to the Contractor.
4. In return for the services identified above, the City agrees to compensate Contractor at the prices set forth in Exhibit "1" attached hereto and made a part hereof for all purposes, subject to a limit not to exceed \$30,870.00. All payments shall be governed by the Local Government Prompt Payment Act as set forth in Sections 218.70 through 218.79, Florida Statutes, as amended.
5. Truth-in-Negotiations.
 - a. For any fixed fee, cost-plus-a-fixed-fee or guaranteed maximum-not-to-exceed compensation professional service contract or compensation in a Task Authorization over \$150,000.00, Architect shall execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract or Task Authorization under which such certificate is required must contain a provision that the original contract price or compensation and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price or compensation was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract or compensation adjustments must be made within one (1) year following the end of the Contract. Otherwise, such adjustments shall be deemed waived by the Architect and null and void for the purposes of this Contract or Task Authorization. The signature on this Contract by the Architect shall act as the execution of a truth-in-negotiation certificate stating that the wage rates and other factual unit costs supporting the compensation of this Contract are accurate, complete, and current at the time of contracting.
 - b. Architect's signature on this Contract or a Task Authorization shall act as execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation set forth in this Contract or a Task Authorization are accurate, complete, and

current at the time of contract. The certification shall also constitute an affirmation that Architect has disclosed all debts or fees owed to or that are pending before the City prior to the execution of this Contract of Task Authorization.

6. Compliance with Other Federal Standards.

(a) Remedies. Administrative, contractual, or legal remedies in instances where the Contractor violates or breaches Contract terms. See Paragraph 8 - Termination for Default in the Contract, a draft of which is attached hereto and made apart hereof by reference.

(b) Termination for Convenience and Non-Appropriation of Funds. Termination for convenience by the City, including how it will be carried out and the basis for settlement is set forth in Paragraph 6, in the Contract, a draft of which is attached hereto and made apart hereof by reference. Termination for non-appropriation of funds is set forth in Paragraph 11 of the contract, a draft of which is attached hereto and made apart hereof by reference.

(c) Equal Employment Opportunity: During the performance of this Contract, the Contractor agrees as follows:

(i) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(ii) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(iii) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

(iv) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(v) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(vi) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(vii) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(viii) The Contractor will include the portion of the sentence immediately preceding paragraph (i) and the provisions of paragraphs (i) through (viii) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, that if the applicant so participating is a state or local government, the above equal opportunity clause is not applicable to any agency,

instrumentality or subdivision of such government which does not participate in work on or under the Contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or [contract](#) modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

(d) Davis-Bacon Act: If applicable to this Contract, the Contractor agrees to comply with all provisions of the Davis Bacon Act as amended (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. Contractor is 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, Contractor must be required to pay wages not less than once a week. This Contract is conditioned upon the acceptance of the Department of Labor Wage Determination. **In situations where the Davis-Bacon Act does not apply, neither does the Copeland "Anti-Kickback" Act.**

When required by the federal program legislation, prime construction contracts over \$2,000 awarded by the City require the Contractor to comply with the following provisions from 29 C.F.R. § 5.5(a)(1)-(10), and Contractor must include these provisions in full in any subcontracts:

29 C.F.R. § 5.5 Contract provisions and related matters.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds

obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis–Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein:

Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis–Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)

(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry;
and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding.

The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any

other federally-assisted contract subject to Davis–Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis–Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a) (1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis–Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)

(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each

employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or

cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH- 347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii) (B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview

employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees.

(i) Apprentices.

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize

apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees.

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity.

The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements.

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a) (1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment.

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis–Bacon and Related Act requirements.

All rulings and interpretations of the Davis–Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis–Bacon Act or 29 CFR 5.12(a)(1).”

(e) Copeland Anti Kick Back Act: Compliance with the Copeland “Anti-Kickback” Act.

Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this contract.

Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

Breach. A breach of the Contract clauses above may be grounds for termination of the Contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

(f) Contract Work Hours and Safety Standards Act:

For all contracts over \$100,000 that involve the employment of mechanics, laborers, and construction work:

(i) Compliance with the Contract Work Hours and Safety Standards Act.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part

of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) *Subcontracts.* The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

(ii) Further Compliance with the Contract Work Hours and Safety Standards Act.

In addition to the clauses contained in subparagraphs (i)(1) thru (4), hereinabove, in any applicable contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 C.F.R. § 5.1, the Contractor shall comply with the following provisions and insert the same in any applicable contracts with subcontractors:

(1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the Contract for all laborers and mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid.

(2) Records to be maintained under this provision shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(g) Rights to Inventions Made Under a Contract or Agreement.

(1) Stafford Act Disaster Grants. This requirement does not apply to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of “funding agreement.”

(2) If the FEMA award meets the definition of “funding agreement” under 37 C.F.R. § 401.2(a) and the non-Federal entity 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 non-Federal entity must comply with the requirements of 37 C.F.R. 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 FEMA. See 2 C.F.R. Part 200, Appendix II, ¶ F.

(3) The regulation at 37 C.F.R. § 401.2(a) currently defines “funding agreement” as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

(h) Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251– 1387) as amended.

For contracts exceeding \$150,000.00, the following provisions apply:

"Clean Air Act"

The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

The Contractor agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.

The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal assistance provided by FEMA.

"Federal Water Pollution Control Act"

The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.

The Contractor agrees to report each violation to the City and understands and agrees that the City, in turn, report each violation as required to assure notification to the Florida Division of Emergency Management ("FDEM"), Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.

The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal assistance provided by FEMA.

(i) Suspension and Debarment: This Contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the Contractor is required to verify that none of the Contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

The Contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

This certification is a material representation of fact relied upon by City. If it is later determined that the Contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to City, the federal government may pursue available remedies, including but not limited to suspension and/or debarment.

The Contractor agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

(j) Byrd Anti-Lobbying Amendment 31 U.S.C. § 1352 (as amended): Contractors who apply or bid for an award of more than \$100,000 shall file the required certification. Each tier certifies to the tier above that it will not and has not used federally 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 shall 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 recipient who in turn will forward the certification(s) to the federal awarding agency.

(k) Procurement of Recovered Materials: Requirements: The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

- A. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired.
 - 1. Competitively within a timeframe providing for compliance with the contract performance schedule;
 - 2. Meeting contract performance requirements; or
 - 3. At a reasonable price.
- B. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>
- C. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines website, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

(l) Prohibition on Contracting for Covered Telecommunications Equipment or Services.

(i) *Definitions.* As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause—

(ii) Prohibitions.

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug.13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (iii) of this clause applies, the Contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

- a. Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- b. Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- c. Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or
- d. Provide, as part of its performance of this Contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(iii) Exceptions.

- (1) This clause does not prohibit Contractors from providing—
 - a. A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
 - b. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.
- (2) By necessary implication and regulation, the prohibitions also do not apply to:
 - a. Covered telecommunications equipment or services that:
 - 1. Are *not used* as a substantial or essential component of any system; *and*
 - 2. Are *not used* as critical technology of any system.
 - b. Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

(iv) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (iv)(2) of this clause to the recipient or subrecipient, unless elsewhere in this Contract are established procedures for reporting the information.

(2) The Contractor shall report the following information pursuant to paragraph (iv)(1) of this clause:

a. Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

b. Within 10 business days of submitting the information in paragraph (iv)(2)(a) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(v) *Subcontracts*. The Contractor shall insert the substance of this clause, including this paragraph (v), in all subcontracts and other contractual instruments.

(m) Domestic Preference for Procurements. As appropriate, and to the extent consistent with law, the Contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products. For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

(n) Access to Records and Reports:

The Contractor agrees to provide City, Recipient (if applicable), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

In compliance with section 1225 of the Disaster Recovery Act of 2018, the City and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

(o) Changes. To be allowable under a FEMA grant or cooperative agreement award, the cost of any contract change, modification, amendment, addendum, change order, or constructive change must be necessary, allocable, within the scope of the grant or cooperative agreement, reasonable for the scope of work, and otherwise allowable. This Contract addresses any potential requests for modifications or changes to the Contract terms as contained herein above.

(p) DHS Seal, LOGO, and Flags. The Contractor shall not use the Department of Homeland Security (DHS) seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval. The Contractor shall include this provision in any subcontracts.

(q) Compliance with Federal Laws, Regulations and Executive Orders and Acknowledgement of Federal Funding. This is an acknowledgment that FEMA financial assistance will be used to fund all or a portion of the Contract. The Contractor will comply with all applicable federal law, regulations, and Executive Orders, FEMA policies, procedures, and directives. The Contractor shall comply with all uniform administrative requirements, cost principles, and audit requirements for federal awards. Contractor shall ensure that all subcontracts comply with the same.

(r) No Obligation by Federal Government. The Federal Government is not a party to this Contract and is not subject to any obligations or liabilities to the City, Contractor, or any other party pertaining to any matter resulting from the Contract.

(s) Program Fraud and False or Fraudulent or Related Acts. The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractors' actions pertaining to this Contract.

(t) Affirmative Socioeconomic Steps. If subcontracts are to be let, the prime Contractor is required to take all necessary steps identified in 2 C.F.R. § 200.321(b)(1)-(5) to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

(u) Copyright and Data Rights. License and Delivery of Works Subject to Copyright and Data Rights. The Contractor grants to the City, a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this Contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly

such data. For data required by the contract but not first produced in the performance of this Contract, the Contractor will identify such data and grant to the City or acquires on its behalf a license of the same scope as for data first produced in the performance of this Contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this Contract, the Contractor will deliver to the City data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the City.

(v) Drug Free Workplace Requirements: Drug-free workplace requirements in accordance with Drug Free Workplace Act of 1988 (Pub L 100-690, Title V, Subtitle D). All Contractors entering into Federal funded contracts over \$100,000 must comply with Federal Drug Free workplace requirements as Drug Free Workplace Act of 1988. The Contractor shall comply with this requirement.

(w) Mandatory Disclosures: The Contractor must disclose in writing all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award.

(x) Record Retention: Contractor will retain all required records pertinent to this contract for a period of five years after closeout of the FEMA grant, beginning on a date as described in 2 C.F.R. §200.333 and retained in compliance with 2 C.F.R. §200.333. This provision is supplemental to other provisions in this Agreement.

(y) Federal Changes: Contractor shall comply with all applicable Federal agency regulations, policies, procedures and directives, including without limitation those listed directly or by reference, as they may be amended or promulgated from time to time during the term of the Contract.

(z) Safeguarding Personal Identifiable Information: Contractor will take reasonable measures to safeguard protected personally identifiable information and other information designated as sensitive by the awarding agency or is considered sensitive consistent with applicable Federal, State and/or local laws regarding privacy and obligations of confidentiality.

(aa) Build America, Buy America Act. If applicable to this Contract, the Contractor shall comply with Build America, Buy America Act ("BABAA"), as part of the Infrastructure Investment and Jobs Act ("IIJA") (Pub. L. 117-58) and BABA provisions of the Act, 41 U.S.C. 8301, unless covered by a waiver.

Contractors and their subcontractors who apply or bid for an award for an infrastructure project subject to the domestic preference requirement in the BABAA shall file the required certification to the non-federal entity with each bid or offer for an infrastructure project, unless a domestic preference requirement is waived by FEMA.

Contractors and subcontractors certify that no federal financial assistance funding for infrastructure projects will be provided unless all the iron, steel, manufactured projects, and construction materials used in the project are produced in the United States. BABAA, Pub. L. No. 117-58, §§ 70901-52. Contractors and subcontractors shall also disclose any use of federal financial assistance for infrastructure projects that do not ensure compliance with BABAA domestic preference requirement. Such disclosures shall be forwarded to the grant recipient who in turn will forward the disclosures to FEMA, the federal awarding agency;

subrecipients will forward disclosures to the pass-through entity, who will in turn forward the disclosures to FEMA.

7. If applicable to this Contract, for FEMA financial assistance programs subject to BABAA, Contractor and subcontractors must sign and submit a certification to the next tier (e.g., subcontractors submit to the Contractor; Contractor submits to the City).
8. This Task Authorization may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile or e-mail of an executed copy of this Task Authorization shall be deemed valid as if an original signature was delivered. No contract shall be formed between the Contractor and the City until the City signs this Task Authorization.

IN WITNESS WHEREOF, the Parties have made and executed this Task Authorization for the purposes herein expressed on the dates set forth below.

Witnesses:

PEGASUS ENGINEERING, LLC

Printed Name: _____ By: _____
Fursan Munjed, Managing Member

Date: _____

Printed Name: _____

***At this time the City does not accept electronic/digital signatures.
A wet signature is required for this document.***

CITY OF PORT ORANGE

By: _____
Donald O. Burnette, Mayor

Date: _____

ATTEST:

By: _____
Robin L. Fenwick, MMC, City Clerk

Date: _____

EXHIBIT “1”

Contractor's Proposal, Fee Estimate and Maps

Consisting of 8 Pages



March 8, 2024

P-229841

Ms. Margaret Tomlinson, RLA, LEED AP
Construction & Engineering Manager
Community Development
City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129

**Re: Grant Management Services for FEMA HMGP/FMA Stormwater & Drainage
Improvements Project Continuing Contract
Contract No. RFSQ #23-11**

**Subj: Grant Application Development for the Acquisition and Demolition of 4 Flood-Prone
Homes as part of the Hazard Mitigation Grant Program under Hurricane Idalia
(DR-4734-FL)**

Dear Ms. Tomlinson:

As requested, we are pleased to submit this proposal to the City of Port Orange to perform grant services associated with the Grant Application Development for the Acquisition and Demolition of 4 Flood-Prone Homes as part of the Hazard Mitigation Grant Program (HMGP) under Hurricane Idalia (DR-4734-FL) project.

In essence, the City of Port Orange's Flood Mitigation Program encompasses three distinct flood mitigation categories the City is interested in participating: typical elevation project, mitigation reconstruction project, which entails the demolition and reconstruction of homes that are not feasible for elevation, and acquisition demolition. This proposal specifically encompasses the preparation of a HMGP grant application for the acquisition and demolition of 4 flood-prone homes with a high risk of repetitive flooding. Please note upon being selected for HMGP funding, these services may be eligible for up to 100% reimbursement through the Sub-Recipient Management Cost program.

Upon the successful HMGP funding obligation of the HMGP grant projects by the State and FEMA, and upon a request by the City of Port Orange, Pegasus Engineering would be pleased to submit a separate proposal to provide grant administration services (i.e., quarterly reports, reimbursement requests, close-out documents). Upon FEMA approval, these costs may be eligible for up to 100% reimbursement through the Sub-Recipient Management Cost program.

"Engineering a Higher Standard"

301 West State Road 434, Suite 309, Winter Springs, FL 32708 • 407-992-9160 • Fax 407-358-5155

Under this contract, Pegasus Engineering will be responsible for the performance of the following tasks, at a minimum:

1. Review various e-mail correspondence from the City and the homeowners documenting the reported flooding associated with prior storm events that affected the area.
2. Attend coordination meetings with City of Port Orange staff to discuss observed and claimed flooding extent and steps to follow in consideration of the removal of structures from harm's way.
3. Coordinate with City staff to prepare for and conduct one-on-one meetings with the homeowners in order to address specific mitigation questions as well as to address the homeowners' concerns.
4. Review available flood loss history, elevation certificates, flood insurance declaration documents, and elevation proposals provided by the City of Port Orange officials and the homeowners.
5. Perform a field assessment of the homes that will be part of the HMGP application.
6. Coordinate with City of Port Orange staff regarding the finished floor elevations, photographs of each structure, and required FEMA documents, as deemed necessary.
7. Coordinate with the City of Port Orange and demolition contractors regarding the demolition proposals and any concerns related to the demolition of each structure.
8. Collect the supporting technical documentation associated with the various structures to be mitigated for the preparation of the Benefit Cost Analysis.
9. Prepare a preliminary Benefit Cost Analysis of the structures that participate in the flood mitigation project.
10. Prepare a HMGP application package, which will include, but may not be limited to, the following information:
 - ✓ HMGP Application
 - ✓ Mitigation Worksheet

- ✓ Local Mitigation Strategy Support Letter
- ✓ Supporting Figures and Exhibits (including USGS Topo Maps, FIRM Maps, etc.)
- ✓ Budget / Costs Estimate, including materials, labor and fees paid
- ✓ Photographic Documentation (Dry Conditions)
- ✓ Environmental Justice
- ✓ Concurrence Letter from the Floodplain Manager
- ✓ Pre-Award Form
- ✓ Sub-Recipient Management Cost Form
- ✓ Property Appraiser Reports
- ✓ Mitigation Specific Forms
- ✓ Recorded Historic Damages
- ✓ BCA Data Source Justification

11. Submit a FEMA HMGP application package to FDEM via the online portal on or before the deadline for submission of April 30, 2024, as established by FEMA.
12. Address Requests for Information (RFI) from DEM staff during the programmatic, engineering, and environmental reviews of the HMGP application. These efforts will include direct coordination with FDEM representatives during the review of the HMGP application.
13. As part of FDEM's technical review process, Pegasus will coordinate with City staff to update and/or revise specific sections of the grant application, as necessary, to incorporate FDEM's review comments.
14. Coordinate closely with the homeowners and address their questions and concerns related to the flood mitigation under the elevation category, as needed.
15. Attend City Commission Meetings with scheduled agenda items encompassing discussions related to this mitigation project, as needed.

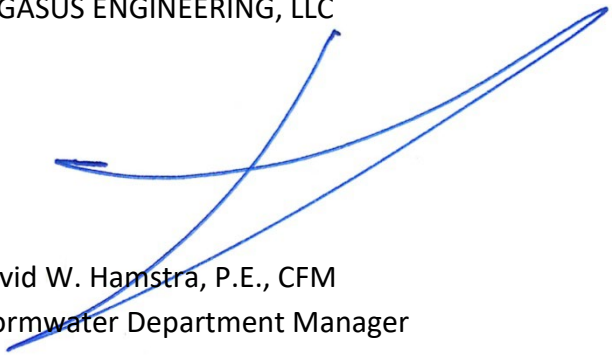
The above-described services will be performed for a fee amount of **\$30,870**, in accordance with the attached manhour and fee estimate (refer to Attachment "A").

We appreciate the opportunity to serve the City of Port Orange on this important flood mitigation assignment. If you have any questions, please contact me directly at 407-992-9160, extension 309, or by email at david@pegasusengineering.net.

Ms. Margaret Tomlinson, RLA, LEED AP
March 8, 2024

Respectfully,

PEGASUS ENGINEERING, LLC



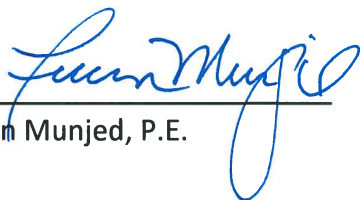
David W. Hamstra, P.E., CFM
Stormwater Department Manager

cc: Debra Neher, City of Port Orange
Valerie Duhl, City of Port Orange
Leylah Saavedra, Pegasus Engineering

**Grant Management Services for FEMA HMGP/FMA
Stormwater & Drainage Improvements Project Continuing Contract
Contract No. RFSQ #23-11**

**Grant Application Development for the
Acquisition and Demolition of 4 Flood-Prone Homes
as part of the Hazard Mitigation Grant Program
under Hurricane Idalia (DR-4734-FL)**

Approved for Pegasus Engineering, LLC

	Principal	March 8, 2024
Fursan Munjed, P.E.	Officer's Title	Date

This proposal is hereby accepted and authorization to proceed is hereby given.
(Please return one executed copy of this proposal for our Pegasus Engineering records).

_____	_____	_____
Authorized Signature	Officer's Title	Date

EXHIBIT "A"
Manhour and Fee Estimate
for the

**GRANT APPLICATION DEVELOPMENT FOR THE ACQUISITION AND DEMOLITION OF 4 FLOOD-PRONE HOMES
AS PART OF THE HAZARD MITIGATION GRANT PROGRAM UNDER HURRICANE IDALIA (DR-4734-FL)**



Task Description	Grant Program Manager (Hamstra, P.E.)	Grant Project Manager (Saavedra, P.E.)	Grant Management Specialist (Whikehart, P.E.)	Sr. Designer/ GIS Technician (Greenough)	Administrative Assistant (Villanueva)	Task Hours	Task Fees
Standard Hourly Rates	\$195.00	\$185.00	\$150.00	\$120.00	\$85.00		
Review various e-mail correspondence from the City and the homeowners documenting the reported flooding		4	4		2	10	\$1,510.00
Attend coordination meetings with City staff to discuss project specifics	4	4				8	\$1,520.00
Conduct one-on-one meetings with the homeowners in order to address specific mitigation questions	2	4	4		2	12	\$1,900.00
Review available flood loss history, elevation certificates, flood insurance declaration documents, etc.		4	4		2	10	\$1,510.00
Perform a field assessment of the homes that will be part of the HMGP application	7	7			2	16	\$2,830.00
Coordinate with City staff regarding the finished floor elevations, elevation certificates, photographs, pre-bidding coordination		4	2			6	\$1,040.00
Coordinate with City of Port Orange and demolition contractors regarding the demolition proposals		2			1	3	\$455.00
Summarize in a database the supporting technical documentation per structure to be mitigated for the BCA		4	4			8	\$1,340.00
Prepare a preliminary Benefit Cost Analysis of the structures that participate in the flood mitigation project	4	6				12	\$1,890.00
Prepare and submit to FDEM via the online portal a FEMA HMGP application packet, including relevant supporting documentation	2	24	12	12	2	52	\$8,240.00
Address Requests for Information (RFI) from DEM staff during the programmatic, engineering and environmental reviews	2	12	6	3	2	25	\$4,040.00
Follow up with the homeowners to address their questions and concerns related to the flood mitigation project		4	2		2	8	\$1,210.00
Prepare for and attend City Commission Meetings regarding the mitigation project, as needed	4	4				8	\$1,520.00
Project Administration (Status Reports via Monthly Invoices)	6				3	9	\$1,425.00
TASK HOURS	31	83	38	15	18	187	
TASK LABOR COSTS	\$6,045.00	\$15,355.00	\$5,700.00	\$1,800.00	\$1,530.00	\$30,430.00	\$30,430.00
PERCENT BREAKDOWN	19.9%	50.5%	18.7%	5.9%	5.0%	100.0%	
 Breakdown in Fees (1) Labor Costs = \$30,430.00 (2) Reimbursable Expenses = \$440.00							
TOTAL HOURLY NOT TO EXCEED AMOUNT						=	\$30,870.00

EXHIBIT A

Address 893 Sugar House Dr.
Parcel 633708020480
Size 0.23 AC

889 Sugar House Ct.
633708020460
0.26 AC



Address 798 Sugar House Dr.
Parcel 633708030760
Size 0.20 AC



EXHIBIT A

Address 5899 Trailwood Dr.
Parcel 632202000080
Size 2.06 AC





March 8, 2024

P-229841

Ms. Margaret Tomlinson, RLA, LEED AP
Construction & Engineering Manager
Community Development
City of Port Orange
1000 City Center Circle
Port Orange, Florida 32129

**Re: Grant Management Services for FEMA HMGP/FMA Stormwater & Drainage
Improvements Project Continuing Contract
Contract No. RFSQ #23-11**

**Subj: Grant Application Development for the Acquisition and Demolition of 4 Flood-Prone
Homes as part of the Hazard Mitigation Grant Program under Hurricane Idalia
(DR-4734-FL)**

Dear Ms. Tomlinson:

As requested, we are pleased to submit this proposal to the City of Port Orange to perform grant services associated with the Grant Application Development for the Acquisition and Demolition of 4 Flood-Prone Homes as part of the Hazard Mitigation Grant Program (HMGP) under Hurricane Idalia (DR-4734-FL) project.

In essence, the City of Port Orange's Flood Mitigation Program encompasses three distinct flood mitigation categories the City is interested in participating: typical elevation project, mitigation reconstruction project, which entails the demolition and reconstruction of homes that are not feasible for elevation, and acquisition demolition. This proposal specifically encompasses the preparation of a HMGP grant application for the acquisition and demolition of 4 flood-prone homes with a high risk of repetitive flooding. Please note upon being selected for HMGP funding, these services may be eligible for up to 100% reimbursement through the Sub-Recipient Management Cost program.

Upon the successful HMGP funding obligation of the HMGP grant projects by the State and FEMA, and upon a request by the City of Port Orange, Pegasus Engineering would be pleased to submit a separate proposal to provide grant administration services (i.e., quarterly reports, reimbursement requests, close-out documents). Upon FEMA approval, these costs may be eligible for up to 100% reimbursement through the Sub-Recipient Management Cost program.

"Engineering a Higher Standard"

301 West State Road 434, Suite 309, Winter Springs, FL 32708 • 407-992-9160 • Fax 407-358-5155

Under this contract, Pegasus Engineering will be responsible for the performance of the following tasks, at a minimum:

1. Review various e-mail correspondence from the City and the homeowners documenting the reported flooding associated with prior storm events that affected the area.
2. Attend coordination meetings with City of Port Orange staff to discuss observed and claimed flooding extent and steps to follow in consideration of the removal of structures from harm's way.
3. Coordinate with City staff to prepare for and conduct one-on-one meetings with the homeowners in order to address specific mitigation questions as well as to address the homeowners' concerns.
4. Review available flood loss history, elevation certificates, flood insurance declaration documents, and elevation proposals provided by the City of Port Orange officials and the homeowners.
5. Perform a field assessment of the homes that will be part of the HMGP application.
6. Coordinate with City of Port Orange staff regarding the finished floor elevations, photographs of each structure, and required FEMA documents, as deemed necessary.
7. Coordinate with the City of Port Orange and demolition contractors regarding the demolition proposals and any concerns related to the demolition of each structure.
8. Collect the supporting technical documentation associated with the various structures to be mitigated for the preparation of the Benefit Cost Analysis.
9. Prepare a preliminary Benefit Cost Analysis of the structures that participate in the flood mitigation project.
10. Prepare a HMGP application package, which will include, but may not be limited to, the following information:
 - ✓ HMGP Application
 - ✓ Mitigation Worksheet

- ✓ Local Mitigation Strategy Support Letter
- ✓ Supporting Figures and Exhibits (including USGS Topo Maps, FIRM Maps, etc.)
- ✓ Budget / Costs Estimate, including materials, labor and fees paid
- ✓ Photographic Documentation (Dry Conditions)
- ✓ Environmental Justice
- ✓ Concurrence Letter from the Floodplain Manager
- ✓ Pre-Award Form
- ✓ Sub-Recipient Management Cost Form
- ✓ Property Appraiser Reports
- ✓ Mitigation Specific Forms
- ✓ Recorded Historic Damages
- ✓ BCA Data Source Justification

11. Submit a FEMA HMGP application package to FDEM via the online portal on or before the deadline for submission of April 30, 2024, as established by FEMA.
12. Address Requests for Information (RFI) from DEM staff during the programmatic, engineering, and environmental reviews of the HMGP application. These efforts will include direct coordination with FDEM representatives during the review of the HMGP application.
13. As part of FDEM's technical review process, Pegasus will coordinate with City staff to update and/or revise specific sections of the grant application, as necessary, to incorporate FDEM's review comments.
14. Coordinate closely with the homeowners and address their questions and concerns related to the flood mitigation under the elevation category, as needed.
15. Attend City Commission Meetings with scheduled agenda items encompassing discussions related to this mitigation project, as needed.

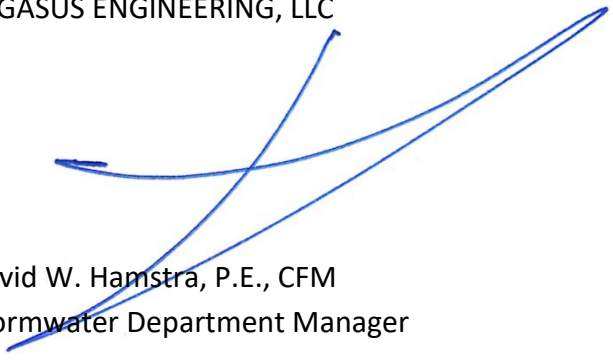
The above-described services will be performed for a fee amount of **\$30,870**, in accordance with the attached manhour and fee estimate (refer to Attachment "A").

We appreciate the opportunity to serve the City of Port Orange on this important flood mitigation assignment. If you have any questions, please contact me directly at 407-992-9160, extension 309, or by email at david@pegasusengineering.net.

Ms. Margaret Tomlinson, RLA, LEED AP
March 8, 2024

Respectfully,

PEGASUS ENGINEERING, LLC



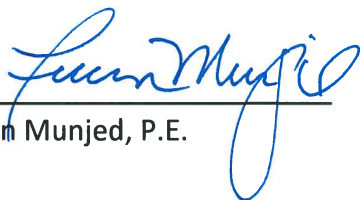
David W. Hamstra, P.E., CFM
Stormwater Department Manager

cc: Debra Neher, City of Port Orange
Valerie Duhl, City of Port Orange
Leylah Saavedra, Pegasus Engineering

**Grant Management Services for FEMA HMGP/FMA
Stormwater & Drainage Improvements Project Continuing Contract
Contract No. RFSQ #23-11**

**Grant Application Development for the
Acquisition and Demolition of 4 Flood-Prone Homes
as part of the Hazard Mitigation Grant Program
under Hurricane Idalia (DR-4734-FL)**

Approved for Pegasus Engineering, LLC

	Principal	March 8, 2024
Fursan Munjed, P.E.	Officer's Title	Date

This proposal is hereby accepted and authorization to proceed is hereby given.
(Please return one executed copy of this proposal for our Pegasus Engineering records).

_____	_____	_____
Authorized Signature	Officer's Title	Date

EXHIBIT "A"
Manhour and Fee Estimate
for the



**GRANT APPLICATION DEVELOPMENT FOR THE ACQUISITION AND DEMOLITION OF 4 FLOOD-PRONE HOMES
AS PART OF THE HAZARD MITIGATION GRANT PROGRAM UNDER HURRICANE IDALIA (DR-4734-FL)**

Task Description	Grant Program Manager (Hamstra, P.E.)	Grant Project Manager (Saavedra, P.E.)	Grant Management Specialist (Whitehart, P.E.)	Sr. Designer/ GIS Technician (Greenough)	Administrative Assistant (Villanueva)	Task Hours	Task Fees
Standard Hourly Rates	\$195.00	\$185.00	\$150.00	\$120.00	\$85.00		
Review various e-mail correspondence from the City and the homeowners documenting the reported flooding		4	4		2	10	\$1,510.00
Attend coordination meetings with City staff to discuss project specifics	4	4				8	\$1,520.00
Conduct one-on-one meetings with the homeowners in order to address specific mitigation questions	2	4	4		2	12	\$1,900.00
Review available flood loss history, elevation certificates, flood insurance declaration documents, etc.		4	4		2	10	\$1,510.00
Perform a field assessment of the homes that will be part of the HMGP application	7	7			2	16	\$2,830.00
Coordinate with City staff regarding the finished floor elevations, elevation certificates, photographs, pre-bidding coordination		4	2			6	\$1,040.00
Coordinate with City of Port Orange and demolition contractors regarding the demolition proposals		2			1	3	\$455.00
Summarize in a database the supporting technical documentation per structure to be mitigated for the BCA		4	4			8	\$1,340.00
Prepare a preliminary Benefit Cost Analysis of the structures that participate in the flood mitigation project	4	6				12	\$1,890.00
Prepare and submit to FDEM via the online portal a FEMA HMGP application packet, including relevant supporting documentation	2	24	12	12	2	52	\$8,240.00
Address Requests for Information (RFI) from DEM staff during the programmatic, engineering and environmental reviews	2	12	6	3	2	25	\$4,040.00
Follow up with the homeowners to address their questions and concerns related to the flood mitigation project		4	2		2	8	\$1,210.00
Prepare for and attend City Commission Meetings regarding the mitigation project, as needed	4	4				8	\$1,520.00
Project Administration (Status Reports via Monthly Invoices)	6				3	9	\$1,425.00
TASK HOURS	31	83	38	15	18	187	
TASK LABOR COSTS	\$6,045.00	\$15,355.00	\$5,700.00	\$1,800.00	\$1,530.00	\$30,430.00	\$30,430.00
PERCENT BREAKDOWN	19.9%	50.5%	18.7%	5.9%	5.0%	100.0%	
 Breakdown in Fees							
(1) Labor Costs						=	\$30,430.00
(2) Reimbursable Expenses						=	\$440.00
TOTAL HOURLY NOT TO EXCEED AMOUNT						=	\$30,870.00

889 Sugar House Ct.
633708020460
0.26 AC

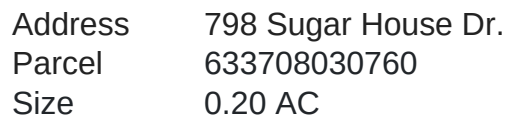


EXHIBIT A

Address 5899 Trailwood Dr.
Parcel 632202000080
Size 2.06 AC





CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C9) Authorization for County of Volusia, Mosquito Control Division to perform low-level flights to provide aerial mosquito control services

DEPARTMENT: City Manager

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to authorize the performance of low-level flights to provide aerial mosquito control services by Volusia County Mosquito Control and authorize the City Manager to execute the Letter of Authorization.

SUMMARY: Every two years, the Volusia County Mosquito Control Division requests authorization from the City to perform low-level flights over the city in connection with their aerial inspection and application of insecticides for the control of adult and larval mosquitoes, in compliance with Federal Aviation Administration (FAA) regulations.

Volusia County Mosquito Control received and responded to over 500 requests for service within and adjacent to the City in Fiscal Year 2023. The ability to apply mosquito control products by air is critical in their mission to protect the health of the public within the County.

The request is for authorization during the calendar year of 2024 through June 20, 2026.

PRESENTER: Robin Fenwick

ATTACHMENTS:

1.	Mosquito Control Letter of Authorization	Mosquito Control Letter of Authorization.pdf
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Robin Fenwick
Wayne Clark
Tracee Cody

Created/Initiated - 3/19/2024
Approved - 3/21/2024
Final Approval - 3/21/2024



PUBLIC WORKS DEPARTMENT
MOSQUITO CONTROL DIVISION

Marcus McDonough
MOSQUITO CONTROL DIRECTOR

801 South Street, New Smyrna Beach, Florida 32168
Phone: (386) 424-2920 • Fax: (386) 424-2924
mmcdonough@volusia.org

February 29, 2024

City Manager Wayne Clark
City of Port Orange
1000 City Center Circle
Port Orange, FL 32129
386-506-5500

Dear City Manager Clark,

Attached in this correspondence is a **Letter of Authority** which I am requesting to be filled out and returned to the listed address above. As in the past, per Federal Aviation Administration (FAA) regulations, this authorizes us to perform low level flights, inspection, and application of insecticides in your city to provide aerial mosquito control services.

Please return the completed and signed Letter of Authority by **April 15, 2024**. Please notify me if you need additional time to complete this form. Your prompt attention to this request is greatly appreciated. If you have questions, please feel free to contact me or the Airborne Operations Supervisor, Mark Stanley at (386) 424-2920.

Respectfully,

A handwritten signature in blue ink, appearing to read "Marcus McDonough", is written over a light blue horizontal line.

Marcus McDonough
Volusia County Mosquito Control Director
CC: Mark Stanley, Airborne Operations Supervisor



**PUBLIC WORKS DEPARTMENT
MOSQUITO CONTROL DIVISION**

Letter of Authority

We hereby give authorization, during the calendar year 2024 through June 30, 2026, to the East Volusia County Mosquito Control Taxing District (County of Volusia, Mosquito Control Division) to perform low-level flights over our city/jurisdiction in connection with their aerial inspection and application of insecticides for the control of adult and larval mosquitoes, in compliance with the FAA regulations explained in a letter from Volusia County Mosquito Control.

SIGNED: _____

DATE: _____

NAME: _____

TITLE: _____

CITY/TOWN/COUNTY: _____

STATE: _____

ZIP CODE: _____



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C10) Approval of Memorandum of Understanding (MOU) with the International Association of Firefighters (IAFF)

DEPARTMENT: Finance

GOAL: 1 - Public Safety
5 - Fiscal Sustainability

RECOMMENDED MOTION: Move to approve the Memorandum of Understanding (MOU) with the International Association of Firefighters (IAFF).

SUMMARY: The current International Association of Firefighters (IAFF) Collective Bargaining Agreement (CBA) is a two-year agreement that expires on 09/30/2025. Article 38 Duration of Agreement 38.3 mentions that the City and the membership agreed to move towards a bi-weekly pay cycle upon implementation of the City's new Enterprise Resource Planning (ERP) software program, Tyler Technology. It was anticipated for this to occur in June 2024, but it is beneficial to start this change on April 22, 2024. This will allow for a better opportunity to review compensation, benefits and deduction in parallel prior to full migration from the current ERP software program, Workday, to Tyler Technology before the anticipated Go Live date of July 1, 2024. This was at the recommendation of the Tyler Technology implementation team consultant.

On 03/01/2024, the City received notification that IAFF members voted in favor of the negotiated Memorandum of Understanding (MOU) to the Collective Bargaining Agreement that was tentatively agreed to by the City's bargaining team. In order to ratify this agreement, the City Council must also vote in favor of the proposed changes.

PRESENTER: John McKinney

ATTACHMENTS:

1.	MOU IAFF Article 38	MOU IAFF Article 38.pdf
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John McKinney	Created/Initiated - 3/12/2024
John McKinney	Approved - 3/12/2024
Matthew Jones	Approved - 3/22/2024
Wayne Clark	Approved - 3/22/2024
Tracee Cody	Final Approval - 3/22/2024

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
CITY OF PORT ORANGE
AND THE
INTERNATIONAL ASSOCIATION OF FIREFIGHTERS Local #3118
PERC CERTIFICATION #777

This Memorandum of Understanding ("MOU") is entered into between International Association of Firefighters Local 3118 - PERC Certification #777 ("Association") and the City of Port Orange ("City") herein collectively referred to as the "parties," and modifies the provisions of the October 1, 2023 – September 30, 2025 collective bargaining agreement entered into by the parties on October 17, 2023 ("Agreement").

1. The Agreement provides for a 14-day pay cycle to begin on or after June 1, 2024, replacing the current 21-day pay cycle concurrent with the implementation of a new ERP software program.
2. After further consultation with the City's software provider, the City has received a recommendation to migrate to the 14-day pay cycle sooner to provide an opportunity to review compensation, benefits and deduction in parallel prior to migration from the current ERP software program to the new ERP software program.
3. The Parties agree that implementation of the 14-day pay cycle earlier will allow for appropriate time to ensure the accuracy of the conversion to the new pay cycle.
4. For purposes of this MOU, words with bold (**bold**) and underlined (underlined) type shall constitute additions to the original text of the Agreement and words with strikethrough (~~strikethrough~~) type shall constitute deletions from the original text of the Agreement.
5. Article 38, Subsection 38.3 of the Agreement, Duration of the Agreement, is hereby amended to read as follows:
 - 38.3 The City and the membership agree to moving towards a bi-weekly pay cycle upon the implementation of the City's new ERP software program. This is anticipated to occur on or after **April 1, 2024** ~~June 1, 2024~~. Until the implementation of the bi-weekly pay cycle, the city will maintain the 21 day pay cycle that was part Article 10 – Hours of Work and Overtime that was in the contract that expired on September 30, 2023. All additional pays will move from weekly to bi-weekly pay as part of the implementation of the ERP software program. All articles, other than Article 11 – Wage, that indicates a bi-weekly amount shall be converted to a weekly amount until the implementation of the bi-weekly pay cycle.

[Remainder of Page Left Blank]

6. Unless expressly modified herein, all terms and conditions set forth in the Agreement shall remain in full force and effect.
7. This MOU shall become effective upon ratification by the Union members, approval by the City, and execution by both parties.

INTERNATIONAL ASSOCIATION OF FIREFIGHTERS Local #3118 PERC CERTIFICATION #777, IAFFF, FLA:



Date: 3-11-24

President, Unit Representation

CITY OF PORT ORANGE, FLORIDA

Date: _____

Don Burnette, Mayor

Attest:

Robin Fenwick, MMC, City Clerk



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C11) Resolution No. 24-06 – Hurricane Idalia Hazard Mitigation Grant Program (HMGP) Application to Request Funds to Acquire four (4) homes

DEPARTMENT: Community Development

GOAL: 1 - Public Safety; 2 - Infrastructure; 3 - Quality of Life

RECOMMENDED MOTION: Move to approve Resolution No. 24-06, authorizing the submission of an application for a grant from the Hazard Mitigation Grant Program and authorizing the City Manager to execute all application documents.

SUMMARY: On January 29, the Federal Emergency Management Agency (FEMA) issued a notice of funding availability (NOFA) for counties/municipalities affected by Hurricane Idalia to submit applications for Hazard Mitigation Grant Program (HMGP) funds. The HMGP helps communities implement hazard mitigation measures following a Presidential major disaster declaration. The objective is to support cost-effective measures during recovery that will reduce the risk of physical and social impacts from future disasters. HMGP is a cost reimbursement grant that can provide 75% of the acquisition cost up to \$500,000 on average per structure if the project is determined to be cost-effective from a Benefit-Cost Analysis.

City staff have been meeting with homeowners of flood-prone or substantially damaged homes. Homeowners whose homes have flooded are eligible for the Hurricane Idalia HMGP funds even if their homes didn't flood during this event. The list of acquisition addresses was created based on owner interest after being contacted about repetitive loss flood claims or a Substantial Damage determination due to Hurricane Ian. City Staff including Public Works, Finance and the City Manager's Office have reviewed the addresses and agreed that these homes may pursue application for acquisition through the FEMA grant process as they will provide a local stormwater benefit. Once acquired, the City will be responsible for demolishing the homes, maintaining the property, and maintaining the use of the property as open space or constructing and maintaining stormwater infrastructure improvements in perpetuity.

To pursue HMGP funds, project initiatives must be submitted and approved to be added to Volusia County's Local Mitigation Strategy (LMS) List. Staff submitted this project to acquire four (4) homes with Hurricane Idalia HMGP funds to the Volusia County LMS group. On March 1, the City of Port Orange project was voted on by the LMS committee and added to the LMS Hurricane Idalia HMGP list under Tier 2. Tier 2 funds are expected to be available.

The four (4) homes on the city's list are located in two flood-prone areas. Three of the four are in the same neighborhood (see Exhibit A). The next step of the process is to finalize the HMGP application and apply to Florida Department of Emergency Management (FDEM) by April 30, 2024. Once approved by FDEM, the project application is forwarded to FEMA for consideration. This action does not obligate the City to fund this project, only for staff to apply to FEMA. If this project is selected, the process is estimated to take 1-2 years.

The total estimated cost to acquire the four (4) homes is \$2,000,000 (approximately \$500,000 per home) and the city will be requesting reimbursement of \$1,500,000 from FEMA at project completion. If the City Council approves the request to apply for Hurricane Idalia HMGP funding to acquire four (4) homes, a project will be requested in the FY 25-26 Capital Improvement Plan.

PRESENTER: Tim Burman

ATTACHMENTS:

1.	Resolution 24-06 w exhibit	Resolution 24-06 w exhibit.pdf
2.	Exhibit A HMGP Idalia Acquisitions Maps	Exhibit A HMGP Idalia Acquisitions Maps.pdf

Margaret Tomlinson	Created/Initiated - 3/13/2024
Tim Burman	Approved - 3/18/2024
Tom DiEulio	Approved - 3/18/2024
John McKinney	Approved - 3/21/2024
Shannon Balmer	Approved - 3/22/2024
Wayne Clark	Approved - 3/22/2024
Tracee Cody	Final Approval - 3/22/2024

RESOLUTION NO. 24-06

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA; APPROVING SUBMISSION OF AN APPLICATION FOR FEDERAL FUNDING UNDER THE HAZARD MITIGATION GRANT PROGRAM ("HMGP") FOR THE PURPOSE OF ACQUISITION PROJECTS FOR APPROXIMATELY FOUR HOMES LOCATED WITHIN FLOOD ZONE X AREA LISTED IN THE VOLUSIA COUNTY LOCAL MITIGATION STRATEGY ("LMS") PLAN; AUTHORIZING THE CITY MANAGER TO EXECUTE ALL NECESSARY DOCUMENTS FOR SAID APPLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, City of Port Orange ("City") is participating in a hazard mitigation planning process as established under the Disaster Mitigation Act of 2000; and

WHEREAS, the Volusia County Local Mitigation Strategy Plan is a multi-jurisdictional hazard mitigation plan which includes the City of Port Orange; and

WHEREAS, the Volusia County LMS Plan is updated on a yearly basis and after any major natural disaster event; and

WHEREAS, the City of Port Orange ("City") experienced severe flooding in autumn of 2022; and

WHEREAS, the City desires to make application through the Florida Division of Emergency Management ("FDEM") to the Federal Emergency Management Agency ("FEMA") for grant funding from the Hazard Mitigation Grant Program in the amount of \$1,500,000 said amount being 75% of the \$2,000,000 estimated total project costs; and

WHEREAS, the City recognizes this grant from HMGP is based on a cost share basis with the federal cost share not to exceed \$1,500,000 of the \$2,000,000 estimated total project costs and that a minimum 25% non-federal cost share will be required for each project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

Section 1. The City Council of the City of Port Orange, Florida, hereby approves and authorizes the submission of the Hazard Mitigation Grant Project Application for the acquisition projects for the structures included and identified in **Exhibit "A"**, attached hereto and made a part hereof by reference.

Section 2. The City Manager is hereby authorized to execute all necessary documents for the completion and forwarding of the project application to FDEM.

Section 3. This resolution shall become effective immediately upon adoption.

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Adopted on the day of

Reviewed and Approved: _____
Shannon K. Balmer, Assistant City Attorney

889 Sugar House Ct.
633708020460
0.26 AC

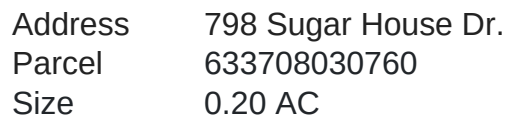


EXHIBIT A

Address 5899 Trailwood Dr.
Parcel 632202000080
Size 2.06 AC



EXHIBIT A

Address 893 Sugar House Dr.
Parcel 633708020480
Size 0.23 AC

889 Sugar House Ct.
633708020460
0.26 AC



Address 798 Sugar House Dr.
Parcel 633708030760
Size 0.20 AC



EXHIBIT A

Address 5899 Trailwood Dr.
Parcel 632202000080
Size 2.06 AC





CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C12) Resolution No. 24-07 - Edward Byrne Memorial Justice Assistance Subgrant Agreement for \$110,365.00 from the Florida Department of Law Enforcement

DEPARTMENT: Police Services

GOAL: 1 - Public Safety

RECOMMENDED MOTION: Move to approve Resolution No. 24-07, Edward Byrne Memorial Justice Assistance Subgrant Agreement from the Florida Department of Law Enforcement for the purchase of night vision devices and necessary supporting equipment and authorize Mayor and City Clerk to sign all necessary documents.

SUMMARY: The Edward Byrne Memorial Justice Assistance Grant - Countywide (JAGC) from FDLE in the amount of \$110,365 will be used to purchase night vision devices and supporting equipment for the Port Orange Police SWAT team. These funds must be used and equipment received no later than September 30, 2024. There is no City match required.

The Southeast Volusia Regional (SEVR) SWAT Team is a multi-agency SWAT comprised of officers from 6 different agencies in Volusia County. The agencies that participate are Ormond Beach PD, South Daytona PD, Port Orange PD, Daytona Beach Shores Public Safety, New Smyrna PD, and Edgewater PD. The population of all 6 agencies is estimated to be 167,000 residents with most of the cities seeing a growing population over the past 5 years.

The JAG funding will help the City of Port Orange Police Department (POPD) accomplish mission profiles. These mission profiles include (in part) Hostage Rescue (Emergency Entry), Barricaded Person Operations, Terrorism Response, Man Tracking Operations, Active Shooter/Killer, and Public Order Operational Support. All these required missions with the use of night vision and Infrared Aiming devices would be a force multiplier and provide an advantage that would greatly contribute to the positive outcome of a mission. The positive outcome being public safety or stopping any further harm by a destructive personality.

PRESENTER: Manuel Marino

ATTACHMENTS:

1.	Resolution No. 24-07	Resolution No. 24-07.pdf
----	----------------------	--------------------------

2.	Application 3-22-24	Application 3-22-24.pdf
Eric Fisher	Created/Initiated - 3/11/2024	
Manuel Marino	Approved - 3/11/2024	
John McKinney	Approved - 3/14/2024	
Matthew Jones	Approved - 3/22/2024	
Wayne Clark	Approved - 3/22/2024	
Tracee Cody	Final Approval - 3/22/2024	

RESOLUTION NO. 24-07

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
PORT ORANGE, VOLUSIA COUNTY, FLORIDA,
ACCEPTING FINANCIAL GRANT ASSISTANCE FROM THE
FLORIDA DEPARTMENT OF LAW ENFORCEMENT'S
EDWARD BYRNE MEMORIAL JUSTICE ASSISTANCE
GRANT PROGRAM; AUTHORIZING THE MAYOR AND
CITY CLERK TO EXECUTE AGREEMENTS AND
CONTRACTS; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Port Orange Police Department applied for a Florida Department of Law Enforcement (FDLE) JAG21 Edward Byrne Memorial Justice Assistance Grant for the purchase of night vision devices and supporting equipment for the Port Orange Police SWAT team; and

WHEREAS, FDLE approved the grant application in the amount of \$110,365.00.

WHEREAS, the City Council of the City of Port Orange desires to accept the financial grant assistance from FDLE.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA as follows:

Section 1. The City Council of the City of Port Orange hereby accepts the FDLE Edward Byrne Memorial Justice Assistance Grant in the amount of \$110,365.00 for the **SWAT Team Night Vision.**

Section 2. The Mayor and the City Clerk of the City of Port Orange are hereby authorized to execute agreements or contracts necessary to implement this Resolution.

Section 3. This Resolution shall become effective immediately upon adoption.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Adopted on the _____ day of _____, 2024

Reviewed and Approved: _____
Shannon K. Balmer, Assistant City Attorney



SWAT Team Night Vision

Prepared by City of Port Orange
for Florida Department of Law Enforcement JAG21 - Countywide Residual (01/29/24 - 03/01/24)

Submitted by Theresa E. Brooks

Submitted on 03/19/2024 2:31 PM Eastern Standard Time

Opportunity Details

Opportunity Information

Title

JAG21 - Countywide Residual (01/29/24 - 03/01/24)

Description

Awards funded under this opportunity have been approved by the FDLE Commissioner.

Agency Contact Phone

850-617-1250

Agency Contact Email

criminaljustice@fdle.state.fl.us

Opportunity Posted Date

1/29/2024

Announcement Type

Initial Announcement

Funding Opportunity Number

15PBJA-21-GG-00241-MUMU

Assistance Listings Number

16.738

Public Link

<https://www.gotomygrants.com/Public/Opportunities/Details/5042a3f9-cd17-4d60-b71a-a85b1ad6aa8e>

Is Published

Yes

Funding Information

Total Program Funding

\$798,294.00

Funding Sources

Federal Or Federal Pass Through

Award Information

Award Period

01/01/2024 - 09/30/2024

Award Type

Non Competitive

Indirect Costs Allowed

No

Matching Requirement

No

Submission Information



Submission Window

01/29/2024 12:00 AM - 03/01/2024 11:59 PM

Submission Timeline Type

One Time

Eligibility Information

Eligibility Type

Private

Eligible Applicants

- County Governments
- City or township governments
- Native American tribal governments (Federally recognized)

Additional Information

Additional Information URL

<http://www.fdle.state.fl.us/Grants/Resources/AmpliFund.aspx>

Additional Information URL Description

The link above provides additional assistance for completing processes in AmpliFund.



Project Information

Application Information

Application Name
SWAT Team Night Vision

Award Requested
\$110,365.00

Total Award Budget
\$110,365.00

Primary Contact Information

Name
Theresa E. Brooks

Email Address
tbrooks@port-orange.org

Address
1000 City Center Circle
PORT ORANGE, FLORIDA 32129

Phone Number
386-717-9050

Project Description

JAG Program - Project Summary

Applicant and Award Information

Eligible Recipients for JAG Funds

Eligible recipients are limited to units of local government. A unit of local government is defined as a city, county, town, township, borough, parish, village, or other general-purpose political subdivision of the state, including Native American Tribes who perform law enforcement functions as determined by the Secretary of the Interior. The eligible recipient cannot be a police department, sheriff's office, or other division of a unit of local government.

In which county is the Eligible Recipient located?

Volusia

Enter the name of the Eligible Recipient.

City of Port Orange

What is the Eligible Recipient's SAM Unique ID number?

LV8ZD1LYF3H4

Upload a copy of the Eligible Recipient's active SAM registration below.

SAM Registration Exp 1-18-25.pdf

What is the Eligible Recipient's FEID number?

596000412

Project Information

NOTE: The final length of the project period will be determined at the time of award approval. No projects will extend past the federal award end date.

Desired Start Date of the Project

1/1/2024

Desired End Date of the Project

9/30/2024

Please select your desired reporting frequency for submitting payment requests AND performance reporting.

Quarterly

Select the appropriate program area for this project.

- ☒ 01 - Law Enforcement
- ☐ 02 - Crime Lab/Forensics
- ☐ 03 - Crime Prevention
- ☐ 04 - Prosecution
- ☐ 05 - Public Defense

- ☐ 06 - Courts
- ☐ 07 - Corrections
- ☐ 08 - Community Corrections
- ☐ 09 - Reentry Services
- ☐ 10 - Behavioral Health
- ☐ 11 - Assessment/Evaluation
- ☐ 12 - Crime Victim/Witness

Problem Identification

PID1: Describe the problem, issues, or concerns this funding will address and describe why this project is a priority for your organization.

The Southeast Volusia Regional (SEVR) SWAT Team is a multi-agency SWAT comprised of officers from 6 different agencies in Volusia County. The agencies that participate are Ormond Beach PD, South Daytona PD, Port Orange PD, Daytona Beach Shores Public Safety, New Smyrna PD, and Edgewater PD. The population of all 6 agencies is estimated to be 167,000 residents with most of the cities seeing a growing population over the past 5 years.

Operationally the SWAT team is responsible for incidents that go beyond the scope of what patrol units can handle and for high-risk search warrants if requested by an agency. SEVR SWAT follows the National Tactical Officer Association (NTOA) guidelines which they refer to as Tactical Response and Operations Standard (TROS). The TROS delineates what different tiers of SWAT Teams or Tactical Response Teams need to be prepared for and the equipment that needs to be available to them. Per their standard SEVR SWAT has the manpower and training hours to satisfy a Tier 2 team. It is the goal of the team leadership and the Chiefs of the agencies to have all the capabilities of a Tier 2 team to accomplish mission profiles.

PID2: What actions are your organization currently taking to help address the problem/issue/concern described above?

Due to budget constraints, the ability to perform these twilight operations remain a continued problem for officers and public safety.

There are alternative actions and strategies that can assist officers resulting in minimal improvement of their visibility and effectiveness in low-light conditions that are currently being relied on:

Providing specialized training to officers on operating in low-light environments. Training includes techniques for using available light sources, such as moonlight and streetlights, to their advantage.

Equipping officers with high-quality flashlights, spotlights, and tactical lighting systems to provide additional illumination in dark environments. These tools can help officers to identify potential threats, navigate surroundings, and communicate more effectively with each other. However, this puts the officers in situations where they are not concealed to potential threats.

Mounting of high-intensity lighting systems on police vehicles to help illuminate large areas during operations.

Officers can strategically position themselves to take advantage of natural light sources and minimize the impact of shadows and obstacles. Effective communication and coordination among team members are also essential for navigating complex environments and responding to threats in low-light conditions.

PID3: Is this project a continuation from the previous year or other federal funding source?

- ☐ Yes
☒ No

Scope of Work

Personnel

Will you be using funds to support personnel costs (FTE, OPS, etc. – not including overtime)?

- ☐ Yes
☒ No

Overtime

Will you be using funds to support overtime pay?

- ☐ Yes
☒ No

Travel and Training

Will you be using funds to support training and/or travel costs?

- ☐ Yes
☒ No

Equipment and/or Supplies

Will you be using funds to support the purchase of equipment and/or supplies?

- ☒ Yes
☐ No

Briefly describe the items to be purchased and how they are critical to addressing the problem described above.

Binocular Night Vision - allows officers to see into dark lit areas and identify objects/persons in those areas

Monocular Night Vision Device - allows officers to see into dark lit areas and identify objects/persons in those areas

PVS-14 J Arm - allows monocular night vision to be used with night vision helmet mount

Night Vision Helmet Mount - allows night vision optics to be mounted to helmet

Night Vision IR Device - infrared aiming device

Weapon Mounted Infrared Device - allows infrared illumination to assist with subject/object identification without sacrificing officer safety

Shipping - shipping costs

Sole Source

The use of noncompetitive procurement methods (i.e. sole source) for grant-funded purchases and procurement contracts is strongly discouraged. However, there are three scenarios in which sole source is allowable:

1. The item or service is only available from one source. This does not mean a particular brand name of a product justifies a sole source, it is the item itself. For example, procuring electronic control devices cannot be a sole source because these less-lethal devices are available to purchase from Taser International and various other vendors. **NOTE: Vendor sole source letters are not sufficient justification for noncompetitive purchases.**
2. A public emergency exists that will result in harmful delays if formal competition is required. This requires official written declaration of the public emergency by an authorized official (i.e. President, Governor, Mayor, etc.). The ability to purchase non-competitively under a declaration of public

emergency expires when the written declaration expires.

3. Inadequate competition was noted after soliciting a number of sources. Documentation of the solicitations from each source must be maintained to support the noncompetitive procurement.

Applicants expecting to purchase grant-funded items non-competitively must complete the [OCJG Sole Source Justification Approval](#) form. If the total procurement, regardless of how much is funded by the award, exceeds the federal simplified acquisition threshold (currently \$250,000), the OCJG grant manager must coordinate federal sole source approval, which may require additional information. NOTE: If the Sole Source request is denied by OCJG, copies of quotes, bids, or other documentation must be provided at the time of payment or monitoring.

Review the requirements above. Are any items being procured noncompetitively (i.e. sole source)?

- ☐ Yes
☒ No

State-Term or Alternate Source Contracts

State-Term or Alternate Source Contracts

Federal procurement regulations allow for grant-funded items to be piggybacked off of other existing contracts with other entities. This is often referred to as alternate source contracting and is often used by OCJG recipients when procuring off of a State-Term Contract. Applicants proposing to use this method of procurement are required to describe and provide the contract number they are using for the alternate source procurement.

Are any items being procured from an existing Florida State-Term Contract?

- ☐ Yes
☒ No

Are any items being procured from any other Alternate Source Contract (GSA, NASPO, piggybacking existing contract, etc.).

- ☒ Yes
☐ No

Provide description of the contract and contract number.

Night Vision Equipment
Contract GS-07F-0022V

Third-Party Contracts and/or Subawards

This category includes third-party agreements with a vendor, provider, consultant, etc. to assist in accomplishing the goals and objectives of the project. There are two types of contractual relationships recognized under federal awards. For a visual flowchart of the two types and what is required for each, please see our "[Understanding Contractual Services under Federal Awards](#)" resource.

Will you be using funds to support third-party agreements (contractual services and/or subawards)?

- ☐ Yes
☒ No

Indirect Costs

Federal recipients may elect to use a portion of funding for indirect costs.

Will you be using funds to support indirect costs?

- ☐ Yes
☒ No

Other Costs

Will you be using funds to support other costs not captured above (i.e. rental agreements, utilities, subscriptions, licensing, etc.)?

- ☐ Yes
☒ No

Program Generated Income (PGI)

Grant-funded activities may generate revenues for the recipient organization. Examples of program income activities include but are not limited to: asset seizures/forfeitures, registration/tuition fees collected from hosted events, interest earned on advance award funds, membership fees, court-ordered attorney's fees, and fees/fines for failed drug tests. All program income must be accounted for, reported, and expended in accordance with [Section 3.4 of the DOJ Grants Financial Guide](#).

Will any proposed grant activities generate Program Income?

- ☐ Yes
☒ No

JAG Pre-Approvals

JAG funds may not be used to pay for any of the following items unless pre-approved by the BJA Director:

- 1. vehicles (excluding police cruisers), vessels (excluding police boats), or aircraft (excluding police helicopters);**
- 2. luxury items;**
- 3. real estate;**
- 4. construction projects (other than penal or correctional institutions); or**
- 5. any similar matters.**

See [BJA's JAG FAQs](#) for more information on the approval process. OCJG grant managers will review the application and seek more information for any items that may require BJA pre-approval.

JAG Program - Grant Contact Information

Recipient Grant Manager Contact Information

This individual serves as a primary point-of-contact and is responsible for:

- ensuring the project is progressing on time and promptly notifying their FDLE grant manager of any delays;
- overseeing all programmatic and financial reporting; and
- ensuring overall compliance with the grant agreement.

GM Name (First Last)

Theresa E. Brooks

GM Title

Grant Manager

GM Address 1

1000 City Center Circle

GM Address 2

Finance Department

GM City

Port Orange

GM State

FL

GM Zip Code+4 (XXXXX-XXXX)

32129-9614

GM Phone Number (XXX-XXX-XXXX)

386-717-9050

GM Email Address

tbrooks@port-orange.org

Chief Official Contact Information

This individual is the agency head for the eligible recipient.

The eligible recipient for the JAG program is a state agency or unit of local government. Examples of Chief Officials may include: Chairperson, Mayor, Executive Director, Secretary, Commissioner, etc.

CO Name (First Last)

Donald O. Burnette

CO Title

Mayor

CO Address 1

1000 City Center Circle

CO Address 2

CO City



Port Orange

CO State

FL

CO Zip Code+4 (XXXXX-XXXX)

32129-9614

CO Phone Number (XXX-XXX-XXXX)

386-506-5500

CO Email Address

dburnette@port-orange.org

Will the Chief Official be designating another individual to execute agreements on their behalf?

☐ Yes

☒ No

Chief Financial Officer (CFO) Contact Information

This individual is responsible for the recipient's accounting system, financial management, and certifying claim reports submitted for payment.

CFO Name (First Last)

Jonathan C. McKinney

CFO Title

Assistant City Manager

CFO Address 1

1000 City Center Circle

CFO Address 2

CFO City

Port Orange

CFO State

FL

CFO Zip Code+4 (XXXXX-XXXX)

32129-9614

CFO Phone Number (XXX-XXX-XXXX)

386-506-5503

CFO Email Address

jmckinney@port-orange.org

Additional Grant Contact

Is there an additional grant point-of-contact (POC) you wish to add to the grant file?

☒ Yes

☐ No

POC Name (First Last)

Zachary Burd

POC Title



Sergeant

POC Phone Number (XXX-XXX-XXXX)
386-675-9330

POC Email Address
zburd@port-orange.org

JAG Program - Certifications & Forms

Required Forms/Certifications for All Applicants

Lobbying, Debarment, and Drug Free Workplace

All applicants are required to complete and submit the [Lobbying, Debarment, and Drug Free Workplace](#) Certification with each application submission.

Upload the completed certification below.

Lobbying SIGNED.pdf

Subrecipient Management Questionnaire

All applicants are required to complete and submit the [Subrecipient Management Questionnaire \(SMQ\)](#) form with their application. This form is used to help evaluate the applicant organization's existing internal controls related to the management of federal grant funds. FDLE will utilize this form as a "risk assessment" to determine the appropriate level of monitoring (desk or onsite) for the subaward.

Upload the completed SMQ form below.

SMQ - JAGC SIGNED.pdf

Upload additional attachments to accompany your completed SMQ, such as your organization's updated procurement policy, etc.

2017 Purchasing Manual.pdf, Single Audit Certification SIGNED.pdf

Equal Employment Opportunity (EEO)

Civil Rights Training

As a condition of the federal JAG award, FDLE requires applicants (and subrecipients) to complete a two part Civil Rights Training and provide copies of the training certificates upon request. To access the training, please visit our [Civil Rights Training for Grantees](#) webpage. At a minimum, the applicant grant manager must complete the training.

Have you completed the Civil Rights Training for Grantees modules?

- ☒ Yes
☐ No (a condition will be added to award)

Upload copy of Civil Rights Training for Grantees certificates.

Civil Rights Certificate of Completion - Module 1 & 2 Signed.pdf, Civil Rights Certification TEB.pdf

EEO Certification (EEOC)

All applicants are required to submit an EEO Certification (EEOC) annually.

FDLE strongly recommends the use of the OJP Office for Civil Rights, [EEO Reporting Tool](#) to complete this certification, especially for applicants who are required to prepare an EEO Plan (EEOP), or Utilization Report. However, in absence of using the EEO Reporting Tool, you may choose to submit the [PDF certification](#) with your application.

Upload completed EEO Certification below.

EEOP Short Form-Signed_11012023.pdf, EEO Plan.pdf

EEO Plan (EEOP)

Applicants with more than 50 employees who also receive a single award of \$25,000 or more in funding from the U.S. Department of Justice (regardless of if it is passed through FDLE), must complete and submit their EEO Plan (EEOP), also known as a Utilization Report, to OJP's Office for Civil Rights.

This process must be completed using the [EEO Reporting Tool](#). OJP's Office for Civil Rights has published an [assistance tool](#) to assist applicants with this process.

Does your organization have 50 employees or more?

- ☒ Yes
☐ No

Does your organization receive a single award of \$25,000 or more from any U.S. Department of Justice grant program?

- ☒ Yes
☐ No

Has your agency completed an EEO Plan within the past two years?

- ☒ Yes
☐ No (a condition will be added to the award)

Upload your EEO Plan below.

EEO Plan.pdf

EEO Plan Approval

Applicants with more than 50 employees who also receive a single award \$500,000 or more in funding from the U.S. Department of Justice (regardless of if it is passed through FDLE), must obtain an EEO Plan (EEOP) approval letter from OJP's Office for Civil Rights.

This process must be completed using the [EEO Reporting Tool](#). OJP's Office for Civil Rights has published an [assistance tool](#) to assist applicants with this process.

Does your organization receive a single award of \$500,000 or more from any U.S. Department of Justice grant program?

- ☐ Yes
☒ No

No approval letter required.

Based on your response, you are only required to submit the EEO Certification and Plan above. You may move to the next section.

Ballistic Vest Certification

Applicants proposing to use grant funds to procure ballistic vests must ensure the vests are American-made, ordered to fit the user, and are compliant with [NIJ Ballistic/Stab Standards](#). In addition, applicants purchasing routine-duty body armor must complete the [Ballistic Vests \(Mandatory Wear\) Certification](#) with their application.

Is this application proposing to use grant funds for ballistic vests?

- ☐ Yes
☒ No

Body Worn Camera Certification

Applicants proposing to use grant funds to procure body worn camera equipment and supplies must complete the [Body Worn Camera Policy Certification](#) with their application.

NOTE: Grant funds can only support licensing, storage, and warranties during the grant period. If these costs extend past the grant period they will be pro-rated from the date of purchase.

Is this application proposing to use grant funds for body cameras?

- ☐ Yes
☒ No

Confidential Funds Certification

Applicants proposing to use their grant to support confidential fund activities must complete the [Confidential Funds Certification](#) with their application. Additionally, applicants must have written policies and procedures to ensure confidential funds are managed in accordance with federal guidelines. Agencies who do not have a written policy may consider formalizing and adopting policies based off of our [example policy](#) provided on our website.

Is the applicant proposing to use the grant to support confidential fund activities?

- ☐ Yes
☒ No

Suitability to Work With Minors

Applicants proposing to use grant funds that involve interacting with minors must make a written determination of each individual's suitability to work with minors. For more information on this requirement, please review our [Suitability to Work with Minors](#) training slides.

In order to facilitate compliance with this requirement, FDLE has two forms that must be completed for any program involving interactions with minors:

- [Suitability to Work and/or Interact with Minors Certification \(SWIMC\)](#)
- [Suitability to Work and/or Interact with Minors Tracking \(SWIMT\)](#)

Is the applicant proposing to use grant funds for activities that directly involve working with or interacting with minors?

- ☐ Yes
☒ No

Telecommunications and Video Surveillance Services and/or Equipment

Applicants proposing to use grant funds to procure telecommunications and/or video surveillance equipment and/or services must complete a [TVS certification](#) with their application. For more information on this requirement, please review the [FAQs](#) and the [training](#) posted to our webpage.

Is the applicant proposing to use grant funds for telecommunications or video surveillance equipment/services?

- ☐ Yes
☒ No

Task Force Activities

Applicants proposing to use funds to support any task force activities (personnel, overtime, equipment, supplies, service agreements, etc.) must provide a task force personnel roster at the time of application. In addition, the applicant is responsible for ensuring all task force members complete the required [BJA Center for Task Force Integrity and Leadership online training](#) once every four years. The completion certificates for each member on the roster must be provided to OCJG.

Note: For any task force members who have not completed the training or have expired training certificates, a withholding of funds condition will be placed on the award until valid certificates are provided for each member on the task force roster.

Is the applicant proposing to use grant funds to support task force activities?

- ☐ Yes
☒ No

NEPA

Applicants proposing to use funds for "minor renovations", mounting items to the exterior of an existing building/structure (i.e. surveillance cameras), meth lab clean up activities, and some forensic processing requires approval from BJA's National Environmental Policy Act (NEPA) coordinator. Any applicants proposing projects that meet the criteria for NEPA approval are required to complete the [BJA CATEX Checklist form](#) and upload it with their grant.

Note: Applicants should not expend any grant funds until NEPA approval is obtained. If BJA denies the approval, you will not be reimbursed for the NEPA related expenses.

Is the applicant proposing to use grant funds for any NEPA related activities?

- ☐ Yes
☒ No

Budget

Proposed Budget Summary

Expense Budget

	Grant Funded	Total Budgeted
D. Equipment		
Binocular Night Vision Devices	\$42,428.72	\$42,428.72
Subtotal	\$42,428.72	\$42,428.72
E. Supplies		
Infrared Aiming Devices	\$3,111.02	\$3,111.02
Monocular Mounts	\$575.00	\$575.00
Monocular Night Vision Devices	\$16,022.40	\$16,022.40
Night Vision Helmet Mounts	\$6,033.72	\$6,033.72
Weapon Mounted Infrared Devices	\$42,194.14	\$42,194.14
Subtotal	\$67,936.28	\$67,936.28
Total Proposed Cost	\$110,365.00	\$110,365.00

Revenue Budget

	Grant Funded	Total Budgeted
Grant Funding		
Award Requested	\$110,365.00	\$110,365.00
Subtotal	\$110,365.00	\$110,365.00
Total Proposed Revenue	\$110,365.00	\$110,365.00

Proposed Budget Detail

See attached spreadsheet.

Proposed Budget Narrative

D. Equipment

List each NON-EXPENDABLE item to be purchased. Expendable items should be included in the supplies category. Each line item description MUST detail the calculation (unit price and quantity) used to arrive at the funded amount. EXAMPLE: 3 PC/Tablets @ \$1,500 each (including associated peripherals such as case, keyboard, docking station, etc.) = \$4,500

Binocular Night Vision Devices

Night Vision Binoculars 6 @ \$7,056.12 each total \$42,336.72 \$92 for shipping

E. Supplies

List items by type (office supplies, postage, training materials, copy paper, books, etc.) with short description of what is included in the type. Each line item description MUST detail the calculation used to arrive the funded amount. NOTE: subscriptions, rent, utilities, etc. should be in the "Other Costs" category. EXAMPLE: office supplies (paper, pens, tape, files, sticky notes, etc.) average \$50/month x 12 months = \$600

Monocular Night Vision Devices

Monocular Night Vision Devices with standard accessory kits 5 @ \$3,204.48 each total \$16,022.40

Monocular Mounts

Monocular Mounts 5 @ \$168.75 each total \$843.75

Night Vision Helmet Mounts

Night Vision Helmet Mounts 14 @ \$430.98 total \$6,033.72

Infrared Aiming Devices

Night Vision IR Devices 2 @ \$1555.51, each total \$3,111.02

Weapon Mounted Infrared Devices

Weapon Mounted Infrared Devices 12 @ \$3,598 each total \$43,176.00 The City will incur all costs over budget amount



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (C13) Resolution No. 24-08 - Approval of the Grant Application for Florida Inland Navigational District (FIND) for construction of the South Causeway Boat Ramp and Floating Docks Improvements

DEPARTMENT: Finance

GOAL: 3 - Quality of Life and
5 - Fiscal Sustainability

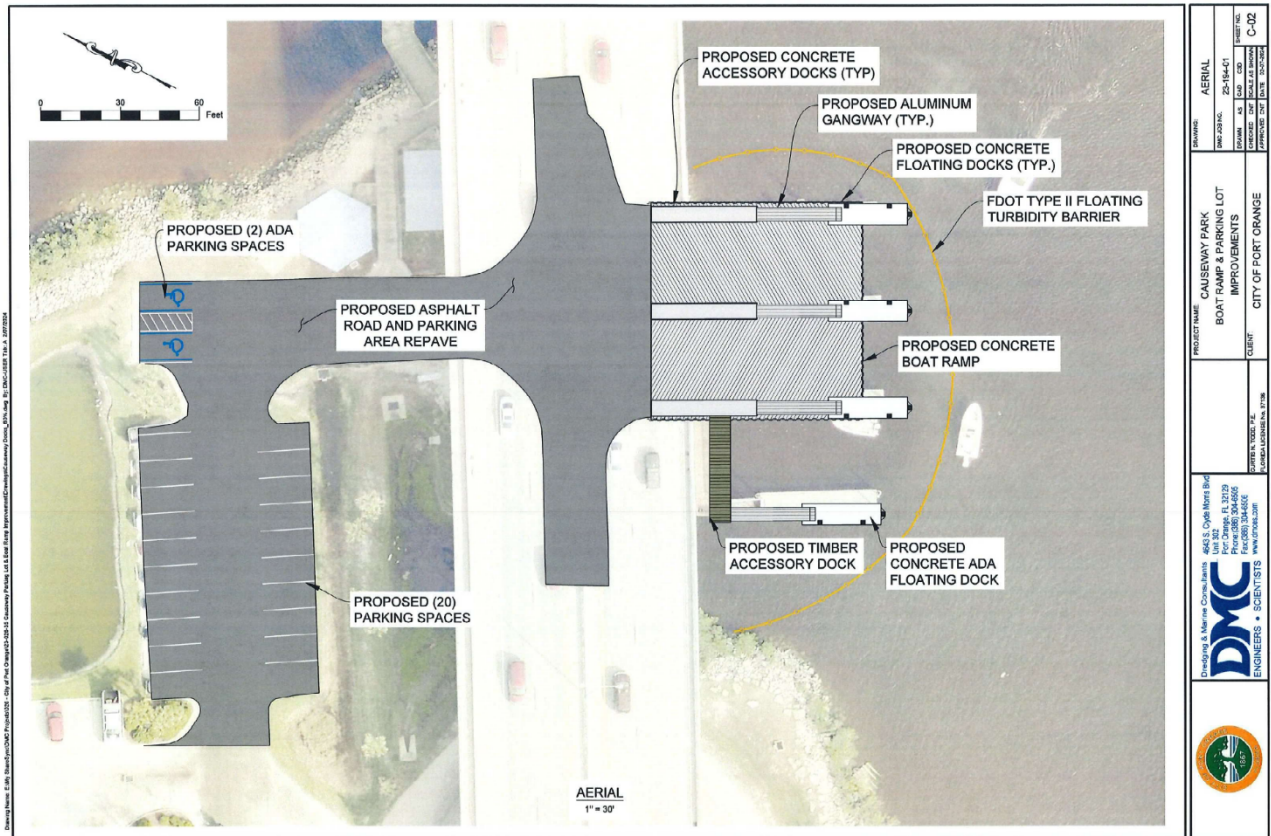
RECOMMENDED MOTION: Move to approve Resolution No. 24-08 and authorize the City Manager to sign the application and all other associated documents.

SUMMARY: Each year, the Florida Inland Navigation District (FIND) issues a call to local governments to submit public waterway improvement projects, such as public navigation, public waterway access facilities, waterfront parks, environmental education, and boating safety projects, to be eligible for funding.

The city has prepared a grant application with FIND, aimed at enhancing the infrastructure of the South Causeway Boat Ramp Park. The proposed improvements include various components intended to improve the functionality and safety of the facility.

At the forefront of these enhancements is the reconstruction of the south boat ramp, which includes the removal of sediment at the boat launch and adjustments to ramp slopes to ensure smoother access for boaters. Additionally, the existing fixed accessory wood docks will be replaced with a more versatile and resilient full floating system. Furthermore, the project encompasses upgrades to parking and drainage systems, which involve the reconstruction of the parking area to accommodate up to 22 vehicles, including two designated ADA-compliant parking spaces.

In adherence to the requirements set forth by the FIND grant, the city must contribute a 50% local match. The total estimated cost for the proposed improvements is projected to be \$1,500,000. Consequently, the city will be submitting a funding request of \$750,000 to FIND with the goal of fortifying and revitalizing the South Causeway Boat Ramp Park for the benefit of our community and visitors alike. This action does not obligate the City to fund this project, only for staff to apply to FIND. If this project is selected, construction is anticipated to begin in 2025.



PRESENTER: Junos Reed

ATTACHMENTS:

1.	Resolution No. 24-08	Resolution No. 24-08.pdf
2.	Port Orange - FIND Application Final Version	Port Orange - FIND Application Final Version.pdf

John McKinney
 Junos Reed
 John McKinney
 Matthew Jones
 Wayne Clark
 Tracee Cody

Created/Initiated - 3/13/2024
 Approved - 3/14/2024
 Approved - 3/14/2024
 Approved - 3/22/2024
 Approved - 3/25/2024
 Final Approval - 3/26/2024

PROJECT NAME CAUSEWAY PARK BOAT RAMP & PARKING LOT IMPROVEMENTS		SHEET NO. C-02
CLIENT CITY OF PORT ORANGE	PROJECT NO. 22-164-C1	DATE 3/26/2024
PREPARED BY DMC ENGINEERS & SCIENTISTS		
CHECKED BY WWW.DMC.COM		
APPROVED BY 365 E. CYRIL HARRIS BLVD PORT ORANGE, FL 32129 PHONE: (407) 328-1111 FAX: (407) 328-1112		

Resolution No. 24-08

ATTACHMENT E-7

RESOLUTION FOR ASSISTANCE 2024

UNDER THE FLORIDA INLAND NAVIGATION DISTRICT
WATERWAYS ASSISTANCE PROGRAM

WHEREAS, THE CITY OF PORT ORANGE is interested in carrying out the following described project for the enjoyment of the citizenry of City of Port Orange, Volusia County and the State of Florida:

Project Title: Port Orange Causeway Park South Boat Ramp Improvements

Total Estimated Cost \$ 1,500,000.00

Brief Description of Project:

The City of Port Orange is seeking funding in the amount of \$750,000 for construction improvements to the existing southeast fixed boat launch ramp at Causeway Park, generally located at 93 Dunlawton Avenue, Port Orange, Florida, with a floating concrete dock arrangement which will match the corresponding dock on the northwest side of the park. Additionally, the parking facility and drainage will be renovated for 22 vehicles including 2 ADA compliant parking spaces. The boat launch ramp and dock were damaged by Hurricane Ian on September 25, 2022 & Hurricane Nicole on November 10, 2022.

AND, Florida Inland Navigation District financial assistance is required for the program mentioned above,

NOW THEREFORE, be it resolved by the City of Port Orange
(Name of Agency)
that the project described above be authorized,

AND, be it further resolved that said City of Port Orange
(Name of Agency)
make application to the Florida Inland Navigation District in the amount of 50 % of the
actual cost of the project in behalf of said City of Port Orange
(Name of Agency)

AND, be it further resolved by the City of Port Orange
(Name of Agency)
that it certifies to the following:

(1)

1. That it will accept the terms and conditions set forth in FIND Rule 66B-2 F.A.C. and which will be a part of the Project Agreement for any assistance awarded under the attached proposal.

2. That it is in complete accord with the attached proposal and that it will carry out the Program in the manner described in the proposal and any plans and specifications attached thereto unless prior approval for any change has been received from the District.

3. That it has the ability and intention to finance its share of the cost of the project and that the project will be operated and maintained at the expense of said_____

The City of Port Orange for public use.
(Name of Agency)

4. That it will not discriminate against any person on the basis of race, color or national origin in the use of any property or facility acquired or developed pursuant to this proposal, and shall comply with the terms and intent of the Title VI of the Civil Rights Act of 1964, P. L. 88-352 (1964) and design and construct all facilities to comply fully with statutes relating to accessibility by persons with disabilities as well as other federal, state and local laws, rules and requirements.

5. That it will maintain adequate financial records on the proposed project to substantiate claims for reimbursement.

6. That it will make available to FIND if requested, a post-audit of expenses incurred on the project prior to, or in conjunction with, request for the final 10% of the funding agreed to by FIND.

This is to certify that the foregoing is a true and correct copy of a resolution duly and
legally adopted by the City of Port Orange City Council at a legal meeting held on this
(Agency Governing Board)
_____ day of _____ 20_____.

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Adopted on the _____ day of _____

Reviewed and Approved: _____
Shannon K. Balmer, Assistant City Attorney

WATERWAYS ASSISTANCE PROGRAM
APPLICATION PACKAGE
Part 2. Attachment E



**Florida
Inland
Navigation
District**

FY 2024-2025

WATERWAYS ASSISTANCE PROGRAM
APPLICATION PACKAGE
Part 2. Attachment E

The following attachment E-1 through E-8, in addition to the requirements of items 10 through 13 of the application checklist, constitute your formal application.

**SUBMIT THE APPLICATION INFORMATION IN
THE ORDER LISTED ON THE CHECKLIST.**

Applications must be received by the District by 4:30 p.m. on April 1, 2024.

SUBMIT THE ENTIRE APPLICATION TO:



Electronic submission
via email to:

CKelley@aicw.org

(pdf file size 15MB or
less and permits should
be sent in separate
emails to reduce file size)

Application must be received by the deadline, no exceptions.

Attachment E - Applicant Tips Sheet

(Mistakes Common to the application process and how to avoid them)

SCHEDULING

The new application is available by January each year, and District funding is available AFTER October 1st of each year. Applicants should plan their schedule to avoid commonly missed deadlines: Application due – 1st of April; Property control/Technical sufficiency items – 15th of May, Permits – 16th of September. (Staff suggestion: Begin to secure property control and permits PRIOR to applying for funding.)

PROPERTY CONTROL VERIFICATION

Please have your attorney complete and sign the form in the application verifying applicant property control. In the case of leases or management agreements, please forward a copy to the District well in advance of the deadline to verify consistency with our program rules. (Staff suggestion: Resolve this requirement outside the application "window".)

PROJECT COSTS ELIGIBILITY

Please note the eligible project costs in Rule Section 66B-2.008, F.A.C. If you are not sure about an item's eligibility, ask! Note: Any ineligible cost, including in-house project management and administration, is also not eligible for an applicant's match. Make sure you have delineated your required minimum cost-share on the project cost estimate. (Staff suggestion: If you have questions about the eligibility of an item, work up a mock cost-sheet and send it to our office well before the deadline.)

COST-SHARE

Although the applicant must provide a minimum of 50% of the total project costs (25% for eligible public navigation dredging), there is no specific requirement to split each item. (Staff suggestion: You may want to organize project elements in a certain manner for easier accounting.)

PRE-AGREEMENT EXPENSES

Rule 66B-2.005(3), F.A.C. requires any activity in the submitted project cost estimate occurring PRIOR to October 1st to be considered as pre-agreement expenses. The Board's past philosophy has been to fund only those projects that require District funding assistance to be completed. It is best to avoid pre-agreement expenses if possible. Note: Pre-agreement expenses must be limited to 50% or less of the total project costs, and they are eligible for only ½ of the original District funding. (Example: A project with a total cost of \$200,000 is Board-approved for one-half construction PRIOR to October 1st. In this case, District funding will be limited as follows: Only 50% of the \$100,000 project cost prior to October 1st is eligible as project expenses (i.e. \$50,000). Then only ½ of the eligible project expenses (\$50,000) are eligible for District funding assistance (i.e. \$25,000).

SUBMITTED MATERIALS & JUNE PRESENTATION

The Board must review and evaluate every application and each year we receive about 90 applications for consideration. The final product for the Board's review is two 8-1/2" x 11" spiral-bound notebooks containing the essential information for the application. NOTE: Make sure your final submitted material is the same material you will be presenting to the Board at our June meeting. This will avoid confusion and strengthen your presentation. (Staff suggestion: Limit the submitted materials to the requested information, in the required format and make sure it is consistent with your June presentation. Do not submit additional material at the June presentation!)

ELECTRONIC SUBMISSIONS

Grant applications are ONLY being accepted by email. Grant applications shall be submitted via email as a pdf attachment (15mb maximum size and permits attached separately). Make sure to label your pdf attachment with the applicant and project title. You will receive a confirmation email letting you know that your application has been received. Email your completed application to CKelley@aicw.org

Applications must be received by the District by 4:30 p.m. on April 1, 2024.

ATTACHMENT E-1

APPLICATION CHECKLIST

WATERWAY ASSISTANCE PROGRAM FY 2024

Project Title:	PORT ORANGE SOUTH BOAT RAMPS AND FLOATING DOCKS
Applicant:	CITY OF PORT ORANGE

This checklist and the other items listed below in items 1 through 13 constitute your application. The required information shall be submitted in the order listed.

An electronic copy shall be emailed (15mb maximum file size) to CKelley@aicw.org. Applications must be received by the deadline, no exceptions.

All information will be printed on 8 ½"x11" paper to be included in agenda books bound by staff.

	<u>YES</u>	<u>NO</u>
1. District Commissioner Review (prior to March 4th) (NOTE: <u>For District Commissioner initials ONLY!</u> (District Commissioner must initial the yes line on this checklist for the application to be deemed complete)	BD _____	_____
2. Application Checklist – E-1 (Form No. 90-26, 2 pages) (Form must be signed and dated)	☒	☐
3. Applicant Info/Project Summary – E-2 (Form No. 90-22, 1 page) (Form must be completed and signed)	☒	☐
4. Project Information – E-3 (Form No. 90-22a, 1 page)	☒	☐
5. Application and Evaluation Worksheet – E-4(+) (Form No.91-25) (One proper sub-attachment included, 7 pages) Must answer questions 1-10. No signatures required	☒	☐
6. Project Cost Estimate – E-5 (Form No. 90-25, 1 page) (Must be on District form)	☒	☐
7. Project Timeline – E-6 (Form No. 96-10, 1 page)	☒	☐
8. Official Resolution Form – E-7 (Form No. 90-21, 2 pages) (Resolution must be in District format and include items 1-6)	☒	☐

ATTACHMENT E-1 (Continued)

APPLICATION CHECKLIST

WATERWAY ASSISTANCE PROGRAM FY 2024

	<u>YES</u>	<u>NO</u>
9. Attorney's Certification (Land Ownership) – E-8 (Must be on or follow format of Form No. 94-26, Legal descriptions NOT accepted in lieu of form)	☒	☐
10. County/City Location Map	☒	☐
11. Project Boundary Map	☒	☐
12. Clear & Detailed Site Development Plan Map	☒	☐
13. Copies of all Required Permits: ACOE, DEP, WMD (Required of development projects only)	☒	☐

The undersigned, as applicant, acknowledges that Items 1 through 12 above constitutes a complete application and that this information is due in the District office no later than 4:30 PM, April 1, 2024. By May 15, 2024, my application must be deemed complete (except for permits) or it will be removed from any further consideration by the District. I also acknowledge that the information in Item 13 is due to the District no later than September 16, 2024. If the information in Item 13 is not submitted to the District office by September 16, 2024, I am aware that my application will be removed from any further funding consideration by the District.

LIAISON: Theresa Brooks TITLE: Grants Manager

Theresa Brooks

March 13, 2024

**** SIGNATURE - PROJECT LIAISON ****

DATE

FIND OFFICE USE ONLY

Date Received: _____

Local FIND Commissioner Review: _____

All Required Supporting Documents: _____

Applicant Eligibility: _____

Project Eligibility: _____ Available Score: _____

Compliance with Rule 66B-2 F.A.C.: _____

Eligibility of Project Cost: _____

ATTACHMENT E-2

APPLICANT INFORMATION & PROJECT SUMMARY

WATERWAY ASSISTANCE PROGRAM FY 2024

APPLICANT INFORMATION			
Applicant: City of Port Orange			
Department: City Manager's Office			
Project Title: Port Orange Causeway Park South Boat Ramp Improvements			
Project Director: Junos Reed		Title:	City Engineer
Project Liaison: (if different from Director)	Theresa E. Brooks	Title:	Grants Manager
Mailing Address:	1000 City Center Circle		
City: Port Orange	Zip Code:	32129	
Email Address: tbrooks@port-orange.org	Phone #:	386-717-9050	
Project Address:	93 Dunlawton Avenue, Port Orange, FL 32127		

*** I hereby certify that the information provided in this application is true and accurate. ***

SIGNATURE: Theresa Brooks DATE: March 13, 2024

PROJECT NARRATIVE (Please summarize the project in space provided below in 2 paragraphs or less.)

The City of Port Orange is seeking funding in the amount of \$750,000.00 for construction improvements to the existing southeast fixed boat launch ramp at Causeway Park, 93 Dunlawton Avenue, Port Orange, Florida, with a floating concrete dock arrangement which will match the corresponding dock on the northwest side of the park. Additionally, the parking facility and drainage will be renovated for 22 vehicles including 2 ADA compliant parking spaces. The boat launch ramp and dock were damaged by Hurricane Ian on September 25, 2022 & Hurricane Nicole on November 10, 2022.

Boat docking facilities at this park have been compromised since the hurricane, resulting in a significant reduction of use and adequate launching and docking facilities for patrons on this part of the ICW. Due to the close proximity to Ponce Inlet and Spruce Creek Lagoon, this area is one of the most popular areas on the Halifax River for recreational boating and fishing. The City considers improving this facility for recreational boating and fishing to be a high priority in accordance with the goals and objectives of the Parks and Recreation's Mission Statement.

ATTACHMENT E-3
PROJECT INFORMATION

WATERWAY ASSISTANCE PROGRAM FY 2024

Applicant:	Project Title: Port Orange Causeway Park South Boat Ramp Improvements	
Total Project Cost: \$1,500,000.00	FIND Funding Requested: \$750,000.00	% of Total Cost: 50
Amount of Applicant's Matching Funds:	\$750,000.00	
Source of Applicant's Matching Funds:	Matching funds from the City's General Fund budget have been identified for use on this project.	

1. **Ownership of Project Site (check one):** Own: ☒ Lease: ☐ Other: ☐

2. **If leased or other, please describe lease or terms and conditions:**

N/A

3. **Has the District previously provided assistance funding to this project or site?** Yes: ☐ No: ☒
If yes, please list:

4. **What is the current level of public access in terms of the number of boat ramps, boat slips and trailer parking spaces, linear feet of boardwalk (etc.)? (as applicable):**

Causeway Park currently has 2 boat ramps, 3 floating docks and an area for parking vehicles and vehicles with trailers.

5. **How many additional ramps, slips, parking spaces or other access features will be added by this project?**

This project is to replace the existing southwest fixed boat launch ramp at Causeway Park, 93 Dunlawton Avenue, Port Orange, Florida, with a floating concrete dock arrangement which will match the corresponding dock on the northwest side of the park. The boat launch ramp and dock were damaged by Hurricane Ian on September 25, 2022 & Hurricane Nicole on November 10, 2022. The replacement dock will be of a floating concrete design which will withstand storm surge and extreme high tides better than the fixed design. Additionally, this project is to remove the existing asphalt pavement and add a repaved asphalt road and 22 vehicle parking spaces, which includes 2 ADA. No additional ramps, slips, parking spaces or access features will be added with this project.

6. **Are fees charged for the use of this project?** No ☒ Yes ☐ **

****If yes, please attach additional documentation of fees and how they compare with fees from similar public & private facilities in the area.**

Please list all Environmental Resource Permits required for this project:

AGENCY	Yes / No / N/A	Date Applied For	Date Received
WMD	NO		
DEP	YES		
ACOE	YES		

ATTACHMENT E-4
EVALUATION WORKSHEET

WATERWAY ASSISTANCE PROGRAM FY 2024

DIRECTIONS:

All applicants will complete questions 1 through 6, and then based on the type of project, complete one and only one subsection (E-4A, B, C, D or E) for questions 7-10.

*****Please keep your answers brief and do not change the pagination of Attachment E-4*****

All other sub-attachments that are not applicable to an applicant's project should not be included in the submitted application.

Project Title:	Port Orange Causeway Park South Boat Ramp Improvements
Applicant:	City of Port Orange

1) PRIORITY LIST:

- a) Denote the priority list category of this project from Attachment C in the application.**
(The application may only be of **one** type based upon the predominant cost of the project elements.)

This project falls under Priority 7 – Acquisition, dredging, shoreline stabilization and development of public boat docking and mooring facilities.

- b) Explain how the project fits this priority category.**

The Causeway Park South boat ramp and docks provide a convenient and centrally located facility for fishing and boating on a very popular area of the Intercoastal Waterway Causeway Park South provides 2 boat ramps, 3 docks, restrooms, picnic pavilions, piers for fishing. Proximity to Ponce Inlet and Spruce Creek Lagoon offers boaters a variety of fishing options.

(For reviewer only)

Max. Available Score for application _____

Question 1. Range of Score (1 to ____ points)

2) WATERWAY RELATIONSHIP:

- a) Explain how the project relates to the ICW and the mission of the Navigation District.

The Causeway Park South docks and associated launch ramps offer free public deep-water access within two hundred yards of the Halifax River (ICW) offering a rich variety of game fish including trout, flounder, sheepshead, tarpon, snook, black drum, mangrove snapper and red drum.

- b) What public access or navigational benefit to the ICW or adjoining waterway will result from this project?

Causeway Park South has been widely used for fishing and boating since opening in the early 1990's. Along with Causeway Park North, it is one of two City of Port Orange parks offering direct access to the ICW. Since the damage resulting from Hurricane Ian and Hurricane Nicole, fishing access has been greatly limited. Improving the Causeway Park South boat ramp and docks will increase the recreational fishing location on the ICW.

(For reviewer only)
(1-6 points)

3) PUBLIC USAGE & BENEFITS:

- a) Describe how the project increases/improves boater/public access.
Estimate the amount of total public use.

The usage of this open access park is typically measured by site observations by City of Port Orange Parks and Recreation staff while maintaining the facility. It is conservatively estimated that the Causeway Park South boat ramp and docks are used by approximately 5,500 boats on an annual basis.

- b) Discuss the regional and local public benefits provided by the project.
Can residents from other counties of the District reasonably access and use the project? Explain.

The Causeway Park South boat ramp and dock facilities are very popular with residents of southeast Volusia County as well as other areas due to the park's central location and convenient access from I95 and I4. No fees are charged to use the parks and residents from the surrounding counties of Brevard and Flagler frequently use the park due to its reputation as a productive fishing spot.

c) Has the local Sponsor implemented or plans to implement any boating access, speed zone, commercial access or other restrictive use of this site?

Larger commercial vehicles which exceed the vehicle and trailer parking space limitations will not be allowed in the park. Additionally, there are no specific restrictions placed on usage of the facility for commercial access. All users are expected to adhere to all city, county, state and federal laws pertaining to the conduct of their business.

4) TIMELINESS:

- a) **Describe current status of the project and present a reasonable and effective timeline for the completion of the project consistent with Attachment E-6.**

DMC Dredging & Marine Consultants have been selected for this project. Preliminary draft design and engineering construction drawings are complete and permitting of the proposed project will be completed before construction begins.

- b) **Briefly explain any unique aspects of this project that could influence the timeline.**

Currently there are no aspects of the project which are expected to influence the proposed timeline.

(For reviewer only)
(1-3 points)

5) COSTS & EFFICIENCY:

- a) **List funding sources and the status and amount of the corresponding funding that will be utilized to complete this project including any cash match or matching grant funds.**

Matching funds from the City's General Fund budget have been identified for use on this project.

- b) **Identify and describe any project costs that may be increased because of the materials utilized or specific site conditions.**

As this is primarily a repair and renovation project, it is not anticipated that site conditions will affect anticipated project costs in any substantial way.

- c) **Are there any fees associated with the use of this facility? If so, please list or attach fee sheet.**

There will not be a fee schedule for use of this facility. There are eight boat launch facilities along the ICW north of Ponce Inlet. No additional fee is charged to use the boat launch.

- d) **If there are any fees, please explain where these fees go and what they are used for. In addition, please provide a listing of the fees charged by similar facilities, public and private, in the project area.**

N/A

(For reviewer only)
(1-6 points)

6) PROJECT VIABILITY:

a) Why is the project necessary and what need will it fill? Why are existing facilities insufficient to meet demand?

According to Volusia County's Comprehensive Plan, Chapter 11 Coastal Management Element, Objective 11.7 states that public services and facilities shall be adequate and available to serve both current and future residents. Additionally, policy 11.7.1 states the land development regulations shall ensure that the provision of roads, potable water, sanitary sewer, drainage, recreation, mass transit, and solid waste facilities and services required to maintain the adopted Level of Service standards shall be consistent and phased with the level of development proposed in the Future Land Use Element. The ICW is centrally located along the Halifax River in Volusia County. It is widely recognized as a strategic asset for the City of Port Orange and important to the citizens of most of east Volusia County for recreational purposes. In addition, its proximity to Ponce Inlet and Spruce Creek lagoon makes it a popular spot for boating and site fishing. The current facilities were disrupted due to Hurricane Ian and Hurricane Nicole and need improvements to restore the high levels of use to this park.

b) Clearly demonstrate how the project will continue to be maintained and funded after funding is completed.

The City of Port Orange is committed to improving and keeping the site open for recreational usage on a permanent basis. Funds are designated in the City's Parks and Recreation Capital Improvement Plan Budget to repair this facility and maintenance funds are allocated annually. Port Orange's Mission Statement and Comprehensive Plan support quality recreational opportunities for its citizens.

c) Is this project referenced or incorporated in an existing maritime management, public access or comp plan?

This project is being implemented in accordance with the Volusia County Comprehensive plan, Chapter 11 Coastal Management Element, Objective 11.7 and policy 11.7.1 as mentioned in section 6) Project Viability: part a).

(For reviewer only)
(1-7 points)

SUB-TOTAL _____

ATTACHMENT E-4A
EVALUATION WORKSHEET
DEVELOPMENT & CONSTRUCTION PROJECTS

WATERWAY ASSISTANCE PROGRAM FY 2024

THIS ATTACHMENT IS TO BE COMPLETED IF YOUR PROJECT IS A DEVELOPMENT OR CONSTRUCTION PROJECT BUT **IS NOT** AN INLET MANAGEMENT OR BEACH RENOURISHMENT PROJECT.

7) PERMITTING:

- a) Have all required environmental permits been applied for? (USACE, DEP and WMD)
If permits are NOT required, explain why not.**

The project design and engineering drawings have been submitted. Permitting work will be done on completion of design and engineering specifications. Port Orange anticipates no issues in securing all permit approval prior to the FIND deadline.

- b) If the project is a Phase I project, please provide a general cost estimate for the future Phase II work.**

This is a single-phase renovation project. DMC Dredging and Marine Consulting will perform the initial design, engineering, surveying, permitting, bid specification development and project management. The total budget for this project is estimated to be \$1,500,000.00.

- c) Detail any significant impediments that may have been identified that would potentially delay the timely issuance of the required permits.**

No known impediments to the issuance of required permits have been identified at this time.

(For reviewer only)
(1-4 points)

8) PROJECT DESIGN:

- a) **Has the design work been completed?**
If this is a Phase I project, has a preliminary design been developed?

The design work/construction drawings are complete, and a draft has been submitted.

- b) **Are there unique beneficial aspects to the proposed design that enhance public usage or access, minimize environmental impacts, improve water quality or reduce costs?**

There are no unique aspects to this project other than to restore much needed access to an important community recreational asset.

(For reviewer only)
(1-2 points)

9) CONSTRUCTION TECHNIQUES:

- a) **Briefly explain the construction techniques and materials to be utilized for this project. Identify any unique construction materials that may significantly alter the project costs. If a Phase 1, elaborate on potential techniques.**

A concrete floating dock system with concrete accessory docks and aluminum gangways appropriate for the harsh brackish water of the Halifax River will replace the current moored wooden dock.

- b) **What is the design life of the proposed materials compared to other available materials?**

The actual floating concrete dock provides minimal impact to the water and has a life expectancy of greater than 30 years.

(For reviewer only)
(1-3 points)

10) ENVIRONMENTAL COMPONENTS:**a) How has the facility where the project is located demonstrated commitment to environmental compliance, sustainability, and stewardship?**

The city of Port Orange is committed to protecting the environment and the proposed improvements to the site will benefit the surrounding natural resources through sustainability. The lifespan of the materials will sustain resiliency from damage caused by sea level rise and changes in the climate, as well as increased use.

b) What considerations, if any, have been made for sea level rise impacts in the design and life span of this project?

Like most of the city, this project site experiences significant impacts from sea-level rise. The improvement of the existing launch ramps and floating docks with better construction and resilient materials will extend the City of Port Orange's efforts to address the impacts of sea-level rise. These materials will be able to endure the conditions that come with rising seas, tidal flooding, and more frequent and severe storms resulting in compound flooding.

(For reviewer only)
(1-3 points)

RATING POINT TOTAL _____**Note:**

The total maximum score possible is dependent upon the project priority category but cannot exceed 50 points unless the project qualifies as an emergency-related project. The minimum score possible is 10 points. A score of 35 points or more is required to be considered for funding.

ATTACHMENT E-4F
EVALUATION WORKSHEET
EMERGENCY RE-CONSTRUCTION

WATERWAY ASSISTANCE PROGRAM FY 2024

THIS ATTACHMENT IS TO BE COMPLETED ONLY IF YOUR PROJECT IS A WATERWAY PROJECT THAT WAS DAMAGED BY A NATURAL DISASTER AS DECLARED BY A STATE OF EMERGENCY UNDER CHAPTER 252, FLORIDA STATUTES.

11. (EXTRA) STORM DAMAGE EVALUATION:

- a) List the State of Emergency declaration order or proclamation & the name and date of the storm/event.

Hurricane Ian
Hurricane Nicole

- b) Has this site/project previously received funding from FIND?

- c) Detail the other funding mechanisms and financial assistance that will be applied to defray the reconstruction costs or damage repair.

- d) What is the current status of your FEMA paperwork for the project?

(For reviewer only)
(0-3 points)

ATTACHMENT E-5
PROJECT COST ESTIMATE

WATERWAY ASSISTANCE PROGRAM FY 2024

(See Rule Section 66B-2.005 & 2.008 for eligibility and funding ratios)

Project Title:	Port Orange Causeway Park South Boat Ramp Improvements
Applicant:	City of Port Orange

Project Elements <i>(Please list the MAJOR project elements and provide general costs for each one. For Phase I Projects, please list the major elements and products expected)</i>	Total Estimated Cost	Applicant's Cost (To the nearest \$50)	FIND Cost (To the nearest \$50)
Mobilization/Demobilization	\$232,000.00	\$116,000.00	\$116,000.00
Construction and As-built Survey	\$ 20,000.00	\$ 10,000.00	\$ 10,000.00
Environmental Compliance	\$ 15,000.00	\$ 7,500.00	\$ 7,500.00
Demolition, Hauling and Disposal	\$ 80,000.00	\$ 40,000.00	\$ 40,000.00
Aluminum Gangways	\$100,000.00	\$ 50,000.00	\$ 50,000.00
Concrete Floating Dock	\$364,000.00	\$182,000.00	\$182,000.00
Fixed Concrete Dock	\$150,000.00	\$ 75,000.00	\$ 75,000.00
Sheet Pile	\$108,000.00	\$ 54,000.00	\$ 54,000.00
Concrete Boat Ramp	\$262,000.00	\$131,000.00	\$131,000.00
Asphalt Pavement & Striping	\$ 55,000.00	\$ 27,500.00	\$ 27,500.00
Limerock Base	\$ 98,000.00	\$ 49,000.00	\$ 49,000.00
Stabilization	\$ 16,000.00	\$ 8,000.00	\$ 8,000.00

**TOTALS =	\$1,500,000.00	\$ 750,000.00	\$ 750,000.00
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ATTACHMENT E-6

PROJECT TIMELINE

WATERWAY ASSISTANCE PROGRAM FY 2024

Project Title	Port Orange Causeway Park South Boat Ramp Improvements
Applicant:	City of Port Orange

The applicant is to present a detailed timeline on the accomplishment of the components of the proposed project including, as applicable, completion dates for: permitting, design, bidding, applicant approvals, initiation of construction and completion of construction.

NOTE: All funded activities must begin AFTER October 1st
(or be consistent with Rule 66B-2.005(3) - Pre-agreement expenses)

Date	Component
10/1/2024	Design Complete
10/15/2024	Applicant Approval
11/1/2024	Permitting Complete
11/1/2024	Bidding
1/15/2025	Start Construction
1/15/2026	Complete Construction

ATTACHMENT E-7

RESOLUTION FOR ASSISTANCE 2024

UNDER THE FLORIDA INLAND NAVIGATION DISTRICT WATERWAYS ASSISTANCE PROGRAM

WHEREAS, THE City of Port Orange is interested in carrying out the
(Name of Agency)
following described project for the enjoyment of the citizenry of Port Orange
and the State of Florida:

Project Title: Port Orange Causeway Park South Boat Ramp Improvements

Total Estimated Cost \$ 1,500,000.00

Brief Description of Project:

The City of Port Orange is seeking funding in the amount of \$750,000 for construction improvements to the existing southeast fixed boat launch ramp at Causeway Park, 93 Dunlawton Avenue, Port Orange, Florida, with a floating concrete dock arrangement which will match the corresponding dock on the northwest side of the park. Additionally, the parking facility and drainage will be renovated for 22 vehicles including 2 ADA compliant parking spaces. The boat launch ramp and dock were damaged by Hurricane Ian on September 25, 2022 & Hurricane Nicole on November 10, 2022.

AND, Florida Inland Navigation District financial assistance is required for the program mentioned above,

NOW THEREFORE, be it resolved by the City of Port Orange
(Name of Agency)
that the project described above be authorized,

AND, be it further resolved that said City of Port Orange
(Name of Agency)
make application to the Florida Inland Navigation District in the amount of 50% of the
actual cost of the project in behalf of said City of Port Orange
(Name of Agency)

AND, be it further resolved by the City of Port Orange
(Name of Agency)
that it certifies to the following:

1. That it will accept the terms and conditions set forth in FIND Rule 66B-2 F.A.C. and which will be a part of the Project Agreement for any assistance awarded under the attached proposal.

2. That it is in complete accord with the attached proposal and that it will carry out the Program in the manner described in the proposal and any plans and specifications attached thereto unless prior approval for any change has been received from the District.

3. That it has the ability and intention to finance its share of the cost of the project and that the project will be operated and maintained at the expense of said _____

The City of Port Orange _____ for public use.
(Name of Agency)

4. That it will not discriminate against any person on the basis of race, color or national origin in the use of any property or facility acquired or developed pursuant to this proposal, and shall comply with the terms and intent of the Title VI of the Civil Rights Act of 1964, P. L. 88-352 (1964) and design and construct all facilities to comply fully with statutes relating to accessibility by persons with disabilities as well as other federal, state and local laws, rules and requirements.

5. That it will maintain adequate financial records on the proposed project to substantiate claims for reimbursement.

6. That it will make available to FIND if requested, a post-audit of expenses incurred on the project prior to, or in conjunction with, request for the final 10% of the funding agreed to by FIND.

This is to certify that the foregoing is a true and correct copy of a resolution duly and legally adopted by the City of Port Orange City Commission at a legal meeting
(Agency Governing Board)

held on this _____ day of _____, 20____.

Attest

Signature

Title

Title

ATTACHMENT E-8

ATTORNEYS CERTIFICATION OF TITLE 2024

(See Rule 66B-2.006(4) & 2.008(2) FAC)

OFFICE OF THE (City or County) ATTORNEY
(ADDRESS)

(Date), 2024

To WHOM IT MAY CONCERN:

I, (Name), an the Attorney for the (City or County), Florida, I hereby state that I have examined a copy of a (deed, lease, management agreement, etc.) from _____ to the (City or County) conveying _____ (Type of interest, i.e.. Fee simple, easement, 30-year lease, etc.) in the following described property:

(Brief Legal Description of Property)

I have also examined a document showing that this property is listed on the tax rolls as belonging to the (City or County). Finally, I have also examined such documents and records as necessary for this certification.

This property is what is now called "(Name of Property as Referenced in the WAP Application)".

I Certify that the (City or County) does in fact (Own, Lease, etc.) this property for _____ years.

Sincerely,

(Name)

Attorney, (City or County)



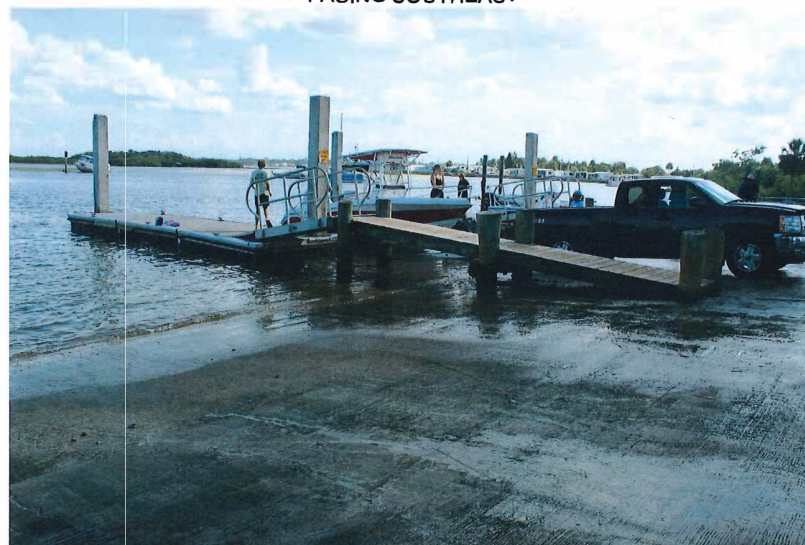
EXISTING BOAT RAMP FACING EAST DMC 07/21/2023



EXISTING BOAT RAMP FACING SOUTH DMC 07/21/2023



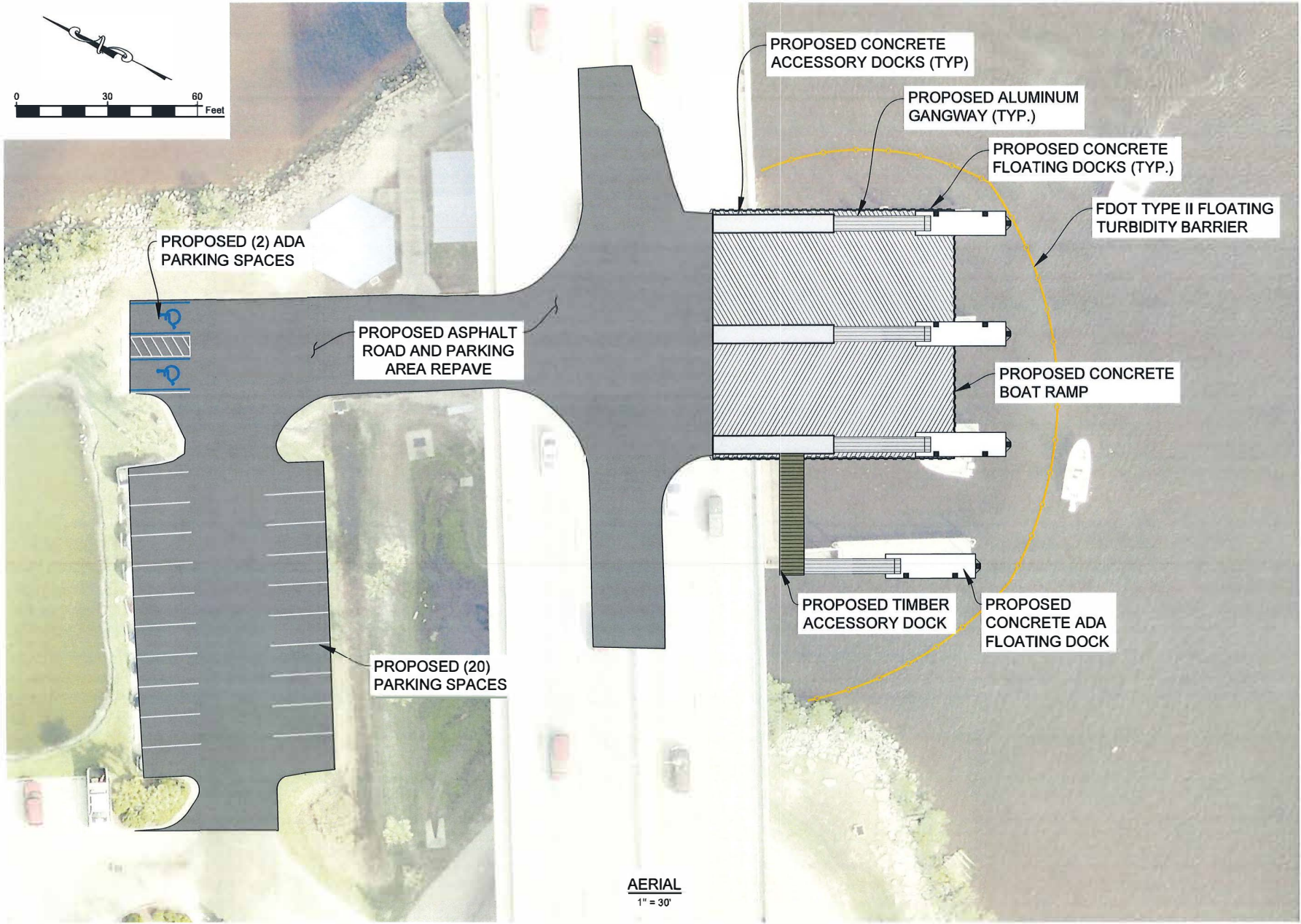
EXISTING ACCESSORY TIMBER DOCK DMC 07/21/2023
FACING SOUTHEAST



EXISTING DOCKS FACING SOUTH DMC 07/21/2023

	Dredging & Marine Consultants DMC ENGINEERS • SCIENTISTS	4644 S. Clyde Morris Blvd Unit 302 Port Orange, FL 32129 Phone (386) 304-6505 Fax (386) 304-6506 www.dmcfla.com	PROJECT NAME: CAUSEWAY PARK BOAT RAMP & PARKING LOT IMPROVEMENTS	DRAWING:									
				DMC JOB NO.: 23-194-01 <table><tr><td>DESIGNER</td><td>AS</td><td>CAD</td><td>CSD</td></tr><tr><td>CHECKED</td><td>ONT</td><td>SCALE</td><td>AS SHOWN</td></tr><tr><td>APPROVED</td><td>ONT</td><td>DATE</td><td>04-27-2004</td></tr></table> SHEET NO.		DESIGNER	AS	CAD	CSD	CHECKED	ONT	SCALE	AS SHOWN
DESIGNER	AS	CAD	CSD										
CHECKED	ONT	SCALE	AS SHOWN										
APPROVED	ONT	DATE	04-27-2004										
			CLIENT: CITY OF PORT ORANGE	DATE: 04-27-2004 SCALE: 1" = 20'-0"									

Drawing Name: E:\Mar Shanty\DMC Projects\026 - City of Port Orange\02-200-25 Causeway Parking Lot & Boat Ramp Improvement\Drawings\Causeway Dock_80%_A.dwg By: DMC-JLB/ET Rev: A 2/27/2024



DMC
ENGINEERS • SCIENTISTS

Dredging & Marine Consultants
4643 S. Clyde Morris Blvd
Unit 302
Port Orange, FL 32129
Phone: (386) 304-6505
Fax: (386) 304-6506
www.dmcscs.com

CURTIS N. TODD, P.E.
FLORIDA LICENSE NO. 37136

PROJECT NAME
**CAUSEWAY PARK
BOAT RAMP & PARKING LOT
IMPROVEMENTS**

CUSTOMER
CITY OF PORT ORANGE

DRAWING
AERIAL

DMC JOB NO.
23-194-01

DRAWN AS
CAD

CHECKED BY
CAD

APPROVED BY
CAD

SHEET NO.
C-02

DATE
04/27/2024



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (F15) FY2023 Audit Discussion with James Moore & Company

DEPARTMENT: Finance

GOAL: 5 - Fiscal Sustainability

RECOMMENDED MOTION: Presentation only - no motion needed.

SUMMARY: The City's audit firm, James Moore & Company, will discuss the status of the City's Annual Comprehensive Financial Report and Audit for the fiscal year ended September 30, 2023.

PRESENTER: John McKinney

ATTACHMENTS:

1.	Audit Presentation	Audit Presentation.pptx
----	--------------------	-------------------------

John McKinney

Created/Initiated - 3/12/2024

John McKinney

Approved - 3/12/2024

Wayne Clark

Approved - 3/27/2024

Tracee Cody

Final Approval - 3/27/2024

City of Port Orange, Florida

**Annual Audit for the Year Ended
September 30, 2023**

**Presented by:
Zach Chalifour, CPA**



888-387-6851

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Certificate of Achievement



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

**City of Port Orange
Florida**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

September 30, 2022

Christopher P. Morill

Executive Director/CEO



Auditors' Reports

- **Independent Auditors' Report** (pages 7-9)
 - Unmodified Opinion
- **Report on Internal Control and Compliance** (pages 133-134)
 - No material weaknesses
- **Management Letter Required by Chapter 10.550, Rules of the AG** (pages 135-137)
 - 1 other recommendation (new in current year)
 - 2 of 2 prior year items corrected
- **Independent Accountants' Examination Report** (page 138)
 - City in compliance with state statutes over investment activity/policies

Audit Comment History

	2023	2022	2021	2020	2019	2018
Material Weaknesses	-0-	-0-	1	3	-0-	-0-
Significant Deficiencies	-0-	-0-	-0-	-0-	-0-	1
Other Comments & Recommendations	1	2	2	2	1	1
Total	1	2	3	5	1	2

History of General Fund Balance:

<u>Fund Balance</u>	<u>9/30/2023</u>	<u>9/30/2022</u>	<u>9/30/2021</u>	<u>9/30/2020</u>
Nonspendable	\$ 2,543,639	\$ 2,126,302	\$ 1,584,595	\$ 2,072,419
Restricted	837,727	806,461	842,035	829,552
Committed	8,813,118	9,306,445	-0-	-0-
Assigned	550,312	607,807	1,608,000	2,052,080
Unassigned	23,656,630	21,972,561	20,611,838	14,953,868
Total	\$ 36,401,426	\$ 34,819,576	\$ 24,705,626	\$ 19,930,632

General Fund (continued)

Total Assigned/Unassigned Fund Balance	\$ 24,206,942
2023 Expenditures and Transfers Out	\$ 59,378,002
Percentage Unassigned Fund Balance as a percentage of Expenditures	40.8%
Prior Year % (2022 / 2021)	46.8% / 59.5%
GFOA Minimum Recommendation (2 Months)	16.7%
Internal Minimum Policy	30-35% of expenditures

Unrestricted Net Position in Proprietary Funds:

Fund	9/30/2023	9/30/2022*	9/30/2021	9/30/2020
Water/Sewer	\$ 25,122,656	\$ 27,101,010	\$ 26,679,814	\$ 24,291,554
Solid Waste	4,077,622	2,583,623	1,879,249	2,333,201
Stormwater	5,103,887	4,608,023	2,687,189	4,493,007
Golf Course*	531,992	389,728	(1,610,142)	(1,692,465)
Internal Service	14,884,309	11,759,244	11,844,257	10,695,981

*Golf course FY22 increase \$121,591, plus \$1.878 million internal transfer

Pension Funds

- Net Pension Liability – recorded in financial statements
 - Governmental Activities: \$34.9 million net pension liability
 - Proprietary Funds: \$3.2 million allocation of General Employees Plan liability
- Net pension (unfunded) liability history – amounts and % funded:

Year	General	Police	Fire
2023	\$ 7,891,943	\$ 9,759,200	\$ 20,372,758
2022	8,395,452	13,225,648	21,771,536
2021	(243,811)	3,227,161	12,054,099
2020	5,201,322	9,831,232	15,942,646
2019	5,044,473	13,870,320	17,473,043

Year	General	Police	Fire
2023	81.64%	85.32%	65.76%
2022	80.85%	79.09%	61.63%
2021	100.60%	94.58%	77.61%
2020	87.02%	82.38%	68.82%
2019	86.91%	74.72%	64.88%

A large, stylized question mark graphic composed of several overlapping semi-circular and rectangular shapes in various shades of blue and teal, positioned on the right side of the slide.

QUESTIONS



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (G16) Environmental Advisory Board Appointment

DEPARTMENT: City Clerk

GOAL: 3 - Quality of Life

RECOMMENDED MOTION: Move to appoint an applicant to serve on the Environmental Advisory Board.

SUMMARY: Mark Heldreth has submitted his application to serve on the Environmental Advisory Board to fill a vacant term. There is currently one vacancy due to Shawn Goepfert running for City Council. There have been no other applications received by the City Clerk's Office. The appointment is a 36-month term that will expire on May 7, 2027. Mr. Heldreth's application is attached for your consideration.

PRESENTER: Tracee Cody

ATTACHMENTS:

1.	Mark Heldreth Application _Redacted	Mark Heldreth Application _Redacted.pdf
----	-------------------------------------	---

Tracee Cody
Robin Fenwick
Wayne Clark

Created/Initiated - 3/18/2024
Approved - 3/18/2024
Final Approval - 3/21/2024

From: noreply@civicplus.com
To: [CityClerk](#)
Subject: [EXT] Online Form Submittal: Advisory Boards and Commissions Volunteer Application
Date: Sunday, February 11, 2024 1:07:01 PM

Advisory Boards and Commissions Volunteer Application

Step 1

Thank you for your interest in serving the City of Port Orange. Your completion of this application is necessary so that the members of the City Council can thoroughly review each application as part of their consideration for your appointment.

Please choose the Board(s) / Commission(s) for which you wish to apply. If applying for more than one Board / Commission, indicate the order of preference in the space below the list.

Check the boards you wish to apply for	Environmental Advisory Board
--	------------------------------

Order of Preference	Field not completed.
---------------------	----------------------

If you are submitting an application to serve as the Interim Council Member for District 2, a resume must be uploaded below.

All of the above boards / commissions are subject to the "Sunshine Law", Chapter 286, F.S.

* Members of these boards / commissions are required to file financial disclosures within 30 days of date of appointment.

Personal Information

First Name	Mark
------------	------

Last Name	Heldreth
-----------	----------

Primary Phone	3865624230
---------------	------------

Alternate Phone	Field not completed.
-----------------	----------------------

Email Address	mheldreth@cfl.rr.com
---------------	----------------------

Are you a registered	Yes
----------------------	-----

voter in Port Orange?

Address	1099 WEXFORD WAY
City	PORT ORANGE
State	FL
Zip Code	32129
Preferred Mailing Address	1099 WEXFORD WAY
City Council District	2
Can you regularly attend meetings?	Yes
Are you currently serving on a Federal, State, County, or City Board?	No
If yes, which board(s)?	<i>Field not completed.</i>

References

Please list three references (business and / or personal)

Reference 1	Tracy Grubbs [REDACTED] Port Orange
Reference 2	Eric Gregory (904) 333-2088 Port Orange
Reference 3	Larry Kelly (386) 547-4464 Port Orange

Education

High School	Mainland Sr High
Date Graduated High School	5/1/1992
College	Daytona State
Date Graduated College	<i>Field not completed.</i>
Degree	No degree

Additional Information

Work Experience	I've been in construction for over 30 years dealing with dewatering for underground utilities.
Interests / Activities	Family, golf, kayaking, hiking, hunting and much more
Community Involvement	Just getting back into coaching little league baseball/softball
Why do you desire to serve on these boards?	I was asked to apply. My work experiences could be a help to this advisory board
Additional Information	<i>Field not completed.</i>
Resume	Screenshot_20240211-130424~2.png

I understand the responsibilities associated with being a board member, and I have adequate time to serve if appointed.

By submitting this application, applicant attests that he/she has reviewed the Code of Ethics for Public Officers and Employees (Part III of Chapter 112, Florida Statutes), and that applicant does not hold any public position, employment or other relationship (i.e. dual office holding prohibition, conflicting employment or contractual relationship, etc.) that would prohibit or otherwise disqualify applicant from serving on the City board/commission for which the applicant now seeks to serve.

Note: If you are unsure whether a Code of Ethics issue exists or require assistance determining if a Code of Ethics issue is present, feel free to reach out to the City Attorney's Office prior to submitting your application at (386) 506-5525.

All statements and information provided in this application are true to the best of my knowledge. Please note that Florida has a broad public records law. Your entire application and the information & responses contained therein, including your name, address, email, and phone number, will become a public record upon submission of the application to the City. In limited circumstances, certain public servants who are afforded protections pursuant to Ch. 119, F.S. may elect to have certain information exempted from public disclosure, upon written request. *

Acceptance	I agree
Type your name to sign	Mark Heldreth
Date	2/11/2024

Note: If you have questions concerning the duties and responsibilities of any of the above Boards / Commissions, please contact the City Clerk's Office at cityclerk@port-orange.org or 386-506-5563.

Email not displaying correctly? [View it in your browser.](#)



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (H17) Selection of Alternate Member to serve on the River To Sea Transportation Planning Organization (TPO) Board (Tabled on March 19, 2024)

DEPARTMENT: City Clerk

GOAL:

RECOMMENDED MOTION:

SUMMARY:

PRESENTER: Robin Fenwick

ATTACHMENTS:

Tracee Cody
Robin Fenwick

Created/Initiated - 3/21/2024
Final Approval - 3/21/2024



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (I18) First Reading - Ordinance No. 2024-04 - Adoption of the City of Port Orange Comprehensive Plan 2022-2045

DEPARTMENT: Community Development

GOAL: 3 - Quality of Life 6 - Organizational Excellence

RECOMMENDED MOTION: Move to approve Ordinance No. 2024-04.

SUMMARY: Planning Commission Action (3/18/24): Recommended Approval (6-0)

For the past two years, staff has been working with Kimley Horn and Associates, Inc. to update the City's Comprehensive Plan for the 2045 Planning Horizon. Approximately every ten years, cities and counties undertake a Comprehensive Plan update that forecasts future land use and growth patterns. The City of Port Orange's Comprehensive Plan was last updated in 2010. Florida's growth management legislation requires local governments to maintain a comprehensive plan that provides the policy foundation for local planning and land use decisions. The proposed amendment would replace the current City of Port Orange Comprehensive Plan 2010-2025 with the updated City of Port Orange Comprehensive Plan 2022-2045.

The primary purpose of the Comprehensive Plan is to provide a guide for growth and development while also preserving environmental features and community character of the area through the City's goals, objectives, and policy guidelines that describe how land-use decisions should be made on a day-to-day basis, along with a future land use map to show what type of land use is desirable within the City's current boundary. The Comprehensive Plan serves as a blueprint for future commercial and residential land uses, housing, and conservation, as well as cultural and recreational amenities. An important component of the comprehensive plan is to identify the new infrastructure and growth demands needed to support the future physical and economic development of the community.

As part of the Comprehensive Plan Update, staff assessed the successes, deficiencies, and modifications of the various goals, objectives, policies, and programs in the Plan and provided an opportunity to identify community issues and evaluate how effective the Comprehensive Plan has been in addressing those issues.

The assessment of the Comprehensive Plan revealed that overall, the 2010 Plan was effective. Therefore, significant changes to the Plan are not recommended. Most of the

updates to the Plan consisted of:

- Consolidating and reorganizing each element by moving specific policies to more appropriate elements within the Plan, removing regulatory details in the Plan that are also in the Land Development Code (LDC) and more appropriate for the LDC, and combining or removing repetitive objectives and policies.
- Formatting changes to make the Plan more user-friendly for residents, staff, and developers.
- Removing outdated objectives and policies.
- Updating all data and analysis required to support each element, such as population projections, vacant land analysis, housing inventory, infrastructure capacity, and level of service analysis.
- Updating all maps to reflect current conditions and for the 2045 planning horizon.

The primary changes for each Element/Chapter to the Comprehensive Plan are listed in the attached staff report and were based on input from various public meetings and workshops held over the last 18 months with residents and staff's initial presentation on the Comprehensive Plan Update to the City Council in November 2022. Link to the November 15, 2022, City Council Workshop on the Comprehensive Plan Update (starts at 42:00 through 1:09):

<https://www.youtube.com/watch?v=bVkM4OntxMQ&list=PLSWPI2RWqtzH85C7zzlBjqLmq3jSpfe9T&index=38>

[Link to the Proposed Amendments for the City of Port Orange Comprehensive Plan 2022- 2045:](#)

<https://www.port-orange.org/1018/2022-2045-Comprehensive-Plan-Update>

The Staff Report is attached for more information.

PRESENTER: Penelope Cruz, Tim Burman

ATTACHMENTS:

1.	Ordinance No. 2024-04 with exhibits	Ordinance No. 2024-04 with exhibits.pdf
2.	STAFF REPORT	STAFF REPORT.pdf
3.	Business Impact Estimate Form - Ord. 2024-04	Business Impact Estimate Form - Ord. 2024-04.pdf

Penelope Cruz
Tim Burman
Shannon Balmer
Wayne Clark
Tracee Cody

Created/Initiated - 3/18/2024
Approved - 3/18/2024
Approved - 3/28/2024
Approved - 3/28/2024
Final Approval - 3/28/2024

ORDINANCE NO. 2024-04

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, AMENDING THE CITY OF PORT ORANGE COMPREHENSIVE PLAN IN ITS ENTIRETY PURSUANT TO CHAPTER 163, FLORIDA STATUTES; PROVIDING FOR ADOPTION OF THE CITY OF PORT ORANGE COMPREHENSIVE PLAN 2022-2045, INCLUDING AMENDMENTS TO THE FUTURE LAND USE ELEMENT, THE TRANSPORTATION ELEMENT, THE HOUSING ELEMENT; THE PUBLIC FACILITIES ELEMENT, THE PUBLIC SCHOOL FACILITIES ELEMENT, THE RECREATION AND OPEN SPACE ELEMENT, THE COASTAL ZONE MANAGEMENT ELEMENT, THE CONSERVATION ELEMENT, THE INTERGOVERNMENTAL COORDINATION ELEMENT, THE CAPITAL IMPROVEMENTS ELEMENT, AND THE PROPERTY RIGHTS ELEMENT; INCLUSIVE OF ALL ASSOCIATED TABLES, EXHIBITS AND MAPS; PROVIDING FOR THE REPEAL OF ORDINANCES INCONSISTENT WITH THIS ORDINANCE; PROVIDING FOR CONFLICTING PROVISIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR TRANSMITTAL TO REVIEWING AGENCIES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, pursuant to Chapter 163, Part II, Florida Statutes; Fla. Const. art. VIII, section 2(b); and Chapter 166, Part I, Municipal Home Rule Powers Act, empowers the City Council to adopt the proposed comprehensive plan and authorize their transmittal to the Florida State Land Planning Agency and reviewing agencies as required by state law; and

WHEREAS, on October 5, 2010, the City of Port Orange adopted a Comprehensive Plan in accordance with Chapter 163, Florida Statutes, and the State of Florida Local Government Comprehensive Planning and Land Development Regulation Act by adoption of Ordinance No. 2010-30; and

WHEREAS, the City of Port Orange has prepared a Comprehensive Plan titled "Port Orange Comprehensive Plan 2022-2045" in accordance with Florida Statutes - Chapter 163, and the Community Planning Act; and,

WHEREAS, after careful review, the Planning Commission, sitting as the Local Planning Agency, has forwarded a recommendation to the City Council regarding this amendment to the Comprehensive Plan for the City of Port Orange; and

WHEREAS, the City Council of the City of Port Orange has provided an opportunity to receive comments and proposals from the general public and held two public hearings with regard to the proposed amendment to the Comprehensive Plan to the proposed amendment to the Comprehensive Plan; and

WHEREAS, the City Council has received comments on the proposed amendment to the Comprehensive Plan; and

WHEREAS, the City Council reviewed the proposed Comprehensive Plan 2022-2045 amendments, Appendix1 – Map Series, and Support Data, Inventory and Analyses, held advertised public hearings, and provided for comments and public participation in the process in accordance with the requirements of state law and the procedures adopted for public participation in the planning process, and authorized transmittal of the amendment to establish the Port Orange Comprehensive Plan 2022-2045 to the Florida State Land Planning Agency and reviewing agencies for the purpose of review in accordance with Florida law. The referenced amendments are attached hereto as the

Port Orange Comprehensive Plan 2022- 2045 together with Appendix 1 – Map Series, and Supporting Data, Inventory, and Analyses; and

WHEREAS, the City Council hereby declares that the purpose and intent of the proposed amendments to the Comprehensive Plan is to guide future growth and development; encourage the most appropriate use of land, water, and other resources, consistent with the public interest; promote and protect the public health, safety, comfort, good order, appearance, convenience, aesthetics, and general welfare; prevent the overcrowding of land and avoid undue concentration of population; provide adequate and efficient transportation, water, sewage, drainage, fire protection, parks, recreational facilities, housing, and other services, facilities and resources; and conserve and protect natural resources within the City, while protecting private property rights; and

WHEREAS, for purposes of this ordinance words with underlined (underlined) type shall constitute additions to the original text and words with strikethrough (~~strikethrough~~) type shall constitute deletions from the original text.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

Section 1. For purposes herein, the term “Comprehensive Plan”, shall mean the Comprehensive Plan for the City of Port Orange, consisting of Exhibit 1, entitled “Port Orange Comprehensive Plan 2022-2045”, and consisting of eleven (11) elements, including Future Land Use; Transportation; Housing; Public Facilities; Public Schools Facilities; Coastal Zone Management; Conservation; Recreation and Open Space; Intergovernmental Coordination, Capital Improvements, and Property Rights all as

adopted by Ordinance No. 1999-43, as subsequently amended by Ordinances No. 1999-46, 1999-56, 1999-57, 2000-1, 2000-8, 2000-13, 2000-25, 2000-29, 2000-41, 2001-2, 2001-21, 2001-26, 2001-28, 2001-75, 2001-76, 2001-89, 2002-7, 2002-20, 2003-3, 2003-1, 2003-22, 2003-39, 2004-34, 2004-39, 2005-1, 2005-3, 2005-13, 2005-15, 2005-25, 2005-27, 2005-30, 2005-31, 2005-49, 2006-9, 2006-16, 2006-24, 2006-41, 2006-51, 2006-53, 2007-4, 2007-14, 2007-30, 2007-48, 2007-55, 2007-57, 2007-60, 2007-61, 2008-2, 2008-8, 2008-9, 2008-12, 2008-16, 2008-19, 2008-36, 2009-3, 2009-19, 2009-20, 2010-14, 2010-20, 2010-30, 2011-24, 2011-34, 2012-8, 2012-24, 2012-30, 2013-20, 2013-25, 2014-31, 2014-32, 2015-42, 2015-44, 2016-6, 2016-20, 2016-24, 2016-26, 2017-4, 2017-33, 2018-10, 2018-15, 2018-18, 2018-20, 2018-30, 2018-36, 2019-11, 2019-21, 2019-23, 2019-33, 2019-41, 2020-2, 2020-5, 2020-11, 2020-14, 2020-22, 2020-34, 2020-39, 2021-1, 2021-14, 2021-24, 2021-28, 2022-8, 2022-11, 2022-13, 2022-30, 2024-02, this ordinance; and Appendix 1 – Map Series.

Section 2. The City Council of the City of Port Orange hereby adopts the Comprehensive Plan of the City of Port Orange entitled, “Port Orange Comprehensive Plan 2022-2045”, including Appendix 1 – Map Series, and associated data tables, exhibits and maps attached hereto and incorporated herein as Exhibit 1, amending the Future Land Use Element, Transportation Element, Housing Element, Public Facilities Element, Public School Facilities Element, Recreation and Open Space Element, Coastal Zone Management Element, Conservation Element, Intergovernmental Coordination Element, Capital Improvements Element, and Property Rights Element for the City, and repealing and replacing in its entirety the current map series with Appendix 1- Map Series, referenced hereinabove.

Section 3. The data, inventory and analyses, marked as Exhibit 2, and made a part here of by reference, is the required documentation supporting the amendments contained in the Comprehensive Plan of the City of Port Orange entitled, “Port Orange Comprehensive Plan 2022-2045”, including Appendix 1 – Map Series, and associated data tables, exhibits and maps attached hereto as Exhibit 1.

Section 4. The Community Development Director or designee is hereby authorized to transmit copies of the proposed amendments, constituting the Port Orange Comprehensive Plan 2022-2045 to the Florida State Land Planning Agency and reviewing agencies as required by law, and to any other unit of local government who had filed a written request for a copy in accordance with the provisions of Section 163.3184(3), Florida Statutes.

Section 5. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

Section 6. If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of this ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

Section 7. The effective date of this plan amendment, if the amendment is not timely challenged, shall be 31 days after the state land planning agency notifies the local government that the plan amendment package is complete. If timely challenged, this

amendment shall become effective on the date the state land planning agency, or the Administration Commission enters a final order determining this adopted amendment to be in compliance. No development orders, development permits, or land uses dependent on this amend may be issued or commence before it has become effective. If a final order of noncompliance is issued by the Administration Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be sent to the state land planning agency. The City Clerk shall note the effective date hereon in the place provided below.

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Passed on first reading on the day of

Passed and adopted on second and final reading on the day of

The effective date of the plan amendment is _____.

Reviewed and Approved: _____
Shannon K. Balmer, Assistant City Attorney

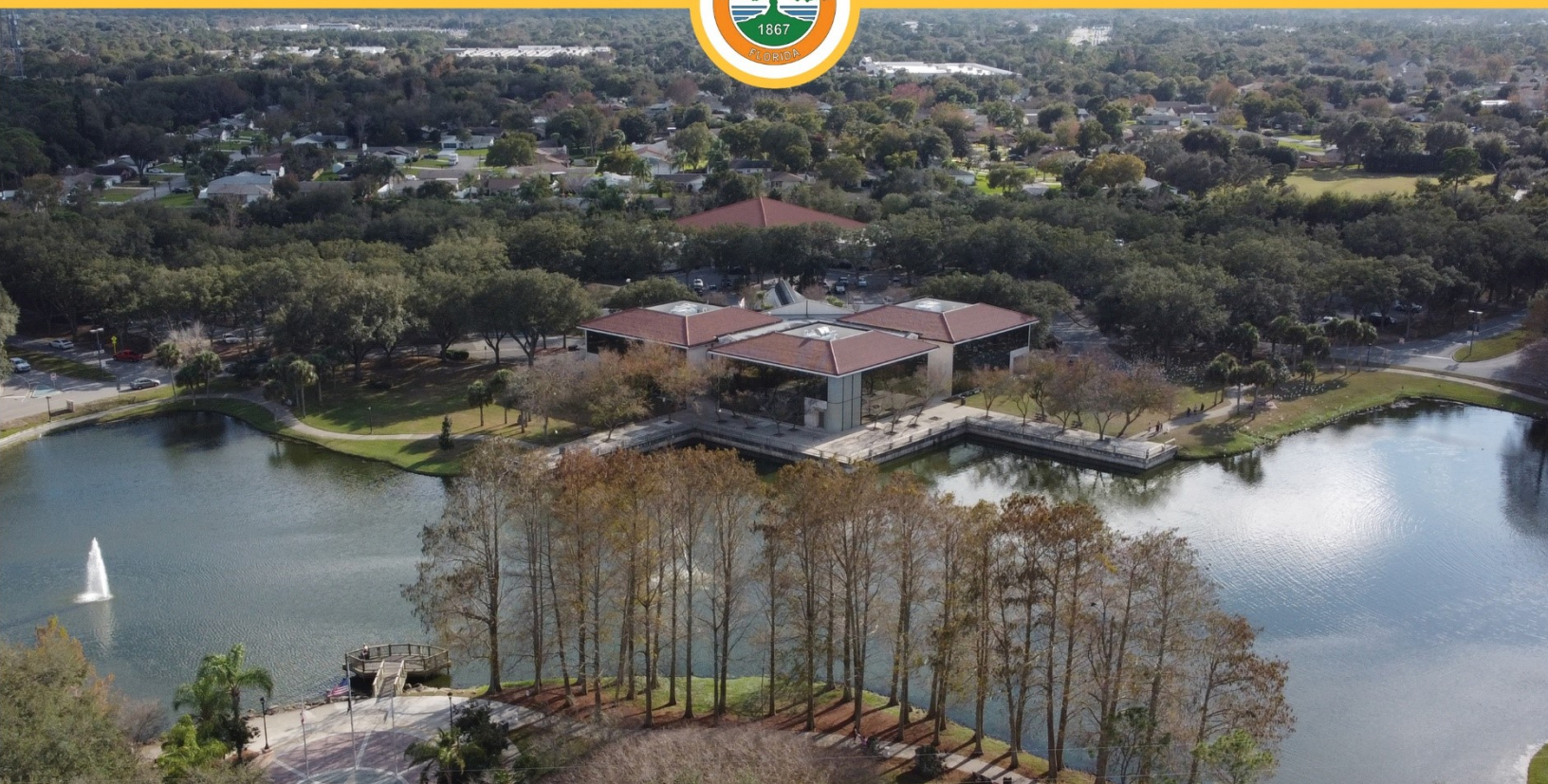
EXHIBIT “1”

TO ORDINANCE NO. 2024-04



PORT ORANGE

Comprehensive Plan
2022-2045



CITY OF PORT ORANGE

CITY COUNCIL

Donald O. Burnette, MBA, Mayor
Scott Stiltner, Vice Mayor
Reed Foley
Drew Bastian
Tracy Grubbs

PLANNING COMMISSION

Maria Mills-Benat, Chairperson
Thomas Jordan, Vice Chair
Darrel “Bo” Bofamy
Mark Bowling
Lance Green
Stan Schmidt
Scott Steger

CITY ADMINISTRATION

Wayne Clark, City Manager
Robin Fenwick, Assistant City Manager – Community Services
John McKinney, Assistant City Manager – Internal Services

DEPARTMENT OF COMMUNITY DEVELOPMENT

Tim Burman, AICP, Community Development Director
Penelope Cruz, AICP, Planning Manager

KIMLEY-HORN AND ASSOCIATES, INC.

Kelley Klepper, AICP
Heather Glisson, AICP
Adam Kerr, P.E.
Mike Vaudo, AICP
Chad Davis, AICP Candidate
Madeline Kender, P.E.
Nicole McConnell, P.E.

Rebecca Linick, E.I.
Molly Williams, P.E.
Tori Bacheler
Amber Crane
Kyle Pote
Morgan McMullen

Cover Photo Credits

Top Photo: Chris Williams, Kimley-Horn & Associates, Inc., 2023

Bottom Photo: Beau Gardner, 2024

Introduction

The **City of Port Orange Comprehensive Plan 2045** (the “Plan”) is the framework for Port Orange’s future. The Plan is built on a process that incorporated an assessment of the City’s existing Comprehensive Plan, analysis of existing conditions, community outreach, input from Port Orange staff and Advisory Boards, and input from the Planning Commission and City Council. Comprehensive Plans guide community development and decision-making over an identified period of time – in the case of this Plan, through 2045. The overarching vision of this Plan is to ensure the City is meeting the needs of its community both now and in the future, as well as protecting local resources and preparing for both new development and redevelopment to occur within the City.

Plan Framework

The Plan is comprised of 11 Elements, each addressing a specific topic. Due to the nature of the Plan, specific policies may cross one or more Elements and are referenced as such. The Plan contains the following Elements:

1. Future Land Use
2. Transportation
3. Housing
4. Public Facilities
5. Public Schools
6. Recreation & Open Space
7. Coastal Zone Management
8. Conservation
9. Intergovernmental Coordination
10. Capital Improvements
11. Property Rights

Each Element contains Goals, Objectives, and Policies, (GOPs) that provide the guidance and framework of the Element and the Plan as a whole. In addition to the GOPs, Element-specific Data Inventory and Analysis (DIA) documentation is presented separately, including any supporting studies, reports, maps, data, and/or references.

Legal Status

The legal status of the Comprehensive Plan requires that all Strategies (Policies) will be considered in making legal determinations of consistency with the Comprehensive Plan, pursuant to State Laws and Statutes.

Vested Rights

In accordance with Chapter 163, Section 163.3167, nothing in this Comprehensive Plan shall limit or modify the rights of any person to complete any development that has been authorized by the City of Port Orange (“City” or “Port Orange”). See the Land Development Code for the City’s vested rights determination process.

Graphics and Images

The use of graphics, images, photographs, or similar throughout the **Port Orange Comprehensive Plan 2045** are for illustrative purposes only and not intended to convey or require a specific element(s).

Use of Terms: “Shall”, “Should”, “Will” and “May”

The terms “shall”, “should”, “will”, and “may” are included within this Comprehensive Plan and are understood to be used in the following manner:

Shall: provisions or items that are mandatory

Will: declares a purpose to accomplish an item in the future

Should/May: items that are more flexible in nature and are non-mandatory but encouraged

Plan Interpretation

- A. The City’s Administrative Official (the “Official”), as defined by its Land Development Code, shall interpret the Comprehensive Plan and its application to public and private land, and to activities permitted thereon. Plan interpretations are to be based on the applicable text, maps, figures, and tables within the adopted Comprehensive Plan, along with the Data Inventory and Analysis (DIA) developed to support the Comprehensive Plan.
- B. Use and Status of Support Documentation – The DIA is not adopted as part of the Plan but may be used in any review, interpretation, or update of the adopted Comprehensive Plan.
- C. Interpretation of Conflicts – Conflicts shall be judged under the following guidelines:
 1. In the event of any difference of meaning or implication between the text of the Plan and any caption, illustration, graphic, summary table, or illustrative table, the text shall control.
 2. In the event of an apparent conflict between the Future Land Use Map and any other map or figure in the adopted Comprehensive Plan, the Future Land Use Map shall control.

- D. Interpretation of Undefined Terms – Terms not otherwise defined in the Comprehensive Plan Introduction shall be interpreted first by reference to the relevant provisions of the Community Planning Act Part II, Chapter 163 F.S., or other relevant and appropriate State Statutes if specifically defined therein; secondly, by reference to terminology adopted by City Ordinance; thirdly, by reference to terminology generally accepted by Federal or State agencies; fourthly, by reference to terminology generally accepted by the planning profession; and otherwise according to the latest edition of Webster’s New Collegiate Dictionary.
- E. Administrative Interpretations – It is the responsibility of the Official to make Comprehensive Plan administrative interpretations. Applications for an administrative interpretation shall be filed with the Official. Administrative interpretations may be required as a result of one of the following actions:
1. *Failure to obtain a Comprehensive Plan consistency finding based on submission of a development application or building permit:* In the event such an application is found inconsistent with the Plan, the application may be forwarded to the Official for an administrative interpretation. The building permit or development application shall serve as the application for an administrative interpretation.
 2. *Request for interpretation of land use designation boundaries:* Written requests are required for administrative interpretations related to land use designation boundaries. The request shall include a legal description of the parcel(s), and depending on the circumstance, a current survey may be required. The requester may submit additional materials that support their written request, such as references to Comprehensive Plan text, maps, figures, and support documentation, and the Official may ask for additional information to explain said request.
 3. *Any other action that would require a Comprehensive Plan interpretation:* Any affected party may submit a written request for an administrative interpretation of the Comprehensive Plan. Specifically, the request shall include a written statement that clearly identifies the section or sections of the Plan for which an interpretation is required, along with references to text, maps, figures, and support document(s) that the affected party feels supports the request.
- F. Administrative Interpretation of Plan Consistency and its Relationship to the Concurrency Provisions of this Plan – An administrative interpretation resulting in a determination of consistency does not constitute a determination of concurrency.
- G. Appeal of an Administrative Interpretation – In accordance with the procedures provided in the Land Development Code (LDC), any administrative interpretation made by the Official under the provisions of this Section may be appealed through the Local Planning Agency, which shall determine consistency with the Plan.

Plan Amendments

All amendments to the Comprehensive Plan shall be reviewed and adopted in accordance with applicable Florida Statutes.

ACRONYMS & DEFINITIONS

The use of certain terms, phrases, and where appropriate, acronyms may be used to describe specific items.

ACRONYMS

A

ACS: American Community Survey

ADA: Americans with Disabilities Act

ADU: Accessory Dwelling Unit

AMI: Area Median Income

B

BEBR: University of Florida Bureau of Economic and Business Research

BLS: United States Bureau of Labor Statistics

BPAC: Bicycle / Pedestrian Advisory Committee of the TPO

C

CAC: Citizens' Advisory Committee of the TPO

CDBG: Community Development Block Grant

CHHA: Coastal High Hazard Area

CIP: Capital Improvement Program

CMS: Concurrency Management Schedule

CRA: Community Redevelopment Area

D

DBSC: Daytona Beach State College Institute of Government

DEP: Florida Department of Environmental Protection

DHR: Division of Historical Resources

DIA: Data Inventory and Analysis

DU/AC: Dwelling Units per Gross Acre

E

ECFRPC: East Central Florida Regional Planning Council

F

FAC: Florida Administrative Code

FAR: Floor Area Ratio

FDOT: Florida Department of Transportation

FDS: Florida Department of State

FFWCC: Florida Fish and Wildlife Conservation Commission

FIND: Florida Inland Navigation District

FISH: Florida Inventory of School Houses

FLC: Florida League of Cities

[FLUM](#): Future Land Use Map

[FP&L](#): Florida Power & Light

[FS](#): Florida Statutes

[FTE](#): Full-Time Equivalent

[FY](#): Fiscal Year

[G](#)

[GBI](#): Green Building Initiative

[GIS](#): Geographic Information Systems

[GPD](#): Gallons Per Day

[H](#)

[HUD](#): United States Department of Housing and Urban Development

[I](#)

[IA](#): Interlocal Agreement

[ICR](#): Intergovernmental Coordination Review

[L](#)

[LDC](#): Land Development Code

[LEED](#): Leadership in Energy and Environmental Design

[LID](#): Low Impact Development

[LOS](#): Level of Service

[LPA](#): Local Planning Agency

[LRTP](#): Long Range Transportation Plan

[M](#)

[MPO](#): Metropolitan Planning Organization

[MS4](#): Municipal Separate Stormwater System

[MSA](#): Metropolitan Statistical Area

[N](#)

[NAICS](#): North American Industry Classification System

[NFIP](#): National Flood Insurance Program

[NGVD](#): National Geodetic Vertical Datum

[NHL](#): National Historic Landmark

[NPDES](#): National Pollutant Discharge Elimination System

[P](#)

[PCD](#): Planned Commercial Development

[PUD](#): Planned Unit Development

[R](#)

[ROW](#): Right-of-Way

[RPC](#): Regional Planning Council, see also ECFRPC

[RSTPO](#): River to Sea Transportation Planning Organization

S

SCADL: School Capacity Availability Determination Letter

SHIP: State Housing Initiative Program

SIS: Strategic Intermodal System

SJRWMD: St. Johns River Water Management District

SLOSH: Sea, Lake, and Overland Surges from Hurricanes

T

TCC: Technical Coordinating Committee of the TPO

TDLCB: Transportation Disadvantaged Local Coordinating Board

TDM: Transportation Demand Management

TDR: Transfer of Development Rights

TIF: Tax Increment Financing

TMDL: Total Maximum Daily Loads

TPO: Transportation Planning Organization, see also RSTPO.

TSM: Transportation System Management

U

USACE: United States Army Corps of Engineers

USB: Urban Service Boundary

USFWS: United States Fish and Wildlife Service

USGBC: United States Green Building Council

V

VCARD: Volusia County Association for Responsible Development

VCEM: Volusia County Emergency Management

VCSB: Volusia County School Board

VGMC: Volusia Growth Management Commission

VLOC: Volusia League of Cities

VMT: Vehicle-Miles-Traveled

VOTRAN: Volusia County Public Transportation System

W

WTP: Water Treatment Plants

DEFINITIONS

A

Abutting: Having common borders or edges

Accessory Dwelling Unit: A separate additional dwelling unit, including kitchen, sleeping and full bathroom facilities, attached or detached from the primary residential unit, and subordinate in size and appearance to the primary dwelling unit.

Accessory Use: A use incidental or subordinate to the principal use of a building or development and located on the same site.

Adaptive Use/Adaptive Reuse: The process of converting a building to a use other than which it was originally designed, e.g., changing a factory into commercial, retail use or residential use. Such conversions are accomplished with varying alterations to the building.

Adjacent: To have property lines or portions thereof in common or facing each other across a right-of-way, street, or alley.

Advanced Wastewater Treatment: As defined in Section 403.086, Florida Statutes (F.S.), treatment that will provide a reclaimed water product that contains not more, on a permitted annual average basis, than the following concentrations: 5 mg/l biochemical oxygen demand, 5 mg/l suspended solids, 3 mg/l total nitrogen, 1 mg/l total phosphorous.

Adverse Impact (upon a natural resource): Direct contamination, alteration, or destruction, or that contributes to the contamination, alteration, or destruction of a natural resource, or portion thereof, to the degree that its present and future environmental benefits are, or will be, eliminated, reduced, or impaired.

Affected Party: Any person or local government that will suffer an adverse effect to an interest protected or furthered by the local government comprehensive plan, including interests related to health and safety, police and fire protection service systems, densities or intensities of development, transportation facilities, health care facilities, equipment or services, and environmental or natural resources, as defined by Section 163.3215(2), F.S., as amended.

Affordable Housing: In alignment with Section 420.9071(2), F.S., as amended, affordable housing is defined as monthly rents or monthly mortgage payments including taxes and insurance do not exceed 30 percent of that amount which represents the percentage of the median annual gross income for households. However, it is not the intent to limit an individual household's ability to devote more than 30 percent of its income for housing, and housing for which a household devotes more than 30 percent of its income shall be deemed affordable if the first institutional mortgage lender is satisfied that the household can afford mortgage payments in excess of the 30 percent benchmark.

Airport: Spruce Creek Airport.

Amenity: A building, object, area, or landscape feature that makes an aesthetic contribution to the environment, rather than one that is purely utilitarian.

American Association of State Highway and Transportation Officials: Composed of state highway and transportation officials from all fifty states who develop and improve methods of

administration, design, construction, operation, and maintenance of our nationwide integrated transportation system.

Americans with Disabilities Act: Public Law 101-336, prohibits discrimination against people with disabilities. The ADA focuses on removing barriers that deny individuals an equal opportunity to have access to jobs, public accommodations, government services, public transportation and telecommunications.

Annexation: The legal method of attaching an area to an area controlled by another form of government.

Aquifer Recharge: The replenishment of groundwater in an aquifer occurring primarily as result of infiltration of rainfall and secondarily by the movement of water from adjacent aquifers or surface water bodies.

Arterial: See Roadways

Assisted Living Facility: A residential facility, for more than three persons unrelated to the owner, where shelter and services are provided and may include meals, housekeeping, and personal care assistance. Residents shall not be under in-house nursing/medical care. This term shall include, but not be limited to, assisted living facility, childcare agency facility, drug and alcohol treatment facility, and shelters for abused persons and unwed mothers. Facilities of this type, which provide for 14 or fewer residents, may need to be licensed with the Florida Department of Health and Rehabilitative Services as a "community residential home" and comply with the requirements provided in Chapter 419, F.S.

Attenuation: To limit stormwater flow to reduce downstream impacts. (See also "detention").

B

Base Flood: A flood having a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood" and the "one-percent-annual chance flood"). "Base flood" is the term used throughout this code.

Base Flood Elevation: The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the flood insurance map (FIRM).

Bicycle Lane (Bike Lane): A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential use of bicyclists.

Bikeway: Any road, trail, or right-of-way which is open to bicycle travel, regardless of whether such a facility is designated for the exclusive use of bicycles or is to be shared with other transportation modes.

Block: an area surrounded by streets. Blocks are subdivided into lots that face the street.

Buffer or Landscape Buffer. The portion of property reserved for landscaping, located between the primary structure on the property and the road on which it fronts, as well as around the structure itself. Buffers are designed to enhance the visual appeal of roadside properties and roadway corridors and to minimize the negative impact of paved vehicular use areas for passing motorists and pedestrians.

Building: Any structure that encloses a space used for sheltering occupancy or providing storage. Each portion of a building separated from other portions by a fire wall shall be considered a separate building.

C

Capacity Analysis: A determination of an infrastructure capability including but not limited to transportation resources, parks, water, wastewater, stormwater, etc.

Capacity (traffic): The measure of the ability of a traffic facility to accommodate a stream of moving vehicles, expressed as a rate. Thus, it is the maximum number of vehicles that have a reasonable expectation of passing over a given roadway in a given time period under the prevailing roadway and traffic conditions.

Capital Budget: The portion of each local government's budget which reflects capital improvements scheduled for a fiscal year.

Capital Improvement: Physical assets constructed or purchased to provide, improve, or replace a public facility and which are large scale and high in cost. The cost of a capital improvement is generally non-recurring and may require multi-year financing.

Capital Improvements Program: A plan for capital expenditures to be incurred each year over a period of years to meet anticipated capital needs. It identifies each planned capital project and estimated resources needed to finance the project.

Capital Improvements Schedule: The City's specific plan for implementation of the Capital Improvements Program (CIP).

Character: An attribute, quality, or property of a place, space, or object; its distinguishing features.

City: City of Port Orange.

Class I Waters (including wells): Potable water supplies as classified and specified in Chapter 62-3, Florida Administrative Code (FAC).

Class II Waters (including wells): Waters deemed suitable for shellfish propagation or harvesting as classified and specified in Chapter 62-3, FAC.

Class III Waters (including wells): Waters deemed suitable for recreation, propagation and protection of fish and wildlife as classified and specified in Chapter 62-3, FAC.

Clustering: The practice of grouping permitted types of residential and/or non-residential uses close together rather than distributing them evenly throughout a site while remaining at or below the appropriate gross density ceiling in order to encourage creative site planning and/or protect natural resources.

Coastal High Hazard Area: The area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.

Coastal or Shore Protection Structures: Shore hardening structures, such as seawalls, bulkheads, revetments, rubblemound structures, groins, breakwaters, and aggregates of materials other than natural beach sand used for beach or shore protection and other structures which are intended

to prevent erosion or protect other structures from wave and hydrodynamic forces including beach and dune restoration.

Coastal Zone: The coastal waters (containing a measurable percentage of sea water) and the adjacent shore lands, strongly influenced by each other.

Collector Road (Collector): See Roadway.

Commercial Uses: Activities within land areas which are predominantly connected with the sale, rental and distribution of products, or performance of services.

Compatibility: Compatibility, actual or perceived, a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other.

Complete Streets: Complete Streets are planned, designed, operated, and maintained to safely accommodate people of all ages and abilities, including pedestrians, cyclists, motorists, transit users, emergency services, freight, adjacent businesses, and residents. Complete streets provide mobility and support livability while providing more mode choices.

Comprehensive Plan: An official document in ordinance form adopted by the local government setting forth its goal, objectives, and policies regarding the long-term development of the area within its jurisdiction pursuant to Chapter 163.3161, et seq, F.S., as amended.

Concurrency: The legal requirement that specified public facilities (potable water, sanitary sewer, solid waste, stormwater management, transportation) be provided for, by an entity to an adopted level of service.

Concurrency Management System: A systematic process that provides information on system performance of public facilities subject to concurrency and alternative strategies to alleviate and enhance the system.

Cone of Depression (or Drawdown Cone): A roughly conical concavity (or dimple) in the potentiometric surface around a pumping well.

Confining Bed: A body of "impermeable" material stratigraphically adjacent to one or more aquifers, also referred to as aquitard, aquiclude, and aquifuge.

Conservation Areas: Environmentally sensitive areas reserved for conservation uses or restricted development.

Consistency: The regulatory requirement that local Comprehensive Plans not conflict with State or regional plans, and that the local plan furthers the goals and policies of the State and regional plans.

Contributing Structure: A contributing building, site structure or object adds to the historic architectural qualities, historic associations, or archaeological values for which a property is significant because a) it was present during the period of significance and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period, or b) it independently meets the National Register criteria. (National Register Bulletin 14).

D

Density: Used as a measurement of dwelling units per gross acre of land.

Deterioration: The process by which structures, and their components wear, age, and decay in the absence of regular repairs and/or replacement of components which are worn or obsolete.

Development: Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, permanent storage of materials, or the dividing of land into two or more parcels. Development includes, but is not limited to, the following:

- a) A reconstruction, alteration of the size, or structural change in the external appearance of a structure on land.
- b) A change in the intensity of use of land, such as an increase in the number of dwelling units in a structure or on land, or a material increase in the number of businesses, manufacturing establishments, offices, or dwelling units on the land as may be determined by the local government.
- c) Alteration of a shore or bank of a seacoast, river, stream, lake, pond, canal, or stormwater management facilities, including any "coastal construction" as defined in F.S. 161.021.
- d) Mining or excavation on a parcel of land.
- e) Demolition or removal of a structure.
- f) Clearing of land as an adjunct of construction.
- g) Deposit of refuse, solid or liquid waste, or fill on a parcel of land.

Development Phasing: The process by which a large-scale project is built in stages over a period of time, concurrent with the provision of public facilities.

Diffusion: The process by which dissolved substances move from a region of higher to lower concentration.

Disability: The term "disability," with respect to an individual, means: A) a physical or mental impairment that substantially limits one or more major life activities of such individual; B) a person who has a history or record of such an impairment; or C) a person who is perceived by others as having such an impairment. Examples of Major Life Activities include: caring for oneself, performing manual tasks, seeing, hearing, learning, and working.

Drainage Basin: Any land area from which the runoff collects at a common point of receiving water.

Dredge and Fill: The process of excavation or deposition of ground materials by any means, in local, state, or regional jurisdictional waters (including wetlands), or the excavation or deposition of ground materials so as to create an artificial waterway that is to be connected to jurisdictional waters or wetlands (excluding stormwater treatment facilities).

Dwelling: A building or part thereof with cooking, sleeping, and sanitary facilities that is designed in whole or part as the separate and independent residence or living quarters for one or more persons, but which does not include the terms bed and breakfast inn, hotel, mobile home, motel, recreational vehicle, or tent. This term does include the following categories:

- a) Dwelling, single-family. A building containing one dwelling unit which would include the following types: Single-family attached or single-family detached.
- b) Dwelling, two-family. A building containing two dwelling units which would include the following types: Single-family attached (two units per building) or duplex.
- c) Dwelling, multi-family. A building containing three or more dwelling units which would include the following types: single-family attached, apartments, townhouses.

E

Easement: A less-than-fee interest in real property acquired through donation or purchase and carried as a deed restriction or covenant to protect important infrastructure, open spaces, archaeological sites, building facades and interiors.

Enclave: Any unincorporated improved or developed area that is enclosed within and bounded on all sides by a single municipality; or any unincorporated improved or developed area that is enclosed within and bounded by a single municipality and a natural or manmade obstacle that allows the passage of vehicular traffic to that unincorporated area only through the municipality.

Endangered and Threatened (Listed) Species: Flora and fauna as identified by the U. S. Fish and Wildlife Service's "List of Endangered and Threatened Wildlife and Plants" in 50 CFR 17.11-12. Fauna identified by the Florida Fish and Wildlife Conservation Commission (FWC) in Section 9-27.03-05, FAC, and flora identified by the Department of Agriculture and Consumer Services "Preservation of Native Flora Act," Section 581.185-187, F.S.. Endangered species are so designated due to man-made or natural factors which have placed them in imminent danger of extinction while threatened species are so designated due to a rapid decline in number and/or habitat such that they may likely become endangered without corrective action.

Environmental Corridor: An open space area which connects natural communities and provides protection of environmentally sensitive and significant areas from development activities and their associated impacts.

Environmentally Sensitive Lands: Areas of land or water designated in the plan as being needed to serve the purpose of conserving or protecting natural resources or environmental quality and includes areas designated for such purposes as protection of soils, protection of quality or quantity of groundwater or surface water, shorelines, fisheries and wildlife management, protection of vegetative communities or protection of wildlife habitats.

Essential Wildlife Habitat: Land or water bodies that, through the provision of breeding or feeding habitat, are necessary to the survival of endangered or threatened species, or species of special concern, as determined by the Florida Fish and Wildlife Conservation Commission or the U. S. Fish and Wildlife Service.

Estuary: A body of water formed where freshwater from rivers and streams flow into the ocean, mixing with seawater. Estuaries and the lands surrounding them are places of transition from land to sea, and from freshwater to saltwater.

Estuarine: Of, relating to, or formed in an Estuary.

Expressway: See Roadway

F

Facility: A component of a site or system. For example, in transportation, a facility may be transportation infrastructure, such as: roads, mass transit lines and/or terminals, bikeways, sidewalks, rail lines, ports, and airports, and at a recreational site or park, components of the park may include trails, courts, athletic fields, or swimming pools.

Floodplain: Area inundated during a 100-year, or other specified, flood event or identified by the National Flood Insurance Program (NFIP) as an AE Zone or V Zone on the Flood Insurance Rate Maps (FIRM) or other map adopted by the City for regulation of development within the floodplain.

Floor Area Ratio (FAR): Measurement of non-residential development including all buildings, structures or similar as compared to the total area of the property or parcel on which it is located. A ratio measured in square feet to the area of a parcel of land, excluding any bonus or transferred floor area.

Florida friendly landscaping. Nine principles to guide Florida yard and neighborhood landscaping programs. The nine principles are to locate the right plant in the right place, water efficiently, fertilize appropriately, mulch, attract wildlife, manage pests responsibly, recycle, reduce stormwater runoff, and protect the waterfront.

Form: In urban design, the perceived, three-dimensional shape of topography, buildings, or landscaping.

Functionally Classified: The assignment of roads into categories according to the character of service they provide in relation to the total road network. Basic functional categories include limited access facilities, arterial roads, and collector roads, which may be subcategorized into principal, major or minor levels. Those levels may be further grouped into urban and rural categories.

Future Land Use Map: The graphic aid intended to depict the spatial distribution of various uses of the land in the City by land use category, subject to the Goals, Objectives, and Policies and the exceptions and provisions of the Land Use Element text and applicable development regulations.

G

Geographic Information System: A computer hardware/software system capable of storing and analyzing geographic information as well as sophisticated image processing.

Green Building Council: The United States Green Building Council, a nonprofit organization whose mission is to transform the way buildings and communities are designed, built, and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves quality of life.

Green Building Initiative: A not-for-profit organization whose mission is to accelerate the adoption of building practices that result in energy-efficient, healthier, and environmentally sustainable buildings by promoting credible and practical green building approaches for residential and commercial construction.

Green Development. A development approach that goes beyond conventional development practice by integrating the following elements: environmental responsiveness, resource efficiency, and sensitivity to existing culture and community, and brings these elements together

through the green development approach and provides numerous environmental and economic benefits by capitalizing on the interconnections between them.

Green Infrastructure: The range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.

Greenways: A linear park or open space which connects natural, cultural, recreational, and historic resources. It can be hard surfaced pathways that permit different recreational uses such as walking, jogging, and biking, or they can be natural corridors with a simple path along a stream or riverbank.

Groundwater, Unconfined: Water in an aquifer that has a water table.

Groundwater Divide: A vertical, imaginary, impermeable boundary that, in an ideal, symmetrical groundwater system, coincides exactly with the topographic highs that represent surface water divides from which water flows in opposite directions.

Group Home: A facility which provides a living environment for unrelated residents who operate as the functional equivalent of a family, including such supervision and care as may be necessary to meet the physical, emotional, and social needs of the residents. Adult Congregate Living Facilities comparable in size to group homes are included in this definition. It shall not include rooming or boarding homes, clubs, fraternities, sororities, monasteries or convents, hotels, residential treatment facilities, nursing homes, or emergency shelters.

Growth Management: A method to guide development in order to minimize adverse environmental and fiscal impacts and maximize the health, safety, and welfare benefits to the residents of the community.

H

Hazardous Materials: Any substance or material in a quantity or form that may pose an unreasonable risk to health and safety or to property when stored, transported, or used in commerce.

Hazardous Waste: A material identified by the Florida Department of Environmental Protection as a hazardous waste. This may include but is not limited to a substance defined by the Environmental Protection Agency based on the 1976 Resource Conservation and Recovery Act, as amended, as:

- Being ignitable, corrosive, toxic, or reactive;
- Fatal to humans in low doses or dangerous to animals based on studies in the absence of human data;
- Listed in Appendix 8 of the Resource Conservation and Recovery Act as being toxic and potentially hazardous to the environment.

Head/Static Head: The height above a standard datum of the surface of a column of water (or other liquid) that can be supported by the static pressure at a given point. Head, when used alone, is understood to mean static head. The head is proportional to the fluid potential; therefore, the head is a measure of the potential.

Historic Preservation: The act of conservation or recreating the remnants of past cultural systems and activities that is consistent with original or historical character. Such treatment may range from a pure “restoration” to adaptive use of the site, but its historic significance is preserved.

Historic Resources: A building, structure, district, area, site, object, or document that is of significance in American, State, or local history, architecture, archaeology, or culture and is listed or eligible for listing on the Florida Master Site File, the National Register of Historic Places or designated by local ordinance.

Household: A household includes all the persons who occupy a group of rooms or a single room which constitutes a housing unit.

Housing: Housing is basically shelter, but it also is privacy, location, environmental amenities, and, for many, an investment. This analysis, however, is limited to the shelter aspect of housing since there is no accurate way to measure the other components.

Housing Stock: The aggregate of individual housing units within the City. This term is used interchangeably with housing inventory in the study.

Housing Supply: The amount of standard housing available for occupancy at a given price and a given point in time.

Housing Unit: A group of rooms or a single room is regarded as a housing unit when it is occupied as separate living quarters, that is, when the occupants do not live and eat with any other persons in the structure, and when there is either: 1) direct access from the outside of the building or a common hall, or 2) complete kitchen facilities for the exclusive use of the occupants of the household.

Human Scale: A combination of qualities in architecture or the landscape that provides an appropriate relationship to human size, enhancing rather than diminishing the importance of people.

Hurricane Evacuation Clearance Time: The amount of time specified in the Indian River County Comprehensive Emergency Management Plan for the safe evacuation of hurricane-vulnerable areas.

Hurricane Evacuation Routes: The routes designated by County emergency management officials that have been identified with standardized state-wide directional signs by the Florida Department of Transportation or are identified in the regional hurricane evacuation study for the movement of persons to safety in the event of a hurricane.

Hydraulic Gradient: The change in static head per unit of distance in a given direction. If not specified, the direction generally is understood to be that of the maximum rate of decrease in head.

Hydrologic Cycle: The continuous circulation of water between the ocean, atmosphere, and land.

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Impact Fee: A fee levied by a local government on new development so that the new development pays its proportionate share of the cost of new or expanded facilities required to service that development.

Impervious: Land surfaces which do not allow (or minimally allow) the penetration of water. An increase in the amount of impervious area will increase the rate and volume of runoff from a given drainage basin.

Impervious Surface: Surface that has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water, including surfaces such as compacted sand, limerock, shell, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots, and other similar structures.

Income: All income earned by each adult member of the family, including gross wages, social security, Workman's Compensation, child support, and public assistance (exclusive of any amount designated for shelter and utilities).

Industrial Uses: The activities predominantly connected with manufacturing, assembly, processing, or storage of products.

Infill: Development which occurs on scattered vacant lots in a developed area.

Infiltration: The entry into the soil of water made available at the ground surface, together with the associated flow away from the ground surface within the unsaturated zone.

Informal Agreements: Simple non-binding arrangements of cooperation to provide services or facilities among different entities. Informal agreements are not always binding, and they may represent acts of goodwill between communities or other entities.

Infrastructure: Those man-made structures which serve the common needs of the population, such as: sewage disposal systems; potable water systems; potable water wells serving a system; solid waste disposal sites or retention areas; stormwater systems; utilities; piers; docks; wharves breakwaters; bulkheads; seawalls; bulwarks; revetments; causeways; marinas; navigation channels; bridges; and roadways.

Inlet: A structure which allows stormwater to flow into a conveyance system.

Intensity: A measure of land use activity based on use, mass, size, and impact. May be used synonymously with or measured by floor area ratio (FAR).

Interchange: A system of interconnecting roadways in conjunction with one or more grade separations, providing for the interchange of traffic between two or more roadways on different levels.

Intergovernmental Coordination: The process in which different levels of government (federal, State, regional, local) act together in a smooth, concerted way to either avoid and/or mitigate adverse impacts that one may impose on the other or to share the responsibilities and benefits of a common service or facility.

Intermodal: Between or including more than one means or mode of transportation.

L

Land Development Code: Ordinances enacted by governing bodies for the regulation of any aspect of development and includes any local government zoning, rezoning, subdivision, building construction or sign regulations or any other regulations controlling the development of land. May

also be referred to and or include Land Development Regulations, Zoning Code, Zoning Regulations, or similar.

Landmark Site: Each designation of a building, structure, object, or piece of land as a landmark shall be accompanied by the designation of a landmark site. A landmark site is the location and the grounds, the premises, or the setting for the landmark, and it shall be identified through its block and lot number. A landmark site shall only be designated in conjunction with the designation of a landmark.

Landscape: The totality of the built or human-influenced habitat experienced at any one place. Dominant features are topography, plant cover, buildings, or other structures and their patterns.

Leachate: The liquid derived from the leaching of buried refuse in sanitary landfills and dumps by percolating water derived from rain or snow melt. It frequently contains large numbers of inorganic contaminants and high concentrations of total dissolved solids, as well as many organic contaminants.

Leakance: The vertical transfer of water from a surficial aquifer system to an adjoining aquifer.

LEED: The Leadership in Energy and Environmental Design rating system of the U.S. Green Building Council.

Level of Service: An indicator of the extent or degree of service provided by or proposed to be provided by a facility based on and related to the operational characteristics of the facility. Level of Service shall indicate the capacity per unit of demand for each public facility.

Limited Access Facility: A roadway especially designed for through traffic, and over, from, or to which owners or occupants of abutting land or other persons have no greater than a limited right or easement of access.

Local Planning Agency: Chapter 75-390 and Chapter 78- 523, Laws of Florida, designate The Planning Commission as the Local Planning Agency (LPA) for the City and give it the responsibility of preparing the Comprehensive Plans for those jurisdictions.

Local Road: See Roadways.

Low-Income: Defined in Section 420.9071, F.S., as amended, low income means one or more natural persons or a family that has a total annual gross household income that does not exceed 80 percent of the median annual income adjusted for family size for households within the metropolitan statistical area, the county, or the nonmetropolitan median for the state, whichever amount is greatest. With respect to rental units, the low-income household's annual income at the time of initial occupancy may not exceed 80 percent of the area's median income adjusted for family size. While occupying the rental unit, a low-income household's annual income may increase to an amount not to exceed 140 percent of 80 percent of the area's median income adjusted for family size.

M

Marina: An establishment with a waterfront location for the dockage of watercraft with more than two wet slips, and/or for the refueling of watercraft used primarily for recreation and providing minor repair services for such craft. A marina may include onshore accessory service uses.

including food service establishment, laundry or sanitary facilities, sundries store and other customary accessory facilities such as boat livery.

Marine Habitat: Areas where living marine resources naturally occur, such as mangroves, seagrass beds, algal beds, salt marshes, transitional wetlands, marine wetlands, rocky shore communities, hard bottom communities, oyster beds or flats, mud flats, coral reefs, worm reefs, artificial reefs, offshore flats, offshore springs, near shore mineral deposits, and offshore sand deposits.

Mass Transit: Passenger services provided by public, private or non-profit entities such as the following surface transit modes: commuter rail, rail rapid transit, light rail transit, light guideway transit, express bus, and local fixed route bus.

Mediation: A process whereby a neutral third-party acts to encourage and facilitate the resolution of a dispute without prescribing what it should be. It is an informal and nonadversarial process with the objective of helping the disputing parties reach a mutually acceptable agreement.

Mitigate: To offset or avoid negative impacts through avoiding the impact altogether; minimizing the impact by limiting the degree or magnitude of the action or its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing the impact over time by preservation or maintenance over the life of the action; or compensating for the impact by replacing or providing substitute resources.

Mixed-Use Development: A type of development that combines a mix of uses that may include residential, commercial and/or office uses within one building or multiple buildings with direct pedestrian access between uses.

Mobile Home: A residential structure, transportable in one or more sections, which is 8 body feet or more in width, over 35 body feet in length with the hitch, built on an integral chassis, designed to be used as a dwelling when connected to the required utilities, and not originally sold as a recreational vehicle, and includes the plumbing, heating, air-conditioning, and electrical systems contained therein.

Modal Split: The percentage of total person trips utilizing each of the various modes of transportation (i.e., auto, bus, train, bicycle, walk).

Mode: The specific method chosen to make a trip, such as walk or rail transit. Typical modes are walk, bicycle, motorcycle, automobile, van, taxi, bus and a variety of rail transit technologies.

Moderate Income: Defined in Section 420.9071, F.S., as amended, moderate income means one or more natural persons or a family that has a total annual gross household income that does not exceed 120 percent of the median annual income adjusted for family size for households within the metropolitan statistical area, the county, or the nonmetropolitan median for the state, whichever is greatest. With respect to rental units, the moderate-income household's annual income at the time of initial occupancy may not exceed 120 percent of the area's median income adjusted for family size. While occupying the rental unit, a moderate-income household's annual income may increase to an amount not to exceed 140 percent of 120 percent of the area's median income adjusted for family size.

Multi-Family Dwelling Units: Three or more attached dwelling units either stacked vertically above one another and/or attached by both side and rear walls.

Multi-Modal Transportation System: May also be referred to as Multi-Modal, Multi-Modal system, or similar; A comprehensive transportation system including, but not limited to, the following options of mode-choice: fixed-guideway transit, bus, auto, truck, motorcycle, bicycle, and pedestrian allowing the user opportunities to transfer between modes.

Multi-Use Trail: A facility physically separated from the road right-of-way for use by non-motorized travelers for transportation or recreation.

N

National Historic Landmark: Districts, sites, buildings, structures, and objects found to possess national significance in illustrating or representing the history and prehistory of the United States. These landmarks are designated by the Secretary of the Interior. NHLs number less than four percent of the properties listed in the National Register (from National Park Service publication).

Native Species: Flora and fauna that naturally occur. Not to mean naturalized or indigenous species that originate from outside the County.

Natural Aquifer Recharge: The replenishment of groundwater in an aquifer.

Natural Plant Communities: Naturally occurring stands of native plant associations exhibiting minimal signs of anthropogenic disturbance. Specific community types can be identified by characteristic dominant plant species composition.

Natural Preserve or Natural Reservation: Areas designated for conservation purposes and operated by contractual agreement with or managed by a federal, state, regional, or local government or non-profit agency, such as: national parks, state parks, city and county parks, lands purchased under the Save Our Coast, Conservation and Recreation Lands, Save Our Rivers, or Environmental Lands Acquisition and Protection Programs (ELAPP), sanctuaries, preserves, monuments, archaeological sites, historic sites, wildlife management areas, national seashores, and Outstanding Florida Waters. This definition does not include privately owned land managed by a state agency on either a voluntary or a short-term contractual basis.

Neighborhood: An integrated area related to the City and used to identify portions of the community that may consist of residential districts, a school or schools, shopping facilities, religious buildings, and open spaces.

National Pollutant Discharge Elimination System Permit: National Pollutant Discharge Elimination System Permits are issued by the State under delegation from the federal government under the auspices of the Clean Water Act. Permits are issued to entities which may be expected to cause water pollution including the wastewater treatment facility, the Municipal Separate Storm Sewer System (MS4), certain Community Development Districts (CDDs) and construction firms. This permit requires the holder to operate their systems to either specific pollutant limitations or, in certain cases, to the maximum extent practicable.

O

Office: An establishment where services are performed involving predominantly administrative, professional, or clerical operations for a business, government, industry, profession, or service.

Open Space(s): The land area within a development which is retained in its natural condition or improved in a manner for the enjoyment of all persons owning property within the development. Open space includes, but is not limited to, tree and environmental preservation areas, water bodies, green roofs, community gardens, and common area parcels, and is not developed with impervious surface unless it is common open space. Open space also includes those portions of the right-of-way which are pervious.

Outfall: Location where stormwater flows out of a given system. The ultimate outfall of a system is usually a receiving water.

Outstanding Florida Waters: Surface waters that have been deemed to be worthy of special protection as identified in Section 62-302.700, FAC.

Overlay: A district established by ordinance to prescribe special regulations to be applied to a site in combination with the underlying or base district.

P

Park land: Dedicated land which is open to the public free of charge (unless it is leased or dedicated or privatized by the City), and accessible via boardwalk or roadway.

Peak Hour Level of Service: The level of service based on the hourly volume during the peak hour divided by the peak fifteen-minute rate of flow within the peak hour.

Peak Hour Peak Direction Level of Service: The level of service determined by the proportion of traffic during the peak hour traveling in the predominant direction.

Pedestrian: An individual traveling on foot or via disability aid such as a wheel chair.

Percolate: Water moving by gravity through pore spaces of unsaturated geologic material.

Permeability: The capacity of a porous medium for transmitting water.

Pervious: Land surfaces which allow the penetration of water. A decrease in pervious area will increase the rate and volume of runoff from a given drainage basin.

Piezometer: A non-pumping well, generally of small diameter, which is used to measure the elevation of the water table or potentiometric surface. A piezometer generally has a short well screen through which water can enter.

Planned Commercial Development and/or *Planned Unit Development*: A form of zoning intended to provide a flexible approach for unique and innovative land development proposals, which would otherwise not be permitted by code. Plans typically provide for mixed use commercial, office, industrial, and/or residential development such as shopping centers, office parks, and industrial parks; promote innovative site and building design; provide efficient location and utilization of infrastructure; establish open areas; provide for a coherent and visually attractive physical environment; and provide for other limitations, restrictions and requirements as deemed necessary by the City.

A form of development recognized within the City's Land Development Code as a specific implementing zoning district. Such developments are designed with a master concept plan, may

include only one or a mixture of land uses, may avoid a gridiron pattern of streets, and usually provides common open space, recreation areas, or other amenities.

Playground: A recreation area with play apparatus.

Plaza: The Spanish name for an open square in an urban area, used as a market place, park, or for public assembly.

Plume: A relatively discrete body of contaminated groundwater originating from a specified source(s) and influenced in its movement by such factors as the local groundwater flow pattern, the specific gravity and solubility of the contaminant, the subsurface geology within the zone of saturation, and the influence of pumping wells.

Pollution: The presence in the outdoor atmosphere, ground or water, of any substances, contaminants, noise or manmade or man-induced alteration of the chemical, physical, biological, or radiological integrity of air or water, in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, or which does or may unreasonably interfere with the enjoyment of life or property.

Porosity: The ratio of the volume of small openings in soil or rock to its total volume; it is usually expressed as a percentage.

Port Orange Town Center: The community redevelopment area generally bounded by Dunlawton Avenue at Spruce Creek Road east to South Peninsula Drive and Ridgewood Avenue from the Port Orange/South Daytona city limits south to Rogers Avenue shown on figure 1 of the Port Orange Town Center Redevelopment Plan, as may be amended from time to time.

Potable Water Wellfield: The site of one or more water wells which supply potable water for human consumption to a water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Poverty Level: A federally-defined income classification based on a property index that takes into account such factors as family size, number of children, and urban vs. rural residents, as well as the amount of income. The cutoff levels are updated every year to reflect changes in the Consumer Price index.

Preserve: An area set aside specifically for the protection and safekeeping of certain values within the area, such as game, wildlife, forest, etc. Preserves may or may not be outdoor recreation areas, depending on the use allowed therein.

Public Access: The ability of the public to physically reach, enter, or use recreation sites including beaches and shores.

Public Buildings and Grounds: Structures or lands that are owned, leased, or operated by a government entity, such as civic and community centers, hospitals, libraries, police stations, fire stations, and government administration buildings.

Public Facilities: Publicly owned infrastructure including transportation systems or facilities, sewer systems or facilities, solid waste systems or facilities, drainage systems or facilities, potable water

systems or facilities, educational systems or facilities, parks and recreation systems or facilities, and public health systems.

R

Recharge Area: That portion of a drainage basin in which the net saturated flow of groundwater is directed away from the water table.

Recharge, Artificial: The addition of water to the groundwater by activities of man at a recharge rate greater than normal.

Recreation: The pursuit of leisure time activities occurring in an indoor or outdoor setting.

Recreational Uses: Activities within areas where recreation occurs.

Redevelopment: The reuse, demolition, and reconstruction or substantial renovation of existing buildings or infrastructure within urban infill areas, existing urban service areas, or community redevelopment areas.

Replacement Needs: Capital improvements required to correct existing deficiencies.

Resident Population: Inhabitants counted in the same manner utilized by the United States Bureau of the Census, in the category of total population. Resident population does not include seasonal population.

Restoration: The act of accurately recovering the form and details of a property and its setting as it appeared at a particular period of time by means of the removal of later work or the replacement of missing earlier work (Secretary of the Interior's Standards).

Retention Basin: A stormwater facility which has no structural outfall and the discharge from which is limited to percolation, evaporation, and evapotranspiration.

Reuse: A use for an existing building or parcel of land other than that for which it was originally intended.

Right-of-Way: Land in which the state, a county, or a municipality holds the fee simple title .

Road: All roads within the city shall be classified as follows:

- **Local road.** A route of relatively low traffic volume and travel speed that provides primary access to the majority of individual lots in subdivisions and connects those lots to the collector and arterial system.
- **Collector road.** A route that provides primary access to or through subdivision(s), collecting and distributing traffic between local roads or arterial roads, and serving as a linkage between land access and mobility needs. Collectors generally provide service that is relatively moderate average traffic volume, moderately average trip length, and moderately average operating speed.
- **Minor arterial road.** A route which generally interconnects with, and augments, principal arterial routes and provides service to trips of shorter length and a lower level of travel mobility. Such a route would include any arterial not classified as 'principal' and containing facilities that place more emphasis on land access than the higher system.

- **Principal arterial road.** A route which generally serves the major centers of activity of an urban area, the highest traffic volume corridors, and the longest trip purpose and carries a high proportion of the total urban area travel on a minimum of mileage. Such a route would be integrated, both internally and between major rural connections.

Roadway Segment or Link: A portion of a road usually defined at its ends by an intersection, a change in lane or facility type, or a natural boundary.

Runoff: 1) That portion of precipitation that does not return to the atmosphere through evapotranspiration nor infiltrate the soil to recharge groundwater but leaves the hydrologic system as streamflow. 2) That portion of precipitation delivered to streams as overland flow to tributary channels.

Saffir/Simpson Hurricane Scale: Describes the degree of hazard and damage potential generally associated with the full range of hurricane intensities. The following describes the five categories of storms accepted for the Gulf and Atlantic coasts.

- **Category 1** - Winds of 74 to 95 miles per hour. Damage primarily to shrubbery, trees, foliage and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs. Storm surge 6 to 8 feet above normal. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.
- **Category 2** - Winds of 96 to 100 miles per hour. Considerable wind damage to shrubbery and tree foliage, some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings; some window and door damage. No major damage to inland buildings. Considerable damage to piers, marinas, and small craft in unprotected anchorage. Storm surge 9 to 11 feet above normal, damage and flooding as described in Category 1.
- **Category 3** - Winds of 111 to 130 miles per hour. Foliage torn from trees; large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing material of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed. Storm surge 12 to 18 feet above normal. Serious flooding along the coast, with larger structures being damaged and small structures destroyed by waves and floating debris.
- **Category 4** - Winds of 131 to 155 miles per hour. Shrubs and trees blown down. All signs blown down. Extensive damage to roofing materials, windows, and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes. Storm surge 18 to 22 feet above normal. Major damage to lower floors of structures near the coast due to flooding, waves, and floating debris.
- **Category 5** - Winds greater than 155 miles per hour. Shrubs and trees blown down, considerable damage to roofs of buildings; all signs down. Very severe and extensive damage to windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes. Storm surge greater

than 22 feet above normal. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore.

Safe Yield: The amount of water that can be withdrawn annually from a groundwater basin without producing an undesirable result. Undesirable results include depletion of groundwater reserves, intrusion of low-quality water, contravention of water rights, and others, such as depletion of streamflow and land subsidence.

Saltwater Intrusion: The migration of saltwater into freshwater aquifers under the influence of groundwater pumping.

Sanitary Landfill: A disposal facility employing an engineered method of disposing of solid waste on land in a manner which minimizes environmental hazards by spreading the solid wastes in thin layers, compacting to the smallest practical volume, and applying cover material as required by state and federal regulations.

Saturated Zone: The subsurface zone occurring below the water table where the soil pores are filled with water and the moisture content equals the porosity.

Scale: Generally refers to relative size or extent. Scale is determined by a building or other objects relating to its surroundings, by the width of adjacent streets and by buildings as they relate to these streets. Human scale is accomplished when dimensions of adjacent objects or buildings are related to those of the human figure.

School District: The governing body of the school district, a body corporate pursuant to Section 230.21, F.S., which operates, controls, and supervises all free public schools within the school district and determines the rate of school district taxes within the limits prescribed of state law.

Setback: Physical distance that serves to minimize the effects of development activity on an adjacent property, structure, or natural resource, and within which it may be necessary to restrict activities for the area. Also, a required horizontal distance from the subject land or water area designed to reduce the impact on adjacent land of land uses or cover types located on the subject land or water area.

Shoreline: Interface of land and water in oceanic and estuarine conditions which follows the general configuration of the mean high water line (tidal water) and the ordinary high water mark (fresh water).

Significant Wildlife Habitat/Wildlife Habitat: Contiguous stands of natural plant communities which have the potential to support healthy and diverse populations of wildlife, and which have been identified on the Florida Fish and Wildlife Conservation Commission's strategic habitat conservation area map or biodiversity hot spot map.

Site: Any tract, lot, or parcel of land or combination of tracts, lots, or parcels of land which are in one ownership or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision, or project.

Socio-Economic Data: Information about people and economies, such as demographics (age, race, sex, birth rates, etc.) and economics (incomes and expenditures of a community or government).

Solid Waste: Garbage, refuse, yard-trash, construction, and demolition debris, white goods, special waste, ashes, sludge, or other discarded material including solid, liquid, semi-solid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations. The term does not include nuclear source or by-product materials regulated under Chapter 404, F.S., or under the Federal Atomic Energy Act of 1954, as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production. The term includes the specific terms garbage, garden trash, rubbish, and industrial wastes, but excludes hazardous waste as herein defined.

State Housing Initiatives Partnership Program: The State Housing Initiatives Partnership Program is created for the purpose of providing funds to local governments as an incentive for the creation of partnerships to produce and preserve affordable housing.

State Water Quality Standards: Numerical and narrative standards that limit the amount of pollutants that may be discharged to Waters of the State, as defined by Chapter 62302, FAC.

Storage Coefficient: The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head. In an unconfined aquifer, the storage coefficient is equal to the specific yield.

Stormwater: Flow of water which results from, and which occurs immediately after, a rainfall event.

Stormwater Management Facility: A feature which collects, conveys, channels, holds, inhibits, or diverts the movement of stormwater.

Stormwater Retention: To store stormwater to provide treatment before discharge into receiving waters or to provide a storage facility for stormwater where no outfall is available.

Stormwater Runoff: That portion of precipitation that flows off the land surface during, and for short durations following, a rainfall event.

Stormwater Treatment Facility: A structural Best Management Practice (BMP) designed to reduce pollutant loading to a receiving water by either reducing the volume of flow, providing for the biological uptake of pollutants, limiting the loading of pollutants or allowing pollutants to settle out of stormwater flow.

Strategy: The way in which programs and activities are conducted to achieve an identified Intent. Previously referred to as a "Policy".

Streetscape: The term streetscape refers to that general aggregation of all street-side elements of the urban environment perceived by the pedestrian or motorist. This street-side environment includes such things as street, alleys, parks, sidewalks, and parking lots. Streetscape elements include things such as lighting, paving, traffic safety and control, signage, shelters, recreation and play equipment, street furniture, and other miscellaneous items.

Structure: Generally, that which is built or constructed.

Subdivisions: The process of laying out a parcel of land into lots, parcels, tracts, or other divisions of land as defined in applicable State statutes and local land development regulations.

Suburban: Generally refers to development on the periphery of urban areas, predominantly residential in nature with many urban services available. Intensity of development is usually lower than in urban areas.

Support Documents: Any surveys, studies, inventory maps, data, inventories, listings, or analyses used as bases for or in developing the local Comprehensive Plan.

T

Townhouses: Three or more single family dwelling units within a structure having common side walls, front and rear yards, and individual entry ways.

Transfer of Development Rights: The transfer of a property's legal development rights either within a property owner's parcel, such as in wetlands density transfers, or offsite.

Transportation Demand Management: Strategies and techniques that can be used to increase the efficiency of the transportation system. Demand management focuses on ways of influencing the amount and demand for transportation by encouraging alternatives to the single-occupant automobile and by altering local peak hour travel demand. These strategies and techniques may, among others, include ridesharing programs, flexible work hours, telecommuting, shuttle services, and parking management.

Transportation Disadvantaged: Those individuals who, because of physical or mental disability, income, status, or age, are unable to utilize regular public or private transportation services and are therefore dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life sustaining activities.

Transportation Improvement Program: Short-term transportation plan for all of the County, which includes all projects to receive federal, state, and local funds.

Transportation System: This is the sum of all forms or modes of transportation which, taken together, provide for the movement of people and goods in the County. The system includes all forms of air, water, and ground transportation.

Transportation Systems Management: A process for planning and operating a unitary system of urban transportation. This views automobiles, public transportation, taxis, pedestrians, and bicycles as elements of one single urban transportation system. The key objective of TSM is to coordinate these individual elements through operating, regulatory and service policies so as to achieve maximum efficiency and productivity for the system as a whole.

Travel Demand Management: Low-cost techniques to reduce travel demand. These include ridesharing, public transit use, work-hour rescheduling, high occupancy vehicle lanes, and park and ride facilities. The focus of these techniques is primarily on behavioral changes, rather than facility improvement.

Trip Demand: The magnitude of travel occurring between two locations or across a corridor.

Trip Generators and Attractors: These are types of land use which either generate or attract vehicular traffic. As an example, residential neighborhoods generate traffic, and Downtown Central Business Districts attract traffic.

U

Unconfined Aquifer: An aquifer having a water table.

Unsaturated Zone: The subsurface zone occurring above the water table and the capillary fringe, in which the soil pores are only partially filled with water, and the moisture content is less than the porosity.

Urban Design: A process by which we may shape and regulate the physical form of our cities and towns in response to our human needs.

Urban Form: The integration of all the physical elements of a city into a three-dimensional whole.

Urban: Generally refers to an area having the characteristics of a city, with intense development and a full or extensive range of public facilities and services.

V

Very Low Income: Defined in Section 420.9071, F.S., as amended, moderate income means one or more natural persons or a family that has a total annual gross household income that does not exceed 50 percent of the median annual income adjusted for family size for households within the metropolitan statistical area, the county, or the nonmetropolitan median for the state, whichever is greatest. With respect to rental units, the very-low-income household's annual income at the time of initial occupancy may not exceed 50 percent of the area's median income adjusted for family size. While occupying the rental unit, a very-low-income household's annual income may increase to an amount not to exceed 140 percent of 50 percent of the area's median income adjusted for family size.

Vision: The long-term end toward which programs or activities are ultimately directed.

W

Wastewater: The spent water of the community comprising the liquid and water-carried wastes from residences, commercial buildings, industries, and institutions, together with minor quantities of ground and surface waters that are not admitted intentionally.

Wastewater Facility: Any wastewater treatment plant, pipeline, structure, pumping station, or other facility used to collect, transmit, or treat wastewater.

Wastewater Treatment Plant: A plant designed to treat and dispose wastewater for the purpose re-use or safe discharge into the environment.

Water Table: The surface on which the fluid pressure in the pores of a porous medium is exactly atmospheric. It is the level at which water stands in a shallow well open along its length and penetrating the surficial deposits just deeply enough to encounter standing water in the bottom.

Wellhead Protection Area: An area designated by local government to provide land use protection for the groundwater source for a potable water wellfield, including the surface and subsurface area surrounding the wellfield. Differing levels of protection may be established within the wellhead protection area commensurate with the capacity of the well and an evaluation of the risk to human health and the environment. Wellhead protection areas shall be delineated using professionally accepted methodologies based on the best available data and taking into account any zones of contribution described in existing data.

Wetlands: Those areas that are inundated or saturated by surface water or groundwater at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Wildlife Corridors: Contiguous stands of wildlife habitat that facilitate the natural migratory patterns, as well as other habitat requirements (e.g., breeding, feeding), of wildlife.

Wildlife: Any member of the plant and animal kingdoms, with the exception of man, including but not limited to any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod, or other invertebrate and excluding domestic animals.

X, Y, Z

Zoning: In general the demarcation of an area by ordinance (text and map) into zones and the establishment of regulations to govern the uses within those zones (commercial, industrial, residential, type of residential) and the location, bulk, height, shape, and coverage of structures within each zone.

CHAPTER 1: FUTURE LAND USE ELEMENT

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INTRODUCTION

The Future Land Use Element is ~~the central~~ a foundational element of the Comprehensive Plan. It functions as the blueprint for the City of Port Orange, ~~the design for its future~~ redesignating future land uses with corresponding densities and intensities in areas that will accommodate projected growth, as well as planning for redevelopment. It is used to ensure that future development is planned harmoniously with existing development and natural systems in a sustainable manner. It provides policy direction and guidelines for orderly growth, infrastructure, and public services. It relates the policies of the other elements in the Plan to the future use of land. It sets the land use Goals to which the City aspires, the Objectives used to measure progress, and the Policies employed to achieve them. This Element, in concert with other Comprehensive Plan Elements, sets the stage for orderly growth, ensures the minimization of adverse impacts on resources, and maintains the quality of life within the City.

~~This Element describes the City's past efforts to become the progressive, high-quality community it is today, and its vision for evolving gradually over the next 20 years into a sustainable, "life-long" community. For the next 20 years, this new vision can ensure that the City's quality will be maintained and the City can continue to build on its success. Twenty years from now, Port Orange will be a city that is able to meet its needs in the present without compromising its ability to meet those needs in the future. The community will shift focus from growth to sustainability. Port Orange will be a city of places and spaces, of neighborhoods and marketplaces, of parks and civic space. It will be a place designed for human interaction—the cultural amenity great cities offer known as "civic life."~~

~~The Future Land Use Element was prepared to be consistent with relevant sections of Chapter 163, Part II, Florida Statutes, the State Comprehensive Plan, and the Strategic Regional Policy Plan. The Existing and Future Land Use Maps are included in this element. The Existing Land Use Map shows the location and distribution of land uses that have developed as of September 30, 2009. The Future Land Use Map indicates the proposed location and distribution of land uses to the year 2025. All policies contained in the Comprehensive Plan are consistent with the Future Land Use Map. All land development regulations contained in the City's Land Development Code must also be consistent with this element and with this Plan.~~

Future Land Use Element Highlights

1. Assigns future land use designations to guide sustainable growth and development within the City;
2. Guides growth management principles to prevent the proliferation of sprawl and requires adequate infrastructure and public facilities to support the City's population;
3. Encourages low-impact development, sustainable, and environmentally friendly building design and practices;
4. Emphasizes infill development and redevelopment;
5. Links land use and all modes of transportation.

IMPLEMENTATION STRATEGIES**Sustainability Strategies**

The strategies of the past 20 years have served the City well in realizing its vision of becoming a progressive, high-quality community. For the next 20 years, a new vision is needed to ensure that the City's quality can be maintained; so that it can continue to build on its success. Twenty years from now, Port Orange will become a city that is able to meet its needs in the present without compromising its ability to meet those needs in the future. This is the vision of sustainability.

The sustainable city will be one that draws together the various uses that are necessary for it to function. It will be knitted together by an urban fabric that is designed around the needs and scale of people. It will be a "lifelong" community that allows its residents to meet their needs at all ages and stages of their lives. It will be a city in which its citizens have choices in how far to travel to get what they need and the mode they choose to get there. It will enable people to drive less and reduce the amount of greenhouse gases their cars produce. It will use less energy and resources while supporting a greater number of people, and will produce a portion of its own energy and food supply. It will be a city of unique places and spaces. It will be a place designed for human interaction—the cultural amenity great cities offer their residents known as "civic life."

The community will shift focus from growth to sustainability. Realizing the vision of sustainability will take a continued effort over the next 20 years to achieve. The City will employ the strategies listed below, which are organized into five categories that form the foundation of the sustainable city: land use, mobility, people, energy, and the environment.

LAND USE

Allow the integration rather than separation of most uses to bring people closer to their destinations and reduce the distance they must travel.

Increase the supply of non-residential land and square footage for shopping, services, and employment in existing and new commercial nodes.

Design new centers and retrofit existing ones according to urban design principles that accommodate the needs and scale of people.

Provide incentives and remove regulatory barriers to guide new growth to areas where it is appropriate and reinvestment to where it is necessary, particularly in older areas of the City and infill parcels. Make infill development more competitive than "greenfield" development on the city's edge.

Encourage small-scale agricultural uses to provide a portion of the local food supply. Protect bonafide agricultural uses outside the city. Encourage/remove barriers to local food production and community gardens.

MOBILITY

Design future transportation improvements to increase mobility, access, and choice.

Enhance the City's "complete streets" to better accommodate the travel modes used by people of all ages and needs. Provide the amenities and infrastructure necessary to make those modes useful, comfortable and convenient to the general population.

Guide density and intensity into mixed-use centers along designated transit corridors to increase ridership.

In appropriate areas, reduce parking requirements that push buildings apart and make other

~~modes much less convenient.~~

~~Utilize urban design principles appropriate to each part of the City that make the best use of available travel modes, corridors, and opportunities.~~

~~Increase connectivity between places to reduce travel distance and make walking and cycling more convenient.~~

PEOPLE

~~Increase the City's jobs/housing balance by 2020 so that more residents do not have to travel to another city for meaningful employment.~~

~~Embrace "place-making" as a design principle in new development and redevelopment.~~

~~Create distinct places built around the concept of shared space that allow residents of the city to gather as a community at a variety of scales, in the form of plazas, squares, sidewalks, cafes, and porches.~~

~~Allow residential areas to include the variety of housing types needed by people at all stages in their lives, including children, adults, parent, "empty-nesters," active retirees, and seniors.~~

~~Design civic buildings, parks, and the public realm so that they add character, build value, promote security, support cultural activities, and help residents feel proud of their community.~~

~~Provide more opportunities for healthy, active living in which people are able to walk or bike to where they want to go for errands or recreation, and where they have access to fresh, locally produced food.~~

ENERGY

~~Enable and encourage home and business owners to achieve greater energy independence by removing regulatory barriers, providing incentives, and creating guidelines to maximize the use and efficiency of private renewable energy systems.~~

~~Steadily increase the amount of energy the City government generates for its own needs from renewable sources, and decrease the amount of energy it uses overall.~~

~~Strive wherever possible to reduce the City's contribution to global climate change by "growing cooler" reducing greenhouse gas emissions, becoming "carbon neutral," and using heat reflective surfaces and materials wherever possible.~~

~~Employ methods to reduce vehicle miles traveled (VMTs) and greenhouse gas (GHG) emissions in location and investment decisions for public facilities.~~

~~Promote energy conservation techniques that incorporate Federal Energy Star Standards, as consistent with the requirements of the Florida Building Code.~~

ENVIRONMENT

~~Create, protect and manage systems of green infrastructure (e.g., urban forests, parks and open spaces, green roofs, shorelines, natural drainage systems).~~

~~Continue to protect floodplains, wetland and stream corridors, critical wildlife habitat, and other environmentally sensitive ecosystems.~~

~~Minimize property damage caused by hurricanes and repeated flooding by building in appropriate areas and removing or raising structures from low-lying areas.~~

~~Provide incentives to create new usable, useful open space, such as allowing community gardens and green roofs to count toward the required open space on any development site.~~

~~Steadily reduce the amount of water used city-wide through conservation, greater efficiency, and florida-friendly landscaping. Increase the percentage of water used from~~

~~renewable sources such as rainfall and stormwater runoff.~~

~~THE FUTURE LAND USE MAP~~

~~The future land use map has been updated based on the need for a somewhat higher percentage of non-residential land to accomplish economic development goals, to provide for a greater mixture of uses, and to accommodate the greater breadth of employment, retail, and service uses that are customary in the mid-size city projected for 2025. With this general direction, land uses were distributed based on the objectives and policies of this element and relevant policies of other elements. The city of port orange future land use map may be found at the end of this element.~~

~~The future land use map is intended to depict the general land use plan for the entire city, not uses for individual parcels. This is especially true where one land use designation transitions into another. Such transition areas should be considered fluid. While the designations on the map must be considered in all development and zoning decisions, they are not intended to act as an impediment to sound land use planning. For example, planned residential or commercial developments may incorporate more than one land use type, density, or intensity. The map should always be considered in the context of the goals, objectives, and policies of the plan and decisions must be made based on the greatest possible conformance with the diversity of policies related to any one issue.~~

~~The city's administrative official as defined by its land development code shall interpret the comprehensive plan. When there are disputes to land use category boundaries on the future land use map, interpretations of these boundaries shall be made by the administrative official. Appeals from the decision of any interpretations made by the administrative official shall be made through the local planning agency, which shall determine consistency with the plan.~~

~~The documentation relating to any development order of the city shall include a statement that such order is in compliance with this plan, based on the goals, objectives and policies herein.~~

[FLU DESCRIPTIONS MOVED TO GENERAL LAND USE GOAL]

~~FUTURE LAND USE CATEGORIES~~

~~The future land use categories are listed below.~~

- ~~— Public/Institutional~~
- ~~— Conservation~~
- ~~— Recreation~~
- ~~— Agricultural (maximum 1 unit/10 acres)~~
- ~~— Rural Transition (0-2 units/acre)~~
- ~~— Suburban Residential (2-4 units/acre)~~
- ~~— Urban Medium Density Residential (4-8 units/acre)~~
- ~~— Urban High Density Residential (8-16 units/acre)~~
- ~~— Office/Residential Transition (up to 10 units/acre)~~
- ~~— Commercial~~
- ~~— Mixed Use Center~~
- ~~— Planned Community~~
- ~~— Warehouse/Industrial~~

Public/Institutional

This category includes publicly owned lands, such as schools, libraries, active recreation parks, City administrative offices and yards, utility plants, the City's wellfield properties west of Tomoka Farms Road, and transportation facilities. Also included in this category are lands for privately owned uses that serve public needs, such as franchise utility operations, hospitals, churches, schools, institutions, etc. The intensity of permitted uses within this category is limited to a maximum floor area ratio (FAR) of 0.2.

This land use category may be located wherever needed to serve the City's population, businesses, and infrastructure in the most efficient manner. However, it is recognized that such uses are acceptable in a wide range of land use environments and, therefore, small and/or isolated properties of this type may be designated under adjoining land use types where appropriate.

Conservation

These areas include publicly or privately owned land deemed necessary or desirable for conservation. In the City, the majority of these areas are in the floodplains along the Halifax River, Spruce Creek, Rose Bay, and canals and streams leading into these water bodies. Also included in this category is the Spruce Creek Preserve located south of Spruce Creek. Development is restricted in these areas based on appropriate strategies for natural preservation, flood control, historic preservation, and passive recreation related to the specific site, as outlined in the Conservation Element. This land use category should be located as needed to protect environmentally sensitive areas pursuant to the Conservation Element. The intensity of permitted uses within this category is limited to a maximum floor area ratio (FAR) of 0.1.

Recreation

This land use category includes public, semi-public, or privately owned areas intended for active recreational uses. Allowable uses within this category include ball fields, golf courses, archery ranges, sports complexes, contoured golf courses, public parks, picnic areas, gymnasiums, and other active recreational uses. The intensity of active recreation facilities within this category is limited to a maximum floor area ratio (FAR) of 0.5.

Agricultural

There is less than one percent of the total land area in the City used for agriculture, and this land use category has not been applied to the Future Land Use Map. This category is intended to support the viability of the local agricultural economy and the production of the local food supply, on properties 10 acres in size or greater, and was designed for use in areas outside the 20-year planning horizon. This land use category should be at the outer edge of the City's south and west sides, adjacent to existing agricultural land and residential areas in the Rural Transition category. Housing density is limited to one unit per ten acres. Agricultural uses and certain limited agricultural related commercial uses may be permitted. The intensity of any agricultural related commercial uses within this category shall be limited to a maximum floor area ratio (FAR) of 0.2.

Rural Transition (up to 2 units per acre)

The Rural Transition category includes rural-scale or large-lot (usually 1 to 2 acres)

residential development that may also include accessory agricultural uses, based on the appropriate surrounding land use. This land use category should be located near Spruce Creek and its tributaries, and situated between Agricultural lands and areas of higher density/intensity. Residential development is limited to no more than two units per acre based on 1) location where environmental factors preclude more intense development; 2) a location that limits the efficient provision of urban level services; and 3) location adjacent to existing large lot development or active agriculture. Where urban services are available, smaller lots of 5,000 s.f. and greater are allowed, as long as sufficient open space and natural areas are preserved so as not to exceed the maximum allowable density.

Suburban Residential—(2-4 units per acre)

Suburban residential areas are generally characterized by detached or attached single family homes on lots one quarter acre in size or more. Smaller lots of 5,000 s.f. and greater are allowed, as long as extensive surrounding open space is provided so as not to exceed the maximum allowable density. This land use category should be located in the areas between collector and arterial roads, with all residential properties generally within one mile of a neighborhood or community level commercial node.

Urban Medium Density Residential—(4-8 units per acre)

The urban scale medium density residential category includes duplex, villa, cluster, townhouse, mobile home, manufactured or multi-family housing at densities of between four and eight units per acre. This land use category should be located adjacent to a community- or sub-regional level commercial node or mixed-used center, along collector and arterial roads, and in areas designed to accommodate densities/intensities greater than those in the Suburban category.

Urban High Density Residential—(8-16 units per acre)

This residential category typically includes townhouses and multi-family housing at densities of between eight and 16 units per acre. This land use category should be located adjacent to a community- or sub-regional level commercial node or mixed-used center, along arterial roads.

Office/Residential Transition

The Office/Residential Transition designation is intended to provide a buffer between areas of high and low intensity use, especially between low density residential areas and commercial nodes, and is intended to provide for an appropriate mix of uses along arterial roadways as a means to keep intensive commercial uses at major intersections, as consistent with the Comprehensive Plan. It will accommodate a mix of medium intensity uses, such as general offices, medical and professional uses, retail sales, personal services, multi-family developments, adult care/retirement facilities, and institutional uses.

The *Office/Residential Transition* category allows uses with a maximum floor area ratio (FAR) of 1.50. Up to 100% of the land area within any development may include office and institutional uses. One quarter (25%) of the land area within any development may include commercial uses. One quarter (25%) of the land area within any development may incorporate residential uses at a density up to 10.0 units/acre, provided it is done as part of a mixed-use development with the uses mixed within the development as whole. Mixed-use developments shall be designed to be pleasing, livable, interesting places that are pedestrian-oriented to

maximize internal trip capture. Live work units will be encouraged in this category. This category is appropriate along arterial roads, adjacent to commercial nodes, light industrial/heavy commercial areas, and residential areas.

Land Uses	Allowable Range as a Percent of Gross Land Area	
Residential	0 %	25%
Office/Institutional	75%	100%
Commercial	0%	25%

Commercial

Commercial land uses are those that provide for the retail sale of items and services to the general public. These areas consist of shopping centers, retail stores, restaurants, automobile service facilities, personal services, offices, and similar uses.

In locating commercial areas on the Future Land Use Map, the City has maintained the policy of designating commercial nodes at intersections of roadways. The functional classification of the adjacent roadways and size of the surrounding neighborhoods dictates the amount of commercial use designated within each node. Overall commercial nodes are defined as follows:

Neighborhood—generally designed to serve the convenience needs of neighborhood areas within a ± 1 mile radius; FAR of 0.30.

Community—generally designed to serve the general shopping needs of areas within a ± 2 -mile radius; FAR of 0.50.

Sub-Regional—generally designed to serve the general and specialized shopping needs of the general population and visitors within a ± 4 mile radius; FAR of 0.75.

Regional—generally intended to serve the east central Florida regional market, with a mix of general, specialized, and highly specialized products, services, and attractions; FAR of 1.0.

Figure 1-9 shows the location of the existing commercial nodes. The intensity of permitted uses within this category not located within a node shall be limited to a maximum floor area ratio (FAR) of 1.0.

Mixed-Use Center

The purpose of this multiple use category is to serve as an alternative to the single use, community-level commercial node in certain settings. A mixed-use center contains a variety of land uses, which may include commercial, office, service, residential, and institutional development, and is focused around a point of high activity, such as an intersection of collector or higher-classified roads. It is intended to provide a concentration of services for adjacent neighborhoods and pass-by traffic. The land uses should be mixed, but commercial uses may dominate if necessary to achieve City redevelopment goals. Such centers may be located along arterial corridors which have bus service, at intersections with collectors or significant local roads.

~~Mixed-use centers should be designed to be convenient, promote personal interaction, reduce travel distance and conserve energy. They should be pedestrian-oriented so as to maximize internal trip capture. To help achieve these objectives, the centers should include mixed-use development, multi-modal public transit facilities, pedestrian-oriented amenities, and high-quality building and site design.~~

~~The maximum density allowed in this category is 16 dwelling units per gross acre. The maximum FAR is 1.5. The allowable distribution of uses within each mixed-use center will be within the following ranges:~~

~~commercial (not including office) 50%–90%;
office 10%–90%;
residential 0%–50%; and
institutional 0%–35%.~~

~~The cumulative mixture of percentages shall equal 100%.~~

Planned Community

~~The *Planned Community* future land use category is intended to provide a flexible way to create integrated mixed-use communities in vacant areas slated for development, as well as in officially designated redevelopment districts where the wholesale redevelopment of large tracts is envisioned.~~

~~The *Planned Community* category implements simultaneously under a single land use classification the promotion of innovative development patterns, efficient provision of City services, environmental protection, minimization of automobile trips, concentration of commercial and industrial development, and creation of a pedestrian-friendly community.~~

~~It promotes the creation of well-planned developments through the required use of “Planned Community” (PC) zoning and an overall Conceptual Development Plan (CDP). This category will allow the City to increase the available inventory of commercial, industrial, and institutional land uses by integrating them with residential uses in a harmonious fashion. The *Planned Community* category should be thought of as a unique planning *process*, rather than a specific development *plan*.~~

~~There are two areas in the City classified as *Planned Community*. The first area (Planned Community Westside) is located between Tomoka Farms Road (SR 415) and I-95, and consists of approximately 1,200 acres. The second (Planned Community Riverwalk) corresponds to the City’s Riverwalk District, a 35.4 acre section of the Port Orange Town Center Redevelopment District. The potential for the remaining area in the Port Orange Town Center to be included in this *Planned Community* area is still being studied.~~

~~Because each area is different, each will have its own unique standards for density, intensity, and mix of uses. However, each area must meet certain criteria in order to be considered appropriate for the *Planned Community* designation. The process by which each area is rezoned will also be same.~~

CRITERIA FOR ASSIGNMENT

~~The *Planned Community* future land use category may only be assigned to parcels or tracts of land meeting the following criteria:~~

~~A minimum of 750 acres in size for vacant tracts, or 25 acres in size for officially designated redevelopment districts, in order to provide sufficient land for the mix of uses necessary in a functionally integrated community.~~

~~Adjacent to one or more existing and/or proposed arterial or collector roadways.~~

~~Located within the City's urban service area.~~

~~Abuts or is planned to abut City utilities lines and infrastructure, including potable water, sanitary sewer, and reclaimed water, if available.~~

Terminology

- ~~1. The overall property, as shown on the Conceptual Development Plan (CDP), shall be referred to as the Macro Region.~~
- ~~2. The Macro Region may be broken down into Districts, each with its own distinct development type, such as urban mixed-use, urban residential, suburban residential, commercial, etc. Districts are defined by building type and layout, rather than specific uses or densities/intensities.~~
- ~~3. Each District may be further subdivided into Micro Regions, which have specific permitted uses, setbacks, and densities/intensities.~~

Procedural Requirements

~~Any proposed development within the Planned Community future land use category shall meet the following procedural requirements:~~

- ~~1. The overall property shall first be rezoned to Planned Community "PC." A Macro CDP shall be prepared which shows the property boundary, the boundaries of each District, the boundaries and approved land use of all proposed Micro Regions, the existing and planned transportation network, and environmentally sensitive lands as defined in the Conservation Element.~~
- ~~2. When development within all or a portion of a Micro Region is proposed, the applicant shall prepare a Micro CDP, which shall indicate the proposed land uses, and the general location of internal collector street locations, proposed open space, utility corridors, external buffers, proposed master drainage facilities, and location within the District and Macro Region. Developments occurring in Micro Regions less than 25 acres in size may forego Micro-level review.~~
- ~~3. All final development plans within a Micro Region shall be approved through the City's standard site development and subdivision process.~~

FLEXIBILITY AND MIXTURE OF USES

~~Each Planned Community shall incorporate a variety of uses, such as residential, commercial, industrial, and institutional. Existing agricultural uses shall be allowed to continue as an interim use until development occurs. The percentage distribution of each use is flexible in order to accommodate market trends. Unique ranges shall be established for each Planned Community. Development may occur in the ranges identified without the necessity for a comprehensive plan amendment so long as there is adequate infrastructure to serve the intended development.~~

~~The City shall maintain a running inventory of the land use allocated within each Planned Community. As development occurs within these areas, the City shall ensure that the maximum ranges allowed for each type of land use are not exceeded. Adjustments to~~

the allocation ranges described below shall require a large-scale comprehensive plan amendment subject to State review.

Each Planned Community shall be a mixed-use development that combines at least two of the four following land use subcategories: residential, commercial, office, industrial, or institutional (including recreational uses). The “PC” zoning district guidelines contain incentives to encourage the creation of mixed-use developments beyond the minimum percent established, particularly those which contribute to the establishment of an efficient urban development pattern. A list of incentives acceptable to the City includes:

- Higher allowable densities and intensities,
- Increased building coverage,
- Reduced parking requirements, and
- Reduced landscaping requirements.

Compliance with Florida Statutes

The land use designation Planned Community does not supersede or circumvent any requirements for State permitting or approval. Nor will the City’s efforts in requiring property owners to cooperate with the City’s long-range planning be intended to imply or require that permits and approvals from State agencies be prematurely obtained.

Planned Community Westside

The following standards apply to Planned Community Westside.

Density/Intensity

Planned Community Westside shall allow a maximum gross residential density of 4 units/acre (4,804 d.u. based on 1,201 acres). The density within mixed-use Micro Regions may be as high as 24 units/acre, so long as the gross density of the overall project does not exceed 4 units/acre. Gross non-residential intensity shall be limited to a maximum floor area ratio (FAR) of 0.25 for commercial uses, 0.30 for industrial uses, and 0.35 for office use. In mixed-use Micro Regions where master-planned stormwater drainage facilities exist or are planned, individual lots may be developed with a maximum FAR of 1.00, so long as the gross FAR for the overall development does not exceed the maximum limits listed above.

Distribution of Uses

The following table identifies each of the land uses required in Planned Community Westside, expressed as an allowable percentage of the overall project’s total acreage. The commercial sub-category may include office-type uses. The conservation/recreation sub-category does not include “open space” or pervious surface area normally required as part of the Planned Community zoning process.

<i>Land Use Sub-category</i>	<i>Allowable Range as a Percent Of Total Project Acreage¹</i>	
	<i>Minimum²</i>	<i>Maximum²</i>
Residential	35%	60%
Commercial	10%	25%
Industrial	10%	25%

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Mixed Use (Town Center)	10%	25%
Conservation/Recreation ³	10%	No max.

¹—Cumulative mixture of percentages shall equal 100%.

²—Minimum and maximum columns may be revised up to 2.5% per item without a comprehensive plan amendment since such changes are non-substantial and the impacts are similar, and provided the total does not exceed 100%.

³—Conservation/recreation, as a land use sub-category, will not impact the regulation of jurisdictional wetlands.

Maximum Vehicle Trips

The number of trips generated as a result of development in Planned Community Westside shall not exceed 62,600 trips per day. This number is equal to that which would be generated by the land uses that were shown on the adopted Future Land Use Map and the programmed roadway network conditions as of June 25, 2001. The future land uses in Planned Community Westside as of that date are as follows:

Agricultural Residential (0-2 units/acre)	423 acres
Suburban Residential (2-4 units/acre)	407 acres
Urban Low Density Residential (4-8 units/acre)	93 acres
Urban High Density Residential (8-16 units/acre)	61 acres
Office/Residential Transition	13 acres
Commercial	41 acres
Warehouse/Industrial	89 acres
Right of way	74 acres
Total	1,201 acres

The total number of daily trips as described herein can only increase commensurate with the appropriate modifications made to the comprehensive plan reflecting improved road network conditions. The City shall monitor the roadway conditions in and adjacent to Planned Community Westside and shall report its findings to DEO, FDOT District 5, River To Sea TPO, Volusia County, and the City of Daytona Beach as described in the Transportation Element, Policy 3.2.2.

General Design Standards

Planned Community Westside shall meet the following general design standards:

- A primary “town center” shall be created for the overall project that includes a mixture of uses (residential, commercial, institutional, and recreation), and a variety of housing types. The location of the town center shall be shown on the CDP for the Macro Region. The town center shall be relatively compact in design, and may be developed at the maximum density/intensity. High density residential units should be clustered into the town center in order to support convenience/service uses, local employment, or mass transit use. A portion of overall project conservation/recreation area shall be in the form of a “town square” or public park.
- Internal connectivity should be provided for pedestrian, bicycle, and automobile modes so as to reduce the number of external trips and provide transit service options.
- Single family housing may be constructed on a variety of lot sizes that are intermixed throughout each Micro Region.

- Projects should be designed with special consideration given to compatibility with the surrounding uses and any adjacent developments. Compatibility is defined as a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other. In general, density and intensity shall decrease toward the south and west. This will ensure that the higher intensity uses will be located where the infrastructure exists to serve them (adjacent to I-95), and where they will not impact lower intensity uses (adjacent to Tomoka Farms Road). In addition, buffering between areas of different intensity will be accomplished through a variety of mechanisms permitted by the City's Land Development Code.

Planned Community Riverwalk

This land use designation implements the Riverwalk component of the Port Orange Town Center Redevelopment Plan.

Planned Community Riverwalk is 35.4 acres and is composed of several land uses including mixed-use, recreational, commercial, office, residential, and civic land uses, among others. These land uses shall be integrated into a walkable community on the Halifax riverbank.

Community Standards

The following standards apply to Planned Community Riverwalk.

Density/Intensity

The Riverwalk District shall allow a maximum gross residential density of 25 units/acre.

Distribution of Uses

The following table identifies the land uses allowed in Planned Community Riverwalk, expressed as number of dwelling units or gross square footage.

<i>Land Use Sub-Category</i>	<i>Maximum Number Of Dwelling Units Or Square Footage</i>	
	<i>Dwelling Units</i>	<i>Square Footage</i>
<i>Residential</i>	800	N/A
<i>Commercial</i>	N/A	240,000
<i>Office</i>	N/A	51,700

Recreation and Open Space

Recreation facilities and open space areas will focus on the natural amenities and both active and passive recreation opportunities provided by the Halifax River. It is envisioned that the existing marina will be utilized promoting public access to the Halifax River; additionally, a boardwalk and passive parks will be provided.

General Goals and Design Standards

Planned Community Riverwalk shall meet the following special character district goals and objectives consistent with Section 5.2.1 of the Port Orange Town Center Redevelopment Plan (below). Also, from the plan "The area shall be recognized as a pedestrian friendly, mixed-use entertainment location, which boasts a Florida Vernacular style of architecture; a compact built environment; a grid network of narrow streets; pathways leading to public spaces; attractive views and vistas; and a nautical theme."

- Develop a unique riverfront location based on a healthy mix of entertainment, retail, office and housing uses;

- ~~Install a promenade from Dunlawton Avenue to the Port Orange South Daytona Chamber of Commerce property to enhance and promote both views and access to the Halifax River;~~
- ~~Evaluate and carry out design improvements to the Dunlawton Avenue and Ridgewood Avenue intersection to emphasize a true “sense of arrival”;~~
- ~~Identify and promote suitable locations for shared parking and retention facilities;~~
- ~~Promote river based activities and events to attract citizens and tourist;~~
- ~~Develop the district in a manner consistent with the principles of New Urbanism; and,~~
- ~~Prepare an architectural design manual to be applied to development and redevelopment activity within the District.~~

Warehouse/Industrial

~~The uses in this category are intended to include construction, light manufacturing, warehouse and distribution related uses, and supporting office and service uses in order to provide for a convenient business environment competitive with other industrial parks in the Central Florida area. This category should be located in the vicinity of the FEC Railway and along the I-95 corridor. The intensity of permitted uses within this category shall be limited to a maximum floor area ratio (FAR) of 0.75. Retail and service uses may be integrated in an amount not to exceed 15% of the total floor area within an individual building or within any industrial/business park as a whole.~~

Future Land Use Map Amendments

~~Compatibility is defined as a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other. In reviewing proposed amendments to the Future Land Use Map, the City evaluates compatibility based on:~~

- ~~the density/intensity of the adjacent uses;~~
- ~~the locational criteria for the proposed use;~~
- ~~projected demand for services and infrastructure;~~
- ~~environmental conditions; and~~
- ~~the extent to which the amendment furthers the City’s goals for sustainability, mobility, and redevelopment.~~

Corridor Plans

~~The City’s Corridor Plans are to be considered as overlays of the goals, objectives, and policies of the Comprehensive Plan itself. However, the uses shown on the Future Land Use Map shall be the ultimate determinant for consistency with the Plan. The City has adopted the Dunlawton Corridor Plan, which is a detailed plan covering approximately 640 acres along Dunlawton Avenue. The plan details all aspects of development from infrastructure coordination to architectural and urban design controls. Since the Plan’s creation in 1989, the majority of the property along the Dunlawton corridor has been built out. The City intends to update the Plan to account for the development activity since that time and to include additional lands west of Williamson Boulevard planned for future development. The City also intends to create new Corridor Plans for its other major arterial corridors.~~

GOALS, OBJECTIVES AND POLICIES

GOAL 1: GENERAL LAND USE PATTERN [PREVIOUSLY GOAL 2]

THE CITY SHALL PROVIDE FOR A LAND USE PATTERN THAT PROMOTES THE HEALTH, SAFETY, AND GENERAL WELFARE OF THE CITIZENS OF PORT ORANGE WHILE REMAINING IN HARMONY WITH THE NATURAL ENVIRONMENT THROUGH THE ENCOURAGEMENT OF GREEN INFRASTRUCTURE, PROTECTION OF NATURAL HABITATS, PRESERVATION OF NEIGHBORHOOD CHARACTER, AND ENCOURAGEMENT OF MULTIMODAL TRANSPORTATION OPPORTUNITIES.

Objective 21.1: *Future Land Use Map.* The City's shall manage continued growth and development, including redevelopment, through land use designations identified in this Element and depicted on ~~shall be based upon~~ the Future Land Use Map; to provide sufficient land necessary to accommodate projected growth during the planning horizon while maintaining compatibility between uses. ~~which shall specify the desired development pattern for Port Orange through a land use category system that provides for the location, type, density, and intensity of development.~~ [PREVIOUSLY OBJ 2.1]

Policy 21.1.1: The Future Land Use Map shall contain the following categories, as described in this Element:

<u>Designation</u>		<u>Density</u>	<u>Intensity</u>
<u>Public / Institutional</u>			<u>0.2 FAR</u>
<u>Conservation</u>			<u>0.1 FAR</u>
<u>Recreation</u>			<u>0.5 FAR</u>
<u>Agricultural Preservation</u>		<u>1 unit per 10 acres</u>	<u>0.2 FAR</u>
<u>Residential Estate</u>		<u>1 unit per acre</u>	
<u>Rural Transition</u>		<u>0 - 2 units per acre</u>	
<u>Suburban Residential</u>		<u>2 - 4 units per acre</u>	
<u>Urban Medium-Density Residential</u>		<u>4 - 8 units per acre</u>	
<u>Urban High Density Residential</u>		<u>8 - 16 units per acre</u>	
<u>Office / Residential Transition¹</u>		<u>Up to 160 units per acre;</u>	<u>1.5 FAR</u>
		<u>75% to 100% office / institutional</u>	
		<u>Up to 25% commercial</u>	
		<u>Up to 25% Residential</u>	
<u>Commercial</u>	<u>Neighborhood Node</u>		<u>0.3 FAR</u>
	<u>Community Node</u>		<u>0.5 FAR</u>
	<u>Sub-Regional Node</u>		<u>0.75 FAR</u>
	<u>Regional Node</u>		<u>1.0 FAR</u>
	<u>Other</u>		<u>1.0 FAR</u>
<u>Mixed Use Center¹</u>		<u>16 units per acre</u>	<u>1.5 FAR</u>
		<u>50 – 90% Commercial</u>	

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<u>Designation</u>		<u>Density</u>	<u>Intensity</u>	
		<u>10 – 90% Office</u> <u>0 – 50% Residential</u> <u>0 – 35% Institutional</u>		
<u>Planned Community</u>	<u>Westside¹</u>	<u>4 units per acre (gross)</u> <u>Density varies across Micro Regions, up to 24 units/acre, so long as gross density does not exceed 4 units/acre.</u>	<u>Commercial: 0.25 FAR</u> <u>Industrial: 0.3 FAR</u> <u>Office: 0.35 FAR</u> <u>Individual lots may conditionally be developed at a max FAR of 1.00 in mixed-use Micro Regions.</u>	
		<u>Land Use</u>	<u>Minimum²</u>	<u>Maximum²</u>
		<u>Residential</u>	<u>35%</u>	<u>60%</u>
		<u>Commercial</u>	<u>10%</u>	<u>25%</u>
		<u>Industrial</u>	<u>10%</u>	<u>25%</u>
		<u>Mixed Use</u>	<u>10%</u>	<u>25%</u>
		<u>Conservation/ Recreation³</u>	<u>10%</u>	<u>No max</u>
	<u>Riverwalk</u>	<u>25 units per acre (gross), or 800 dwelling units</u>	<u>240,000 square feet Commercial</u> <u>51,700 square feet Office</u>	
<u>Warehouse / Industrial</u>			<u>0.75 FAR</u> <u>Retail / Service uses limited to 15%</u>	

1. ~~The Cumulative~~ mixture of uses shall not exceed 100%.
2. Minimum and maximum columns may be revised up to 2.5% per item without a comprehensive plan amendment since such changes are non-substantial and the impacts are similar, and provided the total does not exceed 100%.
3. Conservation / Recreation, as a land use sub-category, will not impact the regulation of jurisdictional wetlands.

A. Public/Institutional

This category includes publicly owned lands, such as schools, libraries, active recreation parks, City administrative offices and yards, utility plants, the City's wellfield properties west of Tomoka Farms Road, and transportation facilities. Also included in this category are lands for privately owned uses that serve public needs, such as franchise utility operations, hospitals, churches, schools, institutions, etc. The intensity of permitted uses within this category is limited to a maximum floor area ratio (FAR) of 0.2.

It is recognized that Public/Institutional uses are acceptable in a wide range of land use environments and, therefore, small and/or isolated properties of this type may be designated under adjoining land use types where appropriate. This land use category may be located wherever needed to serve the City's population, businesses, and infrastructure in the most efficient manner. However, it is recognized that such uses are acceptable in a wide range of land

~~use environments and, therefore, small and/or isolated properties of this type may be designated under adjoining land use types where appropriate.~~

[LAND USE DESC. MOVED FROM PAGE 1-6, SECTION: THE FUTURE LAND USE MAP]

B. Conservation

These areas include publicly or privately owned land deemed necessary or desirable for conservation. In the City, the majority of these areas are in the floodplains along the Halifax River, Spruce Creek, Rose Bay, and canals and streams leading into these water bodies. Also included in this category is the Spruce Creek Preserve located south of Spruce Creek. Development is restricted in these areas based on appropriate strategies for natural preservation, flood control, historic preservation, and passive recreation related to the specific site, as outlined in the Conservation Element. This land use category should be located as needed to protect environmentally sensitive areas pursuant to the Conservation Element. The intensity of permitted uses within this category is limited to a maximum floor area ratio (FAR) of 0.1.

[LAND USE DESC. MOVED FROM PAGE 1-6, SECTION: THE FUTURE LAND USE MAP]

C. Recreation

This land use category includes public, semi-public, or privately-owned areas intended for ~~active~~ recreational uses. Allowable uses within this category include ball fields, golf courses, archery ranges, sports complexes, contoured golf courses, public parks, picnic areas, gymnasiums, and other ~~active~~ recreational uses. The intensity of active recreation facilities within this category is limited to a maximum floor area ratio (FAR) of 0.5.

[LAND USE DESC. MOVED FROM PAGE 1-6/1-7, SECTION: THE FUTURE LAND USE MAP]

D. Agricultural Preservation (maximum 1 unit/10 acres)

There is less than one percent of the total land area in the City used for agriculture, and this land use category has not been applied to the Future Land Use Map. This category is intended to support the viability of the local agricultural economy and the production of the local food supply, on properties 10 acres in size or greater, and was designed for use in areas outside the ~~20-year~~current planning horizon. This land use category should be at the outer edge of the City's south and west sides, adjacent to existing agricultural land and residential areas in the Rural Transition or Residential Estate category. Housing density is limited to one unit per ten acres. Agricultural uses and certain limited agricultural related commercial uses may be permitted. The intensity of any agricultural related commercial uses within this category shall be limited to a maximum floor area ratio (FAR) of 0.2.

[LAND USE DESC. MOVED FROM PAGE 1-7, SECTION: THE FUTURE LAND USE MAP]

E. Residential Estate (1 unit/acre)

The Residential Estate land use category is intended to be an alternative form of development to Rural Transition and serve as a transition between rural land uses and urban land uses and may be applied to areas annexed into the City. This category is intended for large lot, single-family detached residential dwellings at a density of up to one (1) unit per gross acre. [NEW]

F. Rural Transition (0-2 units/acre)

The Rural Transition category includes rural-scale or large-lot (usually 1 to 2 acres) residential development that may also include accessory agricultural uses, based on the appropriate surrounding land use. This land use category should be located near Spruce Creek and its tributaries, and situated between Agricultural lands and areas of higher density/intensity. Residential development is limited to no more than two units per acre based on 1) location where environmental factors preclude more intense development; 2) a location that limits the efficient provision of urban level services; and 3) location adjacent to existing large lot development or active agriculture. Where urban services are available, smaller lots of 5,000 s.f. and greater are allowed, as long as sufficient open space and natural areas are preserved so as not to exceed the maximum allowable density.

[LAND USE DESC. MOVED FROM PAGE 1-7, SECTION: THE FUTURE LAND USE MAP]

G. Suburban Residential (2-4 units/acre)

Suburban residential areas are generally characterized by detached or attached single-family homes on lots one quarter-acre in size or more. Smaller lots of 5,000 s.f. and greater are allowed, as long as extensive surrounding open space is provided so as not to exceed the maximum allowable density. This land use category should be located in the areas between collector and arterial roads, with all residential properties generally within one mile of a neighborhood or community-level commercial node.

[LAND USE DESC. MOVED FROM PAGE 1-7, SECTION: THE FUTURE LAND USE MAP]

H. Urban Medium-Density Residential (4-8 units/acre)

The urban-scale medium-density residential category includes duplex, villa, cluster, townhouse, mobile home, manufactured or multi-family housing at densities of between four and eight units per acre. This land use category should be located adjacent to a community- or sub-regional-level commercial node or mixed-used center, along collector and arterial roads, and in areas designed to accommodate densities/intensities greater than those in the Suburban category.

[LAND USE DESC. MOVED FROM PAGE 1-7, SECTION: THE FUTURE LAND USE MAP]

I. Urban High-Density Residential (8-16 units/acre)

This residential category typically includes townhouses and multi-family housing at densities of between ~~eight~~ 8 and 16 units per acre. This land use

category should be located adjacent to a community- or sub-regional-level commercial node or mixed-used center, along arterial roads.

[LAND USE DESC. MOVED FROM PAGE 1-7/1-8, SECTION: THE FUTURE LAND USE MAP]

J. Office/Residential Transition (up to 160 units/acre)

The Office/Residential Transition designation is intended to provide a buffer between areas of high- and low-intensity use, especially between low-density residential areas and commercial nodes, and is intended to provide for an appropriate mix of uses along arterial roadways ~~as a means to~~ keep intensive commercial uses at major intersections, as consistent with the Comprehensive Plan. It will accommodate a mix of medium-intensity uses, such as general offices, medical and professional uses, retail sales, personal services, multi-family developments, adult care/retirement facilities, and institutional uses.

The *Office/Residential Transition* category allows uses with a maximum floor area ratio (FAR) of 1.50. Up to 100% of the land area within any development may include office and institutional uses. One quarter (25%) of the land area within any development may include commercial uses. One quarter (25%) of the land area within any development may incorporate residential uses at a density up to 160.0 units/acre, provided it is done as part of a mixed-use development with the uses mixed within the development as whole. Mixed-use developments shall be designed to reflect and/or encourage pedestrian-oriented development patterns ~~pleasing, livable, interesting places that are pedestrian-oriented~~ to maximize internal trip capture. Live-work units will be encouraged in this category. This category is appropriate along arterial roads, adjacent to commercial nodes, light industrial/heavy commercial areas, and residential areas.

Land Uses	Allowable Range as a Percent of Gross Land Area		
Residential	0 %	-	25%
Office/Institutional	75%	-	100%
Commercial	0%	-	25%

[LAND USE DESC. MOVED FROM PAGE 1-8, SECTION: THE FUTURE LAND USE MAP; ORT MODIFIED IN 2010 WITH PRIOR EAR-BASED AMENDMENT, ORDINANCE 2010-30, IN ACCORDANCE WITH DENSITY LIMITATIONS ON SMALL-SCALE AMENDMENTS. WITH THE INCREASE OF THE CAP OF SMALL-SCALE AMENDMENTS TO 50 UNITS PER ACRE, THE CITY IS RETURNING THIS DESIGNATION TO 16 UNITS PER ACRE.]

K. Commercial

Commercial land uses are those that provide for the retail sale of items and services to the general public. These areas consist of shopping centers, retail stores, restaurants, automobile service facilities, personal services, offices, and similar uses.

In locating commercial areas on the Future Land Use Map, the City has maintained the policy of designating commercial nodes at intersections of roadways. The functional classification of the adjacent roadways and size of the surrounding neighborhoods dictates the amount of commercial use designated within each node. Overall commercial nodes are generally defined as follows. The City may vary the relative radius distance in the locational criteria:

Neighborhood – generally designed to serve the convenience needs of neighborhood areas within a ±1-mile radius; FAR of 0.30.

Community – generally designed to serve the general shopping needs of areas within a ±2-mile radius; FAR of 0.50.

Sub-Regional – generally designed to serve the general and specialized shopping needs of the general population and visitors within a ±4-mile radius; FAR of 0.75.

Regional generally intended to serve the east central Florida regional market, with a mix of general, specialized, and highly specialized products, services, and attractions; FAR of 1.0.

Map Figure 1.109 shows the location of the existing commercial nodes. The intensity of permitted uses within this category not located within a node shall be limited to a maximum floor area ratio (FAR) of 1.0.

[LAND USE DESC. MOVED FROM PAGE 1-8/1-9, SECTION: THE FUTURE LAND USE MAP]

L. Mixed-Use Center

The purpose of this multiple-use category is to serve as an alternative to the single-use, community-level commercial node in certain settings. A mixed-use center contains a variety of land uses, which may include commercial, office, service, residential, and institutional development, and is focused around a point of high activity, such as an intersection of collector or higher-classified roads. It is intended to provide a concentration of services for adjacent neighborhoods and pass-by traffic. The land uses should be mixed, but commercial uses may dominate if necessary to achieve City redevelopment goals. Such centers may be located along arterial corridors which have bus service, at intersections with collectors or significant local roads.

Mixed-use centers should be designed to be convenient, maximize internal trip capture, promote personal interaction, reduce travel distance, and conserve energy. ~~They should be pedestrian-oriented so as to maximize internal trip capture.~~ To help achieve these objectives, the centers should include mixed-use development, multi-modal public transit facilities, pedestrian-oriented amenities, and high-quality building and site design.

The maximum density allowed in this category is 16 dwelling units per gross acre. The maximum floor area ratio (FAR) is 1.5. The allowable distribution of uses within each mixed-use center will be within the following ranges:

- commercial (not including office) 50%-90%;
- office 10% - 90%;
- residential 0% - 50%; and
- institutional 0% - 35%.

The cumulative mixture of percentages shall equal 100%.

[LAND USE DESC. MOVED FROM PAGE 1-9, SECTION: THE FUTURE LAND USE MAP]

M. Planned Community

The *Planned Community* future land use category is intended to provide ~~a flexible way~~ flexibility and creativity in designs which support ~~to create~~ integrated mixed-use communities in vacant areas slated for development, as well as in ~~officially~~ community redevelopment districts where the wholesale redevelopment of large tracts is envisioned.

The *Planned Community* category implements simultaneously under a single land use classification the promotion of innovative development patterns, efficient provision of City services, environmental protection, minimization of automobile trips, concentration of commercial and industrial development, and creation of a pedestrian-friendly community.

It promotes the creation of well-planned developments through the required use of “Planned Community” (PC) zoning and an overall Conceptual Development Plan (CDP). This category will allow the City to increase the available inventory of commercial, industrial, and institutional land uses by integrating them with residential uses in a harmonious fashion. The *Planned Community* category should be thought of as a unique planning *process*, rather than a specific development *plan*.

Currently, ~~t~~There are two areas in the City classified as *Planned Community*. The first area (Planned Community-Westside) is located between Tomoka Farms Road (SR 415) and I-95, and consists of approximately 1,200. The second (Planned Community-Riverwalk) corresponds to the City’s Riverwalk District, a 35.4-acre section of the Port Orange Town Center Redevelopment District. ~~The potential for the remaining area in the Port Orange Town Center to be included in this Planned Community area is still being studied.~~

Because each area is different, each will have its own unique standards for density, intensity, and mix of uses. However, each area must meet certain criteria in order to be

considered appropriate for the *Planned Community* designation. The process by which each area is rezoned will also be same.

Criteria for Assignment

The *Planned Community* future land use category may only be assigned to parcels or tracts of land meeting the following criteria:

- A minimum of 750 acres in size for vacant tracts, or 25 acres in size for ~~officially~~ designated community redevelopment districts, in order to provide sufficient land for the mix of uses necessary in a functionally integrated community.
- Adjacent to one or more existing and/or proposed arterial or collector roadways.
- Located within the City's urban service area.
- Abuts or is planned to abut City utility~~ies~~ lines and infrastructure, including potable water, sanitary sewer, and reclaimed water, if available.

Terminology

1. The overall property, as shown on the Conceptual Development Plan (CDP), shall be referred to as the Macro Region.
2. The Macro Region may be broken down into Districts, each with its own distinct development type, such as urban mixed-use, urban residential, suburban residential, commercial, etc. Districts are defined by building type and layout, rather than specific uses or densities/intensities.
3. Each District may be further subdivided into Micro Regions, which have specific permitted uses, setbacks, and densities/intensities.

Procedural Requirements

Any proposed development within the Planned Community future land use category shall meet the following procedural requirements:

1. The overall property shall first be rezoned to Planned Community "PC." A Macro CDP shall be prepared which shows the property boundary, the boundaries of each District, the boundaries and approved land use of all proposed Micro Regions, the existing and planned transportation network, and environmentally sensitive lands as defined in the Conservation Element.
2. When development within all or a portion of a Micro Region is proposed, the applicant shall prepare a Micro CDP, which shall indicate the proposed land uses, and the general location of internal collector street locations, proposed open space, utility corridors, external buffers, proposed master drainage facilities, and location within the District and Macro Region. Developments occurring in Micro Regions less than 25 acres in size may forego Micro-level review.
3. All final development plans within a Micro Region shall be approved through the City's standard site development and subdivision process.

Flexibility and Mixture of Uses

Each Planned Community shall incorporate a variety of uses, such as residential, commercial, industrial, and institutional. Existing agricultural uses shall be allowed to continue as an interim use until development occurs. The percentage distribution of each use is flexible in order to accommodate market trends. Unique ranges shall be established for each Planned Community. Development may occur in the ranges identified without the necessity for a comprehensive plan amendment so long as there is adequate infrastructure to serve the

intended development.

The City shall maintain a running inventory of the land use allocated within each Planned Community. As development occurs within these areas, the City shall ensure that the maximum ranges allowed for each type of land use are not exceeded. Adjustments to the allocation ranges described below shall require a large-scale comprehensive plan amendment subject to State review.

Each Planned Community shall be a mixed-use development that combines at least two of the four following land use subcategories: residential, commercial, office, industrial, or institutional (including recreational uses). The “PC” zoning district guidelines contain incentives to encourage the creation of mixed-use developments beyond the minimum percent established, particularly those which contribute to the establishment of an efficient urban development pattern. A list of incentives acceptable to the City includes:

- Higher allowable densities and intensities,
- Increased building coverage,
- Reduced parking requirements, and
- Reduced landscaping requirements.

Compliance with Florida Statutes

The land use designation Planned Community does not supersede or circumvent any requirements for State permitting or approval. Nor will the City’s efforts in requiring property owners to cooperate with the City’s long-range planning be intended to imply or require that permits and approvals from State agencies be prematurely obtained.

Planned Community-Westside

The following standards apply to Planned Community-Westside.

Density/Intensity

Planned Community-Westside shall allow a maximum gross residential density of 4 units/acre (4,804 d.u. based on 1,201 acres). The density within mixed-use Micro Regions may be as high as 24 units/acre, so long as the gross density of the overall project does not exceed 4 units/acre. Gross non-residential intensity shall be limited to a maximum floor area ratio (FAR) of 0.25 for commercial uses, 0.30 for industrial uses, and 0.35 for office use. In mixed-use Micro Regions where master-planned stormwater drainage facilities exist or are planned, individual lots may be developed with a maximum FAR of 1.00, so long as the gross FAR for the overall development does not exceed the maximum limits listed above.

Distribution of Uses

The following table identifies each of the land uses required in Planned Community-Westside, expressed as an allowable percentage of the overall project’s total acreage. The commercial sub-category may include office-type uses. The conservation/recreation sub-category does not include “open space” or pervious surface area normally required as part of the Planned Community zoning process.

<i>Land Use Sub-category</i>	<i>Allowable Range as a Percent Of Total Project Acreage¹</i>
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FUTURE LAND USE ELEMENT

	Minimum ²		Maximum ²
Residential	35%	-	60%
Commercial	10%	-	25%
Industrial	10%	-	25%
Mixed Use (Town Center)	10%	-	25%
Conservation/Recreation ³	10%	-	No max.

¹ Cumulative mixture of percentages shall equal 100%.

² Minimum and maximum columns may be revised up to 2.5% per item without a comprehensive plan amendment since such changes are non-substantial and the impacts are similar, and provided the total does not exceed 100%.

³ Conservation/recreation, as a land use sub-category, will not impact the regulation of jurisdictional wetlands.

Maximum Vehicle Trips

The number of trips generated as a result of development in Planned Community-Westside shall not exceed 62,600 trips per day. This number is equal to that which would be generated by the land uses that were shown on the adopted Future Land Use Map and the programmed roadway network conditions as of June 25, 2001. The future land uses in Planned Community-Westside as of that date are as follows:

Agricultural Residential (0-2 units/acre)	423 acres
Suburban Residential (2-4 units/acre)	407 acres
Urban Low Density Residential (4-8 units/acre)	93 acres
Urban High Density Residential (8-16 units/acre)	61 acres
Office/Residential Transition	13 acres
Commercial	41 acres
Warehouse/Industrial	89 acres
Right-of-way	74 acres
Total	1,201 acres

The total number of daily trips as described herein can only increase commensurate with the appropriate modifications made to the comprehensive plan reflecting improved road network conditions. The City shall monitor the roadway conditions in and adjacent to Planned Community-Westside and shall report its findings to ~~FloridaCommerceDEO~~, FDOT District 5, River To Sea TPO, Volusia County, and the City of Daytona Beach as described in the Transportation Element, Policy ~~2.2.43.2.2~~.

General Design Standards

Planned Community-Westside shall meet the following general design standards:

- A primary “town center” shall be created for the overall project that includes a mixture of uses (residential, commercial, institutional, and recreation), and a variety of housing types. The location of the town center shall be shown on the CDP for the Macro Region. The town center shall be relatively compact in design, and may be developed at the maximum density/intensity. High-density residential units should be clustered into the town center in order to support convenience/service uses, local employment, or mass transit use. A portion of overall project conservation/recreation area shall be in the form of a “town square” or public park.

- Internal connectivity should be provided for pedestrian, bicycle, and automobile modes ~~so as to~~ reduce the number of external trips and provide transit service options.
- Single-family housing may be constructed on a variety of lot sizes that are intermixed throughout each Micro Region.
- Projects should be designed with special consideration given to compatibility with the surrounding uses and any adjacent developments. Compatibility is defined as a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other. In general, density and intensity shall decrease toward the south and west. This will ensure that the higher intensity uses will be located where the infrastructure exists to serve them (adjacent to I-95), and where they will not impact lower intensity uses (adjacent to Tomoka Farms Road). In addition, buffering between areas of different intensity will be accomplished through a variety of mechanisms permitted by the City's Land Development Code.

Planned Community-Riverwalk

This land use designation implements the Riverwalk component of the Port Orange Town Center Redevelopment Plan.

Planned Community-Riverwalk is 35.4 acres and is composed of several land uses including mixed-use, recreational, commercial, office, residential, and civic land uses, among others. These land uses shall be integrated into a walkable community on the Halifax riverbank.

Community Standards

The following standards apply to Planned Community –Riverwalk.

Density/Intensity

The Riverwalk District shall allow a maximum gross residential density of 25 units/acre.

Distribution of Uses

The following table identifies the land uses allowed in Planned Community –Riverwalk, expressed as number of dwelling units or gross square footage.

<i>Land Use Sub-Category</i>	<i>Maximum Number Of Dwelling Units Or Square Footage</i>	
	<i>Dwelling Units</i>	<i>Square Footage</i>
<i>Residential</i>	800	N/A
<i>Commercial</i>	N/A	240,000
<i>Office</i>	N/A	51,700

Recreation and Open Space

Recreation facilities and open space areas will focus on then natural amenities and both active and passive recreation opportunities provided by the Halifax River. It is envisioned that the existing marina will be utilized promoting public access to the Halifax River; additionally, a boardwalk and passive parks will be provided.

General Goals and Design Standards

Planned Community –Riverwalk shall meet the following special character district goals and objectives stated in consistent with Section 5.2.1 of the Port Orange Town Center CRA Redevelopment Plan (below). Also, from the plan “The area shall be recognized as a pedestrian friendly, mixed-use entertainment location, which boasts a Florida Vernacular

~~style of architecture; a compact built environment; a grid network of narrow streets; pathways leading to public spaces; attractive views and vistas; and a nautical theme.”~~

- ~~• Develop a unique riverfront location based on a healthy mix of entertainment, retail, office, and housing uses;~~
 - ~~• Install a promenade from Dunlawton Avenue to the Port Orange South Daytona Chamber of Commerce property to enhance and promote both views and access to the Halifax River;~~
 - ~~• Evaluate and carry out design improvements to the Dunlawton Avenue and Ridgewood Avenue intersection to emphasize a true “sense of arrival”;~~
 - ~~• Identify and promote suitable locations for shared parking and retention facilities;~~
 - ~~• Promote river-based activities and events to attract citizens and tourist;~~
 - ~~• Develop the district in a manner consistent with the principles of New Urbanism;~~
- ~~and,
Prepare an architectural design manual to be applied to development and redevelopment activity within the District.~~

[LAND USE DESC. MOVED FROM PAGE 1-9 – 1-14, SECTION: THE FUTURE LAND USE MAP]

N. Warehouse/Industrial

The uses in this category are intended to include construction, light manufacturing, warehouse and distribution related uses, and supporting office and service uses in order to provide for a convenient business environment competitive with other industrial parks in the Central Florida area. This category should be located in the vicinity of the Florida East Coast (FEC) Railway and along the I-95 corridor. The intensity of permitted uses within this category shall be limited to a maximum floor area ratio (FAR) of 0.75. Retail and service uses may be integrated in an amount not to exceed 15% of the total floor area within an individual building or within any industrial/business park as a whole.

[LAND USE DESC. MOVED FROM PAGE 1-14, SECTION: THE FUTURE LAND USE MAP]

~~*Policy 21.1.2: The Land Use Plan shall provide for compatible land use transition through an orderly land use arrangement, proper buffering, and the use of appropriate physical and natural separators. Compatibility is defined as a condition in which dissimilar land uses can co-exist in relative proximity to one another in a stable fashion over time, such that neither use is unduly negatively impacted by the other. The City shall promote compatibility between Future Land Use categories using the parameters defined in Policy 1.1.1, standards provided in the LDC and the following best practices:*~~

- ~~A. Non-residential uses shall mitigate the visual and physical impacts of the use through methods defined in the LDC, such as Require compatibility between commercial areas and adjacent lower intensity uses through the use of landscaping, open space buffering, setbacks, and appropriate transitions of building scale/massing, and architectural design. Such methods shall be used to enhance compatibility when non-residential uses are adjacent to lower-intensity uses.~~
- ~~B. Low-intensity uses shall not enroach on established high-intensity development areas.~~

- C. The LDC shall incorporate standards and/or review criteria for mandating retention of open space, regulating building design, including setbacks, building placement on site, and building orientation. These provisions shall be directed toward supporting compatibility as well as to preserving light, air, and open space. Other reasonable design principles, including buffering standards, shall be included in the LDC.
- D. The LDC shall incorporate performance standards, urban service availability standards, and other requirements which ensure buffering between urban and rural land uses. This is necessary in order to maintain responsive land management policies along the outer suburban fringe where urban development within the City could potentially impact unincorporated agricultural lands, and vice versa.

[PREVIOUSLY POLICY 2.1.2, REVISED]

Policy 2.1.1.3: In addition to requirements within Chapter 163, Florida Statutes, and the Florida Administrative Code, the evaluation of amendments to the Future Land Use Map shall be guided by the following criteria and the Goals, Objectives, and Policies of this Plan. ~~The criteria below are a general policy guide.~~ Each amendment shall be reviewed on a ~~ease-by-ease~~case-by-case basis. Amendments are expected to be consistent with several, but not necessarily all, criteria below and result in an overall positive impact. The proposed amendment:

- A. ~~The~~ Contains compatible changes in uses, density, and intensity based on surrounding development and land uses;
- B. Further ~~ance of~~ the City's Vision;
- C. Further ~~ance of~~ the City's Sustainability Strategies defined in this Element;
- D. Does not violate ~~t~~ The locational criteria for the proposed category and the adjacent categories;
- E. Contains ~~The~~ environmentally suitable ility of the uses, densities, and intensities ~~proposed;~~
- F. Does not adversely ~~The impact of the proposed land use on~~ water quality and quantity, and or increase the potential for flooding;
- G. ~~Furtherance of energy efficient land use patterns and a r~~ Reduction in vehicle miles traveled;
- H. Does not adversely ~~The impact on~~ the City's transportation network, and the City's Transportation Concurrency Exception Area (TCEA) and further ~~the City's~~ mobility strategies;
- I. Will be supported by ~~The accessibility to the~~ necessary infrastructure and public services, and an analysis of the availability of adequate public facilities without reducing levels-of-service below ~~based on the adopted level-of-service~~ standards;
- J. Will be adequately served with ~~t~~ The availability of water supply, the existing Consumptive Use Permit capacity, and the existing production facilities capacity based on the adopted level-of-service standards;
- K. Reduces or maintains the ~~Whether the change reduces~~ evacuation times beyond below or within 12 hours; and
- L. Does not contribute to ~~The discouragement of~~ urban sprawl, a development pattern characterized by low density, automobile-dependent development with either a single use or multiple uses that are not functionallty related,

requiring the extension of public facilities and services in an inefficient manner, and failing to provide a clear separation between urban and rural uses.

[PREVIOUSLY POLICY 2.1.3, REVISED; ALSO COMBINES 1.6.2 AND 3.1.1]

~~*Policy 2.1.4:* It is recognized that Public/Institutional uses are acceptable in a wide range of land use environments and, therefore, small and/or isolated properties of this type may be designated under any land use category where appropriate, as determined by the Administrative Official.~~

[ADDRESSED IN POLICY 1.1.1A]

~~*Policy 2.1.45:* When there are disputes to land use category boundaries on the Future Land Use Map, interpretations of these boundaries shall be made by the Administrative Official. The Administrative Official may adjust said boundaries within 660 feet, to accommodate property lines, rights-of-way, or easements, and to allow extension to major physical or ~~man-made~~man-made boundaries. Boundaries shall not be expanded in such a manner that they encroach into established residential areas. Appeals from the decision of any interpretations made by the Administrative Official shall be made through the Local Planning Agency, which shall determine consistency with the Plan.~~

~~*Policy 2.1.6:* Development of parcels 6214-01-03-0010 and 6214-01-03-0020 shall be limited to a density of one unit per one acre.~~ **[MOVED TO OBJECTIVE 1.4]**

Objective 2.2: *Land Development Code.* Future growth and development will be managed through the use of the LDC ~~Land Development Code~~, in a manner consistent with the Future Land Use Map and Comprehensive Plan.

~~*Policy 2.2.1:* The City's LDC ~~Land Development Code~~ and Official Zoning Map shall be maintained to permit the use and development of land in accordance with the Future Land Use Map and the Comprehensive Plan.~~

~~*Policy 2.2.2:* The City shall maintain in the LDC a Future Land Use and Zoning Compatibility ~~keep on file a zoning matrix which identifies the~~links zoning districts allowed in each to ~~corresponding to future land use categories.~~ This matrix ~~It shall be used as a guide~~ Zoning Map amendmentswhen determining appropriate zoning for land and reviewing rezoning requests.~~

~~*Policy 2.2.3:* The City shall review and revise its LDC annually to refine and improve its regulatory techniques so that they allow and encourage the type of development that furthers the City's sustainability goals.~~

Objective 21.3: Environmental Protection. Consistent with the Conservation Element, the City shall maintain the environment, including clean air and water, forests, native habitats, and natural resources, by protecting and preserving environmentally significant areas and open space. The City shall coordinate the intensity of future development with the natural constraints of an area such as topography, soils, floodplains, wetlands, and significant wildlife habitat.

Policy 12.3.1: The City shall work with federal, state, regional, and local agencies to purchase or acquire environmentally sensitive lands such as floodplains, wetlands, natural ecological communities, and potential habitats of endangered or listed species, as funds become available, consistent with the Conservation Element.

Policy 21.3.2: In the LDC, the City shall maintain ~~Continue the use of land development~~ regulations and site planning techniques to protect the capacity and natural function of floodplains, incorporate specimen trees, significant natural areas, and natural vegetation into site design in order to increase open space while protecting natural assets.

Policy 21.3.3: -In accordance with the provisions of the Conservation Element and Public Facilities Element, the City shall employ land use planning, zoning, and buffering mechanisms as appropriate to protect the City's potable water wellfields.

Policy 12.3.4: The City shall manage the tree canopy through LDC site design landscaping and tree preservation requirements as well as ~~Continue to increase the tree canopy throughout on the City-owned property where feasible through environmental protection regulations,~~ in accordance with the provisions of the Conservation Element.

Policy 12.3.5: In addition to environmentally friendly development promoted in Objective 2.1, the City shall encourage ~~Promote and provide incentives for designs that respect the natural function of ecosystems and integrate natural vegetation, natural hydrology, and Low Impact Development (LID) principles for development and redevelopment, as well as consider incentivizing LID.~~ The City shall encourage new developments to address future nutrient loading and water conservation through principles including but not limited to:

- a) LID design practices and technologies that address energy, water, and nutrient conservation;
- b) Use of natural, Florida-friendly landscaping; and/or
- c) Reduced, low, or no fertilizer use on greenspaces and yards.

Policy 2.3.6: ~~To support the protection and enhancement of environmentally sensitive corridors, wildlife habitat, connected wetlands, and natural hydrologic functions throughout Volusia County and the City of Port Orange. [DELETED]~~

Policy 21.3.67: To support the protection and enhancement of environmentally sensitive corridors, wildlife habitat, connected wetlands, and natural hydrologic functions throughout Volusia County and the City of Port Orange, the City adopts the Environmental Core Overlay or “ECO” Map as a component of the Future Land Use Map series. **[PREVIOUSLY 1.3.7]**

Policy 21.3.78: Consistent with the Intergovernmental Coordination Element, ~~The~~ City will actively participate with the County and local jurisdictions in the further development of policies that serve to manage future development that occurs within developable tracts of the adopted ECO Map. **[PREVIOUSLY 1.3.8]**

Policy 21.3.98: Where land is partially or fully within ECO, the owner(s)/developer(s) shall be encouraged to utilize innovative land planning and flexible land development techniques such as transfer of development rights, conservation subdivisions, clustering, ~~Low Impact Development (LID),~~ Waterwise Development, Firewise Development, United States Green Building Council LEED Certified development, Florida Green Building Coalition designations, or other similar development certifications which promote sustainability. **[PREVIOUSLY 1.3.9]**

Objective 21.4: Intergovernmental Coordination. ~~Co-location of Schools. The City will~~ continue to work cooperatively with the Volusia County School District Board, Volusia Growth Management Commission (VGMC), and adjoining jurisdictions to ensure proper siting of specific uses and compatibility between jurisdictions. ~~to locate new schools in or near urban areas, and to the extent possible, co-locate them with public parks, libraries, and community centers.~~ **[PREVIOUSLY 2.4]**

Policy 21.4.1: The City will ~~Coordinate,~~ through interlocal agreement, the siting of public educational facilities in or near urban areas and, to the extent possible, co-locate them with public parks, libraries, and community centers, ~~and the review of site plans with Volusia County and the Volusia County School District Board.~~ **[PREVIOUSLY 2.4.1, COMBINES OBJECTIVE 2.4 INTO THIS POLICY]**

Policy 21.4.2: The City will ~~Coordinate~~ long-range planning efforts with the School Board so that school sites can be acquired well in advance of the need for these schools, making every effort to include county planners, parks and recreation planners, library system planners, and the general public in the school siting process. **[PREVIOUSLY 2.4.2]**

Policy 21.4.3: The City shall endeavor to make schools and their location the focal point for new developments where schools are located, in a manner that is compatible with compact urban growth patterns. Where possible, the City shall encourage the co-location of community facilities with new schools as follows:

- A. Elementary Schools - playgrounds, neighborhood parks with facilities for the elderly, neighborhood recreation centers, and library sub-branches.
- B. Middle Schools - community parks, athletic fields, community centers, and library branches or sub-branches.
- C. High Schools and Colleges - community or district parks with community centers, athletic fields, main libraries or library branches. **[PREVIOUSLY 2.4.3]**

Policy 21.4.4: The City shall encourage the School ~~Board~~District to locate proposed school sites away from industrial uses, major arterial roadways and railroads to avoid the noise, odors, dust, and traffic impacts and hazards caused by such uses. To avoid the disrupting influences caused by school yard noise and traffic, the City shall further encourage the School ~~Board~~District to locate schools sufficient distances from hospitals, adult communities, nursing homes, and similar land uses. **[PREVIOUSLY 2.4.4]**

Policy 21.4.5: The City shall assist the School ~~Board~~District in finding school sites that are:

- A. Located as centrally as possible within their intended attendance zones;
- B. Sufficient in size;
- C. Located away from floodplains, flood-prone areas, wetlands, environmentally sensitive areas, coastal high hazard areas, and historic or archaeological resources;
- D. Serviceable by potable water, sanitary sewer, reclaimed water, and stormwater drainage systems;
- E. Accessible from a collector road and do not create detrimental impacts on adjacent roads;
- F. Safe for pedestrians, bicycles, cars, and buses; and
- G. Serviceable by local mass transit. **[PREVIOUSLY 2.4.5]**

Policy 21.4.6: The City shall allow low-intensity public schools, such as elementary and middle schools, in the Public/Institutional, Residential Estate, Rural Transition, Suburban Residential, Urban Medium-Density Residential, Urban High-Density Residential, Office/Residential Transition, and Planned Community-Westside land use categories subject to the rezoning of Government/Public Use (GPU), if applicable. Elementary schools should be located predominately in areas with the housing types and densities to meet the school's enrollment capacity with students that are predominantly within walking distance of the school. Middle schools may be located in areas with a mix of residential and commercial uses. **[PREVIOUSLY 2.4.6]**

Policy ~~2~~1.4.7: The City shall allow high-intensity public schools, such as high schools and colleges, in the Public/Institutional, Urban High-Density Residential, Commercial, and Office/Residential Transition land use categories subject to the rezoning of Government/Public Use (GPU), if applicable. High-intensity schools should be buffered from residential areas as much as possible. **[PREVIOUSLY 2.4.7]**

Policy ~~12~~1.4.8: The Land Development Code shall allow public educational facilities as permitted uses with special development criteria in appropriate zoning districts subject to the interlocal agreement with the Volusia County School ~~Board~~District. **[PREVIOUSLY 2.4.8]**

Policy ~~2~~1.4.9: The City may administratively rezone public school sites to Government/Public Use (GPU). **[PREVIOUSLY 2.4.9]**

Policy ~~1.4.102.5.2:~~ The City shall ~~C~~continue to work with Volusia County and adjacent cities, as applicable, to effectively plan for the location, timing, and form of anticipated urban expansion areas. **[PREVIOUSLY 2.5.2]**

Policy ~~1.4.112.5.3:~~ Consistent with the Intergovernmental Coordination Element, ~~T~~the City shall work with adjacent jurisdictions and intergovernmental coordination committees in siting locally unpopular public and private land uses, with consideration to the area of population served, the impact on land development patterns or important natural resources, and the cost-effectiveness of service delivery. **[PREVIOUSLY 2.5.3]**

Policy ~~1.4.12.5.4:~~ The City shall ~~C~~consider adjoining existing land use and future land use plans when reviewing development proposals within the City that are adjacent neighboring jurisdictional boundaries. **[PREVIOUSLY 2.5.1]**

~~**Objective 2.5: Compatibility with Adjoining Jurisdictions.** Require that land uses are compatible with that of adjoining jurisdictions, as defined by this Plan.~~
[PREVIOUSLY 2.5, COMBINED INTO OBJECTIVE 1.4]

Policy ~~1.34.13:~~ The City shall monitor the roadway conditions and transportation network in and adjacent to Planned Community-Westside, and shall report its findings to the City of Daytona Beach, Volusia County, River To Sea TPO, ~~FloridaCommerce~~DEQ, and FDOT District 5 on an annual basis. **[PREVIOUSLY 1.3.4]**

Policy ~~1.34.14:~~ The City shall limit trips from the City wellfield properties so as not to cause any part of the Volusia County thoroughfare network to operate below the adopted level of service. **[PREVIOUSLY 1.3.5]**

Policy ~~1.34.15:~~ The City shall limit trips from Cracker Creek [parcel numbers 6330-00-00-0160; 6330-00-00-0180; 6330-00-00-0170; 6225-03-00-0070] so as ~~to~~ not to create a significant impact on the Volusia County thoroughfare network and State roadway facilities. **[PREVIOUSLY 1.3.6]**

~~*Policy 1.4.162.1.6:*~~ In accordance with Ordinance 2012-24, development of parcels 6214-01-03-0010 and 6214-01-03-0020 shall be limited to a density of one unit per one acre. **[PREVIOUSLY 2.1.6]**

Objective 12.56: *Non-conformities.* Existing land uses that are inconsistent or incompatible with the City's Land Use Plan shall be eliminated as development and redevelopment occurs. **[PREVIOUSLY 2.6]**

~~*Policy 21.56.1:*~~ Continue to prohibit the proliferation of incompatible uses through the use of the Future Land Use Plan and Land Development Code. **[PREVIOUSLY 2.6.1]**

~~*Policy 12.56.2:*~~ All non-conforming structures and uses of land shall be discontinued or otherwise made to conform with the provisions of the City's Comprehensive Plan, Land Development Code, and the Local Mitigation Strategy, through the use of rezonings, the development review process, the Commercial Property Maintenance Program, and other appropriate mechanisms. **[PREVIOUSLY 2.6.2]**

Objective 12.67: *Historic Resources.* In cooperation with the Florida Department of State, Division of Historic Resources and in accord with the Housing Element, ~~the City shall through the LDC continue the use of land development regulations to~~ protect, preserve, and rehabilitate identified or potential significant historic and archaeological resources. **[PREVIOUSLY 2.7]**

~~*Policy 12.67.1:*~~ In accordance with the Recreation and Open Space Element, as well as the Conservation Element, include historic and archaeological resources in land acquisition programs for open space, recreation, preservation, or conservation. **[PREVIOUSLY 2.7.1]**

~~*Policy 2.7.2:*~~ ~~Continue the use of land development regulations to protect identified archaeological sites by incorporating them into open space areas.~~ **[DELETED, REDUNDANT WITH 2.7.1]**

~~*Policy 2.7.3:*~~ ~~Where the preservation of historic structures per Policies 2.7.1 and 2.7.2 above is not possible, the City shall permit the relocation of such structures so long as they can be moved without noticeable damage to a location of similar historic character.~~ **[DELETED, NOT NEEDED]**

~~*Policy 2.7.4:*~~ ~~Maintain a common database to include survey information, a complete set of Florida Master Site file forms for all recorded sites and archival materials.~~ **[DELETED, NOT NEEDED]**

~~*Policy 1.6.2.7.5:*~~ Nominate eligible historic and archaeological resources to the National Register of Historic Places. **[PREVIOUSLY 2.7.5]**

~~*Policy 1.6.32.7.6:*~~ As applicable, the City will engage with ~~Solicit input from various local, regional, and state, agencies, and interest groups to identify, for ways to better~~

~~protect, preserve, and rehabilitate historic and archaeological resources, including providing plaques to sites as appropriate, identifying issues, and defining solutions. [COMBINES 2.7.6, 2.7.9, AND 2.7.10] [PREVIOUSLY 2.7.6]~~

~~*Policy 1.6.42.7.7:* The Encourage the City's Building Official and Code Enforcement staff will work together to use the Florida Building Code and International Property Maintenance Code to facilitate and encourage the protection, preservation, and rehabilitation of historic properties. [COMBINES 2.7.7 WITH 2.7.8] [PREVIOUSLY 2.7.7]~~

~~*Policy 2.7.8:* Code Enforcement staff shall be trained to identify and cite historic properties that suffer from decline. [CONSOLIDATED WITH 2.7.7]~~

~~*Policy 2.7.9:* Assist preservation interest groups in identifying existing and potential local historic preservation problems and in addressing solutions to those problems. [CONSOLIDATED WITH 2.7.6]~~

~~*Policy 2.7.10:* Solicit a sponsor to provide plaques that recognize locally designated historic and archaeologic sites. [CONSOLIDATED WITH 2.7.6]~~

~~*Policy 1.6.52.7.11:* The City will, when feasible, support the local historic society's efforts Continue to share the City's interest in its history through its informative booklet, *A Town Called Port Orange*. [PREVIOUSLY 2.7.11]~~

~~***Objective 2.8: Urban Sprawl.*** The City shall manage the available supply of developable land by delineating the amount of land and by distributing the types of land uses needed to accommodate growth and development. The City shall, through intergovernmental coordination, discourage urban sprawl by directing urban development to the areas within its urban service area boundaries. [PREVIOUSLY 2.8, CONSOLIDATED INTO OBJECTIVE 2.3]~~

~~*Policy 2.8.1:* The City shall limit urban sprawl by directing urban growth to those areas where public facilities and services are available. [PREVIOUSLY 2.8.1, CONSOLIDATED INTO OBJECTIVE 2.3]~~

~~*Policy 2.8.2:* Future urban development requiring access or connection to public facilities shall be located within the incorporated area or within the designated urban service boundaries in the unincorporated areas established by interlocal agreement. [PREVIOUSLY 2.8.2, CONSOLIDATED INTO OBJECTIVE 2.3]~~

~~*Policy 2.8.3:* In order to protect natural resources, new development and redevelopment shall be encouraged to go into existing developed areas as infill. [PREVIOUSLY 2.8.3] [CONSOLIDATED INTO OBJECTIVE 2.3]~~

~~***Objective 1.67: Impacts of Development.*** The City shall require impacts of development activities to be mitigated through design and performance standards. [PREVIOUSLY OBJECTIVE 1.6]~~

Policy 1.7.16.1: In accordance with the Intergovernmental Coordination Element,
~~the City shall work with relevant local, regional, and state agencies to update its~~
~~development review procedures and mitigation performance standards, as needed.~~
[PREVIOUSLY OBJECTIVE 1.6.1]

Policy 1.7.25.3: The City shall promote local, regional, and state programs, investments, ~~and~~ development, and redevelopment activities which encourage efficient, compatible development ~~and occur in areas which will have where~~ the capacity is available to service new population and commerce. [PREVIOUSLY OBJECTIVE 1.5.3]

Policy 1.7.36.4: The City shall ~~Ensure~~ that the exterior treatment of buildings and other site structural components are aesthetically sensitive to that of the surrounding area. [PREVIOUSLY 1.6.4]

~~*Policy 1.6.2:* Require compatibility between commercial areas and adjacent lower intensity uses through the use of landscaping, open space buffering, and appropriate transitions of building scale, mass, and architectural design, while still providing adequate access between uses.~~ [MOVED TO 1.1.2]

~~*Policy 1.6.3:* Mitigate the visual and physical impacts of parking areas to surrounding residential development and public right of way with interior parking lot and perimeter landscaping.~~ [MOVED TO 1.1.2]

~~*Policy 1.6.4:* Ensure that the exterior treatment of buildings and other site structural components are aesthetically sensitive to that of the surrounding area.~~ [COVERED BY ABOVE POLICY]

Policy 1.67.45: The City will ~~Require~~ a compact and creative pattern of commercial development as compared to inefficient incremental strip development through land use policy and zoning requirements. [PREVIOUSLY OBJECTIVE 1.6.5]

Policy 1.67.56: The City will ~~Utilize~~ site design criteria that consider accessibility, aesthetics, internal function, and energy efficiency. [PREVIOUSLY OBJECTIVE 1.6.6]

~~*Policy 1.7.64.1.5:* Mitigate~~ The visual and physical impacts of multi-family development shall be mitigated with architectural and landscaping treatment standards. [PREVIOUSLY 4.1.5]

Policy 1.7.71.6.7: The City shall ~~Require~~ landscape buffering along roads to respect both the impacts of traffic on land uses and the safety and enjoyment of motorists and pedestrians. [PREVIOUSLY 1.6.7]

Policy 1.7.81.6.8: The City shall ~~Require~~ pedestrian and other intermodal connections between developments where there is the potential for interaction between the uses. [PREVIOUSLY 1.6.8]

Policy 1.6.7.9: Where applicable, the City shall request that the Florida Division of Forestry conduct a wildfire assessment as part of the development review process. **[PREVIOUSLY OBJECTIVE 1.6.9]**

Policy 1.6.10: Where applicable, new developments shall be encouraged to adhere to the fire safety standards outlined in the Florida Division of Forestry publication, “*Wildfire Mitigation in Florida*”. These standards can significantly reduce the disastrous loss of life, property, and resources resulting from wildfire in the wildland/urban interface fire hazard areas. **[PREVIOUSLY OBJECTIVE 1.6.10]**

GOAL 12: SUSTAINABILITY

GROWTH WITHIN THE PLAN’S HORIZON WILL BE MANAGED USING SUSTAINABILITY AND SMART GROWTH PRINCIPLES WHICH SUPPORT DEVELOPMENT AND REDEVELOPMENT. [PREVIOUSLY GOAL 1] PROVIDE FOR DEVELOPMENT THAT MEETS THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THEIR OWN NEEDS.

Objective 12.1: ~~Energy Efficiency~~ Contextual Sensitivity. The City will ~~Promote~~ encourage compact, mixed-use, and ~~energy efficient~~ environmentally friendly development arranged to encourage pedestrians, bicycle, and transit use, leading to a more sustainable community and a reduction in ~~greenhouse gases (GHGs)~~ environmental impact. **[PREVIOUSLY 1.1]**

Policy 12.1.1: ~~The City will Explore various funding opportunities to assist in developing City sustainability, resiliency, and/or emerging technology strategies that focus on reducing climate change and improve community preparedness, as well as GHGs emissions baseline data, in order to set GHG emission goals, to develop strategies to reduce climate change and to mitigate and adapt to its impacts.~~ **[PREVIOUSLY 1.1.1]**

Objective 3.4: ~~Design of Commercial and Industrial Developments. Commercial and industrial development will be designed to~~ Policy 2.1.2: The City shall promote sustainable urban design, enhance access and circulation, and result in promote a positive, attractive, and resilient built environment through the following efforts: **[PREVIOUSLY 3.4]**

- a. Encourage energy and resource efficient technology in existing residential and non-residential development including via redevelopment, as well as new development.
- b. Support technology and practices that enable people to work from home, including flexibility for home office uses.
- c. Encourage food production for local consumption by permitting community gardens, farmers markets, and other uses key to local food networks in the LDC.
- d. Encourage and permit sustainable solutions, such as cluster development,

- passive solar design, green roofs, and alternative and renewable energy sources.
- e. Support green building practices through the City's Green Building program.
- f. Endorse maximization of natural areas and assets, as well as the incorporation of Florida Friendly Landscaping, in accord with the Conservation Element.
- g. Create, protect, and manage green infrastructure, such as urban forests, parks and open spaces, green roofs, and natural drainage systems, in accord with the Conservation Element.
- h. Explore implementing enhanced site design requirements in the LDC to reduce negative environmental effects of development.
- i. Encourage development at an appropriate scale, form, and density / intensity to support economical and efficient public transit service.
- j. The City, at its discretion, may develop and implement a Transfer of Development Rights (TDR) Program, which may include but not be limited to the following:
 - i. Transfer rates and requirements in order to direct development away from targeted (identified) areas.
 - ii. Target areas may include conservation lands, the Coastal High Hazard Area (CHHA), Historic Resources, public open spaces, and wetlands or other native habitats.
 - iii. Incentives established through the TDR process may include density and intensity bonuses based on the quality of the areas being protected and preserved, provision of public spaces, public infrastructure improvements or similar.
 - iv. TDRs shall only be utilized within the City limits for transfer and recipient sites.
- k. Traffic flows within commercial areas shall be designed with internal access, limited curb cuts, and interconnections between various sites to minimize impacts on the thoroughfare network; and adequate parking and safe and convenient traffic flow shall be required on all sites, based on Code requirements and best design practices. **[PREVIOUSLY 3.4.1]**
- l. The City will continue to implement sign regulations requiring stringent, low-key signage programs to protect and enhance the City's visual image. **[PREVIOUSLY 3.4.2]**
- m. The City will continue to require tree preservation and vigorous landscaping requirements to protect and enhance the City's visual image. **[PREVIOUSLY 3.4.3]**
- n. The City will continue to promote attractive architectural design through its Land Development Code and architectural compatibility for multiple buildings within planned commercial developments. **[PREVIOUSLY 3.4.4]**
- o. The City shall continue to promote pedestrian amenities in association with new construction and renovation/redevelopment, including, but not limited to, the provision of sidewalk and bike_path connections, walklights, benches, bus shelters and bicycle parking pursuant to the Dunlawton Corridor Plan and the Land Development Code. **[PREVIOUSLY 3.4.5]**

- p. The City ~~may~~shall encourage non-residential land uses and site developments which have a greater potential to support mass transit within designated public transportation corridors, with priority given to those projects that will bring the greatest increase in transit ridership. **[PREVIOUSLY 3.4.6]**

~~Policy 1.1.2: Promote technology to change and adapt the heating, cooling, insulation, ventilation, and lighting systems of structures to achieve greater energy efficiency. [DELETED]~~

~~Policy 1.1.3: The City shall encourage the maintenance, restoration, and adaptive reuse of existing urban areas, including buildings, infrastructure and other assets, to reduce energy use and Vehicle Miles Traveled (VMTs). [PREVIOUSLY 1.1.3]~~

~~Policy 1.1.4: Encourage the production and use of energy generated from renewable resources. [CONSOLIDATED INTO NEW 2.1.2(d)]~~

~~Policy 1.1.5: Encourage integration of passive solar design, green roofs, active solar and other renewable energy sources into development projects through the Land Development Code. [CONSOLIDATED INTO NEW 2.1.2(d)]~~

~~Policy 1.1.6: Encourage urban design strategies that maximize use of renewable, sustainable, active and passive sources of energy design in architecture. [CONSOLIDATED INTO NEW 2.1.2(d)]~~

~~Policy 1.1.7: The built environment and urban design should maximize natural areas and assets and incorporate Florida Friendly landscaping to reduce energy and water consumption. [CONSOLIDATED INTO NEW 2.1.2(f)]~~

~~Policy 1.1.8: Encourage food production for local consumption in order to decrease the distance that food must travel, and consequently GHG emissions, by allowing farmers markets, community gardens, and other local food networks. [CONSOLIDATED INTO NEW 2.1.2(c)]~~

~~Policy 1.1.9: Create, protect and manage systems of green infrastructure (i.e., urban forests, parks and open spaces, green roofs, natural drainage systems). [CONSOLIDATED INTO NEW 2.1.2(g)]~~

~~Policy 2.1.4H: Through incentive programs, especially in redevelopment districts, dependent on available funding, the City shall promote adaptive reuse and promote the redevelopment of brownfield and grayfield sites to reduce distances between destinations and relieve pressures for greenfield development. [PREVIOUSLY 1.1.11]~~

~~Policy 1.1.12: Support technology and business practices that enable people to reduce vehicle miles traveled from home to work, including increased flexibility~~

~~for home office uses.~~ **[CONSOLIDATED INTO NEW 2.1.2(b)]**

Policy ~~2.1.5~~3: The City will ~~Continue~~ explore ways to provide educational materials regarding energy efficiency, sustainable design, and climate change that encourage community residents and business owners to invest in energy-efficiency improvements through community outreach efforts, such as the City's Green Initiative Website. **[PREVIOUSLY 1.1.13]**

Policy 2.1.6: The City will encourage the development of homes affordable to a diversity of income ranges. The City may utilize alternative techniques in the development and redevelopment process to encourage additional housing options which will support affordable housing. The City may, at its discretion, allow this in the form of Accessory Dwelling Units (ADUs), density bonuses/incentives, or similar.

Policy ~~2.1.7~~2.3: The City will ~~M~~ maintain a sense of community through the provision of public spaces and landscaping of parks, recreation areas and medians. **[PREVIOUSLY POLICY 1.2.3 UNDER SMART GROWTH OBJECTIVE]**

Policy ~~1.1.14:~~ Continue to encourage the incorporation of green building practices into development projects through the City's Green Building Program. **[CONSOLIDATED INTO NEW 2.1.2(e)]**

Policy ~~1.1.15:~~ Encourage design techniques and materials that reduce heat absorption, thereby reducing the heat island effect. **[CONSOLIDATED INTO NEW 2.1.2(h)]**

Objective 1.2: Smart Growth. ~~Future land use designations, requests for rezoning, and development approval shall be in accordance with the following principals of smart growth in order to maintain a sense of place and community.~~ **[DELETED]**

Policy ~~1.2.1:~~ Encourage development projects to include homes affordable to a diversity of income ranges. **[REVISED, MOVED TO 2.1.7]**

Policy ~~1.2.2:~~ Ensure opportunities for meaningful stakeholder participation throughout all stages of planning and policy implementation. **[DELETED]**

Policy 1.2.3: Maintain a sense of community through the provision of public spaces and landscaping of parks, recreation areas and medians. **[MOVED TO 2.1.8]**

Policy 1.2.4: Encourage a mix of land uses and expand housing choices by developing areas of infill or underutilized vacant land within the City. **[MOVED TO POLICY 4.1.4]**

Policy 1.2.5: Encourage cluster development which promotes the efficient use of open space and reduces development costs, in areas where services and facilities exist or are planned. **[CONSOLIDATED INTO NEW 1.1.2]**

~~Policy 1.2.6: Expand transportation choices by ensuring an efficient network of roads, sidewalks, and bike paths that are safe for pedestrians, bicyclists and vehicular traffic.~~
[MOVED TO OBJECTIVE 2.3, NOW POLICY 2.3.3]

~~Policy 1.2.7: Encourage development at an appropriate scale, form, and density/intensity to support more economical and efficient public bus transit service.~~
[CONSOLIDATED INTO NEW 1.1.2]

~~Policy 1.2.8: Promote environmental protection, reduced natural resource consumption and energy management in the design and construction of buildings.~~
[COVERED IN NEW 2.1.2]

Objective 2.23: *Coordinating Land Use and Transportation.* Understanding the iterative nature of land use and transportation and consistent with the Transportation Element, tThe City will ensure that existing and proposed land uses are consistent with the transportation modes and services proposed to serve these areas. **[PREVIOUSLY 2.3]**

~~Policy 1.2.3.1:~~ Consistent with the Transportation Element and the Conservation Element, Any required transportation improvements shall be implemented only after thorough review by the City to ensure with minimal land use, social, and environmental disruption(s). Potential impacts may be offset through mitigation and/or other design and permitting approaches. **[PREVIOUSLY 2.3.1]**

~~Policy 1.2.3.2:~~ The City shall, through enforcement of its Land Development Code regulations, continue to ensure that the transportation facilities function safely and effectively ~~in furtherance of the City's Mobility Improvement policies~~ by:

- A. Limiting curb cuts on arterial roads, providing for common access points, and ensuring safe and convenient on-site and inter-parcel circulation.
- B. Concentrating proposed commercial developments around major roadway intersections; and discouraging proposals that would increase the frontage of existing commercial strips.
- C. Locating higher-intensity uses where transportation facilities can provide the most efficient access.
- D. Incorporating "pedestrian-friendly" design principles in new development projects, as described in the Transportation Element.
- E. Implementing the objective and policies of the Transportation Concurrency Exception Area ~~and Mobility Improvement Zones~~ in the Transportation ~~Mobility~~-Element. **[PREVIOUSLY 1.3.2]**

~~Policy 1.2.3.3:~~ The City will eExpand transportation choices by ensuring an efficient network of roads, sidewalks, and bike paths that are safe for all users~~pedestrians, bicyclists and vehicular traffic~~, as well as requiring multimodal connections between developments to reduce roadway impacts and promote interaction between uses. **[PREVIOUSLY 1.2.6 UNDER SMART GROWTH]** ~~The land use pattern shall serve to minimize travel requirements, and shall encourage the increased use of public transit and an increase in walking and bicycling to support the City's multimodal transportation system.~~ **[DELETED DUE TO SIMILIARITY TO 1.2.6]**

Objective 2.43: *Adequate Public Facilities.* The City shall bBase land use designations and

development approvals on the accessibility to necessary infrastructure and public services. [PREVIOUSLY 1.4]

Policy ~~1.4.3.1~~: The City will ~~m~~Maintain land use patterns and planned intensities adjacent to public facilities with available capacity that maximize the public investment. [PREVIOUSLY 1.4.1]

Policy ~~1.5.1.2.3.2~~: The City shall ~~c~~Continue to require development to be located in areas where urban services are available or will be provided consistent with the Capital Improvements Plan (CIP) while maintaining the adopted level-of-service standards concurrent with the impacts of development, as outlined in the Capital Improvements Element, or otherwise comply with the policy requirements of the Transportation Concurrency Exception Area as related to mobility improvements. [PREVIOUSLY 1.5.1]

Policy ~~1.4.2.3.3~~: Public facilities shall be located in order to maximize the efficiency of the services they provide, as well as minimize costs and potential environmental effects. [PREVIOUSLY 1.4.2]

Policy ~~1.4.3.3.4~~: The City shall ~~R~~require that water supply, production facilities, and Consumptive Use Permit (CUP) capacity is available for new site plan and/or subdivision developments, prior to issuance of development orders. [PREVIOUSLY 1.4.3]

Policy ~~2.3.5~~: Future urban development requiring access or connection to public facilities shall be located within the incorporated area or within the designated urban service boundaries in the unincorporated areas established by interlocal agreement. The City shall limit urban sprawl by directing urban growth to those areas where public facilities and services are available. [PREVIOUSLY 2.8.1 & 2.8.2]

Policy ~~1.5.2.3.6~~: The City shall ~~C~~continue to require development interests to extend services to new developments at the developer's expense. [PREVIOUSLY 1.5.2]

Policy ~~2.3.7~~: In order to protect natural resources, new development and redevelopment shall be encouraged to go into existing developed areas as infill. [PREVIOUSLY 2.8.3]

Policy ~~1.2.3.8.10~~: The potential for reducing Vehicle Miles Traveled (VMTs) and ~~GHG~~emissions should be considered in all location and investment decisions for public facilities. [PREVIOUSLY 1.1.10]

Objective 1.5: ~~Timing and Location of Development.~~ Future development will be directed into appropriate areas and at appropriate times according to the availability of municipal services. [DELETED, POLICIES MOVED TO OBJECTIVES 1.4 OR 1.6]

Policy ~~1.5.1~~: ~~Continue to require development to be located in areas where urban~~

~~services are available or will be provided while maintaining the adopted level of service standards concurrent with the impacts of development, as outlined in the Capital Improvements Element, or otherwise comply with the policy requirements of the Transportation Concurrency Exception Area as related to mobility improvements. [MOVED TO OBJECTIVE 1.4]~~

~~Policy 1.5.2: Continue to require development interests to extend services to new developments at the developer's expense. [MOVED TO OBJECTIVE 1.4]~~

~~Policy 1.5.3: The City shall promote local, regional, and state programs, investments, and development and redevelopment activities which encourage efficient development and occur in areas which will have the capacity to service new population and commerce. [MOVED TO OBJECTIVE 1.6]~~

~~Policy 1.5.4: The City shall continue to guide the development of land in a way that maximizes the uses of existing public facilities, through the coordination of adequate public facilities, the use of impact fees, and other appropriate tools. [DELETED, REITERATES POLICIES ALREADY STATED]~~

Objective 1.7.4: Hurricane Evacuation. In accordance with the Coastal Zone Management Element and Transportation Element, the City shall coordinate the residential density of areas in the coastal zone and areas subject to coastal flooding with the Volusia County Evacuation Plan. [PREVIOUSLY 1.7]

Policy 2.4.14.7.2: Consistent with the Transportation Element, the Coastal Zone Management Element, and the Volusia County Emergency Management Division, Requests to increase development density and intensity will not be permitted in areas that do not meet required standards for hurricane evacuation, unless the developer mitigates their impact through a method permitted by Section 163.3178(8)(a), F.S., as amended, where such method is approved by the City at the time of the development order. [PREVIOUSLY 1.7.2]

GOAL 3: NON-RESIDENTIAL COMMERCIAL/INDUSTRIAL DEVELOPMENT

THE CITY SHALL PROVIDE FOR NON-RESIDENTIAL COMMERCIAL AND INDUSTRIAL DEVELOPMENT SO AS TO MAINTAIN THE ECONOMIC HEALTH OF THE CITY, AND TO INCREASE THE JOB OPPORTUNITIES, PER CAPITA INCOME, AND CONVENIENCE FOR ITS RESIDENTS.

Objective 3.1: Maintaining Land for Non-residential Uses. The City will analyze each request for decrease and or conversion of non-residential land uses for the impact on the amount of land available for both residential and non-residential uses, and where appropriate retain non-residential lands and or require non-residential portions of projects to mitigate the loss of such acreages. The City's goal is to provide opportunities for non-residential development including those that support jobs-producing uses. Ensure that the amount of land already designated for non-residential uses does not decrease.

Policy 3.1.1: The City shall identify appropriate areas with available transportation

~~and infrastructure to designate for non-residential uses and retain said areas to the extent feasible to support a balanced tax base and the anticipated non-residential growth within the Plan's Horizon. Retain designated commercial and industrial development areas for their appropriate uses, unless such uses have been planned to be accommodated elsewhere.~~

~~*Policy 3.1.2:* Where appropriate, non-residential development will connect to or integrate with nearby residential development. The City will plan for ways to connect and integrate commercial and industrial development when establishing or expanding nearby residential uses.~~

~~*Policy 3.1.3:* Higher intensity development areas will be designated and protected from the encroachment of incompatible low intensity uses. [DELETED]~~

Objective 3.2: Location of Commercial Uses. Commercial development will be provided in sufficient and convenient locations to serve both resident and tourist populations.

Policy 3.2.1: Commercial uses will be located at roadway intersections, commercial nodes, and mixed-use centers, as defined in the Future Land Use Element.

Policy 3.2.2: Require the size, location, and character of additional designated commercial development to be related to the population and market it is intended to serve, as defined in FLU Policy 1.1.1.~~follows:~~

~~*Neighborhood Node*—generally designed to serve the convenience needs of neighborhood areas within a ±1 mile radius.~~

~~*Community Node*—generally designed to serve the general shopping needs of areas within a ±2 mile radius.~~

~~*Sub-Regional Node*—generally designed to serve the general and specialized shopping needs of the general population and visitors within a ±4 mile radius.~~

~~*Regional Node*—generally intended to serve the east central Florida market, with a mix of general, specialized, and highly specialized products, services, and attractions.~~

Policy 3.2.3: The commercial/mixed-use node located on Williamson Boulevard North of Pioneer Trail shall be developed through the approved Planned Unit Development (PUD) ~~review process~~ and shall be subject to the following conditions:

- (i) Primary access to the commercial/mixed-use node shall be from Williamson Boulevard, with no more than one secondary access point from Pioneer Trail;
- (ii) The commercial/mixed-use node is buffered from Pioneer Trail by the intervening *Conservation* Future Land Use area. Parking facilities and commercial structures shall not be permitted within this buffer area;

however, passive recreational uses (pedestrian paths, decks, and rail/fence features), stormwater retention ponds, signage, landscaping and similar uses may be permitted and approved through a PUD in this *Conservation Future Land Use* area;

- (iii) The overall square footage for the commercial/mixed-use node shall be limited to 650,000 square feet of non-residential uses; and
- (iv) Residential uses, along with open space, passive and non-passive recreational amenities, may be integrated within this sub-regional commercial node through the PUD process; however, the gross residential density within the PUD property shall not exceed that allowed by the Future Land Use Map and this policy. Medium-intensity uses such as offices may also be integrated into the lands adjacent to the north designated *Suburban Residential*, provided the gross commercial square-footage allowed in this sub-regional node is not exceeded. The unique mixture of uses shall form a Mixed-Use Center in a design that cohesively integrates these community components to establish live/work opportunities.
- (v) The overall residential development for that portion of the PUD located west of Interstate 95 shall be limited to 1,338 dwelling units.

Objective 3.3: *Location of Industrial Uses.* ~~The City shall be competitive in attracting new business and industry, and supporting economic growth. Industrial areas will be located and designed to effectively compete in attracting new industry. The City shall work with the Volusia County Economic Development Department, Team Volusia, the Port Orange-South Daytona Chamber of Commerce, and other interested groups to promote the City, and attract new business and industry.~~ **[PREVIOUSLY 2.3]**

~~*Policy 3.3.1:*~~ ~~The City will ensure appropriate transportation and infrastructure availability when designating industrial locations.~~ **[CONSOLIDATED WITH 3.1.1]**

~~*Policy 3.3.2:*~~ ~~Assure the extension of adequate utility services to areas designated for industrial development.~~ **[DELETED]**

~~*Policy 3.3.13:*~~ ~~The City will~~ The City will continue to promote and provide public incentives and assistance to realize the goals of the Eastport Business Center Redevelopment Plan and the Williamson Business Park. **[PREVIOUSLY 3.3.3, CONSOLIDATED WITH 3.5]**

Policy 3.3.2: The City will explore opportunities in growing industries, including but not limited to the aerospace industry.

~~***Objective 3.4:***~~ ~~*Design of Commercial and Industrial Developments.*~~ ~~Commercial and industrial development will be designed to enhance access and circulation, and result in a positive and attractive built environment.~~

~~*Policy 3.4.1:*~~ ~~Traffic flows within commercial areas shall be designed with internal access, limited curb cuts, and interconnections between various sites to minimize impacts on the thoroughfare network; and adequate parking and safe and convenient traffic flow shall be required on all sites, based on Code requirements and best design~~

practices.

~~Policy 3.4.2:~~ The City will continue to implement sign regulations requiring stringent, low-key signage programs to protect and enhance the City's visual image.

~~Policy 3.4.3:~~ The City will continue to require tree preservation and vigorous landscaping requirements to protect and enhance the City's visual image.

~~Policy 3.4.4:~~ The City will continue to promote attractive architectural design through its Land Development Code and architectural compatibility for multiple buildings within planned commercial developments.

~~Policy 3.4.5:~~ The City shall continue to promote pedestrian amenities in association with new construction and renovation/redevelopment, including, but not limited to, the provision of sidewalk and bikepath connections, walklights, benches, bus shelters and bicycle parking pursuant to the Dunlawton Corridor Plan and the Land Development Code.

~~Policy 3.4.6:~~ The City shall encourage non-residential land uses and site developments which have a greater potential to support mass transit within designated public transportation corridors, with priority given to those projects that will bring the greatest increase in transit ridership. **[OBJECTIVE 3.4 AND ITS POLICIES CONSOLIDATED INTO 2.1.2]**

Objective 3.46: *Commercial Reinvestment Strategy.* The City shall continue to develop and implement a reinvestment strategies for older commercial properties in the City to ensure that over time these properties remain viable and important contributors to the City's non-residential tax base. **[PREVIOUSLY 3.6]**

~~Policy 3.64.1:~~ Work with economic development organizations to develop a database of available redevelopment properties and market information to promote investment in redevelopment. **[PREVIOUSLY 3.6.1]**

~~Policy 3.46.2:~~ Through the LDC, the City shall continue to develop and implement specialized zoning and development regulations for designated reinvestment areas. **[PREVIOUSLY 3.6.2]**

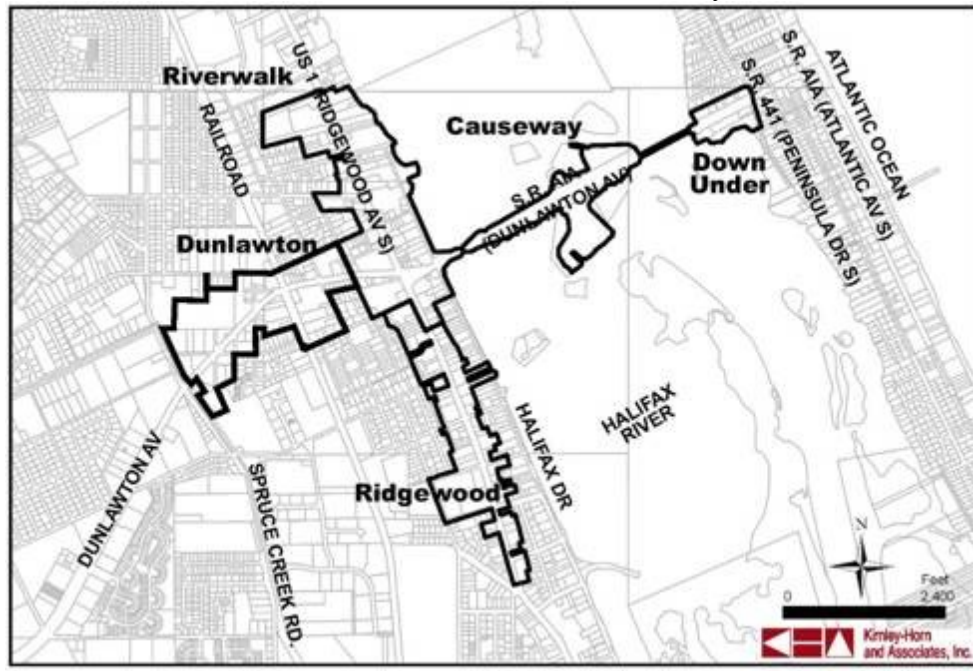
~~Policy 3.6.3:~~ The City shall monitor the impacts of development regulations on small businesses to ensure that the special needs of small business operators are taken into account in the formulation of any new or revised City Codes or policies. **[COVERED BY POLICY 1.2.3]**

~~Policy 3.6.4.3:~~ The City shall continue to work closely with the Port Orange South Daytona local Chamber of Commerce businesses to maintain communication with local business owners about City Code. **[PREVIOUSLY 3.6.4]**

~~Policy 3.6.54.4:~~ The City's urban redevelopment area (URA) and Transportation Concurrency Exception Area (TCEA) for the Port Orange Town Center

Community Redevelopment Area (CRA) is depicted in the figure below. The area is built-up with available public facilities and services such as sanitary sewer, potable water, roads, and recreation areas and does not contain more than 40 percent vacant, developable land. This area is also hereby designated as an Existing Urban Service Area. The TCEA is intended to support the redevelopment objectives of the Redevelopment District by providing a multi-faceted strategy for maintaining acceptable overall mobility, while minimizing the need for major road improvements that would potentially alter the desired future character of the District. [PREVIOUSLY 3.6.5]

CRA/URA/TCEA Boundary



Policy 3.4.56.6: The City shall encourage the preservation of recreational waterfronts~~will continue in its efforts to acquire waterfront properties especially~~ within the Port Orange RiverWalk area ~~for private and public redevelopment~~. [PREVIOUSLY 3.6.6]

Policy 3.4.66.7: The City will continue to acquire properties within the Port Orange Town Center redevelopment area that can serve as regional stormwater retention areas for new development and redevelopment, in accordance with the provisions of the Drainage Sub-Element and Coastal Zone Management Element. [PREVIOUSLY 3.6.7]

Policy 3.4.76.8: The City shall continue its efforts to utilize the wetlands mitigation bank on its wellfield property to assist in the development of industrial, redevelopment, and public projects, in accordance with the provisions of the Conservation Element. [PREVIOUSLY 3.6.8]

Policy 3.4.86.9: The City shall continue to offer economic development incentives in its economically distressed areas, redevelopment areas, and job creation zones,

with a key focus to create value-added jobs, dependant upon available funding. [PREVIOUSLY 3.6.9]

~~Policy 3.6.10: As an alternative to new construction, the City shall continue to offer incentives for the rehabilitation and reuse of existing facilities, structures, and buildings in its redevelopment districts, dependant upon available funding.~~ [PROGRAM NO LONGER ONGOING]

~~Policy 3.4.96.11:~~ The City shall, in cooperation with state, regional, and local agencies, promote economic opportunities for its unemployed and economically disadvantaged residents. [PREVIOUSLY 3.6.11]

Objective 3.57: *Agriculture and Related Industries.* ~~The City of Port Orange shall~~ In order to promote and strive to maintain agriculture, food, forestry, horticulture, and related industries in agricultural areas, outside the City shall discourage annexation for the purposes of development of land with active agricultural land uses and support, as well as appropriate urban agricultural activities and such as community gardens within the City. [PREVIOUSLY 3.7]

Policy 3.57.1: As the City expands into rural areas, bonafide agricultural activities shall be protected through the use of the Agricultural Preservation future land use designation and zoning district. [PREVIOUSLY 3.7.1]

Policy 3.57.2: Allow a reasonable interim use of existing agricultural land by maintaining the Agricultural zoning classification on parcels designated for higher intensity land uses on the Future Land Use Map, until such time that development is proposed. [PREVIOUSLY 3.7.2]

Policy 3.75.3: The City shall work with Volusia County and adjacent jurisdictions to develop a system of incentives which encourage a separation of urban and rural land uses while protecting water supplies, resource development, and fish and wildlife habitats. These may include but not limited to, a transfer of development rights program, implementation of the Environmental Core Overlay (ECO) map and policies, and other appropriate tools. [PREVIOUSLY 3.7.3]

Policy 3.57.4: Consistent with the Conservation Element, tThe City shall, in conjunction with relevant local, regional, and state agencies, promote the use of agricultural practices which are compatible with the protection of wildlife and natural systems. [PREVIOUSLY 3.7.4]

Policy 3.75.5: The City shall continue its water conservation efforts, including wastewater recycling and other appropriate measures, to assure adequate water resources to meet agricultural and other beneficial needs. [PREVIOUSLY 3.7.5]

Policy 3.57.6: In accordance with the provisions of the Conservation Element, the City shall conserve soil resources to maintain the economic value of land for agricultural pursuits and to prevent sedimentation in state waters. [PREVIOUSLY 3.7.6]

Policy 3.57.7: The City shall continue to support the State's preferential property tax treatment for agricultural and conservation lands through the "greenbelt law."
[PREVIOUSLY 3.7.7]

~~*Policy 3.7.8:* The City's transportation system shall provide adequate facilities for the economical transport of agricultural products and supplies between producing areas and markets.~~ [ADDRESSED IN MULTIMODAL AND VEHICLE MILES TRAVELED REDUCTION GOPS IN TRANSPORTATION ELEMENT]

GOAL 4: RESIDENTIAL DEVELOPMENT AND NEIGHBORHOODS

THE CITY SHALL PROVIDE FOR RESIDENTIAL DEVELOPMENT THAT CREATES NEIGHBORHOODS OF ENDURING QUALITY, LIVABILITY, AND CHARACTER, THAT SUPPORT AN ATTRACTIVE AND FUNCTIONAL MIX OF LIVING, WORKING, SHOPPING, AND RECREATIONAL ACTIVITIES, AND MAINTAIN A LIVING ENVIRONMENT FOR CITIZENS OF ALL AGES.

Objective 4.1: Housing Diversity. The City shall ~~create~~ a residential land use pattern that accommodates a diverse housing mix that meets the life-cycle and socio-economic needs of City residents.

Policy 4.1.1: In accordance with Housing Element Policy 3.1.5, ~~Residential land uses shall be established at a variety of densities in order to create a wide range of housing choices and costs. This variety shall be reflected on the Future Land Use Map.~~

~~*Policy 4.1.2:* New neighborhoods should be created to have defined centers and edges, with the center within ¼ mile from the edge. Neighborhood centers shall include a central gathering place in the form of a park, civic lawn, neighborhood commercial node, or other amenity.~~ [BASED ON CITY'S CURRENT BUILD-OUT, UNNECESSARY]

Policy 4.1.32: To help meet its goals for sustainable development, the City will encourage developers to pursue creative alternatives to conventional suburban development patterns, including innovative housing designs; clustering and conservation subdivision design; well-connected, gridded street networks; context-sensitive street configurations; alternative pavement types; and compact mixed-use development. [PREVIOUSLY 4.1.3]

~~*Policy 4.1.4:* The City shall encourage residential land uses and developments which have a greater potential to support mass transit within designated public transportation corridors, with priority given to developments that will bring the greatest increase in transit ridership.~~ [DELETED, POLICY COVERED 2.1.2]

~~*Policy 4.1.5:* Mitigate the visual and physical impacts of multi-family development with architectural and landscaping treatment standards.~~ [MOVED TO 1.1.7]

Policy 4.1.3: In accordance with the Housing Element Policies 3.1.2 and 3.1.3, as well as Policy 1.2.1 of this Element, the City may, at its discretion, permit ADUs, which will not count toward density. The City shall explore permitting ADUs in the Suburban Residential and Urban-Medium-Density Residential districts and other land use designations as appropriate, and will define design and locational standards for ADUs in the LDC. [NEW]

Policy 4.1.4: The City shall encourage a mix of land uses and expand housing choices by developing areas of infill or underutilized vacant land within the City. [PREVIOUSLY 1.2.4]

Objective 4.2-2: Maintaining Neighborhoods. The City shall maintain and enhance the quality of existing neighborhoods through reinvestment strategies, conservation, and redevelopment and renewal of blighted areas if and when these problems occur.

Policy 4.2.1: The City shall continue to allow through the Land Development Code mixed residential densities in older neighborhoods as a financially feasible alternative to commercial encroachment.

Policy 4.2.2: The City shall continue the use of the building inspection program along with continued code enforcement to ensure the lasting viability of existing neighborhoods.

Policy 4.2.3: The City may explore the possibility of developing licensing and inspection requirements for single-family homes used as rental properties.

Policy 4.2.4: The City will use Community Development Block Grant (CDBG) funds, when available, and explore opportunities to establish other financial incentives, for investment in older, declining neighborhoods as part of an overall reinvestment strategy.

Policy 4.2.5: The City will utilize ~~public works and public utility~~ Capital Improvement Program (CIP) projects as opportunities to stabilize and improve the condition and appearance of older, declining neighborhoods ~~through sensitive and appropriate design and retrofits~~ as part of an overall reinvestment strategy. This can include but is not limited to mobility improvements (roadways, sidewalks, multi-use trails), utility improvements, stormwater, or similar. [COMBINED WITH 4.2.4]

GOAL 5: MIXED-USE DEVELOPMENT

THE CITY SHALL PROVIDE FOR MIXED-USE DEVELOPMENT THAT CREATES AN ATTRACTIVE AND FUNCTIONAL MIX OF LIVING, WORKING, SHOPPING, AND RECREATIONAL ACTIVITIES, PROVIDES FOR ENERGY-EFFICIENT LAND USE PATTERNS, COMPACT DEVELOPMENT, URBAN INFILL AND REDEVELOPMENT, AND SUPPORTS A MULTI-MODAL TRANSPORTATION SYSTEM.

Objective 5.1: Mixed-use Centers. Establish mixed-use centers, that are designed to be convenient, promote personal interaction, reduce travel distance, and conserve energy, to serve as an alternative to the single-use, community-level commercial node in certain areas, such as at intersections of collector or higher-classified roads.

Policy 5.1.1: Mixed-use centers should include compact, mixed-use development, facilities and amenities for multi-modal transportation, and high-quality, pedestrian-scale building and site design.

Policy 5.1.2: The City shall maintain identified mixed used centers and explore designating additional locations as mixed-use centers, based on an analysis of physical and economic factors, and consideration of community input. These areas shall also be supported by the infrastructure necessary to meet the demands of such development and use best planning practices for compact forms of development including horizontal and or vertical integration of uses. ~~Based on a detailed analysis of physical and economic factors, as well as community input, the City should amend the Future Land Use Map and Zoning Map to establish mixed-use centers in the most appropriate locations throughout the City.~~ **[CONSOLIDATES 5.1.2 AND 5.1.3]**

~~*Policy 5.1.3:* In future years, the City should consider establishing additional mixed-use centers elsewhere using a similar community input process described above.~~ **[CONSOLIDATES WITH 5.1.2]**

Policy 5.1.34: The overall square footage for the commercial/mixed use node located south of Willow Run Boulevard and east of Williamson Boulevard shall be limited to no more than 250,000 square feet of non-residential uses and 276 residential dwelling units. **[PREVIOUSLY 5.1.4]**

Objective 5.2: Port Orange Town Center Redevelopment Plan Implementation. The City of Port Orange shall implement the Port Orange Town Center Redevelopment Plan, which is made up of five special character districts: Riverwalk, Dunlawton Village, Down Under, Causeway, and Ridgewood. Each district will be redeveloped based upon policies specific to each district.

Policy 5.2.1: The Riverwalk district shall be the main focus of the Plan’s public and private initiatives. The district will be characterized by the following elements: ~~that will be memorialized in an architectural design manual utilizing New Urbanist principles:~~

- Pedestrian-friendly pathways leading to public spaces
- Promenade from Dunlawton Avenue to ~~Port Orange South Daytona~~ the local Chamber of Commerce
- Public waterfront with views and vistas
- “Sense of arrival” created by design improvements to the intersection of Dunlawton and Ridgewood Avenues
- Mixed-use: entertainment, retail, office and residential
- Florida vernacular styles of architecture including Key West, Marina/Coastal, and Mediterranean with nautical themes
- Shared parking with a “park-once” preference
- Master-planned stormwater facilities
- River-based activities and events

Policy 5.2.2: Dunlawton Village is recognized for its historical contribution and significance to the community and will be redeveloped utilizing the following principles:

- Protect and enhance the village character
- Promote the preservation of historic structures
- Stabilize the adjacent neighborhoods
- Enhance the multimodal transportation opportunities
- Promote redevelopment and beautification of the industrial properties along Lemon Street

Policy 5.2.3: Down Under serves as the main gateway to the City from the east, and will be redeveloped in accordance with the Down Under plan and utilizing the following principles:

- Emphasize the prominence and character of the “gateway”
- Develop improved signage
- Install a promenade at the water’s edge to connect recreational fishing piers to adjacent restaurants
- ~~Extend and enhance~~ Re-establish the ~~existing~~ network of wood piers as feasible
- Promote infill of vacant properties
- Beautify parking lots
- Improve the streetscapes with street furnishings and landscaping

Policy 5.2.4: The Causeway district is a unique location within the center of the Halifax River and presents significant redevelopment opportunities. Seabird Island requires sensitivity to the existing residents and the environmental issues that may be generated by redevelopment in this district. The City will carefully consider the costs and benefits to redevelopment proposals for this district. Potential future uses could generally include private marinas, recreational facilities including public boat launches, fishing, and other water-based activities, bird watching, multi-family development ~~at the existing Future Land Use density of 8 units/acre, and limited~~

commercial uses.

Policy 5.2.5: The Ridgewood district is envisioned as an aesthetically pleasing boulevard centered on US 1. The corridor will be redeveloped based upon the following principles:

- Beautify streetscapes
- Enhance multimodal transportation opportunities
- Promote redevelopment of non-conforming residential properties
- Modify the permitted uses and urban design requirements to de-emphasize the strip commercial nature of the corridor and create nodes
- Promote opportunities for shared parking, access, and stormwater retention
- Provide incentives for facade improvements and landscaping

~~*Policy 5.2.6:* The City will adopt a design manual for each of the five districts. Until such time as the City adopts the design manuals, developers will be required to present a design manual for consideration by the Port Orange Town Center Community Redevelopment Agency. The City shall ensure that the development within the Port Orange Town Center complies with the requirements of the approved design manual. In general, the design manuals shall require the following:~~

- Shared driveway connections with adjacent uses and shared access, where feasible
- Internal sidewalks to connect parking areas and building entrances with the public sidewalk system in a reasonably direct route that minimizes walking distance
- Buildings oriented toward the street minimizing the distance between the building entrance and the public right-of-way
- Limited continuous building frontages
- Ground floor retail uses where feasible
- Parking located to the side or rear of buildings
- Shade provided through colonnades, awnings, or trees
- Parking structures wrapped with liner buildings
- On-street parking where feasible

~~*Policy 5.2.7:* Developments of two acres or less will not be required to present a design manual. These developments will still be required to be consistent with the district's design principles and will be required to illustrate those principles in the site plan as appropriate. [DESIGN MANUAL NOT REQUIRED]~~

~~*Policy 5.2.8:* Developments between two acres and 25 acres in size will be required to submit a design manual specific to the respective development consistent with the City's design manual, if available. [DESIGN MANUAL NOT REQUIRED]~~

~~*Policy 5.2.9:* Developments of 25 acres or more will be required to submit an application for a comprehensive plan amendment and a rezoning for a Planned Community along with a design manual specific to the respective development consistent with the City's design manual, if available. [DESIGN MANUAL NOT REQUIRED]~~

Objective 5.3: Port Orange Town Center Redevelopment Plan - Monitoring. The City of Port Orange shall monitor the success of the Port Orange Town Center area to ensure that it is achieving the redevelopment purpose. The monitoring will include the amount of redevelopment by land use and, implementation of mobility strategies, ~~and adoption of design manuals~~. In addition, the City will evaluate the strategies to determine whether modifications are necessary.

Policy 5.3.1: The Port Orange Town Center shall be limited to the maximum allowable number of units, square footage, land use ratios, total daily trips, and total pm peak hour trips identified below. No new building permits will be issued for new developments within the Port Orange Town Center when the applicable maximum allowable limit for the land use density or vehicle trips is reached.

Port Orange Town Center
Development Thresholds

Allowable Land Use Intensities	Residential	Hotel	Non-residential
Planned Land Use Totals	3,380	1,200	2,861,165
<i>Allowable Variance (+)</i>	25%	25%	15%
<i>Maximum Allowable</i>	4,225	1,500	3,290,340
Allowable Land Use Ratios	Residential/Non-residential		
<i>Maximum Allowable</i>	1.74		
<i>Minimum Allowable</i>	0.77		
Allowable Vehicle Trips	Daily Traffic	PM Peak Hour Traffic	
Planned Land Use Total Trips	121,699	11,592	

These thresholds apply cumulatively to the entire Port Orange Town Center.

Policy 5.3.2: The City shall prepare a monitoring report for the Port Orange Town Center Transportation Concurrency Exception Area (TCEA) ~~every three years~~ as needed to determine the cumulative residential to non-residential ratio (as measured by one approved residential unit to 1,000 square feet of approved office and other non-residential).

Policy 5.3.3: In order to achieve a residential density within the Port Orange Town Center that adequately supports public transportation, the City shall require that the redevelopment of residentially designated lands results in a density of at least eight dwelling units per acre for developments within a ¼-mile walking distance from existing and planned transit stops or a comparable level of intensity/density for mixed-use projects. The City shall coordinate with VOTRAN to identify the most appropriate locations for transit stops during the process of considering development applications within the TCEA. Developments exceeding 200 net peak hour trips shall be required to demonstrate coordination with VOTRAN in regard to whether the site is appropriate for a transit stop location or would be within ¼ mile of a planned transit stop.

Objective 5.4: *Planned Community-Westside.* The City shall implement the overall Conceptual Development Plan (CDP) for the Planned Community-Westside Macro Region, which is intended to create a mixed-use, pedestrian-friendly community that increases the available inventory of commercial, industrial, and institutional land uses by integrating them with residential uses in a harmonious fashion, minimizes automobile trips, and promotes environmental protection.

Policy 5.4.1: The City will maintain and may expand the workplace district that includes a mixture of uses, and it shall be shown on the Conceptual Development Plan (CDP) for the Macro Region. The workplace district shall permit development at a high density / intensity where services are provided in support of convenience, local employment, and public transit. A primary “town center” shall be created for the overall project that includes a mixture of uses (residential, commercial, institutional, and recreation), and a variety of housing types. The location of the town center shall be shown on the Conceptual Development Plan (CDP) for the Macro Region. The town center shall be relatively compact in design, and may be developed at the maximum density/intensity. High density residential units should be clustered into the town center in order to support convenience/service uses, local employment, or mass transit use. A portion of overall project conservation/recreation area shall be in the form of a “town square” or public park.

Policy 5.4.2: Internal connectivity should be provided for pedestrian, bicycle, and automobile modes so as to reduce the number of external trips and provide transit service options.

Policy 5.4.3: Single-family housing may be constructed on a variety of lot sizes that are intermixed throughout each Micro Region.

Policy 5.4.4: Projects should be designed with special consideration given to compatibility with the surrounding uses and any adjacent developments. In general, density and intensity shall decrease toward the south and west. This will ensure that the higher intensity uses will be located where the infrastructure exists to serve them (adjacent to I-95), and where they will not impact lower intensity uses (adjacent to Tomoka Farms Road). In addition, buffering between areas of different intensity will be accomplished through a variety of mechanisms permitted by the City’s Land Development Code.

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TRANSPORTATION MOBILITY ELEMENT

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INTRODUCTION

The purpose of the Transportation ~~Mobility~~ Element is to plan for a multimodal transportation system that is safe and meets the needs of the City's residents, business owners, and visitors. This Element encourages improved transportation and mobility planning, establishes Level of Service (LOS) Standards for the major roadways, and also recognizes the need to explore transportation alternatives to increase accessibility as well as provide a comprehensive transportation system. This Element addresses roadway facilities, transit facilities, availability of bicycle and pedestrian facilities, airport systems, and other supplementary services and programs. ~~establish the City's mobility policies, which guide the City in making decisions on transportation system improvements.~~ The City's policies are required to comply with federal and state regulations and provide for effective coordination with other agencies. They must also be internally consistent with other elements of the comprehensive plan.

The Transportation ~~Mobility~~ Element of the Comprehensive Plan is ~~one of the most important elements because of critical~~ due to its interrelationship with the Future Land Use Element. The adopted transportation policies ~~a city adopts~~ are merely one of many components of its to a city's overall land use philosophy, and. ~~T~~ the development path a city follows must be supported by its transportation system. ~~By State law, the future transportation system is required to accommodate the land uses proposed by the Future Land Use Element as well as provide strategies for reducing green house gases. In order to achieve this, the transportation system must work together to give people a wide variety of choices in routes and travel modes to access destinations within short distances to their homes.~~ The City maintains a suitable roadway network through accomplishes this by ensuring that level of service LOS standards that are met through its concurrency management system, while also increasing network capacity and connectivity through its capital improvement program. ~~To guide the application of these efforts, three Mobility Improvement Zones have been created, each with its own mobility policies and strategies, to address appropriately the distinct transportation needs and context in different parts of the City.~~

Transportation Element Highlights

1. Establishes Level of Service standards based on best practices and the FDOT Multimodal Quality/Level of Service Handbook;
2. Prioritizes community safety, accessibility, and liveability;
3. Supports efforts towards bicycle and sidewalk connections and trail opportunities;

~~Since the late 1940s, much of the nation's transportation investments have been prioritized toward roads and highways. Priority was given to maximizing roadway capacity, travel speed, and convenience, to enable the driving public to get from place to place quickly and easily. The State's rules regarding transportation concurrency further this approach by mandating that road capacity be provided to support development. Although transportation networks built solely to accommodate the automobile afford a high degree of personal mobility, they also generate high levels of traffic congestion and air pollution, including greenhouse gases. Furthermore, poorly interconnected roadways increase the distance people travel, shifting traffic to only a few major roadways and not efficiently utilizing the existing capacity on the whole network.~~

The City has been successful at creating a well-connected, relatively compact urban form and walkable transportation system. The older east side of the city features a tightly gridded network of streets which disperses traffic enough to be safely walkable without sidewalks. The areas developed after 1970 are more loosely gridded, but are built with sidewalks on both sides of each street to accommodate walking. The City's arterial and collector roads feature extra-wide sidewalks that are used by pedestrians and cyclists alike. Timely investments in roadway capacity have ensured that the state, county, and local roadways running through the City are free of congestion. The major corridors are also served by transit, including a "super stop" transfer point for five different routes. Overall, the City has been progressive with its planning and access management, especially along Dunlawton Avenue.

Transportation and land use policies that emphasize alternative modes allow a city to develop more compactly. Such a pattern of development allows a city's resources to be utilized more efficiently. The efficiencies resulting from compact development produce economic savings to both a city and its tax-paying citizens. Because living, working, and shopping destinations are closer together, fewer large capacity roads and less money spent on roads are required.

Higher densities also make alternative modes of transportation, such as walking, cycling, and transit buses more practical and cost-effective. Fewer automobile drivers reduces the need for parking, which further increases pedestrian access by allowing stores to be located closer to the street and sidewalk. Fewer automobiles enhances a community's health, safety, and welfare by reducing the number of automobile accidents, decreasing air pollution, allowing one to exercise, and lowering the stress associated with driving in congested traffic.

There has been growing recognition of these benefits at all levels of government. Since 2007, there have been significant changes to Florida's growth management legislation, as well as to planning policies at the regional level. In 2007, community leaders throughout Central Florida conducted a visioning exercise and prepared an analysis of possible future growth trends in the region. Based on the results of the study and community input, these leaders adopted the *"How Shall We Grow? A Shared Vision for Central Florida"* Plan. The visioning process focused on four primary themes in an effort to protect sensitive lands, concentrate growth in select areas to slow urban sprawl, and create more efficient land use and transportation patterns. These four themes include *Conservation, Countryside, Centers* and *Corridors*. One of the priorities is to "provide a variety of transportation choices." This would be achieved by providing:

- Connectivity between centers and other regions
- Congestion relief
- Choices for moving people and goods, and
- Concurrency with new development.

Transportation concurrency is counter-productive in urban centers and a range of mobility options are needed to "reduce congestion and achieve healthy, vibrant centers." Accordingly, the City utilizes a Transportation Concurrency Exception Area (TCEA) within its central core redevelopment area, known as Port Orange Town Center. State-mandated transportation concurrency requirements are utilized outside of the TCEA as an important tool to maintain

transportation mobility. The TCEA in the Port Orange Town Center allows the City to focus on other mobility strategies instead of road widening, with the goal of reducing urban sprawl. The City also promotes and adopts complementary land use strategies that reflect the region's shared vision for its future, such as east central Florida's "*How Shall We Grow?*" Plan. In practical terms, this means bringing people closer to where they want to go and providing the connections to get them there.

The goals of the State's transportation planning requirements dovetail with its requirements for reducing the greenhouse gas emissions that contribute to climate change, as per 2008's HB 697. The City intends to meet these requirements by maintaining levels of service, encouraging a greater distribution of commercial nodes and development of compact, mixed-use centers, creating efficient transportation designs and operating systems, and focusing efforts on Transportation Demand Management (TDM) and Transportation Systems Management (TSM) programs. By reducing the amount of miles people drive, a measure known as "vehicle miles traveled," or "VMTs," the emissions from vehicles are reduced. Together, these strategies are geared to give people greater choices in how they reach their destinations and reduce the distance to get there.

Following the lead of the Volusia County TPO's *2025 Transportation Plan Update*, the City of Port Orange has continued to take steps to ensure that its transportation policies and future transportation programs reflect a balance between modes. Future transportation investments will focus on land use and mobility options while maintaining adopted concurrency standards. This emphasis will give the citizens of Port Orange the ability to get to and from their destinations using the modes that best suit their individual needs.

ROADWAY IMPROVEMENTS NEEDED

The FDOT's *2009-2020 Multimodal Quality/Level of Service HandbookManual* establishes general LOS capacities for roadways that exhibit design characteristics and administrative classifications. However, more specialized LOS analysis tools have been used on selected roadways in order to more accurately identify the roadway capacities. This information can be used to determine the number of lanes needed to achieve the adopted LOS standard for the City's future roadway network, beyond those already programmed. Understanding the LOS for the roadways, as well as how they're performing against that standard, enables the City to determine where improvements are needed in the transportation network.

Table 1 identifies planned transportation lists the improvements needed for each facility. Improvements programmed for 2010-2015 are listed in Table 3 under the "Implementation Strategies" section. The schedule of future long-term transportation capacity improvements planned between 2016-2025 is listed in Table 4. This table also includes other mobility improvements not necessarily related to relieving projected congestion, such as transit system enhancements, bicycle and pedestrian facilities, and trails. Figures 2-4, 2-6 and 2-8 depict the future 2025 transportation mobility network, including the number of roadway lanes, location of transit facilities, and bicycle/pedestrian facilities. Map 2.5 shows 2045 LOS, and Map 2.6 identifies existing and proposed bicycle and pedestrian facilities on major roadways.

Based on the long-term projections, the City may need to coordinate with Volusia County and consider designating additional roadway segments as constrained facilities, since they likely will not be widened beyond what is currently planned or programmed. With the exception of

Taylor Road, N. Williamson Boulevard, and Yorktowne Boulevard, any future congestion may have to be addressed through alternative mobility and traffic management strategies, such as additional Transportation Concurrency Exception Areas (TCEAs), Transportation Concurrency Management Areas (TCMAs), a Long-term Concurrency Management System, or Backlogged Authority, as permitted by Florida Statute. ~~For example, in 2025, a reduction of 85 trips on Clyde Morris Boulevard would achieve the adopted LOS standard on the segment from Willow Run Boulevard to Herbert Street. These trips could potentially be accommodated by providing alternatives such as improved transit service, and better bicycle/pedestrian connections in this area, or by applying concurrency standards in a different way.~~ Map 2.7 exhibits the Transportation Concurrency Exception Areas in the City.

As part of the mobility strategies applied by the City, establishing constrained corridors is essential to promote alternative modes and to preserve the community character and built environment. ~~Figure 2-4~~Map 2.8 identifies arterial and collector roadways designated as constrained by policy or physical condition. These roadways will not be widened beyond their present width and lane configurations. Transportation System Management (TSM) improvements such as the addition of turn lanes, bike lanes, sidewalks, accessory transit amenities, and exclusive transit lanes are exempt from the constrained corridor restrictions; but are effective strategies that can be applied to meet adopted concurrency standards. Transportation Demand Management (TDM) programs may also be appropriate for users of these roadways. In addition, redevelopment of properties along these corridors may present opportunities for land use changes to promote mixed-use development. Together, these transportation and land use strategies can help to reduce vehicle miles traveled.

TABLE 1
NEEDED TRANSPORTATION IMPROVEMENTS (2025)

ROADWAY	SEGMENT		PROJECTED VOLUME	VOL./CAP RATIO	IMPROVEMENTS NEEDED	NEW CAPACITY	NEW VOL./ CAP. RATIO
	FROM	TO					
ADDITIONAL CAPACITY							
Transit Transfer Station	Dunlawton Ave. /Nova Area		N/A	N/A	New central bus transfer Station	N/A	N/A
City wide Bus Stops			N/A	N/A	Bus stop enhancements (5)	N/A	N/A
City wide sidewalks			N/A	N/A	Sidewalk enhancements	N/A	N/A
Clyde Morris Blvd.	Herbert St.	Willow Run Blvd.	3,289	102%	TSM/TDM	N/A	N/A
Dunlawton Ave.	Clyde Morris Blvd.	Taylor Rd.	5,361	110%	TSM/TDM or 8 lane divided	N/A or 6,880	N/A or 78%
I-95	Beville Road (SR 400)	Dunlawton Ave.	7,457	136%	6 lane divided	8,320	90%
	Dunlawton Ave.	Pioneer Trail	5,679	103%	6 lane divided	8,320	68%
Taylor Rd.	Clyde Morris Blvd.	Yorktowne Blvd.	1,830	121%	TSM/TDM	N/A	N/A
	Taylor Branch Rd.	I-95	5,957	122%	TSM/TDM or 8 lane divided	6,530	91%
	I-95	Williamson Blvd.	4,454	110%	7 lane divided	6,260	71%
Williamson Blvd.	N. City Limits	Town West Blvd.	3,191	150%	4 lane divided	3,204	100%
	Taylor Rd.	Airport Rd.	4,283	134%	TDM	N/A	*134%
Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Dr.	1,686	122%	4 lane divided	3,204	53%
DEVELOPMENT ACCESS & OTHER NEEDS							
Coraci Blvd.	Madeline Ave.	Road "D"	484	N/A	New 2 lane	1,656	29%
	Town West Blvd	Taylor Rd.	845	N/A	New 2 lane	1,656	51%
McGinnis Blvd.	Madeline Ave.	Williamson Blvd.	1,821	N/A	New 4 lane divided	3,204	57%
Madeline Ave.	Ridgewood Ave.	McDonald Rd.	1,197	N/A	New 2 lane	1,656	72%
	Williamson Blvd.	Tomoka Farms Rd.	1,069	N/A	New 2 lane	1,656	64%
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	3,488	N/A	TSM/TDM	N/A	N/A
	Herbert St.	Dunlawton Ave.	3,488	N/A	TSM/intersections	N/A	N/A
Spruce Creek Rd.	Canal View Blvd.	Herbert St.	316	N/A	New 2 lane	1,440	22%
Williamson Blvd.	Airport Rd.	Pioneer Tr.	2,287	N/A	New 4 lane divided	3,204	71%
Willow Run Blvd.	Williamson Blvd.	Madeline Ave. ext.	294	N/A	New 2 lane	1,656	18%
Yorktowne Blvd.	Taylor Rd.	Dunlawton Ave.	1,062	N/A	New 4 lane divided	3,204	33%
	Hidden Lakes Dr.	Willow Run Blvd.	1,494	N/A	New 4 lane divided	3,204	47%

* Although volume may be higher, VMTs are expected to drop substantially, by approximately 38%, once development of new commercial nodes planned in the area occurs.

Note: "Needed" refers to those improvements needed to maintain the City's adopted LOS standard or to provide access.

Note: TSM/TDM improvements are proposed for designated constrained facilities on which capacity improvements are not feasible.

FUTURE MOBILITY PROGRAMS AND LAND USE CONSIDERATIONS

~~As noted in the Introduction, significant changes were made to Florida's growth management legislation and regional planning policies in 2008 (HB 697). These changes created energy efficiency requirements that the City must address in its comprehensive plan.~~

With respect to transportation, the vision is for mobility - the continual movement of people and goods - to ensure the quality of life expected by Port Orange businesses and residents. The most effective strategy to maintaining and improving mobility is the development of an efficient and balanced multi-modal transportation system. This section discusses the Mobility Plan for Port Orange, how it will be implemented, and how it will be funded in a cost-feasible manner.

Implementing substantial mobility improvements will be challenging due to existing constraints. The City is over 890% built out. Of the remaining vacant land, only approximately 9131 acres is designated for commercial and industrial development, which leaves little opportunity for creating new commercial nodes within short distances to residential areas. This means that many of the City's residents will have to continue to travel outside of the City to meet certain basic needs.

In the western half of the city, much of the land has been developed at low densities, with relatively few roadway connections. Although the infrastructure exists to support additional development and redevelopment, connecting this development to the residential areas will be difficult because of the manner in which the road network and lots were laid out. Physical constraints in the west side of the City include the reliance upon a small number of major roads to handle most of the traffic; a curvilinear street pattern with few interconnections; low densities to support transit and other modes; and I-95, which itself constricts movement between east and west.

Recognizing the importance of ~~The potential~~ mobility and compatible land use, ~~options that the City may consider~~ the following concepts in transportation planning. ~~to address these requirements are discussed below.~~

TSM/TDM Programs

~~Transportation System Management (TSM) and Transportation Demand Management (TDM) programs are the collective term for a wide range of measures to add roadway capacity and relieve traffic congestion without having to construct costly new facilities. The ultimate goal of TDM strategies is to influence people to shift to more efficient modes of transportation and to travel during off-peak hours. TSM strategies, on the other hand, aim to affect the actual supply of transportation services. The most effective policies integrate supply and demand strategies to create a transportation network that promotes efficient, low-polluting choices. Specific TSM/TDM strategies include:~~

- ~~▪ Ridesharing/carpooling/vanpooling and park-and-ride facilities~~
- ~~▪ High-occupancy vehicle (HOV) facilities~~
- ~~▪ Bicycle/pedestrian facilities~~
- ~~▪ Telecommuting~~
- ~~▪ Flex time/alternative work schedules~~

- ~~▪ Compact, mixed-use development~~
- ~~▪ "Intelligent" highway systems~~
- ~~▪ Coordinated computerized traffic signals/optimization~~
- ~~▪ Pricing schemes, such as higher gas taxes and parking fees~~
- ~~▪ Guaranteed ride home programs~~
- ~~▪ Fixed-route transit service enhancements~~
- ~~▪ Water taxis~~
- ~~▪ Turn lanes~~
- ~~▪ Access management~~
- Public outreach and education/marketing

~~In 2009, the City completed~~ maintains a TDM/TSM Program Manual, ~~primarily directed to~~ identify and establish alternative mobility strategies for the Port Orange Town Center TCEA. However, the manual also includes options that are appropriate to apply city-wide. This Plan will incorporate the mobility strategies identified in the manual and make them a part of the Goals, Objectives, and Policies of the Plan.

Efficient Land Use Patterns

As described in the Future Land Use Element, the City ~~has~~ can taken steps to improve the land use pattern by providing more opportunities for mixed-use development and creating commercial and mixed-use nodes to serve adjacent neighborhoods. These land use patterns ~~will~~ should be supported by a variety of transportation options including efficient and well-connected street systems, transit service and amenities, and bicycle and pedestrian ways.

Variety of Mode Choices

The City has been successful at creating a well-connected, relatively compact urban form and walkable transportation system. As the City becomes substantially built-out during the planning period, efforts to ensure that the transportation system operates as efficiently as possible will have greater importance. Declining revenues from state and local sources are likely to reduce funding for local large-scale capital infrastructure projects. The City should be able to utilize its existing roadways, transit routes and well-connected sidewalk and bikeway system to greater advantage by expanding the role of alternative transportation modes to meet mobility needs. This would include completing the most critically needed roadways in the City and remaining segments of the bicycle and pedestrian network. It would also include transit system improvements that make using transit more accessible, comfortable and convenient.

~~Reducing Greenhouse Gas Emissions and Vehicle Miles Traveled~~

~~As part of HB 697, the City is required to reduce the environmental impact caused by vehicular emissions and greenhouse gases. Doing so can be expected to improve the air quality and health of its citizens, and help to slow climate change. As noted in the Future Land Use Element and other chapters of this Plan, bringing people closer to where they want to go and providing the connections to get them there will reduce the distance they must drive. By reducing the amount of "vehicle miles traveled," or "VMTs," the emissions from vehicles are also reduced.~~

The “Lifelong Community”

Creating opportunities for people of all ages to live, work, shop and recreate in close proximity to their homes is important to building a cohesive community, in which people can remain in their neighborhood as their lifestyles and needs change over time. The City’s transportation network should be able to accommodate the needs of residents at all stages of their lives, including children, adults, parents, “empty-nesters,” active retirees, and seniors. As noted above, this can be accomplished by providing a variety of transportation modes suited to people of different needs, and bringing uses together to reduce travel distance.

The elderly population is considered a transit-dependent socio-economic group. There are several Census tract block groups with a large numbers of elderly persons. Many of these tracts are located along existing transit routes. Opportunities to expand transit service or increase frequency should focus on these areas and other locations where the elderly population is expected to increase and represent a significant portion of the population. This includes making improvements to transit stops, such as installing benches and shelters with schedule information, and providing convenient pedestrian connections from residential areas and stores to bus stops.

The Walkable Community

~~The successful combination of innovative land use planning and urban design, alternative transportation networks, and TDM/TSM programs, is the “walkable community”. Walkable communities are defined as:~~

~~“desirable places to live, work, learn and play, and therefore a key component of smart growth. Their desirability comes from two factors. First, locating, within an easy and safe walk, goods (such as housing, offices and retail) and services (such as transportation, schools, libraries) that a community resident or employee needs on a regular basis. Second, by definition, walkable communities make pedestrian activity possible, thus expanding transportation options and creating a streetscape that better serves a range of users — pedestrians, bicyclists, transit riders and drivers. To foster walkability, communities must mix land uses and build compactly, and ensure safe and inviting corridors.”⁺~~

The key ingredients to achieving a truly walkable community are as follows:

- ~~1. providing a mix of land use in close proximity to one another;~~
- ~~2. building at a pedestrian scale, including buildings and sidewalks;~~
- ~~3. providing compact residential and commercial development;~~
- ~~4. enabling the construction of a highly connected, multi-modal circulation network built to the pedestrian scale; and~~
- ~~5. creating unique places or “placemaking,” which are compact, mixed use and pedestrian and transit-oriented, and that have a strong civic character with lasting economic value.~~

⁺~~Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, ITE, 2005.~~

The FDOT Safety Office² further describes ways in which cities can create a more pedestrian-friendly urban fabric, including:

A System of Continuously Linked Walkways

People should be able to get from one place to any other on foot. The walkway environment should include attractive landscaping, trash receptacles, lighting, and street furniture with comfortable places to sit. Successful downtowns, waterfronts, and entertainment districts contain a 50/50 ratio of walking space to vehicle space for spurring economic development.

Pedestrianized Intersections and Street Crossings

The maximum crossing width should not be over 48 feet. Slip lanes, medians, and bulb outs should be used to minimize pedestrian exposure to traffic. Pedestrian signalization and well illuminated crosswalks should be provided, with signals timed to allow crossing at a rate of 3.5' per second. In areas with large elderly and handicapped populations, curb ramps and audio/tactile pedestrian signal systems should be provided in accordance with The Americans with Disabilities Act (ADA). Mid-block crossings should also be considered where needed, with bulb outs, raised medians, median curb cuts, and proper signing.

Pedestrianized Commercial Areas

Pedestrian access to commercial areas should be provided from adjacent neighborhoods. Walkways should be provided between the sidewalk and the storefront so that car and pedestrian traffic is kept separate. Vehicle traffic may be restricted to specific times of the day or night in areas of heavy pedestrian usage.

Transit/Pedestrian Linkages

Transit stops should be created at trip origins and destinations, such as neighborhoods, multi-family residential areas, commercial and employment centers, and hospitals. Transit stops should be easy to reach, and should be inviting and convenient to the pedestrian.

Walkable-Scale Land Use Planning

New and infill development should favor walking over driving. Compact, mixed-use development, a gridded street pattern, neighborhood-scale stores, pedestrian-only connections between uses, and civic spaces should be allowed and encouraged in land use codes, ordinances, and regulations.

Port Orange has been able to incorporate many of these design elements into its urban fabric through the development review process. The City's extensive bicycle and pedestrian system provides access between commercial and residential areas. The majority of the Dunlawton corridor features pedestrian-level lighting. New intersections constructed

² *Walkable Communities: Twelve Steps for an Effective Program*

in the City meet ADA requirements and include tactile signal systems. Transit stops exist adjacent to sidewalks and bikeways to facilitate travel between modes.

~~Implementing substantial mobility improvements will be challenging due to existing constraints. The City is over 80% built out. Of the remaining vacant land, only approximately 911 acres is designated for commercial and industrial development, which leaves little opportunity for creating new commercial nodes within short distances to residential areas. This means that many of the City's residents will have to continue to travel outside of the City to meet certain basic needs.~~ **[MOVED TO BEGINNING OF THIS SECTION]**

~~In the western half of the city, much of the land has been developed at low densities, with relatively few roadway connections. Although the infrastructure exists to support additional development and redevelopment, connecting this development to the residential areas will be difficult because of the manner in which the road network and lots were laid out. Physical constraints in the west side of the City include the reliance upon a small number of major roads to handle most of the traffic; a curvilinear street pattern with few interconnections; low densities to support transit and other modes; and I-95, which itself constricts movement between east and west.~~ **[MOVED TO BEGINNING OF THIS SECTION]**

IMPLEMENTATION STRATEGIES

THE MOBILITY PLAN

The strategies of the past 20 years have served the City well in realizing its vision of becoming a progressive, high quality community. For the next 20 years, the vision will evolve to ensure that the City's quality can be maintained; so that it can continue to build on its success. With respect to transportation, the vision is for mobility—the continual movement of people and goods—to ensure the quality of life expected by Port Orange businesses and residents. The most effective strategy to maintaining and improving mobility is the development of an efficient and balanced multi-modal transportation system. This section discusses the Mobility Plan for Port Orange, how it will be implemented, and how it will be funded in a cost-feasible manner. **[MOVED TO BEGINNING OF PREVIOUS SECTION]**

Mobility Improvement [MOBILITY ZONES DISCONTINUED AS OF THIS PLAN]

The City is embarking on a new program for implementing transportation mobility improvements. The City is adopting mobility strategies to support a wider variety of mobility strategies to be applied in designated Mobility Improvement (MI) Zones. These strategies are intended to encourage multi-modal transportation, including transit, bicycle and pedestrian modes, supported by appropriate facility design standards. The City's overall mobility strategy is established herein by Goal 1, Objective 1 of this Element. This program focuses on the mobility improvement strategies that will apply in different areas of the City.

Within the City's three MI Zones are established. The Zone boundaries are defined by the development patterns and transportation network characteristics in different parts of the City. Because of different development patterns, the mobility needs and priorities are different in each Zone. In the older, built-out portions of the city, mobility needs are focused more on transportation systems management (TSM) and transportation demand management (TDM) programs, transit enhancement, bicycle and pedestrian improvements, and maintaining the existing system. In the developing portions of the city, where the transportation system is still being created, the focus remains on roadway extensions and capacity improvements, along with TSM programs and bicycle/pedestrian improvements. The three MI Zones are shown on Figure 2-11. The characteristics and specific strategies in each MI Zone are described below.

Mobility Improvement (MI) Zones

Three MI Zones are established. These include:

Zone 1—The historic center of town, comprising the same properties as the Port Orange Town Center TCEA adopted in 2006. Zone 1 is a designated redevelopment area and thus presents opportunities for transportation improvements to be made on a site-by-site basis or with larger-scale redevelopment projects such as Riverwalk. The development pattern is relatively compact and features a gridded street network. Mobility strategies in this zone are geared toward maintaining and enhancing the existing transportation system as described in the TCEA and improving upon the characteristics of Ridgewood Avenue and Dunlawton Avenue as “complete

streets”. Other strategies will encourage pedestrian-oriented, mixed-use development as part of Riverwalk, as well as bicycle, pedestrian and transit system improvements and TSM/TDM programs.

Zone 2—That portion of the City located to the west and south of Zone 1, generally east of I-95 and Clyde Morris Boulevard. Zone 2 contains an interconnected suburban street pattern, with higher residential densities along the major roads serving as transit corridors, and medium to low densities elsewhere. This area is generally built out and includes commercial development in nodes and along specific corridors. Mobility strategies in this zone are geared toward improving roadway intersections, completing gaps in the bicycle and pedestrian system, providing linkages and amenities for transit, implementing appropriate TSM and TDM programs, and maintaining the existing transportation system and adopted LOS standards.

Zone 3—That portion of the City generally located west of I-95 and Clyde Morris Boulevard. Zone 3 contains a suburban street pattern with minimal transportation links/connections between adjacent developments. This area is still developing and includes several Planned Unit Developments, nodal commercial centers, an interstate interchange, as well as the Planned Community Westside area and the proposed Woodhaven development. Mobility strategies in this zone are geared to constructing roadway capacity improvements necessary to maintain the adopted LOS; adding roadway extensions and connections; making bicycle and pedestrian improvements; providing transit service to commercial and employment nodes; utilizing TSM and TDM programs; and maintaining and enhancing the existing transportation system. Complementary land use strategies will help achieve a greater balance of uses to serve existing homes.

The specific mobility strategies for the three MI zones are described in Objectives 1.1, 1.2, 1.3 and 1.4.

Levels of Service

With the adoption of the city wide Mobility Improvement Program as part of this Comprehensive Plan, the traditional roadway level of service measure by a concurrency management system is retained. The City will maintain these adopted LOS standards, but will also consider alternative strategies such as TCMA's, long term transportation concurrency management areas, etc., as may be appropriate. The City will continue to measure and monitor the level of service on its roadways to gauge the demand on each facility. The City will then apply mitigation measures to meet the mobility needs particular to each part of the City, as identified in the three MI Zones. Mitigation may be in the form of physical improvements, payment of fair share contributions and impact fees, and other funding sources necessary to ensure multimodal options and maintain concurrency.

TSM/TDM Programs

In 2009, the City conducted a study of mobility strategies that could be effective in the Port

~~Orange Town Center TCEA. The results of this study are compiled in the *Port Orange TDM/TSM Program Manual*, which the City will use as a basis for applying appropriate multi-modal strategies within the TCEA and MI Zones. For the areas of the City outside of the TCEA/MI zone 1, the City may implement a TDM program and continue to require proportionate fair share funding for traditional roadway capacity improvements needed to comply with the adopted LOS standards.~~

Transit

The City will continue to support and participate in the transit system as planned by the TPO and operated by VOTRAN. The City will also continue to concentrate its high-density residential land uses along major roadways and transit corridors. In addition, the City will continue to concentrate commercial uses within the various commercial nodes throughout the City, many of which are visited by transit riders. These commercial nodes are shown on the Future Land Use Element ~~Figure 1-9~~Map 1.10 and on ~~Figure 2-6 of this Element.~~ Map 2.3 identifies transit routes in Port Orange.

The City will continue to assist VOTRAN with its efforts to encourage ridership. In coordination with VOTRAN priorities, the City may require new development to provide safe, attractive, and comfortable transit amenities such as benches, shelters, lighting, and access to transit stops. The City may assist, if possible, in providing access to system operations information at designated bus stop locations and through public information outlets. This would provide assurance to the public about the service, destination, and timeliness of the routes, and would instill confidence that the trip can be accomplished in a reasonable amount of time. The City also can provide coordination between VOTRAN and groups or individuals who rely on transit service in the city.

Pedestrian Orientation

The City will continue to further improve its pedestrian system in support of the “walkable community” concept. The City will look for ways to enhance its existing “Complete Streets” to increase their use by pedestrians, bicyclists, and transit riders. This is part of a larger effort to create a “lifelong community” that is more sustainable and energy efficient. As part of the effort for making improvements to the transportation system, the City will include the evaluation of alternative technologies and facility design standards. This will ensure that these efforts will enhance multi-modal choice, increase energy efficiencies in the system, and create a more livable urban environment.

Implementation

~~The City will continue to operate its concurrency management system and will implement the mobility improvement strategies based on a phased schedule, but may deviate from the schedule if warranted by economic conditions. Short term efforts may include development of a Corridor Plan or Master Bicycle/Pedestrian Plan, which can then be implemented in prioritized locations. Mobility strategies within the city will retain the Proportionate Fair share process in select areas and focus on the physical infrastructure needed for transit, bicycle and pedestrian modes. In future years, development and operation should receive more of the focus.~~

PROJECTED TRANSPORTATION IMPROVEMENTS

A number of transportation mobility improvements are currently programmed or planned for Port Orange between now and the year 2015. Transportation improvements programmed in the Transportation Planning Organization's (TPO's) Transportation Improvement Program, the Volusia County Five Year Road Program, and the City's Capital Improvement Program are listed in Table 3. These programmed improvements include roadway, transit, bikeway, and pedestrian projects scheduled over the next five years. The cost estimates for these improvements include right-of-way acquisition, engineering, permitting, and construction costs. Table 4 lists the planned but as yet unprogrammed improvements needed between the years 2016 and 2025. The anticipated cost of each improvement and the funding source are also listed. Missing sidewalk gaps in the significant corridors are listed in Table 2. Approximately 13 miles of additional sidewalk are needed in the City to complete the system. However, additional improvements are planned for construction between the years 2010 and 2030. The individual segments are listed under Tables 3 and 4. The entire future bicycle and pedestrian system is shown on Figure 2-8.

TABLE 2
SIDEWALK GAPS ON COLLECTOR AND ARTERIAL ROADS

ROADWAY SEGMENT	FROM TO	DISTANCE
Bruner Road	Madeline Avenue - Clyde Morris Blvd.	2300'
Canal View Blvd.	Nova Road - Spruce Creek Road	4000'
Clyde Morris Blvd. (west side)	Dunlawton Avenue - 200' south	200'
Halifax Drive	Ocean Ave. - Dunlawton Avenue	1800'
Halifax Avenue/Riverside Drive	White Place - Seminole Street	6600'
Herbert Street (north side)	Nova Road - FEC Railway	6100'
Herbert Street (south side)	Nova Road - FEC Railway	6100'
Herbert Street (north side)	Carya Circle - Nova Road	1350'
Herbert Street (south side)	Golden Gate Dr. - Nova Road	3000'
Herbert Street (south side)	Village Terrace Dr. - City Center Dr.	700'
Madeline Ave.	Clyde Morris Blvd. - Bruner Road	1235'
Madeline Ave.	Town Park Dr. - Sunset Cove Drive	2000'
Oak Street	Dunlawton Avenue - FEC Ry.	3200'
Ocean Avenue	Halifax Drive - Ridgewood Avenue	500'
Pioneer Trail	East of Stonehealth Lane - Turnbull Bay Road	7800'
Reed Canal Road (north side)	Red Sail Lane - East of Atlantic High School	2250'
Ridgewood Avenue	Poinciana Avenue - Rose Bay (east side)	2000'
Seminole Street	Riverside Drive - Ridgewood Avenue	400'
Spruce Creek Road	Herbert Street - Dunlawton Avenue	1700'
Spruce Creek Road (east side)	Oak Street - 200' south	200'
Spruce Creek Road (west side)	Selin Circle - Little Town Rd.	900'
Spruce Creek Road (east side)	Nova Road - Angelina Court	1350'
Spruce Creek Road (west side)	Taylor Road - Central Park Blvd.	5150'
Taylor Road (north side)	Dunlawton Avenue - Clyde Morris Blvd.	2600'
Taylor Road	Taylor Branch Road - Williamson Blvd.	1400'
Taylor Road	Crane Lakes Blvd. - Forest Preserve Blvd.	875'
Taylor Branch Road	Dunlawton Avenue - Journey's End Way	350'
Williamson Blvd. (east side)	Madeline Avenue to N. City Limits	1900'
Williamson Blvd. (east side)	Hockney Court - 1200' N. of Willow Run Blvd.	4600'
Williamson Blvd. (east side)	Town West Blvd. - South 250'	250'
Willow Run Blvd.	Chardonnay Drive - Williamson Blvd.	980'
TOTAL		73,790'

Source: City of Port Orange, Department of Community Development, 2009

[TABLE 2 ADDRESSED IN NEW POLICY, 1.1.8]

TABLE 3
PROGRAMMED TRANSPORTATION IMPROVEMENTS
FISCAL YEARS 2010-2015

TRANSPORTATION FACILITY	SEGMENT		CONSTRUCTION IMPROVEMENT	COST	FUNDING SOURCE
	FROM	TO			
BIKE/PED PROJECTS					
Clyde Morris Blvd.	Dunlawton Ave.	W. Pines Plaza Driveway	Sidewalk	\$70,800	City/TPO
Cross Town Trail	City Center Dr.	Nova Rd.	Trail	\$568,618	City/TPO
Halifax Dr.	Dunlawton Ave.	Ocean Ave.	Bike-ped facility	\$100,000	City/CRA
Herbert St.	Carriage Gate Dr.	Nova Rd.	Sidewalk & trail	\$483,617	City/TPO XU
Herbert St.	Nova Rd.	Jackson St.	Sidewalk/bike lanes	\$30,589	City/TPO XU
Peninsula Dr.	Dunlawton Ave.	Demotte Ave.	Sidewalk	\$43,400	City/TPO XU
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	Streetscape improvements	\$3,982,500	FDOT/CRA
Spruce Creek Rd.	Dunlawton Ave.	Herbert St.	Trail	\$250,000	City/TPO
	Taylor Rd.	Central Park Blvd.	Trail	\$226,600	City/TPO
Taylor Rd.	Williamson Blvd.	Taylor Branch Rd.	Pedestrian improvements	\$300,000	City/FDOT/Developer
TRANSPORTATION SYSTEMS MANAGEMENT PROJECTS					
Clyde Morris Blvd.	At Pines Plaza/Wal Mart driveway		Install traffic signal	\$345,000	City/Developer
Dunlawton Ave.	Ridgewood Ave	I-95	Fiber optic addition	\$250,000	FDOT
	At Spruce Creek Rd.		Intersection improvement	\$750,000	CRA
	At Village Trail		Turn lane	\$175,500	City/TPO
Halifax Ave.	Ocean Ave.	Dunlawton Ave.	New roadway alignment	\$2,351,250	CRA
Ocean Ave.	Halifax Ave.	Ridgewood Ave.	New roadway alignment	\$2,351,250	CRA
Pioneer Tr.	At Turnbull Bay Rd.		Intersection Improvement	\$1,550,000	VCO
Ridgewood Ave.	At Herbert St. and Dunlawton Ave.		Intersection improvements	\$2,050,000	FDOT
Taylor Rd.	At Devon Street		New traffic signal	\$247,217	City/FDOT
	At Dunlawton Ave.		Traffic signal modification	\$200,000	Developer
	At I-95 Interchange		WB left turn lane ext.	\$200,000	City/FDOT/Developer
Williamson Blvd.	At Town West Blvd.		New traffic signal	\$273,000	Developer
	At Pioneer Trail		Intersection improvements	\$490,000	Developer
Willow Run Blvd.	At Clyde Morris Blvd.		Turn lane	\$130,000	City/TPO
ROADWAY WIDENING PROJECTS					
Coraci Blvd.	Town West Blvd.	¼ mile south	New 2-lane divided	\$850,000	Developer
	¼ mile south of Town West	Carmody Lakes Dr.	New 2-lane	\$1,300,000	City/Developer
ROADWAY WIDENING PROJECTS CONTINUED					
Williamson Blvd.	N. of Summer Trees Rd.	Town West Blvd.	Widen to 4 lanes	\$2,420,000	Developer
	Airport Rd.	Pioneer Tr.	New 4-lane road	\$16,990,796	Developer

TRANSPORTATION FACILITY	SEGMENT		CONSTRUCTION IMPROVEMENT	COST	FUNDING SOURCE
	FROM	TO			
Willow Run Blvd.	Yorktowne Blvd.	Williamson Blvd.	Widen to 4 lanes*	\$1,310,400	City
Yorktowne Blvd.	Willow Run Blvd.	B 19 Canal	New 4 lane road	\$2,909,000	Developer
	B 19 Canal	Hidden Lakes Dr.	New 4 lane road	\$1,840,000	Developer
	Dunlawton Ave.	Taylor Rd.	New 4 lane road	\$3,636,625	Developer
TRANSIT IMPROVEMENTS					
Transit Improvements	Dunlawton Ave. /Nova Area		Transfer Station	\$125,000	VOTRAN
Transit Improvements	TBD		Five Shelters	\$62,500	VOTRAN

Notes:

PE = Preliminary Engineering

ROW = Right-of-way

Const. = Construction

FDOT = Florida Department of Transportation

VCO = Volusia County

City = City of Port Orange

TPO = Volusia County Transportation Planning Organization

CRA = Community Redevelopment Agency

Sources:

FDOT's 2008 *Transportation Costs*

Volusia County TPO's 2025 *Transportation Plan Update*

City of Port Orange Capital Improvement Program, 2009.

SCSA = FDOT Surface Transportation Program, Any Area**

* Includes traffic circle

TABLE 14
PLANNED CAPITAL IMPROVEMENTS
FISCAL YEARS 2022-2025

FISCAL YEAR	TRANSPORTATION FACILITY	SEGMENT		CONSTRUCTION IMPROVEMENT	COST IN \$1,000s	FUNDING SOURCE
		FROM	TO			
2016-2020						
	Bruner Road	Terminus	Clyde Morris Blvd.	2-lane road extension	800	Developer
	City-wide			Bus stop improvements (5)	63	VOTRAN
	City-wide			Sidewalk improvements	3,601	City
	Clyde Morris Blvd.	At Wal-Mart/Pines Plaza driveway		Traffic signal	345	City/Developer
	Cross Town Trail Ph 2	Jackson St.	Nova Rd.	Trail	120	City/TPO
	Dunlawton Ave.	Halifax River	West city limits	Walklights rehabilitation	1,000	Developer/City/FDOT
	Halifax Dr.	Ocean Ave.	Ridgewood Ave.	Boardwalk	15,450	—City/CRA
	Herbert St.	FEC Railway	Jackson St.	Sidewalk	147	City/Developer
		FEC Railway	Clyde Morris Blvd.	Bikeway improvements	1,012	City
	McGinnis Blvd.	Road “D”.	Williamson Blvd.	New 4-lane road	4,533	Developer
	Madeline Ave.	Ridgewood Ave.	Sauls Rd./McDonald Rd.	New 2-lane road	7,000	VCO
		At U.S. 1		Traffic signal	345	VCO/FDOT
	Nova Rd.	Eagle Lake Tr.	U.S. 1	Median landscaping	100	City/FDOT
	Ridgewood Ave.	At Rose Bay and at north city limits		Gateway landscaping	200	City
		At Fleming St. and at Rose Bay		Median Landscaping	100	City/FDOT
		North city limits	Rose Bay	“Complete streets” improvements	1,000	City/FDOT
	Riverwalk	Ridgewood Ave.		Transit and mobility improvements	125	—CRA/City
		Ridgewood Ave.		Streetscape	3,983	—CRA/City/FDOT
	Road “D”	McGinnis Blvd.	Coraci Blvd.	New 3-lane road	1,260	City/Developer
	Spruce Creek Rd.	At Taylor Rd.		Install roundabout/traffic circle	1,000	City/FDOT
	Taylor Rd.	Clyde Morris Blvd	Yorktowne Blvd.	Widen to 4 lanes	2,143	Developer
		Summer Trees Rd.	Forest Preserve Blvd.	Widen to 4 lanes	4,000	VCO
		Crane Lakes Blvd.	Forest Preserve Blvd.	Bikepath gaps	38	City/TPO-XU
	Williamson Blvd.	North city limits	Town West Blvd.	Widen to 4 lanes w/median	23,000	Developer/VCO
	Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Drive	Widen to 4 lanes	7,800	City
2021-2025						
	City wide			Bus Stop improvements	63	VOTRAN
	City wide			Sidewalk Improvements	1,052	City
	Airport Rd.	Cypress Springs Pkwy.	South city limits	Widen to 4 lanes	8,800	VCO

FISCAL YEAR	TRANSPORTATION FACILITY	SEGMENT		CONSTRUCTION IMPROVEMENT	COST IN \$1,000s	FUNDING SOURCE
		FROM	TO			
	Coraci Blvd.	Madeline Ave.	Road “D”	New 2 lane road	3,122	Developer
		Carmody Lakes Dr.	Taylor Road	New 2 lane road	4,633	City/Developer
	Herbert St.	At Spruce Creek Rd./6 th St.		Traffic Signal	250	City
	Madeline Ave.	Clyde Morris Blvd.	Williamson Blvd.	Median Landscaping	25	Developer
		Williamson Blvd.	Tomoka Farms Rd.	New 2 lane road	13,400	VCO/FDOT/Developer
	McGinnis Ave.	Madeline Ave.	Road “D”	New 4 lane road	4,533	Developer
	Oak St.	At Spruce Creek Rd.		Traffic Signal	250	City
	Spruce Creek Rd.	Herbert St.	Canal View Blvd.	New 2 lane road	1,300	City
	Village Tr.	At Country Ln.		Roundabout/Traffic Circle	500	City
	Willow Run Blvd.	Madeline Ave.	Williamson Blvd.	New 2 lane road	3,527	City/Developer
At Yorktowne Blvd.		Roundabout/Traffic Circle	1,000	City		
2026-2035	(INFORMATION ONLY)					
	Dunlawton Ave.	Clyde Morris Blvd.	Taylor Branch Rd.	Widen to 8 lanes	3,340	FDOT
	I-95	Beville Rd. (SR 400)	Pioneer Tr.	Widen to 6 lanes	23,928	FDOT
		At Pioneer Tr.		Interchange	20,000	FDOT
		Taylor Rd.	Doris Leeper Spruce Creek Preserve	New Trail	480	City
	Madeline Ave.	Long Grove Ln.	Town Park Blvd.	Widen to 4 lanes	5,900	City/Developer
	Pioneer Tr.	Turnbull Bay Rd.	Williamson Blvd.	Widen to 4 lanes	11,545	City/Developer
	Spruce Creek Rd.	Dunlawton Ave.	North of Nova Rd.	Widen to 4 lanes	9,455	City
	Taylor Rd.	Dunlawton Ave.	Williamson Blvd.	Widen to 8 lanes	6,500	City/FDOT
		Forest Preserve Blvd.	Coraci Blvd. Extension	Widen to 4 lanes	4,909	City/Developer

<u>TRANSPORTATION FACILITY</u>	<u>SEGMENT</u>		<u>CONSTRUCTION IMPROVEMENT</u>	<u>FUNDING SOURCE</u>
	<u>FROM</u>	<u>TO</u>		
<u>Airport Rd.</u>	<u>Cypress Springs Pkwy.</u>	<u>South city limits</u>	<u>Widen to 4 lanes</u>	<u>VCO</u>
<u>Bruner Road</u>	<u>Terminus</u>	<u>Clyde Morris Blvd.</u>	<u>2-lane road extension</u>	<u>City</u>
<u>City-wide</u>			<u>Bus stop improvements</u>	<u>VOTRAN</u>
<u>City-wide</u>			<u>Sidewalk improvements</u>	<u>City/TPO</u>
<u>Clyde Morris Blvd.</u>	<u>At Wal-Mart/Pines Plaza Driveway</u>		<u>Traffic signal</u>	<u>City/Developer</u>
<u>Clyde Morris Blvd.</u>	<u>Reed Canal Rd.</u>	<u>Taylor Rd.</u>	<u>TSM/TDM at Intersections</u>	<u>City/VCO/TPO</u>
<u>Clyde Morris Blvd.</u>	<u>At Victoria Gardens Blvd.</u>		<u>Roundabout, traffic signal, or other intersection improvements</u>	<u>City/VCO/TPO</u>

<u>TRANSPORTATION</u> <u>FACILITY</u>	<u>SEGMENT</u> <u>FROM</u> <u>TO</u>		<u>CONSTRUCTION</u> <u>IMPROVEMENT</u>	<u>FUNDING</u> <u>SOURCE</u>
<u>Coraci Blvd.</u>	<u>Madeline Ave.</u>	<u>Road “D”</u>	<u>New 2-lane road</u>	<u>City/Developer</u>
<u>Coraci Blvd.</u>	<u>Carmody Lakes Dr.</u>	<u>Town West Blvd.</u>	<u>New 2-lane road</u>	<u>City/Developer</u>
<u>Dunlawton Ave.</u>	<u>Spruce Creek Rd.</u>	<u>Williamson Blvd.</u>	<u>Install Streetlights or a combination of Streetlights and Walklights</u>	<u>City/FDOT</u>
<u>Dunlawton Ave.</u>	<u>Williamson Blvd.</u>	<u>Peninsula Dr.</u>	<u>TSM/TDM at Intersections</u>	<u>City/FDOT</u>
<u>Dunlawton Ave.</u>	<u>Clyde Morris Blvd.</u>	<u>Taylor Branch Rd.</u>	<u>Widen to 8 lanes</u>	<u>FDOT</u>
<u>Halifax Dr.</u>	<u>Herbert St.</u>	<u>Dunlawton Ave.</u>	<u>Boardwalk or Trail</u>	<u>City/CRA/Developer</u>
<u>Herbert St.</u>	<u>Ridgewood Ave.</u>	<u>Clyde Morris Blvd.</u>	<u>Bikeway or Sidewalk improvements</u>	<u>City/TPO</u>
<u>Herbert St.</u>	<u>At Spruce Creek Rd./6th St.</u>		<u>Traffic Signal</u>	<u>City</u>
<u>I-95</u>	<u>At Pioneer Tr.</u>		<u>Interchange</u>	<u>FDOT</u>
<u>Madeline Ave.</u>	<u>Williamson Blvd.</u>	<u>Nova Rd.</u>	<u>TSM/TDM at Intersections</u>	<u>City/TPO/Developer</u>
<u>Madeline Ave.</u>	<u>Williamson Blvd.</u>	<u>Tomoka Farms Rd.</u>	<u>New 2-lane road</u>	<u>VCO/FDOT/Developer</u>
<u>Madeline Ave.</u>	<u>Long Grove Ln.</u>	<u>Town Park Blvd.</u>	<u>Widen to 4 lanes</u>	<u>VCO/City/Developer</u>
<u>McGinnis Ave.</u>	<u>Madeline Ave.</u>	<u>Road “D”</u>	<u>New 4-lane road</u>	<u>Developer</u>
<u>Nova Rd.</u>	<u>Eagle Lake Tr.</u>	<u>U.S. 1</u>	<u>Median landscaping</u>	<u>City/FDOT</u>
<u>Oak St.</u>	<u>At Spruce Creek Rd.</u>		<u>Traffic Signal and/or intersection realignment</u>	<u>City/TPO/Developer</u>
<u>Pioneer Tr.</u>	<u>Turnbull Bay Rd.</u>	<u>Williamson Blvd.</u>	<u>Widen to 4 lanes</u>	<u>VCO/City/Developer</u>
<u>Ridgewood Ave.</u>	<u>North City limits</u>	<u>Rose Bay</u>	<u>Median Landscaping and Gateway Entry Signage</u>	<u>City/FDOT</u>
<u>Riverwalk</u>	<u>Ridgewood Ave.</u>		<u>Transit and mobility improvements</u>	<u>CRA/City</u>
<u>Riverwalk</u>	<u>Ridgewood Ave.</u>		<u>Streetscape</u>	<u>CRA/City/FDOT</u>
<u>Road “D”</u>	<u>McGinnis Blvd.</u>	<u>Coraci Blvd.</u>	<u>New 2-lane road</u>	<u>City/Developer</u>
<u>Spruce Creek Rd.</u>	<u>Herbert St.</u>	<u>Canal View Blvd.</u>	<u>New 2-lane road</u>	<u>City</u>
<u>Spruce Creek Rd.</u>	<u>Dunlawton Ave.</u>	<u>North of S Nova Rd.</u>	<u>Widen to 4 lanes</u>	<u>City/TPO/CRA</u>
<u>Taylor Rd.</u>	<u>Dunlawton Ave.</u>	<u>Williamson Blvd.</u>	<u>Widen to 8 lanes</u>	<u>City/FDOT</u>
<u>Taylor Rd.</u>	<u>Summer Trees Rd.</u>	<u>Forest Preserve Blvd.</u>	<u>Widen to 4 lanes</u>	<u>VCO</u>
<u>Taylor Rd.</u>	<u>Clyde Morris Blvd.</u>	<u>Yorktowne Blvd.</u>	<u>Widen to 4 lanes or TSM/TDM at Intersections</u>	<u>VCO/City/TPO</u>

<u>TRANSPORTATION FACILITY</u>	<u>SEGMENT</u>		<u>CONSTRUCTION IMPROVEMENT</u>	<u>FUNDING SOURCE</u>
	<u>FROM</u>	<u>TO</u>		
<u>Town West Blvd.</u>	<u>At Coraci Blvd.</u>		<u>Traffic Light</u>	<u>City/Developer/TPO</u>
<u>Town West Blvd.</u>	<u>Tomoka Farms Rd.</u>	<u>Williamson Blvd.</u>	<u>Widen to 4 lanes or TSM/TDM at Intersections</u>	<u>City/Developer/TPO</u>
<u>Town West Blvd.</u>	<u>At Tomoka Farms Rd.</u>		<u>Roundabout, traffic signal, or other intersection improvements</u>	<u>City/VCO/TPO</u>
<u>Village Tr.</u>	<u>At Country Ln.</u>		<u>Roundabout/Traffic Circle</u>	<u>City</u>
<u>Williamson Blvd.</u>	<u>North City limits</u>	<u>Pavilion Main Driveway</u>	<u>Widen to 4 lanes w/median</u>	<u>Developer/VCO</u>
<u>Willow Run Blvd.</u>	<u>Madeline Ave.</u>	<u>Williamson Blvd.</u>	<u>New 2-lane road</u>	<u>City/Developer</u>
<u>Willow Run Blvd.</u>	<u>At Yorktowne Blvd.</u>		<u>Roundabout, traffic signal, or other intersection improvements</u>	<u>City/Developer</u>
<u>Yorktowne Blvd.</u>	<u>Dunlawton Ave.</u>	<u>Hidden Lakes Dr.</u>	<u>Widen to 4 lanes</u>	<u>City/Developer</u>

Notes:

FDOT = Florida Department of Transportation

City = City of Port Orange

VCO = Volusia County

TPO = River to Sea Transportation Planning Organization ~~Devel = Developers~~

Sources: ~~FDOT's Transportation Costs, 2004, Volusia County~~ River to Sea TPO's Connect 2045 Long Range Transportation Plan ~~2025 Transportation Plan Update~~, City of Port Orange, ~~2009~~ 2023

GOALS, OBJECTIVES, AND POLICIES

GOAL 12: RESILIENT, WELL-CONNECTED, AND EFFICIENT MULTI-MODAL SYSTEM

~~THE CITY SHALL DEVELOP AND MAINTAIN TO PROVIDE A RESILIENT, CONNECTED MULTI-MODAL TRANSPORTATION SYSTEM THAT SUPPORTS THE NEEDS OF ALL USERS WITH RESPECT TO MOBILITY, ACCESSIBILITY, IDENTITY, AND MODE PREFERENCE. IS SAFE, CONVENIENT, ATTRACTIVE, COST EFFECTIVE, OPERATIONALLY AND ENERGY EFFICIENT, AND INTEGRATED; THAT PROMOTES HEALTHY LIFESTYLES, REDUCES DEPENDANCE ON SINGLE OCCUPANT AUTOMOBILES, AND PROTECTS THE ENVIRONMENT; AND THAT PERMITS THE EFFICIENT MOVEMENT OF GOODS AND PEOPLE FOR ECONOMIC DEVELOPMENT. [STREAMLINING GOAL LANGUAGE]~~

Objective ~~21.1: Bicycle/Pedestrian Multi-modal System Split.~~ The City shall continue to coordinate with the Transportation Planning Organization (TPO), the Florida Department of Transportation (FDOT), and other agencies to address mobility throughout the City through a multimodal transportation system that includes enhanced facilities using Complete Streets concepts to address walking, bicycling, transit, and vehicles including electric vehicles. increase the use of non-motorized modes of transportation by constructing a continuous network of bikeways and pedestrian facilities. The City will work to achieve a 1.5% modal split for bicycle and pedestrian traffic by the year 2015. The City will utilize revised modal split targets, which will be adopted after obtaining 2010 Census Data. ~~[SHIFTING FOCUS TO BE MORE HOLISTIC]~~

Policy ~~1.1.12.1.6:~~ The City shall use the Volusia Trails Plan and Bicycle Map as well as the TPO's Bicycle and Pedestrian Plan as a guide to supplement the transportation network with interconnected, non-motorized bicycling and walking corridors. The City may create its own Bicycle and Pedestrian Plan to guide development of an active transportation network in lieu of Volusia County's and the TPO's.

Policy ~~1.1.2.1.27:~~ The City shall encourage developers to incorporate interconnected pedestrian and bicycle access ways to public uses such as schools, libraries, parks, intermodal transit stops and, commercial nodes, and between residential and commercial developments, in new development proposals and redevelopment projects, as well as explore developing the same through City projects where feasible.

Policy ~~1.1.3:~~ The City shall periodically review development regulations in the Land Development Code (LDC) and make necessary adjustments to standards for roadway construction or roadway enhancement projects to enhance pedestrian safety including requirements for sidewalks and lighting, as well as pedestrian crossings that are specifically designed for the safe crossing of major, multi-lane higher speed roadway

facilities.

Policy 1.1.4: The City shall require pedestrian, bicycle, and appropriate lighting facilities in roadway improvement projects and in the standard street cross sections to be developed and adopted for the design of all City streets for consistent implementation City-wide when such facilities can be incorporated into the planned roadway improvement project without causing project delay or inefficient spending of public funds.

~~*Policy 2.1.1:*~~ By 2013, the City may prepare a pedestrian and bicycle master plan, which shall analyze the existing system that is in place and identify alternative approaches to expand upon and improve the system, with an emphasis on on-road bike lanes/bike paths and pedestrian and bicycle trails. **[DELETED, CITY USING TPO AND VOLUSIA COUNTY DOCUMENTS – SEE NEW 1.1.1]**

~~*Policy 2.1.2:*~~ The City shall strive to increase the use of non-motorized modes of transportation by constructing a continuous network of bikeways and pedestrian facilities. **[REDUNDANT]**

~~*Policy 2.1.3:*~~ The City shall explore the possibility of developing a trail system connector from east of I-95 and south of Taylor Road to the Doris Leeper Spruce Creek Nature Preserve on the south side of Spruce Creek, utilizing the existing northbound I-95 bridge. **[DEEMED NOT FEASIBLE]**

~~*Policy 2.1.4:*~~ The City shall participate with FDOT in the “Conserve by Bicycle” program and the “Safe Paths to School” program. **[PROGRAMS OUTDATED]**

~~*Policy 2.1.5:*~~ The City shall require a greater mix of uses in new developments with Future Land Use designations of Planned Community and Mixed-Use Center, in such a way that homes, parks, schools, shops, and employment centers, are within walking or biking distance (½ mile) of one another. In existing areas where such a mix is not present, the City shall encourage infill development to achieve it. **[ADDRESSED IN FUTURE LAND USE]**

~~*Objective 2.2: Bicycle/Pedestrian Design Standards.*~~ The City shall revise and apply design standards for bicycle and pedestrian facilities by 2015. **[COMBINING OBJECTIVES 2.1 AND 2.2]**

~~*Policy 1.1.52.2.1:*~~ New bikeways in the City, including nNew and retrofitted bike lanes, bike- paths, sidewalks, and trails, should comply with the *FDOT Florida Pedestrian Planning and Design Guidelines* and the *Florida Bicycle Facilities Design Guidelines*, when feasible.

~~*Policy 2.2.2:*~~ Pedestrian and bicycle facilities should provide effective and convenient access to new commercial and multi-family residential structures. Main public entrances to buildings should include direct pedestrian access points from parking areas and from adjacent sidewalks and bikeways. **[REDUNDANT, SEE NEW 1.1.2]**

Policy ~~1.1.62.2.3~~: In conjunction with new development, redevelopment, or road improvements on roadways maintained by the City and in alignment with Map 2.6, sidewalks wide enough to serve bicycle traffic should be established on one side of every arterial and collector street, with sidewalks for pedestrian use also established on the opposite side of all arterial streets. Along the Dunlawton Avenue corridor, sidewalks wide enough to serve bicycle traffic shall be provided on both sides, pursuant to the Dunlawton Corridor Plan, except where right-of-way width is too narrow, as determined by the City.

Policy ~~2.2.4~~: ~~As funding is available, the City shall seek to modify existing intersections to enhance pedestrian use by providing that:~~
~~all intersection corners are illuminated;~~
~~traffic signals are adequately timed to allow a pedestrian crossing;~~
~~curb ramps and audio/tactile signal systems are provided in areas with large elderly and handicapped populations; and all sidewalks and crosswalks are constructed to comply with the Americans with Disabilities Act, 1991.~~ **[REPLACED WITH POLICIES 1.1.3 AND 1.1.4]**

Policy ~~1.1.72.2.5~~: As funding is available, the City shall work to provide mid-block pedestrian crossings where needed; and study the possibility of building pedestrian bridges over major thoroughfares, such as Dunlawton Avenue, Ridgewood Avenue, ~~I-95~~, Williamson Boulevard, Clyde Morris Boulevard, and Nova Road.

Policy ~~2.2.6~~: ~~New residential developments with densities of one unit per acre or greater shall provide sidewalks on both sides of every street. In addition, where cul-de-sacs within a development are located near adjacent collector or arterial streets, then a sidewalk may be required to provide a connection.~~

Policy ~~2.2.7~~: ~~The City shall require new non-residential development and redevelopment in mixed use land use categories to be pedestrian friendly as follows: by providing directly connecting walkways from streets to buildings and parks, and by restricting or calming vehicle traffic in areas of heavy pedestrian usage.~~ **[COVERED BY NEW 1.1.2]**

Policy ~~1.1.8~~: The City shall continuously seek opportunities and funding to fill sidewalk, bikepath, and lighting gaps on collector and arterial roads, city-wide.

Policy ~~1.1.92.2.8~~: In the development of priority transportation enhancement projects, extra consideration will be given to projects which further the creation of multi-use trails.

Policy ~~1.1.102.2.9~~: Developers of projects adjacent to roadways with constrained or substandard rights-of-way may be required to provide a bicycle and/or pedestrian access easement to ensure that proper facilities and access are provided.

Policy 1.1.11: Development and/or redevelopment within the City shall mitigate transportation impacts to the multimodal transportation system based upon the density/intensity and respective location of the development, proportional to the impacts of development, as established in the Concurrency Management System.

Policy 1.1.12: As properties are developed or redeveloped the City shall encourage the use of connected commercial and/or multi-family parking areas to reduce the number of driveways and the volume of traffic.

Policy 1.1.13: Updates to the City's LDC shall consider the following:

- a. How emerging transportation technologies will impact travel patterns, curb management, parking, and loading / unloading demand, supporting infrastructure, and roadway design.
- b. Provisions to control access points and minimize curb cuts on arterial and collector roadways, provide safe and convenient on-site traffic flow, and provide sufficient on-site parking for motorized and non-motorized vehicles.
- c. Requirements for ride-share and on-demand transportation options, pedestrian, and bicycle amenities for site plans for major mixed use, residential, commercial, industrial, and office buildings.

Policy 1.1.14: The City shall maintain active, positive relationships with FDOT, Volusia County, the TPO, adjacent municipalities, and other relevant public and private entities in order to support and engage in cooperative funding of transportation elements.

Policy 1.1.15: The City may monitor and coordinate with FDOT, Volusia County, and the TPO to participate in the development of complementary bike and pedestrian facilities as part of all road improvement projects. The City may coordinate with FDOT District Five Pedestrian and Bicycle Safety Specialist as well as TPO staff regarding community outreach activities, highly visible enforcement (HVE) efforts with local law enforcement agencies, and resources available to address pedestrian and bicycle safety education and enforcement.

Policy 1.1.16: The City shall continually evaluate emerging transportation technologies including, but not limited to, autonomous vehicles, enhanced real-time communication, and artificial intelligence in relation to the impacts these advancements will have on transportation infrastructure, land use, and urban design.

Policy 1.1.17: The City will encourage the implementation of mixed land uses to encourage the use of public transportation, bicycle, micromobility, and pedestrian activity. This may include additional implementation of the Mixed Use Center District (MXC) and Office/Residential Transition land use categories where appropriate and in alignment with the Future Land Use Element.

Objective 1.2: Residential Street System. The City shall continue to maintain the integrity of the City's residential street system by ensuring that safety, convenient property access, and neighborhood character are not adversely affected by regional traffic or incompatible land uses that would disrupt travel patterns appropriate for residential streets.

Policy 1.2.1: Collectors and local streets shall be periodically evaluated in terms of property access and safety or preservation of neighborhood.

Objective 1.3.2-9: Right-of-Way Protection Requirements. For existing or future transportation rights-of-way, public parking areas, and corridors designated in the City's Comprehensive Plan, the City shall establish measures for their acquisition, preservation, or protection coordinate with collaboration from the County and State to identify, prioritize and acquire land for future right-of-way and public parking areas.

Policy 1.3.12-9.2: The City shall continue to maintain standards for minimum rights-of-way widths for each type of roadway. All new development and redevelopment shall be required to donate or reserve right-of-way adjacent to arterial or collector roadways with substandard right-of-way widths prior to the issuance of a Certificate of Occupancy final development order.

Policy 2.9.1: ~~Where the acquisition of right of way by any agency results in non-compliance with requirements of the Land Development Code for building setbacks and landscape buffers, provisions shall be utilized to re-establish the buffer and address non-conformities.~~

Policy 2.9.3: ~~All building setbacks for new construction and building additions shall be measured from future right-of-way lines once such lines are established.~~

Policy 1.3.2-9.4: The City shall not abandon, sell, or otherwise convey existing rights-of-way for roadways from public ownership unless a determination has been made that the right-of-way is not required to maintain existing underground infrastructure, will not be needed for expansion of underground infrastructure during the planning period, and will not be needed for future transportation improvements, including but not limited to turn lanes, sidewalks, shared use paths, and bike lanes.

Policy 2.9.5: ~~All planned arterial and collector roadways shall be dedicated to the public upon completion of construction and acceptance by the government agency maintaining the roadway.~~ **[BUILT INTO EXISTING PROCESSES]**

Policy 2.9.6: ~~The required right of way landscape buffers shall not be used for additional right of way without landscape mitigation.~~ **[CODE-SPECIFIC]**

Policy 2.9.7: ~~The City will seek opportunities to acquire lands for public parking to support transit service, redevelopment and park-and-ride lot(s). Such facilities may consist of separate designed parking lots, leased lots, or shared-use facilities.~~ **[CITY IS NEARING BUILDOUT]**

Policy 1.3.3: The City shall protect the right-of-way widths for existing or future roadways in the City by requiring in the LDC appropriate setbacks and landscape buffers based on the context of the proposed development when issuing development orders.

Policy 1.3.4: The City shall maintain and, as needed, add landscaping to medians, as well as explore grant and other funding opportunities for making improvements to all roadways in Port Orange.

Objective 1.4: Resilience, Sustainability, and Efficiency. The City shall encourage County, Regional, and State agencies to provide improved and resilient multimodal facilities, safe and convenient public transit terminals, and accommodation of the special needs of the transportation disadvantaged, all while acknowledging the potential of natural disasters.

Policy 1.4.1: The City shall continue to support the development of a multimodal transportation system that increases the use of public transit and other modes to reduce adverse environmental impacts.

~~**Objective 2.12: Evacuation.**~~ Policy 1.4.2: The City's roadway network shall provide a safe and rapid means of coastal evacuation for the citizens of Port Orange and adjacent cities, as outlined in the Coastal Zone Management Element. The City will maintain and improve evacuation routes with consideration of the location of evacuation shelters. ~~Policy 2.12.2:—~~ The City shall coordinate with VOTRAN to assist in the evacuation of transit-dependent persons.

~~Policy 1.4.32.12.1:~~ During emergency evacuations, City emergency service personnel shall facilitate the efficient evacuation of residents and travelers ~~to ensure that hurricane evacuation routes operate at LOS “D” or better.~~

Policy 1.4.4: Consistent with the Intergovernmental Coordination and Coastal Zone Management Elements, the City will partner with other appropriate agencies to facilitate efficient evacuation during natural disasters.

Policy 1.4.52.12.3: The City will avoid public investment in roadway capacity improvements ~~which~~ that encourage or subsidize an increase in development density in coastal high-hazard areas that would increase the evacuation time beyond 12 hours.

Policy 1.4.6: The City shall increase the infrastructure and operational efficiency of the roadway and intermodal transportation system against flooding and other natural disasters through redevelopment, improvements to stormwater or green infrastructure, raised elevations, detour strategies, and addressing heat impacts on active transportation or transit travelers through tree planting and shade/cooling locations.

Policy 1.4.7: The City shall consider wildlife corridors when planning new roadways, such as providing underpasses or overpasses or avoiding critical habitats when determined to be warranted. A survey of wildlife and natural vegetation along the roadway corridor may be required if initial research indicates critical habitats may be included. In cases where critical habitats cannot be reasonably avoided, appropriate permits will be obtained.

Policy 1.4.8: The City shall use Transportation System Management (TSM) and low-cost capital improvements to maximize the efficiency of the existing transportation system and encourage land use patterns that promote the use of public transit whenever possible to promote the reduction of adverse environmental impacts.

Policy 1.4.9: The City shall regularly make TSM and TDM improvements, as well as streetscape improvements, in the Riverwalk area.

Policy 1.4.10: New construction on City streets, including underground infrastructure, should consider their location in relation to areas likely to be more frequently inundated by high tides and heavy rains and ensure that materials resilient to saltwater, storm surge, and more frequent rain-related flooding are utilized in construction to mitigate future flood damages.

Policy 1.4.11: The City shall encourage the use of electric vehicles, as well as micromobility devices deemed appropriate for community character by City Administration, by assessing electric vehicle charging infrastructure in their community and planning for additional infrastructure, if needed, as well as incorporation of electric vehicles and other non-carbon emitting vehicles into the City's assets, when feasible, and as funding is available to support these initiatives. The City shall explore updating the LDC to encourage new development or redevelopment to incorporate charging infrastructure.

Objective 1.5: Wayfinding. The City will explore implementing wayfinding mechanisms that provide clear and visually engaging guidance for the City's residents and visitors and will review the mechanisms in place periodically for consistency and expansion opportunities.

Policy 1.5.1: The City will explore developing and maintaining a comprehensive wayfinding system that appropriately scales directional signage for vehicular, bicyclist, micromobility, and pedestrian travel routes, as well as the location of major civic uses, as practical and/or financially feasible.

Policy 1.5.2: The City may investigate mobile applications to use as part of wayfinding system.

Policy 1.5.3: The City shall include ample signage and pedestrian signalization provisions to designate and promote preferred non-vehicular routes.

Policy 1.5.4: The City will consider installing gateway entry signage at major points of access into Port Orange, including partnering with adjacent developers.

GOAL 2: COORDINATED LAND USE, HOUSING, AND TRANSPORTATION NETWORK. THE CITY SHALL COORDINATE THE TRANSPORTATION SYSTEM WITH FUTURE LAND USE AND ENSURE THAT EXISTING AND PROPOSED POPULATION DENSITIES, HOUSING, NON-RESIDENTIAL INTENSITIES, EMPLOYMENT CENTERS, AND LAND USES ARE CONSISTENT WITH THE MOBILITY MODES AND SERVICES PROPOSED TO SERVE THE CITY.

Objective 2.13: ~~*Public Transportation. Transit Mode.*~~ The City shall encourage increased use of the public transportation system operated by VOTRAN. ~~work with and continue to encourage VOTRAN to provide a safe, convenient, and efficient public transit system to the citizens of Port Orange at an acceptable level of service and with headways as close as possible to 30 minutes or less. The City shall work with VOTRAN to achieve a 1.0% modal split for transit use by the year 2015, and increase the total passengers per revenue mile on routes serving the City. The City will utilize new targets after obtaining 2010 Census data.~~

~~*Policy 2.3.1:*~~ The City shall designate all roads serviced by existing and/or proposed VOTRAN bus routes as "public transportation corridors," as shown on Figure 2-6.
[NOT REQUIRED]

~~*Policy 2.3.2:*~~ The City shall strive to maintain all roads within designated public transit corridors at a level of service (LOS) sufficient to support the VOTRAN bus system.—[INCORPORATED INTO LOS CONSIDERATIONS]

~~*Policy 2.3.3:*~~ The City shall support the operational LOS performance standards for fixed-route transit systems as provided by the TPO in its 2035 *Transportation Plan Update*.—[INCORPORATED INTO LOS CONSIDERATIONS]

~~*Policy 2.1.13.4:*~~ The City shall guide the placement, type, and density of new development along public transportation corridors, in a manner, consistent with the Future Land Use Element, so as to achieve the level of ridership needed to support mass transit.

~~*Policy 2.3.5:*~~ The City shall assist VOTRAN in initiating transit system improvements to increase total passenger per revenue miles traveled on routes serving the City each year. [POLICY NOT REQUIRED, CITY WILL CONTINUE TO COORDINATE WITH VOTRAN AS APPROPRIATE]

~~*Policy 2.3.6:*~~ The City shall require new developments to provide bus stop(s) with shelters if located on a public transportation corridor, at locations prioritized by the number of riders, consistent with VOTRAN standards. [COVERABLE IN LDC REQUIREMENTS]

~~*Policy 2.1.23.7:*~~ The City shall coordinate with VOTRAN on the location of transit

stops to serve proposed major commercial and residential developments.

Policy 2.1.3-8: The City shall utilize the VOTRAN *Transit Development Design Guidelines* and shall coordinate with VOTRAN in the design of recommended transit improvements.

~~*Policy 2.3.9:* The City shall require major trip generators and attractors located on a public transportation corridor to incorporate elements of "transit-friendly design," as specified in the VOTRAN *Transit Development Design Guidelines* or equivalent. Specific elements may include:~~

~~Clearly delineated walkways from the building to the transit stop;~~

~~Buildings and transit stop placed closer to the street, and~~

~~—Incorporating — elements — of — transit-oriented — design.~~**[GUIDELINES INCORPORATED IN TRAFFIC IMPACT ANALYSIS PROCESS]**

~~*Policy 2.3.10:* As a transportation demand management (TDM) strategy, the City shall establish a maximum parking requirement for new developments along public transportation corridors in order to reduce surplus parking that encourages low-occupancy automobile trips.~~**[NOT ESTABLISHED]**

~~*Policy 2.3.11:* The City will continuously make bus stop improvements as needed, city-wide, shall work with VOTRAN to improve existing and future bus stops to include benches, shelters, clearly marked signs, lights, and system information, consistent with Sec. 337.408, F.S. All bus stops shall be safe, convenient, meet the needs of all users, particularly the "transportation disadvantaged", and connect to the City's sidewalks and bikeways.~~

~~*Policy 2.3.12:* The City will coordinate with VOTRAN, the FDOT and other agencies to locate and/or develop park and ride lots and other parking areas to support transit use.~~**[CITY PARTICIPATION WILL BE RE-EVALUATED WHEN/IF THE PROJECT COMES FORWARD]**

~~*Policy 2.3.13:* The City will coordinate with VOTRAN and the TPO to develop a "super-stop" transfer center at or near the intersection of Dunlawton Avenue and Nova Road, and at the I-95 regional commercial node.~~**[TRANSFER STATION CREATED]**

~~*Policy 2.3.14:* The City will support efforts to develop the Central Florida Commuter Rail project (SunRail) and explore opportunities to provide express service to stations in western Volusia County.~~**[PROJECT HAS NOT GAINED TRACTION; MUST BE RE-EVALUATED WHEN BROUGHT FORWARD]**

~~*Policy 2.2.15:* The City supports efforts of the TPO, FDOT and other local governments to initiate intrastate/inter-city passenger rail service along the FEC Railway corridor.~~**[PROJECT HAS NOT GAINED TRACTION; MUST BE RE-EVALUATED WHEN BROUGHT FORWARD]**

Objective 3.2.2: Future Land Use. The City will continue its efforts in studying/analyzing how proposed future land use amendments could impact the multi-modal transportation system. ~~will ensure that existing and proposed population densities, housing and employment patterns, and land uses are consistent with the transportation modes and services proposed to serve these areas.~~

Policy 2.2.1: The City shall continue to review proposed development projects and future land use amendments for transportation concurrency through standards set forth in the LDC.

Policy 2.2.2: The City shall review roadway improvements, new construction, and roadway extensions proposed by the City and other agencies for consistency with the Comprehensive Plan.

Policy 2.2.3: The City shall continue to implement the LDC to encourage multi-family residential properties and mixed-use redevelopment along major thoroughfares as necessary, and where feasible, to encourage higher densities which will, in turn, serve as a buffer between major roadways and low-density neighborhoods and support public transit. The City shall coordinate amendments to its Future Land Use Plan with the County, TPO, and FDOT and implement land use designations and site design requirements in the LDC to further this.

~~*Policy 3.21:* All changes to the City's transportation system shall be consistent with the adopted land uses within the City. Conversely, all changes in land use shall be consistent with the transportation system's ability to support those changes, unless otherwise prescribed for the Transportation Concurrency Exception Area.~~

Policy 3.2.2.4: Transportation planning and analysis within the area identified on the Future Land Use Map as Planned Community-Westside shall be governed by the following provisions:

- A. The number of external trips generated as a result of development shall not exceed 62,600 trips per day. This number is equal to that which would be generated by the land uses shown on the adopted Future Land Use Map for the Planned Community-Westside area and the current and programmed roadway network conditions as of June 25, 2001. Any proposed intensification of these uses shall require the City or developer of this property to demonstrate, by a professionally acceptable traffic impact analysis, that the additional traffic will not result in a degradation to the adopted level-of-service standard for the roadways within the area where the project traffic exceeds 10% of the level of service "C" volumes, unless appropriate measures are identified and implemented in concert with additional traffic impacts. Additionally, the City shall ensure that traffic impacts from Planned Community-Westside will not result in a degradation to the adopted level-of-service standard for the roadways adjacent to the Kirton property, located immediately north of Planned Community-Westside, unless appropriate measures are identified and implemented in concert with additional traffic impacts. The results of this determination shall be provided to the City of Daytona Beach.

- B. Before any development occurs, the City shall provide the City of Daytona Beach, the Volusia County TPO, the Volusia County Traffic Engineering Department, and FDOT District 5 with a future traffic impact analysis of the property using the most recent version of the Central Florida Regional Planning Model (CFRPM). This analysis will be based upon the Future Land Use Map designation of the property as of June 25, 2001. The City shall also provide an analysis utilizing the anticipated land use impacts and planned roadway network resulting from the proposed development of this property.
- C. The City will continue to provide a report to the City of Daytona Beach, Volusia County, Volusia County TPO, DCA, and FDOT District 5, on an annual basis at the end of each calendar year. The report utilizes background traffic data from FDOT, Volusia County and the City of Port Orange. The assessment includes a traffic distribution and assignment based on either the CFRPM or best professional practices resulting from local knowledge. The limits of the study area shall be where the project traffic exceeds 10% of the level of service "C" volumes on collector or higher-classified roadways. The study shall include the following road segments and intersections when traffic volumes generated by Planned Community-Westside create impacts on those segments and intersections in excess of 10% of the level-of-service "C" volumes:

Existing Segments:

Beville Rd. (I-95 to Clyde Morris Blvd.)
Williamson Blvd. (Beville Rd. to Airport Rd.)
Taylor Rd. (Clyde Morris Blvd. to CR 415)
Clyde Morris Blvd. (Madeline Ave. to Taylor Rd.)
Madeline Ave. (Williamson Blvd. to Nova Rd.)
CR 415 (Pioneer Tr. to US 92)
Willow Run Blvd. (Williamson Blvd. to Clyde Morris Blvd.)
Dunlawton Ave. (I-95 to Nova Rd.)

Future (Proposed) Segments:

Yorltowne Blvd. extension (Taylor Rd. to Willow Run Blvd.)
Madeline Ave. (LPGA Blvd. extension to Williamson Blvd.)
LPGA Blvd. extension (CR 415 to US 92)

Existing Intersections:

Beville Rd. / Williamson Blvd.
Willow Run Blvd. / Williamson Blvd.
Willow Run Blvd. / Clyde Morris Blvd.
Clyde Morris Blvd. / Dunlawton Ave.
Clyde Morris Blvd. / Madeline Ave.
Taylor Branch Rd. / Dunlawton Ave.
Taylor Rd. / Williamson Blvd.
Taylor Rd. / CR 415
Williamson Blvd. / Madeline Ave.
Williamson Blvd./Town West Blvd.
CR 415 / Pioneer Tr.
Yorltowne Blvd. / Dunlawton Ave.
Dunlawton Ave. / Nova Rd.

Future (Proposed) Intersections:

US 92 / CR 415

Madeline Ave. / LPGA Blvd./CR 415

Yorktowne Blvd. / Willow Run Blvd.

The report shall contain the following information:

- Development status of the property indicating the location and intensity of development, and list of proposed developments currently under City review, for which a Development Order has not yet been issued;
 - Summary of traffic impacts (AADT, peak hour trips, segment LOS, etc.) generated by all development projects within Planned Community-Westside that received a Certificate of Occupancy during the previous year, as well as by projects that are expected to be completed in the coming year;
 - Identification of potential external impacts on local, county and state roads outside the Planned Community; and
 - Copies of the current and proposed Capital Improvements Element, Capital Improvements Budget, and Five-Year Work Programs of Port Orange, Volusia County, and FDOT.
- D. The above-mentioned analysis shall be used for the planning and development of financially feasible capital improvements. The City of Port Orange Concurrency Management System shall provide the appropriate enforcement mechanism such that the City cannot issue development orders for projects which result in a degradation of the level of service below those standards contained in the Port Orange Comprehensive Plan and Land Development Code. This monitoring program shall be done on an annual basis and shall continue until the Planned Community-Westside is built out.
- E. The City shall further notify Volusia County of future zoning changes to the Macro CDP, pursuant to the Interlocal Planning Agreement between the City and the County.

Policy ~~2.2.53-2.3~~: In cooperation with Volusia County, the City shall limit trips from the City wellfield properties so as not to exceed 5% (13,750 daily trips) of the level of service capacity on the Volusia County thoroughfare network or cause any part of the network to operate below the adopted level of service standard. In the event that the trips generated from the City wellfield properties do exceed 5% of the adopted level of service capacity, the City will provide transportation infrastructure improvements or other appropriate mitigation measures consistent with Volusia County's concurrency management regulations.

Policy ~~2.2.63-2.4~~: The City shall limit trips from Cracker Creek [parcel numbers 6330-00-00-0160; 6330-00-00-0180; 6330-00-00-0170; 6225-03-00-0070] to 1,815 Average Daily Trips, so as to not create a significant impact on the Volusia County thoroughfare network and State roadway facilities.

Policy ~~3.2.5~~: ~~As a condition of PUD approval, Developers will construct the following transportation improvements as generally illustrated on Figure 2-4 of the Transportation Element:~~

- ~~(i) Williamson Boulevard extension from its current terminus, 0.60 miles south of the intersection of Airport Road and Williamson Boulevard, to Pioneer Trail west of I-95; and~~
- ~~(ii) Transportation improvements along Pioneer Trail centered at, but not limited to, the intersection with Williamson Boulevard to accommodate turning vehicles accessing the PUD property.~~

GOAL 3: SAFETY

THE CITY SHALL PROVIDE A SAFE, EFFICIENT, AND CONVENIENT TRANSPORTATION SYSTEM FOR MULTIPLE MODES OF TRAVEL, PRIORITIZING COMPLETE STREETS AND VISION ZERO PRINCIPLES.

Objective 3.1: Complete Streets. The City shall prioritize Complete Streets efforts, which will enhance mobility and overall experience utilizing the transportation system and protect vulnerable users.

Policy 3.1.1: The City may build community consensus on Complete Streets improvements through education on the concept's principles, including but not limited to roadways being designed for people of all ages and abilities regardless of transportation mode, increasing active transportation and transit use, improving community connections and safety, and fostering human interaction.

Policy 3.1.2: The City shall explore ways to fund Complete Street efforts through local, regional, state, and federal assistance.

Policy 3.1.3: The City may, when feasible, conduct studies of local neighborhood traffic volumes and speeds, in order to implement appropriate responses such as, speed monitoring and enforcement, traffic calming devices, turn restrictions, and roundabouts.

Policy 3.1.4: Where pavement widths and right-of-way meet adopted standards, roadways will only be widened for mobility improvements for bicycles and pedestrians, effect intersection improvements, or accommodate stormwater infrastructure to address flooding and continue to direct efforts towards Complete Streets implementation.

Policy 3.1.5: The City may establish/maintain a streetscape beautification program for public rights-of-way and adopt standard street cross sections for implementation City-wide, as funding is available.

Objective 3.2: Vision Zero. The City shall prioritize achieving Vision Zero and work with Volusia County, TPO, and FDOT, including but not limited to: traffic deaths are preventable; human failing must be anticipated; the shared responsibility of road safety; and a Safe Systems Approach that considers all road users, the safety of vehicles, safe speeds, safe roads, and post-crash care.

Policy 3.2.1: The City, in coordination with the Port Orange Police Department, shall build community consensus on Vision Zero through education on the concept's principles, including promoting driver, bicyclist, and pedestrian education programs with the goal of eliminating injuries and fatalities from crashes.

Policy 3.2.2: The City shall monitor crash rates and other performance measures to track progress on reducing fatalities and serious injuries and achieving Vision Zero.

Policy 3.2.3: The City shall collaborate with the local/regional transportation agencies, FDOT, law enforcement, the School District, and other related agencies to implement Vision Zero strategies.

Policy 3.2.4: The City shall evaluate ways to fund Vision Zero efforts through local, regional, state, and federal assistance.

~~**Objective 2.4:** *TSM Program.* By the year 2015, The City's shall develop and adopt a Transportation System Management (TSM) program to enhance traffic capacity, safety, and efficiency in congested areas.~~

~~*Policy 2.4.1:* The City shall support and participate in the TPO's Congestion Management System (CMS) and FDOT's Mobility Management Plan (MMP).~~

~~*Policy 2.4.2:* The City will implement the TSM strategies and improvements identified in the TSM program and as identified through annual system evaluations.~~

~~*Policy 2.4.3:* Funding to implement the TSM program will be secured through developer contributions, impact fees and proportionate fair share agreements, CRA funding, City general funds and intergovernmental funding through the TPO and FDOT, as available. This program will be implemented on a continuing basis, as funds are available.~~

~~*Policy 2.4.4:* The City will evaluate available TSM strategies as a cost-effective alternative to widening roadways.~~

[TSM PROGRAM IMPLEMENTED, ONGOING IMPROVEMENTS BEING MADE UNDER THIS PROGRAM]

~~**Objective 2.5:** *TDM Program.* By the year 2015, the City shall adopt and implement a Transportation Demand Management (TDM) program which identifies incentive-based strategies to reduce travel demand and which shall be included among the mitigation options that developers may implement to reduce mobility impacts.~~

~~*Policy 2.5.1:* The City government should consider encouraging its employees and those of local businesses to participate in the FDOT Commuter Assistance Program, administered in Volusia County by VOTRAN.~~

~~*Policy 2.5.2:* Funding to implement the TDM program will be secured through~~

~~developer contributions, impact fees and proportionate fair share agreements, CRA funds, City general funds and intergovernmental funding through the TPO and FDOT, as available. This program will be implemented on a continuing basis, as funds are available.~~

~~Policy 2.5.3: As part of the TDM program, the City will assist local employers in implementing TDM strategies that have been shown to work in similar locations, such as ride sharing, telecommuting, and flex time. The City will encourage ride sharing among its own employees and provide opportunities for flex time for appropriate personnel.~~

[TDM PROGRAM IMPLEMENTED, ONGOING IMPROVEMENTS BEING MADE UNDER THIS PROGRAM]

GOAL 4: PARKING. ~~Objective 2.11: Parking.~~ The City of Port Orange will maintain regulations to provide safe and convenient motor vehicle and bicycle parking. THE CITY SHALL OPTIMIZE AND ACTIVATE EXISTING PARKING INFRASTRUCTURE WITH RESPECT TO FUTURE LAND USE, ADDRESS FUTURE PARKING NEEDS, AND LEVERAGE TECHNOLOGY TO INVESTIGATE PARKING DEMAND AND MITIGATION STRATEGIES.

Objective 4.1: Adequate Parking. The City shall provide or require the provision of adequate parking and traffic flow design to mitigate consistently occurring over-flow parking problems for public and private facilities while not requiring an oversupply of parking.

Policy 4.1.1: The City shall regularly analyze, assess, and update parking requirements in the LDC to reflect actual parking trends and needs. Parking requirements may be customized for various parts of the City. Additionally, the City shall address potential parking demand changes in the future by reviewing parking requirements as new development or redevelopment occurs to determine if parking requirements remain adequate and may incorporate parking standards for alternative modes of transportation, including bicycles, motorcycles, scooters, micromobility, neighborhood electric vehicles, and designated rideshare drop-off areas.

Policy 4.1.2.11.1: All new developments in the City shall continue to provide adequate off-street parking for all modes of transportation motorized and non-motorized vehicles prior to the issuance of a final development order.

Policy 4.1.32.11.2: The City shall continue to require the provision of landscaping within parking facilities areas shall be landscaped. Additionally, the City will encourage to reduce visual impacts, provide for carbon attenuation, and the use of reflective surfaces to reduce the urban heat island effect.

Policy 4.1.42.11.3: The City shall will explore developing standards for new non-residential development to establish a maximum number of parking spaces allowed in excess of the parking space requirements of the City's LDC incentives for reduced parking standards for commercial uses and higher density residential projects which

~~apply transit-oriented design standards to encourage transit, walking, and bicycling, use, ridesharing, and shared parking, and to minimize the creation of excess impervious surface area. These standards will also identify site-related considerations including the use of alternative parking/surfacing materials (i.e., pervious).~~

Policy 4.1.52.11.4: The City shall encourage shared parking facilities and combined and/or centralized parking where feasible and practical to minimize the amount of parking required to meet the overall parking demands for non-residential and mixed-use areas of the City.~~the use of shared parking and preferential parking for rideshare vehicles and energy efficient vehicles.~~

Policy 4.1.6: The City, at their discretion, may reduce parking requirements for businesses which rely primarily on drive-thru and mobile transactions.

GOAL 5: LEVEL OF SERVICE. THE CITY SHALL ESTABLISH, MAINTAIN, AND MODIFY AS DEEMED NECESSARY LEVEL OF SERVICE (LOS) STANDARDS.

Objective 5.12.6: Level of Service Requirements and Operations. The City shall periodically review its LOS standards to maintain and enhance a mobility network that is safe, reliable, efficient, and meets the existing and future needs of all users. ~~maintain all transportation facilities so that they function at a minimum adopted level of service (LOS), as established by (FDOT, Volusia County, and the City of Port Orange. Transportation facilities needed to maintain the adopted level of service (LOS) standard shall be evaluated when reviewing all new development prior to the issuance of a final development order.~~

Policy 5.1.1: The City shall use the most recent Florida Department of Transportation Quality/Level of Service Handbook criteria, as amended, as a general basis for the City's LOS standards.

~~*Policy 2.6.1: Pedestrian and Bicycle LOS.* The City strives to have all pedestrian and bicycle facilities operate at Level of Service "D" as established in the FDOT 2009 Quality Level of Service Handbook, or latest edition thereof. [NOT TRACKED]~~

Policy 5.1.2-6.2: Roadway facility LOS. The City shall maintain the following transportation Level of Service Standards, ~~strives to have all roadway facilities operate at adopted levels of service~~ consistent with those listed in the latest editions of the FDOT *Quality Level of Service Handbook*, and/or *Highway Capacity Manual*, or by specially conducted travel-time delay studies.

- ~~All roads included in the Florida Intrastate Highway System (FIHS, Sec. 338.001, F.S.) and Strategic Intermodal System (SIS, Sec. 339.61, F.S.) at LOS “C” or better, or as otherwise prescribed by FDOT.~~
- ~~All State-maintained non-SIS/FIHS roads and designated hurricane evacuation routes at LOS “D” or better.~~
- ~~South Williamson Boulevard (Spruce Creek to Airport Road) at LOS “D,” since this roadway was partially funded through the Transportation Regional Incentive Program (TRIP).~~
- ~~All County and City major arterials and collectors at LOS “E” or better.~~
- ~~Constrained roadways shall be permitted to operate at the volume/capacity ratio not greater than 134% by 2025. Alternative mobility strategies shall be applied within these corridors.~~

<u>Roadway Type</u>	<u>Level of Service (LOS)</u>
<u>Strategic Intermodal System (SIS) Roads</u>	<u>Meet State Target</u>
<u>State-maintained non-SIS Roads</u>	<u>LOS D</u>
<u>City & County Roads</u>	<u>LOS E</u>
<u>S Williamson Blvd (Spruce Creek to Pioneer Trail)</u>	<u>LOS D</u>

Objective 5.2: Concurrency Management. The City shall continue to maintain and implement a Concurrency Management System that ensures transportation facilities and services needed to support development and redevelopment are available and concurrent with the impacts of such development or redevelopment.

Policy 5.2.16-3: Prior to the approval of an application for a subdivision plan or site plan, the City will evaluate impacts on roadways and other transportation facilities necessary to support the development by requiring a traffic impact analysis report from the applicant. All ~~new~~ developments proposed within the City shall be required to submit traffic impact analysis studies consistent with the ~~Volusia County~~ TPO Guidelines. The City may grant *de minimus* traffic volume exceptions up to a cumulative 10% degradation of the adopted peak-hour LOS standard, as long as the facility is not an evacuation route or SIS facility.

Policy 5.2.2-6.4: The City will require a traffic impact analysis to be provided with applications for Comprehensive Plan and Future Land Use amendments that affect the City’s transportation system. The analysis must be prepared pursuant to the ~~DCA and~~ FDOT requirements ~~as contained in the “Local Government Comprehensive Planning Review Guidelines, 2007,” as amended, and the “Transportation Concurrency Best Practices Guide, 2007,” as amended and~~ TPO Guidelines as required by the LDC. The City shall also require an analysis of vehicle miles traveled, to demonstrate the effect of the amendment on travel patterns and the degree to which the amendment furthers the City’s mobility goals.

Policy ~~5.2.32.6.5~~: Developments that are projected to cause a roadway segment to operate below the adopted LOS may be required to participate in the City's or Volusia County's Fair-Share programs.

Policy ~~5.2.42.8.4~~: ~~New d~~Developments, regardless of size, may be required to provide operational improvements to the City's transportation system to mitigate their impacts on the system in accordance with the Concurrency Management System provisions set forth in the Capital Improvements Element of this Plan, to maintain the City's ~~level of service (LOS)~~ standards and improve the safety of the City's roads ensure smooth traffic flow, and to aid in the elimination of hazards. Operational improvements may include the addition of turn lanes, deceleration lanes, sidewalk extensions and connections, sign placement, bus system amenities, bicycle facilities, signals, and pavement markings. **[PREVIOUSLY 2.8.4]**

Policy ~~5.2.5~~: ~~New d~~Developments within the Transportation Concurrency Exception Area shall not be required to maintain roadway LOS standards, but shall be required to comply with this policy through multimodal improvements such as public transit facilities, community trolley/shuttle facilities/service, or other comparable mitigation as identified by the City. **[PREVIOUSLY PART OF POLICY 2.8.4, SEPARATED INTO ITS OWN POLICY]**

Policy ~~5.2.62.8.5~~: Developments that are projected to reduce the level of service for ~~negatively impact~~ an intersection or roadway segment will be required to participate in the City's Concurrency and Fair-Share program set forth in the City's Proportionate Fair-Share Ordinance located in the Land Development Code. The Concurrency and Fair-Share program, mandated by state law, provides a means for development to pay their proportion for infrastructure needs to support it rather than rely on local governments or taxpayers to provide such needs. Failure to participate will result in no ~~final plan approval and no~~ issuance of a development order. **[PREVIOUSLY 2.8.5]**

Objective ~~5.32.8~~: *Constrained Roadways*. On a periodic basis, the City shall, in cooperation with FDOT, the East Central Florida Regional Planning Council (ECFRPC), ~~and the~~ Volusia County, and the TPO, identify and officially designate all existing and potentially constrained roadway segments within the Port Orange city limits. The City shall work with these agencies to maintain and improve the operating efficiency on all designated constrained roadway facilities and to address mobility on roadways within the Transportation Concurrency Exception Area ~~and the Mobility Improvement Zones~~.

Policy ~~5.3.12.8.1~~: The City shall maintain a map of officially designated constrained facilities. The City-adopted constrained facilities on collector and arterial streets are indicated on MapFigure 2-84.

Policy 5.3.2.8-2: The City shall work with FDOT to manage, maintain, and to the extent feasible, improve the operational efficiency on constrained facilities. Adding turn lanes or making minor adjustments to roadway alignments and other accepted measures shall be permitted within constrained corridors, but adding through lanes shall not.

Policy 5.3.32.8-3: The City shall apply TSM, TDM, and other multi-modal strategies to improve operating conditions on constrained facilities.

[GOAL 6 IS A REINSTATE OF POLICIES PREVIOUSLY IN USE PRIOR TO THE 2010 COMPREHENSIVE PLAN UPDATE]

GOAL 6: PORT ORANGE TOWN CENTER (POTC) CRA TRANSPORTATION CONCURRENCY EXCEPTION AREA

THE CITY SHALL MAINTAIN THE PORT ORANGE TOWN CENTER REDEVELOPMENT AREA AS A TRANSPORTATION CONCURRENCY EXCEPTION AREA TO REDUCE THE ADVERSE IMPACT TRANSPORTATION CONCURRENCY MAY HAVE ON URBAN INFILL DEVELOPMENT, REDEVELOPMENT, AND THE ACHIEVEMENT OF THE CITY'S REDEVELOPMENT GOALS AND IMPLEMENT AND FUND MOBILITY, URBAN DESIGN, MIXED USES, AND NETWORK CONNECTIVITY STRATEGIES TO ADDRESS TRANSPORTATION NEEDS WITHIN THE POTC CRA TRANSPORTATION CONCURRENCY EXCEPTION AREA.

Objective 6.1: Transportation Concurrence Exception Area (TCEA). The TCEA, established in 2006, for the POTC CRA will continue to be implemented by the City to develop a multimodal transportation system and address mobility within the POTC CRA TCEA.

Policy 6.1.1: The City recognizes the need for concurrency exceptions within the boundaries of the POTC CRA TCEA. Notwithstanding other policies in the comprehensive plan that establish roadway LOS and transportation concurrency requirements, development within the TCEA shall be exempt from those requirements. Mobility within the TCEA shall be maintained by the implementation of the strategies and programs in the element and through complementary policies in the other elements of the comprehensive plan. TCEA mobility strategies for the City will include, but not be limited to:

- Transportation demand management (TDM) program
- Transportation system management (TSM) program
- Revised parking standards/regulations
- Parking facilities that enhance pedestrian and bicycle facilities
- Water taxi service
- Pedestrian and bicycle facility enhancements
- Complete Streets policy implementation

Policy 6.1.2: The POTC redevelopment area within the City is the area consistent with the boundaries of the Town Center TCEA. The boundary is detailed in Map 2.7Figure 16. The area is built-up with available public facilities and services such as sanitary sewer, potable water, roads, and recreation areas-and does not contain

more than 40 percent vacant, developable land. This area is also hereby designated as an Existing Urban Service Area.

Policy 6.1.3: The Port Orange Town Center CRA will become more pedestrian-oriented through mixed-use development using urban design principles consistent with the redevelopment plan of the POTC CRA.

Policy 6.1.4: The City shall coordinate development within the POTC CRA TCEA with the adopted goals, objectives, and policies of the City's Coastal Zone Management Element concerning evacuation routes and the provision of hurricane shelters for the expected increase in population within the POTC CRA.

Policy 6.1.5: In cooperation with VOTRAN, the City shall evaluate transit service within the POTC CRA TCEA and identify improvements to increase public transit's role in providing mobility within the POTC CRA TCEA. The improvements may include route alignments, shelters with benches, lighting, etc., and new stops.

Policy 6.1.6: The City shall promote a pedestrian-friendly environment on streets within the POTC CRA TCEA and the POTC by providing comfortable, convenient, and connected sidewalks and paths in and around the POTC CRA TCEA and from public or private rights-of-way to building entrances.

Policy 6.1.7: The POTC CRA TCEA will not adversely affect the Strategic Intermodal System (SIS). The only SIS (roadway) facility in the City is Interstate 95 which is three miles west of the POTC CRA TCEA.

GOAL 7: AVIATION FACILITIES

PURSUANT TO SECTION 163.3177(6)(B), F.S., AS AMENDED, THE CITY SHALL PROMOTE LAND USE COMPATIBILITY AROUND AIRPORTS.

Objective 7.1: Compatibility. In accordance with the Future Land Use Element, the provisions of Section 333.02, F.S. and the definitions in Section 333.01, F.S. as amended, the City shall coordinate land use decisions with relevant governing bodies to ensure land use compatibility for land on, adjacent to, or in the immediate vicinity of airports and prevent airport hazards.

Policy 7.1.1: The City shall coordinate as needed with the Federal Aviation Administration (FAA), FDOT, TPO, and the Cities of Daytona Beach and New Smyrna Beach, as well as Volusia County to address land use decisions affecting access to the airports.

[THE REMAINDER OF CONTENT IS STRICKEN, WITH NOTES]

~~**Objective 2.7: Safety and Efficiency.** The City, in cooperation with FDOT, the ECFRPC, and the Volusia County TPO, shall improve the safety and efficiency of the existing transportation network and preserve the integrity of the system.~~

~~*Policy 2.7.1:* The City, in coordination with other government agencies and private developers, shall schedule transportation improvements based on the schedules listed in Transportation Mobility Element.~~

~~*Policy 2.7.2:* The City shall consider safety as the highest priority when evaluating potential transportation system improvements and enhancements.~~

~~*Policy 2.7.3:* The City shall improve the efficiency of the transportation system by providing alternatives to motor vehicle use, improving signal systems, constructing turn lanes, improving connections between developments and other traffic operational improvements strategies. Alternative modes and facility improvements, including intelligent transportation systems (ITS), shall be considered when designing new roads and the re-constructing existing facilities.~~

~~*Policy 2.7.4:* The City shall ensure that its transportation system contributes to the ability of Florida's citizens and visitors to access services, jobs, markets, and attractions in an efficient and timely manner.~~

[OBJECTIVE REMOVED; SAFETY AND EFFICIENCY INCORPORATED INTO OBJECTIVES AND POLICIES OF NEWLY DEFINED GOAL 1]

~~**Objective 2.10: Access Management.** The City shall establish access management standards for arterials, collectors, and local streets consistent with those of the administrative jurisdictions.~~

~~*Policy 2.10.1:* New roadways should be configured so that primarily arterials and collectors intersect with or have direct access to an arterial street, and the number of new intersections of arterials and local streets is limited.~~

~~*Policy 2.10.1:* Single family lots with frontage on more than one street shall have access from the street with the lower functional classification. No new single family, duplex or triplex lots shall directly access arterial or collector roadways.~~

~~*Policy 2.10.3:* All access points shall be consistent with City, County and State access regulations. Shared access or variances may be required to achieve separation standards.~~

~~*Policy 2.10.4:* Traffic signs and signals shall be installed as warranted and directed by the *Manual on Uniform Traffic Control Devices*.~~

~~*Policy 2.10.5:* Along arterial roadways, the City may require service roads to be constructed, cross-access easements to be provided, or public roadways to be dedicated as a condition of a development project approval.~~

~~*Policy 2.10.6:* The City shall require new roadways to be dedicated to the public~~

~~when there is a compelling public interest for the roadways to connect with the existing public roadway network.~~

~~*Policy 2.10.7:* In order to achieve an interconnected roadway network, all subdivisions shall have at least two points of non-emergency access open to motor vehicle traffic.~~

~~*Policy 2.10.8:* All new subdivisions shall "stub out" to adjoining undeveloped lands and connect to roadways that are "stubbed out" at their boundaries. Exceptions can be made where topographical or environmental conditions preclude vehicular connections. In such cases, the City may instead accept connections for bicycles and pedestrians.~~

~~*Policy 2.10.9:* The City shall update the Dunlawton Avenue Corridor Plan and prepare corridor plans for other select arterial and collector roadways. The Plans will include access management, utility needs and aesthetic features in order to promote these roadways for economic development in accordance with Florida Statutes.~~

[OBJECTIVE REMOVED; ACCOMPLISHED]

~~***Objective 2.13:*** *Protect I-95 from Non-Interstate Traffic.* The City shall, in cooperation with FDOT, continue to explore, develop, and implement policies to discourage local traffic from using the federal Interstate Highways (I-95 and I-4) and the Florida Intrastate Highway System (FIHS)/Strategic Intermodal System (SIS).~~

~~*Policy 2.13.1:* Encourage local traffic to use alternatives to I-95, such as Williamson Boulevard, Yorktowne Boulevard, Clyde Morris Boulevard, Nova Road, and Ridgewood Avenue/U.S. 1.~~

~~*Policy 2.13.2:* Coordinate with FDOT regarding the impact of land use decisions in the vicinity of FIHS corridors.~~

[ALREADY COVERED CONCEPTUALLY IN GOPS THAT SUPPORT A CONNECTED MULTI-MODAL SYSTEM]

~~***Objective 2.14:*** *Design Standards and Maintenance.* The City shall adopt, maintain, and update design standards for transportation facilities. All new and re-constructed roads shall be designed and constructed to conform with minimum design standards.~~

~~*Policy 2.14.1:* New and reconstructed roadways, sidewalks, bikeways, trails, transit shelters and other transportation facilities shall comply with minimum design standards. The City may adopt standards by reference or ones similar to those from the following sources:~~

- ~~▪ Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways (The Green Book);~~
- ~~▪ The Manual of Uniform Traffic Control devices;~~
- ~~▪ The Florida Department of Transportation 1986 Standards Specifications for Road and Bridge Construction, and~~

- ~~▪ Context sensitive designs endorsed by ITE and AASHTO.~~

~~*Policy 2.14.2:* Private streets shall be constructed to the same standards as public streets, and shall be maintained by the homeowners association or other means approved by the City.~~

~~*Policy 2.14.3:* The City shall pursue paving of all unpaved streets within City rights of way which provide access to existing development. Special assessments of abutting property owners shall be considered as a means to fund the improvement costs.~~

~~*Policy 2.14.4:* The City shall schedule timely maintenance, resurfacing, and repair of roads, bikeways, sidewalks, and bridges, to minimize costly reconstruction and enhance safety.~~

~~*Policy 2.14.5:* The City shall continue to permit flexibility for constructing and retrofitting facilities in substandard rights of way in order to preserve unique natural features. The City may permit alternative roadway designs on the local street system in order to encourage the preservation of unique vegetation and large trees.~~

~~*Policy 2.14.6:* The City shall consider alternative roadway sections that accommodate narrower rights of way and roadway widths in the context of traditional neighborhood development.~~

~~*Policy 2.14.6:* The City shall be empowered to allow alternative roadway layouts, provided that such layouts are consistent with the functional purpose of planned City roadways.~~

~~*Policy 2.14.7:* The City shall require the use of alternative designs for intersections, which may include traffic circles (roundabouts) and traffic calming measures such as chokers, chicanes, and textured or colored surfaces, so long as the maintaining agency (e.g. Florida Department of Transportation or Volusia County) approves.~~

~~*Policy 2.14.8:* Freight terminal access for large vehicles shall be considered in the design of the transportation system.~~

[CITY NO LONGER ANTICIPATES CREATING DESIGN MANUAL, NOT REQUIRED]

~~***Objective 2.15: Transportation Funding.*** The City will systematically review transportation system funding resources and options on at least a yearly.~~

~~*Policy 2.15.1:* The City may pursue grants, developer contributions, special assessments, impact fees, proportionate fair share agreements, and other funding sources to finance construction of new transportation facilities and services.~~

~~*Policy 2.15.2:* The City shall not assume maintenance of substandard private roadways until such roadways are brought into compliance with City design~~

standards, unless specifically authorized by the City Council.

~~Policy 2.15.3: Developments approved prior to the adoption of the 2010-2025 Comprehensive Plan update with conditions to improve or fund improvements to the transportation system shall not be exempted from those conditions. Nothing in this plan shall be deemed or construed to eliminate any requirement previously placed upon a development as a condition of approval.~~

~~Policy 2.15.4: The City will encourage the development of “Florida Transportation Corporation Act” corporations (private non-profit corporations acting on behalf of and under contract with FDOT), to obtain rights of way and assist in the planning and design of improvements to the State roadways in the City.~~

[COVERED IN OTHER POLICIES THAT GENERALLY SPEAK TO SEEKING FUNDING THROUGH MULTIPLE AVENUES]

[THE CITY WILL NO LONGER BE IMPLEMENTING MOBILITY IMPROVEMENT ZONES]

~~GOAL 1: MOBILITY IMPROVEMENT~~

~~ESTABLISH A TRANSPORTATION SYSTEM THAT PROVIDES MOBILITY, ACCESS AND CHOICES, THAT ENCOURAGES INFILL DEVELOPMENT AND ENERGY EFFICIENT MULTI-MODAL TRANSPORTATION THROUGH THE DESIGNATION MOBILITY IMPROVEMENT ZONES.~~

~~**Objective 1.1: Establishment of Mobility Improvement Zones.** The City of Port Orange is designates three Mobility Improvement (MI) Zones, encompassing the geographic limits of the City. The City will utilize these designations to develop a multi-modal transportation system and address mobility needs throughout the City. The three MI zones are indicated in Figure 2-11.~~

~~Policy 1.1.1: Development in MI Zone 1, which consists of the Port Orange Town Center TCEA adopted in 2006, is exempt from traditional state-mandated transportation concurrency requirements. Development in MI Zones 2 and 3 is subject to concurrency standards and shall mitigate transportation impacts according to specific strategies identified for each MI Zone.~~

~~Policy 1.1.2: Capital improvements necessary to meet mobility needs may support transit, pedestrian and bicycle modes to reduce reliance on single-occupant auto travel.~~

~~Policy 1.1.3: The following mobility strategies shall be utilized in all MI zones, as appropriate:~~

- ~~▪ Transportation demand management programs~~
- ~~▪ Transportation system management programs~~
- ~~▪ Revised parking standards/regulations~~
- ~~▪ Community transit service~~
- ~~▪ Parking facilities that accommodate pedestrians and bicyclists safely and~~

conveniently

- “Complete Streets” policy implementation
- Neighborhood traffic management programs
- Transit and pedestrian-oriented site design standards/regulations
- Pedestrian, bicycle, and transit facility amenities and enhancements such as landscaped and shaded routes and shelters

Policy 1.1.4: By 2015, the City shall adopt a city-wide TDM and TSM strategy based on the *TDM/TSM Action Plan* prepared for the City in 2009.

Policy 1.1.5: Transportation Impact Analysis (TIA) reports shall be required of new development, where applicable, as a tool to monitor development impacts.

Policy 1.1.6: The City shall periodically evaluate the effectiveness of the TCEA and each MI zone and, when necessary, make adjustments to policies to more effectively and efficiently meet mobility needs. Evaluation measures include:

- Changes in transit ridership and vehicle miles traveled on the roadway network, and
- Usage of strategically located bicycle and pedestrian facilities in each the TCEA and each MI zone.

Objective 1.2: Mobility Improvement (MI) Zone 1. In order to address specific mobility needs unique to MI Zone 1 (Port Orange Town Center TCEA), the City shall implement specific strategies within this zone.

Policy 1.2.1: MI Zone 1 shares the same boundaries as the Port Orange Town Center (POTC) redevelopment district and the TCEA previously established in 2006, as shown in Figure 2-11. Mobility within Zone 1 shall be maintained by implementing an appropriate combination of strategies listed in *Policy 1.1.3* and zone-specific strategies and programs, as appropriate and as prioritized below, which shall include:

— First Priority

- Transit facility enhancements
- Interconnected street and bicycle/pedestrian circulation system
- Right-of-way dedications

Second Priority

- Impact fees in lieu of off-site improvements
- Impact fee reductions with specified Transit-Oriented Development designs

Third Priority

- Water taxi service

Policy 1.2.2: The City shall require developments within the MI Zone 1 to contribute toward the cost of mobility improvements identified, but not limited to, those under *Policies 1.1.3* and *1.2.1* by paying a combination of impact fees and proportionate fair share payment. The proportionate fair share payment may be allocated to more than one improvement strategy, but at least 75% must be applied to

~~alternative mobility improvements listed in *Policies 1.1.3* and *1.2.1*, either on the development site or within ¼ mile of a designated transit stop. The remaining 25% may be allocated for roadway capacity improvement projects. Developers of properties in *MI Zone 1* are entitled to impact fee credits for off-site facilities constructed in conjunction with the development project.~~

~~*Policy 1.2.3:* The City will coordinate with VOTRAN or the TPO to prepare a feasibility study to develop a local community transit service plan for *MI Zone 1*. The study will include specific route alignments, headways, hours of operation, and other service characteristics to address mobility. If the study concludes that the service is not feasible to achieve a minimum ridership, the City shall update the feasibility study periodically thereafter until the local transit service can be implemented.~~

~~***Objective 1.3: Mobility Improvement (MI) Zone 2.*** In order to address specific mobility needs unique to *MI Zone 2*, the city shall implement specific strategies within this zone.~~

~~*Policy 1.3.1:* *MI Zone 2* encompasses the area as shown in Figure 2-11. Mobility within *MI Zone 2* shall be maintained by the implementing an appropriate combination of strategies listed in *Policy 1.1.3* and zone specific strategies and programs, as appropriate and as prioritized below, which shall include:~~

~~First Priority~~

- ~~▪ Maintain adopted LOS standards through the concurrency management system~~
- ~~▪ Transit facilities enhancements~~
- ~~▪ Transit “super-stop” transfer facility construction~~
- ~~▪ Right-of-way dedications~~

~~Second Priority~~

- ~~▪ Higher density residential development along transit corridors~~

~~Third Priority~~

- ~~▪ Impact fees with a minimum 5% increase above the base rate in lieu of off-site improvements~~
- ~~▪ Special assessment districts~~

~~*Policy 1.3.2:* The City shall establish proportionate fair share projects for development in *MI Zone 2* if needed to meet adopted LOS standards. These may consist of the transportation improvements identified in the Transportation Mobility Element, including roadway capacity, improvements, along with transit shelters and/or bicycle/pedestrian facilities on the development site or within ¼ mile. The proportionate fair share payment may be allocated to more than one mobility improvement strategy. Up to 75% of the payments should be allocated to roadway capacity projects intended to ameliorate the development’s roadway impacts. The remaining 25% should be applied to roadway capacity projects or to alternative mobility improvements consisting of strategies listed in *Policies 1.1.3* and *1.3.1*. Developers of properties in *MI Zone 2* are entitled to impact fee credits for off-site facilities constructed in conjunction with the development project.~~

Objective 1.4: Mobility Improvement (MI) Zone 3. In order to address specific mobility needs unique to MI Zone 3, the city shall implement specific strategies within this zone.

Policy 1.4.1: MI Zone 3 encompasses the area as shown in Figure 2-11. Mobility within the MI Zone 3 shall be maintained by implementing an appropriate combination of strategies and programs listed in *Policy 1.1.3* and zone-specific strategies which shall include, as appropriate and as prioritized below:

First Priority

- Maintain the adopted LOS standards through the concurrency management system
- Proportionate fair share program
- Transportation impact fees

Second Priority

- Expansion of transit service and transit facility enhancements
- Transit “super-stop” transfer facility planning
- Higher density residential development along transit corridors

Third Priority

- Special assessment districts
- Proportionate fair share exceptions for TOD

Policy 1.4.2: Proportionate fair share payments shall be required for new development in MI Zone 3, and will be assessed based on 100% of the vehicular impact of the development on the roadway system. Seventy-five percent of the payments should be allocated to roadway capacity projects intended to ameliorate the development's roadway impacts. The remaining 25% may be applied to roadway capacity projects or to alternative mobility improvements consisting of strategies listed in *Policies 1.1.3* and *1.4.1*. Developers of properties in MI Zone 3 are entitled to City impact fee credits for off-site facilities constructed in conjunction with the development project.

Objective 1.5: Community Design. The City shall seek to create a more pedestrian-oriented and transit-friendly transportation network by utilizing a variety of context-sensitive designs for transportation facilities and urban design standards for new development, as may be applicable within each MI zone.

Policy 1.5.1: Mixed-use development will provide comfortable, convenient, and connected sidewalks, pathways and access to transit facilities.

Policy 1.5.2: By 2013, the City will develop a “complete streets” strategy to include multiple transportation modes into proposed plans for road improvements. The intent of this policy is to develop a comprehensive, integrated, multi-modal street network by coordinating transportation planning strategies and private development activities as follows:

- Provide safe and convenient on-site pedestrian circulation.
- Provide cross-access connections/easements or joint driveways where

available and cost effective.

- ~~Provide land or easements for the construction of public sidewalks, and/or auxiliary transit support facilities consistent with the design standards of the *VOTRAN Transit Development Design Guidelines*, with appropriate credits for developer contributions.~~
- ~~Where appropriate, developers may be required to construct improvements listed below. The City may issue credits toward contribution requirements, if applicable:~~
 - ~~— In-bound and out-bound turn lanes~~
 - ~~— Transit facility improvements~~
 - ~~— Adjacent and connecting sidewalks~~
 - ~~— Streetscaping and landscaping within the public right-of-way~~
 - ~~— Additional bicycle parking.~~

~~The City will apply the following guidelines in implementing this policy:~~

- ~~Determine the applicability of these requirements considering the unique constraints of each development and redevelopment site, the context of each particular street, and compatibility with surrounding areas.~~
- ~~Consider necessary requirements through design, planning, maintenance, and operations.~~

~~*Policy 1.5.3:* By 2013, the City shall amend the land development code and standard construction details to include site development requirements that define the minimum design and location of pedestrian and transit facilities, and improve and prioritize pedestrian access.~~

~~*Policy 1.5.4:* In conjunction with Future Land Use Element policies, the City shall create Transit Oriented Development (TOD) Overlay Zones for select nodes and corridors. The TOD overlays may contain unique design treatments for each of the MI zones and roadway types, and include but not be limited to provisions regarding:~~

- ~~Special assessment district(s)~~
- ~~Land development regulations that support compact development~~
- ~~Maximum parking standards~~
- ~~Minimum floor area ratios~~
- ~~Maximum building setbacks~~
- ~~Transit and pedestrian facilities.~~

~~*Policy 1.5.5:* It is the City's intent to become more pedestrian and transit-oriented. Within *MI Zone 1*, this shall be accomplished by utilizing urban design principles consistent with the redevelopment plan of the POTC. Within *MI Zone 2*, the City shall promote transit-oriented development for select mixed-use centers. Within *MI Zone 3*, the City shall promote transit-oriented development for community and regional nodes and other select areas. The urban design principles which shall be utilized as appropriate include, but are not limited to:~~

- ~~Higher densities/ intensities and compact urban form;~~
- ~~Building placement/build-to lines;~~
- ~~First floor retail in mixed-use buildings;~~

- ~~▪ Parking integration with alternative modes;~~
- ~~▪ Pedestrian/bicycle circulation and facilities;~~
- ~~▪ Roadway/right-of-way aesthetics;~~
- ~~▪ Landscaping, shaded pedestrian routes, and transit shelters;~~
- ~~▪ Pedestrian-level lighting;~~
- ~~▪ Transit facility enhancements;~~
- ~~▪ Development incentives for transit-oriented design; and~~
- ~~▪ Access management, including select driveway closures.~~

~~*Policy 1.5.6:* For new development and redevelopment, the City shall limit the size of blocks and lengths of cul-de-sac and will encourage greater connectivity between blocks and streets. Exceptions may be made where environmentally sensitive natural features or existing development prevents the extension and connection of streets.~~

~~[THE CITY WILL NO LONGER BE IMPLEMENTING MOBILITY IMPROVEMENT ZONES]~~

GOAL 3: COORDINATION AND PLANNING

~~TO CREATE A TRANSPORTATION PLANNING PROCESS THAT IS COORDINATED WITH OTHER JURISDICTIONS AND AGENCIES, AND CONSIDERS THE EFFECT OF NEW TRANSPORTATION IMPROVEMENTS ON ADJACENT LAND USES.~~

~~**Objective 3.1: Planning Coordination.** The City shall coordinate its transportation planning with the Transportation Planning Organization (TPO), Volusia County, FDOT, VOTRAN, adjacent cities and other transportation agencies.~~

~~_____ *Policy 3.1.1:* The City shall promote a comprehensive transportation planning process which coordinates state, regional, and local transportation plans.~~

~~_____ *Policy 3.1.2:* The City shall support, and where possible, participate in the FDOT and TPO long-range mass transit and multi-modal transportation plans~~

~~_____ *Policy 3.1.3:* The City shall utilize the Volusia County TPO Long-Range Transportation Plan (LRTP) as a basis for planning and programming future transportation improvements. In coordination with FDOT and the TPO, the City shall participate in updates to the LRTP to determine its transportation needs from now until the next planning horizon.~~

~~_____ *Policy 3.1.4:* The City shall send a representative to attend all relevant transportation planning meetings and shall communicate with other agencies involved in transportation planning in the Port Orange area.~~

~~_____ *Policy 3.1.5:* The City shall keep the other agencies involved in transportation planning in the Port Orange area informed of the City's plans and policies for transportation improvements. Written notification of the status of the City's current plans shall be sent to the other agencies on a regular basis.~~

TRANSPORTATION MOBILITY ELEMENT

- ~~Policy 3.1.6: Transportation investments in major travel corridors and facilities will be coordinated with local, regional, and state agencies to enhance system efficiency and minimized adverse environmental impacts.~~
- ~~Policy 3.1.7: The City shall work with FDOT to ensure that state transportation investments in major travel corridors are designed and constructed to accommodate multiple modes.~~
- ~~Policy 3.1.8: In accordance with state policy, the City shall encourage adjacent communities and municipalities to ensure that existing port facilities and airports are being used to the maximum extent possible before expanding or developing new facilities.~~
- ~~Policy 3.1.9: The City shall encourage the construction and utilization of a state-wide public transportation system, including but not limited to inter-city or a high-speed rail system, in lieu of highway system expansion, where appropriate. The City will explore ways to support efforts by FDOT and other jurisdictions to establish AMTRAK service for the region on the FEC Railway line.~~
- ~~Policy 3.1.10: In cooperation with state, regional, and local agencies, the City shall ensure that its transportation system provides maximum access to jobs and markets.~~
- ~~Policy 3.1.11: In cooperation with state, regional, and local agencies, the City shall promote the effective coordination of various transportation modes in urban areas to assist urban development and redevelopment.~~
- ~~Policy 3.1.12: The City shall regulate development in the flight path and clear zones of the Spruce Creek Fly-In airport to ensure that new development will not adversely affect flight operations.~~
- ~~Policy 3.1.13: The City will continue to pursue attempts to acquire and rehabilitate the FEC Railway Depot using grant funds from the State Historic Preservation Office, SAFETEA-LU Transportation Enhancement funds, private donations and other sources.~~
- ~~Policy 3.1.14: The City's future transportation development will be guided by the policies set forth in the ECFRPC's Strategic Regional Policy Plan.~~

[COORDINATION COVERED IN OTHER POLICIES HEREIN AND IN INTERGOVERNMENTAL COORDINATION; PROCESSES ALREADY ESTABLISHED AS WELL]

[GOAL 4 AND ITS POLICIES NOT REQUIRED IN THIS ELEMENT]

GOAL 4: AN ENVIRONMENTALLY SOUND AND ENHANCED TRANSPORTATION

NETWORK

~~TO CREATE A TRANSPORTATION SYSTEM THAT IS SUSTAINABLE, AND THAT PROTECTS THE NATURAL ENVIRONMENT BY REDUCING TRAVEL DEMAND, ADVERSE IMPACTS ON AIR QUALITY, WATER QUALITY, NOISE, AND WILDLIFE HABITAT, AND IS AESTHETICALLY PLEASING.~~

Objective 4.1: Air Quality. ~~The City shall promote alternative transportation modes to reduce air pollution, improve air quality and reduce greenhouse gas omissions.~~

~~*Policy 4.1.1:* The City shall evaluate land use changes for reductions in vehicle miles traveled.~~

~~*Policy 4.1.2:* The City shall periodically monitor and assess total vehicle miles traveled on the roadway network.~~

~~*Policy 4.1.3:* The City shall continue to work with state and regional transportation agencies to monitor and improve air quality in the region. The City will abide by applicable provisions of the 1990 Clean Air Act and the State Implementation Plan.~~

~~*Policy 4.1.4:* The City will obtain air quality monitoring reports from appropriate agencies and propose measures to reduce carbon dioxide and carbon monoxide concentrations.~~

~~*Policy 4.1.5:* The City may promote the use of alternative fuels to reduce greenhouse gas omissions by allowing alternative fuel centers in the land development code, and providing incentives for hybrid and non-combustible motor vehicles like preferential parking.~~

~~*Policy 4.1.6:* The City shall continue its program of purchasing hybrid and alternative fueled vehicles as part of the City's fleet, when possible.~~

~~*Policy 4.1.7:* The City will encourage the use of solar reflective surfaces on transportation facilities.~~

~~*Policy 4.1.8:* The City will consider establishing an environmental ratings system or sustainability certification program for roadway design and construction for new and reconstructed/rehabilitated roadways in the City. Such a program could be similar to the *Greenroads* program developed at the University of Washington. The program may include the following components:~~

- ~~▪ Low impact development techniques for stormwater~~
- ~~▪ Life cycle cost analysis~~
- ~~▪ Pavement reuse/recycling~~
- ~~▪ Energy efficiency~~
- ~~▪ Native landscaping~~

- ~~Minimizing emissions~~
- ~~Pavement technologies for permeability, durability, noise reduction, and solar reflectivity~~

~~**Objective 4.2: Natural Environment.** The City will strive to preserve and enhance water quality, wildlife habitat, and natural vegetation when designing transportation system improvements and enhancements.~~

~~**Policy 4.2.1:** Where appropriate, utilize stormwater systems that include open swales for conveyance instead of enclosed systems.~~

~~**Policy 4.2.2:** Prior to developing new roadways, a survey of wildlife and natural vegetation along the roadway corridor shall be required.~~

~~**Policy 4.2.3:** The City shall consider wildlife corridors when planning new roadways, such as providing underpasses or overpasses or avoiding critical habitats. In cases where critical habitats cannot be reasonably avoided, appropriate permits will be obtained per the Conservation Element.~~

~~**Objective 4.3: Aesthetics.** The City will strive to improve the aesthetic quality of its transportation system by incorporating landscaping and architectural features that enhance the character of the community.~~

~~**Policy 4.3.1:** The City shall continue to maintain existing landscaped medians and will pursue opportunities for grants and assistance to continue roadway beautification along other major roadways as appropriate. Landscaping shall incorporate the Florida Friendly landscaping principals described in the Florida Friendly Yard and Neighborhood Program.~~

~~**Policy 4.3.2:** New facilities shall be landscaped with drought-tolerant native species.~~

~~**Policy 4.3.3:** The City shall design or require roadways and parking areas to include tree plantings that can provide substantial canopies to reduce the urban heat island effect.~~

~~**Policy 4.3.4:** Stormwater features necessary to treat run-off from roadways should be designed in an aesthetically pleasing manner and made to accommodate passive recreation, if possible. Stormwater facilities developed as part of the transportation facility may be used to provide irrigation for landscaping.~~

~~**Policy 4.3.5:** The City will establish community gateways along select entrances and at signature locations. Gateways should include themed or contextual landscaping, signing, lighting and other aesthetic features to establish a sense of arrival and be consistent with landscaping programs offered by the FDOT.~~

~~*Policy 4.3.6:* The City shall consider designating certain roadways as scenic corridors in coordination with FDOT, Volusia County and adjacent local governments.~~

~~*Policy 4.3.7:* The City may consider establishing corridor plans for select roadways with design and landscape themes, to be developed as part of a neighborhood plan development. These roadway corridors may include more restrictive or controlled access regulations, building placement, design and regulation, unique and context-oriented landscape designs, drainage features, decorative asphalt and concrete for roadways and pedestrian facilities, transit facility design and context-themed public and or private sign regulation.~~

~~***Objective 4.4:*** *Noise Attenuation.* Promote land use patterns that are minimally impacted by noise from existing and proposed transportation projects, and work to minimize increases in decibel levels when new roads are constructed.~~

~~*Policy 4.4.1:* The City shall consider the noise effects of I-95 and other arterial roadways when reviewing new residential development projects. The City will coordinate with developers to discourage new residential uses immediately adjacent to I-95.~~

~~*Policy 4.4.2:* The City will work with FDOT regarding the placement of noise attenuation walls or earthen berms adjacent to existing residential areas along I-95 in conjunction with widening the highway to six lanes.~~

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CHAPTER 3: HOUSING ELEMENT

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INTRODUCTION

The Housing Element is a key component in the City's Comprehensive Plan that helps ensure that the City has a variety of housing types and price ranges to meet the demand for current and anticipated future residents. This e purpose of the Housing Element is to provides guidance to the City to in the development of appropriate plans and policies to meet identified or projected deficits in the supply of housing for moderate-income, low-income, and very-low-income households, group homes, foster care facilities, and households with special housing needs. The Housing Element contains goals, objectives, and policies to address local government activities as well as provide direction and assistance to the efforts of the private sector.

The supply of housing is controlled by many outside factors. The private sector and the ~~market place~~marketplace are primarily responsible for the maintenance and development of the housing stock. Local government can control certain aspects of the delivery system, such as the provision of land use, ~~urban~~ design requirements, adequate public infrastructure, and enforcement of building codes, but the primary provider for housing units is the private sector. An overarching goal of this Element is to support opportunities to meet the diverse residential needs of the community by encouraging the provision of a wide array of housing options through the Comprehensive Plan and Land Development Code (LDC).

~~Beginning around 2003, the housing market was characterized by rapid increases in valuation of real property, until it reach unsustainable levels relative to incomes and other economic elements. This "housing bubble" peaked in the U.S. in approximately 2005–2006. The collapse of the housing bubble caused the values of securities tied to housing prices to plummet thereafter, damaging financial institutions globally. Questions regarding bank solvency (ability to pay debts), declines in credit availability, and damaged investor confidence had an impact on stock markets around the world, which suffered large losses during 2008. Economies worldwide slowed in late 2008 and 2009 as credit tightened and international trade declined. As of December 2009, the housing market was still uncertain. Housing costs and lending practices are still in flux. Therefore, any data and analysis regarding housing cost and affordability in the support document for this Element will need to be revisited after the market stabilizes.~~

Housing Element Highlights

1. Encourages the preservation, rehabilitation, reuse, and maintenance of the City's existing housing stock and historic structures;
2. Ensures that opportunities for group homes and foster care facilities, as well as housing for the elderly, are provided within the City;
3. Promotes a diverse mix of housing stock that is well-integrated with the City's mobility network;
4. Provides the option for the implementation of innovative housing design and development concepts such as Accessory Dwelling Units (ADUs);
5. Encourages sustainable construction methods and energy efficiency in the development and rehabilitation of housing; and
6. Provides the option, when funding is available for the consideration of incentives for the development of affordable housing to meet existing and future demand.

GOALS, OBJECTIVES AND POLICIES

GOAL 1: HOUSING

THE CITY SHALL PROVIDE THE OPPORTUNITY FOR SAFE, AFFORDABLE, SANITARY, AND ENERGY-EFFICIENT SUSTAINABLE HOUSING AND A HEALTHY, PLEASANT LIVING ENVIRONMENT FOR ALL CITY RESIDENTS.

Objective 1.1: Housing Supply. The City shall assist the private sector in providing new dwelling units of various types, sizes and cost in order to meet the needs of the existing and projected anticipated population of the City that is:

- A. Compatible with the identity and character of the area and surrounding properties;
- B. Provide options among a variety of housing styles, ownership formats, and housing types (i.e. multi-family, single-family);
- C. Cater to a variety of income levels and ages; and
- D. Offer a range of housing prices.

Policy 1.1.1: Through the development review process, the City shall maintain an open line of communication working relationship with area developers and homebuilders by periodically discussing their needs, and problems, concerns, and solutions, from which the City may and reviewing local codes and ordinances to revise and improve the residential development process. ensure that there are no unreasonably restrictive requirements that add to the cost of housing.

Policy 1.1.2: Public facilities and infrastructure will be coordinated so that they are provided or planned for areas where future housing will be located as indicated by the Future Land Use Map.

Policy 1.1.3: The City shall encourage residential infill development and redevelopment, specifically underutilized vacant land within the City.

Objective 1.2: Substandard Housing. The City shall maintain the City's existing low incidence of substandard housing as the current housing stock ages by use of the code enforcement process.

Policy 1.2.1: The City will continue code enforcement activities while enforcing the City's minimum standards to maintain the quality of housing and prevent deterioration of housing and neighborhoods.

Policy 1.2.2: The City may explore the possibility of developing licensing and inspection requirements for all dwelling types single family homes used as rental properties to ensure the safety of renters and the appearance of the dwelling.

Policy 1.2.3: The City shall require demolition or rehabilitation of unsound housing which poses a threat to the safety and welfare of the community if corrective

measures as prescribed in city and state codes and standards are not taken by the property owner.

~~Policy 1.2.43: In the future, w~~When considering the disposition of substandard units, demolition should be considered if rehabilitation costs exceed 50% of taxable value or other value deemed acceptable by the City. ~~Additional policies on disposition of substandard units should be developed if such units exceed 2% of the housing stock.~~

Objective 1.3: Attainable Housing. The City shall encourage ~~increasing~~ the supply of safe, attainable, and sanitary housing for very low-, low, and moderate-income households. Dwelling types should consist of mobile homes, apartments, townhomes, duplexes, and detached single-family homes.

~~Policy 1.3.1: The City Maintain~~ supports the use of mobile, manufactured, modular, and alternative construction homes as a form of housing that can be more affordable to a broader range of people than traditional site-built homes and add to the variety of available housing options and will maintain the existing regulation policy of allowing mobile home development in the Land Development Code (LDC) and on the Official Zoning Map. Mobile home development should be located on infill parcels in existing mobile home areas.

~~Policy 1.3.2: Develop a mechanism to identify, regularly monitor, and resolve deficiencies of low and moderate income housing. This effort shall be coordinated with local Social Services Agencies, including the Housing Division of Volusia County Community Services. Consistent with the Future Land Use Element, the City shall identify appropriate districts within which to explore permitting Accessory Dwelling Units (ADUs) on single-family lots, which if permitted, will not count toward density calculations.~~

~~Policy 3.3: Affordable housing opportunities for very low income, low income, and moderate income households shall be evenly distributed throughout the City.~~
[REVISED AND COMBINED WITH 3.7]

~~Policy 1.3.34: The City shall encourage public-private partnerships to maximize the creation of affordable housing as well as resolve deficiencies of low and moderate-income housing. This effort shall further be coordinated with local Social Services Agencies, including the Housing Division of Volusia County Community Services.~~
[FORMERLY 3.9, REVISED]

~~Policy 3.4: The Port Orange Town Center Redevelopment Plan shall identify and provide sites for affordable housing.~~

~~Policy 1.3.45: The City shall Continue to provide a variety of balanced mix of residential densities throughout the community on the Future Land Use Map to support the equitable distribution in order to ensure a sufficient number of affordable housing sites.~~

Policy 1.3.56: The equitable distribution of affordable housing for very low-, low-, and moderate-income households may be supported by one or more of the following incentives at the discretion of the City:

- A. Expedited permitting.
- B. Waiving development fees for the development or construction of affordable housing.
- C. The reservation of infrastructure capacity for housing for very-low-income persons, low-income persons, and moderate-income persons.
- D. The inclusion of an affordable housing provision if the City adopts an ADU ordinance.
- E. The support of development near transportation hubs, ~~and~~ major employment centers, and mixed-use developments. Continue to allow modular housing in residentially zoned areas, provided that such housing is compatible with surrounding development and meets applicable building code regulations.

Policy 1.3.67: The City shall continue to ensure the LDC and review procedures do not create barriers to the provision of affordable housing through the periodic review of regulatory and permitting processes. Consider establishing a density bonus mechanism by the year 2015 that will allow increased density in private sector housing developments that make provisions for a certain amount of low- to moderate-income housing. **[COMBINED WITH 3.6]**

Policy 1.3.78: Consistent with City process(es), The City shall ~~may~~ consider the donation of excess City-owned, residentially zoned properties and in-fill lots to non-profit organizations that renovate or construct very low- and low-income housing, such as Habitat for Humanity.

Policy 3.9: The City shall foster public-private partnerships to maximize the creation of affordable housing. **[MOVED TO 3.4, REVISED]**

Policy 3.10: The City shall, when possible, support and promote private sector research into low-cost construction techniques, considering life-cycle operating costs.

Objective 1.4: Special Needs Households. The City shall continue to provide opportunities ~~sites zoned~~ for assisted living facilities, foster care homes, group homes, and similar facilities, in suitable locations dispersed throughout the community.

Policy 1.4.1: Recognizing that the Department of Children and Families and the Agency for Health Care Administration are responsible for monitoring and licensing assisted living facilities, foster care homes, group homes, and similar facilities, the Port Orange Land Development Code The LDC will continue to support the inclusion of these facilities throughout the community, as provided in Chapter 419, in accordance with applicable Florida Statutes.

Policy 4.2: The City will continue to maintain a map and corresponding inventory depicting the assisted living facilities, group homes, and similar facilities which are located throughout the community, in accordance with Florida Statutes. **[NOT**

REQUIRED]

Policy 4.1.3: The City will support ~~continue to work with private and non-profit groups for cost-effective community alternatives to long-term institutional care for the elderly and the development of adult care and handicapped-ADA-compliant housing facilities.~~

Policy 4.4: The City shall ~~support cost-effective community alternatives to long-term institutional care for the elderly.~~ **[COMBINES 4.3 AND 4.4]**

Objective 1.5: Displacement. The City shall ~~continue~~ to provide for uniform and equitable treatment of persons and businesses displaced by state and local government programs, projects, and similar, consistent with ~~Section 421.55 Florida Statutes.~~

Policy 1.5.1: The City shall adhere to the requirements of Section 421.55 Florida Statutes to provide equitable solutions ~~Develop a program for relocating local citizens and businesses displaced by City projects, within one year after any such project is identified in the Capital Improvements Element.~~

Objective 1.6: Historically Significant Housing. The City shall ~~continue~~ to preserve and protect historically significant structures and sites, in accordance with the provisions of this Plan consistent with the Future Land Use Objective Element.

Policy 6.1: The City will ~~continue to assist property owner's efforts to rehabilitate and renovate historically significant structures by supplying them with information regarding any available state and federal programs.~~

Policy 1.6.12: The City shall ~~Recognize~~ the historic districts and individual properties listed on the National Register of Historic Places and through regular Code Enforcement activities, the City will monitor these through regular Code Enforcement activities to determine the need for improvement initiatives.

Policy 1.6.23: The City shall ~~continue~~ to allow Professional Office uses, mixed Professional Office/Residential uses, or Assisted Living Facilities in structures recognized as historically significant, in appropriate areas such as along arterial and collector roadways.

Objective 1.7: Existing Housing Stock and Neighborhoods. The City shall support Continue to develop programs to conserve and extend the useful life of the City's existing housing stock by preserving neighborhood quality, maintenance of City facilities and infrastructure, and code enforcement.

Policy 7.1: ~~Continue the review process for the proposed demolition of structures as a mechanism to help control the destruction of historic structures.~~ **[DEMOLITIONS ARE REVIEWED AS PART OF BUILDING PERMITTING PROCESS]**

Policy 7.2: If a regional housing authority is created, the City will participate through

~~interlocal agreement with the County and area municipalities. [NO SUCH AUTHORITY ANTICIPATED]~~

Policy 1.7.13: ~~The City shall~~ Encourage individual homeowners to increase private reinvestment ~~in the City's redevelopment districts~~ by providing them with technical and financial assistance, contingent upon available funding.

Policy 1.7.24: ~~The City will use~~ Community Development Block Grant (CDBG) funding, and SHIP funds, when available, ~~and explore opportunities to establish financial incentives for investment in older, declining neighborhoods as part of an overall reinvestment strategy.~~ **[SPLIT INTO 7.2 AND 7.3]**

Policy 1.7.3: The City shall encourage low-income residents to apply for housing rehabilitation assistance individually or through the programs managed by the County, such as the State Housing Initiatives Partnership (SHIP) Program.

Policy 1.7.45: Consistent with the Future Land Use Element, ~~The City will utilize public works and public utility~~ Capital Improvement Program (CIP) projects as opportunities to stabilize and improve the condition and appearance of older, declining neighborhoods through sensitive and appropriate design and retrofit.

Policy 1.7.5: The City will explore funding opportunities from appropriate state, federal, and other applicable entities to assist property owners in the mitigation of risks to residents and housing from natural hazards and in the repair of housing have a natural disaster.

Objective 8: ~~The City shall assess existing public, private non-profit, and for-profit housing programs, and identify potential ways to further increase access to affordable standard housing for all citizens, regardless of race, sex, age, handicap, ethnic background, marital status, familial composition, or income level.~~

Policy 8.1: ~~The City shall prepare periodic reports to the City Council with recommendations for programs and actions to combat housing discrimination.~~

Policy 8.2: ~~The City shall inform appropriate housing service agencies and the general public about fair housing rights and responsibilities.~~

Policy 8.3: ~~The City shall eliminate local codes, ordinances, and policies which result in housing discrimination.~~

Policy 8.4: ~~The City shall adhere to state and federal accessibility standards for barrier-free multi-family living environments needed by physically handicapped persons.~~

Policy 8.5: ~~The City shall encourage the private sector to provide additional multi-family living environments needed by the physically handicapped.~~

[COVERED IN OBJECTIVE 4.1]

Objective 1.89: Sustainability. Consistent with the Future Land Use Element, the City will encourage sustainability in design, construction, and rehabilitation of housing and neighborhoods. ~~Enhance energy efficiency in the design and construction of new housing and encourage the use of renewable energy resources.~~

~~Policy 9.1: Enhance the energy efficiency of housing in Port Orange through resource efficient green building and sustainable development practices.~~

~~Policy 9.2: Encourage installation of renewable energy systems by homeowners.~~

~~Policy 1.8.19.3: The City will c~~continue to encourage sustainable development the incorporation of and green building practices into development projects through the City's Green Building Program.

~~Policy 1.8.29.4: The City will c~~Continue to provide educational materials regarding energy conservation~~efficiency~~, sustainable design, and climate change, when feasible, that encourage community residents and business owners to invest in energy-efficiency improvements through community outreach efforts.

~~Policy 1.8.39.5: The City shall promote energy conservation, techniques such as Federal Energy Star Standards, as consistent with the requirements of the Florida Building Code.~~

~~Policy 9.6: Encourage~~through building orientation that maximizes energy efficiency and landscaping techniques that reduce cooling loads, as well as provide ~~fosters education on the use of alternative energy sources through the Green Initiative. where appropriate, such as solar or small wind energy systems, to reduce the demand for electricity and reduce greenhouse gas (GHG) emissions.~~
[POLICIES 9.5 AND 9.6 COMBINING]

~~Policy 9.7: Encourage appropriate orientation of trees and shrubs on a development site to reduce cooling loads by taking advantage of evapo-transpiration and shade.~~

~~Policy 1.8.49.8: The City will M~~maximize natural areas and assets and incorporate, where practical, Florida Friendly landscaping into development projects to reduce energy and water consumption.

CHAPTER 4: PUBLIC FACILITIES ELEMENT

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The purpose of the Public Facilities Element is to ensure the availability of sanitary sewer, solid waste, drainage, and potable water facilities to meet the existing and projected demands within the City and its service area. This Element aims to effectively manage growth and maintain environmental quality while providing safe and adequate facilities for residents and visitors. This Element also establishes level of service standards.

There are 5 sub-elements within this Element:

1. Sanitary Sewer
2. Solid Waste
3. Drainage
4. Potable Water
5. Groundwater Aquifer Recharge

Public Facilities Highlights

1. Promotes septic tank users connecting to the central sewer system and encourages use of reclaimed water;
2. Requires that essential public facilities be provided concurrent with the impacts of new development;
3. Ensures efficient, cost-effective solid waste and recycling services are provided within the City;
4. Requires adequate stormwater drainage to protect against flood conditions and prevent degradation of surface and groundwater quality;
5. Ensures the conservation of potable water supplies and the protection of shallow and deep aquifer water resources; and
6. Adopts as part of this Element, the 2023 Water Supply Plan, completed in parallel with this Comprehensive Plan update.

SANITARY SEWER SUB-ELEMENT

INTRODUCTION

During 1964, the City of Port Orange constructed a wastewater treatment plant and collection system to serve 700 customers. That was the humble beginning of a system that now serves three cities, portions of unincorporated Volusia County, and is made up more than 41,000 ELUs (Equivalent Living Units).

The original plant was a 290,000 gallon per day trickling filter plant with a discharge to Mikes Bay, a tributary of the Halifax River. The Plant has been upgraded over the years and in 1990, the plant was expanded to 12.0 MGD and treatment was improved through the provision of nutrient removal processes, and the outfall point was relocated to the Halifax River approximately one mile south of the Dunlawton Avenue bridge. The expanded and upgraded plant has performed well and significantly reduced the pollutant load discharged to the River. The plant is currently operating at one-half its rated capacity.

The City of Port Orange has responded to the needs of its service area with timely plant expansions. The City has responded to water quality concerns through the provisions of higher treatment levels and the implementation of the Reuse Water Program, which further reduces discharge of treated effluent into the receiving surface water body.

The collection system is typical of Florida construction. It contains a series of lift stations, force mains and relatively shallow interceptor sewers. The pipeline network adequately serves the existing users. Individual segments will require reinforcement in response to system growth. [IN DATA INVENTORY & ANALYSIS (DIA)]

IMPLEMENTATION PROGRAM

Table 1 reflects the implementation program for concurrency related items. This program details proposed capital improvements for the wastewater system necessary to satisfy capacity and anticipated regulatory requirements.

TABLE 1
SUMMARY OF PROPOSED
WASTEWATER AND RECLAIMED WATER SYSTEM
CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	TERM			
	IMMEDIATE (<1 YR)	SHORT (1-5 YR)	MID (6-10 YR)	LONG (>10 YR)
⁽¹⁾6.0 MGD 'Western' WWTP Expansion				\$36M
Williamson Boulevard Utility Relocation	\$3.1M			
⁽²⁾Water Reuse Program Upgrades		\$2.6M		
<u>Water Reclamation Facility Filter Rehabilitation</u>	<u>\$4.0M</u>			
<u>Water Reclamation Facility Backup Generator Replacement and Electrical/Controls Upgrades</u>	<u>\$4.5M</u>			
<u>Water Reclamation Facility upgrades to Advanced Wastewater Treatment</u>		<u>\$70M</u>		
<u>Reclaimed Reservoir Improvements</u>		<u>\$2M</u>		
<u>Water Reuse Program Upgrades</u>		<u>\$2.5M</u>		
<u>Western Wastewater Treatment Plant</u>				<u>\$90M</u>
Total	\$8.5M	\$74.5M		\$90M

Notes:

(1) ~~WWTP construction has been delayed indefinitely.~~

(2) ~~Upgrades are contingent upon identification of non-potable augmentation sources sufficient to meet peak irrigation demands.~~

Source: City of Port Orange, 2023

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: SANITARY SEWER

THE CITY OF PORT ORANGE SHALL PROVIDE COST-EFFECTIVE AND EFFICIENT SANITARY SEWER SERVICE WHILE PROTECTING THE ENVIRONMENT AND PUBLIC HEALTH

Objective 1.1: *Wastewater Treatment.* The City shall provide a level of wastewater treatment that meets or exceeds the water quality-based effluent limitations established by the Florida Department of Environmental Protection (FDEP), and the calculated level of service for the system.

~~*Policy 1.1:* Remove nitrogen and phosphorus chemically and biologically, utilize chemical feed, only when necessary, to assure discharge standards are met.~~
[COMBINED WITH 1.1.1, WHICH WAS PREVIOUSLY POLICY 1.2]

Policy 1.1.12: Plant operating personnel will achieve effluent total nitrogen concentrations ~~of 12 mg/L~~ and total phosphorus concentrations ~~of 1 mg/L~~ biologically, in accordance with the City's FDEP permit to operate the Port Orange Water Reclamation Facility (WRF). **[REMOVED SPECIFIC CONCENTRATIONS IN ORDER TO REFERENCE BACK TO PERMIT, SO THAT PLAN WILL REMAIN UP TO DATE WITHOUT AMENDMENTS]**

Policy 1.1.23: The City will monitor effluent quality daily and report results monthly to the ~~FDEP~~^{State}.

Policy 1.1.34: The City will, in coordination with relevant local, regional, and state agencies, continue to identify, develop, and encourage environmentally sound wastewater treatment and disposal methods.

Policy 1.1.45: The City will adopt and maintain a sanitary sewer level-of-service standard of 160 gallons per equivalent residential dwelling unit, and 1/10 gallon per square foot of non-residential development per day.

Policy 1.1.56: The City shall provide sufficient plant capacity for the growth of the system through the planning period by completing plant improvements scheduled in of the Sanitary Sewer Sub-Element.

Objective 1.2: Septic Tanks. ~~The City shall eliminate the use of septic tanks. Require, through the City's Land Development Code, the extension of the City wastewater collection system to all new development, except where septic tanks they can provide an environmentally sound alternative at rural residential densities.~~

Policy 1.2.1: ~~The City shall P~~prohibit the use of individual "package" treatment plants in the City's utility service area; and require the connection of any such existing plants that may be annexed, when access to the central system is available.

Policy 1.2.2: The City shall require existing homes utilizing septic tank systems on lots smaller than one acre to connect to the City central sewer system if available within 100 feet of the property.

Policy 1.2.3: The City shall continue to extend its sewer lines to areas presently using septic tank systems. These extensions shall be prioritized according to the criteria listed below, such that areas least appropriate for septic tank use shall benefit from the extensions first:

- A. Soil type.
- B. Water table level.
- C. Proximity to aquatic preserves and Outstanding Florida Waters.
- D. Proximity to open shellfish harvesting areas.
- E. Proximity to other water bodies.
- F. Density of septic tank systems.
- G. Areas known or suspected to be impacting surface or ground water quality.
- H. Proximity to existing or planned public wastewater treatment systems.

Policy 1.2.4: ~~The City shall P~~prohibit the use of septic tanks, except as follows:

- A. For single-family homes on lots of one acre or more, with soils that are suitable for the use of such systems, as defined by the Soil Conservation Service, and where the central sewer system is not available for extension.
- B. For temporary, isolated use in areas scheduled for future central sewer construction.
- C. For infill on existing single-family lots without central sewer service available.

Policy 1.2.5: ~~On-site sewage waste treatment and disposal systems facilities (OSTDS)~~ and drainfields shall not be located within 75 feet of the 100-year floodplain; within 75 feet of an upland/wetland interface; or within 120 of the mean high water mark of any surface water body, whichever is greater.

Objective 1.3: *Reclaimed Water System/Effluent Disposal.* The City shall reduce the discharge of wastewater into State and local waters through the continued utilization and expansion of its reclaimed water system.

Policy 1.3.1: The City shall strive to install residential reclaimed water lines in all areas defined within the City's Utility Master Plan, contingent upon sufficient reclaimed water supply.

Policy 1.3.2: The City will continue to require, through its Land Development Code (LDC), that all new residential subdivisions shall provide alternative water sources for irrigation, including reclaimed water when determined to be available. ~~All future developments may not be eligible to receive reclaimed water service.~~ Non-residential developments shall connect to the reclaimed water system, where determined to be available, or install irrigation systems designed for alternative water sources.

~~*Policy 3.3:* Continue the reclaimed water system as a program of Public Utilities.~~
[ALREADY COVERED IN OTHER POLICIES, INCLUDING 1.3.2]

Policy 1.3.34: The City will monitor volume of reuse at wastewater treatment meters and maintain a minimum of 90% reuse of average daily flow, with the eventual goal of 100% reuse (zero discharge level) ~~by the year 2020~~, with exceptions allowed as necessary accounting for operational conditions, including current weather conditions, anticipated weather patterns, reclaimed water demand, ~~reclaimed water reuse patterns~~, system draw down restrictions, system surplus volume, interruptible customer service restrictions, system operational efficiency, production capability, reclaimed reservoir capacity, availability of storm and groundwater augmentation sources, and other agency regulatory restrictions that require river discharge.

Policy 1.3.45: The City shall Utilize land application of reclaimed water (irrigation) to minimize discharges to surface waters.

Objective 1.4: *Collection System.* The major collection lines shall have sufficient capacity to transmit peak flows to the treatment plant.

Policy 1.4.1: In an effort to discourage urban sprawl, the City will, through the LDC, continue to require developers to provide the main extension necessary to serve their property based on the City's Utility Master Plan.

Policy 1.4.2: The City will require upsizing of primary ~~system elements of the collections system~~ which might be used for provision of service to other properties. Upsizing shall be in accordance with ~~service area plans~~ the future needs in the area, as determined by the City.

Policy 1.4.3: The City will review on a yearly basis the priorities for replacement, correction of facility deficiencies, and provision of future sanitary sewer facility needs. These priorities will be based on those facilities that: 1) ~~have failed or~~ have a

high probability of failure; and 2) will meet future capacity needs.

Policy 1.4.4: The City will monitor Infiltration and Inflow (I/I) on an on-going basis via flow monitoring and evaluation of lift station run times. A rehabilitation program will be implemented to repair sewers and manholes which exhibit excessive I/I, contingent upon available funding.

SOLID WASTE SUB-ELEMENT

INTRODUCTION

The collection and disposal of solid waste is necessary for the protection of the public health, safety, and welfare. The provision of this service has been accepted as a governmental responsibility by the City of Port Orange.

Solid waste generated in Port Orange is handled by a solid waste private contractor through a five-year contract with the City. The private contractor operates residential and commercial collection routes as well as specialized services like semi-annual seasonal clean-ups and rear door pickups for handicapped residents.

This element includes both solid waste, hazardous waste, and recycling goals, objectives, and policies.

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: SOLID WASTE

THE CITY SHALL PROVIDE FOR THE RELIABLE, COST-EFFECTIVE, AND EFFICIENT COLLECTION AND DISPOSAL OF SOLID AND HAZARDOUS WASTE ON A REGULAR BASIS ~~IN ORDER TO MAINTAIN THE APPEARANCE OF THE CITY, AS WELL AS AND~~ TO PROTECT THE ENVIRONMENT AND PUBLIC HEALTH, SAFETY, AND WELFARE.

Objective 1.12: *Solid Waste Collection.* ~~The CityPort Orange shall ensure that a dependable, environmentally safe means of solid waste maintain 5-year contracts or renew contracts for the collection is available for all residences and businesses and disposal of solid waste within the collection area.~~

Policy 1.2.1.1: ~~Solid waste shall be collected The contract shall provide for the collection of refuse from each residential unit at least twice each week as determined by contractual negotiations between vendors and the City.~~

Policy 1.2.1.2: The City will maintain a level-of-service standard for solid waste collection of 3.21 lbs. per capita per day; up to 1,350 residential units per curbside collection vehicle; and 10 lbs/1,000 square feet of non-residential development.

Policy 1.2.1.3: The City will monitor and assess the performance of refuse collection to ensure quality service to residents and businesses.

Objective 1.24: *Solid Waste Disposal.* Solid waste disposal will continue to be provided through the planning period.

Policy 1.2.1.1: ~~The City shall continue to cooperate with Volusia County on the disposal of solid waste generated within the Port Orange collection area and strive to maintain its contribution to the waste stream to below 10% of the County total on an annual basis.~~ [COMBINES 1.1.2 AND 1.1.1]

Policy 1.2.2: ~~The City shall ensure, to the maximum extent possible, through public education and collection services, that yard waste is separated from the solid waste stream will strive to maintain its contribution to the waste stream to below 10% of the County total on an annualized basis.~~

Objective 1.3: *Hazardous Waste.* Hazardous materials will be properly handled and disposed of in accordance with State law.

Policy 1.3.1: The City will continue to coordinate hazardous waste management with Volusia County, and with relevant local, regional, state, and federal agencies, as well as establish a system for identifying the location, type, and quantity of hazardous materials. [COMBINES 1.3.1 AND 1.3.8]

Policy 1.3.2: The City will assist the County, ~~if requested,~~ in implementing the County's hazardous materials program within the collection area and advertise hazardous material collection days as scheduled by Volusia County. **[COMBINES 1.3.2 AND 1.3.4]**

Policy 1.3.3: ~~The City~~Port Orange will ensure the proper collection and transport of hazardous materials generated within the collection area and encourage the development of environmentally safe hazardous waste treatment and disposal. **[COMBINES 1.3.3 AND 1.3.5]**

Policy 1.3.4: ~~The City will advertise hazardous material collection days as scheduled by Volusia County.~~ **[CONSOLIDATED WITH 1.3.2]**

Policy 1.3.5: ~~The City shall encourage the development of environmentally safe hazardous waste treatment, disposal, and transportation methods.~~ **[CONSOLIDATED WITH 1.3.3]**

Policy 1.3.6: ~~The City will assist the efforts of relevant local, regional, and state agencies to identify and clean up hazardous waste sites.~~ **[PREVIOUSLY 1.3.6]**

Policy 1.3.9: The City shall require all known hazardous waste generators to properly manage their own wastes. **[PREVIOUSLY 1.3.9]**

Policy 1.3.7: The City shall strictly enforce hazardous waste laws, and to the extent possible, support swift prosecution of violators, and strengthen regulations pertaining to the generation, storage, treatment, disposal, and transportation of hazardous waste. **[PREVIOUSLY 1.3.7, COMBINED WITH 1.3.13]**

Policy 1.3.8: ~~The City will, in coordination with relevant local, regional, and state agencies, establish a system for identifying the location, type, and quantity of hazardous materials.~~ **[COMBINED WITH 1.3.1]**

Policy 1.3.11: ~~The City shall encourage greater coordination of intergovernmental waste management efforts.~~ **[REDUNDANT]**

Policy 1.3.12/1.3.7: The City will work cooperatively with the County, who runs the Household Hazardous Waste Program, offering free disposal of household hazardous chemicals to residents, and coordinates disposal with small quantity generators of hazardous wastes. ~~with relevant local, regional, and state agencies, to develop a permanent system for households, small businesses, and other low-volume generators of hazardous waste to safely dispose of these materials in a convenient manner.~~

Policy 1.3.13: ~~The City shall encourage the strict enforcement of hazardous waste laws and the swift prosecution of violators.~~ **[CONSOLIDATED WITH 1.3.7]**

GOAL 2: RECYCLING

THE CITY SHALL MAINTAIN AND EXPAND ITS RECYCLING PROGRAM TO REDUCE THE VOLUME OF WASTE DISPOSED OF IN THE LANDFILL.

Objective 2.1: ~~*Reduce, Reuse, Recycle.*~~*Recycling.* The City will strive to maximize landfill capacity and promote the reuse of resources by continuing to meet or exceed State recycling goals and other mandates related to solid waste reduction~~maintain or decrease the per capita solid waste generation rate through the promotion of recycling programs, in order to achieve the statewide recycling goal of 75% by the year 2020.~~

Policy 2.1.1: The City will ensure to the extent feasible based on the recycling mechanisms available to the City, the availability of the curbside collection of recyclables.

Policy 2.1.2: The City shall provide public education to inform residents and promote opportunities to recycle, encourage source separation of recyclable materials, and promote the benefits of reducing, reusing, recycling, and composting materials~~will utilize its Newsletter to advise the citizens of recycling requirements.~~

Policy ~~2.1.3-10~~ 2.1.3.10: The City shall encourage the research, development, and implementation of recycling, resource recovery, energy recovery, and other methods of using garbage, trash, sewage, slime, sludge, hazardous waste, and other waste.
[PREVIOUSLY 1.3.10]

DRAINAGE SUB-ELEMENT

INTRODUCTION

The City of Port Orange completed a Master Drainage Plan in September, 1990 in an effort to define acceptable levels of service, identify deficiencies, and to quantify the costs associated with both construction and operation. These concerns are under the purview of the City's Storm Drainage Utility. Subsequent studies have focused upon individual drainage basins and capital projects needed to correct specific problems within each.

Rainfall runoff is the source of the water in both natural and man-made drainage systems. When a storm event takes place, the force of gravity dictates the flow of water from uplands to sea level. Natural drainage flows through a series of depressions and channels as defined by the topography of the area.

The Port Orange service area is divided into 13 basins. A stormwater basin is an area defined by topography that acts as an independent source of runoff. The understanding of the affects of the upstream basins on downstream facilities is an essential element of the stormwater management process. Runoff does not recognize City limit lines.

In an effort to manage the natural process, the City and other governmental entities have developed facilities to convey, store, and treat stormwater runoff. The range of man-made facilities designed to move water includes canals, swales, ditches and storm sewers.

The treatment of stormwater discharges is an important issue that has instigated the construction of storage structures designed to either detain or retain runoff. Detention facilities reduce the rate of discharge. They temporarily impound runoff and allow only gradual release. The outlet structure design is critical to detention facility performance. Retention facilities are designed to percolate the storm event and eliminate the discharge to surface waters. Both retention and detention facilities target the "first flush" of pollutants. The accumulation of grease, oils and sediments that are transported by runoff must be eliminated from the area surface waters. This is the primary goal of stormwater management.

In an effort to beneficially utilize all available resources, the City has implemented stormwater augmentation stations at various 'regional' stormwater management facilities. These augmentation stations are controlled via remote telemetry, and pump stormwater at a controlled rate into the sanitary sewer collection system. The stormwater is subsequently treated at the WWTP and discharged into the public reuse system. The reuse water is used for irrigation or discharged to the City's regional storage/recharge reservoir in the vicinity of the City's Central Wellfield. Water in the reservoir recharges the aquifer and/or is stored for subsequent filtration and irrigation. [IN DIA]

SUMMARY OF SYSTEM IMPROVEMENTS

TABLE 1
PROJECT IMPLEMENTATION PROGRAM
CURRENT CAPITAL IMPROVEMENTS PLAN

IMPLEMENTATION				
PROJECT	SCHEDULE	COST	FUNDING SOURCE	
1) Storm Drain Pipe Lining	2009	2014	2,253,772	
Stormwater Utility				
2) Rose Bay Project	2009	1,088,275		
Stormwater Utility				
3) Storm Sewer Reconstruction	2009	2014	270,000	
Stormwater Utility				
4) B-19 Retention Basin		2011	500,000	
Stormwater Utility				
5) The Cove/White Acres		2011	750,000	
Stormwater Utility				
6) Drainage Woodlake/Sleepy Hollow		2009	473,000	
Stormwater Utility				
7) B-23 Canal Dredging		2011	1,000,000	
Stormwater Utility				

Source: Quentin L. Hampton Associates, Inc., 2009.

Project	Prior Year Funding	FY24	FY25	FY26	FY27	FY28	Total
Storm Water Master Plan Phase II	593,909	-	-	-	-	-	\$593,909
Drainage Pipe R&R	2,294,778	500,000	500,000	500,000	500,000	500,000	\$4,794,778
Southwind Stormwater Pump Station Outfall	45,000	150,000	-	1,500,000	-	-	\$1,695,000
White Place & Riverside Drive Drainage Improvement	140,000	-	-	-	-	-	\$140,000
City Center Improvements	1,758,834	100,000	-	-	-	-	\$1,858,834
Jackson Street & Oak Street Drainage Improvements	1,415,210	600,000	-	-	-	-	\$2,015,210
Freemanville Drainage Improvements	60,000	180,000	-	-	-	-	\$ 240,000
Viking Drive Stormwater Improvements	50,000	25,000	250,000	-	-	-	\$ 325,000
Nova Canal Regional Stormwater Pump Station	-	400,000	400,000	10,000,000	10,000,000	10,000,000	\$ 30,800,000
Cambridge Canal Pump Station Upgrades	-	400,000	4,000,000	-	-	-	\$ 4,400,000
Portona Stormwater Improvements	-	150,000	150,000	750,000	-	-	\$ 1,050,000
Nova Road Overflow Pond & Pump Station	-	-	1,200,000	250,000	5,000,000	5,000,000	\$ 11,450,000
Vehicle Replacement (not updated 3/8)	699,500	60,000	60,000	-	-	-	\$ 819,500
Total Stormwater Utility	\$6,357,731	\$ 2,565,000	\$6,560,000	\$ 13,000,000	\$ 15,500,000	\$15,500,000	\$ 60,182,231

FY23- FY28 Total Only:	\$ 2,505,000	\$6,560,000	\$13,000,000	\$15,500,000	\$15,500,000	\$60,182,231
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GOALS, OBJECTIVES, AND POLICIES

GOAL 1: DRAINAGE AND STORMWATER MANAGEMENT

THE CITY SHALL PROVIDE AN EFFICIENT AND EFFECTIVE DRAINAGE AND STORMWATER MANAGEMENT SYSTEM WHICH, TO THE MAXIMUM EXTENT PRACTICAL, PROTECTS PERSONS AND PROPERTY FROM FLOODING, PREVENTS NEGATIVE IMPACTS TO THE GROUNDWATER AQUIFER, AND SAFEGUARDS SURFACE WATERS AGAINST EROSION AND DEGRADATION OF QUALITY.

Objective 1.1: *Flood Control - Existing.* The City shall provide a stormwater management level-of-service that will manage stormwater runoff and minimize duration and intensity of local flooding~~eliminate existing local flooding during the 25-year, 24-hour storm, and require all new development to provide stormwater management facilities based on a 25-year, 24-hour storm event.~~ **[STRIKE-THROUGH PORTION MOVED TO OBJECTIVE 4.2]**

Policy 1.1.1: The City shall ~~Continue to utilize the Port Orange~~ prepare a Master Drainage Plan; and which establishes high water elevations, addresses existing deficiencies, and coordinates the construction of new facilities. The City shall update the Master Drainage Plan every five years in order to verify its continued validity. The plan and subsequent updates shall be in accordance with current State and Federal standards to meet grant funding requirements for flood hazard mitigation and resiliency.

Policy 1.1.23: ~~The City shall utilize the full carrying capacity of the existing culverts and ditches.~~ The City will perform annual inspections of system elements to ascertain whether ditches have been maintained and culverts cleaned to proactively prepare for storm events and meet the requirements of its Municipal Separate Storm Sewer System (MS4) permit.

Policy 1.1.34: The City will review the Master Drainage Plan on a yearly basis and coordinate with the Capital Improvement Plan to include newly identified projects and to review the priorities for replacement, correction of facility deficiencies, and provision of future drainage facility needs. These priorities will be based on those facilities that: 1) have failed or have a high probability of failure; and 2) will meet future capacity needs. The City shall establish a construction schedule for identified improvements as listed in the Drainage Sub-Element in order to meet the future needs of flood control and stormwater management.

Objective 1.2: Flood Control – New Development: The City shall require all new development to provide stormwater management facilities based on a 25-year, 24-hour storm event. **[PREVIOUSLY PART OF FIRST OBJECTIVE]**

Policy 1.2.1: The City shall maintain the 25-year, 24-hour storm as the level-of-service standard (design storm) for drainage facility capacity. This standard shall be evaluated as part of each Master Drainage Plan Update. **[PREVIOUSLY POLICY 1.2]**

Policy 1.2.25: For the purpose of flood control, new construction, development, or redevelopment shall conform to the stormwater management performance standards within the City's LDC Land Development Code. **[PREVIOUSLY POLICY 1.5]**

Policy 1.2.36: For all construction projects impacting the City's stormwater management system capacity, ~~capability~~, the City shall review detailed calculations prepared by the developer's Project Engineer which clearly show that detention or retention has been accomplished as required by the LDC. This review shall take into consideration the following criteria:

- A. ~~The characteristics and limitations of the soil at the proposed site with respect to percolation and infiltration;~~
- B. ~~The existing topography of the site and the extent of topographical changes after development;~~
- C. ~~The existing vegetation of the site, the extent of vegetational changes after development and the threat posed to vegetation endangered or indigenous to wetlands;~~
- D. ~~The plans, specifications, structures, and devices the applicant intends to employ for on-site stormwater retention/detention with filtration, erosion control and flow attenuation;~~
- E. ~~The effect the proposed stormwater management system will have upon mosquito breeding habitat;~~
- F. ~~The adequacy of easements for drainage systems in terms of both runoff conveyance and maintenance;~~
- G. ~~The method of handling upland flow which presently discharges through the sites;~~
- H. ~~The effectiveness of wind and water erosion control measures during construction;~~
- I. ~~Standards and requirements of any other governmental jurisdiction;~~
- J. ~~The maintenance entity responsible for upkeep of the system upon its completion;~~
- K. ~~The continuity of phased projects. Phased projects will require the submission of an overall plan for the applicant's total land holdings;~~
- L. ~~The existing hydrologic cycle of the proposed site and the impact of the proposed alterations on the existing hydrologic cycle;~~
- M. ~~The impact the proposed project will have on the natural recharge capabilities of the site; and~~
- O. ~~The impact the proposed project will have on downstream water quantity and~~

quality and specifically the potential for downstream flooding conditions.

[PREVIOUSLY POLICY 1.6, A-O RECOMMENDED TO GO IN LDC]

Objective 21.3: *Groundwater Recharge.* ~~The City shall Stormwater management facilities shall be designed to protect and enhance groundwater recharge, especially in those areas demonstrated to have significant recharge potential. Where possible, recovery systems will be implemented to enable beneficial utilization of stormwater resource for reclaimed water augmentation, aquifer recharge and/or wetland hydration.~~

Policy 2-1.3.1: ~~The City shall Utilize stormwater retention as the management method on projects located on the ridge formations within the City as identified in the Groundwater Aquifer Recharge Sub-Element.~~

Policy 2-21.3.2: Lowering of the groundwater table shall be prohibited in areas known to the City, based on data collected and interpreted by the U.S. Geological Survey, the St. Johns River Water Management District (SJRWMD), the City, and other professional investigators, as important to recharge or to prevention of discharge to the Floridan aquifer.

Policy 2-31.3.3: ~~For the purpose of protecting and enhancing groundwater recharge, sStormwater management system design shall protect and enhance groundwater recharge through conform with standards established in the LDC. the following performance standards:~~

- A. ~~Any proposed lowering of the water table shall occur over no more than 15% of the site and to a maximum depth of five feet below the surface of the existing undisturbed ground, or an equivalent volume, as measured at the overflow elevation of the retention area(s) except where seasonal pumping is necessary for flood control.~~
- B. ~~If ditches, underdrains or similar devices are used to lower the water table, the lateral volumetric effect will be calculated, and the volume will be deducted from that allowed for retention areas.~~
- C. ~~The high water table may be lowered up to two feet below the undisturbed ground in the vicinity of roads for the purpose of protecting the sub-base and base of the roadway and/or for the purpose of preventing mosquito breeding in the roadside swales.~~
- D. ~~The lowering of the water table shall have no adverse effect on wetlands as defined herein.~~
- E. ~~The lowering of the water table shall not increase flows to the detriment of neighboring lands.~~
- F. ~~Stormwater resources shall be utilized for reclaimed water augmentation. This includes direct and indirect augmentation.~~

[A-F RECOMMENDED TO GO IN LDC]

Objective 31.4: *Water Quality.* ~~The City shall Improve the quality of stormwater discharged into surface waters, such that the discharge of inadequately treated stormwater runoff into state waters is -reduced to the maximum extent possible, using established best management practices (BMPs):~~

Policy 3.1.4.1: ~~For the purpose of protecting water quality, s~~Stormwater management system design shall protect water quality through ~~conform to the following performance standards established in the LDC. :~~

- A. ~~Require construction sites to utilize best management practices to assure sediment control. Best management practice shall mean a practice or combination of practices determined by the City to be the most effective, practical means of preventing or reducing the amount of pollution generated by the project to a level compatible with Florida water quality standards found in chapter 62-3, F.A.C., and based on Volusia County's 208 Study on Stormwater Management.~~
- B. ~~A stormwater pollution prevention plan (SWPPP) shall be prepared with all site plan applications.~~
- C. ~~No site alteration shall cause siltation of wetlands, pollution of downstream wetlands or reduce the natural retention or filtering capabilities of wetlands.~~
- D. ~~No site alteration shall allow water to become a health hazard or contribute to the breeding of mosquitoes.~~
- E. ~~In order to maintain good water quality in stormwater management detention ponds and maximize the provision of fish and wildlife habitat, stormwater management systems with permanently wet detention ponds should be designed, operated and maintained so as to resemble a natural pond to the greatest extent practicable. A natural pond design should include: a littoral zone comprised of native emergent and submersed aquatic macrophytic vegetation; a deep open water limnetic zone free of rooted emergent and submersed vegetation; and, where feasible, an upland buffer or [of] native trees, shrubs and understory vegetation.~~
- F. ~~Where possible, natural vegetation shall be used as a component of the drainage system. The water table should not be manipulated so as to endanger natural vegetation beneficial to water quality unless natural vegetation can be replanted and survive with a lowered water table condition.~~
- G. ~~Runoff shall be treated to remove oil and floatable solids before discharge from the site in a manner approved by the City.~~
- H. ~~Erosion by wind or water shall be prevented by the developer throughout the construction process.~~
- I. ~~Direct discharge to class II waters is prohibited. A workable filter system must be provided prior to any discharge to class II waters.~~
- J. ~~Install grates on all stormwater outfall pipes to prevent manatees from becoming trapped within the pipes. Openings in the grates shall be no more than 6 inches wide.~~

[A-J RECOMMENDED TO GO IN LDC]

Policy 3.21.4.2: ~~The City shall P~~protect the natural water filtering function of vegetation adjacent to Spruce Creek and other natural drainage features through standards established in the LDC. ~~by:~~

- A. ~~Requiring development to maintain a minimum 25-foot building setback from the wetland/upland boundary.~~

- ~~B. Require a minimum 50-foot buffer landward of the top of bank of Spruce Creek. Where the top of bank is not discernable, the more landward of the mean high water line or edge of marsh, or other saltwater vegetative growth shall be used. Development within this buffer shall be limited as per Policy 2.1.2 of the Conservation Element.~~
- ~~C. Prohibiting disturbance of areas with slopes over ten percent (10%) along the banks of Spruce Creek.~~
- ~~D. Directing incompatible uses away from wetlands, as consistent with the provisions of the Conservation and Coastal Zone Management Elements.~~

[A-D RECOMMENDED TO GO IN LDC]

~~Policy 3.31.4.3: The City shall Pprepare and submit all required NPDES monitoring and compliance reports in accordance with the City's permit.~~

~~Policy 1.4.4: The City shall use mechanisms such as periodic sampling and reporting requirements for assessing and monitoring impacts of cumulative development on stormwater runoff and water quality in cooperation with Volusia County Environmental Management and the Health Departments.~~

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POTABLE WATER SUB-ELEMENT

INTRODUCTION

~~The Port Orange water system came into existence during 1941 with the assistance of a W.P.A. Grant. The treatment facility utilized ion exchange softening, and storage was accomplished with a 50,000 gallon elevated tank.~~

~~During 1951, the requirement for improved quantity and quality of the water supply dictated a plant relocation and a change in process. Lime softening was implemented, and three 10-inch wells provided the supply.~~

~~During the 1970s, the raw water supply was relocated west to Clyde Morris Boulevard in order to maintain chloride levels in line with State drinking water standards. This wellfield is still used to supplement water from the Central Recharge Wellfield.~~

~~During 1981, the first 5 million gallon per day (MGD) section of the Garnsey Water Treatment Plant was constructed and placed in service. The plant was expanded to 10 MGD in 1986 and to 15 MGD in 2002. This plant includes aeration, solids contact softening, filtration and disinfection. The facility provides its customers with an excellent quality supply meeting applicable State standards.~~

~~The water distribution system includes both large diameter transmission mains and system storage. The pipeline and storage networks have been extended as necessary to meet service area demands.~~

~~The water system is periodically reviewed for its ability to meet peak daily demand and fire protection. These analyses identify locations needing reinforcement and improvement. The City utilizes its Capital Improvement Program to correct these system deficiencies.~~

~~The Gamsey Water Plant is rated at 15 MGD of capacity with all three 5.0 MGD process trains fully operational and with 20.0 MGD water supply wellfield capacity; the City of Port Orange will not need significant capital expansion improvements through 2025.~~

[IN DIA]

TREATMENT PLANT PROJECTS

The City, as of the development of this Element in 2023, is undergoing preparation of a Facility Plan for the Water Treatment Plant and Wellfield that will be completed in Spring 2024, which will detail equipment replacement schedules and provide additional information, for which reason this information is not available herein. This schedule will be provided in the completed Facility Plan and in future updates to the CIP. An equipment replacement schedule for the water plant is included in Table 1. Other non-concurrency related projects are included in the City's Capital Improvement Program (CIP), but not specifically detailed herein.

Table 1
WATER PLANT EQUIPMENT REPLACEMENT SCHEDULE

PROCESS DESCRIPTION	DATE(S) INSTALLED	EST. USEFUL LIFE	TARGET REPLACEMENT DATE(S)
Softener Drives	(s) (e) (n) 2000, 2000, 2005	10-15	2010-2015
Aerator Trays	2000	25	2025
CO ₂ Feed Equipment	(s) (e) (n) 2000, 1992, 2000	15	(s) (e) (n) 2015, 2023, 2015
Filter Underdrains	2000, 2006	*20	2020, 2026
Filter Controls and Valves	2000	10-15	2010-2015
Filter Media	2002	10	2010-2012
Transfer Pumps	2000	10-15	2010-2015
NaOCl Feed Pumps	2002	6-8	2010
NaOCl Tanks	2002	15-20	2017-2020
High Service Pumps	2002	10-15	2017-2020
Sludge Thickener Drives	2006	10	2016
Vacuum Filter Presses & Vacuum Pumps	2006	10	2016

Concurrency-related projects identified in the CIP and the Water Supply Workplan are detailed below and the cost for these projects is summarized in Table 12.

Treatment Plant Expansion, Long Term (> 10 years)

The water plant's rated capacity is 15 MGD, with all three 5.0 MGD process trains fully operational. With one train out of service, the effective capacity is 10.0 MGD. Prudent planning provides for capacity availability with one train down. Peak week flows are currently below 10 MGD, are expected to exceed 10.0 MGD during 2020. Therefore, a 2.0-3.0 MGD plant expansion is recommended before that time to allow for utilization of lower-quality groundwater. Additional capacity will provide greater operational flexibility and redundancy. It is a long-range capital improvement, (>10 years). The trains are cross-connected in order to provide mechanical back up when a unit is out of service. This assures reliability of service.

When considering treatment processes, the City should plan for the future. In Port Orange's

case, some form of membrane treatment may be required for a portion of the City's raw water supply. The eastern wellfield supplies approximately 30% of all raw water; this is a condition of the City's CUP. There is potential for saltwater intrusion in coastal areas, thus the 250 mg/l isobar may impact the eastern wells. This has already occurred in Ormond Beach and Holly Hill's eastern wells. Therefore, membrane treatment would allow for a lower quality water source.

It should be noted that the City is responsible for treating all water produced from its own wells. The City's wells include all of the City's eastern wells and wells #CR 1 through 27 in the central recharge area.

~~Estimated costs for implementing membrane treatment at the Garnsey WTP are \$3 – \$4/GPD. A 2.0 MGD expansion may cost \$6 – \$8 million, in 2009 valuation. A 3.0 MGD expansion may cost \$9 – \$12 million. All cost estimates are expressed in terms of 2009 dollars. Planning, permitting and design should commence in 2018; estimated costs are approximately \$1.0 million. The City should plan for an expenditure of approximately \$9 – \$12 million in FY '20.~~

Groundwater Rule Compliance

~~The EPA groundwater disinfection rule establishes minimum contact time (CT) requirements for groundwater treatment facilities. Port Orange uses chloramines for disinfection and CT requirements. The City covered the recarbonation basin and filters in 2009 to meet new CT requirements.~~

Table 12
SUMMARY OF PROPOSED WATER TREATMENT PLANT
CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	SHORT TERM (2008-2013) (1-5 YR)	MID TERM (2014-2019) (6- 10 YR)	LONG TERM* (>10 YEARS)
<u>South Softener Train Replacement with Membrane Treatment & Plant Expansion</u>		<u>\$15M</u>	
<u>Oceans Storage Tank and Pump Station Improvements</u>		<u>\$2M</u>	
<u>Peninsula Storage Tank and Pump Station Improvements</u>		<u>\$2M</u>	
<u>3.0 MGD Membrane Treatment Planning and Expansion</u>			<u>\$12 M</u>
<u>Groundwater Rule Compliance*</u>	<u>\$1.39 M</u>		
TOTAL	\$1.39 M	\$19M	\$12 M

~~*Funding encumbered in FY 08 and improvement is scheduled for completion in 2009. No long-term projects are identified at this time but may be identified during the development and finalization of the Facility Plan.~~

~~Source: City of Port Orange, 2023~~

Table 23 summarizes the proposed capital improvements for the water distribution system over the next 10 years. ~~The projects are intended to serve new development, replace older~~

distribution components, replace undersized mains, provide fireflow and/or provide system redundancy.

TABLE 23
SUMMARY OF PROPOSED WATER DISTRIBUTION SYSTEM
CAPITAL IMPROVEMENT PROJECTS

PROJECT DESCRIPTION	SHORT TERM (1-5 YR)	MID TERM (6-10 YR)	LONG TERM (>10 YR)
Clyde Morris Bvd North of Dunlawton 18" Water Main			\$50,000
Garnsey to Madeline Avenue 16" Water Main (North Outlet)			\$468,750
Northwest Storage tank and Pump Station			\$2,500,000
North Commonwealth & S. Ridgewood Ave Water System Improvements	\$5M		
16" Water Main River Crossing	\$2.5M		
City wide Class Pipe replacement		\$6M	
16" Dedicated Fill line for Oceans Storage Tank		\$3M	
Total	\$7.5M	\$9M	

Source: City of Port Orange, 2023 Quentin L. Hampton Associates, Inc., 2009

~~ALTERNATIVE WATER SUPPLY SOURCES AND OPTIONS~~

The City of Port Orange has existing "firm" raw water supply capacity to meet peak day flows of 20.0 MGD and treatment capacity of 15 MGD. Assuming an availability factor of 2.0 – 2.5, proposed well capacity will meet average daily flow (ADF) demands of 8.0 – 10.0 MGD, which is satisfactory through 2025. The availability factor is used to provide rotational capacity and avoid operating wells more than 12 hrs/day. As such, no new Floridan Aquifer wells are proposed through 2025.

Fresh groundwater will remain the dominant source of water supply for the City. However, potential alternative water supply options include:

- ~~Surface Water from the St Johns River~~
- ~~Brackish Groundwater~~
- ~~Demand Reduction Strategies~~
- ~~Artificial Recharge and Regional Aquifer Management Plan (RAMP) projects~~

Surface Water from the St. John's River

This alternative primarily relates to many of the water suppliers in western Volusia County. The St. John's River is a suitable potable source, given certain treatment levels. A reduction in groundwater withdrawal allocations, due to Blue Springs MFL legislation, will necessitate using surface water. It is conceivable that potable supply interconnections from western Volusia County to eastern parts of the County will enable supply to Port Orange and other regional utilities.

Brackish Groundwater

Brackish groundwater is water containing chlorides in excess of 250 mg/l. Brackish

groundwater may be withdrawn from the Lower Floridan Aquifer (LFA), treated using membrane processes or blended with water from the Upper Floridan Aquifer. If used as blend wells, the amount of water from this source would be limited by an acceptable blend ratio, which would maintain a safe concentration level below the Drinking Water Standard for Chlorides and Sulfates of 250 mg/l. This blend ratio would depend on the final use of the finished water. For finished potable water, the blend would need to be between 150 and 200 mg/l. The brackish waters of the LFA could also be treated using membrane treatment technology to produce high quality drinking water or lower quality irrigation water.

Conservation, Reclaimed, and Demand Reduction Strategies

Existing water conservation programs, such as low flow showerheads and toilets, rain sensors for lawn irrigation, and education programs, will stay in effect. The use of reclaimed water to supplement and/or replace potable water used for irrigation purposes has been aggressively pursued by the City of Port Orange. In addition, stormwater improvements could be design to beneficially utilize excess stormwater for reclaimed water augmentation, aquifer recharge, wetland hydration and potentially for transfers to other regional water supplies.

Regional Aquifer Management Projects (RAMP)

RAMP projects encompass a variety of programs which increases the available supply of potable groundwater. This could include interconnects, wellfield management strategies and recharge enhancement projects. Port Orange is actively constructing RAMP projects. Interconnects with New Smyrna Beach and Daytona are in place. Completion of the reclaimed water reservoir will provide enhancement of natural recharge and avoidance of wetland impacts in the vicinity of the Central Recharge Wellfield.

[ALTERNATIVE WATER SUPPLY SOURCES AND OPTIONS CONSIDERED IN THE WATER SUPPLY PLAN, INCORPORATED BY REFERENCE IN THIS ELEMENT; ALSO DISCUSSED IN DIA]

These Goals, Objectives, and Policies are being adopted parallel to the City's Water Supply Work Plan 2023-2033 (Kimley-Horn & Associates, Inc., June 2023), which is incorporated as part of this Element.

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: POTABLE WATER

THE CITY SHALL PRODUCE AND DELIVER SAFE, HIGH-QUALITY POTABLE WATER IN THE MOST SUSTAINABLE, COST-EFFECTIVE MANNER THROUGHOUT THE SERVICE AREA.

Objective 1.1: *Water Supply.* The City shall produce a safe, high-quality potable water supply based on the level-of-service criteria outlined in the Potable Water Sub-Element.

Policy 1.1.1: The City will monitor flow to ensure that the level-of-service standards in the Potable Water Sub-Element are met, and shall make timely system improvements as needed to meet those standards.

Policy 1.1.2: The adopted level-of-service standard for potable water production is 180 gallons per day per equivalent residential unit; and 1/10 gallon per square foot per day of ~~commercial, industrial, or institutional~~ non-residential development; not to exceed Consumptive Use Permit (CUP) capacity for groundwater withdrawals.

Policy 1.1.3: The raw water supply ~~needs are required~~ is determined by the level-of-service and peak demand factors. ~~The City will reassess peak demand ratios will be recalculated annually by the City and raw water demand estimates on an annual basis shall be estimated for the upcoming year.~~

Policy 1.1.4: The City will renew the raw water ~~Consumptive Use Permit (CUP) as needed during 2022,~~ and submit 5-year compliance reports and update requests per the terms of the CUP.

Policy 1.1.5: The City shall explore and promote the development of new treatment technologies, which may include reverse osmosis and desalinization and other filtration technologies for increasing potable water supplies.

Policy 1.1.6: The City will monitor water quality to ensure compliance with the Safe Drinking Water Act as well as to the American Water Works Association potable supply goals related to turbidity, taste, and odor.

Policy 1.1.7: The City shall continue to utilize the Central Recharge Wells as the primary supply source. The City will strive to locate all future potable water wells in the City's Central Recharge Wellfield. The operating staff will continue to optimize chemical feed and control to meet quality control standards.

Policy 1.1.8: ~~All future potable water wells will be located in the City's Central Recharge Wellfield. The Central Recharge Wellfield operating staff will continue to optimize chemical feed and control to meet or exceed quality control standards.~~

Policy 1.1.9: The City shall ~~encourage the development of~~pursue local and regional water supplies within water management districts instead of transporting surface water across district boundaries.

Policy 1.1.10: The City's Water Supply Work Plan 2023-2032 (Kimley-Horn and Associates, Inc., June 2023) is incorporated into the comprehensive plan by reference. **[INCORPORATES WATER SUPPLY PLAN IN THIS ELEMENT; POLICY RECOMMENDED PER THE ST JOHNS RIVER WATER MANAGEMENT DISTRICT]**

Policy 1.1.11: The City shall maintain a Water Supply Work Plan (WSWP) that is coordinated with SJRWMD's Central Springs / East Coast Regional Water Supply Plan (CSEC RWSP). The WSWP and related comprehensive plan policies will be updated, as necessary, within 18 months of an update of the CSEC RWSP that affects the City. **[POLICY RECOMMENDED PER THE ST JOHNS RIVER WATER MANAGEMENT DISTRICT]**

Policy 1.1.12: The Water Supply Work Plan shall identify the traditional and alternative water supply sources and projects, along with the water conservation and reuse practices, necessary to meet existing and future water demands. **[POLICY RECOMMENDED PER THE ST JOHNS RIVER WATER MANAGEMENT DISTRICT]**

Objective 1.2: *Water Distribution.* The City shall deliver an adequate quantity of potable water in the most cost-effective manner.

Policy 1.2.1: The City will provide ground storage capacity as capacity equal to 50% of average daily flow required by Florida Administrative Code. ~~Additional storage will be provided in concert with system growth.~~

Policy 1.2.2: The minimum pressure for fire flow shall be 20 psi.

Policy 1.2.3: ~~Development patterns affect the cost of provision of service.~~ The City will continue its current policy of requiring developers to provide the main extensions necessary to serve their property in an effort to discourage urban sprawl.

Policy 1.2.4: The City shall continue to require future development at urban densities and intensities greater than one unit per five acres to connect to the centralized potable water system in all areas of the City, except for properties meeting the LDC requirements for use of private wells.

Policy 1.2.5: ~~The City shall~~ continue to utilize the construction schedule for identified improvements and correction of existing deficiencies, dependant upon available funding.

Policy 1.2.6: The City will review on a yearly basis the priorities for replacement, correction of facility deficiencies, and provision of future potable water facility needs. These priorities will be based on those facilities that: 1) have failed or have a high probability of failure; and 2) will meet future capacity needs.

Policy 1.2.7: The City will upsize lines in conformance with the Utility Master Plan ~~year 2025 distribution system~~.

Objective 1.3: Water Conservation. The City shall reduce groundwater withdrawal through conservation and reuse programs.

Policy 1.3.1: The City shall continue to implement and update the water conservation programs in the Utility Master Plan.

Policy 1.3.2: The City shall continue conservation practices and strive to maintain per capita consumption below 100 gallons per capita per day (GPCD).

Policy 1.3.3: The City shall continue to require, through the Florida Building Code, low volume plumbing fixtures, including low-flush fixtures, as a potable water conservation tool for all new development.

~~*Policy 3.4:* The City shall continue to utilize the rebate program for retrofit to low-flush fixtures and other inefficient plumbing devices, where funding is available.~~

~~*Policy 3.5*~~*1.3.4:* The City shall promote water conservation as an integral part of its water management program, as identified in the City's CUP.

~~*Policy 3.6*~~*1.3.5:* The City shall promote the use and reuse of water for irrigation ~~or of~~ the lowest acceptable quality for the purposes intended.

~~*Policy 3.7*~~*1.3.6:* The City shall continue to implement the City's Utility Master Plan, which includes retrofitting developed subdivisions with reuse water mains to provide an alternate water supply for ~~substitute for~~ landscape irrigation via the potable water supply, when supply of reclaimed water is available.

~~*Policy 3.8*~~*1.3.7:* The City shall continue to utilize the Land Development Code to require the installation of reuse mains in new subdivisions, when supply of reclaimed water is available.

~~*Policy 3.9*~~*1.3.8:* The City shall continue to require metering of all reclaimed water customers and continue implementation of a conservation rate structure to promote conservation of reclaimed and potable water.

Policy ~~3.10~~1.3.9: The City shall continue to promote water conservation through waterwise irrigation practices and the application of Florida-friendly landscaping practices.

GROUNDWATER AQUIFER RECHARGE SUB-ELEMENT

INTRODUCTION

The general subject of this Sub-Element is the protection of both the quantity and quality of natural groundwater. Groundwater levels and water quality are affected by many activities. Solid waste and hazardous waste facilities, underground storage tanks, and septic tanks all have the potential to contaminate the groundwater supply. These issues are addressed not only in this Sub-Element, but also in several of the other Elements in this Comprehensive Plan.

Several terms and concepts will be used in this Sub-Element to help define the groundwater resource and its requirements for protection. The term *aquifer* is used to describe a water-bearing geologic formation. Such formations can be confined or unconfined, and are noted for their ability to store and transmit usable quantities of water. In an aquifer, water is stored in the pore space of the material.

The Port Orange service area is underlaid by two water-bearing aquifers: the upper unconsolidated surficial (shallow) aquifer, and the confined limestone aquifer, known as the Floridan Aquifer. The surficial aquifer does not have consistent composition and water storage capacity throughout. There are lenses of clayey sand and shell beds, and zones of fine to coarse sand. In general, the clays and sandy clays occur in the lower half of the shallow aquifer. The limestone Floridan Aquifer also exhibits variation. There are alternating layers of porous limestone and relatively dense dolomitic limestone. The interaction between porous beds and impermeable beds is essential to the functioning of the aquifer. The alternating formations affect both the potentiometric surface and the recharge capability.

Potentiometric surface is a term relevant to the confined Floridan Aquifer and represents a measurement of head pressure. This value equals the elevation that water would reach in a well penetrating to the aquifer. Confinement occurs when the water-bearing formation is overlain by relatively impermeable strata, termed *aquitards*. The slope of the potentiometric surface defines the direction of groundwater movement. Water moves from higher surface zones to lower surface zones.

Recharge is the term for the renewal of the groundwater resource. Precipitation either augments surface water, is transpired by plants, or works its way into the groundwater. When water filters down through the unsaturated soils, it reaches the saturated zone and becomes part of the water table or shallow aquifer. In areas where the aquifer is overlain with highly permeable material (DeLand Ridge and Rima Ridge) recharge of the Floridan Aquifer is accomplished.

The protection of recharge areas is of prime importance in locations that rely on aquifers as the sole source of drinking water, such as Volusia County. Since well-drained recharge areas are considered prime land for development, they are often subject to alteration. The installation of impervious surfaces such as roads, roofs and parking lots reduces the area

available for percolation and thus recharge volume. Groundwater quality can also be affected by development of the recharge area. Groundwater can absorb development-related contamination and transmit it to the aquifer/drinking water supply. This is most significant in the case of a sole source aquifer.

The following additional definitions are derived from documents prepared by the U. S. Geological Survey. They provide a verbal framework for this section of the plan:

Cone of Depression (or Drawdown Cone). A roughly conical concavity (or dimple) in the potentiometric surface around a pumping well.

Confining Bed. A body of "impermeable" material stratigraphically adjacent to one or more aquifers, also referred to as aquitard, aquiclude, and aquifuge.

Diffusion. The process by which dissolved substances move from a region of higher to lower concentration.

Groundwater, Unconfined. Water in an aquifer that has a water table.

Groundwater Divide. A vertical, imaginary, impermeable boundary that, in an ideal, symmetrical groundwater system, coincides exactly with the topographic highs that represent surface water divides from which water flows in opposite directions.

Head/Static Head. The height above a standard datum of the surface of a column of water (or other liquid) that can be supported by the static pressure at a given point. *Head*, when used alone, is understood to mean *static head*. The head is proportional to the fluid potential; therefore, the head is a measure of the potential.

Hydraulic Gradient. The change in static head per unit of distance in a given direction. If not specified, the direction generally is understood to be that of the maximum rate of decrease in head.

Hydrologic Cycle. The continuous circulation of water between the ocean, atmosphere, and land.

Infiltration. The entry into the soil of water made available at the ground surface, together with the associated flow away from the ground surface within the unsaturated zone.

Leachate. The liquid derived from the leaching of buried refuse in sanitary landfills and dumps by percolating water derived from rain or snow melt. It frequently contains large numbers of inorganic contaminants and high concentrations of total dissolved solids, as well as many organic contaminants.

Leakance. The vertical transfer of water from a surficial aquifer system to an adjoining aquifer.

Percolate. Water moving by gravity through pore spaces of unsaturated geologic material.

Permeability. The capacity of a porous medium for transmitting water.

Piezometer. A non-pumping well, generally of small diameter, which is used to measure the elevation of the water table or potentiometric surface. A piezometer generally has a short well screen through which water can enter.

Plume. A relatively discrete body of contaminated groundwater originating from a specified source(s) and influenced in its movement by such factors as the local groundwater flow pattern, the specific gravity and solubility of the contaminant, the subsurface geology within the zone of saturation, and the influence of pumping wells.

Porosity. The ratio of the volume of small openings in soil or rock to its total volume; it is usually expressed as a percentage.

Recharge Area. That portion of a drainage basin in which the net saturated flow of groundwater is directed away from the water table.

Recharge, Artificial. The addition of water to the groundwater by activities of man at a recharge rate greater than normal.

Runoff. 1) That portion of precipitation that does not return to the atmosphere through evapo-transpiration nor infiltrate the soil to recharge groundwater, but leaves the hydrologic system as streamflow. 2) That portion of precipitation delivered to streams as overland flow to tributary channels.

Saltwater Intrusion. The migration of saltwater into freshwater aquifers under the influence of groundwater pumping.

Saturated Zone. The subsurface zone occurring below the water table where the soil pores are filled with water and the moisture content equals the porosity.

Safe Yield. The amount of water that can be withdrawn annually from a groundwater basin without producing an undesirable result. Undesirable results include depletion of groundwater reserves, intrusion of low quality water, contravention of water rights, and others, such as depletion of streamflow and land subsidence.

Storage Coefficient. The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head. In an unconfined aquifer, the storage coefficient is equal to the specific yield.

Unconfined Aquifer. An aquifer having a water table.

Unsaturated Zone. The subsurface zone occurring above the water table and the capillary fringe, in which the soil pores are only partially filled with water, and the moisture content

is less than the porosity.

Water Table. The surface on which the fluid pressure in the pores of a porous medium is exactly atmospheric. It is the level at which water stands in a shallow well open along its length and penetrating the surficial deposits just deeply enough to encounter standing water in the bottom. [IN DIA]

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: AQUIFER PROTECTION

THE CITY SHALL STRIVE TO MAINTAIN THE VIABILITY OF THE VOLUSIA-FLORIDIAN SOLE SOURCE AQUIFER AS THE POTABLE WATER SUPPLY FOR THE CITIZENS OF PORT ORANGE.

Objective 1.1: Development within the zone of influence of any wellfield shall be regulated to ensure that groundwater quality is not degraded.

Policy 1.1.1: If prime recharge areas are annexed into the City, development shall be limited in density/intensity and designed in a manner that limits paved surfaces and the diversion of stormwater.

Policy 1.1.2: The City should not support any proposed changes to the County Future Land Use Map that would increase the intensity of development on the Rima Ridge.

Policy 1.1.3: Given that the Rima Ridge is a location of above average annual groundwater recharge, the City shall continue to support the County's efforts to prevent development from diverting water away from the Ridge.

Objective 1.2: The City shall protect the water quality in the aquifer in order to maintain its potable water standards.

Policy 1.2.1: The City shall continue to employ best management practices for stormwater management, as outlined in the Drainage Sub-Element, such that the collection and percolation of stormwater will decrease runoff and increase potential recharge, as well as protect water quality.

Policy 1.2.2: The City will monitor groundwater testing information annually to ascertain changes in quality in the surficial and artesian aquifers.

Policy 1.2.3: The City will employ conservative well spacing and withdrawal procedures to preclude saltwater intrusion by:

- A. Monitoring the potentiometric surface of pumping wells and terminating operation when the surface reaches elevation of 5 M.S.L.
- B. Assuring that well spacing is greater than 750 ft. when withdrawal rates exceed 350 GPM in order to control interference drawdown.
- C. Rotating wells in order to reduce withdrawal demand on individual wells.

Policy 1.2.4: In an effort to reduce public reliance on potable water and shallow aquifer consumption, the City, in accordance with the provisions of the Sanitary Sewer Sub-Element, shall continue to expand its reclaimed water system, to require new development to connect to the existing system where sufficient reclaimed water

supply is available, and to encourage alternative water sources for irrigation other than potable water.

Policy 1.2.5: All requests for development shall be reviewed to ensure that potential impacts of the proposed development do not negatively impact the quantity and quality of groundwater resources.

Policy 1.2.6: In order to protect the viability of the Volusia-Floridan Sole Source Aquifer, the City shall prohibit excavation projects from removing the confining layer of material separating the bottom of borrow pits from the top of the aquifer.

Objective 1.3: The City shall continue to protect the quality of its wellfield areas from contamination by hazardous substances, as defined in this Element, through the use of wellhead protection zones and buffers.

Policy 1.3.1: The City shall maintain wellhead protection zones as follows:

- A. *Primary protection zone* -- The land area within a 200-foot radius of any public potable water supply well, wherein the use, handling, production, or storage of hazardous substances for non-residential purposes is prohibited.
- B. *Secondary protection zone* -- The land area within a 1,000-foot radius of any public potable water supply well, and surrounding each primary protection zone, wherein the use, handling, production, or storage of hazardous substances for non-residential purposes is considered to be a non-conforming use, and therefore subject to City review.

Policy 1.3.2: The City will retain current wellfield buffers in public ownership, and maintain the Conservation land use designation on its Central Recharge Wellfield property consistent with the Wellfield Property and Water Supply Planning Area interlocal agreements between the City and the County, which specify the permitted uses for this area.

Policy 1.3.3: The City will continue to utilize the County Minimum Standards for Wellhead Protection, in order to protect wells from potential sources of contamination.

Policy 1.3.4: Groundwater resources shall be protected from leaking underground storage tanks by the utilization of state-of-the art leak-prevention technology, such as double-walled storage tanks.

CHAPTER 5: PUBLIC SCHOOL FACILITIES ELEMENT

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INTRODUCTION

In 2005, the Florida Legislature adopted requirements for all local governments to institute mandatory planning for schools. The requirements called for cooperative efforts between local governments and school ~~boards~~board districts to develop long-term plans for the provisions of necessary educational facilities to meet current and future needs. These plans were accompanied by requirements to institute school concurrency to ensure that facilities are in place to serve the needs of new development at the time the student demand resulting from the new development impacts schools. Local governments were also required to adopt amendments to their capital improvements elements demonstrating that plans to provide educational facilities were financially feasible. These requirements are implemented through the interlocal agreement between the school ~~board~~board district and local governments and through the public school facilities element, capital improvements element, and intergovernmental coordination element.

The Volusia County School ~~Board~~Board District and the 16 local governments¹ began formal development of the public school facilities element in the summer of 2006. The planning task was supported by a broad-based effort to involve various segments of the community in the planning process. The School ~~Board~~Board District appointed a Stakeholders Committee that included representatives from the real estate and building interests, teachers, school administrators, elected officials and a variety of citizen groups. Each local government was given the opportunity to appoint a staff member to serve on a technical committee. Regular meetings were held with city managers, and periodic reports were made to local elected officials at the Volusia Council of Governments meetings. Workshops were also held with the School ~~Board~~Board District to obtain direction on key issues. Two public forums were held mid-way through the planning process to report results from the data and analysis effort and obtain comments about various options for the plan. Completion of the model plan was followed by adoption by each local government in compliance with the requirements for amending local government comprehensive plans.

The approach to the Public School Facilities Element (PSFE) employed in Volusia County was the preparation of a model PSFE, and amendments to the capital improvements and intergovernmental coordination elements that could be adopted as presented or with minor modifications to account for local conditions. In addition to the PSFE, the interlocal agreement will provide for a uniform school concurrency management approach and uniform proportionate share methodology.

¹ Ponce Inlet was granted an exemption.

~~Each year by December 1st~~ Annually, the City shall adopt, as part of its annual update to the Capital Improvement Element, the Volusia County School District five-year work program, which is approved in September of each year as part of the School District budget. The School District's work program includes planned facilities and funding sources to ensure a financially feasible capital improvements program and to ensure the level-of-service standards will be achieved by the end of the five-year period.

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: INTERGOVERNMENTAL COORDINATION

COLLABORATE AND COORDINATE WITH THE SCHOOL ~~BOARD~~DISTRICT OF VOLUSIA COUNTY TO PROVIDE AND MAINTAIN A PUBLIC EDUCATION SYSTEM WHICH MEETS THE NEEDS OF VOLUSIA COUNTY'S CURRENT AND FUTURE POPULATION.

Objective 1.1: The City of Port Orange shall implement and maintain mechanisms designed to coordinate with the School ~~Board~~District to provide consistency between local government comprehensive plans and public school facilities and programs.

Policy 1.1.1: Pursuant to the procedures and requirements of the adopted interlocal agreement, the City of Port Orange shall coordinate with the School ~~Board~~District on growth and development trends, general population and student projections to ensure that the plans of the School ~~Board~~District and the City are based on consistent data.

Policy 1.1.2: The City of Port Orange shall provide the representative of the School ~~Board~~District with copies of meeting agendas and staff reports for the Staff Development Review Committee, Planning Commission, and City Council.

Policy 1.1.3: The City of Port Orange shall meet at least annually with representatives from the School District and the other local governments in Volusia County to review the Public School Facilities Element including enrollment projections. The timing and content of these meetings shall be done according to the requirements and procedures set forth in the adopted interlocal agreement.

Objective 1.2: The City of Port Orange shall coordinate with the School ~~Board~~District on the planning and siting of new public schools and ancillary facilities to ensure school facilities are matched with necessary services and infrastructure and are compatible and consistent with the comprehensive plan.

Policy 1.2.1: The City of Port Orange shall coordinate with the School ~~Board~~District to assure that proposed public school facility sites are consistent with the applicable land use categories and policies of the comprehensive plan. Low-intensity public schools, such as elementary and middle schools, shall be allowed in the Rural Transition, Suburban Residential, Urban Medium Density Residential, Urban High Density Residential, Office/Residential Transition, Planned Community-Westside and Public/Institutional land use categories. High-intensity public schools, such as high schools and colleges, shall be allowed in the Urban High Density Residential, Office/Residential Transition, Mixed-use Center,

Commercial, Warehouse/Industrial and Public/Institutional land use categories.

Policy 1.2.2: Coordination of the location, acquisition, phasing and development of future school sites and ancillary facilities shall be accomplished through the procedures adopted in the interlocal agreement.

Policy 1.2.3: The City of Port Orange and School ~~Board~~District will jointly determine the need for and timing of on-site and off-site infrastructure and capital improvements necessary to support each new school or the proposed renovation, expansion or closure of an existing school. If deemed necessary, the parties may enter into a written agreement as to the timing, location, and party or parties responsible for constructing, operating and maintaining the required improvements.

Policy 1.2.4: The City of Port Orange shall encourage the School ~~Board~~District to “land bank” sites for future use as school facilities. The City of Port Orange shall coordinate with the School ~~Board~~District on the acquisition and use of land banked sites in the same manner as established for other sites in order to ensure adequate infrastructure is planned and built in advance of school construction.

Policy 1.2.5: The City of Port Orange shall protect schools and land banked school sites from the adverse impact of incompatible land uses by providing the School District with the opportunity to participate in the review process for all proposed development adjacent to schools.

Policy 1.2.6: In developing capital improvements plans and programs for public services, the City of Port Orange shall consider required infrastructure to service existing and proposed schools and any land banked school sites.

Objective 1.3: The City of Port Orange shall enhance community and neighborhood design through effective school facility planning and siting standards and encourage the siting of school facilities to serve as community focal points that are compatible with surrounding land uses.

Policy 1.3.1: The City of Port Orange shall coordinate with the School ~~Board~~District on opportunities for the expansion and rehabilitation of existing schools (including but not limited to renovations, remodeling and site redesign) so as to support neighborhoods and redevelopment by enabling existing schools to remain viable.

Policy 1.3.2: The City of Port Orange shall collaborate with the School ~~Board~~District on the siting of public facilities such as parks, libraries, and community centers near existing or planned public schools, to the extent feasible.

Policy 1.3.3: The City of Port Orange shall look for opportunities to co-locate and share the use of City and School facilities when preparing updates to the comprehensive plan’s schedule of capital improvements and when planning and

designing new or renovating existing, community facilities. Co-located facilities shall be governed by a written agreement between the School ~~Board~~District and the City specifying operating procedures and maintenance and operating responsibilities.

Policy 1.3.4: The City of Port Orange shall reduce hazardous walking conditions consistent with Florida's "Safe Ways to School" program. In conjunction with the School ~~Board~~District, the City of Port Orange shall implement the following strategies:

1. New developments adjacent to schools shall be required to provide a direct safe access path for pedestrian travel to existing and planned schools and shall connect to the neighborhood's pedestrian network.
2. New development and redevelopment within two miles of a school shall be required to provide sidewalks within or adjacent to the property for the corridor that directly serves the school or qualifies as an acceptable designated walk or bicycle route to the school.
3. The City of Port Orange shall consider infill sidewalk and bicycle projects connecting networks serving schools as part of the annual capital budget process. Priority shall be given to hazardous walking conditions pursuant to Section 1006.23, Florida Statutes.
4. The City of Port Orange shall coordinate with the Metropolitan Planning Organization to maximize the funding from the Florida Department of Transportation and other sources that may be devoted to improving pedestrian networks serving schools.

Policy 1.3.5: The City of Port Orange and School ~~Board~~District shall coordinate with Volusia County Emergency Services on efforts to build new school facilities, and facility rehabilitation and expansion, to be designed to serve as and provide emergency shelters as required by Section 1013.372, Florida Statutes.

Objective 1.4: Manage the timing of new development to coordinate with adequate school capacity as determined by the Volusia County School District.

Policy 1.4.1: The City of Port Orange shall take into consideration the School ~~Board~~District comments and findings on the availability of adequate school capacity in the evaluation of comprehensive plan amendments and other land use decisions, including but not limited to developments of regional impact.

Policy 1.4.2: Amendments to the future land use map shall be coordinated with the School ~~Board~~District and the Public School Facilities Planning Maps.

Policy 1.4.3: Where capacity will not be available to serve new students from the property seeking a land use change or other land use determination that increases residential density, the City of Port Orange shall not approve the proposed land use change until such time as the School ~~Board~~District can find that adequate public schools can be timely planned and constructed to serve the student

population, or that the applicant has provided adequate mitigation to offset the deficiencies in anticipated school capacity.

GOAL 2: IMPLEMENT PUBLIC SCHOOL CONCURRENCY

THE CITY OF PORT ORANGE SHALL ASSURE THE FUTURE AVAILABILITY OF PUBLIC SCHOOL FACILITIES TO SERVE NEW DEVELOPMENT CONSISTENT WITH THE ADOPTED LEVEL OF SERVICE STANDARDS. THIS GOAL WILL BE ACCOMPLISHED RECOGNIZING THE SCHOOL DISTRICT'S STATUTORY AND CONSTITUTIONAL RESPONSIBILITY TO PROVIDE A UNIFORM SYSTEM OF FREE AND ADEQUATE PUBLIC SCHOOLS AND THE CITY'S AUTHORITY TO GOVERN THE USE OF LAND, INCLUDING THE AUTHORITY TO APPROVE OR DENY COMPREHENSIVE PLAN AMENDMENTS, RE-ZONINGS OR OTHER DEVELOPMENT ORDERS THAT GENERATE STUDENTS AND IMPACT THE PUBLIC SCHOOL SYSTEM. THE CITY OF PORT ORANGE SHALL OPERATE AND MAINTAIN IN A TIMELY AND EFFICIENT MANNER ADEQUATE PUBLIC FACILITIES FOR BOTH EXISTING AND FUTURE POPULATIONS CONSISTENT WITH THE AVAILABLE FINANCIAL RESOURCES.

Objective 2.1: The City of Port Orange, through coordinated planning with the School District and implementation of its concurrency management system, shall ensure that the capacity of schools is sufficient to support residential subdivisions and site plans at the adopted level-of-service standard within the period covered by the five-year schedule of capital improvements. These standards and the concurrency management system shall be consistent with the interlocal agreement approved by the School ~~Board~~District and the local governments in Volusia County.

Policy 2.1.1: The level-of-service standards for schools shall be applied consistently by all the local governments in Volusia County and by the School ~~Board~~District district-wide to all schools of the same type.

Policy 2.1.2: Consistent with the interlocal agreement, the uniform, district-wide level-of-service standards are set as follows using FISH capacity based on the traditional school calendar:

1. Elementary Schools: 115% of permanent FISH capacity for the concurrency service area
2. K-8 Schools: 115% of permanent FISH capacity for the concurrency service area.
3. Middle Schools: 115% of permanent FISH capacity for the concurrency service area
4. High Schools: 120% of permanent FISH capacity for the concurrency service area

5. Special Purpose Schools: 100% of permanent FISH capacity

Policy 2.1.3: The following schools shall be considered constrained schools at the designated LOS due to the inability to add capacity at the site and the nature of the communities they serve. Concurrency will be reviewed in the adjacent concurrency service areas and requests to increase residential densities in the constrained concurrency service areas will need to be accompanied by a plan to address school capacity.

School	LOS
Burns-Oak Hill Elementary	115%
Coronado Elementary	115%
Samsula Elementary	165%

Source: Volusia County Interlocal Agreement

Policy 2.1.4: The City of Port Orange and School Board District recognize and agree that short-term changes in enrollment unrelated to new development approvals can and do occur, and that students enrolling in their assigned school will be accepted consistent with the School District's constitutional obligations regardless of the utilization levels at the assigned school.

Policy 2.1.5: If there is a consensus to amend any level-of-service, the amendment shall be accomplished by execution of an amendment to the interlocal agreement by all parties and the adoption of amendments to each local government's comprehensive plan. The amended level-of-service standard shall not be effective until all plan amendments are effective and the amended interlocal agreement is fully executed. No level-of-service standard shall be amended without showing that the new standard is financially feasible and can be achieved and maintained within the five-year timeframe of the capital facilities plan.

Objective 2.2: The City of Port Orange shall establish School Concurrency Service Areas, as determined district-wide, within which an evaluation is made of whether adequate school capacity is available, based on the adopted level-of-service standard. Maps of the School Concurrency Service Areas are adopted in the Volusia County Interlocal Agreement for Public School Facilities Planning.

Policy 2.2.1: The concurrency service area for elementary schools shall be the elementary school attendance boundary as represented on the map series "Public School Facilities Element Elementary School Concurrency Service Areas" adopted as part of the Volusia County Comprehensive Plan and which is incorporated herein by reference.

Policy 2.2.2: The concurrency service area for middle schools shall be the middle school attendance boundary as represented on the map series "Public School Facilities Element Middle School Concurrency Service Areas" adopted as part of the Volusia County Comprehensive Plan and which is incorporated herein by reference.

Policy 2.2.3: The concurrency service area for K-8 schools shall be the attendance boundary as represented on the map series “Public School Facilities Element K-8 Concurrency Service Areas” adopted as part of the Volusia County Comprehensive Plan and which is incorporated herein by reference.

Policy 2.2.4: The concurrency service area for high schools shall be as represented on the map series “Public School Facilities Element High School Concurrency Service Areas” adopted as part of the Volusia County Comprehensive Plan and which is incorporated herein by reference.

Policy 2.2.5: The concurrency service area for special use schools shall be district-wide.

Policy 2.2.6: The concurrency service area maps designate three areas where school capacity is not anticipated for the planning period and in which increases in residential density are not anticipated.

Policy 2.2.7: Within the central concurrency service areas, all current and future students shall be assigned to schools designated for them as part of the School District’s normal school assignment procedures. Requests for development orders for new development consistent with the future land use designations and existing residential zoning densities shall be evaluated for concurrency based on the assigned school and that school’s concurrency service area. If adequate capacity is not available in the assigned concurrency service area, the proposed development shall be evaluated in comparison to the concurrency service areas adjacent to the assigned concurrency service area, subject to the limitations of Policy 2.3.7. The school district shall maintain a listing of assigned and adjacent concurrency service areas for each central school concurrency service area.

Policy 2.2.8: Requests to develop properties within the central school concurrency service areas at residential densities and intensities greater than the current land use or zoning designations shall be done via a comprehensive plan amendment consistent with the Volusia County Charter provision 206 regarding school planning. The comprehensive plan amendment shall demonstrate how school capacity will be met consistent with the terms of the First Amendment to the Interlocal Agreement for Public School Facility Planning effective July 2007 and Section 206 of the Volusia County Charter. If the project area is to be annexed by a municipality, the comprehensive plan amendment shall include an amendment of the central concurrency service area boundary by Volusia County to exclude the subject parcel.

Policy 2.2.9: Amendments to the School Concurrency Service Areas shall be completed according to the procedures specified in the Volusia County Interlocal Agreement for School Facilities Planning. Amendments to concurrency service areas shall consider the following criteria:

1. Adopted level-of-service standards shall not be exceeded within the initial five-year planning period, except as identified in Policies 2.1.3 of this Element.
2. The utilization of school capacity is maximized to the greatest extent possible taking into account transportation costs, ethnic and socio-economic diversity, proximity to schools, subdivisions and neighborhoods, demographic changes, future land development patterns, crossing guard availability and other relevant factors.

Objective 2.3: In coordination with the School ~~Board~~District, the City of Port Orange will establish a process for implementing school concurrency, which includes applicability and capacity determination, availability standards and school capacity methods. The City of Port Orange shall manage the timing of residential subdivision approvals and site plans to ensure adequate school capacity is available consistent with the adopted level of service standards for public schools.

Policy 2.3.1: School concurrency applies to residential development not otherwise exempt as specified by Policy 2.3.3.

Policy 2.3.2: Development orders may be issued for residential development where:

1. Adequate school capacity, as determined by the School ~~Board~~District, exists or will be under construction for each level of school in the affected concurrency service area within three years after the issuance of the development order allowing the residential development.
2. Adequate school facilities, as determined by the School ~~Board~~District, are available within an adjacent concurrency service area subject to the limitations of Policy 2.3.7. Where capacity from an adjacent concurrency service area or areas is utilized, the impacts of development (i.e. students) shall be shifted to that area. If capacity exists in more than one concurrency service area or school within a concurrency service area, the School District shall determine where the impacts of development shall be allocated based on the School District policies for student assignment.
3. The developer executes a legally binding commitment with the School ~~Board~~District and the City of Port Orange to provide mitigation proportionate to the demand for public school facilities to be created by the actual development of the property as provided by Objective 2.4 and its supporting policies.

Policy 2.3.3: The following residential development shall be considered exempt from the school concurrency requirements:

1. Single family lots of record on a recorded plat, existing prior to February 1, 2008, the effective date of the School Concurrency implementing ordinance, which otherwise would be entitled to build;

2. Any residential development or any other development with a residential component that received approval of a Final Development Order or functional equivalent prior to February 1, 2008, the effective date of school concurrency implementing ordinance, is considered vested for that component which was previously approved for construction and shall not be considered as proposed new residential development for purposes of school concurrency;
3. Amendments to residential development approvals which do not increase the number of students generated by the development based on the student generation rates for each school type as determined by the School District;
4. Age-restricted developments that are subject to deed restrictions prohibiting the permanent occupancy by a resident under the age of fifty-five, which are recorded and irrevocable for a period of at least thirty years; and
5. Group quarters that do not generate students including residential facilities such as jails, prisons, hospitals, bed and breakfasts, hotels and motels, temporary emergency shelters for the homeless, adult halfway houses, firehouse dorms, college dorms exclusive of married student housing, and religious non-youth facilities.

Policy 2.3.4: The creation of subdivisions and/or single family lots equal to or less than ten units shall be subject to school concurrency as part of an annual concurrency management review. The City of Port Orange shall report such subdivisions to the School ~~Board~~District as part of the annual planning coordination process established by the interlocal agreement and these units shall be included by the School ~~Board~~District in planning student allocations by school.

Policy 2.3.5: Continue to implement the school concurrency ordinance (Ord. 2008-3), which establishes the application procedures and process for evaluating school capacity and making concurrency determinations consistent with the provisions of the interlocal agreement.

Policy 2.3.6: The School ~~Board~~District shall conduct a concurrency review that includes findings and recommendations of whether there is adequate capacity to accommodate proposed development for each type of school within the affected concurrency service area, consistent with the adopted level-of-service. The School ~~Board~~District may issue a certificate of school concurrency if sufficient capacity exists for the proposed development or the School ~~Board~~District may set forth conditions required to satisfy the requirements of school concurrency including proportionate share mitigation.

Policy 2.3.7: If the adopted level-of-service standard cannot be met within a particular concurrency service area as applied to an application for development order and if the needed capacity is available in one or more contiguous concurrency service areas, then this capacity shall be applied to the concurrency evaluation of the application for development approval subject to the following limitations (Graphic examples are provided in the data and analysis report.):

1. Areas established for ethnic and socio-economic diversity at schools shall not be considered contiguous.
2. Concurrency service areas generating excessive transportation costs shall not be considered contiguous. Excessive transportation costs may include the cost of transporting students requiring a transport time of fifty minutes one way as determined by School District transportation routing staff.
3. Concurrency service areas shall not be considered contiguous when separated by a natural or man-made barrier such as a river, water body, or interstate highway that requires indirect transport of students through a third concurrency service area.
4. When capacity in an adjacent concurrency service area is allocated to a development application, assignment of the students to the school with available capacity may be accomplished by applying any of the techniques used to establish school attendance zones including modification of existing attendance zone boundaries or creation of island zones.
5. Student transportation not in conformance with the conditions established in items 1 through 4 above shall be permitted to allow student assignments based on specific educational programming options; to comply with State and Federal mandatory transfer opportunities; or for other transfer opportunities that School ~~Board~~District shall deem appropriate for the specific circumstances of an individual student.

Policy 2.3.8: If the adopted level-of-service standard cannot be met within a particular concurrency service area, the School ~~Board~~District may apply one or more of the following techniques to maximize use of available capacity and provide for adequate numbers of student stations to meet current and future demand:

1. Construct new school facilities
2. Construct additions to current facilities
3. Adjust program assignments to schools with available capacity
4. Modify attendance boundaries to assign students to schools with available capacity
5. Eliminate variances to overcrowded facilities that are not otherwise restricted by State or Federal requirements.

Objective 2.4: The City of Port Orange shall provide for mitigation alternatives that are financially feasible and will achieve and maintain the adopted level-of-service standard consistent with the School ~~Board~~District's adopted financially feasible work program.

Policy 2.4.1: In the event that sufficient school capacity is not available in the affected concurrency service area to support a development project, the developer shall have the option to propose proportionate-share mitigation to address the impacts of the proposed development.

Policy 2.4.2: Mitigation shall be directed toward a permanent capacity improvement identified in the School ~~Board~~District's financially feasible work program, which satisfies the demands created by the proposed development

consistent with the adopted level-of-service standards.

Policy 2.4.3: Mitigation shall be directed to projects on the School ~~Board~~District's financially feasible work program that the School ~~Board~~District agrees will satisfy the demand created by the proposed development and shall be assured by a legally binding development agreement between the School ~~Board~~District, the City of Port Orange, and the applicant, which shall be executed prior to the City's approval of the subdivision or site plan. If the School ~~Board~~District agrees to the mitigation, the School ~~Board~~District shall commit in the agreement to placing the improvement required for mitigation in its work plan.

Policy 2.4.4: The applicant's total proportionate-share obligation shall be based on multiplying the number of needed student stations generated from the proposed project times the School ~~Board~~District's current cost per student station plus land cost for each type of school. The applicant's proportionate-share mitigation obligation shall be credited toward any impact fee or exaction fee imposed by local ordinance for the same need on a dollar for dollar basis. (For example, if the proportionate share mitigation provides only for land, the credit is applied only against that portion of the impact fee or other exaction devoted to land costs.)

Policy 2.4.5: The student generation rates used to determine the impact of a particular development shall be the rates adopted in the most recent school impact fee study.

Policy 2.4.6: The cost per student station shall be the most recent actual costs per student station, and capitalization costs if applicable, paid by the School ~~Board~~District for the equivalent school facility.

Policy 2.4.7: Mitigation options must consider the School ~~Board~~District's educational delivery methods and requirements and the State Requirements for Educational Facilities and may include, but not be limited to, the following:

1. Donation of buildings for use as a primary or alternative learning facility
2. Renovation of existing buildings for use as learning facilities
3. Funding dedicated to, or construction of permanent student stations or core capacity
4. Construction of schools in the School ~~Board~~District's adopted five-year capital facilities work program ahead of schedule, upon agreement with the School ~~Board~~District
5. Dedication of a school site as approved by the School ~~Board~~District
6. Up front lump sum payment of school impact fees
7. Up front payment of interest and other costs of borrowing
8. Payment of off-site infrastructure expenses needed for schools, including but not limited to roads, water, and/or sewer improvements
9. Payment of transportation costs associated with the movement of students as a result of overcapacity school
10. Funding assistance with acquisition of school site

11. Phasing of construction or delay of construction in order to timely plan for the availability of school capacity,
12. Establishment of an educational facilities benefit district
13. Establishment of educational facilities mitigation banks

The identified mitigation options are subject to negotiations between the developer, the School ~~Board~~District, and the City.

Objective 2.5: The City of Port Orange shall ensure that existing school capacity deficiencies and future needs are addressed consistent with the adopted level-of-service standards for schools.

Policy 2.5.1: In accordance with the adopted interlocal agreement, the City of Port Orange shall collaborate with the School ~~Board~~District in locating required school sites as identified in the School ~~Board~~District's five-, ten- and twenty-year capital facilities plan.

Policy 2.5.2: The City of Port Orange shall ensure that future development pays a proportionate share of the costs of public school facilities needed to accommodate new development and to assist in maintaining the adopted level-of-service standards via impact fees and other legally available and appropriate methods.

Policy 2.5.3: ~~By December 1 of~~ Annually each year, the City of Port Orange shall adopt as part of its Capital Improvement Element the Volusia County School District five year-work program approved in September of each year as part of the School District budget, including planned facilities and funding sources to ensure a financially feasible capital improvements program and to ensure the level-of-service standards will be achieved by the end of the five-year period.

CHAPTER 6: RECREATION AND OPEN SPACE ELEMENT

INTRODUCTION

The City of Port Orange has a comprehensive system of public and private recreation sites including parks, natural areas, waterway access, and recreation facilities. The City prioritizes the provision of adequate space, equitably distributed throughout its jurisdiction. The purpose of the Recreation and Open Space Element¹ ensures that the City maintains and, as needed, grows, or changes is to present a this comprehensive system to meet the needs of existing and projected users and enhance the natural resources of the City. recreation and open space plan for the City of Port Orange. This Element presents what has been determined to be the most appropriate strategies that the City should follow to achieve the best use for land and resources in developing a comprehensive recreation and open space system.

~~Parks and natural open space areas promote physical activity and social interaction. Areas with natural vegetation also have direct effects on physical and mental health. One review of studies showed that access to places for physical activity combined with outreach and education can produce a 48% increase in the frequency of physical activity¹. Exposure to natural open space has additional benefits to health. More generally, living in proximity to open space is associated with reduced self-reported health symptoms, better self-rated health, and higher scores on general health questionnaires². Trees and open space also improve the physical environment by removing air pollution from the air and mitigating the urban heat island effect produced by concrete and glass.~~

~~It is the goal of the Port Orange Parks and Recreation Program to ensure the quality of life for our citizens through recreation and open space, in a manner that meets the changing needs of our community. This is achieved by providing our citizen's multiple sports leagues, enrichment classes, community events, educational opportunities, community parks and playgrounds, extreme sport facilities, a multitude of recreational experiences for area youths and adults, and open space areas as an essential component of a balanced, well designed community. In addition, City residents frequently mention that part of the benefit of living in Port Orange is having convenient access to other recreational amenities such as the City's golf course and other area golf courses, County facilities and natural resources such as the beaches, the Daytona International Speedway, Kennedy Space Center, Walt Disney World and other nearby theme parks.~~

~~This Element will be implemented by maintaining and expanding the recreation and open space system to meet future needs and improve the quality of life for the residents of the City. Several important trends need to be considered in planning for present and future recreation needs, such as the City's population growth and changing age distribution. However, maintaining and expanding the City's existing recreation and open space system will be a continuing challenge due to rising costs and limitations on staffing and equipment. Nonetheless, the degree to which the City maintains the quality of its recreation facilities and open spaces will in large part determine the desirability of the City as a place to live.~~

Recreation and Open Space Element Highlights

1. Establishes Level of Service for recreation facilities in the City;
2. Ensures equitable distribution of parks to guarantee accessibility to recreational facilities for all residents;
3. Establishes a Parks System Master Plan to identify and plan for the maintenance of existing facilities and development of new facilities;
4. Promotes the conservation of environmentally sensitive open space, environmental teaching, and sustainability efforts at parks;
5. Emphasizes bicycle and pedestrian access and the expansion of the City's trail network;
6. Promotes increased public access to the City's water resources;
7. Encourages community outreach and promotes environmental education activities; and
8. Identifies City coordination efforts with the public and private sector in order to provide and promote recreational opportunities.

For the Planned Improvements table, please refer to the Parks System Master Plan.

THE PLAN FOR RECREATION AND OPEN SPACE

PARKS AND RECREATION FACILITIES

Over the years, the City has been successful in maintaining a schedule for the purchase and development of parks and recreation areas as set forth in the Comprehensive Plan. The City's policy regarding the multiple use of recreation and open space areas wherever possible will be maintained. The combination of recreation impact fees, user fees, and available grant monies will continue to be the major source of funding for these projects. It is anticipated that private development will continue to supply recreational amenities in order to compete in the real estate market. Based on current and future funding projections, it is not likely that the City will be constructing new neighborhood parks; thus, it will be increasingly more important that common open space provided in new neighborhoods be designed to be usable open space for the use and enjoyment of the residents of the development within which it is located. Recreation facilities should also be incorporated into commercial development (e.g. central park at the Pavilion at Port Orange).

As previously stated, there is strong desire by residents for additional trail facilities within the City. Although an LOS standard specifically for trails has not yet been developed by the City, policies have been added to the Comprehensive Plan to provide for the development of a multi-use trail system as part of the City's mobility strategies that will provide connections and linkages to neighborhoods, and recreation and open space facilities. In addition to the Cross-town Trail identified in the table below, additional improvements needed for a City-wide multi-use trail system are identified in the Transportation Element.

Based on the analysis of need, current and anticipated development trends, community priorities, and the City's goals and objectives, the following outline has been prepared detailing new park acquisition and development that should be implemented over the planning horizon, as funding is available. A general location map showing existing and future recreation facilities is shown in Figure 6-1.

FACILITY	TARGETED AGE GROUP
Specialized Facilities	
<i>Allen Green Center</i> —Renovate the existing building to accommodate a small community theater, offices, and meeting rooms.	Primary: all Secondary: adults
<i>Central Wellfield Property</i> —Develop trails for mountain bike, dirt bikes, and 4-wheelers, and a comfort station (i.e. a small pavilion with public restrooms).	Primary: teens and adults Secondary: all
<i>Cross-town Trail</i> —Develop a 12-foot wide paved bicycle and pedestrian trail within the FPL transmission corridor easement from Clyde Morris Boulevard to Jackson Street, crossing Nova Road.	all
<i>Halifax Drive Linear Park</i> —Turn Riverside Drive/Halifax Drive into a one-way street from Meeker Place to Commonwealth Boulevard, and develop a linear park on the existing northbound land.	all

RECREATION AND OPEN SPACE ELEMENT

<i>Riverwalk Park</i> —Develop a continuous dynamic linear park that will provide public access to the waterfront with a variety of program areas that have both natural and civic qualities and could include a public marina.	all
<i>Russell Property</i> —Develop camping cabins, a ropes course, and a banquet and meeting facility.	Primary: adults and teens Secondary: all
Community Parks	
<i>Airport Road Community Center</i> —Develop a community center that includes a gymnasium, activity room, after school play rooms, and offices.	Primary: school-aged children Secondary: all
<i>Coraci Sports Complex</i> —Complete the sports complex with the addition of a concession stand, restrooms, two additional ball fields, a football field, and a community center.	Primary: school-aged children Secondary: all
<i>Woodhaven Park</i> —Develop a community park that includes playfields, outdoor courts, and picnic pavilions.	Primary: school-aged children Secondary: all

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: PROVISION OF RECREATION AND OPEN SPACE

The City shall provide a system of inclusive and accessible open space and recreational facilities, complemented by tailored programming, that meets the diverse needs of the City and safely and efficiently serves all residents of Port Orange. ~~ENSURE THE PROVISION OF ADEQUATE RECREATION AREAS AND OPEN SPACE TO SATISFY THE NEEDS OF ALL PORT ORANGE CITIZENS, INCLUDING THE ELDERLY, VERY YOUNG, HANDICAPPED, AND VISITING POPULATION, IN AN EFFICIENT AND COST EFFECTIVE MANNER.~~

Objective 1.1: Distribution of Service. In accord with Goal 2 and its policies, the City shall undertake a comprehensive recreation program to ensure that parks and recreation facilities are maintained, with a distribution of parks and recreational facilities throughout the City that meets the requirements of all residents. ~~Continue the development of a park system that provides a broad spectrum of active and passive recreation facilities.~~

Policy 1.1.1: The City shall ~~continue to maintain the following adopted minimum level-of-service standards for recreation facilities standards:~~

Parkland	7 acres / 1,000 persons
Ball Field	1 field / 5,000 persons
Basketball Court	1 court / 4,000 persons
Multipurpose Field	1 field / 3,500 persons
Tennis Court	1 court / 4,000 persons
Neighborhood Center	1 facility / 15,000 persons

[RECREATION CONCURRENCY NO LONGER REQUIRED BY FLORIDA STATUTE 163.3180; AFTER CAREFUL ANALYSIS AND CONSIDERATION, THE CITY HAS OPTED TO MAINTAIN ONLY PARK ACREAGE LEVEL OF SERVICE STANDARDS FOR RECREATION]

Policy 1.1.2: The City shall update and maintain the Land Development Code (LDC) to match the LOS standards, enhance the applicability of the dedication or fee in lieu provisions, add objective criteria for determining private recreation credits, and ensure the ability for private recreation credits to satisfy all public recreation land dedication requirements.

Policy 1.1.32: The City shall ~~B~~broaden the types of facilities provided to the public, following the funding priorities identified in the Parks System Master Plan. ~~in order to accommodate differing preferences and age groups.~~ **[PREVIOUSLY POLICY 1.2]**

Policy 1.1.47: Consistent with the City's adopted recreational facility LOS standards and concurrency requirements, ~~Prior to the approval of an application for a residential final subdivision plan or final site plan,~~ the City will review the proposed development applications to ensure that recreation facilities necessary to support the

development are available concurrent with the impacts of such development, ~~based on the Concurrency Management System as set forth in the City's Land Development Regulations and the Capital Improvements Element.~~ Residential projects that exceed the City's adopted LOS shall be required to either provide such facilities or provide alternative mitigation strategies to be approved by the City to address the deficiency. Through the development approval process, the City shall coordinate with private sector developers in providing needed improvements to recreation facilities by enforcing the recreation land and facility dedication or fee in lieu provision of the LDC.

Policy 1.1.5: All plans for development or redevelopment of park land resources involving or adjacent to environmentally sensitive lands shall incorporate creative concepts of urban design (stormwater/low impact development) and landscape. The plans shall be designed to enhance controlled access along the shoreline and wetland systems. Active and passive recreation areas shall be planned in a manner compatible with unique natural features of the site. Where provided, the design shall provide a circulation system to minimize conflict between pedestrians and vehicles and shall seek to use necessary stormwater management areas as a beneficial feature of the design. Adequate landscape and screening shall be integrated into park development plans to minimize land use conflicts, protect stability of established residential areas, and enhance community appearance. [NEW]

Policy 1.1.6: The City shall encourage the use of native plants and Florida Friendly Landscape techniques when landscaping is added or updated in parks, recreation facilities, and open spaces. The City shall encourage the use of Low Impact Development (LID) strategies to reduce stormwater runoff from parks and recreation facilities. The City will promote recycling and signage discouraging littering at Parks. [NEW]

Policy 1.1.7: The City shall explore the creation of a wayfinding system with consistent design and language to identify and direct users to and within parks, as well as explore installing park / trail system maps as appropriate and capitalizing on placemaking opportunities. [NEW]

Objective 1.2: Trails. The City shall ~~D~~develop, promote and maintain a multi-use trail system as part of the City's mobility strategies that provide connections and linkages to neighborhoods, ~~and~~ recreation, and open space facilities. [PREVIOUSLY POLICY 1.5]

Policy 1.2.1: In accord with Policy 2.2.3, the City shall strive to incorporate a natural system of connectivity within the parks and open space system. This Green Infrastructure will aid in transport of natural ecosystems, reduce flooding in developed areas, and enhance treatment of stormwater runoff.

Policy 1.2.2: The City shall identify potential locations and funding opportunities for new multi-use trails and blueways that will enhance connectivity by adding to the network and/or filling in gaps in the network, in accordance with the priorities of the Parks System Master Plan Action Plan Strategies.

Policy 1.2.3-6: To the extent practical, utility easements (overhead transmission lines, gas, and water) and other open space areas shall be considered in the development of trails. **[PREVIOUSLY POLICY 1.6]**

Policy 1.2.4: In accordance with Objective 6, communicate with Florida Department of Transportation (FDOT), Volusia County, and River to Sea Transportation Planning Organization (TPO) to discuss multi-use trail gaps and opportunities. **[NEW]**

Policy 1.2.5: The City shall identify high opportunity corridors and waterway access points in order to coordinate with adjacent development for the creation of spurs, trailheads, and general partnership. (i.e., agreements with developers to link their private internal trails and sidewalks to City designated ones, easements from developers to allow for construction of public trail or public access to the waterway). **[NEW]**

Policy 1.2.6-3: The City will work with private property owners, the appropriate local, regional, state, and federal agencies, non-profit organizations, and others to develop a blueway trail along Spruce Creek and Halifax River. **[PREVIOUSLY POLICY 5.3]**

Policy 1.2.7-8: Wherever possible, recreational trail corridors shall be coordinated with other national and state level trails, such as the East Coast Greenway, ~~as well as other state trail systems~~. **[PREVIOUSLY POLICY 6.8]**

Policy 1.2.8: In order to promote the blueway and trail system, the City shall explore earning official designations, such as through joining Blueway Community Program (Florida Paddling Trails Association) and becoming a Florida Trail Town. **[NEW]**

Policy 1.2.9: In accordance with Objective 1, the City shall explore incorporating greenways and blueways into the calculation of the acreage LOS. **[NEW]**

Objective 1.3: Open Space. ~~The City shall Provide for the protection and acquire, maintain, and protect~~ sition of open space and conservation areas as feasible while protecting these areas from incompatible land uses and allowing them to remain functionally intact. **[REVISED OBJECTIVE 3]**

Policy 1.3.1: Open space and conservation areas should remain functionally intact through measures of protection including but not limited to requirements in the LDC to protect these areas from incompatible land uses. **[PREVIOUSLY PART OF OBJECTIVE 3]**

Policy 1.3.42: ~~For all development projects, the City shall utilize land development-LDC regulations which address the protection of native vegetation and environmentally sensitive areas in open space and buffers, in accordance with the provisions of the Conservation Element and encourage the incorporation of open space into all development projects, in addition to any environmentally sensitive areas preserved.~~ **[COMBINES POLICY 3.1 AND POLICY 3.4]**

Policy 1.3.23: ~~Incorporate natural open space, especially wetlands and areas unsuitable for development into neighborhood and community parks as passive recreation space. The City may use City-owned floodplains, conservation lands or environmentally sensitive lands, and other similar areas for passive recreational land, provided that the City determines that passive recreational use of these sites would not endanger the public health, safety, welfare, or environment. The City shall partner with local, regional, state, and federal agencies to achieve this.~~ **[REVISION TO POLICY 3.2]**

Policy 1.3.43: ~~The City shall continue to enforce standards which address require that 60% of the total project area of any new residential PUD shall be established and maintained as open space, including definitions and standards addressing protection of open space, natural vegetation, landscape, and signage. This percentage may include environmentally sensitive areas to be preserved according to the provisions of the Conservation Element and other Elements of this Comprehensive Plan. A minimum of 20% of the total project area shall be established and maintained as common open space or common facilities. No area shall be accepted as common open space unless it satisfies the following standards.~~

A. ~~Common open space shall be dedicated to and usable by all residents of the planned unit development or specific phase thereof.~~

B. ~~Common open space shall be suitably improved for its intended use. Such use may include aesthetic, amenity, buffering or recreational purposes (including multi-use open fields).~~

C. ~~Common open space set aside for the preservation of natural features or listed species habitats, or for buffering purposes shall remain undisturbed and be protected by conservation easements dedicated to the city.~~

D. ~~Common open space shall not be used for the construction of any structures other than recreational facilities and incidental maintenance buildings.~~

E. ~~Common open space shall be maintained by the Home Owners Association of the PUD or specific phase thereof.~~

Policy 3.4: ~~The City shall encourage the incorporation of open space into all new non-residential projects, in addition to any environmentally sensitive areas preserved in accordance with the Conservation Element and other Elements of this Comprehensive Plan.~~ **[CONSOLIDATED WITH 3.1]**

Policy 1.3.5: In accordance with Objectives 1.2 and the funding priorities identified in the Parks System Master Plan, ~~To the extent practical based on available funding, the City shall acquire or preserve lands with unique environmental assets and that provide community access, and/or recreation opportunities, and/or value~~

to the community, ~~and coordinate this effort with all levels of government, quasi-public agencies and the private sector as described in Objective 6 of this Element and its corresponding policies.~~

Objective 1.45: Waterway Access. The City shall ~~M~~maintain existing public access and acquire additional public access points to local waterways. The City shall coordinate any acquisition program with the appropriate local, regional, state, and federal agencies, so as not to harm or degrade the habitat of the Florida manatee.

Policy 1.4.15.1: The City will retain and improve existing public access points to the Halifax River, consistent with the Volusia County Manatee Protection Plan.

Policy 1.4.25.2: The City will work with the appropriate local, regional, state, and federal agencies, in its efforts to acquire additional public access points to Spruce Creek through development approvals.

Policy 1.4.35.4: The City will continue to work with the appropriate local, regional, state, and federal agencies, in its efforts to acquire additional public access along the Halifax River in concert with the Port Orange Town Center redevelopment plan.

Policy 1.4.45.5: Any construction work along local waterways shall be performed in accordance with the provisions of the Conservation Element.

Objective 1.56: Coordination. The City shall ~~C~~coordinate efforts with all levels of government, quasi-public agencies, and the private sector to provide and manage recreational opportunities and open space while exploring and utilizing creative mechanisms for funding acquisition and development of parks and facilities.

Policy 6.1: ~~Continue to cooperate with the Volusia County School Board on joint utilization and development of School and Park Sites.~~

Policy 1.5.16.2: The City shall ~~M~~maintain and review the Recreation Impact Fee Program in order to assure that new development contributes its proportional share of the cost to expand recreation facilities, consistent with the Comprehensive Plan.

Policy 1.5.26.3: The City shall ~~C~~continue to actively participate in the Volusia County land acquisition programs and to request utilization of available funds for open space land purchases within the City as appropriate and to the maximum extent feasible.

Policy 6.4: ~~Maintain close contact with state agencies by monitoring state recreation development grant programs.~~ **[COVERED BY OTHER POLICIES]**

Policy 1.5.36.5: In accordance with the Parks and Recreation Donation Acceptance Policy resolution, as amended, the City will maintain ~~Design a~~ the mechanism for

accepting and utilizing private donations for parks and recreation facilities ~~by no later than 2012.~~

~~*Policy 6.6:* Continue to work with the appropriate local, regional, state, and federal agencies, non-profit organizations, East Central Florida Regional Planning Council, St. Johns River Water Management District, Metropolitan Planning Organization, Florida Communities Trust, Volusia Forever, and others to acquire and manage the recreation and open space system. [COVERED BY EXISTING POLICIES]~~

Policy 1.5.46-7: The City shall continue to submit applications for grants under programs sponsored by various Federal, State, and regional governments including but not limited to the Florida Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the Florida Inland Navigation District.

~~*Objective 7:* Maintain a continuous park and recreation planning program.~~

~~*Policy 7.1:* Annually review changing trends and demand for new programs through surveys, research and the input from the City's Parks and Recreation Advisory Board.~~

~~*Policy 7.2:* Continue to develop the Plan for Park Acquisition and Development and evaluate the plan on an annual basis. [COVERED BY EXISTING POLICIES]~~

GOAL 2: PARKS SYSTEM MASTER PLAN

The City maintain a Parks System Master Plan as part of this element. The Parks System Master Plan shall be consistent with this Element and provide additional information including:

- A. Inventory of existing facilities;
- B. Identification and maintenance of existing facilities;
- C. Development of new facilities;
- D. Criteria for the prioritization of funding for the acquisition, development, and enhancement of public parks, with an emphasis on existing parks for the Capital Improvements Program (CIP); and
- E. Future revisions intended to build on or reset the vision for the Parks System will be built on substantial, focused community engagement, a summary of which will be included in the Plan. [NEW]

Objective 2.1: Implement Existing Plans. The City shall continue to implement existing plans and the Capital Improvements Plan (CIP) as part of adhering to Policy 1.1.1. Plans should be updated as needed. [NEW]

Policy 2.1.1: The City shall review on an annual basis the Recreation and Open Space inventory and the need for new recreation sites and facilities, as well as the need for repair and renovation of existing facilities. These identified needs shall be incorporated into the CIP. The analysis shall be directed towards maintaining a system of recreational sites and facilities which is responsive to user needs. [NEW]

Policy 2.1.2: The City shall plan for and maintain existing park facilities large enough to accommodate league and tournament play. [PREVIOUSLY GOAL 1, POLICY 2.1]

Policy 2.1.3: On a continuing basis, the City shall provide facilities and activities that support the ongoing Recreation Program offerings and guide efficient administration of organized programs. [PREVIOUSLY GOAL 1, OBJECTIVE 2]

Policy 2.2.1.4: The City shall provide community activity centers to meet the needs of the surrounding community based on yearly evaluation of program requests. [PREVIOUSLY GOAL 1, POLICY 2.2]

Policy 2.1.5: Park and recreation resources may be used by the City as an instrument for environmental education as well as other adaptive education programs. This effort shall facilitate the use of local parks as year-round community education and recreation facilities for all age groups and may be supported by community partnerships or volunteers. [NEW]

Objective 2.2.4: Facility Access. The City shall require all public recreational facilities to have adequate public access by automobile, bicycle paths, pedestrian paths, or other means as appropriate. [PREVIOUSLY GOAL 1, OBJECTIVE 4]

Policy 2.2.14.4: Public parks and facilities shall have access by at least two modes. The types of access should be compatible with the character and type of natural areas and facilities at the site. [PREVIOUSLY GOAL 1, POLICY 4.1]

Policy 2.2.2: The City shall ensure an appropriately scaled level of automobile access. Parks designed to appeal to a wider audience than the immediate adjacent area shall have adequate parking for the anticipated number of users, as identified by the City. Compatibility with the character of the park and surroundings shall be taken into account in designing automobile access. [NEW]

Policy 2.2.3: In accordance with Objective 1.2 and its policies, the City shall connect parks and public spaces through pedestrian/bike access ways including linear parks, sidewalks, bicycle lanes, trails, blueways (such as kayak trails), or greenways. [NEW]

Policy 2.2.4.4: The City's bicycle paths program, as outlined in the Transportation Element, shall be designed to coordinate with and interconnect the City's park network, in support of this objective and Objective 1.2. [PREVIOUSLY GOAL 1, POLICY 4.2]

Policy 2.2.54.3: All new recreation facilities or renovation of existing facilities shall be designed to accommodate and integrate the handicapped and disabled consistent with Federal and State ADA standards. **[PREVIOUSLY GOAL 1, POLICY 4.3]**

Policy 2.2.61.3: ~~The City will locate new parks and recreation~~ Ensure that park sites are readily accessible to the majority of residents based on a service area radius of 1 mile from neighborhood parks and 3 miles from community park facilities within population centers and/or where increasingly accessible via the City's expanding mobility network. The City will identify population centers and the mobility network, as well as available land(s) for such facilities and/or partner with the adjacent jurisdictions for use or creation of facilities near the City limits. These criteria are not part of the City's adopted level of service standards and are utilized only as a guide for development review and land acquisition. **[PREVIOUSLY GOAL 1, OBJECTIVE 1.3]**

Policy 2.2.71.4: ~~The City will~~ provide for park sites large enough to accommodate a broad spectrum of facilities. New park sites should be no less than five acres in size. **[PREVIOUSLY GOAL 1, POLICY 1.4]**

Objective 2.3: Identify Opportunities. The City shall identify gaps in service and develop new recreational opportunities. **[NEW]**

Policy 2.3.1: The City shall review on an annual basis the need for new recreation sites and facilities based on identified gaps in service. These identified needs shall be incorporated into the CIP. The analysis shall be directed towards maintaining a system of recreational sites and facilities which is responsive to user needs. **[NEW]**

Policy 2.3.2: The City shall identify and prepare a list of possible acquisition lands for recreation or open space to meet the current and future needs of City residents. The City shall consider prioritizing in the following manner:

- A. Expansion of Coraci Park and other west side parks.
- B. Addition of pickleball courts.
- C. The acquisition of lands that provide access to parks, trail linkages, recreation, or open space areas. The City shall add proposed land acquisition projects to the City's CIP.
- D. The acquisition of lands in the Coastal High Hazard Area (CHHA) and in or adjacent to jurisdictional wetlands for passive recreational purposes, provided that the proposed sites would not endanger the public health, safety, welfare, or environment. **[NEW]**

CHAPTER 7: COASTAL ZONE MANAGEMENT ELEMENT

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INTRODUCTION

The Coastal Zone Management Element, required for coastal communities throughout Florida, intends to protect and preserve coastal resources, as well as protect life and property from natural disasters. is a part of the Comprehensive Plan that coastal communities must prepare in accordance with State legislation. The purpose of the Element is to "plan for and where appropriate restrict development activities where such activities would damage or destroy coastal resources, and protect human life and limit public expenditures in areas that are subject to destruction by natural disaster."

Within the context of the Comprehensive Plan, the Coastal Zone Management Element has a special status. Although it must be integrated into and be consistent with all the other Elements of the Plan, the Coastal Zone Management The Element not only addresses the protection of coastal resources, but also addresses other related issues of land use, transportation, public access, and public services, facilities and infrastructure. Portions of this Element may also cross into other Elements and or sub-Elements including Stormwater, Conservation, Transportation, and Future Land Use, especially with respect to the Coastal High Hazard Area (CHHA) (addressed as part of / required by Section 163.3178(2)(h)9, F.S.).

Volusia County and the coastal municipalities cooperated in the preparation of the original Element in 1989. Early on, the County and coastal communities recognized that coastal issues and resources should be coordinated from a systems approach. Environmental systems such as estuaries, watershed basins, or wildlife habitat, and man-made systems like traffic circulation or drainage structures, do not start or stop at political boundaries. The original Coastal Zone Management Element was written for the County's Comprehensive Plan, with the inventory, the analysis, and the goals, objectives and policies drafted in a broad-based structure so that each community could choose to adopt all or part of the element into their individual Comprehensive Plans. The City modified the goals, objectives, and policies of the plan to suit its own specific needs.

The central concept of the Element is to promote consensus among and between coastal communities so that common problems can be identified and common solutions proposed and implemented. Where the goals, objectives and policies specifically reference the County and cities, the intent is to emphasize cooperation in implementing and achieving the goals, objectives and policies.

Coastal Zone Management Highlights

1. Addresses the City's Coastal Communities including identification and protections
2. Protects the City's shorelines and public access to shorelines; and
3. Ensures development is compatible with sensitive coastal and wetland resources.

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: COASTAL RESOURCES

THE CITY SHALL CONSERVE, PROTECT, AND MANAGE THE COASTAL RESOURCES OF THE CITY, INCLUDING THE WETLAND AND UPLAND ECOSYSTEM, SO AS TO MAINTAIN AND ENHANCE NATIVE HABITATS, FLORAL AND FAUNAL SPECIES DIVERSITY, WATER QUALITY, AND NATURAL SURFACE WATER CHARACTERISTICS.

Objective 1.1: Hydrological Systems. Consistent with the Conservation Element, the City will retain interconnected hydrological systems, sensitive habitats, and open space where the wetlands and uplands function as a productive unit resembling the original landscape, especially around the Halifax River, Rose Bay, and Spruce Creek.

Policy 1.1.1: The City will continue to work with Volusia County Environmental Management Division (EMD) to maintain, update, and implement management plans and standards to protect and conserve natural systems within the City.

Policy 1.1.2: The City will continue to integrate all hydro-ecological corridors identified by the ~~County Environmental Management Division~~ EMD into the City's Conservation land use category as annexation occurs.

Policy 1.1.3: Areas of wetland and native upland habitats not connected to corridors, that exhibit resource values as defined by this Comprehensive Plan, should be included as conservation or recreation areas within development plans. Secondary linkage to nearby corridors, even if by artificial means, should be considered and encouraged. Construction of new corridors, or restoration of existing disturbed corridors, should be considered as a form of mitigation where appropriate.

~~*Policy 1.1.4:* The City will utilize development review standards for the protection of wildlife habitats that are utilized by either Listed or Protected wildlife species in accordance with the provisions of the Conservation Element. [DELETED, REDUNDANT TO EXISTING POLICY 1.1.8]~~

~~*Policy 1.1.45:* The City will provide environmental and natural resource studies and recommendations to Volusia County Environmental Management EMD, as requested.~~

~~*Policy 1.1.56:* Consistent with the Conservation Element, the City shall utilize the Land Development Code (LDC) to maintain standards requiring development adjacent to estuarine and riverine shoreline areas shall to maintain a buffer zone to protect or conserve the canopy, understory and ground cover of native upland vegetation and wetlands, in accordance with the provisions of the Conservation Element. The City shall require the use of native Florida vegetation where feasible.~~

~~*Policy 1.1.7:* New development or re-development adjacent to estuarine and riverine shoreline areas should consider living shorelines concepts and nonstructural shoreline stabilization measures in their design. [DELETED, COVERED IN CONSERVATION ELEMENT]~~

Policy 1.1.68: Development regulations shall be utilized protecting habitat areas of species listed by the State of Florida and U.S. Fish and Wildlife Service (USFWS) as endangered, threatened or of special concern where such species are sighted. These regulations shall be in accordance with the provisions of the Conservation Element.

~~*Policy 1.1.79:* Consistent with the Conservation Element and the Drainage Sub-Element of the Public Facilities Element, the City shall cContinue the enforcement of Sstormwater_Mmanagement, Ttree and Vvegetation Pprotection, and Wwetland Pprotection Rregulations. These regulations shall be in accordance with the provisions of the Conservation Element and Drainage Sub-Element.~~

~~*Policy 1.1.840:*~~ The City shall protect and restore natural water systems and limit the use and/or impact of structural stormwater management alternatives, where possible.

~~*Policy 1.1.944:*~~ The City shall work with relevant local, regional, and state agencies to establish minimum seasonal flows and levels for surface watercourses, with primary consideration given to the protection of natural resources, especially marine, estuarine, and aquatic ecosystems.

~~*Policy 1.1.102:*~~ The City shall emphasize the maintenance, and where possible, acquisition, of ecologically intact systems in all land and water planning, management, and regulation activities.

GOAL 2: LAND USE

~~THE CITY SHALL TO CONSERVE, PROTECT, AND RESTORE COASTAL RESOURCES BY MANAGING GROWTH AND LAND USE SO AS NOT TO DAMAGE OR DESTROY THOSE IDENTIFIED RESOURCES.~~

Objective 2.1: Land Use and Coastal Resources. ~~The City will~~ Continue to utilize land use regulations that provide for the location, extent, and distribution of land uses consistent with the protection of coastal resources. These regulations shall be in accordance with the provisions of the Conservation Element and Future Land Use Element.

Policy 2.1.1: Land uses ~~which that~~ have a demonstrated adverse impact on coastal resources shall be regulated to mitigate such impacts.

Policy 2.1.2: A survey for endangered, threatened, special concern, and commercially exploited species shall be conducted and reviewed to assess development impact on these species. So as to limit the cumulative impacts of development on remaining coastal marine resources and wildlife habitats, a survey shall be required for site plans and subdivision development for all proposed water-front or water-dependent uses. The survey shall be conducted in accordance ~~with~~ of the provisions of the Conservation Element.

Policy 2.1.3: Significant environmental or ecological features, wildlife habitat, environmental system corridors, or conservation areas shall be protected through a variety of mechanisms including but not limited to buffer zones, restoration, limiting density and intensity, conservation easements, acquisition, ~~density transfers~~, transfer of development rights (TDRs) if a program is adopted by the City, purchase of development rights or land exchanges, or other appropriate mechanisms. Such protection shall be accomplished in accordance with the provisions of the Future Land Use and Conservation Elements.

Objective 2.2: *Protection of Coastal Resources.* The City shall ~~Utilize~~ standards for appropriate densities ~~and~~, intensities, buffer zones, resource protection, and location for development adjacent to aquatic and natural preserves, wildlife refuges, and environmental system corridors to protect the natural character, scenic values, and public benefit of these areas.

Policy 2.2.1: The City shall ~~Utilize zoning districts~~ standards or techniques to protect coastal resources, including but not limited to ~~Such techniques could include~~ overlay districts, floating zones, ~~bonus ordinances~~, performance standards, ~~fast-tracking~~ streamlining of development review applications, ~~transferable development rights~~ TDRs, or other incentive-based methods.

~~*Policy 2.2.2:* Maintain a database and information system on land use and acreage by watershed within the coastal area, and update on an annual basis. [DELETED, NOT REQUIRED]~~

Policy 2.2.23: The City shall ~~C~~continue to cooperate and coordinate with other local governments, state agencies, and special districts in developing consistent standards, criteria, and land development regulations for protection of coastal resources, as needed.

Policy 2.2.34: The City shall develop or maintain standard buffer zones for development around wetlands, surface waters, wildlife refuges, and other natural areas consistent with Federal, State, or Regional regulations.

~~*Policy 2.2.4:* Areas identified in the future as having a high redevelopment probability shall be evaluated for appropriate land uses, eliminating unsafe conditions, and restoring coastal resources. [DELETED, NOT STATUTORILY REQUIRED, AREA IS MOSTLY BUILT OUT]~~

Policy 2.2.45: The City shall ~~P~~protect and preserve historic and archaeological resources in the coastal zone consistent with the ~~other~~ Future Land Use and Housing Elements.

Policy 2.2.56: The City will continue to ~~f~~oster and encourage intergovernmental coordination in the coastal management area between Volusia County, the coastal cities, adjacent local governments, and Federal, State, and Regional, ~~state, and federal~~ governmental entities.

Objective 2.3: Shoreline Land Uses. Priorities for shoreline land use shall be given to water-dependent uses over water-related land uses and shall be based on type of water-dependent use, adjacent land use, water quality, impact on habitat and impact on coastal resources.

Policy 2.3.1: When reviewing applications for zoning, plan amendments or development orders, shoreline land uses shall be prioritized as follows:

- A. Water-dependent uses such as fish, shellfish and wildlife production, protection and conservation of coastal and natural resources, recreation, public access, marinas and navigation, and water-dependent utilities and industry, which do not create a significant adverse impact upon the waters or land use.
- B. Water-enhanced uses such as recreation, and certain utilities, commercial and industrial uses.
- C. Non-water dependent or related activities such as intensive urban residential, non-water dependent industry and commerce.
- D. Of lowest priority are those uses which are non-water dependent, non-water enhanced which result in a reduction of coastal resources.

Policy 2.3.2: The City shall ~~Coordinate~~ with the County and other appropriate agencies regarding the provision of adequate sites for water-dependent uses, hazard mitigation, and the provision of public water-dependent access.

Policy 2.3.3: The first priority for providing new boat slips is for the expansion of existing marinas, then to new areas for marinas using the criteria in Policy 2.3.4. All new boat slips must be consistent with the Volusia County Manatee Protection Plan (MPP).

Policy 2.3.4: The City will ~~Utilize,~~ as part of land development regulations, standards for marina siting or expansion that include the following criteria, with priority given to expansion of existing marinas:

- A. Marinas shall be located in areas where the least dredging and maintenance are required and where aquatic resources shall not be adversely affected.
- B. Sufficient upland areas shall be provided to accommodate needed support facilities, such as adequate parking, dry storage, work areas, stormwater management facilities, and other non-water dependent uses.
- C. Locate marinas and docking facilities in areas that require minimal or no dredging or filling to provide access by either canal, channel, or road.
- D. The marina areas and navigation access channels shall not be dredged to depths greater than necessary to prevent prop dredging.
- E. Marina basins shall be located where there is an existing basin and access channel and adequate depths to accommodate the proposed use. A minimum existing depth of four feet below mean low water shall be required.
- F. Facilities shall be designed to maximize or improve water circulation patterns and shall not adversely affect existing circulation patterns.
- G. Any buffer zones established by the Florida Department of Environmental Protection (FDEP) shall be maintained and where necessary, enhanced or expanded.
- H. Marinas shall not be permitted in areas where approved or conditionally approved shellfish harvesting would be severely impacted and/or sections closed to shellfish harvesting.

- I. Marinas should not be permitted in areas which have been determined by FDEP and USFWS to be critical to the survival of the endangered Manatee. These areas may include but are not limited to Manatee sanctuaries, feeding areas or areas which have been identified in Manatee recovery plans.
- J. Prior to the operation of any new marina fueling facility or expansion of an existing facility, a fuel management/spill contingency plan shall be developed. The plan shall describe methods to be used in dispensing fuel and all the procedures, methods, and materials to be used in the event of a spill.
- K. Sewer pump-out service and facilities shall be available and accessible to all new boat slips constructed or renovated inside marinas.
- L. All new or expanded marinas shall provide water quality monitoring data which complies with state water quality standards under a program approved by the FDEP.
- M. The City will participate in manatee protection through the continued use of manatee protection criteria in development regulations, in accordance with the provisions of the Conservation Element, and the Volusia County MPP. ~~Manatee Protection Plan~~.
- N. The City will encourage marinas to participate in the Clean Marine Program (CMP).

Policy 2.3.5: Resource management plans, such as aquatic preserve management plans, the Volusia County Intercoastal Island Management Plan, the City's Shoreline Habitat Restoration and Management Plan, or Surface Water Improvement Management (SWIM) plans, shall be utilized in developing standards for marina siting or water-dependent uses.

Policy 2.3.6: New or expanded marina facilities shall utilize dry storage to the fullest extent possible in addition to wet slips.

Policy 2.3.7: The City shall reserve from use that water or shoreline areas necessary to support essential non-withdrawal demands, including navigation, recreation, and the protection of fish and wildlife.

Objective 2.4: Public Facilities and Services. In accordance with the provisions of this Plan, the City shall ensure that the capacity of public facilities and services required to maintain the adopted level-of-service standards is consistent and phased with the level of development proposed in the Future Land Use Element to serve both current and future residents.

Policy 2.4.1: -Development or redevelopment within the coastal areas shall have public services and facilities available concurrent with the impacts of development.

Policy 2.4.2: -~~The City shall~~ provide for fire and law enforcement facilities commensurate with population growth and development in the coastal area.

Policy ~~2.4.36.7.7~~ 6.7.7: -~~The City shall~~ continue to update procedures as part of the Comprehensive Emergency Management Plan for emergency fire and police protection and response. **[POLICY NUMBERED 6.7.7 IN EXISTING PLAN. NUMBERING CORRECTED]**

GOAL 3: WATER QUALITY

THE CITY SHALL STRIVE TO PROTECT, ENHANCE, AND IMPROVE THE QUALITY OF THE ESTUARINE ENVIRONMENT THROUGHOUT VOLUSIA COUNTY.

Objective 3.1: Water Quality. The City shall ~~continue~~ to monitor and improve estuarine water quality by utilizing an on-going water quality sampling and monitoring program, in cooperation with Volusia County Environmental Management and the Volusia County Health Department.

Policy 3.1.1: A comprehensive water quality sampling and monitoring network shall be conducted for the coastal area by the Volusia County ~~Environmental Management Division (EMD)~~ and the Volusia County Health Department. The data shall be evaluated on ~~an annual basis~~ as needed to detect possible problems and to determine where corrective action is needed. The City shall cooperate in the monitoring program so that point and non-point sources and facilities which are identified as potential water quality problems are regularly and periodically inspected.

Policy 3.1.2: The City will encourage converting septic systems to centralized wastewater and utilize, in conjunction with the County Health Department, and in accordance with the provisions of the Public Facilities Element, use regulations, and criteria restricting future placement of septic systems into those areas identified as priority areas to be incorporated into the public wastewater treatment system. The City will emphasize the conversions especially within the Coastal High Hazard Area (CHHA).

Policy 3.1.3: The City shall not permit new septic systems to be installed within a designated Basin Management Action Plan (BMAP) area where sewer is available. On lots one acre or less where sewer is not available, new septic systems must provide enhanced treatment that achieves at least 65% nitrogen reduction. [ADDED IN COMPLIANCE WITH SB1633/HB1379]

~~*Policy 3.1.2:* The City shall continue to upgrade its wastewater treatment plant and a concerted effort and commitment shall be made to utilize the highest level of treatment possible. [NOT REQUIRED IN THIS ELEMENT]~~

~~*Policy 3.1.4:* Alternative methods of effluent disposal such as re-use and land spreading/spray irrigation shall continue to be used to reduce nutrient loadings to the rivers and estuaries. [NOT REQUIRED IN THIS ELEMENT]~~

Policy 3.1.45: The City shall continue to require the use of Best Management Practices in agriculture, silviculture, construction, dredge-and-fill operations, and stormwater management systems, as described in the Public Facilities and Conservation Elements, which limit the amount of sediment reaching all surface waters, and require erosion and sediment control provisions as part of the

development review process within the City's coastal environment.

Policy 3.1.5: The City shall continue to support FDEP adopted nutrient total maximum daily loads (TMDLs) for the Spruce Creek Estuary.

Policy 3.1.6: The City shall ~~Utilize~~ Stormwater Management Regulations that consider the timing of discharge of fresh water to the estuary, the hydro-period of wetlands, reuse of fresh water, as well as the potential loadings, consistent with the Drainage Sub-Element.

Policy 3.1.7: The City shall ~~Continue~~ the enforcement of stormwater regulations prohibiting the construction of new pipes, ditches and canals which transport large volumes of fresh water rapidly to the estuaries and reduce existing freshwater discharges, based on the Volusia County Environmental Management and Health Department's water quality monitoring program.

Policy 3.1.8: The City shall ~~Continue~~ to utilize the ~~Master~~ Stormwater ~~Master Management~~ Plan to address specific and cumulative impacts to prevent estuarine pollution and control surface water runoff.

~~Policy 3.1.9: Continue to cooperate with regional water quality planning efforts.~~
[COVERED IN PUBLIC FACILITIES AND INTERGOVERNMENTAL COORDINATION ELEMENTS]

~~Policy 3.1.10: Utilize mechanisms such as periodic sampling and reporting requirements for assessing and monitoring impacts of cumulative development on stormwater runoff and water quality in cooperation with Volusia County Environmental Management and the Health Departments.~~ **[MOVED TO PUBLIC FACILITIES, DRAINAGE SUB-ELEMENT]**

~~Policy 3.1.94:~~ The City shall install grates on all stormwater outfall pipes to prevent manatees from becoming trapped within the pipes. Openings in the grates shall be no more than 6 inches wide.

Policy 3.1.102: The City shall continue its commitment to improve and enhance water quality and estuarine conditions through intergovernmental cooperation by a variety of mechanisms such as:

- A. Participation in ad-hoc or other special technical advisory committees.
- B. Exchange of data and information among and between the County and the municipalities as well as Flagler and Brevard Counties.
- C. Presentations and discussions with ~~the Volusia County~~ city of Governments.
- D. Updating data in cooperation with FDEP and SJRWMD.
- E. Notification of proposed programs, development regulations or activities that address water quality.
- F. Implementing the policies or recommendations of the Aquatic Preserve Management Plans, the Volusia County Intercoastal Island Management Plan, and the City's Shoreline Habitat Restoration and Management Plan.
- G. Participation and assistance in establishing and maintaining the water quality

sampling and monitoring program.

Policy 3.1.113: The City shall ~~Encourage~~ the establishment of living shorelines and the use of nonstructural shoreline stabilization measures within the estuarine environment to promote natural water quality improvement.

GOAL 4: COASTAL HAZARDS

THE CITY SHALL LESSEN THE IMPACT OF A-DESTRUCTIVE STORM-NATURAL DISASTERS OR EVENTS ON HUMAN LIFE, PROPERTY, PUBLIC FACILITIES AND NATURAL RESOURCES.

Objective 4.1: Evacuation of Population. The City shall maintain the clearance time for the evacuation of the population in the Hurricane Vulnerability Zone at 12 hours ~~based on a level-of-service standard “D,” as defined in the Transportation Mobility Element,~~ during emergency evacuations, and ensure consistency with the City’s and Volusia County’s hurricane evacuation plans.

Policy 4.1.1: Future Land Use Map amendments in the Hurricane Vulnerability Zone shall strive to reduce and shall not increase the clearance time for evacuation of the population in the Hurricane Vulnerability Zone above 12 hours.

Policy 4.1.2: Redevelopment activity shall not increase hurricane evacuation times beyond the established standard.

Policy 4.1.3: During the development review process, the City shall assess the impact of all new development along the hurricane evacuation route to determine clearance time for evacuation of the population in the Hurricane Vulnerability Zone.

Policy 4.1.4: The City shall ensure adequate roadway capacity to facilitate the evacuation of residents in the Hurricane Vulnerability Zone by evaluating any proposed changes in land use density/intensity against the currently acceptable evacuation plan.

Policy 4.1.5: Future roadway improvements shall ~~minimize~~ not affect the impact of flooding and storm damage on the facilities.

Policy 4.1.6: Evacuation routes shall be designated in such a way as to distribute traffic demand to provide optimum utilization of available roadway facilities.

Policy 4.1.7: The City shall incorporate updates to the East Central Florida Regional Planning Council’s (ECFRPC) Regional Evacuation Study into the Coastal Zone Management Element of this Comprehensive Plan as needed.

Policy 4.1.8: The City shall coordinate with VOTRAN to assist in the evacuation of transit-~~dependant~~ dependent persons.

Objective 4.2: Shelter for Protection. The City, in cooperation with the American Red Cross, Volusia County and the coastal cities, shall designate hurricane evacuation shelters to protect the population in the Hurricane Vulnerability Zone.

Policy 4.2.1: The City, in cooperation with the American Red Cross, Volusia County and the coastal cities, shall designate hurricane emergency shelter facilities to accommodate at least 10% of the population in the Hurricane Vulnerability Zone, based upon a standard of 20 square feet of shelter space per person.

Policy 4.2.2: New hurricane emergency shelter space shall not be located in the Hurricane Vulnerability Zone or ~~Coastal High Hazard Area~~ CHHA.

Policy 4.2.3: Cooperate with the County, School Board, ~~and~~ the American Red Cross or other agency in the identification and designation of school facilities as hurricane evacuation and emergency shelters.

Policy 4.2.4: Future school facilities should be designed to be utilized as emergency and evacuation shelters, consistent with State Enhanced Hurricane Protection Area (EHPA) construction requirements.

Objective 4.3: Mitigation of Property Damage. The City shall utilize ~~land development~~ regulations governing development in the ~~Coastal High Hazard Area~~ CHHA that minimize danger to life and property.

Policy 4.3.1: Prior to the development of public facilities in the ~~Coastal High Hazard Area~~ CHHA, the City shall determine that there are no other feasible sites outside that area.

Policy 4.3.2: If constructed, all public facilities in the ~~Coastal High Hazard Area~~ CHHA, where necessary and appropriate, shall be flood-proof to ensure minimum damages from storms and hurricanes.

Policy 4.3.3: ~~All new septic tanks in the Coastal High Hazard Area shall be fitted with back flow preventers. The City's septic tank policies shall be guided by the Sanitary Sewer Sub Element.~~

Policy 4.3.34: ~~The City's~~ utility infrastructure shall be designed to withstand floods and wind damage associated with major storms and hurricanes. Furthermore, the City shall require, where necessary and appropriate, that electric, telephone, television cable, and other private utility infrastructure be designed to withstand flood and storm damage. Specifically, except as provided below, all utility lines and services shall be installed underground at the owner's, developer's, or builder's expense, consistent with the ~~Land Development Code~~ LDC Requirements.

Policy 4.3.5: ~~All residential development of more than 100 units in the Hurricane Vulnerability Zone shall be required to provide information to residents concerning hurricane evacuation and shelters during hurricane season. [NO STATUTORY BASIS FOUND; DELETED]~~

~~*Policy 4.3.6:* All new residential development of more than 100 units in the Hurricane Vulnerability Zone shall be required to formulate an emergency hurricane preparedness plan for that development. [NO STATUTORY BASIS FOUND; DELETED]~~

~~*Policy 4.3.47:* All development in the Coastal High Hazard Area~~CHHA shall be consistent with the federal flood hazard requirements.

~~*Policy 4.3.58:* The City will incorporate the recommendations of the Comprehensive Emergency Management Plan and the Local Mitigation Strategy (LMS), and other relevant interagency reports and agreements into the Comprehensive Plan and Land Development Code, as appropriate.~~

~~*Policy 4.3.69:* The City shall continue to participate in the county-wide Local Mitigation Strategy (LMS) program and implement the LMS, as necessary and appropriate, through capital improvements programming.~~

~~*Policy 4.3.740:* The City shall continue to participate in and comply with the National Flood Insurance Program (NFIP) regulations.~~

~~*Policy 4.3.844:* The City shall continue to participate in and pursue the improvement of Port Orange's insurance rating under the NFIP Community Rating System (CRS) to achieve flood insurance premium discounts for residents.~~

~~*Policy 4.3.942:* The City will work with the School District to~~locate future school facilities outside of areas susceptible to hurricane storm damage or areas prone to flooding, or as consistent with F.S. 1013 and F.A.C. Rule 6A-2, as amended, regarding flood plain and school building requirements.

~~*Policy 4.3.103:* The City shall~~locate new fire and law enforcement facilities outside of the areas susceptible to hurricane storm damage or flooding, unless service levels cannot be maintained without such locations.

~~*Policy 4.3.114:* New development and redevelopment in areas at high risk of flooding due to storm surge, high tide events, flash flood, stormwater runoff, and sea level rise shall be required to utilize building design specifications, engineering solutions, site development techniques, and management practices (i.e. requiring higher minimum floor elevations, retrofitting buildings for increased flood risk, design infrastructure that can withstand higher water levels such as raising seawalls and installing tidal valves, implementing natural drainage features such as bioswales, and other similar techniques and best practices); and is encouraged to use these building design specifications, engineering solutions, site development techniques, and management practices to remove real property from flood zone designations established by the Federal Emergency Management Agency. The City will review and update standards within its LDC to ensure consistency with updated rules and regulations, as they may be amended by the State and or the relevant agencies.~~

~~*Policy 4.3.125:* New development and redevelopment in areas at high risk of flooding~~

due to storm surge, high tide events, flash flood, stormwater runoff, and sea level rise shall meet or exceed the flood-resistant construction requirements of the Florida Building Code (i.e. requiring higher minimum floor elevations, retrofitting buildings, requiring the use of flood damage-resistant materials).

Policy 4.3.136: New development and redevelopment shall be consistent with flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R., part 60, as amended.

Objective 4.4: *Post-Disaster Redevelopment.* By 2045~~25~~, the City shall undertake an evaluation of the long-term problems related to post-disaster redevelopment, and based upon those findings, will prepare a Post-Disaster Redevelopment Plan. If necessary, amendments shall be made to the Comprehensive Plan based upon the Post-Disaster Redevelopment Plan.

Policy 4.4.1: The Post-Disaster Redevelopment Plan shall include: the identification of land areas that should not be reconstructed; the abandonment and/or relocation of buildings; and the rebuilding of public facilities, abandonment of public facilities, or reconstruction of public facilities with structural modification.

Policy 4.4.2: The Post-Disaster Redevelopment Plan shall also identify structures in the Coastal High Hazard Area that might be of some utility for public access, and make recommendations for acquisition when post-disaster opportunities arise. It shall establish guidelines for determining priorities for the acquisition of storm-damaged property in the Coastal High Hazard Area.

Policy 4.4.3: The Post-Disaster Redevelopment Plan shall establish principles for repairing, replacing, modifying, or relocating public facilities in the Coastal High Hazard Area.

Policy 4.4.4: The City shall utilize the build-back policies in its Post-Disaster Redevelopment Plan after a hurricane or other natural and man-made disasters.

Policy 4.4.5: The City shall plan for the immediate relief of the adverse effects of natural and man-made disasters. The primary concern shall be to protect the public health, safety, and welfare.

Policy 4.4.6: The Post-Disaster Redevelopment Plan shall contain objectives and policies that distinguish between immediate repair and cleanup and long-term repair and redevelopment.

Policy 4.4.7: The Post-Disaster Redevelopment Plan shall prioritize the responses of the City to natural and man-made disasters.

Policy 4.4.8: The City shall continue to implement hazard mitigation programs, such as building codes, floodplain regulations, stormwater management regulations, land use regulations, and proper management of public facilities, in accordance with the provisions of the Comprehensive Plan.

Policy 4.4.9: The City will incorporate the recommendations of interagency hazard

mitigation reports, as appropriate, into the City's Comprehensive Plan.

Policy 4.4.10: Until such time as the City adopts a Post-Disaster Redevelopment Plan, properties destroyed in a disaster shall be allowed to be redeveloped to the actual built density on that property prior to the disaster.

Objective 4.5: *Coastal High Hazard Area (CHHA).* The City shall limit the use of public funds to subsidize existing and future development and redevelopment in the ~~Coastal High Hazard Area~~ CHHA (as defined by Section 163.3178(2)(h), Florida Statutes), except where future development or redevelopment projects are specified within the City's City projects within the Community Redevelopment Area Plan or generally consistent with the City's Community Redevelopment Area Plan, that would increase exposure to coastal hazards for human life, property, public facilities and natural resources, and shall direct population concentrations away from known or predicted ~~Coastal High Hazard Areas~~ CHHAs. These include hurricane events, flooding, or sea level rise.

Policy 4.5.1: The ~~Coastal High Hazard Area~~ CHHA is defined as the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The City shall continue to update its maps of the ~~Coastal High Hazard Area~~ CHHA as new and or amended information and data becomes available.

Policy 4.5.2: The City shall limit densities in the ~~Coastal High Hazard Area~~ (CHHA) by requiring that amendments to the Future Land Use Map for areas within the CHHA shall not increase the clearance time for evacuation of the population above 12 hours. For purposes of evaluating applications for development within the City, specifically:

- a. If 50 percent or more of a parcel of land is located within the Coastal High Hazard Area, then the entire parcel shall be considered within the Coastal High Hazard Area
- b. Isolated areas that are defined by the SLOSH computerized storm surge model to be at higher elevations and are surrounded by the CHHA or by the CHHA and a body of water, shall be considered within the CHHA
- c. For purposes of evaluating development proposals or site plans, if any portion of the proposed building footprint is in the CHHA, then the entire parcel shall be considered within the CHHA

Policy 4.5.3: The City, through the annual budgeting and Capital Improvements Program processes, shall identify and limit expenditures that subsidize development and redevelopment in the ~~Coastal High Hazard Area~~ CHHA that would increase exposure to coastal hazards for human life, property, public facilities, and natural resources.

Policy 4.5.4: Capital improvement projects in the ~~Coastal High Hazard Area~~ CHHA shall assist in restoring or enhancing natural resources. The City shall establish a priority list of infrastructure facilities located in the CHHA which could be

relocated, mitigated, or replaced should state funding become available for such activities.

Policy 4.5.5: The implementation of adopted levels of service and capital improvements identified in the Comprehensive Plan shall assist in improving the quality of coastal resources, estuarine environments, shorelines, and other natural resources and shall direct population away from the ~~Coastal High Hazard Area~~. CHHA.

GOAL 5: PUBLIC ACCESS

THE CITY SHALL MAINTAIN AND IMPROVE PUBLIC ACCESS TO THE SOVEREIGN LANDS OF THE COASTAL MANAGEMENT AREA THROUGH THE PROVISION OF FISHING PIERS, BOAT RAMPS AND MARINAS

Objective 5.1: Fishing Piers. The City, in cooperation with Volusia County, ~~the Ponce de Leon Port District~~, and the other coastal cities, shall endeavor to expand, refurbish existing, and construct fishing piers, as appropriate and when funding becomes available.

Policy 5.1.1: Fishing pier needs shall be met through the utilization of fishing pier space located on existing bridges. The County, coastal cities, and Ponce de Leon Port Authority shall determine the appropriate location at which fishing pier space can be utilized in conjunction with existing bridges.

Objective 5.2: Boat Ramps. The City, in cooperation with Volusia County, the Ponce de Leon Inlet Port District, and the other coastal cities, shall endeavor to expand and construct boat ramps, as funding becomes available. Additional boat ramps should not be constructed in areas known to be critical to or known to contribute to manatee survival.

Policy 5.2.1: Additional boat ramp lanes shall be constructed as needed countywide, consistent with the Volusia County ~~Manatee Protection Plan~~ MPP.

Policy 5.2.2: New public riverfront recreational facilities will contain boat launching facilities as needed, consistent with the Volusia County MPP ~~Manatee Protection Plan~~.

Objective 5.3: Marinas. The City, in cooperation with Volusia County, the Ponce de Leon Port Authority, and the other coastal cities shall assist in providing the private sector the ability to accommodate the projected demand of additional marinas, as outlined in the MPP.

Policy 5.3.1: Marinas shall be developed in accordance with the provisions of *Objective 2.3*, ~~and~~ corresponding policies of this Element, and the MPP.

Policy 5.3.2: A priority shall be placed on the expansion of marina activity in the Port Orange Town Center.

Policy 5.3.3: Marinas shall be encouraged to include both wet slip and dry slip capacity.

Policy 5.3.4: Priority for new slips will be given to the expansion of existing marinas, in accord with the MPP.

Objective 5.4: *Scenic Routes.* The City shall establish scenic routes and roadways consistent with the County's Scenic Roadway policies, to preserve the natural beauty and vistas of the Coastal Management Area.

Policy 5.4.1: Riverside Drive/Halifax Drive, from Dunlawton Avenue in Port Orange south to Main Street, shall remain designated as a Scenic Roadway, because of its significant aesthetic value.

Policy 5.4.2: The County and coastal cities shall continue to cooperate on establishing corridor management strategies and recommendations to protect and enhance the scenic quality of identified scenic roadways.

Policy 5.4.3: Signage shall be provided to designate Scenic Roadways.

Objective 5.5: *Manatee Protection Plan.* The City of Port Orange shall protect the water resources within its jurisdiction by regulating the impacts of boating and recreational water uses to this environment.

Policy 5.5.1: The City shall not allow more than 1,890 powerboat slips (as defined in the MPP), including the 780 existing –and 1,110 future slips, to be constructed within the City limits, based upon data and research compiled in the Volusia County ~~MPP~~Manatee Protection Plan, together with shoreline measurements, inventory of existing slips, City level of service and other data.

Policy 5.5.2: Waterfront single-family residential parcels will not be denied their riparian rights to construct one dock per parcel. If single-family residential parcels are subdivided subsequent to the approval of the Volusia County ~~MPP~~Manatee Protection Plan, each additional parcel shall represent one powerboat slip to be deducted from the total.

Policy 5.5.3: No less than ten percent of the future slips allocation shall be applied to public use facilities.

Policy 5.5.4: Where the opportunity exists, the sharing of multi-slip facilities and aggregation of slips shall be encouraged during development and redevelopment, including for single-family residences.

Policy 5.5.5: The data and analysis used to determine allowable densities of powerboat slips, as noted above in Policy 5.5.1, shall be monitored by the re-evaluation of data in association with or concurrent with the periodic re-evaluation of the Volusia County ~~MPP~~Manatee Protection Plan.

CHAPTER 8: CONSERVATION ELEMENT

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INTRODUCTION

~~The City of Port Orange has played an important role in environmental protection and conservation in the Halifax area and intends to continue to remain active in these areas into the future.~~

~~The City's commitment to conservation and environmental protection has been reflected in its willingness to 1) protect floodplains through the Conservation land use designation and Floodplain Conservation (F-C) Zoning District; 2) regulate tree and vegetation removal; 3) safeguard the purity of the air, water, and soil; 4) avoid the disturbance of wetlands; 5) identify and protect natural communities and endangered species; and 6) take a leadership role in the implementation of wastewater effluent reuse.~~

~~This purpose of the Element is to provide guidance for guides the conservation and protection of natural resources, which are important to the local quality of life, including the Halifax River and Spruce Creek. The intent of the element is to protect the public health, safety and welfare through the retention, and protection, and connection of "environmentally sensitive lands." Environmentally sensitive lands are defined as...~~

~~"...areas of land or water designated in the plan as being needed to serve the purpose of conserving or protecting natural resources or environmental quality and includes areas designated for such purposes as protection of soils, protection of quality or quantity of groundwater or surface water, shorelines, fisheries and wildlife management, protection of vegetative communities or protection of wildlife habitats."~~

There is an on-going need to protect the natural resources and environmental quality that attracted people to the area. This Element will help maintain and improve areas that are suited for development and guide new development away from areas that are not.

Conservation Highlights

1. Requires the protection of the City's natural resources, wildlife, and habitats, as well as encouraging restoration efforts;
2. Protects native vegetation and requires implementation of Florida Friendly Landscaping principles;
3. Strives to preserve or better air and water quality;
4. Encourages the adoption of and connectivity between green infrastructure, including but not limited to parks, open space, and drainage features;
5. Continues focus on preserving and protecting Spruce Creek and the Halifax River;
6. Encourages Low-Impact Development techniques and compact urban development patterns; and
7. Supports the interconnectivity of places, use of mass transit, and adoption of alternative fuel technologies to maintain good air quality;

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: CONSERVATION OF AIR, WATER, AND SOIL RESOURCES

THE CITY SHALL CONSERVE, PROTECT, MANAGE, RESTORE, AND ENHANCE THE CITY'S AIR, WATER, AND SOIL RESOURCES IN ORDER TO MAINTAIN A LIVING ENVIRONMENT THAT SUPPORTS A HEALTHY POPULATION AND DOES NOT CAUSE ILLNESS.

Objective 1.1: The City shall continue to meet or exceed all minimum air quality levels required by the Florida Department of Environmental Protection (FDEP).

Policy 1.1.1: The City shall require all industrial land uses to obtain the necessary state, federal, and local emission permits prior to issuing local construction permits.

Policy 1.1.2: Industrial land uses will be located so as to minimize the impact on any areas with identified air quality problems.

Policy 1.1.3: No industrial or commercial land uses which would emit air pollutants in sufficient volumes to degrade the City's ambient air quality--whether in terms of public health, visual aesthetics, or odor--will be permitted unless it can be proven to the City that all available pollution control devices and practices will be employed upon occupancy.

Policy 1.1.4: In an effort to reduce potential air pollution hazards from automobile emissions, the City will require walls, fencing and/or vegetative buffers between residential land uses and arterial roadways.

Policy 1.1.5: Recognizing that automobile emissions contribute to air pollution, the City shall promote the use mass transit, electric/alternative fuel vehicles, and non-motorized transportation modes, as well as continue to encourage a more compact pattern of urban development, especially through the interconnection of places and integration of land uses that promote walking, biking, transit, and alternative modes of transportation, in accordance with the provisions of the Future Land Use and Transportation Elements.

~~*Policy 1.1.6:* The City shall continue to require that all buildings scheduled for demolition or renovation be surveyed by the applicant for the presence of asbestos. Asbestos shall be removed prior to demolition. Any asbestos removal and disposal shall be performed by a contractor licensed by the Florida Department of Professional Regulation.~~

Objective 1.2: The City of Port Orange shall protect, enhance, and improve the ambient water quality of surface waters within the City.

Policy 1.2.1: The City will continue to monitor and upgrade its sewage treatment facility to ensure it complies with state and federal effluent standards.

Policy 1.2.2: The City will expand its reclaimed water system in accordance with the 2005 Utility Master Plan and subsequent updates in an effort to improve water quality in the Halifax River. The City shall maintain ~~establish~~ a target of 100% reuse of average daily wastewater flow ~~by the year 2020~~, except for operational conditions, including current weather conditions, anticipated weather patterns, reclaimed water demand, ~~reclaimed water reuse~~ patterns, system draw down restrictions, system surplus volume, interruptible customer service restrictions, system operational efficiency, production capability, reclaimed reservoir capacity, availability of storm and groundwater augmentation sources, and other agency regulatory restrictions that require river discharge.

Policy 1.2.3: The City will, in cooperation with local, regional, and state agencies, continue to identify, monitor, and where possible, manage, all point and non-point source discharges into area surface waters.

Policy 1.2.4: The City shall require, in accordance with the provisions of the Sanitary Sewer Sub-Element, that existing homes utilizing septic tank systems on lots smaller than one acre must connect to the City central sewer system if available within 100 feet of the property.

Policy 1.2.5: On-site ~~sewage waste~~ treatment and disposal systems ~~facilities~~ and drainfields shall not be located within 75 feet of the 100-year floodplain; within 75 feet of an upland/wetland interface; or within 120 feet of the mean high water mark of any surface water body, whichever is greater. On-site waste treatment systems should be located as far inland from a water body or wetland as possible.

Policy 1.2.6: The City shall continue to educate residents regarding deliberate deposition of lawn debris, washing of paint brushes, the use of fertilizers and chemicals, or the storage of hazardous chemicals and fuel supplies in close proximity to water bodies. "Close proximity" shall be defined according to the nature of the proposed activity and the degree to which the adjacent water body is to be protected.

Policy 1.2.7: The City will continue to utilize standards which meet or exceed the County Minimum Standards regarding surface water quality management, and will meet EPA and FDEP drainage standards for outfalls.

Policy 1.2.8: The City shall encourage the establishment of living shorelines and the use of nonstructural shoreline stabilization measures to promote natural water quality improvement.

Policy 1.2.9: The City shall support and promote programs to improve the natural tidal flushing action of adjacent water bodies, such as the Halifax River and Rose Bay, as a way to restore and maintain ambient water quality.

Policy 1.2.10: The City shall coordinate with state, regional, and local agencies in permitting the construction of new marina facilities on the Halifax River. In accordance with the provisions of the Coastal Zone Management Element and the Volusia County Manatee Protection Plan (incorporated by reference), the City shall continue to enforce its marina facility siting and design standards through the LDC.

Policy 1.2.11: In accordance with Objective 4 of the Public Facilities – Drainage Sub-element, ~~The~~ City will continue to enforce County and State minimum standards for stormwater management and adopt additional requirements, as necessary, to address unique local concerns.

Policy 1.2.12: The City will utilize stormwater management design performance standards in accordance with the provisions of the Drainage Sub-element.

Policy 1.2.13: The City will work with the FDEP, Volusia County, and the SJRWMD to maintain or improve the water quality in Spruce Creek, thereby, ensuring its viability as an Outstanding Florida Water (OFW).

Objective 1.3: Aquifer Protection. The City shall ~~continue to utilize~~ implement programs and development regulations to protect the Volusia-Floridan ~~s~~Sole s~~Source a~~Aquifer, in accordance with the policies of this Comprehensive Plan.

Policy 1.3.1: The City will utilize wellhead protection and water conservation measures in accordance with the provisions of the Public Facilities – Groundwater Aquifer Recharge Sub-Element.

Policy 1.3.2: The City will monitor ground water testing information on an annual basis to ascertain changes in water quality in the surficial and artesian aquifer.

Policy 1.3.3: The City will employ conservation well spacing and withdrawal procedures to avoid saltwater intrusion by:

- A. Monitoring the potentiometric surface of pumping wells and terminating operation when the surface reaches an elevation of 5 M.S.L.
- B. Assuring that well spacing be greater ~~than~~ than 750 ~~feet~~ when withdrawal rates exceed 350 GPM in order to control interference drawdown.
- C. Rotating wells in order to reduce withdrawal demand on individual wells.

Policy 1.3.4: The City shall prohibit excavation projects from removing the confining layer of material separating the bottom of borrow pits from the top of the aquifer.

Policy 1.3.5: Groundwater resources shall be protected from leaking underground storage tanks ~~by~~ through the ~~use~~ utilization of ~~state-of-the-art~~ leak-prevention technology, such as double-walled storage tanks.

Policy 1.3.6: All requests for development shall be reviewed to ensure that potential impacts of the proposed development do not negatively impact the quantity and quality of groundwater resources.

Objective 1.4: Water Conservation. The City shall ~~C~~ontinue to promote and implement existing water conservation programs.

Policy 1.4.1: The average consumption of potable water will not exceed the adopted level-of-service standard in the Public Facilities Element, Water Supply Plan, or CUP capacity for groundwater withdrawals.

Policy 1.4.2: The City will continue to implement the Master Utility Plan, which, in accordance with the Sanitary Sewer Sub-Element, outlines the planned extension of the City's reclaimed water system to other City properties, private residences, and businesses.

Policy 1.4.3: The City shall ~~C~~ontinue to utilize the Land Development Code to require the installation of reuse mains in new subdivisions, when supply of reclaimed water is available.

Policy 1.4.4: The City shall utilize the SJRWMD emergency water use plan during declared water emergencies.

Policy 1.4.5: The City shall discourage the over-watering of lawns and other landscaping vegetation, particularly when automatically timed sprinkler systems are used. Furthermore, the City shall continue to prohibit the watering of lawns during hours of high evaporation potential.

Policy 1.4.6: The City shall reduce groundwater withdrawal through water conservation and reuse programs as identified in Objective 3 and subsequent policies of the Potable Water Sub-element.

Objective 1.5: Soil Erosion. The City shall ~~C~~ontinue to protect against local soil erosion by enforcing the City's erosion and sedimentation control regulations in the LDC.

Policy 1.5.1: Development plans shall indicate areas containing highly erodible soils, as defined by the U.S. Soil Conservation Service, and shall minimize and avoid where possible, disturbance of those areas.

Policy 1.5.2: The City shall prohibit new development and construction on hydric soils, as defined by the U.S. Soil Conservation Service and Florida Department of Agriculture, except to accommodate an overriding public interest; or as allowed within the wetland regulations.

Policy 1.5.3: Any construction, excavation, and land-clearing activities shall minimize the exposed ground surface area. Those areas that are not to be disturbed

shall be protected by an adequate barrier from construction activity. Any area that is to be exposed for an extended time period shall be seeded, mulched, or sodded. Whenever possible, natural vegetation shall be retained and protected.

Policy 1.5.4: New development activities shall not allow pollution, sedimentation, and/or erosion into adjacent wetlands or other water bodies.

Policy 1.5.5: All swales, retention, and detention areas constructed in association with new development shall be sodded or otherwise vegetated to help prevent soil erosion, filter nutrients, and to facilitate efficient maintenance.

Policy 1.5.6: The City will, in accordance with the provisions of the Drainage Sub-Element, identify sediment discharge sources to the Halifax River and minimize sediment pollution thereto through the administration of the Stormwater Management Ordinance and the Environmental Preservation Code.

Objective 1.6: Sustainability. The City shall continue to promote measures which protect and conserve area resources through a comprehensive recycling program in accordance with the Public Facilities – Solid Waste Sub-element, and by as well as promoting energy efficiency, and the use of renewable energy resources, the incorporation of Florida Friendly landscaping, and the implementation of green infrastructure.

Policy 1.6.1: The City shall ~~continue to maintain and promote a curb-side recycling program, as described in the Public Facilities – Solid Waste Sub-element, to reduce the City's waste stream. in coordination with Volusia County.~~ **[INCORPORATES 1.6.2 WITH 1.6.1]**

~~*Policy 1.6.2:* Continue to maintain a recycling program that reduces the City's waste stream.~~ **[INCORPORATED WITH 1.6.1]**

Policy 1.6.23: In support of state policy, the City shall promote energy conservation and efficiency measures in all "end-use sectors", which is defined as transportation, commercial, residential, and industrial sectors.

Policy 1.6.34: The City will ~~encourage the production and use of energy generated from renewable resources (e.g. solar and wind), especially for homeowners and local businesses.~~ **[INCORPORATES 1.6.5 WITH 1.6.4]**

~~*Policy 1.6.5:* Encourage installation of renewable energy systems by homeowners and businesses.~~ **[INCORPORATED 1.6.5 WITH 1.6.4]**

Policy 1.6.46: The City shall ~~maximize natural areas and assets and well as require incorporation of Florida Friendly landscaping into development projects to reduce energy and water consumption.~~

Policy 1.6.57: The City shall create, protect, and manage systems of “green infrastructure” (i.e., urban forests, parks and open spaces, green roofs, and natural drainage systems) where feasible.

Policy 1.6.68: The City shall protect and enhance green spaces to provide natural carbon sinks in soils, vegetation, and streambeds to mitigate carbon emissions.

Policy 1.6.79: The City will encourage site design techniques that restore natural “green infrastructure,” (i.e., urban forests, parks and open spaces, natural drainage systems). The City shall also coordinate local open space plans with regional green infrastructure plans in order to promote connectivity, investment, and maximize the ecological and public benefits of green infrastructure, instead of relying solely on engineered systems that require higher energy and carbon inputs.

Objective 1.7: Hazardous Waste. The City will coordinate a hazardous waste management program with Volusia County, in accordance with the provisions of the Solid Waste Sub-Element.

Policy 1.7.1: The City will cooperate with the implementation the County's hazardous waste management program.

Policy 1.7.2: The City will utilize its quarterly newsletter to publicize through various forms of communication the locations where the County will accept household and small business hazardous waste as part of their collection program.

Objective 1.8: Health. The City shall strive for a ~~ensure that the~~ local environment that is capable of supporting a healthy population and does not cause illness.

Policy 1.8.1: The City shall uphold and protect the right of every Florida resident to breathe clean air, drink pure water, and eat nutritious food.

Policy 1.8.2: In accordance with the provisions of this Comprehensive Plan, the City shall work with all relevant local, regional, and state agencies to assure a safe and healthful environment by monitoring and regulating activities which impact the quality of the air, water, and food.

Policy 1.8.3: The City shall ensure that future growth does not cause the environment to adversely affect the health of the population.

Policy 1.8.4: The City will encourage food production for local consumption in order decrease the distance that food must travel; and consequently reduce adverse environmental impacts green house gas (GHG) emissions, by allowing community gardens by right in appropriate zoning districts.

GOAL 2: CONSERVATION OF THE NATURAL ENVIRONMENT

THE CITY SHALL CONSERVE, PROTECT, MANAGE, RESTORE, AND ENHANCE THE FUNCTIONAL, AESTHETIC, AND QUALITATIVE VALUE OF THE NATURAL ENVIRONMENT FOR THE BENEFIT OF PRESENT AND FUTURE GENERATIONS.

Objective 2.1: Protect Floodplain Resources. The City will continue to protect the natural function of the 100-year floodplains of Spruce Creek, the Halifax River, and their tributaries. In accordance with the provisions of the Comprehensive Plan, the City shall enforce ~~development~~ regulations in the LDC, to maintain the capability of floodplains to carry, store, and filter flood waters.

Policy 2.1.1: The City will continue the use of the Conservation land use designation, as well as the Floodplain-Conservation (F-C) Zoning District, to protect the natural functions of floodplains and shorelines. Permitted uses shall be limited to those described in the Future Land Use Element.

Policy 2.1.2: In addition to the Conservation land use designation and the Floodplain-Conservation (F-C) zoning district, the City shall protect Spruce Creek through the use of the "Spruce Creek Environmental Corridor." The corridor is defined as the area within 50 feet landward from the top of the ~~river bank~~riverbank. In places where the top of the bank is not discernable, either the mean high water line or the upland/wetland boundary shall be used, whichever is greater. Development within the corridor shall be managed as follows:

- A. Lots created after November 1, 1990 shall denote the corridor on the lot survey, and shall dedicate the corridor to the City via conservation easement.
- B. Only water-dependent uses within the corridor are permitted.
- C. Existing vegetation within the corridor shall be preserved. Where native vegetation has been disturbed in the past, it shall be restored concurrent with new development.
- D. Where new plantings are required, a restoration plan, specifying appropriate vegetation for rehabilitation of shores and associated lands (such as grasses for submerged lands and shorelines, and trees/shrubs for banks sloping away from shore) shall be submitted as part of the development proposal. The type of vegetation selected for new plantings shall be based upon its ability to provide shore stabilization, water purification, and wildlife habitat.

Policy 2.1.3: Floodplains whose functional values have been degraded or destroyed through human intervention should be restored, if possible, through the public acquisition of historic floodplain lands. Various state, regional, and local acquisition programs shall be used for this purpose.

Policy 2.1.4: No fill will be allowed in the Floodplain-Conservation (F-C) Zoning District that will decrease the flood carrying capacity of the riverine floodplain, except as provided by *Policy 2.1.6* below.

Policy 2.1.5: No fill will be allowed in isolated floodplain pockets that will decrease the flood storage capacity of depressional wetlands, except as provided by *Policy 2.1.6* below.

Policy 2.1.6: If any filling of land occurs during site design such that the volume of floodplain storage would be reduced, an equal volume of soil shall be excavated within the same floodplain to provide compensatory storage. Such excavations shall not be located within land areas identified for preservation purposes, or within the jurisdictional wetland limits of regulatory agencies, except for the purpose of providing pretreated stormwater storage capacity.

Policy 2.1.7: The City shall ensure that fill material or other structures do not adversely obstruct the natural movement of floodwater overland sheetflow or pose a threat to the public health, safety, and welfare.

~~*Policy 2.1.8:* The City shall encourage the development of a strict floodplain management program by state, regional, and local governments designed to preserve hydrologically significant wetlands and other natural floodplain features. [NOT REQUIRED]~~

Policy 2.1.89: The City shall continue to participate in the National Flood Insurance Program.

Objective 2.2: Incompatible Uses. Consistent with State and Federal regulations, ~~The City shall protect wetlands by directing incompatible uses away from wetland areas, and establishing standards for mitigation based on a policy of no-net-loss of wetlands function, as a last resort.~~

Policy 2.2.1: The City will continue to protect the natural functions of wetlands through the Conservation land use designation, as well as the Floodplain Conservation (F-C) Zoning District. Wetlands that do not currently fall under this designation or zoning district shall be protected in accordance with the ~~Land Development Code~~ LDC Environmental Protection regulations.

Policy 2.2.2: Land use planning and site design shall support development patterns that minimize the impact of development on wetland communities.

Policy 2.2.3: The City shall maintain acceptable criteria for wetland modification in the ~~Land Development Code~~ LDC, consistent with the minimum standards for wetland protection as approved by Volusia County.

Policy 2.2.4: Where the direct impact upon wetlands by incompatible uses cannot be avoided outright on new development or redevelopment sites, mitigation proposals shall be considered that shall include one or more of the following mitigation strategies, listed in descending order of preference:

- A. Minimize impacts by limiting the degree or magnitude of the action or its implementation.
- B. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
- C. Reduce or eliminate the impact over time through preservation and maintenance operations over the life of the action.
- D. Compensate for the impact by replacing or providing substitute resources or environments through the creation of new wetlands, enhancement of existing wetlands, or restoration of wetlands or significant upland areas that are no longer functioning due to significant past alteration.

Policy 2.2.5: Mitigation shall take place on-site or in close proximity, and within the same drainage basin or sub-basin. Mitigation through restoration of other degraded wetlands or preservation of significant upland areas is preferred over wetland creation. In lieu of mitigation requirements, the City may collect a mitigation fee that will fund an off-site wetlands mitigation bank program.

Policy 2.2.6: Wetlands shall not be used as sediment traps during development. No grading, cutting, or filling shall commence adjacent to wetland areas until erosion and sedimentation control devices have been installed between the disturbed area and the wetlands.

Policy 2.2.7: The City shall encourage the incorporation of natural drainageways and isolated forested wetlands into stormwater management systems as detention facilities, in order to avoid the filling and excavation of wetlands. Hydroperiods and stage elevations shall be designed to maintain the existing natural wetlands community, except in such cases when permitting agencies agree that water quality, wildlife habitat, or other wetlands functions can be enhanced by alteration of the natural community.

Objective 2.3: Urban Forest. The City shall provide for the perpetuation of the Port Orange urban forest, as well as require, through its ~~Land Development Code~~ LDC regulations, the protection and use of drought resistant, native vegetation, and Florida Friendly landscaping and sod on sites under development review.

Policy 2.3.1: All new development, expansions of existing development, and redevelopment, except for single-family homes, shall provide for the protection of native vegetation on site, and the removal of invasive, exotic plant species. Existing developments should utilize native plants in common areas in instances where replanting becomes necessary.

Policy 2.3.2: The City shall require the protection of specimen and historic trees, as defined by the minimum County standards, which have been identified on sites under development. Such trees shall be preserved and protected through conservation easements granted to the City.

Policy 2.3.3: The City shall continue to review proposals to clear, fill, or excavate sites under development where such alteration would result in the destruction, moving, or removing of trees and natural vegetation. In order to preserve the existing vegetation to the greatest extent possible, all development proposals shall be reviewed according to the following criteria:

- A. The extent to which the actual or intended use of the property requires cutting down or destroying trees, or necessitates a change of grade;
- B. The desirability of preserving any tree by reason of its size, age, or some other outstanding quality, such as uniqueness, rarity, or status as a historic or specimen tree;
- C. The extent to which the area would be subject to increased water runoff and other environmental degradation due to removal of vegetative cover or change of grade;
- D. The heightened desirability of preserving or enhancing tree cover in densely developed or populated areas;
- E. The need for visual screening in transitional areas, or relief from glare, blight, commercial or industrial unsightliness or any other affront to the visual or aesthetic sense in the area;
- F. The effect that changes in the natural existing grade will have on the trees to be protected and preserved; and
- G. The effect that changes in the natural existing grade will have on drainage and its impact on adjoining properties.

Policy 2.3.4: To ensure survival of trees during construction, the City shall utilize the provisions of the Tree Protection Manual for Builders and Developers published by the State Department of Agriculture and Consumer Services.

Policy 2.3.5: The City shall require, through ~~the LDC's Land Development Regulations~~, that a minimum amount of 50% of the landscaping on any site design be selected from a list of drought or moderate drought resistant native vegetation, and shall be based on the Florida Friendly ~~Landscape principals~~ principles described in the Florida Friendly Yard and Neighborhood Program.

Policy 2.3.6: A minimum of 75% of shade trees preserved or planted on any site design shall be native Florida trees.

Policy 2.3.7: ~~The City will Encourage~~ multiple uses of forest resources, where appropriate, to provide for timber production, recreation, wildlife habitat, watershed protection, erosion control, and maintenance of water quality.

Policy 2.3.8: Vegetation on new City landscaping projects shall incorporate the Florida Friendly ~~Landscaping principles~~ described in the Florida Friendly Yard and Neighborhood Program.

Policy 2.3.9: The City will continue to maintain its Tree City USA status and will ~~seek~~ strive to increase the tree canopy throughout the City.

Policy 2.3.10: The City will ~~seek to partner with the Florida Department of Transportation~~ FDOT, the TPO, the County, and private developments to consider additional opportunities to increase the tree canopy within the road rights-of-way throughout the City.

Objective 2.4: Preserve Natural Communities. The City shall ~~continue to utilize LDC~~ Land Development Code regulations to preserve natural communities identified as potential habitat for listed plant and animal species.

Policy 2.4.1: The City shall continue to utilize the Conservation land use category along with the F-C zoning designation to protect natural communities identified as potential habitat for listed plant and animal species. Permitted uses shall be limited to those described in the Future Land Use Element.

Policy 2.4.2: The City shall work with local, regional, state, and federal agencies to maintain, refine, and expand its Florida Land Use and Cover Forms Classification System (FLUCFCS) inventory and map of natural communities potentially inhabited by species endangered, threatened, or of special concern.

Policy 2.4.3: ~~The City shall continue to utilize regulations requiring~~ the submission of a survey showing species that are endangered, threatened, or of special concern for proposed developments requiring site plan or plat approval. Surveys required by this policy shall include the following information:

- A. The vegetative community types observed on the site, in accordance with the natural communities listing in this Element;
- B. The presence or evidence of listed species; and
- C. The field surveying method applied, such as transect, arrays, etc.

Policy 2.4.4: Site development activities shall not result in the harming, pursuit, or harassment of wildlife species classified as endangered, threatened, or of special concern by either the state or federal governments, as required by state and federal laws. Should such species be determined to be residing on, or be otherwise significantly dependent upon the project site, the developer shall cease all activities which might negatively affect that individual or population and immediately notify the Florida Fish and Wildlife Conservation Commission, ~~or~~ FDEP, the U.S. Fish and Wildlife Service, and the City. Proper protection and habitat management, to the satisfaction of all agencies, shall be provided by the developer.

Policy 2.4.5: Where natural communities and listed species habitats are found on a site, in accordance with *Policies 2.4.3 – 2.4.4* above, such areas shall be protected in perpetuity, to the greatest extent practicable, through appropriate legal mechanisms. Protection mechanisms may include conservation easements dedicated to the City, rezoning of the area to Floodplain-Conservation (F-C) in conjunction with a rezoning of the site, or changing the future land use designation of the area to Conservation in conjunction with an amendment to the Future Land Use Map of the site. Other mechanisms may include buffer zones, acquisition, ~~density transfers~~, transfer of development rights (TDRs), purchase of development rights or land exchanges. The adequacy of any particular protection mechanism shall be evaluated based on the following:

- A. Approval by the Florida Fish and Wildlife Conservation Commission, which will be consulted by the City;
- B. Provision of any permits needed from the Florida Fish and Wildlife Conservation Commission or the U.S. Fish and Wildlife Service;
- C. The connection of conservation easements, zones, or land use designations on the subject development property to any like easements, zones, or land use designations on adjoining properties, and/or to the city's designated environmental corridor along Spruce Creek; and
- D. The cumulative and macro-level impacts upon native floral and faunal species, their habitats, and wildlife corridors.

Policy 2.4.6: The City shall encourage the clustering of residential units where functioning natural communities or critical habitats, as defined by local, state and federal regulatory programs, are preserved on the site.

Policy 2.4.7: The City shall continue to ensure the protection of manatees by, at a minimum: supporting the regulation and enforcement of boat speeds; regulating safety and water sports activities; utilizing the boat facility siting plan in ~~Phase II of the Manatee Protection Plan for Volusia County, as amended (October 2005)~~; monitoring and ensuring the proper maintenance of signage denoting manatee habitat and associated boat speed zone; requiring mitigation through contributions to the Manatee Conservation Fund; and ensuring the distribution of educational materials about manatees and their protection at boat launch and marina facilities. All manatee protection measures shall be consistent with ~~Phase I (February 2001) and Phase II (October 2005) of the State approved Manatee Protection pPlan for Volusia County.~~

Policy 2.4.8: Any bridge or road crossings over water bodies and/or wetlands shall be designed and constructed to minimize the right-of-way width, minimize overstory vegetation removal, and provide adequate space under the bridge or road span to accommodate normal wildlife movement and water flow.

Policy 2.4.9: The City will continue to cooperate with Volusia County and the adjacent coastal cities to conserve and protect unique natural communities located within more than one local jurisdiction.

Policy 2.4.10: The City of ~~Port Orange~~ shall protect the water resources within its jurisdiction by regulating boating impacts to this environment consistent with the Volusia County Manatee Protection Plan, and as described in Objective 5.5 and associated policies within Coastal Zone Management Element of this Plan.

Policy 2.4.11: The City, in cooperation with State, regional, and local agencies, shall participate in a program to enhance the aesthetic, recreational, botanical, fish, and wildlife values of spoil islands.

Policy 2.4.12: The City shall continue to Pprotect existing natural shoreline areas, through the establish shoreline management standards in the LDC that minimize the impact of man-made structures on shoreline systems, and restore altered shorelines within the City's jurisdiction.

Policy 2.4.13: Areas of wetland and native upland habitats not connected to corridors, that exhibit resource values as defined by this Comprehensive Plan, should be included as conservation or recreation areas within development plans. Secondary linkage to nearby corridors, even if by artificial means, should be considered and encouraged. Construction of new corridors, or restoration of existing disturbed corridors, should be considered as a form of mitigation where appropriate.

Objective 2.5: Resource-Based Recreation. The City shall ~~C~~continue to protect resource-based recreation areas from adverse impacts of adjacent development.

Policy 2.5.1: The City shall ~~R~~require a buffer zone between adjacent development and ~~resource~~ resource-based parks.

Policy 2.5.2: The City will ~~C~~coordinate the extension of wildlife corridors with adjoining development through the development review process.

Policy 2.5.3: The City shall monitor and review development and recreation activities along Spruce Creek and its tributaries to identify the impacts that these activities have on fish and wildlife within the creek's riparian wildlife corridor.

GOAL 3: LOW IMPACT DEVELOPMENT

FOR NEW DEVELOPMENT AND REDEVELOPMENT, THE CITY SHALL ENCOURAGE LOW IMPACT DEVELOPMENT (LID) TECHNIQUES, AND PURSUE COMMITMENTS TO REDUCE STORMWATER RUNOFF VOLUMES AND PEAK FLOWS, TO INCREASE GROUNDWATER RECHARGE, AND TO INCREASE PRESERVATION OF UNDISTURBED AREAS.

Objective 3.1: Implementation. ~~By 2025, the City shall amend the LDC Land Development Code at its discretion~~ to eliminate impediments to LID techniques.

Policy 3.1.1: ~~The City will~~ integrate into the ~~LDC Land Development Code~~ the source control concept that places a greater importance on managing smaller, cost-effective landscape features located on each lot rather than through costly pipe and pond stormwater management design.

Policy 3.1.2: ~~The City shall~~ maintain or improve infiltration, frequency and volume of discharges, and groundwater recharge by placing greater emphasis on reducing pervious surfaces, functional grading, open channel sections, and increasing the use of bioretention/filtration landscape areas.

Policy 3.1.3: ~~The City shall encourage~~ integrate alternative stormwater management practices such as on-lot microstorage, functional landscaping, open drainage swales, reduced imperviousness, flatter grades, increased runoff travel time, and depression storage being integrated into a multifunctional site design.

Policy 3.1.4: ~~The City shall~~ encourage integrated stormwater management practices (IMPs), which distribute stormwater in small portions of a lot or parcel, near the source of impacts.

Policy 3.1.5: ~~The City may~~ amend the ~~LDC Land Development Code and Construction Details~~ to permit LID designs that can significantly reduce development costs by:

- Reducing impervious surfaces (roadways), curb, and gutters;
- Decreasing the use of storm drain piping, inlet structures; and
- Eliminating or decreasing the size of large stormwater ponds.

CHAPTER 9: INTERGOVERNMENTAL COORDINATION ELEMENT

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FIGURE 9—1 INTERLOCAL PLANNING AGREEMENT AREA

INTRODUCTION

The purpose of the Intergovernmental Coordination Element is to provide guidelines and mechanisms for coordinating with other governments and selected governmental agencies in the preparation and revision of the Comprehensive Plan, in the review and approval of future development and certain development activity(s), and in the provision of services. This Element ~~strives to determine~~identifies and responds to the needs for coordination ~~mechanisms~~ between the City, regional and state agencies, and adjacent local governments, as applicable.

Intergovernmental Coordination Element Highlights

1. Ensures intergovernmental relationships and mechanisms are established and maintained to effectively meet the needs of the residents, businesses and visitors;
2. Includes intergovernmental strategies for each Element of this Plan to ensure coordination is occurring in all aspects of the City as applicable; and
3. Ensures that the City has an intergovernmental mediation process established in order to achieve conflict resolution.

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: INTERGOVERNMENTAL COORDINATION

THE CITY SHALL ESTABLISH AND MAINTAIN EFFECTIVE COORDINATION MECHANISMS AND RELATIONSHIPS TO EFFECTIVELY ADDRESS ~~ANY MULTI-JURISDICTIONAL PLANNING ISSUES IMPACTING PORT ORANGE OR OTHER COMMUNITIES THAT MAY ARISE IN IMPLEMENTING THE PORT ORANGE COMPREHENSIVE PLAN.~~

Objective 1.1: Information Exchange. ~~The City shall~~ The City shall continue to utilize a formal, continuous program through the Volusia Growth Management Commission (VGMC) for planning information exchange with Florida Department of Transportation (FDOT), Volusia County, the Volusia County School Board ~~District~~, Daytona Beach, South Daytona, Daytona Beach Shores, New Smyrna Beach, and Ponce Inlet.

Policy 1.1.1: A monthly report of development approval and construction activity in Port Orange will be posted on the City website, ~~and similar information will be requested from the adjacent jurisdictions.~~

Policy 1.1.2: ~~The City shall~~ The City shall continue the coordination of capital improvement projects with the affected governments listed ~~above~~ in Objective 1.1.

~~*Policy 1.1.3:* The City shall encourage the siting and co-location of public schools with other public facilities as permitted land uses. To the maximum extent possible, new public facilities shall be located, designed, and constructed on or adjacent to libraries, community centers, parks, and/or recreational facilities. [MOVED TO POLICY 2.1.5]~~

Objective 1.2: Intergovernmental Planning. ~~The City shall~~ The City shall maintain and increase the use of intergovernmental planning agencies for discussion and resolution of multi-jurisdictional issues.

Policy 1.2.1: ~~The City shall~~ The City shall continue active membership and support of intergovernmental planning agencies such as Volusia League of Cities (VLOC) ~~COG~~, River to Sea Transportation Planning Organization (TPO), VGMC, and the East Central Florida Regional Planning Council (ECFRPC).

Policy 1.2.23: In accordance with Future Land Use Objective 1.4 and its policies, the City shall ~~work~~ work with the VGMC to ensure coordination of all planning activities mandated by the Comprehensive Plan.

Policy 1.2.3: For Comprehensive Plan disputes, the City shall use the Volusia County Growth Management's dispute resolution process. [PREVIOUSLY 1.3.3]

Policy 1.2.4: As needed, the City shall use the ECFRPC's dispute resolution process. [PREVIOUSLY 1.3.1]

~~The City will maintain a Water Supply Facilities Work Plan that is coordinated with SJRWMD's District Water Supply Plan by updating the Work Plan within 18 months of an update to the SJRWMD's District Water Supply Work Plan that affects the City. [PREVIOUSLY POLICY 1.2.4, DELETED PER RECOMMENDATION OF ST. JOHNS RIVER WATER MANAGEMENT DISTRICT. POLICY EXISTS IN PUBLIC FACILITIES ELEMENT]~~

~~**Objective 1.3:** Continue to utilize specific protocols to resolve conflicts with other local governments. [DELETED, SIMILAR TO 1.2]~~

~~**Policy 1.3.1:** Utilize the Regional Planning Council's dispute resolution process. [MOVED TO POLICY 1.2.3]~~

~~**Policy 1.3.2:** Utilize the Volusia Council of Governments. [DELETED]~~

~~**Policy 1.3.3:** Utilize the Volusia Growth Management Commission process. [MOVED TO POLICY 1.2.3]~~

Objective 1.34: Planning Issues. The City shall ~~Continue~~ or develop programs to address specific planning issues.

~~**Policy 1.3.14.1:** The City shall ~~Abide~~ by the annexation agreement with New Smyrna Beach, and will develop similar agreements, when needed, with South Daytona, Daytona Beach Shores, Ponce Inlet, Daytona Beach, and Volusia County.~~

~~**Policy 1.3.24.2:** The City shall ~~Abide~~ by the 2008 Interlocal Agreement with Volusia County that established the City of Port Orange Water Supply Planning Area west of I-95 and reaffirmed previous arrangements related to water and sewer service delivery and other planning-related activities.~~

~~**Policy 1.3.34.3:** The City will maintain transparency and ~~Continue to~~ use a variety of existing forms of communication with the public information programs, including the Port Orange Newsletter and pogTV.~~

~~**Policy 1.4.3:** Work with the School Board to use the rezoning process or other formalized process, when applicable, as a citizen participation/notification mechanism in the location and timing of public educational facilities. [MOVED TO POLICY 2.1.7]~~

~~**Policy 1.3.4.5:** The City will ~~Continue~~ to work with the FDOT to implement the City's Master Access Management Plan for the Dunlawton Avenue corridor.~~

~~**Policy 1.3.54.6:** Consistent with the Conservation Element, ~~The City will support work with the~~ Florida Department of Environmental Protection (FDEP), Volusia County, and the SJRWMD ~~into~~ developing a regional approach to protecting Spruce Creek in order to maintain water quality, thereby, complying with its Outstanding Florida Water (OFW) designation.~~

Policy 1.3.64.7: In accordance with the Future Land Use (FLU) Element, ~~the~~ City shall work with adjacent jurisdictions and intergovernmental coordination committees to develop and utilize a system of intergovernmental negotiation for siting locally unpopular public and private land uses, reviewed on a use-specific basis. Such a system should consider the area of population served, the impact on land development patterns or important natural resources, and the cost-effectiveness of service delivery.

Policy 1.3.72.5: The City will participate in the development of updates to SJRWMD's Water Supply Assessment and ~~District~~ Regional Water Supply Plan and in other water supply development-related initiatives facilitated by SJRWMD that affect the City. **[PREVIOUSLY 1.2.5, REVISED PER SJRWMD]**

~~*Policy 1.4.8:* The City shall create a partnership among state government, adjacent local governments, and the private sector which would identify and build needed public facilities and allocate the costs of such facilities among the partners in proportion to the benefits accruing to each of them. **[DELETED]**~~

~~*Policy 1.4.9:* In support of State policy, the City shall encourage the development, use, and coordination of capital improvement plans by all levels of government. **[DELETED]**~~

~~*Policy 1.4.10*~~ ***Objective 1.4: Wellfield Property.*** In accordance with the "Interlocal Agreement with the City of Port Orange Wellfield Property," between the City and Volusia County, the City shall exercise jurisdictional control over a special area it owns without annexation.

Policy 1.4.1: Consistent with the City of Port Orange Wellfield Property Interlocal Agreement of 2004, the uses allowed in area "A-1" shall be limited to the following:

- Communications Towers (camouflaged or monopole only)
- Class "AA"EQ biosolid disposal, as per 40 CFR 503
- Environmental Education
- Essential Utility Services
- Forestry/Silviculture (see Exhibit "B" of the subject interlocal agreement)
- Managed fishing, forestry, soil and wildlife areas (including hunt clubs)
- Preserve, resource based Parks & Recreation (e.g. hiking trails and primitive camping)
- Potable Water Recharge Areas and Potable Water Supply Wells
- Reclaimed Water Treatment, Production, Storage and Pumping (maximum of 320 acres) and Permitted improvements pursuant to County Development Order 03-F-FSP-0427
- Roadways (Private, non-public access) and associated stormwater treatment
- Wetlands Mitigation Bank

~~*Policy 1.4.24:*~~ Consistent with the City of Port Orange Wellfield Property Interlocal Agreement of 2004, all land that comprises area "A-2" will remain included within

the Volusia County Natural Resource Management Area (NRMA), and any land development activity shall be consistent with applicable provisions of the Volusia County NRMA.

A. The uses allowed in area “A-2” shall be limited to the following:

- Adult/vocational Education
- Agriculture: pasture/forestry
- Biosolid treatment and Disposal
- Camouflaged or monopole communications towers
- City Facilities and Yards
- Class “AA” EQ biosolid treatment and disposal, as per 40 CFR 503
- Colleges and Universities
- Environmental Education
- Essential Utility Services
- Permitted improvements pursuant to County Development Order 03-F-FSP-0427
- Hospitals
- Houses of Worship
- Managed fishing, forestry, soil and wildlife areas (including hunt clubs)
- Parks and Recreation areas
- Potable Water Recharge Areas and Potable Water Supply Wells
- Potable Water Treatment, Production, Storage and Pumping
- Public and Private Schools
- Public Utility Services/Stations/Plants
- Reclaimed Water Treatment, Production, Storage and Pumping
- Roadways
- Soil Storage as Temporary Stockpile
- Stormwater Treatment, Storage, Pumping and Disposal
- Wetlands Mitigation Bank

B. To ensure that the level of service on roads that serve the land identified as area “A-2” by the Port Orange Wellfield Property Interlocal Agreement of 2004 is maintained, no development or aggregate thereof shall generate more than 13,750 trip ends per day.

Policy 1.4.34: Consistent with the 2008 Interlocal Agreement between Volusia County and the City of Port Orange that established the Port Orange Water Planning Area, and with the City of Port Orange Wellfield Property Interlocal Agreement of 2004, the uses allowed in the Wellfield Expansion Area shall be limited to the following:

- Communications Towers (camouflaged or monopole only)
- Environmental Education
- Essential Utility Services
- Forestry/Silviculture
- Managed fishing, forestry, soil consistent with the Wetland Mitigation Bank Management Plan and wildlife areas (including hunt clubs)
- Preserve, resource based Parks and Recreation (e.g. hiking trails and

primitive camping)
Potable Water Recharge Areas and Potable Water Supply Wells
Reclaimed Water Treatment, Production, Storage and Pumping (maximum of 320 acres) and permitted improvements pursuant to County Development Order 03-F-FSP-0427
Roadways (Private, non-public access) and associated stormwater treatment
Wetlands Mitigation Bank

Objective 1.5: Roadway Capacity Management. Consistent with the Transportation Element and Objective 1.1 of this Element, the City shall work with the FDOT, local governments, transit providers, etc., to manage the capacity of the roadway network, as well as identify existing and proposed transportation network needs.

Policy 1.5.144: The City shall coordinate transportation mobility projects and funding mechanisms by notifying adjacent local governments and maintaining agencies of the potential impacts to their respective roadways from a proposed development's impacts and requiring the maintaining agency's concurrence through the provisions set forth in the City's Land Development Code. **[PREVIOUSLY 1.4.14]**

Policy 1.5.24.15: The City shall cooperate with VOTRAN and the ~~Volusia County TPO~~ Transportation Planning Organization on multi-modal strategies that reduce vehicles miles traveled.

Policy 1.5.34.16: ~~The City shall~~ Coordinate all hurricane evacuation activities through the Volusia County Emergency Management Department.

GOAL 2: PUBLIC SCHOOL FACILITIES

THE CITY SHALL ESTABLISH AND MAINTAIN A COOPERATIVE RELATIONSHIP BETWEEN THE CITY OF PORT ORANGE AND SCHOOL DISTRICT TO PROVIDE AN EFFECTIVE JOINT PLANNING PROCESS INCLUDING PROCEDURES TO COORDINATE LAND USE PLANNING WITH THE DEVELOPMENT OF SCHOOL FACILITIES INCLUDING PUBLIC SCHOOL SITING, CALCULATION OF POPULATION PROJECTIONS, AND PROVIDING FOR THE DEVELOPMENT OF PUBLIC EDUCATION FACILITIES CONCURRENTLY WITH RESIDENTIAL DEVELOPMENT AND OTHER PUBLIC FACILITIES AND SERVICES.

Objective 2.1: School District. The City of Port Orange shall establish coordination mechanisms with the School ~~Board~~ District to achieve a collaborative effort to identify school needs, provide for schools facilities, and implement school concurrency using consistent supporting data and analysis.

Policy 2.1.1: In cooperation with the School ~~Board~~ District, the City of Port Orange shall continue to implement the Public School Facilities Planning Interlocal Agreement as required by Section 1013.33 F.S., which includes procedures for:

- a. Coordinating and sharing information

- b. Educational and ancillary siting procedures
- c. Comprehensive plans and plan amendment review
- d. Site design and development plan review
- e. Joint development of schools, parks and other uses
- f. School concurrency implementation
- g. Implementation and amendments
- h. Resolution of disputes

Policy 2.1.2: In accordance with the schedule established in the interlocal agreement, the City of Port Orange shall continue to send a representative to meet with School ~~Board~~District and other local government representatives to review data and annually approve a projection of the amount, type, and distribution of population growth and student enrollment. Data shall include but not be limited to:

- a. Capital budgets for each jurisdiction
- b. School ~~Board~~District five-year facilities work program
- c. School ~~Board~~District educational plant survey (every fifth year)
- d. Volusia County five-year road improvement program
- e. Anticipated new development, infill development and redevelopment
- f. Student enrollment and school utilization including portable classroom assignments

Policy 2.1.3: The City of Port Orange shall provide the School ~~Board~~District with a copy of each planning board and Council/Commission agenda.

Policy 2.1.4: The City of Port Orange and the School ~~Board~~District shall coordinate the acquisition and development of sites for future educational and ancillary facilities in accordance with the process established in the interlocal agreement and the FLU Element.

Policy 2.1.5: The City shall encourage the siting and co-location of public schools with other public facilities as permitted land uses. To the maximum extent possible, new public facilities shall be located, designed, and constructed on or adjacent to libraries, community centers, parks, and/or recreational facilities. **[PREVIOUSLY POLICY 1.1.3]**

Policy 2.1.56: The City of Port Orange shall continue to implement school concurrency and Section 206 of the Volusia County Charter.

Policy 2.1.67: The City of Port Orange shall work with the Volusia County School ~~Board~~District to provide notice to adjacent jurisdictions as required by the Volusia County Interlocal Agreement for School Planning when school capacity in the adjacent jurisdiction is anticipated to be applied to meet concurrency requirements for proposed residential development.

Policy 2.1.8: The City shall ~~w~~Work with the School ~~Board~~District to use the rezoning process or other formalized process, when applicable, as a citizen participation/notification mechanism in the location and timing of public educational facilities. [PREVIOUSLY POLICY 1.4.3]

Objective 2.2: Monitor and Evaluate. The City of Port Orange shall regularly monitor and evaluate the implementation of the Public School Facilities Element to assure compliance with the provisions of the comprehensive plan and the interlocal agreement, to assure the use of best practices in the joint planning of school facilities, and to provide for the continuing coordination of school planning.

Policy 2.2.1: In accordance with the interlocal agreement but no less than once per year, the City of Port Orange shall submit a report to the Planning Commission and the School ~~Board~~District reporting on the implementation actions and coordinated planning efforts for planning and developing school facilities including joint development opportunities. If the School ~~Board~~District or Planning Commission finds that implementation of the plan or interlocal agreement is not occurring, the School ~~Board~~District or Planning Commission shall make recommendations to the City Council of steps necessary to achieve successful implementation.

Policy 2.2.2: For each comprehensive plan amendment reviewed by the ~~Volusia Growth Management Commission (VGMC)~~, the City of Port Orange shall identify in the VGMC application support materials how anticipated impacts of the proposed amendment to school facilities are addressed.

Policy 2.2.3: The City of Port Orange shall appoint a citizen to serve as a member of the oversight committee created by the adopted Interlocal Agreement and shall appoint a staff member to serve on the technical committee created by the adopted Interlocal Agreement.

CHAPTER 10: CAPITAL IMPROVEMENTS ELEMENT

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FIGURE 10—1 CAPITAL IMPROVEMENT PROJECTS

INTRODUCTION

~~Under the 1985 Growth Management Act, local governments are mandated to plan for the availability of public facilities and services to support development and the impacts of such development. The purpose of the Capital Improvements Element (CIE) and the Capital Improvements Schedule (Schedule) is to identify the capital improvements that are needed to implement the Comprehensive Plan and ensure that the adopted Level of Service (LOS) Standards are achieved and maintained for concurrency related facilities.~~

~~The 2005 Growth Management Act requires the Schedule to be financially feasible. As defined by Chapter 163.3164(32) F.S., in order for a Schedule to be financially feasible it must demonstrate that sufficient revenues are currently available or will be available from committed funding sources for the first 3 years, or will be available from committed or planned funding sources for years 4 and 5. These revenues must be adequate to fund the projected costs of the capital improvements identified in the comprehensive plan necessary to ensure that adopted LOS standards are achieved and maintained within the period covered by the 5-year Schedule. The requirement that LOS standards be achieved and maintained does not apply if the proportionate share process set forth in Chapter 163.3180(12) and (16), F.S., is used.~~

This Element, intended to demonstrate the financial feasibility of the City of Port Orange's Comprehensive Plan, commences in the fiscal year ~~2022/23~~2023-24 and identifies potential projects for the initial five-year planning period. Individual Capital Improvement needs identified in this Element are, for the most part, those improvements which cost \$25,000 or more and are generally non-recurring purchase items. The capital improvements as may be identified in the other Elements of this Comprehensive Plan or provided in the City's annual update, pursuant to Section 163.3177(3)(b), Florida Statutes, are listed with a brief description in Table 1 (Capital Improvements Schedule) along with their estimated cost, funding source, and projected year of expenditure. The improvements are listed by type of service, related to the various Elements of the Comprehensive Plan. The Capital Improvements Element addresses existing and future capital improvements needed for at least the first five fiscal years after the adoption of the comprehensive plan. Therefore, Table 1 lists improvements identified for the years 2023-2028.

The capital improvements projects listed in Table 1 are not inclusive of all anticipated capital expenditures by the City during the designated time period. For the most part, the list of improvements has been limited to the capital projects required to meet or maintain adopted LOS standards or implement the Goals, Objectives, and Policies of the Comprehensive Plan. Improvements on a smaller scale (generally under \$25,000 in cost) are outlined in the City's five-year Capital Improvement Program and annual budget as they are needed over time.

Capital Improvements Highlights

1. Requires the adoption of the Capital Improvements Schedule to ensure public improvements meet adopted Level of Service (LOS) Standards;
2. Identifies sound fiscal means to ensure the timely and necessary installation and maintenance of public facilities needed; and
3. Requires prioritization criteria for capital improvement projects.

CAPITAL IMPROVEMENTS ELEMENT

TABLE 1
CAPITAL IMPROVEMENTS SCHEDULE

Project #	Description	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	Total
WATER							
URP001	Water System Replacement/ Upsizing	400,000	300,000	300,000	300,000	300,000	1,600,000
	Water/Sewer Operating (401)	-	100,000	100,000	100,000	100,000	400,000
	Water/Sewer R&R (403)	400,000	200,000	200,000	200,000	200,000	1,200,000
	Total	400,000	300,000	300,000	300,000	300,000	1,600,000
Planned replacement of undersized galvanized steel piping in older sections of the city and peninsula area. Target areas to be accomplished based on current priorities. (Consistent w/ Comp Plan: Pot. Water, Policy 1.1, 2.6 and 2.7)							
UET001	Water System Extensions/Upsizing	-	-	50,000	50,000	50,000	150,000
	Water Impact Fee (405)	-	-	50,000	50,000	50,000	150,000
	Total	-	-	50,000	50,000	50,000	150,000
Provide water service to existing residential areas not presently served by the City and provide for greater system redundancy and looping. Additional water main installations that serve to reinforce the distribution system to eliminate or avoid areas of substandard water pressure. (Consistent w/ Comp Plan: Pot. Water, Policy 2.2, 2.4 and 2.5)							
WWP003	Water Treatment Plant R&R- Equipment	200,000	200,000	200,000	200,000	250,000	1,050,000
	Water/Sewer Operating (401)	200,000	200,000	200,000	200,000	250,000	1,050,000
	Total	200,000	200,000	200,000	200,000	250,000	1,050,000
Planned improvements for City's water treatment plant and various wells per Table 2A Water Treatment Plant Improvements. (Consistent w/ Comp Plan: Pot. Water, Policy 1.7 and San. Swr., Policy 1.6)							
WWP007	Water Treatment Plant 1 Million-Gal Water Storage Tank	-	1,500,000	-	1,500,000	-	3,000,000
	Sewer Impact Fee (405)	-	1,500,000	-	1,500,000	-	3,000,000
	Total	-	1,500,000	-	1,500,000	-	3,000,000
The water plant produces and distributes an average of 6 million gallons per day of drinking water. The plant has one water storage tank that holds 1 million gallons. The tank was constructed in 1983. There are three storage tanks located throughout the City to store a total of 4.5 million gallons of water. In order to ensure water can be produced and distributed continuously from the treatment plant, an additional storage tank needs to be constructed. It is recommended that a one-million-gallon tank be constructed on the property adjacent to the water plant. The City owns the property. The existing pumping equipment would be sufficient to distribute the water from the new tank. Since this is an expansion of service to our customers, water impact fee funds could be used (Consistent w/ Comp Plan: Pt. Water, Obj. 2, Policy 2.1, Policy 2.6)							
WWW005	Production Well Replacement	-	250,000	250,000	250,000	250,000	1,000,000
	Water/Sewer R&R (403)	-	250,000	250,000	250,000	250,000	1,000,000
	Total	-	250,000	250,000	250,000	250,000	1,000,000
This project is to replace four wells that are impacting water quality due to increase salinity levels. The wells, constructed in 1973, cannot be rehabilitated. This project is to replace the four wells, one per year.							
WRP002	Ridgewood Avenue Water Main Replacement	150,000	100,000	900,000	100,000	900,000	2,150,000
	Water and Sewer Impact Fees (405)	150,000	100,000	900,000	100,000	900,000	2,150,000
	Total	150,000	100,000	900,000	100,000	900,000	2,150,000
Replacement of substandard water mains and associated fittings, valves, and hydrants on Ridgewood Avenue between Farmbrook Road and Niver Street. These improvements will include an upsizing of the water main project. The current water main is 2". this project would include upsizing to a 6" pipeline and adding fire hydrants where needed. This is to encourage commercial development on the Ridgewood corridor by providing sufficient water to service potential customers and provide sufficient fire flow. Farmbrook to Niver being replaced in FY21, Dunlawton to Commonwealth being replaced with North Commonwealth project, see URP001.							
	TOTAL—WATER	750,000	2,350,000	1,700,000	2,400,000	1,750,000	8,950,000
SANITARY SEWER							
URH001	Sewer System Rehabilitation	1,500,000	750,000	750,000	750,000	750,000	4,500,000
	Water/Sewer Operating (401)	1,500,000	750,000	750,000	750,000	750,000	4,500,000
	Total	1,500,000	750,000	750,000	750,000	750,000	4,500,000
There are currently 110 lift stations in the collection system. This is an on-going repair and rehabilitation project for the sewer collection system at each lift station. The scope of work will depend upon the condition, age, and capacity of the pipeline. (Consistent w/ Comp Plan: San. Swr., Policy 1.5 and 4.3)							

CAPITAL IMPROVEMENTS ELEMENT

SSP002	Water Reclamation Facility R&R	600,000	500,000	500,000	550,000	550,000	2,700,000
Water/Sewer R&R (403)		600,000	500,000	500,000	550,000	550,000	2,700,000
Total		600,000	500,000	500,000	550,000	550,000	2,700,000
Scheduled facility repair and equipment replacement of electrical and mechanical system components for the City's wastewater treatment plant per Table 2D Wastewater Treatment Plant Improvements. (Consistent w/ Comp Plan: Pot. Water, Policy 1.1 and 2.6 along with San. Swr, Policy 1.6)							
SSP017	Water Reuse Program	-	-	-	5,000,000	-	5,000,000
Future Grant/Bonds		-	-	-	5,000,000	-	5,000,000
Total		-	-	-	5,000,000	-	5,000,000
A three million gallon ground storage tank with pump station to provide additional reuse supply for irrigation and minimize discharge to the Halifax River. Location to be identified in utility master plan. Staff will apply for grant funding. Current grant funding from SFRWMD is 33% for shovel ready projects. (Consistent w/ Comp Plan: San. Swr. Obj. 3)							
UET023	Sewer System Expansion	-	-	-	2,000,000	-	2,000,000
Sewer Impact Fee (405)		-	-	-	1,000,000	-	1,000,000
Future Grant/Bonds		-	-	-	1,000,000	-	1,000,000
Total		-	-	-	2,000,000	-	2,000,000
Sewer system construction at locations that are currently on septic. The locations and the priorities have been determined and design has been initiated. (Consistent w/ Comp Plan: San. Swr., Policy 2.2 and 2.3)							
SLS203	Williams Regional Lift Station Rehab	150,000	1,500,000	-	-	-	1,650,000
Water/Sewer Operating (401)		150,000	1,500,000	-	-	-	1,650,000
Total		150,000	1,500,000	-	-	-	1,650,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, Odor control, building, and site upgrades to the Williamson Regional Lift Station (Station No. 95). This project is necessary to insure uninterrupted collection and transmission of wastewater. Williamson is a regional lift station that provides service to residences in the southwest portion of the City. The proposed improvements include installation of an advance odor control system, installation of static mixers in the wet well, replacement of electrical equipment damaged by the excessive hydrogen sulfide gasses, and rehabilitation of the existing electrical building. (Consistent w/ Comp. Plan: San. Swr. Obj. 1 and Obj. 4)							
SLS204	Sugar Forest Lift Station Rehab	250,000	700,000	-	-	-	950,000
Water/Sewer Operating (401)		250,000	700,000	-	-	-	950,000
Total		250,000	700,000	-	-	-	950,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Sugar Forest Lift Station (Station No. 40). This project is necessary to insure uninterrupted collection and transmission of wastewater. Due to the shallow existing wet well, the gravity sewer lines in the area of the lift station are often surcharged, additionally the lift station is constructed in the center median at the entrance of the Sugar Forest neighborhood. This location makes it difficult to properly maintain the lift station. The proposed improvements include installing a new, deeper wet well, converting from suction lift pumping to submersible pumping, installation of a new electrical control panel, and site improvements. (Consistent w/ Comp. Plan: San. Swr. Obj. 1 and Obj. 4)							
SLS202	Lowes/Gateway Lift Station Rehab	550,000	-	-	-	-	550,000
Water/Sewer Operating (401)		550,000	-	-	-	-	550,000
Total		550,000	-	-	-	-	550,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Lowes/Gateway Lift Station (Station No. 82). This project is necessary to insure uninterrupted collection and transmission of wastewater. The proposed improvements include converting from suction lift pumping to submersible pumping, installation of a new control panel, and site improvements. This lift station was constructed in 1999 and has not been upgraded since initially constructed. (Consistent w/ Comp. Plan: San. Swr. Obj. 1 and Obj. 4)							
TOTAL - SANITARY SEWER		3,050,000	3,450,000	1,250,000	8,300,000	1,300,000	17,350,000
WATER & SANITARY SEWER							
UCP001	City-Cost Participation	-	-	-	50,000	50,000	100,000
Water Impact Fee (405)		-	-	-	25,000	25,000	50,000
Sewer Impact Fee (405)		-	-	-	25,000	25,000	50,000
Total		-	-	-	50,000	50,000	100,000
Citywide annual cost participation program with new development to upsize various water and sewer lines, extension of various mains, upsizing of lift stations, and other miscellaneous items. (Consistent w/ Comp Plan: San. Swr., Policy 4.2 and Pot. Water, Policy 2.5 & 2.7)							

CAPITAL IMPROVEMENTS ELEMENT

TOTAL WATER & SANITARY SEWER		-	-	-	50,000	50,000	100,000
TRANSPORTATION							
POL204	Road Program	800,000	800,000	800,000	800,000	800,000	4,000,000
Capital Projects (301)		800,000	800,000	800,000	800,000	800,000	4,000,000
Total		800,000	800,000	800,000	800,000	800,000	4,000,000
Multi Year Reconstruction Program. Ongoing routine maintenance program to repair/replace paving on existing streets throughout the city. This project also includes unexpected repairs that cannot be performed by in-house staff. (Consistent w/ Comp Plan: Transp. Objective 2.14 and 2.7)							
200905	Williamson Blvd. N. of Pavilion	-	-	-	220,000	260,935	480,935
Developer Constructed		-	-	-	220,000	260,935	480,935
Total		-	-	-	220,000	260,935	480,935
This project involves adding 2 lanes to the existing 2 lane Williamson Blvd. roadway from the north boundary of the Pavilion project north to Townwest Blvd., a 0.53-mile section. Project cost estimates are based on construction of an additional 2 travel lanes within the existing right of way with minimal impact to the existing roadway. The new construction will require stormwater treatment and it will be necessary to acquire an estimated 1 acre of off site property for this purpose. (Consistent w/ Comp Plan: Transp. Objective 2.6, 2.7, 2.13, and 2.14)							
200907	Coraci Blvd. Extension	-	-	-	-	257,000	257,000
Developer Constructed		-	-	-	-	257,000	257,000
Total		-	-	-	-	257,000	257,000
This project involves construction of a 1/2 mile 2 lane divided roadway extending Coraci Blvd. 2600' from the south limits of Coquina Cove III to Carmody Lake Drive within the existing undeveloped right of way. Drainage improvements are projected to be constructed in the right of way. This will serve as an alternate route and reliever route for traffic generated by the Forest Lakes subdivision and to a lesser extent to Coquina Cove and reduce impacts on Taylor Road. This roadway is indicated as a future collector road in the Comprehensive Plan. (Consistent w/ Comp Plan: Transp. Objective 2.7, 2.10, and 2.14)							
PNC015	Yorktowne Blvd North Section (Nautica Lakes)	-	-	-	2,131,414	-	2,131,414
Developer Fairshare Contr. (Planned)		-	-	-	2,131,414	-	2,131,414
Total		-	-	-	2,131,414	-	2,131,414
This project is proposed as either a 2 lane or 4 lane divided curb and gutter road designed to major collector street standards. The Yorktowne Boulevard extension consist of two segments, the north and central segment. The central segment has been permitted and the funds for construction is already dedicated. This design of the north segment is required to complete the Yorktowne Blvd. connection between Hidden Lakes Dr. and Willow Run Blvd. Construction of the north section along with the central section would redirect traffic and relieve congestion at the I-95/Dunlawton Ave. intersection and Williamson Boulevard, south of Willow Run Boulevard. (Consistent w/ Comp Plan: Transp. Objective 2.7, 2.9, 2.13 and 2.14)							
201015	Willow Run Boulevard Widening	-	200,000	1,125,000	-	-	1,325,000
Capital Projects (301)		-	200,000	-	-	-	200,000
TPO Funds		-	-	1,125,000	-	-	1,125,000
Total		-	200,000	1,125,000	-	-	1,325,000
A 1/4 mile segment of Willow Run east of Williamson Boulevard to the proposed intersection of the Yorktowne Boulevard extension will need to be improved to accommodate future traffic flows diverted from Williamson Boulevard and future traffic on the new Yorktowne north extension. A traffic circle or other improvements at the Willow Run/Yorktowne intersection will be considered as part of the design. (Consistent w/ Comp Plan: 2.7, 2.9, 2.13, and 2.14)							
PNC200	Dunlawton and Yorktowne Turn Lane Bundle	-	886,158	1,359,960	-	-	2,246,118
Capital Projects (301)		-	88,616	135,996	-	-	224,612
TPO Funds		-	797,542	1,223,964	-	-	2,021,506
Total		-	886,158	1,359,960	-	-	2,246,118
This project is a bundle of three previous separate projects (PNC020, IMI011, PNC018, PNC019). This project consists of five turn lanes: 1) Westbound Dunlawton Ave. right turn lane at Nova Road; extension of existing left turn lanes westbound Dunlawton Ave. at Clyde Morris Boulevard and eastbound Dunlawton Ave. at Nova Road and a right turn lane on southbound Yorktowne Boulevard at the intersection with Dunlawton Avenue and modification to the left turn lane on northbound Yorktowne Boulevard at the intersection with Dunlawton Avenue. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)							
PNC024	Clyde Morris Turn Lane Bundle	217,446	441,000	5,125,054	-	-	5,783,500

CAPITAL IMPROVEMENTS ELEMENT

Capital Projects (301)	20,275	36,000	117,225	-	-	173,500
TPO Funds	197,171	405,000	5,007,829	-	-	5,610,000
Total	217,446	441,000	5,125,054	-	-	5,783,500
THIS PROJECT IS PART OF A BUNDLE OF CLYDE MORRIS TURNLANES. (PNC021, PNC022, PNC023) This project consists of a right turn lane on southbound Clyde Morris Boulevard at the intersection with Madeline Avenue to improve traffic flow, reduce delays for turning vehicles and through vehicles, and improve intersection safety. The project will add roadway capacity at the intersection and reduce delays for northbound vehicles turning right or through northbound traffic. Additional right-of-way is anticipated to be needed for this project. The City submitted the project for TPO funding in Spring 2019 and a feasibility study was completed in February 2020. Under current policy, the TPO will fund up to 90% of the project design, construction and CEI cost and the City will fund 10% of the project. The project is now on the TPO's Project Priority List and is eligible for funding if the City commits to support the design and construction phases based on the feasibility study. The City's local match will be funded with restricted Gas Tax funds (Fund 301). The cost estimate was updated in March 2022 based on inflation and current cost data. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)						
New-002	Widening of Madeline Avenue Between Clyde Morris Blvd & Nova Road	-	1,125,000	-	-	1,125,000
Transportation Impact Fee (312)	-	112,500	-	-	-	112,500
TPO Funds	-	1,012,500	-	-	-	1,012,500
Total	-	1,125,000	-	-	-	1,125,000
The project consists of widening the current vehicle travel lanes on Madeline Avenue between Clyde Morris Boulevard and Nova Road. The proposed improvements are anticipated to be constructed within the existing right-of-way of Madeline Avenue; additional right-of-way is not anticipated to be required for this project. Removal of existing trees within the right-of-way may be required to accommodate the widening to improve driver safety, maintain sidewalks, LOS capacity, safety conditions, and long-term maintenance. The City submitted the project for TPO funding in Spring 2020. Under the current policy, the TPO will fund up to 90% of the project design and construction cost and the City will fund 10% of the project. Once ranked by the TPO, a feasibility study will be conducted; upon completion, the project will be eligible for inclusion in the TPO program if the City commits to support the design and construction phases. The estimated design and construction cost of the project will be adjusted after the feasibility study is completed. (Consistent w/ Comp Plan: Transp. Obj. 2.7, 2.9, 2.13, and 2.14)						
001	Madeline Avenue Eastbound & Westbound Turn Lane Improvement at Nova Road	-	155,800	640,800	-	796,600
Capital Projects (301)	-	15,580	64,080	-	-	79,660
TPO Funds	-	140,220	576,720	-	-	716,940
Total	-	155,800	640,800	-	-	796,600
The project consists of widening the current vehicle travel lanes on Madeline Avenue between Clyde Morris Boulevard and Nova Road. The proposed improvements are anticipated to be constructed within the existing right-of-way of Madeline Avenue; additional right-of-way is not anticipated to be required for this project. Removal of existing trees within the right-of-way may be required to accommodate the widening to improve driver safety, maintain sidewalks, LOS capacity, safety conditions, and long-term maintenance. The City submitted the project for TPO funding in Spring 2020. Under the current policy, the TPO will fund up to 90% of the project design and construction cost and the City will fund 10% of the project. Once ranked by the TPO, a feasibility study will be conducted; upon completion, the project will be eligible for inclusion in the TPO program if the City commits to support the design and construction phases. The estimated design and construction cost of the project will be adjusted after the feasibility study is completed. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)						
201859	Taylor Rd./Williamson Blvd. Intersection Improvement	-	-	2,000,000	4,521,736	6,521,736
Transportation Impact Fee (312)	-	-	1,775,000	452,174	-	2,227,174
TPO Funds	-	-	225,000	4,069,562	-	4,294,562
Total	-	-	2,000,000	4,521,736	-	6,521,736

CAPITAL IMPROVEMENTS ELEMENT

A Feasibility Study was completed in April 2020. The Feasibility Study identified alternatives that provide effective Improvements to minimize delays to traffic, eliminate or reduce crashes, and improve sidewalks and crosswalks for pedestrians at the Taylor Road and Williamson Boulevard intersection, and along the Taylor Road/Dunlawton Avenue corridor at 1-95. Under current policy, the TPO will fund up to 90% of the project and the City will fund 10% of the project. the TPO does not provide matching funds for land acquisition. Now that the study is completed, the projects identified by the feasibility study will be eligible for inclusion in the TPO's Project Priority List for design and construction funding. The current estimated cost for the improvement recommended in the Feasibility Study is \$4,137,135 and this cost does not include anticipated right of way needed for stormwater drainage at an anticipated 1.75 million dollars. The TPO does not provide matching funds for land or right of way acquisition. Staff plans to further discuss the recommendations in this Feasibility Study with FDOT to determine if these can be improvements completed by FOOT as they would add capacity, minimize delays to traffic, eliminate or reduce crashes, and improve sidewalks and crosswalks for pedestrians. The proposed improvements include Taylor Road at Williamson Boulevard: 1) Provide an additional southbound left turn lane (3rd turn lane) and 2) Modify the sidewalk and crosswalk on the north leg as shown to improve pedestrian visibility. Taylor Road/Dunlawton Avenue at 1-95 SB Ramps: 1) Provide an additional southbound left turn lane, and 2) Remove the southbound channelized right turn lane and bring it under a signal, 3) Add a lane under the bridge in the westbound direction that will drop as outside westbound left turn lane at Taylor Road and Williamson Boulevard, and 4) Provide an eastbound right turn lane and remove the channelized right turn lane. Dunlawton Avenue at 1-95 NB Ramps: 1) Extend the existing storage lane for the westbound left turn to 1-95 SB on ramp to help mitigate the lane imbalance issue along westbound Taylor Road, 2) Add an exclusive westbound right turn for 1-95 NB on ramp with the current westbound outside lane being dropped as a right turn lane to 1-95 NB on ramp, and 3) Provide sidewalk south of Taylor Road between east of Williamson Boulevard and east of 1-95 NB Ramps. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)

OMI037	Taylor Rd./Clyde Morris Blvd. Intersection Improvements						
		-	-	90,000	385,000	-	475,000
Transportation Impact Fee (312)		-	-	9,000	38,500	-	47,500
TPO Funds		-	-	81,000	346,500	-	427,500
Total		-	-	90,000	385,000	-	475,000

The project consists of looking at options to modify the intersection at Taylor Road/Clyde Morris Boulevard to improve movement through the intersection, specifically the eastbound Taylor Road through movement and left turn onto Clyde Morris Boulevard. The intersection experiences congestion throughout the day, most notably in the morning and late afternoon. Additional right of way is anticipated to be needed for any intersection improvements. The City submitted the project for TPO funding to prepare a Feasibility Study in Spring 2018. A Feasibility Study will first need to be conducted to develop an estimated cost for design and construction. Under current policy, the TPO will fund up to 90% of the project and the City will fund 10% of the project. Once the study is completed, the project will be eligible for inclusion in the TPO's Project Priority List for design and construction funding and the cost estimates will be updated. The City's local match will be funded with Transportation Impact Fee Fund 312. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3, Obj. 2.8)

PNC025	Spruce Creek Elem. School EB Taylor Rd. Right Turn Lane and Pedestrian Improvements						
		-	-	75,000	440,000	-	515,000
Capital Projects (301)		-	-	7,500	44,000	-	51,500
TPO Funds		-	-	67,500	396,000	-	463,500
Total		-	-	75,000	440,000	-	515,000

The project consists of a right turn lane on eastbound Taylor Rd. at the intersection with Spruce Creek Elementary School to improve safety, improve traffic flow, reduce delays for turning vehicles and through vehicles during school drop off and pick up. Additionally, pedestrian improvements and modifications to the left turn lane could also be accomplished with this project. The project will improve safety at the school, improve roadway capacity and reduce delays for eastbound and westbound vehicles. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)

PNC016	EB & WB Herbert St. Turn Lanes at Nova Rd						
		32,700	-	100,000	660,000	-	792,700
Capital Projects (301)		3,000	-	10,000	66,000	-	79,000
TPO Funds		29,700	-	90,000	594,000	-	713,700
Total		32,700	-	100,000	660,000	-	792,700

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The project consists of looking at options to modify the intersection of Nova Road and Herbert Street to improve movement through the intersection. The intersection experiences congestion throughout the day, most notably in the morning and late afternoon. Additional right of way is anticipated to be needed for any intersection improvements. The City submitted the project for TPO funding in Spring 2017 but as of March 2022, this project has not been selected to receive funds for a feasibility study. The estimated design and construction cost of the project is \$760,000 but will be adjusted after the feasibility study is completed. Based on this estimated cost, the City's share would be \$78,000 including \$2,000 for feasibility study, \$10,000 for design, \$60,000 for construction, and \$6,000 for CEL. The City's local match will be funded with restricted Gas Tax funds (Fund 301). As part application request for a feasibility study, the City requests that multiple options be evaluated. With improvements to the intersection, specifically, turn lane improvements on Herbert Street and Nova Road along with corresponding signal timing improvements more green time could be allocated to Nova Road. (Consistent w/ Comp Plan: Transp. Objective 2.7, Policy 2.7.3)							
TOTAL TRANSPORTATION		1,050,146	3,607,958	11,315,814	9,158,150	1,317,935	26,450,003
DRAINAGE							
DIP068	Halifax River Outfall Replacement	285,430	285,430	285,430	285,430	285,430	1,427,150
Stormwater Utility Capital Project Fund 413		285,430	285,430	285,430	285,430	285,430	1,427,150
Total		285,430	285,430	285,430	285,430	285,430	1,427,150
There are 14 stormwater discharge outfalls directly to the Halifax River throughout the City. Many of these outfalls are constructed of metal pipes that have corroded throughout the years due to the harsh saltwater environment. These pipes need to be replaced with Reinforced Concrete Pipe; in addition, headwalls will need to be constructed or reconstructed to accommodate the reinforced concrete pipe and possibly upsized in the diameter of the pipe. Also, the storm water pipe networks associated with the outfalls are tidally influenced which allows river water to enter the networks and equalize to the tidal water level. This project presents an opportunity to install engineered tidal gates at all locations where flooding issues are caused by tidal surcharge and lack of stormwater capacity. (Consistent w/ Comp Plan: Drainage, Policy 1.2 through 1.4)							
DIP200	Southwinds Stormwater Pond Outfall Retrofit	-	-	100,000	-	-	100,000
Stormwater Utility Capital Project Fund 413		-	-	100,000	-	-	100,000
Total		-	-	100,000	-	-	100,000
This project involves modification to the existing stormwater ponds of the Southwinds neighborhood stormwater system. Currently, the subdivision does not have a positive stormwater outfall discharge. An engineered plan will be required to design and permit an outfall. (Consistent w/ Comp Plan: Drainage, Policy 1.2 through 1.4)							
DIP075	Pipe Repair and Replacement	350,000	350,000	350,000	350,000	350,000	1,750,000
Stormwater Utility Capital Project Fund 413		350,000	350,000	350,000	350,000	350,000	1,750,000
Total		350,000	350,000	350,000	350,000	350,000	1,750,000
R & R funding to Replace/repair deteriorated and/or undersized corrugated metal pipes with properly sized reinforced concrete pipe or liners to improve storm water conveyance to reduce potential for flooding. (Consistent w/ Comp Plan: Drainage, Policy 1.2 through 1.4)							
DIP073	Storm Water Master Plan Phase II	250,000	1,500,000	1,500,000	1,500,000	1,500,000	6,250,000
Stormwater Utility Capital Project Fund 413		250,000	1,500,000	1,500,000	1,500,000	1,500,000	6,250,000
Total		250,000	1,500,000	1,500,000	1,500,000	1,500,000	6,250,000
The Stormwater Master plan update will identify corrective measures to alleviate existing deficiencies in the system and proactively plan for new improvements needed to accommodate future development. The Stormwater Master Plan will help prioritize spending for future capital drainage projects and ensure existing stormwater drainage systems are adequately and proactively maintained. The current estimated cost to update the Stormwater Master Plan is \$605,000.00. Phase 1 of the plan began in Fiscal Year 2016 at a cost of \$247,340.00. This phase only included the Eastern Basin and the vicinity of District I and IV. Phase 2 of the plan is anticipated to begin in Fiscal Year 2021 at a cost of \$200,00.00. (Consistent w/ Comp Plan: Drainage, Policy 1.2 through 1.4)							
DIP203	Delmar and Palmas Drive	150,000	-	-	-	-	150,000
Stormwater Utility Capital Project Fund 413		150,000	-	-	-	-	150,000
Total		150,000	-	-	-	-	150,000

CAPITAL IMPROVEMENTS ELEMENT

At the intersection of Delmar and Palmas Drive, roadway and property continually flood due to the absence of a drainage system to convey stormwater runoff. In addition, the existing grade at the intersection is much lower than the surrounding areas allowing the stormwater runoff to accumulate. The accumulation causes flooding on the roadway and adjacent residential properties. The project consists of correcting the drainage deficiencies at Delmar where it intersects with Palmas Drive. The cost of drainage easement acquisition (if required) is not included. The design is to create a path for the stormwater runoff to drain to the exiting stormwater drainage system and prevent continued flooding of this intersection. (Consistent w/ Comp Plan: Drainage, Policy 1.2 through 1.4)							
TOTAL—DRAINAGE		1,035,430	2,135,430	2,235,430	2,135,430	2,135,430	9,677,150
PARKS AND RECREATION							
QPC082	Recreational Educational Cultural Center (REC) Center Expansion	281,000	-	-	-	-	281,000
General Capital Replacement (317)		281,000	-	-	-	-	281,000
Total		281,000	-	-	-	-	281,000
This project will provide for a re purposing and expansion of a former gymnasium to a Recreational, Educational and Cultural Center that will include areas for classes, after school programs, community meetings, dance/exercise room and a youth activity room. New restrooms will be constructed, and the Center will provide for ADA access. This project will provide expanded recreational opportunities for the City. (Consistent w/ Comp Plan: ROSE, Obj. 1, Policy 1.2, Obj. 2, Policy 2.2)							
QPC200	Coraci North	-	1,210,000	575,000	575,000	575,000	2,935,000
Grant Funding		-	1,210,000	575,000	575,000	575,000	2,935,000
Total		-	1,210,000	575,000	575,000	575,000	2,935,000
This project involves the design and construction of a sports complex to include 3 baseball fields, 4—6 soccer / football fields, lighting, and support buildings. The project would encompass 100 acres with the construction of roadways, ponds, parking lots, playgrounds, and picnic areas as well as trails and open space. The project would be eligible for FRDAP and ECHO grants and provide availability for partnerships with other public groups and private donors. This project will provide expanded recreational opportunities for the City. (Consistent w/ Comp Plan: ROSE, Obj. 1, Policy 1.1, Obj. 2, Policy 2.1)							
201795	West Side Community Center	-	630,000	-	5,250,000	-	5,880,000
Grant Funding—Unsecured		-	630,000	-	5,250,000	-	5,880,000
Total		-	630,000	-	5,250,000	-	5,880,000
This project will provide for the construction of a 15,000 SF community center to include two gyms, community rooms, after school areas and offices. The center would be equipped with technology, office furniture and miscellaneous equipment. Proposed funding is from grants, bonds or possibly a community foundation. This project will provide expanded recreational opportunities for the City. (Consistent w/ Comp Plan: ROSE, Obj. 1, Policy 1.1, Obj. 2, Policy 2.2)							
TOTAL—PARKS AND RECREATION		281,000	1,840,000	575,000	5,825,000	575,000	9,096,000
TOTAL—CAPITAL IMPROVEMENTS		6,166,576	13,383,388	17,076,244	27,868,580	7,128,365	71,623,153

Project #	Description	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Total
WATER							
URP001	Water System Replacement/Upsizing	1,500,000	500,000	500,000	500,000	500,000	3,000,000
Water/Sewer R&R (403)		1,500,000	500,000	500,000	500,000	500,000	3,500,000
Total		1,500,000	500,000	500,000	500,000	500,000	3,500,000
Planned replacement of undersized galvanized steel piping in older sections of the city and peninsula area. Target areas to be accomplished based on current priorities.							
URP200	South Peninsula Force Main Upgrades	150,000	1,000,000	-	-	-	1,150,000
Water/Sewer R&R (403)		150,000	1,000,000	-	-	-	1,150,000
Total		150,000	1,000,000	-	-	-	1,150,000
The sewer system in Ponce Inlet is owned and operated by the City of Port Orange. This wastewater transmission system improvement project involves replacing approximately 2,100 LF existing Ductile Iron Pipe (DIP) force main with new HPDE/PVC force main along S. Peninsula Dr from Beach Street to the Ponce Inlet Master lift station. The existing force main pipe material is ductile iron and has begun to corrode from the inside due to the corrosive sewer gasses. As the pipe continues to deteriorate, the possibility of a failure increases dramatically. The new force main will be sized to handle all of the existing flow, plus any additional future flow from the Town of Ponce Inlets septic to sewer program.							

CAPITAL IMPROVEMENTS ELEMENT

WWP003	Water Treatment Plant R&R - Equipment	200,000	200,000	200,000	250,000	250,000	850,000
	Water/Sewer R&R (403)	200,000	200,000	200,000	250,000	250,000	1,100,000
	Total	200,000	200,000	200,000	250,000	250,000	1,100,000
Planned improvements for City's water treatment plant and various wells per Table 2A Water Treatment Plant Improvements.							
WWP008	Water Treatment Plant- Raw Water Main Replacement	-	-	3,000,000	-	-	3,000,000
	Water/Sewer R&R (403)	-	-	3,000,000	-	-	3,000,000
	Total	-	-	3,000,000	-	-	3,000,000
There is currently only one pipeline from the wellfield on Shuntz Road to the Garnsey Water Treatment Plant. This pipeline provides 80% of the well water into the treatment plant. The 30-inch diameter, 5 mile long prestressed concrete pipeline has been in service over 30 years. It is a specialty pipe that staff cannot repair in house. In fact, there are very few specialty firms that can repair this type of pipeline. Should the pipe fail, damages would be significant to the surrounding area and significantly impair the treatment plants ability to supply drinking water to the customers. This project would provide a secondary pipeline to the treatment plant to provide reliability on the system.							
WRP001	City-Wide Class Pipe Replacement	750,000	750,000	750,000	750,000	750,000	3,000,000
	Water/Sewer R&R (403)	750,000	750,000	750,000	750,000	750,000	3,750,000
	Total	750,000	750,000	750,000	750,000	750,000	3,000,000
Identify and replace critical sections of large diameter (10" and greater) potable water transmission mains that are construction out of Class Pipe. Class Pipe water mains are an industry wide problem in water distribution. Over time the pipe can fail prematurely causing outages for large areas of a service area and require expensive emergency repairs. Failures have already occurred on Spruce Creek Road and Taylor Road, causing significant damage.							
	TOTAL - WATER	2,600,000	2,450,000	4,450,000	1,500,000	1,500,000	9,850,000
SANITARY SEWER							
URH001	Sewer System Rehabilitation	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
	Water/Sewer R&R (403)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
	Total	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
There are currently 110 lift stations in the collection system. This is an on-going repair and rehabilitation project for the sewer collection system at each lift station. The scope of work will depend upon the condition, age and capacity of the pipeline.							
SSP002	Water Reclamation Facility R&R	500,000	500,000	550,000	550,000	500,000	2,100,000
	Water/Sewer R&R (403)	500,000	500,000	550,000	550,000	500,000	2,600,000
	Total	500,000	500,000	550,000	550,000	500,000	2,600,000
Scheduled facility repair and equipment replacement of electrical and mechanical system components for the City's wastewater treatment plant per Table 2D Wastewater Treatment Plant Improvements.							
URH003	Sewer System Rehab - Force Main River Crossing	2,500,000	-	-	-	-	2,500,000
	Future Grant/Bonds	2,500,000	-	-	-	-	2,500,000
	Total	2,500,000	-	-	-	-	2,500,000
Scheduled facility repair and equipment replacement of electrical and mechanical system components for the City's wastewater treatment plant per Table 2D Wastewater Treatment Plant Improvements.							
SSP017	Water Reuse Program	150,000	150,000	-	-	-	300,000
	Water/Sewer R&R (403)	150,000	150,000	-	-	-	300,000
	Total	150,000	150,000	-	-	-	300,000

CAPITAL IMPROVEMENTS ELEMENT

A three million gallon ground storage tank with pump station to provide additional reuse supply for irrigation and minimize discharge to the Halifax River. Location to be identified in utility master plan. Staff will apply for grant funding. Current grant funding from SFRWMD is 33% for shovel ready projects.							
SLS002	WRF Replace Existing Lift Stations	100,000	100,000	100,000	100,000	100,000	400,000
Water/Sewer R&R (403)		100,000	100,000	100,000	100,000	100,000	500,000
Total		100,000	100,000	100,000	100,000	100,000	500,000
There are 110 sewage lift stations located throughout the city which pump sewage from the gravity collection system to the wastewater treatment plant. Life expectancy of the equipment is 15 years. Much of the existing equipment is at the end of their useful life. Costs for repair/rehabilitation/replacement currently averages \$60,000 per station. Each year the stations are evaluated based on age, capacity, and overall condition. In FY 20, the stations located at Halifax Estates, Devon St., Town Homes West and Sugar Forest are anticipated to require capital R&R. This is an ongoing R&R program with the anticipation of work on 5 to 6 stations per year.							
SLS203	Williams Regional Lift Station Rehab	1,500,000	-	-	-	-	1,500,000
Water/Sewer R&R (403)		1,500,000	-	-	-	-	1,500,000
Total		1,500,000	-	-	-	-	1,500,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, Odor control, building, and site upgrades to the Williamson Regional Lift Station (Station No. 95). This project is necessary to insure uninterrupted collection and transmission of wastewater. Williamson is a regional lift station that ultimately provides service to residences in the southwest portion of the City. The proposed improvements include installation of an advance odor control system, installation of static mixers in the wet well, replacement of electrical equipment damaged by the excessive hydrogen sulfide gasses, and rehabilitation of the existing electrical building.							
SLS204	Sugar Forest Lift Station Rehab	700,000	-	-	-	-	700,000
Water/Sewer R&R (403)		700,000	-	-	-	-	700,000
Total		700,000	-	-	-	-	700,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Sugar Forest Lift Station (Station No. 40). This project is necessary to insure uninterrupted collection and transmission of wastewater. Sugar Forest lift station provides service to residences and businesses in the Sugar Mill Gardens section of the City. Due do the shallow existing wet well, the gravity sewer lines in the area of the lift station are often surcharged, additionally the lift station is constructed in the center median at the entrance of the Sugar Forest neighborhood. This location makes it difficult to properly maintain the lift station. The proposed improvements include installing a new, deeper wet well, converting from suction lift pumping to submersible pumping, installation of a new electrical control panel, and site improvements.							
SLS206	Halifax Estates Lift Station Rehab	640,000	-	-	-	-	640,000
Water/Sewer R&R (403)		640,000	-	-	-	-	640,000
Total		640,000	-	-	-	-	640,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Halifax Estates lift station (Station No. 9). This project is necessary to insure uninterrupted collection and transmission of wastewater. Halifax Estates lift station provides service to approximately 50 residences and businesses in the Halifax Mobile Estates. The proposed improvements include converting from suction lift pumping to submersible pumping, installation of a new control panel, and site improvements including raising the wet well top and electrical control panel above the 100-year flood plain.							
SLS207	Ponce Inlet Master Lift Station	180,000	1,750,000	-	-	-	1,930,000
Water/Sewer R&R (403)		180,000	1,750,000	-	-	-	1,930,000
Total		180,000	1,750,000	-	-	-	1,930,000
The sewer system in Ponce Inlet is owned and operated by the City of Port Orange. This wastewater transmission system improvement project involves the design, permitting, and construction of complete mechanical, electrical, and odor control upgrades to the Ponce Inlet Master Lift Station (Station No. 195). This project is necessary to insure uninterrupted collection and transmission of wastewater. the Ponce Inlet Master is a regional lift station that ultimately provides service to approximately 1,700 residences in Ponce Inlet and Wilber-by-the-Sea. The station was originally constructed in 1991 and was last upgraded in 2006.							
SLS208	Southern Pines Lift Station Rehab	700,000	-	-	-	-	700,000
Water/Sewer R&R (403)		700,000	-	-	-	-	700,000

CAPITAL IMPROVEMENTS ELEMENT

	Total	700,000	-	-	-	-	700,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Southern Pines lift station (Station No. 22). This project is necessary to insure uninterrupted collection and transmission of wastewater. Southern Pines lift station provides service to approximately 300 residences and businesses in the Southern Pines & Spruce Creek Village subdivisions and surrounding area. The proposed improvements include converting from suction lift pumping to submersible pumping, installation of a new control panel, and site improvements including raising the wet well top and electrical control panel above the 100-year flood plain.							
SLS209	<u>Waters Edge Lift Station #38</u>	1,025,000	-	-	-	-	1,025,000
Water/Sewer R&R (403)		1,025,000	-	-	-	-	1,025,000
	Total	1,025,000	-	-	-	-	1,025,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Water's Edge 2 Lift Station (Station No. 38). This project is necessary to insure uninterrupted collection and transmission of wastewater. Water's Edge 2 lift station provides service to approximately 610 residences and businesses in the Water's Edge subdivision. The proposed improvements include converting from suction lift pumping to submersible pumping, installation of a new control panel, and site improvements including raising the wet well top and electrical control panel above the 100-year flood plain.							
SLS210	<u>Waters Edge Lift Station #42</u>	1,025,000	-	-	-	-	1,025,000
Water/Sewer R&R (403)		1,025,000	-	-	-	-	1,025,000
	Total	1,025,000	-	-	-	-	1,025,000
This wastewater transmission system improvement project involves the design, permitting, and construction of mechanical, electrical, and site upgrades to the Water's Edge 1 Lift Station (Station No. 42). This project is necessary to insure uninterrupted collection and transmission of wastewater. Water's Edge 1 lift station provides service to approximately 550 residences and businesses in the Water's Edge subdivision. The proposed improvements include converting from suction lift pumping to submersible pumping, installation of a new control panel, and site improvements including raising the wet well top and electrical control panel above the 100-year flood plain.							
SSP201	<u>Leisure Circle Sewer Improvement</u>	500,000	-	-	-	-	500,000
Water/Sewer R&R (403)		500,000	-	-	-	-	500,000
	Total	500,000	-	-	-	-	500,000
This project will include removal and replacement of three sanitary manholes and approximately 600 LF of failing 10" clay gravity sewer main. This gravity sewer collection system, constructed in the late 1970's is failing and needs to be replaced. Due to the depth and level of failure, this line is not able to be rehabilitated in place by pipe lining.							
SSP202	<u>Reclaimed Lake Improvements (Lake A & Lake B)</u>	2,000,000	-	-	-	-	2,000,000
Water/Sewer R&R (403)		2,000,000	-	-	-	-	2,000,000
	Total	2,000,000	-	-	-	-	2,000,000
City currently stores treated reclaimed water in Lake A and Lake B. To provide additional reclaimed water storage, the Lake B reservoir will be evaluated and designed with higher berms to match the Lake A berm elevation and both lakes are proposed to operate with 1-ft of additional staging. This is anticipated to require extensive permitting and modification of the existing control and drainage structures to accommodate the new hydraulic profile. A draft Preliminary Design Report (PDR) evaluating the feasibility and wetland impacts of raising the Lake B berm height to match Lake A's berm height and for both Lakes to operate at a higher high-water level (HWL), providing additional reclaimed water storage.							
SSP203	<u>Water Reclaimed Facility Upgrades</u>	2,500,000	-	70,000,000	-	-	72,500,000
Water/Sewer R&R (403)		2,500,000	-	70,000,000	-	-	72,500,000
	Total	2,500,000	-	70,000,000	-	-	72,500,000
City currently stores treated reclaimed water in Lake A and Lake B. To provide additional reclaimed water storage, the Lake B reservoir will be evaluated and designed with higher berms to match the Lake A berm elevation and both lakes are proposed to operate with 1-ft of additional staging. This is anticipated to require extensive permitting and modification of the existing control and drainage structures to accommodate the new hydraulic profile. A draft Preliminary Design Report (PDR) evaluating the feasibility and wetland impacts of raising the Lake B berm height to match Lake A's berm height and for both Lakes to operate at a higher high-water level (HWL), providing additional reclaimed water storage.							

CAPITAL IMPROVEMENTS ELEMENT

TOTAL - SANITARY SEWER		15,020,000	3,500,000	71,650,000	1,650,000	1,600,000	91,820,000
WATER & SANITARY SEWER							
UCP001	City Cost Participation	-	-	50,000	50,000	50,000	100,000
Water Impact Fee (405)		-	-	25,000	25,000	25,000	75,000
Sewer Impact Fee (405)		-	-	25,000	25,000	25,000	75,000
Total		-	-	50,000	50,000	50,000	150,000
Citywide annual cost participation program with new development to upsize various water and sewer lines, extension of various mains, upsizing of lift stations, and other miscellaneous items.							
TOTAL - WATER & SANITARY SEWER		-	-	50,000	50,000	50,000	150,000
TRANSPORTATION							
POL205	Road Resurfacing and Reconstruction	800,000	800,000	800,000	800,000	800,000	3,200,000
Capital Projects (301)		800,000	800,000	800,000	800,000	800,000	4,000,000
Total		800,000	800,000	800,000	800,000	800,000	4,000,000
Multi Year Reconstruction Program. Ongoing routine maintenance program to repair/replace paving on existing streets throughout the city. This project also includes unexpected repairs that cannot be performed by in-house staff.							
200905	Williamson Blvd. N. of Pavilion	-	-	-	220,000	260,935	220,000
Developer Constructed		-	-	-	220,000	260,935	480,935
Total		-	-	-	220,000	260,935	480,935
This project involves adding 2 lanes to the existing 2 lane Williamson Blvd. roadway from the north boundary of the Pavilion project north to Town West Blvd., a 0.53 mile section. Project cost estimates are based on construction of an additional 2 travel lanes within the existing right-of-way with minimal impact to the existing roadway. The new construction will require stormwater treatment and it will be necessary to acquire an estimated 1 acre of off-site property for this purpose.							
200907	Coraci Blvd. Extension	-	-	-	257,000	2,150,000	257,000
Developer Constructed		-	-	-	257,000	2,150,000	2,407,000
Total		-	-	-	257,000	2,150,000	2,407,000
This project involves construction of a 1/2 mile 2-lane divided roadway extending Coraci Blvd. 2600' from the south limits of Coquina Cove III to Carmody Lake Drive within the existing undeveloped right-of way. Drainage improvements are projected to be constructed in the right-of-way. This will serve as an alternate route and reliever route for traffic generated by the Forest Lakes subdivision and to a lesser extent to Coquina Cove and reduce impacts on Taylor Road. This roadway is indicated as a future collector road in the Comprehensive Plan.							
PNC015	Yorktowne Blvd North Section (Nautica Lakes)	-	-	-	2,131,414	-	2,131,414
Developer Fairshare Contr. (Planned)		-	-	-	2,131,414	-	2,131,414
Total		-	-	-	2,131,414	-	2,131,414
This project is proposed as either a 2-lane or 4-lane divided curb and gutter road designed to major collector street standards. The roadway design is complete and was done in conjunction with the Nautica Lakes development. This improvement is required to complete the Yorktowne Blvd. connection between Hidden Lakes Dr. and Willow Run Blvd. Completion of these sections would redirect traffic and relieve congestion at the I-95/Dunlawton Ave. intersection and Williamson Boulevard, south of Willow Run Boulevard.							
201015	Willow Run Boulevard Widening	-	200,000	-	-	1,125,000	200,000
Capital Projects (301)		-	200,000	-	-	-	200,000
TPO Funds		-	-	-	-	1,125,000	1,125,000
Total		-	200,000	-	-	1,125,000	1,325,000
A 1/4 mile segment of Willow Run east of Williamson Boulevard to the proposed intersection of the Yorktowne Boulevard extension will need to be improved to accommodate future traffic flows diverted from Williamson Boulevard and future traffic on the new							

CAPITAL IMPROVEMENTS ELEMENT

Yorktowne north extension. A traffic circle or other improvements at the Willow Run/Yorktowne intersection will be considered as part of the design.							
PNC200	Dunlawton and Yorktowne Turn Lane Bundle	259,500	-	1,774,588	-	-	2,034,088
Capital Projects (301)		259,500	-	177,459	-	-	436,959
TPO Funds		-	-	1,597,129	-	-	1,597,129
	Total	259,500	-	1,774,588	-	-	2,034,088
This project is a bundle of three previous separate projects (PNC020, IMI011, PNC018, PNC019) . This project consists of five turn lane projects: 1) Westbound Dunlawton Ave. right turn lane at Nova Road; extension of existing left turn lanes westbound Dunlawton Ave. at Clyde Morris Boulevard and eastbound Dunlawton Ave. at Nova Road and a right-turn lane on southbound Yorktowne Boulevard at the intersection with Dunlawton Avenue and modification to the left-turn lane on northbound Yorktowne Boulevard at the intersection with Dunlawton Avenue.							
PNC024	Clyde Morris Turn Lane Bundle	215,864	275,000	-	829,696	-	1,320,560
Capital Projects (301)		21,586	275,000	-	9,170	-	305,756
TPO Funds		194,278	-	-	820,526	-	1,014,804
	Total	215,864	275,000	-	829,696	-	1,320,560
THIS PROJECT IS PART OF A BUNDLE OF CLYDE MORRIS TURNLANES. (PNC021, PNC022, PNC023) This project consists of a right turn lane on southbound Clyde Morris Boulevard at the intersection with Madeline Avenue to improve traffic flow, reduce delays for turning vehicles and through vehicles, and improve intersection safety. The project will add roadway capacity at the intersection and reduce delays for northbound vehicles turning right or through northbound traffic. Additional right-of-way is anticipated to be needed for this project. The City submitted the project for TPO funding in Spring 2019 and a feasibility study was completed in February 2020. Under current policy, the TPO will fund up to 90% of the project design, construction and CEI cost and the City will fund 10% of the project. The project is now on the TPO's Project Priority List and is eligible for funding if the City commits to support the design and construction phases based on the feasibility study. The City's local match will be funded with restricted Gas Tax funds (Fund 301). The cost estimate was updated in March 2022 based on inflation and current cost data.							
PNC201	Widening of Madeline Avenue Between Clyde Morris Blvd & Nova Road	45,000	200,000	-	1,125,000	-	1,370,000
Transportation Impact Fee (312)		4,500	20,000	-	112,500	-	137,000
TPO Funds		40,500	180,000	-	1,012,500	-	1,233,000
	Total	45,000	200,000	-	1,125,000	-	1,370,000
The projects consists of widening the current vehicle travel lanes on Madeline Avenue between Clyde Morris Boulevard and Nova Road. The proposed improvements are anticipated to be constructed within the existing right-of-way of Madelline Avenue; additional right-of-way is not anticipated to be required for this project. Removal of existing trees within the right-of-way may be required to accommodate the widening to improve driver safety, maintain sidewalks, LOS capacity, safety conditions, and long-term maintenance. The City submitted the project for TPO funding in Spring 2020. Under the current policy, the TPO will fund up to 90% of the project design and construction cost and the City will fund 10% of the project. Once ranked by the TPO, a feasibility study will be conducted; upon completion, the project will be eligible for inclusion in the TPO program if the City commits to support the design and construction phases. The estimated design and construction cost of the project will be adjusted after the feasibility study is completed.							
001	Madeline Avenue Eastbound & Westbound Turn Lane Improvement at Nova Road	-	155,800	-	-	-	155,800
Capital Projects (301)		-	15,580	-	-	-	15,580
TPO Funds		-	140,220	-	-	-	140,220
	Total	-	155,800	-	-	-	155,800
The projects consists of widening the current vehicle travel lanes on Madeline Avenue between Clyde Morris Boulevard and Nova Road. The proposed improvements are anticipated to be constructed within the existing right-of-way of Madelline Avenue; additional right-of-way is not anticipated to be required for this project. Removal of existing trees within the right-of-way may be required to accommodate the widening to improve driver safety, maintain sidewalks, LOS capacity, safety conditions, and long-term maintenance. The City submitted the project for TPO funding in Spring 2020. Under the current policy, the TPO will fund up to 90% of the project design and construction cost and the City will fund 10% of the project. Once ranked by the TPO, a feasibility study will							

CAPITAL IMPROVEMENTS ELEMENT

be conducted; upon completion, the project will be eligible for inclusion in the TPO program if the City commits to support the design and construction phases. The estimated design and construction cost of the project will be adjusted after the feasibility study is completed.

201859	Taylor Rd./Williamson Blvd. Intersection Improvement	-	2,000,000	4,521,736	-	-	6,521,736
Transportation Impact Fee (312)		-	1,775,000	452,174	-	-	2,227,174
TPO Funds		-	225,000	4,069,562	-	-	4,294,562
	Total	-	2,000,000	4,521,736	-	-	6,521,736

A Feasibility Study was completed in April 2020. The Feasibility Study identified alternatives that provide effective Improvements to minimize delays to traffic, eliminate or reduce crashes, and improve sidewalks and crosswalks for pedestrians at the Taylor Road and Williamson Boulevard intersection, and along the Taylor Road/Dunlawton Avenue corridor at 1-95. Under current policy, the TPO will fund up to 90% of the project and the City will fund 10% of the project. the TPO does not provide matching funds for land acquisition. Now that the study is completed, the projects identified by the feasibility study will be eligible for inclusion in the TPO's Project Priority List for design and construction funding. The current estimated cost for the improvement recommended in the Feasibility Study is \$4,137,135 and this cost does not include anticipated right-of-way needed for stormwater drainage at an anticipated 1.75 million dollars. The TPO does not provide matching funds for land or right-of-way acquisition. Staff plans to further discuss the recommendations in this Feasibility Study with FDOT to determine if these can be improvements completed by FOOT as they would add capacity, minimize delays to traffic, eliminate or reduce crashes, and improve sidewalks and crosswalks for pedestrians. The proposed improvements include Taylor Road at Williamson Boulevard: 1)Provide an additional southbound left turn lane (3rd turn lane) and 2)Modify the sidewalk and crosswalk on the north leg as shown to Improve pedestrian visibility. Taylor Road/Dunlawton Avenue at 1-95 SB Ramps: 1) Provide an additional southbound left turn lane, and 2) Remove the southbound channelized right turn lane and bring it under a signal, 3) Add a lane under the bridge in the westbound direction that will drop as outside westbound left turn lane at Taylor Road and Williamson Boulevard, and 4) Provide an eastbound right turn lane and remove the channelized right turn lane. Dunlawton Avenue at 1-95 NB Ramps: 1) Extend the existing storage lane for the westbound left turn to 1-95 SB on-ramp to help mitigate the lane imbalance issue along westbound Taylor Road, 2) Add an exclusive westbound right turn for 1-95 NB on-ramp with the current westbound outside lane being dropped as a right turn lane to 1-95 NB on-ramp. and 3) Provide sidewalk south of Taylor Road between east of Williamson Boulevard and east of 1-95 NB Ramps.

OMI037	Taylor Rd./Clyde Morris Blvd. Intersection Improvements	39,000	-	90,000	-	385,000	129,000
Transportation Impact Fee (312)		3,900	-	9,000	-	38,500	51,400
TPO Funds		35,100	-	81,000	-	346,500	462,600
	Total	39,000	-	90,000	-	385,000	514,000

The project consists of looking at options to modify the intersection at Taylor Road/Clyde Morris Boulevard to improve movement through the intersection, specifically the eastbound Taylor Road through movement and left-turn onto Clyde Morris Boulevard. The intersection experiences congestion throughout the day, most notably in the morning and late afternoon. Additional right-of-way is anticipated to be needed for any intersection improvements. The City submitted the project for TPO funding to prepare a Feasibility Study in Spring 2018. A Feasibility Study will first need to be conducted to develop an estimated cost for design and construction. Under current policy, the TPO will fund up to 90% of the project and the City will fund 10% of the project. Once the study is completed, the project will be eligible for inclusion in the TPO's Project Priority List for design and construction funding and the cost estimates will be updated. The City's local match will be funded with Transportation Impact Fee Fund 312.

PNC016	EB & WB Herbert St. Turn Lanes at Nova Rd	215,864	275,000	-	911,696	-	1,402,560
Capital Projects (301)		21,586	275,000	-	91,170	-	387,756
TPO Funds		194,278	-	-	820,526	-	1,014,804
	Total	215,864	275,000	-	911,696	-	1,402,560

The project consists of looking at options to modify the intersection of Nova Road and Herbert Street to improve movement through the intersection. The intersection experiences congestion throughout the day, most notably in the morning and late afternoon. Additional right-of-way is anticipated to be needed for any intersection improvements. The City submitted the project for TPO funding in Spring 2017 but as of March 2022, this project has not been selected to receive funds for a feasibility study. The estimated design and construction cost of the project is \$760,000 but will be adjusted after the feasibility study is completed. Based on this estimated cost, the City's share would be \$78,000 including \$2,000 for feasibility study, \$10,000 for design, \$60,000 for construction, and \$6,000 for CEI. The City's local match will be funded with restricted Gas Tax funds (Fund 301). As part application request for a feasibility study, the City requests that multiple options be evaluated. With improvements to the intersection, specifically, turn lane improvements on Herbert Street and Nova Road along with corresponding signal timing improvements more green time could be allocated to Nova Road.

CAPITAL IMPROVEMENTS ELEMENT

TOTAL - TRANSPORTATION		1,575,228	3,905,800	7,186,324	6,274,806	4,720,935	18,942,158
DRAINAGE							
DIP200	Southwinds Stormwater Pond Outfall Retrofit	-	1,500,000	-	-	-	1,500,000
Stormwater Utility Capital Project Fund 413		-	1,500,000	-	-	-	1,500,000
Total		-	1,500,000	-	-	-	1,500,000
This project involves modification to the existing stormwater ponds of the Southwinds neighborhood stormwater system. Currently, the subdivision does not have a positive stormwater outfall discharge. An engineered plan will be required to design and permit an outfall.							
DIP201	White Place & Riverside Drive Drainage Improvement	50,000	1,250,000	-	-	-	1,300,000
Stormwater Utility Capital Project Fund 413		50,000	1,250,000	-	-	-	1,300,000
Total		50,000	1,250,000	-	-	-	1,300,000
Analyze, design, and construct improvements to White Place and Riverside Drive drainage system to improve storm water storage and conveyance to reduce potential for flooding. Improvements will include the boring and installation of properly sized pipe.							
DIP075	Pipe Repair and Replacement	500,000	500,000	500,000	500,000	500,000	2,000,000
Stormwater Utility Capital Project Fund 413		500,000	500,000	500,000	500,000	500,000	2,500,000
Total		500,000	500,000	500,000	500,000	500,000	2,500,000
R & R funding to Replace/repair deteriorated and/or undersized corrugated metal pipes with properly sized reinforced concrete pipe or liners to improve storm water conveyance to reduce potential for flooding.							
DIP073	Storm Water Master Plan Phase II	-	1,500,000	1,500,000	1,500,000	1,500,000	4,500,000
Stormwater Utility Capital Project Fund 413		-	1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
Total		-	1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
The Stormwater Master plan update will identify corrective measures to alleviate existing deficiencies in the system and proactively plan for new improvements needed to accommodate future development. The Stormwater Master Plan will help prioritize spending for future capital drainage projects and ensure existing stormwater drainage systems are adequately and proactively maintained. The current estimated cost to update the Stormwater Master Plan is \$605,000.00. Phase 1 of the plan has began in Fiscal Year 2016 at a cost of \$247,340.00. This phase only included the Eastern Basin and the vicinity of District I and IV. Phase 2 of the plan is anticipated to begin in Fiscal Year 2021 at a cost of \$200,00.00.							
DIP204	Jackson St Stormwater Improvements	600,000	-	-	-	-	600,000
Stormwater Utility Capital Project Fund 413		600,000	-	-	-	-	600,000
Total		600,000	-	-	-	-	600,000
Install 2,000 feet of pipe in the open ditch on the west side of Jackson Street from Oak St. to Canal View Blvd. Currently the City maintains the open ditch by hand. The existing driveway culverts all have old and failing sand cement headwalls. Once the ditch is piped and filled in, the residents will take over the maintenance of the parkage in front of their residences. Install approximately 1,300 feet of pipe in the open ditch on the south side of Oak St. from Jackson St. to Dame St. The water elevation in this ditch is influenced by the Memorial Park Pond with reduces the capacity of the ditch. This causes local roadway flooding during heavy rain events.							
DIP205	Freemanville Drainage Improvements	180,000	-	-	-	-	180,000
Stormwater Utility Capital Project Fund 413		180,000	-	-	-	-	180,000
Total		180,000	-	-	-	-	180,000
This project is to pipe approximately 450LF of the open ditch from the Railroad Tracks east to Orange Ave in the Freemanville section of the City. The ditch is deep with greater than 4:1 side slopes, which makes it very difficult to properly maintain. Once piped, the maintenance of the area will revert to the property owners and the City will maintain an easement over the pipe.							
DIP206	Viking Dr Stormwater Improvements	25,000	250,000	-	-	-	275,000
Stormwater Utility Capital Project Fund 413		25,000	250,000	-	-	-	275,000

CAPITAL IMPROVEMENTS ELEMENT

	Total	25,000	250,000	-	-	-	275,000
Presently, Viking Drive does not have a stormwater system in place, and the localized depression area near 112 Viking Drive experiences standing water over the roadway during most rain events. This project consists of design and permitting stormwater improvements within Viking Drive area. Construction cost estimates to follow completion of the design.							
DIP207	Cambridge Canal Pump Station Upgrades	400,000	4,000,000	-	-	-	4,400,000
Stormwater Utility Capital Project Fund 413		400,000	4,000,000	-	-	-	4,400,000
	Total	400,000	4,000,000	-	-	-	4,400,000
Hurricanes Ian and Nicole exposed vulnerabilities and limitations of the Cambridge Pump station. Originally constructed in 2006 in response to the flooding from the 2004 hurricane season, in which over 200 homes were damaged by the flooding. The existing pump station discharges to a concrete trough which overflows to Rose Bay via a weir structure. During extreme high tide events the elevation of the water in Rose Bay is higher than the elevation of the discharge weir, not allowing the pump station to operate. The proposed improvements will include construction of a new discharge structure, discharge piping, and raising the berm of the ponds to allow for pumping during the extreme high tide events.							
DIP208	Nova Canal Regional Stormwater Pump Station	400,000	-	-	-	-	400,000
Stormwater Utility Capital Project Fund 413		400,000	-	-	-	-	400,000
	Total	400,000	-	-	-	-	400,000
Feasibility study for a stormwater pump station in the area of Dunlawton Ave and Spruce Creek Rd. In October of 2022, Hurricane Ian caused unprecedented flooding in the city. Much of this flooding was caused when the Nova Canal overtopped its banks and flooded the surrounding areas. This project is to study the feasibility of a regional stormwater pump station at or near the intersection of Dunlawton Ave and Spruce Creek Rd. The study will also include an estimate of probable cost for construction and assistance with identifying grant possibilities.							
DIP209	Portona Stormwater Improvements	150,000	750,000	-	-	-	900,000
Stormwater Utility Capital Project Fund 413		150,000	750,000	-	-	-	900,000
	Total	150,000	750,000	-	-	-	900,000
This project includes purchasing a 7AC vacant piece of property in the Portona section of the City for the construction of a stormwater pond and additional drainage infrastructure needed in the area for conveyance to the pond. The purchase of this property and the construction of the pond would provide stormwater management for the area between 1st and 5th Streets south of Charles St.							
	TOTAL - DRAINAGE	2,305,000	9,750,000	2,000,000	2,000,000	2,000,000	16,055,000
PARKS AND RECREATION							
QIO204	Memorial Park Boardwalk Replacement	732,000	-	-	-	-	732,000
General Capital Replacement (317)		732,000	-	-	-	-	732,000
	Total	732,000	-	-	-	-	732,000
The Memorial Park Piers are in bad condition and need to be completely replaced. The majority of the boards on both piers need constant maintenance and have reached their shelf life. The current condition of the piers creates a tripping hazard for citizens trying to enjoy to the park. They were also damaged by Hurricane Ian.							
QPC204	Restroom/Concession Facility (City Center Field 4&5)	-	427,000	-	-	-	427,000
General Capital Replacement (317)		-	427,000	-	-	-	427,000
	Total	-	427,000	-	-	-	427,000
This project involves the design and construction of a sports complex to include 3 baseball fields, 4 - 6 soccer / football fields, lighting and support buildings. The project would encompass 100 acres with the construction of roadways, ponds, parking lots, playgrounds and picnic areas as well as trails and open space. The project would be eligible for FRDAP and ECHO grants and provide availability for partnerships with other public groups and private donors. This project will provide expanded recreational opportunities for the City.							
QPC200	Coraci North	-	860,000	200,000	1,150,000	1,100,000	3,310,000
Grant Funding		-	860,000	200,000	1,150,000	1,100,000	3,310,000
	Total	-	860,000	200,000	1,150,000	1,100,000	3,310,000

CAPITAL IMPROVEMENTS ELEMENT

This project involves the design and construction of a sports complex to include 3 baseball fields, 4 - 6 soccer / football fields, lighting and support buildings. The project would encompass 100 acres with the construction of roadways, ponds, parking lots, playgrounds and picnic areas as well as trails and open space. The project would be eligible for FRDAP and ECHO grants and provide availability for partnerships with other public groups and private donors. This project will provide expanded recreational opportunities for the City.							
201795	West Side Community Center	-	630,000	-	5,250,000	-	5,880,000
Grant Funding - Unsecured		-	630,000	-	5,250,000	-	5,880,000
Total		-	630,000	-	5,250,000	-	5,880,000
This project will provide for the construction of a 15,000 SF community center to include two gyms, community rooms, after school areas and offices. The center would be equipped with technology, office furniture and miscellaneous equipment. Proposed funding is from grants, bonds or possibly a community foundation. This project will provide expanded recreational opportunities for the City.							
TOTAL - PARKS AND RECREATION		732,000	1,917,000	200,000	6,400,000	1,100,000	9,922,000
TOTAL - CAPITAL IMPROVEMENTS		22,232,228	21,522,800	85,536,324	17,874,806	10,970,935	146,739,158

Source: City of Port Orange, Department of Finance, Department of Community Development, 20222023

CAPITAL IMPROVEMENTS ELEMENT

TABLE 2
TRANSPORTATION PROPORTIONATE FAIR-SHARE AGREEMENTS BY PROJECT

Developer	Development	Agreement Approval	Date of Contribution	Total
Project 1: Dunlawton / Taylor at I-95				
Intervest Construction, Inc	Waters Edge Phase 9A and 11	08/17/04	01/26/06	50,000
Centerline Homes (Prev. Olson Assoc 4/25/06)	Port Orange Landings Phase I	03/29/05	03/29/05	32,878
Tomoka Farms Dev, LLC (DR Horton)	Coquina Cove Phase I	04/19/05	04/19/05	104,242
Airport Pharmacy LLC (Charles Wayne)	Walgreens at Taylor Road	08/16/05	02/23/07	13,763
Villages of Royal Palm (Winston-James)	Royal Palm PUD, Phase III	11/15/05	11/15/05	54,797
D.R. Horton	Port Orange Plantation Phase II	11/15/05	11/15/05	32,878
Holiday Builders	Port Orange Landings, Phase II	03/21/06	09/27/07	41,034
Viscomi and Associates (Paytas Homes)	Pinnacle PUD, Phase II	06/27/06	09/22/06	106,791
D.R. Horton	Port Orange Plantation Phases III, IV, V	07/25/06	12/06/06	49,445
D.R. Horton	Villas of P.O. Plantation Phases I, II	09/26/06	12/06/06	62,953
Intervest Construction, Inc	Waters Edge Phase 9B	06/05/07	07/05/07	27,526
Quest Design Group	Crystal Lake Business Park	08/07/07	09/19/07	16,567
Floridian Bank	Floridian Bank	08/28/07	08/28/07	10,959
All Aboard Storage	Nova Depot	09/18/07	09/18/07	10,959
Shoppes at Southwinds LLC	Shoppes at Southwinds	10/08/07	10/08/07	8,156
Port Orange Properties, LC	Port Orange Properties	11/13/07	11/16/07	38,486
Halifax Veterinary Clinic	Halifax Veterinary Clinic	12/18/07	01/04/08	2,804
Continental 217 Fund, LLC	Westport Square - Kohls	01/15/08	01/15/08	175,351
Atlantic Coast, LLC	Atlantic Coast Office Building	04/16/08	04/16/08	2,804
Cruz Investment Group	Nova Bella Piazza	04/22/08	04/23/08	10,959
City of Port Orange	Port Orange Business Park	05/06/08	08/05/09	235,756
Port Orange Apartment Assoc.	Reserve at Crystal Lake	05/27/08	02/24/09	2,804
K E M Associates, LLC	Countryside Commercial	08/19/08	09/17/08	2,804
Sun Glow Construction Inc.	Summer Trees Plaza - Site "B"	01/27/09	05/02/09	2,804
Sun Glow Construction Inc.	National City Bank	01/27/09	01/27/09	8,156
Four Lanes, LLC	CVS Pharmacy #4112 (Altamira CVS)	04/15/10	04/15/10	8,156
US Foodservice, Inc.	US Foodservice Facility Expansion	06/22/10	06/22/10	13,763
The Pavilion at Port Orange, LLC	Pavilion at Port Orange	08/19/09	09/30/09	500,000
Four Lanes, LLC	Altamira Shopping Center	01/24/12	Deferred	312,472
Dunlawton Yorktowne, LLC	Dunlawton-Yorktowne Shopping Center	01/24/12	Deferred	134,317
Ferber Construction Mgmt, LLC	Gateway Center Lot 6A – Multi-Tenant Retail	02/28/12	02/28/12	43,838
Total - Approved Contribution Amounts for Project 1				\$ 2,118,222
Project 2: Dunlawton / Clyde Morris				
D.R. Horton	Port Orange Plantation Phase II	11/15/05	11/15/05	19,788
Villages of Royal Palm (Winston-James)	Royal Palm PUD, Phase III	11/15/05	11/15/05	29,681
Holiday Builders	Port Orange Landings, Phase II	03/21/06	09/27/07	74,204
Viscomi and Associates (Paytas Homes)	Pinnacle PUD, Phase II	06/27/06	09/22/06	39,575
D.R. Horton	Port Orange Plantation Phases III, IV, V	07/25/06	12/06/06	34,628
Linen Group	Nova Oaks	09/26/06	09/26/06	9,894
D.R. Horton	Villas of P.O. Plantation Phases I, II	09/26/06	12/06/06	34,628
Intervest Construction, Inc	Waters Edge Phase 9B	06/05/07	07/05/07	14,841
Quest Design Group	Crystal Lake Business Park	08/07/07	09/19/07	9,894
Floridian Bank	Floridian Bank	08/28/07	08/28/07	54,416
All Aboard Storage	Nova Depot	09/18/07	09/18/07	9,894
Shoppes at Southwinds LLC	Shoppes at Southwinds	10/08/07	10/08/07	9,894
Port Orange Properties, LC	Port Orange Properties	11/13/07	11/16/07	29,681

CAPITAL IMPROVEMENTS ELEMENT

Developer	Development	Agreement Approval	Date of Contribution	Total
Halifax Veterinary Clinic	Halifax Veterinary Clinic	12/18/07	01/04/08	4,947
CBL	Pavillion at Port Orange	12/18/07	01/08/08	317,447
Continental 217 Fund, LLC	Westport Square - Kohls	01/15/08	1/15/2008	34,628
Atlantic Coast, LLC	Atlantic Coast Office Building	04/16/08	04/16/08	9,894
Cruz Investment Group	Nova Bella Piazza	04/22/08	04/23/08	9,894
City of Port Orange	Port Orange Business Park	05/06/08	08/05/09	29,681
Port Orange Apartment Assoc.	Reserve at Crystal Lake	05/27/08	02/24/09	14,841
The Animal, LLC	Ravenwood Veterinary Clinic	08/18/08	09/05/08	4,947
K E M Associates, LLC	Countryside Commercial	08/19/08	09/17/08	4,947
ABC Liquors, Inc.	ABC Liquor Store and Bank	05/19/09	05/27/09	9,894
LaCour & Company (Southwind Villas)	Dollar General Store	01/19/10	01/19/10	4,947
Four Lanes, LLC	CVS Pharmacy #4112 (Altamira CVS)	04/15/10	04/15/10	29,681
Houligan's Port Orange, LLC	Houligan's Restaurant & Office Bldg.	06/03/10	06/03/10	4,947
Four Lanes, LLC	Altamira Shopping Center	01/24/12	04/15/12	59,363
Dunlawton Yorktowne, LLC	Dunlawton-Yorktowne Shopping Center	01/24/12	06/21/12	24,735
Total - Approved Contribution Amounts for Project 2				\$ 935,811
Project 3: Town West / Williamson Signalization				
D.R. Horton	Port Orange Plantation Phase II	11/15/05	11/15/05	82,994
D. R. Horton Refund	Port Orange Plantation Phase II	11/15/05	12/21/17	(9,969)
Villages of Royal Palm (Winston-James)	Royal Palm PUD, Phase III	11/15/05	11/15/05	66,736
Villages of Royal Palm (Winston-James) Refund	Royal Palm PUD, Phase III	11/15/05	09/27/17	(8,015)
D.R. Horton	Port Orange Plantation Phases III, IV, V	07/25/06	12/06/06	80,770
D. R. Horton Refund	Port Orange Plantation Phases III, IV, V	07/25/06	10/23/17	(9,702)
D.R. Horton	Villas of P.O. Plantation Phases I, II	09/26/06	12/06/06	76,064
D. R. Horton Refund	Villas of P.O. Plantation Phases I, II	09/26/06	10/23/17	(9,137)
Port Orange Properties, LLC	Port Orange Properties	11/13/07	11/16/07	5,813
Port Orange Properties, LLC (additional Payment)	Port Orange Properties	11/13/07	09/30/16	8,792
Port Orange Properties, LLC (City Council Approved Write Off of Additional Payment)	Port Orange Properties	11/13/07	09/28/18	(8,792)
CBL	Pavillion at Port Orange	12/18/07	01/08/08	162,657
Continental 217 Fund, LLC	Westport Square - Kohls	01/15/08	01/15/08	24,957
Continental 217 Fund, LLC – (Refund Issued)	Westport Square - Kohls	01/15/08	12/20/12	(17,467)
Continental 217 Fund, LLC (additional payment)	Westport Square - Kohls	01/15/08	09/30/16	11,331
Continental 217 Fund, LLC (City Council Approved Write Off of Additional Payment)	Westport Square - Kohls	01/15/08	09/28/18	(11,331)
Total - Approved Contribution Amounts for Project 3				\$445,701
Project 4: Summertrees Road Extension				
Villages of Royal Palm (Winston-James)	Royal Palm PUD, Phase III	11/15/05	11/15/05	65,896
Holiday Builders	Port Orange Landings, Phase II	03/21/06	09/27/07	18,287
Viscomi and Associates (Paytas Homes)	Pinnacle PUD, Phase II	06/27/06	09/22/06	84,183
D.R. Horton	Port Orange Plantation Phases III, IV, V	07/25/06	12/06/06	47,609
D.R. Horton	Villas of P.O. Plantation Phases I, II	09/26/06	12/06/06	40,358
Intervest Construction, Inc	Waters Edge Phase 9B	06/05/07	07/05/07	22,071
All Aboard Storage	Nova Depot	09/18/07	09/18/07	7,252
Shoppes at Southwinds LLC	Shoppes at Southwinds	10/08/07	10/08/07	7,252
Port Orange Properties, LC	Port Orange Properties	11/13/07	11/16/07	47,609
Halifax Veterinary Clinic	Halifax Veterinary Clinic	12/18/07	01/04/08	3,784
CBL	Pavillion at Port Orange	12/18/07	01/08/08	889,220

CAPITAL IMPROVEMENTS ELEMENT

Developer	Development	Agreement Approval	Date of Contribution	Total
Continental 217 Fund, LLC	Westport Square - Kohls	01/15/08	01/15/08	172,466
Atlantic Coast, LLC	Atlantic Coast Office Building	04/16/08	04/16/08	3,784
City of Port Orange	Port Orange Business Park	05/06/08	08/05/09	168,682
Port Orange Apartment Assoc.	Reserve at Crystal Lake	05/27/08	02/24/09	7,252
K E M Associates, LLC	Countryside Commercial	08/19/08	09/17/08	7,252
Sun Glow Construction Inc.	Summer Trees Plaza - Site "B"	01/27/09	05/02/09	11,035
Sun Glow Construction Inc.	National City Bank	01/27/09	01/27/09	36,574
Four Lanes, LLC	CVS Pharmacy #4112 (Altamira CVS)	04/15/10	04/15/10	11,035
US Foodservice, Inc.	US Foodservice Facility Expansion	06/22/10	06/22/10	29,322
Four Lanes, LLC	Altamira Shopping Center	01/24/12	04/15/12	102,786
Dunlawton Yorktowne, LLC	Dunlawton-Yorktowne Shopping Center	01/24/12	06/21/12	44,142
Ferber Construction Mgmt, LLC	Gateway Center Lot 6A – Multi-Tenant Retail	02/28/12	02/28/12	11,036
Intervest Construction, Inc	Water's Edge Phase XII	06/05/07	08/30/13	91,751
LIV Development	Whitepalm Apartments	02/26/13	03/18/13	47,610
Edge Cove LLC	Westport Reserve Subdivision PH 2	08/16/16	08/19/16	3,784
Edge Cove LLC	Sanctuary at Westport PH 2A	06/21/16	06/23/16	14,665
Westport Reserve LLC	Westport Reserve Subdivision-PH 3	12/12/17	12/18/17	14,819
Westport Reserve LLC	Westport Reserve Subdivision-PH 4	12/12/17	12/18/17	7,252
2017 Yorktown Port Orange LLC	Port Orange Gateway Center Lot 3A	03/20/18	03/26/18	11,036
Acorn Ministorage of Brevard	Acorn Mini-Storage	05/01/18	09/17/18	18,288
Z Development Services	Arby's Site Plan	08/21/18	08/28/18	3,784
Autozone Stores LLC	AutoZone	12/18/18	12/28/18	51,393
Continental 425 Fund LLC	Springs Apartments	12/04/18	03/13/19	106,254
Memorial Health Systems Inc	Advent Health Medical Center	5/5/2020	8/12/20	164,979
Central Parc at Oakwater	Central Parc at Oakwater	11/05/19	12/09/19	87,989
NX Port Orange Owner LLC	Palms at Ashtopn Lakes ALF & Commercial Development	02/14/20	02/14/20	43,994
Noon Development of Florida LLC	Halifax Health Port Orange (Springs Lot 3)	12/15/20	12/29/20	58,659
Memorial Health Systems Inc	Advent Health MOB	04/06/21	04/13/21	21,998
N&T Enterprises, LLC	Paytas Office Building	08/27/20	12/28/20	3,666
Crane Lakes Depot, LLC	Crane Lakes Depot	12/15/21	12/22/21	65,896
Woodhaven, LLC	Woodhaven Phase II	10/25/21	10/29/21	130,704
HPI Self Storage Port Orange, LLC	Port Orange Neighborhood Storage	02/17/22	04/19/22	18,331
Town West Senior Living Partners, LTD	Town West Senior Living	5/11/22	6/29/22	21,997
Health Care 4, LLC	New Port Lot 4 -Conviva	06/07/22	06/08/22	3,666
Stor-It Self Storage Port Orange, LLC	Stor-It	06/07/22	06/08/22	14,665
Southern Hospitality Management & Development, INC	Woodspring Suites	03/01/22	04/22/22	7,251
Thrive Community Church	Thrive Community Church Phase II	11/05/22	11/21/22	3,666
Concept Development, Inc.	Q2B Kids – New Port, Lot 5	10/04/22	04/04/23	7,332
Build Senior Living, LLC	Hampton Manor	02/07/23	04/21/23	36,662
Villa Nova 8.0, LLC	Villa Nova Townhomes	03/21/23	03/23/23	3,666
4SG Development, LLC	Del Taco	03/21/23	03/29/23	10,999
Total - Approved Contribution Amounts for Project 4				\$2,853,318 \$2,893,646
Project 5: Devon / Taylor Road Signalization				
Coventry Partners LLC	Kings Landing – PH 1	12/05/17	12/20/17	3,653
N&T Enterprises, LLC	Paytas Office Building	08/27/20	12/28/20	176
Southern Hospitality Management & Development, INC	Woodspring Suites	03/01/22	04/22/22	232
Total - Approved Contribution Amounts for Project 5				\$4,061

CAPITAL IMPROVEMENTS ELEMENT

Developer	Development	Agreement Approval	Date of Contribution	Total
Project 6: Yorktowne Boulevard Extension				
Westport Reserve LLC	Westport Reserve Subdivision-PH 3	12/12/17	12/18/17	117,795
Westport Reserve LLC	Westport Reserve Subdivision-PH 4	12/12/17	12/18/17	77,363
2017 Yorktown Port Orange LLC	Port Orange Gateway Center Lot 3A	03/20/18	03/26/18	17,741
Acorn Ministorage of Brevard	Acorn Mini-Storage	05/01/18	09/17/18	16,968
Z Development Services	Arby's Site Plan	08/21/18	08/28/18	1,580
Edengate Development	Eden (formerly Lazul) at Crystal Lake	12/04/18	09/05/19	27,825
Autozone Stores LLC	AutoZone	12/18/18	12/28/18	33,704
POA Development LLC	New Port Apartments	11/05/19	11/13/19	240,354
Central Parc at Oakwater	Central Parc at Oakwater	11/05/19	12/09/19	30,916
NX Port Orange Owner LLC	Palms at Ashton Lakes ALF & Commercial Development	02/14/20	02/14/20	72,984
N&T Enterprises, LLC	Paytas Office Building	08/27/20	12/28/20	5,773
Health Care 4, LLC	New Port Lot 4 - Conviva	06/07/22	06/08/22	82,922
<u>Villa Nova 8.0, LLC</u>	<u>Villa Nova Townhomes</u>	<u>03/21/23</u>	<u>03/23/23</u>	<u>25,447</u>
<u>New Port LLP</u>	<u>New Port Lot 3 – Sherwin Williams</u>	<u>05/16/23</u>	<u>05/15/23</u>	<u>10,879</u>
Total - Approved Contribution Amounts for Project 6				<u>\$725,925</u>
				<u>\$762,251</u>
Grand Total - All Projects				<u>\$7,083,039</u>
				<u>\$7,181,690</u>

Notes: Initial funding for above transportation concurrency projects was appropriated during previous or current fiscal years.

Total contributions received through fair share agreements through 9/30/2023. Total contributions include actual project costs for projects 1, 2, 3 and 4 which have been completed. Total contributions, on projects 5 and 6, include estimated project costs and contingency funding for potential cost overruns.

SOURCE: City of Port Orange, Department of Finance, Department of Community Development, 20222023

CAPITAL IMPROVEMENTS ELEMENT

**TABLE 3
SUMMARY OF CAPITAL IMPROVEMENTS**

Facility Type	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	Total
Water	—750,000	—2,350,000	—1,700,000	—2,400,000	—1,750,000	—8,950,000
Sanitary Sewer	—3,050,000	—3,450,000	—1,250,000	—8,300,000	—1,300,000	17,350,000
Water & Sewer	—	—	—	—50,000	—50,000	—100,000
Stormwater	—1,035,430	—2,135,430	—2,235,430	—2,135,430	—2,135,430	—9,677,150
Transportation	—1,050,146	—3,607,958	11,315,814	—9,158,150	—1,317,935	26,450,003
Parks and Recreation	—281,000	—1,840,000	—575,000	—5,825,000	—575,000	—9,096,000
Total Capital Improvements	—6,166,576	13,383,388	17,076,244	—27,868,580	—7,128,365	—71,623,153

Facility Type	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Total
Water	2,600,000	2,450,000	4,450,000	1,500,000	1,500,000	11,000,000
Sanitary Sewer	15,020,000	3,500,000	71,650,000	1,650,000	1,600,000	91,820,000
Water & Sewer	-	-	50,000	50,000	50,000	100,000
Stormwater	2,305,000	9,750,000	2,000,000	2,000,000	2,000,000	16,055,000
Transportation	1,575,228	3,905,800	7,186,324	6,274,806	4,720,935	18,942,158
Parks and Recreation	732,000	1,917,000	200,000	6,400,000	1,100,000	9,249,000
Total Capital Improvements	22,232,228	21,522,800	85,536,324	17,874,806	10,970,935	147,166,158

**TABLE 4
SUMMARY SCHEDULE OF COMMITTED AND PLANNED FUNDS**

Fund	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	Total
Capital Projects (301)	—823,275	—1,140,196	—1,134,801	—910,000	—800,000	—4,808,272
Transportation Impact Fee (312)	—	—112,500	—1,784,000	—490,674	—	—2,387,174
General Capital Fund (317)	—281,000	—	—	—	—	—281,000
Water/Sewer Operating (401)	—2,650,000	—3,250,000	—1,050,000	—1,050,000	—1,100,000	—9,100,000
Water/Sewer R&R (403)	—1,000,000	—950,000	—950,000	—1,000,000	—1,000,000	—4,900,000
Water/Sewer Impact Fee (405)	—150,000	—1,600,000	—950,000	—2,700,000	—1,000,000	—6,400,000
Stormwater Utility (413)	—1,035,430	—2,135,430	—2,235,430	—2,135,430	—2,135,430	—9,677,150
Recreation Impact Fee (611)	—	—	—	—	—	—
Proportionate Fair Share / Other / Grant	—	—1,840,000	—575,000	—12,045,000	—1,092,935	—15,552,935
TPO Funds	—226,871	—2,355,262	—8,397,013	—5,406,062	—	—16,385,208
ARPA	—	—	—	—	—	—
Developer Fairshare Contr. (Planned)	—	—	—	—2,131,414	—	—2,131,414
Total Committed and Planned Funds	6,166,576	13,383,388	17,076,244	27,868,580	7,128,365	71,623,153

Fund	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Total
Capital Projects (301)	1,102,672	1,565,580	977,459	900,340	800,000	4,546,051
Transportation Impact Fee (312)	8,400	1,795,000	461,174	112,500	38,500	2,377,074
General Capital Fund (317)	732,000	427,000	-	-	-	1,159,000
Water/Sewer Operating (401)	-	-	-	-	-	-
Water/Sewer R&R (403)	15,120,000	5,950,000	76,100,000	3,150,000	3,100,000	100,320,000

CAPITAL IMPROVEMENTS ELEMENT

Water/Sewer Impact Fee (405)	-	-	50,000	50,000	50,000	100,000
Stormwater Utility (413)	2,305,000	9,750,000	2,000,000	2,000,000	2,000,000	16,055,000
Proportionate Fair Share / Other / Grant	2,500,000	1,490,000	200,000	6,400,000	1,100,000	10,590,000
TPO Funds	464,156	545,220	5,747,691	2,653,552	1,471,500	9,410,619
Developer Fairshare Contr. (Planned)	-	-	-	2,608,414	2,410,935	2,608,414
Total Committed and Planned Funds	22,232,228	21,522,800	85,536,324	17,874,806	10,970,935	147,166,158

SOURCE (For Tables 3 and 4): City of Port Orange, Department of Finance, 2023~~4~~

Table 5 identifies transportation improvements included in the first five years of the applicable Transportation Planning Organization's (TPO) adopted Transportation Improvement Program (TIP), to the extent that such improvements are relied upon to ensure concurrency and financial feasibility.

TABLE 5
TPO TRANSPORTATION IMPROVEMENT PLAN*

Project Name	Work Summary	Agency	2022/23 2023/24	2023/24 2024/25	2024/25 2025/26	2025/26 2026/27	2026/27 2027/28	Total
Dunlawton Ave. Turn Lanes Various Locations	Intersection improvements at various intersections along Dunlawton Ave.	City of Port Orange	\$610,050	\$290,940	\$290,940	\$4,728,567	\$4,728,567	\$5,629,557 <u>\$5,019,507</u>

SOURCE: TPO TIP FY ~~2022/23 – 2023/27~~ 2023/24 – 2027/28; City of Port Orange, Department of Community Development, 2022~~3~~

Table 6 identifies public school facilities improvements included in the first five years of the ~~2022/23 – 2023/27~~ 2023/24 – 2027/28 Volusia County School District Work Program.

CAPITAL IMPROVEMENTS ELEMENT

Table 6
VOLUSIA COUNTY SCHOOL DISTRICT FIVE-YEAR WORK PROGRAM

	Budget 2022-2023	Forecast 2023-2024	Forecast 2024-2025	Forecast 2025-2026	Forecast 2026-2027
Major Projects - New Construction					
Woodward Elm - Renovations and Addition	1,750,000	-	-	-	-
Tucie T. Small Elm - Master Plan	16,000,000	-	-	-	-
Tomoka Elm - Master Plan	35,000,000	2,000,000	-	-	-
Starke Elm - Renovations and Classroom Addition	16,500,000	1,000,000	-	-	-
Orange City Elm - Renovations and Classroom Addition	28,300,000	1,200,000	-	-	-
Spruce Creek HS - Classroom Addition and Auditorium Remodeling	-	10,000,000	5,000,000	1,200,000	-
Enterprise Elm - Master Plan	2,000,000	18,000,000	2,000,000	-	-
McInnis Elm - Renovations and Administration Addition	650,000	6,500,000	500,000	-	-
Spruce Creek Elm - Campuswide HVAC and Lighting	-	1,200,000	12,200,000	-	-
Tucie T. Small Elm - Joint Venture	-	1,500,000	5,000,000	500,000	-
Avalon Park	-	-	3,000,000	65,000,000	3,000,000
Timbercrest Elm - Classroom Addition	-	700,000	7,000,000	500,000	-
Citrus Grove Elm - Classroom Addition	-	800,000	8,000,000	500,000	-
Silver Sands Mid - Classroom Addition and Remodeling	-	1,500,000	12,000,000	750,000	-
Ormond Beach Elm - Renovations	-	-	500,000	5,000,000	-
Creekside Mid - Classroom Addition	-	750,000	8,500,000	750,000	-
Port Orange Elm - Renovations	-	-	750,000	8,500,000	-
Read-Paullo Elm - Remodeling	-	-	750,000	8,500,000	-
Pineridge HS - Classroom Addition	-	-	-	1,000,000	-
New Smyrna Beach Mid - Classroom Addition	-	-	-	1,500,000	10,000,000
Total Major Projects - New Construction	100,200,000	45,150,000	65,200,000	93,700,000	13,000,000
Projects at Existing Schools and Facilities					
Atlantic HS - Install Grandstands	150,000	-	-	-	-
Atlantic HS - Pressbox Concession	300,000	-	-	-	-
Atlantic HS - Repair Exterior Doors	-	-	306,000	-	-
Atlantic HS - Upgrade Auditorium Seating and Flooring	792,000	-	-	-	-
Blue Lake Elm - Resurface Basketball Court	100,000	-	-	-	-
Brewster Center - Interior Renovations	-	-	3,000,000	-	-
Brewster Center - Repair Wood Floor Joists	-	117,600	-	-	-
Brewster Center - Replace First and Second Floor Outside Air Units	464,445	-	-	-	-
Brewster Center - Replace Generator, Upgrade Main Electrical Distribution	-	2,000,000	-	-	-
Campbell Mid - Generator Replacement	-	225,000	-	-	-
Campbell Mid - Repair Security Gates	78,000	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 1 and 2	-	-	-	1,129,086	-
Campbell Mid - Upgrade HVAC Bldgs. 3 and 7	2,219,661	-	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 5 and 9	-	-	1,817,016	-	-
Campbell Mid - Upgrade HVAC Bldgs. 8 and 10	-	518,006	-	-	-
Chisholm Elm - Perimeter Fencing	115,000	-	-	-	-
DeBary Elm - Upgrade HVAC, Ceiling and Lighting Bldgs 1 and 4	-	3,777,026	-	-	-
DeBary Elm - Resurface Bus Loop and Parking	350,000	-	-	-	-
DeLand HS - Replace Cafeteria Chiller	941,512	-	-	-	-
DeLand HS - Replace Site Generator	528,000	-	-	-	-
DeLand HS - Softball Field Lighting	-	660,000	-	-	-
DeLand HS - Upgrade HVAC Bldgs 14 and 15	-	3,022,390	-	-	-
Deltona HS - Rebuild Chillers, Cooling Tower and Piping	-	2,400,000	-	-	-
Deltona HS - Relocate and Replace Shelter Generator	1,400,000	-	-	-	-
Deltona HS - Repair Building Cracks Campus Wide	1,500,000	-	-	-	-
Deltona HS - Upgrade Stage Lighting	100,000	-	-	-	-
Deltona Lakes Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 3 and 4	1,759,583	-	-	-	-
Deltona Transportation - Site Improvements	-	2,000,000	-	-	-
Forest Lake Elm - Resurface Basketball Court	100,000	-	-	-	-
Freedom Elm - Upgrade Parking Lot Lighting	250,000	-	-	-	-
Friendship Elm - Replace Intercom	483,000	-	-	-	-
Galaxy Mid - Replace 50 KW Kitchen Generator	200,000	-	-	-	-
Galaxy Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Galaxy Mid - Upgrade Intrusion and Monitoring	396,000	-	-	-	-
George Marks Elm - Coat Roof Bldg 2	33,600	-	-	-	-

CAPITAL IMPROVEMENTS ELEMENT

	Budget 2022-2023	Forecast 2023-2024	Forecast 2024-2025	Forecast 2025-2026	Forecast 2026-2027
Heritage Mid - Replace Gymnasium Bleachers	400,000	-	-	-	-
Heritage Mid - Replace Roof Campus Wide	200,000	-	-	-	-
Heritage Mid - Resurface Tennis and Basketball Courts	60,000	-	-	-	-
Heritage Mid - Upgrade Chiller, HVAC Ceiling and Lighting Bldg. 3	-	2,930,610	-	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	1,800,000	-	-	-
Hinson Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 6 and 8	3,608,302	-	-	-	-
Holly Hill School - Replace Switchgear Bldg. 6	300,000	-	-	-	-
Indian River Elm - Replace Doors and Hardware Buildings 2 and 3	831,600	-	-	-	-
Indian River Elm - Upgrade HVAC, Ceiling and Lighting Bldgs 2, 3 and 4	-	2,591,224	-	-	-
Indian River Elm - Upgrade Intrusion and Monitoring	396,000	-	-	-	-
Mainland HS - Upgrade Chiller Plant	-	1,700,000	-	-	-
Mainland HS - Upgrade Site Lighting	-	900,000	-	-	-
McInnis Elm - Potable Water and Sanitary Sewer	100,000	100,000	350,000	100,000	100,000
McInnis Elm - Upgrade Site Lighting	250,000	-	-	-	-
New Smyrna Beach HS - Replace Intercom	690,000	-	-	-	-
New Smyrna Beach HS - Upgrade Controls Campus Wide	-	1,629,826	-	-	-
New Smyrna Beach HS - Upgrade BAS System Bldgs 6 - 8	1,150,000	-	-	-	-
New Smyrna Beach HS - Traffic Signal	300,000	-	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	1,479,604	-	-	-
Palm Terrace Elm - Replace Roof	2,338,000	-	-	-	-
Pathways Elm - Replace Fire Alarm	990,000	-	-	-	-
Pathways Elm - Upgrade Parking Lot Poles and Lighting	-	-	258,000	-	-
Piereson Elm - Upgrade Fire Suppression Water Tank	95,497	-	-	-	-
Piereson Transportation - Remove Underground Fuel Tank and Pumps	150,000	-	-	-	-
Pine Ridge HS - Upgrade HVAC, Ceiling and Lighting Bldgs. 9 and 10	2,488,374	-	-	-	-
Pine Trail Elm - Intercom Replacement	150,000	-	-	-	-
Port Orange Elm - Renovate Reception Area	-	168,000	-	-	-
Port Orange Elm - Parking Area	100,000	-	-	-	-
Port Orange Elm - Remodel Clinic and Office Toilet Rooms	150,000	-	-	-	-
Port Orange Elm - Renovate Reception	130,000	-	-	-	-
Portables - Lease	100,000	100,000	100,000	100,000	100,000
Portables - Moves & Compliance	400,000	400,000	400,000	400,000	400,000
River Springs Mid - New Chiller Plant	-	-	3,500,000	-	-
RJ Longstreet Elm - Upgrade Lighting at Parking Lot and Canopy	250,000	-	-	-	-
Seabreeze HS - New Chiller 3, Upgrade HVAC Bldgs 4, 5, and 6	3,579,930	-	-	-	-
Seabreeze HS - Reroof Media Center	504,536	-	-	-	-
Silver Sands Mid - Replace Gymnasium Bleachers	-	-	-	400,000	-
Silver Sands Mid - Renovate Culinary Lab	514,700	-	-	-	-
Silver Sands Mid - Replace Cafeteria 30 Ton WSHP	175,000	-	-	-	-
Silver Sands Mid - Replace Main Electrical Switchgear Bldg 12	528,000	-	-	-	-
Southwestern Mid - Replace 250 Ton Chiller	700,000	-	-	-	-
Sugar Mill Elm - Intercom Replacement	250,000	-	-	-	-
Sunrise Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 2 and 3	-	2,125,000	-	-	-
Sunrise Elm - Upgrade OAU and Chiller Bldgs. 1 - 4	-	1,300,000	-	-	-
T. Devitt Taylor Mid-HS - Replace Gutters	260,534	-	-	-	-
Transportation - Warehouse DeLand - Warehouse Renovations	2,500,000	-	-	-	-
University HS - Install Grandstands	-	-	-	-	275,000
University HS - Pressbox Concession	300,000	-	-	-	-
University HS - Repair Wall Flashings Bldg 2	177,360	-	-	-	-
University HS - Upgrade AHU Sensors, Dampers and Duct Heaters	1,007,535	-	-	-	-
Westside Elm - Replace Doors and Hardware Bldg. 1	764,000	-	-	-	-
Various Locations - Rural Broadband	2,500,000	-	-	-	-
Various Schools - HS School Athletics	3,070,000	3,000,000	3,000,000	3,000,000	3,000,000
Various Schools - Infrastructure for Technology	250,000	250,000	250,000	250,000	250,000

CAPITAL IMPROVEMENTS ELEMENT

	Budget 2022-2023	Forecast 2023-2024	Forecast 2024-2025	Forecast 2025-2026	Forecast 2026-2027
Various Schools - Minor Projects	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Various Schools - Minor Projects - Spruce Creek HS	500,000	-	-	-	-
Various Schools - Parking Lot Improvements	-	4,000,000	-	-	-
Various Schools - Pavilions	250,000	-	-	-	-
Various Schools - Playgrounds	350,000	300,000	300,000	300,000	300,000
Various Schools - Security	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Projects at Existing Schools and Facilities	53,745,169	46,495,186	20,281,016	12,679,086	11,150,000
Facilities Management					
Facilities Management - Various Projects	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000
Total Facilities Management	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000
Technology					
Network, EDP & Communications Equipment	2,537,007	2,537,007	2,716,902	9,000,000	9,000,000
Total Technology	2,537,007	2,537,007	2,716,902	9,000,000	9,000,000
System Wide Equipment and Vehicles					
Various Schools & Departments Vehicles	500,000	500,000	500,000	500,000	500,000
Various Schools & Departments Furniture & Equipment	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Total System Wide Equipment and Vehicles	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000
Buses					
Transportation Dept - Bus Safety Upgrades	2,300,000	-	-	-	-
Transportation Dept - Bus Replacement	-	2,386,960	2,386,960	2,386,960	2,386,960
Total Buses	2,300,000	2,386,960	2,386,960	2,386,960	2,386,960
PROJECT TOTALS	\$ 163,282,176	\$ 101,069,153	\$ 95,084,878	\$ 122,266,046	\$ 40,036,960
Transfers					
Transfers - To General Fund	16,242,204	14,325,935	11,938,434	5,653,336	5,655,336
Transfers - To Debt Service	48,951,525	48,953,625	36,057,388	36,053,663	36,059,450
Total Transfers	65,193,729	63,279,560	47,995,822	41,708,999	41,714,786
GRAND TOTAL	\$ 228,475,905	\$ 164,348,713	\$ 143,080,700	\$ 163,975,045	\$ 81,751,746

CAPITAL IMPROVEMENTS ELEMENT

	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Sources - revenues					
State sources:					
CO&DS distributed	\$ 2,250,000	\$ 2,250,000	\$ 2,250,000	\$ 2,250,000	\$ 2,250,000
Interest on undistributed CO & DS	16,500	16,500	16,500	16,500	16,500
Total state sources	2,266,500	2,266,500	2,266,500	2,266,500	2,266,500
Local sources:					
Ad valorem property taxes	91,362,991	94,926,240	100,589,760	106,090,560	111,264,480
Local Sales tax	66,547,292	67,472,722	68,411,022	69,362,370	70,326,948
Investment income	2,100,000	1,580,000	1,370,000	1,160,000	950,000
Impact fees	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Total local sources	170,010,283	173,978,962	180,370,782	186,612,930	192,541,428
Total sources	172,276,783	176,245,462	182,637,282	188,879,430	194,807,928
Uses - expenditures					
New Construction					
Creskide Mid - Classroom Addition	-	-	-	-	750,000
Deltona HS - Classroom Addition	-	2,000,000	15,000,000	-	-
Enterprise Elm - Master Plan	4,000,000	-	-	2,000,000	36,000,000
McInnis Elm - Renovations and Administration Addition	-	650,000	6,500,000	500,000	-
New Smyrna Beach Mid - Classroom Addition	-	-	-	-	1,500,000
Orange City Elm - Renovations and Additions	21,200,000	-	-	-	-
Ormond Beach Elm - Renovations	-	-	-	-	500,000
Pine Ridge HS - Classroom Addition	-	-	-	-	1,000,000
Port Orange Elm - Renovations	-	750,000	8,500,000	-	-
Read-Patillo Elm - Remodeling	-	-	750,000	8,500,000	-
Silver Sands Mid - Classroom Addition and Remodeling	-	-	1,500,000	12,000,000	750,000
Spruce Creek HS - Classroom Addition and Auditorium Ren	-	-	5,000,000	1,200,000	-
Spruce Creek Elm - Campuswide HVAC and Lighting	-	-	1,200,000	15,500,000	-
Spruce Creek HS - Master Plan	-	-	-	-	3,000,000
Starke Elm - Renovations and Additions	19,000,000	1,750,000	-	-	-
Timbercrest Elm - Classroom Addition	-	-	-	700,000	7,000,000
Tomoka Elm - Master Plan	2,000,000	-	-	-	-
Transportation - Warehouse DeLand - Warehouse Addition	-	8,000,000	-	-	-
Turie T. Small Elm - Joint Venture	-	-	1,500,000	5,000,000	500,000
Woodward Elm - Renovation Finishes and Infrastructure B	-	4,458,556	-	-	-
Total New Construction	46,200,000	17,608,556	39,950,000	45,400,000	51,000,000
Projects at Existing Schools and Facilities					
All High Schools - Athletic Facility Leases	180,000	180,000	180,000	180,000	180,000
Atlantic HS - Repair Exterior Doors	-	306,000	-	-	-
Brewster Center - Interior Renovations	-	-	3,000,000	-	-
Brewster Center - Repair Wood Floor Joists	-	117,600	-	-	-
Brewster Center - Replace Emergency Generator	-	601,200	-	-	-
Brewster Center - Upgrade Main Electrical Distribution	-	-	2,000,000	-	-
Campbell Mid - Replace Emergency Generator	-	597,600	-	-	-
Campbell Mid - Upgrade HVAC Bldgs. 1 and 2	-	-	-	1,129,086	-
Campbell Mid - Upgrade HVAC Bldgs. 5 and 9	-	-	1,817,016	-	-
Campbell Mid - Upgrade HVAC Bldgs. 8 and 10	-	518,906	-	-	-
Coronado Beach Elem - Install New Lighting at Parking Lot	283,200	-	-	-	-
Debary Elem - New Marquee	216,000	-	-	-	-
Debary Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 1 &	-	3,777,362	-	-	-
DeLand Warehouse - Lease	231,186	231,186	231,186	231,186	231,186
Deltona HS - Foundation Repairs Bldgs. 12	2,500,000	-	-	-	-
DeLand HS - Upgrade HVAC Bldgs. 14 and 15	3,022,390	-	-	-	-

CAPITAL IMPROVEMENTS ELEMENT

	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Deltona Lakes Elm - Upgrade HVAC, Ceiling and Lighting Bldg.	2,795,436	-	-	-	-
Deltona Mid - Upgrade Door Hardware and Signage Bldgs.	135,600	-	-	-	-
Deltona HS - Rebuild Chillers, Cooling Tower and Piping	-	2,700,000	-	-	-
DeLand Mid - School Envelope Improvement	-	3,900,000	-	-	-
DeLand Mid - Upgrade Door Hardware	-	752,400	-	-	-
Deltona Transportation - Site Improvements	-	2,000,000	-	-	-
Deltona HS - Foundation Repairs Bldgs. 2	-	3,000,000	-	-	-
Discovery Elm - Upgrade Fire Alarm and Intrusion Monitor	105,000	-	-	-	-
Edgewater Elm - Upgrade Fire Alarm and Intrusion Monitor	105,000	-	-	-	-
Edgewater Elm - Upgrade Parking Lot and bus Loop Lightin	-	402,000	-	-	-
Forest Lake Elm - Replace OAU Bldgs. 6 and 7	1,942,864	-	-	-	-
Freedom Elm - Replace Small Chiller Bldg. 7	308,000	-	-	-	-
Friendship Elm - Upgrade HVAC Bldgs. 1 and 2	-	3,368,400	-	-	-
Heritage Mid - Replace Roof Campus Wide	-	3,750,000	-	-	-
Heritage Mid - Replace Fire Alarm	1,287,000	-	-	-	-
Heritage Mid - Upgrade HVAC, Ceiling and Lighting Bldg. 2	-	3,500,000	-	-	-
Heritage Mid - Reclaimed Water Connection	250,000	-	-	-	-
Herbert Street Center - Upgrade HVAC	-	1,969,859	-	-	-
Heritage Mid - New Marquee	-	216,000	-	-	-
Hinson Mid - Upgrade HVAC and Lighting Bldg. 7	-	1,800,000	-	-	-
Hinson Mid - Upgrade HVAC, Ceiling and Lighting Bldgs. 3 and 4	-	2,689,618	-	-	-
Horizon Elm - Replace Small Chiller Bldg. 11	-	345,000	-	-	-
Indian River Elm - Renovate Media Center	350,000	-	-	-	-
Indian River Elm - New Marquee	180,000	-	-	-	-
Indian River Elm - Upgrade HVAC, Ceiling and Lighting Bldg.	-	3,115,348	-	-	-
Mainland HS - Upgrade Chiller Plant	1,700,000	-	-	-	-
Mainland HS - Upgrade Site Lighting	-	900,000	-	-	-
McInnis Elementary - Potable Water and Sanitary Sewer	300,000	100,000	350,000	100,000	100,000
New Smyrna Beach HS - Upgrade BAS Bldgs. 1-4 and Pump	-	1,570,127	-	-	-
New Smyrna Beach Mid - Replace Millwork Campus Wide	-	1,479,604	-	-	-
Parking Lot Lease - City of DeLand	27,326	27,326	27,326	27,326	27,326
Pathways Elm - Upgrade Parking Lot Poles and Lighting	-	258,000	-	-	-
Pine Ridge HS - Upgrade HVAC, Ceiling and Lighting Bldg. 6	2,648,064	-	-	-	-
Pine Ridge HS - Reclaimed Water Connection	250,000	-	-	-	-
Pine Ridge HS - Replace Intercom	-	834,000	-	-	-
Portables - Moves and Compliance	400,000	400,000	400,000	400,000	400,000
Port Orange Elm - Parking Area	250,000	-	-	-	-
River Springs Mid - New Chiller Plant	-	-	3,500,000	-	-
River Springs Mid - Replace Gutters and Downspouts	-	600,000	-	-	-
RJ Longstreet Elm - Upgrade Fire Alarm and Intrusion Monitor	105,000	-	-	-	-
Seabreeze HS - Replace Tile Roof and Coat Flat Roof Bldg. 1	956,393	-	-	-	-
Seabreeze HS - Upgrade HVAC Bldg. 1 and Tower	3,643,686	-	-	-	-
Seabreeze HS - New Marquee	-	216,000	-	-	-
Silver Sands Mid - Replace Gymnasium Bleachers	-	-	400,000	-	-
Spirit Elm - Upgrade HVAC Bldgs. 4	2,500,000	-	-	-	-
Spruce Creek HS - Replace 7 AC Roof Top Units	2,100,000	-	-	-	-
Spruce Creek HS - Renovate Culinary Lab	400,000	-	-	-	-
Sunrise Elm - Upgrade HVAC, Ceiling and Lighting Bldgs. 2	-	2,805,600	-	-	-
T. Dewitt Taylor Mid-HS - Upgrade Fire Alarm and Intrusion Monitor	105,000	-	-	-	-
Transportation Warehouse - DeLand - Replace Emergency	849,600	-	-	-	-
University HS - Seal Abandoned Wells	447,600	-	-	-	-
University HS - New Marquee	-	102,000	-	-	-
Various - Security	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Various - Infrastructure for Technology	250,000	250,000	250,000	250,000	250,000
Various - Minor Projects	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Various Schools - High School Athletics	2,015,800	1,000,000	1,000,000	1,000,000	1,000,000

CAPITAL IMPROVEMENTS ELEMENT

	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Various Schools - BDA	945,938	945,938	945,938	-	-
Various Schools - Playgrounds	1,000,000	1,000,000	300,000	300,000	300,000
Various Schools - Leased Portables	100,000	100,000	100,000	100,000	100,000
Various - Parking Lot Improvements	-	3,300,000	-	-	-
Total Projects at Existing Schools and Facilities	41,886,083	62,727,074	21,501,466	10,717,598	9,588,512
Facilities Management					
Contingency	7,000,000	6,500,000	7,000,000	12,000,000	12,000,000
Contingency - Operations	2,000,000	-	-	-	-
Facilities Management	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000
Total Facilities Management	11,800,000	9,300,000	9,800,000	14,800,000	14,800,000
Technology					
ERP Software - Enterprise Resource Planning	1,000,000	-	-	-	-
Various Schools & Depts - District Wide Technology Equipr	2,537,008	8,286,936	9,000,000	9,000,000	9,000,000
Total Technology	3,537,008	8,286,936	9,000,000	9,000,000	9,000,000
System Wide Equipment and Vehicles					
Furn, Fix, Equip, Veh	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
White Fleet	500,000	500,000	500,000	500,000	500,000
Total System Wide Equipment and Vehicles	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000
Buses					
Bus and Safety	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Buses	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Charter School Disbursements					
Charter School Capital Outlay LCIF Disbursements	690,689	1,441,254	2,329,836	3,323,530	4,409,688
Total Charter School Disbursements	690,689	1,441,254	2,329,836	3,323,530	4,409,688
Total categories	108,813,780	104,063,819	87,281,302	87,941,128	93,498,200
Roll Forward					
Prior Year Carryover Encumbrances	124,810,791	-	-	-	-
Prior Year Carryover Appropriations	101,220,862	-	-	-	-
Total roll forward	226,031,653	-	-	-	-
Total uses	334,845,434	104,063,819	87,281,302	87,941,128	93,498,200
Excess (deficiency) of revenues over expenditures	(162,568,651)	72,181,643	95,355,980	100,938,302	101,309,727
Other financing uses					
Transfers - General Fund	(28,184,069)	(22,717,701)	(22,293,868)	(22,588,884)	(22,889,800)
Transfers - Debt Service Funds	(48,953,625)	(36,057,388)	(36,053,663)	(36,059,450)	(36,063,863)
Total other financing uses	(77,137,694)	(58,775,089)	(58,347,531)	(58,648,334)	(58,953,663)
Net change in fund balances	(239,706,345)	13,406,554	37,008,449	42,289,968	42,356,065
Fund balances					
Beginning Balance	277,075,248	37,368,903	50,775,457	87,783,906	130,073,874
Ending Balance	\$ 37,368,903	\$ 50,775,457	\$ 87,783,906	\$ 130,073,874	\$ 172,429,939

Source: Volusia County School District, Work Program adopted September 13, 2022, 2023

IMPLEMENTATION

5-YEAR SCHEDULE OF IMPROVEMENTS

The 5-Year Schedule of Improvements (Table 1) is the mechanism by which the City can effectively stage the timing, location ~~(see Figure 10-1)~~, projected cost, and revenue sources for the capital improvements derived from the other Comprehensive Plan Elements. This table lists only those capital projects that will be funded by the City of Port Orange as part of its annual Capital Improvement Program. Based upon the Inventory, Analysis, and Goals, Objectives, and Policies of this Element, the 5-Year Schedule of Improvements has been developed to document the financial feasibility of the City of Port Orange's *Comprehensive Plan*.

MONITORING AND EVALUATION

The role of monitoring and evaluation is vital to the effectiveness of any Comprehensive Plan and particularly for the Capital Improvements Element. As part of the annual budgeting process, the City evaluates the status of all scheduled capital improvements and the overall status of public facilities in relation to current and projected demand. This evaluation ensures that revisions to the budget, work programs, the Capital Improvements Program and this Comprehensive Plan may be made as necessary to provide facilities in a timely and financially feasible manner, consistent with adopted level-of-service standards. This review is coordinated by the Capital Improvements Project Manager. In addition, the issuance of development orders and development permits is monitored continuously to ensure consistency with this Plan.

The City's annual review includes the following considerations, which are also evaluated each year to determine their continued applicability:

- 1) Any corrections, updates, and modifications concerning costs; revenue sources; acceptance of facilities pursuant to dedications which are consistent with the element; or the date of construction of any facility listed in this Element,
- 2) The Capital Improvement Element's consistency with the other Elements and its support of the Future Land Use Element.
- 3) The City's ability to provide public facilities and services within the Urban Service Area in order to determine any need for boundary modification or adjustment.
- 4) The priority assignment of existing public facility deficiencies.
- 5) The City's progress in meeting those needs that are determined to be existing deficiencies.
- 6) The criteria used to evaluate capital improvement projects in order to ensure that projects are being ranked in their appropriate order of priority.
- 7) The City's effectiveness in maintaining the adopted LOS standards.
- 8) The City's effectiveness in reviewing the impacts of plans and programs of state agencies and water management districts that provide public facilities within the City's jurisdiction.
- 9) The effectiveness of impact fees, and mandatory dedications or fees in lieu of, for assessing new development a pro rata share of the improvement costs which they generate.
- 10) The impacts of special districts and any regional facility and service provision upon the City's ability to maintain its adopted LOS standards.
- 11) The ratio of outstanding indebtedness to the property tax base.
- 12) Efforts made to secure grant or private funds, whenever available to finance the provision

- of capital improvements.
- 13) The transfer of any unexpended account balances.
- 14) The criteria used to evaluate proposed plan amendments and requests for new development or redevelopment.
- 15) Capital improvements needed for the latter part of the planning period, for inclusion in the 5-Year Schedule of Improvements.

CONCURRENCY MANAGEMENT SYSTEM

OVERVIEW

The purpose of a Concurrency Management System is to provide the necessary regulatory mechanism for evaluating development orders to ensure that the level-of-service standards adopted as part of the *Comprehensive Plan* are maintained. The system consists of three primary components: 1) an inventory of existing public facilities for which concurrency is to be determined; 2) a concurrency assessment of each application for a final development order or permit; and 3) a schedule of improvements needed to correct any existing public facility deficiencies. Under this system, and according to the Florida State Legislature, no development orders may be issued which will cause a public facility to operate below its adopted level-of-service standard. However, development orders may be conditioned such that needed public facility improvements will be in place concurrent with the impacts of the proposed development.

In order to ensure that all public facilities included within this system are available concurrent with the impacts of development, concurrency will be determined during the final site plan or final subdivision plan approval process. All development orders and permits will specify any needed improvements and a schedule for their implementation. Thus, while some required improvements may not have to be completed until a certificate of occupancy is applied for, the requirements for the certificate of occupancy will have already been specified as a condition of approval of the original development order. If a development proposal can not meet the test for concurrency, then it may not proceed under any circumstances and no development orders or permits may be issued. Likewise, if a development fails to meet a condition of approval once it has commenced, then no additional development orders, permits, or certificates of occupancy may be issued.

APPLICABILITY

Prior to the granting of a development order, all applications for a final site plan or final subdivision plan shall be reviewed for concurrency consistent with the provisions and requirements of this system. Development orders may be issued only upon a finding by the City that the public facilities addressed under the Concurrency Management System will be available concurrent with the impacts of the development.

All applicants for development permits shall be required to provide all information deemed necessary by the City so that the impacts of the proposed development may be accurately assessed.

The City's land development regulations specifically list the application requirements for development permits that reflect the informational needs for the determination of concurrency, and application forms have been developed accordingly.

DEPARTMENT OF COMMUNITY DEVELOPMENT

The City's Department of Community Development is responsible for the four primary tasks which are described below. The Director of Community Development may delegate all or a part of these

functions to the employees within this Department. The four tasks are: 1) maintaining an inventory of existing public facilities and capacities or deficiencies; 2) determining concurrency of proposed development which does not require City Council approval; 3) providing advisory concurrency assessments and recommending conditions of approval to the City Council for those applications for development orders which require City Council approval; and 4) reporting the status of all public facilities covered under this system to the City's Capital Improvement Facilities Project Manager and recommending a schedule of improvements for those public facilities found to have existing deficiencies.

CAPACITY AND LEVEL-OF-SERVICE INVENTORY

The Department of Community Development collects, and makes available to the public, information on certain facilities as described below in Table 7. The information has been available since November 1, 1990 and is updated annually thereafter. The provisions and requirements of the Concurrency Management System apply only to those facilities listed in Table 7.

CAPITAL IMPROVEMENTS ELEMENT

TABLE 7
PUBLIC FACILITIES CAPACITIES AND LEVEL-OF-SERVICE INVENTORY
FOR CONCURRENCY MANAGEMENT

The following inventories shall be maintained by the Department of Community Development to be used for the concurrency assessment of new development.

TRANSPORTATION

Design capacity of different roadway types and bikeways.

The existing level of service measurement.

Analysis of specific facilities.

The service degradation on those facilities classified as backlogged, based on the methodology described in the Transportation Element of this Plan.

The adopted level of service standards for all roadway types ~~and desired level of service standard for bikeways.~~

The existing capacities or deficiencies of the transportation system.

The capacities reserved for approved but unbuilt development.

The projected capacities or deficiencies due to approved but unbuilt development.

The improvements to be made to the transportation system in the current fiscal year by the City, Volusia County, the Florida Department of Transportation, or other public agency and the impact of such improvements on the existing capacities or deficiencies.

SANITARY SEWER

The design capacity of the wastewater treatment facilities.

The existing level-of-service standards measured by the average number of gallons per day unit based on the average flows experienced at the treatment plant and the total number of equivalent residential units within the service area.

The adopted level-of-service standard for average daily flows per equivalent residential unit.

The existing deficiencies of the system.

The capacities reserved for approved but unbuilt development.

The projected capacities or deficiencies due to approved but unbuilt development.

The improvements to be made to the facility in the current fiscal year by any approved developments pursuant to previous development orders and the impact of such improvements on the existing capacities or deficiencies.

POTABLE WATER

Permitted groundwater withdrawal capacity as per the City's Consumptive Use Permit.

The design capacity of potable water treatment facilities.

The existing level of service measured by the average number of gallons per day per unit based on the average flows experienced and the total number of equivalent residential units within the service area.

The existing potable water storage capabilities of the water system.

CAPITAL IMPROVEMENTS ELEMENT

TABLE 7
(Continued)

POTABLE WATER (Continued)

The existing minimum water pressure.

The adopted level-of-service standards for the potable water facility components.

The existing capacities or deficiencies of the system.

The capacities reserved for approved but unbuilt development.

The improvements to be made to the facility in the current fiscal year by any approved developments pursuant to previous development orders and the impact of such improvements on the existing capacities or deficiencies.

The improvements to be made to the facility in the current fiscal year by the City and the impact of such improvements on the existing capacities or deficiencies.

SOLID WASTE DISPOSAL

The design capacity of solid waste disposal facilities.

The existing level of service measured by the number of units served per route.

The adopted level-of-service standard for solid waste.

The capacities reserved for approved but unbuilt development.

The projected capacities or deficiencies due to approved but unbuilt development.

The improvements to be made to the system in the current fiscal year by any approved developments pursuant to previous development orders and the impact of such improvements on the existing capacities or deficiencies.

The improvements to be made to the system in the current fiscal year by the City and the impact of such improvements on the existing capacities or deficiencies.

STORMWATER DRAINAGE

The existing level of service measured by storm event.

The adopted level-of-service standard for stormwater drainage quantity and quality.

RECREATION AND OPEN SPACE

The existing acreage of parkland and the existing number of recreation facilities in the Recreation and Open Space Element of this Plan.

The existing level of service measured by the number of acres of parkland available per 1,000 residents of the City based on an inventory of parklands in the City and the population of the City.

The existing level of service for recreation facilities measured by the adopted standard based on an inventory of the facilities in the City and the population of the City.

The adopted level-of-service standards for parkland acreage and individual recreation facilities in the Recreation and Open Space Element of this Plan.

TABLE 7
(Continued)

RECREATION AND OPEN SPACE (Continued)

The existing capacities reserved for approved but unbuilt development.

The projected capacities or deficiencies due to approved but unbuilt development.

The improvements to be made to the recreation facilities in the current fiscal year by any approved developments pursuant to previous development orders and the impact of such improvements on the existing capacities or deficiencies.

The improvements to be made to the recreation facilities in the current fiscal year by the City and the impact of such improvements on the existing capacities or deficiencies.

PUBLIC SCHOOL FACILITIES*

The existing level-of-service for each School Concurrency Service Area.

The adopted level-of-service standard for each School Concurrency Service Area.

The existing and projected deficiencies of the system.

The number of approved residential units and their projected students that have received school concurrency certificates, but whose units are not constructed.

The projected capacities and level-of-service due to approved but unbuilt residential development.

The improvements to be made by any approved developments pursuant to Capacity Enhancement Agreements and/or Mitigation Agreements and the projected impact of such improvements on school capacities and the adopted level-of-service.

*The Public School Facilities inventories are maintained by the School Board/District of Volusia County.

Source: City of Port Orange, 202309

CONCURRENCY ASSESSMENT

The Department of Community Development is responsible for determining concurrency for all applications of development orders for final site plans and/or applications of development orders for final site plans and/or final subdivision plans. When reviewing applications for such development orders, the Department performs a Concurrency Assessment to ensure that public facilities are available concurrent with the impacts of the proposed development. To conduct the assessment, the inventory presented in Table 7 is used as a base for the establishment of existing conditions. The capacity of existing public facilities to service new development shall then be determined by using the general rules presented in Table 8 and the facility-specific rules presented in Table 9. Finally, a determination of concurrency is made. Such determination may include conditions of approval which are deemed necessary for concurrency to be ensured.

The Department of Community Development provides recommendations to the Planning Commission and City Council concerning those development order applications which require Planning Commission and City Council approval. ~~The comments and recommendations provided by the Department include, but are not limited to:~~

- ~~1. — the ability of existing facilities to accommodate the proposed development at the adopted level-of-service standards;~~
- ~~2. — any existing facility deficiencies that will need to be corrected prior to the completion of~~

- ~~the proposed development;~~
3. ~~the facility(s) improvements or additions that will be needed to accommodate the impacts of the proposed development at the adopted level(s) of service standard(s);~~
4. ~~the date such facility(s) improvements or additions will need to be completed to be concurrent with the impacts on such facility(s) created by the proposed development; and~~
5. ~~a recommendation of approval or denial with any applicable conditions for the timing and location of needed improvements.~~

Prior to the issuance of a development order for a proposed new development, the ~~City Council and/or~~ the Department of Community Development determines:

1. the impacts created by the proposed development;
2. whether the public facilities covered under the Concurrency Management System will be available concurrent with the impacts of new development at the adopted level;
3. those facility(s) improvements or additions that are required to ensure the finding of concurrency; and
4. the entity responsible for the design and installation of all required facility(s) improvements or additions.
5. whether the development will have to participate in a Concurrency and Fair Share Agreement, as outlined in the City's Proportionate Fair Share Ordinance.

The adopted level-of-service standards are the minimum acceptable standards with which all proposed new development shall comply. The Concurrency Management System does not preclude the Planning Commission or the City Council from imposing other conditions of approval, ~~including improvements and additions to the facilities covered under this system beyond the minimums necessary to achieve concurrency.~~

FACILITIES REPORTING

Annually, the Department of Community Development reports to the City Council the information required in Table 7. The report includes the degree of any deficiencies and a summary of the impacts the deficiencies will have on the approval of development orders. The Department of Community Development then recommends a schedule of improvements necessary to prevent a moratorium or a reduction in the approval of development orders.

CAPITAL IMPROVEMENTS ELEMENT

TABLE 8
GENERAL RULES FOR CONCURRENCY ASSESSMENT

EXISTING DEFICIENCIES

No development may be approved which will impact any facility which is currently deficient unless the facility is required to be improved in the current fiscal year pursuant to a previous development order or permit, except within the Transportation Concurrency Exception Area. Any needed improvements shall be completed prior to the projected impacts of the proposed development as required by Table 7. Developments within the Town Center TCEA shall be required to provide funding contributions or mobility improvements commensurate with anticipated level of impact to the overall transportation system and shall be credited for any mobility improvements or programs deemed acceptable by the City as a means of offsetting such mobility impacts.

APPROVED IMPACTS

The impacts of new development shall be assessed against the existing conditions as described in Table 7 and the projected impacts from approved but unbuilt development. These two items together shall be considered the existing conditions for all public facilities for the impact assessment of all proposed development.

PHASING

Development that is proposed to be phased may also phase the improvement of facilities provided the concurrency requirements for each facility as described in Table 7 are met.

TIME SPECIFIC APPROVAL

All development approvals shall have a time period specified in the development order or permit in which development must commence. The time period may involve two or more phases but the timing of each phase shall be specified in the development order or permit.

Any required improvements shall also require a time period for construction and completion. Should development or facilities improvements fail to begin or be completed in accordance with the development order or site construction permit, all outstanding approvals of the development shall expire. Amendments to time schedules shall be permitted but must be approved consistent with the procedures established in the Land Development Code.

ADDITIONAL INFORMATION

The Department of Community Development may require additional information from applicants or other City Departments in order for an accurate assessment to be conducted. Such additional informational requests shall be reasonable and be provided in writing to the applicant or appropriate Department.

Should the Department of Community Development require a special study (such as traffic counts on a road that is not regularly monitored), the applicant shall provide such information. Review and approval of proposed development may be postponed for a reasonable time period in order that more information may be gathered on a facility. Proposed development may be denied approval, for failure of the applicant to provide adequate information on the projected impacts created by the development.

Source: City of Port Orange, 2023~~09~~

TABLE 9
FACILITY SPECIFIC RULES FOR CONCURRENCY ASSESSMENT

TRANSPORTATION

Traffic impact analysis studies are required for development projects to determine the project impacts, maintain information on roadway conditions, and develop appropriate mobility mitigation strategies. Such studies must be consistent with the adopted TPO Guidelines. The studies shall calculate the number of trips generated by the proposed development, show the distribution and assignment of the projected trips, and project the level of service of impacted road links. Traffic studies shall still be required for projects within the Town Center Transportation Concurrency Exception Area (TCEA) to provide a measure of the projects impacts and to maintain information on the roadway conditions within the Town Center TCEA to develop, monitor, and adjust mobility strategies.

Prior to the issuance of a Certificate of Occupancy, all facility improvements necessary to accommodate the impacts of the development shall be in place or planned for construction within the first three years of the adopted FDOT Work Program, County Road Program, and/or City CIP. If the necessary facility improvements will not be in place or under construction within three years of the time of the development approval, the development's approval will be subject to the signing of an enforceable development agreement, such as a Concurrency and Fair-Share Agreement, as outlined in the City's Proportionate Fair Share Ordinance. Completed improvements may be required prior to the issuance of a building permit if deemed necessary for public safety purposes. Outside the boundaries of the Transportation Concurrency Exception Area, the City may grant *de minimus* exceptions up to a cumulative 10% degradation of the adopted peak-hour LOS standard volume, as long as the facility is not an evacuation route or part of the State's SIS.

SANITARY SEWER

The City's Land Development Code provides sanitary sewer use standards for residential development based on equivalent residential units and for non-residential development based on gross leasable area. The City may also require commercial and industrial developments to provide a description and estimate of wastewater generations for any commercial or industrial processes which create wastewater that will be discharged into the City's system.

Prior to the issuance of a Certificate of Occupancy, all facility improvements necessary to accommodate the impacts of that portion of the development receiving a Certificate of Occupancy shall be in place, as required by the Development Order.

POTABLE WATER

The City's Land Development Code provides potable water use standards for residential development based on equivalent residential units and for non-residential development based on gross leasable area. The City may also require commercial and industrial developments to provide a description and estimate of water use needs for any commercial or industrial processes involving potable water.

Prior to the issuance of a Certificate of Occupancy, groundwater or alternative water supplies and all facility improvements necessary to accommodate the impacts of that portion of the development receiving a Certificate of Occupancy shall be in place, as required by the Development Order and the City Consumptive Use Permit.

CAPITAL IMPROVEMENTS ELEMENT

TABLE 9
(Continued)

SOLID WASTE

The City's Land Development Code provides solid waste generation standards based on land use types. Commercial and industrial developments which are potential hazardous waste generators shall provide a description and estimate of tonnage of solid waste to be generated. The applicant will be responsible for coordinating with Volusia County for disposal of such waste. The City will then obtain written approval from Volusia County that the proposed development's hazardous waste generation can be accommodated at the County's landfill.

Prior to the issuance of a Certificate of Occupancy, all facility improvements necessary to accommodate the impacts of that portion of the development receiving a Certificate of Occupancy shall be in place.

STORMWATER DRAINAGE

All development shall prepare a drainage plan based on the Stormwater Management regulations which incorporate the level-of-service design storm. Such plans shall be approved by the City's Storm Drainage Engineer prior to the approval of the development.

Prior to the issuance of a building permit, all facility improvements necessary to accommodate the impacts of that portion of the development receiving the building permit shall be approved and a schedule established for their implementation such that all improvements shall be completed prior to the issuance of a Certificate of Occupancy.

RECREATION

The City's Land Development Code provides recreation standards for residential uses. Commercial and industrial developments shall not be assessed as having an impact on recreational facilities. However, the City reserves the right to require the provision of recreational facilities a part of Planned Commercial Developments.

Prior to the issuance of a building permit, all facility improvements necessary to accommodate the impacts of the entire development shall be approved and a schedule established for their implementation such that all improvements shall be completed prior to the issuance of the last Certificate of Occupancy.

PUBLIC SCHOOLS

The Interlocal Agreement for Public School Facilities Planning, the Public School Facilities Element, and the City's Land Development Code provides district-wide level-of-service standards for all school types and establishes Concurrency Service Areas for each school type.

The School Board/District shall conduct a concurrency review that includes findings and recommendations of whether there is adequate capacity to accommodate proposed development for each type of school, consistent with the adopted level-of-service. Prior to the issuance of the Final Development Order for a residential development or a development with a residential component, facility capacity necessary to accommodate the impacts of that portion of the development receiving a Development Order shall be in place or planned for construction within the first three years of the adopted five-year School District Capital Improvement Program. If the necessary facility capacity will not be in place or under construction within three years of the time of the development approval, the developer has the option to enter into negotiations for a Mitigation Agreement and development approval will be subject to the execution of the Mitigation Agreement.

Source: City of Port Orange, 2023~~09~~

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: CAPITAL IMPROVEMENTS

THE CITY SHALL UNDERTAKE NECESSARY ACTIONS TO ECONOMICALLY AND EFFICIENTLY PROVIDE NEEDED PUBLIC FACILITIES AND SERVICES TO ALL RESIDENTS WITHIN ITS SERVICE AREA~~JURISDICTION~~ IN A MANNER WHICH PROTECTS INVESTMENTS IN EXISTING FACILITIES, MAXIMIZES THE USE OF EXISTING FACILITIES, AND PROMOTES ORDERLY COMPACT URBAN GROWTH.

Objective 1.1: Capital improvements will be to accommodate growth, ~~provided to correct existing deficiencies, to accommodate anticipated future growth, and to replace outdated and obsolete correct existing deficiencies, and; facilities to meet adopted LOS,~~ as indicated in the Schedule of Improvements of this Element.

Policy 1.1.1: The City shall include all projects required to meet or maintain adopted LOS standards or implement the Goals, Objectives, and Policies of the Comprehensive Plan and determined to be of relatively large scale in cost (\$25,000 or greater) as Capital Improvement Projects to be included in the Schedule of Improvements of this Element;

~~*Policy 1.1.2:* The City shall, for accounting purposes, also include into this Element Debt Service and Operating expenditures.~~

~~*Policy 1.1.23:* In the City's Capital Improvement Program, the City shall prioritize, as a matter of priority, scheduling and funding all capital improvement projects in the City's annual Capital Improvement Program which are designed to correct existing deficiencies as identified listed in the various other in other Elements of this Plan.~~

~~*Policy 1.1.4:* The City will continue its current program providing for renewal and replacement of capital facilities as outlined in the various Elements of this Plan.~~

Policy 1.1.35: The Capital Improvements Coordinating Committee, composed of senior staff from operating departments and Finance, shall evaluate and rank on an annual basis in order of priority the projects proposed to be included in the Schedule of Improvements.

Policy 1.1.46: Proposed City capital improvement projects shall be evaluated and ranked in order of priority according to the following criteria:

- A. Whether the project is needed to protect public health and safety, to fulfill the City's legal commitment to provide facilities and services, or to preserve or achieve full use of those facilities already in place.
- B. Whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement costs, provides services to developed areas lacking full service, or promotes in-fill development.
- C. Whether the project represents a logical extension of facilities and services and is coordinated with the plans of ~~state~~ other agencies that provide facilities within the City.

- D. Whether the project implements the policies of this Comprehensive Plan as they pertain to the concurrency requirements or mobility strategies in support of the City's Town Center TCEA.
- E. Whether the project is financially feasible.

Policy 1.1.57: The potential for reducing Vehicle Miles Traveled (VMTs) ~~and green house gas (GHG) emissions~~ should be considered in all location and investment decisions for public facilities.

Objective 1.2: Future development will bear a proportionate cost of facility improvements or mobility strategies necessitated by the development in order to maintain the adopted level-of-service standards or to maintain mobility within the City's Town Center Transportation Concurrency Exception Area (TCEA).

Policy 1.2.1: The City will continue to collect impact fees from development projects to pay for the provision of public facilities and services required by ~~those projects~~ developments.

Policy 1.2.2: The City shall consider the use of other impact fees to fund TCEA mobility strategies.

Policy 1.2.3: All new development shall be required to donate or reserve their fair share of right-of-way adjacent to major roadways prior to the issuance of a final development order.

Policy 1.2.4: All new development shall be required to pay its proportionate fair share toward transportation LOS and mobility improvements necessary to provide capacity for its impacts.

Objective 1.3: The City will manage its fiscal resources to ensure the provision of needed capital improvements for previously issued development orders and for future development and redevelopment.

Policy 1.3.1: In providing capital improvements, the City shall limit the maximum ratio of outstanding indebtedness to no greater than 15% of the property tax base.

Policy 1.3.2: The City shall continue to adopt a Capital Improvement Program and an Operating Budget on a yearly basis as part of this budgeting process for implementation of the Goals, Objectives, and Policies set forth in this Comprehensive Plan.

Policy 1.3.3: The City shall continue to apply for and secure grants or private funds whenever available to finance the provision of capital improvements and other City improvement projects.

Policy 1.3.4: Prior to the issuance of Certificates of Occupancy, the City will provide for all public facilities needed to service development for which Development Orders were previously issued.

Policy 1.3.5: The City shall allocate the costs of new public facilities on the basis of the benefits received by existing and future residents.

Policy 1.3.6: The City shall identify and use stable revenue sources which are also responsive to growth for financing public facilities.

Policy 1.3.7: The City shall continue to strive for financial self-sufficiency in the provision of public facilities.

Policy 1.3.8: A capital improvement scheduled to be funded through grants and/or funding that requires a referendum will not be undertaken if the grants are not secured or the referendum is not passed; however, if the improvement is needed to maintain a LOS standard, then all new development will be required to contribute its fair share towards the improvement.

Policy 1.3.9: The City shall identify funding sources for the mobility strategies in the Town Center Transportation Concurrency Exception Area (TCEA) annually during the update to the Capital Improvements Plan. Mitigation shall be satisfied through a combination of physical infrastructure improvements, as listed in the Transportation ~~Mobility~~ Element, or payment of impact fees, and proportionate fair-share contributions, or other future identified sources.

Policy 1.3.10: The City may create a special assessment district to secure funding for TCEA strategies and identified improvements within the Port Orange Town Center Redevelopment District. The City shall amend the Capital Improvements Schedule annually to incorporate funding from the special assessment district for capital improvements to enhance mobility within the TCEA.

Policy 1.3.11: The City will pursue ~~and secure~~ funding from other revenue sources including, but not limited to:

- Florida Inland Navigation Department (FIND) grants
- Volusia County ECHO grants
- Community Development Block Grant (CDBG) funds
- Ponce de Leon Port District
- Special Assessment District
- ~~Florida Commerce Department of Economic Opportunity (DEO)~~
- Florida Department of Transportation (FDOT)
- Transportation Planning Organization (TPO)
- Transportation impact fees
- Utility projects (drainage, water, wastewater)
- Development Agreements
- Parking credits
- Gas tax

Objective 1.4: The City will utilize a Concurrency Management System so that decisions regarding the issuance of development orders and permits will be based upon coordination of the development requirements included in this Plan, the land development regulations, and the availability of necessary public facilities to support such development at the time needed. The Transportation Concurrency Exception Area provides concurrency exceptions for the issuance of development orders and permits for infill development and redevelopment based upon the multimodal transportation policies and strategies for mobility included in this Plan.

Policy 1.4.1: The City shall use the following Level-of-Service (LOS) standards in reviewing the impacts of new development and redevelopment upon public facility provision, except for the Roadways within the Transportation Concurrency Exception Area as described in the Transportation ~~Mobility~~ Element:

Sanitary Sewer --

Capacity: 160 gallons per equivalent residential unit per day. 1/10 gallon per square foot per day of commercial, industrial, or institutional development

Solid Waste --

Capacity: 3.21 pounds per capita per day; up to 1,350 residential units per curbside collection vehicle; 10 lbs/1,000 square feet of non-residential development

Potable Water --

Per Capita Consumption: 180 gallons per day per equivalent residential unit. 1/10 gallon per square foot per day of commercial, industrial, or institutional development; not to exceed CUP capacity for groundwater withdrawals

System Minimum Pressure during fire flow: 20 psi

Storage Provided: 50% of daily flow

Well Capacity: Meet or exceed CUP capacity for groundwater withdrawals

Normal Operating Pressure: 60-70 psi

Water Plant Capacity: Adequate for peak day. Three year lead time for planned expansion.

High Service Pumping: Peak hour with largest pump out of service. Expansion concurrent with treatment capacity.

Water Quality: Meet State and Federal Drinking Water Standards.

Drainage --

Quantity: 25-year, 24-hour storm event; per Drainage Sub-Element.

Quality: Reduction of pollutants to a level compatible with State Standards.

Transportation --

~~LOS C~~ Meet State Target for FHHS and SIS roads

LOS E for City and County-maintained roads ~~arterials and collectors~~

LOS D for S Williamson Boulevard (*Spruce Creek to Airport Road* ~~Pioneer Trail~~)

LOS D for State-maintained non-SIS or FHHS roadways, ~~and designated hurricane evacuation routes~~

Desired LOS D for bikeways

Recreation Standards for Facilities --

Parkland	7 acres / 1,000 persons
Ball Field	1 field / 5,000 persons
Basketball Court	1 court / 4,000 persons
Multipurpose Field	1 field / 3,500 persons
Tennis Court	1 court / 4,000 persons
Neighborhood Center	1 facility / 15,000 persons

Policy 1.4.2: Prior to the approval of an application for a final subdivision or development plan, the City will review the proposed application to ensure that public facilities and services needed to support the development are available concurrent with the impacts of such development based on the Concurrency Management System as set forth in the Capital Improvements Element (Tables 7, 8, and 9) and as provided in Goals 1 and 2 of the Transportation ~~Mobility~~ Element.

Policy 1.4.3: Provisions in the Comprehensive Plan that ensure public facilities and services standards will be met to satisfy the Concurrency requirement are listed below.

- A. The necessary facilities and services are in place or under construction at the time a development permit is issued; or
- B. A development permit is issued subject to the condition that the necessary facilities and services will be in place when the impacts of the development occur. For required roadway facilities, the construction commencement and completion date and source of funds for the necessary facility shall be adopted in the Capital Improvements Schedule; or
- C. The necessary facilities and services are guaranteed in an enforceable development agreement. The agreement must guarantee that the necessary facilities and services will be in place when the impacts of the development occur; or
- D. At the time the development permit is issued, the necessary facilities and services are the subject of a binding executed contract which provides for the commencement of the actual construction of the required facilities or the provision of services within three years of the development approval; or
- E. The necessary facilities and services are guaranteed in an enforceable development agreement which required the commencement of the actual construction of the facilities or the provision of services within one year of the issuance of the applicable development permit; or
- F. The necessary facilities and services are guaranteed in an adopted CIP but are not funded for construction within the first three years, and the development has entered into a Fair-Share Agreement to pay its proportionate fair share toward the required facilities.

For potable water, sewer, solid waste, and drainage facilities, at a minimum, one of provisions A-C must be met to satisfy the concurrency requirement. For parks and recreation and transportation facilities, any one of the provisions A-E must be met to satisfy the concurrency requirement. It should be noted, however, that concurrency for transportation facilities, as per provisions C and E, is predicated only upon development agreements which are subject to Section Chapter 163.3220 (Florida Local Government Development Agreement Act) or Chapter 380 (Land and Water Management), Florida Statutes. Pursuant to Section 163.3180, F.S., the portion of the City designated as a Transportation Concurrency Exception Area

(TCEA) is not subject to State-mandated transportation concurrency requirements. In accordance with this statute, the City has developed mobility strategies which must be met for development to occur, in the TCEA. As development occurs, mitigation shall be satisfied through a combination of physical infrastructure improvements, as listed in the Transportation ~~Mobility~~ Element, or payment of impact fees, and proportionate fair-share contributions, or other future identified sources. These must be guaranteed using any one of options above.

Policy 1.4.4: Proposed plan amendments and requests for new development or redevelopment shall be evaluated according to the following guidelines as to whether the proposed action would:

- A. Be consistent with the Public Facilities Element and the Coastal Management Element and not contribute to a condition of public hazard.
- B. Be consistent with the Transportation ~~Mobility~~ Element; Public Facilities Element; and Recreation and Open Space Element and not intensify any existing public facility capacity deficits not envisioned within this plan.
- C. Generate public facility demands that may be accommodated by planned capacity increases.
- D. Conform with future land uses as shown on the future land use map, and Urban Service Areas as described in the Public Facilities Element of this Plan.
- E. Accommodate public facility demands based upon level-of-service standards by provision of facilities by the developer or by the City consistent with this element.
- F. Be consistent with state and regional agencies' and water management district's facilities plans.

Policy 1.4.5: The City shall include projects within the City's Five-Year Capital Improvements Program and the Capital Improvements Element to fund mobility and implement strategies to support the Town Center Transportation Concurrency Exception Area (TCEA). The identified projects will be prioritized consistent with the Transportation ~~Mobility~~ Element.

Policy 1.4.6: The City will work annually through the TPO's Transportation Improvement Program (TIP) with FDOT, the TPO and Volusia County to promote the inclusion of projects in their plans, programs and development regulations that maintain mobility within or that would benefit the TCEA in terms of mobility; and to identify joint funding strategies, including special assessment and developer contributions, that would allow for the acceleration of long range improvements for inclusion with the TIP or the City's 5-year Capital Improvements Schedule, as appropriate.

Policy 1.4.7: Capital Improvements necessary for water supply concurrency will be identified and included in the annual update to the Capital Improvements Schedule.

GOAL 2: PUBLIC SCHOOL FACILITIES

THE CITY, IN COOPERATION WITH THE SCHOOL DISTRICT, SHALL PROVIDE FOR A FINANCIALLY FEASIBLE PUBLIC SCHOOL FACILITIES PROGRAM.

Objective 2.1: The City of Port Orange shall ensure that the capacity of schools is sufficient to

support residential subdivisions and site plans at the adopted level-of-service standard. This level of service standard shall be consistent with the level of service standard adopted in the interlocal agreement entered into by the School ~~Board~~District and the local governments within Volusia County.

Policy 2.1.1: The level-of-service standard adopted by the City of Port Orange is the same as adopted by all local governments within Volusia County and by the School ~~Board~~District and shall be applied district-wide to all schools of the same type.

Policy 2.1.2: Consistent with the interlocal agreement, the uniform, district-wide level-of-service standards are set as follows using FISH capacity based on the traditional school calendar:

Elementary Schools: 115% of permanent FISH capacity for the concurrency service area

K- 8 Schools: 115% of permanent FISH capacity for the concurrency service area.

Middle Schools: 115% of permanent FISH capacity for the concurrency service area

High Schools: 120% of permanent FISH capacity for the concurrency service area

Special Purpose Schools: 100% of permanent FISH capacity

Objective 2.2: The City of Port Orange shall cooperate with the School ~~Board~~District to ensure existing deficiencies and future needs are addressed consistent with adopted level of service standards for public schools.

Policy 2.2.1: ~~By December 1 of each year~~Annually, the City of Port Orange shall adopt as part of its Capital Improvement Element the Volusia County School District five year work program approved in September of each year as part of the School District budget, including planned facilities and funding sources to ensure a financially feasible capital improvements program and to ensure the level of service standards will be achieved by the end of the five-year period.

Policy 2.2.3: The City of Port Orange shall coordinate with the School ~~Board~~District and adopt development requirements to ensure that future development pays a proportionate share of the costs of capital facility capacity needed to accommodate new development and to assist in maintaining the adopted level-of-service standards via impact fees and other legally available and appropriate methods.

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CHAPTER 11: PROPERTY RIGHTS ELEMENT

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Chapter 11: PROPERTY RIGHTS ELEMENT 1

GOALS, OBJECTIVES, AND POLICIES 2

GOALS, OBJECTIVES, AND POLICIES

GOAL 1: PRIVATE PROPERTY RIGHTS. TO THE CITY SHALL RECOGNIZE AND RESPECT JUDICIALLY ACKNOWLEDGED AND CONSTITUTIONALLY PROTECTED PRIVATE PROPERTY RIGHTS.

Objective 1.1: Recognition of Private Property Rights. The following policies are to ensure that private property rights shall be considered in local decision making.

Policy 1.1.1: The right of a property owner to physically possess and control his or her interests in the property, including easements, leases, or mineral rights.

Policy 1.1.2: The right of a property owner to use, maintain, develop, and improve his or her property for personal use or for the use of any other person, subject to state law and local ordinances.

Policy 1.1.3: The right of the property owner to privacy and to exclude others from the property to protect the owner's possessions and property.

Policy 1.1.4: The right of a property owner to dispose of his or her property through sale or gift.

Appendix

MAP SERIES



The Port Orange Map Series supports each of the respective elements of the City's Comprehensive Plan. The Maps identified below are identified (numbered) with respect to the Element. For Example, Element One is the City's Future Land Use Element and the corresponding Map Series is identified with the number "1" and the Map Title.

Future Land Use

- 1.1 Existing Land Use
- 1.2 Vacant Land
- 1.3 Vacant Land by Future Land Use
- 1.4 Future Land Use
- 1.5 Water Bodies
- 1.6 Flood Zones
- 1.7 Soils
- 1.8 Historical Resources
- 1.9 Community Redevelopment Areas
- 1.10 Location of Commercial Nodes
- 1.11 Environmental Corridor Overlay
- 1.12 Potable Water Wells and Wellhead Projection Zones

Transportation

- 2.1 Roadway Jurisdiction
- 2.2 Functional Classification
- 2.3 Transit Routes
- 2.4 Existing LOS 2023
- 2.5 Roadway LOS 2045
- 2.6 Bicycle and Pedestrian Routes
- 2.7 Transportation Concurrency Exception Areas
- 2.8 Constrained Roadways & Future Lanes

Housing

No Maps

Public Facilities

- 4.1 Septic Tank Areas
- 4.2 Wastewater Service Areas
- 4.3 Potable Water Service Areas
- 4.4 Reclaimed Water

Public Schools

No Maps

Recreation & Open Space

- 6.1 Recreation Facilities



Coastal Zone Management

- 7.1 Coastal High Hazard Areas
- 7.2 Hurricane Evacuation Zone & Routes

Conservation

- 8.1 Land Cover
- 8.2 Nature Reserve & Conservation Areas

Intergovernmental Coordination

- 9.1 Annexation Areas

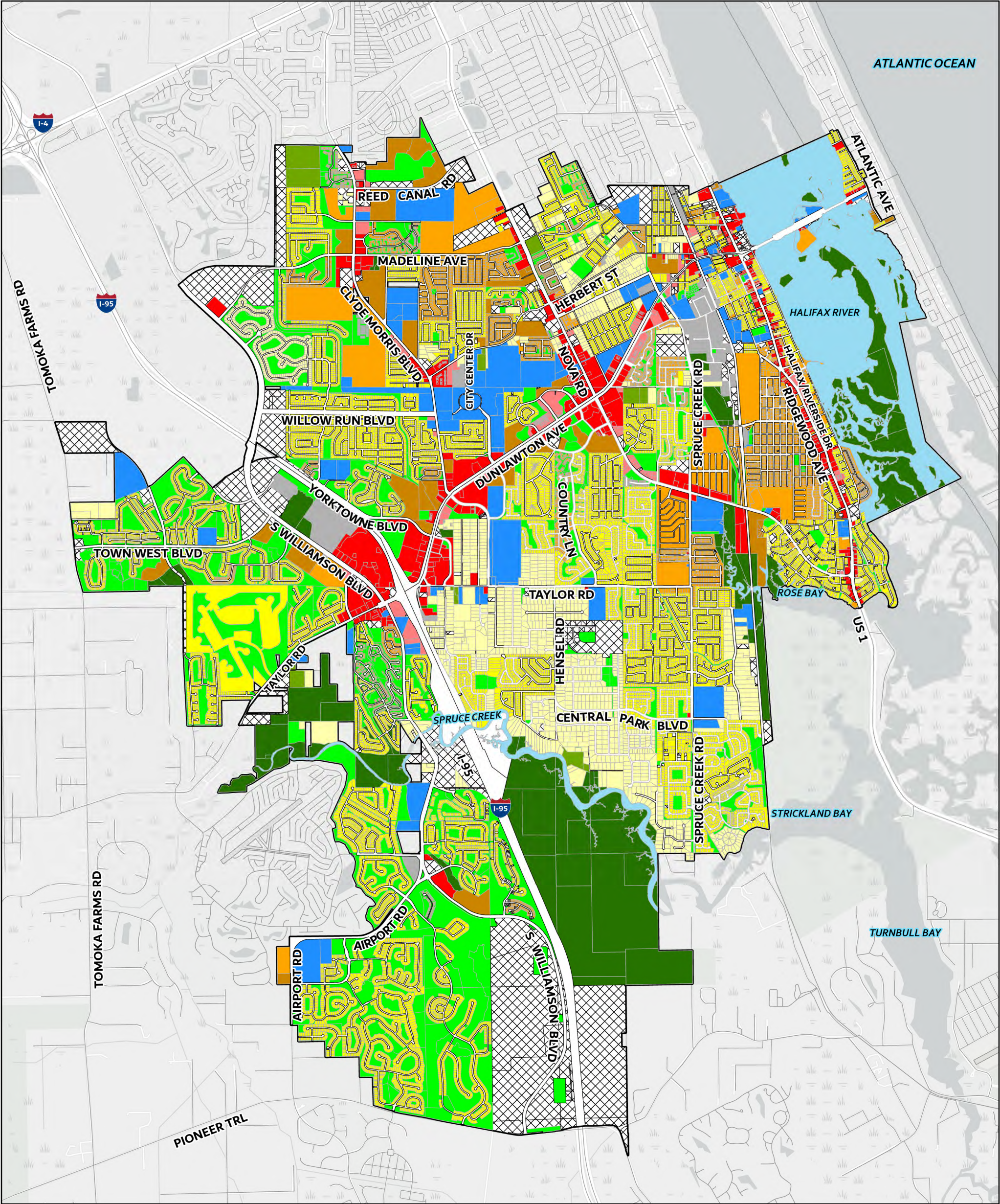
Capital Improvements

No Maps

Property Rights

No Maps





Existing Land Use (2022)

- | | | | |
|---------------|----------------------------|-----------------------------|----------------------|
| City Boundary | Public/Quasi-Public | Residential 4-8 Units/Acre | Warehouse/Industrial |
| Agriculture | Recreation/Open Space | Residential 8-16 Units/Acre | Water Feature |
| Commercial | Residential 0-2 Units/Acre | Right-of-Way | |
| Conservation | Residential 2-4 Units/Acre | Vacant | |
| Office | | | |

Map 1.1 - Existing Land Use (2022)

City of Port Orange | 2045 Comprehensive Plan Map Series

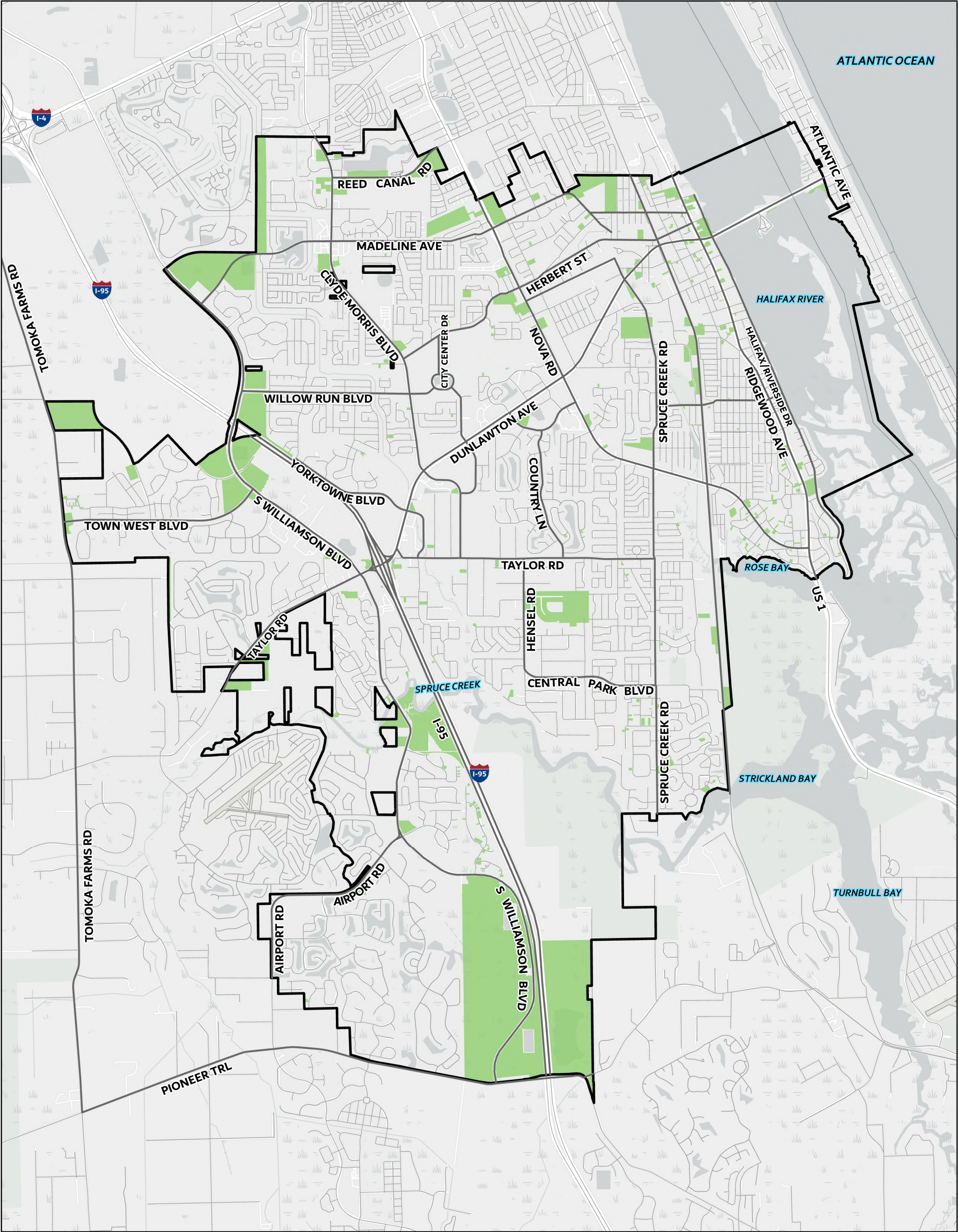


Source: City of Port Orange (2023)
Note: This map was compiled utilizing available GIS data and does not reflect an actual survey. The City of Port Orange does not assume responsibility for errors or omissions contained herein.

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Map Revised: February 19, 2024

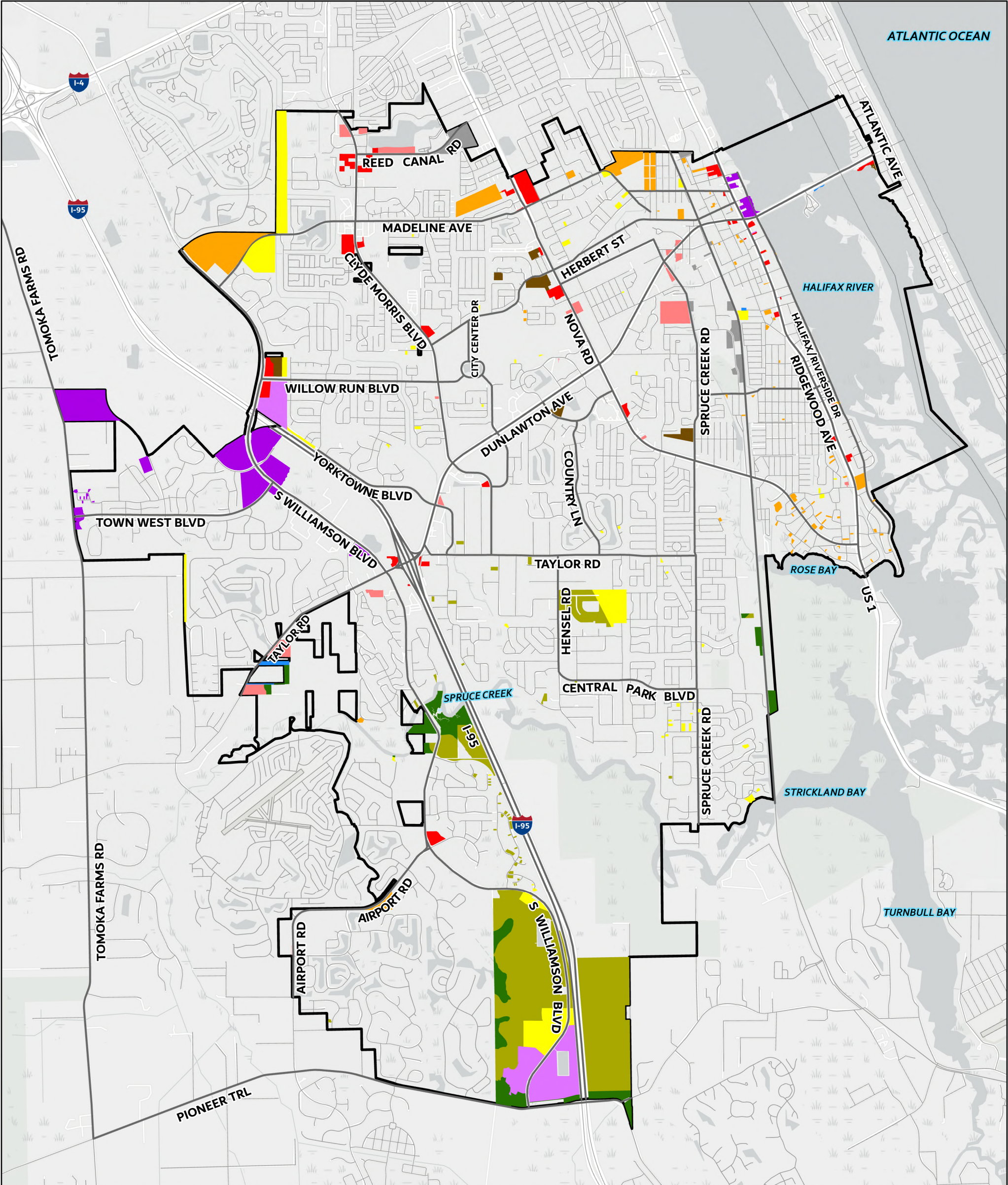




Vacant Land (2023)

-  City Boundary
-  Vacant Land

Map 1.2 - Vacant Land (2023)



Vacant Land by Future Land Use (2023)

- City Boundary

Commercial

Conservation

Mixed-Use Center
- Office Residential Transition

Planned Community

Public/Institutional

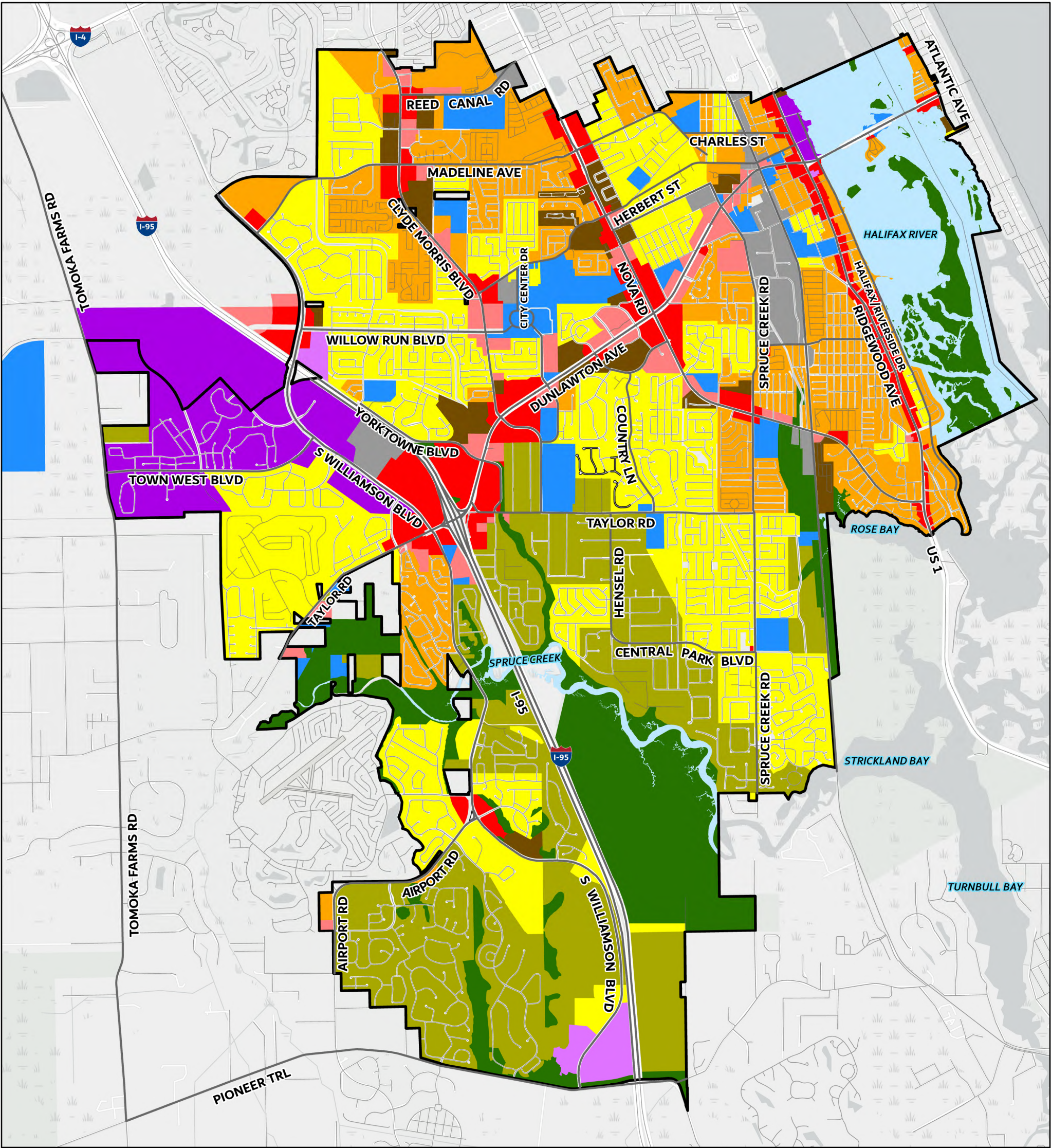
Rural Transition
- Suburban Residential

Urban High Density Residential

Urban Medium Density Residential
- Warehouse/Industrial

Water Feature

Map 1.3- Vacant Land by Future Land Use (2023)



Future Land Use (2023)

- City Boundary

Future Land Use

Agricultural Preservation

Commercial

Conservation

Mixed-Use Center
- Office Residential Transition

Planned Community

Public/Institutional

Residential Estate

Right-of-Way

Rural Transition
- Suburban Residential

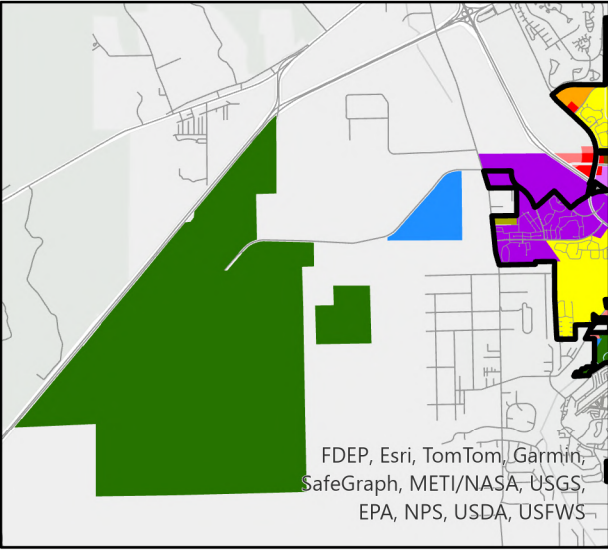
Urban High Density Residential

Urban Medium Density Residential

Warehouse/Industrial

Water Feature

Areas Outside City Boundary



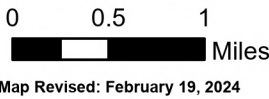
Map 1.4 - Future Land Use (2023)

City of Port Orange | 2045 Comprehensive Plan Map Series



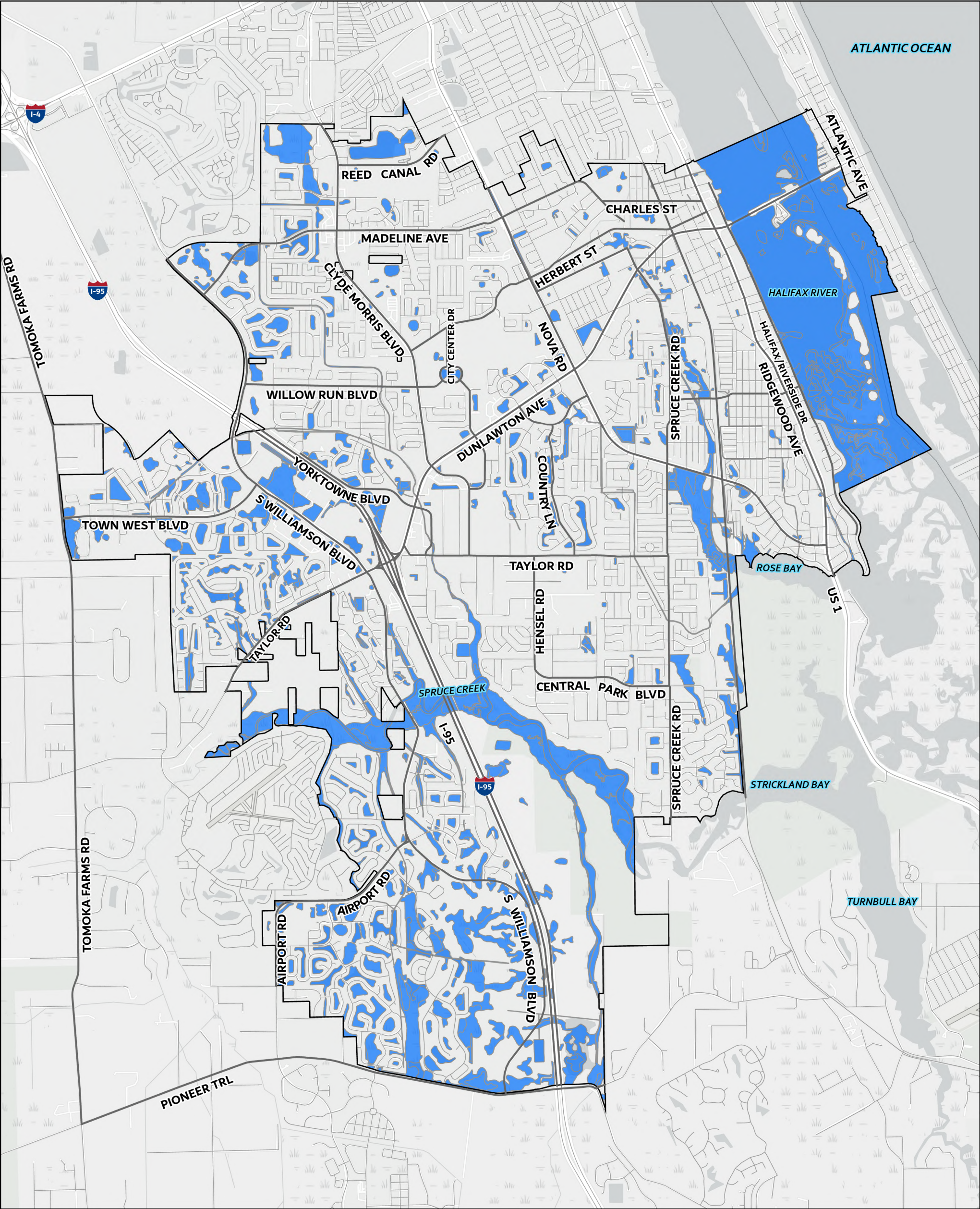
Source: City of Port Orange, Volusia County IT/GIS Department (2023)
Note: This map was compiled utilizing available GIS data and does not reflect an actual survey. The City of Port Orange does not assume responsibility for errors or omissions contained herein.

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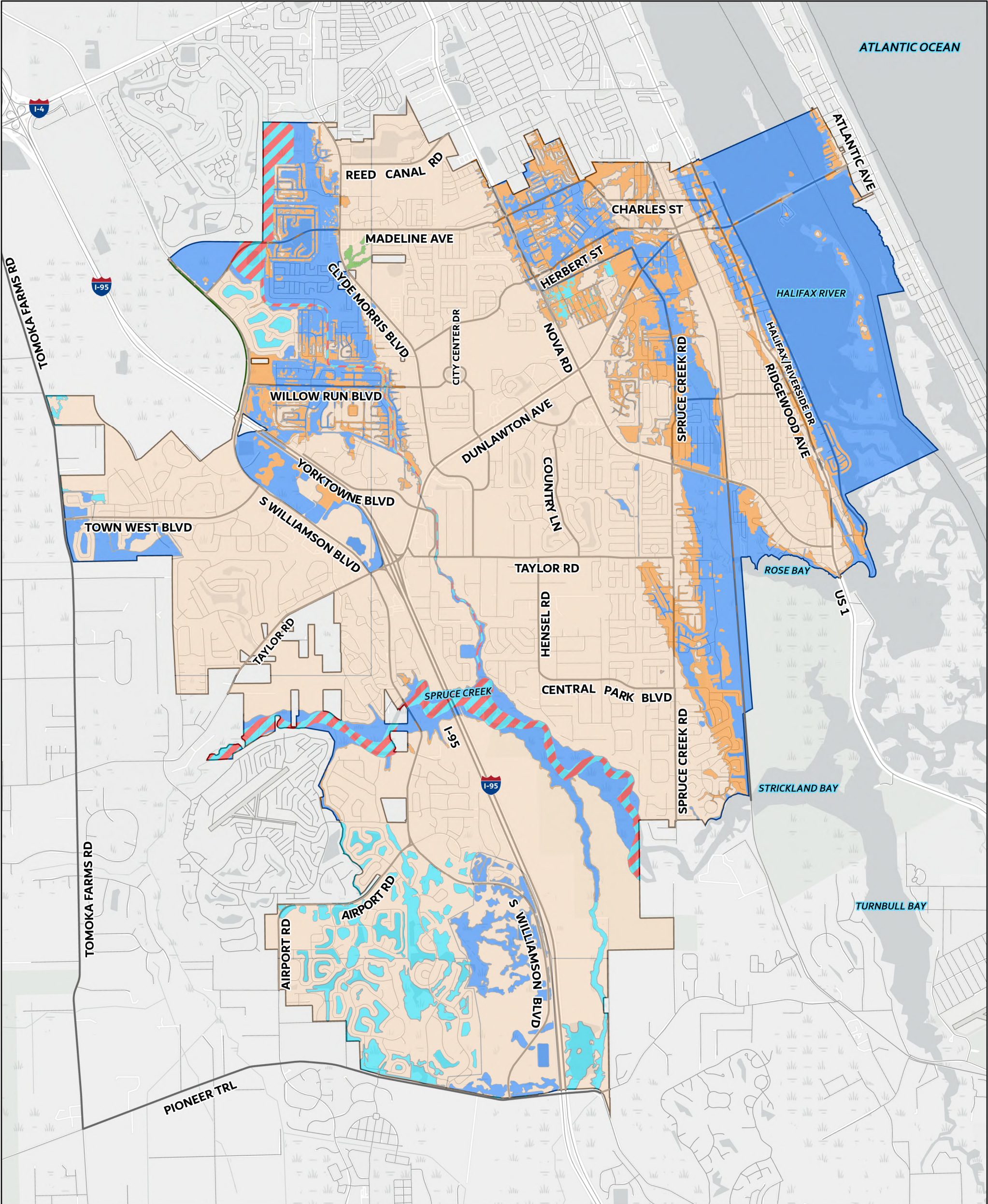




Waterbodies (2023)

- City Boundary
- Waterbodies

Map 1.5 - Waterbodies (2023)



Flood Zones (2023)

- City Boundary

Flood Zone

Flood Zone A

Flood Zone AE

Flood Zone AE (Floodway)

Flood Zone AH

Flood Zone X (0.2 Pct Annual Chance Flood Hazard)

Flood Zone X (Area of Minimal Flood Hazard)
- Map 1.6 - Flood Zones (2023)
- 

City of Port Orange | 2045 Comprehensive Plan Map Series

Source: Federal Emergency Management Agency (2023)

Note: This map was compiled utilizing available GIS data and does not reflect an actual survey. The City of Port Orange does not assume responsibility for errors or omissions contained herein.

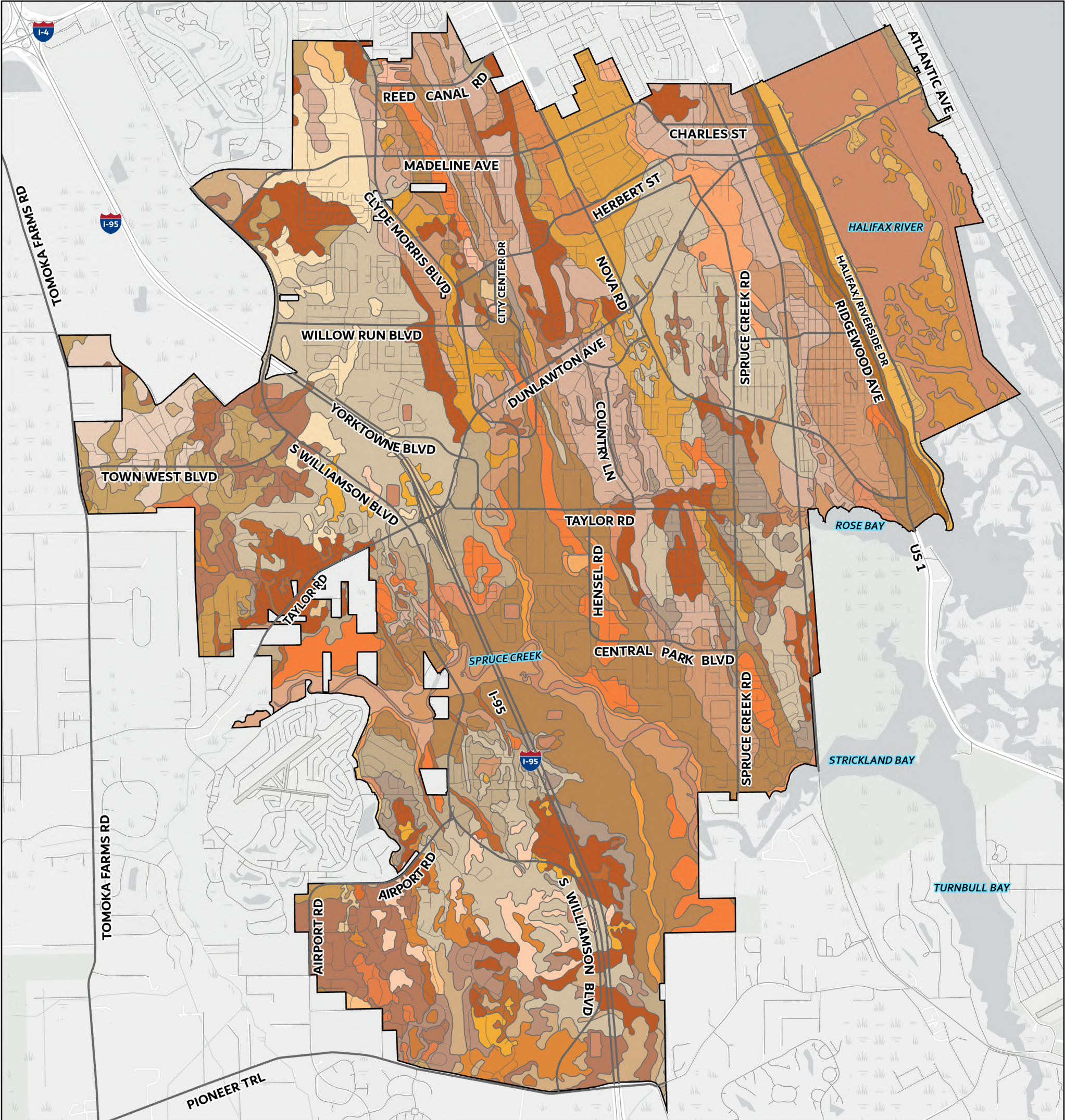
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Soils (2023)

 City Boundary	 Hydraquents	 Placid fine sand, frequently ponded, 0 to 1 perce*	 Tavares fine sand, 0 to 5 percent slopes
 Arents	 Immokalee sand	 Pomona fine sand	 Terra Ceia muck, frequently ponded, 0 to 1 persen*
 Astatula fine sand, 0 to 8 percent slopes	 Immokalee sand, depressional	 Pomona fine sand, depressional, 0 to 2 percent sl*	 Turnbull muck
 Basinger fine sand, frequently ponded, 0 to 1 per*	 Malabar fine sand	 Pomona-St. Johns complex	 Turnbull variant sand
 Canaveral sand, 0 to 5 percent slopes	 Myakka fine sand	 Pompano fine sand	 Tuscawillia fine sand
 Cassia fine sand, 0 to 2 percent slopes	 Myakka fine sand, frequently ponded, 0 to 1 perce*	 Pompano-Placid complex	 Tuscawillia-Urban land complex
 Chobee fine sandy loam	 Myakka variant fine sand	 Quartzipsamments, gently sloping	 Valkaria fine sand, 0 to 2 percent slopes
 Cocoa sand, 0 to 5 percent slopes	 Myakka-St. Johns complex	 Riviera fine sand	 Wabasso fine sand
 Daytona sand, 0 to 5 percent slopes	 Orsino fine sand, 0 to 5 percent slopes	 Samsula muck, frequently ponded, 0 to 1 percent s*	 Water
 EauGallie fine sand	 Palm Beach-Urban land-Paola complex, 0 to 8 perce*	 Satellite sand	 Wauchula fine sand
 Farmton fine sand	 Paola fine sand, 0 to 8 percent slopes	 Scoggin sand	
 Fluvaquents	 Paola fine sand, 8 to 17 percent slopes	 Smyrna fine sand	
 Gator muck, 0 to 1 percent slopes, frequently flo*	 Pineda-Pineda, wet, fine sand, 0 to 2 percent slo*	 St. Johns fine sand	
 Holopaw sand	 Pits	 St. Lucie fine sand, 0 to 5 percent slopes	

Map 1.7 - Soils (2023)

City of Port Orange | 2045 Comprehensive Plan Map Series

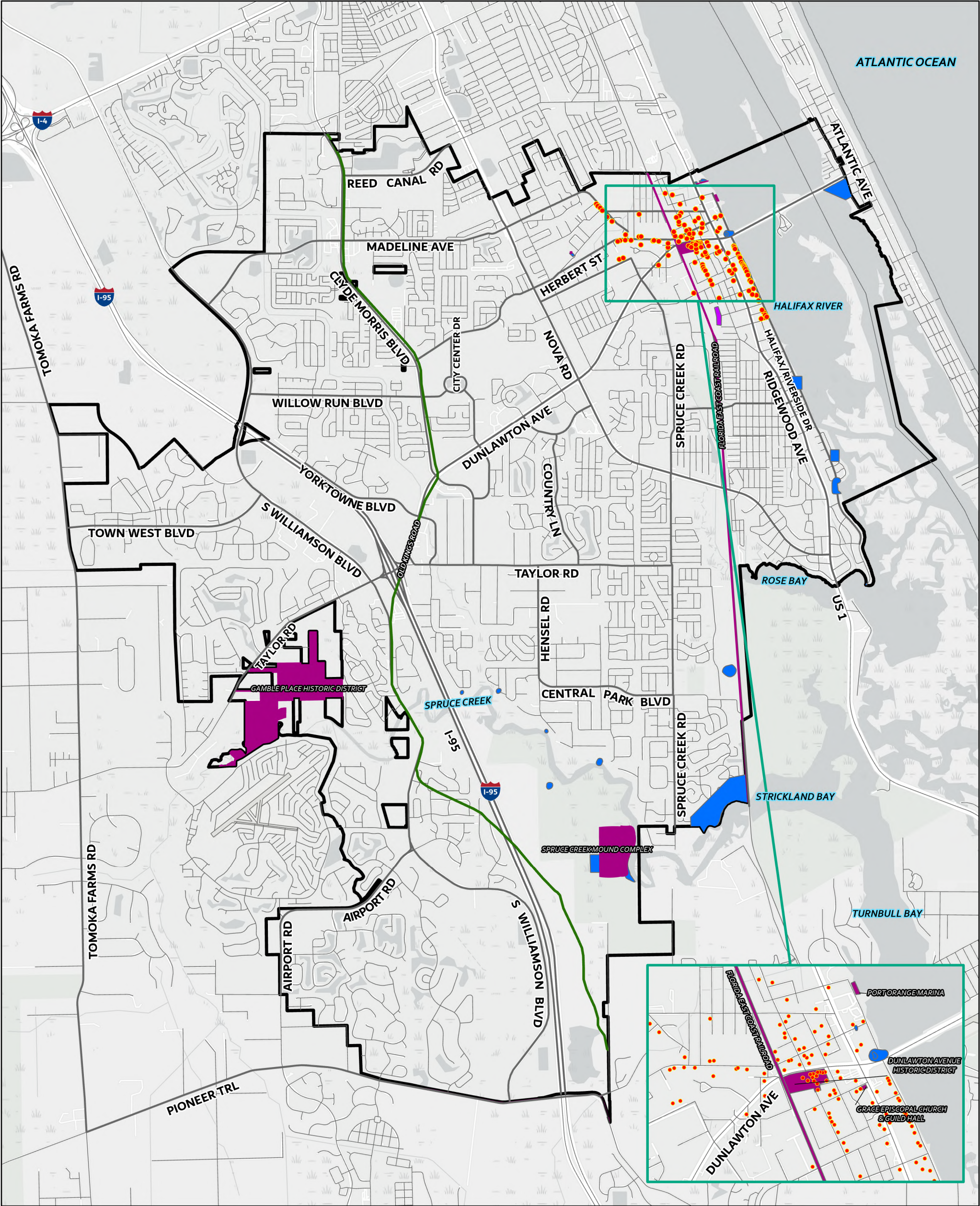


Source: United States Department of Agriculture - NRCS (2023)
Note: This map was compiled utilizing available GIS data and does not reflect an actual survey. The City of Port Orange does not assume responsibility for errors or omissions contained herein.

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Map Revised: February 19, 2024

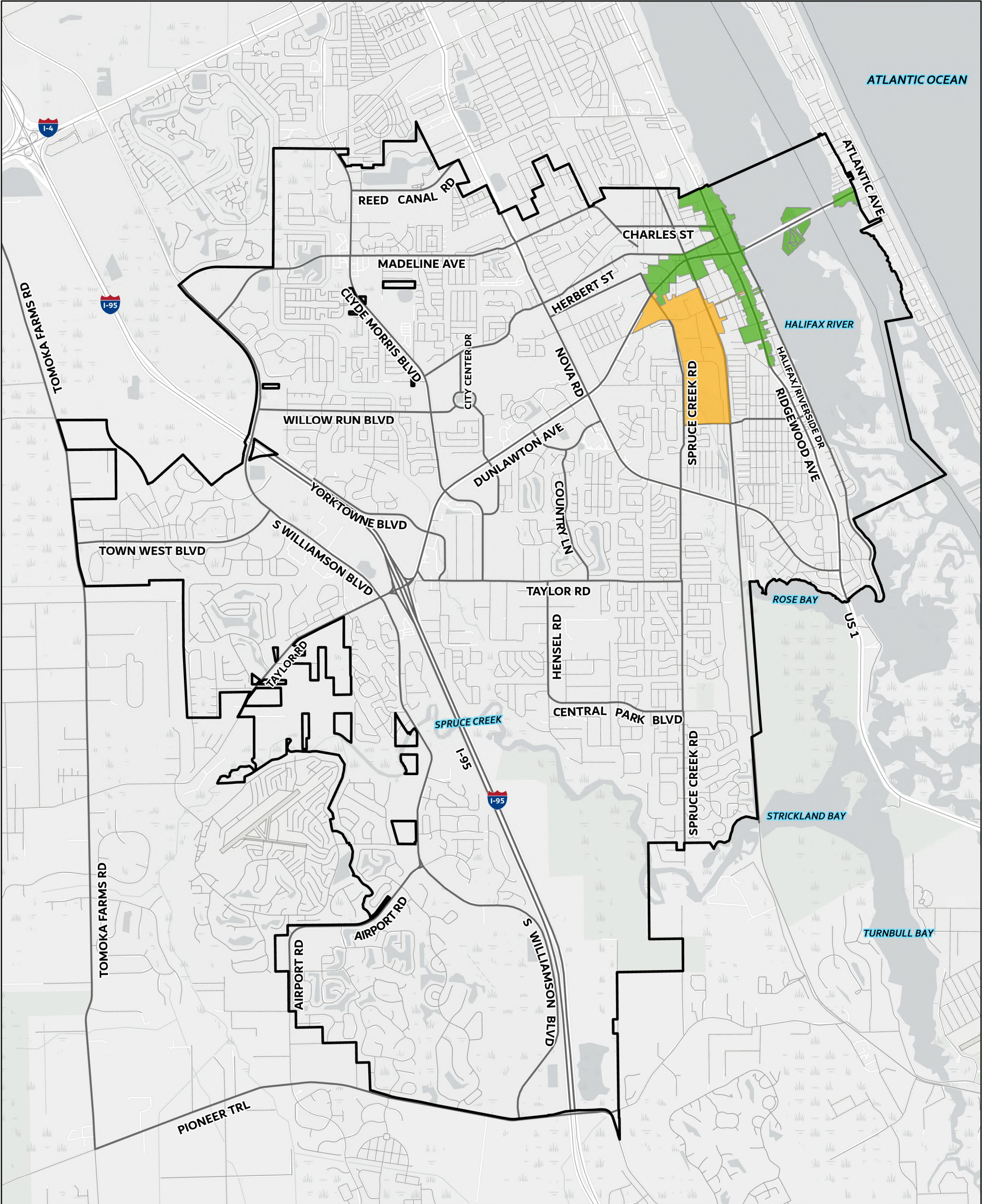




Historical Resources (2023)

- City Boundary
- Historical Structures
- Archaeological Site
- Historical Roads
- Cemetery Roster
- Historical Sites

Map 1.8 - Historical Resources (2023)



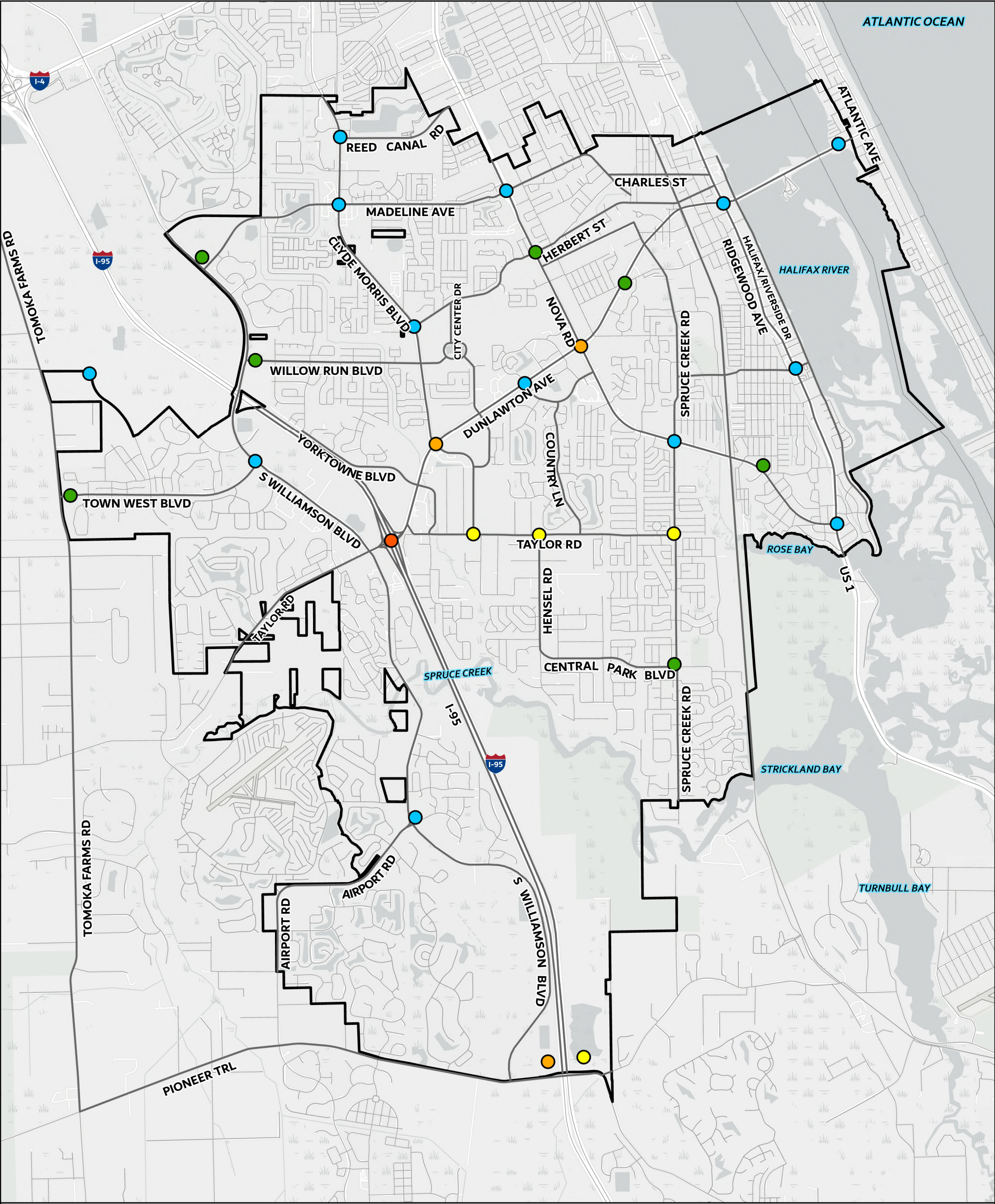
Community Redevelopment Areas (2023)

 City Boundary

CRA

-  Eastport Business Center CRA
-  Port Orange Town Center CRA

Map 1.9 - Community Redevelopment Areas (2023)

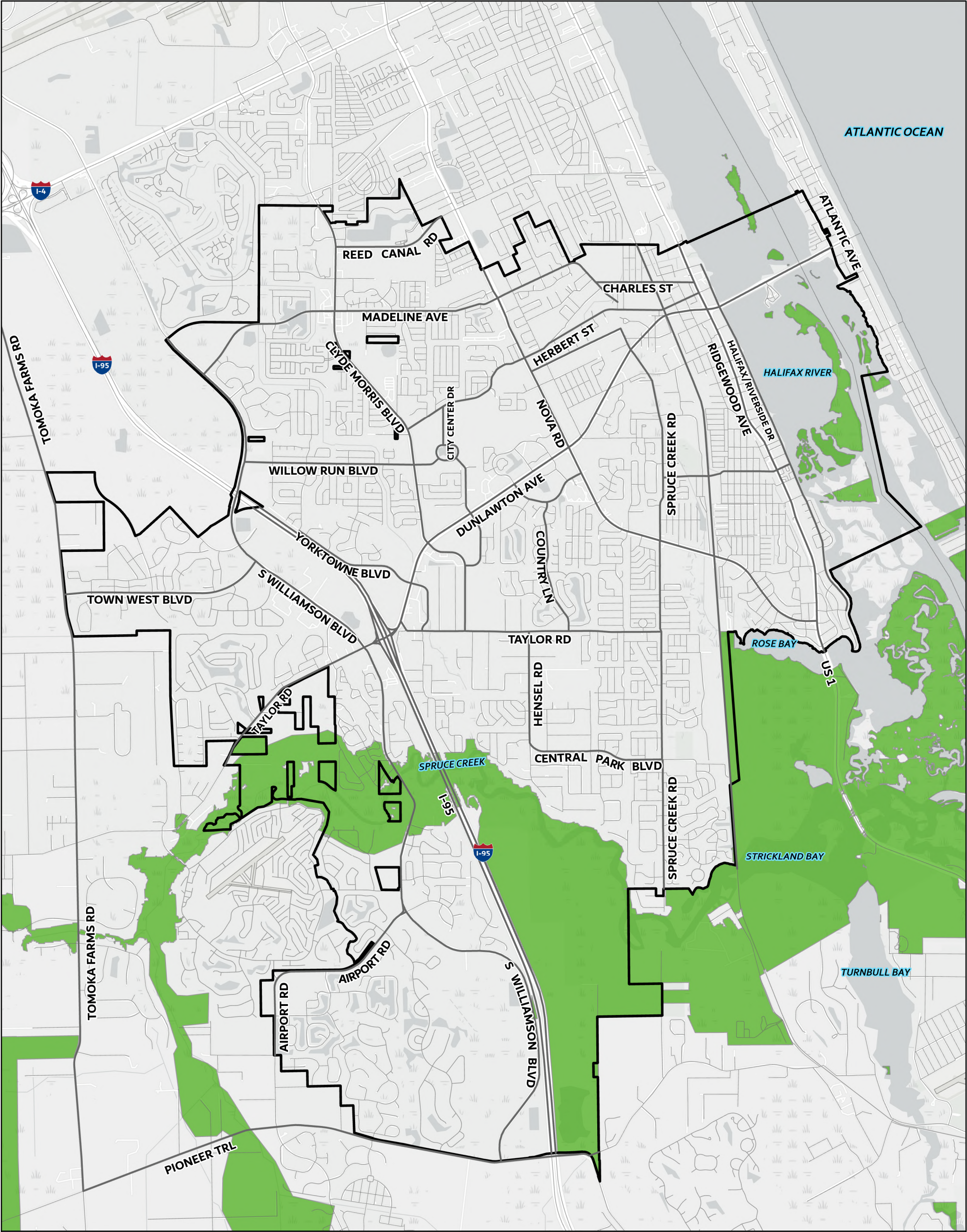


General Location of Commercial Nodes (2023)

City Boundary

- Commercial Node
- Potential Future Neighborhood
 - Community
 - Neighborhood
 - Regional
 - Sub-Regional

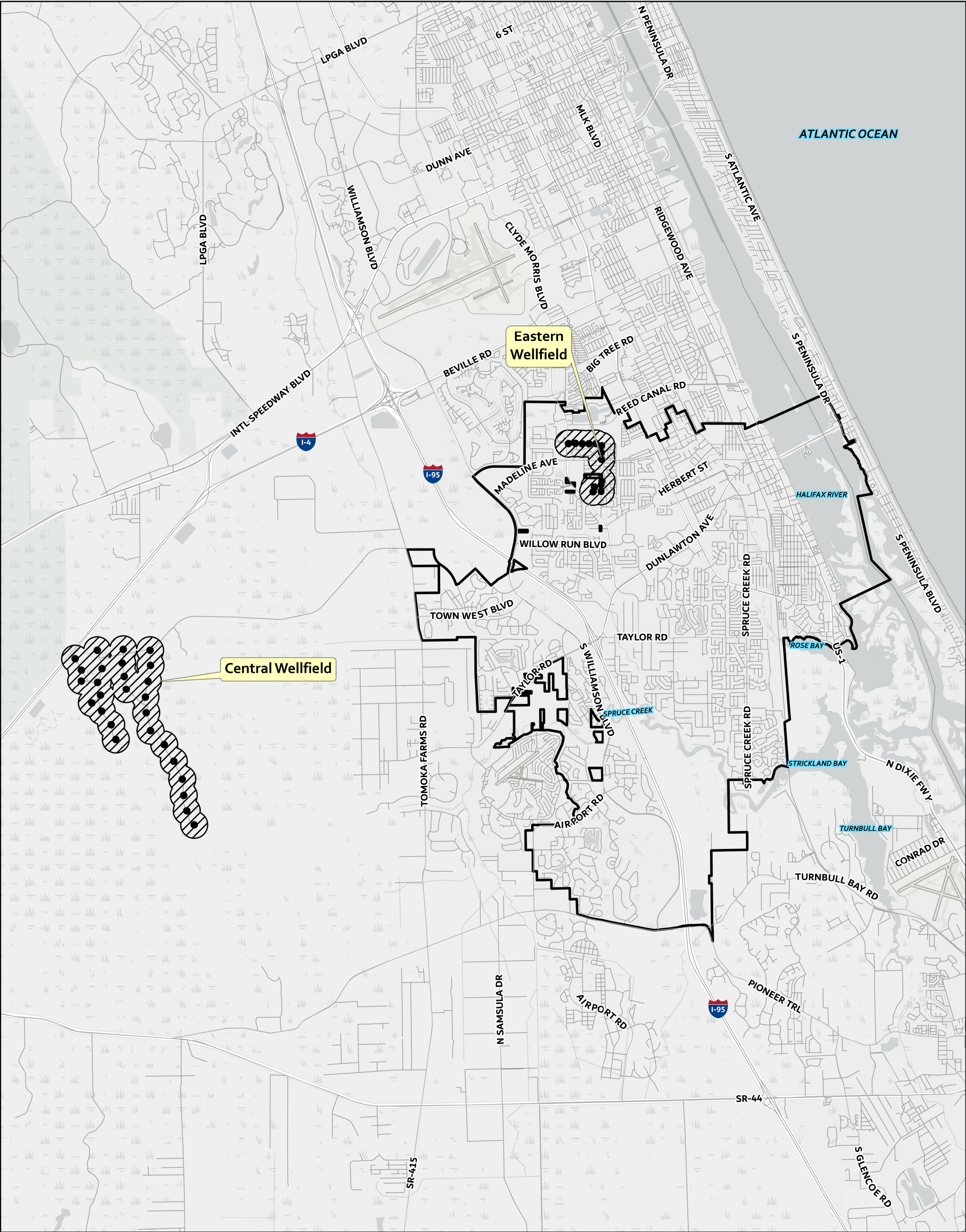
Map 1.10 - Location of Commercial Nodes (2023)



Environmental Corridor Overlay (2023)

-  City Boundary
-  Environmental Corridor

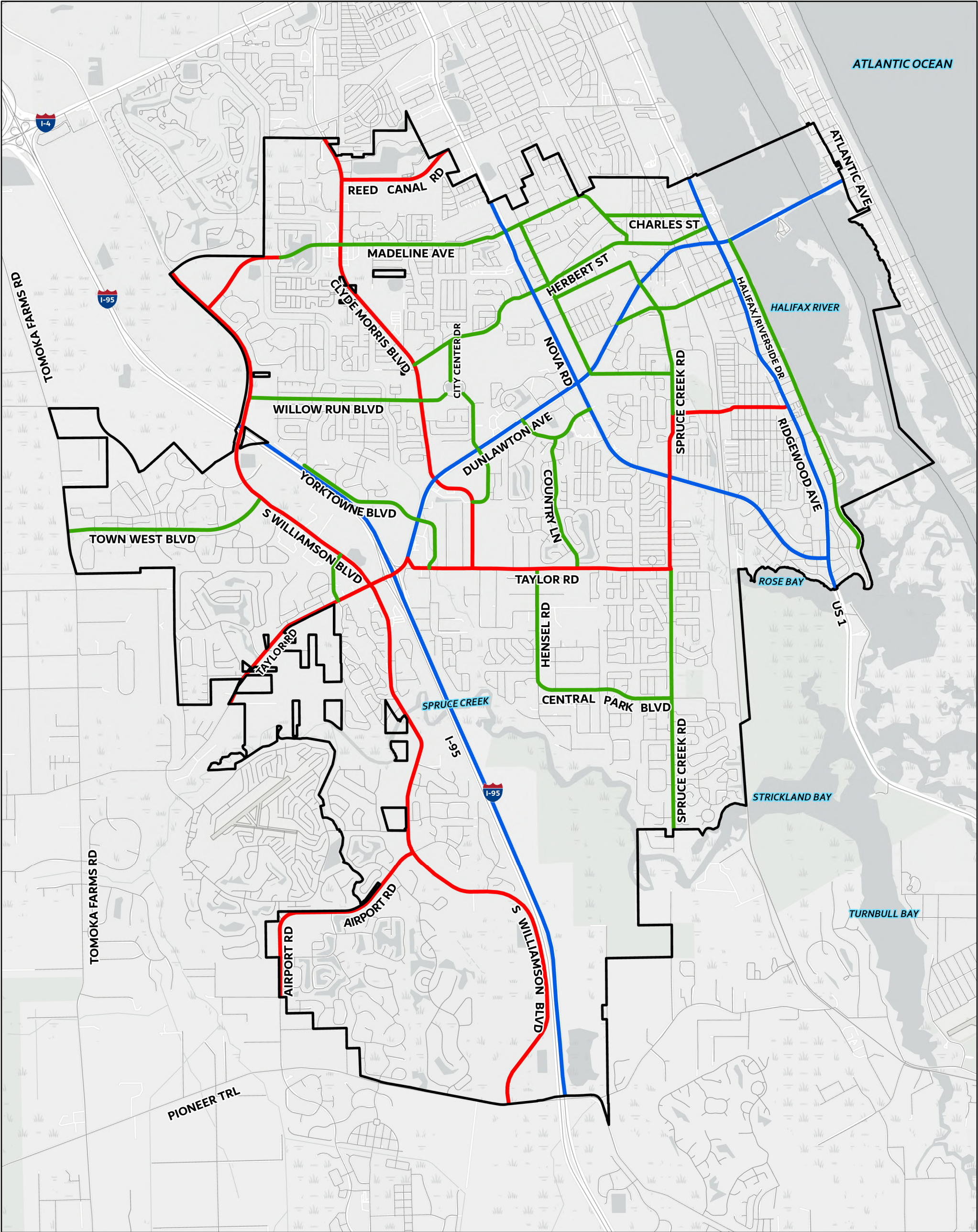
Map 1.11 - Environmental Corridor Overlay (2023)



Potable Water Wells and Wellhead Protection Zone (2023)

- City Boundary
- Wellfield Protection Zones (1000 ft Radius)
- Potable Water Wells

Map 1.12 - Potable Water Wells and Wellhead Protection Zone (2023)



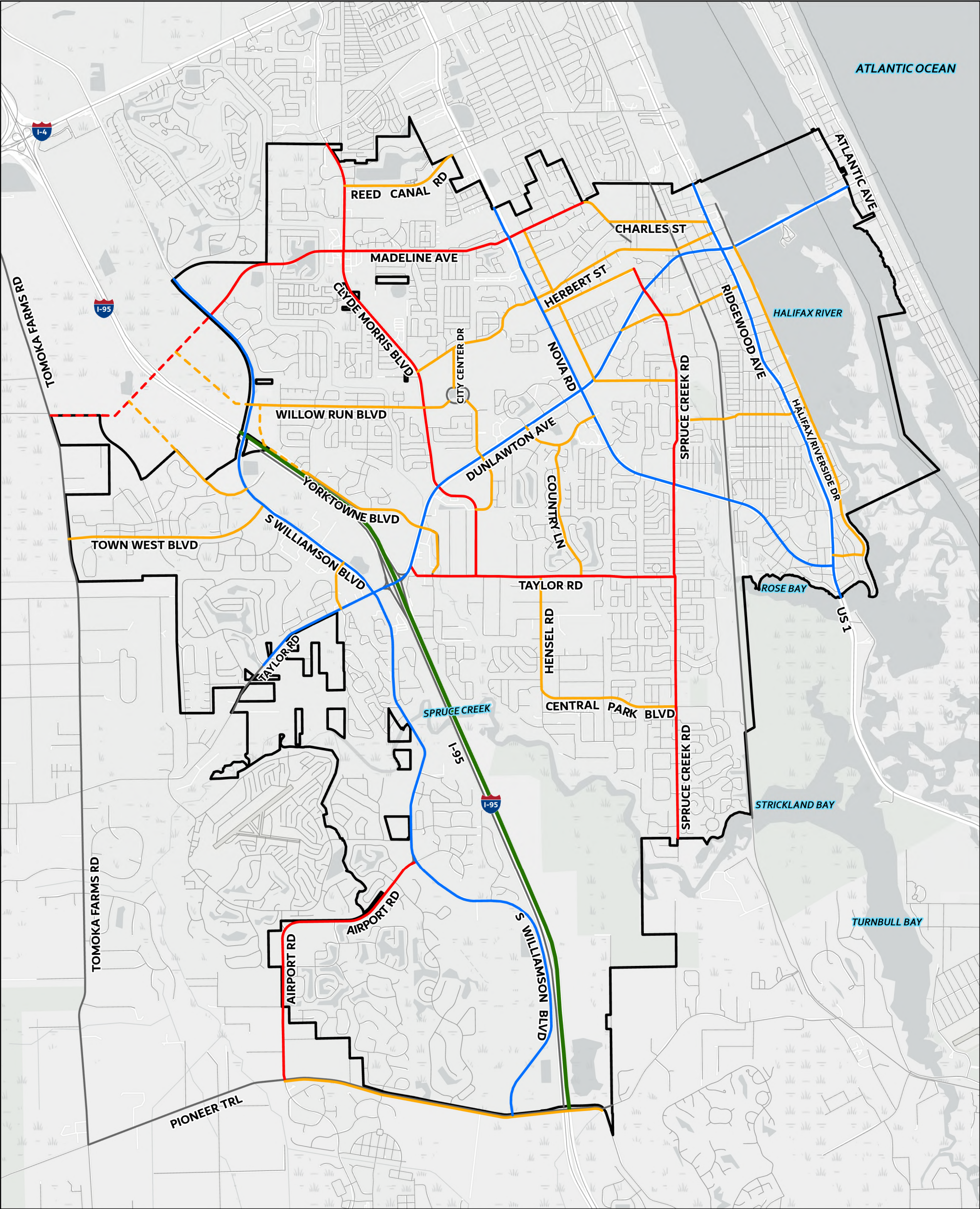
Roadway Jurisdiction (2023)

City Boundary

Jurisdiction

- City (2-3 lanes)
- County (2-5 lanes)
- FDOT (4-6 lanes)

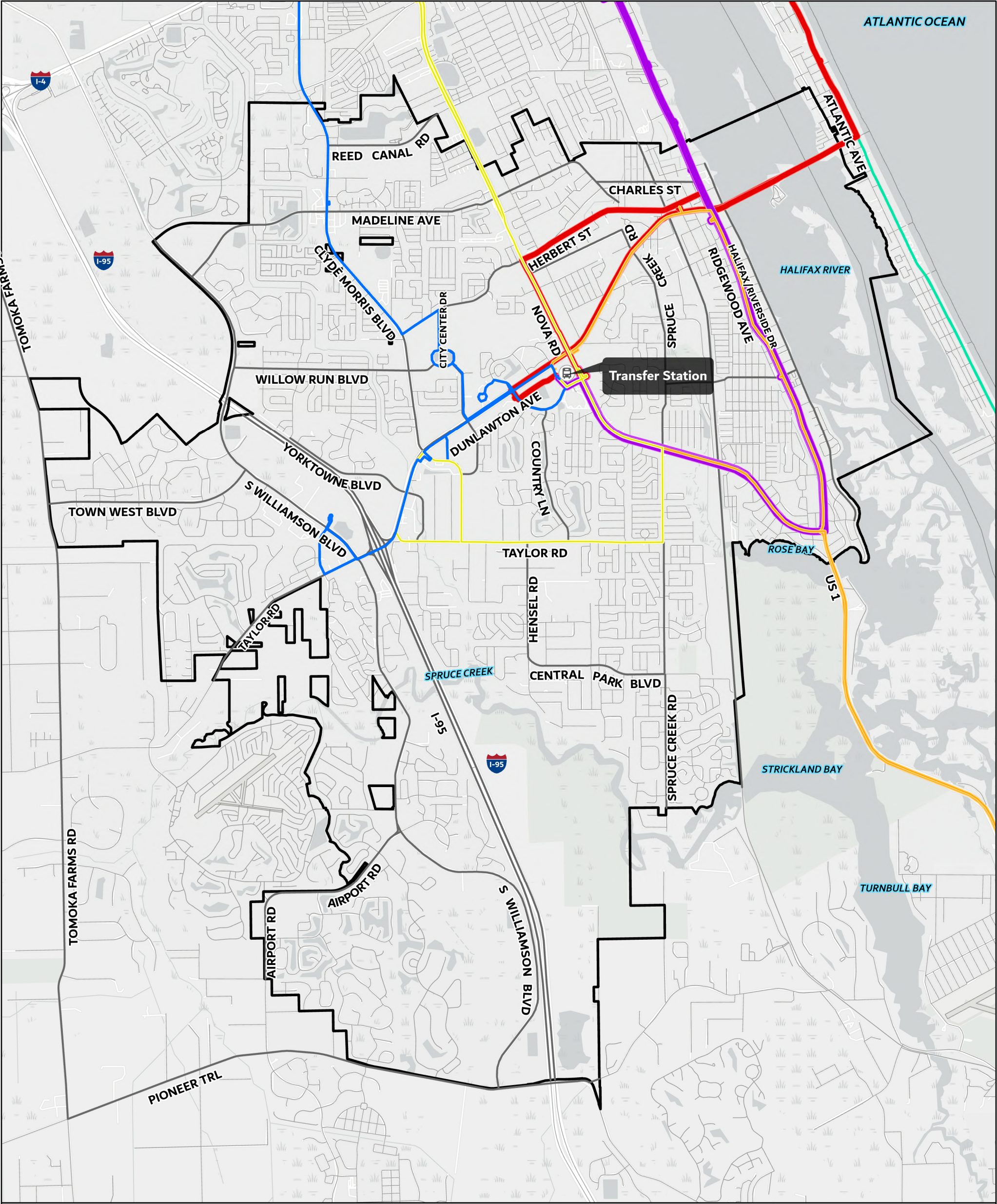
Map 2.1 - Roadway Jurisdiction (2023)



Functional Classification (2023)

- City Boundary
- Collector
- Proposed Collector
- Minor Arterial
- Proposed Minor Arterial
- Principal Arterial
- Strategic Intermodal System

Map 2.2 - Functional Classification (2023)



Transit Routes (2023)

- City Boundary

VOTRAN Routes

Route 12

Route 17B

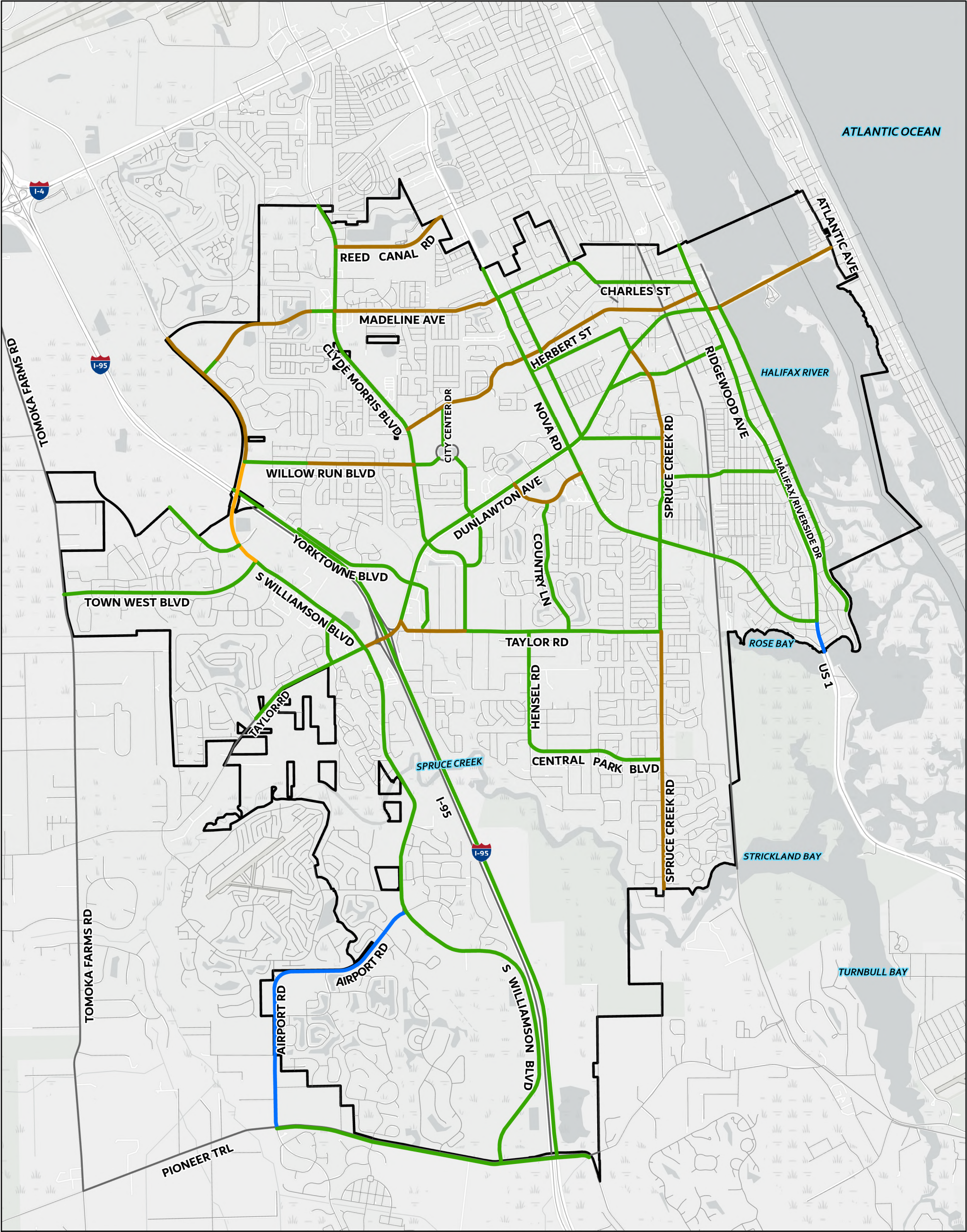
Route 4

Route 17A

Route 7

Route 40

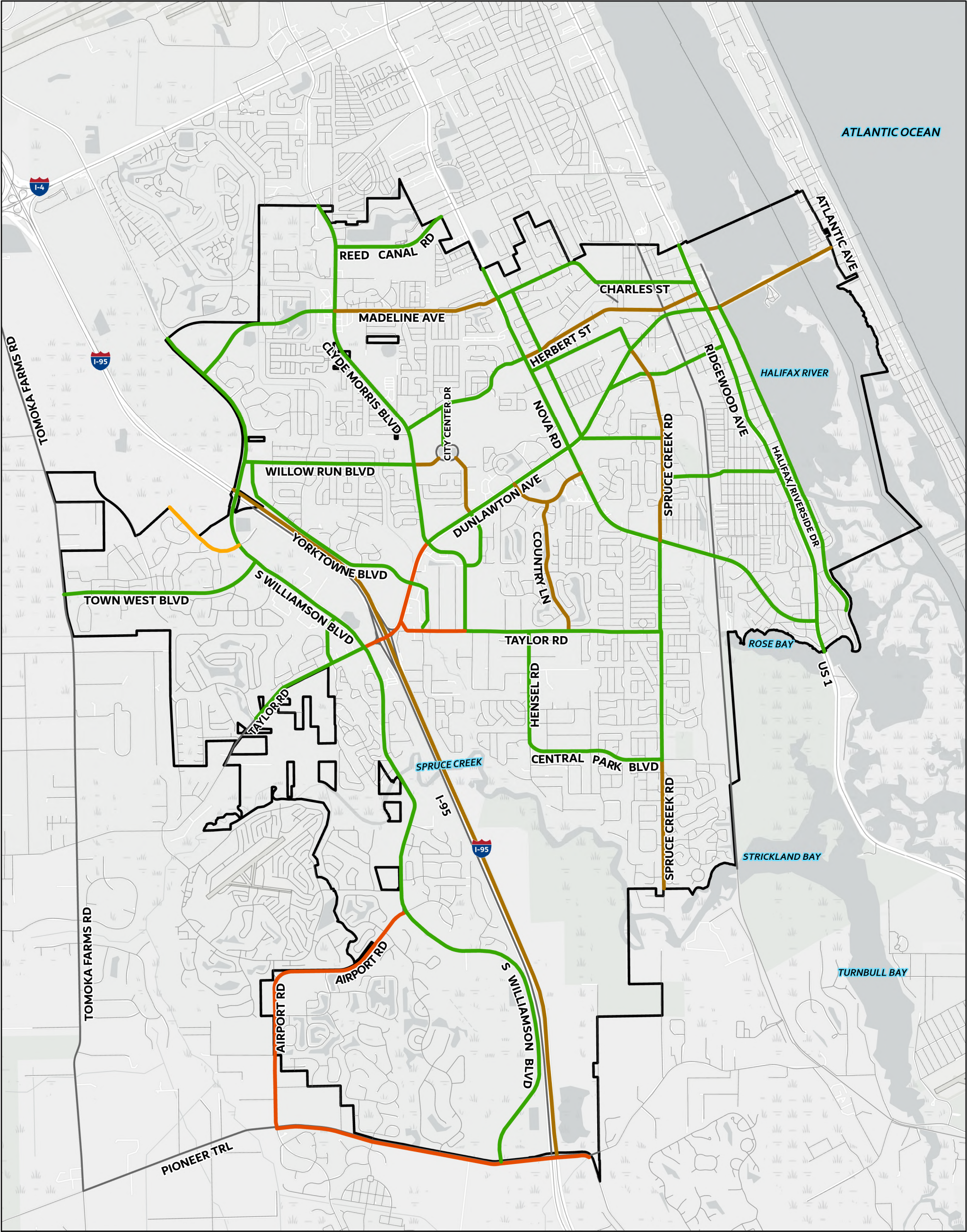
Map 2.3 - Transit Routes (2023)



Existing Roadway Levels of Service (2023)

- City Boundary
- B
- C
- D
- E

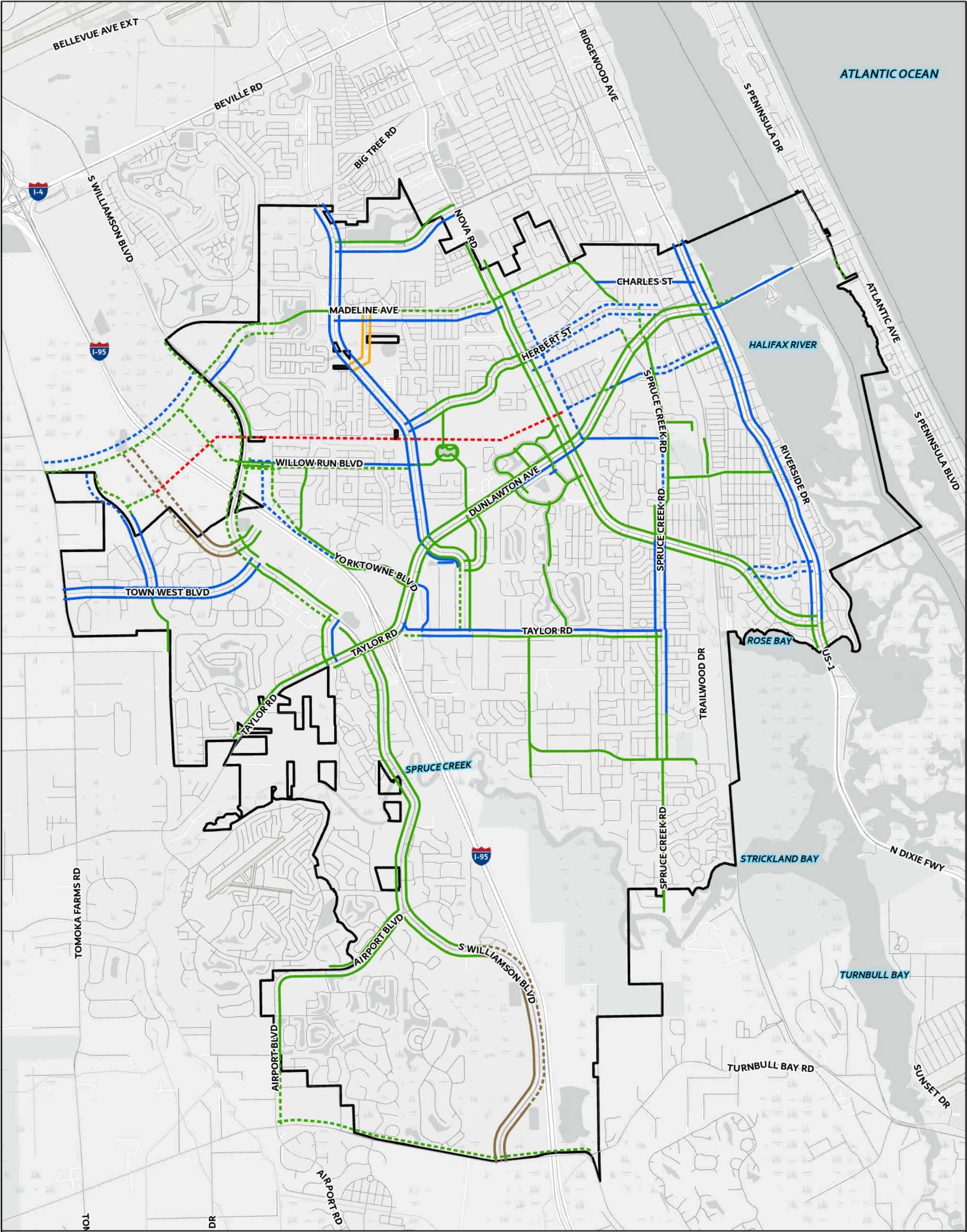
Map 2.4 - Existing Roadway Levels of Service (2023)



Roadway Level of Service, 2045

- City Boundary
- LOS C
- LOS D
- LOS E
- LOS F

Map 2.5 - 2045 Level of Service (Prepared in 2023)



Bicycle and Pedestrian Routes (2023)

- City Boundary

Existing 4' Sidewalk

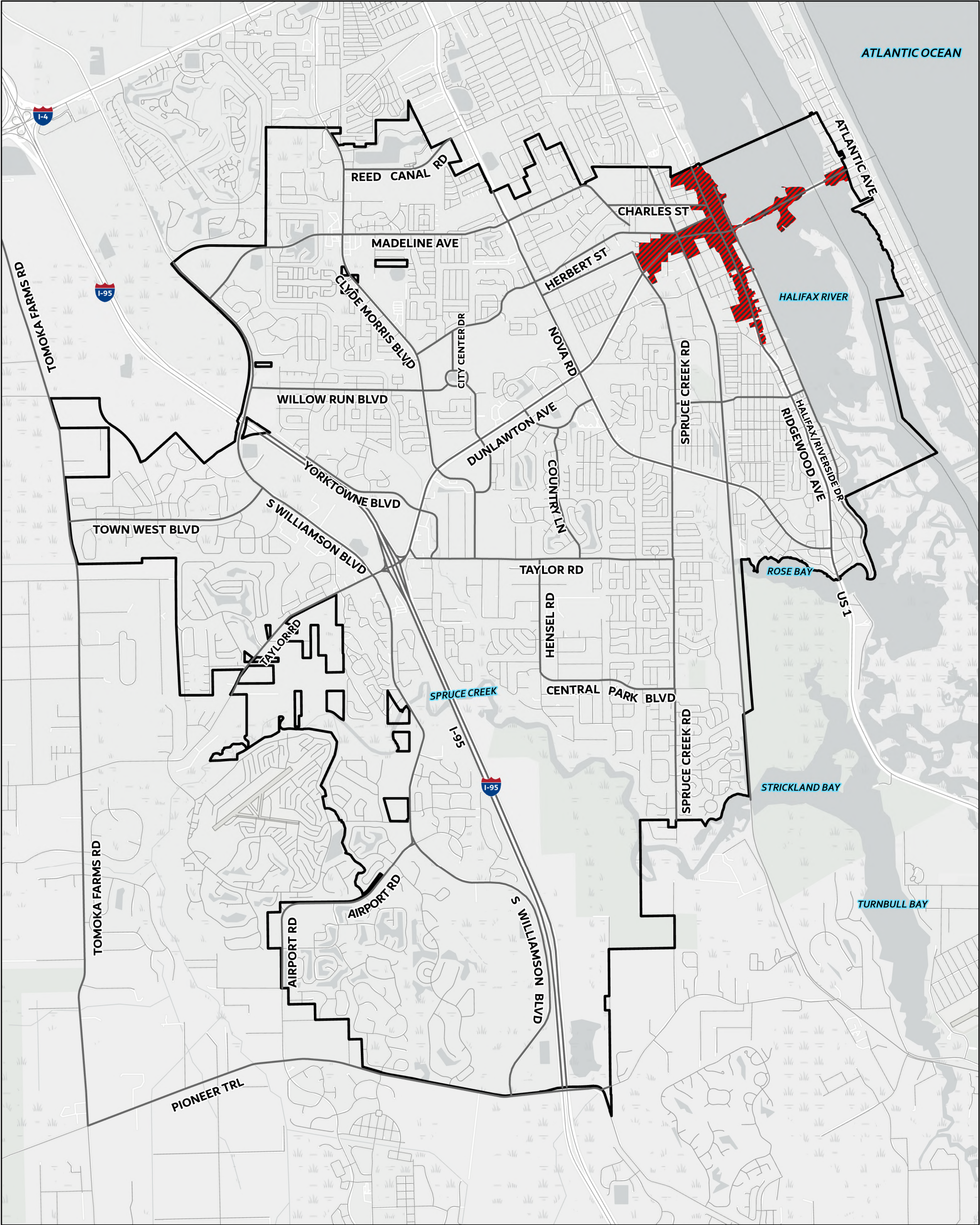
Existing 5' Sidewalk
- Proposed 5' Sidewalk

Existing 6' Sidewalk

Proposed 6' Sidewalk
- Existing 8' Bikeway/
Sidewalk

Proposed 8' Bikeway/
Sidewalk
- Proposed 12' Multi-Use
Trail

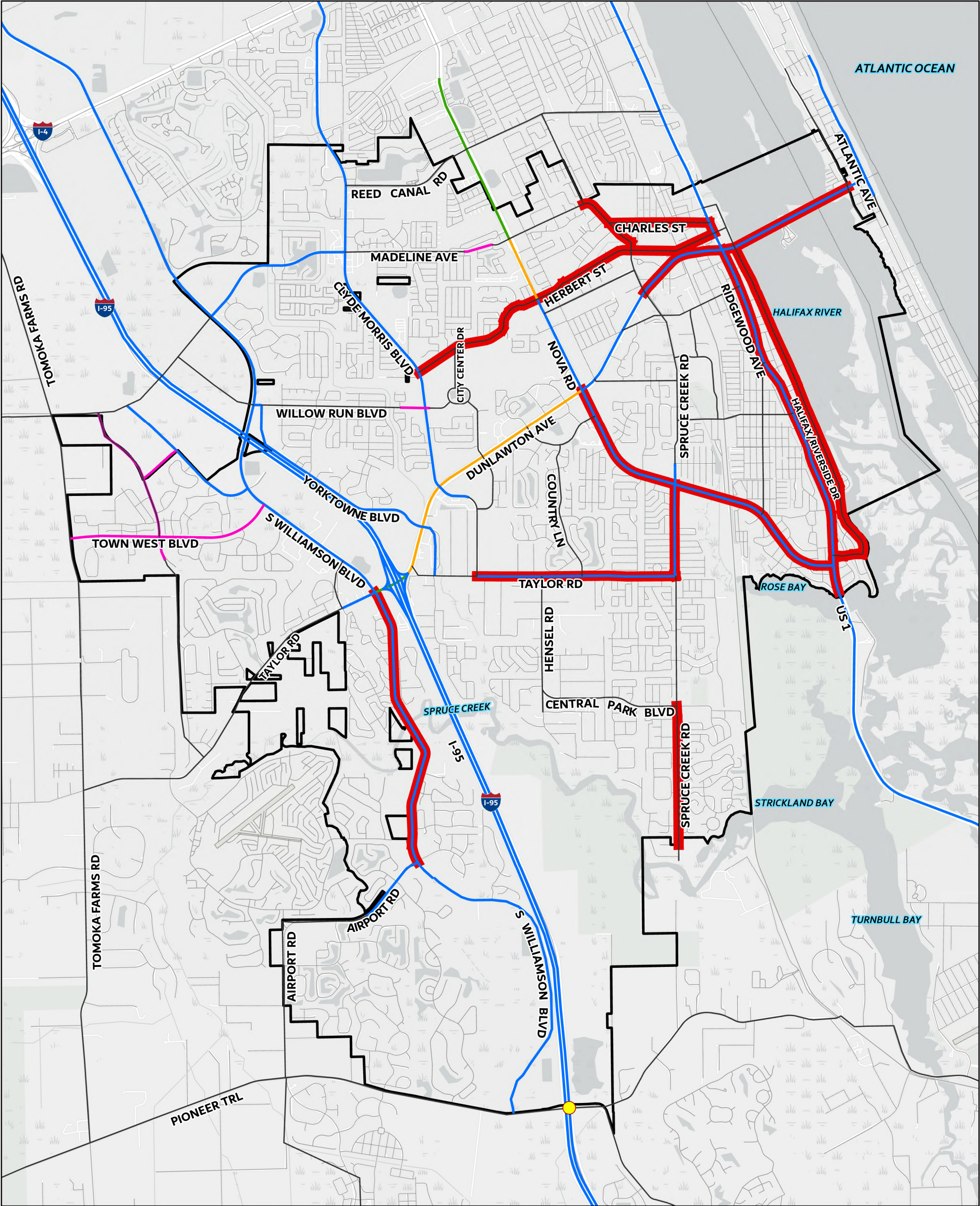
Map 2.6 - Bicycle and Pedestrian Routes (2023)



Transportation Concurrency Exception Area (2023)

-  City Boundary
-  Transportation Concurrency Exception Area

Map 2.7 - Transportation Concurrency Exception Area (2023)



Constrained Roadways & Future Number of Lanes (2024)

- City Boundary

Constrained Roadways

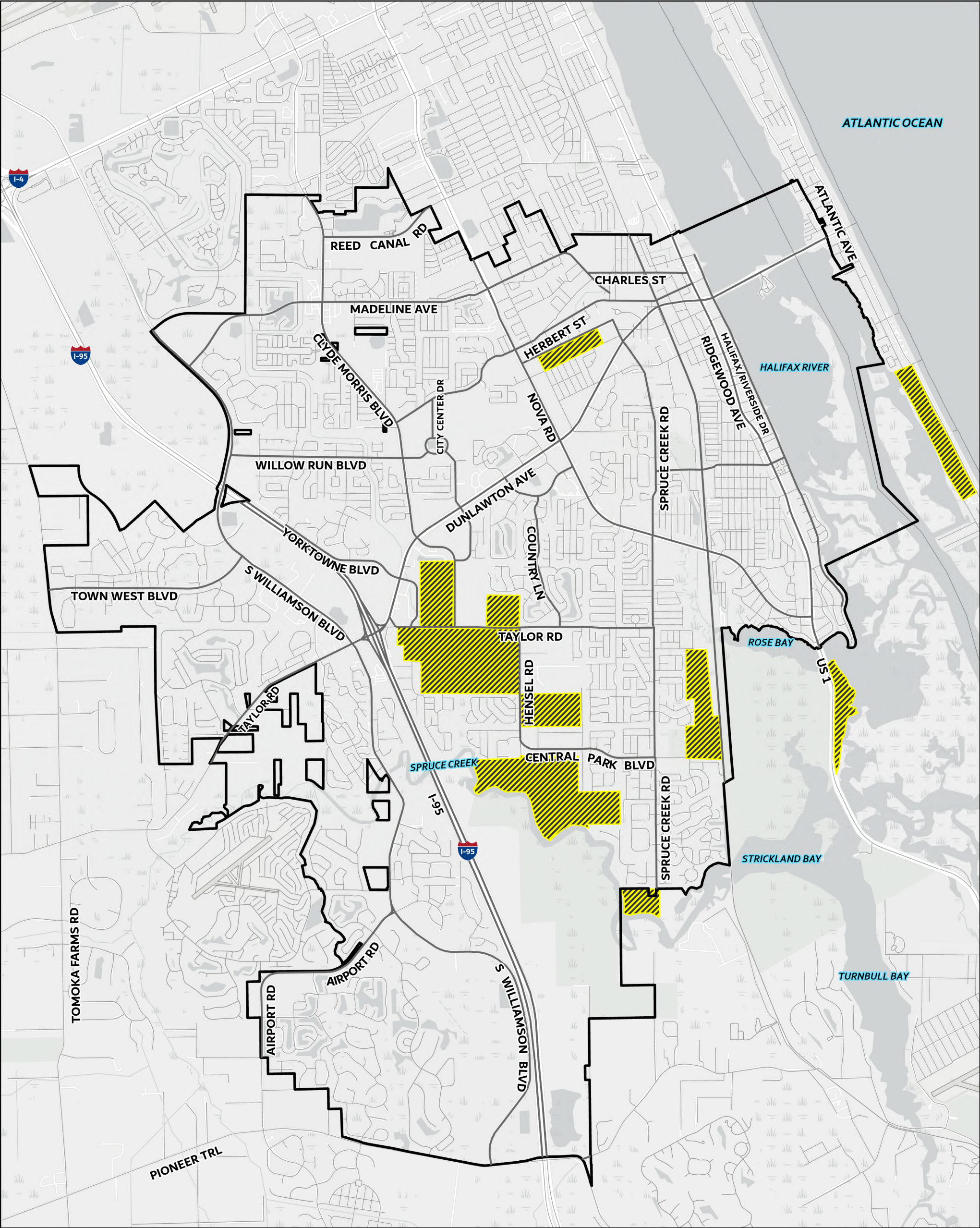
Number of Future Lanes 2045

6-Lane Divided
- 5-Lane Divided

4-Lane Divided

2-Lane Divided

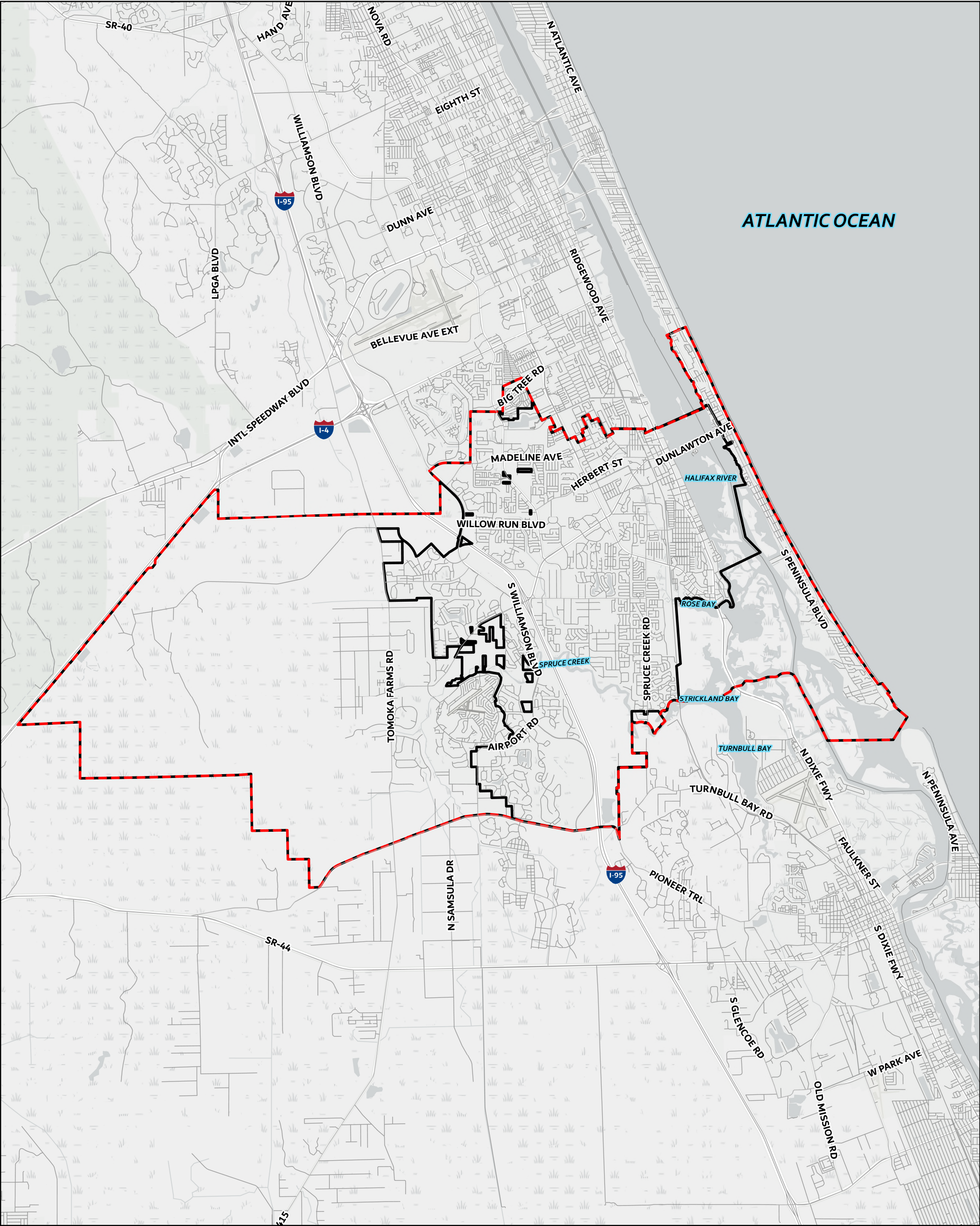
2-Lane
- Pioneer Trail/I-95 Interchange



Septic Tank Areas (2023)

-  City Boundary
-  Septic Tank Areas

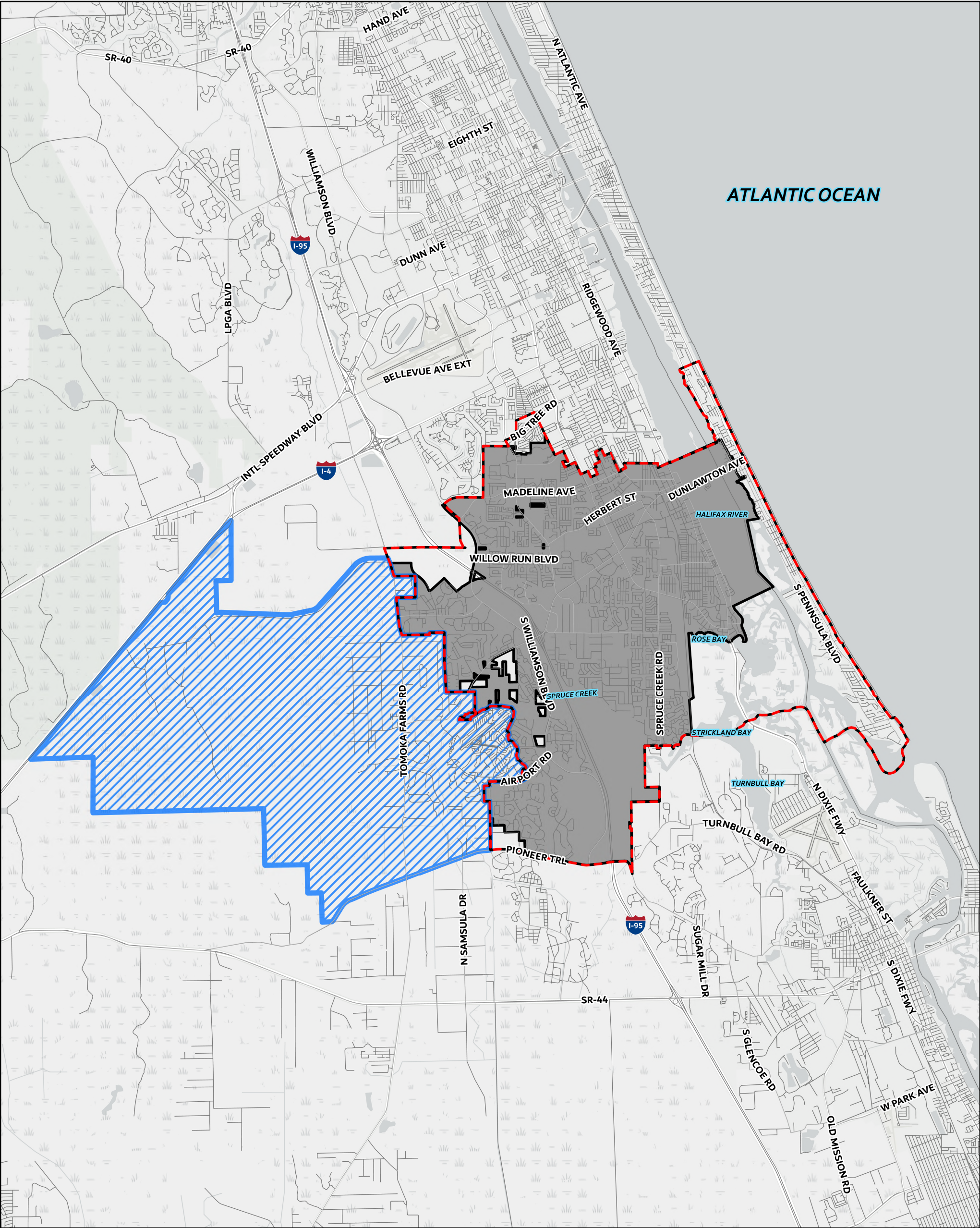
Map 4.1 - Septic Tank Areas (2023)



Wastewater Service Area (2023)

- City Boundary
- Wastewater Service Area

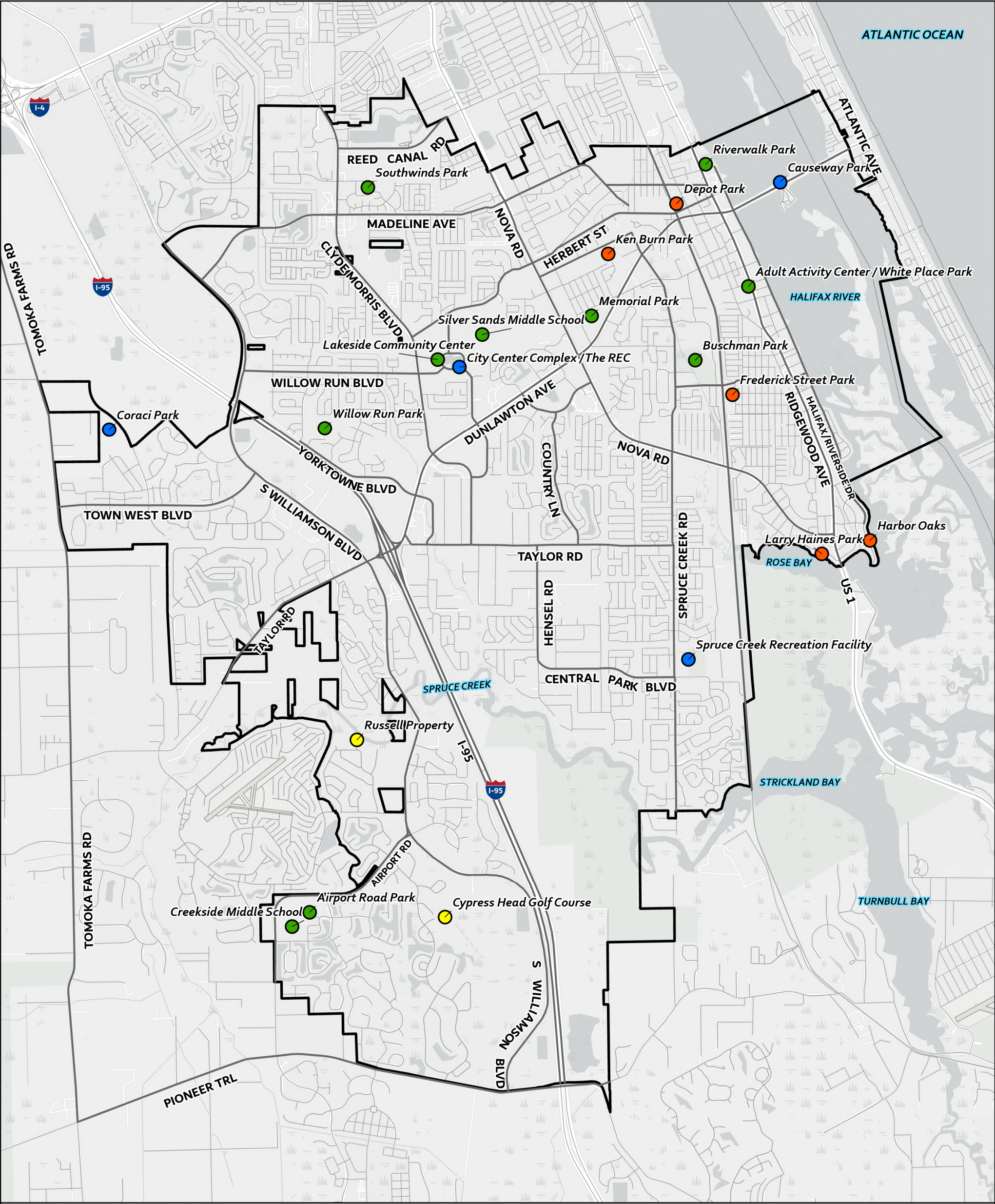
Map 4.2 - Wastewater Service Area (2023)



Potable Water Service Area (2023)

- City Boundary
- Port Orange Water Supply Planning Area
- Port Orange Water Service Area

Map 4.3 - Potable Water Service Area (2023)

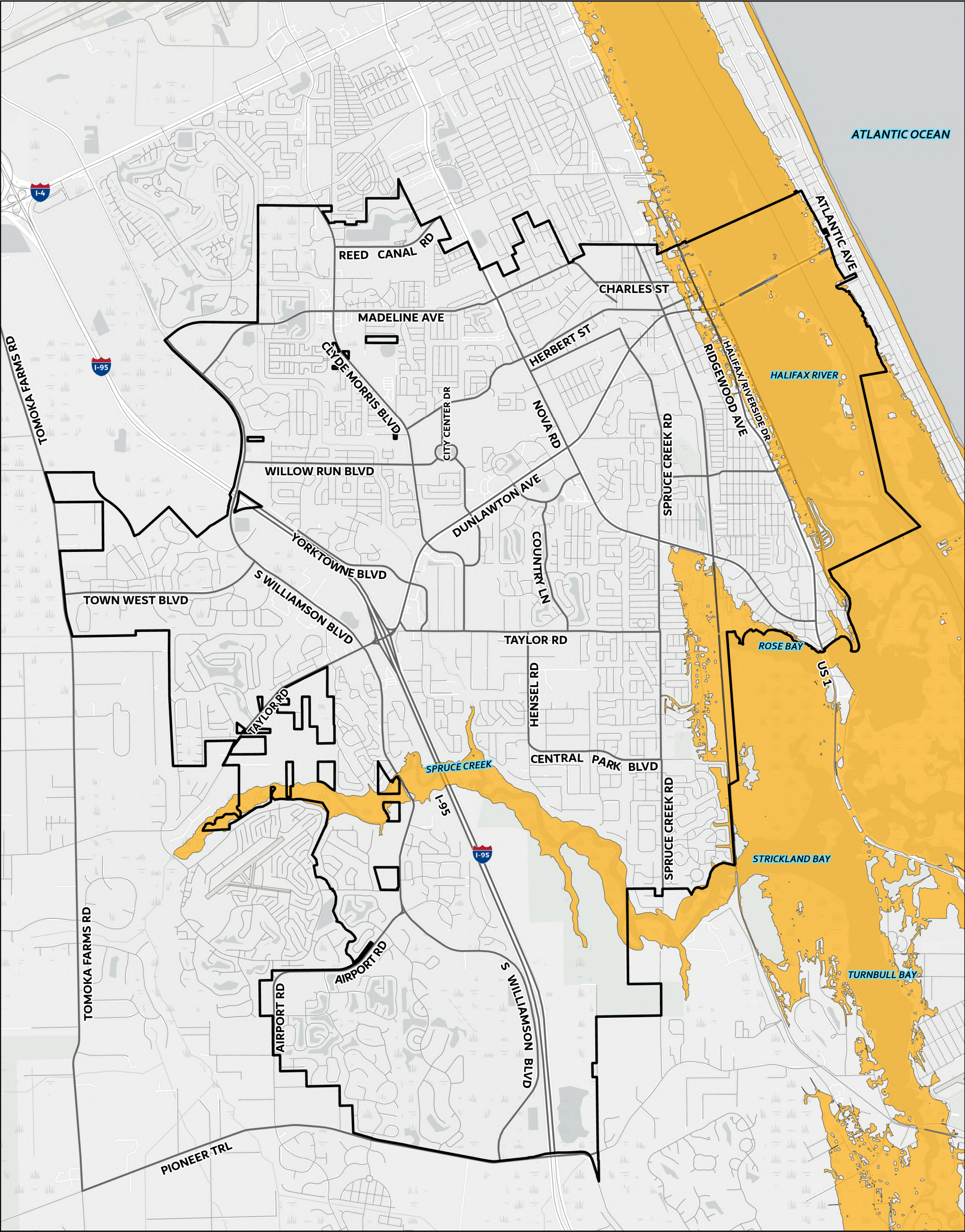


Parks and Recreation (2023)

City Boundary

- Facility Type
- Community
 - District
 - Neighborhood
 - Special Park

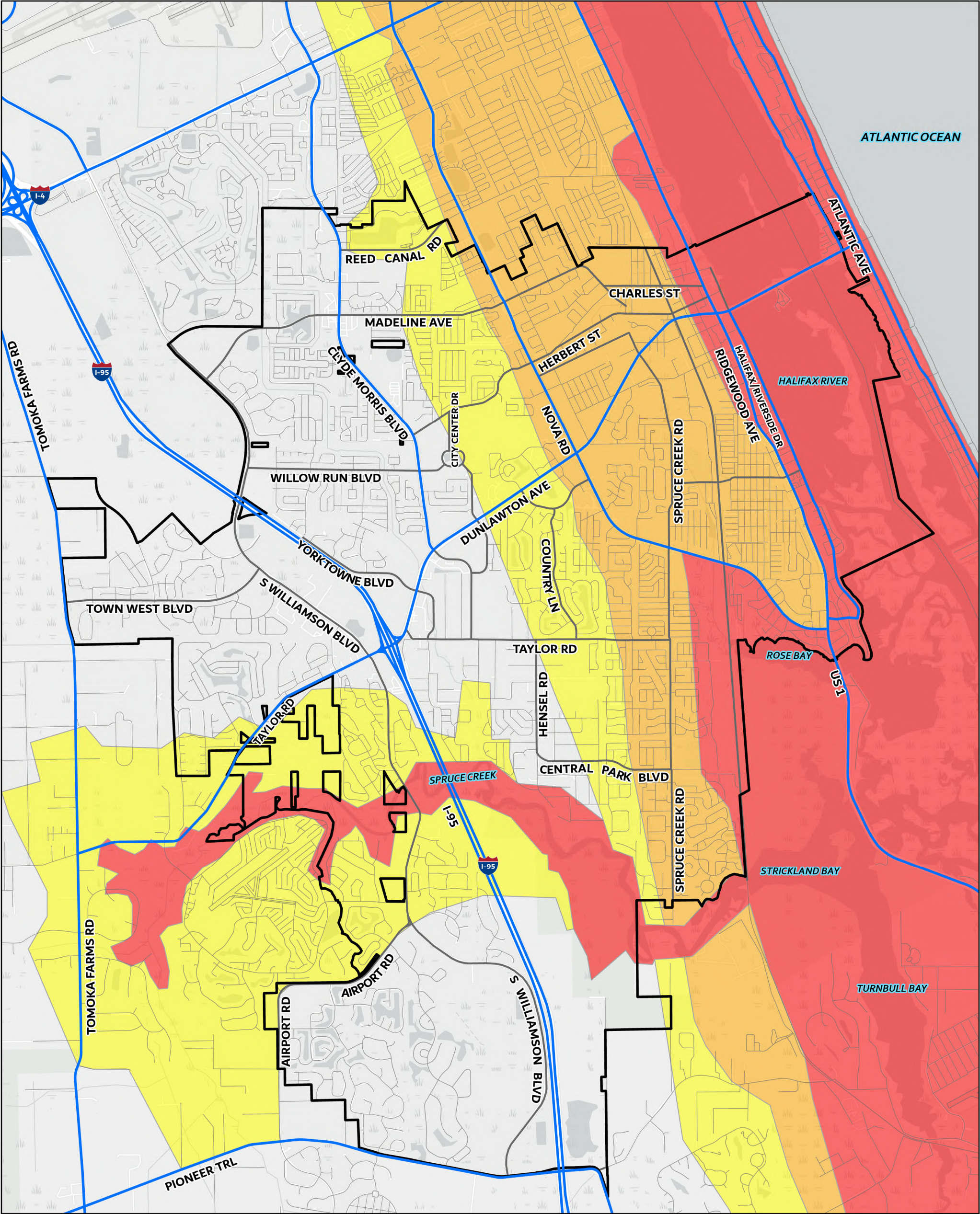
Map 6.1 - Recreation Facilities (2023)



Coastal High Hazard Area (2023)

- City Boundary
- Coastal High Hazard Area

Map 7.1 - Coastal High Hazard Area (2023)



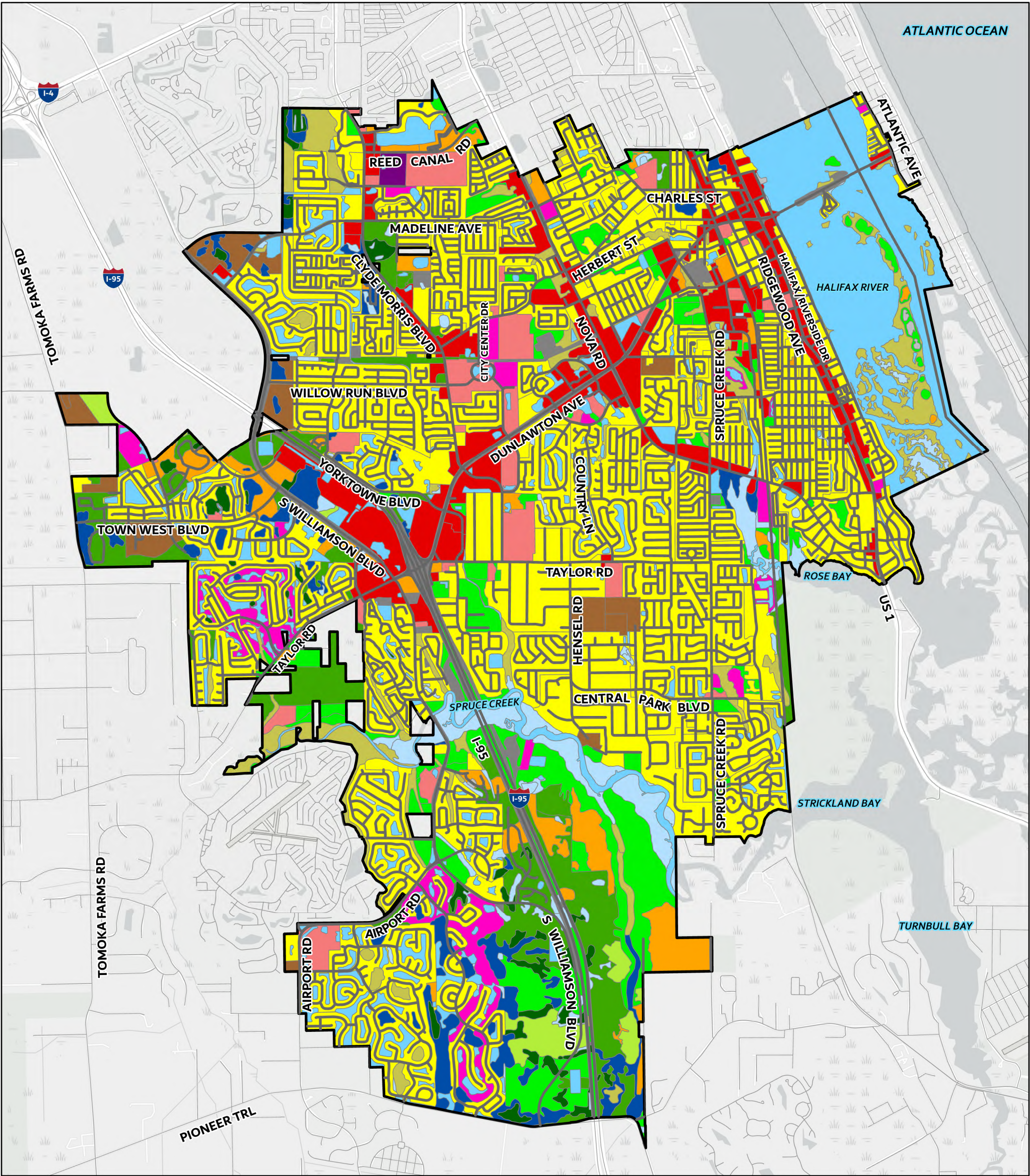
Hurricane Evacuation Routes & Zones (2023)

- City Boundary
- Evacuation Routes
- Evacuation Zones**
- Zone A
- Zone B & C
- Zone D & E

In Volusia County, depending on the track and strength of a threatening hurricane, local officials may order one of three evacuation levels A, BC, or DE. These are called Hurricane Evacuation Categories. These levels correspond to the flooding that is likely to occur during a hurricane.

Zone A, being closest to the water, is typically evacuated first, followed by Zone B & C, then Zone D & E, as necessary. Zones may additionally be called simultaneously to evacuate in the case of stronger hurricanes. This information was retrieved from Volusia County Interactive Know Your Zone Map.

Map 7.2 Hurricane Evacuation Routes and Zones (2023)



Land Cover (2022)

- City Boundary

Land Cover

Residential

Commercial

Extractive

Institutional

Recreation
- Agriculture

Upland nonforested

Coniferous forest

Hardwood forest

Tree plantation

Water

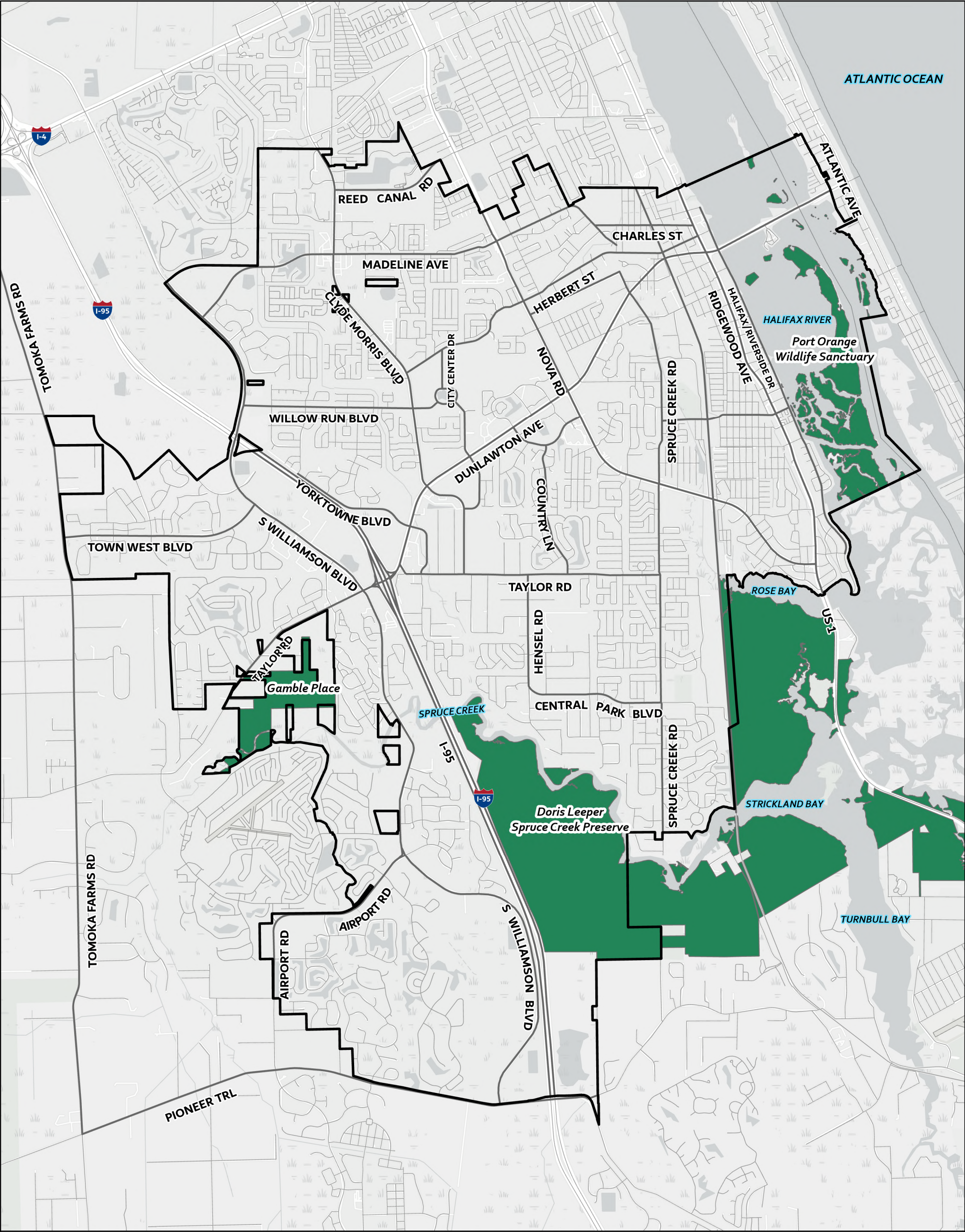
Hardwood forested wetland
- Coniferous forested wetland

Mixed forested wetland

Nonforested wetland

Barren land

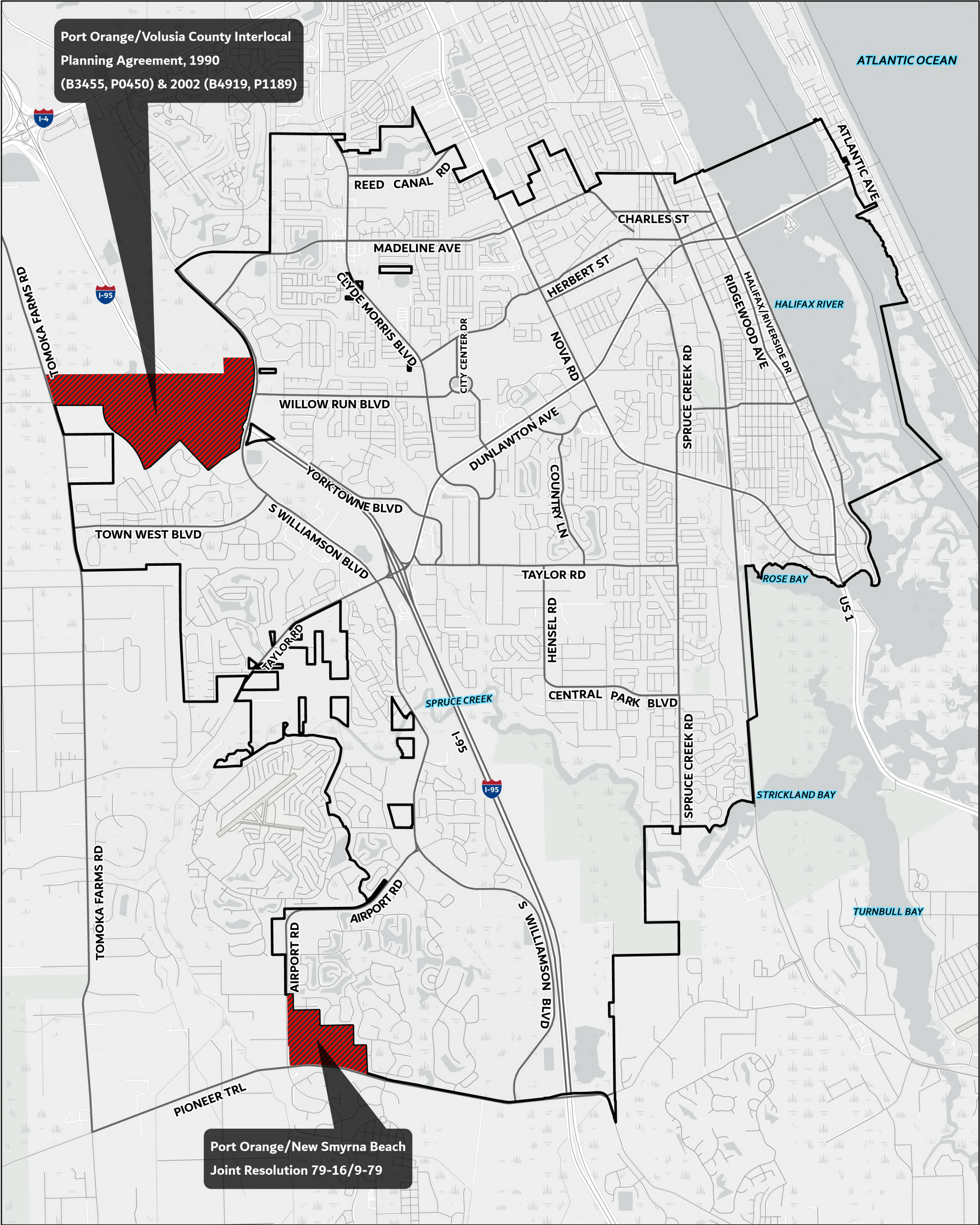
Transportation, Communication, Utilities



Nature Reserve & Conservation Areas (2023)

- City Boundary
- Nature Reserves & Conservation Areas

Map 8.2 - Nature Reserve & Conservation Areas (2023)



Annexation Interlocal Planning Agreements (2023)

- City Boundary
- Interlocal Planning Agreement Area

Map 9.1 - Annexation Interlocal Planning Agreements (2023)

EXHIBIT “2”

TO ORDINANCE NO. 2024-04

Chapter 1

FUTURE LAND USE

Data Inventory & Analysis



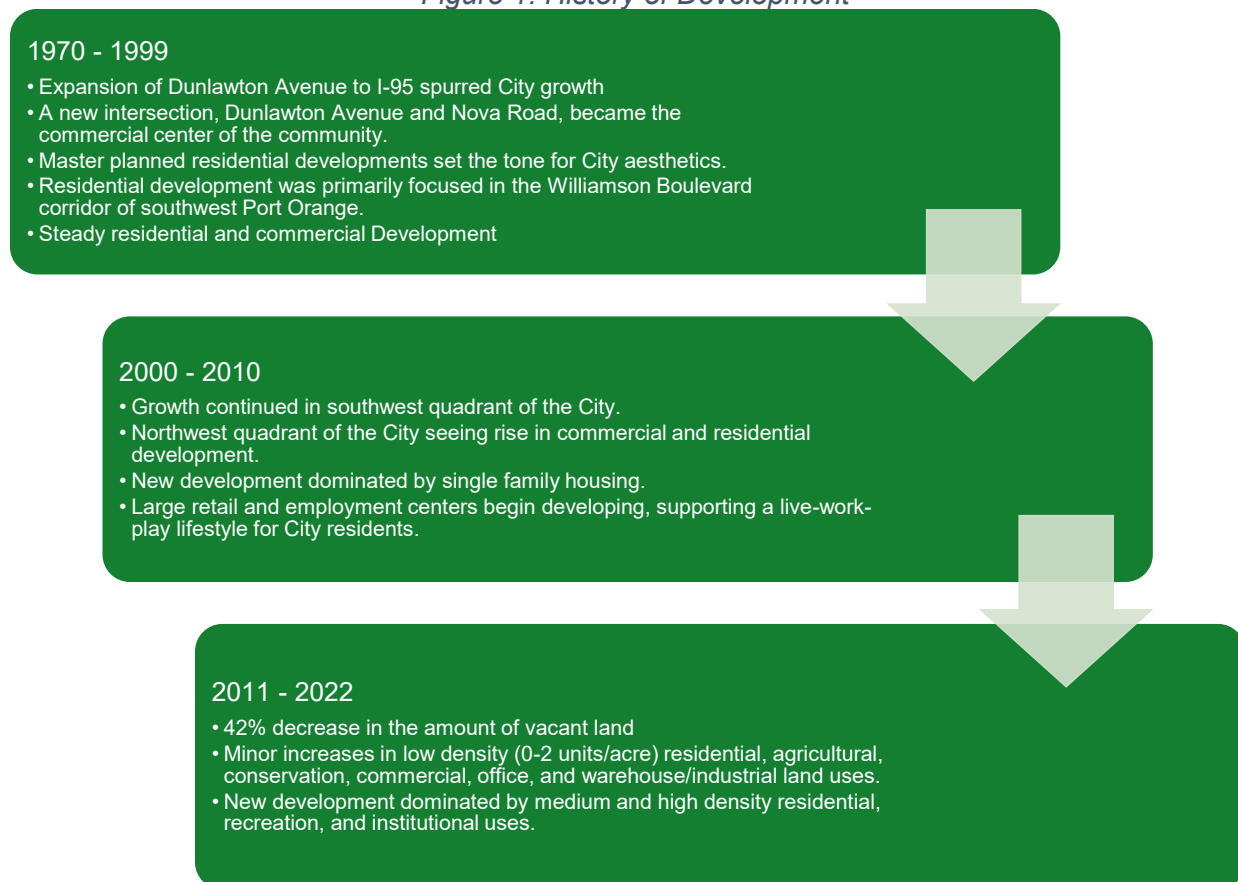
Introduction

Pursuant to the requirements of Chapter 163 of the Florida Statutes, the Future Land Use Element consists of data inventory and analysis (DIA) that influences and informs the overarching goals, objectives, and policies that will guide the growth and development of the City of Port Orange. The City's existing land uses, vacant land, build-out potential, natural resources, historic resources, and population projections were evaluated and analyzed in order to update the City's land use designations which will shape how the City will grow in the next 20 years. The updated 2045 Future Land Use Map (FLUM) is provided as a regulatory tool to direct future development. Maps, as referenced herein, are available in the Map Series, following the Introductory Chapter of the Plan.

History and Setting

The original City of Port Orange developed around the intersection of Dunlawton Avenue and Ridgewood Avenue (U.S. 1) with development spreading out along U.S. 1 and Herbert Street. In the 1960s, a major annexation extended the City Limits south to Spruce Creek Road and west of Clyde Morris Boulevard. Despite the growth in land area, Port Orange remained rather compact along the Halifax River with a small-town population of 3,781 as of the 1970 census. At that time, mobile home housing and large rural lots dominated the housing stock within the community. It was not until the early 1980s that conventional single-family development comprised more than fifty percent of the Port Orange housing inventory. Figure 1 provides an overview of the history of development in Port Orange.

Figure 1. History of Development



Source: City of Port Orange, 2009; Kimley-Horn, 2023



Existing Land Use Conditions

In order to better guide and direct future land uses within the City of Port Orange, it is necessary to first gain an understanding of present land use patterns. The City of Port Orange covers approximately 29 square miles. Existing land use data retrieved in October 2022 from the Volusia County Property Appraiser underwent review by the City of Port Orange Planning and GIS staff to confirm the data was the most up-to-date available for use in this analysis. This information provides insight into the current conditions and development patterns of the City. To provide a basis for analysis, these existing land uses have been further grouped into the following distinct categories*:

Agriculture: Property used for production of food, feed, and fiber commodities, livestock and poultry, bees, fruits and vegetables, and sod, ornamental, nursery, grazing farm animals and horticultural crops that are raised, grown, or produced for commercial purposes.

Commercial: Business property, such as supermarkets, shopping centers, office buildings, medical centers, hotels, theaters, financial institutions, stores, etc. which are intended to operate with a profit.

Residential: Property zoned for single-family homes, mobile homes, retirement homes, multifamily apartments, and co-ops.

Public/Quasi-Public: (1) All property owned by or leased to the Government or (2) property which is not strictly commercial, industrial, agricultural, or residential, but which serves some public purpose, even if privately owned. Examples include (1) forests, parks, public schools, county hospitals, (2) private schools, private hospitals, cemeteries, nursing homes etc. For the purposes of this analysis, the Public/Quasi-Public acreage includes lands classified as Public/Semi-Public, Recreation/Open Space, and Conservation.

Industrial: Property used for industrial purposes. Types of industrial property include light/heavy manufacturing buildings, packing or mineral processing plants, warehouses, wineries, etc.

Miscellaneous: Includes property such as right-of-way, water features, railroad land, utilities, waste land, submerged land etc.

*Note: Existing Land Use analyzes what is identified “on the ground” as of the date of the data acquisition and does not reflect Future Land Use which is analyzed separately in Future Land Use Designations and Analysis.

The analysis of existing land use and categories is displayed in Table 1 and Figure 2.



Port Orange Comprehensive Plan 2022-2045

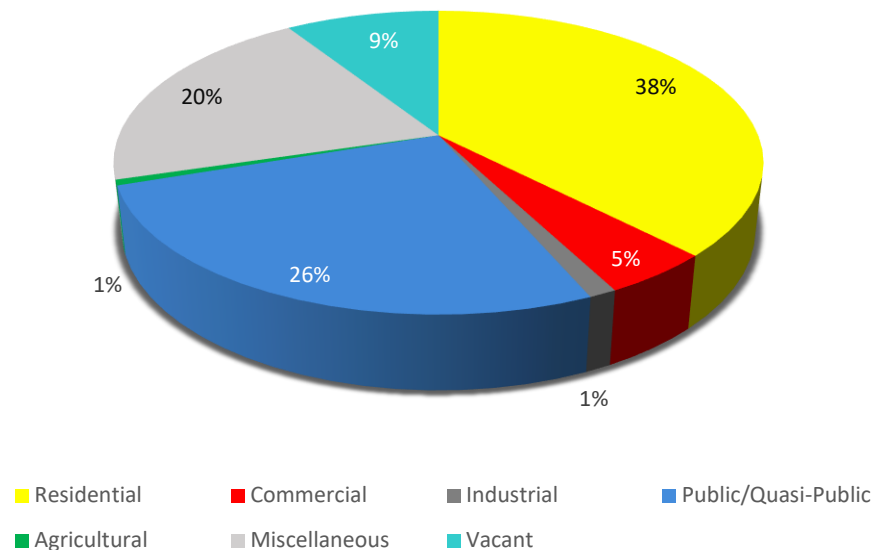
Table 1: Existing Land Use Summary

Land Use	Acres	% of Total
Residential	6,975	38%
Commercial	863	5%
Industrial	219	1%
Public/Quasi-Public	4,867	26%
Agriculture	109	0.5%
Miscellaneous	3,803	20.5%
Vacant	1,683	9%
Total (within City limits)	18,518	100%
<i>*Public / Institutional – Interlocal Agreement</i>	352	1.54%
<i>*Conservation – Interlocal Agreement</i>	7,352	3.21%
<i>*Residential – Interlocal Agreement</i>	459	2.00%
Total	26,681	

Source: City of Port Orange, October 2022

*Note: These areas are identified and defined in an Interlocal Agreement (ILA) between the City of Port Orange and Volusia County. The City has land use, zoning, and land development code authority over these areas per the ILA. The Public/Institutional and Conservation areas identified within the ILA will not be annexed. The Residential areas are slated for a planned community and will be annexed into the City as development occurs.

Figure 2. Existing Land Use Breakdown



Source: City of Port Orange, October 2022

Existing Land Use distribution can also be viewed on Map 1.1.

Existing Land Use Conditions Analysis

The City of Port Orange has a healthy balance of public/quasi-public, residential, and commercial development. As expected for an urban area, lands for agriculture are limited but not insubstantial.



Vacant Land Analysis

An analysis of vacant land was conducted using the City's October 2022 Existing Land Use data, which does not distinguish between vacant *commercial* land, vacant *residential* land, and others. The City's total area classified as "vacant" is comprised of 1,682.83 acres. It is important to note that some of these parcels may be in the development application process or under development, exist as remnant parcels, etc., and therefore actual vacant land supply may be less than reported at present. The vacant lands within the City of Port Orange are displayed on Map 1.2 in the Map Series.

The City of Port Orange is approaching full build-out, yet still has potential for future development, redevelopment, and growth. In the past 11 years, the City has not only continued to grow in population but also has continued to develop its vacant land. To understand the type of impact these vacant lands could have on the cityscape if eventually developed, it is useful to view what Future Land Use Categories they fall in.

The analysis displayed in Table 2, Figure 3, and Map 1.3 was done by analyzing the relationship between the City's future land use designations and vacant parcel data obtained from City.

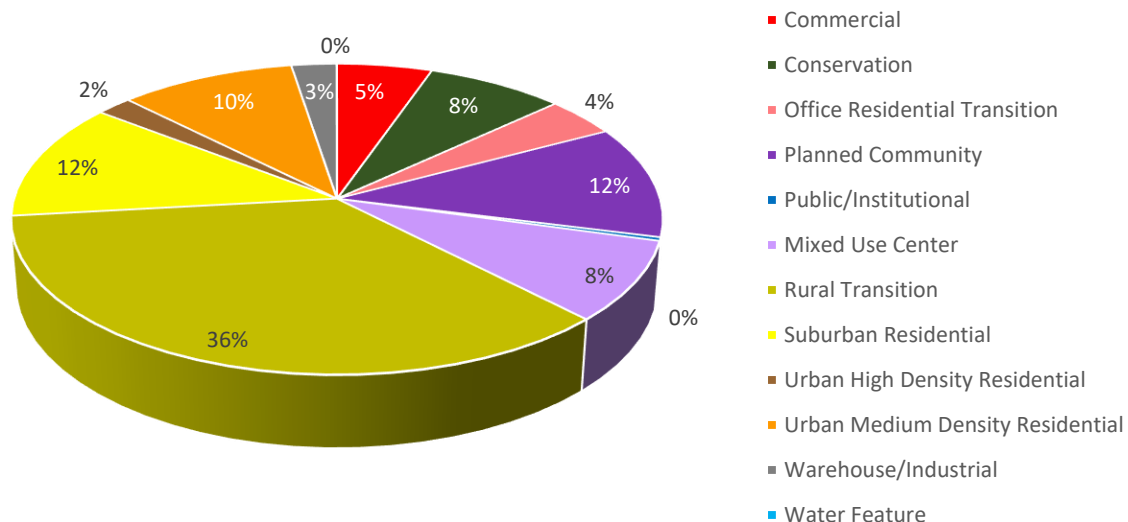
Table 2. Vacant Parcels by Future Land Use

Future Land Use Designation	Acres	% of Total
Commercial	89.05	5%
Conservation	129.84	8%
Office Residential Transition	68.16	4%
Planned Community	194.85	12%
Public/Institutional	6.08	0%
Mixed Use Center	139.55	8%
Rural Transition	591.83	36%
Suburban Residential	203.69	12%
Urban High Density Residential	33.78	2%
Urban Medium Density Residential	165.46	10%
Warehouse/Industrial	42.27	3%
Water Feature	0.37	0%
Total	1664.92	
*Volusia County Urban Medium Intensity	25	1%
*Planned Community – not yet annexed yet.	459	21%
Total	2,148.92	

Source: The City of Port Orange, October 2023



Figure 3. Vacant Parcel by Future Land Use



Source: The City of Port Orange, October 2023

Population Trends and Projections

Projected population is the driving force behind the City's future facility needs, housing supply and demand, and land use requirements. This population analysis is a major consideration in preparing future land use designations and each of the Element's goals, objectives, and policies. Future population estimates for the City identify the amount of residential land and development density allocations that will be necessary to accommodate the City's growth.

According to the University of Florida's Bureau of Economic and Business Research (BEBR), the official population estimate of permanent residents in the City as of April 1, 2023, is 65,008 residents. This is a growth of 8,960 persons (16.0% growth rate) since the 2010 recorded census population, and an average of 1.23% annually.

Methodology

Population projections for the City of Port Orange were calculated using the following methodology. Historical population counts from 1970 through 2020 were collected. Recognizing that growth and development increased rapidly pre-2000, it was determined that using the historical population counts for 2000, 2010, and 2020 to project future growth would provide the highest level of accuracy and confidence (see Table 3). Between 2000 and 2020, the City of Port Orange has on average accounted for 11.2% of the total population of Volusia County. This percentage, in combination with County-level projections prepared by BEBR, is used to project future population levels for the City through the year 2045, as shown in Table 4 and Figure 4.



Summary

According to the U.S. Census Bureau's 2021 American Community Survey, the median age in Port Orange is 46, with a breakout of the percentage of individuals in different age groups displayed in Figure 5. The City's race characteristics are exhibited in Figure 6. The majority of the population is comprised of individuals who identify as White (77%), followed by Hispanic (7%), and Multi-Racial (7%).

Port Orange's future population growth is projected to reach 75,515 residents by the year 2045. This is a population gain of about 12,919 people between 2020 and 2045. The City's projected growth will continue to provide development and redevelopment opportunities for the City.

Table 3. Historical Population Counts

Year	Port Orange	Volusia County	Average (% of Population in Port Orange)
1980	18,756	258,762	7%
1990	35,317	370,737	10%
2000	45,823	443,343	10%
2010	56,048	494,593	11%
2020	62,596	553,543	11%

Source: U.S. Census Bureau Decennial Census, 1980, 1990, 2000, 2010, 2020;

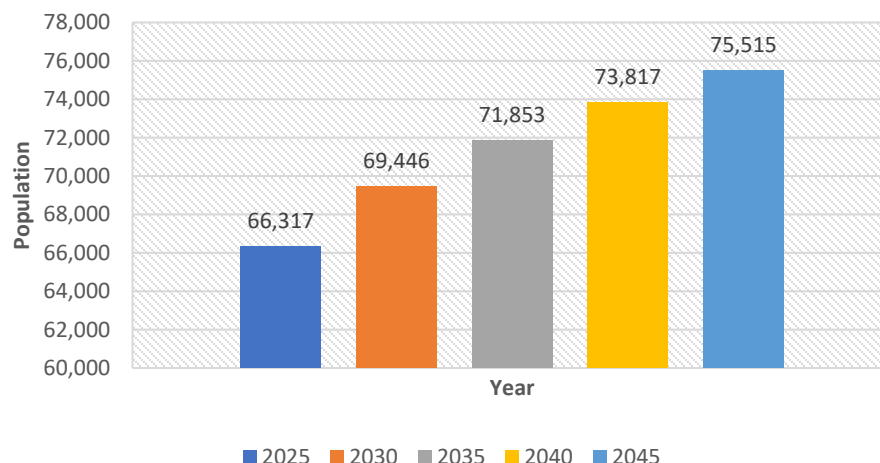
Table 4. Population Projections, 2025 - 2045

Year	Port Orange Population*	Volusia County Population**
2025	66,317	592,117
2030	69,446	620,057
2035	71,853	641,542
2040	73,817	659,082
2045	75,515	674,241

Sources: *Based on historical population ratio between Port Orange and Volusia County;

**Based on the BEBR Population Projections by Age, Sex, Race, and Hispanic Origin for Florida and Its Counties, 2025–2050, With Estimates for 2021.

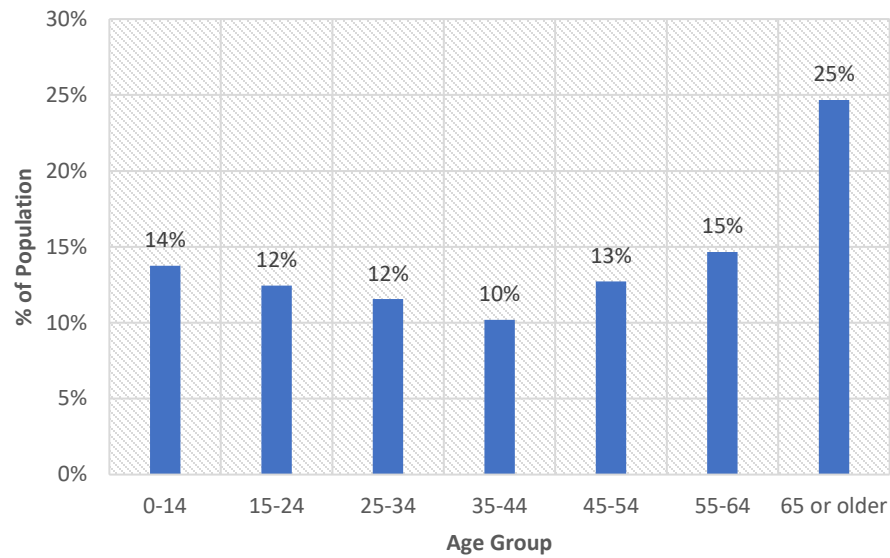
Figure 4. Population Projections, 2025 – 2045



Source: University of Florida's Bureau of Economic and Business Research, 2021; Kimley-Horn & Associates, Inc., 2023

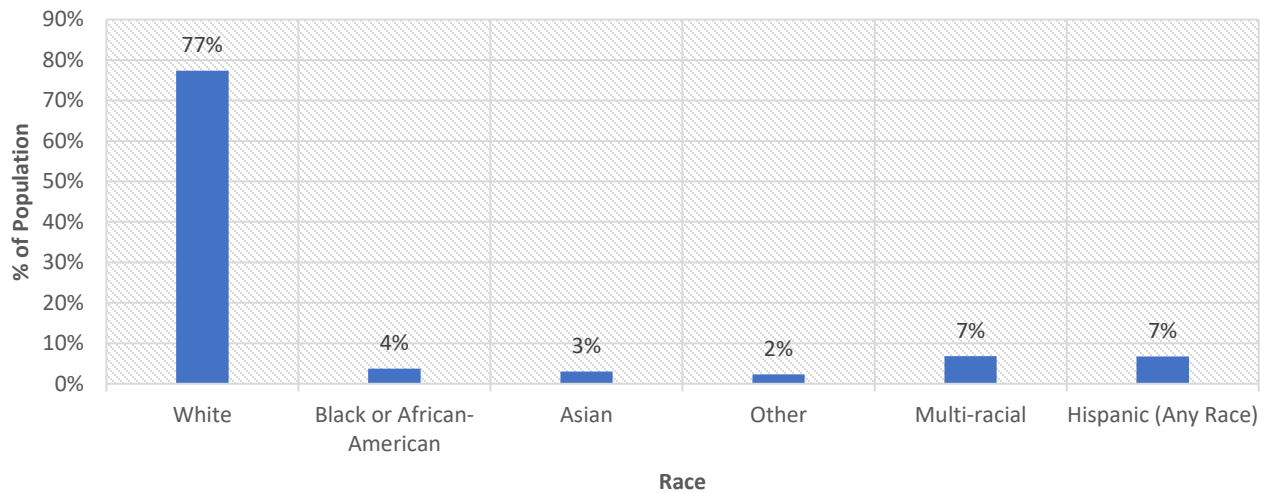


Figure 5. Age Distribution



Source: U.S. Census Bureau, 2021 American Community Profile 5-Year Estimates

Figure 6. Racial Distribution



Source: U.S. Census Bureau, 2020 Decennial Census*

*Note, data not available through 2021 American Community Survey, 5-Year Estimates.



Future Land Use Designations and Analysis

The 2045 Future Land Use Map ("FLUM"), Map 1.4, designates future land uses within the existing Port Orange City limits through the 2045 planning horizon. The 2045 FLUM incorporates two FLU designations which exist in the Comprehensive Plan but are not presently assigned to any land in the City (Residential Estate and Agricultural Preservation). The acreages of the currently adopted Future Land Use Map are shown below in Table 5.

Table 5. Future Land Use Designations and Analysis

Land Use Designations	Future Land Use Map	
	Acres	% of Total
Commercial	840.54	4%
Conservation	9,323.15	39%
Mixed-Use Center	151.64	1%
Office Residential Transition	449.42	2%
Planned Community	1,148.44	5%
Public/Institutional	978.69	4%
Right-of-Way	8.27	0%
Rural Transition	2,813.35	12%
Suburban Residential	4,040.67	17%
Urban High Density Residential	398.83	2%
Urban Medium Density Residential	2,292.39	10%
Warehouse/Industrial	340.35	1%
Total	24,080	100%

Source: The City of Port Orange, August 29, 2023



Build Out Analysis

To better understand the current level of development potential and the ability of the City of Port Orange to accommodate the growth that is expected, a build out analysis was performed utilizing the currently adopted FLUM and vacant lands. Maximum densities and intensities were assigned to each future land use designation as documented in Table 6. The acreages of vacant parcels within these future land use designations were used to roughly calculate the most dense and intense development that Port Orange could potentially expect. This analysis assumes maximum build out and vacant land acreage is based on data retrieved from the City in October 2022.

The build out analysis illustrates that the currently adopted FLUM allows for a maximum construction of approximately 6,759 dwelling units and approximately 21.5 million square feet of non-residential floor area.

Using the 2021 American Community Survey's average household size of 2.60 people per dwelling unit, the City can expect to accommodate 17,573 people under the current FLUM's residential designations that have been identified as vacant. This meets the dwelling units needed to absorb the amount of growth projected in Port Orange (12,919 persons) through, at a minimum, the planning period. Also, the build out analysis shows that the currently adopted FLUM allows for a maximum construction of approximately 21.5 million square feet of non-residential floor area which presents the opportunity to develop supporting non-residential development as the City's population continues to grow.



Port Orange Comprehensive Plan 2022-2045

Table 6. Build Out Analysis

Future Land Use Category	Acres (Vacant)	Maximum DU/AC	Maximum FAR	Maximum Density (DU/AC)	Maximum Intensity (Square Feet)
Agricultural Preservation	-	1DU/10AC	-	-	-
Rural Transition	591.83	2	-	1183	-
Suburban Residential	203.69	4	-	814	-
Urban Medium Density Residential	165.46	8	-	1323	-
Urban High Density Residential	33.78	16	-	540	-
Planned Community	194.85	-	-	-	-
Westside	177.96	4	-	711	-
Commercial (max 25%)		-	0.25	-	484,496
Industrial (max 25%)		-	0.3	-	581,395
Office (max 25%)		-	0.35	-	678,294
Riverwalk		25 / MAX; 800 DU	-	800	-
Commercial		-	MAXIMUM 240,000 SF	-	240,000
Office		-	MAXIMUM 51,700 SF	-	51,700
Office Residential Transition	68.16	16	1.5	-	-
100% Office / Institutional (O/I)				-	4,453,746
75% O/I, 25% Commercial				-	4,453,746
75% O/I, 25% Residential				272	3,340,309
50% O/I, 25% Comm, 25% Res				272	3,340,309
Commercial	89.05	-	-	-	-
Neighborhood Node		-	0.3	-	1,163,737
Community Node		-	0.5	-	1,939,562
Sub-Regional Node		-	0.75	-	2,909,342
Regional Node		-	1.0	-	3,879,123
Other		-	1.0	-	3,879,123
Mixed-Use Center	139.55	16	1.5	-	-
50% Residential / 50% C/O/I ¹				1116	4,559,019
40% Residential / 60% C/O/I				893	5,470,822
30% Residential / 70% C/O/I				669	6,382,626
20% Residential / 80% C/O/I				446	7,294,430
10% Residential / 90% C/O/I				223	8,206,234
0% Residential / 100% C/O/I				-	9,118,038
Warehouse/Industrial	42.27	-	0.75	-	1,380,961
Retail/Service uses limited to 15%		-	-	-	207,144
Public/Institutional	6.08		0.2	-	52,931
Conservation	129.84	-	0.1	-	565,581

Source: City of Port Orange, October 2022

1. C/O/I = Commercial/Office/Industrial



Natural Resources Inventory

Waterbodies and Wetlands

The City of Port Orange has wetlands, rivers, lakes, ponds, and canals, according to data retrieved from the St. Johns Water Management District and US Fish and Wildlife Service. Waterbodies within and adjacent to the City include: Halifax River, Spruce Creek, Fozzard Creek, Rose Bay, Strickland Bay (along southeast City limits), Turnbull Bay (southeast of City, connected to Strickland Bay), and numerous primarily man-made stormwater ponds. Wetlands are scattered throughout Port Orange with concentrations along the Halifax River and along Spruce Creek.

The US Environmental Protection Agency (EPA) identifies numerous area waters as an impaired waterbody. Issues include bacteria and other microbes, low oxygen, and mercury and metal contaminants. There are statewide plans in place to reduce mercury: [Statewide Mercury Total Maximum Daily Load \(TMDL\) as amended through 2020](#) and [Florida Statewide Mercury TMDL \(2014\)](#). Spruce Creek is also featured in its own [TMDL report](#) for dissolved oxygen (DO) and nutrients; the plan establishes the allowable loadings to Spruce Creek that would restore the waterbody. There are no other plans in place to rectify the impairments. Table 7 identifies the impaired waters in the area.

Table 7. Impaired Waters

Waterbody	Impairment	Designated Uses Impaired
Spruce Creek	Bacteria and other microbes, low oxygen, mercury, and metals; Dissolved oxygen and nutrients	Fish and Wildlife Propagation – Marine, Fish Consumption, Recreation
Tributary to Spruce Creek	Aquatic Weeds, Low Oxygen, Nitrogen and/or Phosphorus	Fish and Wildlife Propagation – Freshwater, Recreation
Rose Bay	Bacteria and, metals	Fish and Wildlife Propagation – Marine, Fish Consumption, Recreation

Source: Florida Department of Environmental Protection, 2022

Floodplains

Because Port Orange is in the Coastal Zone, it is subject to coastal or tidal flooding associated with tropical storms, hurricanes, and other storm events. Approximately one-third of the City is within the 100-year floodplain, which means that each year those areas have a one percent chance of flooding hazard. Map 1.6 identifies those portions of the City that are within the 100-year floodplain. More detailed information regarding floodplains is included in the Conservation Element.

Coastal High Hazard Area (CHHA)

The Coastal High Hazard Area (CHHA), a component of the broader HVZ, is the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The CHHA is predominately comprised of conservation lands, residential areas, commercial development, and some institutional as well as industrial uses. The CHHA can be viewed in Map 7.1.

Although the Coastal High Hazard Area and its infrastructure are susceptible to storm surge, its location provides some natural protection. The peninsula acts as a barrier and breaks up potentially damaging waves. Port Orange Causeway Park and Riverside Pavilion Park are more susceptible to



wind and flying debris damage than storm surge and wave action. With the peninsula acting as somewhat of a shield, this infrastructure is not expected to be seriously damaged except in a catastrophic hurricane event.

The City, through the annual budgeting and Capital Improvements Program processes, shall identify and limit expenditures that subsidize development and redevelopment in the Coastal High Hazard Area that would increase exposure to coastal hazards for human life, property, public facilities, and natural resources. Capital improvement projects in the Coastal High Hazard Area shall assist in restoring or enhancing natural resources.

Air Quality

Air quality sampling is the responsibility of the FDEP. FDEP does not presently monitor air quality in Port Orange area on a regular or periodic basis. The closest air quality monitoring station is within Daytona Beach. Pollution generated from commercial and industrial developments within and adjacent to the City is not anticipated to adversely affect the air quality of the City. Fugitive dust particles from land cleared for development may be experienced by the community, and developers should be requested to quickly replant development areas following clearing. The majority of air pollution in Port Orange continues to emanate from automobile emissions.

Mineral Resources

The City has no significant mining operations for rock or mineral resources. There are no borrow pit areas. There are also no major timbering operations within the City; however, some undeveloped areas that are being held for future development are managed on an interim basis as timberland. Also, limited timbering operations are conducted at the City's Central Recharge Wellfield as part of a Forestry Management Plan.

Soils and Topography

Knowledge of the types of soil present in Port Orange is important in assessing the limitations or reclamation that must be done to develop a site. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NCRS) provide soil survey data online, most recently published in 2021, that gives details of 50 different soil types in Port Orange. The soil classifications are made based upon the water table, slope, erosion potential, permeability, subsidence and organic (muck/peat) content. The soils are also rated as to their potential for development based upon those limiting properties. Soil types covering the City are illustrated in Map 1.7.

According to the abovementioned soil survey data, the soils are predominantly nearly level to gently sloping. Slope does not exceed 5%. In terms of potential for erosion, 43% of area soil has low runoff potential in drained areas but high runoff potential in undrained areas. 33% of area soil has low runoff potential. 14% of area soil has moderate runoff potential, and the remaining 4% of area soil has a high runoff potential. Additional information about soils can be obtained from the Conservation Element.



Historical Resources Inventory

In 1986, the City completed a limited historic and archaeological survey of the older portions of the City. The objective was to identify existing historic and archaeological resources and their general location. A more comprehensive survey was completed in 1996 that identified 144 structures and one site within the City as historically significant. The Survey also nominated two historic districts and two individual properties for inclusion in the National Register of Historic Places. In 2007, the City conducted another Archeological & Historical Survey within the Riverwalk redevelopment area. Based on the 2007 survey, the Halifax Drive Historic District was de-listed in 2009 from the National Register of Historic Places since all but one of the structures had been demolished.

As of September 2023, there are two sites and two districts listed on the National Register of Historic Places: the Dunlawton Plantation-Sugar Mill Ruins, located within a County-maintained park; the Spruce Creek Mound Complex, located within the Spruce Creek Preserve; the Dunlawton Avenue Historic District, located on Dunlawton Avenue east of Ridgewood Avenue; and the Gamble Place Historic District, located south of Taylor Road and north of Spruce Creek. There are other individual buildings and structures listed in the Florida Master Site Files, two of which are also on the National Register of Historic Places: Grace Episcopal Church, located on Ridgewood Avenue; and the former Florida East Coast (FEC) Train Depot, located adjacent to the tracks off Herbert Street.

Map 1.8 identifies the general location of the City's historic resources.



Chapter 2

Transportation Element Data Inventory & Analysis



Introduction

This document provides the relevant data, inventory, and analysis of transportation conditions in support of the City's Transportation Element of their Comprehensive Plan, as described in Section 163.3177(1)(f), Florida Statutes (F.S.). This information was considered in developing the Goals, Objectives, and Policies in the City's Transportation Element. Maps, as referenced herein, are available in the Map Series, following the Introductory Chapter of the Plan.

Analysis of Existing Conditions

To effectively guide and direct future transportation plans within Port Orange, a clear understanding of existing transportation conditions is necessary. This section examines the existing transportation conditions, including an inventory of streets, bicycle facilities, transit service, functional classification, jurisdiction, and traffic volumes. This information was used to identify existing levels of service for the roadways.

Roadways

The City of Port Orange is served by a network of state, county, and local roads that range from the newer suburban street patterns west of Interstate 95 (I-95) to a gridded pattern of streets closer to the Halifax River. The City has a mix of local streets, collectors, arterials, and major state and national routes. I-95, which links major cities along the eastern seaboard, and U.S. 1, which links major towns along the east coast of Florida, both traverse the City north to south. Table 1 shows the number of lanes, functional classification, and jurisdiction of Florida Department of Transportation (FDOT), County, and City roadways within the City.

Jurisdiction

The Jurisdiction refers to the "ownership" of the roadway. For example, the Florida Department of Transportation (FDOT) has the responsibility to maintain roadways within their jurisdiction. FDOT also controls the access to these roads. Volusia County and the City of Port Orange have similar responsibilities for roads within their jurisdiction. It should be noted that Port Orange has the authority to establish the level of service standard for City roads. In addition, jurisdictions can be transferred between FDOT, Volusia County, and the City upon the parties reaching agreement as to the transfer. FDOT also maintains a special classification for Strategic Intermodal System (SIS) Roadways. SIS roadways are defined as "Florida's high priority network of transportation facilities important to the state's economy and mobility." Within Port Orange, I-95 is an SIS facility.

Functional Classification

All roadways within Port Orange are assigned a Functional Classification based on the agreement of FDOT, the River to Sea Transportation Planning Organization (TPO) and the Federal Highway Administration (FHWA). Functional classification is the process when streets and highways are grouped into classes, or systems, per the character of service they provide. The designation of functional classification is made at least once every 10 years following the decennial Census. Three functional classification categories are common to roadways:

- Principal Arterial - Interstate – i.e., I-95
- Minor Arterial – i.e., Clyde Morris Boulevard
- Collector – i.e., Herbert Street



Existing laneage and jurisdiction are illustrated in Map 2.1. The functional classification of each roadway is illustrated in Map 2.2.

Urban Principal Arterial Roads

Routes which generally serve the major centers of activity of an urban area, on which the highest traffic volumes are carried, and the longest distance trips are made. These roads carry a high proportion of the total urban area travel on a minimum of mileage. The routes are integrated, both internally and between major rural connections.

Urban Minor Arterial Roads

Routes which generally interconnect with and augment urban principal arterial routes and provide service for trips of shorter length and a lower level of travel mobility. Such routes include all arterials not classified as "principal."

Urban Collector Road

A route that services moderate to average traffic volume, moderate to average trip length, and at moderate to average operating speeds. Such a route also collects and distributes traffic between local roads or arterial roads and serves as a linkage between land access and mobility needs.



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Table 1. Functional Classification and Jurisdiction

Roadway	Segment		Jurisdiction	Classification	Type of Facility	Existing Lanes	ROW Width (FT)
	From	To					
I-95	N. City Limits	SR 421	FDOT	Principal Arterial	Limited Access	6	350
	SR 421	Pioneer Tr.	FDOT	Principal Arterial	Limited Access	6	350
Airport Rd.	Williamson Blvd.	Cypress Springs Pkwy.	County	Minor Arterial	Divided	4	100
	Cypress Springs Pkwy.	S. City Limits	County	Minor Arterial	Undivided	2	100
Canal View Blvd.	Spruce Creek Rd.	Nova Rd.	City	Collector	Undivided	2	40
Central Park Blvd.	Spruce Creek Rd.	Hensel Rd.	City	Collector	Undivided	2	80
Charles St.	Ridgewood Ave.	FEC Railway	City	Collector	Undivided	2	55
	FEC Railway	McDonald Rd.	City	Collector	Undivided	2	55
City Center Pkwy.	City Center Cir.	Dunlawton Ave.	City	Collector	Undivided	2	100
City Center Blvd.	City Center Cir.	Clyde Morris Blvd.	City	Collector	Undivided	2	100
City Center Dr.	Herbert St.	City Center Cir.	City	Collector	Undivided	2	100
Clyde Morris Blvd.	N. City Limits	Madeline Ave.	County	Minor Arterial	Divided	4	100
	Madeline Ave.	Herbert St.	County	Minor Arterial	Divided	4	100
	Herbert St.	Willow Run Blvd.	County	Minor Arterial	Divided	4	100
	Willow Run Blvd.	Dunlawton Ave.	County	Minor Arterial	Divided	4	100
	Dunlawton Ave.	Taylor Rd.	County	Minor Arterial	Divided	2	100
Commonwealth Blvd.	Ridgewood Ave.	F.E.C. Railway	County	Collector	Undivided	2	100
	FEC Railway	Spruce Creek Rd.	County	Collector	Undivided	2	50
Coraci Blvd	Town West Blvd.	Coraci Park	City	Collector	Divided	2	100
Country Ln.	Village Tr.	Taylor Rd.	City	Collector	Undivided	2	70
Dunlawton Ave.	Peninsula Dr.	Ridgewood Ave.	FDOT	Principal Arterial	Divided	4	90-300
	Ridgewood Ave.	Spruce Creek Rd.	FDOT	Principal Arterial	Divided	4	90
	Spruce Creek Rd.	Nova Rd.	FDOT	Principal Arterial	Divided	4	200
	Nova Rd.	Clyde Morris Blvd.	FDOT	Principal Arterial	Divided	6	200
	Clyde Morris Blvd.	I-95	FDOT	Principal Arterial	Divided	6	200
Halifax/Riverside Dr.	Dunlawton Ave.	Main St.	City	Collector	Undivided	2	50
Hensel Rd.	Taylor Rd.	Central Park Blvd.	City	Collector	Undivided	2	60
Herbert St.	Ridgewood Ave.	McDonald Rd./6 th St.	City	Collector	Undivided	2	40
	McDonald Rd./6 th St.	Nova Rd.	City	Collector	Undivided	2	30-60
	Nova Rd.	City Center Dr.	City	Collector	Undivided	2	30-60
	City Center Dr.	Clyde Morris Blvd.	City	Collector	Undivided	2	30-60



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Roadway	Segment		Jurisdiction	Classification	Type of Facility	Existing Lanes	ROW Width (FT)
	From	To					
Jackson St.	Spruce Creek Rd.	Dunlawton Ave.	City	Collector	Undivided	2	60
	Dunlawton Ave.	Canal View Blvd.	City	Collector	Undivided	2	60
	Canal View Blvd.	Herbert St.	City	Collector	Undivided	2	60
	Herbert St.	Madeline Ave.	City	Collector	Undivided	2	60
Main St.	Riverside Dr.	Ridgewood Ave.	City	Collector	Undivided	2	40-50
McDonald Rd./6 th St.	Madeline Ave.	Herbert St.	City	Collector	Undivided	2	60-80
McGinnis Ave.	Williamson Blvd.	Georgia Peach Ave.	City	Collector	Undivided	2	100
Madeline Ave.	McDonald Rd.	Nova Rd.	City	Minor Arterial	Undivided	2	30-50
	Nova Rd.	Clyde Morris Blvd.	City	Minor Arterial	Undivided	2	50-70
	Clyde Morris Blvd.	Long Grove Dr.	County	Minor Arterial	Divided	2	100-200
	Long Grove Dr.	Town Park Dr.	City	Minor Arterial	Undivided	2	100-200
	Town Park Dr.	Williamson Blvd.	County	Minor Arterial	Divided	2	100-200
Nova Rd.	N. City Limits	Madeline Ave.	FDOT	Principal Arterial	Divided	4	100-180
	Madeline Ave.	Herbert St.	FDOT	Principal Arterial	Divided	4	100-180
	Herbert St.	Dunlawton Ave.	FDOT	Principal Arterial	Divided	4	100-180
	Dunlawton Ave.	Spruce Creek Rd.	FDOT	Principal Arterial	Divided	4	100
	Spruce Creek Rd.	Ridgewood Ave.	FDOT	Principal Arterial	Divided	4	100
Oak St.	Ridgewood Ave.	Spruce Creek Rd.	City	Collector	Undivided	2	50
	Spruce Creek Rd.	Dunlawton Ave.	City	Collector	Undivided	2	50
Peninsula Dr. (SR 441)	N. City Limits	Dunlawton Ave.	FDOT	Minor Arterial	Undivided	2	50
	Dunlawton Ave.	S. City Limits	City	Collector	Undivided	2	50
Pioneer Tr.	Turnbull Bay Rd.	Airport Rd	County	Collector	Undivided	2	66-130
Reed Canal Rd.	Nova Rd.	Clyde Morris Blvd.	County	Collector	Undivided	2	100
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	FDOT	Principal Arterial	Divided	4	100
	Dunlawton Ave.	Commonwealth Blvd.	FDOT	Principal Arterial	Divided	4	100
	Commonwealth Blvd.	Nova Rd.	FDOT	Principal Arterial	Divided	4	100
	Nova Rd.	S. City Limits	FDOT	Principal Arterial	Divided	4	100
Spruce Creek Rd.	Canal View Blvd.	Dunlawton Ave.	City	Minor Arterial	Undivided	2	50-100
	Dunlawton Ave.	Commonwealth Blvd.	City	Minor Arterial	Undivided	2	50-100
	Commonwealth Blvd.	Nova Rd.	City/County	Minor Arterial	Undivided	2	50-100
	Nova Rd.	Taylor Rd.	County	Minor Arterial	Divided	4	100
	Taylor Rd.	Central Park Blvd.	City	Minor Arterial	Undivided	2	50-100
	Central Park Blvd.	S. City Limits	City	Minor Arterial	Undivided	2	50-100



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Roadway	Segment		Jurisdiction	Classification	Type of Facility	Existing Lanes	ROW Width (FT)
	From	To					
Summer Trees Rd.	Williamson Blvd.	Taylor Rd.	City	Collector	Undivided	2	100
Taylor Road	Spruce Creek Rd.	Devon St.	County	Minor Arterial	Divided	4	100
	Devon St.	Hensel Rd.	County	Minor Arterial	Divided	4	100
	Hensel Rd.	Clyde Morris Blvd.	County	Minor Arterial	Divided	4	100
	Clyde Morris Blvd.	Dunlawton Ave.	County	Minor Arterial	Undivided	2	50-60
	I-95	Williamson Blvd.	County	Minor Arterial	Divided	5	100
	Williamson Blvd.	Summer Trees Blvd.	County	Minor Arterial	Divided	4	100
	Summer Trees Blvd.	W. City Limits	County	Minor Arterial	Undivided	2	100
Town West Blvd.	Williamson Blvd.	Tomoka Farms Rd.	City	Collector	Divided	2	100
Victoria Gardens Blvd.	Dunlawton Ave.	Clyde Morris Blvd.	City	Collector	Undivided	2	80
Village Tr.	Nova Rd.	Country Ln.	City	Collector	Undivided	2	100
	Country Ln.	Dunlawton Ave.	City	Collector	Undivided	2	100
Willow Run Blvd.	Clyde Morris Blvd.	Tracy Dr.	City	Collector	Divided	3	200
	Tracy Dr.	Williamson Blvd.	City	Collector	Undivided	2	200
Williamson Blvd.	N. City Limits	Madeline Ave.	County	Principal Arterial	Undivided	2	100-200
	Madeline Ave.	Willow Run Blvd.	County	Principal Arterial	Undivided	2	100-200
	Willow Run Blvd.	Town West Blvd.	County	Principal Arterial	Undivided	2	100-200
	Town West Blvd.	Summer Trees Rd.	County	Principal Arterial	Undivided	2	100-200
	Summer Trees Rd.	Taylor Rd.	County	Principal Arterial	Divided	2	100-200
	Taylor Rd.	Airport Rd.	County	Principal Arterial	Divided	4	100-200
	Airport Rd.	Pioneer Tr.	County	Principal Arterial	Divided	4	100-200
Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Dr.	City	Collector	Undivided	2	100

Source: City of Port Orange, 2023



Existing Constrained Roadway Facilities

A constrained roadway facility is one in which the addition of laneage to meet current or future level of service is not possible due to physical or policy barriers. Physical barriers may include environmentally sensitive lands or right-of-way constraints. Policy barriers include aesthetic, political, or social reasons that prevent the expansion of the roadway.

In Port Orange, there are several roadways that meet the definition of a constrained facility. Constrained roadways will not be widened except to construct turn lanes, sidewalks, or bicycle facilities. A listing of the designated constrained roadways is indicated in Table 2 below. The City will work with FDOT and the County to explore ways to manage, maintain, and possibly improve the level of service of these facilities.

Table 2. Designated Constrained Corridors

Constrained Roadway	Limits of Constrained Designation	Max # of lanes
Charles Ave.	McDonald Ave./6 th St. to Ridgewood Ave. (U.S. 1)	2 lanes
Dunlawton Ave.	Peninsula Dr. to Spruce Creek Rd.	4 lanes
Herbert St.	Ridgewood Ave. to Clyde Morris Blvd.	2 lanes
McDonald Ave./6 th St.	Madeline Ave. to Herbert St.	2 lanes
Main St.	Riverside Dr. to Ridgewood Ave.	2 lanes
Nova Rd.	Dunlawton Ave. to Ridgewood Ave. (U.S. 1)	4 lanes
Peninsula Dr.	N. City Limits to south terminus	2 lanes
Ridgewood Ave. (U.S. 1)	N. City Limits to Rose Bay	4 lanes
Riverside Dr./Halifax Ave.	Dunlawton Ave. to Main St.	2 lanes
Spruce Creek Rd.	Taylor Rd. to Nova Rd.	4 lanes
Spruce Creek Rd.	City Limits to Central Park Blvd	2 lanes
South Williamson Blvd.	Taylor Rd. to Airport Rd.	4 lanes
Taylor Rd.	Clyde Morris Blvd. to Spruce Creek Rd.	4 lanes

Source: City of Port Orange, 2023

Roadway Level-of-Service Analysis

This Plan establishes the framework for the Port Orange Town Center (POTC) Transportation Concurrency Exception Area (TCEA) designation adopted in 2006. The POTC TCEA was established in order to:

“reduce the adverse impact transportation concurrency may have on urban infill development, redevelopment, and the achievement of the city’s redevelopment goals and implement and fund mobility, urban design, mixed uses, and network connectivity strategies to address transportation needs within the town center TCEA.”

To achieve this goal, objectives and policies were implemented to support mobility in the TCEA.

Outside of the TCEA, the City will maintain adopted LOS standards on area roadways but will also consider alternative strategies such as a Transportation Concurrency Management Area as may be appropriate.

Level of service (LOS) is a quantitative stratification of quality of service established in the Highway Capacity Manual, published by Transportation Research Board. For roadways, LOS is based on the presumption that high speed and low congestion levels are preferable to slower speed and congested conditions. The LOS quality of service is divided into six letter grades, A through F, with A being the “best” – representing low volume and high-speed conditions, and F being the “worst” –



representing congested or gridlocked conditions. Often, better vehicular levels of service translate into worse levels of service for pedestrians and bicycles.

Because it is costly to measure average travel speeds, traffic volumes are often used as a surrogate for the average travel speeds, based on models that FDOT has developed to correlate traffic volumes with the projected travel speeds. Volusia County maintains level of service standards on all County-maintained. The adopted level of service for all City-maintained roadways is LOS E. The adopted LOS for County and FDOT roadways is LOS D. Maintaining LOS E for City streets (as opposed LOS D or better) will help ensure that local streets are not required to be widened to accommodate vehicles at the expense of other mobility modes such as bicycling and walking and negatively impacting the character of the surrounding areas. The levels of service for FDOT, County, and City roadways is based on the 2020 FDOT Quality/Level of Service (QLOS) handbook. It is important to note that FDOT periodically updates the LOS thresholds, and the volumes may change.

Existing Roadway LOS

A level of service analysis was conducted for existing conditions of major roads in the City. Data was provided by FDOT, Volusia County, and the City. 2023 Data was utilized where available. Daily and peak hour volumes are reported. The roadways were divided into segments and the existing volume on each segment was reported. The volume-to-capacity ratio and level-of-service were also reported. Volume-to-capacity (v/c) is a measurement that quantifies that amount of a roadway's capacity that is being utilized by the reported traffic. For example, a road with a v/c ratio of 0.60 is 60% utilized by traffic with 40% of the capacity remaining unutilized. As the v/c ratio approaches 1.0, the road is more congested. For roadways with a v/c ratio above 1.0, very congested conditions and a general failure of the level of service can be expected. The City reviews the Existing Roadway LOS each year as part of the Concurrency Management Report (CMR). The Draft 2023 CMR informed the Existing Roadway LOS, exhibited in Map 2.4, and shared in Table 3.

Transit Service

Transit service within the City of Port Orange is provided by Volusia County Transit (VOTRAN). VOTRAN provides fixed-schedule service through Volusia County.

According to the VOTRAN Transit Development Plan, Major Update 2022-2031, VOTRAN provides 27 routes with approximately 3.2 million rides in 2019. VOTRAN also operates a fleet of para-transit vehicles.

There are five routes presently serving the City of Port Orange, which include Routes 4, 7, 12, 17B, and 40. The routes serve destinations on the major corridors such as Dunlawton Avenue, Nova Road, and U.S. 1. There is a transfer points on Swallow Tail Drive behind Countryside Shopping Center for several of the routes. Destinations such as Halifax Health Medical Center, City Hall, and the Library are served, in addition to shopping centers throughout the City.

The Port Orange VOTRAN routes are shown in Map 2.3.

Ridership is expected to increase by 31 percent to 4.6 million rides by 2031.



Bikeways and Pedestrian Ways

Bikeways

The City has an established bikeway plan and has constructed bike facilities along major streets. The bikeways consist of bike lanes, paved shoulders, wider joint-use sidewalks (bike paths), and designated trails. The City's off-street bikeways, known as bike paths, are multi-use facilities that double as pedestrian sidewalks.

The system of eight-foot wide and five-foot wide off-street bike paths/sidewalks, as well as on-street bike lanes and paved shoulders, is maintained by the City, State and County. Some corridors may have more than one kind of bikeway facility. The location of the City's significant bikeway facilities are shown on the map in Map 2.6.

Sidewalks

The City has a well-connected sidewalk system, with sidewalks on both sides of most major roadways and in subdivisions. Neighborhoods in the eastern part of the City benefit from a tighter grid network of streets.

Ports, Aviation, Rail, and Intermodal

Intracoastal Waterway, Ports, and Marinas

The Intracoastal Waterway bounds the City to the east. Although used for recreational purposes, the waterway is not a significant route for transportation within the City.

Aviation Facilities/Air Transportation

A public airport is not located within the City of Port Orange. However, general and commercial aviation are provided by the nearby Daytona Beach International Airport (DBIA), located approximately five miles north of the city. Additional general aviation service is available throughout Volusia County, including at New Smyrna Beach Airport and Ormond Beach Airport. A private Spruce Creek Fly-in community is located just west of the City.

Rail Service

The Florida East Coast (FEC) Railway operates through the City. At this time, no passenger service is provided on this rail line, and no future passenger service is actively planned. Sunrail is being expanded to DeLand and will provide commuter rail operations to the Orlando area.

Analysis of Future Conditions

Future Roadway Network Projections

The daily and peak hour volumes for 2045 conditions were determined using the volumes reported in the 2045 Central Florida Regional Planning Model and supplemented with data produced by the River to Sea TPO and Volusia County. The long range laneage as anticipated in the TPO's plan and the resulting roadway levels of service are summarized in Table 3.



Table 3. Existing (2023) Analysis

ROADWAY	SEGMENT		DAILY VOLUME	DAILY CAPACITY	DAILY V/C RATIO	PK HR VOLUME	PK HOUR CAPACITY	VOL/CAP RATIO	EXISTING LOS	ADOPTED LOS
	FROM	TO								
I-95	N. City Limits	SR 421	81,500	97,800	0.83	7,335	8,310	0.88	C	C
	SR 421	Pioneer Tr.	50,700	97,800	0.52	4,563	8,310	0.55	C	D
Airport Rd.	Williamson Blvd.	S. City Limits	16,124	18,320	0.88	1,451	1,656	0.88	B	E
Canal View Blvd.	Spruce Creek Rd.	Nova Rd.	1,969	17,920	0.11	177	917	0.19	C	E
Central Park Blvd.	Spruce Creek Rd.	Hensel Rd.	2,548	17,920	0.14	229	917	0.25	C	E
Charles St.	Ridgewood Ave.	FEC Railway	1,670	17,920	0.09	150	917	0.16	C	E
	FEC. Railway	McDonald Rd.	2,246	17,920	0.13	202	917	0.22	C	E
City Center Pkwy.	City Center Cir.	Dunlawton Ave.	4,816	17,360	0.28	433	1,128	0.38	C	E
City Center Blvd.	City Center Cir.	Clyde Morris Blvd.	4,639	17,360	0.33	418	1,128	0.37	C	E
City Center Dr.	Herbert St.	City Center Cir.	2,405	17,360	0.14	216	1,021	0.21	C	E
Clyde Morris Blvd.	Madeline Ave.	N. City Limits	21,520	35,820	0.60	1,937	3,222	0.60	C	E
	Madeline Ave.	Herbert St.	23,390	35,820	0.65	2,105	3,222	0.65	C	E
	Herbert St.	Willow Run Blvd.	23,390	35,820	0.65	2,105	3,222	0.65	C	E
	Willow Run Blvd.	Dunlawton Ave.	19,360	35,820	0.54	1,742	3,222	0.54	C	E
	Dunlawton Ave.	Taylor Rd.	9,150	16,727	0.55	824	1,512	0.54	C	E
Commonwealth Blvd.	Ridgewood Ave.	FEC Railway	5,510	13,640	0.40	496	1,128	0.44	C	E
	FEC Railway	Spruce Creek Rd.	3,830	13,640	0.28	345	1,128	0.31	C	E
Country Ln.	Village Tr.	Taylor Rd.	5,061	12,480	0.41	455	1,128	0.40	C	E
Dunlawton Ave.	Peninsula Dr.	Ridgewood Ave.	24,500	32,400	0.76	2,205	2,920	0.76	D	D
	Ridgewood Ave.	Spruce Creek Rd.	25,500	39,800	0.64	2,295	3,580	0.64	C	D
	Spruce Creek Rd.	Nova Rd.	32,000	39,800	0.80	2,880	3,580	0.80	C	D
	Nova Rd.	Clyde Morris Blvd.	39,000	59,900	0.65	3,510	5,390	0.65	C	D
	Clyde Morris Blvd.	I-95	52,000	59,900	0.87	4,680	5,390	0.87	C	D
Halifax/Riverside Dr.	Dunlawton Ave.	Main St.	1,331	17,920	0.07	120	917	0.13	C	E
Hensel Rd.	Taylor Rd.	Central Park Blvd.	7,006	17,920	0.39	631	1,269	0.50	C	E
Herbert St.	Ridgewood Ave.	McDonald Rd./6 th St.	7,467	17,920	0.42	672	917	0.73	D	E
	McDonald Rd./6 th St.	Nova Rd.	7,467	17,920	0.42	672	917	0.73	D	E
	Nova Rd.	City Center Dr.	8,694	17,920	0.49	782	917	0.85	D	E
	City Center Dr.	Clyde Morris Blvd.	7,919	17,920	0.44	713	917	0.78	D	E
Jackson St.	Spruce Creek Rd.	Dunlawton Ave.	1,913	17,920	0.11	172	917	0.19	C	E



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ROADWAY	SEGMENT		DAILY VOLUME	DAILY CAPACITY	DAILY V/C RATIO	PK HR VOLUME	PK HOUR CAPACITY	VOL/CAP RATIO	EXISTING LOS	ADOPTED LOS
	FROM	TO								
Jackson St.	Dunlawton Ave.	Canal View Blvd.	1,913	17,920	0.11	172	917	0.19	C	E
	Canal View Blvd.	Herbert St.	1,913	17,920	0.11	172	917	0.19	C	E
	Herbert St.	Madeline Ave.	1,913	17,920	0.11	172	917	0.19	C	E
McDonald Rd./6 th St.	Madeline Ave.	Herbert St.	2,942	17,360	0.16	265	917	0.29	C	E
Madeline Ave.	McDonald Rd.	Nova Rd.	4,562	16,146	0.28	411	1,459	0.28	C	E
	Nova Rd.	Clyde Morris Blvd.	9,883	16,146	0.61	889	1,459	0.61	D	E
	Clyde Morris Blvd.	Long Grove Dr.	13,081	35,820	0.37	1,177	2,736	0.37	C	E
	Long Grove Dr.	Town Park Dr.	13,081	18,320	0.71	1,177	1,656	0.71	D	E
	Town Park Dr.	Williamson Blvd.	11,425	15,930	0.72	1,028	3,222	0.71	C	E
Nova Rd.	N. City Limits	Madeline Ave.	18,000	42,350	0.43	1,620	3,815	0.42	C	D
	Madeline Ave.	Herbert St.	18,000	59,900	0.30	1,620	5,390	0.30	C	D
	Herbert St.	Dunlawton Ave.	18,000	39,800	0.45	1,620	3,580	0.45	C	D
	Dunlawton Ave.	Spruce Creek Rd.	27,000	39,800	0.68	2,430	3,580	0.68	C	D
	Spruce Creek Rd.	Ridgewood Ave.	18,200	39,800	0.46	1,638	3,580	0.46	C	D
Oak St.	Ridgewood Ave.	Spruce Creek Rd.	3,255	17,920	0.18	293	917	0.32	C	E
	Spruce Creek Rd.	Dunlawton Ave.	3,255	17,920	0.18	293	917	0.32	C	E
Pioneer Tr.	Turnbull Bay Rd.	Airport Rd.	7,380	18,320	0.40	664	1,656	0.40	C	E
Reed Canal Rd.	Nova Rd.	Clyde Morris Blvd.	6,460	14,040	0.46	581	1,269	0.46	D	E
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	24,000	39,800	0.60	2,160	3,580	0.60	C	D
	Dunlawton Ave.	Commonwealth Blvd.	17,600	39,800	0.44	1,584	3,580	0.44	C	D
	Commonwealth Blvd.	Nova Rd.	15,700	39,800	0.39	1,413	3,580	0.39	C	D
	Nova Rd.	S. City Limits	23,500	39,800	0.59	2,115	3,580	0.59	C	D
Spruce Creek Rd.	Canal View Blvd.	Dunlawton Ave.	2,493	17,360	0.14	224	917	0.24	C	E
	Dunlawton Ave.	Commonwealth Blvd.	7,025	17,360	0.40	632	1,269	0.50	D	E
	Commonwealth Blvd.	Nova Rd.	8,500	14,040	0.61	765	1,269	0.60	C	E
	Nova Rd.	Taylor Rd.	14,740	37,970	0.39	1,327	3,222	0.41	C	E
	Taylor Rd.	Central Park Blvd.	8,425	17,920	0.47	758	1,459	0.52	D	E
Taylor Rd.	Spruce Creek Rd.	Hensel Rd.	14,800	35,820	0.41	1,332	3,222	0.41	C	E
	Hensel Rd.	Clyde Morris Blvd.	16,970	35,820	0.47	1,527	3,222	0.47	C	E
	Clyde Morris Blvd.	Dunlawton Ave.	12,780	14,040	0.91	1,150	1,269	0.91	D	E
	I-95	Williamson Blvd.	44,340	47,560	0.93	3,991	4,485	0.89	D	E



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ROADWAY	SEGMENT		DAILY VOLUME	DAILY CAPACITY	DAILY V/C RATIO	PK HR VOLUME	PK HOUR CAPACITY	VOL/CAP RATIO	EXISTING LOS	ADOPTED LOS
	FROM	TO								
	Williamson Blvd.	Summer Trees Blvd.	18,120	35,820	0.51	1,631	3,222	0.51	C	E
	Summer Trees Blvd.	W. City Limits	14,840	32,600	0.46	1,336	2,930	0.46	C	E
Town West Blvd.	Williamson Blvd.	Tomoka Farms Rd.	6,209	17,920	0.35	559	1,532	0.36	C	E
Victoria Gardens Blvd.	Dunlawton Ave.	Clyde Morris Blvd.	2,826	17,360	0.16	254	1,128	0.23	C	E
Village Tr.	Nova Rd.	Country Ln.	7,739	17,920	0.43	697	1,128	0.62	D	E
	Country Ln.	Dunlawton Ave.	6,577	17,920	0.37	592	1,128	0.52	D	E
Willow Run Blvd.	Clyde Morris Blvd.	Tracy Dr.	10,385	21,970	0.47	935	1,976	0.47	D	E
	Tracy Dr.	Williamson Blvd.	7,778	17,920	0.43	700	1,440	0.49	C	E
Williamson Blvd.	N. City Limits	Madeline Ave.	14,430	35,820	0.40	1,299	2,130	0.61	D	E
	Madeline Ave.	Willow Run Blvd.	14,840	35,820	0.41	1,336	2,050	0.65	D	E
	Willow Run Blvd.	Town West Blvd.	17,140	35,820	0.48	1,543	1,760	0.88	D	E
	Town West Blvd.	Summer Trees Rd.	19,440	35,820	0.54	1,750	1,890	0.93	D	E
	Summer Trees Rd.	Taylor Rd.	19,440	35,820	0.54	1,750	3,222	0.54	C	E
	Taylor Rd.	Airport Rd.	25,040	35,820	0.70	2,254	3,222	0.70	C	E
	Airport Rd.	Pioneer Tr.	6,100	37,970	0.16	549	1,440	0.38	C	D
Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Dr.	3,467	17,920	0.19	312	1,440	0.22	C	E

Source: City of Port Orange, 2023



Short-Term Projection Methodology

Short-term daily and peak-hour traffic for the major roads in the City was projected using information from Volusia County and the River to Sea TPO. A five-year (2027) horizon was analyzed. An areawide growth rate was calculated based on existing volumes, long-range volumes, and an interpolation calculation. Adjustments were made to account for roadway links that were not specifically analyzed by the TPO. This growth was checked for reasonableness based on knowledge of land use patterns in the City.

The short-term projections include the additional capacity provided by the anticipated roadway improvements. The short-range projections, volume-to-capacity ratios, and levels-of-service are presented in Table 4.



Table 4. Short-Range (2027) Analysis

ROADWAY	SEGMENT		2027 DAILY VOLUME	2027 DAILY CAPACITY	2027 DAILY V/C	2027 DAILY LOS	2027 PK HR VOLUME	2027 PK HR CAPACITY	2027 PEAK HOUR V/C	2027 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
I-95	N. City Limits	SR 421	85,650	97,800	0.88	C	7,708	8,310	0.93	C	C
	SR 421	Pioneer Tr.	53,282	97,800	0.54	B	4,795	8,310	0.58	B	D
Airport Rd.	Williamson Blvd.	S. City Limits	16,945	18,320	0.92	C	1,525	1,656	0.92	C	E
Canal View Blvd.	Spruce Creek Rd.	Nova Rd.	2,069	17,920	0.12	C	186	917	0.20	C	E
Central Park Blvd.	Spruce Creek Rd.	Hensel Rd.	2,678	17,920	0.15	C	241	917	0.26	C	E
Charles St.	Ridgewood Ave.	FEC Railway	1,755	17,920	0.10	C	158	917	0.17	C	E
	FEC Railway	McDonald Rd.	2,360	17,920	0.13	C	212	917	0.23	C	E
City Center Pkwy.	City Center Cir.	Dunlawton Ave.	5,061	17,360	0.29	C	455	1,128	0.40	C	E
City Center Blvd.	City Center Cir.	Clyde Morris Blvd.	4,875	17,360	0.28	C	439	1,128	0.39	C	E
City Center Dr.	Herbert St.	City Center Cir.	2,527	17,360	0.15	C	227	1,021	0.22	C	E
Clyde Morris Blvd.	Madeline Ave.	N. City Limits	22,616	35,820	0.63	C	2,036	3,222	0.63	C	E
	Madeline Ave.	Herbert St.	24,581	35,820	0.69	C	2,212	3,222	0.69	C	E
	Herbert St.	Willow Run Blvd.	24,581	35,820	0.69	C	2,212	3,222	0.69	C	E
	Willow Run Blvd.	Dunlawton Ave.	20,346	35,820	0.57	C	1,831	3,222	0.57	C	E
	Dunlawton Ave.	Taylor Rd.	9,616	16,727	0.57	C	866	1,512	0.57	C	E
Commonwealth Blvd.	Ridgewood Ave.	FEC Railway	5,791	13,640	0.42	C	521	1,128	0.46	C	E
	FEC Railway	Spruce Creek Rd.	4,025	13,640	0.30	C	363	1,128	0.32	C	E
Country Ln.	Village Tr.	Taylor Rd.	5,319	12,480	0.43	C	478	1,128	0.42	C	E
Dunlawton Ave.	Peninsula Dr.	Ridgewood Ave.	25,748	32,400	0.79	B	2,317	2,920	0.79	B	D
	Ridgewood Ave.	Spruce Creek Rd.	26,798	39,800	0.67	D	2,412	3,580	0.67	D	D
	Spruce Creek Rd.	Nova Rd.	33,629	39,800	0.84	C	3,027	3,580	0.85	C	D
	Nova Rd.	Clyde Morris Blvd.	40,986	59,900	0.68	C	3,689	5,390	0.68	C	D
	Clyde Morris Blvd.	I-95	54,648	59,900	0.91	C	4,918	5,390	0.91	C	D
Halifax/Riverside Dr.	Dunlawton Ave.	Main St.	1,399	17,920	0.0.08	C	126	917	0.14	C	E
Hensel Rd.	Taylor Rd.	Central Park Blvd.	7,363	17,920	0.41	C	663	1,269	0.52	D	E
Herbert St.	Ridgewood Ave.	McDonald Rd./6 th St.	7,847	17,920	0.44	C	706	917	0.77	D	E
	McDonald Rd./6 th St.	Nova Rd.	7,847	17,920	0.44	C	706	917	0.77	D	E
	Nova Rd.	City Center Dr.	9,137	17,920	0.51	C	822	917	0.90	D	E
	City Center Dr.	Clyde Morris Blvd.	8,322	17,920	0.46	C	749	917	0.82	D	E
Jackson St.	Spruce Creek Rd.	Dunlawton Ave.	2,010	17,920	0.11	C	181	917	0.20	C	E



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ROADWAY	SEGMENT		2027 DAILY VOLUME	2027 DAILY CAPACITY	2027 DAILY V/C	2027 DAILY LOS	2027 PK HR VOLUME	2027 PK HR CAPACITY	2027 PEAK HOUR V/C	2027 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
Jackson St.	Dunlawton Ave.	Canal View Blvd.	2,010	17,920	0.11	C	181	917	0.20	C	E
	Canal View Blvd.	Herbert St.	2,010	17,920	0.11	C	181	917	0.20	C	E
	Herbert St.	Madeline Ave.	2,010	17,920	0.11	C	181	917	0.20	C	E
McDonald Rd./6 th St.	Madeline Ave.	Herbert St.	3,092	17,920	0.17	C	278	917	0.30	C	E
Madeline Ave.	McDonald Rd.	Nova Rd.	4,794	16,146	0.30	C	432	1,459	0.30	C	E
	Nova Rd.	Clyde Morris Blvd.	10,386	16,146	0.64	D	934	1,459	0.64	D	E
	Clyde Morris Blvd.	Long Grove Dr.	13,747	35,820	0.38	C	1,237	2,736	0.38	C	E
	Long Grove Dr.	Town Park Dr.	13,747	18,320	0.75	C	1,237	1,656	0.75	C	E
	Town Park Dr.	Williamson Blvd.	12,007	15,930	0.75	C	1,080	3,222	0.75	C	E
Nova Rd.	N. City Limits	Madeline Ave.	18,917	42,350	0.45	C	1,702	3,815	0.45	D	D
	Madeline Ave.	Herbert St.	18,917	59,900	0.32	C	1,702	5,390	0.32	D	D
	Herbert Street	Dunlawton Ave.	18,917	39,800	0.48	C	1,702	3,580	0.48	C	D
	Dunlawton Ave.	Spruce Creek Rd.	28,375	39,800	0.71	C	2,554	3,580	0.71	C	D
	Spruce Creek Rd.	Ridgewood Ave.	19,127	39,800	0.48	C	1,721	3,580	0.48	C	D
Oak St.	Ridgewood Ave.	Spruce Creek Rd.	3,421	17,920	0.19	C	308	917	0.34	C	E
	Spruce Creek Rd.	Dunlawton Ave.	3,421	17,920	0.19	C	308	917	0.34	C	E
Pioneer Tr.	Turnbull Bay Rd.	Airport Rd.	7,756	18,320	0.42	C	698	1,656	0.42	C	E
Reed Canal Rd.	Nova Road	Clyde Morris Blvd.	6,789	14,040	0.48	C	611	1,269	0.48	C	E
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	25,222	39,800	0.63	C	2,270	3,580	0.63	C	D
	Dunlawton Ave.	Commonwealth Blvd.	18,496	39,800	0.46	C	1,665	3,580	0.46	C	D
	Commonwealth Blvd.	Nova Rd.	16,499	39,800	0.41	C	1,485	3,580	0.41	C	D
	Nova Rd.	S. City Limits	24,697	39,800	0.62	C	2,223	3,580	0.62	C	D
Spruce Creek Rd.	Canal View Blvd.	Dunlawton Ave.	2,620	17,360	0.15	C	235	917	0.26	C	E
	Dunlawton Ave.	Commonwealth Blvd.	7,383	17,360	0.43	C	664	1,269	0.52	D	E
	Commonwealth Blvd.	Nova Rd.	8,933	14,040	0.64	C	804	1,269	0.63	D	E
	Nova Rd.	Taylor Rd.	15,491	37,970	0.41	C	1,395	3,222	0.43	C	E
	Taylor Rd.	Central Park Blvd.	8,853	17,920	0.49	C	797	1,459	0.55	C	E
Taylor Rd.	Spruce Creek Rd.	Hensel Rd.	15,554	35,820	0.43	C	1,400	3,222	0.43	C	E
	Hensel Rd.	Clyde Morris Blvd.	17,834	35,820	0.50	C	1,605	3,222	0.50	C	E
	Clyde Morris Blvd.	Dunlawton Ave.	13,431	14,040	0.96	D	1,209	1,269	0.95	E	E
	I-95	Williamson Blvd.	46,598	47,560	0.98	E	4,194	4,485	0.94	D	E



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ROADWAY	SEGMENT		2027 DAILY VOLUME	2027 DAILY CAPACITY	2027 DAILY V/C	2027 DAILY LOS	2027 PK HR VOLUME	2027 PK HR CAPACITY	2027 PEAK HOUR V/C	2027 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
Taylor Rd.	Williamson Blvd.	Summer Trees Blvd.	19,043	35,820	0.53	C	1,714	3,222	0.53	C	E
	Summer Trees Blvd.	W. City Limits	15,596	32,600	0.48	C	1,404	2,570	0.55	C	E
Town West Blvd.	Williamson Blvd.	Tomoka Farms Rd.	6,525	17,920	0.36	C	587	1,532	0.38	D	E
Victoria Gardens Blvd.	Dunlawton Ave.	Clyde Morris Blvd.	2,970	17,360	0.17	C	267	1,128	0.24	C	E
Village Tr.	Nova Rd.	Country Ln.	8,133	17,920	0.45	C	732	1,128	0.65	D	E
	Country Ln.	Dunlawton Ave.	6,912	17,920	0.39	C	622	1,128	0.55	D	E
Willow Run Blvd.	Clyde Morris Blvd.	Tracy Dr.	10,914	21,970	0.50	D	983	1,976	0.50	D	E
	Tracy Dr.	Williamson Blvd.	8,174	17,920	0.46	C	736	1,440	0.51	C	E
Williamson Blvd.	N. City Limits	Madeline Ave.	15,165	35,820	0.42	C	1,365	2,130	0.64	C	E
	Madeline Ave.	Willow Run Blvd.	15,596	35,820	0.44	C	1,404	2,050	0.68	C	E
	Willow Run Blvd.	Town West Blvd.	18,013	35,820	0.50	C	1,622	1,760	0.92	D	E
	Town West Blvd.	Summer Trees Rd.	20,430	35,820	0.57	C	1,839	1,890	0.97	D	E
	Summer Trees Rd.	Taylor Rd.	20,430	35,820	0.57	C	1,839	3,222	0.57	C	E
	Taylor Rd.	Airport Rd.	26,315	35,820	0.73	C	2,369	3,222	0.74	C	E
	Airport Rd.	Pioneer Tr.	6,411	39,970	0.17	C	577	1,440	0.40	C	D
Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Dr.	3,644	17,920	0.20	C	328	1,440	0.23	C	E

Sources: Kimley-Horn & Associates, Inc., 2023



Long-Term Projection Methodology

Future daily and peak-hour traffic for the major roads in the City was projected using information from Volusia County and the River to Sea TPO. Adjustments were made to account for roadway links that were not specifically analyzed by the TPO. Furthermore, an areawide growth rate was calculated and applied to the existing counts to determine long-range volumes on City streets not analyzed by the TPO. This growth was checked for reasonableness based on knowledge of land use patterns in the City.

The long-term projections include the additional capacity provided by the anticipated roadway improvements. The long-range projections, volume-to-capacity ratios, and levels-of-service are presented in Table 5.



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Table 5. Long-Range (2045) Analysis

ROADWAY	SEGMENT		2045 DAILY VOLUME	2045 DAILY CAPACITY	2045 DAILY V/C	2045 DAILY LOS	2045 PK HR VOLUME	2045 PK HR CAPACITY	2045 VOL/CAP RATIO	2045 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
I-95	N. City Limits	SR 421	95,294	97,800	0.97	C	8,576	8,310	1.03	D	C
	SR 421	Pioneer Trail	96,499	97,800	0.99	C	8,685	8,310	1.05	D	D
Airport Rd.	Williamson Blvd.	S. City Limits	18,865	18,320	1.03	F	1,698	1,656	1.03	F	E
Canal View Blvd.	Spruce Creek Rd.	Nova Rd.	2,304	17,920	0.13	C	207	917	0.23	C	E
Central Park Blvd.	Spruce Creek Rd.	Hensel Rd.	2,442	17,920	0.14	C	220	917	0.24	C	E
Charles St.	Ridgewood Ave.	FEC Railway	2,586	17,920	0.14	C	233	917	0.25	C	E
	FEC Railway	McDonald Rd.	2,435	17,920	0.14	C	219	917	0.24	C	E
City Center Pkwy.	City Center Cir.	Dunlawton Ave.	5,635	17,360	0.32	C	507	1,128	0.45	D	E
City Center Blvd.	City Center Cir.	Clyde Morris Blvd.	5,428	17,360	0.31	C	489	1,128	0.43	D	E
City Center Dr.	Herbert St.	City Center Cir.	2,814	17,360	0.16	C	253	1,021	0.24	C	E
Clyde Morris Blvd.	Madeline Ave.	N. City Limits	29,075	35,820	0.81	C	2,617	3,222	0.81	C	E
	Madeline Ave.	Herbert St.	26,980	35,820	0.75	D	2,448	3,222	0.76	C	E
	Herbert St.	Willow Run Blvd.	26,043	35,820	0.73	C	2,350	3,222	0.73	C	E
	Willow Run Blvd.	Dunlawton Ave.	24,259	35,820	0.68	C	2,183	3,222	0.68	C	E
	Dunlawton Ave.	Taylor Rd.	10,844	16,727	0.65	C	976	1,512	0.65	C	E
Commonwealth Blvd.	Ridgewood Ave.	FEC Railway	6,774	13,640	0.47	C	580	1,128	0.51	C	E
	FEC Railway	Spruce Creek Rd.	4,481	13,640	0.33	C	403	1,128	0.36	C	E
Country Ln.	Village Tr.	Taylor Rd.	5,921	12,480	0.47	D	533	1,128	0.47	D	E
Dunlawton Ave.	Peninsula Dr.	Ridgewood Ave.	28,665	32,400	0.88	D	2,580	2,920	0.88	D	D
	Ridgewood Ave.	Spruce Creek Rd.	29,903	39,800	0.75	C	2,685	3,580	0.75	C	D
	Spruce Creek Rd.	Nova Rd.	37,053	39,800	0.93	C	3,370	3,580	0.94	C	D
	Nova Rd.	Clyde Morris Blvd.	49,205	59,900	0.82	C	4,428	5,390	0.82	C	D
	Clyde Morris Blvd.	I-95	64,875	59,900	1.08	F	5,839	5,390	1.08	F	D
Halifax/Riverside Dr.	Dunlawton Ave.	Main St.	1,557	17,920	0.08	C	140	917	0.15	C	E
Hensel Rd.	Taylor Rd.	Central Park Blvd.	8,197	17,920	0.46	C	738	1,269	0.58	C	E
Herbert St.	Ridgewood Ave.	McDonald Rd./6 th St.	8,736	17,920	0.49	C	786	917	0.86	D	E
	McDonald Rd./6 th St.	Nova Rd.	8,736	17,920	0.49	C	786	917	0.86	D	E
	Nova Rd.	City Center Dr.	10,172	17,920	0.57	C	915	917	0.99	C	E
	City Center Dr.	Clyde Morris Blvd.	9,265	17,920	0.52	C	834	917	0.91	C	E
Jackson St.	Spruce Creek Rd.	Dunlawton Ave.	2,238	17,920	0.12	C	201	917	0.22	C	E



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ROADWAY	SEGMENT		2045 DAILY VOLUME	2045 DAILY CAPACITY	2045 DAILY V/C	2045 DAILY LOS	2045 PK HR VOLUME	2045 PK HR CAPACITY	2045 VOL/CAP RATIO	2045 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
Jackson St.	Dunlawton Ave.	Canal View Blvd.	2,238	17,920	0.12	C	201	917	0.22	C	E
	Canal View Blvd.	Herbert St.	2,238	17,920	0.12	C	201	917	0.22	C	E
	Herbert St.	Madeline Ave.	2,238	17,920	0.12	C	201	917	0.22	C	E
McDonald Rd./6 th St.	Madeline Ave.	Herbert St.	3,442	17,920	0.33	C	310	917	0.34	C	E
Madeline Ave.	McDonald Rd.	Nova Rd.	5,338	16,146	0.33	C	480	1,459	0.33	C	E
	Nova Rd.	Clyde Morris Blvd.	11,563	16,146	0.72	D	1,041	1,459	0.71	D	E
	Clyde Morris Blvd.	Long Grove Dr.	15,305	35,820	0.43	C	1,377	2,736	0.43	C	E
	Long Grove Dr.	Town Park Dr.	15,305	18,320	0.84	C	1,377	1,656	0.83	C	E
	Town Park Dr.	Williamson Blvd.	13,367	15,930	0.84	C	1,203	3,222	0.84	C	E
Nova Rd.	N. City Limits	Madeline Ave.	21,060	42,350	0.50	C	1,895	3,815	0.50	C	D
	Madeline Ave.	Herbert St.	21,060	59,900	0.35	C	1,895	5,390	0.35	C	D
	Herbert St.	Dunlawton Ave.	21,060	39,800	0.53	C	1,895	3,580	0.53	C	D
	Dunlawton Ave.	Spruce Creek Rd.	31,590	39,800	0.79	C	2,843	3,580	0.79	C	D
	Spruce Creek Rd.	Ridgewood Ave.	21,294	39,800	0.54	C	1,916	3,580	0.54	C	D
Oak St.	Ridgewood Ave.	Spruce Creek Rd.	3,808	17,920	0.21	C	343	917	0.37	C	E
	Spruce Creek Rd.	Dunlawton Ave.	3,808	17,920	0.21	C	343	917	0.37	C	E
Pioneer Tr.	Turnbull Bay Rd.	Airport Rd.	19,529	18,320	1.07	F	1,758	1,656	1.06	F	E
Reed Canal Rd.	Nova Rd.	Clyde Morris Blvd.	6,549	14,040	0.47	C	589	1,269	0.46	C	E
Ridgewood Ave.	N. City Limits	Dunlawton Ave.	32,159	39,800	0.81	C	2,894	3,580	0.81	C	D
	Dunlawton Ave.	Commonwealth Blvd.	20,592	39,800	0.52	C	1,853	3,580	0.52	C	D
	Commonwealth Blvd.	Nova Rd.	18,369	39,800	0.46	C	1,653	3,580	0.46	C	D
	Nova Rd.	S. City Limits	29,287	39,800	0.74	C	2,636	3,580	0.74	C	D
Spruce Creek Rd.	Canal View Blvd.	Dunlawton Ave.	2,917	17,360	0.17	C	263	917	0.29	C	E
	Dunlawton Ave.	Commonwealth Blvd.	8,219	17,360	0.47	C	740	1,269	0.58	D	E
	Commonwealth Blvd.	Nova Rd.	9,945	14,040	0.71	C	895	1,269	0.71	D	E
	Nova Rd.	Taylor Rd.	17,606	37,970	0.46	C	1,585	3,222	0.49	C	E
	Taylor Rd.	Central Park Blvd.	11,822	17,920	0.66	C	1,064	1,459	0.73	D	E
Taylor Rd.	Spruce Creek Rd.	Hensel Rd.	16,234	35,820	0.45	C	1,461	3,222	0.45	C	E
	Hensel Rd.	Clyde Morris Blvd.	22,612	35,820	0.63	C	2,035	3,222	0.63	C	E
	Clyde Morris Blvd.	Dunlawton Ave.	14,212	14,040	1.01	F	1,279	1,269	1.01	F	E
	I-95	Williamson Blvd.	53,524	47,560	1.13	F	4,817	4,485	1.07	F	E



Port Orange Comprehensive Plan 2022-2045

ROADWAY	SEGMENT		2045 DAILY VOLUME	2045 DAILY CAPACITY	2045 DAILY V/C	2045 DAILY LOS	2045 PK HR VOLUME	2045 PK HR CAPACITY	2045 VOL/CAP RATIO	2045 PEAK HOUR LOS	ADOPTED LOS
	FROM	TO									
Taylor Rd.	Williamson Blvd.	Summer Trees Blvd.	21,200	35,820	0.59	C	1,908	3,222	0.59	C	E
	Summer Trees Blvd.	W. City Limits	17,086	32,600	0.52	C	1,538	2,570	0.60	C	E
Town West Blvd.	Williamson Blvd.	Tomoka Farms Rd.	7,500	17,920	0.42	C	700	1,532	0.46	C	E
Victoria Gardens Blvd.	Dunlawton Ave.	Clyde Morris Blvd.	3,306	17,360	0.19	C	298	1,128	0.26	C	E
Village Tr.	Nova Rd.	Country Ln.	9,055	17,920	0.51	D	815	1,128	0.72	D	E
	Country Ln.	Dunlawton Ave.	7,695	17,920	0.43	D	693	1,128	0.61	D	E
Willow Run Blvd.	Clyde Morris Blvd.	Tracy Dr.	12,150	21,970	0.55	C	1,094	1,976	0.55	C	E
	Tracy Dr.	Williamson Blvd.	9,100	17,920	0.51	C	819	1,440	0.57	C	E
Williamson Blvd.	N. City Limits	Madeline Ave.	18,844	35,820	0.53	C	1,696	3,222	0.53	C	E
	Madeline Ave.	Willow Run Blvd.	18,387	35,820	0.51	C	1,655	3,222	0.51	C	E
	Willow Run Blvd.	Town West Blvd.	20,054	35,820	0.56	C	1,805	3,222	0.56	C	E
	Town West Blvd.	Summer Trees Rd.	22,745	35,820	0.63	C	2,047	3,222	0.64	C	E
	Summer Trees Rd.	Taylor Rd.	22,745	35,820	0.63	C	2,047	3,222	0.64	C	E
	Taylor Rd.	Airport Rd.	27,175	35,820	0.76	C	2,446	3,222	0.76	C	E
	Airport Rd.	Pioneer Tr.	7,137	37,970	0.19	C	642	1,440	0.45	C	D
Yorktowne Blvd.	Dunlawton Ave.	Hidden Lakes Dr.	4,056	17,920	0.23	C	365	1,440	0.25	C	E

Sources: River to Sea Transportation Planning Organization, 2022; Kimley-Horn & Associates, Inc., 2023



Roadway Improvements Needed

Based on the long-term projections, several roadways will not meet the adopted level-of-service. The Goals, Objects and Policies of the City should promote alternative modes of transportation that shift prioritization away from additional vehicular infrastructure and toward a balance of overall mobility. Accepting a high level of service for vehicular travel can inversely impact other modes of transportation, such as walking and bicycling, and counteract the goals of placemaking which improve overall quality of life. The City should support long-term regional mobility solutions, such as enhanced transit service, bike, and pedestrian facilities.



Chapter 3

HOUSING ELEMENT

Data Inventory & Analysis



Introduction

Pursuant to the requirements of Chapter 163 of the Florida Statutes, the Housing Element consists of a data inventory and analysis (DIA) that influences the overarching goals, objectives, and policies that will guide housing development within the City of Port Orange. The City's housing trends and needs are evaluated in this analysis in order to ensure a proper mix of housing types are available to accommodate diverse housing needs and achieve a livable community.

Housing Inventory

This section addresses the characteristics and conditions of the existing housing stock in the City. In order to compile this analysis, the City utilized primary sources of data including the U.S. Census Bureau, the American Community Survey (ACS), and the Shimberg Center – Florida Housing Data Clearinghouse. These specific resources were applied as they comprise some of the most current and accurate information available.

Tables 1 through 19 of this section provide an inventory and comparison of housing characteristics for the City of Port Orange and Volusia County, where appropriate. Data identified for Volusia County represents the entire county, including all unincorporated and incorporated areas as well as Port Orange and not a specific area of the County.

Dwelling Units by Structure Type

A comparison of dwelling units by structure type for the City of Port Orange and Volusia County is displayed in Table 1. Single-family detached homes make up the majority of the inventoried housing units within Port Orange and Volusia County. Additionally, as noted in the City's 2010 Comprehensive Plan, the City had a total of 26,715 dwelling units in September 2009. Depicted in the table below, the City has a total of 30,022 dwelling units, a 3,307 increase.

Table 1. Dwelling Units by Structure

Housing Units by Type	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Single-Family Detached	19,073	63.5%	165,042	67.8%
Single-Family Attached	1,545	5.1%	10,702	4.4%
Multi-Family	4,829	16.1%	48,322	19.9%
Mobile Home or Other	4,575	15.2%	19,278	7.9%
Total	30,022		243,344	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates



Dwelling Units by Tenure

A comparison between owner-occupied dwelling units and renter-occupied dwelling units in Port Orange and Volusia County is presented in Table 2. As depicted below, the City and the County have similar levels of owner-occupied and renter occupied units. In both cases, the majority of occupied units are owner-occupied. As noted in the City's 2010 Comprehensive Plan, the City's homeownership rate had slightly decreased to a rate of 79%. As seen below, that rate has furthered decreased to 72.5%, signifying a rise in renter-occupied units within the City.

Table 2. Dwelling Units by Tenure

Housing Units by Tenure	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Owner-occupied	19,511	72.5%	178,724	73.4%
Renter-occupied	7,385	27.5%	64,620	26.6%
Total Occupied Housing Units	26,896		243,344	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Household Size

Table 3 lists households according to the number of persons comprising a household in Port Orange and in the County. In both locations, two-person households are the most common, followed closely by one-person households. Unlike Volusia County, Port Orange has more three-person households than four-person households.

Table 3. Persons per Household

Persons per Household	Port Orange	Volusia County
Total Occupied Households	26,896	243,344
1-person household	8,188	75,003
2-person household	10,478	99,248
3-person household	4,638	30,425
4-or-more person household	3,592	38,668

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Housing Vacancy

The City is experiencing a vacancy rate of 10.4% for all housing units, a figure lower than that experienced by the County, which has a 13.9% vacancy rate. Comparatively, the City's 2010 Comprehensive Plan stated that both the City and the County had an even lower vacancy rate: 7% and 13% respectively. This demonstrates an increase in vacant housing units over time. Most vacant housing units are caused by seasonal, recreation, or occasional use in the City and County. It's worthwhile to note that only a small percentage of units are available but not yet rented or sold, totaling about 2.1% in the City and County. Table 4 shows the number of vacant housing units according to various circumstances.



Table 4. Vacancy Status of Housing Units

Vacant Housing Units by Type	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Total Housing Units	30,022		243,344	
Total Vacant Housing Units	3,126		33,937	
Vacant Units For Rent	255	8.2%	1,569	4.6%
Rented, Not Occupied	50	1.6%	175	0.5%
For Sale Only	340	10.9%	1,461	4.3%
Sold, Not Occupied	237	7.6%	2,479	7.3%
For Seasonal, Recreational, or Occasional Use	1,560	49.9%	20,681	60.9%
Vacant Units for Migrant Workers	0	0.0%	0	0.0%
Other Vacant Units	684	21.9%	7,572	22.3%

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Housing Age

Table 5 compares the age of housing units in the City of Port Orange and Volusia County. Most housing unit construction in both the City and County took place between 1960-2009. Construction has slowed but still increased an average of 207 units per year for 10 years from 2010 to 2020.

Table 5. Dwelling Units by Age of Construction

Year Structure Built	Port Orange		Volusia County	
	Units	Percent	Units	Percent
2020 or later	124	0.5%	3,409	1.4%
2010-2019	2,094	7.8%	19,275	7.9%
2000-2009	5,376	20.0%	41,508	17.1%
1980-1999	11,791	43.8%	89,462	36.8%
1960-1979	6,677	24.8%	60,546	24.9%
1940-1959	690	2.6%	22,301	9.2%
1939 or Earlier	144	0.5%	6,843	2.8%
Total	26,896		243,344	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates



Monthly Housing Rent

Table 6 compares monthly gross rents in the City and the County and reveals that the majority of renters pay between \$1,000 and \$1,499, followed by \$500 to \$999, and then \$1,500 to \$1,999.

Table 6. Gross Rent

Gross Rent	Port Orange		Volusia County	
	Units	Percent	Units	Percent
No Rent Paid	329	4.5%	3,291	5.1%
Less than \$500	121	1.6%	2,965	4.6%
\$500-\$999	1,780	24.1%	17,883	27.5%
\$1,000-\$1,499	3,228	43.7%	28,308	43.5%
\$1,500-\$1,999	1,444	19.6%	8,590	13.2%
\$2,000-\$2,499	404	5.5%	2,565	3.9%
\$2,500-\$2,999	56	0.8%	892	1.4%
\$3,000 or More	23	0.3%	612	0.9%
Total	7,385		65,106	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Monthly Cost of Owner-Occupied Units

The monthly owner costs for units with a mortgage are shown in Table 7.

Table 7. Owner Costs

Owner Costs (with a mortgage)	Port Orange		Volusia County	
	Housing units	Percent	Housing units	Percent
Less than \$200	0	0.0%	206	0.2%
\$200 to \$399	15	0.1%	457	0.5%
\$400 to \$599	214	2.1%	2,332	2.3%
\$600 to \$799	559	5.4%	6,568	6.5%
\$800 to \$999	1,077	10.4%	12,547	12.5%
\$1,000 to \$1,499	4,145	40.1%	40,050	39.9%
\$1,500 to \$1,999	2,816	27.3%	20,916	20.9%
\$2,000 to \$2,499	858	8.3%	10,268	10.2%
\$2,500 to \$2,999	331	3.2%	3,039	3.0%
\$3,000 or more	318	3.1%	3,923	3.9%
Total	10,333		100,306	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates



Value of Owner-Occupied Housing Units

The owner-occupied units by value are shown in Table 8.

Table 8. Owner-Occupied Units by Value

Owner-Occupied Units by Value	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Less than \$50,000	1,899	9.7%	2,325	2.3%
\$50,000 to \$99,999	1,464	7.5%	1,636	1.6%
\$100,000 to 299,999	11,120	57.0%	61,461	61.3%
\$300,000 to \$499,999	4,327	22.2%	27,103	27.0%
\$500,000 to \$999,999	656	3.4%	5,812	5.8%
\$1,000,000 or more	45	0.2%	704	1.3%
Total	19,511		100,306	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Household Income

The household income levels for Port Orange compared to Volusia County are shown in Table 9. The median household income and per capita income for the City are slightly higher than Volusia County. Port Orange has fewer persons in poverty compared to the County.

Table 9. Household Income

Income	Port Orange	Volusia County
Median Household Income (2021 Dollars)	\$58,530	\$58,380
Per Capita Income (2021 Dollars)	\$32,563	\$32,491
Persons in Poverty, in percent	12.7%	13.5%

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Rent-to Income Ratio

Rent as a percentage of income for Port Orange compared to Volusia County is shown in Table 10. According to Census data the highest percentage of renters in both Port Orange and Volusia County are paying 35% or more of their income for housing. This makes affordability an issue for renters in both the City and the County.

Table 10. Rent-to Income Ratio

Gross Rent as a Percentage of Household Income	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Less than 10 %	3,960	43.9%	1,710	2.6%
10% to 14.9%	1,367	15.1%	4,216	6.5%
15% to 19.9%	1,262	14%	7,727	11.9%
20% to 24.9%	418	4.6%	6,839	10.5%
25% to 29.9%	329	3.6%	6,239	9.6%
30% to 34.9%	209	2.3%	5,450	8.4%
35% or more	1,483	16.4%	27,837	42.8%
Not Computed	150	1.7%	5,088	7.8%
Total	9,028		65,106	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates



Mortgage Costs to Income Ratio

The monthly mortgage costs-to-income ratio for both Port Orange and Volusia County are shown in Table 11. Most homeowners with and without a mortgage in both Port Orange and Volusia County are paying less than 30% of their income for housing.

Table 11. Costs to Income Ratio

Owner Costs (with and without a mortgage)	Port Orange		Volusia County	
	Units	Percent	Units	Percent
With Mortgage, Less than 30%	7,112	36.8%	61,131	68.4%
With Mortgage, More than 30%	3,178	16.5%	28,279	31.6%
Without Mortgage, Less than 30%	7,336	38.0%	59,691	82.7%
Without Mortgage, More than 30%	1,692	8.8%	12,530	17.3%
Total	19,318		161,631	

Source: U.S. Census Bureau 2021 American Community Survey 5-Year Estimates

Cost Burden

Cost Burdened households pay more than 30 percent of income on housing costs such as rent or mortgage. Based on 2020 estimates, the data indicates that 3,151 households within the City paid more than 30% of income for renter-occupied housing. Based on 2020 estimates, the data indicates that 2,183 households within the City paid more than 30% of income for owner-occupied housing. Table 12 identifies what percent of household income is being paid toward housing costs based on household income level.

Table 12. Amount of Income Paid for Housing Household by Cost Burden, 2020

Renter-Occupied Households, 2020		Housing Cost Burden		
Geography	Household Income	30 % or less	30.1-50%	More than 50%
Port Orange	30% AMI or less	49	27	877
Port Orange	30.1-50% AMI	44	89	574
Port Orange	50.1-80% AMI	200	672	285
Port Orange	80.1-100% AMI	356	258	76
Port Orange	more than 100% AMI	2319	280	13
Volusia County	30% AMI or less	866	454	7586
Volusia County	30.1-50% AMI	1315	2186	6725
Volusia County	50.1-80% AMI	3411	8591	3288
Volusia County	80.1-100% AMI	3886	3293	331
Volusia County	more than 100% AMI	20592	2347	342

Source: Shimberg Center – Florida Housing Data Clearinghouse, 2020



Table 13. Amount of Income Paid for Housing Household by Cost Burden, 2020

Owner-Occupied Households, 2020		Housing Cost Burden		
Geography	Household Income	30 % or less	30.1-50%	More than 50%
Port Orange	30% AMI or less	68	37	327
Port Orange	30.1-50% AMI	335	278	290
Port Orange	50.1-80% AMI	852	324	259
Port Orange	80.1-100% AMI	747	156	60
Port Orange	more than 100% AMI	6121	418	34
Volusia County	30% AMI or less	810	1470	5283
Volusia County	30.1-50% AMI	5557	3460	4452
Volusia County	50.1-80% AMI	13072	7123	3937
Volusia County	80.1-100% AMI	11473	4087	992
Volusia County	more than 100% AMI	87019	7145	1314

Source: Shimberg Center – Florida Housing Data Clearinghouse, 2020

Inventory of Standard/Substandard Units

The Census provides indicators for substandard housing by measuring overcrowding and the lack of complete plumbing, kitchen, or heating equipment. Overall substandard housing makes up a small percentage of the overall occupied units in both the City and the County. An analysis of substandard housing is displayed in Table 14.

Table 14. Substandard Housing

Substandard Housing	Port Orange		Volusia County	
	Units	Percent	Units	Percent
Overcrowded (1.01 or More Persons per Room)	266	0.99%	5,127	2.1%
No Fuel Used	163	0.61%	2,477	1.0%
Lacking Complete Kitchen Facilities	126	0.47%	1,628	0.7%
Lacking Complete Plumbing Facilities	24	0.09%	560	0.2%
Total Units	26,896		243,344	

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates



Assisted Living Inventory

Based on data from the Florida Housing Data Clearinghouse, Table 15 lists assisted living facilities located within or close to the City of Port Orange.

Table 15. Assisted Housing Inventory, 2020

Development Name	Street Address	Housing Program(s)	Total Units	Assisted Units	Subsidy Expiration (Year)
Ashton Point Apartments	6305 S Williamson Blvd	Housing Credits 4%	268	268	2032
Club at Sugar Mill	3535 Caramel Avenue	Housing Credits 9%;	168	168	2051
Epiphany Manor	4792 S Ridgewood Ave	Rental Assistance / HUD; Section 207/223(f)	72	72	2041
Sunrise Pointe	1375 Richel Drive	Local Bonds; SAIL	208	208	2052

Source: Shimberg Center – Florida Housing Data Clearinghouse, 2020

Government Subsidized Housing

The following are government subsidized housing resources that can be utilized by the City of Port Orange.

- **Florida Housing Finance Corporation:** a public corporation of the State of Florida that offers homeownership programs, multifamily development programs, predevelopment and demonstration project loans, and technical assistance for local governments.
- **Volusia County Neighborhood Stabilization Program Home Purchase Program:** provides a deferred payment to approved households for down payment, gap financing and closing cost toward the purchase of a county-owned Neighborhood Stabilization Program (NSP) home.
- **Volusia County Owner Occupied Rehabilitation Programs:** assists eligible homeowners with necessary repairs such as housing rehabilitation, demolition and reconstruction, and emergency repairs. The program is funded through State and Federal sources.
- **Community Development Block Grant:** provides funds through the Small Cities Program for capital improvements.
- **Section 8:** provides rental subsidies to very low, low, and moderate-income households. The rental limits are set each year by the U.S. Department of Housing and Urban Development (HUD).
- **Rural and Farm Worker Housing:** no rural or farm workers housing is required within the City, and no housing is designated for rural or farming purposes.

Mobile and Manufactured Homes

The City of Port Orange has many mobile home parks and subdivisions as it was the dominant housing type in the City prior to 1980. Since the adoption of the City's Comprehensive Plan in 1979, there has been a conscious effort to reduce the percentage of mobile homes in the City to a level closer to that of the County as a whole. While there is still a significant demand for mobile home sites, other housing alternatives, such as townhouses or duplexes appear to have captured some of



the traditional mobile home market. Table 16 identifies the mobile home parks and subdivisions in the City and the number of spaces each one has available.

Table 16. Mobile and Manufactured Homes

Inventory of Mobile Home Parks and Subdivisions	
Mobile Home Parks	Spaces
Briarwood Mobile Home Estates	322
Colony In the Wood	385
Elmwood Mobile Home Park	103
Gray Acres	45
Harbor Oaks Mobile Home Park	10
Lamplighter Mobile Home Park	260
Lighthouse Pointe	436
Live Oak Mobile Home Park	41
Maplewood Mobile Estates	272
Parkwood Mobile Home Park	600
Pickwick Village	492
Riverside Mobile Home Park	96
Rose Bay Mobile Home Park	8
Sea Bird Island	107
Tanglewood Mobile Home Estates	298
Treasure Isle Estates	142
Zuber Mobile Home Park	12
Crane Lakes Mobile Homes	818
<i>Total</i>	<i>4,447</i>
Mobile Home Subdivisions	Spaces
Barefoot Park Mobile Homes	174
Commonwealth Mobile Homes	598
Halifax Estates Mobile Homes	103
Laurelwood Mobile Homes	352
Southern Pines Mobile Homes	66
Spruce Creek Village Mobile Homes	119
Treasure Lakes Mobile Homes	165
Williams Mobile Homes	119
White Acres Mobile Homes	58
The Cove Mobile Homes	12
Twin Gates Mobile Homes	178
<i>Total</i>	<i>1,944</i>

Source: City of Port Orange, Department of Community Development, 2022



Assisted Housing Inventory

Based on data from the Florida Housing Data Clearinghouse, Table 17 lists the amount of assisted housing by the funder and Table 18 lists assisted living facilities located within or close to the City.

Table 17. Assisted Housing by Funder

Funder	Properties	Total Units	Assisted Units	HUD/RD Rental Assistance Units
Florida Housing Finance Corporation	4	759	725	0
HUD Multifamily	1	72	72	72
Local Housing Finance Authority	1	208	208	0
Total	5	831	797	72

Source: City of Port Orange, 2022

Table 18. Assisted Living Facilities in Port Orange

	Facility	Beds	Address
1.	Angel's Senior Living II LLC	6	5855 Boggs Ford Rd.
2.	Benton House of Port Orange	80	812 Airport Rd.
3.	Brookdale Port Orange	60	955 Village Trail
4.	Canal View Rest Home	6	864 Canal View Blvd.
5.	Coquina Cove	6	3739 Sunrise Cove Dr.
6.	Countryside Lakes	120	941 Village Trail
7.	Fran's Elderly Care	6	1309 Alcorn Road
8.	Halifax Hospice	58	3800 Woodbriar Trail
9.	Harbor Oaks Golden Years	40	158 Farmbrook Road
10.	The Gallery ALF	192	6421 S Williamson Blvd.
11.	Open Arms ALF	14	401 Orange Avenue
12.	Pheasant Paradise	6	799 Pheasant Run Ct.
13.	Port Orange Assisted Living Facility	6	1111 Buttermilk Ln.
14.	Reflections Memory Care of Port Orange	54	1321 Herbert St.
15.	Seagrass Village	75	3875 Yorktowne Blvd.
16.	Selah Living LLC	6	3617 Joan Ln.
17.	Wickshire Port Orange	102	1675 Dunlawton Avenue

Source: Agency for Health Care Administration, 2022; City of Port Orange, 2022.



Additional Analysis

Based on the available data and information, the following has been provided for reference purposes only. It is understood this information is supplemental and provides a snapshot of valuations/rates specific to the 10-Year Home Value Index (ZHVI) for the area. The ZHVI represents the typical value for homes in the 35th to 65th percentile range for a specific area. The ZHVI includes single-family homes and condominiums/co-ops. Table 19 shows the average home values in the City of Port Orange for the last ten years. Since 2012, the average home values in Port Orange have increased from an average of \$142,941 to \$353,046, reflecting a 147% increase over time.

Table 19. 10-Year Home Value Index

Year	Average Sale Price	% Increase
2022 through June 30, 2022	\$353,046	21%
2021	\$290,573	17%
2020	\$248,789	5%
2019	\$236,838	5%
2018	\$225,827	7%
2017	\$211,554	10%
2016	\$192,395	7%
2015	\$179,497	4%
2014	\$172,234	9%
2013	\$157,709	10%
2012	\$142,941	-

Source: <https://www.zillow.com/research/data/>

The National Realtors Association (NAR) tracks a variety of statistics for Metropolitan Service Areas. The Deltona-Daytona Beach-Ormond Beach, FL MSA includes the City of Port Orange. According to NAR's [Housing Shortage Tracker](#), the MSA has sufficient single-family housing supply with one permit issued for every job created.



Chapter 4

PUBLIC FACILITIES

Data Inventory & Analysis



Introduction

The Public Facilities Element is comprised of five (5) sub-elements, each with its own data and analysis presented herein:

1. Sanitary Sewer
2. Solid Waste
3. Drainage
4. Potable Water
5. Groundwater Aquifer Recharge

Unless otherwise cited, all data was provided by the City of Port Orange. Maps, as referenced herein, are available in the Map Series, following the Introductory Chapter of the Plan.

Sanitary Sewer Sub-Element

Introduction

In 1964, the City of Port Orange constructed a wastewater treatment plant (WWTP) and collection system to serve 700 customers. This system has grown to serve three cities, portions of unincorporated Volusia County, and a residential population of approximately 68,000 people (U.S. Census Bureau, 2020).

The collection system is typical of Florida construction. It contains a series of lift stations, force mains, and relatively shallow interceptor sewers. The pipeline network adequately serves the existing users. Individual segments will require reinforcement in response to system growth.

The original WWTP was a trickling filter plant rated for 290,000 gallons-per-day, with a discharge to Mikes Bay, a tributary of the Halifax River. The City of Port Orange ("City" or "Port Orange") has responded to the needs of its service area with timely plant expansions. In 1990, the WWTP was expanded to 12.0 million gallons per day (MGD). The treatment process was improved through the provision of nutrient removal and the outfall point was relocated to the Halifax River, approximately one mile south of the Dunlawton Avenue bridge. The City is permitted to discharge up to 0.999 MGD to the Halifax River. To meet this permitting requirement, the City continues to rely on its Reuse Water Program, started in 1986, which reduces discharge of treated effluent into the receiving surface water body.

Since the last upgrade in 1990, the expanded plant has performed well, meeting required permitted effluent limits, and significantly reducing the pollutant load discharged to the Halifax River. However, after three decades of operation, much of the plant's equipment is nearing the end of its useful life. A planning document has been prepared to outline proposed improvements to the treatment plant, including processes and equipment to improve treatment efficiency, ease of operation, and plant resiliency. Treatment plant upgrades are scheduled for design in 2023 and construction in 2024.

Regulatory Framework

Federal

Federal control over water pollution was established via the implementation of Public Law 92-500. This legislation adopted quality standards, planning standards, and a financing program. The City of Port Orange has been actively involved in the Federal Grants Program. The following projects were made possible through acquisition of Federal grants:



Table 1. Federal Grant Funding Projects

Year	Project Description
1976	Construction of a 2.0 MGD activated sludge plant
1979	Development of the North Coastal Volusia County 201 Facilities Plan
1981	Expansion of the WWTP to 6.0 MGD in accordance with the 201 Facilities Plan
1986-1987	Design and construction of multiple force main projects in an effort to support the extension of wastewater availability in the Peninsula portion of the service area (i.e., the Town of Ponce Inlet, unincorporated areas, and the City of Daytona Beach Shores)
1990	Conversion of the WWTP to advanced treatment and expansion for an increased capacity of 12.0 MGD

The City's facilities and monitoring programs are designed in compliance with Federal laws and regulations. Federal laws and regulations that govern the use and disposal of municipal sludges are found in various sections of the Code of Federal Regulations. The primary regulation for municipal sludge management is titled, "Part 503 Standards for the Use or Disposal of Sewage Sludge." This regulation describes the treatment processes that can achieve the required reduction of pathogens and vector attractions.

To protect human health, the federal Environmental Protection Agency (EPA) has established that sewage sludge must be treated with a "process to significantly reduce pathogens" when the sludge is to be either applied to or incorporated into the soil. Port Orange has incorporated aerobic sludge digestion and dewatering into the treatment process. The City of Port Orange currently delivers its product to a contract vendor who then transports all residuals to the Regional Biosolids Treatment Facility. The facility produces a Class AA fertilizer in accordance with EPA 503, which is in compliance with the EPA guidelines regarding sludge disposal.

State

The Florida Department of Environmental Protection (FDEP) is responsible for domestic and industrial wastewater management. Prior to July 1, 2021, the Florida Department of Health (DOH) was in charge of the administration of the state's septic tank program. Regulatory authority of this program has since transferred from the DOH to FDEP. The City of Port Orange has the appropriate permits in place and is in compliance with State regulations.

Volusia County

The County's Department of Environmental Management has a review function on State applications and provides local comments to the State agency. In addition, the County performs inspections to assure compliance with regulatory requirements. The City has a responsibility to inform this agency of spills or other incidents that might be detrimental to the environment.

Existing Conditions

Service Area

During 1976, the Volusia Council of Governments authorized the preparation of the North Coastal Volusia County 201 Facility Plan ("Plan"). The Plan was developed in compliance with Section 201 of the Federal Water Pollution Control Act and subsequently adopted by each governmental entity. The Plan identifies the Port Orange service area and establishes Port Orange as the owner and operator of the regional treatment facility. The existing service area is shown in Map 4.2. The service area includes the Cities of Daytona Beach Shores and Ponce Inlet as well as portions of unincorporated Volusia County.



In response to the Plan, interlocal agreements have been reached with the other governmental entities for service to the South Peninsula, the Town of Ponce Inlet, and the City of Daytona Beach Shores.

South Peninsula: Port Orange and Volusia County entered into a retail service agreement in 1985 for the provision of sewer service on the South Peninsula (i.e., Daytona Beach Shores, Ponce Inlet, and portions of unincorporated Volusia County). The agreement named Port Orange the sole provider and rate-making agency.

Town of Ponce Inlet: In 1986, Port Orange and Peninsula Utilities, a private utility, entered into a retail service agreement for service to the Town of Ponce Inlet (Town). That agreement included a provision for the acquisition of Peninsula Utilities in conjunction with the initiation of service. The utility acquisition was completed in 1986 and the Peninsula Utilities wastewater treatment plant was phased out and replaced by a pump station and force main to convey flow to the City. The Town has the responsibility to bill and collect user charges inside the town limits. Port Orange is responsible for planning and constructing collection system expansions as well as advising the Ponce Inlet Town Council of proposed collection system improvements to assist in its community planning.

City of Daytona Beach Shores: The City of Daytona Beach Shores has owned and operated a collection system for a number of years. It elected to retain its collection system and utilize the Port Orange system for transmission, treatment, and disposal. Thus, the City of Daytona Beach Shores retains collection system design and has a capacity reservation of 1.5 MGD at the Port Orange plant.

Incorporated Port Orange lies in the central portion of the service area. Approximately 94% of the existing residential and commercial units are served by the wastewater collection system. The balance of the units utilize septic tank disposal systems. The large-diameter lines required to serve the collection systems in central Port Orange are available for the transmission of sewage to the wastewater treatment plant.

Septic Tank Areas

The City of Port Orange has adopted a policy requiring installation of central wastewater collections systems to all subdivisions with a density greater than one unit per acre. In addition, connection to the wastewater collection is required on lots smaller than one acre if they are located within 100 feet of the central sewer system lines. Septic tanks provide a low-cost wastewater treatment alternative depending on density and suitable soil conditions; however, approval of these installations should take place only after detailed review of site suitability. The areas with the majority of septic system users are the unincorporated peninsula between the Town of Ponce Inlet and the City of Daytona Beach Shores as well as one-acre residential building sites south of Taylor Road in the south central Port Orange service area.

Areas with a high concentration of septic tanks are shown on Map 4.1. A typical on-site septic disposal system consists of a buried tank and a drainfield, in which sewage is collected and scum, grease, and settleable solids are removed by gravity separation. Solids that settle out of the sewage mixture are collected and stored in the tank, while any remaining liquids are flushed out into the drainfield. The volume of collected solids is then reduced by the digestion activity of anaerobic bacteria in the tank. The effectiveness of this treatment and disposal system is dependent on soil and site conditions. Septic tanks should not be located in areas with seasonal high water tables close to the surface. There is also a potential for contamination and health risks when a soil system loses the ability to absorb pollutants.

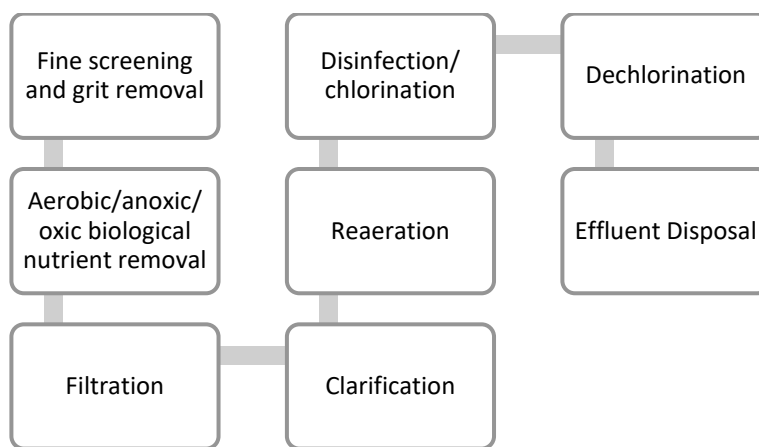


Septic tanks treat wastewater to a lower quality than secondary treatment. There is an increased chance that the surrounding groundwater can have high nutrient loadings and pathogenic organism contamination when tank concentration is high, even in well drained sandy soils. For example, in the peninsula area, where septic tanks are less than 500 feet from the Halifax River, the direction of groundwater flow combined with the rapid movement of wastewater through the soil can be detrimental to the water quality. The potential for groundwater contamination is significantly lower for the low-density installations on the mainland. Private wells that utilize the shallow aquifer for irrigation may also be affected by the groundwater quality in these areas.

Wastewater Treatment Plant

The regional treatment plant is a 12.0 MGD advanced secondary treatment plant which was last expanded and upgraded in 1990. The expansion increased treatment capacity from 6.0 MGD to 12.0 MGD. Facility upgrades included the addition of improved nutrient removal processes. The treatment plant operates under FDEP permit FL0020559, which was renewed on November 21, 2019, and expires on November 20, 2024. An overview of the wastewater treatment process is provided in Figure 1.

Figure 1 - Wastewater Treatment Process



The wastewater treatment plant (WWTP) receives effluent from four major sources: a 30-inch gravity main from the south, a 12-inch force main from the north, a 30-inch gravity interceptor from the west, and a 30-inch gravity interceptor from the peninsula's system. Flow is diverted to either the East or West master lift station. With the largest pump out of service, the East master lift station has a capacity of 10,400 gallons per minute (15 MGD) and the West master lift station has a capacity of 5,200 gallons per minute (7.5 MGD). Each pumping station is equipped with variable speed pumping equipment to meter flow through the WWTP. The stations have standby equipment to assure process reliability.

The influent structure includes fine screening and grit removal equipment to remove inorganic materials that would otherwise be untreated by the biological process. Advanced secondary treatment utilizes the anaerobic/anoxic/oxic biological nutrient removal process. The Port Orange WWTP has an advanced treatment basin sized for 12.0 MGD. The separation of activated sludge into clarified water and return sludge occurs in four, 80-foot diameter settling tanks.

The plant includes 4,200 square feet of deep-bed, coarse-grained media sand filters which provide attached growth denitrification and suspended solids removal. The filter effluent is sufficient to meet the State's public access irrigation standard of less than 5 mg/l of suspended solids and less than 2 turbidity units. To increase the dissolved oxygen levels in the filter effluent, the effluent is sent to a reaeration basin where five submersible aerators add oxygen to the water.

Following reaeration, the effluent is disinfected through the use of liquid sodium hypochlorite. The typical result of this disinfection process is a 0.5 mg/l chlorine residual, or 1.0 mg/l for reuse. The disinfected effluent is either discharged to the Halifax River, to one of two reclaimed water reservoirs, or to the public access reuse system. The disinfected effluent is dechlorinated to a maximum level of 0.01 mg/L prior to discharge to the Halifax River. The chlorine residual is reduced using sodium bisulfate to reduce toxicity to certain test species identified by the EPA. Effluent utilized in the reclaimed water system maintains chlorine residual to protect the public health.

The Port Orange WWTP generates waste activated sludge as a by-product of the treatment process. This sludge must be treated and disposed in a manner approved by the FDEP. Port Orange utilizes aerobic digestion to stabilize the sludge and a belt filter presses to dewater the digested material. The dewatered sludge is delivered to a facility owned and operated by a contracted vendor where the sludge is treated to Class AA fertilizer standards.

Reclaimed Water System

The City of Port Orange reclaimed water program was established in 1986 and has since grown to include an assortment of pumps, pipes, valves, and structures serving approximately 8,000 customers. In the past five years, monthly average daily flows to the reclaimed system have ranged between 4.4 and 7.7 MGD. There were three major expansions to the reclaimed system in 1986, 1990, and 2006. The projects focused on repurposing existing infrastructure, increasing system pumping and storage capacity, expanding distribution piping, and establishing programs to closely monitor the effluent quality.

The major structural components of the system include the three existing ground storage tanks, each with a volumetric capacity of 3.0 MG, for a total storage capacity of 9.0 MG. The construction of the ground storage tanks and the two reservoirs has enabled the City to continue to meet permitting requirements and minimize treated effluent discharge to the Halifax River. Monthly average daily flows to the river range between 0.0 and 3.6 MGD. The annual average daily flows have been below the permit limit of 0.999 MGD in all years except 2014 and 2020. See Table 3 for a summary of annual average daily flows to the Halifax River over the past decade.

The City's 170-acre reservoir is a mechanism for aquifer recharge to the Surficial Aquifer and minimizes potential for secondary wetland impacts. Preliminary groundwater modeling results indicated that a certain amount of recharge to the Upper Floridian Aquifer (UFA) may also occur. Additional site-specific modeling and water level monitoring is necessary to determine actual groundwater enhancement benefits. For planning purposes, it is assumed the City can withdraw an average of 8.50 MGD – 10.0 MGD of groundwater from the UFA in the City's wellfields by using the wells on a 50 percent rotational basis.

The piping components of this system have been constructed by the City and by private developers. Table 2 exhibits the length by pipe size of the City's Reclaimed Water Distribution System. The values in Table 2 are based on GIS mapping data from the 2020 Hydraulic Modeling project completed by Kimley-Horn and Associates, Inc.



Table 2. Pipe Components for the Port Orange Reclaimed Water System

Size	Length (FT.)
2"	11,121
3"	2,113
4"	112,637
6"	155,4865
8"	158,637
10"	44,189
12"	71,409,
14"	7,827
16"	44,269
18"	17,670
20"	27,204
24"	32,615
TOTAL	685,177

Table 3 shows how the expansion of the reclaimed system has helped keep discharges to the Halifax River below the permitted limit of 0.999 MGD with the exception of years 2014 and 2020. As the population within the service area has increased, so have total flows to the WWTP. Despite these growing flows, discharge to the Halifax River has remained below permitted limits because of the reclaimed system expansion. A clear growth in customer base for the reclaimed water system can be seen through the increased reclaimed water demands over the past decade.

Table 3. Reclaimed Water Use, Annual Average Daily Flows

Year	Total thru Plant (MGD)	Effluent to River (MGD)	Total to Reclaimed System (MGD)	To Reservoir ¹ (MGD)	From Reservoir ² (MGD)
2011	5.60	0.000	3.90	0.669	0.106
2012	6.00	0.000	4.00	0.736	0.133
2013	6.20	0.787	3.70	0.471	0.133
2014	6.30	1.391	4.70	0.538	0.011
2015	5.90	0.595	5.30	0.790	0.041
2016	5.60	0.225	5.60	0.636	0.612
2017	5.50	0.038	5.50	0.790	0.000
2018	6.00	0.347	6.20	1.715	0.121
2019	6.40	0.800	5.70	0.579	0.071
2020	7.40	1.100	5.60	1.041	0.170
2021	8.30	0.085	6.20	1.793	0.627
2022	6.50	0.368	6.10	1.599	0.850

1. Flows from reclaimed system used to fill reservoir.
2. Flows from reservoir used to supplement reclaimed system.
3. 2022 values include data from January-August of 2022.



There are four elements of potential continued customer growth for the reclaimed water system: infill of served subdivisions, future commercial developments, future subdivisions, and future redevelopment of older areas of the City. Table 4 quantifies new customers from planned developments and future flow estimates. These future customers will use the available supply when these areas are fully developed.

Table 4. Reclaimed Water Distribution System Flow Estimates

Area	Quantity	Unit	Future Flow Estimate (GPD) ¹
Planned Future Residential Projects*	1,354	Lots	812,400
Planned Future Commercial Projects*	968,040	S.F.	1,080,000

*Planned development data is based off of projects included on Port Orange Development Activity Dashboard and is current as of September 2022.

¹Based on a level of service of 600 GPD/Unit.

All new developments are required to connect to the reclaimed water system, where determined to be available, or install irrigation systems designed for alternative water sources. The biggest obstacle facing future expansion of the reclaimed water program is maintaining supply during peak demand periods as the customer base grows. The area served by the existing distribution system and supplemented by the demand from future developments will almost fully utilize annual average daily flows from the treatment plant, which leaves limited availability of reclaimed water during periods of peak demand. The 170-acre reservoir and pumping station were built to help alleviate this obstacle to future expansion of the reclaimed system by supplementing flows from the WWTP during times of peak demand. Future upgrades to the City's reclaimed water system are identified in the Capital Improvement Program.

The most cost-effective way to virtually eliminate surface water discharge at the Port Orange WWTP is to extend reclaimed water mains to new developer-installed distribution systems. The recommended target for small extensions is less than 300 total units, unless reclaimed water supplements are received. The small extensions are expected to increase average demand by 180,000 gallons/day and thus use the remainder of the available supply. Additional units could be served if an interlocal agreement is reached with contiguous utilities with excess reuse.

Wastewater Collection

The wastewater collection system has grown in response to the expansion of the City. The first wave of construction in 1964 provided sewer service to 700 customers. The system now serves approximately 34,000 customers, including the City of Daytona Beach Shores, the Town of Ponce Inlet, and areas of unincorporated Volusia County. The Port Orange collection system contains 113 standard public pump stations, 24 grinder stations, 44 private pump stations, and approximately 360 miles of pipeline. The sewer collector pipes range in size from 8 inches to 30 inches, conveying flow to the WWTP via a series of force mains and relatively shallow interceptors. Table 5 exhibits the length of pipe by size and type. The values in Table 5 are based on GIS mapping data from the 2020 Hydraulic Modeling project completed by Kimley-Horn and Associates, Inc.



Table 5. City of Port Orange Sanitary Sewer Collections System Pipe Components, 2020

Size	Gravity Sewer- Length (FT.)	Force Main – Length (FT.)
Unknown	2,973	N/A
2"	N/A	8,041
3"	N/A	2,432
4"	1,086	37,785
6"	11,153	82,042
8"	1,369,740	60,447
10"	82,845	33,973
12"	23,261	91,267
14"	5,245	9,528
16"	5,798	35,585
18"	1,426	8,014
20"	N/A	10,695
24"	2,983	3,698
30"	13,950	498
TOTAL	1,520,460	384,005

Source: Kimley-Horn and Associates, Inc., 2020

The overall collections system capacity totals 11.5 MGD. The relative capacity of the sanitary sewer system allocated to serve the respective government entities is shown in Table 6.

Table 6. Relative Capacities for the City of Port Orange Sanitary Sewer System

ENTITY	CAPACITY (MGD)
Daytona Beach Shores	1.5
Ponce Inlet	1.0
Port Orange	8.5
Unincorporated Volusia County	0.5
TOTAL	11.5

Source: Quentin L. Hampton Associates, Inc., 1996, 2007

The majority of gravity sewers in the collection system are below the water table and subject to infiltration and inflow (I/I) at all joints, cracks and service lateral locations. In order to control I/I, the City has a program to regularly inspect sewers via closed circuit television (CCTV) and repair leaking sewers by lining manholes, sewers, and laterals. The prevention of degradation of sewers is a continuous process and repair must be a regularly scheduled part of the City's Capital Improvement Program (CIP), contingent upon funding. The annual CIP has funds earmarked for this purpose.

The City's robust collection system maintenance program includes the following programs to maintain system operations and reliability:

- A field crew monitors pump station operations and performs system maintenance.
- All pump stations include standby equipment for mechanical reliability.
- The City periodically utilizes visual inspection equipment to locate system deficiencies.
- Sealing programs have successfully reduced extraneous flows.



The level-of-service (LOS) standard established for collection system users is 200 GPD per equivalent residential unit (ERU); and 1/10 GPD per square foot of non-residential development. The LOS was determined by the Public Utilities staff who evaluated 5 years' worth of account data and flow records to determine an accurate LOS.

Future Conditions

Wastewater demand and population data from 2015-2021 shows the historical average wastewater demand rate is 101.6 gallons per capita per day (GPCD). Table 7 shows historical flows for years 2015 and 2020 as well as projected flows for years 2025 – 2040. Based on these projections, it is anticipated that additional capacity through plant modifications or new plant construction will not be required until the end of the planning period in 2040.

Table 7. City of Port Orange Wastewater Flow

Year	Average Daily Flow (MGD)
2015	5.90
2020	7.40
2025	7.38
2030	7.64
2035	7.91
2040	8.19

The WWTP effluent discharge to the Halifax River is a 36-inch reclaimed water main that can act as both a gravity line and a force main depending upon peak flow rates. Under normal operating conditions, there is sufficient gravity head available at the chlorine contact chamber to provide gravity service. Outfall pumps were added in 2002 to handle the design peak flows from the WWTP for operations flexibility.

Wastewater systems are subject to variable flow that reflects water consumption patterns. The WWTP must be capable of acceptable treatment efficiency during peak flow periods.; likewise, the collection mains must also be able to transmit peak daily flow. The treatment plant effluent flow monitoring logs were reviewed to establish demand factors for the sizing of operating equipment and collection mains. It is estimated that the peak flow in the year 2040 will be a factor of 2.0 times the average flow. Table 8 summarizes peak demand. The year 2040 peak demand value will be utilized to evaluate the capacity of the most critical elements of the collection system.

Table 8. Projected Peak Flow Rates for Port Orange Service Area

Year	Peak Flow (MGD)
2020	14.8
2025	14.8
2030	15.3
2035	15.8
2040	16.4



Wastewater Collection

Population data is divided geographically into the Central, North, and South areas, corresponding with the primary elements of the wastewater collection system to easily evaluate the system's carrying capacity. The design flow capacity of the City's force mains was established using a maximum velocity of 5 feet per second. The interceptor capacities are based on an installed slope of 0.8 feet per 100 feet, and a roughness coefficient of .013.

The primary force mains and interceptors in the Central and North areas are expected to have sufficient capacity through the planning period. The force mains and gravity interceptors in the South area handle the majority of the City's wastewater flow. These pipes are critical for maintaining wastewater service to the City and the other entities that rely on the City for service and should be regularly evaluated to determine condition and remaining capacity. The City's Utility Master Plan identified a strategy for splitting the service area into eastern and western sections and proposed construction of a Western WWTP at an undetermined date in the future. The decision to construct a western WWTP is not dictated by force main capacity; it will be decided based upon economic factors, development trends, and regulatory issues. This strategy is intended to reduce flow in the critical force mains.

Treatment Plant

The City of Port Orange's Water Reclamation Facility (WRF) has been in operation for thirty-two years. The WRF currently has sufficient capacity to serve all portions of the service area through the planning period. There are planned upgrades to the WRF over the course of the next few years, in accordance with recommendations in the WRF Facilities Plan, completed in 2022. Tables 9 and 10 summarize the river discharge limits and standards for discharge to the reclaimed water system, respectively. The reclaimed water program is meeting all of the discharge standards, including the standard of <5 mg/l of total suspended solids.

*Table 9. Waste Load Allocation Discharge Standards
Halifax River Area Effluent Limitation (Max. 30 Day Average)*

Parameter	Monthly Average Concentration (mg/L)	Single Sample Concentration (mg/L)
Total Suspended Solids	20.0	60.0
5-day Carbonaceous BOD (CBOD)	20.0*	60.0
Total Nitrogen as N (TN)	16.0	32.0
Organic Nitrogen as N (ON)	5.0	10.0
Ammonia Nitrogen as N (NH ₃ N)	1.0	2.0
Total Phosphorus as P (TP)	3.0	6.0
Dissolved Oxygen (DO) (minimum)		6.0

* - Technology Based Effluent Limit

Source: Florida Department of Environmental Protection, 2019



Table 10. Effluent Reuse Sampling and Testing Requirements

Parameter	Frequency of Test	Discharge Standard
Flow	Continuous	≤10.5 MGD
Chlorine Residual	Continuous	≥1.0 mg/L
Turbidity	Continuous	Varies
Total Suspended Solids	Daily	≤5 mg/L
Fecal Coliform	Daily	25/100 mL

NTU (Nephelometric Turbidity Units)

<1/100 mL (<1 colony per 100 milliliters of effluent)

Source: Florida Department of Environmental Protection, 2019

Reclaimed Water Program

The reuse of wastewater effluent for residential and commercial irrigation continues to be a priority for the City. The City maintains a 170-acre reservoir and pump station to provide seasonal storage, augmentation, and aquifer recharge. The reservoir and transmission facility are part of an interconnected regional system which uses excess stormwater, surface water and reclaimed water to offset future groundwater deficits.

Reclaimed water augmentation and the storage/recovery reservoir enables the City to increase its ability to supply reuse water to its customers. The biggest obstacle facing future expansion of the program is maintaining supply during peak demand periods. To make more efficient use of existing supplies, the City has implemented a progressive approach to conservation through their rate structure for residential customers. This allows the utility to track usage patterns and utilize a rate strategy to promote conservation. The City intends to pursue interconnection with other reclaimed water suppliers to maximize beneficial utilization of the resource and minimize discharge to surface waters.

The two projects that have been identified in the City's Utility Master Plan as necessary elements in order to provide adequate pressure and flow to new reclaimed water customers in the southwest quadrant of the City:

1. South Williamson Boulevard Reclaimed Water Transmission Main, aka "Williamson Boulevard Utility Relocation" is under construction.
2. Pioneer Trail Storage tank and Pump Station, aka "Water Reuse Program Upgrades". A site has not been identified; however, the general vicinity is west of I-95 near Pioneer Trail. An implementation schedule has not been established for this project. It is contingent upon identification of sufficient reclaimed water supply based upon current usage patterns as well as available grant funding from the SJRWMD.

Septic Tank Areas

Port Orange has been careful to limit new septic tank construction on large residential lots. It is recommended that collection system construction and connection to the Port Orange WWTP should be required for all densities greater than one unit per acre. For existing homes utilizing septic tank systems on lots smaller than one acre, the City already requires connection to the central sewer system if service is available within 100 feet of the property. The major septic system locations shown in Map 4.1 have soils suitable for septic tanks according to the Soil Survey of Volusia County, Florida (see Map 1.7).



Impact on Adjacent Natural Resources

The Halifax River is the natural resource that is the most affected by wastewater collection and treatment in the Port Orange service area. This river receives direct discharge from each of the major municipalities in northeastern Volusia County.

Implementation Program

Table 11 reflects the implementation program for concurrency related items. This program details proposed capital improvements for the wastewater system necessary to satisfy capacity and anticipated regulatory requirements.

Table 11. Summary Of Proposed Wastewater And Reclaimed Water System Capital Improvement Projects

Project Description	Term			
	Immediate (<1 yr.)	Short (1-5 yr.)	Mid (6-10 yr.)	Long (>10 yr.)
Water Reclamation Facility Filter Rehabilitation	\$4.0M			
Water Reclamation Facility Backup Generator Replacement and Electrical / Controls Upgrades	\$4.5M			
Water Reclamation Facility Upgrades to Advanced Wastewater Treatment		\$70M		
Reclaimed Reservoir Improvements		\$2M		
Water Reuse Program Upgrades		\$2.5M		
Western Wastewater Treatment Plant				\$90M
Total	\$8.5M	\$74.5M		\$90M

Source: City of Port Orange, 2023



Solid Waste Sub-Element

Introduction

The collection and disposal of solid waste is necessary for the protection of the public health, safety, and welfare. The provision of this service has been accepted as a governmental responsibility by the City of Port Orange. Solid waste generated in Port Orange is handled by a solid waste private contractor through a five-year contract with the City. The private contractor operates residential and commercial collection routes as well as specialized services like semi-annual seasonal clean-ups and rear door pickups for handicapped residents. The following table groups refuse materials by kind and composition and indicates their general source.

Table 1. Refuse Materials By Kind, Composition, And Sources

KIND	COMPOSITION	SOURCE
Garbage	Wastes from preparation, cooking, and serving of food; market wastes; wastes from handling, storage and sales of produce Combustible: paper, cartons, boxes, barrels, wood, excelsior, wood furniture, bedding Noncombustible: metals, metal furniture, dirt, glass, crockery, minerals	Households, restaurants, institutions, stores,
Ashes	Residue from fires used for cooking and heating, and from on-site incineration	Restaurants, households, natural & man-made fires
Street Refuse	Sweepings, dirt, leaves, catch basin dirt, contents of litter receptacles	
Dead Animals	Cats, dogs, horses, cows vacant lots, pastures, farms, vet	Streets, sidewalks, alleys, clinics, animal shelters
Abandoned Vehicles	Unwanted cars and trucks left on public property	
Industrial Wastes	Food processing wastes, boiler house cinders, lumber, and metal scraps, shavings	Factories, power plants, lumber yards
Demolition Wastes	Lumber, pipes, brick, masonry, and other construction materials from razed buildings and other structures	Demolition sites to be used for new buildings, road projects
Construction Wastes	Scrap lumber, pipe, other construction materials	New construction, remodeling
Special Wastes	Hazardous solids and liquids; explosives, pathological wastes, radioactive materials	Households, hotels, hospitals, institutions, stores, industry
Sewage Treatment	Solids from coarse screening and from grit chambers; septic tank sludge	Sewage treatment plants; septic tanks
Yard Waste	Tree branches, yard trimmings	Residential lots, non-residential landscaped areas



Regulatory Framework

Federal

Subtitle D of the Resource Conservation and Recovery Act (RCRA) empowers the EPA to maintain minimum standards for landfilling solid wastes. The Agency can withhold grants from States that allow open dumps or fail to meet Federal criteria for dump closings. The Comprehensive Emergency Response and Compensation Liability Act (CERCLA) established the EPA's authority to directly respond to chemical spills or the release of hazardous substances.

State

The Florida Resource Recovery and Management Act established hazardous waste definitions, created a monitoring and permitting system, and provided funds for clean-up efforts.

The Florida Solid Waste Management Act established in 1988 required recycling programs, with the goal of 30% solid waste stream reduction. In 2008, the Florida Legislature passed the Energy, Climate Change, and Economic Security Act that established a statewide recycling goal of 75% to be achieved by the year 2020. Other requirements include:

- 1) No beverage container shall be sold with a detachable metal ring or tab;
- 2) No plastic beverage container rings shall be sold unless the rings are composed of a biodegradable material which decomposes within 120 days;
- 3) No plastic bag shall be provided at any retail outlet unless the plastic is degradable within 120 days.

Statewide, this 2020 goal has not yet been achieved.

Several items are banned from disposal in landfills:

- 1) Lead Acid Batteries;
- 2) Used Oil;
- 3) "White Goods"; and
- 4) Yard Trash.

Landfills, much more than collection systems, are subject to State Regulation and Permits. The Tomoka Farms Road Landfill currently has the following active permits.

- 1) Florida Department of Environmental Protection Operation Permit for Solid Waste Resource Recovery and Management Facility
- 2) National Pollutant Discharge Elimination System
- 3) Management and Storage of Surface Waters from St. Johns River Water Management District

These permits are continuously renewed and modified, in response to landfill modifications and expansion.



Existing Conditions

An essential element in the establishment of solid waste system requirements is the development of population forecasts and waste generation rates. Table 2 displays historic and projected population figures for Port Orange. Population growth has slowed over time, but the population continues to increase. The historical population figures shown below are taken from the US Census. The population projections were developed as described in the Future Land Use Data Inventory & Analysis.

Table 2. Population Estimates and Projections 1970-2045

YEAR	POPULATION	POPULATION CHANGE (PERCENTAGE)	POPULATION CHANGE (PERSONS)
1970	3,781	-	-
1980	18,756	396%	+14,975
1990	35,317	88%	+16,643
2000	45,823	29%	+10,424 ¹
2010	56,048	22%	+10,225
2020	62,596	12%	+6,548
2025	66,317	6%	+3,721
2030	69,446	5%	+3,129
2035	71,853	3.5%	+2,407
2040	73,817	2.7%	+1,964
2045	75,515	2.3%	+1,698

Sources: U.S. Bureau of the Census (1970, 1980, 1990, 2000, 2010, 2020); University of Florida, Bureau of Economic and Business Research (BEBR) & Kimley-Horn & Associates, Inc. (2025-2045).

Per capita solid waste generation rates take into effect the usage characteristics of Volusia County. The rate assigned to an individual reflects that persons' proportionate share of waste generated by visitors, by construction activity, and other non-residential sources.

The generation rate for residential areas is approximately 3.21 pounds per capita per day and 10 pounds per 1,000 square-feet of non-residential development. This amount is used as the City's solid waste level-of-service standard.

This rate was utilized in Table 3 to project solid waste generation through the planning period.

¹ The unincorporated Harbor Oaks (±328 acres; annexed in 1997) and Allendale (±76 acres; annexed in 2000) areas were already built up when they were annexed into the City.



Table 3. Solid Waste Generation (2015-2045)

YEAR	POPULATION	SOLID WASTE (TONS/DAY)
2015	57,858	93
2020	62,596	96
2025	66,317	106
2030	69,446	111
2035	71,853	115
2040	73,817	118
2045	75,515	121

Source: Port Orange Concurrency Management Report, October 2022; Kimley-Horn & Associates, Inc., September 2023

The City of Port Orange is the source of approximately 9% of the County-wide solid waste volume. The Port Orange refuse collection system impact upon the County disposal facilities is projected to increase only slightly through the duration of the planning period.

Disposal System

Solid waste generated within the City of Port Orange is delivered to the Volusia County Tomoka Farms Road Landfill. This landfill has been operated by the County since 1969. The landfill comprises 3,000 acres of active area plus buffer, located in Township 16 South, Range 32 East, Sections 3, 4, 9 and 20. The landfill is a Class I facility and is able to accept residential, commercial, and agricultural wastes, and wastewater sludges. Hazardous wastes are specifically excluded from this landfill.

Protection of surface and subsurface water is important. The landfill design includes perimeter ditches for collection of leachate and stormwater. Water collected is pumped to holding ponds for treatment and disposal.

The surficial water table is typically 3.5 - 4.0 feet below the ground surface. During the rainy season the water table is at or just below the ground surface. Flow in the surficial aquifer has been defined as relatively stagnant.

It is essential that landfill leachate be controlled within the confines of the County property. The City of Port Orange Central Recharge Wellfield is two miles south and west of the landfill. Since the clay aquitard is much thinner in the wellfield, a contaminated plume from the surficial aquifer cannot be allowed to migrate from the landfill site.

Collection System

The City of Port Orange utilizes a private contractor for the collection of solid waste for its citizens. The service includes both garbage and trash pick-up. The residential and commercial solid waste collected is transported to the Volusia County Tomoka Farms Road Landfill.

Port Orange residential collection is at curbside. In this system, the individual residents place refuse in storage containers at the curb line. This is the least costly method of providing the collection service.



In addition to regular garbage collection, the City of Port Orange has recyclable material routes. These routes are in response to the State regulations and include the collection of glass, metal, and paper products. Special vehicles designed for separation are used to improve the efficiency of the collection. These vehicles allow sequential dumping of the recyclables and, thus, limit handling of the wastes.

The Volusia County Department of Environmental Management is responsible for monitoring small-quantity and conditionally exempt hazardous waste generators, maintaining the homeowners' and conditionally exempt hazardous waste collection facility, and educating the public regarding hazardous waste. The City has instituted a program advising its collection system customers of the special nature of hazardous waste. The citizens understand the environmental problems associated with burying hazardous waste in the landfill. Reminders are provided through the City newsletter, and Saturday collection dates are well advertised.

Hazardous Materials Disposal

During 1984, Volusia County accepted the requirements of Chapter 17-31 (now 62-31) F.A.C., which were designed to implement the Water Quality Assurance Act as it relates to hazardous waste. Volusia County used the following criteria for site selection of a hazardous waste collection site.

- * Publicly owned or industrial zoned property;
- * a minimum of 10 acres;
- * not a park/recreation area;
- * not on a coastal barrier island;
- * not in a municipality;
- * not within one mile of a municipal well;
- * not in the 100-year floodplain.

The County selected two sites: the Tomoka Farms Road Landfill and the former DeLand Prison Farm off State Road 44 west of DeLand.

Volusia County has implemented a small-quantity hazardous waste generator verification program, the purpose of which is to determine the type of hazardous waste generated, the amount, storage and disposal methods, and location. Volusia County has a large number of conditionally exempt, small-quantity generators who produce less than 220 lbs. of hazardous waste per month. Small-quantity generators are allowed to generate up to 2,200 lbs. of waste without complying with full generator rules.

Medical wastes are incinerated or autoclaved before disposal. All surgeons, dentists, podiatrist, general practitioners, veterinarians, walk-in clinics, etc. are required to follow this rule. Halifax Hospital currently accepts infectious medical wastes from other sources.

The average Port Orange home produces a small percentage of the total hazardous waste. Improperly handled pesticides, motor oil, lead-based paints, and lead-acid batteries can leak into the groundwater or surface water with far-reaching effects. The new disposal rules are specific to these wastes.

Volusia County has operated a permanent collection facility for household hazardous waste since 1988. This facility provides a place for hazardous waste to be safely sorted, packed, and transported



to a disposal site outside of the State of Florida. This facility serves all residents, both incorporated and unincorporated, and is the only one of its kind in Volusia County. It is operated by Volusia County Solid Waste Service Group.

Volusia County landfill personnel are trained to handle discarded lead (automobile) batteries. They are stored on a concrete pad and delivered to a battery recycler. Oil- and water-based paints are treated at the collection facility. The procedure involves pouring the paint into a lined sand pit. When the liquid evaporates, the remaining hardened paint is disposed of in the County landfill. Lead-based paints are separated and removed to a hazardous waste disposal facility. A hazardous waste technician is present on those days the facility is open.

The City continues to comply with its National Pollutant Discharge Elimination System NPDES permit regarding hazardous material disposal. The City has instituted a program advising its collection system customers of the special nature of hazardous waste and reminders are provided through regular City communications.

The Volusia County Public Safety Department is responsible for any emergency measures that need to be taken as a result of a hazardous materials accident in the unincorporated area. However, the hazardous materials team does assist cities upon request. The HAZMAT Team, using Federal Department of Transportation guidelines, determines the extent of the threat and whether or not evacuation is necessary. This extensively trained team of at least 60 members consists of fire and support personnel from the County and cities. Training includes fire college seminars, miscellaneous seminars, quarterly drills and simulations, and monthly training sessions. The City encourages the County and relevant local, regional, state, and federal agencies to monitor all known active and inactive hazardous waste sites in order to determine and prevent contamination of ground and surface waters.

Needs Assessment

The City of Port Orange relies upon the Volusia County Solid Waste Department to own, operate, and manage the County's Landfill. In 2020, the City disposed of approximately 35,040 tons of solid waste. In 2045, the estimated disposal quantity is approximately 44,165 tons per year, based upon 3.21 pounds per capita per day. The amount of solid waste generated has decreased since 2005 while the City's population has continued to incrementally increase annually. The decreasing trend for solid waste generation could be attributed to active participation in recycling programs by residents and the commercial sector. The City should strive to maintain its contribution to the waste stream to below 10% of the County total on an annualized basis. Furthermore, the City should maintain or decrease the per capita solid waste generation rate through the promotion of recycling programs, in order to achieve the statewide recycling goal of 75%.

The City plans to continue utilizing contract disposal services for garbage and recycling collection. Solid waste will continue to be disposed at the landfill throughout the planning period. Volusia County continuously monitors the utilization of its available capacity and has sufficient land holdings to accept waste from all cities through 2050.



Drainage Sub-Element

Introduction

The City of Port Orange completed a Master Drainage Plan in September 1990 in an effort to define acceptable levels of service, identify deficiencies, and to quantify the costs associated with both construction and operation. In 2019, the Stormwater Master Plan Update, Phases 1A and 1B for the North Nova Canal and the Halifax River Watersheds was prepared and includes Stormwater Infrastructure Inventory and Assessment; development of a Renewal and Replacement Program; stormwater modeling for existing conditions and for recommended improvements; and development and prioritization of recommended projects and funding strategies for the recommended projects. These responsibilities are under the purview of the City's Storm Drainage Utility. Additional future studies will focus on updating information for the Subsequent studies have focused upon individual drainage basins and capital projects needed to correct specific problems within each.

Rainfall runoff is the source of the water in both natural and man-made drainage systems. When a storm event takes place, the force of gravity dictates the flow of water from uplands to sea level. Natural drainage flows through a series of depressions and channels as defined by the topography of the area.

The Port Orange service area is divided into six (6) basins. A stormwater basin is an area defined by topography that acts as an independent source of runoff. The understanding of the effects of the upstream basins on downstream facilities is an essential element of the stormwater management process. Runoff does not recognize City limit lines.

In an effort to manage the natural process, the City and other governmental entities have developed facilities to convey, store, and treat stormwater runoff. The range of man-made facilities designed to move water includes canals, swales, ditches, and storm sewers.

The treatment of stormwater discharges is an important issue that has instigated the construction of storage structures designed to either detain or retain runoff. Detention facilities reduce the rate of discharge. They temporarily impound runoff and allow only gradual release. The outlet structure design is critical to detention facility performance. Retention facilities are designed to percolate the storm event and eliminate the discharge to surface waters. Both retention and detention facilities target the "first flush" of pollutants. The accumulation of grease, oils, and sediments that are transported by runoff must be eliminated from the area surface waters. This is the primary goal of stormwater management.

The City has implemented stormwater augmentation stations at various 'regional' stormwater management facilities to optimize the use of all available resources. These augmentation stations are controlled via remote telemetry, and pump stormwater at a controlled rate into the sanitary sewer collection system. The stormwater is subsequently treated at the WWTP and discharged into the public reuse system. The reuse water is used for irrigation or discharged to the City's regional storage/recharge reservoir in the vicinity of the City's Central Wellfield. Water in the reservoir recharges the aquifer and/or is stored for subsequent filtration and irrigation.



Regulatory Framework

Federal

Section 208 of the federal Water Pollution Control Act dictates the need for stormwater management to protect the quality of surface waters. The Volusia Council of Governments was awarded a grant by the U.S. Environmental Protection Agency (EPA) to develop a Section 208 Water Quality Management Plan for Volusia County. This plan had a primary goal of compliance with in-stream water quality standards. The methodology employed had two basic elements: the initial water quality management plan and the continuing planning process.

Section 405 of the federal 1987 Clean Water Act requires the EPA to establish permit regulations for stormwater. A National Pollutant Discharge Elimination System (NPDES) permit program was developed for municipal and county stormwater systems. The City has been issued a City-wide NPDES permit with specific conditions of issuance. The City has monitoring and reporting requirements, as well as an annual compliance report that must be submitted in accordance with the permit conditions.

State

The Florida Department of Environmental Protection (FDEP) is charged with the implementation of the State 404 Program regulating discharges of dredged or fill material into waters within the jurisdiction of the State in accordance with Clean Water Act (CWA) section 404(g-l). Chapter 62-25 was repealed on February 8, 2017, but is still applicable for grandfathered activities in accordance with sections 373.414 (11, 12a, 13, 14, 15) and section 373.4145(6) of the Florida Statutes (F.S.).

The FDEP Total Maximum Daily Load (TMDL) initiative evaluates water bodies throughout the State to determine impaired water bodies due to current pollutant levels and to determine the maximum pollutant loading a water body can accept. Each water body has a unique Water Body Identification (WBID). The City is in the Upper East Coast Basin, Group 5 of FDEP's Plan and will be re-evaluated in 2023. TMDLs have been adopted for the Spruce Creek waterbody (WBID 2374 and 2674A) and for the Tomoka River waterbody (WBID 2634). Treatment techniques are to be based on the targeted pollutant.

The State addresses surface water management in Chapter 62-40 F.A.C. This relates specifically to the many man-made improvements in the Port Orange drainage system, such as flood control facilities. This Chapter provides the State with a methodology for assuring stream flow while also addressing aquifer recharge.

Stormwater management policy is a complex interweaving of both the quality and the quantity of rainfall and runoff. The Saint Johns River Water Management District (SJRWMD) regulates stormwater management systems via Division 40C F.A.C., including pollutants from urban areas, oil, gasoline, and grease that are washed off the streets and the runoff from agricultural areas that contains excessive nutrients causing eutrophication and fish kills. Capturing the first flush (the volume that carries most of the pollutants) in detention ponds or swales is the primary objective of the SJRWMD permitting process.

In an attempt to eliminate the discharge of stormwater pollutants, treatment systems are required in conjunction with new development. The volume of runoff treated is related to the size of the development. In general, 100 acres is the size project which triggers lower volumes of treatment storage. (The first 0.5 inch vs. the first 1.0 inch of runoff.)



One of the primary concerns of the State Rule is the “follow-up storm”. Many facilities can adequately treat the first storm. A recurrence can result in direct discharge. Thus, the State emphasizes that capacity must be available 72 hours after the initial storm. This is relevant to both retention areas and swales.

The establishment of Spruce Creek as an Outstanding Florida Water also has an impact upon regional development. Direct discharge into an Outstanding Florida Water will trigger a 50% increase in the amount of stormwater treatment a given area or development is required to provide, thus requiring a larger percentage of developable property to be committed for stormwater management.

One consideration in portions of the Port Orange service area is stormwater discharge into wetlands. Chapter 62 F.A.C. provides guidelines for those discharges. The State must be assured that the discharge is compatible with the ecological characteristics of the wetlands. Wetlands can be effective in the reduction of solids transport and can effectively remove nitrogen from the discharge. Non-jurisdictional wetlands may also be utilized for stormwater management. These wetlands are identified as either unconnected or connected by artificial or intermittent methods.

In 2021, Section 403.9302, Florida Statutes, was enacted and requires a 20-year Stormwater Needs Analysis from local governments providing stormwater services. In 2022, local governments providing stormwater services complied and submitted with supporting documentation to the County a 20-year Stormwater Needs Assessment. In the future, a Stormwater Needs Analysis must be compiled and submitted with supporting documentation to the County every five years with the next reporting cycle in 2027.

Local Government

The City of Port Orange has implemented a Stormwater Management Ordinance for new development within the City limits which parallels the minimum standards promulgated by Volusia County. This legislation was designed to reduce the volume of stormwater discharge and assure quality through the use of retention and detention. The City has had stormwater management regulations with the same design storm criteria as the County's since 1979.

During 1986, the City established a Storm Drainage Utility by Ordinance 1986-28. The primary responsibility of the Utility is the operation and maintenance of the stormwater conveyance system. This includes canal and ditch cleaning, which is scheduled and accomplished on a regular basis. Ordinance No. 2005-24 dated June 28, 2005, established a uniform method of stormwater fee collection by Non-Ad Valorem Assessment as authorized in Section 197.3632 Florida Statutes. The City adopted Ordinance No. 2016-13 dated July 19, 2016 to restate and amend Article V. Stormwater Utility, Sections 74-156 through 74-164. Since the adoption of local regulations, the City has constructed numerous drainage improvement projects to enhance water quality and reduce flooding. The Storm Drainage Utility continues to fund the critical, proactive operation and maintenance of the stormwater management system.

Capital requirements of the stormwater management system are funded by a user charge. This charge is billed to all developed property in proportion to the amount of impervious surface. A capital facilities charge was instituted as a portion of the stormwater drainage utility fee. The charge is used to pay for capital improvements of the existing City stormwater drainage facilities and for future capital improvements that may be established within the City for stormwater drainage facilities. The charge is reduced for developed properties where volumes of stormwater are retained on-site.



Existing Conditions

The volume of stormwater runoff is variable and responsive to the intensity and duration of a storm. In the Port Orange service area, 90% of the rainfall events are low-intensity high-frequency storms (moderate storms) with total accumulations of less than one inch. Prior to development, natural drainage features were well suited to convey and store the runoff volume of the moderate storms. The high-intensity low-frequency storms (severe storms) created a volume of runoff that exceeded the natural system capacity and created temporary flooding.

With development, the response to flooding was conveyance at a faster rate. Canals were constructed and large-diameter culverts were installed to move the water off the land. These systems were adequate until upstream basins were developed and started contributing runoff at faster and faster rates. These increases in impervious surface area and resultant runoff are the driving force behind comprehensive stormwater management planning. Port Orange has observed temporary flooding in portions of its service area. It is the desire of the City to minimize impact and recovery time from observable events.

Stormwater management in Port Orange is concerned with both quality and quantity. The City has utilized both structural and non-structural elements to accomplish the objective of controlling the volume, rate of flow and pollutant load of post development runoff. The retention and detention basins represent structural elements designed to remove pollutants and reduce discharge volume. Grassy swales are primary examples of non-structural elements that simulate natural overland flow systems but inhibit the transport of sediments.

The City has the responsibility to manage stormwater within the service area. The City has adopted and refined the uniform design standards for development, which are responsive to the rainfall intensity and duration experienced in Port Orange. The City is also responsible for maintenance of the conveyance elements to ensure the continued functionality and capacity of the system.

The design storm utilized in Port Orange and the adopted level-of-service standard is the 25-year, 24-hour event. The 25-year, 24-hour design storm event has a 4% chance of happening in any given year. This storm produces a total rainfall of nine inches during a 24-hour period. The new development design standards are directed towards abating the flow and pollutant load of this design storm.

Drainage Basins

There are several topographic features of Volusia County that have a direct affect upon the drainage in the City of Port Orange. The service area comprises a series of marine terraces separated by sand ridges. The terraces are relatively flat and tend to be fair to poorly drained. The Pamlico Terrace, which is generally elevation 24 - 26 MSL (mean sea level), and the Silver Bluff Terrace, which is elevation 8 - 10 MSL, are prominent features of Port Orange. These formations created the 13 drainage basins within the City as delineated in the City's Stormwater Master Plan (QLH, September 1990).

In the 1990 Plan, each area was subject to an extensive evaluation of existing hydrologic and hydraulic characteristics. Existing culverts and storm drains were identified and their performance during the design storm was simulated. The runoff characteristics were calculated, and Soil Conservation Service (SCS) curve numbers were established for each basin. SCS runoff curve numbers were utilized for hydrograph calculations, based on the soil classification, densities and land uses of the areas, impervious percentages of the areas, and antecedent soil moisture



conditions. Adherence to the City's Stormwater Management Ordinance will assure that future development will not change these curve numbers and adversely affect the quantity of the runoff. Updates to the 1990 plan have taken the form of individual basin studies and project specific plans, models, and permit applications.

The City is in the process of updating the Stormwater Master Plan in phases. In 2019, the Stormwater Master Plan Update, Phase 1A and 1B included recommended improvements for the North Nova Canal and the Halifax River Watersheds.

Water Quantity (Flood Protection)

The City of Port Orange has utilized stormwater management planning in an effort to ensure the continued viability of its stormwater management system. The primary objective in the Stormwater Management Program limit peak flows from future development to equivalent or less pre-development peak flows. With this concept in mind, the design of the stormwater management system can be addressed accordingly. Specific design/performance standards are outlined in the Policies under Objective 1 in the Goals, Objectives, and Policies Section of this Sub-Element.

Groundwater Recharge

Alterations in the flow of surface water have the potential to disrupt the region's groundwater supply and recharge system. For example, lowering the water table in order to create flood storage capacity in man-made retention systems can reduce the recharge capacity of the local surficial aquifer. For this reason, stormwater management facilities must be designed to protect and enhance groundwater recharge, especially in those areas demonstrated to have significant recharge potential. Specific design/performance standards for stormwater facilities with regard to groundwater recharge are outlined in the Policies under Objective 1.3 in the Goals, Objectives, and Policies Section of this Sub-Element.

Water Quality

The streets in the City of Port Orange are a potent source of surface water pollution. The combination of hydro-carbon, rubber, and organic contaminants are carried off by stormwater runoff. Since the majority of these roads are in urban areas, the pollutant load is carried to the culvert and ditch system.

The best method of mitigating this non-point source pollution is a combination of structural and non-structural methods. New roads should include grassy swales to trap pollutants. Old systems should be subject to street sweeping and storm sewer cleaning. The City will continue to maintain the Stormwater Management System in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II program and the City's NPDES Municipal Separate Storm Sewer System (MS4) permit. In addition, the Volusia County Chapter 50, Article VII Florida Friendly Fertilizer Use ordinance applies in the City to manage and regulate the proper use of fertilizers by any applicator.

A vegetative buffer zone is established for Spruce Creek. This buffer protects upland and wetland vegetation along the Creek with particular emphasis placed on wetland hardwood forests, wetland coniferous forests, and vegetative non-forested wetlands. The provisions require 25 feet from the wetland/upland boundary along with a minimum 50 feet from the top of bank of the Creek. Additional requirements are triggered if slopes are overly steep (greater than 10%) or if the vegetative community is sparse. Specific design/performance standards for stormwater facilities with regard to



water quality are outlined in the Policies under Objective 1.4 in the Goals, Objectives, and Policies Section of this Sub-Element.

Resiliency

The City is committed to developing and implementing resilience policies to support efforts to manage and improve recovery from severe events and to sustain natural resources. The City will strive to enhance public infrastructure, services, natural systems, and resources to improve resiliency. Coordination with local and regional partners to monitor, plan, mitigate, and adapt to changing conditions of the community is advantageous to optimize the benefit to the City.

Useful Life Replacement Projects

The City continuously evaluates the condition of the stormwater management infrastructure. As part of the Stormwater Master Plan Update, Phase 1A and 1B, survey of the City's infrastructure in the Nova Canal North (NCN) and Halifax (HAL) Drainage Basins included existing headwalls, inlets, culverts, ponds, ditches, and other conveyance elements. Using established ranking criteria for prioritization, the repair and replacement recommendations from the Stormwater Master Plan Update, Phase 1A and 1B are incorporated in the 5-year Capital Improvement Program (CIP). The City is in the process of updating the 1990 Stormwater Master Plan in phases. Future phases will include condition assessments and recommendations for stormwater infrastructure repair and replacement projects.

Needs Assessment

The majority of the local street drains in suburban subdivisions are adequate when design conditions are maintained. It is the objective of the storm drainage utility to ensure that adequate maintenance is provided for these local systems. Included in the maintenance programs are such things as street sweeping, sediment removal, and bank mowing and stabilization along the drainage ways.

Stormwater Needs Analysis

In 2021, Section 403.9302, F.S., was enacted and requires a 20-year Stormwater Needs Analysis from local governments providing stormwater services. In 2022, local governments providing stormwater services complied and submitted with supporting documentation to the County a 20-year Stormwater Needs Assessment. The County developed a countywide report for submittal to the Department of Environmental Protection and the Florida Office of Economic & Demographic Research (EDR). The 2022 Stormwater Needs Analysis has been completed. In the future, a Stormwater Needs Analysis must be complied and submitted with supporting documentation to the County every five years with the next reporting cycle in 2027. The Stormwater Needs Assessment documents and identifies stormwater management system improvement needs for of water quantity (flood protection); water quality (pollution reduction); groundwater recharge; resiliency; and useful life replacement projects. Five key components needed to prepare the Stormwater Needs Analysis are:

1. **Stormwater Management Program and System Description.** Detailed information regarding the City's Stormwater Management Program (the management of urban agricultural and other stormwater runoff) and the Stormwater Management System (infrastructure [grey and green] designed to collect, control, and manage rainfall runoff to prevent flooding), and any impacts on the quantity or quality of rainfall runoff. Included in this section is a list of documents and resource the City uses to track and manage stormwater infrastructure.



2. **Geographic and Population Information.** Geographic and population information for the areas the City serves, and identification of any changes to the boundary that may occur over the next 20 years is to be documented in a GIS shapefile.
3. **Costs.** The anticipated cost associated with the routine operations & maintenance (O&M), expansion of or improvements to the City's stormwater management system. The needs analysis also requires defining funding (committed or no identified funding source) for the O&M or expansion costs. O&M costs should include the cost of any community outreach and education efforts, but all cost reporting should include only those expenditures that have or will flow through an approved budget.
4. **Future Projects.** Provide a summary list of major useful life replacement projects (single projects that make up greater than 5% of the total O&M expenditures over the most recent 5-year period) for infrastructure identified for replacement due to old age or failure over the next 20 years.
5. **Funding.** The final section compiles data for capital expenditures for recent years and looks forward past the 20-year horizon including potential funding sources to close the financial gaps.

Summary of System Improvements

A summary of proposed system improvements is included in the annual adopted budget. The project implementation program includes the current capital improvement plan. In addition to the annual adopted budget, the 20-year Stormwater Needs Assessment provides a list of water quantity (flood protection); water quality (pollution reduction); groundwater recharge; and resiliency projects.



Potable Water Sub-Element

Introduction

The Port Orange potable water system was established in 1941 with the assistance of a W.P.A. Grant. The water treatment facility at that time utilized ion exchange softening and storage was accomplished with a 50,000-gallon elevated tank. In 1951, the requirement for improved quantity and quality of the water supply dictated a plant relocation and a process change which implemented lime softening and utilized three 10-inch wells for the supply. In the 1970s, the raw water supply was relocated west to Clyde Morris Boulevard in order to maintain chloride levels in line with State drinking water standards. This wellfield, currently known as the Eastern wellfield, is still used to supplement water from the Central Recharge Wellfield.

The first section of the Garnsey Water Treatment Plant (WTP) was constructed and placed in service in 1981, rated for 5 million gallons per day (MGD). The plant was expanded to 10 MGD in 1986 and to 15 MGD in 2002. This plant includes aeration, solids contact softening, filtration, and disinfection. The facility provides its customers with an excellent quality supply meeting applicable State standards.

The City adopted the City of Port Orange Water Supply Work Plan (2023-2033), Kimley-Horn & Associates, Inc., in June 2023. The WTP has a rated capacity of 15 MGD with all three 5.0 MGD process trains fully operational. The water supply wellfields have the capacity to produce over 20.0 MGD of raw water, although groundwater withdrawals are limited by the 2023 Consumptive Use Permit (CUP) to a maximum withdrawal of 2,676 million gallons per year (7.33 MGD). Based on population growth projections in the CUP and the available capacity of the wellfields and treatment plant, the City of Port Orange will not need significant capital expansion improvements through 2040. However, it is recommended that new well sites be investigated in order to guarantee high quality groundwater over the next 20 years.

The water distribution system includes both large-diameter transmission mains and system storage. The pipeline and storage networks have been extended as necessary to meet service area demands.

The water system is periodically evaluated for its ability to meet peak daily demand and fire protection requirements. These analyses identify locations needing reinforcement and improvement. The City utilizes its Capital Improvement Program to address system deficiencies.

Regulatory Framework

Federal

Water treatment programs are regulated by the Safe Drinking Water Act, which was promulgated during 1974. Since its original passage, there have been numerous amendments which have increased compliance and monitoring requirements. City staff continually monitors rule changes and updates to confirm that treatment processes and reporting procedures are in compliance with all applicable Federal and State regulatory requirements.

The groundwater disinfection and disinfection byproducts rule is in effect. This action was a direct response to a concern over the health hazards associated with microbiologically contaminated groundwater. The City has implemented capital construction for plant modifications necessary to comply with the rule. The treatment plant is currently in compliance with all federal regulations. The groundwater supply is suitable for public consumption.



State

The State of Florida has developed statutes to implement its permitting responsibilities under the federal legislation. Chapter 62.550 of the Florida Administrative Code (F.A.C.) defines the constraints for community water supplies. This Chapter addresses technical specifications including treatment systems and pumping equipment. Microbiological clearance is required. This Chapter also provides the Florida Department of Environmental Protection (FDEP) with the tools necessary to ensure that public water supplies are contaminant-free, and that appropriate treatment is being provided.

The St. Johns River Water Management District (SJRWMD) has the authority to regulate consumptive use within its district. This authority was provided by Section 373.216 of the Florida Statutes. The basic premise of consumptive use regulation is as follows:

- 1) The use must be beneficial.
- 2) The use must not interfere with a pre-existing legal use.
- 3) The use must be in the public interest.

Volusia County

The County retains zoning and land use control in the unincorporated area. Since the Port Orange Central Recharge Wellfield is in the unincorporated area, it was originally subject to a special exception for utility uses, and it required approval by County Council. However, the City and the County entered into a Settlement Agreement in 2004, and an expanded Interlocal Agreement 2008, which provides for City land use, zoning, and land development control over the Central Recharge Wellfield.

Existing Conditions

The Port Orange Department of Public Utilities is responsible for the planning and implementation of the potable water facilities and necessary infrastructure to meet service area needs. The distribution network has been evaluated for present and future needs. The water utility service area currently includes the following entities:

- City of Port Orange
- City of Daytona Beach Shores (south of Thames Avenue)
- Town of Ponce Inlet (wholesale account)
- Wilbur By-The-Sea (unincorporated area)
- Other non-designated unincorporated areas

A location map illustrating the boundaries of the water supply service and planning areas is shown on Map 4.3. The majority of the service area consists of developed communities. In the rural area west of Tomoka Farms Road, potable water needs are presently met by individual wells. As noted, Port Orange is the retail supplier with the only exception being the Town of Ponce Inlet. As the retail supplier, the City owns and operates the distribution system and serves individual customers through service meters. The City of Port Orange serves Ponce Inlet through three master meters. An interlocal agreement between the two cities outlines the connection location and required level of service. Ponce Inlet is responsible for metering and distribution within its corporate limits.

Water Supply

The raw water supply for the Port Orange service area is derived from the Volusia Floridan sole-source aquifer. The inventory of the existing wells is detailed in Table 1, and their location is shown on Map 4.2. The City wholly owns approximately 6,000 acres and jointly, with Volusia County owns another 5,000 acres west of Tomoka Farms Road in an area generally referred to as the wellfield property. Placing this land under local government control has allowed the site to be used as a



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wildlife habitat, forestry area, low-intensity recreation area, and as the City's Central Recharge Wellfield.

The City adopted the Water Supply Work Plan 2023-2033 (Kimley-Horn and Associates, Inc., June 2023), and it is incorporated by reference into the Goals, Objectives, and Policies, as well as the DIA.

Table 1. Inventory Of Potable Supply Wells

WELL NO.	CASING DIAM.	WELL DEPTH	CASED DEPTH	QUANTITY PRODUCED
*CR- 1	16"	350'	100'	350 GPM
CR- 2	16"	350'	98'	450 GPM
CR- 3	16"	350'	98'	460 GPM
CR- 4	16"	350'	95'	450 GPM
CR- 5	16"	350'	91'	450 GPM
CR- 6	16"	350'	140'	350 GPM
CR- 7	16"	350'	133'	450 GPM
CR- 8	16"	350'	96'	450 GPM
CR- 9	16"	350'	94'	250 GPM
CR-10	16"	350'	91'	450 GPM
CR-11	16"	300'	90'	450 GPM
CR-12	16"	250'	90'	450 GPM
CR-13	16"	300'	88'	450 GPM
CR-14	16"	350'	87'	350 GPM
CR-15	16"	350'	86'	350 GPM
CR-16	16"	300'	86'	350 GPM
CR-17	16"	300'	85'	450 GPM
CR-18	16"	300'	84'	200 GPM
CR-19	16"	300'	86'	300 GPM
CR-20	16"	370'	87'	250 GPM
CR-21	16"	370'	87'	420 GPM
CR-22	10"	300'	145'	450 GPM
CR-23	16"	300'	130'	250 GPM
CR-24	16"	300'	130'	350 GPM
CR-25	16"	300'	130'	150 GPM
CR-26	16"	300'	130'	210 GPM
CR-27	16"	300'	130'	200 GPM
**CM-4	8"	142'	108'	350 GPM
CM-5	8"	160'	117'	350 GPM
CM-6	8"	160'	119'	340 GPM
CM-7	8"	160'	113'	350 GPM
CM-8	8"	160'	108'	340 GPM
CM-9	10"	200'	111'	510 GPM
CM-10	10"	200'	111'	330 GPM
CM-11	10"	200'	110'	370 GPM
CM-12	10"	200'	111'	120 GPM
CM-13	10"	200'	111'	150 GPM
CM-14	10"	200'	111'	360 GPM
CM-15	10"	200'	110'	350 GPM
CM-16	10"	200'	109'	350 GPM

Source: 2023 Port Orange Consumptive Use Permit.

*Wells CR-1 - CR-27 are located in the Central Recharge Wellfield

**Wells CM-4 – CM-16 are located in the Eastern (Clyde Morris) Wellfield



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The utilization of the supply wells is limited by the City's Consumptive Use Permit, (C.U.P.) # 8595, issued in 2023 by the St. Johns River Water Management District and valid until February 14, 2043. Conditions in the permit allow for evaluation and updating by SJRMWD at five-year intervals. Maximum annual groundwater withdrawals are specified in the permit. The permitted allocations are adequate to satisfy projected demands. A tabular listing of permitted withdrawals in the conditionally approved 2023 permit is detailed below:

Table 2. City of Port Orange CUP #8595 ANNUAL GROUNDWATER Withdrawal Limits

Year	Permitted Annual Average Withdrawal (MGD)	Projected Annual Average Withdrawal (MGD)
2022	7.33	6.38
2023	7.33	6.42
2024	7.33	6.47
2025	7.33	6.51
2026	7.33	6.56
2027	7.33	6.61
2028	7.33	6.65
2029	7.33	6.70
2030	7.33	6.75
2031	7.33	6.79
2032	7.33	6.84
2033	7.33	6.89
2034	7.33	6.94
2035	7.33	6.98
2036	7.33	7.03
2037	7.33	7.08
2038	7.33	7.13
2039	7.33	7.18
2040	7.33	7.23
2041	7.33	7.28
2042*	7.33	7.33

**CUP expires in 2043*

Additional permit conditions are assumed as follows:

1. Water quality samples must be analyzed from the following wells every six months: CM-4, CM-5, CM-7 through CM-16, CR-10, CR-21, CR-25, CR10 (on-going)
2. The approved Wetland Hydrologic Monitoring Plan must be implemented. (on-going)
3. Available reclaimed water must be used. (on-going)
4. The individual wells must be metered and withdrawals reported every six months. (on-going)
5. The average annual groundwater withdrawals from the Upper Floridan Aquifer must not exceed 6.22 MGD from the Central wellfield and 1.12 MGD from the Eastern wellfield.

At present, the Central Recharge Wellfield is the primary source of potable water, with the secondary Eastern (Clyde Morris) Wellfield providing 15% of the total supply. While the 13 wells at the Eastern Wellfield are suitable for use and contribute to the City's raw water supply capacity, they have lower water quality than the Central Recharge wells. Raw water pulled from the Eastern Wellfield is limited



to 15% of total water demand in order to maintain high water quality. A Wellfield Management Plan was completed by Ardaman and Associates, Inc. in 2022. This report showed that at least five of the wells in the Eastern wellfield have high chloride levels. Due to these high chloride levels, these five wells are currently operated under restricted usage and can only be pumped once each month or under emergency situations.

SJRWMD has the legislative authority to limit Consumptive Use Permit (CUP) allocations for individual permit holders based upon cumulative groundwater withdrawals, and their potential effect upon spring flows. Therefore, future regional groundwater deficits may be assigned countywide, but not on a utility-by-utility basis. In the event that this occurs, Port Orange should be prepared to meet future demands as detailed in the Alternative Water Supply Sources and Options section of this Sub-element.

Raw Water Mains

The wellfields are connected to the treatment plant by raw water supply mains. The pipeline serving the Central Recharge Wellfield is the largest main in the Port Orange system. It is a 30-inch reinforced concrete pipe approximately eight miles long. The pipeline route selected minimized the impact upon wetlands and adjacent natural resources. The pipeline has a nominal capacity of 15.2 MGD, adequate for peak day conditions; however, a failure of this pipeline would seriously compromise the City's ability to supply water. Proposed finished water interconnects and storage reservoirs can provide a portion of the water necessary, but alternative supplies should be pursued either independently or in conjunction with other utilities and/or partners.

The Eastern (Clyde Morris) Wellfield raw water main is a twelve-inch diameter main that serves as a collection header. The 13 wells comprising this field are directly connected to the raw water main. The main is adequately sized for the connected wells. At peak withdrawal the maximum velocity in the pipeline is 6.81 feet per second and the pressure loss is 7 psi per one thousand feet. During normal operation, the Eastern (Clyde Morris) Wellfield is operated at reduced capacity. The values reported are maximums and the well pumping equipment has been sized to overcome those losses.

Finished Water Storage

Water storage provides the additional supply required for peak demands and fire flows. These facilities are located in the distribution system where they can provide large flow volumes in response to demand. The City of Port Orange owns and operates four storage facilities as described in Table 3. Two of the existing tanks with a total capacity of 2.5 MGD are located on the peninsula portion of the service area. The distribution system analysis has shown these tanks to be adequate for meeting simulated fires in that segment of the system. Storage on the mainland is provided at the treatment plant ground storage, and the Cypress Head ground storage facility. These two storage facilities have a total capacity of 3.0 MGD and the distribution system analysis has shown these tanks to be adequate for meeting simulated fires in that segment of the system.

Table 3. Water Storage Facilities

FACILITY NAME	CAPACITY
Water Treatment Plant	1.0 Million Gallons
Oceans Pump Station	1.5 Million Gallons
South Peninsula Pump Station	1.0 Million Gallons
Cypress Head	2.0 Million Gallons



When the mainland storage tank was constructed during 1978, the water treatment plant was located at Oak Street. The tank functioned as a remote distribution system facility. The construction of the Garnsey Water Treatment Plant and elimination of the Oak Street plant changed the role of this storage facility. The mainland storage tank has now been incorporated into the treatment plant operation. It allows the treatment plant to operate at level output and use the one million gallons of storage as a buffer for high and low demand. The treatment plant includes control valves which divert water to this tank during off peak hours.

The four ground storage facilities include high service pumps, all of which are rated from 750 to 1,600 gallons per minute. Three out of the four stations have two pumps, with a location reserved for installation of a third pump. The Cypress Head storage facility has three pumps in place. Pump size varies with each station. Control is via radio telemetry. The storage tanks operate in response to pressure. Low pressure activates high service pumps and boosts system pressure. System high pressure opens the refill valve and increases the volume stored in the tank. The distribution system is designed such that, with flow discharging from the WTP at a constant rate, peak flows are met from storage. Operating in this manner allows for minimal flow variations at the water plant.

Distribution System

The treatment plant has a production capacity of 15 MGD and pumps water into the distribution network through four high-service fixed-speed pumps and two variable-speed pumps at a constant pressure of approximately 60-70 psi. Under normal operating conditions, these pumps provide water supply to all portions of the service area. During times of peak flow (i.e., mid-morning and late afternoon), portions of the service area, particularly the peninsula, are subject to greatly increased water demands. Demand requirements are then met by the ground storage tanks located at the north and south ends of the peninsula. When demand subsides, water is no longer pumped from the storage tanks, and they are refilled to normal operating levels. In this manner peak flow requirements can be met efficiently and demand at the treatment plant remains fairly constant. A similar system is available to serve the growth corridor along Williamson Boulevard. A 2 MG storage tank and pump station (Cypress Head) is available to supplement flow from the treatment plant.

From the Garnsey Water Treatment Plant, flow is introduced into the distribution network through one 24-inch, one 16-inch and two 12-inch water mains. Flow through each of the pipes varies according to size, but average daily flows up to 10 MGD can be easily transported. The network of pipes which distribute water throughout the service area varies in size from 1-1/2 inches to 24 inches in diameter. Larger diameter lines are used to transport greater volumes of water greater distances. They are termed "feeder" lines and as the name suggests, feed smaller diameter pipes which serve individual residences and subdivisions. Table 4 is an inventory of the pipes composing the network that was analyzed for existing conditions.

Table 4. Potable Water Distribution Inventory (2020)

Size (in)	Length (ft)	Size (in)	Length (ft)
Unknown	26,650	12	348,810
1	7,483	16	83,119
2	198,210	18	19,044
3	1,394	20	4,835
4	55,271	24	10,369
6	850,929	30	42,332
8	543,937	36	395
10	176,530	TOTAL	2,369,400

Source: Kimley-Horn and Associates, Inc. Hydraulic Modeling Project Data, 2020.



The water distribution system analyses for existing conditions are included in the appendix. Separate runs were made for average daily flow and peak day flow.

The City's distribution network has been modeled using geometric data and operational data. Geometric data includes pipe diameters, lengths, materials, pipe junction elevations, pumping pressures, and pipe configuration. Operational data is variable and represents different operating conditions. It includes total water consumption, demand locations and quantities, and which sources of water are contributing at any one time. The primary source of geometric data is from the City's GIS database covering the mainland and peninsula, which detailed the location, length, and diameter of the pipes composing Port Orange's water distribution network.

The data regarding water consumption and demand locations was taken from billing data provided by the City's Department of Community Development. The report combines existing housing information and projections with maps divided into zones. Relating the number of housing units to observed water consumption rates enables one to estimate the volume of water needed to serve any particular area.

For this analysis the estimated consumption level-of-service standard was 180 gallons per day per equivalent residential unit. In order to determine the accuracy of these estimates, a comparison was made between estimated water demand and actual water sales. Using the previously stated demand assumptions, the average daily demand for the Port Orange water service area is 5.2 MGD. The material supply (water sold) during the 2020 calendar year was approximately 4.5 MGD. The combination of utility use, flushing water and system loss accounts for 15% of treated water volume. This calculation documents the appropriateness of 180 gallons per day per equivalent residential unit as the average day level-of-service standard. The presence of seasonal users in the distribution system is included in the calculation.

Hydraulic modeling of the City's water distribution network indicates that the existing infrastructure network, storage, and pumping systems are adequate to satisfy peak demand requirements throughout the service area.

Treatment Plant

The City operates a 15 MGD water treatment plant located in the vicinity of the Eastern (Clyde Morris) Wellfield. The treatment process includes aeration, solids contact type lime softening, filtration, fluoridation, and disinfection. The plant configuration includes three parallel process trains each rated 5.0 MGD. The trains are cross-connected in order to provide mechanical back up when a unit is out of service. This assures reliability of service.

The softening process generates lime sludge waste that must be dewatered and disposed. The weight of the sludge is almost one ton per million gallons of water treated. The sludge is wasted in a slurry form with a solids content of 30%. The vacuum filters draw moisture out of the sludge, increasing solids concentration to 75%. This material is truckable and is delivered to a contract vendor where it may then be incorporated into roadway base material. The disposal volume at current flow averages 1.5 truckloads per day.

The plant disinfection process was modified in response to the Safe Drinking Water Act. The use of chlorine gas as a bacteriological control resulted in the formation of trihalomethanes that exceeded 100 parts per billion. Ammonia feed was added to chlorine resulting in the formation of chloramine as the disinfecting agent. This modification reduced trihalomethane to 35 parts per billion or less and brought the facility into compliance.



The high-service pump station at Garnsey WTP is outfitted with three 250 HP, one 125 HP, and one 100 HP high service pumps. The piping and controls have been configured to allow for future outfitting of one additional 250 HP pump, at a later date. The current high-service pumping capacity of the station is 20 MGD and may be increased to 25 MGD. The plant has sufficient treatment and pumping capacity for existing and future conditions through 2042.

The high-service pumping system is designed to make use of remote ground storage tanks/pump stations. There are three remote sites with storage and high-service pumping: Cypress Head (2.0 MG), Oceans (1.5 MG), and Peninsula (1.0 MG). The distribution system is designed such that, with flow discharging from the WTP at a constant rate, peak flows are met from storage. Operating in this manner allows for minimal flow variations at the water plant.

Needs Assessment

The Port Orange Department of Public Utilities is responsible for ensuring that Level of Service (LOS) standards for the potable water system are met throughout the service area. These LOS standards establish the baseline requirements for the potable water system. The LOS standards for the City of Port Orange are summarized in Table 5 below.

Table 5. Summary Of Level-Of-Service Standards

1) Per Capita Consumption	180 gallons per day per equivalent residential unit; 1/10 gallon per square foot per day of commercial, industrial, or institutional development; not to exceed CUP capacity for groundwater withdrawals
2) System Minimum Pressure during Fire Flow	20 psi
3) Storage Provided	50% of daily flow
4) Well Capacity	Meet or exceed CUP capacity for groundwater withdrawals
5) Normal Operating Pressure	60-70 psi
6) Water Plant Capacity	Adequate for peak day; three-year lead time for planned expansion.
7) High Service Pumping	Peak hour with largest pump out of service; expansion concurrent with treatment capacity

8) Water Quality Standards Meet State and Federal Drinking Water Standards

Source: Port Orange Land Development Code, 2022

To assess the needs of the Port Orange potable water system, the City must evaluate whether the existing water system is capable of meeting the LOS standards over the next twenty years. Elements of the water system that are not capable of meeting these standards must be identified for improvement. The needs assessment helps the City to determine which capital improvement projects must be completed and to prioritize when each project must occur.

In general, the existing City water system has sufficient capacity to meet the demands of the service area over the next twenty years. See Table 6 on the following page for a summary of available and required capacity for each of the existing facilities. However, although there are no capacity deficiencies within the system, there are key elements of the system that will require repair or replacement over the next twenty years to ensure that the existing system capacity is maintained.



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This section outlines key needs for the water supply wells, water storage tanks, treatment plant, and distribution system in both the long term and the short term.

Table 6. Summary Of Water System Facilities For The Entire Planning Period

FACILITY	CAPACITY* AVAILABLE	CAPACITY REQUIRED	DEFICIENCY
Water Supply Wells	31 Wells	30 Wells	None
Water Treatment Plant	15 MGD	14.4 MGD	None
Ground Storage	5.5 MG	3.6 MG	None

Notes:

Water Supply Mains are identified in distribution analysis.

The 31 wells represent the 27 wells in the Central Recharge Wellfield plus an additional 15% of well availability, equivalent to 4 wells, from the Eastern Wellfield. This excludes 9 of the existing wells at the Eastern Wellfield.

Water Supply Well Needs

As outlined in the Water Supply section of the Potable Water Sub-Element, the City of Port Orange completed the renewal process for the City's Consumptive Use Permit in February of 2023. Through this process the City reviewed future water demand needs through 2040, as well as the capacity of the existing wellfields to meet these water needs. Utilizing the wells from both wellfields, the City of Port Orange currently has existing "firm" raw water supply capacity to meet peak day flows of approximately 19 MGD. Firm capacity represents the production capacity with the largest well out of service. With two wells out of service (one from each well field), the City's raw water supply capacity is approximately 18.5 MGD. Assuming a peaking factor of 2, proposed well capacity will meet ADF demands of 6.6 – 7.3 MGD and peak flow demands of 13.4 – 14.7 MGD. While the existing firm capacity of the wellfields will meet the City's water demand needs through 2040, this firm capacity assessment assumes no decreases in well water quality and well pumping capacity over the next 20 years.

Ardaman and Associates, Inc. also prepared a Wellfield Management Plan summarizing the water quality of the wells in both wellfields and providing recommendations to help the City retain high raw water quality. In the Wellfield Management Report, five wells at the Eastern wellfield were designated for restrictive usage due to poor water quality. Given the number of wells with pumpage restrictions due to water quality issues, it is likely that there will be additional water quality issues at the Eastern wellfield over the next twenty years. Therefore, in the Wellfield Management Plan it was recommended that the City investigate locations for new wells. Additionally, many of the wells are approaching the end of their stated useful life. The City's 2021 CIP includes \$1,275,000 of funding for the replacement of production wells over the next five years (FY23 – FY27). See Table 7 on the following page for information on the date of each well's most recent rehab and each well's expected life span.



Table 7. Summary Of Potable Supply Wells Expected Useful Life

Well No.	Date of Most Recent Rehab	Expected Life Span
CR-1	FY 2005	15
CR-2	FY 2005	15
CR-3	FY 2005	15
CR-4	FY 2005	15
CR-5	FY 2005	15
CR-6	FY 2005	15
CR-7	FY 2005	15
CR-8	FY 2005	15
CR-9	FY 2005	15
CR-10	FY 2005	15
CR-11	FY 2005	15
CR-12	FY 2005	15
CR-13	FY 2005	15
CR-14	FY 2005	15
CR-15	FY 2005	15
CR-16	FY 2005	15
CR-17	FY 2005	15
CR-18	FY 2005	15
CR-19	FY 2005	15
CR-20	FY 2005	15
CR-21	FY 2005	15
CR-22	FY 2005	15
CR-23	FY 2005	15
CR-24	FY 2005	15
CR-25	FY 2005	15
CR-26	FY 2005	15
CR-27	FY 2005	15
CM-4	FY 2004	15
CM-5	FY 2004	15
CM-6	FY 2004	15
CM-7	FY 2004	15
CM-8	FY 2004	15
CM-9	FY 2004	15
CM-10	FY 2004	15
CM-11	FY 2004	15
CM-12	FY 2004	15
CM-13	FY 2004	15
CM-14	FY 2004	15
CM-15	FY 2004	15
CM-16	FY 2004	15



Water Storage Tank Needs

It is desirable to maintain storage at 50% of average daily flow. Table 8 shows that no storage tank deficiency is anticipated during the planning period.

Table 8. Storage Requirements

YEAR	AVERAGE FLOW (MILLION GALLONS)	STORAGE REQUIRED (MILLION GALLONS)	STORAGE DEFICIENCY
2015	5.9 MGD	2.95	None
2020	6.6 MGD	3.30	None
2025	6.5 MGD	3.25	None
2030	6.7 MGD	3.35	None
2035	7.0 MGD	3.50	None
2040	7.2 MGD	3.60	None

The City has included in the Capital Improvements Plan the purchase of a one-million-gallon water storage tank to increase storage capacity from the existing 4.5 million gallons to 5.5 million gallons, to ensure water can be produced and distributed continuously from the treatment plant. This project is anticipated to be fully funded in FY 25-26.

Treatment Plant Needs

A Water Facilities Plan is currently being prepared to assess the needs of the Garnsey Water Treatment Plant over the next 20 years. The Water Facilities Plan completed in June 2023 outlines proposed repairs and improvements that will need to be completed at the WTP. Pending this analysis, it is expected that several treatment processes may require replacement based on the installation date of the equipment and its known useful life. Table 10 summarizes anticipated costs for the proposed water treatment plant improvements summarized in this section. A summary of other non-concurrency related projects is included in the City's Capital Improvement Program (CIP), but not specifically detailed herein.

Treatment Plant Expansion, Long Term (> 10 years)

In addition to planning for short term equipment replacement, the City of Port Orange also plans to review treatment system modifications that may be needed at the plant over a larger planning horizon (>10 years). Given the known water quality issues at the Eastern wellfield, it may be beneficial for the City to implement some form of membrane treatment to allow for treatment of lower quality groundwater.

Groundwater Rule Compliance

The EPA groundwater disinfection rule establishes minimum contact time (CT) requirements for groundwater treatment facilities. Port Orange uses chloramines for disinfection and CT requirements.



Table 9. Summary Of Proposed Water Treatment Plant Capital Improvement Projects

Project Description	Short Term (1-5 yr.)	Mid Term (6-10 yr.)	Long Term (>10 years)
South Softener Train Replacement with Membrane Treatment & Plan Expansion		\$15M	
Oceans Storage Tank and Pump Station Improvements		\$2M	
Peninsula Storage Tank and Pump Station Improvements		\$2M	
TOTAL		\$19M	

Source: City of Port Orange, 2023

Distribution System Needs

Although hydraulic modeling of the City's water distribution network indicates that the existing infrastructure network, storage, and pumping systems will meet the service area's peak demand requirements over the next 20 years, there are several locations in the distribution system where new piping may be needed. Table 10 summarizes the proposed capital improvements for the water distribution system over the next 10 years. The projects are intended to serve new development, replace older distribution components, replace undersized mains, provide fireflow and/or provide system redundancy.

Table 10. Summary Of Proposed Water Distribution System Capital Improvement Projects

Project Description	Short term (1-5 yr.)	Mid term (6-10 yr.)	Long term (>10 yr.)
North Commonwealth & S. Ridgewood Ave Water System Improvements	\$5M		
16" Water Main River Crossing	\$2.5M		
Citywide Class Pipe Replacement		\$6M	
16" Dedicated Fill Line for Oceans Storage Tank		\$3M	
Total	\$7.5M	\$9M	

Source: City of Port Orange, 2023

Implementation Issues

Capital Improvement Program

The City of Port Orange utilizes revenue bonds, State Revolving Fund loans, user charges, and impact fees to fund capital improvements. The deficiencies requiring correction prior to 2025 have been identified and a Capital Improvement Plan has been developed to address the deficiencies.

Regionalization

The City has actively participated in all regional water supply planning groups. In the late 1990s, in an effort to further protect groundwater supplies, Port Orange joined with several other municipalities to form the Water Authority of Volusia (WAV). The WAV was formed to develop alternative water supplies on behalf of all members. WAV was intended to help members to work together in the production and protection of the area's water supply rather than compete for it. However, the role of the organization was forced to shift to that of an advisory group after a number of key cities withdrew. As this trend continued, WAV was compelled to disband and merge its functions with the Volusia Council of Governments (VCOG). At this time, the City has taken the steps necessary to insure



adequate water supply, treatment, and distribution to all of its customers. Interconnections with adjacent utilities are in place to provide for emergency water supply in the event of catastrophic conditions at the WTP which affect water production.

Cones of Influence

The Port Orange Central Recharge Wellfield cones of influence are shown schematically on Map 1.12. The wellfield was designed to retain the cone of significant influence within City property. There are no overlaps into the jurisdiction of other local governments.

The average withdrawal rate in the wellfield is 390 gallons per minute. The average well spacing is 1,200 feet between wells and 2,000 feet between rows. The effective drawdown at the edge of the City property is less than 2 feet.

Impact upon Adjacent Natural Resources

The water treatment plant and distribution system have demonstrated minimal impact upon adjacent natural resources. The water plant generates calcium carbonate sludge as a byproduct of the softening operation. This sludge is taken to a contract vendor where it may be recycled as road base or used for other purposes. Sludge generation from softening is approximately one ton per million gallons treated. The current and future volume of lime sludge provides this useful byproduct.

The Central Recharge Wellfield is located in the Rima Ridge section of Volusia County. That ridge formation is a location where recharge could be enhanced by reductions in the potentiometric surface of the Floridan Aquifer. The increased recharge could have a favorable impact upon local isolated wetlands. Wetlands monitoring is a Consumptive Use Permit (CUP) requirement. No detrimental effects have been observed to date as documented by an ongoing study of wetland vegetation mandated in the CUP by the SJRWMD.

Alternative Water Supply Sources and Options

The City of Port Orange has existing “firm” raw water supply capacity to meet peak day flows of 20.0 MGD and treatment capacity of 15 MGD, although permitting requirements only allow for maximum withdrawals of 13.46 MGD². Assuming an availability factor of 2.0 – 2.5, proposed well capacity will meet average daily flow (ADF) demands of 6.6 – 7.3 MGD, which is satisfactory through 2040. The availability factor is used to provide rotational capacity and avoid operating wells more than 12 hrs./day. As such, no new Floridan Aquifer wells are proposed through 2040.

Fresh groundwater will remain the dominant source of water supply for the City. However, potential alternative water supply options include:

- Surface Water from the St Johns River
- Brackish Groundwater
- Demand Reduction Strategies
- Artificial Recharge and Regional Aquifer Management Plan (RAMP) projects

Surface Water from the St. Johns River

This alternative primarily relates to many of the water suppliers in western Volusia County. The St. Johns River is a suitable potable source, given certain treatment levels. A reduction in groundwater withdrawal allocations, due to Blue Springs MFL legislation, will necessitate using surface water. It

² 13.46 MGD is the maximum permitted withdrawal as of 2022. This may be updated in the 2022 CUP permit.



is conceivable that potable supply interconnections from western Volusia County to eastern parts of the County will enable supply to Port Orange and other regional utilities.

Brackish Groundwater

Brackish groundwater is water containing chlorides in excess of 250 mg/l. Brackish groundwater may be withdrawn from the Lower Floridan Aquifer (LFA), treated using membrane processes or blended with water from the Upper Floridan Aquifer. If used as blend wells, the amount of water from this source would be limited by an acceptable blend ratio, which would maintain a safe concentration level below the Drinking Water Standard for Chlorides and Sulfates of 250 mg/l. This blend ratio would depend on the final use of the finished water. For finished potable water, the blend would need to be between 150 and 200 mg/l. The brackish waters of the LFA could also be treated using membrane treatment technology to produce high-quality drinking water or lower-quality irrigation water.

Conservation, Reclaimed, and Demand Reduction Strategies

Existing water conservation programs, such as low-flow showerheads and toilets, rain sensors for lawn irrigation, and education programs, will stay in effect. The use of reclaimed water to supplement and/or replace potable water used for irrigation purposes has been aggressively pursued by the City of Port Orange. In addition, stormwater improvements could be designed to beneficially utilize excess stormwater for reclaimed water augmentation, aquifer recharge, wetland hydration and potentially for transfers to other regional water supplies.

Regional Aquifer Management Projects (RAMP)

RAMP projects encompass a variety of programs which increases the available supply of potable groundwater. This could include interconnects, wellfield management strategies and recharge enhancement projects. Port Orange is actively constructing RAMP projects. Interconnects with New Smyrna Beach and Daytona are in place. Completion of the reclaimed water reservoir will provide enhancement of natural recharge and avoidance of wetland impacts in the vicinity of the Central Recharge Wellfield.



Groundwater Aquifer Recharge Sub-Element

Introduction

The general subject of this Sub-Element is the protection of both the quantity and quality of natural groundwater. Groundwater levels and water quality are affected by many activities. Solid waste and hazardous waste facilities, underground storage tanks, and septic tanks all have the potential to contaminate the groundwater supply. These issues are addressed not only in this Sub-Element, but also in several of the other Elements in this Comprehensive Plan.

Several terms and concepts will be used in this Sub-Element to help define the groundwater resource and its requirements for protection. The term *aquifer* is used to describe a water-bearing geologic formation. Such formations can be confined or unconfined and are noted for their ability to store and transmit usable quantities of water. In an aquifer, water is stored in the pore space of the material.

The Port Orange service area is underlain by two water-bearing aquifers: the upper unconsolidated surficial (shallow) aquifer, and the confined limestone aquifer, known as the Floridan Aquifer. The surficial aquifer does not have consistent composition and water storage capacity throughout. There are lenses of clayey sand and shell beds, and zones of fine to coarse sand. In general, the clays and sandy clays occur in the lower half of the shallow aquifer. The limestone Floridan Aquifer also exhibits variation. There are alternating layers of porous limestone and relatively dense dolomitic limestone. The interaction between porous beds and impermeable beds is essential to the functioning of the aquifer. The alternating formations affect both the potentiometric surface and the recharge capability.

Potentiometric surface is a term relevant to the confined Floridan Aquifer and represents a measurement of head pressure. This value equals the elevation that water would reach in a well penetrating to the aquifer. Confinement occurs when the water-bearing formation is overlain by relatively impermeable strata, termed *aquitards*. The slope of the potentiometric surface defines the direction of groundwater movement. Water moves from higher surface zones to lower surface zones.

Recharge is the term for the renewal of the groundwater resource. Precipitation either augments surface water, is transpired by plants, or works its way into the groundwater. When water filters down through the unsaturated soils, it reaches the saturated zone and becomes part of the water table or shallow aquifer. In areas where the aquifer is overlain with highly permeable material (DeLand Ridge and Rima Ridge), recharge of the Floridan Aquifer is accomplished.

The protection of recharge areas is of prime importance in locations that rely on aquifers as the sole source of drinking water, such as Volusia County. Since well-drained recharge areas are considered prime land for development, they are often subject to alteration. The installation of impervious surfaces such as roads, roofs, and parking lots reduce the area available for percolation and thus recharge volume. Groundwater quality can also be affected by development of the recharge area. Groundwater can absorb development-related contamination and transmit it to the aquifer/drinking water supply. This is most significant in the case of a sole source aquifer.

The following additional definitions are derived from documents prepared by the U. S. Geological Survey. They provide a verbal framework for this section of the plan.

Cone of Depression (or Drawdown Cone). A roughly conical concavity (or dimple) in the potentiometric surface around a pumping well.



Confining Bed. A body of "impermeable" material stratigraphically adjacent to one or more aquifers, also referred to as aquitard, aquiclude, and aquifuge.

Diffusion. The process by which dissolved substances move from a region of higher to lower concentration.

Groundwater, Unconfined. Water in an aquifer that has a water table.

Groundwater Divide. A vertical, imaginary, impermeable boundary that, in an ideal, symmetrical groundwater system, coincides exactly with the topographic highs that represent surface water divides from which water flows in opposite directions.

Head/Static Head. The height above a standard datum of the surface of a column of water (or other liquid) that can be supported by the static pressure at a given point. *Head*, when used alone, is understood to mean *static head*. The head is proportional to the fluid potential; therefore, the head is a measure of the potential.

Hydraulic Gradient. The change in static head per unit of distance in a given direction. If not specified, the direction generally is understood to be that of the maximum rate of decrease in head.

Hydrologic Cycle. The continuous circulation of water between the ocean, atmosphere, and land.

Infiltration. The entry into the soil of water made available at the ground surface, together with the associated flow away from the ground surface within the unsaturated zone.

Leachate. The liquid derived from the leaching of buried refuse in sanitary landfills and dumps by percolating water derived from rain or snow melt. It frequently contains large numbers of inorganic contaminants and high concentrations of total dissolved solids, as well as many organic contaminants.

Leakance. The vertical transfer of water from a surficial aquifer system to an adjoining aquifer.

Percolate. Water moving by gravity through pore spaces of unsaturated geologic material.

Permeability. The capacity of a porous medium for transmitting water.

Piezometer. A non-pumping well, generally of small diameter, which is used to measure the elevation of the water table or potentiometric surface. A piezometer generally has a short well screen through which water can enter.

Plume. A relatively discrete body of contaminated groundwater originating from a specified source(s) and influenced in its movement by such factors as the local groundwater flow pattern, the specific gravity and solubility of the contaminant, the subsurface geology within the zone of saturation, and the influence of pumping wells.

Porosity. The ratio of the volume of small openings in soil or rock to its total volume; it is usually expressed as a percentage.

Recharge Area. That portion of a drainage basin in which the net saturated flow of groundwater is directed away from the water table.



Recharge, Artificial. The addition of water to the groundwater by activities of man at a recharge rate greater than normal.

Runoff. 1) That portion of precipitation that does not return to the atmosphere through evapo-transpiration nor infiltrate the soil to recharge groundwater but leaves the hydrologic system as streamflow. 2) That portion of precipitation delivered to streams as overland flow to tributary channels.

Saltwater Intrusion. The migration of saltwater into freshwater aquifers under the influence of groundwater pumping.

Saturated Zone. The subsurface zone occurring below the water table where the soil pores are filled with water and the moisture content equals the porosity.

Safe Yield. The amount of water that can be withdrawn annually from a groundwater basin without producing an undesirable result. Undesirable results include depletion of groundwater reserves, intrusion of low-quality water, contravention of water rights, and others, such as depletion of streamflow and land subsidence.

Storage Coefficient. The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head. In an unconfined aquifer, the storage coefficient is equal to the specific yield.

Unconfined Aquifer. An aquifer having a water table.

Unsaturated Zone. The subsurface zone occurring above the water table and the capillary fringe, in which the soil pores are only partially filled with water, and the moisture content is less than the porosity.

Water Table. The surface on which the fluid pressure in the pores of a porous medium is exactly atmospheric. It is the level at which water stands in a shallow well open along its length and penetrating the surficial deposits just deeply enough to encounter standing water in the bottom.

Regulatory Framework

Federal

The Congress periodically considers amendments to the Federal Safe Drinking Water Act, which changes the Federal regulations for safe drinking water. These amendments increase the monitoring of priority pollutants in an effort to protect the public health.

The Environmental Protection Agency (EPA) establishes minimum standards for public water supply, including maximum contaminant levels (M.C.L.) for water systems. The Port Orange system is subject to these regulations. The City has accomplished the quality testing required by the EPA and has determined that the groundwater supply is suitable for public consumption.

Other federal programs affecting groundwater include the Resource Conservation and Recovery Act of 1976 (RCRA), the Water Pollution Control Act, and Sole Source Aquifer designation. RCRA is addressed in the Solid Waste Sub-Element. The Act addresses diverse issues such as open dumping, leaking underground storage tanks, and hazardous waste control. Leachate from solid waste is a powerful contaminant and its entrance into the groundwater must be prevented. The Water



Pollution Control Act and subsequent amendments are addressed in the Sanitary Sewer Sub-Element. This Act provides management and permitting authority to the EPA. Both surface water and groundwater were affected. However, the primary emphasis is surface water.

The designation of the Volusia-Floridan as a sole source aquifer means that all federally financed projects in the designated area are subject to EPA review. The purpose of the review is to determine whether projects are designed and constructed in a manner that precludes contamination of the aquifer and the creation of a significant hazard to the public health. The rationale behind the designation is the hydraulic isolation of this aquifer and its dependence on localized recharge. Port Orange has taken substantial strides toward protecting its Central Recharge Wellfield from the impacts of development.

State

The State of Florida has developed statutes to implement its permitting responsibilities under the Federal legislation. The State has established well regulations in Chapters 62-20, 62-21, and 62-22 of the Florida Administrative Code (F.A.C.), which contain provisions regarding the licensing of well contractors, the State Water Management Districts powers to regulate well construction, and the constraints for community water supplies. This Chapter provides the Florida Department of Environmental Protection (FDEP) with the tools necessary to assure that public supply wells are contaminant free.

Florida groundwater has been classified into four categories in Section 62-3.403 F.A.C. The classifications and their designated uses are as follows:

CLASS G-I	Potable water use, groundwater in single-source aquifers which has a total dissolved solids content of less than 3,000 mg/l.
CLASS G-II	Potable water use, groundwater in aquifers which has a total dissolved solids content of less than 10,000 mg/l, unless otherwise classified by the Environmental Regulation Commission.
CLASS G-III	Non-potable water use, groundwater in unconfined aquifers which has a total dissolved solids content of 10,000 mg/l or greater, or which has total dissolved solids of 3,000-10,000 mg/l and either has been reclassified by the Commission as having no reasonable potential as a future source of drinking water, or has been designated by the Department as an exempted aquifer pursuant to Section 62-28.13(3), F.A.C.
CLASS G-IV	Non-potable water use, ground water in confined aquifers which has a total dissolved solids content of 10,000 mg/l or greater.

The St. Johns River Water Management District (SJRWMD) has the authority to establish consumptive use permitting within its district, under Section 373.216 of the Florida Statutes. The basic purpose of consumptive use permit review is as follows:

- 1) The use must be beneficial.
- 2) The use must not interfere with a pre-existing legal use.
- 3) The use must be in the public interest.

Since the Volusia-Floridan is a sole source, rainfall-dependent aquifer, there are limitations to the available supply. The Water Management District has the right to approve the transfer of water from



one basin to another. This could be important if, for example, Lake County was selected as a location for future transfers to Volusia County users.

Volusia County

The County government's regulations had an impact on the design and construction of the Port Orange water supply wells. During 1979, the County expressed concern regarding the lateral movement of excessive chlorides. The concept of stringing wells in an east to west configuration was identified as a source of chloride contamination (saltwater intrusion) of the central water supply. In response to that concern, a two-mile-wide wellfield buffer zone was established in unincorporated Volusia County. The legislation discouraged the construction of wells six inches in diameter and larger within the buffer. The Port Orange Central Recharge Wellfield was therefore sited to the west of this buffer.

The Port Orange Wellfield was initially subject to a special exception for utility use, and it required approval by the County Council. However, in 2004, the City and the County entered into an Interlocal Agreement that provides for City land use, zoning, and land development control over the Central Recharge Wellfield, which is in the unincorporated area.

Existing Conditions

The groundwater system that underlies the Port Orange wellfields is comprised of surficial and confined aquifers. These units function as the primary source of potable water in Volusia County. Several studies completed by the U.S. Geological Survey have served as the primary source of information on existing conditions. These studies have been integrated with site specific material derived from the testing and evaluation of the Port Orange Central Recharge Wellfield.

Geography

Port Orange derives its raw water supply from two wellfields. The original Eastern (Clyde Morris) Wellfield, located in the vicinity of the water plant, consists of 13 wells. It is the oldest supply source and is still used on a rotational basis to augment supply from the Central Recharge Wellfield. The Central Recharge Wellfield is the City's primary water production area. It contains 27 production wells and is sited on a 6,000-acre parcel owned by the City. The City of Port Orange jointly owns, with Volusia County, an additional 5,000 acres as wellfield and buffer area.

Physiography

The majority of the Central Recharge Wellfield is located on the eastern edge of the Talbot Terrace. The northeast corner of the property extends onto the Rima Ridge which runs north-south separating the Talbot Terrace from the Pamlico Terrace located east of the site. Surface topography on the Talbot Terrace is relatively flat with an average elevation of approximately 40 feet above mean sea level (msl). Topographic elevations along the Rima Ridge are approximately 5 feet higher. Surface water flow in the wellfield watershed flows north into Tiger Bay Swamp and south to Spruce Creek.

Geology

The wellfield area is underlain by unconsolidated Pleistocene and Holocene deposits consisting of fine to medium quartz sands, clayey sand, and localized shell beds. Surficial deposits are underlain by sediments of Pliocene to late Miocene in age consisting of sand, shells, and calcareous clay.

Underlying these unconsolidated deposits is the Ocala limestone formation which is composed of cream to white fossiliferous limestone. Its thickness is generally less than 100 feet. Beneath the



Ocala limestone is the Avon Park limestone of late to middle Eocene Age. It consists of layers of dark brown dolomite separated by layers of chalky limestone. The formation thickness is estimated at approximately 300 feet. Production wells at the site are open holes from 120 feet to 300 feet below grade, all withdrawing from the Ocala and Avon Park limestone.

Hydrology

Surficial Aquifer

A shallow/non-artesian aquifer underlies the Port Orange service area. This formation contains Pleistocene Age and Holocene (Recent) Age sediments with traces of Miocene and Pliocene Age material. In the Port Orange service area, this aquifer extends from near the ground surface to a depth of 70-90 feet. A typical profile is shown in Table 1 below.

Table 1. Shallow Aquifer Soil Profile

Port Orange Central Recharge Wellfield	
CHARACTER OF MATERIALS	DEPTH BELOW SURFACE
Sand	0' - 20'
Gray Sand, some Hard Pan	20' - 30'
Sand and Shell	30' - 70'
Clay and Shell	70' - 90'
Source: 1985 Port Orange Drilling Logs, Quentin L. Hampton Associates, Inc.	

In this typical profile the sand and shell layer contains the largest pore space and, thus, it has the greatest potential for water storage. The clay and shell layer is the confining zone which establishes the top of the artesian aquifer. The clay layer may be described as a leaky Miocene Age discontinuous clay bed. Recharge of the Volusia-Floridan Aquifer is limited to the leakance of the surficial aquifer into the underlying limestone formation.

The source of water for the surficial aquifer is primarily local rainfall. Water exits the surficial aquifer via downward leakance, horizontal flow to drainageways and evapo-transpiration. The volume available for withdrawal from the Volusia-Floridan Aquifer is dependent upon the surficial system.

Any discussion of the surficial aquifer in the Port Orange service area should point out the positive aspects of the Miocene Age clay. This clay helps assure the water quality of the municipal supply. The ion exchange potential of the material forms a protective barrier to the downward migration of pollutants. Nevertheless, improper waste disposal, including toxic chemicals and landfill leachate must be isolated from the surficial aquifer in order to protect the groundwater resource.

The thin clay layer serves as an intermediate confining unit which hydraulically separates the potentiometric heads of the Upper Floridan Aquifer from the surficial aquifer system. Based on data obtained annually by the SJRWMD, typical potentiometric water surface elevations of the Floridan Aquifer in the vicinity of the wellfield range from 20 to 30 feet NGVD. The hydraulic gradient is towards the northeast.

Ground surface elevations and corresponding water surface/surficial aquifer elevations range between 40 and 50 feet NGVD. As a result of the net downward gradient between the surficial aquifer and Upper Floridan, and leakance through the confining layer, the terrace and ridge areas provide recharge to the Upper Floridan Aquifer. Recharge rates are estimated at 8 or 9 inches per year.



It should also be noted that the confining layer exhibits leakance and as such promotes recharge. This characteristic is valuable as it renews water supplies withdrawn for consumption. However, leakance creates a hydraulic connection from the surficial aquifer to the Upper Floridan Aquifer. If contamination of the surficial aquifer occurs, it is possible to compromise the City's water supply. Additionally, wetland systems adjoining production wells may experience drawdowns due to excessive pumping. Monitoring for wetland impacts is currently being done on an annual basis, as further discussed in this Element.

Volusia-Floridan Aquifer

The confined Volusia-Floridan Aquifer is the sole source aquifer available to the Port Orange service area. The materials in the aquifer are defined as follows:

Table 2. Limestone Characteristics

PORT ORANGE CENTRAL RECHARGE WELLFIELD

CHARACTER OF MATERIALS	DEPTH BELOW SURFACE
Soft Limestone	90' - 120'
Hard White Limestone	120' - 132'
Soft Limestone	132' - 150'
Hard Limestone	150' - 173'
Soft White Limestone	173' - 190'
Medium Hard Limestone	190' - 215'
Hard White Limestone	215' - 230'
Soft Limestone	230' - 245'

Source: 1985 Port Orange Drilling Logs, Quentin L. Hampton Associates, Inc.

Below 245', the Volusia-Floridan potable water supply is underlain by waters with excessive chloride. The low permeability of the dolomitic limestone layers at depth impedes the upward migration of these waters.

In the Port Orange service area, the City must employ groundwater withdrawal practices that will not accelerate the upward migration of high chloride waters (saltwater intrusion). These practices include the following:

- 1) Monitor potentiometric surface of pumping wells and terminate operation when the surface drops to elevation 5 MSL NGVD.
- 2) Space wells and utilize pumping grates to minimize the effect of interference draw down, which is the result of two wells competing for the same water.
- 3) Reduce withdrawals through conservation and wastewater effluent reuse.
- 4) Rotate wells in order to reduce withdrawal demand on individual wells.

The original source of potable water in the deep aquifer is recharge that occurred within the confines of Volusia County. The recharge zones for the Volusia-Floridan Aquifer consist of the sandy terraces and ridges of Volusia County and are entirely dependent upon local rainfall. Annual average rainfall in Volusia County is about 54". Evapotranspiration losses average 35" per year. The remainder is available for surface water enhancement and groundwater recharge. U.S. Geological Survey reports identified the Penholoway Terrace, Talbot Terrace and Rima Ridge as productive recharge areas. The Port Orange Central Recharge Wellfield is located on the Rima Ridge. The characteristics of



these formations that give them enhanced recharge capability include surface elevation and a relatively permeable confining layer.

An important objective of groundwater resource management is maintaining the productivity of these zones. Development in prime recharge areas must avoid contamination of the surficial aquifer. Volusia County is reviewing alternatives that will limit residential construction in the Talbot Terrace. The City of Port Orange and City of Daytona Beach control sections of the Rima Ridge through an aggressive acquisition program.

Effects of Development

In Volusia County, the most extensive alteration of a recharge area has occurred along the DeLand Ridge (Penholoway Terrace). This area has been subject to typical residential and commercial development. It will be necessary to carefully monitor septic tank areas, chemical and petroleum storage facilities, and agricultural activities in this area in order to assure protection of the groundwater resource.

The adopted City and County land use maps recommend that all major urban and suburban development be contained east of Tomoka Farms Road in an effort to protect the recharge/wellfield areas as well as wetlands and areas less suitable for development. This effort both promotes compact development and conserves resources.

Through land purchase, the City of Port Orange has established a substantial buffer around the City's Central Recharge Wellfield including necessary separation from the Volusia County landfill at Tomoka Farms Road. Groundwater contamination from the landfill must be avoided. A network of leachate monitor wells is in place and groundwater is monitored quarterly by Volusia County. The installation and maintenance of a membrane type leachate barrier has further reduced the potential for contamination from this source. The City also has three leachate monitor wells in addition to the County's, which are sampled and tested quarterly.

Since the majority of the Recharge Area falls within the control of Volusia County, that jurisdiction must take the steps required to protect the resource. The City of Port Orange supports the County's groundwater protection efforts in this area; specifically in the regulation of agriculture, septic tanks, and chemical storage. Agricultural activities have been identified as potential pollution sources. Over fertilization in exceptionally permeable soils can allow nutrients to enter the surficial aquifer and eventually the Floridan. The Soil Conservation Service should be utilized for assistance in the development of best management practices for fertilization and pesticide use.

The County passed legislation designed to reduce septic tank density. When land use density exceeds one unit per acre, sanitary sewer collection system installation is required with new subdivisions.

The underground storage of chemicals and fuels has also been identified as a potential threat to groundwater quality. Throughout Florida, leaking tanks have been identified and groundwater decontamination has been mandated. The installation of anti-corrosion systems and the use of leak detection programs are required. The cost to clean up contaminated groundwater far exceeds the retrofit required to prevent and monitor leaks.



Needs Assessment

The 2022 Central Springs / East Coast Regional Water Supply Plan (CSEC RWSP), along with the 2013 Volusia Strategy, the 2018 Volusia Strategy Assessment, and the 2020 Lake Butler Strategy, constrain the availability of groundwater throughout Volusia County and provide a technical basis for the constraint. As a result of these constraints, the Volusia County portion of the CSEC RWSP area is proposed for inclusion in the CSEC Water Resource Caution Area (WRCA).

The following table summarizes projected groundwater withdrawals, as reported in the City's Water Supply Plan.

Table 3. Projected Daily Groundwater Withdrawals

YEAR	AVERAGE DAY	Permitted Max*
2022	6.38 MGD	7.33 MGD
2025	6.51 MGD	7.33 MGD
2030	6.75 MGD	7.33 MGD
2035	6.98 MGD	7.33 MGD
2040	7.23 MGD	7.33 MGD
2042**	7.33 MGD	7.33 MGD

*Based on City's approved Consumptive Use Permit (CUP)

**Ends in 2042, because the CUP expires in 2042

Source: Kimley-Horn and Associates, Inc., 2023;

Wells CR-1 through CR-27 have a cumulative water production capacity of approximately 11.5 MGD. Utilizing the Central Recharge Wellfield to supply 70% of the total system supply, with the remaining 30% from the Eastern (Clyde Morris) Wellfield, the City's water supply capacity is approximately 15 MGD, with two of the largest wells out of service. Sufficient capacity exists to meet demand until through the life of the City's CUP; however, prudent water management practice recommends increasing production prior to this date.

The City of Port Orange has judiciously managed its water resources by maintaining an abundance of water production capacity. By doing so, it is possible to rotate wells and distribute demand evenly around the wellfield. This practice minimizes localized impacts to wetlands and surface waters by reducing drawdown periods. Rotating wells also induces aquifer recharge over a broader area to maximize groundwater utilization.

Limiting water consumption is an important part of aquifer protection. Acknowledging that water resources are limited and promoting conservation is in the best interests of all utilities withdrawing from the Floridan Aquifer. Port Orange has enacted water conservation ordinances and aggressively pursued expansion of its reclaimed water program. These activities should be continued and promoted countywide.

The City of Port Orange has an ownership interest in a portion of the recharge area since its wellfield is on the Rima Ridge. In 1991 the City adopted the Wellfield Protection Ordinance (No. 1991-20), formally amending its Land Development Code to protect its wellfield property and water supply. The Ordinance, which mirrors the provisions of this Comprehensive Plan, designates wellhead protection zones and limits the types of permitted land uses and activities on wellfield property. Land uses on this property are carefully controlled by the City, and are limited to timber management, conservation,



and recreation. These uses are compatible with the maximization of recharge and preservation of groundwater quality.

The City's groundwater supply is also being protected through the implementation of an effective stormwater management system throughout the Port Orange service area, as outlined in the Drainage Sub-Element. The result of having such a system in place is that the collection and percolation of stormwater decreases runoff and increases potential recharge. Both the City and County programs have been designed to protect the quality of water entering the Floridan Aquifer.



Chapter 5

PUBLIC SCHOOLS

Data Inventory & Analysis



Notice

This element did not undergo substantial changes during the update to the 2045 Comprehensive Plan, and therefore did not require a new data inventory and analysis.

Chapter 6

RECREATION & OPEN SPACE

Data Inventory & Analysis



Introduction

The Recreation and Open Space Element is designed to present a comprehensive recreation and open space plan for the City of Port Orange, inventorying existing facilities and guiding planning and development for additional facilities. The City intends for the Recreation and Open Space Element of the Comprehensive Plan to serve also as a Parks System Master Plan.

Parks and open space provide opportunities for the community to increase their physical activity, which is shown to reduce the risks of many diseases including coronary heart disease, hypertension, and diabetes, as well as relieve symptoms of depression and anxiety¹. Research has additionally shown that exposure to greenery reduces recovery time, reduces stress and pain, and increases positive and restorative feelings². There is additionally strong evidence that parks positively impact biodiversity, property values, and local cooling³.

It is the goal of the City of Port Orange Parks and Recreation Program to support a good quality of life for citizens through recreation and open space. The City aims to provide inclusive parks that meet the needs of all ages and all abilities within the community. This is achieved by providing a wide variety of facilities and opportunities, including multiple sports leagues, enrichment classes, community events, educational opportunities, community parks and playgrounds, extreme sport facilities, a multitude of recreational experiences for area youths and adults, and open space areas. In addition, residents have convenient access to other recreational amenities such as the City's golf course, other area golf courses, County facilities, the Daytona International Speedway, Kennedy Space Center, Walt Disney World and other nearby theme parks, as well as natural resources such as the beaches.

Several important trends need to be considered in planning for present and future recreation needs, such as population growth and changing age distribution. The quality of recreation facilities and open spaces plays a role in the desirability of the City as a place to live. Rising costs and staffing limitations present a challenge to adequately meeting recreation needs, but these challenges can be overcome with appropriate planning.

Existing Conditions

To understand community needs, it is important to first catalogue the existing facilities within and around the jurisdiction.

Classifications

Recreation facilities and open space typically range in size, function, and activity level to suit a variety of needs and abilities within the community.

Historically, the City has used five defined classifiers:

1. **Community Facilities** are located within a service area radius of three miles.
2. **Neighborhood Facilities** are located within a service area radius of one mile.
3. **Specialized Facilities** serve the City at large without a specific service area.

¹ Sherer, Paul. [The Benefits of Parks: Why America Needs More City Parks and Open Space](#). 2006

² Wageningen University & Research: dr.ir. J.A. Hiemstra, dr. S. de Vries and ir. J.H. Spijker. Vrije Universiteit Amsterdam: dr. J. Maas. Hogeschool Saxion: Dr. Karin Tanja-Dijkstra. [Greenery and Healthcare](#).

³ Konijnendijk, C., Annerstedt, M., Nielsen, A.B., Maruthaveeran, S. [Benefits of Urban Parks: A systemic review](#). 2013.



4. **Resource-based sites** are developed around particular natural resources such as forests, lakes, and rivers, and are usually associated with more passive uses such as picnicking, hiking, fishing, and camping.
5. **Activity-based sites** are associated with facilities where the users themselves are the main focus, and often feature areas for baseball, football, soccer, gymnastics, aerobics or other participatory activities designed for targeted age groups.

The City additionally classifies some parks as Regional Facilities, notably in both the previous 2010 Data Inventory and Analysis as well as the 2022 Concurrency Management Report, but the term did not have a definition.

The resource- versus activity-based site definitions allow for categorization of the parks, but it is unclear what constitutes a regional park, a community park, and a neighborhood park. While it's important to understand the service area of the park types, it is equally important to know what qualifies a park as a certain type. A new classification system is laid out below that allows for the clear delineation of park type and park function, which will provide a fuller understanding of the facilities provided by the City. This will reveal the distribution of park types across the City and guide investment policy for future recreation, ensuring equity and consistency in the recreation planning process.

New Classifications

District Parks serve more than one community or an entire county and are normally larger than 25 acres. They typically provide a resource or activity at a scale which cannot be accomplished at a Community Park. Activities and features may include picnic areas, sports fields, nature trails, boating facilities, and riding trails. District Parks are ideally located near collector or arterial roads to accommodate adequate access.

Community Parks serve several neighborhoods and sometimes contain specialized facilities. Community parks are typically 5 to 25 acres in size. Facilities may include sports fields or courts, gymnasiums, performing arts centers, play structures, picnic areas, and more.

Neighborhood Parks are large in number but small in either size or facility investment. They provide open space or play areas for communities at an individual neighborhood level. Neighborhood Parks are generally up to 5 acres in size and may provide play structures, sports courts, open areas, and picnic areas.

Special Parks serve a unique purpose, featuring solely a specialized facility such as a boat ramp, kayak launch, or festival grounds. The provision of special facilities is typically based more on the desires or unique characteristics of a community rather than numerical standards.

Reclassification

Table 1 identifies the existing park classifications and the recommended change in classification. The proposed reclassifications are based on the above primary classification definitions. Park access, amenities, facilities, and acreage were reviewed to determine the new classification.



Table 1. Park Classifications

Facility Name	Existing Classification	Proposed Classification
Causeway Park	Regional	District
Cypress Head Golf Course	Regional	Special Park
Riverwalk Park	Regional	Community
Adult Activity Center / White Place Park	Community	Community
Airport Road Park	Community	Community
City Center Complex / The REC	Community	District
Coraci Park	Community	District
Lakeside Community Center	Community	Community
Russell Property	Community	Special Park
Spruce Creek Recreation Facility	Community	District
Buschman Park	Neighborhood	Community
Frederick Street Park	Neighborhood	Neighborhood
Harbor Oaks	Neighborhood	Neighborhood
Ken Burn Park	Neighborhood	Neighborhood
Larry Haines Park	Neighborhood	Neighborhood
Depot Park	Neighborhood	Neighborhood
Memorial Park	Neighborhood	Community
Southwinds Park	Neighborhood	Community
Willow Run Park	Neighborhood	Community
Creeside Middle School	Neighborhood	Community
Silver Sands Middle School	Neighborhood	Community

Source: Parks & Recreation Department, 2023

This reclassification establishes four (4) District Parks, ten (10) Community Parks, five (5) Neighborhood Parks, and two (2) Special Parks.

Inventory

Meeting the recreational needs of all age groups and ability levels requires efficient utilization of community recreation areas and a realistic consideration of what programs can be established to ensure future quality recreational opportunities. Understanding the City's existing recreational conditions and planned facilities is the first step toward planning for the community's recreational needs.

Historically, the City's inventory has tracked park acreage, tennis courts, basketball courts, baseball / softball fields, multipurpose fields, and community centers.

Table 2 inventories these features as well as pickleball, bocci, and shuffleboard courts. Pickleball, in particular, has been a rising star in recreation, attracting many players and increasing demand for pickleball facilities.



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Table 2. Existing Recreation / Open Space Facilities

Facility Name	Location	Acres	Tennis Courts	Pickleball	Bocci	Shuffleboard	Basketball Courts	BB/SB Fields	Fields	Neighborhood Centers
Causeway Park	93 Dunlawton Ave	30.0								
Cypress Head Golf Course	6231 Palm Vista	216.9								1
Riverwalk Park and Trail	3459 S Ridgewood Ave	10.0								1
Adult Activity Center / White Place Park	4790 S Ridgewood Ave	5.1		8	2	6				1
Airport Road Park	6731 Airport Road	25.0	12				2		1	
City Center Complex / REC	1000 City Center Cir	49.0					3	5	6	2
Coraci Park	5200 Coraci Blvd	36.0						4	6	
Lakeside Community Center	1999 City Center Cir	2.0								1
Russell Property	6060 Deer Feed Trail	17.0								
Spruce Creek Recreation Facility	5959 S Spruce Creek Rd	40.0	6				1	2	2	
Buschman Park	4575 Spruce Creek Rd	27.5								
Frederick Street Park	5210 Frederick St	5.0								
Harbor Oaks	5937 Riverside Dr	0.2					1			
Ken Burn Park	850 Canal View Blvd	5.0								
Larry Haines Park	5550 W Bayshore Dr	0.4								
Depot Park	Herbert St. east of FEC	1.0								
Memorial Park	3801 Jackson St	12.6								
Southwinds Park	1200 Richel Rd	10.0							2	
Willow Run Park ²	1351 Schoolhouse Dr	10.0	2				6			
Creekside Middle School ³	Airport Rd	15.0								
Silver Sands Middle School ³	Herbert St	22.9	2				4		1	
Totals		539.6	22	8	2	6	17	11	18	6

1. County-owned.

2. Outside of school hours (Horizon Elementary). Interlocal agreement expires in 2039.

3. Outside of school hours. Interlocal agreement expires 2026.

Source: City of Port Orange Concurrency Management Report, 2022; City of Port Orange [Facilities](#), 2023; Parks and Recreation Department, 2023.

The City recognizes that the recreation needs vary across age groups. To address this, the City has attempted to provide a variety of facilities both in size and function. The following park overviews provide additional information about available facilities and target age groups.

District Facilities

Causeway Park is a resource-based park on the Halifax River at the Port Orange Bridge, featuring seven boat ramps, three fishing piers, covered pavilions, picnic tables and grills, restrooms, and vehicle / boat parking.



Spruce Creek Recreation Facility is an activity-based facility that includes Seemor Memorial Dog Park for both large and small dogs, two competition softball fields, six lighted tennis courts, a basketball court, concession stand, covered pavilion, grill, playground, and restrooms.

City Center Complex / The REC is an activity-based park featuring many facilities: City Hall, Gymnasium, Kenneth W Parker Amphitheater, Lakeside Community Center, library, Skate Park, Sports Complex, and Veterans Park. There is also a 1/2-mile trail around a lake.

The Sports Complex includes two lighted soccer fields, four batting cages, five lighted softball fields, a concession stand, playground, and restrooms; it hosts adult and youth baseball and softball, soccer, and PAL programs.

The Kenneth W Parker Amphitheatre has a lighted stage with permanent seating for up to 700 spectators. Annually, the facility hosts a variety of events, including concerts, performances, festivals, and more.

The REC features youth basketball and volleyball programs as well as open play basketball, E-Sports, Skatepark, and an indoor playground. There are additionally exercise programs held in the gym. There are three indoor air-conditioned basketball courts, restrooms, and snack machines.

The Skate Park features facilities for skateboards, rollerblades, and BMX bikes. The Skate Park is generally enjoyed by older kids and teens.

The Veterans Park features a boardwalk over a lake, and a veteran's memorial with monuments to each service branch, memorial bricks for service members, and flags. There are additionally memorial trees planted as part of the City's memorial program.

Coraci Park is a sports complex featuring 4 softball fields, two multipurpose fields, and a playground.

Community Facilities

Airport Road Park is an activity-based park that has six lighted tennis courts, a covered pavilion, two soccer fields, an outdoor basketball court (full), a playground, and restrooms.

Lakeside Community Center is a multi-purpose specialized facility intended to accommodate a variety of events, from weddings to conferences. The venue offers 1,800 square feet of indoor space with a full kitchen, a landscaped lawn, and a covered patio overlooking City Center Lake.

Riverwalk Park and Trail is a resource- and activity-based park featuring a kayak / canoe / paddleboard launch, boardwalk, fishing piers, a 12' wide trail, concession stand, and restroom facility on the northern section. Paddle equipment is rented to the public on-site. The southern section includes a splash pad, playground, event lawn, concession stand, restroom facility, a riverfront promenade area, event stage, picnic pavilions, and a 12' trail encompassing the park.

White Place Park / Adult Activity Center is an activity-based park that includes open space, pickleball / tennis courts, shuffleboard / bocci courts, horseshoe pits, picnic areas, restrooms, and an activity center building with meeting rooms and a kitchen. The park and activity center were designed with senior citizens in mind. The activity center is used for club meetings and classes for the 55+ community.

Southwinds Park is an activity-based facility that hosts the Port Orange Soccer Club and is open to the public.



Buschman Park is a resource-based facility featuring a boardwalk into a lake, covered pavilion picnic areas, a playground, natural trails, and restrooms. There is a 3/4-mile walkway around the lake.

Memorial Park is a resource-based park featuring a boardwalk / fishing pier, 0.7 miles of lighted walkway around a lake that features a fountain, and picnic tables and benches. Leashed pets are permitted.

Willow Run Park is an activity-based park featuring tennis courts, restrooms, playground, and picnic area. This park is adjacent to Horizon Elementary School and is part of an active interlocal agreement between the City and the Volusia County School Board (expires 2039).

Creekside Middle School is available to residents outside of school hours for use of the recreational facilities (including five fields, four basketball courts, and two tennis courts). The interlocal agreement for joint use of this facility between the School Board and the City expires in 2026.

Silver Sands Middle School is available to residents outside of school hours for use of the recreational facilities (including four tennis courts, four shuffleboard courts, three baseball/softball fields, and one multi-purpose field). The interlocal agreement for joint use of this facility between the School Board and the City expires in 2026.

Neighborhood Facilities

Frederick Street Park is a resource-based park with a 1/3-mile walking trail around a lake. The lake includes a fountain feature. Leashed pets are permitted.

Harbor Oaks is an activity-based park featuring a basketball court and waterfront view.

Ken Burn Park is a resource-based facility featuring a 1/3-mile walk around a lake with a fountain feature. Leashed pets are permitted.

Larry Haines Memorial Park is a resource-based facility featuring benches, a kayak / paddleboard launch, and a swing. There is no parking available on-site.

Special Parks

Golf Course at Cypress Head is an activity-based park featuring a 6,832 yard 18-hole golf course, lighted driving range, pro shop, restaurant, and a banquet room. It is a municipal golf course managed by Kempersports. The Course was beautifully restored and reopened to the public in November 2015.

Russell Property is a resource-based open space presently with planned development of camping cabins, a ropes course, and a banquet / meeting facility.

Adjacent Facilities

There are public recreation facilities locating in adjacent jurisdictional communities, such as surrounding cities and the County. Within a one-mile buffer around the City, the following recreation facilities are available:

Volusia County

Toronita Avenue Beach Park is a 1.93-acre facility that provides restrooms, showers, and parking for the beach. There is a signalized crossing to the Toronita Avenue Public Beach Access Point.



Daytona Beach Facilities

Shangri-La Mini Park is a 0.67-acre activity-based park featuring a basketball court and covered picnic area with two tables.

Daytona Beach Shores Facilities

Sunset Park is a 0.15-acre resource-based park located at the end of Van Avenue in Daytona Beach Shores. It is identified as a “foot traffic” park which provides benches overlooking scenic river views.

Van Avenue Park is a 0.33-acre resource-based beachfront park which offers restrooms, beach access, and a picnic area.

Dahlia Park is a 0.25-acre resource-based beachfront park that provides beach access, picnic areas, and restrooms.

Larry Fornari Park is a 0.63-acre resource-based beachfront park which offers beach access, a picnic area, playground, and restrooms.

Max Samuely Park is a 0.37-acre activity-based park featuring a pavilion for events, benches, a picnic area, restrooms, and the Court of Flags, which flies the national flags of countries representing some of the ethnic origins of Shores’ residents, visitors, and businesspeople.

Mcelroy Park is a 3.48-acre activity-based park that offers a basketball court, 10 pickleball courts, picnic area, playground, and restrooms.

Oceans Racquet & Recreation Club is a 4.15-acre activity-based park that provides six tennis courts, restrooms, and a shaded area with seating, as well as a garden and fountain features. The courts primarily are limited to Shores residents, with Court #6 being open play from 8:00am – 9:30am and 11:00am to 12:30pm.

Ponce Inlet Facilities

Ponce Preserve is a 56-acre resource-based park. At the heart of the park is the Green Mound State Archaeological Site, an ancient Indian midden. The full park features a boardwalk, fishing, kayak/canoe launch, a pavilion, picnic areas / shelters, a playground, restrooms, and trails.

Old Carriage Park is a 0.07-acre resource-based park which provides view of Wilbur Bay and the Wilbur Bay Wetlands.

Wilbur Bay Wetlands is a 33-acre resource-based park. The majority of the acreage is not accessible, but there are picnic tables on the southern corner of the park abutting Peninsula Dr that allow for enjoyment of the view.

Elbers Sunset Park is a 0.03-acre resource-based pocket park that provides a bench and a view of the Halifax River.

South Daytona Facilities

Blaine O’Neal Park is a 11-acre activity-based park with a baseball field, restrooms, pavilion with picnic tables, and a 3-acre lake surrounded by a walking path.

Magnolia Park is 1-acre resource-based park featuring facilities for disabled and elderly visitors to fish in a small pond, as well as a playground, picnic tables, and shaded seating.

Ned Wagner Park is a 2-acre activity-based park that provides a small playground, open playfield, and an outdoor basketball court.



Reed Canal Park is a 35-acre is an activity-based park featuring shell walking trails in the nature area, picnic facilities and restrooms, multipurpose field for flag football/soccer, a barrier free playground, disc golf course, lighted concrete paths around the lake, and picnic facilities for large and small groups.

Central Park is a 2-acre activity-based park with a walking path.

Melodie Park is a 2-acre activity-based park that provides benches, walking paths, a tennis court, and an outside basketball court.

Private Sector Facilities

There are additional private facilities available in some residential facilities, and often new residential communities, as well as multi-family and planned unit developments provide recreation facilities as part of their development to remain competitive in the market. Whether or not such developers provide recreational facilities, they are still subject to the City's recreation impact fee.

Planned Facilities

Table 3. Planned Facilities

Short-Term Projects (≤10 years)
Coraci North - This project involves purchase of an additional 100 acres and construction of 4 new softball fields, six new soccer fields, restrooms, parking, and a 5k trail around the entire park including Coraci South. The project will also include new roads and utility work. Proposed funding is from bonds. This project will provide expanded recreational opportunities and benefit the level of service for the City.
West Side Community Center - This project will provide for the construction of a 15,000 SF facility with activity rooms, gymnasiums, and park improvements to include a possible splash pad, skatepark, and parking lot improvements. Proposed funding is from bonds. This project will provide expanded recreational opportunities for the City.
Willow Run Soccer Field - This project will design and build 2 new soccer fields with a support building and parking. Irrigation, sports turf, sidewalks, and sports lighting will be included. Proposed funding is from bonds. This project will provide expanded recreational opportunities and benefit the level of service for the City.
Adult Activity Center/White Place Park - This project will include design for sidewalks, a playground, picnic pavilion, open green space, renovation of existing pickleball courts, and construction of a drainage pond with walkways and lighting. Proposed funding is from bonds. This project will provide expanded recreational opportunities for the City.
Train Depot - This project will renovate the existing depot into a museum, design a park with a train theme to include restrooms, parking, and train car viewing areas. Proposed funding is from bonds. This project will provide expanded recreational opportunities for the City.
Long-Term Projects (>10 years)
Central Wellfield Property - Develop trails for mountain bikes, dirt bikes, and 4-wheelers, and a comfort station (i.e. a small pavilion with public restrooms).
Cross-town Trail - Develop a 12-foot-wide paved bicycle and pedestrian trail within the FPL transmission corridor easement from Clyde Morris Boulevard to Jackson Street, crossing Nova Road.
Russell Property – Develop camping cabins, a ropes course, and a banquet / meeting facility.



Existing Level-of-Service Standards

The City's adopted Level-of-Service (LOS) Standards account for overall parkland as well as different types of facilities, specifically baseball or softball fields, basketball courts, multipurpose fields, tennis courts, and neighborhood centers. The LOS identifies the number of facilities the City should provide based on the City's total population. The LOS for each facility is shown in Table 4.

Table 4. Existing Level-of-Service Standards

Facility	Unit of Measure
Parkland	7 acres per 1,000 persons
Ball Fields	1 field per 5,000 persons
Basketball Courts	1 court per 4,000 persons
Multipurpose Fields	1 field per 3,500 persons
Tennis Courts	1 court per 4,000 persons
Neighborhood Centers	1 facility per 15,000 persons

Source: City of Port Orange, 2023

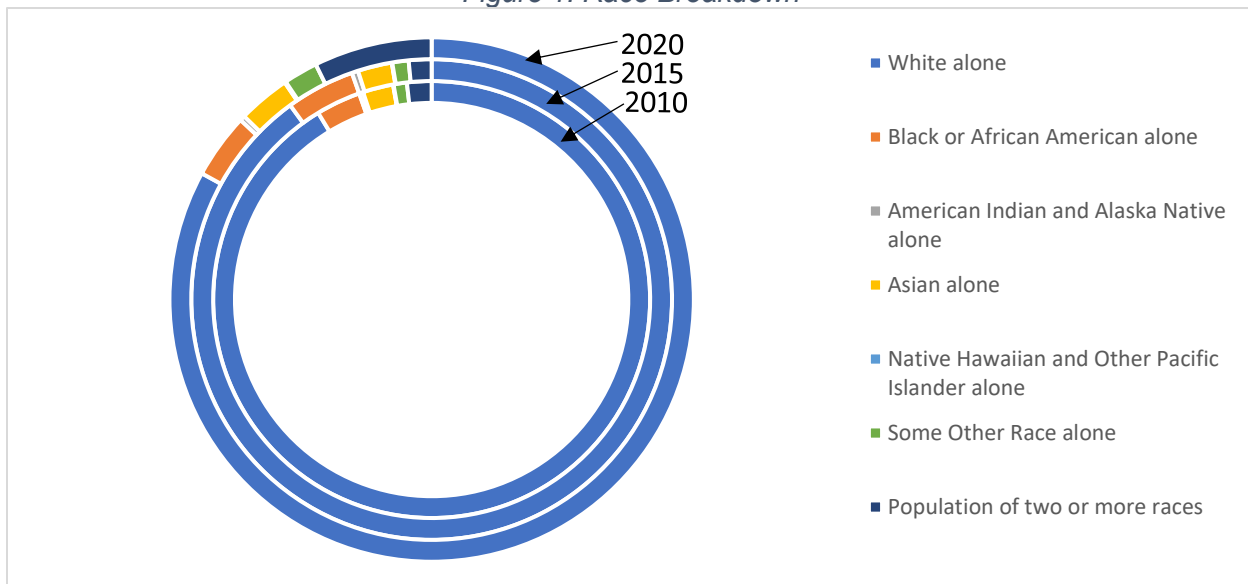
Demographics

Demographics provide a breakdown of the current community makeup and how the community has changed over time, allowing for a glimpse into the future makeup of the City. With this data, we will know the average age, ethnicity, income, household size, and family size.

Generally, the demographics show a growing population. The City has grown from 56,048 people in the 2010 Decennial Census to 62,596 in the 2020 Decennial Census. This growth has included an increasing number of non-white residents, specifically Native Hawaiian and other Pacific Islanders and Asians as well as races not provided on the census and populations of two or more races (

Figure 1). There has additionally been an increasing number of residents identifying as Hispanic or Latino.

Figure 1. Race Breakdown

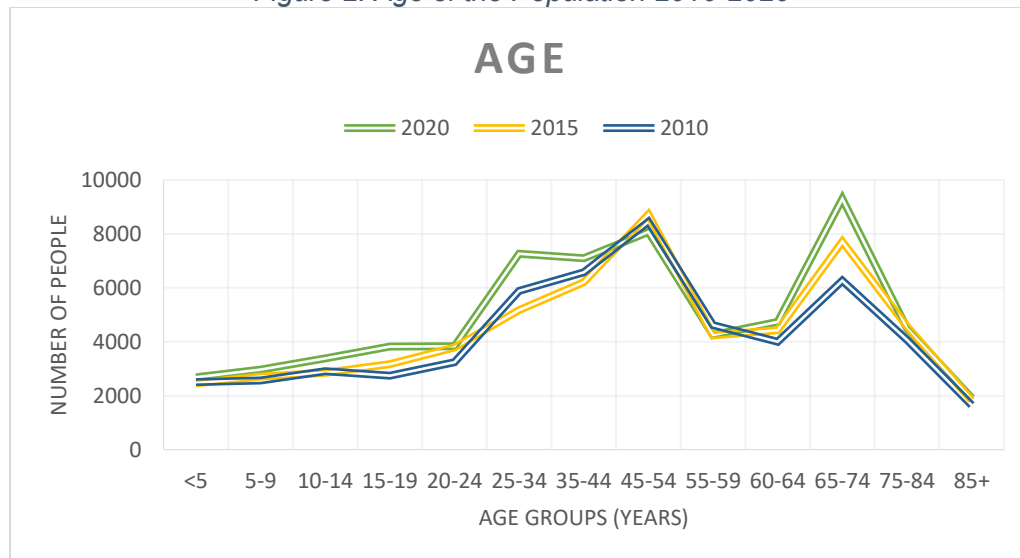


Source: 2020 Decennial Census, 2015 American Community Survey, 2010 Decennial Census;



The median age for the community has decreased minutely, impacted by both an increase in the youth and elderly populations. The portions of the population aged 5 to 19 has increased from previous years, as well as those aged 25 to 34. This is balanced with a continuous sharp increase in the population aged 65-74 (Figure 2).

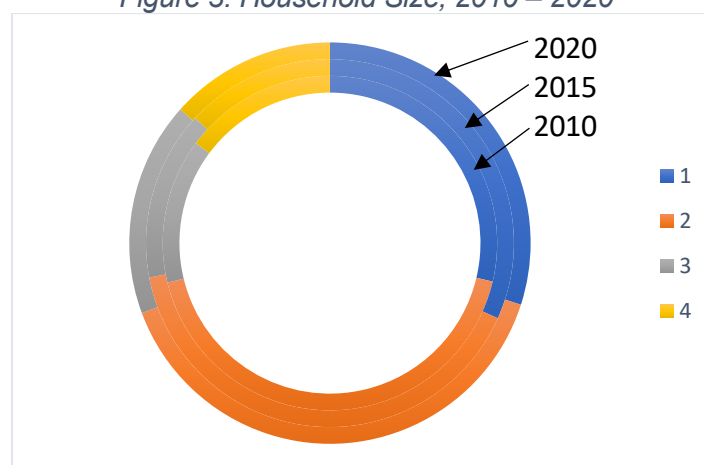
Figure 2. Age of the Population 2010-2020



Source: American Community Survey, 2010, 2015, and 2020;

Port Orange has experienced an increase in the number of housing units on the market, from 27,972 in 2010 to 30,285 in 2020. Household size has meanwhile fluctuated (Figure 3), with 1-person households experiencing a minor increase followed by a decrease over the period, 2-person households decreasing, and 4-or-more-person households decreasing then increasing. 3-person households have increased from 2010 to 2020. The average household size has grown from 2.36 in 2010 to 2.4 in 2020.

Figure 3. Household Size, 2010 – 2020



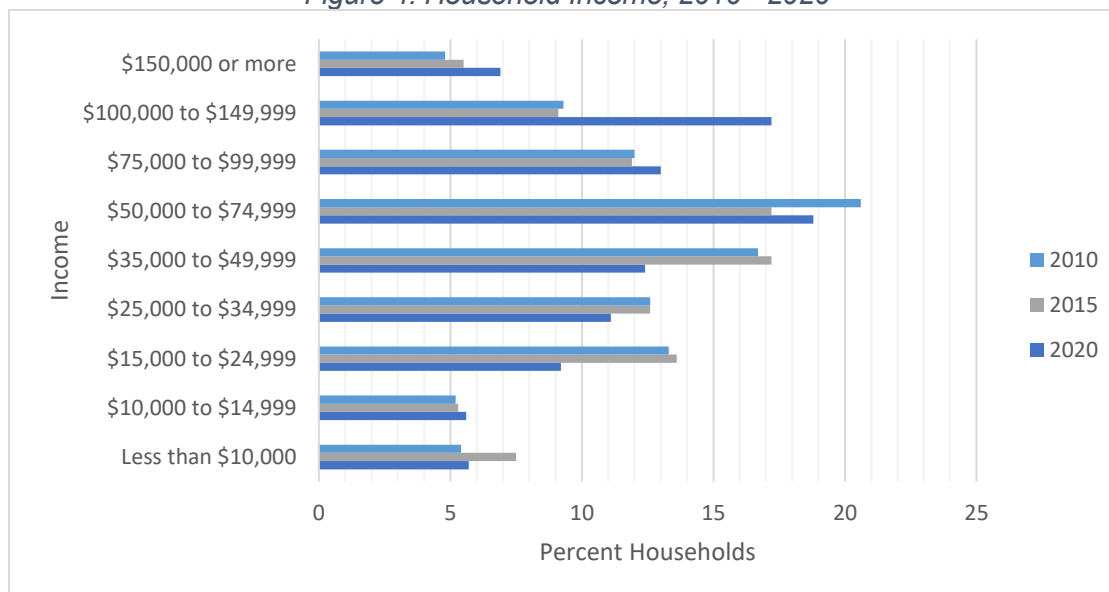
Source: American Community Survey, 2010, 2015, and 2020;

Household income has also increased (Figure 4), with the median income growing from \$46,572 in 2010 to \$56,242. There has been a decrease in the number of households earning between \$15,000 and \$49,999. The number of households earning \$50,000 to \$74,999 has fluctuated over time,



ending up lower in 2020 than it was 2010. These decreases are somewhat balanced by more households in 2020 earning over \$100,000 compared to 2015 and 2010. Overall, in 2020, most households are earning \$50,000-\$74,999, followed closely by \$100,000-\$149,999, which is a change from earlier years – in 2010 and 2015, most households earned between \$35,000 and \$74,499.

Figure 4. Household Income, 2010 - 2020



Source: American Community Survey, 2010, 2015, and 2020;

In summary, the demographics data is showing an increase in minority communities, children, the elderly, household size, and household income. These are all important considerations when determining the community's recreation needs.

Analysis

With an understanding of the City of Port Orange, its residents, and its existing recreation facilities, it is imperative to use that information to analyze the City's recreation and identify opportunities. This analysis will consider state and regional benchmarks to evaluate the City's offerings and ensure community needs are and will be met going forward.

The 2019 Statewide Comprehensive Outdoor Recreation Plan (SCORP) identifies the top 10 desired facilities among residents:

1. Hiking / walking trails
2. Biking paths / trails
3. Nature / Interpretive Trails
4. Community parks
5. Wildlife viewing areas / overlooks
6. Paved walkways
7. Playgrounds
8. Beach access / parking
9. Off-leash dog areas
10. Campgrounds

The 2019 SCORP also highlights trending recreational activities, such as pickleball, which is identified as the fastest growing sport in the U.S. with more than 2.8 million participants and 21,000 indoor and outdoor courts.



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Looking at the SCORP, the report breaks down facility types to a very minute level. Historically, Port Orange has not done the same, using broader categories to encapsulate like facilities, such as biking paths and walking trails. Port Orange's recreation facilities are generally in alignment with the top facilities identified in the 2019 SCORP.

Level of Service

Level of Service Comparison

Table 5 compares the existing levels of service for Port Orange, Volusia County, other municipalities in Volusia County, the Central East Region (2019 SCORP), and statewide (2019 SCORP). While such comparisons provide a general idea of the similarities and differences between offerings, they should not be taken as indictments of any one community due to variations in types of offerings, total land area, population, and area median income. The table reviews facilities currently tracked in Port Orange. Some of the municipalities included track additional facilities, such as swimming pools, golf course holes, trail mileage, and more.

For ease of direct comparison, all levels of service have been recalculated to reflect "per 1,000 residents." For example, for Port Orange, basketball courts are provided at a 1 court per 4,000 residents LOS. To reflect this at "per 1,000 residents," one should divide the facility numbers and the resident number by 4, which equals 0.25 courts per 1,000 residents.

Table 5. Level of Service Comparison

2020 Population	553,543	62,596	72,647	30,142	93,692	43,080	-	21,538,187
2020 Median Income	\$52,407	\$56,242	\$38,686	\$61,885	\$56,760	\$55,189	-	\$57,703
Facility	Volusia County	Port Orange	Daytona Beach	New Smyrna Beach	Deltona	Ormond Beach	Central East Region¹	Florida¹
Parkland (acres)	7 ²	7	3.5	-	3.5-4.5	13 ³	-	
Ball Fields	-	0.20	0.25	0.10	-	0.613	1.33	0.69
Basketball Courts	-	0.25	0.33	0.05	-	-	1.23	0.70
Soccer Fields ⁴	-	0.29	-	0.04	-	0.271	0.25	0.11
Tennis Courts	-	0.25	0.33	0.10	-	0.548	1.19	0.73
Neighborhood Centers	-	0.067	-	-	-	0.099	-	-

1. Port Orange is located within the Central East Region as delineated by the 2019 SCORP. LOS based on the year 2025.
2. Volusia requires 2 acres/1,000 of local parks and 5 acres/1,000 of district parks.
3. The 13 acres is broken down by park type – 0.512/1,000 for mini parks, 0.837/1,000 for Neighborhood Parks, 1.801/1,000 for community parks, 3.274/1,000 for large sports complex parks, 5.343/1,000 for natural resource parks, and 1.278/1,000 for special purpose/use parks.
4. Multipurpose Fields in Port Orange.

Sources: [U.S. Census Bureau](#), Volusia County Comprehensive Plan (2022), Daytona Beach Comprehensive Plan (2021), New Smyrna Beach Comprehensive Plan (2020), Deltona Comprehensive Plan (2018), Ormond Beach Parks and Recreation Master Plan (2005), 2019 Statewide Comprehensive Outdoor Recreation Plan [SCORP]

Volusia County does not have individual levels-of-service specific to facility types beyond parkland, but the County does require a certain number of facilities at each of their park types. Deltona does not identify facility requirements beyond parkland acreage, but their comprehensive plan does provide guidelines and recommendations.

Overall,



Table 5 shows that Port Orange aims to offer more parkland and identified facilities than New Smyrna Beach and Deltona. Daytona Beach offers some facilities at a near similar capacity but considers additional facility types in their levels of service and offers less park space overall. Port Orange has a lower level of service than Ormond Beach, the Central East Region, and Florida – except for soccer fields, where Port Orange outperforms all other municipalities, as well as the region and state.

Extra Jurisdictional Demand

Parks provided by the City of Port Orange are available to both City residents and residents of other municipalities and unincorporated Volusia County. Similarly, parks outside of the City are also available generally to City residents. There are four municipalities immediately adjacent to Port Orange: Daytona Beach, South Daytona, Ponce Inlet, and New Smyrna Beach. Each of these locations as well as Volusia County has established their own recreation level of service standards.

Simplifying the Level of Service Standards

The types of facilities accounted for in level of service (LOS) vary from community to community, ranging from communities which only identify a level of park acreage per 1,000 persons all the way up to communities which may have 11 or more level-of-service requirements to meet. Previously, in the State of Florida, recreation concurrency was mandated statewide, requiring the establishment and maintenance of level(s) of service related to recreation in order to guide development and adequately evaluate project and community needs. Since the last major Comprehensive Plan update, however, statutory changes have removed the statewide mandatory concurrency requirement for recreation facilities (Florida Statutes 163.3180). A municipality may opt for public facilities beyond those identified in FS 163.3180 (sanitary sewer, solid waste, potable water, and drainage) to be locally subject to concurrency.

As part of this update and analysis, the City explored modifications to their LOS, including combining Tennis Courts and Basketball Courts into Sports Courts as well as combining Ball Fields and Multipurpose Fields into Sports Fields. However, due to the statutory change coupled with the City's desire to be responsive to community needs and changing trends, the City opted to simplify the LOS standards to only include park acreage per 1,000 persons. This simplification is not intended to decrease the LOS the City provides but is intended to foster the proactive provision of highly sought facilities.

The demand analysis is provided with this DIA for informational purposes only and is not intended to construe a requirement for concurrency or a specific level of service. The City is committed to the provision of enriching, diverse recreational facilities and experiences.

Projected Demand

Current and future demands for recreation space are calculated by applying level of service standards to the population projections for the City of Port Orange. The City is retaining, as part of this update, a level of service standard for parkland, 7 acres per 1,000 persons. As provided in the Future Land Use Data Inventory and Analysis, the population in Port Orange is expected to grow at a slow but steady rate (Table 6). As established in the Future Land Use DIA, Port Orange population projections were prepared based on the historical population ratio between Port Orange and Volusia County, further substantiated by the University of Florida's Bureau of Economic and Business Research 2025-2050 county-level population projections.

Table 6. Population Projections

Year**	2020*	2025	2030	2035	2040	2045
Population	62,596	66,317	69,446	71,853	73,817	75,515



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Source: *2020 Decennial Census; **UF BEBR, 2023;

In the 2022 CMR, the City is meeting the recreation demand for parkland, sports fields, sports courts, and neighborhood centers. Table 7 projects demand through the planning period only for parkland based on facilities existing today and the change in facility counts anticipated prior to 2030. Facility counts will change in advance of 2030 for two reasons: (1) By 2030, the interlocal agreements establishing public access to recreational facilities at Creekside Middle School and Silver Sands Middle School will expire; facilities at these locations are removed from the total count in Table 7. (2) By 2030, the City intends to expand Coraci Park by 100 acres, adding four baseball fields and ten multipurpose fields; the “Planned” column in

Table 8 accounts for these increases.

Table 7. Recreation Demand 2020-2045

Facility	Existing	2020		2025		Existing	2030		2035		2040		2045	
		R	+/-	R	+/-		R	+/-	R	+/-	R	+/-	R	+/-
Parkland	540.6	438	102	464	76	502.7	486	17	503	0	517	(14)	529	(26)

Table 8. Recreation Demand 2030-2045 with Coraci Expansion

Facility	Planned	2030		2035		2040		2045	
		R	+/-	R	+/-	R	+/-	R	+/-
Parkland	602.7	486	117	503	100.3	517	85.7	529	73.7

Table 7 Table 7. Recreation Demand 2020-2045 reveals the City will become deficient in Parkland by 2040, beginning when the Interlocal Agreements with two middle schools expire. However, if the City expands Coraci Park, which will include an increase in Parkland, the City will continue to exceed the established levels of service through the planning period.



Chapter 7

COASTAL ZONE MANAGEMENT

Data Inventory & Analysis



Introduction

The Coastal Zone Management Element is an integral part of the Comprehensive Plan that coastal communities must prepare in accordance with State legislation. The purpose of the Element is to plan for and where appropriate restrict development activities where such activities would damage or destroy coastal resources, protect human life, and limit public expenditures in areas that are subject to destruction by natural disaster (Section 163.3178(1), Florida Statutes [F.S.]).

Pursuant to the requirements of Chapter 163 of the Florida Statutes, the Coastal Zone Management Element consists of a data inventory and analysis that influences the overarching goals, objectives, and policies. This Element sets the foundation for the City to protect the quality of the coastal zone environment and protect life and property from natural disasters.

Within the framework of the Comprehensive Plan, the Coastal Zone Management Element has a distinct function. It is written to address issues of land use, transportation, public access, and public services & safety, facilities, and infrastructure.

Volusia County and the coastal municipalities cooperated in the preparation of the original Element in 1989. Early on, the County and coastal communities recognized that coastal issues and resources should be coordinated from a systems approach. Environmental systems such as estuaries, watershed basins, or wildlife habitat, and man-made systems like traffic circulation or drainage structures, do not start or stop at political boundaries. The original Coastal Zone Management Element was written for the County's Comprehensive Plan, with the inventory, the analysis, and the goals, objectives and policies drafted in a broad-based structure so that each community could choose to adopt all or part of the element into their individual Comprehensive Plans. The City modified the goals, objectives, and policies of the plan to suit its own specific needs.

The goal of the Element is to encourage coastal communities to work together to identify common problems. Utilizing the Element as a guide, they are empowered to identify solutions and their implementation. Cooperation is the key to success of the Elements within the Comprehensive Management Plan. Maps, as referenced herein, are available in the Map Series, following the Introductory Chapter of the Plan.

Coastal Resources

Coastal Hydrological Systems

Volusia County is a coastal area intricate in nature. Its unique composition of estuaries, rivers, barrier islands, and watersheds make managing these resources more. Watersheds are the first order ecosystem which is used to measure the status of many elements that are influenced by both human and natural activities. Physical influences in the watershed directly affect its function in the landscape. The biological communities are affected by natural forces such as tidal fluctuations, rainfall, heat, energy, winds, and sunlight. These key natural factors drive the complexity of the watershed in its function. The soils, water, and biota are all intimately influenced by these basic forces.

These forces can be influenced in a negative way by human activities such as development. In regard to management plans, the City will continue to work with Volusia County Environmental Management Division (EMD) to maintain, update, and implement management plans and standards to protect and conserve natural systems within the City. This will protect and stabilize (to the greatest level probable) the forces that shape the hydrological systems.



Historic practices in Volusia County have greatly affected the health and function of its hydrology and natural resources. Urbanization continues to expand. It is with the Coastal Zone Management Element that the City desires to manage these resources. Utilizing basic watershed management units, a consolidated effort can be used with these guiding principles:

- Mapping systems and their interactions
- Evaluating each system and its function
- Analyzing functions and their level of effect
- Engaging best management practices to minimize negative effects

Volusia County and its sensitive lands and coastal geography make these tasks complex. It also makes them more critical. This Element is the guideline to help establish these practices and their implementation.

Coastal Resource Management

Wetlands, estuaries, and surface waters are extremely valuable resources. They provide a of interactions with both the landscape and biota. The fluctuations of these shallow waters allow for large variety of habitats. These habitats provide conditions for support of some portion of the life cycle of many species. From commercial shellfish to sea grasses and beyond, these systems are critical to the continuance of the life cycles of many organisms.

An estuary is a unique ecosystem that is created when sea water and freshwater mix. The resulting fluctuations in water chemistry support a myriad of organisms and provide the means for which they survive and thrive. Flora and fauna rely on water quality of both water types. Therefore, it is critical that water quality in both freshwater systems and sea water remain of the highest value for it is at the very base of the pyramid of survival for the watershed.

The forest-dominated freshwater wetlands occur generally within the interior of the coastal zone which is west of the estuary. The protection of surface and ground water quality is key to the health of these wetlands.

Volusia County wetlands and coastal wetlands are protected under regulatory agencies. The governing agencies act together to protect these wetlands and their habitats. The U.S. Army Corps of Engineers (aided by the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service), Florida Department of Environmental Protection (FDEP), and the St. John's River Water Management District (SJRWMD) work together to address, evaluate, and permit activities that may affect these sensitive wetlands.

The complex coastal wetlands are unique habitats. Typically protected by upland coastal scrub, they are somewhat isolated in the landscape. Sparse in nature and species, these coastal scrub areas have continued to decline in acreage. They house and protect species that are not present in any other habitat and are of great importance to habitat diversity and the protection of this valuable reserve.

Within the coastal zone are found a variety of upland habitats. This diversity is reflected in the flora and fauna many of which are listed as threatened or endangered. Regulatory agencies do not provide protection for these upland areas. The coastal zone contains a variety of native upland habitats including pine flatwood, pine-mesic oak, temperate hardwoods, coastal scrub, palmetto prairie, cabbage palm, rangeland, sand pine, sand live oak, long leaf pine - xeric oak, and live oak and, without conservation, these habitats will continue to steadily disappear.



System Linkages

The interdependency of each individually mapped habitat and its resources should be considered when managing them. Understanding the broader and subtle connections between the habitats, natural systems, and all the inhabitants help create a big picture. The ability to plan each course of action relating to urbanization or land use changes that might affect them or their sources is important. Preservation of the most critical of these connections is key to both the existence and protection of such important natural resources.

Habitats are connected by both terrestrial and marine pathways. These connections go beyond the physical and encompass complex chemical interactions and dependencies for both flora and fauna. Water quality and availability and quality of habitat not only affect immediate utilization but rather extend to those habitats both near and far as they affect organisms at every level. Watersheds are not isolated from one another but are joined together by a multidimensional system of relationships that cross many scientific levels both above and below the surface.

Wetlands, by definition, include relationships that are both above and below the surface. The evaluation and management of wetlands and their contributing systems is critical for long-term sustainability. A broad ranging method of both cataloging and managing these coastal resources is necessary. However, wetland programs alone will not ensure the long-term viability of these habitats nor guarantee their ability to function as productive ecosystems which provide fish and wildlife habitat, water storage, and recreational values. Unless wetlands are evaluated and managed as a complete natural system, they are likely to exhibit significantly lower fauna/floral species composition and diversity due to altered water level and hydro-period, coupled with isolation from natural upland habitats.

Environmental Systems Corridors

Environmental Systems Corridors are designed as a contiguous pathway connecting wetlands and uplands regardless of boundaries, location, or ownership. This hydro-ecological pathway comprised of environmentally sensitive lands and waters ensure the quality of resources within each watershed will function at optimal levels. A hydro-ecological corridor allows for the maintenance and perpetuation of the complex biota and the necessary resources on which they survive. Construction of new corridors and restoration of existing disturbed corridors should be considered as a form of mitigation where appropriate. The establishment of such a corridor requires the cooperation of numerous entities and will be influenced by the results of in depth evaluation of available data.

Development regulations shall be utilized protecting habitat areas of species listed by the State of Florida and U.S. Fish and Wildlife Service as endangered, threatened, or of special concern where such species are sighted. This is discussed in more detail in the Conservation Element.

The environmental systems corridors have been shown on the Coastal Area Land Use Plans. Major systems connect the drainage courses of the Tomoka River and Spruce Creek. The City of Port Orange has also accepted a Shoreline Habitat Restoration and Management Plan (2009) to encourage Best Management Practices (BMPs) along the Halifax River. Regulatory techniques such as environmental impact assessments, overlay districts, setbacks and buffers, floating zones, density transfer and the use of transferable development rights can be incorporated into land development regulations as alternatives to traditional or conventional land use and development review practices. These critical water conveyances play an important role in preventing flooding during storm events.



Coastal Zone

The Coastal Zone includes the entire area of the City of Port Orange. The Coastal Zone includes a myriad of uses, including but not limited to commercial, residential, industrial, and institutional. The City will continue to utilize land use regulations that provide for the location, extent, and distribution of land uses in a manner that is consistent with the protection of coastal resources. These regulations should be in line with both the Conservation Element and the Future Land Use Element.

Land uses which have demonstrated adverse impacts on resources in the coastal zone shall be regulated to mitigate for those impacts. A survey for species of any level of concern is required and will be reviewed to assess the impact of development on the species.

Part of Volusia County's coastal resources remain intact even though the coastal area ecosystem has been altered by human activities. The future survival of these resources depends greatly on the decisions and management of land and its uses.

Significant environmental or ecological features, wildlife habitat, environmental system corridors or conservation areas shall be protected through a variety of mechanisms including buffer zones, restoration, limiting density and intensity, conservation easements, acquisition, density transfers, purchase of development rights or land exchanges, or other appropriate mechanisms. Such protection shall be accomplished in accordance with the provisions of the Future Land Use and Conservation Elements.

To ensure the future sustainability of these resources, management techniques will need to embrace a balance of both natural and manmade processes. The beauty of the natural coastal areas provide scenery as well as the very ecosystems that house many species both terrestrial and aquatic. The balanced coexistence of humans and nature will require careful checks and balances by which to measure future uses of resources.

Although the Coastal Zone Management Element is not intended to supersede the City and County land use plans, its findings and policies should be consistent with the Future Land Use Elements in the comprehensive plans of the county and each coastal city. Consistency is essential if the resource conservation goals set forth in this document are to be achieved. The environmental impact of development can be greatly mitigated if growth occurs within specific geographic areas, following design standards and principles which conserve vegetation and water quality and respect the natural features of each site. It is also equally important to limit the extent to which growth increases exposure to coastal hazards. By directing development away from areas most vulnerable to coastal storms -- especially hurricanes -- future losses of life and property can be minimized.

Standards for appropriate densities, intensities, buffer zones, resource protection, and location for development adjacent to coastal or aquatic and natural preserves, wildlife refuges, and environmental or ecological corridors serve to protect the natural character, scenic values, and public benefit of these coastal areas.

In order to achieve these objectives, the following generalized guidelines have been developed:

- 1) Utilize zoning districts or techniques to protect coastal resources. Such techniques could include overlay districts, floating zones, bonus ordinances, performance standards, fast-tracking of development applications, transferable development rights, or other incentive-based methods.



- 2) Future development and growth should occur in designated urban areas where public services and facilities are available or planned.
- 3) Priorities for shoreline land use shall be given to water-dependent uses over water-related land uses.

Redevelopment

Emphasis should be placed on infill development and redevelopment in existing urban areas. Areas identified in the future as having a high redevelopment probability shall be evaluated for appropriate land uses, eliminating unsafe conditions, and restoring coastal resources. Continue to cooperate and coordinate with other local governments, state agencies, and special districts in developing consistent standards, criteria and land development regulations for protection of coastal resources, as needed.

In 1995, the City established its first redevelopment plan for the Eastport Business Center. The Eastport Business Center redevelopment plan was followed by a second redevelopment plan in 1998. This effort created the Port Orange Town Center Redevelopment District, with the goal of re-establishing a mixed-used “downtown” in the City’s historic heart by the Halifax River. In 2006, the City created a Transportation Concurrency Exception Area (TCEA) that coincides with the Port Orange Town Center District boundary. The TCEA addresses the constraints associated with transportation concurrency in urban areas, along with specific development initiatives within the District. While a TCEA is not specifically a redevelopment program or mechanism, it can help facilitate redevelopment by alleviating the transportation concurrency requirements that are counterproductive to pedestrian activity. Such activity is crucial to the success and life of downtowns. The City’s Goals, Objectives, and Policies regarding redevelopment can be found within the Future Land Use and Housing Elements.

The Economy

One of the concerns of the City is the need for expansion of the local economic base. The present economic base is very limited, which means that the majority of the City’s General Fund revenue is provided by residential property owners. Although commercial and industrial development has grown, housing construction has continued to outpace any other type of development. This has been a major concern of local government officials who have worked with the area Chambers of Commerce, the Volusia Business Development Corporation and the County Economic Development Department to attract more jobs to the area. The City has taken a proactive role by developing two industrial parks and by offering incentive packages and fast-track permitting to attract high-wage employers. Currently, each park is half-full, and the City must continue its efforts to attract employers. Without a more diverse economic base, that includes various commercial, office and industrial uses, it is difficult for a City to fund and maintain the needed infrastructure and services required by residents. The City shall foster and encourage intergovernmental coordination in the coastal management area between Volusia County, the coastal cities, adjacent local governments, and regional, state, and federal governmental entities.

Historic Resources

In 1804, Patrick Dean was granted nearly 1000 acres from the Spanish Crown. As a city, Port Orange has flourished through civil war, abolition, and name changes. In 1866, nearly 500 freed slaves were brought to the lands along the Halifax river. The rich human history created a future home for many to enjoy.

The city is speckled with parks and vistas ranging from festival grounds to historic sites. There are two sites and two districts listed on the Natural Register of Historic Places: the Dunlawton Plantation-



Sugar Mill Ruins, located within a County-maintained park; the Spruce Creek Mound Complex, located within the Spruce Creek Preserve; the Dunlawton Avenue Historic District, located on Dunlawton Avenue east of Ridgewood Avenue; and the Gamble Place Historic District, located south of Taylor Road and north of Spruce Creek.

There are other individual buildings and structures listed in the Florida Master Site Files, two of which are also on the Natural Register of Historic Places: Grace Episcopal Church, located on Ridgewood Avenue; and the former FEC Train Depot, now located adjacent to the tracks off Herbert Street. A more detailed discussion regarding the City's historic resources can be found in the Future Land Use Element. Volusia County and the City of Port Orange strive to continue to protect and preserve historic and archaeological resources in the coastal zone consistent with the other Elements.

Water Quality

Pollution

Port Orange has vowed to protect, enhance, and improve the quality of the estuarine environment throughout its municipal limits. This requires the identification of potential sources of pollution affecting its waters.

There are two sources of pollution in water. There are point sources which are definable as a location and non-point sources which are generated over a larger area and a span of time. Urban runoff such as those from storms and construction are among the origins of water non-point pollution. Wastewater treatment plants are an example of point source polluters of receiving waterbodies.

Stormwater

Stormwater runoff, wastewater treatment plant effluent discharge and restricted water circulation are the leading factors contributing to water quality degradation. By utilizing Stormwater Management Regulations that consider the timing of discharge of fresh water to the estuary, the hydro-period of wetlands, as well as the potential loadings, consistent with the Drainage Sub-Element the City can continue to ensure water quality continues to improve.

The City plans to continue the enforcement of stormwater regulations prohibiting the construction of new pipes, ditches and canals which transport large volumes of fresh water rapidly to the estuaries and reduce existing freshwater discharges, based on the Volusia County Environmental Management and Health Department's water quality monitoring program.

Wastewater

The commitment to upgrade existing wastewater treatment plants should continue, utilizing the highest level of treatment feasible. Alternatives to discharging treated effluent into surface waters, such as re-use, alternative treatment methods (wetlands, vegetative) and land spreading, should be used. A priority should be placed on eliminating areas with a concentration of septic systems, particularly in proximity to Aquatic Preserves, Outstanding Florida Waters, open shellfish harvesting areas, and areas known or suspected to be impacting surface or groundwater quality.

The use of natural wetland systems for the detention and recycling of treated stormwater runoff should be utilized. Encouraging the establishment of living shorelines and the use of nonstructural shoreline stabilization measures within the estuarine environment will promote natural water quality improvement. The application of Best Management Practices can be effective in controlling non-point pollution. Runoff could be routed in such a way to provide natural filtration prior to discharge. Erosion identification can stop the input of soil pollution in stormwater. Streambank stabilization and vegetative buffer strips along water courses (such as the Tomoka River and Spruce Creek) will filter



pollutants and control direct runoff. Continued development of innovative scrubbing techniques for runoff should be supported. The environmental systems corridors should be utilized as a last resort to provide such detention and filtration.

Sampling

Continue to monitor and improve estuarine water quality by utilizing an on-going water quality sampling and monitoring program, in cooperation with Volusia County Environmental Management and the Volusia County Health Department. The County, through the Health Department, has instituted a water quality monitoring program. Water quality sampling stations have been established in the Halifax River, Rose Bay, and Spruce Creek. As a result of stormwater management projects, effluent reuse, and upgrading of wastewater treatment plants, these water bodies continue to show a water quality improvement. In addition, the City continues to cooperate with the Florida Department of Environmental Protection and the St. Johns River Water Management District in updating point and non-point source discharge permits to ensure accuracy and completeness.

A comprehensive water quality sampling and monitoring network shall be conducted for the coastal area by the Volusia County Environmental Management Division and the Volusia County Health Department. The data shall be evaluated on an annual basis to detect possible problems and to determine where corrective action is needed. The City shall cooperate in the monitoring program so that point and non-point sources and facilities which are identified as potential water quality problems are regularly and periodically inspected.

Details regarding Port Orange water quality issues are outlined in the Conservation Element. Wastewater treatment plant improvements and stormwater management projects are outlined in the Public Facilities Element. Specifically, new development and redevelopment activity is subject to the stormwater management policies outlined in the Drainage Sub-element, while the growing benefits to the City of the Reclaimed Water Program are outlined in the Sanitary Sewer Sub-element.

The City shall continue to utilize the Master Stormwater Management Plan to address specific and cumulative impacts to prevent estuarine pollution and control surface water runoff while cooperating with regional water quality planning efforts. Grates installed on all stormwater outfall pipes strive to prevent manatees from becoming trapped within the pipes. Finally, the City shall continue its commitment to improve and enhance water quality and estuarine conditions through intergovernmental cooperation by a variety of mechanisms such as:

1. Participation in ad-hoc or other special technical advisory committees.
2. Exchange of data and information among and between the County and the municipalities as well as Flagler and Brevard Counties.
3. Presentations and discussions with the Volusia Council of Governments.
4. Updating data in cooperation with FDEP and SJRWMD.
5. Notification of proposed programs, development regulations or activities that address water quality.
6. Implementing the policies or recommendations of the Aquatic Preserve Management Plans, the Volusia County Intercoastal Island Management Plan, and the City's Shoreline Habitat Restoration and Management Plan.
7. Participation and assistance in establishing and maintaining the water quality sampling and monitoring program.



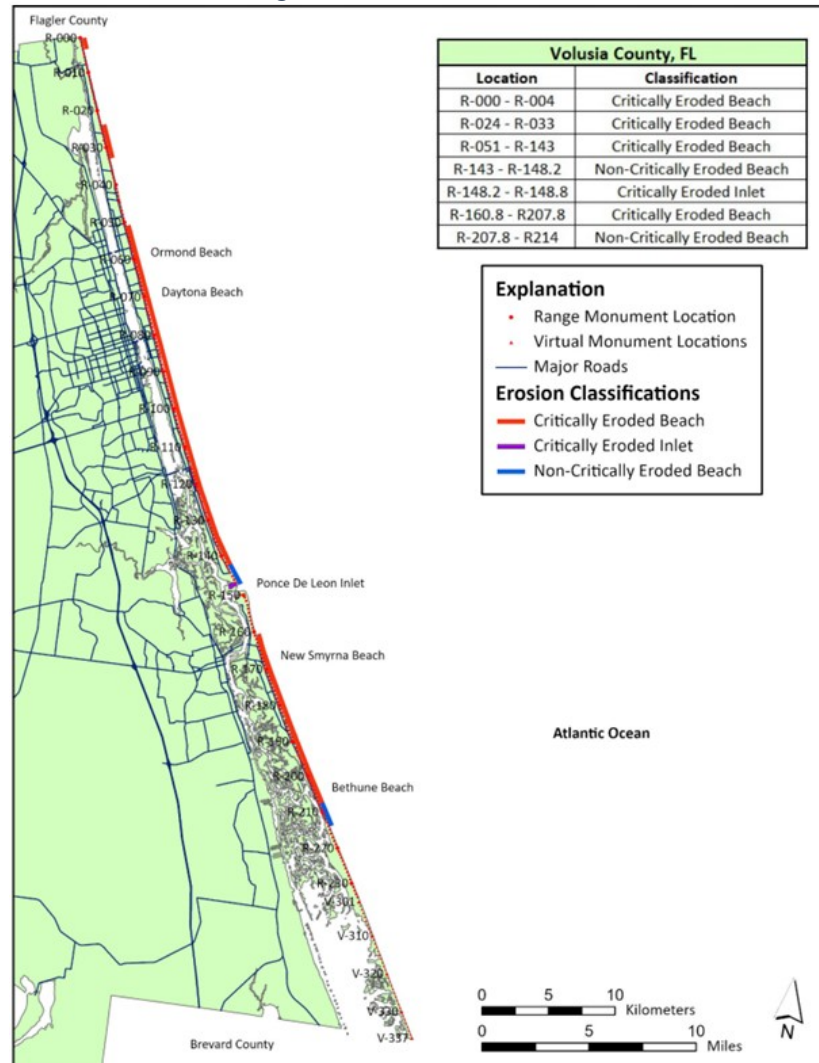
Coastal Hazards

The Coastal High Hazard Area (CHHA) is depicted in Map 7.1.

Hurricanes

It is always the responsibility of the City to adopt objectives and policies that lessen the impact of a destructive storm on human life, property, public facilities, and natural resources. In 2022, two major hurricanes struck the Florida coastline destroying property and natural resources. In Figure 1 you can see the lengths of critically eroded shoreline.

Figure 1. Shoreline Erosion



Source: Florida Department of Environmental Protection, July 2023

Future Land Use Map amendments in the Hurricane Vulnerability Zone shall strive to reduce and shall not increase the clearance time for evacuation of the population in the Hurricane Vulnerability Zone above 12 hours. Redevelopment activity shall not increase hurricane evacuation times beyond the established standard. During the development review process, the City shall assess the impact

of all new development along the hurricane evacuation route to determine clearance time for evacuation of the population in the Hurricane Vulnerability Zone.

The coastal areas are vulnerable to the significant hazards associated with hurricanes. The three major threats associated with hurricanes – storm surge, high winds, and freshwater flooding – constitute a major destructive force which requires the evacuation of residents while impeding the ability to safely evacuate.

Storm surge is an abnormal rise in sea level accompanying a hurricane or other intense storm, and whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone. It is primarily caused by high winds pushing on the ocean's surface. Storm surge is usually estimated by subtracting the normal or astronomic high tide from the observed storm tide. The height of the surge may vary considerably depending on the difference between the atmospheric pressure contained within the eye of the hurricane and that of the surrounding air, the depth and slope of the offshore bottom, the configuration of the coast itself, and the daily and monthly tide cycles. As a rule, the greater the storm surge, the more devastation that will result from inundation to the coastal area. As is evident by the mass destruction resulting in coastal areas from hurricane Ian (2022).

High winds present many types of hazards. Property destruction, debris deposited on evacuation routes, and dangers with flying debris all originate with the winds associated with hurricanes. The high winds generated from a storm may be 74 to 150+ miles per hour, with gusts up to 200 miles per hour. Evacuation is not considered safe after winds reach tropical storm force strength (39 miles per hour sustained).

The hazard from freshwater flooding occurs because of the large amount of rainfall which typically accompanies a hurricane. The rainfall tends to saturate the ground, preventing the absorption of additional water. Increased runoff overwhelms stormwater ponds and conveyances. Waterbodies suffer rises in water levels and the resulting flooding presents a hazard to evacuation as well as residential homes. Low-lying areas are the first to suffer in this type of inundation and therefore are typically included in the first alerts for evacuation.

The areas in the Coastal Zone which are especially vulnerable to a hurricane are referred to as the Hurricane Vulnerability Zone (HVZ). The HVZ consists of the area to be evacuated in a Category 3 or greater intensity hurricane as categorized on the Saffir/Simpson Hurricane Scale¹. Included in the City's Hurricane Vulnerability Zone are the peninsula area and the mainland area generally east of Nova Road to the Halifax River and along Spruce Creek.

Emergency Management & Evacuation of Population

In the event a hurricane was to pose a danger to the Port Orange area, actions would be guided by the severity and development of the impending event. These response actions are outlined in the City of Port Orange Comprehensive Emergency Management Plan (CEMP). The City, in conjunction with Volusia County Emergency Management Division, developed the CEMP to secure its compatibility with the Volusia County Comprehensive Emergency Management Plan and Section 252.38, Florida Statutes. The City's CEMP defines and documents the City's operations that will be

¹ The Saffir/Simpson Hurricane Scale categorizes hurricanes into 5 different types of storms. A Category 1 storm has winds of 74-95 mph, with storm surges of 4-5 feet above normal. A Category 2 storm has winds of 96-110 mph, with storm surges of 6-8 feet above normal. A Category 3 storm has winds of 111-130 mph, with storm surges of 9-12 feet above normal. A Category 4 storm has winds of 131-155 mph, with storm surges of 13-18 feet above normal. A Category 5 storm has winds greater than 155 mph, with storm surges greater than 18 feet above normal.



implemented to prepare for, respond to and recover from all types of hazard events, major emergencies, and disasters, including but not limited to hurricanes².

In addition, the City is a participant in "Volusia Prepares," a countywide, multi-jurisdictional mitigation strategy effort to reduce the vulnerabilities of the county communities to future hazards of all types. Volusia Prepares is active before and after disaster events. Before disasters, the City participates in technical analyses identifying potential hazards threatening the jurisdiction, defining vulnerabilities to those hazards, and formulating mitigation initiatives to eliminate or reduce those vulnerabilities. The mitigation initiatives are included in the City's portion of the Volusia County Multi-jurisdictional Local Mitigation Strategy and are scheduled for implementation when the resources to do so become available.

Evacuation of Population

The City and County CEMPs provide for the orderly movement of persons in the Coastal Zone from areas vulnerable to hurricanes. The evacuation routes established in these plans for Port Orange are shown on Map 7.2. Evacuation traffic flow patterns are consistent with State and County requirements. The City shall maintain the clearance time for the evacuation of the population in the Hurricane Vulnerability Zone at 12 hours based on a level-of-service standard "D," as defined in the Transportation Element, during emergency evacuations, and ensure consistency with the City's and Volusia County's hurricane evacuation plans.

The City shall ensure adequate roadway capacity to facilitate the evacuation of residents in the Hurricane Vulnerability Zone by evaluating any proposed changes in land use density/intensity against the currently acceptable evacuation plan. Future roadway improvements shall minimize the impact of flooding and storm damage on facilities.

Evacuation routes shall be designated in such a way as to distribute traffic demand to provide optimum utilization of available roadway facilities. The City shall incorporate updates to the East Central Florida Regional Planning Council's (ECFRPC) Regional Evacuation Study into the Coastal Zone Management Element of this Comprehensive Plan as needed. The City shall coordinate with VOTRAN to assist in the evacuation of transit dependent persons.

Shelter for Protection

The City, in cooperation with the American Red Cross, Volusia County and the coastal cities, shall designate hurricane evacuation shelters to protect the population in the Hurricane Vulnerability Zone, the area below the elevation of the Category 3 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The City's designated hurricane shelters will provide accommodations to those who evacuate in the event of a hurricane. These shelters are designated by, under the control of, and operated by the Volusia County School District and Volusia County Emergency Management. The City's designated hurricane shelters are listed in Table 1 below.

New hurricane emergency shelter space shall not be located in the Hurricane Vulnerability Zone or Coastal High Hazard Area. In determining the amount of shelter space needed, the Red Cross has assigned the figure of 20 square feet per person for general population shelters and 40 square feet per person for Special Needs shelters (SNS) and shall designate hurricane emergency shelter facilities to accommodate at least 10% of the population in the Hurricane Vulnerability Zone, based upon a standard of 20 square feet of shelter space per person. The capacity of the City's potential

² Natural hazards known to threaten the area include hurricanes, tornados, lightning, severe storms, flooding, drought, freezes, and wildfires.



shelters, as determined by the Volusia County School District in cooperation with Volusia County Emergency Management, is shown in Table 1 below:

Table 1. Port Orange Hurricane Shelter Capacities

FACILITY	CAPACITY (persons)
Creekside Middle School (General)	1584
Creekside Middle School (Special Needs)	127
Sweetwater Elementary School (General)	373
Atlantic High School (Special Needs)	97

Source: Florida Department of Emergency Management – Statewide Emergency Shelter Plan (2022)

According to the ECFRPC's Hurricane Evacuation Study, 2017 Update, Volusia County has adequate in-county public shelter capacities to meet public shelter demand through Evacuation Level C. Should the Red Cross decide that additional shelter space is needed for the City and those outside of the City who might seek shelter therein, buildings such as churches, meeting halls, etc. could be considered for designation as "Alternative Shelters" by the Red Cross.

With transportation routes, means, and destinations established, the three critical components in the evacuation of the population at risk are: 1) the time prior to hurricane landfall that an Evacuation Order can be given by the Volusia County Emergency Management Division with a reasonable degree of accuracy; 2) the time prior to hurricane landfall that operating conditions become unsafe for motorists due to flooding and winds (pre-landfall hazard time); and 3) the clearance time³ required for persons to leave and reach safe shelter prior to actual landfall of the hurricane.

Once the pre-landfall hazard time is determined through estimates provided by the National Hurricane Center, evacuation times can be calculated through transportation analysis. The sum of pre-landfall hazard times and clearance times determines how many hours before the arrival of sustained tropical storm winds the Evacuation Order must be given. At 24 to 36 hours before projected landfall, areas are advised that a hurricane is imminent by the National Hurricane Center (NHC) and local National Weather Service. Pre-landfall hazard times range from 12 to 24 hours before landfall, when flooding or sustained tropical storm force winds might prevent an evacuation from being carried out.

It has been determined by the NHC that an Evacuation Order can be given with a reasonable degree of accuracy in Volusia County at 13 hours prior to landfall for a Category 1 or 2 hurricane and 24 hours prior to landfall for a Category 3, 4, or 5 hurricane.

Evacuation of the Port Orange Vulnerability Zone is available by way of the Port Orange bridge and Dunlawton Avenue. In evaluating the ability of this roadway system to evacuate the population at risk, the roadway level of service and peak hour capacity must be considered.

The evacuation clearance time for residents of only the City of Port Orange cannot be determined as resident from other areas will likely be utilizing the bridge for evacuation. The City should analyze the overall evacuation time in the area of Dunlawton Avenue as the level of service (LOS) may be affected. The City should incorporate any recent findings into future updates of the Coastal Zone Management Element as soon thereafter as possible.

³ Clearance time is the time required to evacuate the population at risk prior to the arrival of sustained tropical storm-force winds (39 mph.)



Mitigation of Property

The City shall utilize land development regulations governing development in the Coastal High Hazard Area that minimize danger to life and property. Prior to the development of public facilities in the Coastal High Hazard Area, the City shall determine that there are no other feasible sites outside that area. If constructed, all public facilities in the Coastal High Hazard Area, where necessary and appropriate, shall be flood-proof to ensure minimum damages from storms and hurricanes.

All new septic tanks in the Coastal High Hazard Area shall be fitted with back-flow preventers. The City's septic tank policies shall be guided by the Sanitary Sewer Sub-Element. City utility infrastructure shall be designed to withstand floods and wind damage associated with major storms and hurricanes. Furthermore, the City shall require, where necessary and appropriate, that electric, telephone, television cable, and other private utility infrastructure be designed to withstand flood and storm damage. Specifically, except as provided below, all utility lines and services shall be installed underground at the owner's, developer's, or builder's expense, consistent with the Land Development Code Requirements.

All development in the Coastal High Hazard Area shall be consistent with the federal flood hazard requirements.

The City shall:

- ▲ Incorporate the recommendations of the Comprehensive Emergency Management Plan and the Local Mitigation Strategy (LMS), and other relevant interagency reports and agreements into the Comprehensive Plan and Land Development Code, as appropriate.
- ▲ Continue to participate in the county-wide Local Mitigation Strategy (LMS) program and implement the LMS, as necessary and appropriate, through capital improvements programming.
- ▲ Continue to participate in and comply with the National Flood Insurance Program (NFIP) regulations.
- ▲ Continue to participate in and pursue the improvement of Port Orange's insurance rating under the NFIP Community Rating System (CRS) to achieve flood insurance premium discounts for residents.
- ▲ Locate new fire and law enforcement facilities outside of the areas susceptible to hurricane storm damage or flooding unless service levels cannot be maintained without such locations.

Post-Disaster Redevelopment

Following a disaster level event, all new development and redevelopment in areas at high risk of flooding due to storm surge, high tide events, flash flood, stormwater runoff, and sea level rise shall be required to utilize building design specifications, engineering solutions, site development techniques, and management practices (i.e. requiring higher minimum floor elevations, retrofitting buildings for increased flood risk, design infrastructure that can withstand higher water levels such as raising seawalls and installing tidal valves, implementing natural drainage features such as bioswales, and other similar techniques and best practices); and is encouraged to use these building design specifications, engineering solutions, site development techniques, and management practices to remove real property from flood zone designations established by the Federal Emergency Management Agency.

These risk areas shall meet or exceed the flood-resistant construction requirements of the Florida Building Code (i.e., requiring higher minimum floor elevations, retrofitting buildings, requiring the use of flood damage-resistant materials). New development and redevelopment shall be consistent with



flood-resistant construction requirements in the Florida Building Code and applicable flood plain management regulations set forth in 44 C.F.R., part 60, as amended.

By 2045, the City shall strive to undertake an evaluation of the long-term problems related to post-disaster redevelopment, and based upon those findings, will prepare a Post-Disaster Redevelopment Plan. If necessary, amendments shall be made to the Comprehensive Plan based upon the Post-Disaster Redevelopment Plan. The contents of the Post-Disaster Redevelopment Plan are identified Objective 4.4 of this Element and its policies.

Coastal High Hazard Area

The Coastal High Hazard Area (CHHA), a component of the broader HVZ, is the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model. The CHHA is predominately comprised of conservation lands, residential areas, commercial development, and some institutional as well as industrial uses. The CHHA can be viewed in Map 7.1.

The City shall limit the use of public funds to subsidize existing and future development and redevelopment in the Coastal High Hazard Area that would increase exposure to coastal hazards for human life, property, public facilities, and natural resources, and shall direct population concentrations away from known or predicted Coastal High Hazard Areas. The City shall limit densities in the Coastal High Hazard Area (CHHA) by requiring that amendments to the Future Land Use Map for areas within the CHHA shall not increase the clearance time for evacuation of the population above 12 hours.

Port Orange Causeway Park contains three fishing piers, seven boat ramps, open space, picnic tables, restroom facilities, and parking facilities. Riverside Pavilion Park contains the Port Orange/South Daytona Chamber of Commerce and the Halifax Sport Fishing Club; it features a fishing pier; a children's play area; picnic tables; and parking facilities.

The corridor along U.S. 1 & Ridgewood Avenue is a proposed redevelopment area. Converting the existing non-conforming residential uses to commercial will aid to lower the population in this zone. This will, in turn, lower the number of residents that may be affected in the event of a hurricane or other event.

Although the Coastal High Hazard Area and its infrastructure are susceptible to storm surge, its location provides some natural protection. The peninsula acts as a barrier and breaks up potentially damaging waves. Port Orange Causeway Park and Riverside Pavilion Park are more susceptible to wind and flying debris damage than storm surge and wave action. With the peninsula acting as somewhat of a shield, this infrastructure is not expected to be seriously damaged except in a catastrophic hurricane event.

The City, through the annual budgeting and Capital Improvements Program processes, shall identify and limit expenditures that subsidize development and redevelopment in the Coastal High Hazard Area that would increase exposure to coastal hazards for human life, property, public facilities, and natural resources. Capital improvement projects in the Coastal High Hazard Area shall assist in restoring or enhancing natural resources.

The evacuation population in this area is expected to decline. The area has very few lots available and future redevelopment will only decrease this area's population by being comprised largely of commercial growth. The implementation of adopted levels of service and capital improvements identified in the Comprehensive Plan shall assist in improving the quality of coastal resources,



estuarine environments, shorelines, and other natural resources and shall direct population away from the Coastal High Hazard Area.

Public Access

Shoreline Access Facilities

The City will maintain and improve public access to the sovereign lands of the coastal management area through the provision of fishing piers, boat ramps, and marinas. These coastal access facilities are located throughout Volusia county.

Port Orange has no beachfront under its jurisdiction, discussion of beach access is omitted in this element. A detailed discussion is available in the Volusia County Coastal Management Element.

Coastal access facilities are geographically constrained, it is more appropriate to view them as regional facilities where service areas cross jurisdictional lines. The facilities that provide public access to coastal area beaches and inland waterways are classified into seven categories:

- 1) Coastal Beach Access Facilities (pedestrian and vehicular)
- 2) Fishing Piers
- 3) Marinas and Docks
- 4) Boat Ramps
- 5) Park Facilities
- 6) Undeveloped Lands
- 7) Scenic Roadways

(*The City does not have level-of-service standards for these types of facilities.)

Except for some undeveloped lands and scenic roadways, coastal access facilities are considered water-dependent uses. Water-dependent uses are subject to the environmental protection standards found within this and other Elements of the Comprehensive Plan, especially in regard to protection of the endangered Florida manatee.

Fishing Piers

Prior to the destruction from two hurricanes in 2022, there were approximately 3,758 linear feet of fishing pier within the City, along with several hundred feet of deep-water bulkhead and shoreline areas that are commonly used for fishing. Fishing pier needs shall be met through the utilization of fishing pier space located on existing bridges. The County, coastal cities, and Ponce de Leon Port Authority shall determine the appropriate location at which fishing pier space can be utilized in conjunction with existing bridges.

Boat Ramps

The City, in cooperation with Volusia County, the Ponce de Leon Inlet Port District, and the other coastal cities, shall endeavor to expand and construct boat ramps, as funding becomes available. Additional boat ramps should not be constructed in areas known to be critical to manatee survival. Given the significance of the Halifax River and Spruce Creek to the Florida manatee, any new ramps must be consistent with the Volusia County Manatee Protection Plan. Additional boat ramp lanes shall be constructed as needed countywide, consistent with the Volusia County Manatee Protection Plan. New riverfront recreational facilities will contain boat launching facilities as needed, consistent with the Volusia County Manatee Protection Plan.

Marinas and Docks

The City, in cooperation with Volusia County, the Ponce de Leon Port Authority, and the other coastal cities shall assist in providing the private sector the ability to accommodate the projected demand of additional marinas. Marinas shall be developed in accordance with the provisions of Objective 5.3



and corresponding policies of this Element. A priority shall be placed on the expansion of marina activity in the Port Orange Town Center.

Construction of a few larger regional facilities or expansion of existing facilities is preferable instead of permitting numerous, scattered, small marinas, each contributing to environmental degradation or associated negative impacts. In addition, dry storage should be particularly encouraged or required in lieu of or as part of wet slip construction. Dry slips allow proximity to water without the tremendous spatial demands of individual wet slips and without as much negative environmental impact. Marinas shall be encouraged to include both wet slip and dry slip capacity. Priority for new slips will be given to the expansion of existing marinas.

Scenic Routes

Scenic coastal areas showcase the beauty of the surrounding natural resources while highlighting the amenities available to both residents and travelers. The City does not presently contain federal, state, or county-designated Scenic Routes.

The County and coastal cities shall continue to cooperate on establishing corridor management strategies and recommendations to protect the scenic quality of identified scenic roadways and signage shall be provided to designate Scenic Roadways.

Manatee Protection Plan

The City of Port Orange shall protect the water resources within its jurisdiction by regulating the impacts of boating to this environment. These areas of shallow water provide critical habitat in which they graze, breed, and travel.

There continue to be manatee deaths in these areas due to a number of causes. Florida Fish and Wildlife Conservation Commission (FWCC) investigate, document, and analyze of death in Florida manatee. Such causes include watercraft-related, perinatal, human activity-related, undetermined, and natural. In recent years, the Florida manatee suffered large scale deaths and those causes are still under investigation.

The City shall not allow more than 1,890 powerboat slips (as defined in the MPP), including the 780 existing and 1,110 future slips, to be constructed within the City limits, based upon data and research compiled in the Volusia County Manatee Protection Plan, together with shoreline measurements, inventory of existing slips, City level of service and other data. Waterfront single-family residential parcels will not be denied their riparian rights to construct one dock per parcel. If single-family residential parcels are subdivided subsequent to the approval of the Volusia County Manatee Protection Plan, each additional parcel shall represent one powerboat slip to be deducted from the total. No less than ten percent of the future slips' allocation shall be applied to public use facilities.

In February 2001, the FWCC approved Phase I of the Volusia County Manatee Protection Plan (MPP), which addresses manatee/human interaction, habitat inventory, habitat protection, education, research, and governmental coordination. In October 2005, the FWCC approved Phase II, the Boat Facility Siting component, which establishes boat slip-to-shore line ratios throughout the County, mandates the use of specific siting criteria, and creates mitigation fees that will support the Manatee Conservation Fund for additional on-the-water manatee speed zone enforcement and conservation. All new marinas, boat ramps, and boat slips must be consistent with the MPP.

Land uses along waterfronts, permits for shoreline construction, new marinas or boat slips, and other water dependent or related requests will be considered with great care in order to continue to provide



protection for the Florida manatee in the waters of the City. Where the opportunity exists, the sharing of multi-slip facilities and aggregation of slips shall be encouraged during development and redevelopment, including for single-family residences. The data and analysis used to determine allowable densities of powerboat slips, as noted in Policy 5.5.1, shall be monitored by the re-evaluation of data in association with or concurrent with the periodic re-evaluation of the Volusia County Manatee Protection Plan.

Public Infrastructure

Public infrastructure and facilities needed to support coastal growth and development are under the authority of a variety of jurisdictions. The majority of this infrastructure and facilities, particularly potable water, sewer, and public buildings are the responsibility of individual municipalities. In some instances, a city may provide service to an adjacent jurisdiction. In other cases, the infrastructure or facility is provided by an independent agency or district such as the Volusia County School District. The City has adopted policies to limit the provision of public expenditures that would subsidize development in the Coastal High Hazard Area.

Water, Sewer, and Drainage

As discussed in the Public Facilities Element, the potable water and sanitary sewer systems are more than adequate for the population served. The Port Orange water utility currently serves a number of areas to include City of Port Orange, City of Daytona Beach Shores (south of Thames Avenue), Town of Ponce Inlet (wholesale account), Wilbur-By-The-Sea (unincorporated area), and other unincorporated non-designated areas.

The Reclaimed Water Program is a major element of the City's water conservation portfolio and continues to grow with demand increasing as developers are being required to install service connections to reclaimed water lines when available.

Development in prime aquifer water recharge areas should be consistent with the goal of protecting water resources. The City of Port Orange adopted a wellfield protection ordinance in September 1990 to protect potable water well fields from contamination. The City's Central Recharge Wellfield has been located inland to protect against saltwater intrusion. This is particularly important due to the designation by the SJRWMD of most of Volusia County, including the City of Port Orange, as a Priority Water Resource Caution Area.

Stormwater management systems: 1) should be designed to prohibit the untreated direct discharge of stormwater runoff into all natural waterways; 2) should not result in violation of adopted water quality standards; and 3) should be designed to remove oil and suspended solids prior to discharge.

All new development and redevelopment are required to meet the standards of the SJRWMD and the Port Orange Land Development Code. The level-of-service standard for the drainage system is the 25-year, 24-hour storm event. The Drainage Sub-element includes a more detailed discussion of stormwater drainage for each basin.



Chapter 8

CONSERVATION

Data Inventory & Analysis



Introduction

The purpose of this element is to promote the conservation, use and protection of natural resources in the City of Port Orange. The protection, conservation and promotion of these resources are important for the public welfare now and as the population increases in the City throughout the planning period. Natural resources are to be protected and conserved to the extent feasible as they serve or provide important functions for the environmental well-being of this community.

This element inventories and evaluates the natural resources within the City. As the population within the City increases, increasing pressure will be placed on the natural resources. This element will examine this issue and propose methods to protect, conserve and safely use these resources. The natural resources examined by this element include water (surface and ground), wildlife, vegetation, minerals, air, and soil. The examination of these resources includes an analysis of how to conserve them and an examination of potential pollution problems in the City. Maps, as referenced herein, are available in the Map Series, following the Introductory Chapter of the Plan.

Waterbodies

The City of Port Orange has wetlands, rivers, lakes, ponds, and canals, according to data retrieved from the St. Johns Water Management District and US Fish and Wildlife Service. Waterbodies within and adjacent to the City include: Halifax River, Spruce Creek, Fozzard Creek, Rose Bay, Strickland Bay (along southeast City limits), Turnbull Bay (southeast of City, connected to Strickland Bay), and numerous primarily man-made stormwater ponds. Wetlands are scattered throughout Port Orange with concentrations along the Halifax River and along Spruce Creek.

The US Environmental Protection Agency (EPA) identifies numerous area waters as an impaired. Issues include bacteria and other microbes, low oxygen, mercury, and metals. There are statewide plans in place to reduce mercury: [Statewide Mercury Total Maximum Daily Load \(TMDL\) as amended through 2020](#) and [Florida Statewide Mercury TMDL \(2014\)](#). Spruce Creek is also featured in its own [TMDL report](#) for dissolved oxygen (DO) and nutrients; the plan establishes the allowable loadings to Spruce Creek that would restore the waterbody. There are no other plans in place to rectify the impairments. Table 1 identifies the impaired waters in the area.

Table 1. Impaired Waters

Waterbody	Impairment	Designated Uses Impaired
Spruce Creek	Bacteria and other microbes, low oxygen, mercury, and metals; Dissolved oxygen and nutrients	Fish and Wildlife Propagation – Marine, Fish Consumption, Recreation
Tributary to Spruce Creek	Aquatic Weeds, Low Oxygen, Nitrogen and/or Phosphorus	Fish and Wildlife Propagation – Freshwater, Recreation
Rose Bay	Bacteria and, metals	Fish and Wildlife Propagation – Marine, Fish Consumption, Recreation

Source: FDEP, 2023

The Florida Department of Environmental Protection (DEP) deems some waterways “worthy of special protection because of their natural attributes.” These waterways are known as [Outstanding Florida Waters](#) (OFWs) and Aquatic Preserves. Such waters have restrictions on discharge or



activities within them to prevent the degradation of water quality. [Spruce Creek](#) is an OFW. There are no Aquatic Preserves within the City of Port Orange.

Conservation of Resources

Significant lands that are conserved within the City are identified in Map 8.2. These areas include:

- Doris Leeper Spruce Creek Preserve (912.9 acres within the City of Port Orange)
- Port Orange Wildlife Sanctuary (204.9 acres within the City of Port Orange)

There are areas of conservation land located throughout the City on private property. These conservation lands help protect natural resources, enhance environmental quality, conserve vital habitats, and reduce fragmentation within the City.

Threatened and Endangered Species

Wildlife and plant species which have been listed by the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWC) as being endangered or threatened in Volusia County are documented in Table 2.

This table is provided as a guide to project planning and is not a substitute for site-specific surveys. Such surveys may be needed to assess species' presence or absence, as well as the extent of project effects on listed species and/or designated critical habitat.

The following table lists those federal and state listed species known to be present in the County.

Table 2. Endangered/Threatened Species in Volusia County

Common Name	Scientific Name	Protection Status
Mammals		
Southeastern Beach Mouse	<i>Peromyscus polionotus niveiventris</i>	Threatened
West Indian Manatee	<i>Trichechus manatus</i>	Threatened
Birds		
Audubon's Crested Caracara	<i>Polyborus plancus audubonii</i>	Threatened
Eastern Black Rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	Threatened
Everglade Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	Endangered
Florida Scrub-jay	<i>Aphelocoma coerulescens</i>	Threatened
Piping Plover	<i>Charadrius melodus</i>	Threatened
Red Knot	<i>Calidris canutus rufa</i>	Threatened
Red-cockaded Woodpecker	<i>Picoides borealis</i>	Endangered
Wood Stork	<i>Mycteria americana</i>	Threatened
Least Tern	<i>Sternula antillarum</i>	State Threatened
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	State Threatened
Little Blue Heron	<i>Egretta caerulea</i>	State Threatened
Tricolored Heron	<i>Egretta tricolor</i>	State Threatened
Reptiles		
Atlantic Salt Marsh Snake	<i>Nerodia clarkii taeniata</i>	Threatened
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	Threatened
Gopher Tortoise	<i>Gopherus polyphemus</i>	State Threatened
Green Sea Turtle	<i>Chelonia mydas</i>	Threatened



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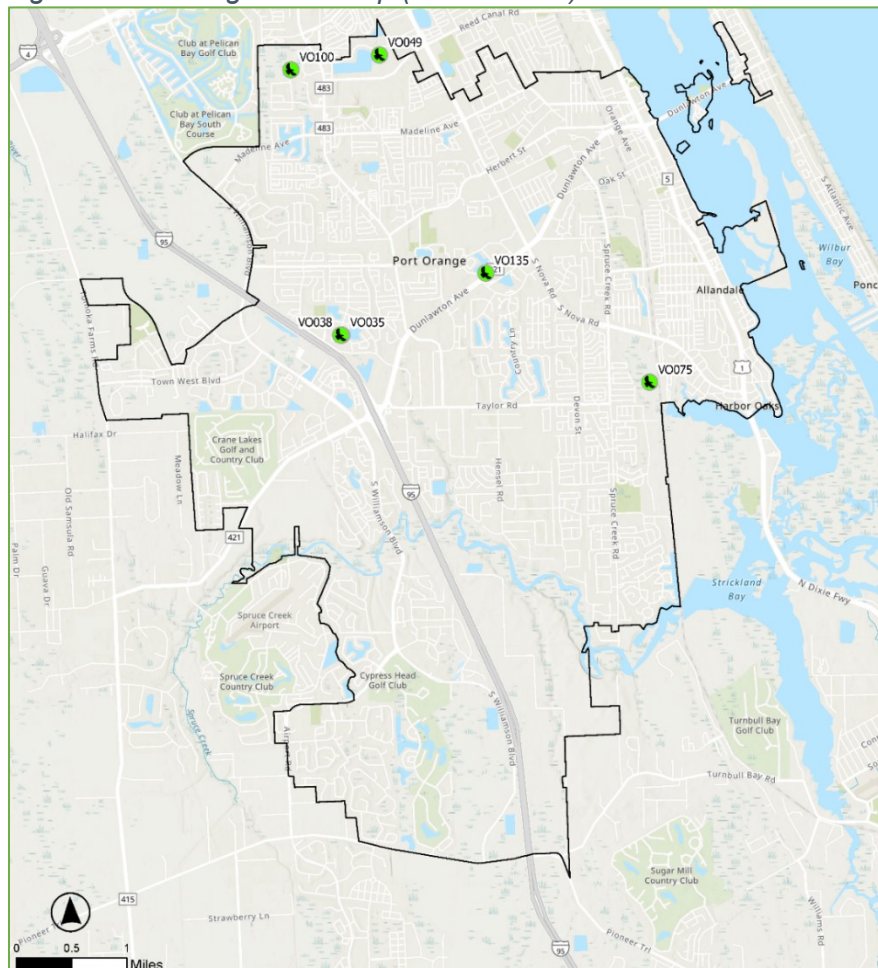
Common Name	Scientific Name	Protection Status
Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	Endangered
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	Endangered
Loggerhead Sea Turtle	<i>Caretta caretta</i>	Threatened
Sand Skink	<i>Neoseps reynoldsi</i>	Threatened
Fish		
Atlantic Sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	Endangered

Source: USFWS and FWC, 2022

Other species not federal or state listed that are still protected include the bald eagle (*Haliaeetus leucocephalus*) and Florida black bear (*Ursus americanus floridanus*). There are five known bald eagle nests within the City of Port Orange (VO049, VO100, VO035, VO135, and VO075) see Figure 1. Bald Eagle Nest Map.

The City of Port Orange is within the Central Bear Management Unit (BMU) and bears are considered “frequent” within a majority of the City Limits. There have been several black bear related calls to the FWC (as identified on FWC GIS Black Bear Related Calls in Florida data) within the City limits. These calls reported black bears either “In Yard” or “In Area.” There have been no black bear mortality events within the City.

Figure 1. Bald Eagle Nest Map (1998 – 2017)



Source: Florida Fish and Wildlife Conservation Commission, 2022



Land Use Cover

According to the St. Johns River Water Management District (SJRWMD) 2013-2016 land use data set, primary land uses and their acreages within the City's boundaries are shown in Table 3 below. Each of these land uses and their corresponding detailed land use covers within Port Orange are broken out in this section. Map 8.1 delineates the generalized locations of these SJRWMD land uses within the City. Vegetative communities included within these land uses shall be protected to the maximum extent practicable to reduce fragmentation of wildlife corridors. Changes to the character of the community's vegetation and related-densities will likely induce species sensitive to environmental changes to seek more attractive, undisturbed habitats in areas outside Port Orange's corporate limits. However, no abnormal impacts on flora or fauna are expected to occur; only those impacts normally associated with an area experiencing further urbanization are anticipated.

Table 3. Land Use Coverage

Land Use	Acreage	Percent
Urban and Built Up	11,053.7	63.4%
Agriculture	367.6	2.1%
Rangeland	389.3	2.2%
Upland Forests	2,130.2	12.2%
Water	1,095.6	6.3%
Wetlands	1,827.3	10.5%
Barren Lands	5.9	0.03%
Transportation, Communication, and Utilities	561.1	3.2%
Total	17,430.7	100%

Source: St. Johns River Water Management District, 2022

Urban and Built Up. The Urban and Built Up land use covers within Port Orange include the following:

- Residential, Low Density - Less than 2 dwelling units per acre
- Residential, Rural - Less than or equal to 0.5 dwelling units per acre (one unit on 2 or more acres)
- Low Density Under Construction
- Residential, Medium Density - Two to five dwelling units per acre
- Residential, Medium Density Under Construction
- Residential, High Density – 6 or more dwelling units per acre
- Commercial and Services
- Commercial and Services Under Construction
- Extractive
- Cemeteries
- Institutional
- Golf Courses
- Marinas
- Parks
- Other Recreational
- Community Recreational Facilities
- Open Land



Agriculture. The Agriculture land use covers within Port Orange include the following:

- Improved Pastures
- Woodland Pastures
- Field Crops
- Ornamentals
- Horse Farms

Rangeland. The Rangeland land use covers within Port Orange include the following:

- Herbaceous (Dry Prairie)
- Shrub and Brushland
- Mixed Rangeland

Upland Forests. The Upland Forests land use covers within Port Orange include the following:

- Pine Flatwoods
- Sand Pine
- Upland Hardwood Forest
- Hardwood-Coniferous Mixed
- Coniferous Plantations
- Forest Regeneration Areas

Water. The Water land use covers within Port Orange include the following:

- Streams and Waterways
- Lakes
- Reservoirs

Wetlands. The Wetlands land use covers within Port Orange include the following:

- Mangrove Swamps
- Mixed Wetland Hardwoods
- Willow and Elderberry
- Hydric Pine Flatwoods
- Cypress
- Wetland Forested Mixed
- Freshwater Marshes
- Saltwater Marshes
- Wet Prairies
- Emergent Aquatic Vegetation
- Treeless Hydric Savanna

Barren Land. The Barren Land land use covers within Port Orange include the following:

- Spoil Areas



Transportation, Communication, and Utilities. The Transportation, Communication, and Utilities land use covers within Port Orange include the following:

- Roads and Highways
- Auto Parking Facilities
- Electrical Power Facilities
- Water Supply Plants
- Sewage Treatment
- Surface Water Collection Ponds

Primary vegetative communities within the City that are listed above include, but are not limited to, herbaceous (dry prairie), shrub and brushland, pine flatwoods, hardwood-conifer mixed, mangrove swamp, mixed wetland hardwoods, cypress, hydric pine flatwoods, treeless hydric savanna, wetland forested mixed, freshwater marshes, and saltwater marshes. These primary vegetative communities indigenous to Port Orange are described below based upon data and information from the Florida Fish and Wildlife Conservation Commission as well as the Florida Natural Areas Inventory.

Herbaceous (Dry Prairie). Herbaceous (dry prairie) include upland nonagricultural, non-forested lands which contain no evidence of cattle grazing. It includes areas that have over 67% herbaceous cover, not counting any forested inclusions, which may be up to 25% of the area. It also includes prairie grasses which occur on the upland margins of the wetland zone and may be periodically inundated by water. Generally, it is the marginal area between marsh and upland forested areas. These grasslands are generally treeless but in wet areas would have many types of soils resulting in a variety of vegetation types dominated by grasses, sedges, rushes and other herbs while dryer grass areas would be dominated by wire grasses with some saw palmetto present.

Shrub and Brushland. Shrub and brushland includes wax myrtle, saltbush, sumac, elderberry, saw palmetto, blackberry, gallberry, fetterbush, staggerbush, broomsedge, dog fennel, together with oak, pine and other tree seedlings or saplings. Coastal scrub vegetation would include pioneer herbs and shrubs composed of such typical plants as sea purslane, sea grapes and sea oats without any one of these types being dominant.

Pine Flatwoods. Pine flatwoods include mesic pine woodland or mesic shrubland on flat sandy or limestone substrates, often with a hard pan that impedes drainage.

Hardwood-Conifer Mixed. This category includes upland with loamy soils and mesic-xeric woodlands. There is occasional fire (variable but as little as two up to 20-year interval) and an open to partially closed canopy over an open understory of mixed herbs and scattered shrub. Upland mixed coniferous/hardwood is dominated by a mixture of southern red oak, mockernut hickory, and longleaf or shortleaf pine with other mixed hardwoods. Wiregrass is infrequent.

Mangrove Swamp. Mangrove swamp includes estuarine wetland on muck/sand/or limestone substrate that is regularly inundated with saltwater by daily tides. The area is dominated by mangrove and mangrove associate species, including red mangrove, black mangrove, white mangrove, buttonwood.

Mixed Wetland Hardwoods. Mixed wetland hardwoods are wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined mixture of species.



Cypress. Cypress is dominated entirely by cypress, or these species are important in the canopy. There is a long hydroperiod.

Hydric Pine Flatwoods. Forest with a sparse to moderate canopy of slash pine. The understory is grasses, wiregrass, forbs, and at times with sparse saw palmetto.

Treeless Hydric Savanna. This category is typically dominated by wiregrass or cutthroat grass along with wetland plant associates.

Wetland Forested Mixed. Wetland forested mixed includes mixed wetlands forest communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the crown canopy composition.

Freshwater Marshes. The communities included in this category are characterized by having one or more of the following species predominate: Sawgrass, cattail, arrowhead, maidencane, buttonbush, cordgrass, giant cutgrass, switchgrass, bulrush, needlerush, common reed, and/or arrowroot.

Saltwater Marshes. Saltwater marshes are herbaceous communities that occur in coastal zones impacted by tides and seawater but are protected from large waves by either topography, a barrier island, or location. They have distinct zones of vegetation, each dominated by a single species of grass or rush. Saltmarsh cordgrass and needle rush are the primary species. Other characteristic species include Carolina sea lavender, perennial saltmarsh aster, wand loosestrife, marsh fimbry, saltwort, saltmeadow cordgrass, seaside oxeye, christmasberry, and shoreline seapurslane. The edge of the marsh nearest land is influenced by freshwater and may feature high marsh and inland species. Soils range from deep mucks with high clay and organic content to silts and fine sands.

Air Quality

Air quality sampling is the responsibility of the FDEP. FDEP does not presently monitor air quality in Port Orange area on a regular or periodic basis. The closest air quality monitoring station is within Daytona Beach. Pollution generated from commercial and industrial developments within and adjacent to the City is not anticipated to adversely affect the air quality of the City. Fugitive dust particles from land cleared for development may be experienced by the community, and developers should be requested to quickly replant development areas following clearing. The majority of air pollution in Port Orange continues to emanate from automobile emissions.

Water Quantity and Quality

This section analyzes the current and projected water needs and sources based on the demands for industrial, agricultural, and potable water use and the quality and quantity of water available to meet these demands.

Water Demands

The City of Port Orange's potable water system consists of twenty-seven (27) water supply wells, divided among the Central Recharge and Eastern wellfields. Raw water is pumped from the wellfields to the Garnsey Water Treatment Plant located on Wellfield Drive off Clyde Morris Boulevard where it is treated through aeration, lime-softening, filtration, and disinfection processes. A high service pump station at the treatment facility delivers water either directly to the distribution system or fills three (3) offsite ground storage tanks. Water is distributed to the City's service area, which consists of the City of Port Orange city limits, the City of Daytona Beach Shores, south of Thames Avenue,



the Town of Ponce Inlet, and unincorporated Volusia County. In 2022, the City had an average daily flow of 6.45 million gallons per day (MGD) of potable water.

Water Conservation

The City of Port Orange participates in water conservation, use, and protection through programs and policies supported by SJRWMD. Per Section 373.016, F.S., the SJRWMD, and all other water management districts are required to "promote the conservation, replenishment, recapture, enhancement, development, and proper utilization of surface and groundwater." To accomplish this directive, the SJRWMD considers conservation in the development of policy and rules, public information programs, planning, and resource management and evaluation.

Conservation measures are also witnessed through the use of a consumptive use permitting process, which enables the SJRWMD to review certain proposed and existing developments for reasonable and beneficial use of water.

The SJRWMD encourages the reuse of wastewater for irrigation purposes as a measure to conserve water. Incentives to install and utilize wastewater reuse facilities are provided in the Water Management District's permitting process for wastewater treatment facilities.

Included among the SJRWMD's conservation efforts is a program targeted at plugging unattended, free-flowing artesian wells. This program attempts to identify abandoned wells, seal them, and restore them to their natural hydrologic condition.

SJRWMD also promulgates information to the public concerning water conservation. Pamphlets, slide shows, speeches, and addresses made through media.

Aquifer Recharge

There are no areas within the City that have been adopted by the St. John's River Water Management District as prime groundwater recharge areas for the Floridan aquifer. However, there are areas within the City that recharge the aquifer about 0 to 20 inches per year. The Floridan aquifer is recharged in western Volusia County and very little down migration of water is possible due to two factors:

- A confining layer of silt and clay and various other materials separates the surficial and deep (Floridan) aquifer; and
- The potentiometric surface of the aquifer is approximately +30 feet NGVD (National Geodetic Vertical Datum), this upward pressure will not permit recharge except under extremely high head conditions.

The top of the surficial aquifer within the City is generally located between five (5) and ten (10) feet below the ground surface but may be much closer to the ground surface depending upon the amount of rainfall which is present. The rainfall in the area recharges the surficial aquifer, and as such, the water table depth fluctuates with the amount and intensity of the rainfall.

The surficial aquifer recharge areas within the City may not supply large quantities of water to the aquifer but serve to prevent lateral saltwater intrusion into inland groundwater supplies.

The City's zoning regulations, flood damage prevention ordinance, and subdivision regulations accomplish an adequate degree of protection for natural drainage and recharge areas. Port Orange's



existing land use has generally developed in a manner favorable to natural groundwater recharge and natural flood protection.

Water Quality

The degradation of water quality in Port Orange may be a concern with the potential for increased growth and urbanization. With an increase in impervious surfaces the more concern there is for pollutants and runoff into water bodies. A decrease in water quality can cause several issues for the City including harmful algal blooms. Recognizing nitrogen leachate in groundwater is a significant contributor to water quality in surface water bodies. Improvement of water quality should continue to be a cooperative effort between the City, the County, SJRWMD, the National Estuary Program, East Volusia Mosquito Control District, and the Natural Resource Conservation Service. SJRWMD has also worked with Florida Department of Health, Volusia County Department of Environmental Health, and the National Estuary Program to monitor surface water quality.

Urban run-off is a major contributor of pollutants to the surface waters of the City and Volusia County. Utilization of more advanced treatment techniques and storm water management will assist in decreasing the detrimental effects of pollution on the natural systems of the City. Impacts of sea level rise and combined rain events may affect water quality and a pollutant load model may need to be developed. The City's Stormwater Management Plan shall identify approaches to address existing and potential deficiencies in the City's existing stormwater management system to maintain water quality.

The City of Port Orange is not within any Basin Management Action Plan (BMAP), but the following waterways have been identified by [FDEP](#) as not attaining standards:

- Spruce Creek
- Tomoka River
- B-19 Canal
- Reed Canal

Soils

Knowledge of the types of soil present in Port Orange is important in assessing the limitations or reclamation that must be done to develop a site. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NCRS) provide soil survey data online, most recently published in 2021, that gives details of 50 different soil types in Port Orange. The soil classifications are made based upon the water table, slope, erosion potential, permeability, subsidence and organic (muck/peat) content. The soils are also rated as to their potential for development based upon those limiting properties. Soil types covering the City are illustrated in Map 1.7.

According to the abovementioned soil survey data, the soils are predominantly nearly level to gently sloping. Slope does not exceed 5%. In terms of potential for erosion, 43% of area soil has low runoff potential in drained areas but high runoff potential in undrained areas. 33% of area soil has low runoff potential. 14% of area soil has moderate runoff potential, and the remaining 4% of area soil has a high runoff potential.

Following is a description of soil associations and their characteristics courtesy of the Volusia County Soil Survey by NCRS.



1. **Soils of the sand ridges and coastal dunes. Daytona-Paola-Astatula.** Mostly long, narrow sand ridges of moderately well drained, grayish sandy soils that have an organic-stained subsoil and excessively drained, grayish and brownish, sandy soils; interspersed with areas of poorly drained and very poorly drained soils. Vegetation in the area is highly variable. The moderately well drained soils support coastal hammocks and dense thickets of scrub oak. The poorly drained soils support a slash pine-saw palmetto community. The very poorly drained soils are marshes or hardwood swamps where red maple and Coastal Plain willow are abundant.
2. **Soils of the flatwoods.**
 - a. **Myakka-Smyrna-Immokalee.** Nearly level, poorly drained soils that have a dark, organic-stained subsoil underlain by sandy material; interspersed with swamps and poorly defined drainageways. The major soils and many of the minor soils have a spodic horizon, locally called a hardpan. A spodic horizon is a type of subsoil into which organic matter has been translocated and has accumulated. Almost all soils of this unit are sandy to a depth of 80 inches (2 meters) or more. Natural vegetation consists of pine-palmetto communities. The understory is a thick, scrubby growth of saw palmetto and other shrubs, such as gallberry and fetterbush. Unless the area is entirely covered with saw palmetto, the ground cover consists mostly of pineland threeawn, or wiregrass, and some bluestem. Most soils of this unit have a seasonal high water table. This creates problems because water stands at or near the surface during the rainy season. During the dry season, however, the water table recedes, and these sandy soils become droughty. The major limitation to the use of these soils for urban development is the wetness or the seasonal high water table. This limitation can be overcome. Often, corrective measures are impractical because of expense and other restrictions.
 - b. **Pomona-Wauchula.** Nearly level, poorly drained soils that have a dark, organic-stained subsoil underlain by loamy material; interspersed with swamps and depressions. This unit is similar to the Myakka-Smyrna-Immokalee unit. Vegetation in both is the pine-palmetto type of flatwoods, often called “acid flatwoods” because the soils are acid. The major difference between this unit and the Myakka-Smyrna-Immokalee unit is that in this unit the major soils have a loamy subsoil below the spodic horizon. Use and management of soils in the two units are similar.
 - c. **Pineda-Malabar-Wabasso.** Nearly level, poorly drained soils that have a yellowish, iron-stained subsoil or a dark, organic-stained subsoil and are underlain by loamy material; interspersed with swamps and depressions. Wabasso soils and other soils that have a spodic horizon are generally a few inches higher in elevation than the Pineda and Malabar soils, which have a yellowish, iron-stained subsoil. Natural vegetation on this unit tends to be grassier and have fewer slash pines and saw palmettos than the vegetation on the other two flatwoods units. Cabbage palm and wax myrtle are common. In spring, flowering herbaceous plants, such as butterworts, pitcher plants, and violets, are conspicuous.
3. **Soils of low-lying hammocks. Tuscahilla-Chobee.** Lowlands of poorly drained and very poorly drained soils that have a thin sandy surface layer over a loamy calcareous subsoil. Natural vegetation on this unit is mainly a hardwood or hydric hammock. As in the other hammocks in the county, there are large live oaks and laurel oaks. Cabbage palm is



abundant. Deciduous hardwoods, such as red maple, sweetgum, and American hornbeam, are abundant. There are also many other hardwood trees, such as water oak, pumpkin ash, Florida elm, boxelder, Florida basswood, and water hickory. Southern magnolia is obvious in higher areas. Such shrubs as yaupon, little bluestem, palmetto, red buckeye, and hop tree are locally common. It is wet much of the time, and the clay in the shallow subsoil impedes the use of heavy equipment.

4. **Soils of the St. Johns River flood plain. Bluff-Tequesta-Astor.** Low-lying, predominantly poorly drained and very poorly drained soils that have a thick, dark surface layer or a thin layer of muck; interspersed with marshes, swamps, organic soils, and low hammocks. Natural vegetation on this unit is mainly swamps, wetland grasslands, and low hammocks. Sawgrass, sand cordgrass, cattail and pickerel weed are common within marshes. Cabbage palm, live oak and sweetgum are commonly found along wet grassland edges. Wetness and periodic flooding make this soil series unsuited for development.
5. **Soils of the inland and coastal wetlands.**
 - a. **Samsula-Terra Ceia-Tomoka.** Swamps and marshes dominated by organic soils. Natural vegetation of these wetlands is freshwater marshes dominated by grasses and grasslike plants and swamps dominated by trees and other woody plants. The marshes are mostly covered with sand cordgrass where the water is more shallow and sawgrass where it is deeper. It is wet all of the time and not easily drained, making development severely limited.
 - b. **Hydraquents-Turnbull.** Mangrove swamps and salt marshes subject to tidal flooding. Subject to storm driven tides and inundated twice daily. Natural vegetation consists of mangrove swamps and saltwater marshes. Red, black and white mangroves occur on hydraquents on the islands and around the shorelines of the lagoons. Salt marshes, predominantly black needlerush and salt tolerant grasses are found on turnbull soils.



Chapter 9

INTERGOVERNMENTAL COORDINATION

Data Inventory & Analysis



Introduction

Pursuant to the requirements of Chapter 163 of the Florida Statutes, the Intergovernmental Coordination Element must show the relationships and state principles and guidelines to be used in coordinating with other agencies, including other municipalities, taxing authorities, special districts, County, Regional, State, and Federal agencies. Coordination is key to the provision of basic services and planning for future growth.

This data inventory and analysis (DIA) influences and informs the goals, objectives, and policies that will guide intergovernmental coordination. The goal of the Intergovernmental Coordination Element is to formulate improved coordination processes and support the continuation of functioning partnerships.

Effective coordination requires the identification of all agencies with which the local government must coordinate, a thorough understanding of the roles of each agency and that of the local government, and the creation of adequate intergovernmental coordination mechanisms to carry out policies.

City of Port Orange Overview

The City of Port Orange is situated in Volusia County in east central Florida, south of Daytona Beach and north of New Smyrna Beach. According to the 2020 Decennial Census, Port Orange has a population of 62,596, making up approximately 11.2% of the total population of Volusia County, 553,543.

The City of Port Orange operates under the Council-Manager form of government, as they have since 1971, with a Mayor, a four-member City Council, and a professional City Manager. The Mayor and Council are responsible for the legislative and policy direction functions of the City's government. The City Manager serves as the Chief Executive Officer of the City and oversees day-to-day operations. The City Manager is responsible for the Deputy City Manager, Administrative Services (Human Resources, Information Technology, and Risk Management), Police, Fire, and Finance. The Deputy City Manager is responsible for the City Clerk, Communication & Public Information, Parks & Recreation, Public Works & Utilities, and Community Development.

Boards

The City Council appoints members of the community to boards and commissions to advise the Council on a wide variety of topics. These bodies act in an advisory capacity to the City Council, the City Manager, or the departments of the City. Each appointed body has a specific scope of authority, provided by City Ordinance and/or State Statute. These bodies may have administrative, managerial, quasi-judicial, investigatory, and/or advisory powers dependent upon the enabling legislation. They do not set policy but are intended to participate in the policy process as an integral part of citizen participation in local government. There are presently 13 boards that serve the City¹.

¹ Board information: <https://www.port-orange.org/203/City-Appointed-Boards-Commissions>



Charter Review

Chapter 2, Division 3, Code of Ordinances.

Five-member board appointed for three-year terms. No financial disclosure required. Members are appointed by City Council and meet as needed to discuss potential Charter changes. Those recommended changes are then brought before Council for consideration.

Civil Service

Chapter 54, Article II, Section 54-26, Code of Ordinances.

Three-member board appointed for three-year terms. No financial disclosure required. Members are appointed by City Council and meet as needed to review appeals brought by an employee.

Construction Regulation Board

Chapter 3, Article III, Section 12, Land Development Code.

Five-member board appointed for two-year terms. Meets as necessary. Financial Disclosure required.

Districting Commission

Article II, Section 5.05, City Charter.

Each member appointed for 10-year terms. Financial Disclosure not required. Commission meets pursuant to Florida Statute after the census to determine the district boundaries within the City.

Environmental Advisory

Chapter 2, Article III, Division 4, Code of Ordinance.

Seven-member board appointed for three-year terms. No Financial Disclosure required. Board meets on the 3rd Monday, Quarterly at 5:15 p.m. in the 2nd Floor Conference Room at City Hall.

Fire Pension

Ordinance No. 2007-29 § 1, September 18, 2007, Sec. 54-79.

Five-member board appointed for two-year terms. Financial Disclosure form required. Board meets quarterly on the 4th Monday at 4:30 p.m. at City Hall.

General Employee Pension

Ordinance No. 1991-34, § 4, November 19, 1991, Sec. 54 to 1, 2.

Five-member board appointed for two-year terms. Financial Disclosure form required. Board meets the last Monday of each month at 2:00 p.m. typically in the City Hall Second Floor Conference Room.

Golf Course Advisory Board

Ordinance No. 2019-4, § January 22, 2019, Sec. 50 to 108.

Five-member board appointed for three-year terms. No Financial Disclosure required. Board meets the first Tuesday of every other month (even months) at 5 p.m. typically in the Dorothy L. Hukill Annex.



Parks & Recreation Advisory

Chapter 50, Article III, Code of Ordinances.

Seven-member board appointed for three-year terms. No Financial Disclosure required. Board meets on the 3rd Tuesday, quarterly at 5:15 p.m. in the conference room at the Dorothy L. Hukill Annex.

Planning Commission

Chapter 3, Article III, Section 10, Land Development Code.

Seven-member commission appointed for two-year terms. Financial Disclosure required. Board meets on the 4th Thursday at 5:30 p.m. at City Hall.

Police Pension

Ordinance No. 2007-29 § 1, September 18, 2017.

Five-member board appointed for two-year terms. Financial Disclosure required. Board meets quarterly on the 3rd Friday of the month at 2 p.m. in the training room at the Port Orange Police Department.

Eastport Community Redevelopment Agency

Section 163.356(3)(c), Florida Statutes (F.S.).

Includes all of City Council plus two residents or business owners of the Community Redevelopment Agency (CRA) area. Terms are four years. Financial Disclosure required. Meetings are typically held twice yearly or as needed. The Eastport CRA makes recommendations to the City Council on items pertaining to the CRA area.

Town Center CRA

Section 163.356(3)(c), F.S.

Includes all of City Council plus two residents or business owners of the CRA area. Terms are four years. Financial Disclosure required. Meetings are typically held twice yearly or as needed. The Town Center CRA makes recommendations to the City Council on items pertaining to the CRA area.

Agency Relationship Overview

The City of Port Orange currently has effective, ongoing working relationships with the other local governments in the area. The City has worked closely with Volusia County and the surrounding municipalities to effectively resolve areas of common concern and reduce the potential for conflicts. The City also has working relationships with a multitude of state, regional, and local agencies through formal or informal coordination agreements or interaction as part of standard operating procedures. A list of these agencies is provided in Table 1.



Port Orange Comprehensive Plan 2022-2045

Table 1. Coordinating Agencies

Local Governments	Abbreviation
City of Daytona Beach	Daytona Beach
City of Daytona Beach Shores	Daytona Beach Shores
City of New Smyrna Beach	New Smyrna Beach
City of South Daytona	South Daytona
Town of Ponce Inlet	Ponce Inlet
Volusia County	Volusia
Local Public Agencies	Acronym
Volusia County Emergency Management	VCEM
Volusia League of Cities	VLOC
Volusia Growth Management Commission	VGMC
Volusia County Public Transportation System	VOTRAN
River to Sea Transportation Planning Organization	TPO
Technical Coordinating Committee of the TPO	TCC
Citizens' Advisory Committee of the TPO	CAC
Bicycle / Pedestrian Advisory Committee of the TPO	BPAC
Transportation Disadvantaged Local Coordinating Board	TDLCB
Volusia County School Board	VCSB
Ponce DeLeon Inlet and Port District	
Daytona Beach State College Institute of Government	DBSC
Regional Public Agencies	Acronym
East Central Florida Regional Planning Council	ECFRPC
St. Johns River Water Management District	SJRWMD
Florida League of Cities	FLC
State Agencies	Acronym
Florida Department of Transportation	FDOT
Florida Department of Community Affairs	FDCA
FloridaCommerce	
Florida Department of Environmental Protection	FDEP
Florida Department of State, Division of Historical Resources	FDS/DHR
Florida Fish and Wildlife Conservation Commission	FFWC
Private Agencies	Acronym
Volusia County Association for Responsible Development	VCARD
AT&T	
Florida Power and Light	FP&L
Peoples Gas System, Inc.	
Bright House	

Source: City of Port Orange, 2022; Volusia County, 2022;

This data inventory will review the relationships between entities unique to Port Orange, excluding state, regional, or private agencies which have identical relationships with other municipalities.



Local Governments

City of Daytona Beach

The relationship between Port Orange and Daytona Beach is characterized by frequent communication and interaction and close coordination. Informal discussion between staff is common, and there is significant formal contact through various professional organizations in the area. The two cities have an agreement regarding the interconnection of utilities on the peninsula that allows for diversion of flows for temporary periods due to emergencies or plant construction activities. Formal relationships are limited to the area-wide organizations described below. In 2008, the City of Port Orange, the City of Daytona Beach, and the County entered into a Tri-Party Interlocal Agreement, which established water/wastewater service and planning area boundaries for the two cities for areas west of I-95. Primary intergovernmental coordination is accomplished through the City Manager's Office and Community Development Department, while secondary coordination is made directly through operational departments such as Public Utilities, Police, Fire & Rescue, and Public Works. Over the years, the increase in area-wide agency involvement and staff contact has resulted in an excellent working relationship today.

City of Daytona Beach Shores

The working relationship between Port Orange and Daytona Beach Shores is similar to that with Daytona Beach; however, there is one important functional difference. Port Orange provides a major portion of Daytona Beach Shores with water and sewer services. This requires a different level of coordination between many functional departments of Daytona Beach Shores' government and the Port Orange Public Utilities Department. The City of Port Orange owns and operates the water system south of Thames Avenue and accepts the flow from the entire Daytona Beach Shores owned sewer system for treatment at the Port Orange plant. All billing is done by Daytona Beach Shores, and building permits are not issued until appropriate impact fees are remitted to Port Orange. Outside of utility operational functions, intergovernmental coordination is carried out through the City Manager's Office and the Community Development Department.

City of New Smyrna Beach

Again, the working relationship with the City of New Smyrna Beach is similar to those cited above; however, these cities have one of the few formal annexation boundary agreements in the County. In 1979, the two elected bodies passed a joint resolution identifying a specific annexation boundary between the Cities. The resolution allowed for flexibility where property ownership straddled the line, and in 1985, the resolution was amended to reflect two such properties that had requested annexation to Port Orange. Pioneer Trail is the southern city boundary of Port Orange and the northern boundary for the City of New Smyrna Beach. In recent years, development has been occurring along this road corridor in both cities. Coordination is carried out through the City Manager's Office and the Community Development Department.

City of South Daytona

Beyond the typical relationship described with the other Cities in the area, the Cities of South Daytona and Port Orange have particularly strong cultural and philosophical ties. The two Cities have a joint Chamber of Commerce that has helped to tie the communities together on many projects and issues. In addition, the communities have adjoining Community Redevelopment Areas (CRAs), which would benefit from the coordination of redevelopment activities. Coordination is carried out through the City Manager's Office and the Community Development Department.



Town of Ponce Inlet

Port Orange's relationship with Ponce Inlet parallels that of Daytona Beach Shores. Port Orange provides wholesale water to Ponce Inlet's own distribution network, while Port Orange owns the sewage collection system and conveys Ponce Inlet's flow back to the City of Port Orange plant for treatment. New development is coordinated with the City Public Utilities Department to assure system design continuity and adequate water supply. The Town requires utility impact fees to be paid prior to issuing building permits. Coordination activities with Ponce Inlet are generally centered in the City Manager's Office and Public Utilities Department.

Volusia County

The relationship between cities and counties is always an extensive one, and Volusia County's charter government makes an even greater amount of coordination and cooperation necessary. Outside of the formal relationships and organizations outlined below, the City has individual agreements with the County to provide utility services to the unincorporated portion of the barrier island, and an agreement covering the planning for a future annexation area west of the current City limits to Tomoka Farms Road. In 2008, the City entered into an interlocal agreement with Volusia County that established the City Water Supply Planning Area west of I-95 and reaffirmed previous arrangements related to water and sewer service delivery and other planning-related activities. Also in 2008, the City of Port Orange, the City of Daytona Beach, and the County entered into a Tri-Party Interlocal Agreement, which established water/wastewater service and planning area boundaries for the two cities for areas west of I-95. The County exercises authority under its charter to set minimum environmental standards, which must be incorporated into the development regulations of the municipalities. City staff serves on various committees that assist in the development of these standards.

Prior to the adoption of their Comprehensive Plans in the spring of 1990, the City of Port Orange and Volusia County entered into an interlocal agreement covering land located primarily west of I-95 and north of Taylor Road. This area is shown in Map 9-1. The agreement provides for comprehensive planning and development review to be administered by the City in anticipation of the ultimate annexation of the property.

While coordination with County government takes place in virtually every department of the City, primary coordination activities generally emanate from the City Manager's Office and the Community Development Department.

Volusia County additionally hosts the Roundtable of Volusia County Elected Officials the second Monday of every other month. The group is composed of one elected official from each of Volusia's cities, county government, and school system. It discusses countywide issues and concerns².

Local Agencies

Volusia County Emergency Management

This department is responsible for the County's Comprehensive Emergency Management Plan (CEMP) and is the recommending body to the County Council for hurricane evacuation. The City coordinates its natural disaster preparation plans, hurricane evacuation plans, the County-wide Local

² [Volusia.org](https://www.volusia.org), 2022.



Mitigation Strategy (LMS) and other emergency management matters with this department. Coordination activities are carried out through the Fire and Police Departments.

Volusia Council of Governments

The Volusia Council of Governments (VCOG) was created in 1970 as an area-wide planning organization, replacing the Volusia Area Planning Commission. VCOG disbanded effective October 31, 2014³.

Volusia League of Cities

The Volusia League of Cities (VLOC) formed in 2010 for the specific purpose of public education to promote intergovernmental coordination and good municipal governance throughout Volusia County⁴. VLOC presently has an 11-person Board of Directors, featuring representation of many local governments in Volusia County. The League promotes communication among municipalities, fosters cooperative action, and represents Volusia municipalities to the Florida League of Cities, State Legislature, State agencies, and the County and Federal governments⁵.

Volusia Growth Management Commission

The Growth Management Commission (VGMC) was created in 1987 under Section 202.3, Article II of the Volusia County Charter, approved under a 1986 referendum. The responsibility of the Commission is to determine the consistency of the municipalities' and the County's comprehensive plans and their amendments. Their determination is binding, and no plans, elements, or amendments are valid until the Commission has certified them as consistent. Members include one voting member from each municipality and five voting members from the unincorporated area within the County. Members are appointed by their respective governing body, with each voting member having a weighted vote based on population. Nonvoting members include the Volusia County School Board, the St. Johns River Water Management District (SJRWMD), and the Volusia County Economic Development Department (VCED). The Commission is staffed by a consultant planner and an attorney in private practice. According to the adopting Ordinance (No. 87 24), the main purpose of the Commission is to provide an effective means for coordinating the plans of municipalities and the County; however, the VGMC can also be effective in resolving conflicts that may arise as part of the planning process.

River to Sea Transportation Planning Organization

The River to Sea Transportation Planning Organization (TPO), formerly known as the Volusia TPO, carries out urban transportation planning and programming for the Metropolitan Planning Area (MPA), which includes all of Volusia County and a small portion of the eastern half of Flagler County. The TPO Board consists of elected officials from the member local governments and is responsible for improving the safety and efficiency of the transportation system in the area served. The TPO serves to hear community concerns, identify priorities, and plan for transportation improvements for all modes of transportation, including not only standard modes but also seaports and airports. A primary responsibility of the promotes continuing, cooperative, and comprehensive planning to develop plans and programs.

³ [Volusia County Council Meeting Minutes](#), 2014.

⁴ [Articles of Incorporation of Volusia League of Cities, Inc.](#), 2010

⁵ [Volusialeagueofcities.com](#), 2022



The TPO Board membership consists of elected officials representing all the local governments, including municipal and county entities. The Board is comprised of 19 voting members: five from Volusia County, one from Flagler County, one from each of the 12 largest cities by population (Deltona, Palm Coast, Daytona Beach, Port Orange, Ormond Beach, DeLand, New Smyrna Beach, Edgewater, DeBary, South Daytona, Holly Hill, and Orange City) and one which represents the remaining small cities (Flagler Beach, Daytona Beach Shores, Ponce Inlet, Lake Helen, Bunnell, Oak Hill, Pierson, and Beverly Beach)⁶. In addition, there are six non-voting members. The voting members review local, regional, and statewide transportation issues and work cooperatively to determine appropriate policy to address transportation needs. The non-voting members represent the Technical Coordinating Committee (TCC), Citizen's Advisory Committee (CAC), Bicycle/Pedestrian Advisory Committee (BPAC), Florida Department of Transportation (FDOT) District Office, Flagler County School Board, and Volusia County School Board. These members are appointed primarily to provide information to the Board.

Technical Coordinating Committee of the TPO

The TCC is comprised of planners, engineers, and other technical representatives of each member government of the TPO, as well as the Volusia County School Board, VOTRAN, and the Daytona Beach International Airport. This committee serves the TPO only in an advisory capacity.

Citizens' Advisory Committee of the TPO

This committee is responsible for providing a citizen's review of TPO plans and programs and for advising the TPO on local concerns. Citizen representatives are appointed by each TPO Board member for their respective jurisdiction. This committee serves the TPO in an advisory capacity.

Bicycle/Pedestrian Advisory Committee of the TPO

This committee is responsible for making recommendations to the TPO on pertaining to bicycle and pedestrian planning and safety. Members are not required to have a background in transportation and are appointed by TPO Board members for their respective jurisdiction. This committee serves the TPO in an advisory capacity.

Transportation Disadvantaged Local Coordinating Board

The Florida Statutes establish the voting membership of the Transportation Disadvantaged Local Coordinating Board (TDLCB) to ensure representation of agencies serving transportation-disadvantaged populations. The TPO Board approves appointments to the TDLCB. This Board is responsible for identifying local needs as well as providing information and advice to the Community Transportation Coordinator.

Volusia County School Board

There is a long history of active interrelationships between the school district and local governments in Volusia County. Much of the contact has occurred at the staff level, but the School Board and local elected bodies have also met regularly in workshops to discuss school and community needs and develop relationships that help foster cooperation on key issues. In 2003, the School Board and the local governments adopted the Interlocal Agreement for Public School Facilities Planning (ILA). As a result, when implementation of the Public School Facilities Element (PSFE) requirements

⁶ [River to Sea TPO Bylaws](#), 2021.



began, the planning staffs and School District staff already had a solid working relationship that allowed for a frank and broad-based discussion of issues and potential solutions.

Legislation enacted in 2005 by the Florida Legislature mandated a comprehensive focus on school planning by requiring local governments and school boards to adopt a school concurrency system. All local governments in Florida were required to adopt and implement a school concurrency system by December 2008. Volusia County's deadline was February 1, 2008. In May 2005, the School Board adopted Policy 613 that asked local governments to voluntarily consider impacts on schools when comprehensive plan amendments or rezoning requests that increased residential densities were reviewed. Implementation of this policy gave Volusia County some base of experience in identifying and dealing with the issues that would be brought to the forefront by the mandatory PSFE. In 2006, voters in Volusia County approved an amendment to the County Charter including school planning as a mandatory element of the comprehensive planning process in addition to state requirements.

The Volusia County School Board and the 17 local governments began formal development of the First Amendment to the ILA, the PSFE and other related comprehensive plan amendments in the summer of 2006. The City adopted school concurrency related documents, as well as related Land Development Code regulations, in January 2008 in order to meet the legislative deadline.

Volusia County Association for Responsible Development

The Volusia County Association for Responsible Development and its Flagler County chapter (VCARD) is a not-for-profit comprised of land development professionals. VCARD's mission is to be a forum for collaboration in all aspects of land development, and to provide programs that further the idea of responsible development in Volusia and Flagler Counties. VCARD publishes information on land development to support transparency, monitors policies and legislation, acts as a liaison between municipal agencies and professionals, provides community education, and circulates timely information on development matters. The City of Port Orange is a member of VCARD.

Regional Agencies

Regional resources for intergovernmental coordination and conflict resolution include the following two organizations:

East Central Florida Regional Planning Council

The East Central Florida Regional Planning Council (ECFRPC) includes Marion, Volusia, Sumter, Lake, Seminole, Orange, Osceola, and Brevard Counties. ECFRPC was established in 1962 and is represented by 32 Council Members from the region's eight counties and many municipalities. All Florida Regional Planning Councils have been directed to establish a dispute resolution process to reconcile differences on planning and growth management issues between local governments, regional agencies, and private interests (186 F.S. 509). The dispute resolution process provides for voluntary meetings among the disputing parties. If those meetings fail to resolve the dispute, then mandatory mediation or a similar process is initiated. If that process fails, initiation of arbitration or administrative or judicial action begins, where appropriate. The East Central Florida 2060 Plan states, "The [Regional Dispute Resolution Process's (RDRP)] intent is to provide a flexible process that will: clearly identify and resolve problems as early as possible; utilize the procedures in a low-to-high cost sequence; allow flexibility in the order in which the procedures are used; provide for the appropriate involvement of affected and responsible parties; and provide as much process certainty as possible (29F-3.101(2))." ECFRPC further provides technical assistance to local governments



and solutions to growth-related problems on greater-than-local issues, as required in Florida Statutes, Chapter 186.502(4)⁷.

St. Johns River Water Management District

In Florida, the State Legislature established five regional water management districts in 1972 with the passage of the Water Resources Act. The St. Johns River Water Management District (SJRWMD) comprises all or part of 18 counties from the Georgia border to Indian River County. City of Port Orange is located within the SJRWMD regulatory area. Through a permitting procedure, the Water Management District regulates the use of ground and surface waters within its jurisdiction, which includes wetlands protection, surface water management, stormwater discharges, and consumptive uses of water.

SJRWMD also administers several other programs including water supply planning, groundwater studies, restoration of regional surface water systems, comprehensive plan review, intergovernmental coordination, land acquisition, and management of environmentally sensitive lands. Because of its regional jurisdiction over water resources, the City of Port Orange could use this resource for dispute resolution or intergovernmental coordination involving water related issues. Coordination on water supply issues is through the Public Utilities Department, while coordination on private development issues is made through the Community Development Department.

State Agencies

The relationship with most State agencies is standardized for most cities, based on the specific program regulations of the State. The one agency with which the City has ongoing coordination is:

Florida Department of Transportation

Major planning coordination with the Florida Department of Transportation (FDOT) is accomplished through the TPO, which has been previously discussed. Project planning and traffic operations issues are coordinated through the Community Development Department. Maintenance and construction coordination are accomplished through the Community Development Department and the Public Works Department.

Other Coordinating Mechanisms

Many other resources exist to assist local governments with the coordination of activities and the resolution of disputes.

Florida Conflict Resolution Consortium

The Consortium was established by the Florida Legislature to provide a forum and organizing force that resolves growth management disputes affecting Florida through the use of alternative conflict resolution techniques. In 2009, the Florida Conflict Resolution Consortium began operating under the name, the “FCRC Consensus Center” because it better reflects the work of the FCRC. In the early years of the FCRC, many of the projects resulted from impasse and gridlock, while today, most FCRC projects focus on conflict prevention and consensus-oriented planning. In addition to providing consensus building services, the FCRC Consensus Center provides dispute resolution education, training and research activities. These efforts seek to build a broader understanding of the value of

⁷ [East Central Florida 2060 Plan](#), 2011



collaborative approaches, to assist those implementing new dispute resolution policies and to create a cadre of citizens, leaders, professionals and students trained in using collaborative consensus building and alternative dispute resolution processes. The Center also provides neutral technical assistance and consultation to a wide range of professionals, agency staff and citizens engaged in public problems throughout Florida.

It helps design efforts for intergovernmental collaboration, community problem-solving, and dispute resolution. The Center serves as a broker connecting stakeholders with dispute resolution professionals.

Conclusion

Goals, objectives, and policies within this plan have been included to reflect necessary coordination with other local, state, and federal agencies, as well as to acknowledge and be consistent with the provisions of aforementioned formalized agreements. These goals, objectives, and policies are found both within the Intergovernmental Coordination Element, as well as within other respective elements in the Comprehensive Plan where applicable.



Chapter 10

CAPITAL IMPROVEMENTS

Data Inventory & Analysis



Introduction

The purpose of the Capital Improvement Element is to consider the need for and the location of public facilities as identified in other elements of the comprehensive plan, to estimate the cost of improvements for which the local government has fiscal responsibility, to analyze the fiscal capability of the local government to finance and construct improvements, to adopt financial policies to guide the funding of improvements and to schedule the funding and construction of improvements in a manner necessary to ensure that capital improvements are provided when required based on needs identified in the other comprehensive plan elements. This element also includes the requirements to ensure that the City implements an adequate concurrency management system.

Needed capital improvements are those that are necessary to meet the City's adopted level of service (LOS) standards. LOS help establish whether public facilities are adequate to meet the needs of the City's future populations. LOS is a standardized measure of infrastructure operating conditions and is defined with reference to a benchmark or a measure of effectiveness.

The City of Port Orange public facilities that require identification and funding are transportation; sanitary sewer; solid waste; stormwater drainage; potable water; and recreation. The City utilizes numerous revenue sources to fund operational and capital expenses in the City. The City has employed methods described in this element in addition to its standard annual budgeting procedures to allocate funds for specific purposes. The funding of all capital improvements includes but is not limited to impact fees, property taxes, sales taxes, franchise fees, grants, tax increment financing (TIF) revenue, and other fees and taxes.

Concurrency Management

The intent of the Community Planning Act in Chapter 163 of the Florida Statutes is to utilize and strengthen the existing role, processes, and powers of local governments in the establishment and implementation of comprehensive planning programs to guide and manage future development consistent with the proper role of local government. Pursuant to this act the statutory concurrency requirements are sanitary sewer, solid waste, stormwater drainage, and potable water.

The concurrency requirements are applicable to such facilities within the corporate limits of the City of Port Orange, and those areas within unincorporated Volusia County served by City potable water and sanitary sewer services. The City has developed and continues to use a concurrency management system identified in the City's Land Development Code to ensure that all the required public facilities and services are available as required to meet adopted levels of service prior to the issuance of development orders and building permits. This will ensure that development receives approval only when it meets concurrency requirements. The City requires concurrency for transportation, recreation and open space, and public schools, in addition to the above-listed requirements.

Annually, the City produces a Concurrency Management Report in addition to individual concurrency reviews for current development proposals. These activities meet the monitoring requirements associated with concurrency.



Level of Service Standards

The City's adopted LOS standards, provided in Table 1 and in each respective Element (e.g., Transportation, Public Facilities, Recreation & Open Space) for each measurable service. In Table 1, the acronym GPD equates to Gallons Per Day, and the acronym ERU equates to Equivalent Residential Unit.

Table 1. Level of Service Standards

Facility Type	Level of Service Standard
Sanitary Sewer	160 GPD/ERU
Potable Water	180 GPD/ERU
Solid Waste	3.21 lbs. per capita per day
Stormwater	Quantity – 25-year, 24-hour storm event Quality – Reduction of Pollutants to a level compatible with State Standards.
Transportation	Strategic Intermodal System (SIS) Roads – Meet State Target
	State-Maintained Non-SIS Roads – LOS D
	City & County Roads – LOS E
	S Williamson Blvd – LOS D
Recreation	Parkland – 7 acres per 1,000 residents

Source: City of Port Orange, 2023



Chapter 11

PROPERTY RIGHTS

Data Inventory & Analysis



Notice

This element did not undergo substantial changes during the update to the 2045 Comprehensive Plan, and therefore did not require a new data inventory and analysis.



STAFF REPORT

Comprehensive Plan Update (24-1 Cycle)
CASE NO. CPAM-24-0001

REQUEST:	Approval of the Comprehensive Plan Update for the 2045 Planning Horizon.
APPLICANT:	City of Port Orange
STAFF CONTACT:	Penelope Cruz, Planning Manager, (386) 506-5671
STAFF RECOMMENDATION:	Approval
PLANNING COMMISSION:	Recommended Approval 6-0 (March 18, 2024)
CITY COUNCIL:	April 2, 2024

For the past two years, staff has been working with Kimley Horn and Associates, Inc. to update the City's Comprehensive Plan for the 2045 Planning Horizon. Approximately every ten years, cities and counties undertake a Comprehensive Plan update that forecasts future land use and growth patterns. The City of Port Orange's Comprehensive Plan was last updated in 2010. Florida growth management legislation requires local governments to maintain a comprehensive plan that provides the policy foundation for local planning and land use decisions. The proposed amendment would replace the City of Port Orange Comprehensive Plan 2010-2025, adopted in October 2010, with the new City of Port Orange Comprehensive Plan 2022-2045.

The primary purpose of the Comprehensive Plan is to provide a guide for growth and development while also preserving environmental features and community character of the area through the City's goals, objectives, and policy guidelines that describe how land-use decisions should be made on a day-to-day basis, along with a future land use map to show what type of land use is desirable within the City's current boundary. The Comprehensive Plan is a blueprint for future commercial and residential land uses, housing, conservation, and cultural and recreational amenities. An essential component of the comprehensive Plan is to identify the new infrastructure and growth demands needed to support the community's future physical and economic development.

As part of the Comprehensive Plan Update, staff assessed the successes, deficiencies, and modifications of the various goals, objectives, policies, and programs in the Plan and provided an opportunity to identify community issues and evaluate how effective the Comprehensive Plan has been in addressing those issues. This Comprehensive Plan update is also a critical transitional document as the City moves from its current Plan that guides traditional green field development to one that provides goals, objectives, and policy guidelines for infill and redevelopment in the upcoming planning horizon.

DISCUSSION

The assessment of the Comprehensive Plan revealed that overall, the 2010 Plan was effective. Therefore, significant changes to the Plan were not recommended.

The primary changes for each Element/Chapter to the Comprehensive Plan are listed below:

1. All Elements

- Consolidated and reorganized each element by moving specific policies to more appropriate elements within the Plan, removing regulatory details in the Plan that are also in the Land Development Code and more appropriate to be in the LDC, and combining or removing repetitive objectives and policies.
- Made formatting changes to make the Plan more user-friendly for residents, staff, and developers.
- Removed outdated objectives and policies.
- Updated all data and analysis that is required to support each element, such as population projections, vacant land analysis, housing inventory, infrastructure capacity and level of service analyses.
- Updated all maps to reflect current conditions and for the 2045 planning horizon.

2. Introduction Chapter

- Added an Introduction Chapter to provide information on how the Plan is organized, legal status, interpretation of the Plan, and a list of acronyms and definitions of terms used.

3. Future Land Use Element

- Maintained the list of current Future Land Use designations.
- Added a new Future Land Use designation, the Residential Estate Future Land Use (FLU) Designation (1 unit/acre). This designation provides a lower-density option for areas annexed into the city. Revised the Office/Residential Transition (ORT) designation to allow a density limit as previously allowed before the State placed a statutory ten units/acre density limitation on small-scale amendments. The ORT destination allows twenty-five percent of the site to be developed as residential. As part of the 2010 Comprehensive Plan Update, the density for the residential component of the ORT designation was reduced from 16 units/acre to 10 units/acre. The State has removed the statutory ten units/acre density limitations on small-scale amendments, allowing the ORT designation to return to its original density.
- Added policies to support applications or requests for federal, State, regional, and local funding sources, or grants for land acquisition.

4. Transportation Element

- Added policies to support future applications for federal, State, regional, and local funding sources or grants for roadway and pedestrian safety and capacity-enhancing roadway projects.

- Added policies to support the statewide initiative, Vision Zero, to create safer roadways for motorists, pedestrians, and bicyclists to reduce the number of transportation-related severe injuries and deaths across Florida to zero.
- Added statutorily required text to comply with Florida Statutes, Section 163.3177(6)(b), to promote land use compatibility around airports.
- Updated the list of long-term roadway or pedestrian projects that may be needed to improve the transportation network through 2045.
- Added policies to support a multi-modal transportation system that provides infrastructure for walking, bicycling, transit, and vehicles including electric vehicles.

5. Housing Element

- Added the framework for Accessory Dwelling Units to be implemented into the Land Development Code at a later date, if directed by the City Council, as an affordable housing option.
- Updated policies that encourage sustainable construction methods and energy efficiency in the development and rehabilitation of housing.

6. Recreation and Open Space Element

- Updated the Level of Service (LOS) standards by removing the facility-specific level-of-service (LOS) standards for tennis courts, basketball courts, multi-purpose fields, etc. Florida Statutes no longer require facility-specific level-of-service (LOS). Removing the facility-specific LOS standards will provide the city more flexibility to be more responsive to community needs and changes in recreation trends. The existing Parkland LOS standard of 7 acres / 1,000 persons will remain.
- Added policies to explore opportunities to enhance or create trails within the city and assist in securing federal, State, regional, or local funding sources for acquisition, design, and construction.
- Created a Master Recreation Plan as a separate stand-alone document that is referenced in this element, that can be used as a tool to identify and plan for the maintenance of existing facilities, and criteria for the prioritization of funding for the acquisition, development, and enhancement of future public parks based on community needs.

7. Public Facilities Element

- Updated policies and objectives to be consistent with the Water Supply Plan adopted in July 2023.
- Added policies to support applications or requests for federal, State, regional, and local funding sources or grants for capital improvements.

8. Public School Facilities Element, Conservation Element, Coastal Zone Management Element, Intergovernmental Coordination Element, and Property Rights Element

- Updated policies and objectives to comply with current Florida Statutes.

9. Capital Improvements Element

- Updated this element to include projects from the City's approved FY 24 Capital Improvements Program (CIP) and other statutorily required information, such as excerpts from the Transportation Planning Organization's (TPO) Transportation Improvements Program (TIP) and the Volusia County School District Five-Year Work Program.

10. Map Series

- Updated all maps to be based on current data, future projections, and to comply with current Florida Statutes and Federal, State, and County regulatory agencies.

PUBLIC OUTREACH AND INPUT

The proposed Comprehensive Plan update process included various public involvement opportunities, ranging from a 204-participant survey to various public meetings and workshops held over the last 18 months, including Comprehensive Plan Update specific workshops, as well as public outreach during Port Orange University, Town Halls, and the Youth Civic Leadership program.

Example: Link to November 15, 2022, City Council Workshop on the Comprehensive Plan Update (starts at 42:00 through 1:09):

<https://www.youtube.com/watch?v=bVkm4OntxMQ&list=PLSWPI2RWqtzH85C7zzlBjqLmq3jSpfe9T&index=38>

RECOMMENDATION

Staff recommends **approval** of the amendments to the Comprehensive Plan, inclusive of all associated data and analysis, replacing in its entirety the City's Comprehensive Plan 2022-2045, and transmittal to the Volusia Growth Management Commission, Florida State Land Planning Agency, and other required review agencies for review.

Link to Proposed Amendments for the City of Port Orange Comprehensive Plan 2022-2045: <https://www.port-orange.org/1018/2022-2045-Comprehensive-Plan-Update>



Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the City's website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:

First Reading – Ordinance No. 2024-04: Adoption of the City of Port Orange Comprehensive Plan 2022-2045 (Case No. CPAM-24-0001)

This Business Impact Estimate is provided in accordance with Section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is **not** required by state law¹ for the proposed ordinance, but the City is implementing the procedure required by statutory law to ensure that no inadvertent procedural issue could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant, or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The proposed ordinance relates to procurement; or
- ☒ The proposed ordinance is enacted to implement the following:
 - a. Part II of Chapter 163, *Florida Statutes*, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
 - b. Sections 190.005 and 190.046, *Florida Statutes*, regarding community development districts;
 - c. Section 553.73, *Florida Statutes*, relating to the *Florida Building Code*; or
 - d. Section 633.202, *Florida Statutes*, relating to the *Florida Fire Prevention Code*.

¹ See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that, an exemption noted above may apply, the City hereby publishes the following information:

1. Summary of the proposed ordinance (must include statement of the public purpose, such as serving the public health, safety, morals, and welfare):

The ordinance is for the proposed City-initiated amendments to the City of Port Orange Comprehensive Plan to update the entire plan for the 2045 planning horizon. All the following Elements of the Comprehensive Plan, as well as the corresponding element map series, and support data and analysis are proposed to be updated: Future Land Use Element; Transportation Element; Housing Element; Public Facilities Element; Public School Facilities Element; Recreation & Open Space Element; Coastal Zone Management Element; Conservation Element; Intergovernmental Coordination Element; Capital Improvements Element; and Property Rights Element.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:

N/A

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

N/A

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs:

N/A

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

N/A

4. Additional information the governing body deems useful² (if any):

This ordinance is to update the Comprehensive Plan for the 2045 planning horizon as required by State law.

² You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: City staff solicited comments from businesses in the City as to the potential impact of the proposed ordinance by contacting the local Chamber of Commerce, social media posting, direct mail or direct email, posting on City website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses.



CITY COUNCIL AGENDA ITEM

COUNCIL MEETING DATE 4/2/2024

SUBJECT: (I19) First Reading - Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations

DEPARTMENT: Police Services

GOAL: 1 - Public Safety
3 - Quality of Life

RECOMMENDED MOTION: Move to approve Ordinance No. 2024-06.

SUMMARY: Vice Mayor Scott Stiltner requested an ordinance to formally authorize the use of golf carts in the Cypress Head Subdivision, a golf course community surrounding the City's public golf course. State Law prohibits the use of golf carts upon City streets, unless the City designates one or more streets for use by golf carts. This will be the first such designation by the City authorizing golf cart use on all city streets within the Cypress Head Subdivision. It is believed that people have been using golf carts on the streets within the Cypress Head Subdivision since its inception and without any major incidents reported.

Golf carts operating pursuant to Ordinance No. 2024-06 will be required to have efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear. Additional safety equipment will be required for night-time driving including headlights and brakelights. The City will require golf cart drivers to have a valid driver's license or learner's driver's license. A golf cart may only contain the number of passengers for which it is designed. Golf carts can also access sidewalks that are a minimum of 8' wide; however, their speed on sidewalks shall be limited to 15 mph. This ordinance does not limit the HOA's right to regulate golf carts on HOA property. Lastly, the ordinance formally authorizes the municipal use of golf carts and other low speed vehicles for a municipal purpose.

This ordinance does not limit or otherwise regulate the use of low speed vehicles (LSVs) which are registered by the State of Florida, and are required to have a license plate and insurance. Under existing State Law, LSVs are defined as a vehicle with a top speed greater than 20 mph, but less than 25 mph. LSVs may be operated on any street with a posted speed limit of 35 mph or less.

PRESENTER: Manuel Marino

ATTACHMENTS:

1.	Ordinance No. 2024-06-Regulation of Golf Carts	Ordinance No. 2024-06-Regulation of Golf Carts.pdf
2.	FDOT Review of Port Orange Golf Cart Ordinance	FDOT Review of Port Orange Golf Cart Ordinance.pdf
3.	Business Impact Estimate Ord. No. 2024-06	Business Impact Estimate Ord. No. 2024-06.pdf

Paula Andrews	Created/Initiated - 3/5/2024
Manuel Marino	Approved - 3/11/2024
Tim Burman	Approved - 3/21/2024
John McKinney	Approved - 3/21/2024
Matthew Jones	Approved - 3/22/2024
Wayne Clark	Approved - 3/22/2024
Tracee Cody	Final Approval - 3/22/2024

ORDINANCE NO. 2024-06

AN ORDINANCE OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, AMENDING THE CODE OF ORDINANCES, CHAPTER 70 – TRAFFIC, TO ADD AN ARTICLE REGULATING THE USE OF GOLF CARTS WITHIN THE CITY OF PORT ORANGE; PROVIDING FOR GENERAL ENFORCEMENT; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council has elected to enact an ordinance regarding golf cart operation and equipment which is as restrictive or more restrictive than those enumerated in § 316.212, F.S.; and

WHEREAS, the City's regulations aim to protect the public health, safety, welfare and to ensure the protection of pedestrian bicycle and all vehicular travel within the City of Port Orange and its citizenry; and

WHEREAS, the City Council has determined that certain streets located within the Cypress Head Subdivision (hereinafter "Golfing Community") are uniformly configured by platting and right of way designation; that golf carts are currently an accepted mode of limited destination travel within the Golfing Community; that the use of golf carts within the Golfing Community has been routinely utilized since the inception of the Golfing Community and no negative findings were generated; and the City of Port Orange has found it operationally and economically feasible to implement § 316.212, F.S. within the boundaries of the Golfing Community; and

WHEREAS, the City Council has carefully considered factors including the speed, volume, and character of motor vehicle traffic using the streets within the

Golfing Community and has determined that golf carts may safely travel on these streets; and

WHEREAS, the City has consulted with the Department of Transportation in accordance with § 316.212, F.S. prior to the implementation of this Ordinance; and

WHEREAS, the City Council has determined, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk designated herein.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA:

SECTION 1. The City Council of the City of Port Orange, Florida, hereby amends Chapter 70, to add a new Article IV, Golf Cart Regulations, to the City of Port Orange Code of Ordinances to read as follows:

ARTICLE IV. - GOLF CART REGULATIONS

Sec. 70-75. Use of golf carts.

(a) *Designated Streets.* In accordance with the provisions of § 316.212, F.S., the city hereby designates the following streets for use by golf carts, as defined by § 320.01(22), F.S.:

(1) *Cypress Head Subdivision.* Streets within the platted boundary limits of the Cypress Head Subdivision, as described in the Cypress Head Phase I-A plat, recorded in Plat Book 44 Pages 36-43, Public Records of Volusia County, Florida, Cypress Head Phase II-A plat, recorded in Plat Book 44

Pages 145-148, Public Records of Volusia County, Florida, Cypress Head Phase II-B plat, recorded in Plat Book 45 Pages 145-148, Public Records of Volusia County, Florida, Cypress Head Phase II-C plat, recorded in Plat Book 47 Pages 80-82, Public Records of Volusia County, Florida, and Cypress Head Phase II-D plat, recorded in Plat Book 49 Pages 25-27, Public Records of Volusia County, Florida.

- (b) *Signage.* The chief of police shall post appropriate signs to alert the public of golf cart usage in designated areas.
- (c) *Safety Equipment.* A golf cart being operated pursuant to this article between sunrise and sunset shall be equipped with efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear. In addition to the safety equipment required for daytime use, a golf cart being operated pursuant to this article during nighttime shall be equipped with headlights, brake lights, turn signals, and a windshield.
- (d) *Age of Operator.* When operating a golf cart pursuant to this article, a golf cart operator must be at least sixteen (16) years of age and possess a valid driver license or valid learner's driver license.
- (e) *Number of Passengers.* The number of occupants in any golf cart being operated pursuant to this article shall be restricted to the number of seats on the golf cart; however, a child under the age of seven (7) years may ride on the lap of an adult passenger (eighteen (18) years of age or older) who is not operating the golf cart.

- (f) *Sidewalks.* Golf carts may only access those sidewalks adjacent to the streets identified in subsection (a) above that are a minimum of eight (8) feet in width. Golf carts must yield to pedestrians at all times. While driven on a sidewalk, golf carts may not exceed the speed of fifteen (15) mph.
- (g) *Homeowner Associations.* Nothing contained in this article shall be construed to prevent, limit, or otherwise impair the authority of a homeowner association to adopt and enforce rules related to the use of golf carts.
- (h) *Municipal Use.* Municipal employees for municipal purposes, including, but not limited to, police patrol, traffic enforcement, and inspection of public facilities, shall be authorized to operate golf carts, low-speed vehicles and utility vehicles pursuant and subject to the authority granted in § 316.2126, F.S., as amended, and subject to and in compliance with all the restrictions contained herein, except for the limitations contained in subsection (c) above, which are waived, and is unrestricted.

Sec. 70-76. Penalties and enforcement.

The police department of the city, acting through its certified law enforcement officers and community service officers, shall have the authority to issue citations for violations of this article on citation forms approved by the chief of police.

Any person violating the provisions of this article shall be punished in the manner prescribed in section 1-8 of this Code.

SECTION 2. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 3. If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

SECTION 4. This ordinance shall become effective immediately upon final passage by the City Council.

MAYOR DONALD O. BURNETTE

ATTEST:

Robin L. Fenwick, MMC, City Clerk

Passed on first reading on the day of _____

Passed and adopted on second and final reading on the day of _____

Reviewed and Approved: _____
Matthew J. Jones, City Attorney

[CA 0662]

Burman, Tim

Subject: FW: [EXT] RE: City of Port Orange Golf Cart Ordinance
Attachments: Golf Carts Ordinance MJrev3.8.24-Final form.docx

From: Sanders, Michael <Michael.Sanders@dot.state.fl.us>
Sent: Thursday, March 21, 2024 1:14 PM
To: Jones, Matthew <mjones@port-orange.org>
Cc: Burman, Tim <tburman@port-orange.org>; Marino, Manuel <mmarino@port-orange.org>; Mahler, James (Ryan) <Ryan.Mahler@dot.state.fl.us>
Subject: [EXT] RE: City of Port Orange Golf Cart Ordinance

Thank you Matthew. Cypress Head Subdivision municipal streets do not front or have direct access to roadways under the jurisdiction of the state. The Department's District Traffic Operations office has no objection to the proposed city ordinance for sidewalk use. I have also copied our counsel for their awareness.

Sincerely,

Michael Sanders, P.E.
Assistant District Traffic Operations Engineer
District Five
Florida Department of Transportation
719 S Woodland Blvd
DeLand FL 32720
Office # 386-943-5339
michael.sanders@dot.state.fl.us

From: Jones, Matthew <mjones@port-orange.org>
Sent: Thursday, March 21, 2024 10:16 AM
To: Sanders, Michael <Michael.Sanders@dot.state.fl.us>
Cc: Burman, Tim <tburman@port-orange.org>; Marino, Manuel <mmarino@port-orange.org>
Subject: City of Port Orange Golf Cart Ordinance

EXTERNAL SENDER: Use caution with links and attachments.

Mr. Sanders,

Good morning. I was forwarded your contact information from one of your colleagues at FDOT. On April 2, 2024, the City of Port Orange will have its first reading of the attached ordinance authorizing the use of golf carts in one of our local golf course communities. Contained in the ordinance, is authorization for golf carts to use the 8' sidewalks located within the golf course community.

According to s. 316.212, F.S., the City is required to consult with FDOT prior to adoption of an ordinance authorizing the use of golf carts on sidewalks. The relevant section is reproduced as follows:

(8) A local governmental entity may enact an ordinance relating to:

(b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:

1. The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk;

2. The local governmental entity consults with the Department of Transportation before adopting the ordinance;

3. The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide;

4. The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by s. 316.271; and

5. The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalks.

I am submitting to you a draft of our ordinance to formally seek the consult of FDOT. If you have any questions or concerns regarding the draft ordinance, please let me know.

Thank you in advance for your time. If there are any other individuals who need to be contacted at FDOT, please let me know.

Regards,

Matthew Jones
City Attorney
City of Port Orange
o 386-506-5525
c 386-290-8953



Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the City's website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:

Ordinance No. 2024-06 - Amendment of the Code of Ordinances Chapter 70, to add a new Article IV, Golf Cart Regulations

This Business Impact Estimate is provided in accordance with Section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the City is of the view that a business impact estimate is **not** required by state law¹ for the proposed ordinance, but the City is implementing the procedure required by statutory law to ensure that no inadvertent procedural issue could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☒ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant, or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The proposed ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
 - a. Part II of Chapter 163, *Florida Statutes*, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
 - b. Sections 190.005 and 190.046, *Florida Statutes*, regarding community development districts;
 - c. Section 553.73, *Florida Statutes*, relating to the *Florida Building Code*; or
 - d. Section 633.202, *Florida Statutes*, relating to the *Florida Fire Prevention Code*.

¹ See Section 166.041(4)(c), Florida Statutes.

In accordance with the provisions of controlling law, even notwithstanding the fact that, an exemption noted above may apply, the City hereby publishes the following information:

1. Summary of the proposed ordinance (must include statement of the public purpose, such as serving the public health, safety, morals, and welfare):

The proposed Ordinance 2024-06 aims to protect the public health, safety, welfare and to ensure the protection of pedestrian bicycle and all vehicular travel within the City of Port Orange and its citizenry, by enacting regulations which are more restrictive than those enumerated in § 316.212 F.S. with respect to golf cart operation within the the Cypress Head Subdivision, as well as providing for municipal use of golf carts and penalties.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City, if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur:

No direct compliance costs to businesses are estimated by Ordinance 2024-06.

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible:

No new charges or fees to businesses, or for which businesses will be financially responsible are estimated by Ordinance No. 2024-06.

(c) An estimate of the City's regulatory costs, including estimated revenues from any new charges or fees to cover such costs:

No new regulatory cost, including revenues from any new charges or fees to cover such cost to businesses, are estimated by Ordinance No. 2024-06.

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

No businesses are estimated to be impacted by Ordinance No. 2024-06.

4. Additional information the governing body deems useful² (if any):

N/A

² You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: City staff solicited comments from businesses in the City as to the potential impact of the proposed ordinance by contacting the local Chamber of Commerce, social media posting, direct mail or direct email, posting on City website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses.