AGENDA
TOWN OF JUPITER
TOWN COUNCIL MEETING
TOWN COUNCIL CHAMBERS
TUESDAY, MAY 5, 2026
7:00 PM

Call To Order

Invocation; Moment of Silence; and Pledge of Allegiance

Roll Call:

Mayor Jim Kuretski
Vice-Mayor Phyllis Choy
Councilor Ron Delaney
Councilor Dan Guisinger
Councilor Malise Sundstrom
Town Manager Frank Kitzerow
Town Attorney Thomas J. Baird

If you would like to speak on any item, please submit a Comment Card.

PROCLAMATION

1. National Drinking Water Week, May 3 – May 9, 2026. #

2. Historic Preservation Month. #

PRESENTATION

3. Update on Ongoing Scams in the County — Palm Beach County Clerk of Court and Comptroller, Mike Caruso. #

4. Drop Savers Poster Contest Awards.

CITIZEN COMMENTS

All Non-agenda items are limited to three (3) minutes. Anyone wishing to speak is asked to state his/her name and address for the record prior to addressing the Town Council. Council will not discuss these items this evening. **Any issues will be referred to Staff for investigation; a report will be forwarded to Council; and citizens will be contacted.**

MINUTES

5. April 21, 2026, Town Council Meeting Minutes.

CONSENT AGENDA

All items listed in this portion of the agenda are considered routine by the Town Council and will be enacted by one motion. There will be no separate discussion of these items unless a Councilor or citizen so requests; in which event, the item will be removed and considered at the beginning of the regular agenda.

PUBLIC BUSINESS

6. Approval of Work Order No. 3 to LP Asphalt, LLC (Contract EPW2025-33A) for the New Haven North Resurfacing in the amount of $538,689.

7. Approval of Agreement with Industrial Shadeports Inc. for the purchase and installation of shaded bleacher covers at Jupiter Community Park in the amount of $86,330.

8. **Resolution 31-26,** Approving the award of Contract EPW2025-31 for the Public Works Site Work project to Creative Contracting Group in the Amount of $1,343,900.

9. **Resolution 41-26**, Approving a Contract with Interacid North America, Inc. for Supplying Sulfuric Acid (W2604L) for a unit price of $338 per ton.

10. **Resolution 51-26,** Approving the Fiscal Year 2026 Mid-Year Budget Amendment.

11. **Resolution 56-26,** Authorizing the Submittal of a FIND Grant Application for Waterway Access and Rapid Rescue Vessels Response Initiative.

REGULAR AGENDA

PUBLIC HEARING

12. **Resolution 59-26,** Adopting an Initial Rate for a Non-Ad Valorem Assessment For Fire Rescue Services.

PUBLIC BUSINESS

13. **Resolution 60-26,** Authorizing an Option Purchase Agreement for 3126 Jupiter Park Drive.

REPORTS

TOWN ATTORNEY

TOWN MANAGER

TOWN COUNCIL – LIAISON REPORTS AND COMMENTS

ADJOURNMENT

Town Council Future Meetings
May 19, 2026, 7pm - Town Council Chambers
June 2, 2026, 7pm - Town Council Chambers

NOTICE
Town Council and CRA Meetings are now webcasted real-time and viewable on your computer or mobile device.
www.jupiter.fl.us/Live

Back up material for the Town Council Meetings are available online one (1) week before the Regular Meetings
= no materials attached *revisions may occur*
www.jupiter.fl.us

Section 2-64; Decorum, disturbing meeting
While the Town Council is in session, the members thereof and the public present in the Council chambers shall not, by conversation or otherwise, delay or interrupt the proceeding or the peace of the Council. It shall be unlawful for any person to disturb or disrupt a meeting of the Town Council or to refuse to obey the orders of the presiding officer in the conduct of the meeting and such person shall be subject to being summarily ejected from the meeting.

Note: Persons are advised that if they wish to appeal any decision made at this meeting, they will need a record of the proceedings and for such purpose, they 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, per Section 286.0105 of the Florida Statute.

Persons with disabilities requiring accommodations in order to participate in the meeting should contact the Town Clerk's office at TownClerk@jupiter.fl.us or 561-741-2530 at least 48 hours in advance to request accommodations.



National
Drinking Water Week
May 3-9, 2026

TOWN OF JUPITER

Drop Savers Poster Contest Awards May 5, 2026

TOWN OF
JUPITER

What is “Drop Savers”?

- Statewide poster contest organized by the Florida Section of the American Water Works Association (FSAWWA) and hosted locally by the Town of Jupiter Utilities with a water conservation theme
- Raises awareness about the importance of water conservation and encourages responsible water use
- Opportunity for Kindergarten -12th grade students to showcase their creativity by designing a poster
- 3 winners from each division are awarded prize packages from the Town
- 1st place winners advanced to the State level of the poster contest



TOWN OF JUPITER

Contest Divisions

Division 1: Kindergarten and 1st grade

Division 2: 2nd and 3rd grade

Division 3: 4th and 5th grade

Division 4: Middle School

Division 5: High School



TOWN OF JUPITER

THANK YOU TO OUR GENEROUS SPONSORS!

Sustaining Sponsors

C.R. CHICKS
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JUPITER INLET LIGHTHOUSE & MUSEUM

EVIDENT ELEMENTS

A TASTE OF PARADISE
GUANABANAS

TIME TRAVEL ESCAPES

Supporting Sponsors

Body Contrology Lab
Kids Need More Art
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Blaze Pizza
Blueline Paddle & Surf Co
Bolay Jupiter
Brush Strokes and More LLC
Dune Dog Café
Five Guys
Lighthouse Cove Adventure Golf
Maltz Jupiter Theatre
Smallcakes Cupcakery
TopCrust Jupiter Kitchen

TOWN OF JUPITER

Division 1 Winners

Kindergarten and 1st Grade

TOWN OF JUPITER

DIVISION 1

3RD PLACE

PAIGE McROBERTS

Kindergarten



TOWN OF JUPITER

DIVISION 1

2ND PLACE

GRACIE KETTNER

1st Grade



TOWN OF JUPITER

DIVISION 1

1st PLACE

EDRUNE NOVELUS

1st Grade



TOWN OF JUPITER

Division 2 Winners

2nd and 3rd Grade

TOWN OF JUPITER

DIVISION 2

3rd PLACE

WYATT POKORNY

2nd Grade



TOWN OF JUPITER

DIVISION 2

2nd PLACE

NICHOLAS JOHNSON
3rd Grade



TOWN OF JUPITER

DIVISION 2

1st PLACE

MAIA HILL
3rd Grade



Division 3 Winners

4th and 5th Grade

TOWN OF JUPITER

DIVISION 3

3RD PLACE

HADLEY GUITTAP

4th Grade



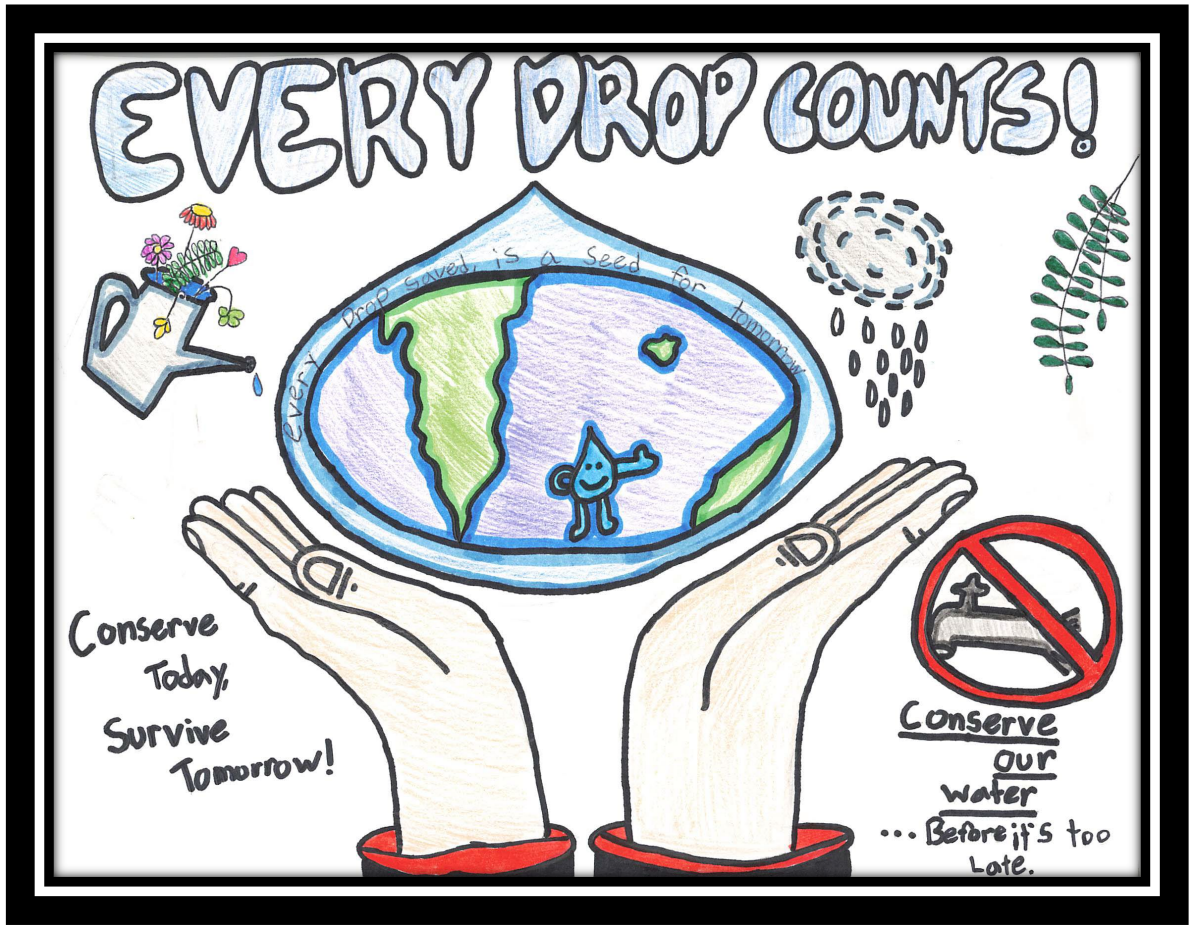
TOWN OF JUPITER

DIVISION 3

2nd PLACE

TESSA DABROWSKI

5th Grade



TOWN OF JUPITER

DIVISION 3

1ST PLACE

RILEY FISCHER

4th Grade



TOWN OF JUPITER

Division 4 Winners

Middle School: 6th – 8th Grade

TOWN OF JUPITER

DIVISION 4

3RD PLACE

HELLEN RAYMUNDO

7th Grade



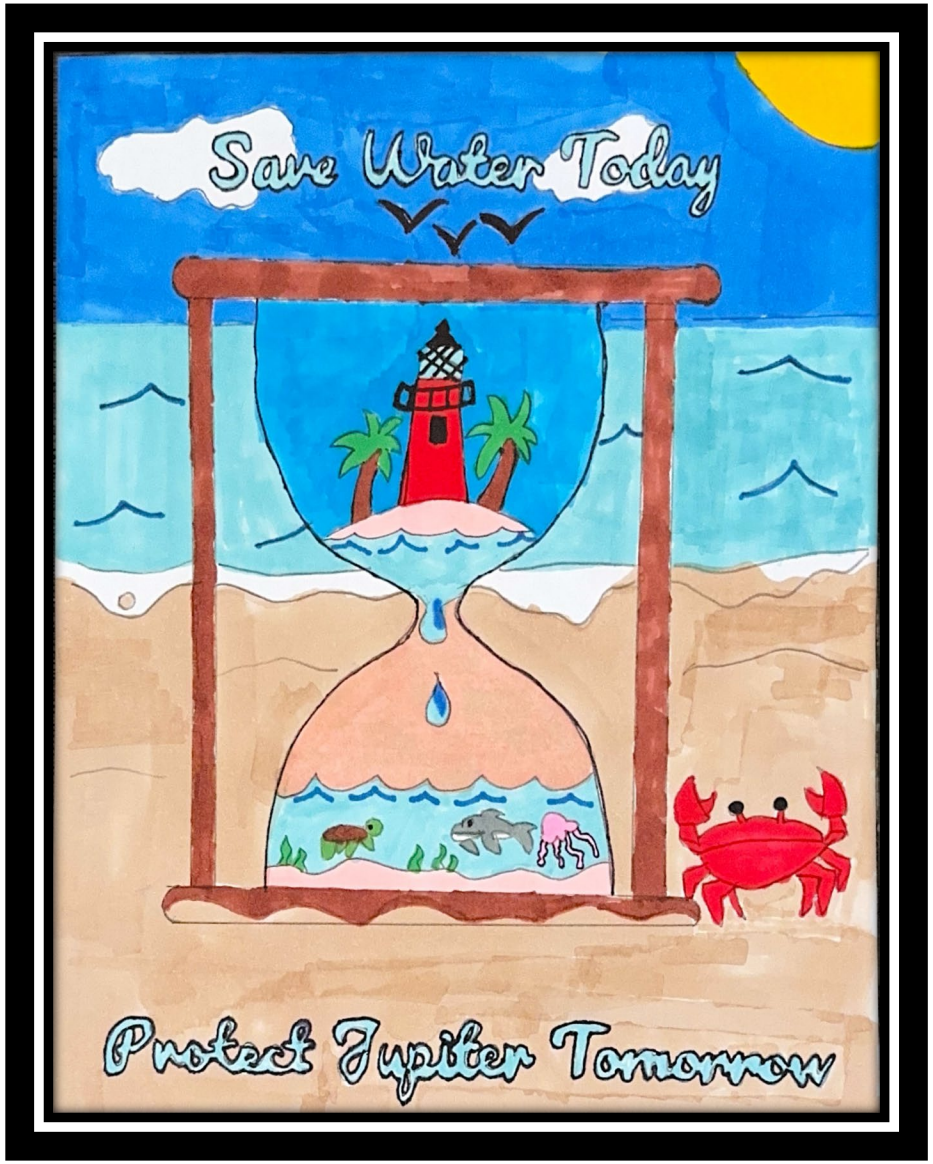
TOWN OF JUPITER

DIVISION 4

2ND PLACE

PEYTON LAU

8th Grade



TOWN OF JUPITER

State Winner!
3rd Place

DIVISION 4

1ST PLACE

GIAHNA LIPSET
8th Grade



TOWN OF JUPITER

Division 5 Winners

High School: 9th – 12th Grade

TOWN OF JUPITER

DIVISION 5

2ND PLACE

PRESTON LAU

9th Grade



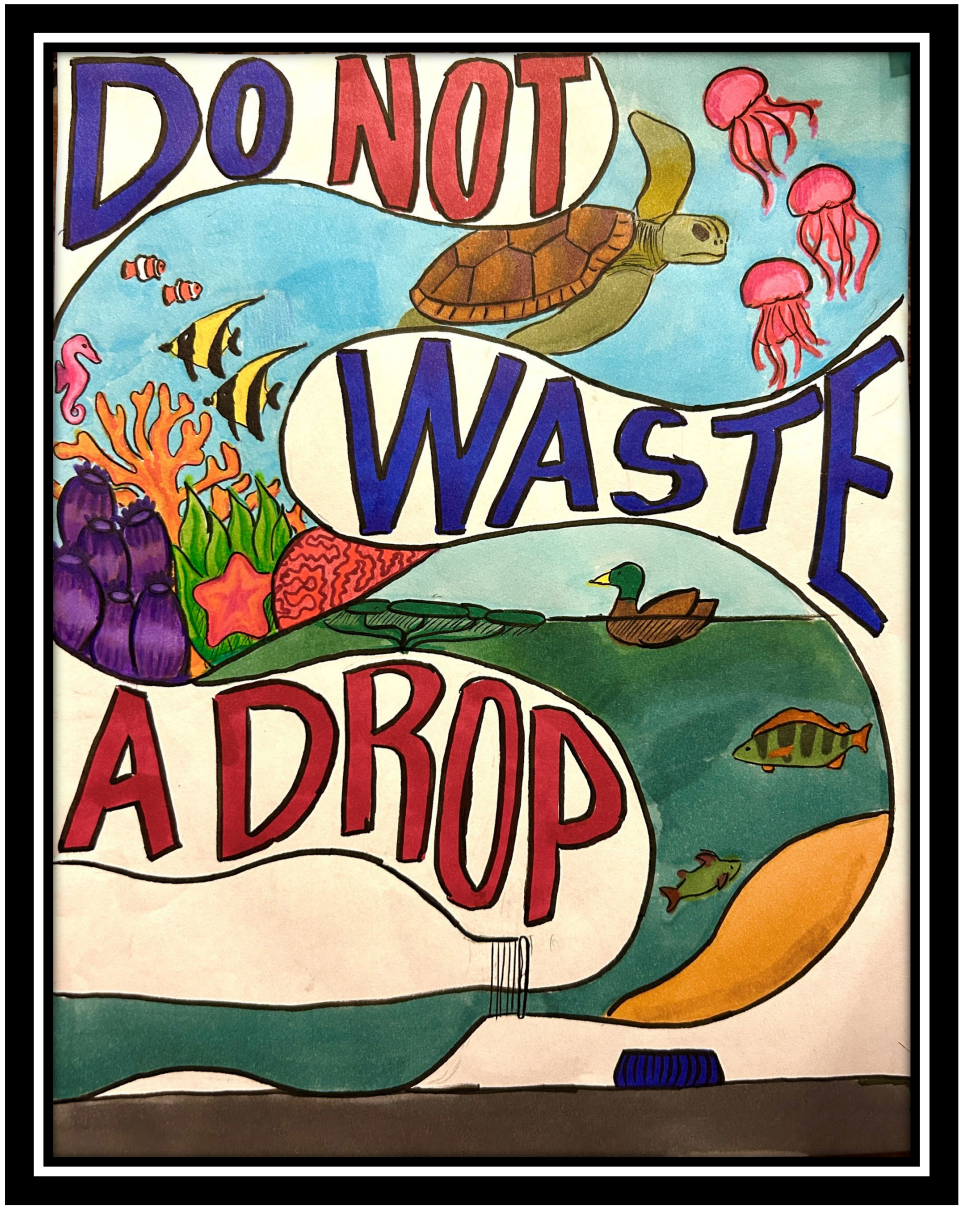
TOWN OF JUPITER

State Winner!
1st Place

DIVISION 5

1ST PLACE

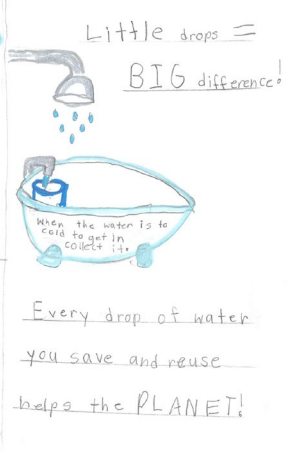
CAROLINE McCARTHY
11th Grade



TOWN OF JUPITER









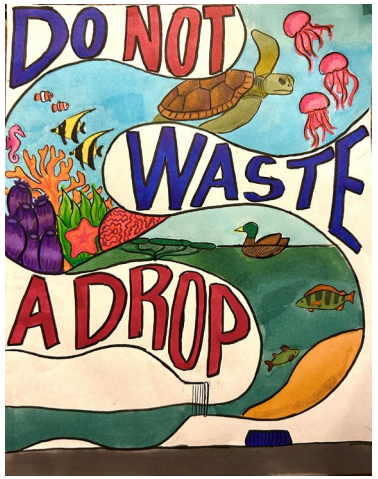






CONGRATULATIONS TO ALL PARTICIPANTS!

















TOWN OF JUPITER FLORIDA
TOWN OF JUPITER

FINAL MINUTES AND AGENDA
TOWN OF JUPITER
TOWN COUNCIL MEETING
TOWN COUNCIL CHAMBERS
TUESDAY, APRIL 21, 2026

Mayor Kuretski called the meeting to order at 7:00 P.M.

Roll Call: Mayor Jim Kuretski; Vice-Mayor Phyllis Choy; Councilor Ron Delaney; Councilor Dan Guisinger; Councilor Malise Sundstrom; Town Manager Frank Kitzerow; Town Attorney Thomas J. Baird and Town Clerk Merriane Lahmeur.

PRESENTATION

1. FYE 2025 Audit Presentation Discussion and Findings – Moises Ariza, CPA Presenting.

Mr. Moises Ariza provided an overview of the Town Annual Comprehensive Financial Report for the Fiscal Year ended September 30, 2025, which included the Independent Auditors' Report and Opinions, Management's Discussion and Analysis, basic financial statements and footnotes, statement of activities, snapshot of investment portfolio, capital assets, internal control report, compliance report, schedule of expenditures of federal awards, and different audits completed (CRA, Town and Federal). Mr. Ariza noted their opinion was considered a clean opinion and said there were no instances of noncompliance (unmodified and highest regard).

Councilor Sundstrom noted that she had attended the Audit Committee meeting and requested a recap of information presented on page 100. Mr. Ariza stated the information was related to the Municipal Officers' Retirement Trust, and that he had reported that the Trust is funded at 94%, which is much higher than their other clients, and the highest it has ever been funded, and that it was something to be proud of.

Councilor Sundstrom inquired whether any findings were identified in the current or previous audits and asked what percentage of municipalities typically receive findings. Mr. Ariza responded that this information is publicly available on both the municipality's website and the Florida Auditor General's website. He stated that for the Town, they had no findings or recommendations to report, which is not typical. He further stated that approximately half of their clients receive findings and recommendations at year-end.

Mayor Kuretski expressed the Council's gratitude to the Audit Committee members and shared appreciation for the clear and effective presentation style.

Vice-Mayor Choy also thanked Staff and the auditing firm for their work.

2. JFRD Update.

Fire Chief Donatto provided the most recent update on the Jupiter Fire Rescue Department, which included an overview of the upcoming timeline and the hiring of the operational personnel. He expressed his gratitude to the Human Resources Department (HR) for their dedication, noting that HR had helped JFRD hire 107 new employees within a few months.

He highlighted the frontline leadership experience, which included 12 Captains, 12 Lieutenants, and 12 Driver Engineers, each bringing extensive combined years of fire service. In addition, 54 Firefighter Paramedics and EMTs contributed significant knowledge. He also stated that all trainees who attended fire EMT school had graduated.

Fire Chief Donatto next outlined the next steps for JFRD. He stated that from May 11 to 29, the 36 frontline leaders would begin orientation and training. From June 1 to 5, 54 firefighters would join and begin orientation and training. Beginning June 6, a total of 93 operational personnel, including battalion chiefs, would start and begin an intensive four-month training program.

Fire Chief Donatto noted that the department remained on schedule and on budget.

CITIZEN COMMENTS

Mr. Eric Weitze, resident of Ocean Grande, stated his concerns regarding the sidewalks at the beach and informed Council he had reached out to County Commissioner Maria Marino for assistance.

MINUTES

3. April 7, 2026, Town Council Meeting Minutes.

Councilor Guisinger moved to approve the April 7, 2026, Town Council Meeting Minutes; seconded by Vice-Mayor Choy; motion passed.

Kuretski	Choy	Delaney	Guisinger	Sundstrom
Yes	Yes	Yes	Yes	Yes

CONSENT AGENDA

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Councilor Delaney moved to approve the Consent Agenda; seconded by Councilor Sundstrom; motion passed.

Kuretski	Choy	Delaney	Guisinger	Sundstrom
Yes	Yes	Yes	Yes	Yes

PUBLIC BUSINESS

4. Approving the Purchase of Two Skydio Drones and Software from Axon Enterprises, Inc. in the amount of $52,154.

5. Approving a Purchase Order to Flagler Technologies for Managed Detection and Response Licensing in the amount of $119,502.

6. Amending the Funding Schedule for the Utilities Generator Maintenance Services Contract (W2537) with OnsiteGenPros LLC.

7. Approval of Agreement with Rep Services, Inc. for Playground Equipment Purchase and Installation at Heights of Jupiter Park, Abacoa Community Park, and Jupiter Community Center in the Amount of $1,871,982

8. **Resolution 42-26,** Approving the Award of EPW 2026-11, Sea Grape Trimming and Exotic Removal to K&S Services of South Florida, Inc. in the amount of $375,150.

9. **Resolution 47-26,** Approving the Renewal of Printing, Binding and/or Mailing Services Contract with Southeastern Printing Co., Inc. in the annual amount of $87,568.

10. **Resolution 49-26,** Authorizing a Premium Holiday through the Town's Insurance Fund for Employees and the Town for the Months of May and June 2026.

REGULAR AGENDA

PUBLIC HEARING

11. **Jupiter Christian School Legacy Campus (fka Hawkeye)–**
    - **A. Ordinance 21-26, First Reading** — Future Land Use Map amendment from General Industrial with Bioscience Research Protection Overlay to High Density Residential, on 18.0± acres generally located east of I-95, north of Jupiter Park Drive, and 180± feet west of Capital Street;
    - **B. Ordinance 23-26, First Reading** — Future Land Use Map amendment from General Industrial with Bioscience Research Protection Overlay to Public Institutional, on 38.6± acres generally located east of I-95, 770± feet south of Indiantown Road, and 180± feet west of Capital Street;
    - **C. Ordinance 22-26, First Reading** - Zoning Map amendment from Industrial, Park, Light Industry (I-1) to Residential, Limited Multifamily (R-3) on 18.0± acres generally located east of I-95, north of Jupiter Park Drive, and 180± feet west of Capital Street; and,
    - **D. Ordinance 24-26, First Reading** - Zoning Map amendment from I-1 to Public/Institutional (PI) district, on 38.6± acres generally located east of I-95,

770± feet south of Indiantown Road, and 180± feet west of Capital Street. (Second Reading TBD)

Councilor Sundstrom requested that the Item be postponed. She stated that Council had received a draft developer's agreement the previous evening and, given their fiduciary duty to residents, expressed concern over the incomplete information, including the staff analysis. She noted that the proposal requested the Town pay $11 million dollars for the cost of a new road, which exceeded the Town's budget, and that there was no proposed proportionate fair-share agreement. She requested the Item to be postponed to allow Staff and the Applicant sufficient time to resolve critical deficiencies in the record related to the proportionate fair-share agreement, the staff analysis, and the developer's agreement.

Mayor Kuretski expressed his agreement and understanding of the concerns; however, he explained that the project application could not move forward without first understanding the Town's position on the land use and zoning items. He noted that a site plan would need to be approved by Council before anything could proceed.

Councilor Sundstrom commented that the application is unique in that it is dependent on the delivery of infrastructure, and the project doesn't exist without infrastructure, and there is currently no clear understanding of the developer's contributions or the Town's.

Councilor Delaney stated that the property was landlocked and that a road is necessary for it to be developed. He indicated that the Applicant might need to pay for a portion of the road, noting that the development agreement currently stated that the Town would be responsible for the full cost. He added that he was not prepared to move forward and that the Item needed to be reworked.

Councilor Guisinger stated that he would like to see a more integrated plan that includes roadway construction and right-of-way acquisitions that are phased with the development of the property. He noted that none of that currently exists.

Vice-Mayor Choy clarified that the discussion was not a lack of support for Jupiter Christian School, but the Council needed additional information, emphasizing that the $11 million request was significant. She supported the motion to postpone.

Mayor Kuretski opened the Item up for Public Comment:

Mr. Donald Barnes, Jupiter Christian School Board Chairman, expressed his disappointment and stated that they had been requested to submit a draft developer's agreement and that it was expected for it to be modified. He also

expressed his disappointment at not being notified in advance regarding the postponement.

Mayor Kuretski responded that the Council had received the document late the day before, and it opened up a lot of questions and concerns regarding expectations on the part of both parties to enable a project such as this to proceed.

Councilor Sundstrom moved to postpone Ordinances 21-26, 22-26, 23-26 and 24-26; seconded by Councilor Guisinger; motion passed.

Kuretski	Choy	Delaney	Guisinger	Sundstrom
No	Yes	Yes	Yes	Yes

The Council recessed from 7:45 p.m. to 7:50 p.m.

12. **Ordinance 27-26, Second Reading,** Establishing Procedures for Authorization of a Fire Special Assessment on Properties within the Town of Jupiter.

Mr. Scott Reynolds, Director of Finance, provided a brief presentation outlining the framework for the non-ad valorem assessment. His presentation included an overview of the proposed Ordinance, available funding options, potential immediate savings for property owners, and the next steps along with a timeline.

Councilor Guisinger inquired whether the $2.1 million in sales tax referenced on page 3 would come from the Town's General Fund. Mr. Reynolds confirmed that it would and explained that these funds could be allocated for any purpose designated by the Council. He also noted that the Town had previously used these funds for debt service.

Councilor Delaney noted the projected $10 million in savings associated with the non-ad valorem assessment. Mr. Reynolds presented details regarding the applicable fees, administrative process, and required public notices. He emphasized that the process was designed to be as transparent as possible and is fully outlined within the Ordinance.

Mayor Kuretski addressed concerns related to public misperception and the reported deficit. He referenced Palm Beach Gardens example and requested confirmation of its accuracy. Mr. Reynolds confirmed the information. Mayor Kuretski discussed outstanding bond debt and its implications.

Vice-Mayor Choy expressed appreciation for the clarity and thoroughness of the presentation, noting that tangible savings were effectively demonstrated for residents.

Councilor Sundstrom stated that the presentation represented a positive step forward in communicating the Ordinance's impact. Mr. Reynolds acknowledged and thanked the Community Relations team for their contributions.

Mayor Kuretski reiterated the anticipated savings on residents' tax bills and referred to a specific example discussed at the previous Council meeting that he found concerning. He noted that this example was based on information provided in the study and would form the basis for the first year.

The title for Ordinance 27-26 was read by Mr. Baird.

Councilor Delaney moved to approve Ordinance 27-26, Second Reading; seconded by Councilor Guisinger; motion passed.

Kuretski	Choy	Delaney	Guisinger	Sundstrom
Yes	Yes	Yes	Yes	Yes

REPORTS

TOWN ATTORNEY –

- Property Purchase – Mr. Baird reported that the Town had located a piece of property that it is interested in purchasing. He stated that a letter of intent had been signed and negotiations were ongoing, but that the property owner indicated another buyer was also interested in the property and was requesting that the Town sign an Option Agreement within the next 48 hours. Mr. Baird noted that a Real Estate Agreement would still come back before Council for approval at the May 5 Council meeting, and that there would still be an inspection period after the execution of that Agreement. He requested permission to secure the property and have the Option Agreement executed.

  Mayor Kuretski expressed his support for the action and securing the property.

  Vice-Mayor Choy inquired about the use of the property, and Mr. Kitzerow, Town Manager, explained it would be used for possible consolidation of services for the Town.

  Councilor Delaney moved to authorize the Town Manager to execute the Option Agreement for the property; seconded by Counselor Guisinger; motion passed.

Kuretski	Delaney	Choy	Guisinger	Sundstrom
Yes	Yes	Yes	Yes	Yes

TOWN MANAGER –

- JCS Legacy Campus - Mr. Kitzerow addressed a comment made during public comment requesting pre-notification of an anticipated outcome of an Agenda Item, and explained that, as with any Agenda Item, there is no way for any Council Member to know what the outcome will be prior to a meeting.

- Finance Department – Mr. Kitzerow expressed gratitude to Mr. Reynolds and his team for all of the great work that they do. He noted the stellar results from the audit, which included 150 pages of analysis and took over four months to complete. Mr. Reynolds requested to specifically recognize and thank Mark Rady, Senior Accountant, who took on a heavier load this year.

- JFRD - Mr. Kitzerow reported that three of the Town's recruits had graduated from the Fire Academy. He noted that one of them had been selected to serve as the Class Captain and Leader for both EMT and Fire training phases, another received the Edward F. Croker Outstanding Student Award, and another one received the David Horowitz Academic Award and the Geoff Cooper Academic Award for both EMT training and Fire training respectively. JFRD's new firefighters received three of the four awards presented to the class.

- Cinquez Fire Station – Mr. Kitzerow reported that as part of the construction for the station located next to Cinquez Park, the western entrance to the park and the access road through the park are currently closed to traffic in order to allow for the replacement of the curbs and sidewalks and repaving of the roadway. Work began on April 9 and will conclude the week of May 4.

- Street Resurfacing - Mr. Kitzerow provided an update on three major projects. Work on Dolphin Drive will begin on April 27, Resurfacing on Egret Landing is scheduled to start this month, and work on New Haven is expected to start early summer. Mr. Kitzerow stated that the Town is using post cards and social media to notify residents.

- Employee Recognition - Mr. Kitzerow recognized and congratulated Tony DiCuia, Utilities Chief Plant Operator, for being awarded the FDEP 2025 Portable Water Plant Excellence Award, noting the award is given to those who demonstrate excellence, innovation and leadership in water treatment operations and maintenance.

TOWN COUNCIL – LIAISON REPORTS AND COMMENTS –

COUNCILOR GUISINGER:

- Finance Department - Councilor Guisinger recognized and congratulated Mr. Reynolds and the Finance team for their efforts in obtaining a clean and unmodified audit, noting that it was a testament to their due diligence in maintaining strong financial practices.

- Great American Cleanup - Councilor Guisinger thanked the Town Staff for a great event with a lot of participation from Town employees, who assisted in cleaning up the campus.

COUNCILOR SUNDSTROM:

- JCS Legacy Campus - Councilor Sundstrom provided clarification on her motion to postpone the Agenda Item. She explained that because the Items were land use and zoning amendments, action would either give entitlements or remove entitlements, and she did not feel she had enough information to proceed. She stated they had received last-minute information, and she had concerns regarding

traffic and questions about the proposed related funding structures. She noted how complex the project was, and the possible impact to other projects as well as a major arterial road, which would impact all residents. She further explained that she felt at this time she couldn't support the project due to the lack of information but wanted to give more time for details to be worked out because of its complexity.

MAYOR KURETSKI:

- Town Manager - Mayor Kuretski reminded everyone that they needed to complete the annual performance evaluation for the Town Manager. Mayor Kuretski explained the Town Council process of each member meeting one-on-one with the Town Manager to provide a performance review. He noted that once that process was complete, the Council would discuss any compensation adjustments on the dais.

- Connect with Council – Mayor Kuretski explained that he had met two residents, who live in a community off of Bush Road, north of Toney Penna Drive. He relayed that they had safety concerns with the roadway improvement projects that were taking place in the area. Mayor Kuretski shared a recent experience in the same area where trucks were blocking a lane on Bush Road but noted that these vehicles belonged to workers doing work for TECO. He stated that these types of blockages from work trucks are occurring more frequently. He requested Staff provide clarification and guidance for when trucks are allowed to block roadways. Mr. Kitzerow requested individuals to contact the Town so that the police can be called to address these types of matters.

- Commercial Center on Maplewood - Mayor Kuretski shared that one evening he had observed three landscapers maintaining the commercial center across from the elementary school blowing leaves into the roadway. He requested Staff share with the Council rules on this activity as well.

- JCS Legacy Campus - Mayor Kuretski stated that even though he did not vote for the motion, he recognized they all have the same type of concerns. He explained that he thought it was premature to call the document they had received a "Developer's Agreement." Noting that there is no developer until there is a site plan. Councilor Sundstrom explained that her concerns were more with the content of the agreement than with what the agreement was called. There was brief discussion on when an agreement would typically come forth for action.

COUNCILOR DELANEY:

- JCS Legacy Campus - Councilor Delaney explained the responsibilities put on the Town in the agreement for road expansion had caught him off guard. He stated that he was glad he did not have to vote against it tonight, since he needed more information. He also explained that they receive a large number of complaints about traffic on east Indiantown Road, and any development and road expansion would need to have a positive impact on traffic.

- Finance Department - Councilor Delaney expressed gratitude to Mr. Reynolds and the Finance team for their great work.

VICE-MAYOR CHOY:

- Finance Department - Vice-Mayor Choy expressed gratitude to Mr. Reynolds and the Finance team for their great work.
- JFRD - Vice-Mayor Choy expressed appreciation for JFRD and the Human Resources team for all of their hard work.

ADJOURNMENT – 8:33 P.M.

_____

Merriane Lahmeur, Town Clerk

TOWN OF JUPITER
New Haven North Resurfacing Project

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	George Dzama, Engineering Director
SUBJECT	Approval of Work Order No. 3 to LP Asphalt, LLC (Contract EPW2025-33A) for the New Haven North Resurfacing in the amount of $538,689.

EXECUTIVE SUMMARY

Town staff seeks Town Council approval of Work Order No. 3 of Contract EPW 2025-33A with LP Asphalt, LLC for the New Haven North Resurfacing in the amount of $538,689.

Work Order No. 3 authorizes LP Asphalt, LLC to complete the resurfacing of the roads in New Haven North. The scope of work includes but is not limited to, the milling of existing asphalt pavement, adjustments to utility manholes and valves, concrete curb removal and installation, roadway repairs, asphaltic concrete roadway overlay, striping rehabilitation, and striping of new asphalt.

This work order will fall under an existing contract which was reviewed by the Town Attorney for legal sufficiency.

ANALYSIS

LP Asphalt, LLC was awarded a continuing services contract, EPW 2025-33A, by the Town Council in November of 2025. Staff has determined that LP Asphalt, LLC can provide the necessary contracting services for the New Haven North Resurfacing.

Approval of this item will authorize the Town Manager to execute Work Order No. 3 with LP Asphalt, LLC in the amount of $538,689.

STRATEGIC PRIORITY

- Safety
- Fiscal Responsibility
- Manage Growth

ATTACHMENTS

1. Work Order
2. CIP Sheets

3. Procurement Review Memo

FUNDING SOURCE

Amount of this Request	$ 538,689	
Amount Approved in Budget	$ 470,114 $ 68,575	Sources: 31031041-553000-E1003 CIP Street Resurfacing 41151038-563100-S2227 CIP Utilities Curb Replacement
Additional Funding Requested		Sources:

For more information or copies of the attachments, please contact Heather Keys at heatherk@jupiter.fl.us or 561-741-2737.

EPW 2025-33
STREET RESURFACING
WORK ORDER 3
NEW HAVEN NORTH

Pursuant to that certain Contract ("**Contract**") between the Town of Jupiter ("TOWN") and LP Asphalt, LLC ("**Contractor**") dated November 18, 2025, **Contractor** hereby agrees to provide the services specified on Exhibit "A", under the terms and conditions and at a cost of $538,688.40 all as more specifically described in Exhibit "A", attached hereto and incorporated by this reference. The terms of the **Contract** shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

Substantial Completion Time:	120 calendar days
Final Completion Time:	**30** calendar days upon issuance of the Punchlist *(Pursuant to Section 218.735, Florida Statutes)*
Liquidated Damages:	**$** 1,685 per day

IN WITNESS WHEREOF, the **TOWN** and the **Contractor** have executed this Work Order effective this 5th day of May 2026.

LP Asphalt, LLC

Don Mancil, Jr.
Manager

REVIEWED BY:

George Dzama, P.E.
Director of Engineering & Public Works

TOWN OF JUPITER

Frank J. Kitzerow, MPA
Town Manager

Work orders $200,000 or greater (or otherwise indicated)

Payment & Performance Bonds shall be recorded in the public records of the Town of Jupiter. **A certified copy of completed and recorded bonds must be delivered to and accepted by the TOWN prior to commencement of the Work.** Bond premiums shall be paid by Contractor. Bonds shall be on the form provided by the TOWN and written through a licensed agency that fulfills the requirements of §287.0935, Fla. Stat.

PROPOSAL

LP Asphalt LLC

PHYSICAL ADDRESS: 4060 SELVITZ RD, FORT PIERCE, FL 34981 BILLING: 10790 SW CITRUS BLVD, PALM CITY, FL 34990
PHONE: 772-521-PAVE (7283) EMAIL: LPASPHALTLLC@GMAIL.COM

DATE: 4/15/2026
ESTIMATOR: RICK MANCIL
PROJECT: NEW HAVEN NORTH STREET RESURFACING
PER PLANS: PROVIDED BY TOWN OF JUPITER
LOCATION: JUPITER
ASPHALT

BID TO: TOWN OF JUPITER
CONTACT: SCOTT ISBERNER
PHONE: 561-284-4983
EMAIL: scotti@jupiter.fl.us

ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL
4	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC LEVEL C ROADWAY OVERLAY	1,425	TN	$ 142.00	$ 202,350.00
18	SOLID TRAFFIC STRIPE, THERMOPLASTIC (6" DOUBLE YELLOW)	500	LF	$ 4.80	$ 2,400.00
19	SOLID TRAFFIC STRIPE, THERMOPLASTIC (6"	1,600	LF	$ 2.40	$ 3,840.00
22	SOLID TRAFFIC STRIPE, THERMOPLASTIC (12"	1,900	LF	$ 7.20	$ 13,680.00
23	SOLID TRAFFIC STRIPE, THERMOPLASTIC (24"	250	LF	$ 14.40	$ 3,600.00
24	SOLID TRAFFIC STRIPE, THERMOPLASTIC (18" YELLOW)	350	LF	$ 9.60	$ 3,360.00
28	RETRO REFLECTIVE PAVEMENT MARKERS BI-DIRECTIONAL (AMBER-AMBER)	185	EA	$ 7.80	$ 1,443.00
28	RETRO REFLECTIVE PAVEMENT MARKERS BI-DIRECTIONAL (BLUE - FIRE HYDRANT)	18	EA	$ 7.80	$ 140.40
32	REGULAR EXCAVATION (INCLUDING REMOVAL & DISPOSAL	225	CY	$ 40.00	$ 9,000.00
39	BASEROCK (8", INCLUDING REMOVAL & DISPOSAL)	625	SY	$ 85.00	$ 53,125.00
46	MILL EXISTING ASPHALT PAVEMENT 1" (FULL	5	DAY	$ 7,500.00	$ 37,500.00
52	CONCRETE F CURB	325	LF	$ 45.00	$ 14,625.00
53	CONCRETE VALLEY CURB	725	LF	$ 50.00	$ 36,250.00
69	SAW CUT ASPHALT	5,000	LF	$ 4.00	$ 20,000.00
66	ADJUSTING MAHOLE TOPS	5	EA	$ 450.00	$ 2,250.00
67	ADJUSTING VALVE BOXES	5	EA	$ 450.00	$ 2,250.00
70	CONCRETE SIDEWALK (5.5")	175	SY	$ 95.00	$ 16,625.00
76	CONCRETE REMOVAL	225	TN	$ 120.00	$ 27,000.00
N/A	DETECTABLE WARNINGS ON WALKING SURFACE (BLACK)	625	SY	$ 60.00	$ 37,500.00
107	FLORITAM SOD	250	SY	$ 7.00	$ 1,750.00
1000-1	OWNER'S ALLOWANCE - CONTINGENCY	1	LS	$ 50,000.00	$ 50,000.00
				TOTAL	**$ 538,688.40**

TERMS AND CONDITIONS:

THIS QUOTE IS VALID FOR 30 DAYS AND MAY BE EXTENDED AT THE SOLE DISCRETION OF LP ASPHALT LLC.
LP ASPHALT LLC WILL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO COMPLETE THE ITEMS AS SPECIFICALLY LISTED ABOVE. ADDITIONAL WORK OR MATERIALS WILL BE PROVIDED AT AN ADDITIONAL COST, IF NECESSARY.
FINAL PAYMENT DETERMINED BY UNIT PRICES ACTUAL FIELD MEASUREMENTS.

THE FOLLOWING EXCLUSIONS APPLY UNLESS SPECIFIATLLY NOTED ABOVE:

1 ANY REQUIRED PERMITS AND ASSOCIATED FEES.
2 ALL TESTING, INSPECTION,SURVEYS, LAYOUT, AS BUILTS AND ASSOCIATED FEES.

PROPOSAL

PROPOSAL IS BASED ON MEASUREMENTS SUPPLIED BY: CUSTOMER

WORK WILL NOT BE SCHEDULE UNTIL EXECUTED PROPOSAL HAS BEEN RECEIVED

RESPECTFULLY SUBMITTED BY:

Don Mancil Jr.

ACCEPTED BY:

NAME: _____

TITLE: _____

DATE: _____

TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
2026 - 2030

Project Name:	**Department:**	
Street Resurfacing	Engineering	
Link to Strategic Plan/Strategic Result:	**Project #:**	**Projected In-Service Date:**
Manage Growth	E1003	On-going

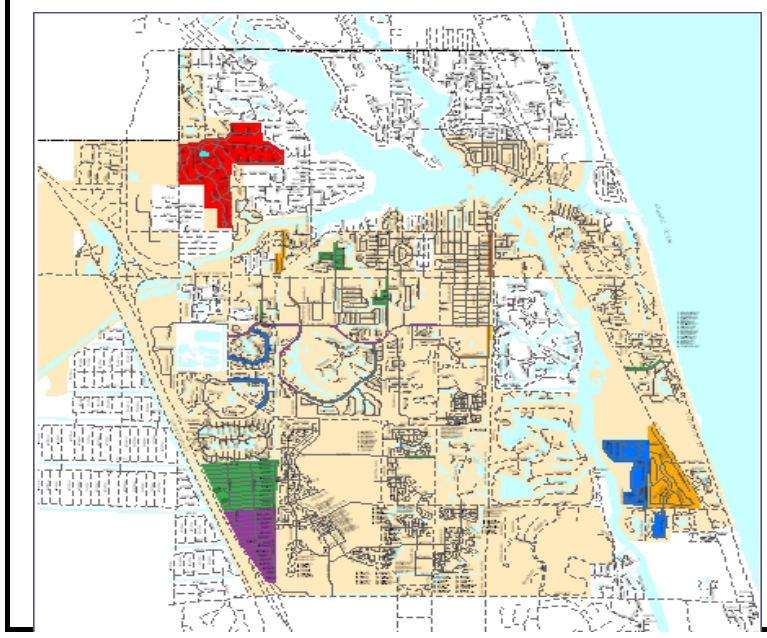
Project Description and Justification:

Project Description:
The Town maintains approximately 310 lane miles of roads. Resurfacing funds are primarily used for milling, repaving, and restriping of roadways, however, when appropriate, funds have been allocated to various other maintenance and repair techniques, including geo-textile layer installation, crack sealing, slurry sealing, micro resurfacing, sectional pavement and patch repairs, collector road safety edge installations, and intersection radii/curb installations.

Justification:
The overlay program prioritizes resurfacing the most deteriorated pavement surfaces first, while also considering geographical proximity and economy of scale. Staff will continue to monitor pavement conditions to best avoid advanced pavement deterioration to avoid the need for more extensive repairs including full asphalt removal and replacement and base replacement. Resurfacing may be initiated sooner to take advantage of cost savings from recent unit prices.

Location(s) and Program Schedule		**In-Service**	
Fiscal Yr	**Scope**	**FY/Qtr**	**Budget**
2026	**Engineering:** In-House design. **Construction:** Resurfacing of Egret Landing (combined FY2025 & 2026), Abacoa - New Haven (North), Dolphin Drive, misc. concrete repairs and pavement repairs Town-wide. Expenditures include FY25 carryforward funds.	2026/4	$2,337,044
2027	**Engineering:** In-House design. **Construction:** Resurfacing of N. Pennock Lane, Indiantown Road (US-1 to A1A), Palm Avenue, misc. concrete repairs and pavement repairs Town-wide.	2027/4	$1,000,000
2028	**Engineering:** In-House design. **Construction:** Resurfacing of Fisherman's Landing, Abacoa - New Haven (South), School House Road, misc. concrete repairs and pavement repairs Town-wide.	2028/4	$1,000,000
2029	**Engineering:** In-House design. **Construction:** Resurfacing of side streets north of Center Street, Abacoa - The Island, Old Dixie Highway (ITR to Center Street), Abacoa - SWA Road, misc. concrete repairs and pavement repairs Town-wide.	2029/4	$1,000,000
2030	**Engineering:** In-House design. **Construction:** Resurfacing of Pine gardens South, Daniels Way, misc. concrete repairs and pavement repairs Town-wide.	2030/4	$1,000,000

Project Photo(s) / Map of Location





TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
FINANCIAL INFORMATION
2026 - 2030

Project Name:	**Department:**
Street Resurfacing	Engineering
Link to Strategic Plan/Strategic Result:	**Project #:**
Manage Growth	E1003

Project Budget:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Land acquisition	$0	$0	$0	$0	$0	$0	$0
Planning / Design	$0	$0	$0	$0	$0	$0	$0
Engineering	$150,000	$0	$0	$0	$0	$0	$150,000
Construction	$11,816,420	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$16,816,420
Equipment	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0
Total Budget	**$11,966,420**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$16,966,420**

Funding Sources:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
General revenues	$11,966,420	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$16,966,420
CRA funding	$0	$0	$0	$0	$0	$0	$0
Surtax proceeds	$0	$0	$0	$0	$0	$0	$0
Open space	$0	$0	$0	$0	$0	$0	$0
Fire impact fees	$0	$0	$0	$0	$0	$0	$0
Police impact fees	$0	$0	$0	$0	$0	$0	$0
Recreation impact fees	$0	$0	$0	$0	$0	$0	$0
Road impact fees	$0	$0	$0	$0	$0	$0	$0
Escrow/Contribution	$0	$0	$0	$0	$0	$0	$0
Grant revenues							
CDBG	$0	$0	$0	$0	$0	$0	$0
FDOT	$0	$0	$0	$0	$0	$0	$0
FEMA Hazard Grant	$0	$0	$0	$0	$0	$0	$0
LRPI	$0	$0	$0	$0	$0	$0	$0
Grant (TBD)	$0	$0	$0	$0	$0	$0	$0
Stormwater revenues	$0	$0	$0	$0	$0	$0	$0
Stormwater R&R funds	$0	$0	$0	$0	$0	$0	$0
Water revenues	$0	$0	$0	$0	$0	$0	$0
Water R & R funds	$0	$0	$0	$0	$0	$0	$0
Off-site fees	$0	$0	$0	$0	$0	$0	$0
Building revenues	$0	$0	$0	$0	$0	$0	$0
Insurance proceeds	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$11,966,420**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$16,966,420**

Previous Years:	**Prior to FY 2021**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Total**
Amount Budgeted	$7,241,420	$625,000	$750,000	$950,000	$1,400,000	$1,000,000	$11,966,420
Amount Expended	$6,743,569	$466,077	$278,840	$11,678	$1,817,748	$1,302,595	$10,620,506
Current Encumbrances							$8,870
Remaining Available Budget							**$1,337,044**

Footnote: Expenditures anticipated to continue after 5-year planning window.

TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
2026 - 2030

Project Name:	**Department:**	
Curb Replacements	Utilities	
Link to Strategic Plan/Strategic Result:	**Project #:**	**Projected In-Service Date:**
Safety / Fiscal Responsibility	S2227	On-going

Project Description and Justification:

This project consists of select curb replacements on Town-owned roads to repair damaged curbs that are no longer properly conveying stormwater runoff to drainage inlets and may result in unsafe conditions for the public. Concrete curbs are often cracked and lifted by tree roots which impede proper drainage and result in unsafe conditions.

This project supports the Town's Strategic Plan of Fiscal Responsibility and Safety by providing for well maintained neighborhood drainage infrastructure to minimize flooding and ensure safety for neighborhoods and roadways.

Timing of curb replacements is coordinated with the Engineering Department's roadway and re-paving program to the greatest extent practical to reduce impacts to neighborhoods and economize construction through use of a single construction contract. Curb replacements are planned to address only damaged sections of curb as such, curb footages provided below are not continuous. Design of curb replacements in Egret Landing with carryover funding is complete. Construction is scheduled for Fall 2025.

Location(s) and Program Schedule

Fiscal Yr	Scope	In-Service FY/Qtr	Budget
2026	Curb replacements in Egret Landing and New Haven, North End (5,280 ft). Includes use of prior year carryforward balance.	2027/4	$62,106
2027	Curb replacements in Tuscany, Martinque and Indiantown Rd East (1,380 ft)	2028/4	$166,850
2028	Curb replacements in New Haven, South End and School House Road (1,420 ft)	2029/4	$150,340
2029	Curb replacements in The Island, Old Dixie Highway and SWA Road (1,765 ft)	2030/4	$267,160
2030	Curb replacements in Pine Gardens South, Daniels Way and Misc areas around Town (1,770 ft)	2031/4	$198,800

Project Photo(s) / Map of Location





TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
FINANCIAL INFORMATION
2026 - 2030

Project Name:	**Department:**
Curb Replacements	Utilities
Link to Strategic Plan/Strategic Result:	**Project #:**
Safety / Fiscal Responsibility	S2227

Project Budget:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Land acquisition	$0	$0	$0	$0	$0	$0	$0
Planning / Design	$40,000	$0	$0	$0	$0	$0	$40,000
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$357,710	$62,106	$166,850	$150,340	$267,160	$198,800	$1,202,966
Equipment	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0
Total Budget	**$397,710**	**$62,106**	**$166,850**	**$150,340**	**$267,160**	**$198,800**	**$1,242,966**

Funding Sources:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
General revenues	$0	$0	$0	$0	$0	$0	$0
CRA funding	$0	$0	$0	$0	$0	$0	$0
Surtax proceeds	$0	$0	$0	$0	$0	$0	$0
Open space	$0	$0	$0	$0	$0	$0	$0
Fire impact fees	$0	$0	$0	$0	$0	$0	$0
Police impact fees	$0	$0	$0	$0	$0	$0	$0
Recreation impact fees	$0	$0	$0	$0	$0	$0	$0
Road impact fees	$0	$0	$0	$0	$0	$0	$0
Escrow/Contribution	$0	$0	$0	$0	$0	$0	$0
Grant revenues							
CDBG	$0	$0	$0	$0	$0	$0	$0
FDOT	$0	$0	$0	$0	$0	$0	$0
FEMA Hazard Grant	$0	$0	$0	$0	$0	$0	$0
LRPI	$0	$0	$0	$0	$0	$0	$0
Grant (TBD)	$0	$0	$0	$0	$0	$0	$0
Stormwater revenues	$0	$0	$0	$0	$0	$0	$0
Stormwater R&R funds	$397,710	$62,106	$166,850	$150,340	$267,160	$198,800	$1,242,966
Water revenues	$0	$0	$0	$0	$0	$0	$0
Water R & R funds	$0	$0	$0	$0	$0	$0	$0
Off-site fees	$0	$0	$0	$0	$0	$0	$0
Building revenues	$0	$0	$0	$0	$0	$0	$0
Insurance proceeds	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$397,710**	**$62,106**	**$166,850**	**$150,340**	**$267,160**	**$198,800**	**$1,242,966**

Previous Years:	**Prior to FY 2021**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Total**
Amount Budgeted	$0	$0	$93,209	$123,942	$103,040	$77,519	$397,710
Amount Expended	$0	$0	$19,609	$71,022	$5,425	$0	$96,056
Current Encumbrances							$0
Remaining Available Budget							**$301,654**

Footnote: Expenditures anticipated to continue after 5-year planning window.

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 24, 2026

Re: Procurement Review Memo – Work Order No.3 to LP Asphalt, LLC. for New Haven North Resurfacing from EPW2025-33A

After reviewing Work Order No. 3 to LP Asphalt, LLC for New Haven North Resurfacing in the amount of $538,689.00, I have found that the procurement meets all requirements of contractual services contract EPW 2025-33A.

Work Order No. 3 to LP Asphalt, LLC for New Haven North Resurfacing contractual services contract EPW 2025-33A complies with all Federal, State, County, and Local procurement requirements, including Town of Jupiter Procurement Polices and Florida State Statutes Chapter.

TOWN OF JUPITER
Shaded Bleachers for Jupiter Community Park

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Mike Hoffmann, Senior Director, Community Services
SUBJECT	Approval of Agreement with Industrial Shadeports Inc. for the purchase and installation of shaded bleacher covers at Jupiter Community Park in the amount of $86,330

EXECUTIVE SUMMARY

Approval is requested for an agreement with Industrial Shadeports Inc., using the Manatee County School Board Contract No. 26-0041-MR, a competitively procured contract, for the purchase and installation of shaded bleacher covers at Jupiter Community Park.

The Manatee County School District contract includes multiple qualified vendors for shade structures and installation services. Staff reviewed the proposal from Industrial Shadeports Inc. and selected this company based on best value, including total project cost, quality of equipment and amenities, and compatibility with location.

The total project cost is $86,330. Sufficient funding is available within the FY26 Community Investment Program (CIP) under the Parks Restoration Program, which includes a total budget of $380,000.

The selected contractor has verified their Experience Modification Rate (EMR) for the preceding three (3) years of 1.00.

Approval of this item will authorize staff to initiate procurement of the shade structures and finalize the construction schedule. Installation is anticipated to begin in Summer 2026, with completion in Fall 2026.

ANALYSIS

The Town's FY2026 CIP budget includes a project to replace the irrigation system and the turfgrass on the multipurpose fields located at Jupiter Community Park (JCP). On March 17, 2026, the Town Council approved Resolution 9-26, an agreement for the replacement of the irrigation system and two multipurpose fields at JCP. Fields seven (7) and eight (8) will undergo replacement beginning in Spring 2026, with completion in Fall 2026. Installation of the shaded bleacher covers will enhance the spectator and player experience by offering shaded seating, and will take place in conjunction with the field replacement project.

The competitively bid Manatee County School Board Contract No. 26-0041-MR includes competitive pricing through pre-established manufacturer discounts.

Proposal No. 4081 from Industrial Shadeports Inc. includes the design, manufacture, and

installation of four (4) cantilever hip roof structures and associated concrete pads alongside multipurpose fields seven (7) and eight (8) at Jupiter Community Park.

STRATEGIC PRIORITY

- Unique, Small Town Feel
- Fiscal Responsibility

ATTACHMENTS

1. Proposal No. 4081
2. Manatee County School District Contract No. 26-0041-MR
3. Approved CIP Sheet
4. Procurement Review Letter

FUNDING SOURCE

Amount of this Request	$86,330	
Amount Approved in Budget	$380,000	Sources: 31032572-546005 R1301 Parks Restoration CIP
Additional Funding Requested	$0	Sources:

For more information or copies of the attachments, please contact Mike Hoffmann at mikeh@jupiter.fl.us or 561-741-2471.

Industrial Shadeports Inc
6600 NW 12th Ave, Suite 220
Fort Lauderdale, FL 33309
+19547550661
info@shadeports.com
www.Shadeports.com

Estimate

ADDRESS
Zach Gile
Town of Jupiter
3131 Washington St
Jupiter, FL 33405

SHIP TO
Jupiter Community Park
1201 Island Way
Jupiter, FL 33458

ESTIMATE # 4081
DATE 04/21/2026
EXPIRATION DATE 05/21/2026

NAME	EMAIL	PHONE NUMBER
Zach Gile	ZachG@Jupiter.fl.us	(561) 275-8132

QTY	ACTIVITY	DESCRIPTION	AMOUNT
1	**Master Contract**	This proposal is based on the Master Contract between the Manatee County School Board and Industrial Shadeports: Term Contract #26-0041-MR, Expiring August 31, 2030. A copy of which can be provided upon request. The Master Contract has favorable pricing and terms which are represented within this contract.	0.00
1	**T Cantilever Hip Roof Design**	Four (4) 24'L x 12'W x 10'H Powder Coated Steel Double Cantilever Hip Roof Shadeport Structure. Structure is designed with baseplates for surface mounting on concrete foundations to be provided by Industrial Shadeports, Inc. using anchor bolts to be provided by Industrial Shadeports, Inc.	86,330.00T
1	**Option**	Concrete Pads: Provide and install two (2) concrete pads, each approximately 730 sq. ft., intended to accommodate future 5' x 24' three-tier aluminum bleachers (bleachers to be supplied and installed by the County). Total Cost (Optional): $16,800.00	0.00T
1	**Engineering**	3 Sealed copies of Structural Engineering Drawings and Calculations (if required) for permitting. Drawings and calculations are signed and sealed by a State of Florida Licensed and Registered Structural Engineer. Current Site Plan and/or Survey must be furnished by the Customer. Special Inspectors, if required, will be an additional cost.	0.00T
1	**Permit Administration**	Permit registration administration fee, not including any Municipal Fees (to be billed separately). Filing of notices to owner and/or Notice of Commencement by others.	0.00T
1	**Shadeport Installation**	Install Shadeport Structure as per Engineering Specifications - No allowance for rock removal, dewatering, dumpster rental and unforseen ground conditions, including tree roots, sprinkler systems and underground piping unless otherwise stated herein. An additional charge due to damaged existing steel structure (or restraining devices) will be billed at the current Service Rates as published by Industrial Shadeports, as will any delays beyond the control of Industrial Shadeports and/or the rental fee of any	0.00T

QTY	ACTIVITY	DESCRIPTION	AMOUNT
		additional equipment that may be necessary to break though Coral. If soil testing is required to be done, this is to be done by others. Soil/rock will be left next to the finished foundation(s).	
1	**Dumpster Rental**	Dumpster Rental for soil removal (if required). Excavated soil is normally left near the foundations for use by others elsewhere in the landscaping.	0.00T
1	**Equipment Rental**	Any necessary special equipment (Cranes, Scissor Lifts, etc.)	0.00T
1	**Concrete**	Fiber Reinforced Concrete	0.00T
1	**S/H - With Install Quote**	Shipping and Handling will be an additional charge if Industrial Shadeports is not selected to perform the installation	0.00T
1	**Payment Terms**	Payment due upon completion of work. Progress payments may be requested for long duration projects. Price is based on cash or check payment. Credit card payments will require an additional charge.	0.00T
1	**Delivery**	4-8 Weeks after placement of order, receipt of deposit due and/or permit approval.	0.00T
1	**FL Sales Tax Note**	NOTE: Florida Sales Tax will be charged and collected unless a valid, current Florida Sales Tax Exemption Certificate is provided. Please submit your current Florida Sales Tax Exemption Certificate.	0.00T
1	**Price Guarantee**	Ask about our Low Price Guarantee! We will meet or beat any price on the market at the time of order.	0.00T
1	**Delivery Guarantee**	Ask about our Quick Delivery Guarantee! We will meet or beat any delivery time on the market at the time of order.	0.00T
1	**Qualifications**	Industrial Shadeports is the original USA manufacturer and Installer of Shadeports / Shade Structures / Shade Sails. We have been manufacturing in Broward County and have been installing our own products around the Country, in the Carribbean, and in the Pacific Islands since first introducing the product to the US market in 1993. We have also been manufacturing in Miami-Dade County since 2006. Industrial Shadeports is a Certified General Contractor in the State of Florida License #CGC1525577. Industrial Shadeports is a Certified Recreation Installation Specialist by the National Playground Contractors Association, Inc. #2023-1649. Industrial Shadeports has Certified Playground Safety Inspectors for all your shade needs. Industrial Shadeports is a Broward County Florida Certified County Business Enterprise (CBE). Industrial Shadeports is a Broward County Florida Certified Small Business Enterprise (SBE). We are also a Palm Beach County Florida Certified Small Business Enterprise (SBE). Miami Dade County provides reciprocity for the SBE Certifications.	0.00T

Contact Industrial Shadeports Inc to pay.
ACCEPTANCE OF ESTIMATE: The above prices, conditions and specifications are hereby accepted. You are authorized to perform the work as specified. All units are custom made and all sales are final. Payments are to be made promptly as outlines in the estimate. Past due invoices are subject to a 1.5% monthly finance charge. Invoices turned over to a third party for collection are subject to a 33% collection fee plus any other applicable fees. Unit(s) shall remain the property of Industrial Shadeports until the order is paid in full. Florida Sales Tax will be collected if applicable. NOTE: ALL FABRIC MUST BE REMOVED IF AND WHEN A HURRICANE OR SNOW WARNING IS PREDICTED OR POSTED FOR THE AREA.

SUBTOTAL	86,330.00
TAX	0.00
TOTAL	**$86,330.00**

Accepted By

Accepted Date

BID ON PARK AND PLAYGROUND EQUIPMENT, SDMC No. 26-0041-MR

SECTION 1. SCOPE

The purpose of this solicitation is to establish a pre-qualified list of providers for the supply and installation of various park and playground equipment, including but not limited to: swing sets, shade structures, park, site furnishings (park benches, outdoor trash receptacles, outdoor picnic tables, etc.) and surfacing materials.

This bid applies to materials offered at a fixed discount from the manufacturer's and/or bidder's current catalog price list(s) and installation services based on a firm, fixed percentage markup of the equipment cost. While price lists may change, the discount percentage shall remain unchanged for the contract duration.

Minor repairs shall be invoiced at an hourly repair rate, plus a fixed percentage markup for materials.

Contract Value: Contract Value: No guarantee is given or implied as to the total dollar value of this bid.

Specifications and the quality standards of service set forth in this bid.

SECTION 2. SPECIAL CONDITIONS

1. **Term:** The intent of this Contract is to establish a Contract for a period of five (5) year(s) from the date of award, during which time the successful Bidder(s) shall guarantee fixed Pricing on items awarded, as specified in this Solicitation. Contract period commences on **September 1, 2025 through August 31, 2030**.
2. **Contract Renewals:** The School District of Manatee County reserves the right to renew any or all prices, terms, conditions, and specifications of this Contract, for up to two (2) additional one-year period(s), upon mutual agreement by both the School District of Manatee County and the Awarded Bidder. Renewals must be evidenced, in writing, with the Signature of the Awarded Bidder's authorized representative and the School District of Manatee County.
3. **Contract Extension**: In addition to any renewal options contained herein, the School District of Manatee County has the right to extend the Contract for the period of time necessary for the School District of Manatee County to release, award, and implement a replacement ITB for the commodities and/or contractual services provided through this Contract. Such extension shall be based upon the same prices, terms, and conditions as the existing ITB.
4. **Additional Vendors:** The School District of Manatee County reserves the right to increase the pool of companies to provide the services included in the ITB, if deemed necessary by the School District of Manatee County, subject to approval, additional providers will be added to the pool of awarded companies. Regardless as to the year a company is added to the pool of awarded companies, all awards will be terminated at the end of this ITB.
5. **E-Verify:** The School District of Manatee County and all parties the district contracts with must provide contractors E-Verify number in accordance with Florida Statute 448.95.
6. **Insurance:** Indemnification shall be in accordance with section 725.06, 725.08 Florida Statute "as applicable". The successful proposer shall furnish the School District of Manatee County with proof of:

SECTION 6. GENERAL TERMS AND CONDITIONS

ASSIGNMENT:
Neither party may assign any of its rights or obligations hereunder, whether by operation of law or otherwise, without the prior written consent of the other party (not to be unreasonably withheld.) If this matter pertains to a school that becomes a Charter School, this contract may be cancelled by the School District upon thirty days written notice and the School Board will be released of any and all obligations under this contract.

GENERAL BIDDER'S INFORMATION: Interested vendors are advised that the School District of Manatee County (District) will not consider bids which contain an escalation clause for the initial contract period. It is understood that normal bid processing time will be 30 - 60 days after opening date of bid and that prices reflected by this bid will be firm through bid processing time and the delivery of items awarded.

No price escalations (increases) will be permitted during the initial term of this contract. Price de-escalation (decrease) is permissible at any time during the contract term. The District reserves the right to require a decrease based on industry pricing indicators (PPI and CPI) Contractors may request a price increase at renewal, if any. Price increase requests must be based on the Producer Price Index (PPI) Table Containing PPI-U All Items Indexes and Annual Percent Changes, http://data.bls.gov index for related commodity, final demand, seasonally adjusted, and may not exceed 4 percent.

The price increase request must be submitted 30 days before the expiration of the Contract, to the Contract Administrator, in writing and substantiated by a copy of the appropriate (meaning specific to that Contractor's commodity code) PPI index.

PURCHASE TERMS AND CONDITIONS: This bid, and the corresponding contract of award agreement and purchase orders will constitute the complete agreement. The School District of Manatee County will not accept proposed terms and conditions that are different than those contained in this Invitation for Bid, including pre-printed text contained on catalogs, price lists, other descriptive information submitted or any other materials. By virtue of submitting a bid, vendor agrees to not submit to any School District of Manatee County employee, for signature, any document that contains terms and conditions that are different than those contained herein and that in the event any document containing any term or condition that differs from those contained herein is executed, said document shall not be binding on the School District of Manatee County.

MINOR IRREGULARITIES/RIGHT TO REJECT: The District reserves the right to accept or reject any and all bids, or separable portions thereof, and to waive any minor irregularity, technicality, or omission if the District determines that doing so shall serve the Districts' best interests. The District may reject any response not submitted in the manner specified by the solicitation documents.

CLARIFICATIONS OR REVISIONS: The District reserves the right to seek clarifications or request any information deemed necessary for proper evaluation of submissions from all respondents deemed eligible for Contract award. Failure to provide requested information may result in rejection of the response.

EX PARTE COMMUNICATION: To assure proper and fair evaluation of submissions, after submissions are received the District prohibits ex parte communication initiated by the submitter to Board members and discourages ex parte communication initiated by the submitter to any District official or employee evaluating or considering the submissions prior to the time a decision has been made. Communication between a submitter and the District will be initiated by the appropriate District official, employee or designated consultant in order to obtain information or clarification needed to develop a proper and accurate evaluation of the submission. Ex parte communication may be grounds for disqualifying the offending submitter from consideration or award of the contract then in evaluation or any future contract.

PURCHASES BY OTHER PUBLIC AGENCIES: With the consent and agreement of the successful bidder(s), purchases may be made under this bid by other governmental agencies within the State of Florida. Such purchases shall be governed by the same terms and conditions as stated herein.

CANCELLATION: Notwithstanding any other provision of this invitation, any agreement resulting from this invitation may be unilaterally canceled by the School District of Manatee County via either of these two methods at the District's sole discretion:

1. In the event any of the provisions of the awarded bid are violated by the vendor, the School District of Manatee County may give written notice to the vendor stating the violations or deficiencies and demanding their cure. If those violations or deficiencies are not cured to the School District's reasonable satisfaction within five (5) days of the vendor's receipt of the notice, the agreement may immediately thereafter be canceled by written notification to the vendor; or

completion of the administrative hearing process and appellate court proceedings, the District prevails, it shall recover all costs and charges which shall be included in the final order or judgment, including charges made by the Division of Administrative Hearings, but excluding attorney's fees. Upon payment of such costs and charges by the protester, the remainder, if any, of the protest security shall be returned. If the protester prevails, protester shall recover from the district all costs and charges which are included in the final order of judgment, excluding attorney's fees.

Failure to file a notice of intent to protest, or failure to file a formal written protest within the time prescribed in Florida Statute 120.57(3), shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

COMPLIANCE WITH REGULATIONS: Federal, state, county, and local laws, ordinances, rules, and regulations that in any manner affect the items covered herein apply. Lack of knowledge by the bidder will in no way be a cause for relief from responsibility. The bidder **shall have in their possession and must provide** all applicable insurance, permits, licenses, etc., which may be required by federal, state, or county law to furnish services under the scope of this contract. The successful bidder(s) must not be in violation of any zoning or other ordinances in the performance of this contract.

VENUE: The laws of the State of Florida shall govern this contract. Venue shall be in Manatee County, Florida and the sole and exclusive jurisdiction to resolve any disputes arising under the contract shall be in the county or circuit court for Manatee County, Florida.

INDEMNITY: Indemnifications as specified in section 725.06, 725.08 Florida Statute "as applicable", the bidder agrees to indemnify and hold the School Board of Manatee County harmless from all third party claims and all costs, including attorney's fees incurred by the School Board in defending same to the extend such claims are based on a defect in a product or part thereof, supplied hereunder, or failure of such product or part thereof to conform.

CANCELLATION OR CHANGES IN SPECIFICATIONS: The Board reserves the right to cancel an awarded bid without penalty or negotiate changes to specifications as required by changes to local, State or U. S. Government regulations concerning the contents of products desired.

UNAUTHORIZED ALIENS: The School District of Manatee County considers the employment of unauthorized aliens by the vendor/bidder, or any of its sub-contractors, a violation of the Immigration and Naturalization Act. Vendor/Bidder shall screen those working on the project site to insure no unauthorized aliens are present at any time. If it is determined that an unauthorized alien is working on the Project, the Vendor/Bidder shall immediately take all steps necessary to remove such unauthorized alien from the property and the project.

PUBLIC ENTITY CRIMES CERTIFICATE: A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, sub-contractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in section 287.017, Florida Statute, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

NONCOMPLIANCE WITH CONTRACT: It is expected that the delivery and/or completion dates as annotated on this bid will be firm dates. Any deviation from the contracted completion date must be approved in writing by the Purchasing Office of the School District of Manatee County. Failure to complete the contract within the time agreement or cancellation of any item(s) awarded may result in your company being barred from doing business with the School District of Manatee County, in accordance with School District Policies and Procedures. Other assessments as outlined elsewhere in this document may also apply. Termination for cause includes terminations under 287.135, F.S.

PURCHASE ORDER NUMBER: The School District of Manatee County's purchase order number must appear on all packages, labels, cartons, packing slips, bills of lading, invoices and all correspondence referring to all orders. Orders received without the purchase order number prominently displayed shall be subject to refusal and return at the vendor's expense.

TAX EXEMPTIONS: When purchasing directly from a supplier the School District of Manatee County, Florida is exempt from Federal Excise, State Sales and Use Taxes. Tax exemption certificates and numbers will be furnished on request.

INVOICES: The Contractor agrees that bills and invoices for fees or other compensation services or expenses shall cite the purchase order number, work order number, date of service, location of job, and name of person requesting the work. The invoice shall be submitted to the Accounts Payable Department within ten (10) working days upon completion of the job. The invoice shall be in detail sufficient for a proper pre-audit and post audit thereof. Each bill or invoice must properly identify the services, portion of services, and

TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
2026 - 2030

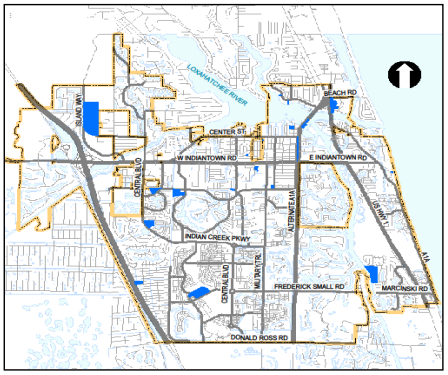
Project Name:	**Department:**	
Parks Restoration Program	Parks and Recreation	
Link to Strategic Plan/Strategic Result:	**Project #:**	**Projected In-Service Date:**
Green, Blue and Open Spaces	R1301	On-going

Project Description and Justification:

The Parks Restoration Program focuses on small-scale maintenance, repair, and rehabilitation efforts necessary to preserve the current level of service across our park system. As our parks continue to age and experience growing usage, these targeted improvements are essential for maintaining their safety and appeal. This project involves the replacement of specific park amenities, rather than expanding park capacity. To ensure the park system remains safe, functional, and aesthetically pleasing, key amenities must be regularly refurbished or replaced as they wear over time. By proactively addressing maintenance needs, we not only enhance the park experience for users but also reduce the risk of accidents, thus minimizing the Town's exposure to potential legal claims. Funding for this program must come from general revenues, as Parks and Recreation impact fees are designated solely for capacity expansion, not for maintenance or renovation. The cost of supplies and services has risen due to inflation, driving up funding requirements for larger projects, such as fencing and restroom renovations. Additionally, the Parks and Recreation Facilities Master Plan may influence the future direction of this restoration initiative.

Location(s) and Program Schedule		**In-Service**	
Fiscal Yr	**Scope**	**FY/Qtr**	**Budget**
2026	**Abacoa Community Park**- replacement of racquetball court fencing, picnic tables, trash receptables, benches and tennis windscreens	2026/4	$63,000
	Jupiter Community Park- replacement of soccer and lacrosse goals, trash receptacles, tennis and pickleball court windscreens; resurfacing of basketball courts; batting cage renovation; gutter replacement on multi-purpose field building ($150,000 rollover of FY25 funds)	2026/4	$74,000
	Maplewood Park- replace racquetball fencing and existing playground pavilion	2026/4	$65,000
	Lighthouse Park- resurfacing of tennis courts to include conversion of one court into four dedicated pickleball courts	2026/4	$110,000
	Sawfish Bay Park- fencing replacement	2026/4	$28,000
	Various Parks and Playgrounds- furnish (10) additional parks and playgrounds with AED's and Stop the Bleed kits	2026/2	$40,000
2027	Projects to be indetified in FY26	2027/4	$400,000
2028	Projects to be indetified in FY27	2028/4	$400,000
2029	Projects to be indetified in FY28	2029/4	$400,000
2030	Projects to be identified in FY29	2030/4	$400,000

Project Photo(s) / Map of Location







TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
FINANCIAL INFORMATION
2026 - 2030

Project Name:	**Department:**
Parks Restoration Program	Parks and Recreation
Link to Strategic Plan/Strategic Result:	**Project #:**
Green, Blue and Open Spaces	R1301

Project Budget:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
Land acquisition	$0	$0	$0	$0	$0	$0	$0
Planning / Design	$0	$0	$0	$0	$0	$0	$0
Engineering	$0	$0	$0	$0	$0	$0	$0
Construction	$4,191,100	$380,000	$400,000	$400,000	$400,000	$400,000	$6,171,100
Equipment	$0	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0	$0
Total Budget	**$4,191,100**	**$380,000**	**$400,000**	**$400,000**	**$400,000**	**$400,000**	**$6,171,100**

Funding Sources:	**Prior to 2026**	**2026**	**2027**	**2028**	**2029**	**2030**	**Total**
General revenues	$4,191,100	$530,000	$400,000	$400,000	$400,000	$400,000	$6,321,100
CRA funding	$0	$0	$0	$0	$0	$0	$0
Surtax proceeds	$0	$0	$0	$0	$0	$0	$0
Open space	$0	$0	$0	$0	$0	$0	$0
Fire impact fees	$0	$0	$0	$0	$0	$0	$0
Police impact fees	$0	$0	$0	$0	$0	$0	$0
Recreation impact fees	$0	$0	$0	$0	$0	$0	$0
Road impact fees	$0	$0	$0	$0	$0	$0	$0
Escrow/Contribution	$0	$0	$0	$0	$0	$0	$0
Grant revenues							
CDBG	$0	$0	$0	$0	$0	$0	$0
FDOT	$0	$0	$0	$0	$0	$0	$0
FEMA Hazard Grant	$0	$0	$0	$0	$0	$0	$0
LRPI	$0	$0	$0	$0	$0	$0	$0
Grant (TBD)	$0	$0	$0	$0	$0	$0	$0
Stormwater revenues	$0	$0	$0	$0	$0	$0	$0
Stormwater R&R funds	$0	$0	$0	$0	$0	$0	$0
Water revenues	$0	$0	$0	$0	$0	$0	$0
Water R & R funds	$0	$0	$0	$0	$0	$0	$0
Off-site fees	$0	$0	$0	$0	$0	$0	$0
Building revenues	$0	$0	$0	$0	$0	$0	$0
Insurance proceeds	$0	$0	$0	$0	$0	$0	$0
Loan proceeds	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$4,191,100**	**Incorrect Sum**	**$400,000**	**$400,000**	**$400,000**	**$400,000**	**Incorrect**

Previous Years:	**Prior to FY 2021**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Total**
Amount Budgeted	$2,630,600	$153,000	$175,000	$335,500	$414,500	$482,500	$4,191,100
Amount Expended	$2,573,522	$182,268	$86,878	$243,071	$294,753	$365,679	$3,746,171
Current Encumbrances							$85,118
Remaining Available Budget							**$359,812**

Footnote: Expenditures anticipated to continue after 5-year planning window.

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 23, 2026

Re: Procurement Review – Purchase of Shaded Bleacher Covers at Jupiter Community Park from Industrial Shadeports, Inc.

After reviewing the documents associated with the request to issue a purchase order for Shaded Bleacher Covers at Jupiter Community Park from Industrial Shadeports, Inc. in the amount of $86,330, I have found that the request meets all procurement requirements of F.S. 287.056.

The purchase will be made using the competitively bid Manatee County School Board Contract No. 26-0041-MR.

This piggyback purchase complies with all Town of Jupiter Procurement Policies, Palm Beach County Ordinances and Florida State Statutes.

TOWN OF JUPITER
Public Works Site Work Project

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	George Dzama, Engineering Director
SUBJECT	**Resolution 31-26,** Approving the award of Contract EPW2025-31 for the Public Works Site Work project to Creative Contracting Group in the Amount of $1,343,900.

EXECUTIVE SUMMARY

Town staff is requesting the Town Council's approval of Resolution 24-26 for the award of Contract EPW2025-31 with Creative Contracting Group for the Public Works Site Work project in the amount of $1,343,900.

This project implements comprehensive drainage improvements to support the two recently constructed buildings, Public Works Storage (Building B) and Fire Rescue Storage (Building C), within the Public Works operations site at 3131 Washington Street, and to meet water quality and storage requirements established by the South Florida Water Management District. The project also serves to modernize public service facilities, improve site circulation and safety, and support long-term service delivery and growth.

The work includes completion of final site improvements, including upgrades to site access, drainage, and utilities. The scope of work includes, but is not limited to, mobilization and demobilization; preparation of record surveys and as-built drawings; implementation of erosion control measures; demolition of existing concrete pads and pavement; clearing and grubbing; pavement widening; site grading and drainage improvements; installation of concrete curb and gutter; enhancements to the retention pond and on-site utilities, including electrical infrastructure; and upgrades to signage, pavement markings, and sod.

On April 2, 2026, eight bids were received for the subject project. After reviewing the bid forms and reviewing qualifications, it has been determined that Creative Contracting Group is the lowest, responsive, and responsible bidder, with a total bid amount of $1,343,900.

Town staff has contacted the references provided by Creative Contracting Group and received positive feedback regarding the quality of their work and their timely project completion. Adequate fiscal year funding and existing rollover funds are available for this project. The company's current Experience Modification Rate (EMR) is 0.90.

The construction agreement contract has been reviewed by the Town Attorney for form and legal sufficiency.

ANALYSIS

Town staff recommends approval of Resolution 31-26 to award Contract EPW 2025-31 for the Public Works Site Work project, to Creative Contracting Group in the amount of $1,343,900. If the Town Council approves Resolution 31-26, the Mayor will be authorized to execute the contract on its behalf.

STRATEGIC PRIORITY

● Organizational Excellence

ATTACHMENTS

1. Resolution 31-26 with Contract
2. Bid Tabulation
3. CIP Sheet
4. Procurement Review Memo

FUNDING SOURCE

Amount of this Request	$1,343,900	
Amount Approved in Budget	$1,343,900	Sources: 31031041-546000-E2200 Public Works Storage
Additional Funding Requested	$	Sources:

For more information or copies of the attachments, please contact Heather Keys at heatherk@jupiter.fl.us or 561-741-2737.

RESOLUTION NO. 31-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA AUTHORIZING THE MAYOR TO EXECUTE CONTRACT EPW 2025-31 WITH CREATIVE CONTRACTING GROUP FOR EXTENDING PUBLIC WORKS SITE WORK IN AN AMOUNT OF $1,343,900.00

WHEREAS, the Town of Jupiter (Town) is a municipality with those powers and responsibilities enumerated in Chapter 166 Florida Statues and the Florida Constitution; and

WHEREAS, the Town's Engineering and Public Works Department solicited bids for "Contract EPW 2025-31 Public Works Site Work" (the Project); and

WHEREAS, the Project proposes final site improvements to update essential public service daily operations, site circulation and long-term service delivery and community growth. The proposed work consists of minor demolition, site upgrades including underground utilities, paving, and site drainage; and

WHEREAS, the scope of work for the Project as set forth in the Town's solicitation includes, but is not limited to: minor site demolition, site clearing and grubbing, erosion control, installation and upgrades of underground utilities, concrete material pad, site drainage, along with modifications to fencing, pavement, the existing retention pond area, and obtaining required Town permits.; and

WHEREAS, Creative Contracting Group ("Contractor") timely submitted a response to the Town's solicitation and the Town Council has determined that Contractor is a responsive bidder and is qualified to provide the services sought in the scope of work for the Project pursuant to the Town's solicitation of services; and

WHEREAS, the Town Council has determined that it should award a contract for $1,343,900.00 to Contractor; and

WHEREAS, the Town has sufficient funds in its Community Investment Program budget which are available to fund the Project.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA:

Section 1. The foregoing recitals are incorporated herein.

Section 2. The mayor is hereby authorized to execute the contract with Creative Contracting Group in the amount of $1,343,900.00.

Section 3. This resolution shall take effect immediately upon its execution.

#7608676 v1 26503-00001

AGREEMENT BETWEEN THE TOWN OF JUPITER AND CONTRACTOR FOR CONSTRUCTION

THIS AGREEMENT, effective this 5th day of May in the year, 2026, between:

TOWN OF JUPITER, a municipal corporation of the state of Florida, (hereinafter TOWN), having an address of 210 Military Trail, Jupiter, FL 33458.

AND the CONTRACTOR:	Creative Contracting Group, having an address of 3141 Fortune Way S-16, Wellington, FL 33414
(hereinafter CONTRACTOR)	
Project Name:	PUBLIC WORKS SITE WORK
Project Number:	EPW2025-31

In accordance with the following terms:

Total Contract Price:	$1,343,900.00
Substantial Completion Time:	180 calendar days
Liquidated Damages:	$1,685 per day for each day the Project is not substantially completed within the 180 days
Final Completion Time:	30 calendar days upon issuance of the Punchlist
Liquidated Damages:	$1,685 per day for each day not completed following 30 days of the final completion time

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Article 2: Work / Preliminary Requirements
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Article 7: Liquidated Damages
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Article 9: Site Conditions
Article 10: Indemnification
Article 11: Termination
Article 12: Suspension of the Work
Article 13: Changes in the Work
Article 14: Materials, Equipment, and the Workmanship; Substitutions
Article 15: Compliance
Article 16: Non-Discrimination
Article 17: Defective Work
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Article 19: Performance Guarantee and Warranty
Article 20: Shop Drawings, Product Data and Samples
Article 21: Safety
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Article 24: Utility Coordination
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Article 29: Attorney's Fees and Costs
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Article 32: Miscellaneous
Exhibit A: Technical Specifications
Exhibit B: Contractor's Bid Form

ARTICLE 1
DEFINITIONS

Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1.1 Actual Costs. The real Project costs attributable to:

A. labor, including social security, insurance, fringe benefits required by Agreement or custom, and workers' compensation insurance;

B. materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

C. rental machinery and equipment, exclusive of hand tools, whether rented from the CONTRACTOR or others;

D. premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

E. field supervision and field office personnel directly attributable to the charge, exclusive of the cost of estimating, contract administration, and purchasing.

1.2 Addenda. Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

1.3 Agreement. The written instrument which is evidence of the Agreement between the TOWN and the CONTRACTOR covering the Work. Also referred to as "Contract".

1.4 Bid Package. The Bid Advertisement, Instructions to Bidders, all Addenda, the Bonds, the Notice of Award, and the Notice to Proceed.

1.5 Bonds. The performance bond and payment bond and other instruments of security, furnished by the CONTRACTOR and its surety in accordance with the Contract Documents and in accordance with the laws of Florida.

1.6 Change Order. A written document, which is signed by the CONTRACTOR and the TOWN, that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

1.7 Claim. A demand or assertion by the TOWN or the CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract (a demand for money or services by a third party is not a Claim).

1.8 Contract Documents. The documents that establish the rights and obligations of the parties and include the following:

A. the Agreement (including Exhibits);

B. the CONTRACTOR's entire completed Bid Package;

C. the Design Documents;

D. the Bid Package; and

E. the approved submittals, and other documents provided by, through, or under the CONTRACTOR that fix, depict, and/or describe the size, quality and character of the Project; however, Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents.

1.9 Contract Price. The monies paid to the CONTRACTOR under the Contract Documents.

1.10 Contract Times. The number of days or the dates stated in the Agreement to: (A) achieve Substantial Completion; and (B) complete the Work so that it is ready for final payment as evidenced by the TOWN's written recommendation of final payment.

1.11 CONTRACTOR. Creative Contracting Group.

1.12 Design Documents. The Drawings (Construction Plans) and Specifications, surveys, permits, estimates, photographs, and reports, together with all Written Amendments, Change Orders, the Work Change Directives, Field Orders, and the TOWN's written interpretations and clarifications issued on or after the Effective Date of the Agreement.

1.13 Drawings. That part of the Contract Documents prepared or approved by an engineer that graphically shows the scope, extent, and character of the Work to be performed by the CONTRACTOR (Shop Drawings or other the CONTRACTOR submittals are not Drawings). Also referred to as Construction Plans.

1.14 Effective Date of the Agreement. The last date evidencing that both parties have executed the Agreement.

1.15 Field Order. A written order issued by the TOWN that requires minor changes in the Work and may involve a minor change in the Contract Price or the Contract Time.

1.16 Final Completion or Final Acceptance. The completion of all the Work called for under the Contract Documents, including, but not limited to:

A. satisfactory operation of all equipment supplied by the CONTRACTOR;

B. correction of all punch list items to the satisfaction of the TOWN;

C. payment of all trade contractors, subcontractors, and materialmen;

D. settlement of all claims, if any;

E. payment and release of all mechanic's, materialmen's, and similar liens;

F. delivery of all guarantees, equipment operation and maintenance manuals, Record Drawings, required certificates, and all other required approvals and acceptances by any agency within the TOWN, the TOWN itself, the State of Florida or other authorities or agencies having jurisdiction; and

G. removal of all rubbish, tools, scaffolding, and surplus materials and equipment from the Work site.

1.17 Lump Sum Bid. The total cost that the CONTRACTOR has agreed for all Work reflected on Plans and Specifications included in the TOWN'S Request for Bids (RFB), which is not to exceed $1,592,710.25. The lump sum bid shall be utilized for building and facility projects in which unit price work is not specified on the bid form.

1.18 Notice to Proceed. A written notice given by the TOWN to the CONTRACTOR fixing the date on which the Contract Times will commence and on which the CONTRACTOR shall start to perform the Work under the Contract Documents.

1.19 Project. The construction, improvement, repair, rehabilitation, maintenance, or alteration of public infrastructure or facilities to be performed by the CONTRACTOR pursuant to the Contract Documents, plans, specifications, and any authorized modifications. The Project includes all labor, materials, equipment, services, supervision, and incidentals necessary to complete the work in accordance with the Contract Documents and applicable laws, regulations, and standards.

1.20 Project Manager. Each individual appointed by and acting on behalf of the TOWN and CONTRACTOR for the duration of the Project; the individuals that are responsible for administrative items including Applications for Payments between the CONTRACTOR and the TOWN.

1.21 Public Record. All records pursuant to Chapter 119, Florida Statutes, which include but are not limited to, documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material, regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business between the TOWN and the CONTRACTOR.

1.22 Samples. Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.23 Shop Drawings. All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of the Work.

1.24 Specifications. That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

1.25 Substantial Completion. For the purpose of this Agreement, and for the compliance of those procedures, duties and obligations as set forth in the Florida Statutes' "Local Government Prompt Payment Act", the term "Substantial Completion" is defined as that point where the TOWN is able to enjoy beneficial occupancy of the Work and where the Work has achieved that level of completion such that the TOWN is able to utilize the entire the Project for its intended purposes, including but not limited to the completion of all specified systems and items relating to life, safety and regulatory use, with the exception of incidental or incomplete items except where a lack of completion of such incidental or incomplete items of the Work will adversely affect the complete operation of other areas of the Work. Additional conditions (if any) needed to achieve Substantial Completion of the Work and which are

project specific as set forth in Exhibits (if any). The Project should be completed to the point that the Work can be utilized for the purposes for which it was intended, as well as the satisfaction of the following requirements: (A) the items that affect operational integrity and function of the Project must be capable of continuous use; (B) all permits and other regulatory requirements must be satisfied; and (C) where required, a Certificate of Occupancy must be issued.

1.26 Superintendent. The individual appointed by and acting on behalf of the CONTRACTOR, as approved by the TOWN, for the duration of the Project.

1.27 Surety. The corporate body that is responsible for the CONTRACTOR in connection with the Work as set forth in the Bonds and that is included in the most recent United States Department of the Treasury List of Acceptable Sureties and authorized to issue surety bonds in Florida, and which maintains a surety rating of "A-" or better.

1.28 Underground Facilities. All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

1.29 Unit Price Bid. The total cost of unit prices that the CONTRACTOR submits to the TOWN which includes all Work reflected on Plans and Specifications included in the TOWN'S Request for Bids (RFB). The Work shall be paid for on the basis of scope item unit prices included in the Project bid.

1.30 Work. All labor, supervision, materials, equipment, tools, supplies, services, permits, utilities, transportation, and incidentals necessary to fully construct, install, complete, and deliver the Project in strict accordance with the Contract Documents. The term includes all tasks reasonably inferable from the Contract Documents as being required to produce the intended result, whether or not specifically stated, and encompasses all obligations of the CONTRACTOR, including coordination, testing, inspection, cleanup, protection of persons and property, and compliance with applicable federal, state, and local laws, codes, and regulations.

ARTICLE 2
WORK / PRELIMINARY REQUIREMENTS

2.1 The CONTRACTOR agrees to furnish and complete all authorized and approved work, materials, supplies, tools, furnishings, fixtures, labor, services, equipment, site development, permitting, regulatory matters, environmental mitigation, traffic control, accounting, coordination, and construction of the Project, more specifically described in the Design Documents, as applicable.

2.2 The CONTRACTOR shall be responsible to produce a color audio-visual recording of the Project site prior to construction and upon completion of construction. The CONTRACTOR shall provide the audio-visual recordings on a DVD or USB Flash Drive/Thumb Drive. The purpose of the audio-visual recording is to document the condition of the Project site prior to construction with attention focused on the existence of any faults, fractures, or defects. Therefore, the recording shall be produced by a skilled videographer that is regularly engaged in the production of pre-construction recordings. The video recording shall be produced with sharp picture and accurate colors and shall be free of vibrations, distortion, or other significant picture imperfections; it shall be recorded during daylight hours and when the Project site is free of debris or obstructions. The pan rate, rate of travel, camera

height, and zoom rate shall be maintained steady and clear at all times. The audio commentary shall be produced with proper volume and clarity and shall be free of distortion; it shall be simultaneously recorded with the video to assist the TOWN with the orientation, location, identification, and description of the recorded features that are included in or adjacent to the Project site, which include, but are not limited to: (A) each side of the roadways; (B) sidewalks, bicycle paths, and other modes of transportation facilities; (C) buildings, walls, retaining walls, and seawalls; (D) elements of the stormwater management system, including ponds, culvert ends, and visible drainage structures; and (E) landscaping/trees, visible components of the irrigation system, and fencing.

2.3 Prior to the issuance of the Notice to Proceed, the TOWN shall schedule a pre-construction meeting with the CONTRACTOR. At the pre-construction meeting, the CONTRACTOR shall submit for the TOWN's review its audio-visual recording of the Project site, the proposed Critical Path Method (CPM) Schedule, the Final Schedule of Values, personnel and subcontractor lists, and the proposed mobilization requirements. It is the intent of the pre-construction meeting to ensure that the Project Manager and the Superintendent have a clear understanding of the proposed Work and the requirements of this Agreement and to establish the appropriate Date of Commencement, which may or may not coincide with the date of the pre-construction meeting.

2.4 The Date of Commencement of the Work shall be the date indicated in the Notice to Proceed. The Notice to Proceed shall be issued by the Project Manager after the CONTRACTOR has delivered to the TOWN the executed Agreement together with the Bonds and Insurance Certificates required in accordance with the Agreement and the TOWN has approved this Agreement. No Work shall be performed by the CONTRACTOR or its professionals, subconsultants, or subcontractors, and no irrevocable commitments to vendors shall be made prior to the Date of Commencement, at which time, the CONTRACTOR may commence to perform the Work.

ARTICLE 3
CONTRACT PRICE

3.1 The TOWN shall pay the CONTRACTOR for the performance of this Agreement and completion of the Work under the Project in accordance with the Contract Documents, subject only to any adjustment by Change Order approved by the Town Council, the fixed Contract Price as stated on Page 1 of this Agreement, based on the unit costs and quantities in the Bid. The obligations of the TOWN under this Agreement are subject to the availability of funds lawfully appropriated for the Project by the TOWN.

3.2 The CONTRACTOR fully understands that the Lump Sum and/or Unit Price for all items includes a sufficient allowance for the completion of all Work associated with the Project, as depicted in the Contract Documents, including, but not limited to, all profit and overhead, incidentals, all labor, supervision, testing, TOWN inspections, machinery, equipment, tools, utility coordination, clean up, and other means of construction necessary to complete the Work in accordance with all applicable regulatory agencies.

ARTICLE 4
CONTRACTOR RESPONSIBILITIES

4.1 The CONTRACTOR represents that it has familiarized itself with, and assumes full responsibility for having familiarized itself with, the nature and extent of the Contract Documents, the

Work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work, and represents that it has correlated its study and observations with the requirements of the Contract Documents. The CONTRACTOR also represents that it has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as it deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that it has correlated the results of all such data with the requirements of the Contract Documents.

4.2 The CONTRACTOR shall give all notices and comply with all municipal, county, state and federal laws, ordinances, codes, rules, licenses, and regulations applicable to the Work. If the CONTRACTOR observes that any of the Agreement is contradictory to such laws, rules, and regulations, it shall notify the Project Manager promptly in writing. If the CONTRACTOR performs any the Work that it knows or should have known to be contrary to such laws, ordinances, rules, and regulations, it shall bear any additional costs related to the Work.

4.3 The CONTRACTOR understands and acknowledges that all documents and materials provided with the Request for Bid package and any addenda are general and preliminary, and that the CONTRACTOR shall not rely on the accuracy or completeness thereof. The CONTRACTOR acknowledges that its duties hereunder shall not be excused or discharged in any respect based on the incompleteness or inaccuracy of any such documents or materials.

4.4 The CONTRACTOR shall be responsible to the TOWN for acts and omissions of the CONTRACTOR and the CONTRACTOR's agents, employees, professionals, subconsultants, subcontractors, and all other parties performing the Work by, through, and under the CONTRACTOR.

4.5 The CONTRACTOR shall be responsible for the management, coordination and supervision of all construction means, methods, techniques, sequences, and procedures for completion of the Work.

4.6 The CONTRACTOR agrees to bind specifically every professional, subconsultant and subcontractor to the applicable terms and conditions of the Agreement, for the benefit of the TOWN.

4.7 The CONTRACTOR represents that it is fully experienced and properly qualified to perform the Work under the Contract Documents and that it is properly licensed, equipped, organized, and financed to perform such the Work.

4.8 The CONTRACTOR shall act as an independent contractor and not as the agent of the TOWN. The CONTRACTOR shall supervise and direct the Work and shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction subject to compliance with the Contract Documents.

4.9 The CONTRACTOR shall employ and maintain a full-time on-site Superintendent and Project Manager who shall have been designated in writing by the CONTRACTOR and pre-approved by the TOWN. The Superintendent and Project Manager shall be dedicated to the Project full time and shall have full authority to act on behalf of the CONTRACTOR. The Superintendent shall be present during Work at all times. The Superintendent and Project Manager shall not be the same person, unless approved by the TOWN. All communications given to the Superintendent and/or Project Manager shall be as binding as if given to the CONTRACTOR. Copies of written communications given to the Superintendent and/or Project Manager of the CONTRACTOR shall be mailed to the address set forth

in the Agreement for notices. Nothing contained herein shall be construed as modifying the CONTRACTOR's duty of supervision and fiscal management as provided by Florida law. The TOWN shall have the right of direct removal of any Superintendent and/or Project Manager of the CONTRACTOR upon written notice. Any change in the Superintendent of the CONTRACTOR assigned to the Project shall be subject to the TOWN's prior written approval. The Superintendent shall have full authority to receive instructions from the Owner and/or Engineer, and to execute the orders or directions of the Owner and/or Engineer, including promptly supplying any materials, tools, equipment, labor, and incidentals that may be required. The Superintendent shall provide such superintendence regardless of the amount of work sublet.

4.10 The CONTRACTOR shall perform at least 30% (thirty percent) of the total amount of the Work in-house. The foregoing 30% (thirty percent) is exclusive of administrative work performed by the CONTRACTOR in connection with the Work.

4.11 The CONTRACTOR shall not employ any subcontractor or consultant against whom the TOWN may have reasonable objection including but not limited to the subcontractor or consultants non-compliance or poor past performance on another TOWN project.

4.12 The CONTRACTOR represents to the TOWN that the CONTRACTOR (and its Manager officers, directors, partners, or shareholders holding ten 10% or more of the outstanding stock of the CONTRACTOR), does not have any financial interest in or with (i.e. is not an officer, director, partner or 10% (ten percent) plus shareholder) any person, entity, subcontractor, consultant, design professional, materialmen, supplier, or any other subcontractor performing the Work or the Project. The CONTRACTOR agrees to obtain prior written consent from the TOWN before entering into any agreement on this the Project in which it has a common financial interest.

4.13 The CONTRACTOR shall keep on-site one record copy of all Drawings, Specifications, Addenda, Modifications, and Shop Drawings that is annotated to show all changes made during the construction process. Final acceptance of the Work will be withheld until all such modifications have been properly inserted electronically into the design documents, thus creating Record Drawings, and the Record Drawings are accepted by the TOWN.

4.14 The CONTRACTOR shall provide the TOWN two copies of the Record Drawings verifying the as-built conditions for all installed and constructed components of the Work, including, but not limited to, the surface water management, traffic control, lighting, water distribution, and wastewater collection systems. The Record Drawings, which shall be signed and sealed by a Professional Engineer or Surveyor and Mapper, licensed in the State of Florida, must demonstrate to the Project Manager that the Project components were constructed in substantial conformance with the approved Construction Plans and applicable permits and that the Project will function as designed and intended. The Record Drawings must be certified based on an As-Built Survey prepared in accordance with the Minimum Technical Standards established in Florida Administrative Code (FAC) 5J-17.051 and 5J-17.052. If the Project Manager determines that the as-built conditions of one or more components are not constructed in substantial conformance with the approved Construction Plans or that the Record Drawings do not sufficiently demonstrate conformance with the Construction Plans, one set of the Record Drawings will be returned to the CONTRACTOR that identify the deficient component(s) of the Work. The CONTRACTOR shall correct the component(s) or the Record Drawing in the timeframes set forth in Article 6 of this Agreement. Upon acceptance by the Project Manager, the CONTRACTOR shall

provide the TOWN Record Drawings electronically in AutoCAD® and Adobe Acrobat®. The Adobe Acrobat® file shall be a replica of the signed and sealed Record Drawing.

4.15 The CONTRACTOR shall, at its expense, attend any and all meetings called or noticed in writing by the TOWN to discuss the Work under the Agreement.

4.16 The CONTRACTOR shall not establish and shall not allow its employees to engage in any non-Project related commercial activities on the Project site.

4.17 The CONTRACTOR shall, at its expense, arrange for, develop, and maintain all utilities required to execute the Work. Such utilities shall be furnished by the CONTRACTOR at no additional cost to the TOWN, including, but not be limited to: telephone service for the CONTRACTOR's use; construction power; and potable water, and sanitary sewer. Prior to Final Acceptance of the Work, the CONTRACTOR shall, at its expense, satisfactorily remove and dispose of all temporary utilities developed to meet the requirements of the Agreement.

4.18 The CONTRACTOR shall be responsible for the proper control, maintenance, and detour of traffic in the construction area, at all times during the course of the Work. Contractor shall provide and maintain Maintenance of Traffic (MOT) by a certified Advanced Work Zone Traffic Control officer. All traffic control and maintenance procedures shall be in accordance with the requirements of the Florida Department of Transportation, TOWN, or the county, within their respective area of jurisdiction. It shall be the CONTRACTOR’s responsibility, as Bidder, prior to submitting its Bid, to determine the requirements of these agencies so that its Bid reflects all costs to be incurred. No claims for additional payment will be considered for costs incurred in the proper control, maintenance, detour of traffic. The CONTRACTOR shall notify all such agencies and the TOWN at least 7 (seven) days in advance of any traffic detour. No road closures are permitted unless approved in writing by the TOWN. The CONTRACTOR shall notify all such agencies and the TOWN at least 14 (fourteen) days in advance of any road closure.

4.19 The CONTRACTOR is responsible for adequate NPDES-compliant drainage at all times. Existing functioning storm sewers, gutters, ditches, and other run-off facilities shall not be obstructed. Stabilization measures, as defined by the State of Florida Department of Environmental Protection Generic Permit for Stormwater Discharge from Large and Small Construction Activities, as amended, shall be initiated as soon as practicable, but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.

4.20 The CONTRACTOR shall ensure that all fire hydrants on or adjacent to the Project are accessible and no obstruction shall be placed within fifteen feet of any hydrant.

4.21 The CONTRACTOR shall ensure that heavy equipment is not operated close enough to TOWN assets or other structures to cause their displacement.

4.22 CONTRACTOR certifies that it and any of its affiliates are not scrutinized companies as identified in Section 287.135, F.S. In addition, CONTRACTOR agrees to observe the requirements of Section 287.135, F.S., for applicable sub-agreements entered into for the performance of Work under this Agreement.

ARTICLE 5
PAYMENT

5.1.1 A Schedule of Values shall be approved by the TOWN prior to the commencement of the Work. The approved Schedule of Values shall be the basis for progress payments and shall be incorporated into a form of Application for Payment acceptable to the TOWN. Progress payments on account of Unit Price Work shall be based on the number of units completed.

5.2 Applications for Payments

A. The CONTRACTOR shall submit to the TOWN for review, an Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as required by the Contract Documents. Such supporting documents shall include but not be limited to: (i) a current release from the CONTRACTOR releasing all claims, other than those previously submitted pursuant to Article 10 herein, through the date of the Application for Payment; and (ii) a monthly dated Critical Path Method (CPM) Schedule for the Project. Written consent from the surety in a form acceptable to the TOWN regarding the project or payment may be given in lieu of waivers. Submission of this supporting documentation shall be a condition precedent to the CONTRACTOR's entitlement to receive payment. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the TOWN has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect the TOWN's interest therein, all of which must be satisfactory to the TOWN.

B. Beginning with the second Application for Payment, each Application shall include:

(i) an affidavit by the CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge the CONTRACTOR's legitimate obligations associated with prior Applications for Payment and

(ii) a "Conditional Waiver of Right to Claim Against Payment Bond and "Town of Jupiter" completed by the CONTRACTOR and all subcontractors.

C. The amount of retainage with respect to progress payments shall be 5% of the Contract Price or as otherwise stipulated in the Agreement and will remain in place subsequent to final completion of the Work based upon the schedule of values contained in the Agreement.

D. Upon Substantial Completion, the CONTRACTOR must provide for Punchlist items necessary to render the construction services complete, satisfactory, and acceptable. The process, time frames, and reviewing responsibilities for that list must be specified. After the list is developed and the TOWN receives a proper invoice or payment request, the TOWN shall pay the remaining contract balance including remaining retainage less an amount equal to 150% of the estimated cost to complete the items on the list within 30 calendar days from the issuance of the Punchlist. Once all items on the Punchlist are completed, the CONTRACTOR can request payment for all remaining retainage. If there is a good faith

dispute over whether some items have been completed, the TOWN shall be entitled to withhold up to 150% of the cost to complete those disputed items.

E. The Application for Final Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to the TOWN) of all Lien rights arising out of or Liens filed in connection with the Work.

5.3 Review of Applications

A. The TOWN's approval of any payment requested in an Application for Payment shall constitute a representation by the TOWN that to the best of the TOWN's knowledge, information and belief:

(i) the Work has progressed to the point indicated;

(ii) the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price the Work, and to any other qualifications stated in the recommendation); and

(iii)the conditions precedent to the CONTRACTOR's being entitled to such payment have fulfilled the TOWN's responsibility to observe the Work.

B. The TOWN's approval of any payment requested in an Application for Payment shall not be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work performed have been exhaustive, extended to every aspect of the Work, or were detailed inspections of the Work; or (ii) there may not be other matters or issues between the parties that might entitle the TOWN to withhold payment to the CONTRACTOR.

C. The TOWN may reject the payment request or invoice within 20 business days after the date on which the payment request or invoice is stamped as received by the TOWN. The rejection must be in writing and must specify the deficiency in the payment request or invoice and the action necessary to make the payment request or invoice proper. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the Application. The TOWN shall determine whether the corrections submitted are acceptable.

D. The TOWN may refuse to make payment of the full amount because:

(i) claims have been made against the TOWN on account of the CONTRACTOR's performance or furnishing of the Work;

(ii) Liens have been filed in connection with the Work. The CONTRACTOR may delivers a specific Bond to the TOWN, whereby the TOWN shall determine whether the bond submitted is sufficient to satisfy and discharge the Liens;

(iii)there are other items entitling the TOWN to an offset against the amount recommended.

(iv) the Work is defective or the completed Work has been damaged, requiring correction or replacement;

(v) the Work for which payment is requested cannot be verified;

(vi) the CONTRACTOR failed to make proper payments to subcontractor(s) for labor, materials or equipment in connection with the Work;

(vii) the Contract Price has been reduced because of modifications or there is reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;

(viii) the TOWN has been required to correct defective Work or complete the Work in accordance with the Contract Documents;

(ix) the CONTRACTOR failed to carry out the Work in accordance with the Contract Documents, or otherwise unsatisfactory prosecution of the Work;

(x) of any other breach of, default under, violation of, or failure to comply with the provisions of the Contract Documents.

E. If the TOWN refuses to make payment of the full amount, the TOWN must give the CONTRACTOR written notice within 10 business days of receipt of invoice stating the reasons for such action and promptly pay the CONTRACTOR any amount remaining after deduction of the amount so withheld. The TOWN shall promptly pay the CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by the TOWN and the CONTRACTOR, when the CONTRACTOR corrects the reasons for such action to the TOWN's satisfaction.

5.4 All payments made to the CONTRACTOR, whether Progress or Final, shall be in strict accordance with the "Local Government Prompt Payment Act" addressing payment, retainage, and punchlist procedures for the performance of the Work.

5.5 The CONTRACTOR warrants and guarantees the Work covered by an Application for Payment, whether incorporated in the Work or not, shall pass to the TOWN prior to the making of the Application for Payment, free and clear of all liens, claims, security interests, purchase money security interest, chattel paper or encumbrances of any nature whatsoever ("Liens").

5.6 The CONTRACTOR shall promptly pay all subcontractors, laborers, materialmen, and suppliers upon receipt of payment from the TOWN out of the amount paid to the CONTRACTOR on account of such person's portion of the Work, the amount to which such person is entitled, reflecting percentages actually retained from payments to the CONTRACTOR. The CONTRACTOR shall, by appropriate agreement with each subcontractor or other person, require each subcontractor or other person to make payments to sub-subcontractors in similar manner.

5.7 A Certificate of Payment, a progress payment, or partial or entire use of the Project by the TOWN shall not constitute the TOWN's acceptance of any Work it determines in its sole discretion to not be in accordance with the Contract Documents.

5.8 In accordance with the provisions of §255.05, Florida Statutes, where the CONTRACTOR requires a waiver from laborers, materialmen, subcontractors, or sub-subcontractors (as each such term

is defined by §713.01, Florida Statutes) of the right to make a claim against the Payment Bond in exchange for or to induce payment of a progress payment or a final payment, such waivers shall comply with the form set forth in §255.05, Florida Statutes.

5.9 If one or more Notice of Non-Payment is received by the TOWN, no further payments will be approved until non-payment(s) have been satisfied and a Release of Claim for each Notice of Non-Payment has been submitted to the TOWN. Upon request, the CONTRACTOR shall furnish acceptable evidence that all such claims or liens have been satisfied. If the CONTRACTOR fails to satisfy the non-payment, the TOWN may make payment and back-charge the CONTRACTOR for any and all costs associated with such payment.

5.10 If at any time during the progress of the Work, the CONTRACTOR's actual progress is inadequate to meet the requirements of the Agreement, the TOWN may, but is not required to, notify the CONTRACTOR to implement some or all of the following remedial actions at the sole cost and expense of the CONTRACTOR:

A. Increase construction manpower in such quantities and crafts as necessary to eliminate the schedule progress deficiency;

B. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the schedule progress deficiency;

C. Reschedule the Work in conformance with the specification requirements.

5.11 Neither such notice by the TOWN nor the TOWN's failure to issue such notice shall relieve the CONTRACTOR of its obligation to achieve the quality of the Work and rate of progress required by the Agreement.

ARTICLE 6
TIME OF PERFORMANCE

Time is of the essence for all Work under this Agreement.

6.1 Prior to requesting an inspection for Substantial Completion, as defined in Article 1.25, the CONTRACTOR shall confirm, in writing that:

A. All construction is complete, the project components are clean, and all systems fully functional.

B. All utilities are installed or adjusted, as required, and are fully functional.

C. The Project site is clear of the CONTRACTOR’s excess equipment, temporary facilities and/or trailers.

D. All operations and maintenance manuals for all equipment have been delivered to the TOWN.

E. All operations and maintenance training related literature, software, and back-up disks have been delivered to the TOWN.

F. All manufacturers’ certifications and warranties have been delivered to the TOWN.

G. All required spare parts, materials, as well as any special measuring devices and tools have been delivered to the TOWN.

6.2 The TOWN shall have the right to exclude the CONTRACTOR from the Project after the date of Substantial Completion, but the TOWN shall allow the CONTRACTOR reasonable access to complete or correct items on the punch list.

6.3 When the CONTRACTOR considers the Work ready for its intended use, the CONTRACTOR shall notify the TOWN, in writing, that the Work is substantially complete and request that the TOWN issue a certificate of Substantial Completion. Promptly thereafter, the TOWN and the CONTRACTOR shall make an inspection of the Work to determine the status of completion. For the purpose of this Agreement, and for the compliance of those procedures, duties, and obligations as set forth in §218.70 et seq. and §218.735 et seq., Florida Statutes, the term "Substantial Completion" is defined as that point where the TOWN determines that it is able to enjoy beneficial occupancy of the Work and where the Work has achieved that level of completion such that the TOWN is able to utilize the entire Project for its intended purposes, including but not limited to the completion of all specified systems and items relating to life, safety, and regulatory use, with the exception of incidental or incomplete items except where a lack of completion of such incidental or incomplete items of the Work will adversely affect the complete operation of other areas of the Work. Additional conditions (if any) needed to achieve Substantial Completion of the Work and which are project specific are as set forth in attached Exhibits. If the TOWN does not consider the Work substantially complete, the TOWN will notify the CONTRACTOR in writing giving the reasons therefore. If the TOWN considers the Work substantially complete, the TOWN will issue and deliver to the CONTRACTOR a certificate of Substantial Completion, which shall fix the date of Substantial Completion. In addition to §218.735(7)(a), Florida Statutes, punch list procedures for construction projects having an estimated cost of less than $10,000,000 to render the Work complete, satisfactory, and acceptable are established as follows:

A. The intent of this section is for the TOWN and the CONTRACTOR to cooperate to develop a Final Punchlist no later than 30 days from the date of reaching Substantial Completion.
B. Within 5 days of Substantial Completion of the Project, the CONTRACTOR shall schedule a walkthrough with the TOWN ("Punchlist Walkthrough"). The purpose of the Punchlist Walkthrough is to determine that the project has achieved Substantial Completion, and if so, to develop a Punchlist of items to be performed by the CONTRACTOR, based upon observations made jointly between the CONTRACTOR and the TOWN during the Punchlist Walkthrough. The TOWN shall issue the Final Punchlist within 30 days of the Substantial Completion date.
C. The CONTRACTOR shall address and complete the Punchlist work either during the Punchlist Walkthrough itself or no later than 30 days from the date of the Punchlist Walkthrough.
D. No more than 25 days following the issuance of the Final Punchlist, the CONTRACTOR shall again initiate and request a second walkthrough ("Final Walkthrough") of the Project with the TOWN. The purpose of the Final Walkthrough is to identify which items on the Punchlist remain incomplete and to supplement that list as legally necessary (based, for example, upon work which may have been damaged as a result of the CONTRACTOR's performance of completion of items contained on the Punchlist.
E. The CONTRACTOR shall complete the Final Punchlist items within 30 days of the date of its issuance by the TOWN.

F. In no event may the CONTRACTOR request payment of final retainage under §218.735(7)(e), Florida Statutes, until the CONTRACTOR considers the Final Punchlist to be 100% (one hundred percent) complete.
G. The CONTRACTOR acknowledges and agrees that no item contained on the Final Punchlist shall be considered a warranty item until such time as: (i) the Final Punchlist is 100% complete; and (ii) the TOWN has been able to operate or utilize the affected punchlist item for 15 days, whichever occurs last.
H. The CONTRACTOR acknowledges and agrees that the TOWN may, at its option, during performance of the Work and prior to Substantial Completion, issue lists of identified non-conforming or corrective work for the CONTRACTOR to address. The intent of any such lists prior to Substantial Completion is to streamline the Punchlist process upon achieving Substantial Completion, and to allow for the CONTRACTOR to address needed areas of corrective work as they may be observed by the TOWN during performance of the Work.
I. The CONTRACTOR acknowledges and agrees that in calculating 150% of the amount which may be withheld by the TOWN as to any Final Punchlist item for which a good faith basis exists as to it being complete, as provided for by §218.735(7)(e), Florida Statutes, the TOWN may include within such percentage calculation its total costs for completing such item of work, including its administrative costs as well as costs to address other services needed or areas of work which may be affected in order to achieve full completion of the Final Punchlist item. Such percentage shall in no event relate to the schedule of value associated with such the Work activity, but rather total costs are based upon the cost of completing the Work activity based upon market conditions at the time of Final Punchlist completion.

6.4 If Substantial Completion has not been obtained at the Punchlist Walkthrough inspection called by the CONTRACTOR, for reasons that are the fault of the CONTRACTOR, as determined by the TOWN, the cost of any subsequent inspections requested by the CONTRACTOR for the purpose of determining Substantial Completion shall be at the cost of the CONTRACTOR and shall be assessed against the final payment application. Punch list items recorded as a result of inspections for Substantial Completion are to be corrected by the CONTRACTOR within the time-frame established.

6.5 Use by the TOWN, at the TOWN's option, of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which the TOWN and the CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by the TOWN for its intended purpose without significant interference with the CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

A. The TOWN may request, in writing, the CONTRACTOR permit the TOWN to use any such part of the Work which the TOWN believes to be ready for its intended use and substantially complete. If the CONTRACTOR agrees that such part of the Work is ready for its intended use and substantially complete, the CONTRACTOR shall certify to the TOWN that such part of the Work is substantially complete and request the TOWN issue a certificate of Substantial Completion for that part of the Work. The CONTRACTOR may notify, in writing, the TOWN that the CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request the TOWN issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either a request or notification is made, the TOWN and the CONTRACTOR shall inspect that part of the Work to determine its status

of completion. If the TOWN does not consider that part of the Work to be substantially complete, the TOWN shall notify the CONTRACTOR in writing giving the CONTRACTOR its reasons for its determination.

B. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of this Agreement regarding property insurance.

6.6 Upon written notice from the CONTRACTOR that the entire Work, or an agreed portion thereof, is complete, the TOWN shall promptly make a final inspection with the CONTRACTOR and notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The CONTRACTOR shall immediately take such measures necessary to complete such Work or remedy such deficiencies. Upon review of the measures taken, the TOWN shall determine whether the **measures** taken have rendered the incomplete or defective Work complete.

ARTICLE 7
LIQUIDATED DAMAGES

7.1 Upon failure of the CONTRACTOR to Substantially Complete the Agreement within the specified period of time, plus approved time extensions, the CONTRACTOR shall pay to the TOWN daily liquidated damages in the amount shown on Page 1 of this Agreement to reflect the TOWN's estimated damages resulting from the delay to Substantial Completion.

7.2 Upon failure of the CONTRACTOR to Finally Complete the Agreement within the specified period of time, plus approved time extensions, the CONTRACTOR shall pay to the TOWN daily liquidated damages in the amount shown on Page 1 of this Agreement to reflect the TOWN's estimated damages resulting from the delay to Final Completion.

7.3 Milestones, milestone completion dates, and applicable Liquidated Damages shall be in accordance with the Contract Documents.

7.4 If completion dates are not strictly complied with, then Liquidated Damages shall be assessed against the CONTRACTOR, and CONTRACTOR hereby agrees that such Liquidated Damages bear a reasonable relationship to damages incurred by the TOWN. The CONTRCATOR agrees to the reasonableness of the posted Liquidated Damages amount, which may not equal actual damages, and shall be legally enforceable in a court of law.

ARTICLE 8
CLAIMS FOR ADDITIONAL TIME

8.1 If the CONTRACTOR's performance of this Agreement is delayed, either by delays that are beyond the reasonable control and without the fault or negligence of the CONTRACTOR or its subcontractors or by changes ordered in the Work, and in either event where such delay or change in the Work affects the critical path, then the Agreement Time shall be extended by Change Order provided it is approved by the TOWN Council. If the CONTRACTOR wishes to make Claim for an increase in the Contract Time, the CONTRACTOR shall provide the TOWN a written notice, stating the reasons or the cause of the alleged delay. Such notice of claim shall include the following information, or else be waived:

A. Nature of the delay or change in the Work;

B. Dates of commencement and cessation of the delay or change in the Work;

C. Activities on the current progress schedule affected by the delay or change in the Work;

D. Identification and demonstration that the delay or change in the Work affects the critical path;

E. Identification of the source of delay or change in the Work;

F. Anticipated extent of the delay or change in the Work; and

G. Recommended action to minimize the delay.

8.2 The CONTRACTOR shall not be entitled to any extension of time for delays resulting from any cause unless the CONTRACTOR has notified the TOWN in writing within 7 (seven) calendar days of commencement of the delay and the Town Council has approved the extension.

8.3 No Damages for Delay; Exclusive Remedy. The CONTRACTOR shall not be entitled to and hereby waives any and all claims for damages which it may suffer by reason of delay, acceleration, loss of efficiency, or other related time or impact-based claims (hereinafter collectively "delay") or for delay attributable to any foreseen or unforeseen condition, or for delays claimed to be the result of active, intentional, knowing, or passive interference by the TOWN, its employees, or agents, and waives damages that it may suffer by reason of such claims for lost profits, loss or impairment of bonding capacity, destruction of business, extended overhead, supervision, extended, unabsorbed home office overhead; the extension of time granted by the TOWN, being the CONTRACTOR's sole remedy, with the exception that in the event of demonstrated critical, compensable, non-concurrent delay suffered by the CONTRACTOR, as determined by the TOWN, the CONTRACTOR may claim as its sole and exclusive remedy any associated, extended direct jobsite general conditions expended by the CONTRACTOR (hereinafter "applicable extended general conditions") in a sum not to exceed $250.00 per each day of delay. Apart from extensions of time or acceleration costs approved by the TOWN and any applicable extended general conditions, no payment of claim for delay damages shall be made to the CONTRACTOR as compensation for damages for any delays or hindrances from any cause whatsoever in the progress of the Work, whether such delay be avoidable or unavoidable. Notwithstanding anything herein to the contrary, provided the CONTRACTOR has otherwise satisfied the requirements of this Agreement, the CONTRACTOR shall be entitled to an increase in the Contract Price based upon approved general condition, insurance, and bond premium costs resulting from delays for which the TOWN Council has approved by Change Order or Construction Change Directive, provided, however, the TOWN shall not be required to pay such additional amounts for any days following the date on which the CONTRACTOR achieves Final Completion for the appropriate portion of the Work.

8.4 The time during which the CONTRACTOR is delayed in the performance of the Work by an act of Force Majeur shall be added to the Contract Time stated in the Agreement; provided, however, that no claim by the CONTRACTOR for an extension of time for such delays be considered unless made in accordance with Paragraph 8.1.

8.5 The TOWN shall not be obligated or liable to the CONTRACTOR for and the CONTRACTOR hereby expressly waives any claims against any damages, costs, or expenses of any nature whatsoever

which the CONTRACTOR, its subcontractors or sub-subcontractors may incur as a result of any events referred to in Paragraph 8.4 above, it being understood and agreed that the CONTRACTOR's sole and exclusive remedy in such event shall be an extension of Contract Time, but only if claim is properly made in accordance with Paragraph 8.1.

8.6 If any adverse weather conditions arising from Force Majeure are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were , could not have been reasonably anticipated, and had an adverse effect on the scheduled critical path of construction. Based on 30-Year, National Weather Service historical rainfall averages for the Town of Jupiter, the CONTRACTOR shall anticipate the amount of rainfall days affecting the schedule as normal conditions outlined in the following months below:

JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
2	2	3	2	3	5	5	6	6	5	3	2

The monthly allocated rainfall days are incorporated into the Contract Time and shall be considered a form of contingency built into the schedule.

ARTICLE 9
SITE CONDITIONS

9.1 Field Measurements. Before undertaking each part of the project, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the TOWN any conflict, error, or discrepancy that the CONTRACTOR or any of its subcontractors or suppliers may discover and shall obtain a written interpretation or clarification from the TOWN before proceeding with any Work affected. The CONTRACTOR shall remain liable to the TOWN for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents prepared by the CONTRACTOR.

9.2 Differing Site Conditions. The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the TOWN in writing of:

(A) subsurface or latent physical conditions at the site differing materially from those indicated in this Agreement; or (B) unknown physical conditions at the site of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work of the character provided for in this Agreement. The TOWN will promptly investigate the conditions, and if it finds that such conditions materially differ and such that it would cause an increase or decrease in the CONTRACTOR's cost of, or the time required for, performance of any part of the Work under this Agreement, propose an equitable adjustment to the Contract Price or Time and modify the parties may agree to the same. The CONTRACTOR's failure to provide notice upon discovery of the differing site condition shall waive any entitlement to an adjustment in the Contract Price or Contract Time.

9.3 Physical Conditions (Including Underground Facilities). The CONTRACTOR shall have responsibility for physical conditions, and Underground Facilities owned by the TOWN or others, as shown or indicated in the Contract Documents. The CONTRACTOR shall have full responsibility for reviewing and checking all such information and data. The TOWN shall not be responsible for accuracy or completeness of data, plans, and specifications and the CONTRACTOR shall have responsibility for

checking all information and data. If the Contract Documents necessitate an amendment or a change order in the Work due to Underground Facilities owned by the TOWN or others, whether they be shown or indicated or newly discovered, the TOWN may authorize an amendment to the Work by Change Order. If those Underground Facilities owned by the TOWN or others cause or will cause delays in the performance or extend completion of all or part of the Work, the CONTRACTOR shall absorb all related delay, extension, or acceleration costs, however caused, except that if the TOWN and the CONTRACTOR agree that the delays require a change in Contract Time, the TOWN shall authorize the necessary change in Contract Time only to the extent that such delays exceed 30 days impact to controlling work items. However, an extension in Contract Time, when and if so granted shall be the CONTRACTOR's sole and exclusive remedy with respect to the TOWN for any delay, disruption, interference, inefficiency, acceleration, extension or hindrance, and associated costs, however caused, resulting from variance in the location or configuration of Underground Facilities owned by the TOWN or others as shown or indicated, or from newly discovered Underground Facilities owned by the TOWN or others.

9.4 Special Requirements for Underground Facilities. The CONTRACTOR shall have responsibility for the following list. Except as otherwise provided, all costs involved and time required to perform these responsibilities shall be considered as having been included in the Contract Price and in the CONTRACTOR's schedule for the performance of the Work within the Contract Time, even if the Contract Documents need amending to authorize minor deviations or changes in the Work due to those Underground Facilities including utilities.

A. Field locating any and all Underground Facilities including utilities shown or indicated as to depth and alignment in advance of excavation;

B. Notifying the TOWN of any newly discovered Underground Facility and promptly notifying that the TOWN of that discovery;

C. Shoring, blocking and protecting Underground Facilities including utilities shown, indicated or discovered;

D. Coordination, scheduling and sequencing the Work with the TOWN's of all Underground Facilities shown, indicated or discovered;

E. Repairing any damage to the satisfaction of the TOWN, to the extent that the damage was due to the CONTRACTOR's failure to adhere to the requirements, or to the fault or negligence of the CONTRACTOR; and

F. The safety and protection of any affected the Work, and for repairing any damage done to the work.

9.5 If those Underground Facilities owned by the TOWN or others cause or will cause delays in the performance or extend completion of all or part of the work, the CONTRACTOR shall absorb all related delay, extension or acceleration costs, however caused, except that if the TOWN and the CONTRACTOR agree that the delays require a change in Contract Time, the TOWN shall authorize the necessary change in Contract Time only to the extent that such delays exceed 30 days impact to controlling work items. However, an extension in Contract Time, when and if so granted shall be the CONTRACTOR's sole and exclusive remedy with respect to the TOWN for any delay, disruption, interference, inefficiency, acceleration, extension or hindrance and associated costs, however caused,

resulting from variance in the location or configuration of Underground Facilities owned by the TOWN or others shown or indicated, or from newly discovered Underground Facilities owned by the TOWN or others.

9.6 Unless it prejudices the Work already excavated and uncovered, the CONTRACTOR shall schedule layout, excavation and uncovering of the Work or Underground Facilities a sufficient time in advance to allow the TOWN'S design professional's review, and the possible amending or supplementing of the Contract Documents.

ARTICLE 10
INDEMNIFICATION

The CONTRACTOR hereby assumes entire responsibility and liability for any and all damage or injury of any kind or nature whatever (including death resulting therefrom) to all persons, whether employees of the CONTRACTOR, its SUBCONTRACTS, CONSULTANTS or SUPPLIERS or otherwise, and to all property caused by, resulting from, arising out of or occurring in connection with the execution of the Agreement, or in preparation for the work and services under this Agreement, or any extension, modification, or amendment thereto by change order to otherwise.

The CONTRACTOR hereby agrees to indemnify and hold harmless the TOWN, its elected and appointed officers and employees from liabilities, damages, lawsuits, and costs, including but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness or intentional wrongful misconduct of the CONTRACTOR or persons employed or utilized by the CONTRACTOR in the performance of this Agreement.

ARTICLE 11
TERMINATION

11.1 Notwithstanding any other provision of this Agreement, the CONTRACTOR may be held in default of its contractual obligation under this Agreement if the CONTRACTOR:

A. refuses or fails to supply enough properly skilled workers or proper and sufficient materials and equipment;

B. fails to make payment to subcontractor for materials or labor in accordance with the respective agreements between the CONTRACTOR and the subcontractors;

C. disregards laws, ordinances, or rules, regulations or orders of any public authority having jurisdiction;

D. performs the Work that does not conform to Contract Documents requirements;

E. fails to meet the Contract Schedule or fails to make progress on the Work so as to endanger performance of the Agreement;

F. abandons or refuses to proceed with any or all the Work; or

G. otherwise breaches, fails to comply fully with, or is in default of any provision of the Contract Documents.

11.2 In the event that the TOWN deems the CONTRACTOR is in default, it shall provide written notice to the CONTRACTOR notifying it of the default and provide the CONTRACTOR with written notice of default, and a time as determined by the TOWN based upon the circumstances to cure such default. In the event that the CONTRACTOR fails to cure the default within the default period as determined by the TOWN, the TOWN may:

A. take possession of the Work site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the CONTRACTOR; and

B. accept assignment of subcontracts pursuant to this Agreement; and

(i) Complete the Work using any reasonable method the TOWN deems expedient, and deduct all costs incurred to complete the Work from any amounts due or that may become due to the CONTRACTOR. If such costs exceed the remaining contract balance, the CONTRACTOR shall be responsible for and promptly reimburse the TOWN for the excess., or

(ii) terminate the CONTRACTOR and engage others to complete the Work, charging the CONTRACTOR for all resulting completion costs. Such costs shall include, but not be limited to, expenses for construction, architectural and engineering services, project management, inspection, administrative costs, and any other costs reasonably incurred by the TOWN as a result of the CONTRACTOR's default., or

C. offset any and all such completion costs against any monies then due or to become due on any other projects that the TOWN has with the CONTRACTOR.

11.3 Upon default, the TOWN shall have no further obligation to pay the CONTRACTOR, and the CONTRACTOR shall not be entitled to receive further payment from the TOWN unless the TOWN permits the CONTRACTOR to complete the Work.

11.4 Pursuant to Section 287.135, F.S., the TOWN may immediately terminate this Agreement for cause if the CONTRACTOR, its affiliates, or its subcontractors are found to have submitted a false certification per Section 4.22 of this Agreement; or if the CONTRACTOR, its affiliates, or its subcontractors are placed on any applicable scrutinized companies list or engaged in prohibited contracting activity during the term of this Agreement. As provided in Subsection 287.135(8), F.S., if federal law ceases to authorize these contracting prohibitions, then they shall become inoperative.

11.5 Termination by the TOWN for Convenience. Notwithstanding any notice of default, the TOWN reserves the right at any time and in its sole and absolute discretion to terminate the services of the CONTRACTOR with respect to the Work by giving written notice to the CONTRACTOR. In such event, the CONTRACTOR shall be entitled to, and the TOWN shall reimburse the CONTRACTOR for, an equitable portion of the Contract Price based on the portion of the Work completed prior to the effective date of termination and for any other reasonably expended costs attributable to such termination. However, the CONTRACTOR shall not be entitled to receive its anticipated profits for any unperformed Work.

ARTICLE 12
SUSPENSION OF WORK

The TOWN may, without cause, provide written notice to the CONTRACTOR to suspend, delay, or interrupt the Work in whole or in part for such period of time as the TOWN may determine.

ARTICLE 13
CHANGES IN THE WORK

13.1 The TOWN may, at any time or from time to time, order additions, deletions, or revisions in the Work by requesting a proposal from the CONTRACTOR detailing the proposed additions, deletions, or revisions to the Work. The proposal shall include such details as man-hours, man-hour rates, quantities, quantity unit rates, equipment, equipment unit rates, and mark-ups. The CONTRACTOR shall complete and return the proposal to the TOWN within 10 calendar days from receipt thereof. The proposal shall include any increases or decreases in Contract Time or Contract Price and shall include any additional modifications required by virtue of the requested change, whether or not such additional modifications were specifically identified in the request for proposal.

13.2 The TOWN may authorize minor changes or alterations in the Work involving minimal cost or time and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the CONTRACTOR believes that any minor change or alterations authorized by the Field Order entitles it to an increase in the Contract Price or extension of Contract Time, it shall appeal the changes to the Town Manager, whose decision shall be final.

13.3 Additional Work performed by the CONTRACTOR without a written Change Order shall not entitle the CONTRACTOR to an increase in the Contract Price or an extension of the Contract Time.

13.4 It is the CONTRACTOR's responsibility to notify its Surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable Bonds shall be adjusted accordingly. The CONTRACTOR shall furnish proof of the adjustment by the Surety to the TOWN.

13.5 The TOWN may, at any time, without notice to the Surety, by Field Order or by properly executed Change Order, make any change in the Work within the general scope of the Contract Documents, including but not limited to changes:

A. in the Drawings and designs, and Specifications;

B. in the method or manner of performance of the Work;

C. directing acceleration in the performance of the Work.

13.6 Except as herein provided, no order, statement, or conduct of the TOWN shall be treated as a Change Order or Field Order or entitle the CONTRACTOR to an equitable adjustment hereunder.

13.7 No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Agreement.

13.8 The value of any Work covered by a Field Order, Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways at the sole discretion of the TOWN:

A. where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved;

B. by negotiated lump sum; or

C. cost plus. If this option is selected, the CONTRACTOR shall provide all documentation in support of its Actual Costs, and the CONTRACTOR agrees promptly to supply such information.

13.9 For changes in the Work performed by the CONTRACTOR, the CONTRACTOR shall be entitled to a percentage 10% mark-up for Actual Costs as defined in Section 1.

13.10 For changes in the Work performed by subcontractors: (A) the subcontractor shall be entitled to mark-up the cost of the change(s) by 10%; and (B) the CONTRACTOR shall be entitled to mark-up the subcontractor's total by 5%. The foregoing shall be the maximum amount allowable for subcontractor's and the CONTRACTOR's Actual Costs as defined in Section 1.

13.11 The Contract Sum includes an Owner Contingency as specified on the Bid Form. This fund is for the exclusive use of the TOWN to defray expenses from changes in the work such as unforeseen conditions or added scope. The Contractor must obtain the TOWN's prior written approval and provide documentation of costs before any funds are released. Any balance remaining at project conclusion shall belong solely to the Owner.

All contingency spend must be listed as a separate item on the project invoice. The TOWN reserves the right to request an itemized monthly report of all contingency expenses.

ARTICLE 14
MATERIALS, EQUIPMENT AND WORKMANSHIP; SUBSTITUTIONS

14.1 Only new, unused items of recent manufacture, of designated quality, free from defects, shall be accepted. Rejected items shall be removed immediately from the Work and replaced with items of specified quality. The TOWN's failure to identify, reject, or order the removal of defective or nonconforming materials or equipment shall not relieve the CONTRACTOR of responsibility for the quality and compliance of the materials and equipment furnished, nor shall it waive any requirement of the Contract Documents or limit the TOWN's rights and remedies thereunder.

14.2 No Work defective in construction or quality, or deficient in meeting any requirement of the Contract Drawings and Specifications, are acceptable regardless of the TOWN's failure to discover or to point out defects or deficiencies during construction; nor will the presence of field representatives at the Work or the satisfaction of the Work meeting applicable code requirements relieve the CONTRACTOR from responsibility for the quality and maintaining progress in accordance with the critical path for the Work as required by the Contract Documents.

14.3 Prior to proposing any substitute item, the CONTRACTOR shall secure from the TOWN its concurrence that the item proposed is, in fact, equal or better to that specified in the Contract Documents that: such item will fit into the space allocated; such item affords comparable ease of operation, maintenance and service; the appearance, longevity and suitability for the climate are comparable; and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution of such item will be in the TOWN's interest, and will in no way have a detrimental effect upon the Project completion date and schedule.

A. The burden of proof of equality of a proposed substitution for a specified item shall be upon the CONTRACTOR. The CONTRACTOR shall support its request with sufficient test data and other means to permit the TOWN to make a fair and equitable decision on the merits of the proposal. The CONTRACTOR shall submit drawings, samples, data and certificates and such additional information as may be required by the TOWN for proposed substitute items as required by the Contract Documents.

B. Any item by a manufacturer other than those specified or of brand name or model number or of generic species other than those specified shall be considered a substitution. The TOWN will be the sole judge of whether or not the substitution is equal in quality, utility, and economy to that specified.

C. The CONTRACTOR shall allow an additional 15 calendar days for the TOWN's review of requested substitutions. All requests for substitutions with supporting data must be made at least 50 calendar days prior to the time the CONTRACTOR must order, purchase or release for manufacture or fabrication. Approval of a substitution shall not relieve the CONTRACTOR from its responsibility to comply with all requirements of the Agreement. The CONTRACTOR shall coordinate any changes with all trades and shall bear the expense for any changes in other parts of the Work caused by any substitutions approved by the TOWN.

D. If the TOWN rejects the CONTRACTOR's requested substituted item on the first submittal, the CONTRACTOR may make only one additional request for substitution in the same category. Upon the second request, the CONTRACTOR shall be invoiced the expenses of the TOWN for its review of the data submitted to support the proposed substituted item. The TOWN’s expenses shall be deducted from the next succeeding partial payment to the CONTRACTOR, or from the final payment, at the TOWN’s discretion.

ARTICLE 15
COMPLIANCE

15.1 All Work, labor, materials and equipment provided under this Agreement shall be performed in strict compliance with any and all applicable building and fire, life and safety codes and strictly in accordance with plans and specifications contained in the Contract Documents. The CONTRACTOR must satisfy itself that the Plans, Drawings and Specifications in fact comply with all applicable codes. The CONTRACTOR shall notify the TOWN prior to commencement of the Work of any requirement of the plans and specifications not in strict compliance with such codes. There will be no extra payment for compliance to existing codes or any item of interpretation regarding enforcement of existing codes. The CONTRACTOR acknowledges and agrees that by its execution of this Agreement that it has thoroughly researched all applicable codes and regulations affecting the Project.

15.2 If, during the term of this Agreement, there are any changed or new laws, ordinances or regulations not known or foreseeable at the time of signing this Agreement which become effective and which affect the cost or time of performance of the Agreement, the CONTRACTOR shall immediately notify the TOWN in writing and submit detailed documentation of how the law, ordinance, or regulation effects the terms herein regarding either or both the time and cost of performing the Agreement. Upon concurrence by the TOWN as to the effect of such changes, an adjustment in the Contract Price and/or time of performance shall be presented top the Town Council for its approval. If any discrepancy or inconsistency should be discovered between the Contract Documents and any law, ordinance, or regulation, the CONTRACTOR shall immediately report the same in writing to the TOWN for its evaluation and a response. However, it shall not be grounds for a Change Order that the CONTRACTOR was unaware of or failed to investigate any such laws, regulations or ordinances.

15.3 The CONTRACTOR shall, at all times, comply with all applicable laws, ordinances, and regulations in effect during the time of performance of the Work.

15.4 The CONTRACTOR shall deliver a product which meets or exceeds the design package standards, provide a complete and functional facility including but not limited to all necessary interfaces between this facility and adjacent existing facilities, and/or anticipated future facilities. All built-in equipment, systems, controls, devices and finishes necessary for the efficient use and maintenance of the facility and its related site work (if applicable), except as otherwise noted and/or clarified herein, shall be included in the Work.

ARTICLE 16
NON-DISCRIMINATION

The CONTRACTOR agrees that it shall not discriminate against any employee or applicant for employment to be employed in the performance of the Agreement with respect to its hiring, the tenure of an employee, the terms, conditions or privileges of employment, or any matter directly or indirectly related to employment because of age, sex, physical handicaps (except where based on a bona fide occupational qualification) marital status, race, color, religion, national origin or ancestry.

ARTICLE 17
DEFECTIVE WORK

17.1 The TOWN shall have authority to reject any Work which it determines, in its sole discretion to be "defective" (which term is hereinafter used to describe any Work that the TOWN determines is unsatisfactory, faulty or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to final acceptance). The TOWN shall also have authority to require special inspection or testing of the Work as it determines to be necessary, whether or not the Work is fabricated, installed or completed.

17.2 Upon the TOWN's presentation of a notice of Defective the Work to the CONTRACTOR, the CONTRACTOR shall meet with the TOWN'S representative within 24 hours to discuss and develop a plan of remedial action and time-line to correct the defective the Work. The CONTRACTOR shall have no more than 3 working days to begin corrective action and repairs; provided, however, all repairs to natural gas, telephone, radio, computer security, water, waste water, electric air conditioning services and all emergency services shall be commenced within 12 hours of notification, or by 7:00 a.m.

whichever is earlier, and the CONTRACTOR shall complete the repairs in an expeditious manner befitting the nature of the deficiency. If the CONTRACTOR refuses to comply with the 24 hour meeting requirement, or the agreed upon correction schedule, the TOWN have the right to do any of the following: (A) correct any the Work so performed by the CONTRACTOR and deduct the expenses for doing so from the final payment due the CONTRACTOR; or (B) hold back payment due the CONTRACTOR until such time as the Work is completed to the satisfaction of the TOWN and in compliance with the Contract Documents. The TOWN shall have the sole discretion to determine if the Work is satisfactory and in compliance with Contract Documents. The foregoing remedies are not exclusive and the TOWN reserves the right to pursue any and all other remedies, including but not limited to damages, or liquidated damages for any delay which it determines in its sole discretion to be appropriate.

ARTICLE 18
BONDS AND INSURANCE

18.1 Payment and Performance Bonds. The CONTRACTOR shall, upon execution and return of this Agreement to the TOWN, furnish a Public Payment Bond and a Performance Bond, pursuant to §255.05, Florida Statutes, in at least an amount equal to the Contract Price covering the faithful performance of this Agreement and the CONTRACTOR's faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. The Bonds shall be recorded at the CONTRACTOR's expense. The Surety for the bonds must be included in the most recent United States Department of the Treasury List of Acceptable Sureties, authorized to issue surety bonds in Florida, and which maintains a surety rating of "A-" or better. A complete copy of the fully executed Payment and Performance Bond shall be posted in a conspicuous place at the Project site. If the Surety on any Bond furnished by the CONTRACTOR is declared bankrupt, becomes insolvent, its authorization to do business in the State of Florida is terminated, it ceases to be listed on the United States Department of Treasury List of Acceptable Sureties, or its surety rating ceases to be an "A-" or better, the CONTRACTOR shall within 5 days thereafter substitute another Payment Bond, Performance Bond, and Surety, each of which shall be in accordance with the Contract Documents and acceptable to the TOWN . An action to enforce any claim against a payment bond must be brought within one year from the last furnishing of labor, services, or materials, or as otherwise stated in §95.11 (5)(e), Florida Statutes. An action to enforce any claim against a performance bond must be brought within five years in accordance with §95.11(2)(b) , Florida Statutes, and applicable case law.

18.2 Insurance

A. Certificate of Insurance. One certified true copy of the policy(s) must be furnished by the CONTRACTOR to the TOWN prior to commencement of any Work on the site, including demolition and the preparation for construction. The Certificate of Insurance must indicate the "Town of Jupiter" as an Additional Insured on all policies except the Workers Compensation. The statement "Additional Insured" is to be listed in the Description Block of the Insurance Certificate along with the Project name. Listing the Town of Jupiter as a Certificate Holder alone does **not** provide the Town with insurance coverage. The Town must be listed as an **Additional Insured** on the policy, as described above. The Additional Insured endorsement must be attached to the Certificate of Insurance and shall include coverage for completed operations under the General Liability policy.

B. General Insurance Requirements. The Contractor, and any designated subcontractors, shall maintain all required insurance at the types, amounts, and terms specified in this Agreement for the entire duration of the Work and for the full period allowed by law for claims related to personal injury, property damage, or other losses covered by such insurance.

(i) All policies and endorsements shall be issued on Insurance Service Office (ISO) forms or on forms providing broader and no less restrictive coverage. Notwithstanding the foregoing, the form and content of all policies and endorsements must be acceptable to the TOWN. All insurance carriers must carry an A.M. Best Rating of A:IX or better and coverage should apply on a Primary and Noncontributory basis. At the discretion of the TOWN, other coverage types and /or specific endorsements may be required depending upon the type and Work to be performed. All insurance must be acceptable by and approved by the TOWN as to form and types of coverage.

(ii) The policy(s) shall provide for 30 days prior written notice to the TOWN, by registered or certified mail, if the approved insurance provider cancels or any changes the coverages required herein.

(iii) The policy(s) shall be written for the Contract Times, commencing with the initial demolition, site preparation, or Work and ending at the Final Completion and shall contain an endorsement providing for extension of the policy(s) for up to 2 (two) years. The products and completed operations portions of the General Liability shall extend for a period of 10 years after the Final Acceptance of the Project by the TOWN and shall include an "Additional Insured" endorsement.

(iv) All liability polices required herein shall be written on an occurrence basis

(v) The policies shall name the TOWN, its elected and appointed officials and employees as additional insured (including completed operations coverage under the General Liability) as their interest may appear under this Agreement.

(vi) All insurers shall agree to waive all rights of subrogation against the TOWN and its elected and appointed officials, and employees.

(vii) It is the responsibility of the CONTRACTOR to ensure any independent contractors and subcontractors it utilizes on the Project also comply with these insurance requirements.

C. Premiums. The CONTRACTOR shall be solely responsible for payment of all premiums for insurance required of it under this Agreement and shall be solely responsible for the payment of all deductibles to which such policies are subject.

D. Specific Insurance Limits

(i) Workers' Compensation. The CONTRACTOR shall carry Workers' Compensation insurance on behalf of all employees who are required to provide a service under this Agreement, as required by Chapter 440, Florida Statutes, and Employers Liability of limits no less than:

$ 500,000	each accident
$ 500,000	disease - policy limit
$ 500,000	each employee

Should the scope of work performed by the CONTRACTOR qualify its employees for benefits under Federal the Worker's Compensation Statute proof of appropriate Federal Act coverage must be provided.

(ii) Commercial General Liability, with limits of not less than:

$ 1,000,000	each occurrence
$ 1,000,000	personal/advertising injury
$ 2,000,000	products/completed operations (per project aggregate)
$ 2,000,000	general aggregate (per project aggregate)
$ 100,000	fire damage legal (any 1 fire)
$ 10,000	medical expense (any 1 person)

Coverage shall include include liabiltiy for bodily injury, property damage liability, personal and advertising injury, products and completed operations, fire damage legal liability and medical expense coverage. The insurance must include contractual liability coverage to protect both the Town and the contractor for any obligations the contractor has agreed to assume under the contract's hold harmless/indemnification provisions.Coverage is to extend to independent contractors and CONTRACTORS employees. Explosion, Collapse, and Underground (XCU) coverage is to be included. Coverage is to include a cross liability or severability of interest provision as provided under the standard ISO form separation of insureds clause. There should be no "damage to your work" exclusion for work performed by subcontractors. Policy is to include coverage for pollution release at project location in which the insured is performing non-environmental operations. There shall be no exclusion for mold, silica or respirable dust or bodily injury or property damage arising out of heat, smoke, fumes or ash from a hostile fire. If the Project involves environmental exposures, CONTRACTOR shall maintian environmental impairment liability coverage.

(iii) Automobile Liability - $1,000,000 Combined Single Limit coverage for all owned, hired, leased and non-owned vehicles.

(iv) Umbrella Liability - to include the employer's liability, general liability and automobile in underlying policy schedule, with limits of not less than $1,000,000.

(v) Hazardous Material - if the Work being performed involves hazardous materials, the need to procure appropriate insurance coverage will be addressed in a modification to the Agreement. However, if hazardous materials are identified while carrying out this Agreement, no further the Work is to be performed in the area of the hazardous material until the TOWN has been consulted as to the need to procure and maintain such coverage.

E. Waiver of Subrogation. The CONTRACTOR hereby waives any and all rights of subrogation against the TOWN, its elected and appointed officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement,

then the CONTRACTOR shall notify the insurer and request the policy be endorsed with a waiver of transfer of rights of recovery against others, or its equivalent.

ARTICLE 19
PERFORMANCE GUARANTEE AND WARRANTY

19.1 All materials and equipment incorporated into any Work shall be warrantied and guaranteed as new quality and of the highest grade of quality for their intended use. All Work shall be performed in good workmanship and shall be in accordance with all Contract Documents and industry standards. The Work shall be functionally sound, technically proficient, developed with structural integrity, and shall be in compliance with all governing laws, ordinances and regulations. The CONTRACTOR warrants all Work against defects for a period of 1 year (unless longer guarantees or warranties are provided for elsewhere in the Agreement or are required by law, in which case the longer periods of time shall prevail) from the date of Substantial Completion, regardless of whether the Work was performed by the CONTRACTOR or any of its subcontractors.

19.2 If defects are identified during the warranty period, the CONTRACTOR shall repair or replace the defect and cure such defect within 48 hours of receipt of written notice. The CONTRACTOR warrants such repaired or replaced Work for a period of 1 year from the completion of the warranty work or the warranty period specified, whichever is longer. Should the CONTRACTOR fail to timely cure such defects, the TOWN may proceed to perform the work at the CONTRACTOR's expense and may charge the CONTRACTOR for all TOWN costs associated with the work.

19.3 The CONTRACTOR shall require that all of its subcontractors, suppliers, and materialmen provide warranties for the benefit of the TOWN in their agreements with CONTRACTOR that are sufficient to satisfy the CONTRACTOR’s obligations in this Agreement and the CONTRACTOR shall assign all such warranties to the TOWN as a condition precedent to the receipt of Final Payment. The CONTRACTOR shall defend and indemnify the TOWN against all fees and costs should the CONTRACTOR fail to obtain the warranty protections required herein.

19.4 For all equipment that has a manufacturer's warranty, the CONTRACTOR shall assign such warranty to the TOWN. The manufacturer's warranty period shall be concurrent with the CONTRACTOR's warranty to the TOWN. In the event that the equipment manufacturer or supplier is unwilling to provide such a warranty, the CONTRACTOR shall obtain a 2 year equipment warranty commencing at the time of acceptance of the equipment by the TOWN.

ARTICLE 20
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

20.1 Documents and Samples at the Site. From and after commencement of the Work, the CONTRACTOR shall maintain at the site one record copy of the Construction Documents and any and all amendments thereto, in good order and marked, to record changes to the Contract Documents as approved during the construction of the Project. In addition, the CONTRACTOR shall maintain at the site approved shop drawings, product data, samples, and similar required submittals. These shall be provided to the TOWN upon completion of the Work.

20.2 Shop Drawings, Product Data and Samples.

A. Shop Drawings, Product Data, Samples, and similar items produced and submitted to the TOWN are not Contract Documents. The purpose of these items is to demonstrate, for those portions of the Work for which submittals are required, the way the CONTRACTOR proposes to conform the construction to the Contract Documents.

B. The CONTRACTOR shall review and take appropriate action upon Shop Drawings, Product Data, Samples, and similar items. The TOWN shall review Shop Drawings, Product Data, Samples, and similar items for compliance with the Design Documents and shall provide comments, if any, within 15 days of receiving such documents.

C. The CONTRACTOR shall not be relieved of responsibility for the deviations from requirements of the Contract Documents by the TOWN's approval of Shop Drawings, Product Data, Samples, or similar items unless the CONTRACTOR has specifically informed the TOWN of such deviation at the time of their submission to the TOWN and the TOWN has given ITS written approval to the specific deviation. The CONTRACTOR shall not be relieved of responsibility for errors or omissions in the Shop Drawings, Product Data, Samples, or similar items submitted to the TOWN for its approval.

ARTICLE 21
SAFETY

21.1 The CONTRACTOR shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees, users, and licensees of the TOWN.

21.2 All the Work, whether performed by the CONTRACTOR, its subcontractors, or anyone directly or indirectly employed by the CONTRACTOR or subcontractors, and all equipment, appliance, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with, and conform to:

A. all applicable laws, ordinances, rules, regulations and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970 and the Trench Safety Act, as amended, and all state, county or the TOWN laws, ordinances and regulations; and

B. all codes, ordinances, laws, regulations and requirements of the TOWN and its insurance carriers. In the event of conflicting requirements, the more stringent shall govern.

21.3 Should the CONTRACTOR fail to provide a safe area for the performance of the Work or any portion thereof, the TOWN shall have the right, but not the obligation, to suspend the Work in the unsafe area. All costs of any nature resulting from the suspension shall be borne by the CONTRACTOR.

21.4 The CONTRACTOR shall provide, or cause to be provided, to each worker on the Work site, the proper safety equipment for the duties being performed by that worker and shall prohibit any worker on the Work site from working who fails or refuses to use the proper safety equipment. The TOWN shall have the right, but not the obligation, to order the CONTRACTOR to send a worker home for the

day or to discharge a worker for his or her failure to comply with safe practices, with which order the CONTRACTOR shall promptly comply.

21.5 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the TOWN, must take such action as are reasonably necessary to prevent damage, injury, or loss at the site. If the CONTRACTOR believes that additional Work done by it in an emergency which arose from causes beyond its control entitles it to an increase in the Contract Price or an extension of the Contract Time, it may make a claim therefore as provided in the Contract Documents.

ARTICLE 22
PROTECTION OF WORK AND PROPERTY

22.1 The CONTRACTOR: (A) shall, throughout the performance of the Agreement, maintain adequate and continuous protection of all completed Work and temporary facilities against loss or damage from whatever cause; (B) shall protect the property of the TOWN and third parties from loss or damage from whatever cause arising out of the performance of the Agreement; and (C) shall comply with the requirements of the TOWN and its insurance carriers and with all applicable laws, ordinances, and regulations with respect to the prevention of loss or damage to the site. The TOWN, its insurance carriers or their representatives, may, but shall not be required to, make periodic patrols of the Work site as a part of its normal safety, loss control, and security programs. In such event, however, the CONTRACTOR shall not be relieved of its aforesaid responsibilities and the TOWN shall not assume, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the CONTRACTOR by this Agreement.

22.2 Before the CONTRACTOR disposes of any existing improvements or equipment which are to be removed as a portion of the Work and for which disposition is not specifically provided for elsewhere in the Contract Documents, the CONTRACTOR shall contact the TOWN and determine if the removal items are to be salvaged. Items to be salvaged by the TOWN shall be neatly stockpiled or stored in a neat and acceptable manner at the construction site easily accessible to the TOWN. Equipment and materials which will not be salvaged by the TOWN shall become the property of the CONTRACTOR, who shall be responsible for removing it from the site and disposed of in an acceptable manner. To the extent the CONTRACTOR intends to temporarily store materials at a site near or adjacent to the site prior to its ultimate removal or disposal, the CONTRACTOR must first obtain written authorization from the TOWN.

22.3 Preservation of Trees. Those trees which are designated on the Drawings for preservation shall be carefully protected from damage by the CONTRACTOR. The CONTRACTOR shall erect and maintain such protections such as barricades, guards, and enclosures as is necessary for the protection of the trees during all construction operations. The CONTRACTOR shall replace any and all trees damaged during construction activities (other than trees specified to be removed) at no expense to the TOWN.

22.4 Preservation of Private Property. The CONTRACTOR shall exercise extreme care to avoid unnecessary disturbance of private property around the site. Any trees, shrubbery, gardens, lawn and other landscaping that must be removed shall be replaced and replanted to restore the construction easement to the condition existing prior to construction. All soil preparation procedures and replanting operations shall be under the supervision of a nurseryman experienced in such operations. Any

vegetation requiring relocation, temporary or otherwise, which is damaged or destroyed, shall be replaced at no cost to the TOWN. The CONTRACTOR shall replace any and all such vegetation damaged during construction activities (other than vegetation specified to be removed) at no expense to the TOWN.

22.5 Until final acceptance of the Work by the TOWN pursuant to this Agreement, the CONTRACTOR shall have full and complete charge and care of and, except as otherwise provided in this subparagraph, shall bear all risk of loss of, and injury or damage to, the Work or any portion thereof (specifically including the TOWN-furnished supplies, equipment or other items to be utilized in connection with, or incorporated in, the Work) from any cause whatsoever.

22.6 Existing manholes, fire alarms, etc., shall not be obstructed by the CONTRACTOR, unless called for in the Contract Documents. The CONTRACTOR is to make no connections to or operate valves on water mains or otherwise interfere with the operation of the water system, without first getting written approval from the appropriate governmental entity.

ARTICLE 23
TESTS AND INSPECTIONS

23.1 If any Work (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the TOWN, it must be uncovered for observation if requested by the TOWN. Such uncovering shall be at the CONTRACTOR's expense.

23.2 The CONTRACTOR shall be liable for any additional testing or inspections necessitated by defective work performed or materials supplied by the CONTRACTOR or by any of its subcontractors or vendors.

23.3 The CONTRACTOR shall be liable for all expenses incurred for stand-by time charged by the testing firm as a result of cancelled or delayed testing or inspections. These charges shall be deducted from the CONTRACTOR'S final payment.

ARTICLE 24
UTILITY COORDINATION

24.1 The CONTRACTOR shall be responsible for making all necessary arrangements with governmental entities, utilities, public carriers, service companies and private corporations owning or controlling roadways, railways, water, sewer, gas, electrical, cable television, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc., including incidental structures connected therewith, that are encountered in the Work in order that such items may be properly shored, supported, and protected, or the CONTRACTOR shall be solely responsible for coordinating their relocation. The CONTRACTOR: shall (A) give all proper notices; (B) comply with requirements of such parties in the performance of its the Work; (C) permit entrance of such parties on the Work site in order that they may perform their necessary the Work; and (D) pay all charges and fees made by such parties for this the Work. The CONTRACTOR's attention is called to the fact that there may be delays on the Project due to the Work to be done by governmental departments, public utilities, and others in repairing or moving poles, conduits, etc. The CONTRACTOR shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.

24.2 At all points where the Work constructed by the CONTRACTOR connects to existing utilities and services, the actual the Work of making the necessary connection to the existing service or utility shall be arranged for by the CONTRACTOR at no expense to the TOWN (unless specifically indicated otherwise). Services and utilities included within (but not limited to) this responsibility are roads, ditches, electrical, sewer, mechanical utilities, water, fencing, etc. Connections shall be made at a time that will result in the least possible interference with existing services.

24.3 FPL calls attention to the fact that there may be energized, high voltage electric lines, both overhead and underground, located in the area of this Project. The CONTRACTOR must visually survey the area and take the necessary steps to identify all overhead and underground FPL facilities prior to commencing construction to determine whether the construction of any proposed improvements will bring any person, tool, machinery, equipment, or object closer to FPL's power lines than the OSHA-prescribed limits. If the CONTRACTOR identifies such, it shall re-design the Project to allow for safe construction given the pre-existing power line location, or make arrangements with FPL to, either deenergize and ground its facilities, or relocate them. The CONTRACTOR must do this before allowing any construction near power lines. If it is necessary for the CONTRACTOR and/or subcontractor to operate or handle cranes, digging apparatus, draglines, mobile equipment, or any other equipment, tools or materials in such a manner that they might come closer to underground or overhead power lines than is permitted by local, state or federal regulations, the CONTRACTOR or subcontractor must notify FPL in writing of such planned operation prior to the commencement thereof and make all necessary arrangements with FPL in order to carry out the work in a safe manner. Any work in the vicinity of the electric lines should be suspended until these arrangements are approved and implemented. The CONTRACTOR shall complete a "Notification of FPL Facilities" form prior to the commencement of the Work.

ARTICLE 25
HAZARDOUS MATERIALS

The CONTRACTOR shall obtain all required federal, state, and local permits, approvals and licenses and shall be responsible for the safe and proper handling, transporting, storage, and use of any explosive or hazardous materials brought onto or encountered within the Project, and at its expense, make good any damage caused by its handling, transporting, storage, and use. The CONTRACTOR shall notify the TOWN immediately if explosive or hazardous materials are encountered on the Project site. Transporting explosive or hazardous materials onto the site will require prior written approval from the TOWN. The CONTRACTOR shall maintain and post as necessary Material Hazard Data Sheets for all applicable Hazardous Materials used in the course of its work. In the event that hazardous material is improperly handled or stored by the CONTRACTOR, its subcontractors, or any employee or agent of any of the aforementioned, which results in contamination of the site, the CONTRACTOR shall immediately notify the TOWN and the appropriate governmental authority and shall take whatever action is necessary or desirable to remediate the contamination at the CONTRACTOR's sole cost and expense.

ARTICLE 26
AUDIT

26.1 The CONTRACTOR agrees that the TOWN, or any of its duly authorized representatives, shall have access to and the right to examine any and all books, documents, papers, and records of the CONTRACTOR, and may at its option conduct an audit of the CONTRACTOR's financial books and

records concerning this the Project. The CONTRACTOR agrees that payment(s) made under this Agreement shall be subject to a reduction for amounts charged thereto, which are found on the basis of audit examination, to constitute non-allowable costs under this Agreement. The CONTRACTOR shall promptly refund by check payable to the TOWN the amount of such reduction of payments. All required records shall be maintained until the latter of the completion of the audit and all questions arising therefore are resolved, or 6 years after completion of the Work and issuance of the Final Payment.

26.2 The Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this Contract and in furtherance thereof may demand and obtain records and testimony from the Contractor and its subcontractors and lower tier subcontractors. The Contractor understands and agrees that in addition to other remedies and consequences provided by law, the failure of the Contractor or its subcontractors or lower tier subcontractors to fully cooperate with the Office of Inspector General of Palm Beach County when requested may be deemed by the municipality to be a material breach of this contract justifying its termination. The Office of Inspector General in Palm Beach County is established by Palm Beach County Code, Section 2-421 - 2-440. Failure to cooperate with the Inspector General or interfering with or impeding any investigation shall be in violation of Palm Beach County Code, Section 2-421 – 2-440, and be punished pursuant to Section 125.69, Florida Statutes, in the same manner as a second-degree misdemeanor.

ARTICLE 27
PUBLIC RECORDS

27.1 The CONTRACTOR shall comply with the provisions of Chapter 119, Fla. Stat. (Public Records Act), in connection with this Agreement and shall provide access to public records in accordance with §119.0701, Fla. Stat. and more specifically Contractor shall:

27.1.1 Keep and maintain public records required by the TOWN to perform the Agreement.

27.1.2. Upon request from the TOWN's custodian of public records, provide the TOWN with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Fla. Stat. or as otherwise provided by law.

27.1.3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the CONTRACTOR does not transfer the records to the TOWN.

27.1.4. Upon completion of the Agreement, transfer, at no cost, to the TOWN all public records in possession of the CONTRACTOR or keep and maintain public records required by the TOWN to perform the Agreement. If the CONTRACTOR transfers all public records to the TOWN upon completion of the Agreement, the CONTRACTOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the CONTRACTOR keeps and maintains public records upon completion of the Agreement, the CONTRACTOR shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the TOWN, upon request from the TOWN's custodian of public records, in a format that is compatible with the information technology systems of the TOWN.

27.2 **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (561) 741-2752, townclerk@jupiter.fl.us, 201 MILITARY TRAIL, JUPITER, FL 33458.**

27.3 Failure to comply with the requirements of this Article shall be deemed a default as defined under the terms of this Agreement and constitute grounds for termination.

ARTICLE 28
ASSIGNMENT

28.1 The TOWN and the CONTRACTOR each binds itself, its officers, directors, qualifying agents, partners, successors, assigns, and legal representatives to the other party hereto and to the partners, successors, assigns, and legal representatives of such other party in respect to all covenants, agreements, and obligations contained in the Agreement.

28.2 The CONTRACTOR shall not assign, transfer, convey, or otherwise dispose of the Agreement or its right, title, or interest in or to the same or any part thereof, or allow legal action to be brought in its name for the benefit of others, without previous written consent of the TOWN and Surety.

28.3 If for any reason the TOWN terminates its Agreement with the CONTRACTOR, the CONTRACTOR hereby assigns this Agreement to the TOWN. The CONTRACTOR shall include in each of its subcontracts, language that requires its subcontractors to agree to such assignment and to perform their responsibilities and to fully complete the work required by this Agreement directly for the TOWN.

ARTICLE 29
ATTORNEY'S FEES AND COSTS

29.1 In the event the CONTRACTOR defaults in the performance of any of the terms, covenants, and conditions of this Agreement, the CONTRACTOR agrees to pay all damages and costs incurred by the TOWN in the enforcement of this Agreement, including the TOWN's reasonable attorney's fees, expert fees, court costs, and expenses, even if not taxable as court costs, including, at the State Court, Appellate Court, and in Bankruptcy Proceedings.

ARTICLE 30
NOTICES

All notices under this Agreement shall be in writing and shall be (as elected by the person giving such notice) mailed solely by Certified Mail, Return Receipt Requested, Hand Delivery with Proof of Service, or by Overnight Courier to the TOWN and the CONTRACTOR at the addresses listed on page one of this Agreement. Either party may change its address, for the purposes of this Section, by giving the other party 30 days written notice.

ARTICLE 31
RESOLUTION OF CLAIMS AND DISPUTES; CERTIFIED CLAIMS

31.1 Mediation. As a condition precedent to the filing of any legal proceedings, the parties shall endeavor to resolve claim disputes or other matters in question by mediation. Mediation shall be initiated by any party by serving a written request for same on the other party. The parties shall, by mutual agreement, select a mediator within 15 days of the date of the request for mediation. If the parties cannot agree on the selection of a mediator within 15 days, then the TOWN shall select the mediator, who shall be a mediator certified by the Supreme Court of Florida. The mediator's fee shall be paid in equal shares by each party. If a party fails to comply with this section, including, but not limited to, filing a lawsuit without mediating before filing the lawsuit, the party in violation shall be liable for the reasonable attorneys' fees and costs of the other party in enforcing this provision.

31.2 Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the state of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Fifteenth Judicial Circuit in and Palm Beach County, Florida. If any claim arising from, related to or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit shall be in the United States District Court for the Southern District of Florida. BY ENTERING INTO THIS AGREEMENT, THE PARTIES HERETO EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY.

31.3 Certified claims. If CONTRACTOR submits a claim seeking an increase in the Contract Price in the amount of (10%) or more of the Contract Price, an increase in the Contract Time for substantial or final completion by more than30 days, or both, upon the request of the TOWN in its sole discretion, CONTRACTOR shall, within30) days, submit to the TOWN a "certified claim," that is, a claim made in writing under oath by a person duly authorized by the CONTRACTOR, and shall contain a statement that:

(i) The claim is made in good faith;

(ii) The claim's supporting data are accurate and complete to the best of the person's knowledge and belief;

(iii) The amount of the claim accurately reflects the amount that the claimant believes is due from the TOWN; and

(iv) The certifying person is duly authorized by the claimant to certify the claim.

FAILURE TO PROVIDE THE REQUESTED CERTIFICATION WITHIN THE PRESCRIBED PERIOD OF 30 DAYS SHALL CONSTITUTE A FORFEITURE OF THE ENTIRE CLAIM.

31.4 False, fraudulent, or inflated claim. If a court finds a certified claim is false, fraudulent, or inflated, whether in whole or in part, CONTRACTOR shall:

(i) Be liable to the TOWN for an amount equal to 3 times the amount of the claim that is false, fraudulent, or inflated;

(ii) Immediately, fully, and irrevocably forfeit the entire amount of the claim;

(iii) Be liable to the TOWN for all costs and fees (including, without limitation, reasonable attorneys' fees, court costs, expert fees, and consulting fees) incurred by the TOWN to review, defend, and evaluate the claim; and

(iv) Be subject to debarment from TOWN contracting for a period not to exceed 5 years.

31.5 Innocent claimant, notice. Notwithstanding the foregoing, CONTRACTOR is an innocent claimant and not liable for a false, fraudulent, or inflated claim if CONTRACTOR submitted a certified claim to the TOWN reasonably believing that such claim was free of any material misstatements, or any exaggerated, inflated, or unsubstantiated assertions or damages and had no reasonable basis to doubt the truth, veracity, or accuracy of such claim at the time it was submitted, and within15 days of discovering the falsity of the claim, took immediate steps to modify, correct, or withdraw such claim and provided the TOWN with immediate written notice thereof.

ARTICLE 32
MISCELLANEOUS

32.1 Taxes. The TOWN is exempt from payment of Florida State Sales and Use Taxes. The CONTRACTOR shall not be exempt from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the TOWN, nor is the CONTRACTOR authorized to use the TOWN's Tax Exemption Number in securing such materials. The CONTRACTOR shall be responsible for payment of all federal, state, and local taxes and fees applicable to the Work and same shall be included in the Contract Price.

32.2 Pledge of Credit. The CONTRACTOR shall not pledge the TOWN's credit or make it a guarantor of payment or surety for any Agreement, debt, obligation, judgment, lien or any form of indebtedness. The CONTRACTOR further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of the Agreement.

32.3 Entirety of Agreement. All prior and contemporaneous negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein are merged into this Agreement. No modification, amendment, or alteration of this Agreement may be made unless made in writing pursuant to the terms of this Agreement.

32.4 Severability. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be held invalid or unenforceable, then the remaining provisions survive and are fully binding and enforceable.

IN WITNESS WHEREOF, the TOWN and the CONTACTOR have executed this Agreement as of the last date written below.

ATTEST

Merriane Lahmeur
Town Clerk

TOWN OF JUPITER

Jim Kuretski
Mayor

CREATIVE CONTRACTING GROUP

Lisa Addis
Vice President

EXHIBIT A

TOWN OF JUPITER, FLORIDA

PUBLIC WORKS ADDITIONAL STORAGE
SITE WORK

Engineering & Public Works Department
3131 Washington Street
PUBLIC WORKS ADDITIONAL STORAGE - SITE WORK
Jupiter, Florida 33458

Technical Specifications
For Construction

December 2025

Hazen

Telephone: (561) 997-8070

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APPENDIX C - GEOTECHNICAL REPORT

Note: *The specification above are intended as a supplement to the Town of Jupiter and Loxahatchee River District requirements. The Contractor shall follow all requirements within Town of Jupiter Utilities – Guide for Development – Design and Construction Standards – Water and Stormwater and within Loxahatchee River Environmental Control District – Manual of Minimum Construction Standards and Technical Specifications, with regard to methods and materials of construction, in addition to the requirements within Divisions 1 through 40. The latest edition of the Guide for Development Design and Construction Standards Water and Stormwater is located online at https://www.jupiter.fl.us/268/Utilities-Construction-Standards. The latest edition of the Manual of Minimum Construction Standards and Technical Specifications is located online at https://loxahatcheeriver.org/sewer-iq/design-standards. Basis for bid shall be the version of standards current at the time of bid.*

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TOWN OF JUPITER SPECIFICATIONS

FOR

PUBLIC WORKS ADDITIONAL STORAGE – SITE WORK
WORK ORDER NO.: 184

BID SET
CONSTRUCTION

December 2025

Volume 1

HAZEN AND SAWYER
4000 Hollywood Blvd., #750N
Hollywood, FL 33021
Certificate of Authorization No. 2771

David Andrew Bannett, P.E.
Civil
No. 51865

Jean Paul Silva, P.E.
Structural
No. 66522

Joseph B. Pickett, P.E.
Electrical
No. 74106

SECTION 01 11 00

SUMMARY OF WORK

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Summary
2. Location and Description of Work
3. Sequence and Progress of Work
4. Contractor's Use of Site
5. Easements and Rights-of-Way
6. Notices to Owners and Authorities of Properties Adjacent to the Work
7. Salvage of Equipment and Materials
8. Partial Utilization by Owner

1.02 LOCATION AND DESCRIPTION OF WORK

The work associated with the project will generally consist of final site improvements as shown on the Drawings. This Contract shall include but not limited to demolition, clearing and grubbing, erosion control, underground utilities, concrete material pad, fence modifications, pavement modifications, and modifications to the pond. Contractor shall provide equipment and material in accordance with the Contract Documents.

The project will include surface restoration of all areas impacted by construction.

1.03 SEQUENCE AND PROGRESS OF WORK

A. It is the Contractor's responsibility to develop a detailed construction sequencing plan to describe the proposed construction activities and submit for review and approval.

1.04 CONTRACTOR'S USE OF SITE

A. Contractors' use of the Site shall be confined to the areas shown. Contractors shall share use of the Site with other contractors and others specified in this Section.

B. Contractor shall move stored products that interfere with operations of Owner, other contractors, or others performing work for Owner.

1.05 EASEMENTS AND RIGHTS-OF-WAY

A. Easements and rights-of-way will be provided by Owner in accordance with the General Conditions. Confine construction operations to within Owner's property, public rights-of-way, easements obtained by Owner, and the limits shown. Use care in placing construction tools, equipment, excavated materials, and products to be incorporated into the Work to avoid damaging property and interfering with traffic. Do not enter private property outside the construction limits without permission from the owner of the property.

1.06 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

A. Notify owners of adjacent property and utilities when execution of the Work may affect their property, facilities, or use of property.

B. When it is necessary to temporarily obstruct access to property, or when utility service connection will be interrupted, provide notices sufficiently in advance to enable affected persons to provide for their needs. Conform notices to Laws and Regulations and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit the inconvenience caused.

C. Notify utility owners and other concerned entities at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near Underground Facilities or exposed utilities.

1.07 SALVAGE OF EQUIPMENT AND MATERIALS

A. Existing equipment and materials removed and not shown or specified to be reused in the Work will be Contractor's property and responsibility to remove from site.

B. Existing equipment and material removed by Contractor shall not be reused in the Work, except where specified or indicated.

C. Carefully remove in manner to prevent damage all equipment and materials specified or indicated to be salvaged and reused or to remain property of Owner. Store and protect salvaged items specified or indicated to be used in the Work. Replace in kind or with new items equipment, materials, and components damaged in removal, storage, or handling through carelessness or improper procedures.

D. Contractor may furnish and install new items, with Engineer's approval, instead of those specified or indicated to be salvaged and reused, in which case such removed items will become Contractor's property.

1.08 PARTIAL UTILIZATION BY OWNER

A. Owner reserves the right to enter and use portions of the Work prior to Certificate of Substantial Completion is issued by Engineer.

B. Owner shall be responsible to prevent premature connections by private and public parties, persons or groups of persons, before Engineer issues Certificate of Substantial Completion for the portion of Work being partially utilized by Owner.

C. Contractor shall cooperate with Owner, Owner's agents, and Engineer to accelerate completion of Work designed for partial utilization by Owner in accordance with Contractor's progress schedule.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 20 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL

A. Measurement and payment will be based upon Work completed and accepted in accordance with the Contract Documents. No separate payment will be made for excavation, trenching, leakage tests, surveying, bacteriological test, density tests or other incidental items of Work not shown in the Agreement.

1.02 EQUIPMENT AND MATERIALS IN STORAGE

A. Partial payment for materials and equipment in proper storage at the site of the Work will be made for those items for which the Contractor has submitted the following:

1. Invoice for each item in storage. The invoice shall not exceed the value of the item stored as determined by the amount paid to the manufacturer (subcontractor fabrication costs excluded for subcontractors or fabricated or manufactured assemblies).

2. List of items in storage.

3. With the following pay estimate, release of liens for 90% of each item listed as stored materials for the previous pay estimate. Any item for which a 90% release of lien is not supplied shall be considered as having been removed from the site.

B. No payment for any offsite storage of material will be made. Any payment for stored material shall not include labor or profit by the Contractor or any sub-contractor. The Contractor is specifically advised that this procedure may require full payment for some stored materials or shop work significantly ahead of the time when payment is issued by the Owner.

1.03 MEASUREMENT

A. Contractor will be paid for work performed under this contract according to Engineer approved percentage of completion for each item on the schedule of values and/or identified unit prices, all as further described and set forth in other sections of this document.

1.04 PAYMENT

A. Payment will be made at the lump sum price for each applicable item shown in the Agreement and listed in the Engineer approved schedule of values, as identified and applicable for specific items, stored and/or installed and accepted, which price and payment shall constitute full compensation for furnishing all materials and performing all Work in connection therewith and incidental thereto. The following schedule shall be adhered to:

1. 15th of the Month - Cutoff date
2. 18th of the Month - Pay estimate to the Inspector
3. 20th of the Month - Pay estimate to the Engineer
4. 25th of the Month - Pay estimate to the Owner.
5. 20th the following Month - Payment by the Owner

When the cut off date occurs on a holiday or weekend, the date shall be the last work day preceding the 15th.

1.05 PAY ESTIMATE FORMS

A. The Engineer will supply a pay estimate form for the Contractor to use for submittal. The Contractor shall make copies to be used for submittal of the following pay estimates. Failure of the Contractor to sign the pay estimate or attach appropriate documentation shall be grounds for returning the pay estimate with no action by the Owner or Engineer.

1.06 SCHEDULE OF VALUES

A. The Schedule of Values shall be submitted to the Engineer for approval. The Contractor shall anticipate an extremely detailed Schedule of Values. Separate pay items shall not be included in the Schedule of Values for the preparation and provision of submittals.

1.07 RETAINAGE REDUCTION

A. In accordance with Florida Statutes § 255.078, the Owner shall withhold 5% retainage from each progress payment made to the Contractor. This retainage shall be held until the project reaches Substantial Completion, as defined in the Contract Documents. Nothing herein shall require the Owner to reduce retainage to the Contractor if the Owner has determined that the Contractor is in default, or if the Owner or any of its consultants reasonably believes that the retainage and/or future payments to the Contractor will not be enough for the Owner to complete the project or cover its damages as a result of Contractor breach or default or for any other reason, or there is a good faith dispute by the Owner against its bonding company. The Owner shall have the right, but not the obligation, to withhold from payment, at a minimum, the Owner's or Engineer's estimated cost of completion for the work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes:

1. Contractor shall provide submittals in accordance with the General Conditions as modified by the Supplementary Conditions, and this Section.

2. Contractor is responsible to confirm and correct dimensions at the Site, for information pertaining to the fabrication processes and to techniques of construction, and for coordinating the work of all trades. Contractor's signature of submittal's stamp and letter of transmittal shall be Contractor's representation that Contractor has met his obligations under the Contract Documents relative to that submittal.

B. Related Sections:

1. Section 01 33 00 - Substitution Procedures.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Types of Submittals: When type of submittal is not specified and is not specified in this Section, Engineer will determine type of submittal.

1. Action/Informational Submittals:

a. Shop Drawings.

b. Town of Jupiter Pre Approved Products List

c. Product data.

d. Delegated design submittals in accordance with the General Conditions and as modified by the Supplemental Conditions.

e. Samples.

f. Testing plans, procedures, and testing limitations.

g. Design data not sealed and signed by a design professional retained by Contractor, Subcontractor, or Supplier.

h. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potential Hazardous Environmental Conditions, and similar reports.

i. Supplier instructions, including installation data, and instructions for handling, starting up, and troubleshooting.

j. Sustainable design submittals (other than sustainable design closeout documentation).

k. Lesson plans for training and instruction of Owner's personnel.

2. Closeout Submittals:

a. Maintenance contracts.

b. Operations and maintenance data.

c. Bonds, such as maintenance bonds and bonds for a specific product or system.

d. Warranty documentation.

e. Record documentation.

f. Sustainable design closeout documentation.

g. Software.

3. Maintenance Material Submittals:

a. Maintenance materials schedule and checklist.

b. Spare parts.

c. Extra stock materials.

d. Tools.

4. Quality Assurance Submittals:

a. Performance affidavits.

b. Certificates.

c. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.

d. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.

e. Supplier reports.

f. Special procedure submittals, including health and safety plans and other procedural submittals.

g. Qualifications statements.

B. Submittal Requirements:

1. Contractor shall submit electronic copy of submittals for Engineer's review unless otherwise specified in individual Specification Sections. Acceptable electronic formats are Adobe PDF, Microsoft Word, Autodesk DWF and AutoCAD.

2. Contractor shall provide multiple stamped and signed hard copy submittals to the Town of Jupiter - Engineering Division for review and approval as required.

3. Submittal shall be accompanied by letter of transmittal containing date, project title, Contractor's name, number and title of submittal, list of relevant Specification Sections, notification of deviations from Contract Documents, and other material required for Engineer's review.

C. Scheduling:

1. Provide submittals well in advance of the Work following Engineer's approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.

2. Submittals shall be provided by Contractor with at least thirty (30) working days for review and processing.

1.03 SCHEDULE OF SUBMITTALS

A. Schedule of Submittals, as specified in this Section:

1. Timing:

a. Provide submittal within time frames specified in the Contract Documents.

b. Provide an updated Schedule of Submittals with each submittal of the updated Progress Schedule.

2. Content: In accordance with the General Conditions as modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical.

a. Identify submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path.

b. Indicate the following for each submittal:

1) Date when submittals are requested and received from Supplier.

2) Date when certification is received from Supplier and when submitted to Engineer.

3) Date when submittals are submitted to Engineer and returned with disposition from Engineer.

4) Date when submittals are revised by Supplier and submitted to Engineer.

5) Date when submittals are returned with "Furnish as Submitted" (FAS) or "Furnish as Corrected" (FAC) disposition from Engineer.

6) Date when approved submittals are returned to Supplier.

7) Date of Supplier scheduled delivery of equipment and material.

8) Date of actual delivery of equipment and material.

9) Whether submittal will be for a substitution or "equal". Procedures for substitutions and "or equals" are specified in the General Conditions and the Section 01 33 00 - Substitution Procedures.

10) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors.

3. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules.

4. Coordinate Schedule of Submittals with the Progress Schedule.

5. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's critical path, or that places extraordinary demands on Engineer for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.

6. In preparing the Schedule of Submittals:

a. Considering the nature and complexity of each submittal, allow sufficient time for review and revision.

b. Reasonable time shall be allowed for: Engineer's review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to Contractor.

c. Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.04 ACTION / INFORMATIONAL SUBMITTALS

A. Provide the following Submittals in accordance with the individual Specification Sections, including, but not limited to, the following:

1. Product Data:

a. Town of Jupiter Pre Approved Products List

b. Catalog cut-sheets

c. Descriptive bulletins/brochures/specifications

d. Material of construction data, including details on all components including applicable ASTM designations.

e. Lifting, erection, installation, and adjustment instructions, and recommendations.

f. Finish/treatment data, including interior and exterior shop coating systems.

g. Equipment/material weight/loading data, including total uncrated weight of the equipment plus the approximate weight of shipped materials. Support locations and loads that will be transmitted to bases and foundations following installation. Size, placement, and embedment requirements of anchor bolts.

h. Complete information regarding location, type, size, and length of all field welds in accordance with "Standard Welding Symbols" AWS A2.0 of the American Welding Society. Special conditions shall be fully explained by notes and details.

i. Motor data including horsepower; enclosure type; voltage; insulation class; temperature rise and results of dielectric tests; service-rating; rotative speed; motor speed-torque relationship; efficiency and power factor at ½, ¾, and full load; slip at full load; running, full load, and locked rotor current values; safe running time-current curves; motor protective devices; and interconnection diagrams.

j. Engineering design data, calculations, and system analyses

k. Digital system documentation

l. Operating sequence descriptions

m. Software/programming documentation

n. Manufacturer's instructions

2. Shop Drawings:

a. Town of Jupiter Community Development - Engineering Division Shop Drawing Submittals and Approved Product List located in Appendix F.

b. Equipment and material layout drawings, including panel layout drawings.

c. System schematics and diagrams including, but not limited to, piping systems; HVAC and ventilation systems; process equipment systems; electrical operating systems; wiring diagrams; controls, alarm and communication systems.

d. Layout and installation drawings (interior and exterior) for all pipes, valves, fittings, sewers, drains, heating and ventilation ducts, all electrical, heating, ventilating and other conduits, plumbing lines, electrical cable trays, lighting fixture layouts, and circuiting, instrumentation, interconnection wiring diagrams, communications, power supply, alarm circuits, etc.

e. Layout and installation drawings shall show connections to structures, equipment, sleeves, valves, fittings, etc.

f. Drawings shall show the location and type of all supports, hangers, foundations, etc., and the required clearances to operate valves, equipment, etc.

g. Drawings for pipes, ducts, conduits, etc., shall show all 3 inch and larger electrical conduits and pressure piping, electrical cable trays, heating and ventilation ducts or pipes, structure, manholes or any other feature within four (4) feet (measured as the clear dimension) from the pipe duct, conduit, etc., for which the profile is drawn.

h. Equipment and material schedules.

3. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional retained by Contractor, Subcontractor, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specification Section. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.

B. Samples:

1. General Requirements:

a. Conform submittal of Samples to the General Conditions as modified by the

Supplementary Conditions, this Section, and the Specification Section in which the Sample is specified.

b. Furnish at the same time Samples and submittals that are related to the same unit of Work or Specification Section. Engineer will not review submittals without associated Samples and will not review Samples without associated submittals.

c. Samples shall clearly illustrate functional characteristics of product, all related parts and attachments, and full range of color, texture, pattern, and material.

2. Submittal Requirements:

a. Securely label or tag Samples with submittal identification number. Label or tag shall not cover, conceal, or alter appearance or features of Sample. Label or tag shall not be separated from the Sample.

b. Submit number of Samples required in Specifications. If number of Samples is not specified in the associated Specification Section, provide at least one identical Samples of each item required for Engineer's approval. If Contractor requires Sample(s) for Contractor's use, notify Engineer in writing and provide additional Sample(s). Contractor is responsible for furnishing, shipping, and transporting additional Samples.

c. Deliver one Sample to Engineer's field office at the Site. Deliver balance of Samples to location directed by Engineer.

1.05 CLOSEOUT SUBMITTALS

A. Provide the following Closeout Submittals in accordance with the individual Specification Sections, including, but not limited to, the following:

1. As-builts per the Town of Jupiter Checklist

2. Maintenance contracts

3. Bonds for specific products or systems

4. Warranty documentation

5. Sustainable design closeout documentation.

6. Software programming and documentation.

B. On documents such as maintenance contracts and bonds, include on each document furnished original signature of entity issuing the document.

C. Disposition: Dispositions and meanings are the same as specified for Informational Submittals.

1.06 MAINTENANCE MATERIAL SUBMITTALS

A. Disposition: Dispositions and meanings are the same as specified for Informational Submittals.

1.07 CONTRACTOR'S RESPONSIBILITIES

A. Contractor shall review, coordinate, and verify submittals with Subcontractors, Manufacturers, and Suppliers, including field measurements at Site, in accordance with the General Conditions and as modified by Supplemental Conditions prior to submitting material for Engineer's review.

B. Contractor shall provide Contractor's stamp of approval certifying submittal material has been reviewed and conform to the Contract Documents prior to submitting material for Engineer's review.

C. Contractor shall provide written notice of deviations or variations that submittal may have with the Contract Documents.

D. Contractor shall provide bound, dated, labeled, tabulated, and consecutively numbered submittals as specified in the individual Specification Section. Label shall contain the following:

1. Specification Section.

2. Referenced Drawing number.

3. Subcontractor or Supplier name.

4. Type of equipment and/or materials.

E. Contractor shall perform the following after receiving Engineer's review disposition:

1. Order, fabricate, or ship equipment and materials included in the submittal (pending Engineer's review of source quality control submittals) with the following disposition:

   a. "Furnish as Submitted" (FAS).

   b. "Furnish as Corrected" (FAC).

   c. "Furnish as Corrected – Confirm" (FACC), only portions of Work that do not require resubmittal for Engineer's review.

2. Resubmittal requirements:

   a. Partial resubmittal of "Furnish as Corrected – Confirm" (FACC) returned dispositions, until Engineer's disposition is either "Furnish as Submitted" (FAS) or "Furnish as Corrected" (FAC).

b. Full resubmittal of material with Engineer's disposition of "Revise and Resubmit" (R&R), until Engineer's disposition is "Furnish as Submitted" (FAS), "Furnish as Corrected" (FAC), or "Furnish as Corrected – Confirm" (FACC) that requires a partial resubmittal.

c. Contractor shall be responsible for Engineer's charges to Owner if submittals are not approved within the number of specified submittals in accordance with the General Conditions. Engineer's charges shall include, but not limited to, additional review effort, meetings, and conference calls with Contractor, Subcontractor, or Supplier.

1.08 ENGINEER'S REVIEW

A. Engineer's review of the Contractor's submittal shall not relieve Contractor's responsibility under the Contract Document in accordance with the General Conditions and as modified in the Supplemental Conditions. An acceptance of a submittal shall be intended to mean the Engineer does not have specific objection to the submitted material, subject to conformance with the Contract Drawings and Specifications.

B. Engineer's review of Contractor's submittal shall be confined to general arrangement and compliance with the Contract Documents, and shall not be for the purpose of checking dimensions, weights, clearances, fittings, tolerances, interferences, coordination of Subcontractor work, etc.

C. Review Dispositions:

1. "Furnish as Submitted" (FAS) – No exceptions are taken.

2. "Furnish as Corrected" (FAC) – Minor corrections are noted for Contractor's correction.

3. "Furnish as Corrected – Confirm" (FACC) – Corrections are noted, and partial resubmittal shall be made as noted.

4. "Revise and Resubmit" (R&R) – Corrections are noted, and complete resubmittal shall be made. Submittal does not conform to applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and conformance with the Contract Documents.

5. "Receipt Acknowledged" (RA) –

a. Information included in submittal conforms to the applicable requirements of the Contract Documents and is acceptable. No further action by Contractor is required relative to this submittal, and the Work covered by the submittal may proceed, and products with submittals with this disposition may be shipped or operated, as applicable.

b. Information included in submittal is for Project record purposes and does not require Engineer's review or approval.

6. "Rejected" (R) – Information included in submittal does not conform to the applicable requirements of the Contract Documents and is unacceptable. Contractor shall submit products and materials as specified in the Contract Documents or provide required information for substitution as specified in the Contract Documents for consideration by Engineer.

D. Electronic Submittal Return to Contractor: Electronic submittals shall be returned electronically with dispositions provided.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 -- GENERAL

1.01 THE REQUIREMENT

A. Testing Laboratory Services

1. Laboratory testing and checking and all certifications required by the Specifications, including the cost of transporting all samples and test specimens, shall be provided and paid for by the Contractor unless otherwise indicated in the Specifications.

2. In the case of a conflict between this Specification Section and the Contractor's Quality Management Plan, the more stringent requirement between the two documents shall govern.

3. Procedure

a. The Contractor shall plan and conduct his operations to permit taking of field samples and test specimens, as required, and to allow adequate time for laboratory tests.

b. The collection, field preparation and storage of field samples and test specimens shall be performed by the Contractor as required by the Specifications and as directed by the Town.

4. Supplementary and Other Testing

a. Nothing shall restrict the Contractor from conducting tests he may require. Should the Contractor at any time request the Town to consider such test results, the test reports shall be certified by an independent testing laboratory acceptable to the Town. Testing of this nature shall be conducted at no additional cost to the Town.

1.02 SAMPLING AND TESTING

A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the Town reserves the right to use any generally accepted system of sampling and testing which, in the opinion of the Engineer will insure the Town that the quality of the workmanship is in full accord with the Contract Documents.

B. Any waiver by the Town of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance

as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial Work, shall not be construed as a waiver of any requirements of the Contract Documents.

C. Notwithstanding the existence of such waiver, the Engineer reserves the right to make independent investigations and tests and failure of any portion of the Work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the Engineer to require the removal or correction and reconstruction of any such Work in accordance with the General Conditions.

1.03 SITE INVESTIGATION AND CONTROL

A. The Contractor shall verify all dimensions in the field and shall check field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the Work due to its failure to comply with this requirement.

B. The Contractor shall inspect related and appurtenant Work and shall report in writing to the Engineer any conditions which will prevent proper completion of the Work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair, or replacement caused by unsuitable conditions shall be performed by the Contractor within the scope of the Project.

1.04 DEFECTIVE WORK, EQUIPMENT, OR MATERIALS

A. Any defective work, equipment, or materials furnished by the Contractor which is discovered before the final acceptance of the work, as established by the Certificate of Final Completion, or during the subsequent warranty period, shall be removed immediately even though it may have been overlooked by the Town and estimated for payment. Any equipment or materials condemned or rejected by the Town shall be tagged as such and shall be promptly removed from the site. Satisfactory work or materials shall be substituted for that rejected.

B. The Town may order tests of defective or damaged work, equipment, or materials to determine the required functional capability for possible acceptance, if there is no other reason for rejection. The cost of such tests shall be borne by the Contractor; and the nature, tester, extent and supervision of the tests will be as determined by the Town. If the results of the tests indicate that the required functional capability of the work, equipment, or material was not impaired, consistent with the final general appearance of same, the work, equipment, or materials may be deemed acceptable. If the results of such tests reveal that the required functional capability of the questionable work, equipment, or materials has been impaired, then such work, equipment, or materials shall be deemed imperfect and shall be replaced. The Contractor may elect to replace the imperfect work, equipment, or material in lieu of performing the tests.

1.05 INSPECTION AND TESTS

A. The Contractor shall allow the Town ample time and opportunity for testing materials and equipment to be used in the work. He shall advise the Town promptly upon placing orders for material and equipment so that arrangements may be made, if desired, for inspection before shipment from the place of manufacture. The Contractor shall at all times furnish the Town and his representatives, facilities including labor, and allow proper time for inspecting and testing materials, equipment, and workmanship. The Contractor must anticipate possible delays that may be caused in the execution of his work due to the necessity of materials and equipment being inspected and accepted for use. The Contractor shall furnish, at his own expense, all samples of materials required by the Town for testing, and shall make his own arrangements for providing water, electric power, or fuel for the various inspections and tests of structures and equipment.

B. The Contractor shall furnish the services of representatives of the manufacturers of certain equipment, as prescribed in other Sections of the Specifications. The Contractor shall also place his orders for such equipment on the basis that, after the equipment has been tested prior to final acceptance of the work, the manufacturer will furnish the Town with certified statements that the equipment has been installed properly and is ready to be placed in functional operation. Tests and analyses required of equipment shall be paid for by the Contractor, unless specified otherwise in the Section which covers a particular piece of equipment.

C. Where other tests or analyses are specifically required in other Sections of these Specifications, the cost thereof shall be borne by the party (Town or Contractor) so designated in such Sections. The Town will bear the cost of all tests, inspections, or investigations undertaken by the order of the Town for the purpose of determining conformance with the Contract Documents if such tests, inspection, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever nonconformance is determined by the Town as a result of such tests, inspections, or investigations, if overtime or standby costs are incurred due to delays in the scheduled work and associated tests, the Contractor shall bear the full cost thereof or shall reimburse the Town for said cost. In this connection, the cost of any additional tests and investigations, which are ordered by the Town to ascertain subsequent conformance with the Contract Documents, shall be borne by the Contractor.

1.06 OTHER CONSTRUCTION CONSIDERATIONS

A Sleeves and Openings: The Contractor shall provide all openings, chases, etc., to fit its own work and that of any other subcontractors and Contractor's. All such openings or chases shown on the Contract Drawings, or reasonably implied thereby, or as confirmed or modified by acceptable shop, setting or erecting drawings, shall be provided by the Contractor.

B Where pipes or conduits are to pass through slabs or walls, or where equipment frames or supports are to be installed as integral part of an opening, the sleeves, openings,

forms or frames shall be furnished by the installer of the pipes, conduits or equipment, but shall be placed by the Contractor. Where hanger inserts, anchor bolts and similar items are to be embedded in concrete as an integral part of a slab or wall, they shall be furnished by the installer of the pipe or other equipment requiring the hanger, etc., but shall be placed by the Contractor.

C Fire Protection: The Contractor shall take all necessary precautions to prevent fires at or adjacent to the Work, including its own buildings and trailers. Adequate fire extinguisher and hose line stations shall be provided throughout the work area.

D Weather Conditions: Work that may be affected by inclement weather shall be suspended until proper conditions prevail. In the event of impending storms, the Contractor shall take necessary precautions to protect all work, materials and equipment from exposure.

PART 2 – PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 BOUYANCY

A. The Contractor shall be completely responsible for any tanks, pipelines, manholes, foundations or similar improvements that may become buoyant during the construction operations due to groundwater levels. Should there be any possibility of buoyancy, the Contractor shall take the necessary steps to prevent damage due to floating or flooding and shall repair or replace said improvements at no additional cost to the Town.

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.01 SUMMARY

A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions and Supplementary Conditions.

1.02 REFERENCES

A. Abbreviations and Acronyms: Common abbreviations that may be found in the Contract Documents are listed below:

alternating current	a-c
ampere	A
Architectural Barriers Act	ABA
Americans with Disabilities Act	ADA
Americans with Disabilities Act Accessibility Guidelines	ADAAG
American Iron and Steel	AIS
ante meridian	a.m.
average	avg
biochemical oxygen demand	BOD
brake horsepower	bhp
British thermal unit	Btu
Centigrade (or Celsius)	C
chlorinated polyvinyl chloride	CPVC
Code of Federal Regulations	CFR
cubic inch	cu in
cubic foot	cu ft
cubic yard	cdu yd, or CY
cubic feet per minute	cfm
cubic feet per second	cfs

degree Centigrade (or Celsius)	degrees C or ºC
degrees Fahrenheit	degrees F or ºF
diameter	dia
direct current	d-c
dollars	$
each	ea
efficiency	eff
Fahrenheit	F
feet	ft
feet per hour	fph
feet per minute	fpm
feet per second	fps
figure	Fig
flange	flg
foot-pound	ft-lb
gallon	gal
gallons per hour	gph
gallons per minute	gpm
gallons per second	gps
gram	g
grams per liter	g/L
Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
inch	in.
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID

iron pipe size	IPS
thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilowatt	kw
linear foot	lin ft or LF
liter	L
maximum	max
mercury	Hg
milligram	mg
milligrams per liter	mg/l or mg/L
milliliter	ml
millimeter	mm
million gallons per day	mgd or MGD
million gallons	MG
minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
nominal pipe size	NPS
number	no.
operator interface terminal	OIT
ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	ppb

polyvinyl chloride	PVC
post meridian	p.m.
pound	lb
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
revolutions per minute	rpm
second	sec
specific gravity	sp gr or SG
square	sq
square foot	sq ft or sf
square inch	sq in.
square yard	sq yd or SY
standard	std
standard cubic feet per minute	scfm
total dynamic head	TDH

B. Definitions: Terminology used in the Specifications includes:

1. “Indicated” refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs or schedules in the Specifications and similar locations in the Contract Documents.

2. “Shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference without limitation on the location.

3. “Installer”, “applicator”, or “erector” is Contractor or another entity engaged by Contractor, either as an employee or subcontractor, to perform a particular construction activity, including installation, erection, application or similar Work. Installers shall be experienced in the Work that installer is engaged to perform.

4. “Experienced”, when used with the term “installer” means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction and complying with requirements of the Supplier of the material or equipment being installed.

5. Trades: Use of a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter”, unless otherwise indicated in the Contract Documents or required by Laws or Regulations. Such terminology also does not imply that specified requirements apply exclusively to trade personnel of the corresponding generic name.

6. “Assigned specialists” and similar terms: Certain Sections of the Specifications require that specific construction activities be performed by specialists recognized as experts in those operations. Engage said specialists for those activities, and their engagement is a requirement over which Contractor has no option. These requirements do not conflict with enforcement of building codes and other Laws and Regulations. Also, such requirements are not intended to interfere with local trade union jurisdictional settlements and similar conventions. Such assignments shall not relieve Contractor of responsibility for complying with the requirements of the Contract Documents.

C. Reference Standards:

1. Refer to General Conditions, as may be modified by the Supplementary Conditions, relative to reference standards and resolving discrepancies between reference standards and the Contract Documents. Provisions of reference standards are in effect in accordance with the Specifications.

2. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.

3. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only.

4. Following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
ACIFS	American Cast Iron Flange Standards
ACOE	Army Corps of Engineers
ACPA	American Concrete Pipe Association
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGMA	American Gear Manufacturer's Association
AHGDA	American Hot Dip Galvanizers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APHA	American Public Health Association
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASMM	Architectural Sheet Metal Manual
ASSE	American Society of Sanitary Engineers

ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
CEMA	Conveyor Equipment Manufacturer’s Association
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FS	Federal Specifications
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Systems and Automation
ISO	International Organization for Standardization
MBMA	Metal Building Manufacturers Association
MMA	Monorail Manufacturers Association
MTI	Marine Testing Institute
NAAM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association

NIOSH	National Institute of Occupational Safety and Health
NIST	National Institute of Standards and Testing
NRCA	National Roofing Contractors Association
NSF	National Science Foundation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCM	Program Construction Manager
PMT	Program Management Team
SFWMD	South Florida Water Management District
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
SFWMD	South Florida Water Management District
UL	Underwriters Laboratories, Inc.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 51 00

TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 SUMMARY

A. Contractor shall provide temporary utilities required for the Project and to complete the Work.

1. Make arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities.

2. Pay utility service costs, including connection fees, required for the Work as needed.

3. Continuously maintain adequate utilities for all purposes during the Project, until removal of temporary utilities and temporary facilities. At minimum, provide and maintain temporary utilities through Substantial Completion and removal of temporary field offices and sheds.

4. Should Owner occupy part of the Project prior to Substantial Completion of the entire Work, cost of utilities consumed via temporary utilities serving the portion occupied by Owner will be shared proportionately between Owner and Contractor as mutually agreed to by the parties.

5. Maintain, including cleaning, temporary utilities and continuously provide consumables as required.

6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and requirements of Project.

7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

B. Provide the following temporary utilities:

1. Electricity and lighting.

2. Telephone and communications.

3. Heating.

4. Sanitary facilities.

5. Water service.

6. First-aid facilities.

7. Fire protection.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Use of Owner's System:

1. Existing Utility Systems: Do not use systems in existing buildings or structures for temporary utilities without Owner's written permission and mutually acceptable basis agreed upon by the parties for proportionate sharing of costs between Owner and Contractor.

2. Use of Permanent Utility Systems Provided Under the Project:

a. Permanent lighting, water, heating, ventilating, and fire protection systems and first-aid facilities may be used to provide temporary utilities and temporary facilities if the following are met:

1) Obtain Owner's written permission to use permanent systems.

2) Permanent systems to be used for temporary utilities or temporary facilities shall have achieved Substantial Completion, including complete functionality of all controls.

3) Contractor shall pay all costs while using permanent system, including operation, maintenance, replacement of consumables, and provide replacement parts.

b. Do not use the following permanent facilities:

1) Telephone and communication facilities.

2) Sanitary facilities.

1.03 SYSTEM DESCRIPTION

A. Electricity and lighting:

1. Contractor shall provide electrical and lighting service for construction field offices, sheds, storage containers, etc. and as required for the Work.

2. General 120/240 V service requirements:

a. Contractor shall provide 120/240 V, single phase, 3-wire temporary system for small power requirements and general lighting.

b. Contractor shall provide main disconnect, overcurrent protection, meter outlet, branch circuit breakers, and wiring for temporary service to the Contractor's field office service connections. Contractor shall provide equipment and appurtenances in accordance with electricity service provider and applicable standards and codes

c. Contractor shall register the 120/240 V electrical service meter in the Contractor's name and shall be responsible for electrical charges at no additional cost to the Owner.

d. Contractor shall provide electrical service other than 120/240 V, single phase, 3-wire service as required for the Work at the Contractor's own expense.

3. General lighting requirements:

a. Contractor shall provide a minimum of 10-foot candles for enclosed and partially enclosed structures for performing the Work.

b. Contractor shall provide a night lighting circuit for security. Light intensity shall be a minimum of 2-foot candles.

4. Contractor shall energize the electrical system 15-minutes prior to and following regular workday hours at the Site. Required from Monday through Friday, all inclusive.

5. Contractor shall energize the night lighting system at end of typical working day and de-energize at start of typical working day. System shall be continuously energized on Saturdays, Sundays, and holidays.

6. Contractor shall provide an independent grounding cable connected directly to the structure, building, and equipment for erection and fabrication by electrical welders. Grounding by adjacent conduit, piping, etc. shall be prohibited at the Site.

7. Contractor shall coordinate usage of temporary electrical system with Subcontractors, Suppliers, and Owner including the following:

a. Usage is suitable for 120V, single phase, 60 Hz operation with a maximum operating input of 1,500 volt-amperes.

b. One unit connected to a single outlet.

c. Restrict usage in case of overloading circuits to correct loading.

B. Telephone and communications: Contractor shall provide temporary telephone and communications required for its operations at the Site and for summoning emergency medical assistance.

C. Heating:

1. Contractor shall provide temporary heating, ventilation coverings and enclosures necessary to protect the Work and materials against wetness and temperature damage, to dry out the Work, and to facilitate the Work in structures.

2. Equipment, fuel, materials, personnel and methods used shall be adequate to maintain critical installation temperatures and ventilation of Work at all times in areas where necessary to perform the Work.

3. Enclosed structures shall have a minimum temperature of 50°F, unless otherwise specified, where Work is performed.

4. Contractor shall provide sufficient heat to maintain a minimum temperature of 65°F before and during application of interior finishing, painting, coating, etc.

5. Contractor shall replace any Work damaged by dampness or insufficient/abnormal heating at no cost to the Owner.

D. Sanitary facilities:

1. Contractor shall provide suitably enclosed chemical or self-contained toilets for Contractor's employees and visitors to the Site. Location of temporary toilets shall be acceptable to Owner and screened from public observation.

2. Facilities shall be maintained and provided in accordance with State or Commonwealth Labor Regulations and local ordinances. Contents shall be removed and disposed in accordance with local and state or commonwealth regulations as required.

3. Contractor shall be prohibited from committing nuisances within, on, or in the vicinity of the Site.

E. Water service:

1. The Contractor shall provide temporary potable water service for construction purposes, sanitary facilities, fire protection, field offices and for cleaning. The Contractor shall make all arrangements for connections to the potable water at the plant site. The Contractor shall obtain a potable water flowmeter from the Department of Public Services at the Town of Jupiter.

2. The Contractor shall pay all charges associated with the potable water connection. The Contractor shall pay all charges for potable water used under this Contract.

3. Each Contractor shall supply potable water for his employees either by portable containers or drinking fountains.

4. An adequate number of hose bibbs, hoses, and watertight barrels shall be provided for the distribution of water.

5. Water service shall be extended by the Contractor and relocated as necessary to meet temporary water requirements.

6. Contractor shall provide freeze protection for water service.

F. First-aid facilities:

1. Contractor shall provide temporary first-aid stations at or immediately adjacent to the Site's major work areas. Contractor shall provide temporary first-aid stations inside its temporary field office. Locations of first-aid stations shall be determined by Contractor's safety representative.

2. Contractor shall provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section 01 31 19 – Project Meetings.

G. Fire protection:

1. Contractor shall comply with NFPA 241, Safeguarding Building Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

2. Contractor shall provide temporary fire exits, fire extinguishers, hoses and safety devices as required by authorities having jurisdiction.

3. Contractor shall notify Engineer, Owner, and fire marshals in the event of fire at the Site including, but not limited to, fuel tanks and similar hazardous utilities and devices. Contractor shall cooperate with Owner of fuel tank and utilities to prevent occurrence of fire or explosion.

4. Contractor shall perform safety precautions and comply with fire marshal's instructions in the event of fire.

PART 2 – PRODUCTS

2.01 EQUIPMENT

A. Materials and equipment for temporary systems may be new or used but shall be adequate for purposes intended and shall not create unsafe conditions and shall comply with Laws and Regulations.

B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

C. Electrical system requirements: System shall consist of wiring, switches, insulated supports, poles, fixtures, sockets, receptacles, lamps, guards, cutouts and fuses as required for completion of the Work.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install temporary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.

B. Location of Temporary Utilities and Temporary Facilities:

1. Locate temporary systems for proper function and service.

2. Temporary systems shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of utility companies.

3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, and similar systems in place for short durations.

C. Modify and extend temporary systems as required by progress of the Work.

3.02 MAINTENANCE

A. Maintain temporary systems to provide safe, continuous service as required.

B. Properly supervise operation of temporary systems:

1. Enforce compliance with Laws and Regulations.

2. Enforce safe practices.

3. Prevent abuse of services.

4. Prevent nuisances and hazards caused by temporary systems and their use.

5. Prevent damage to finishes.

6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.

C. At end of each workday, check temporary systems and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

D. Contractor shall replace broken and burned-out lamps, blown fuses, and damaged wiring and appurtenances as required to maintain adequate and safe operating conditions.

E. Contractor shall permit subcontractors and others at a mutually agreed arrangement to use temporary electrical system that meet the following requirements:

1. Equipment is suitable for 120 V, single phase, 60 Hz operation.

2. Operating input does not exceed 1,500 volt-amperes.

3. Single piece of equipment connected to one outlet.

4. Contractor shall restrict use of equipment as required to prevent overloading circuits.

3.03 CLOSEOUT ACTIVITES

A. Completely remove temporary utilities, facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.

B. Contractor is responsible for and shall return to original condition those portions of permanent electric system used in completing the Work.

C. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.

D. When permanent utilities and systems that were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

END OF SECTION

SECTION 01 52 00
CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. At the Contractor's discretion, the Contractor may provide field office(s), equipment and services for its own use as specified herein and as may be required.

B. If the Contractor elects to provide field office(s), the location of the field office(s) shall be determined by the Contractor. The Owner is not responsible for providing a location for Contractor's field office(s).

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01 51 10 – Temporary Utilities

1.03 SUBMITTALS

A. The Contractor shall submit shop drawings and other information as required to the Owner for review in accordance with Section 01 33 00 titled "Submittal Procedures".

1.04 GENERAL FIELD OFFICE REQUIREMENTS

A. Contractor shall provide steps and platforms to permit entry to the offices. This work shall conform to the 2023 Florida Building Code, 8th Edition and OSHA requirements.

B. Trailers shall be blocked up and hurricane straps installed conforming to the applicable building codes.

C. Contractor retains responsibility for procuring all necessary permits for the installation of the field offices.

PART 2 - PRODUCTS

2.01 CONTRACTOR'S FIELD OFFICE

A. Contractor's Field Office: Each Contractor shall furnish, equip and maintain a field office at the site of a size required for his operations as may be required. Each Contractor shall provide his own telephone and electric service and shall have readily accessible at the field office, copies of the Contract Documents, latest approved Shop Drawings and all field Project related correspondence, Change Order, etc.

PART 3 - EXECUTION

3.01 UTILITY SERVICES

A. Contractor shall provide all utilities (as may be required) for his construction trailer in accordance with Section 01 51 00 titled “Temporary Utilities”.

END OF SECTION

SECTION 01 55 00

CONTRACTOR ACCESS AND PARKING

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Contractor shall provide and maintain temporary laydown and employee parking areas and appurtenances required during the Project for use by Contractor, other contractors employed on the Project, Owner's, and emergency vehicles, as shown on the Drawings.

2. Laydown and employee parking areas shall be designed and maintained by Contractor and shall be fully passable to vehicles in all weather conditions.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Access roads:

1. Contractor shall construct and maintain such temporary access roads as required to perform the Work.

2. Contractor shall construct access roads, where possible, in locations over the areas of future road systems.

3. Access roads shall be located within the property lines of the Owner unless the Contractor independently secures easements for use and convenience.

a. Contractor shall submit written documentation to the Engineer for Contractor secured easements across privately held property.

b. Easement agreements shall specify terms and conditions of use and provisions for Site restoration.

c. Written release from property owner certifying that terms of the easement agreement have been complied by the Contractor shall be furnished to the Engineer prior to final payment.

B. Use of existing access roads:

1. Contractor will be allowed to use Owner's existing roads as shown on the Drawings.

2. Prevent interference with traffic on existing roads and parking areas. At all times, keep access roads and entrances serving the Site clear and available to Owner,

Owner's employees, emergency vehicles, and other contractors. Do not use access roads or Site entrances for parking or storage of materials or equipment.

3. Contractor shall indemnify and hold harmless Owner and Engineer from expenses caused by Contractor's operations over existing roads and parking areas.

4. Schedule deliveries to minimize use of driveways and Site entrances.

5. Contractor shall suitably maintain existing access road at Contractor's expense for the duration of the Contract time.

C. Contractor parking areas:

1. Contractor employee vehicles shall park in area(s) designated by Owner or as shown on the Drawings.

2. Contractor shall construct and maintain parking area at the Site.

D. State and local regulations:

1. Contractor shall obtain and pay all cost associated with bonds required by authorized entity (i.e. State Department of Transportation) for the use of State maintained roads.

2. Contractors shall obey traffic laws and comply with requirements, rules and regulations of the authorized entity (i.e. State Department of Transportation), including local authorities having jurisdiction, to maintain warning signs, lights, barriers, etc. for the protection of traffic on public roadways.

E. Site security:

1. Contractor shall safely guard all the Work, the Project, products, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion. Contractor's duty includes safely guarding Owner's property in vicinity of the Work and Project, and other private property in the vicinity of the Project from injury and loss in connection with performance of the Project.

2. Employ watchmen as required to provide required security and prevent unauthorized entry.

3. Costs for security required under this Section shall be paid by Contractor.

4. Make no claim against Owner for damage resulting from trespass.

5. Pay full compensation for, or repair or replace, damage to property of Owner and others arising from failure to furnish adequate security.

6. Provide temporary fencing in accordance with the Contract Documents.

7. Security requirements specified in the Section shall begin as soon as the contractor delivers materials to the Site and/or begins work and shall continue until the date of Final Completion.

8. Procedures:

   a. Contractor shall conform to Owner's security procedures and access restrictions at Site throughout entire Project.

   b. Contractor, including Subcontractors and Suppliers, shall comply with the following:

      1) Personnel Identification: All Contractor personnel shall wear at all times on-Site a badge bearing Contractor's name, employee's name and, as applicable, employee number.

      2) Parking: Do not park outside of designated Contractor parking area. Prepare and maintain parking area as required. Personal vehicles are not allowed outside Contractor parking area.

9. Contractor shall provide and maintain temporary security fencing if existing security fencing or barriers are breached or temporarily removed for the Project at no additional cost to the Owner. Temporary security fencing shall be equal to existing, unless otherwise specified, and provided and maintained in a manner satisfactory to Engineer and Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 INSTALLATION

A. Contractor shall determine if and where temporary fencing is necessary, unless existing security fencing is damaged, which will be determined by Engineer and Owner.

B. Install temporary fencing used for site security in accordance with the Contract Documents and fence manufacturer's instructions. Provide temporary fencing for site security so that integrity of site security is maintained throughout the Project.

C. Maintain temporary fencing. Repair damage to temporary fencing and replace fencing when required to maintain site security.

D. Remove temporary fencing when permanent site security fencing is in place and fully functional, or when otherwise directed by Owner or Engineer.

END OF SECTION

SECTION 01 57 00
TEMPORARY CONTROLS

PART 1 – GENERAL

1.01 SUMMARY

A. Contractor shall provide and maintain methods, equipment, and temporary construction as required to control environmental conditions at the Site and adjacent areas.

B. Maintain controls until no longer required.

C. Temporary controls include, but are not limited to, the following:

1. Dust control.

2. Noise controls.

3. Pest and rodent control.

4. Pollution control.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 DUST CONTROL

A. Contractor shall take measures to control dust from Contractor's operations and prevent spillage of excavated materials on public roads.

B. Contractor shall remove spillage of excavated materials, debris, and dust from public roads by methods approved by Engineer.

C. Contractor shall provide temporary dust-proof partitions where required to protect unaltered portions of existing structures and facilities and as directed by Engineer or Owner. Temporary partitions shall be provided where demolition Work is required, to protect equipment and material, and shall consist of the following:

1. Wood studs with plywood on both sides and extend from floor to ceiling.

2. Closure plate at floor and ceiling.

3. One door (minimum) with hardware.

D. Contractor shall refer to applicable sections of local and state/commonwealth regulations on dust control for additional guidance.

1. Contractor shall apply water at locations, quantities, and frequencies required by Engineer to control dust for nuisance prevention to Owner, Engineer, and properties in the vicinity of the Site.

2. Dust control and cleaning measures shall be provided at no additional cost to the Owner.

3.02 NOISE CONTROL

A. Contractor's vehicles and equipment shall minimize noise emissions to greatest degree practicable. Provide mufflers, silencers, and sound barriers when necessary.

B. Noise levels shall comply with Laws and Regulations, including OSHA requirements and local ordinances.

C. Noise emissions shall not interfere with the work of Owner or others.

3.03 PEST AND RODENT CONTROL

A. Provide rodent and pest control as required to prevent infestation of the Site and storage areas.

B. Employ methods and use materials that do not adversely affect conditions at the Site or on adjoining properties.

C. In accordance with laws and regulations, promptly and properly dispose of pests and rodents trapped or otherwise controlled.

3.04 POLLUTION CONTROL

A. General:

1. Provide means, methods, and facilities required to prevent contamination of soil, water, and atmosphere caused by discharge of noxious substances from construction operations.

2. Equipment used during construction shall comply with Laws and Regulations.

B. Spills and Contamination:

1. Provide equipment and personnel to perform emergency measures required to contain spills and to remove contaminated soils and liquids.

2. Excavate contaminated material and properly dispose of off-site and replace with suitable compacted fill and topsoil.

C. Protection of Surface Waters: Implement special measures to prevent harmful substances from entering surface waters. Prevent disposal of wastes, effluents, chemicals, and other such substances in or adjacent to surface waters and open drainage routes, in sanitary sewers, or in storm sewers.

D. Atmospheric Pollutants:

1. Provide systems for controlling atmospheric pollutants related to the Work.

2. Prevent toxic concentrations of chemicals and vapors.

3. Prevent harmful dispersal of pollutants into atmosphere.

E. Solid Waste:

1. Provide systems for controlling and managing solid waste related to the Work.

2. Prevent solid waste from becoming airborne, and from discharging to surface waters and drainage routes.

3. Properly handle and dispose of solid waste.

END OF SECTION

SECTION 01 71 33

PROTECTION OF WORK AND PROPERTY

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Protection of existing utilities and structures.

2. Protection of installed equipment and materials.

3. Protection during inclement weather.

4. Reporting of accidents.

5. Barricades and warning signals.

B. Contractor shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage, as specified in the General Conditions, Supplementary Conditions, and this Section.

C. To prevent damage, injury, or loss, Contractor's actions shall include the following:

1. Storing apparatus, materials, supplies, and equipment in an orderly, safe manner that does not unduly interfere with progress of the Work or work of other contractors or utility companies.

2. Providing suitable storage facilities for equipment and materials subject to damage or degradation by exposure to weather, theft, breakage, or other cause.

3. Placing upon the Work or any part thereof only loads consistent with the safety and integrity of that portion of the Work and existing construction.

4. Frequently removing and disposing of refuse, rubbish, scrap materials, and debris caused by Contractor's operations so that, at all times, the Site is safe, orderly, and workmanlike in appearance.

D. Contractor has full responsibility for preserving public and private property and facilities on and adjacent to the Site. Direct or indirect damage done by, or on account of, any act, omission, neglect, or misconduct by Contractor in executing the Work, shall be restored by Contractor, at his expense to condition equal to that existing before damage was done.

E. Contractor shall comply with safety regulations required by Owner or authorities having jurisdiction. Contractor shall comply with and correct unsafe conditions created or caused by Contractor's personnel. In the event Contractor fails to comply, Owner receives the right to take necessary measures to correct conditions or practices for reimbursement by Contractor.

1.02 REFERENCES

A. Definitions:

1. "Existing utilities" shall refer to both publicly-owned and privately-owned utilities such as, but are not limited to, electric power and lighting, telephone, water, gas, storm drains, process lines, sanitary sewers and all appurtenant structures.

2. "Surface structures" are existing buildings, structures, and other facilities at or above ground surface, including their foundations or any extension below ground surface. Surface structures include, but are not limited to, buildings, tanks, walls, channels, open drainage, exposed piping and utilities, poles, exposed wires, posts, signs, markers, curbs, walks, fencing, and other facilities visible at or above ground surface.

1.03 SITE CONDITIONS

A. Location of Existing Utilities and Structures:

1. Contractor shall confirm and verify location of existing utilities and structures at the Site prior to commencing the Work.

2. Contractor shall notify and obtain approval from authority having jurisdiction prior to performing the Work in the vicinity of the existing utilities and structures.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PROTECTION OF EXISTING UTILITIES AND STRUCTURES

A. General:

1. Contractor shall satisfy Engineer that methods and procedures for protection have been approved by authorities having jurisdiction prior to proceeding with the Work.

2. Contractor shall provide temporary support and protection, as required, to existing utilities and structures during the Work, including excavation.

a. Temporary support and protection of existing utilities shall be provided in accordance with requirements of the authority having jurisdiction.

b. Temporary support and protection of existing structures shall be provided as directed by the Engineer.

3. Contractor shall be responsible for costs incurred for temporary support or protection provided by a third-party or authority having jurisdiction to ensure safety of the existing utility, Owner, and public and private parties.

B. Existing Buried Utilities:

1. Contractor shall perform field investigations to identify conflicts or interferences between existing utilities and utility Work prior to excavation Work.

a. Investigation of conflicts and interferences shall be performed on Site locations, elevations, slopes, etc. of the existing utilities determined during the field investigations.

b. Contractor shall notify Engineer and Owner in writing of identified conflicts or interferences. Contractor shall not proceed with the Work until written authorization is provided by the Engineer.

c. Identified conflicts and interferences shall be handled in accordance with the Contract Documents.

2. Contractor shall perform the Work to prevent disruption of existing service and damage to existing utilities.

a. Temporary connections shall be provided, as required, to provide uninterrupted service of existing utilities.

b. Contractor shall repair damage to existing utilities as directed by the Engineer or the authority having jurisdiction at Contractor’s own expense.

c. Contractor shall be responsible for damages and repair costs to the authority having jurisdiction if third-party or authority having jurisdiction personnel repair damaged existing utilities.

C. Protection of Existing Structures:

1. Contractor shall sustain existing surface structures in existing place and protect from direct or indirect injury located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure or facility.

2. Contractor shall bear all risks attending the presence or proximity of all surface structures within or adjacent to limits of the Work, in accordance with the Contract Documents.

3. Contractor shall be responsible for damage and expense for direct or indirect injury caused by his Work to structures and facilities.

4. Contractor shall repair immediately damage caused by his Work, to the satisfaction of owner of damaged structure or facility at no cost to the Owner.

5. Contractor shall provide temporary weather protection for existing structures and buildings where exterior walls or roofs are modified or disturbed in the Work. Contractor shall be responsible for damages due to inadequate protection of existing structures and building.

D. Relocation of Surface Structures: Existing surface facilities, including but not limited to guard rails, posts, guard cables, signs, poles, markers, curbs, and fencing, that are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at Contractor's expense.

E. Contractor shall protect installed equipment and materials equipment to prevent damage, injury or loss from subsequent operations. Remove protection facilities when no longer needed prior to completion of the Work.

F. Control traffic to prevent damage to equipment, materials, and surfaces.

G. Coverings: Provide coverings to protect materials and equipment from damage.

3.02 PROTECTION DURING INCLEMENT WEATHER

A. Contractor shall not perform Work during inclement or unsuitable weather that will affect the quality of the completed Work.

B. Contractor shall take necessary precautions in the event of impending inclement weather to protect equipment, materials and Work from damage or deterioration due to floods, driving rain, wind, or snowstorms.

1. Owner reserves the right to require additional protection measures beyond Contractor's proposed protection measures to protect the Work.

2. Contractor shall not claim additional compensation for additional protection measures required by Owner nor for damages to equipment, material, or Work due to the inclement weather.

C. When directed by Engineer, Contractor shall stop Work and protect new Work by protective covering during rainstorms for, but not limited to, the following:

1. Concrete mixing and placement.

2. Paving placement.

3. Masonry installation.

4. Buried piping, valve, and appurtenance installation.

5. Additional inclement weather requirements and limitations are specified in individual Specification Sections.

3.03 REPORTING OF ACCIDENTS

A. Contractor shall immediately report, in writing, to Engineer and Owner accidents out of, or in conjunction with, the performance of Work.

1. Accident reporting includes on Site and adjacent to Site, which cause death, personal injury, or property damage.

2. Written report shall provide full details and witness statements.

3. If claim is made against Contractor, Supplier, or Subcontractor due to accident, Contractor shall promptly report facts, in writing, to Engineer and Owner, with full account of the claim.

B. Contractor shall immediately report death, serious injury, or serious damage caused by telephone or messenger to Engineer and Owner.

END OF SECTION

SECTION 01 77 19

CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Substantial Completion.

2. Final inspection.

3. Request for final payment.

1.02 REFERENCES

A. Definitions:

1. Substantial completion procedures for requesting and documenting are in the General Conditions, as modified by Supplemental Conditions.

2. Final inspection procedures for requesting and documenting are in the General Conditions, as modified by Supplemental Conditions.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Request for Final Payment:

1. Procedure: Submit request for final payment in accordance with the Agreement and General Conditions, as may be modified by the Supplementary Conditions.

B. Request for final payment shall include:

1. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.

2. Releases or Waivers of Lien Rights:

a. Provide a final release or waiver by Contractor and each Subcontractor and Supplier that provided Contractor with labor, material, or equipment totaling $10,000 or more.

b. Provide list of Subcontractors and Suppliers for which release or waiver of Lien is required.

c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver to Contractor, and shall include Subcontractor's or Supplier's corporate seal, when applicable.

d. Release or waiver of Lien may be conditional upon receipt of final payment.

e. Manufacturer's Affidavit of Release of Liens – furnish a separate, completed form from the manufacturer.

3. Consent of Surety Company to Final Payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 02 32 00
SUBSURFACE EXPLORATION

PART 1 – GENERAL

1.01 GEOTECHNICAL

A. The Contractor shall assume responsibility for knowledge of soil characteristics in the areas where excavation is required, based on past experience, the knowledge of others, soil tests, or other means available. No claim for extra compensation or for extension of time will be allowed on account of subsurface conditions inconsistent with Contractor's assumptions, except as provided elsewhere herein.

B. A Geotechnical Report is provided, as Appendix C, for information purposes only with the Contract Documents.

C. The Owner and the Engineer will not assume responsibility for variations of sub-soil quality or conditions at locations other than places shown and at the time the geotechnical investigation was made. The Contractor shall examine the site and review the available geotechnical report or undertake its own subsurface investigation prior to submitting its bid, taking into consideration all conditions that may affect its work.

1.02 EXISTING UTILITIES

A. The plans depict the approximate location of the existing utilities. The location of those facilities (horizontal and vertical) was obtained from survey information, utility atlas, and record drawings provided by utility owners, and a limited amount of utility soft dig information.

B. Existing utilities shown are located according to the information available to the engineer at the time of the topographic survey. Guarantee is not made that all existing underground utilities are shown or that the location of those shown are entirely accurate. Finding the actual location of any existing utilities is the Contractor’s responsibility and shall be done before he commences and works in the vicinity. Furthermore, the Contractor shall be fully responsible for any and all damages due to the Contractor’s failure to exactly locate and preserve any and all underground utilities.

1.03 SUBSURFACE UTILITY INVESTIGATION

A. The Contractor is required to verify all utility crossing elevations via vacuum or direct excavation. The report(s) shall be provided to the Owner/Engineer indicating all stations, offsets and elevations. The report(s) shall be provided prior to the commencement of pipe installation. The Owner/Engineer will confirm elevations and provide any required revisions to the Contractor.

B. Perform all necessary exploratory excavations and subsurface utility engineering (SUE) services to verify the location, elevation and alignment of existing underground utilities that may interfere with the proposed improvements.

C. Perform all necessary exploratory excavations and SUE services to verify the location, elevation and alignment of existing underground utilities that are indicated for relocation and/or at proposed tie-in locations.

D. Provide American Society of Civil Engineers (ASCE) quality levels “A” and **“**B” subsurface utility engineering (SUE) services to designate, verify and document the location of the existing underground facilities, including yard piping, electrical conduits, and drainage facilities in the areas that may be impacted by construction.

E. Location information collected by the CONTRACTOR shall be used by the CONTRACTOR to supplement information on existing record drawings available from the OWNER.

F. Standard of care for subsurface utility data collection shall be in accordance with ASCE standard 38-02 (titled “Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data”).

G. The CONTRACTOR shall retain a professional land surveyor. The surveyor shall document the vertical and horizontal locations of the utilities that may interfere with the proposed improvements. Elevations shall be referenced to National Geodetic Vertical Datum (NGVD) 1929 vertical datum (or the vertical datum indicated on the existing site plan). Horizontal locations shall be in state plane coordinates. Incorporate utility locate information into an AutoCAD drawing that provides the horizontal coordinates and elevations of all located utilities. Submit the AutoCAD file along with a PDF that is signed and sealed by the professional land surveyor.

1.04 CONTRACTOR’S RESPONSIBILITIES

A. Contractor shall notify the Sunshine State One Call of Florida (SSOCF) service at 811, 48 hours prior to digging, as required by Florida Statutes Chapter 556 throughout the duration of the construction project.

B. Locate the cables, ducts, conduit, pipeline, etc. in advance of the proposed construction.

C. Notify Engineer of any substantial changes and/or conflicts that would require a deviation in the plans. Late discovery of existing underground utilities does not constitute “required” deviations should early discovery prevent them.

D. Support existing utilities not proposed for replacement, including VCP sewer pipe as may be present. Repair any damage done to existing utilities at no additional expense to the Owner.

E. Remove or modify those utilities scheduled to be removed or modified on the plans.

F. All pipe and materials that are not abandoned in place shall be removed and disposed of off-site in a legal manner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 02 41 00
DEMOLITION

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Removal and disposal of structures, pavement surfaces, sidewalks, underground obstructions, and other facilities necessary to prepare the area for construction of proposed facilities.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION

3.01 GENERAL

A. Utilities:

1. Notify Town or appropriate utilities to turn off affected services before starting demolition or alterations. Provide not less than seven (7) days notice to the owner of the utility prior to the shutdown.

2. Remove utility lines exposed by demolition excavation.

3. Remove electric, sanitary, and storm drainage adjacent to buildings to be demolished.

4. Excavate utility lines serving buildings to be demolished and provide a permanent leak-proof closure for water and gas lines.

5. Plug sewerlines at locations shown or at limits of excavation if not shown with concrete length of plug, 5 feet minimum to prevent groundwater infiltrating sewer systems.

B. Removal and Storage of Equipment for Reuse:

1. Do not remove equipment and materials without approval of Engineer.

2. Properly store and maintain equipment and materials in same condition as when removed.

3. Engineer will determine condition of equipment and materials prior to removal.

3.02 DEMOLITION

A. Additional quantities of new construction or additional work caused by the demolition, beyond the limits, will be performed at the Contractor’s expense.

B. Drawings define minimum portion of structures to be removed. Unless otherwise shown, rough cuts or breaks may be made exceeding limits of demolition shown. Provide sawcut at limits of all pavement removal. Structures shall be removed in such a way as to leave no obstructions to any proposed new structures or to any waterways.

C. Core drill floor slabs, catch basins, and other concrete improvements to remain in place below ground, or break holes at structure's lowest point to allow water to freely migrate through.

D. Remove piping from areas to be backfilled. Pipe, valves, and fittings adjacent to those to be removed may also be removed as salvage.

E. Remove all materials associated with existing equipment that is to be removed or relocated.

F. Cut off concealed or embedded conduit, boxes, or other materials a minimum of 2 inches below final finished surface.

G. Extract existing piling, which conflict with new piles, prior to driving new piles.

H. Fuel storage tanks shall be removed from site and properly disposed in accordance with all local, state and federal requirements, including those of FDEP.

3.03 DISPOSAL

A. Dispose of debris and other nonsalvaged materials offsite in licensed landfills.

3.04 BACKFILLING

A. Demolished Areas: Backfill to existing ground level or foundation level of new construction.

B. Backfill Material and Compaction:

1. Conform to Sections 31 23 00 – Excavation and Backfill for Utilities and 31 23 01 – Excavation and Backfill for Structures.

2. Do not use demolition debris as backfill material.

3.05 SALVAGE

A. Equipment and materials, including piping within the limits of demolition, unless otherwise specified, will become the property of Contractor.

B. Any material designated to remain by the Town shall be stored in neat piles in a location directed by the Town.

C. Fire Hydrants:

1. Salvage for future use by Town.

2. Remove and leave for Town in location directed by the Town.

END OF SECTION

SECTION 02 42 00

PAVEMENT REMOVAL AND REPLACEMENT

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall cut, remove, protect, and replace existing pavements of the various types encountered including roadways, driveways, sidewalks, curbs, and combination curb and gutter.

B. Protection of Existing Improvements: The Contractor shall be responsible for the protection of all pavements, sidewalks, and other improvements within the work area. All damage to such improvements as a result of the Contractor's operations, beyond the limits of the Work of pavement replacement as described herein, shall be repaired by the Contractor at his expense.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 32 12 00 – Asphalt Concrete Pavement

B. Section 32 15 00 – Limerock Base

PART 2 – PRODUCTS

2.01 MATERIALS

A. Materials including bituminous prime and tack coat, and asphaltic concrete for the above Work shall be as specified in Section 32 12 00 – Asphalt Concrete Pavement

B. Limerock material shall be as specified in Section 32 15 00 – Limerock Base.

PART 3 – EXECUTION

3.01 PREPARATION

A. Pedestrian or school crossings: Where the work crosses or interferes with school or pedestrian crossings, extreme care shall be taken by the Contractor to ensure the safety of school children or other pedestrians.

3.02 PERFORMANCE

A. Removals

1. Pavement Removal: Where existing pavement is to be removed, the surfacing shall be mechanical saw cut prior to trench excavation, leaving a uniform and

straight edge, with minimum disturbance to the remaining adjacent surfacing. The width of cut for this phase of existing pavement removal shall be minimal.

2. Sidewalk, Drive, and Curb Removal: Concrete sidewalks, curbs, combination curb and gutter, walks, drive ribbons, or driveways shall be removed by initially sawing the structure with a suitable power saw as specified above for pavement. When a formed joint in the concrete exists within three (3) feet of the proposed saw cut and parallels the proposed saw cut, the removal line shall be extended to the formed joint. After sawing, the material shall be removed.

B. Restorations

1. General: Street or roadway pavement cut and removed in connection with trench excavation shall be replaced or restored in equal or better condition than the original and as shown on the Drawings. All restorations shall be a complete overlay of the road surface.

2. Pavement Restoration - Asphalt:

a. Limerock base course shall be compacted for its full thickness as specified in Section 32 15 00 – Limerock Base.

b. Construction methods and equipment shall generally meet the requirements therefore as established in the FDOT Specifications. Any such modifications shall be approved by the Engineer prior to their use.

c. Joints with existing surface and base shall be straight and neat. If it is necessary to obtain a straight net joint, the Contractor shall cut out sufficient existing material and replace it with new material.

d. The upper surface of the completed base course shall be compacted to an elevation to permit the full depth of the surface course to be at the pavement surface. The completed surface shall match the line and grade of the existing surface. When pavement is removed to the edge of the roadway, the replaced base course shall extend not less than six (6) inches beyond the edge of the surfacing constructed without deviating from the grade.

3. Driveway Restoration - Asphalt: Driveway pavement with limerock base cut and removed in connection with trench excavation shall be replaced or restored as specified above for street or roadway pavement, with the exception that the new limerock base course shall equal the existing base course in thickness, except that in no case shall new driveway base course be less than six (6) inches in thickness. Muck or unsuitable material found under existing driveway construction will not be removed and replaced.

4. Concrete, Sidewalk, Walkway, Driveway Ribbon, and Curb Restoration:

a. Concrete sidewalks, walkways, driveways, driveway ribbons, and curbs required to be removed for the installation of facilities under this Contract

shall be restored. Class B concrete shall be used in all cases.

b. Replaced portions of these items shall conform to the lines, grades, and cross sections of the removed portions. Concrete sidewalks and walkways shall be of 4-inch thickness; concrete driveways and driveway ribbons shall be of 6-inch thickness. Replaced concrete curb and/or gutter shall joint neatly to the remaining section.

5. Pavement Restoration - Concrete: Rigid pavement shall be replaced in kind with Class B concrete, using high early strength cement.

END OF SECTION

SECTION 02 48 10
TREE RELOCATION AND PROTECTION

PART 1 – GENERAL

1.01 WORK TO BE PERFORMED AND WORK INCLUDED

A. Prepare and relocate trees and palms designated for relocation within the project boundaries, to include all aspects of preparation, relocation, protection, and maintenance.

B. Protection and care of existing trees and palms to remain within the project boundaries, to include all aspects of protection, pruning, fertilization, and watering.

C. Watering by water truck.

D. Follow up maintenance as required by these specifications.

E. Labor, materials, equipment, and services to complete all preparation, relocations and protection work as shown on the Drawings, as specified herein, or both.

1.02 SUBMITTALS

A. Copy of all permits submitted for tree relocations.

B. Verification of Qualifications: The Contractor shall provide a list of references and project list of a minimum of five (5) projects that the Contractor has successfully completed that are similar in scope and nature.

C. List of all equipment to be utilized during tree preparation and transplanting.

D. Literature on specified wetting agents, fertilizers, and soil conditioners.

1.03 APPLICABLE STANDARDS AND SPECIFICATIONS

A. Comply with the following standards and specifications for all materials, methods, and workmanship unless otherwise noted:

1. Codes and Standards of the American Association of Nurserymen.

2. Codes and Standards of the National Arborists Association.

3. Codes and Standards of the International Society of Arboriculturists.

1.04 PERMITS

A. The Contractor shall secure any permits required, including tree removal and tree relocation permits, in order to complete the work under this Section.

1.05 DESCRIPTION

A. Trees to be relocated within the project area will be specifically designated in the field as project work progresses or as noted in tree disposition plans on the drawings.

B. Existing trees to be relocated shall be crown pruned and be treated with soil amendments prior to relocation.

C. Existing trees to be relocated or to remain shall be protected with barricades during construction. Trees or shrubs to remain which are scarred or destroyed shall be replaced at the direction of the Town Forester with the same species, size, and quality at no cost to the Town.

D. Tree pits resulting from relocated material shall be backfilled with clean fill and brought flush with surrounding grade.

1.06 GUARANTEES

A. The Contractor shall guarantee his work in the following way:

1. Any tree or palm that dies or is deemed in unacceptable condition for one year following final project acceptance shall be removed by the Contractor, including root ball, and backfilling of pit, at no cost to the Town.

2. The Contractor shall provide a comparable specimen at no additional cost to the Town.

3. The guarantee shall be enforced if it is deemed by the Town Forester that tree mortality or decline is a product of negligence by the Contractor.

PART 2 – MATERIALS

2.01 SOIL AMENDMENTS

A. Root stimulant shall be Roots Biostimulant, concentrate or powder, as manufactured by LISA Products Corp., (305) 797-6801, or Town-approved equal. Stimulant shall be applied either as a wash, or by injection, mixed per manufacturer’s recommendation.

B. Soil conditioner shall be Lesco Wet, as manufactured by Lesco, Inc. or NoburN, as manufactured by Roots or Town-approved equal.

C. Minor element liquid fertilizer mix shall be Micro Mix liquid as produced by Lesco, Inc., or equal; to be diluted at a rate of 1 gallon per 100 gallons of water and applied at a rate of 50 gallons per 1,000 square feet of canopy, or Iron Roots, applied per manufacturer’s instructions.

D. Time Release Fertilizer tablets shall be Agriform, 15 grams, designation 8-8-8; or approved equal.

2.02 EQUIPMENT

A. Soil amendments shall be injected into the soil by means of a spray apparatus utilizing mechanical agitation to keep powdered amendments suspended.

B. Root pruning equipment shall be designed for this task, and shall produce clean cuts of roots without damage to the resulting root ball.

C. Relocation equipment shall be capable of lifting and transporting trees without damage.

2.03 SOIL

A. Soil to be placed once trees or palms are transplanted shall meet the requirements specified in the Contract Documents.

2.04 WATER

A. Water shall be clean and potable.

2.05 MULCH

A. Grade A Eucalyptus mulch, free of viable weed seeds.

2.06 BRACING AND STAKES

A. All bracing and stakes shall be pressure treated pine. Compression bands shall be stainless steel.

PART 3 – EXECUTION

3.01 EXCAVATING NEAR EXISTING TREES

A. Maintain a minimum 6-foot clearance from all tree trucks except palm trees.

B. Use a 24-inch minimum depth saw cut in pavement or dirt/gravel roadway before start of excavation in areas where there are large trees close to the construction area. No coating application is required after saw cutting roots.

3.02 PREPARATION FOR RELOCATION OF TREES AND PALMS WITHIN THE PROJECT BOUNDARIES

A. Crown Pruning: All trees and palms shall be crown pruned prior to relocation.

1. Broadleaf Trees:

a. All trees are to be trimmed by thinning the crown only, and not by reducing crown dimensions. Trim to conform to NAA standards, including removal of dead wood.

b. Repair any existing injuries to trees including cavities and machinery marks.

2. Palms:

a. Remove all fruits and seed pods, and all but the seven (7) youngest fronds.

b. Tie all remaining fronds with untreated cotton twine or burlap straps.

B. Fertilization and Watering:

1. Preparation: Clear the root ball area of all foreign material, trash, etc., to expose undisturbed soil.

2. Application/Schedule:

a. Trees shall be deep injection fertilized a minimum of 14 days prior to relocation. Specified liquid fertilizer shall be used and applied at the concentration and application rates stated herein.

b. Mix wetting agent, bio-stimulant, and minor element mix to produce a single fluid with each component included at the specified concentration. Inject into the root zone within the limits of proposed root ball at the rate of 50 gallons fluid per 1,000 square feet of tree canopy, using only approved spray equipment.

c. Form an earth berm 6 inches high outside the proposed root ball prior to watering. Water application shall saturate the root ball to its entire depth.

C. Root Pruning:

1. Technique:

a. All trees shall be excavated by digging a trench a minimum of 36 inches deep by 6 inches wide, either by hand or with a trenching machine designed for this purpose. Provide continuous trenching around the tree or palm at a minimum distance of 30 inches from the trunk. Hand cut broadleaf tree roots after trenching to produce clean cuts with no splits or tears.

b. Barricades: Barricade all root pruned trees and palms at outside of soil berm with minimum 4-foot chain link fence or other barricade approved by the Town.

c. Timing:

1) All oaks to be relocated shall be maintained for a minimum of 10 weeks after root pruning prior to relocation.

2) Palms shall be maintained a minimum of 4 weeks prior to relocation.

3.03 RELOCATION OF TREES AND PALMS

A. General: Trees to be relocated shall be as directed by the Engineer.

B. Preparation:

1. Trees and palms shall be injected with soil amendments a minimum of 14 days prior to relocation. Apply at manufacturer's recommended concentration and application rates.

2. Trees and palms shall be thoroughly soaked to the full depth of the root ball daily for seven (7) consecutive days prior to relocation.

3. Accurately locate position and elevation where all trees are intended to be planted, for verification by Town Forester. Verify that no overhead or underground utilities, existing or proposed, conflict with proposed locations.

4. Ascertain that all proposed paths for machinery are clear of utilities and other obstructions.

C. Excavation of Tree Pits: Dig all pits with vertical sides and flat bottom. Existing soil may be utilized as backfill as directed by the Town Forester. All Tree Pits to be lined with root barrier adjacent to roadways and sidewalks as directed by Town.

D. Digging and Handling - Broadleaf Trees:

1. Notify Town 2 business days in advance of each relocation to allow for observation of procedures.

2. Determine line of previous root pruning and excavate around root mass to leave area 12 inches out from line of root pruning undisturbed. Digging shall be accomplished so as to produce clean cuts on all roots without tearing or splitting. Trenching shall be a minimum of 36 inches deep.

3. Trees are to be handled in such a way as to avoid damage to bark and limbs subject to support cables or chains. Attach padded support cables or chains at multiple points where possible. Alternatively, tree trunks may be drilled and doweled for broadleaf trees. The Town Forester reserves the right to require doweling in lieu of lifting by straps.

4. Root balls are to be undercut prior to lifting. Do not force tree from ground prior to undercutting. Ball depth to be determined upon assessing conditions at time of trenching, to keep intact the entire root ball.

5. Trees shall be properly wrapped during moving so trunks will not be scarred and damaged and to avoid broken limbs. Broken limbs or scarred trunks shall cause tree to be unacceptable and rejected at the Town's option. Broken limbs and wounds which do not (in the judgment of the Town Forester) cause the tree to be rejected shall be cleanly cut.

6. Transport plant material on vehicles of adequate size to prevent overcrowding, broken limbs, foliage damage or root ball damage.

7. Root balls and foliage shall be kept moist during all phases of relocation.

8. Partially backfill tree pits with 12 inches of approved planting soil prior to setting tree. This layer of soil to be thoroughly drenched prior to relocation to achieve a stable platform at the correct elevation so that the top of root ball is 1 inch above proposed grade.

9. Rotate tree prior to setting to achieve best positioning relative to adjacent trees and viewing angles.

E. Backfilling:

1. Flood bottom soil layer to settle tree into best position and to remove air pockets.

2. Continue to flood root ball as planting soil is deposited to ensure removal of all air pockets.

3. Create a saucer to retain water.

F. Bracing:

1. Support tree with machinery until bracing is complete.

2. Buttresses may support separate trunks on multiple trunk trees.

3. Maintain braces until completion of project. Removal of braces shall be by others.

G. Watering: Relocated trees shall by watered using water-truck. Watering schedule shall be: once per day for first 6 weeks; followed by 3 times per week for following 6 weeks.

END OF SECTION

SECTION 02 50 00

SURFACE RESTORATION

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Items specified in this Section include repairs to concrete sidewalks and landscaped and grassed areas that may be damaged by Contractor activities.

B. The Contractor shall videotape all areas to be affected by his construction operations. Copies of this videotape will be provided to the Owner. This videotape will be used to verify that all affected areas are restored to original conditions prior to final acceptance of the Work.

C. Furnish and install permanent benchmark as indicated on the Drawings.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Related Sections, but not limited to, the following:

1. Section 01 71 33 – Protection of Work and Property

2. Section 02 48 10 – Tree Relocation and Protection

1.03 SUBMITTALS

A. The Contractor shall submit submittals for review in accordance with the Section entitled “Submittals”.

1.04 PROTECTION OF EXISTING IMPROVEMENTS

A. The Contractor shall be responsible for the protection of all pavements, concrete sidewalks, and other improvements within the work area. All damage to such improvements, as a result of the Contractor's operations, beyond the limits of the work of pavement replacement as described herein, shall be repaired by the Contractor at his expense, as specified hereinafter. Replacement methods and materials shall be as specified in the FDOT Standard Specifications for Road and Bridge Construction.

1.05 GUARANTEE

A. The Contractor shall guarantee all trees, ground cover or shrubs planted or replanted under this Contract for a period of one (1) year beyond acceptance of the project. In the event that any new tree, plant or shrub dies within the guarantee period, the Contractor shall be responsible for replacement in kind. In the event that a transplanted (reused) tree dies within the guarantee period, the Contractor shall be responsible for replacement in

kind, except that the maximum height of any new tree shall be eight feet as measured from the ground surface, once planted, to the top of the tree.

1.06 QUALITY ASSURANCE

A. All landscape work and installation shall be in full compliance with local and state codes standards and regulations, the State of Florida "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways" and "Manual of Traffic Control and Safe Practices for the Streets and Highway Construction Maintenance and Utility Operation." (Commonly known as the "Florida Greenbook").

PART 2 – PRODUCTS

2.01 CONCRETE

A. Concrete shall conform to the requirements of the Division 3 Specifications.

2.02 REPLACEMENT TREES, GROUND COVER AND SHRUBS

A. Replacement trees, ground cover and shrubs shall be of the same type and size and be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae.

2.03 MULCH

A. Mulch shall be windproof shredded eucalyptus; mulch shall be clean, fresh, and free of branches and other foreign matter. Mulch shall be used around all shrubs, ground covers and tree trunks, and placed to a minimum depth of 2 inches.

PART 3 – EXECUTION

3.01 GRADING

A. Existing Soil Conditions: The Contractor shall notify the Owner when conditions detrimental to plant growth are encountered before proceeding with any planting operations. The Contractor shall not remove any existing plant material not noted on Drawings.

B. Removal of Rubbish: Any objectionable materials such as stones or construction debris encountered on the field shall be promptly removed from the site before beginning any planting operations.

C. The Contractor shall regrade the work areas disturbed by his construction activities to the existing grades prior to commencement of construction.

3.02 FINAL ACCEPTANCE

A. A final review of all surface restoration shall be made by the Owner and the Contractor prior to the conclusion of the warranty period upon written notice requesting such review submitted by the Contractor prior to the anticipated date. After review, the Contractor shall be notified of acceptance or deficiencies in the work and subject to rechecking before final acceptance. The warranty period for all replacements shall be extended for an additional one (1) year.

END OF SECTION

SECTION 03 31 10

CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Section includes cast-in-place concrete work.

B. Provide all labor, equipment, materials, and services necessary for all cast-in-place concrete work, including the composition, transportation, and placement of the concrete mix, and for all formwork, reinforcement, finishing and curing of all plain and reinforced concrete work, as shown on the Drawings.

C. The requirements in this section shall apply to the following types of concrete:

1. Class A Concrete: Normal weight structural concrete in all structures other than environmental concrete structures as described above, and for all sidewalks and pavement.

2. Class B Concrete: Normal weight structural concrete used for duct bank encasements, catch basins, fence and guard post embedment, concrete fill, and other areas where specifically noted on Contract Drawings.

1.02 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Without limiting the generality of the Specifications, all work herein shall conform to or exceed the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

1. Florida Building Code

2. ACI 117 – Specification for Tolerances for Concrete Construction and Materials and Commentary

3. ACI 214 – Guide to Evaluation of Strength Test Results of Concrete

4. ACI 301 – Specifications for Structural Concrete

5. ACI 304 – Guide for Measuring, Mixing, Transporting, and Placing Concrete

6. ACI 305.1 – Specification for Hot Weather Concreting

7. ACI 306.1 – Standard Specification for Cold Weather Concreting

8. ACI 308.1 – Specification for Curing Concrete
9. ACI 309 – Guide for Consolidation of Concrete
10. ACI 315 - Details and Detailing of Concrete Reinforcing
11. ACI 318 – Building Code Requirements for Structural Concrete and Commentary
12. ACI 347 – Recommended Practice for Concrete Formwork
13. ACI 350 – Code Requirements for Environmental Engineering Concrete Structures
14. ACI SP66 - ACI Detailing Manual
15. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcing
16. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field
17. ASTM C33 – Standard Specification for Concrete Aggregates
18. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
19. ASTM C42 – Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
20. ASTM C94 – Standard Specification for Ready-Mixed Concrete
21. ASTM C114 – Standard Test Method for Chemical Analysis of Hydraulic Cement
22. ASTM C138 – Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
23. ASTM C143 – Standard Test Method for Slump of Hydraulic Cement Concrete
24. ASTM C150 – Standard Specification for Portland Cement
25. ASTM C171 – Standard Specifications for Sheet Materials for Curing Concrete
26. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete
27. ASTM C192 – Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
28. ASTM C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

29. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete

30. ASTM C309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete

31. ASTM C457 – Standard Test Method for Microscopical Determination of the Air-Void System in Hardened Concrete

32. ASTM C494 – Standard Specification for Chemical Admixtures for Concrete

33. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete

34. ASTM C989 – Standard Specification for Slag Cement for Use in Concrete and Mortars

35. ASTM C1077 – Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation

36. ASTM C1315 – Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete

37. ASTM C1602 – Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

38. ASTM C1778 – Standard Guide for Reducing the Risk of Deleterious Alkali – Aggregate Reaction in Concrete

39. CRSI - Concrete Reinforcing Institute Manual of Standard Practice

40. U.S. Product Standard for Concrete Forms, Class I, PS 1

1.03 SUBMITTALS

A. Submit the following.

1. Concrete mix design for each class of concrete.

2. Field experience records for the proposed concrete mixes for each class of concrete specified herein.

3. mix data for each class of concrete.

4. Sources of all materials and certifications of compliance with specifications for all materials.

5. Certified current (less than 6 months old) chemical analysis of the Portland Cement or Blended Cement to be used. For Type IL cement, submit updated cement mill test reports every 6 months while active concrete work is being performed.

6. Manufacturer's data on all admixtures stating compliance with required standards.

7. Manufacturer's mill certificates for reinforcing steel.

8. Detailed placing and shop fabricating drawings, prepared in accordance with ACI 315 and ACI Detailing Manual - (SP66), for all concrete reinforcing. These drawings shall be made to such a scale as to clearly show the arrangement, spacing and splicing of the bars. These drawings shall include proposed bar supports, bar schedules, stirrup spacing, splice lengths, diagrams of bent bars, arrangements, and assemblies, as required for fabrication and placing concrete reinforcing.

9. Manufacturer's data on proposed formwork system, form release agent and form ties.

10. Proposed procedures for protection and curing of concrete under normal conditions, wet weather placement conditions, hot weather conditions, and cold weather conditions. Including proposed method of measuring concrete surface temperature changes.

1.04 QUALITY ASSURANCE

A. Field quality control tests, as specified in Article 3.08, unless otherwise stated, will be performed by a materials testing consultant employed by the Owner. However, the Contractor shall be charged for the cost of any additional tests and investigation on work performed which does not meet the Specifications. Any individual who samples and tests concrete to determine if the concrete is being produced in accordance with this Specification shall be certified as a Concrete Field-Testing Technician, Grade I, in accordance with ACI CP-2. Testing laboratory shall conform to requirements of ASTM C1077.

PART 2 – PRODUCTS

2.01 FORMS AND FALSEWORK

A. All forms shall be smooth surface forms and conform to the requirements of ACI 347.

B. The Contractor shall furnish all labor and materials for all forms required for the construction of the Work.

C. Either metal or wood forms may be used.

D. All forms shall be true to the required shape, clean, of sufficient strength, and well braced so that they shall maintain their proper position during the placing and vibrating of the concrete

2.02 STEEL REINFORCEMENT

A. Steel reinforcement shall be detailed, fabricated, and placed in conformance with all applicable requirements of ACI 318, and the CRSI Manual of Standard Practice.

B. Steel reinforcing bars shall conform to ASTM A615, Grade 60, unless otherwise specified.

C. Welded wire fabric shall conform to ASTM A185.

D. Steel wire shall conform to ASTM A82.

E. All metal accessories for setting and fastening of reinforcement shall conform to CRSI Manual of Standard Practice.

2.03 HYDRAULIC CEMENT

A. Portland Cement

1. Portland Cement shall be Type II conforming to ASTM C150. Type I cement may be used provided either fly ash or slag cement is also included in the mix in accordance with Articles 2.04 or 2.05, respectively.

2. The proposed Portland Cement shall not contain more than 8% tricalcium aluminate and more than 12% tetracalcium aluminoferrite.

B. Blended Cement

1. Blended cements shall be Type IP (Portland Fly Ash Cement), Type IS (Portland Slag Cement), or Type IL (Portland Limestone Cement) conforming to ASTM C595.

2. Type IP cement shall be an inter-ground blend of Portland Cement and fly ash in which the fly ash constituent is between 15% and 25% of the weight of the total blend.

3. Type IS cement shall be an inter-ground blend of Portland Cement and slag cement in which the slag cement constituent is between 30% and 40% of the weight of the total blend.

4. Type IL cement shall be an inter-ground blend of Portland Cement and limestone in which the limestone constituent is between 5% and 15% of the weight of the total blend.

5. Fly ash, slag cement, and limestone used in the production of blended cements shall meet the requirements of Articles 2.04, 2.05, and 2.06 respectively.

6. Cements meeting ASTM C1157 shall not be used in manufacture of blended cements.

7. Blended cement shall meet the Physical Requirements of Tables 2 and 3 of ASTM C595 including the requirements for high sulfate resistance in Table 3 as tested per ASTM C1012.

2.04 FLY ASH

A. Fly ash shall meet the requirements of ASTM C618 for Class F, except that the loss on ignition shall not exceed 4%. Fly ash shall also meet the optional physical requirements for uniformity as shown in Table 3 of ASTM C618. Fly ash shall be considered as a supplemental cementitious material.

B. Where fly ash is used, the minimum fly ash content shall be 15%.

2.05 SLAG CEMENT

A. Slag cement shall meet the requirements of ASTM C989 including tests for effectiveness of slag in preventing excessive expansion due to alkali-aggregate reactivity as described in Appendix X-3 of ASTM C989.

B. Where Slag Cement is used, the minimum Slag Cement content shall be 30%, and the maximum Slag Cement content shall be 40%.

2.06 PORTLAND LIMESTONE CEMENT (TYPE IL)

A. Portland Limestone Cement (Type IL) cement shall meet the requirements of ASTM C595.

B. Limestone used for blended cement Type IL shall be naturally occurring and meet the requirements of ASTM C33.

C. Fly ash or slag cement shall be used with Type IL cement to meet requirements for durability, ASR resistance, sulfate resistance, and use for environmental structures, as specified herein.

2.07 WATER

A. Water used for mixing concrete shall be clear, potable, and free from deleterious substances such as objectionable quantities of silty organic matter, alkali, salts, and other impurities.

B. Water shall meet requirements of ASTM C1602.

2.08 AGGREGATES

A. All aggregates used in normal weight concrete shall conform to ASTM C33.

B. Fine Aggregate (Sand) in the various concrete mixes shall consist of natural or manufactured siliceous sand, clean and free from deleterious substances, and graded within the limits of ASTM C33.

C. Coarse aggregates shall consist of hard, clean, durable gravel, crushed gravel, or crushed rock. Coarse aggregate shall be size #57 or #67 as graded within the limits given in ASTM C33 unless otherwise specified.

D. All aggregates shall be non-reactive according to ASTM C1778 if concrete not proportioned for alkali loading in accordance with 2.07.

E. All aggregates shall be sourced from a FDOT approved producer.

2.09 ADMIXTURES

A. Admixtures containing calcium chloride, thiocyanates or more than 0.05% chloride ions are not permitted. The addition of admixtures to prevent freezing is not permitted.

B. All admixtures shall be compatible and made by the same manufacturer.

C. Air entraining admixture shall be added to all concrete unless noted otherwise. The air entraining admixture shall conform to ASTM C260.

D. Water reducing admixture shall conform to ASTM C494, Type A.

E. High-range water reducing admixture shall conform to ASTM C494, Type F or G. The high range water reducer shall be added to the concrete at the batch plant and may be used in conjunction with a water reducing admixture.

F. A non-chloride, non-corrosive accelerating admixture may be used where specifically approved by the Engineer. The admixture shall conform to ASTM C494, Type C or E.

G. A retarding admixture may be used where specifically approved by the Engineer. The admixture shall conform to ASTM C494, Type B or D.

H. Workability Retaining Admixture shall conform to ASTM C494, Type S.

I. The Contractor shall submit manufacturer's data including the chloride ion content of each admixture and certification from the admixture manufacturer that all admixtures utilized in the design mix are compatible with one another and properly proportioned prior to mix design review.

2.10 CONCRETE MIX DESIGN

A. The proportions of cement, aggregates, admixtures, and water used in the concrete mixes shall be based on the results of laboratory trial mixes in conformance with ACI 301.

B. Structural concrete shall conform to the following requirements. Cementitious materials refer to the total combined weight of all cement, fly ash, and slag cement contained in the mix.

1. Compressive Strength (28-Day)

Concrete Class A	4,500 psi (minimum)
Concrete Class B	3,000 psi (minimum)

2. Water/cementitious materials ratio, by weight

	Maximum	**Minimum**
Concrete Class A	0.42	0.39
Concrete Class B	0.50	0.39

3. Slump range

a. 4" nominal unless high range water reducing admixture is used

b. 8” max if high range water reducing admixture is used.

4. Air Content

Concrete Class A	6% ±1.5%
Concrete Class B	3% Max (non-air-entrained)

2.11 CURING COMPOUND

A. Clear curing and sealing compound shall be a clear styrene acrylate type complying with ASTM C1315, Type 1, Class A with a minimum solids content of 30%. Moisture loss shall not be greater than 0.40 kg/m2 when applied at manufacturer’s recommended volume for square feet of area. Manufacturer’s certification is required. Acceptable products are Super Diamond Clear VOX by the Euclid Chemical Company.

B. Where specifically approved by Engineer, on slabs to receive subsequent applied finishes, compound shall conform to ASTM C309. Acceptable products are “Kurez DR VOX” or

"Kurez W VOX" by the Euclid Chemical Company. Install in strict accordance with manufacturer's requirements.

2.12 EVAPORATION REDUCER

A. Evaporation reducer shall be "MasterKure ER 50" by Master Builders Solutions, or "Euco-Bar" by Euclid Chemical Company.

B. All freshly placed horizontal surfaces and flatwork shall receive application of evaporation reducer as soon as concrete has been placed and screeded or between finishing operations to reduce surface moisture evaporation.

PART 3 – EXECUTION

3.01 FORMS AND FALSEWORK

A. Forms and falsework shall be designed for total dead load, plus all construction live load as outlined in ACI 347. Design and engineering of formwork and safety considerations during construction shall be the responsibility of the Contractor.

B. Design, erect, shore, brace and maintain formwork according to ACI 301.

C. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

D. Forms shall be smooth and free from surface irregularities. Adjacent edges shall be held tightly together for accurate alignment. Forms shall be true to line and grade and shall be sufficiently rigid to prevent displacement and sagging between supports.

E. All vertical surfaces of concrete members shall be formed, unless specifically noted otherwise.

F. All forms shall be constructed in such a manner that they can be removed without hammering or prying against the concrete.

G. Suitable moldings shall be placed to bevel or round all exposed corners and edges of beams, columns, walls, slabs, and equipment pads. Chamfers shall be 3/4 inch unless otherwise noted.

H. Forms for concrete surfaces that will not be subsequently waterproofed shall be coated with a form release agent. Form release agent shall be applied on formwork in accordance with manufacturer's recommendations.

I. The inner faces of all forms shall be thoroughly cleaned prior to concreting. Forms may be reused only if in good condition and only if acceptable to the Engineer. Light sanding between uses will be required wherever necessary to obtain uniform surface texture.

Unused tie rod holes in forms shall be covered with metal caps or shall be filled by other methods acceptable to the Engineer.

J. Forms shall not be disturbed until the concrete has attained sufficient strength. Sufficient strength shall be demonstrated by structural analysis considering proposed loads, strength of forming and shoring system, and concrete strength data. Formwork shall remain in place for 7 days minimum after concrete placement, or as approved by the Engineer.

3.02 REINFORCING STEEL

A. Reinforcing steel shall be accurately formed to the dimensions and shapes shown on the Drawings and the fabricating details shall be prepared in accordance with ACI 315 and ACI 318.

B. No fabrication shall commence until approval of Shop Drawings has been obtained.

C. All reinforcing shall be neatly bundled and tagged for placement when delivered to the job site. Bundles shall be properly identified for coordination with mill test reports. Reinforcing steel shall be stored above ground on platforms or other supports and shall always be protected from the weather by suitable covering

D. The surfaces of all reinforcing steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

E. Reinforcing steel placement shall comply with CRSI's "Manual of Standard Practice".

F. Reinforcing steel shall be accurately positioned as shown on the Drawings and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcing steel shall be supported by concrete, plastic or plastic protected (CRSI Class 1) metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcing steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used in sufficient numbers to support the reinforcing bars without settlement. In no case shall concrete block supports be continuous.

G. Reinforcing placing, spacing, and protection tolerances shall be within the limits specified in ACI 318 except where in conflict with the Building Code, unless otherwise specified.

H. Tie wires shall be bent away from the forms to provide the specified concrete coverage.

I. Reinforcing bar splices shall only be used at locations shown on the Drawings or where approved by the Engineer. The length of lap slices for reinforcing bars, unless otherwise shown on the Drawings, shall be in accordance with ACI 318 for a class B splice.

J. The Contractor shall advise the Engineer of intentions to place concrete and shall allow adequate time to inspect all reinforcing steel before concrete is placed.

3.03 PRODUCTION OF CONCRETE

A. All concrete shall be machine mixed. Hand mixing of concrete will not be permitted.

B. Ready-Mixed Concrete

1. Ready-mixed concrete shall meet the requirements for materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C94.

2. Truck mixers shall be equipped with electrically actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type, and shall be mounted in the driver's cab. The counters shall be actuated at the time of starting mixers at mixing speeds.

3. Each batch of concrete shall be mixed in a truck mixer for not less than 100 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment.

4. Ready-mixed concrete shall be delivered to the site for the work and discharge shall be completed within the time requirements of this Section.

5. Every concrete delivery shall be accompanied by a delivery ticket containing at least the following information:

a. Date and truck number

b. Ticket number

c. Mix designation of concrete

d. Cubic yards of concrete

e. Cement brand, type, and weight in pounds

f. Weight in pounds of fine aggregate (sand)

g. Weight in pounds of coarse aggregate (stone)

h. Air entraining agent, brand, and weight in pounds and ounces

i. Other admixtures, brand, and weight in pounds and ounces

j. Water, in gallons, stored in attached tank

k. Water, in gallons, maximum that can be added without exceeding design water/cementitious materials ratio

l. Water, in gallons, used (by truck driver)

m. Time of loading

n. Time of delivery to job (by truck driver)

6. Any truck delivering concrete to the job site, which is not accompanied by a delivery ticket showing the above information will be rejected and such truck shall immediately depart from the job site.

7. The use of non-agitating equipment for transporting ready-mixed concrete will not be permitted. Combination truck and trailer equipment for transporting ready-mixed concrete will not be permitted. The quality and quantity of materials used in ready-mixed concrete and in batch aggregates shall be subject to inspection at the batching plant by the Engineer.

3.04 CONCRETE PLACEMENT

A. No concrete shall be placed prior to approval of the concrete mix design. Concrete placement shall conform to the recommendations of ACI 304.

B. Prior to concrete placement, all reinforcement shall be securely and properly fastened in its correct position. Formwork shall be clean, oiled and form ties at construction joints shall be retightened. All bucks, sleeves, castings, hangers, pipe, conduits, bolts, anchors, wire, and any other fixtures required to be embedded therein shall be in place. Forms for openings to be left in the concrete shall be in place and anchored by the Contractor. All loose debris in bottoms of forms or in keyways shall be removed and all debris, water, snow, ice, and foreign matter shall be removed from the space to be occupied by the concrete. The Contractor shall notify the Engineer in advance of placement, allowing sufficient time for a concurrent inspection and for any corrective measures required.

C. All concrete shall be placed during the daylight hours except with the consent of the Engineer. If special permission is obtained to carry on work during the night, adequate lighting must be provided.

D. When concrete arrives at the project with slump below that suitable for placing, as indicated by the Specifications, water may be added to bring the concrete within the specified slump range provided the design water-cementitious materials ratio is not exceeded. The water shall be incorporated by additional mixing equal to at least half of the total mixing required. Water may be added only to full trucks. On-site tempering shall not relieve the Contractor from furnishing a concrete mix meeting all specified requirements.

E. Concrete shall be conveyed as rapidly as practical to the point of deposit by methods which prevent the separation or loss of the ingredients. The concrete shall be deposited so that additional handling will be unnecessary. Discharge of the concrete to its point of deposit shall be completed within 90 minutes after the addition of the cement to the aggregates unless workability-retaining admixtures are included and approved by the Engineer. In hot weather (air temperature greater than 85 degrees F), or under conditions contributing to quick stiffening of the concrete, the time between the introduction of the cement to the aggregates and discharge shall not exceed 60 minutes.

F. Where concrete is conveyed to position by chutes, a continuous flow in the chute shall be maintained. The angle and discharge arrangement of the chute shall be such to prevent segregation of the concrete ingredients. The delivery end of the chute shall be as close as possible to the point of deposit and in no case shall the free pour from the delivery end of the chute exceed five feet, unless approved otherwise.

G. Placing of concrete shall be regulated so the pressure caused by the wet concrete shall not exceed that used in the design of the forms.

H. Concrete shall be placed to thoroughly embed all reinforcement, inserts, and fixtures.

I. When forms are removed, surfaces shall be even and dense, free from aggregate pockets or honeycomb. Concrete shall be consolidated using mechanical vibration, supplemented by forking and spading by hand in the corners and angle of forms and along form surfaces while the concrete is plastic under the vibratory action. Consolidation shall conform to ACI 309.

J. Mechanical vibration shall be applied directly to the concrete, unless otherwise approved by the Engineer. The bottom of vibrators used on floor slabs must not be permitted to ride the form supporting the slab. Vibration shall be applied at the point of deposit and in freshly placed concrete by a vertical penetration of the vibrator. Vibrators shall not be used to move concrete laterally within the forms.

K. The intensity of vibration shall be sufficient to cause settlement of the concrete into place and to produce monolithic joining with the preceding layer. Vibration shall be of sufficient duration to accomplish thorough compaction and complete embedment of reinforcement and fixtures with a vibrator transmitting not less than 7,500 impulses per minute. Since the duration of vibration per square foot of surface is dependent on the frequency (impulses per minute), size of vibrator, and slump of concrete, the length of time must therefore be determined in the field. Vibration shall not be continued in any one location to the extent that pools of grout are formed.

L. Care shall be taken to prevent cold joints when placing concrete in any portion of the work. The concrete placing rate shall ensure that each layer is placed while the previous layer is soft or plastic, so the two layers can be made monolithic by penetration of the vibrators. Maximum thickness of concrete layers shall be 18 inches. The surface of the concrete shall be level whenever a run of concrete is stopped.

M. Concrete shall not be placed during rains sufficiently heavy or prolonged to prevent washing of mortar from coarse aggregate on the forward slopes of the placement. Once placement of concrete has commenced in a block, placement shall not be interrupted by diverting the placing equipment to other uses.

N. Cold weather concreting procedures shall conform to the requirements of ACI 301 and ACI 306.1.

O. Hot weather concreting procedures shall conform to the requirements of ACI 301 and ACI 305.1.

3.05 PLACING FLOOR SLABS ON GROUND

A. The subgrade for slabs on ground shall be well drained and of adequate and uniform loadbearing nature. The in-place density of the subgrade soils shall be at least the minimum required by the specifications. No foundation, slab, or pavement concrete shall be placed until the depth and character of the foundation soils have been inspected and approved by the materials testing consultant.

B. The subgrade shall be free of frost before concrete placing begins. If the temperature inside a building where concrete is to be placed is below freezing, the temperature shall be raised and maintained above 50° long enough to remove all frost from the subgrade.

C. The subgrade shall be moist at the time of concreting. If necessary, the subgrade shall be dampened with water in advance of concreting, but no free water shall remain standing on the subgrade nor any muddy or soft spots when the concrete is placed.

D. Thirty-pound felt-paper shall be provided between edges of slabs-on-ground and vertical and horizontal concrete surfaces, unless otherwise indicated on the Drawings.

E. Contraction joints shall be provided in slabs-on-ground at locations indicated on the Drawings.

F. Floor slabs shall be screeded level or pitched to drain as indicated on the Drawings.

3.06 FINISHING

A. Finishes on Formed Concrete Surfaces

1. Rough Finish

a. Rough finish shall be provided only for concrete surfaces not exposed to view.

b. Rough finish is defined as as-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Honeycombs shall be chipped back to solid concrete and repaired as directed by the Engineer.

Remove fins and other projections that exceed specified limits on formed-surface irregularities.

2. Grout Cleaned Finish

   a. Grout cleaned finish shall be provided for concrete surfaces exposed to view.

   b. Grout cleaned finish shall be applied after completion of a rough finish. After the concrete has been pre-dampened over an extended amount of time to reach the condition of saturated surface dry (SSD), a slurry consisting of one part cement (including an appropriate quantity of white cement to produce a color matching the surrounding concrete) and 1-1/2 parts sand passing the No. 16 sieve, by damp loose volume, shall be spread over the surface with clean burlap pads or sponge rubber floats. Any surplus shall be removed by scraping and then rubbing with clean burlap.

3. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated

B. Finishes on Floors and Slabs

1. General: Comply with ACI 302.1R recommendations for screeding, and finishing operations for concrete surfaces. Do not wet concrete surfaces. All edges shall be edged with a 1/8-inch tool as directed by the Engineer.

2. Float Finish

   a. Float finish shall be applied to floors of process basins, wetwells, and flow channels.

   b. Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes until surface is left with a uniform, smooth, granular texture.

3. Trowel Finish

   a. Trowel finish shall be applied to equipment pads and interior finish floors which are not continuously or intermittently wet or floors that are to receive tile, flooring, or carpeting.

   b. Trowel finish shall be applied after the completion of a float finish. When the concrete has hardened sufficiently to prevent excess fine material from working to the surface, the surface shall be compacted and smoothed with not

less than two thorough and complete troweling operations. Continue troweling passes until surface is free of trowel marks and uniform in texture and appearance.

4. Broom Finish

   a. Broom finish shall be applied to all pedestrian surfaces exposed to weather and all interior finish floors which are continuously or intermittently wet.

   b. Broom finish shall be applied after completing a trowel finish. This finish shall provide the surface with a transverse scored texture by drawing a broom or burlap belt across the surface immediately after completion of a trowel finish.

3.07 CURING

A. General: Concrete curing procedures shall be in accordance with ACI 308.1. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305.1 for hot-weather protection during curing.

B. As soon as the concrete has been placed and horizontal top surfaces have received their required finish, provisions shall be made for maintaining the concrete in a moist condition for at least a 7-day period thereafter. Horizontal surfaces shall be kept covered, and intermittent, and localized drying will not be permitted.

C. Walls that will be exposed on one side with either fluid or earth backfill on the opposite side shall be continuously wet cured for a minimum of seven days. Use of a curing compound will not be acceptable for applications of this type.

D. The Contractor shall use one of the following methods to ensure that the concrete remains in a moist condition for the minimum period stated above:

   1. Ponding or continuous fogging or sprinkling.

   2. Application of mats or fabric kept continuously wet.

   3. Continuous application of steam (under 150°F).

   4. Application of sheet materials conforming to ASTM C171.

   5. If approved by the Engineer, application of a curing compound.

E. The Contractor shall keep absorbent wood forms wet until they are removed. After form removal, the concrete shall be cured by one of the specified methods.

F. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall

within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.08 QUALITY CONTROL

A. Testing of Concrete

1. The Contractor shall coordinate with the Engineer's project representative the on-site scheduling of the materials testing consultant personnel as required for concrete testing.

2. Concrete for testing shall be supplied by the Contractor at no additional cost to the Owner, and the Contractor shall assist the materials testing consultant in obtaining samples. The Contractor shall dispose of and clean up all excess material.

3. Testing of composite samples of fresh concrete obtained according to ASTM C172 shall be performed according to the following requirements.

   a. Testing Frequency

      1) In general, one sampling shall be taken for each placement greater than five (5) cubic yards, with a minimum of one (1) sampling for each day of concrete placement operations, or for each one hundred (100) cubic yards of concrete, whichever is greater.

   b. Slump shall be tested in accordance with ASTM C143, with one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.

   c. Air Content shall be tested in accordance with ASTM C231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

   d. Concrete Temperature shall be tested in accordance with ASTM C1064, with one test hourly when air temperature is 40 degrees F and below and when 80 degrees F and above, and one test for each composite sample.

   e. Unit Weight: Perform one test for each composite sample.

   f. Compression Test Specimens shall be tested in accordance with ASTM C31. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.

   g. Compressive-Strength Tests shall be performed in accordance with ASTM C39, with test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.

1) Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.

2) A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

B. Evaluation and Acceptance of Concrete

1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 214, ACI 318, and ACI 350.

2. The strength level of concrete will be considered satisfactory if the following conditions are satisfied.

a. Every arithmetic average of any three consecutive strength tests equals or exceeds the minimum specified 28-day compressive strength for the mix.

b. No individual compressive strength test result falls below the minimum specified strength by more than 500 psi.

3. If any of the conditions listed above are not met, the mix proportions shall be corrected for the next concrete placing operation.

4. If condition 2B is not met, additional tests shall be performed.

5. All concrete which fails to meet the ACI requirements, and these specifications is subject to removal and replacement at no additional cost to the Owner.

6. When non-compliant concrete is identified, test reports shall be sent immediately to the Engineer for review.

C. Additional Tests

1. When ordered by the Engineer, additional tests on in-place concrete shall be provided and paid for by the Contractor.

2. If the 28-day test cylinders fail to meet the minimum strength requirements, the Contractor shall have concrete core specimens obtained and tested in accordance with ASTM C42, or by other methods as directed by the Engineer.

3. If the concrete placed by the Contractor is suspected of not having proper air content, the Contractor shall engage a materials testing consultant approved by the Engineer, to obtain and test samples for air content in accordance with ASTM Specification C457.

3.09 CARE AND REPAIR OF CONCRETE

A. The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Care shall be exercised to avoid jarring forms or placing any strain on the ends of projecting reinforcing bars. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired, or removed and replaced with acceptable concrete at no additional cost to the Owner.

B. Areas of honeycomb shall be chipped back to sound concrete and repaired as directed.

C. Concrete formwork blowouts or unacceptable deviations in tolerances for formed surfaces due to improperly constructed or misaligned formwork shall be repaired as directed. Bulging or protruding areas, which result from slipping or deflecting forms shall be ground flush or chipped out and redressed as directed.

D. Areas of concrete in which cracking, spalling, or other signs of deterioration develop prior to final acceptance shall be removed and replaced or repaired as directed. This stipulation includes concrete that has experienced cracking due to drying or thermal shrinkage of the concrete. Structural cracks shall be repaired using an approved epoxy injection system. Non-structural cracks shall be repaired using an approved hydrophilic resin pressure injected grout system unless other means of repair are deemed necessary and approved. All repair work shall be performed at no additional cost to the Owner.

END OF SECTION

SECTION 26 05 00
BASIC ELECTRICAL REQUIREMENTS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish all labor, materials, tools, and equipment, and perform all work and services necessary for, or incidental to, the furnishing and installation of all electrical work as shown on the Drawings, and as specified in accordance with the provisions of the Contract Documents, and completely coordinate with the work of other trades involved in the general construction. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation shall be furnished and installed as part of this work. The Contractor shall obtain approved Shop Drawings showing wiring diagrams, connection diagrams, roughing-in, and hook up details for all equipment and comply therewith. All electrical work shall be complete and left in operating condition in accordance with the intent of the Drawings and the Specifications for the electrical work.

B. The electrical scope of work for this project primarily includes, but is not limited to, the following:

1. Furnish and install electrical power equipment including an automatic transfer switch, utility service entrance circuit breaker, and a standby diesel generator.

2. Furnish and install power and lighting panelboards and other low voltage electrical power distribution equipment.

3. Furnish and install all aboveground raceway systems including conduit, fittings, boxes, supports, and other pertinent components.

4. Furnish and install all underground raceway systems including conduit, fittings, handholes and other pertinent components.

5. Furnish and install all low voltage wire and cable resulting in a complete and operable electrical system.

6. Other electrical work as specified herein and indicated on the Drawings.

C. All material and equipment shall be the product of an established, reputable, and approved manufacturer; shall be new and of first-class construction; shall be designed and guaranteed to perform the service required; and shall bear the Label of approval of the Underwriters Laboratories, Inc., where such approval is available for the product of the listed manufacturer as approved by the Engineer.

D. When a specified or indicated item has been superseded or is no longer available, the manufacturer's latest equivalent type or model of material or equipment as approved by the Engineer shall be furnished and installed at no additional cost to the Owner.

E. Where the Contractor's selection of equipment of specified manufacturers or additionally approved manufacturers requires changes or additions to the system design, the Contractor shall be responsible in all respects for the modifications to all system designs, subject to approval of the Engineer. The Contractor's bid shall include all costs for all work of the Contract for all trades made necessary by such changes, additions or modifications or resulting from any approved substitution.

F. Furnish and install all stands, racks, brackets, supports, and similar equipment required to properly serve the equipment which is furnished under this Contract, or equipment otherwise specified or indicated on the Drawings.

G. All electrical components and systems (e.g., conduit and other raceways, freestanding equipment, etc.) and their anchorage, including electrical equipment foundations, shall be designed to resist the controlling load combination of gravity loads, operational forces, wind forces, seismic forces, thermal loads, and any other applicable forces required in accordance with the governing Building Code. Seismic design shall be in accordance with ASCE 7 Chapter 13 unless the nonstructural component meets the criteria to be exempt.

1.02 EQUIPMENT LOCATION

A. The Drawings show the general location of feeders, transformers, equipment, devices, conduits, and circuit arrangements. Because of the small scale of the Drawings, it is not possible to indicate all of the details involved. The Contractor shall carefully investigate the structural and finish conditions affecting the work and shall arrange such work accordingly. Contractor shall furnish and install such fittings, junction boxes, and accessories as may be required to meet such conditions. The Contractor shall refer to the entire Drawing set to verify openings, special surfaces, and location of other equipment, or other special equipment prior to roughing-in for panels, switches, and other outlets. The Contractor shall verify all equipment dimensions to ensure that proposed equipment will fit properly in spaces indicated.

B. Where outlets are shown near identified equipment furnished by this or other Contractors, it is the intent of the Specifications and Drawings that the outlet be located at the equipment to be served. The Contractor shall coordinate the location of these outlets to be near the final location of the equipment served whether placed correctly or incorrectly on the Drawings.

1.03 LOCAL CONDITIONS

A. The Contractor shall examine the site and become familiar with conditions affecting the work. The Contractor shall investigate, determine, and verify locations of any overhead or buried utilities on or near the site, and shall determine such locations in conjunction with

all public and/or private utility companies and with all authorities having jurisdiction (AHJs). All costs, both temporary and permanent to connect all utilities, shall be included in the Bid. The Contractor shall be responsible for scheduling and coordinating with the local utility for temporary and permanent services.

B. In addition, the Contractor shall relocate all duct banks, lighting fixtures, receptacles, switches, boxes, and other electrical equipment as necessary to facilitate the Work included in this project. Costs for such work shall be included in the Bid.

C. The Contractor is responsible for coordinating all electric utility equipment installations with the serving electric utility. The Contractor shall furnish and install all electric utility equipment required by the electric utility to be installed by the Contractor whether specifically shown on the Drawings or not.

D. The Contractor shall furnish and install the following electric utility equipment as a minimum:

1. Concrete transformer/equipment pads constructed in accordance with utility requirements and/or as instructed by the electric utility.

2. Primary and /or secondary conduits/ductbank and manholes.

3. Metering equipment cabinets and/or bases.

4. Conduit and wire required from metering cabinet to metering current transformers and potential transformers.

5. Secondary conductors.

6. Secondary terminations.

E. The electric utility will furnish and install the following equipment:

1. Primary conductors and terminations.

2. Utility Transformer.

F. The Contractor is responsible for ensuring all electric utility equipment and construction installed by the Contractor is furnished and installed in accordance with the electric utility's design specifications and requirements. The Contractor is fully responsible for coordinating all required work with the electric utility. Any additional required electric utility construction or equipment not specified herein or shown on the Drawings shall be supplied by the Contractor at no additional cost to the Owner.

1.04 SUBMITTALS

A. In accordance with the procedures and requirements set forth in Section 01 33 00 –

Submittal Procedures and the requirements of the individual Specification Sections, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings
2. Operation and Maintenance Manuals
3. Spare Parts List
4. Proposed Testing Methods and Reports of Certified Shop Tests
5. Reports of Certified Field Tests
6. Manufacturer’s Representative’s Certification

B. Submittals shall be sufficiently complete in detail to enable the Engineer to determine compliance with Contract requirements.

C. Submittals will be approved only to the extent of the information shown. Approval of an item of equipment shall not be construed to mean approval for components of that item for which the Contractor has provided no information.

D. Some individual electrical specification sections may require a Compliance, Deviations, and Exceptions (CD&E) letter to be submitted. If the CD&E letter is required and shop drawings are submitted without the letter, the submittal will be rejected. The letter shall include all comments, deviations, and exceptions taken to the Drawings and Specifications by the Contractor AND Equipment Manufacturer/Supplier. This letter shall include a copy of the applicable specification section(s). In the left margin beside each and every paragraph/item, a letter "C", "D", or "E" shall be typed or written in. The letter "C" shall be for full compliance with the requirement. The letter "D" shall be for a deviation from the requirement. The letter "E" shall be for taking exception to a requirement. Any requirements with the letter "D" or "E" beside them shall be provided with a full typewritten explanation of the deviation/exception. Handwritten explanation of the deviations/exceptions is not acceptable. The CD&E letter shall also address deviations and exceptions taken to each Drawing related to the applicable specification section(s).

E. Submit design for all nonstructural electrical components and systems and their anchorage in accordance with the governing Building Code.

1.05 APPLICABLE CODES AND REQUIREMENTS

A. Conformance

1. Unless otherwise noted, all work, equipment, and materials furnished shall conform with the latest available version of the rules, requirements, and specifications of the following:

a. Insurance Rating Organization having jurisdiction.

b. The serving electric utility company.

c. The currently adopted edition of the National Electrical Code (NEC).

d. The National Electric Manufacturers Association (NEMA).

e. The Institute of Electrical and Electronic Engineers (IEEE).

f. The Insulated Cable Engineers Association (ICEA).

g. The American Society of Testing Materials (ASTM).

h. The American National Standards Institute (ANSI).

i. The requirements of the Occupational Safety Hazards Act (OSHA).

j. The National Electrical Contractors Association (NECA) Standard of Installation.

k. National Fire Protection Association (NFPA).

l. InterNational Electrical Testing Association (NETA).

m. All other applicable Federal, State/Commonwealth, and local laws and/or ordinances.

2. All equipment and materials shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL), if the material and equipment is of the type/class inspected by said laboratories.

B. Nonconformance

1. Any paragraph of requirements in these Specifications or Drawings deviating from the rules, requirements, and specifications of the above organizations shall be invalid and their (the above organizations) requirements shall hold precedent thereto. The Contractor shall be held responsible for adherence to all rules, requirements, and specifications as set forth above. Any additional work or material necessary for adherence will not be allowed as an extra, but shall be included in the Bid. Ignorance of any rule, requirement, or specification shall not be allowed as an excuse for nonconformity. Acceptance by the Engineer does not relieve the Contractor from the expense involved for the correction of any errors which may exist in the drawings submitted or in the satisfactory operation of any equipment.

C. Certification

1. Where applicable, upon completion of the work, the Contractor shall obtain certificate(s) of inspection and approval from the inspection organization having jurisdiction and shall deliver same to the Engineer and the Owner.

1.06 PERMITS AND INSPECTIONS

A. The Contractor shall reference the General Conditions and Section 01 11 00 – Summary of Work.

1.07 TEMPORARY LIGHTING AND POWER

A. The Contractor shall reference the General Conditions and Section 01 51 00 – Temporary Utilities.

1.08 TESTS

A. Upon completion of the installation, the Contractor shall perform tests for operation, load (Phase) balance, overloads, and short circuits. Tests shall be made with and to the satisfaction of the Owner and Engineer.

B. The Contractor shall perform all field tests and shall provide all labor, equipment, and incidentals required for testing and shall pay for electric power required for the tests. All defective material and workmanship disclosed shall be corrected by the Contractor at no cost to the Owner. The Contractor shall show by demonstration in service that all circuits and devices are in good operating condition. Test shall be such that each item of control equipment will function not less than five (5) times.

C. Refer to each individual specification section for detailed test requirements.

D. The Contractor shall complete the installation and field testing of the electrical installation at least two (2) weeks prior to the start-up and testing of any equipment served by that electrical equipment. During the period between the completion of electrical installation and the start-up and testing of all other equipment, the Contractor shall make all components of the Work available as it is completed for their use in performing Preliminary and Final Field Tests.

E. Before each test commences, the Contractor shall submit a detailed test procedure, and also provide test engineer resume, personnel, and scheduling information for the approval by the Engineer. In addition, the Contractor shall furnish detailed test procedures for any electrical equipment required as part of the field tests of other systems.

1.09 INFRARED INSPECTION

A. Just prior to the final acceptance of a piece of equipment, the Contractor shall perform an infrared inspection to locate and correct all heating problems associated with electrical equipment terminations.

B. Equipment located in hazardous areas shall be excluded from infrared testing requirements since the equipment in those areas is not intended to be operated while the enclosure is open. The infrared inspection shall apply to all new equipment and existing equipment in non-hazardous areas that is in any way modified under this Contract. All heating problems detected with new equipment furnished and installed under the Scope of this Contract shall be corrected by the Contractor at no additional cost to the Owner. All problems detected with portions of existing equipment modified under this Contract shall also be corrected by the Contractor at no additional cost to the Owner.

C. Any issues detected with portions of existing equipment that were not modified under this Contract are not the responsibility of the Contractor. Despite the Contractor not being held responsible for these problems, the Contractor shall report them to the Owner and Engineer immediately for resolution.

D. The infrared inspection report shall include both digital photos and infrared (IR) photos positioned side by side. Both the digital and IR photos shall be clear and high quality. Fuzzy, grainy, or poorly illuminated photos are not acceptable. Each IR photo shall be provided with a temperature scale beside it, and an indication of the hot spot temperature in the photo. Reports shall be furnished in a 3-ring binder, with all pages printed in full color, with equipment assemblies separated by tabs.

1.10 PROTECTIVE DEVICE SETTING AND TESTING

A. The Contractor shall provide the services of a field services organization to adjust, set, calibrate and test all protective devices in the electrical system. The organization shall be a subsidiary of or have a franchise service agreement with the electrical equipment manufacturer. The qualifications of the organization and resumes of the technicians as well as all data forms to be used for the field testing shall be submitted.

B. All protective devices in the electrical equipment shall be set, adjusted, calibrated, and tested in accordance with the manufacturers' recommendations, the coordination study, and best industry practice.

C. Proper operation of all equipment associated with the device under test and its compartment shall be verified, as well as complete resistance, continuity, and polarity tests of power, protective, and metering circuits. Any minor adjustments, repairs, and/or lubrication necessary to achieve proper operation shall be considered part of this Contract.

D. All solid state trip devices shall be checked and tested for setting and operation using manufacturers' recommended test devices and procedures.

E. Circuit breakers and/or contactors associated with the above devices shall be tested for trip and close functions with their protective device.

F. When completed, the Contractor shall provide a comprehensive report for all equipment tested indicating condition, readings, faults, and/or deficiencies in same. Inoperative or defective equipment shall be brought immediately to the attention of the Engineer.

G. Prior to placing any equipment in service, correct operation of all protective devices associated with this equipment shall be demonstrated by field testing under simulated load conditions.

1.11 POWER SYSTEM STUDIES

A. The Engineer will provide the Power System studies to the firm providing the protective device setting and testing services. The Contractor shall submit to the Engineer a tabulated listing of all protective devices requiring setting at least three (3) weeks prior to the scheduled date for setting and testing of protective devices. This table shall include the protective device manufacturer, model number, ampere rating (if applicable), instrument transformer ratios, and all other required information.

1.12 SCHEDULES AND FACILITY OPERATIONS

A. Since the equipment testing required herein shall require that certain pieces of equipment be taken out of service, all testing procedures and schedules shall be submitted to the Engineer for review and approval one (1) month prior to any work beginning. When testing has been scheduled, the Engineer shall be notified 48 hours prior to any work to allow time for load switching and/or alternation of equipment. In addition, all testing that requires temporary shutdown of facility equipment shall be coordinated with the Owner/Engineer so as not to affect proper facility operations.

B. At the end of the workday, all equipment shall be back in place and ready for immediate use should a facility emergency arise. In addition, should an emergency condition occur during testing, at the request of the Owner, the equipment shall be placed back in service immediately and turned over to Owner personnel.

C. In the event of accidental shutdown of Owner equipment, the Contractor shall notify Owner personnel immediately to allow for an orderly restart of affected equipment.

D. Maintaining the operation of these facilities during the duration of the construction period is essential and required. The Contractor shall furnish and install temporary equipment as required to maintain facility operation. Reference Section 01 14 00 – Coordination with Owner’s Operations for construction sequencing and specific operational constraint information.

1.13 EQUIPMENT, MATERIALS, AND SPARE PARTS HANDLING AND STORAGE

A. Materials arriving on the job site shall be stored in such a manner as to keep material free of rust and dirt and to keep material properly aligned and true to shape. Rusty, dirty, or misaligned material will be rejected. Electrical conduit shall be stored to provide protection

from the weather and accidental damage. Rigid non-metallic conduit shall be stored on even supports and in locations not subject to direct sun rays or excessive heat. Cables shall be sealed, stored, and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Adequate protection shall be required at all times for electrical equipment and accessories until installed and accepted. Materials damaged during shipment, storage, installation, or testing shall be replaced or repaired in a manner meeting with the approval of the Engineer. If space heaters are provided in a piece of electrical equipment, they shall be temporarily connected to a power source during storage. The Contractor shall store equipment and materials in accordance with Section 01 55 00 – Contractor Access and Parking.

B. Spare parts lists, included with the shop drawing submittal for each Section, shall indicate specific sizes, quantities, and part numbers of the items to be furnished. Terms such as "1 lot of packing material" are not acceptable.

C. Spare parts shall be completely identified with a numerical system to facilitate parts inventory control and stocking. Each part shall be properly identified by a separate number. Those parts which are identical for more than one size, shall have the same parts number.

D. Spare parts shall be packed in containers suitable for long term storage, bearing labels clearly designating the contents and the pieces of equipment for which they are intended.

E. Spare parts shall be delivered at the same time as the equipment to which they pertain. The Contractor shall properly store and safeguard such spare parts until completion of the work, at which time they shall be delivered to the Owner.

1.14 WARRANTIES

A. Unless otherwise specified in an individual specification section, all electrical equipment and electrical construction materials shall be provided with a warranty in accordance with the requirements of Section 46 00 00 – Equipment General Provisions and the General Conditions.

1.15 TRAINING

A. Unless otherwise specified in an individual specification section, all training for electrical equipment shall be provided in accordance with the requirements of Section 46 00 00 – Equipment General Provisions.

PART 2 – PRODUCTS

2.01 PRODUCT REQUIREMENTS

A. Unless otherwise indicated, the materials to be provided under this Specification shall be the products of manufacturers regularly engaged in the production of all such items and

shall be the manufacturer's latest design. The products shall conform to the applicable standards of UL and NEMA, unless specified otherwise. International Electrotechnical Commission (IEC) standards are not recognized. Equipment designed, manufactured, and labeled in compliance with IEC standards is not acceptable.

B. All items of the same type or ratings shall be identical. This shall be further understood to include products with the accessories indicated.

C. All equipment and materials shall be new, unless indicated or specified otherwise.

D. The Contractor shall submit proof if requested by the Engineer that the materials, appliances, equipment, and/or devices that are provided under this Contract meet the requirements of Underwriters Laboratories, Inc. with regard to fire and casualty hazards. Documentation indicating Listing and Labeling by Underwriters Laboratories, Inc., will be accepted as meeting this requirement.

E. Where the above items are Labeled by (bearing the certification mark of) an OSHA Nationally Recognized Testing Laboratory (NRTL) other than UL, and the NRTL is authorized by the Occupational Safety and Health Administration (OSHA) to test and certify those items to the same standard(s), then the certification mark of that NRTL shall be considered equivalent to the ‘UL’ certification mark.

2.02 SUBSTITUTIONS

A. Unless specifically noted otherwise, any reference in the Specifications or on the Drawings to any article, service, product, material, fixture, or item of equipment by name, make, or catalog number shall be interpreted as establishing the type, function, and standard of quality and shall not be construed as limiting competition.

2.03 CONCRETE

A. The Contractor shall furnish all concrete required for the installation of all electrical work. Concrete shall be Class A unless otherwise specified. Concrete and reinforcing steel shall meet the appropriate requirements of Division 03 of the Specifications.

B. The Contractor shall provide concrete equipment pads for all free-standing electrical apparatus and equipment located on new or existing floors or slabs. The Contractor shall provide all necessary anchor bolts, channel iron sills, and other materials as required. The exact location and dimensions shall be coordinated for each piece of equipment well in advance of the scheduled placing of these pads. Equipment pads shall be 4 inches high unless otherwise indicated on the Drawings and shall conform to the Standard Detail for equipment pads shown on the Drawings. Equipment pads shall not have more than 3 inches of excess concrete beyond the edges of the equipment.

C. The Contractor shall provide concrete foundations for all free-standing electrical apparatus and equipment located outdoors or where floors or slabs do not exist and/or are not or

provided by others under this Contract. The Contractor shall provide all necessary anchor bolts, channel iron sills, and other materials as required. The location and dimensions shall be coordinated for each piece of equipment well in advance of the scheduled placing of the foundations. Equipment foundations shall be constructed as detailed on the Drawings or if not detailed on the Drawings shall be 6 inches thick minimum reinforced with #4 bars at 12-inch centers each way placed mid-depth. Concrete shall extend 6 inches minimum beyond the extreme of the equipment base and be placed on a compacted stone bed (#57 stone or ABC) 6 inches thick minimum.

2.04 RUBBER INSULATING MATTING

A. Rubber insulating matting shall be furnished and installed for each piece of electrical equipment that is located indoors and installed under this Contract. Rubber insulating matting shall not be installed outdoors. Matting shall be installed in the front of all equipment and in the rear of equipment that is rear accessible. The mat shall be long enough to cover the full length of the equipment. The mat shall be ¼-inch thick with beveled edges, canvas back, solid type with corrugations running the entire length of the mat. The matting shall meet OSHA requirements and the requirements of ASTM D-178 for Type 2, Class 2 insulating matting. Matting shall be 36 inches wide, minimum. However, matting width shall be no less than the NEC working clearance for the equipment with which it is associated.

B. Matting shall be provided for the following equipment:

1. Panelboards

2. Security and Access Control Panels

3. Fire Alarm Control Panels

PART 3 – EXECUTION

3.01 CUTTING AND PATCHING

A. Coordination

1. The Work shall be coordinated between all trades to avoid delays and unnecessary cutting, channeling, and drilling. Sleeves shall be placed in concrete for passage of conduit wherever possible.

B. Damage

1. The Contractor shall perform all chasing, channeling, drilling, and patching necessary to the proper execution of this Contract. Any damage to the building, structure, or any equipment shall be repaired by qualified mechanics of the trades involved at the Contractor's expense. If, in the Engineer's judgment, the repair of

damaged equipment would not be satisfactory, then the Contractor shall replace damaged equipment at the Contractor's expense.

C. Existing Equipment

1. Provide a suitable cover or plug for openings created in existing equipment as the result of work under this Contract. For example, provide round plugs in equipment enclosures where the removal of a conduit creates a hole and the enclosure. Covers and plugs shall maintain the NEMA rating of the equipment enclosure. Covers and plugs shall be watertight when installed in equipment located outdoors.

3.02 EXCAVATION AND BACKFILLING

A. The Contractor shall perform all excavation and backfill required for the installation of all electrical work. All excavation and backfilling shall be in complete accordance with the applicable requirements of Division 31.

3.03 CORROSION PROTECTION

A. Wherever dissimilar metals, except conduit and conduit fittings, come into contact, the Contractor shall isolate these metals as required with neoprene washers, nine (9) mil polyethylene tape, or gaskets.

END OF SECTION

SECTION 26 05 19
LOW VOLTAGE CONDUCTORS AND CABLES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish, install, connect, test, and place in satisfactory operating condition all low voltage wire and cable indicated on the Drawings, as specified herein, and/or required for proper operation. The work of connecting cables to equipment and devices shall be considered a part of this Section. All appurtenances required for the installation of wire and cable systems shall be furnished and installed by the Contractor.

B. The scope of this Section does not include internal wiring factory installed by electrical equipment manufacturers.

C. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements

2. Section 26 05 33.16 – Boxes for Electrical Systems

3. Section 26 28 16.16 – Enclosed Switches

1.02 CODES AND STANDARDS

A. All low voltage wire, cable, and appurtenances shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. Low voltage wire, cable, and appurtenances shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE):

a. IEEE 1202 – Standard for Flame Testing of Cables.

2. American Society for Testing and Materials (ASTM):

a. ASTM B3 – Standard Specification for Soft or Annealed Copper Wire.

b. ASTM B8 – Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.

c. ASTM B33 – Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes.

d. ASTM D69 – Standard Test Methods for Friction Tapes.

e. ASTM D4388 – Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes.

3. Insulated Cable Engineers Association (ICEA):

a. ICEA S-58-679 – Standard for Control, Instrumentation and Thermocouple Extension Conductor Identification.

b. ICEA T-29-250 – Conducting Vertical Cable Tray Flame Tests with Theoretical Heat Input Rate of 210,000 B.T.U./Hour.

4. National Fire Protection Association (NFPA):

a. NFPA 70 – National Electrical Code (NEC).

5. Underwriters Laboratories (UL):

a. UL 13 – Standard for Power-Limited Circuit Cables.

b. UL 44 – Thermoset-Insulated Wires and Cables.

c. UL 83 – Thermoplastic-Insulated Wires and Cables.

d. UL 486A-486B – Standard for Safety Wire Connectors

e. UL 1277 – Standard for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members.

f. UL 1581 – Reference Standard for Electrical Wires, Cables, and Flexible Cords.

g. UL 1685 – Standard for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables.

h. UL 2250 – Standard for Instrumentation Tray Cable.

i. UL 2556 – Wire and Cable Test Methods.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the wire and cable manufacturer and submit the following:

1. Shop Drawings

2. Reports of Field Tests

3. Circuit Logs

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed material's compliance with the Contract Documents.

B. Partial, incomplete, or illegible Submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets for the following:

a. Wire and cable

1) The product data sheets for wire and cable for up to four (4) manufacturers for each type of wire/cable specified herein will be reviewed if they are submitted at the same time under the same submittal cover for simultaneous review.

b. Power and control wire terminations, including wire ferrules

c. Instrumentation cable terminations

d. Pulling lubricant.

2. Cable pulling calculations (if required).

3. Wiring identification methods and materials.

D. The shop drawing information shall be complete and organized in such a way that the Engineer can determine if the requirements of these specifications are being met. Copies of technical bulletins, technical data sheets from "soft-cover" catalogs, and similar information which is "highlighted" or somehow identifies the specific equipment items the Contractor intends to provide are acceptable and shall be submitted.

1.05 CABLE PULLING CALCULATIONS

A. Prior to the installation of the wire and cable specified herein, the Contractor shall submit cable pulling calculations for Engineer review and approval when all of the following are true:

1. The amount of cable to be installed will be greater than 200 linear feet between pull points.

2. The installation will have one or more bends.

3. The wire/cable is size #1/0 AWG and larger.

B. Cable pulling calculations shall be performed by a Professional Engineer (P.E.) licensed in the State or Commonwealth in which the project is located. Calculations shall define pulling tension and sidewall loading (sidewall bearing pressure values).

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The wire and cable to be furnished and installed for this project shall be the product of manufacturers who have been in the business of manufacturing wire and cable for a minimum of ten (10) years. Wire and cable shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as specified herein and indicated on the Drawings.

2.02 POWER AND CONTROL WIRE AND CABLE

A. Power wire for and control wire shall consist of insulated copper conductors with a nylon (or equivalent) outer jacket. Conductor insulation shall be rated 90°C for dry locations, 75°C for wet locations, and 600V. Insulated conductors shall be UL 83 Listed as NEC Type THHN/THWN.

B. Unless specified otherwise herein, conductors shall be stranded copper per ASTM B-8 and B-3, with Class B or C stranding contingent upon the size. Power conductors for lighting and receptacle branch circuits shall be solid copper per ASTM B-3.

C. Power conductor size shall be no smaller than No. 12 AWG and Control conductor size shall be no smaller than No. 14 AWG.

D. Multi-conductor cable assemblies shall include a grounding conductor and an overall PVC jacket. The jacket shall be PVC and resistant to abrasion, sunlight, and flame in accordance with UL 1277. Multi-conductor cable assemblies shall be UL 1277 Listed as NEC Type TC (Power and Control Tray Cable).

E. Power wire and cable shall be as manufactured by the Okonite Company, the Southwire Company, General Cable, Encore Wire, or Engineer approved equal.

2.03 INSTRUMENTATION CABLE

A. For single-analog signal applications, instrumentation cable shall consist of a single, twisted pair or triad of individually insulated and jacketed copper conductors with an overall cable shield and jacket. Conductor insulation shall be rated 90°C in both wet and dry locations, and 600V. The jacket shall be PVC and resistant to abrasion, sunlight, and flame

in accordance with UL 1277. Cable shall be UL 1277 Listed as NEC Type TC (Power and Control Tray Cable).

B. For multiple-analog signal applications, instrumentation cable shall consist of multiple, twisted pairs or triads (i.e., groups) of individually insulated and jacketed copper conductors with individual pair/triad shields (i.e., group shields) and an overall cable shield and jacket. Conductor insulation shall be rated 90°C in both wet and dry locations, and 600V. The jacket shall be PVC and resistant to abrasion, sunlight, and flame in accordance with UL 1277. Cable shall be UL 1277 Listed as NEC Type TC (Power and Control Tray Cable).

C. Cable and group shields shall consist of overlapped aluminum/polyester tape/foil providing 100% coverage. Instrumentation cables shall include an overall copper shield drain wire. Cables containing multiple twisted pairs or triads shall also include group shield drain wires.

D. Conductors, including drain wires, shall be tin or alloy coated (if available), soft, annealed copper, stranded per ASTM B-8, with Class B stranding unless otherwise specified.

E. Instrumentation signal conductor size shall be no smaller than No. 16 AWG.

F. Instrumentation cable shall be Okoseal-N Type P-OS (for single pair or triad applications) or Okoseal-N Type SP-OS (for multiple pair or triad applications) as manufactured by the Okonite Company, Belden equivalent, Southwire Company equivalent, or Engineer approved equal.

2.04 CONDUCTOR IDENTIFICATION

A. Conductors shall be identified using a color-coding method. Color coding for individual power, control, lighting, and receptacle conductors shall be as follows:

1. 480/277V AC Power
    a. Phase A – BROWN
    b. Phase B – ORANGE
    c. Phase C – YELLOW
    d. Neutral – GREY
2. 120/208V or 120/240V AC Power
    a. Phase A – BLACK
    b. Phase B – RED
    c. Phase C – BLUE

d. Neutral – WHITE

3. DC Power

a. Positive Lead – RED

b. Negative Lead - BLACK

4. DC Control

a. All wiring – BLUE

5. 120 VAC Control

a. 120 VAC control wire shall be RED except for a wire entering a motor control center compartment, motor controller, or control panel which is an interlock. This interlock conductor shall be color coded YELLOW. For the purposes of this Section, an interlock is defined as any wiring that brings voltage into the above-mentioned equipment from a source outside that equipment.

6. 24 VAC Control

a. All wiring - ORANGE

7. Equipment Grounding Conductor

a. All wiring - GREEN

B. Individual conductors No. 2 AWG and smaller shall have factory color coded insulation. It is acceptable for individual conductors larger than No.2 AWG to be provided with factory color coded insulation as well, but it is not required. Individual conductors larger than No.2 AWG that are not provided with factory color coded insulation shall be identified by the use of colored tape in accordance with the requirements listed in Part 3 herein. Insulation colors and tape colors shall be in accordance with the color-coding requirements listed above.

C. Conductors that are part of multi-conductor cable assemblies shall have black insulation. The conductor number shall be printed on each conductor's insulation in accordance with ICEA S-58-679, Method 4. Each conductor No.2 AWG and smaller within the cable assembly shall also be identified with a heat shrink tag with color coded background. Each conductor larger than No.2 AWG within the cable assembly shall also be identified by the use of colored tape. Heat shrink tags and colored tape shall be in accordance with the requirements listed in Part 3 herein. Tape color and heat shrink tag background color shall be in accordance with the color-coding requirements listed above.

2.05 CABLE PULLING LUBRICANTS

A. Cable pulling lubricants shall be non-hardening type and approved for use on the type of cable installed. Lubricant shall be Yellow #77 Plus by Ideal, Cable Gel by Greenlee, Poly-Gel by Gardner Bender, or equal.

PART 3 – EXECUTION

3.01 WIRE AND CABLE INSTALLATION

A. General

1. All wire and cable furnished under this Contract, including wire and cable furnished under other Divisions, shall be installed in raceways (e.g., conduit) unless specifically noted otherwise.

2. Wire and cable shall be installed as specified herein and indicated on the Drawings. Unless specifically indicated otherwise on the Drawings, wire and cable shall be installed in separate raceways according to wiring type. For example, power wiring shall not be combined with control wiring, and control wiring shall not be combined with instrumentation wiring.

3. Wire shall be furnished and installed as single conductor cables, with limited exceptions. Multi-conductor cable assemblies shall only be installed where indicated on the Drawings, required by the NEC, or after obtaining written permission from the Engineer.

4. Where instrumentation cables are installed in control panels, motor controllers, and other locations, the Contractor shall arrange wiring to provide maximum clearance between these cables and other conductors. Instrumentation cables shall not be installed in same bundle with conductors of other circuits.

5. Instrumentation cable shielding shall be continuous and shall be grounded at one point only.

B. Splices

1. Splices shall not be allowed in power or control wire and cable unless approved in writing by the Engineer. If unique field conditions exist or pulling calculations indicate that splices may be required, the Contractor shall submit a detailed request indicating why splices are required to the Engineer. The Engineer shall be under no obligation to grant such request.

2. Splicing materials shall be UL 486A Listed barrel type butt splice connectors and heat shrink tubing as manufactured by 3M, Ideal, or equal. The use of screw-on wire connectors (wire nuts) shall only be permitted for lighting and receptacle circuits.

3. No splicing of instrumentation cable is permitted.

C. Wire and Cable Sizes

1. The sizes of wire and cable shall be as indicated on the Drawings, or if not shown, as approved by the Engineer. If required due to field routing, the size of conductors and respective conduit shall be increased so that the voltage drop measured from source to load does not exceed 2-1/2%.

D. Additional Conductor Identification

1. In addition to the color-coding identification requirements specified in Part 2 herein, individual conductors shall be provided with heat shrinkable identification tags. Identification tags for individual conductors shall have a white background where the conductor insulation is colored. Identification tags for individual conductors shall have a colored background where the conductor insulation is black. Background color shall match that of the taping provided on the individual black conductors.

2. Multi-conductor cables shall be provided with heat shrinkable identification tags in accordance with Part 2 herein.

3. All wiring shall be identified at each point of termination. This includes but is not limited to identification at the source, load, and in any intermediate junction boxes where a termination is made. The Contractor shall meet with the Owner and Engineer to come to an agreement regarding a wire identification system prior to installation of any wiring. Wire numbers shall not be duplicated.

4. Wire identification shall be by means of a heat shrinkable sleeve with appropriately colored background and black text. Wire sizes #14 AWG through #10 AWG shall have a minimum text size of 7 points. Wire sizes #8 AWG and larger shall have a minimum text size of 10 points. Sleeves shall be of appropriate length to fit the required text. The use of handwritten text for wire identification shall not be permitted.

5. Sleeves shall be suitable for the size of wire on which they are installed. Sleeves shall not be heat-shrunk onto control cables. Tags shall remain loose on cable to promote easier identification. For all other applications, sleeves shall be tightly affixed to the wire and shall not move. Sleeves shall be heat shrunk onto wiring with a heat gun approved for the application. Sleeves shall not be heated by any means which employs the use of an open flame. The Contractor shall take special care to ensure that the wiring insulation is not damaged during the heating process.

6. Sleeves shall be installed prior to the completion of the wiring terminations and shall be oriented so that they can be easily read.

7. Sleeves shall be polyolefin as manufactured by Brady, Seton, Panduit, or equal.

8. Wire identification in manholes, handholes, pull boxes, and other accessible

components in the raceway system where the wiring is continuous (no terminations are made) shall be accomplished by means of a tag installed around the bundled group of individual conductors or around the outer conductor jacket of a multi-conductor cable. Identification shall utilize a FROM-TO system. Each group of conductors shall consist of all individual conductors in a single conduit or duct. The tag shall have text that identifies the bundle in accordance with the 'FROM' and 'TO' column for that specific conduit number in the conduit and wire schedule. Minimum text size shall be 10 points. The tag shall be affixed to the wire bundle using nylon wire ties and shall be made of polyethylene as manufactured by Brady, Seton, Panduit, or equal.

9. Where colored tape is used to identify cables, it shall be wrapped around the cable with a 25% overlap and shall cover at least 2 inches of the cable.

E. Wiring Supplies

1. Rubber insulating tape shall be in accordance with ASTM D4388. Friction tape shall be in accordance with ASTM D69.

F. Training of Cable in Manholes, Handholes, and Vaults

1. The Contractor shall furnish all labor and material required to train cables around cable vaults, manholes, and handholes. Sufficient length of cable shall be provided in each handhole, manhole, and vault so that the cable can be trained and racked in an approved manner. In training or racking, the radius of bend of any cable shall be not less than the manufacturer's recommendation. The training shall be done in such a manner as to minimize chaffing.

2. Instrumentation cable shall be racked and bundled separate from AC wiring to maintain the required separation as follows:

a. 18 inches for 480/277 VAC wiring

b. 12 inches for 208/120 VAC wiring

c. 6 inches for 24 VAC wiring

G. Conductor Terminations

1. Where wires are terminated at equipment which requires lugs, connections shall be made by solderless mechanical lug, crimp type ferrule, or irreversible compression type lugs. Reference individual equipment Specification Sections as applicable for additional termination requirements.

2. For conductors with stranding other than Class B or C, a UL 486A Listed wire ferrule shall be installed prior to each conductor termination. Ferrules shall be suitable for the size of conductors and shall be made of a material that is compatible with the conductors. Ferrules shall be crimped on in accordance with the ferrule

manufacturer’s instructions.

3. Where enclosure sizes and sizes of terminals at limit switches, solenoid valves, float switches, pressure switches, temperature switches, and other devices make terminations impractical due to the size of the field wiring, the Contractor shall terminate field wiring in an adjacent junction box per the requirements of Section 26 05 33.16 – Boxes for Electrical Systems, complete with terminal strips. Contractor shall install the smaller wiring from the device to the junction box in a conduit, using the terminal strip as the means for joining the two different wire sizes. Splicing of wires in lieu of using terminal strips is not acceptable.

4. The cables shall be terminated in accordance with the cable and/or termination product manufacturer's instructions for the particular type of cable.

5. To minimize oxidation and corrosion, selected wire and cable shall be terminated using an oxide-inhibiting joint compound recommended for electrical connections. The compound shall be Penetrox E for copper-to-copper connections, and Penetrox A for all other connections, as manufactured by Burndy Electrical, or equal. The joint compound shall be used in the following installations:

   a. Termination of aluminum conductors, where aluminum conductors are specifically allowed by the Engineer.

6. All spare conductors shall be terminated on terminal blocks mounted within equipment or junction boxes. Unless otherwise noted, coiling up of spare conductors within enclosure is not acceptable.

H. Pulling Temperature

1. Cable shall not be installed when the temperature of the jacket is such that damage will occur due to low temperature embrittlement. When cable will be pulled with an ambient temperature of 40°F or less within a three (3) day period prior to pulling, the cable reels shall be stored three (3) days prior to pulling in a protected storage area with an ambient temperature of 55°F or more. Cable pulling shall be completed during the workday for which the cable is removed from the protected storage. Any cable reels with wire remaining on them shall be returned to storage at the completion of the workday.

I. Circuit Log

1. The Contractor shall maintain a written log of installed circuit lengths for all single-phase and three-phase power circuits operating at 208VAC or greater. The log shall be organized in a tabular format, recording the following items for each circuit:

   a. Circuit ID or Conduit ID(s) as shown on the Drawings.

   b. From (originating equipment).

c. To (terminating equipment).

d. Conductor sizes and counts.

e. Conductor length.

3.02 TESTING

A. All testing shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Shop Test

a. Wires and cables shall be tested in accordance with the applicable ICEA Standards. Wire and cable shall be physically and electrically tested in accordance with the manufacturer's standards.

2. Field Tests

   a. After installation, all wires and cables shall be tested for continuity. Testing for continuity shall be “test light” or “buzzer” style.

   b. After installation, wires and cables shall be tested for insulation resistance levels between conductors of the same circuit and between conductor and ground as follows:

      1) For #8 AWG and larger 600V wire and cable, apply 1,000 VDC from a Megohmmeter for one (1) minute. Resistance shall be no less than 100 Megohms.

      2) Instrumentation signal cable shall be tested from conductor to conductor, conductor to shield, and conductor to ground using a Simpson No. 260 volt-ohmmeter or approved equal. The resistance value shall be 200 Megohms or greater.

      3) Insulation resistance testing is not required for power and control cables smaller than #8 AWG.

   c. Wires and cables shall be tested after required terminations are made, but before being connected to any equipment.

   d. If tests reveal defects or deficiencies, the Contractor shall make the necessary repairs or shall replace the cable as directed by the Engineer, without additional cost to the Owner. All conductors of a multi-phase circuit shall be replaced if one conductor fails the required testing. If part of a multi-set (parallel conductors per phase) circuit fails testing, only the set containing failure shall be replaced.

   e. All tests shall be made by and at the expense of the Contractor who shall supply all testing equipment. Test reports shall be submitted to the Engineer.

Note: “Exhibit A” found on the pages after “End of Section” are part of this specification section.

END OF SECTION

Exhibit A
Test Data – Megohms
Test No. ____

Date:			Company:				
Time:			Location:				
Circuit:	Circuit Length:	Aerial:	Duct:	Buried:	No. of Conductors	Size:	AWG MCM Shield:
Insulation Material:			Insulation Thickness:		Voltage Rating:		Age:
Type: _____ Pothead _____ Terminal					Location: Indoors _____ Outdoors _____		
Number and Type of Joints:							
Recent Operating History:							
Manufacturer:							
State if Potheads or Terminals were grounded during test:							
List associated equipment included in test:							
Miscellaneous Information:							

Exhibit A
Test Data – Megohms
Test No. ____

Part Tested:	Test Performed: _____ Hours/Days: _____ After Shutdown: _____
Grounding Time:	Dry Bulb Temperature: _____ Wet Bulb Temperature: _____
Test Voltage:	Equipment Temperature: _____ How Obtained: _____ Relative Humidity: _____ Absolute Humidity: _____ Dew Point: _____

Megohmmeter: Serial Number: _____ Range: _____
Voltage: _____ Calibration Date: _____

Test Connections	To Line To Earth To Ground	To Line To Earth To Ground	To Line To Earth To Ground	Test Connections	To Line To Earth To Ground	To Line To Earth To Ground	To Line To Earth To Ground
1/4 Minute				5 Minutes			
1/2 Minute				6 Minutes			
3/4 Minute				7 Minutes			
1 Minute				8 Minutes			
2 Minutes				9 Minutes			
3 Minutes				10 Minutes			
4 Minutes				10/1 Minute Ratio			

Remarks:

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install grounding systems complete in accordance with the requirements established by Article 250 of the NEC. Article 250 of the NEC shall be considered a minimum requirement for compliance with this Specification.

B. Grounding of all instrumentation and control systems shall be furnished and installed in accordance with the manufacturer/system requirements and IEEE 1100. Conflicts shall be promptly brought to the attention of the Engineer.

C. In addition to the NEC requirements, building structural steel columns and metallic buildings shall be permanently and effectively grounded:

D. Reference Section 26 05 00 – Basic Electrical Requirements

1.02 CODES AND STANDARDS

A. Equipment and materials covered under this Section shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE):

    a. IEEE 81 – Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System.

    b. IEEE 1100 – Recommended Practice for Power and Grounding Electronic Equipment.

2. National Fire Protection Association (NFPA):

    a. NFPA 70 – National Electrical Code (NEC).

3. Underwriters Laboratories (UL):

    a. UL 467 – Grounding and Bonding Equipment.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings

2. Reports of certified field tests.

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Drawings and written description of how the Contractor intends to furnish and install the grounding system.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by these specifications shall be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

2.02 GROUND RODS AND GRID

A. Ground rods shall be rolled to a commercially round shape from a welded copper-clad steel manufactured by the molten-welding process or by the electro-formed process (molecularly bonded). They shall have an ultimate tensile strength of 75,000 pounds per square inch (psi) and an elastic limit of 49,000 psi. The rods shall be not less than 3/4 inch in diameter by 10 feet in length; and the proportion of copper shall be uniform throughout the length of the rod. The copper shall have a minimum wall thickness of 0.010 inch at any

point on the rod. Ground rods shall be UL 467 Listed. The ground rods shall be manufactured by Erico Products, Blackburn, or Engineer approved equal.

B. Except where specifically indicated otherwise, all exposed non -current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductors in nonmetallic raceways, and neutral conductors of wiring systems shall be grounded.

C. The ground connection shall be made at the main service equipment and shall be extended to the ground grid surrounding the structure. The ground grid shall also be connected to the point of entrance of the metallic water service. Connection to the water pipe shall be made by a suitable ground clamp or lug connection to a plugged tee. If flanged pipes are encountered, connection shall be made with the lug bolted to the street side of the flanged connection.

D. Where ground fault protection is employed, care shall be taken so that the connection of the ground and neutral does not interfere with the correct operation of the ground fault protection system.

2.03 FITTINGS

A. Grounding connections to equipment shall be bolted. Cable end connections shall be made by hydraulic crimp or exothermically welded. Split bolt type connectors are not acceptable. Fittings shall be UL 467 Listed.

2.04 EQUIPMENT GROUNDING CONDUCTORS

A. An insulated equipment grounding conductor, which shall be separate from the electrical system grounded (neutral) conductor, shall be furnished and installed for all circuits. Insulation shall be of the same type as the ungrounded conductors in the raceway and shall be green in color. Equipment grounding conductors shall be furnished and installed in all conduits. Use of conduits as the NEC required equipment grounding conductor is not acceptable.

2.05 EQUIPMENT GROUNDS

A. Equipment grounds shall be solid and continuous from a connection at earth to all distribution panelboards. Ground connections at panelboards, outlets, equipment, and apparatus shall be made in an approved and permanent manner.

B. For all control panels, disconnect switches, and other electrical enclosures, equipment grounds, and bonding jumpers shall be terminated individually on a ground bar or mechanical lugs. No wire nuts will be permitted.

2.06 GROUND BARS

A. Ground bars shall be furnished and installed where indicated on the Drawings and where required in the Specifications. Ground bars shall be tin-plated copper, 1/4-inch thick

(minimum) with hole pairs spaced for NEMA 2-hole cable termination lugs. The number of hole pairs shall be as required for the number of cables terminated, plus four (4) spares (minimum). Ground bars shall be provided with insulated mounting hardware.

2.07 EXOTHERMIC WELDS

A. All exothermic welding shall be completed per the welding kit manufacturer's instructions. Exothermic welds shall be CadWeld by Erico or ThermoWeld.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Metal surfaces where grounding connections are to be made shall be clean and dry. Steel surfaces shall be ground or filed to remove all scale, rust, grease, and dirt. Copper and galvanized steel shall be cleaned with emery cloth to remove oxide before making connections.

B. Ground Grid

1. A main ground grid shall be provided for each structure and interconnecting structure grids consisting of driven ground rods as shown on the Drawings. Ground rods shall be driven straight down into the earth, or if objects are encountered, at an angle to avoid the obstruction.

2. The ground rods shall be interconnected by the use of copper cable sized as shown on the Drawings. The interconnecting cables shall be connected to ground rods by hydraulic crimp or exothermic weld where buried, and removable bolted clamp where shown to be installed in test wells. The grounding cables shall be installed after the excavations for the building have been completed and prior to the pouring of concrete for the footings, mats, etc. Copper "pigtails" shall be connected to the ground grid and shall enter the buildings and structure from the outside, and shall be connected to steel structures, equipment as described in this Section, and as required to provide a complete grounding system. The copper pigtails shall be hydraulically crimped or exothermically welded to the ground grid and connected to building reinforcement steel by hydraulic crimp.

3. Grounding conductors shall be continuous between points of connection; splices shall not be permitted.

4. Where conductors are exposed and subject to damage from personnel, traffic, etc., conductors shall be installed in metal raceway. The raceway shall be bonded to the grounding system.

5. Where subsurface conditions do not permit use of driven ground rods to obtain proper ground resistance, rods shall be installed in a trench or plate electrodes shall be provided, as applicable and necessary to obtain proper values of resistance.

6. Buried hydraulic crimp connections, exothermic welds, and ground ring shall not be backfilled until inspected by Engineer.

C. Raceways

1. Conduit which enters equipment such as switchgear, switchboards, motor control centers, transformers, panelboards, variable frequency drives, instrument and control panels, and similar equipment shall be bonded to the ground bus or ground lug, where provided, and as otherwise required by the NEC.

3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Witnessed Shop Tests

a. None required.

2. Field Tests

a. Field testing shall be done in accordance with the requirements specified in the General Conditions, Division 01, and NETA Acceptance Testing Specifications, latest edition.

b. Fall of potential tests shall be performed on the ground grid per IEEE 81 recommendations by a third party, independent testing firm. A fall of potential plot shall be submitted at the conclusion of testing for Engineer review. Documentation indicating the location of the rod and grounding system as well as the resistance and soil conditions at the time the measurements were made shall be submitted. Testing shall show that the ground grid has 5 ohms resistance or less. Due to soil conditions and/or unforeseen field conditions, ground resistances greater than 5 ohms may be acceptable if specifically approved in writing by the Engineer. Ground resistance measurements shall be made in normally dry weather not less than 48 hours after rainfall and with the ground grid under test isolated from other grounds.

c. Continuity tests for the grounding electrode conductor shall be performed. Test will be accepted when a resistance of less than 1 ohm is shown for this conductor.

END OF SECTION

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install structural supports for mounting and installing all conduits, electrical equipment, lighting, alarm systems, instrumentation, and control and communications equipment furnished under this Contract.

B. Equipment shall be installed strictly in accordance with recommendations of the manufacturer and best practices of the trade resulting in a complete, operable, and safe installation. The Contractor shall obtain written installation manuals from the equipment manufacturer prior to installation.

C. Support design for all nonstructural electrical components (e.g., conduit and other raceways, freestanding equipment, etc.) shall be provided in accordance with the governing Building Code.

D. Metal welds and fasteners shall be provided in accordance with the governing Building Code and Section 05 05 23 – Metal Fastening.

E. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements.

1.02 CODES AND STANDARDS

A. Equipment and materials covered under this Section shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American Society for Testing and Materials (ASTM):

a. ASTM A123 – Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.

b. ASTM A153 – Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.

c. ASTM A240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

d. ASTM A276 – Standard Specification for Steel Bars and Shapes.

e. ASTM B783 – Standard Specification for Materials for Ferrous Powder Metallurgy Structural Parts.

2. National Fire Protection Association (NFPA):

a. NFPA 70 – National Electrical Code (NEC).

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop drawings

2. Structural support calculations and designs in accordance with the governing Building Code.

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Complete assembly, layout, installation, and foundation drawings with clearly marked dimensions.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by this Specification is intended to be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

2.02 MATERIALS

A. Support channel shall be 1-5/8” by 1-5/8” minimum, with 12-gauge material thickness.

B. Support channel, support channel fittings, and threaded rod shall be furnished with the following material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	Material of Construction
Indoor Wet Process Area	Type 304 Stainless Steel
All Outdoor Areas	Type 304 Stainless Steel

C. Fastening hardware (bolts, nuts, washers, and screws) shall be furnished with the following material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	Material of Construction
Indoor Wet Process Area	Type 304 Stainless Steel
All Outdoor Areas	Type 304 Stainless Steel

PART 3 – EXECUTION

3.01 INSTALLATION

A. Concrete and Masonry Anchors

1. The Contractor shall be responsible for the furnishing and installation of all concrete anchors, masonry anchors, anchor screen tubes, bolts, and similar devices required for installation of equipment furnished under this Contract.

2. Where specific anchor types and sizes are called for on the Drawings, those anchor types and sizes shall be used. Where the Drawings call for anchors but do not have any type or size details shown, the anchors shall be designed and selected by an Engineer currently registered in the State or Commonwealth in which the project is located. Reference Section 05 05 23 – Metal Fastening for anchor product specifications and anchor design requirements.

B. The Contractor shall furnish leveling channels for all switchgear, switchboards, motor control centers, and similar floor mounted equipment. The leveling channels shall be provided for embedment in the equipment housekeeping pads. Coordination of the installation of these channels with the concrete pad is essential and required. Pad height shall be as required to maintain concrete coverage of the reinforcement bars while not causing associated equipment to exceed the maximum mounting height requirements of the NEC.

C. Support Fastening and Locations

1. All equipment fastenings to columns, steel beams, and trusses shall be by beam clamps or welded. No holes shall be drilled in the steel.

2. Unless otherwise indicated on the Drawings or in the Specifications, guards/handrails shall not be utilized as supports for electrical equipment, devices, or appurtenances. Guards/handrails shall not be cut, drilled, or otherwise modified in order to accommodate electrical supports without written approval from the Engineer.

3. All holes made in reflected ceilings for support rods, conduits, and other equipment shall be made adjacent to ceiling grid bars, where possible, to facilitate removal of ceiling panels.

4. Support channel shall be provided wherever required for the support of starters, switches, panels, and miscellaneous equipment.

5. Equipment, devices, and raceways that are installed on the dry side of a water bearing wall shall not be installed directly onto the wall. Support channel shall be used to allow ventilation air to pass behind the equipment, devices, or raceway.

6. All supports shall be rigidly bolted together and braced to make a substantial supporting framework. Where possible, control equipment shall be grouped together and mounted on a single framework.

7. Aluminum support members shall not be installed in direct contact with concrete. Stainless steel or non-metallic "spacers" shall be used to prevent contact of aluminum with concrete.

8. Actual designs for supporting framework should take the nature of a picture frame of support channels and bracket with a plate for mounting the components. The Contractor is responsible for the design of supporting structure; Contractor shall submit design details to the Engineer for acceptance before proceeding with the fabrication.

9. Wherever dissimilar metals come into contact, the Contractor shall isolate these metals as required with neoprene washers, nine (9) mil polyethylene tape, or gaskets. Reference Section 05 10 00 - Metal Materials for guidance on dissimilar metals.

10. For all installations where fiberglass supporting materials are required, the Contractor shall submit structural calculations and the details of the proposed system of support. Structural calculations shall be signed and sealed by a Professional Engineer (P.E.) licensed in the State or Commonwealth in which the project is located.

11. For the following installations where conduits are provided with a support system suspended from the above or attached to a vertical structure, the Contractor shall submit structural calculations and details of the proposed system of support. Structural calculations shall be signed and sealed by a Professional Engineer (P.E.) licensed in the State or Commonwealth in which the project is located.

    a. A quantity of twelve (12) or more conduits trade size 1" and smaller are proposed for a conduit support rack.

    b. A quantity of eight (8) or more conduits trade sizes 1 ½" to 2 1/2" are proposed for a conduit support rack.

    c. A quantity of four (4) or more conduits trade sizes 3" and larger are proposed for a conduit support rack.

12. Single conduits installed exposed along walls and ceilings shall be secured to the wall or ceiling with a one-hole conduit clamp and clamp-back. Where multiple conduits are installed exposed together, support channel and conduit clamps shall be used.

D. Equipment, boxes, and enclosures which are factory-constructed with integral mounting provisions (such as brackets, mounting feet, bolt holes, etc.) shall be installed/supported utilizing those mounting provisions. Equipment, boxes and enclosures shall not be field-modified by any means which compromises the UL Listing or NEMA rating of the enclosure/assembly.

END OF SECTION

SECTION 26 05 33.13

CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install conduits, conduit fittings, and appurtenances to complete the installation of all electrically operated equipment as specified herein, indicated on the Drawings, and as required.

B. Reference Specification Section 26 05 00 – Basic Electrical Requirements.

C. Requirements for conduit clamps, support systems, and anchoring are not included in this Section. Reference Specification Section 26 05 29 – Hangers and Supports for Electrical Systems, for these requirements.

1.02 CODES AND STANDARDS

A. All equipment and materials shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. Conduits, conduit fittings, and appurtenances shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American National Standards Institute (ANSI)

    a. ANSI/ASME B1.20.1 – Pipe Threads, General Purpose.

    b. ANSI C80.1 – Electrical Rigid Steel Conduit.

    c. ANSI C80.3 – Steel Electrical Metallic Tubing.

    d. ANSI C80.5 – Electrical Rigid Aluminum Conduit.

    e. ANSI/NEMA FB 1 – Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.

2. National Electrical Contractors Association (NECA):

    a. NECA 1 – Standard for Good Workmanship in Electrical Construction.

3. National Electrical Manufacturer’s Association (NEMA):

    a. NEMA FB 2.40 – Installation Guidelines for Expansion and Expansion/Deflection Fittings.

b. NEMA RN 1 – PVC Externally Coated Galvanized Rigid Steel Conduit.

c. NEMA RV-3 – Application and Installation Guidelines for Flexible and Liquid-tight Flexible Metal and Nonmetallic Conduits.

d. NEMA TC-2 – Electrical PVC Conduit.

e. NEMA TC-3 – PVC Fittings for Use with Rigid PVC Conduit and Tubing.

4. National Fire Protection Association (NFPA):

a. NFPA 70 – National Electrical Code (NEC).

5. Underwriters Laboratories (UL):

a. UL 1 – Standard for Flexible Metal Conduit.

b. UL 6 – Electrical Rigid Metal Conduit-Steel.

c. UL 6A – Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel.

d. UL 360 – Standard for Liquid-tight Flexible Metal Conduit.

e. UL 467 – Grounding and Bonding Equipment.

f. UL 514B – Conduit, Tubing, and Cable Fittings.

g. UL 651 – Standard for Schedule 40 and 80 Conduit and Fittings.

h. UL 797 – Electrical Metallic Tubing-Steel.

i. UL 1203 – Standard for Explosion-proof and Dust-ignition-proof Electrical Equipment for use in Hazardous (Classified) Locations.

j. UL 1479 – Standard for Fire Tests of Penetration Fire Stops.

k. UL 1660 – Liquid-tight Flexible Nonmetallic Conduit.

6. Others:

a. American Concrete Institute (ACI): ACI 318 – Building Code Requirements for Structural Concrete.

b. Aluminum Association – Aluminum and It's Alloys.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Conduit identification methods and materials.

2. Product data sheets for conduits, fittings, and miscellaneous associated materials.

a. The product data sheets for conduits and fittings for up to three (3) manufacturers for each type of conduit specified herein will be reviewed if they are submitted at the same time under the same submittal cover for simultaneous review.

1.05 DEFINITIONS

A. Conduits are categorized by the circuit type of the wiring to be installed inside. Conduits are defined as follows:

1. Power Conduits – Conduits that carry AC or DC power wiring from a source to a load. Conduits that carry lighting and receptacle wiring.

2. Control Conduits – Conduits that carry AC or DC discrete control wiring between devices and/or equipment. Also, conduits that carry fiber optic cables between devices and/or equipment.

3. Instrumentation Conduits – Conduits that carry AC or DC analog signal wiring between devices and/or equipment. Conduits that carry Category 5e or Category 6 unshielded twisted-pair cables.

PART 2 – PRODUCTS

2.01 GENERAL

A. Conduit and conduit fitting products are specified in the text that follows this article. Reference Part 3 herein for the application, uses, and installation requirements of these conduits and conduit fittings.

B. All metallic conduit fittings shall be UL 514B and UL 467 Listed and constructed in accordance with ANSI FB 1. All metallic conduit fittings for use in Class I, Division 1 hazardous areas shall be UL 1203 Listed with a visible certification tag on the outside of the fitting. All non-metallic fittings shall be UL 651 Listed and constructed in accordance with NEMA TC-3.

C. Flexible conduit couplings for use in Class I, Division 1 hazardous areas shall have threaded Type 316 stainless steel end fittings and a flexible braided core. Flexible braid shall be constructed of Type 316 stainless steel where available in the conduit trade size required for the application. Where Type 316 stainless steel braid is not available, the braid shall be provided with a factory-applied PVC coating. No other braid types or materials are acceptable.

D. Where threading is specified herein for conduit fitting connections, the fittings shall be manufactured to accept conduit that is threaded to ANSI B1.20.1 requirements.

E. Conduit expansion fittings for all conduit materials of construction shall be capable of 4 inches of movement along the axis of the conduit for trade sizes 2 inches or less. Expansion fittings shall be capable of 8 inches of movement along the axis of the conduit for trade sizes greater than 2 inches.

F. Conduit deflection fittings for all conduit materials of construction shall be provided with a flexible neoprene outer jacket that permits up to ¾ inch of expansion/contraction along the axis of the conduit as well as up to ¾ inch of parallel misalignment between the conduit axes. Outer jacket shall be secured to the conduit hubs by Type 304 stainless steel clamps.

G. Conduit seals shall either be Listed and Labeled for 40% fill, or conduit reducing fittings and a trade size larger conduit seal shall be provided to achieve 25% or less fill within the seal. Percentage fill calculation shall be based on the conductors to be installed. Conduit seals shall be provided with breathers and/or drains where required by the NEC.

H. Conduit insulating bushings shall be constructed of plastic and shall have internal threading.

I. Additional conduit and conduit fitting requirements are specified in the articles that follow based on the specific conduit material of construction to be used.

2.02 RIGID GALVANIZED STEEL (RGS) CONDUIT AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be hot dip galvanized on the inside and outside and made of heavy wall high strength ductile steel. Conduit shall be manufactured in accordance with ANSI C80.1 and shall be UL 6 Listed.

2. Conduit shall be provided with factory-cut 3/4 inch per foot tapered threads at each end in accordance with ANSI B1.20.1. Threads shall be cut prior to galvanizing to

ensure corrosion protection adequately protects the threads. Conduit shall be provided with a matching coupling on one end and a color-coded thread protector on the other.

B. Conduit Bodies for use with Rigid Galvanized Steel

1. Conduit bodies shall be constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish. Conduit bodies shall have integral threaded conduit hubs.

2. Conduit bodies for Class I, Division 1 hazardous areas shall be provided with integrally threaded covers constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish.

3. Conduit bodies for all other areas shall be provided with covers that are affixed in place by Type 304 stainless steel screws which thread directly into the conduit body. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish. Covers shall be provided with matching gasket.

C. Conduit Couplings, Nipples, and Unions for use with Rigid Galvanized Steel

1. Couplings and nipples shall be threaded and shall be constructed of hot dipped galvanized steel. Split-type couplings that use compression to connect conduits are not acceptable.

2. Unions shall be threaded, rain-tight, and constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish.

D. Conduit Expansion and Deflection Fittings for use with Rigid Galvanized Steel

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of bronze or an electro-galvanized malleable iron alloy. Expansion and deflection fittings shall have threaded conduit connections.

2. Expansion fittings shall have an integral bonding jumper and deflection fittings shall have an external bonding jumper.

E. Conduit Seals for use with Rigid Galvanized Steel

1. Conduit seals shall be constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish. Conduit seals shall have threaded conduit connections.

F. Conduit Termination Fittings for use with Rigid Galvanized Steel

1. Conduit hubs shall be constructed of Type 316 stainless steel and shall have threaded connections to the conduit and enclosure. Hubs shall have a plastic insulated throat and shall be watertight when assembled to an enclosure.

2. Conduit locknuts shall be constructed of zinc plated steel. Locknuts shall have internal threading. Locknuts with integral gasket or seal are not acceptable. Locknuts shall have integral bonding screw where required for proper bonding.

3. Conduit bonding bushings shall be constructed of zinc plated malleable iron. Bonding bushings shall have a threaded conduit connection. Bonding bushing shall be provided with properly sized set screw for connecting bonding conductor and an integral plastic insulator rated for 150 degrees C located in the throat.

2.03 RIGID NONMETALLIC CONDUIT AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be Schedule 40 or 80 (dependent on application) polyvinyl chloride (PVC) construction, manufactured in accordance with NEMA TC-2, UL 651 Listed, and suitable for conductors with 90 degree C insulation.

B. Conduit Bodies for use with Rigid Nonmetallic Conduit

1. Conduit bodies shall be constructed of PVC. Conduit hubs shall be integral to the conduit body and shall be smooth inside to accept a glued conduit connection.

2. Conduit body shall be provided with cover that is affixed in place by Type 304 stainless steel screws which thread directly into the conduit body. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be provided with matching gasket.

C. Conduit Couplings and Unions for use with Rigid Nonmetallic Conduit

1. Conduit couplings and unions shall be constructed of PVC and shall be smooth inside to accept a glued conduit connection.

D. Conduit Expansion and Deflection Fittings for use with Rigid Nonmetallic Conduit

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of PVC and shall be smooth inside to accept a glued conduit connection.

E. Conduit Termination Fittings for use with Rigid Nonmetallic Conduit

1. Conduit hubs shall be constructed of PVC and shall be smooth inside to accept a glued conduit connection. Hubs shall have external threads and an accompanying PVC locknut and shall be watertight when assembled to an enclosure.

2. Conduit locknuts shall be constructed of zinc plated steel. Locknuts shall have internal threading. Locknuts constructed of PVC and locknuts with integral gasket or seal are not acceptable.

3. Conduit end bells shall be constructed of PVC and shall be smooth inside to accept a glued conduit connection. End bell shall have a smooth inner surface that curves outward towards the edge of the fitting.

2.04 PVC COATED RIGID GALVANIZED STEEL CONDUIT AND ASSOCIATED FITTINGS

A. General

1. Where an external coating of polyvinyl chloride (PVC) is specified for conduit and fittings, the coating shall be 40 mil (minimum) thickness. Where an internal coating of urethane is specified for conduit and fittings, the coating shall be 2 mil (minimum) thickness.

2. All conduit fittings shall have a sealing sleeve constructed of PVC which covers all connections to conduit. Sleeves shall be appropriately sized so that no conduit threads will be exposed after assembly.

3. PVC coated conduit and associated PVC coated fittings shall be Ocal-Blue by ABB, Plasti-Bond by Robroy Industries, or Perma-Cote by Robroy Industries, no substitutions.

4. PVC coated conduit and associated PVC coated fittings shall be provided with a 5-year non-prorated warranty covering manufacturing defects and improper installation by the Contractor.

B. Conduit

1. Conduit shall be hot dip galvanized on the inside and outside and made of heavy wall high strength ductile steel. Conduit shall be manufactured in accordance with ANSI C80.1 and shall be UL 6 Listed.

2. Conduit shall be provided with factory-cut 3/4 inch per foot tapered threads at each end in accordance with ANSI B1.20.1. Threads shall be cut prior to galvanizing to ensure corrosion protection adequately protects the threads. Conduit shall be provided with a matching coupling on one end and a color-coded thread protector on the other.

3. Conduit shall be coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit shall be manufactured in accordance with NEMA RN 1.

C. Conduit Bodies for use with PVC Coated Rigid Galvanized Steel Conduit

1. Conduit bodies shall be constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit bodies shall have integral threaded conduit hubs.

2. Conduit bodies for Class I, Division 1 hazardous areas shall be provided with integrally threaded covers constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane.

3. Conduit bodies for all other areas shall be constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Covers shall be affixed in place by Type 304 stainless steel screws which thread directly into the conduit body and have a plastic encapsulated head. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be provided with matching gasket.

D. Conduit Couplings, Nipples, and Unions for use with PVC Coated Rigid Galvanized Steel Conduit

1. Couplings and nipples shall be threaded and shall be constructed of hot dipped galvanized steel which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Split-type couplings that use compression to connect conduits are not acceptable.

2. Unions shall be threaded, rain-tight, and constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane.

E. Conduit Expansion and Deflection Fittings for use with PVC Coated Rigid Galvanized Steel Conduit

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of bronze or an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Expansion and deflection fittings shall have threaded conduit connections.

2. Expansion fittings shall have an integral bonding jumper and deflection fittings shall have an external bonding jumper.

F. Conduit Seals for use with PVC Coated Rigid Galvanized Steel Conduit

1. Conduit seals shall be constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit seals shall have threaded conduit connections.

G. Conduit Termination Fittings for Use with PVC Coated Rigid Galvanized Steel Conduit

1. Conduit hubs shall be constructed of an electro-galvanized malleable iron alloy which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Hubs shall have threaded connections to the conduit and enclosure. Hubs shall have a plastic insulated throat and shall be watertight when assembled to an enclosure.

2. Conduit bonding bushings shall be constructed of zinc plated malleable iron which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Bonding bushings shall have a threaded conduit connection. Bonding bushing shall be provided with properly sized set screw for connecting bonding conductor and an integral plastic insulator rated for 150 degrees C located in the throat.

2.05 RIGID ALUMINUM CONDUIT AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be made of heavy wall high strength 6063 alloy aluminum with temper designation T1 as defined by the Aluminum Association. Conduit shall be manufactured in accordance with ANSI C80.5 and shall be UL 6A Listed.

2. Conduit shall be provided with factory-cut 3/4 inch per foot tapered threads at each end in accordance with ANSI B1.20.1. Threads shall be cut prior to galvanizing to ensure corrosion protection adequately protects the threads. Conduit shall be provided with a matching coupling on one end and a color-coded thread protector on the other.

B. Conduit Bodies for use with Rigid Aluminum Conduit

1. Conduit bodies shall be constructed of copper-free aluminum which is coated with an aluminum enamel finish. Conduit bodies shall have integral threaded conduit hubs.

2. Conduit bodies for Class I, Division 1 hazardous areas shall be provided with integrally threaded covers constructed of copper-free aluminum which is coated with an aluminum enamel finish.

3. Conduit bodies for all other areas shall be provided with stamped copper-free aluminum covers that are affixed in place by Type 304 stainless steel screws which thread directly into the conduit body. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be provided with matching gasket.

C. Conduit Couplings, Nipples, and Unions for use with Rigid Aluminum Conduit

1. Couplings and nipples shall be threaded and shall be constructed of heavy wall high strength 6063 alloy aluminum with temper designation T1. Split-type couplings that use compression to connect conduits are not acceptable.

2. Unions shall be threaded, rain-tight, and constructed of copper-free aluminum which is coated with an aluminum enamel finish.

D. Conduit Expansion and Deflection Fittings for use with Rigid Aluminum Conduit

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of copper-free aluminum which is coated with an aluminum enamel finish. Expansion and deflection fittings shall have threaded conduit connections.

2. Expansion fittings shall have an integral bonding jumper and deflection fittings shall have an external bonding jumper.

E. Conduit Seals for use with Rigid Aluminum Conduit

1. Conduit seals shall be constructed of copper-free aluminum which is coated with an aluminum enamel finish. Conduit seals shall have threaded conduit connections.

F. Conduit Termination Fittings for use with Rigid Aluminum Conduit

1. Conduit hubs shall be constructed of copper-free aluminum and shall have threaded connections to the conduit and enclosure. Hubs shall have a plastic insulated throat and shall be watertight when assembled to an enclosure.

2. Conduit locknuts shall be constructed of copper-free aluminum. Locknuts shall have internal threading. Locknuts with integral gasket or seal are not acceptable. Locknuts shall have integral bonding screw where required for proper bonding.

3. Conduit bonding bushings shall be constructed of copper-free aluminum. Bonding bushings shall have a threaded conduit connection. Bonding bushing shall be provided with properly sized set screw for connecting bonding conductor and an integral plastic insulator rated for 150 degrees C located in the throat.

2.06 PVC COATED RIGID ALUMINUM CONDUIT AND ASSOCIATED FITTINGS

A. General

1. Where an external coating of polyvinyl chloride (PVC) is specified for conduit and fittings, the coating shall be 40 mil (minimum) thickness. Where an internal coating of urethane is specified for conduit and fittings, the coating shall be 2 mil (minimum) thickness.

2. All conduit fittings shall have a sealing sleeve constructed of PVC which covers all connections to conduit. Sleeves shall be appropriately sized so that no conduit threads will be exposed after assembly.

3. PVC coated conduit and associated PVC coated fittings shall be Ocal-Blue by ABB, Plasti-Bond by Robroy Industries, or Perma-Cote by Robroy Industries, no substitutions.

4. PVC coated conduit and associated PVC coated fittings shall be provided with a 5-year non-prorated warranty covering manufacturing defects and improper installation by the Contractor.

B. Conduit

1. Conduit shall be made of heavy wall high strength 6063 alloy aluminum with temper designation T1. Conduit shall be manufactured in accordance with ANSI C80.5 and shall be UL 6A Listed.

2. Conduit shall be provided with factory-cut 3/4 inch per foot tapered threads at each end in accordance with ANSI B1.20.1. Threads shall be cut prior to galvanizing to ensure corrosion protection adequately protects the threads. Conduit shall be provided with a matching coupling on one end and a color-coded thread protector on the other.

3. Conduit shall be coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit shall be manufactured in accordance with NEMA RN 1.

C. Conduit Bodies for use with PVC Coated Rigid Aluminum Conduit

1. Conduit bodies shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit bodies shall have integral threaded conduit hubs.

2. Conduit bodies for Class I Division 1 hazardous areas shall be provided with integrally threaded covers constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane.

3. Conduit bodies for all other areas shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Covers shall be affixed in place by Type 304 stainless steel screws which thread directly into the conduit body and have a plastic encapsulated head. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be provided with matching gasket.

D. Conduit Couplings, Nipples, and Unions for use with PVC Coated Rigid Aluminum Conduit

1. Couplings and nipples shall be threaded and shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Split-type couplings that use compression to connect conduits are not acceptable.

2. Unions shall be threaded, rain-tight, and constructed of copper free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane.

E. Conduit Expansion and Deflection Fittings for use with PVC Coated Rigid Aluminum Conduit

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Expansion and deflection fittings shall have threaded conduit connections.

2. Expansion fittings shall have an integral bonding jumper and deflection fittings shall have an external bonding jumper.

F. Conduit Seals for use with PVC Coated Rigid Aluminum Conduit

1. Conduit seal shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Conduit seals shall have threaded conduit connections.

G. Conduit Termination Fittings for use with PVC Coated Rigid Aluminum Conduit

1. Conduit hubs shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Hubs shall have threaded connections to the conduit and enclosure. Hubs shall have a plastic insulated throat and shall be watertight when assembled to an enclosure.

2. Conduit bonding bushings shall be constructed of copper-free aluminum which is coated on the exterior with a PVC jacket and coated on the interior with a layer of urethane. Bonding bushings shall have a threaded conduit connection. Bonding bushing shall be provided with properly sized set screw for connecting bonding conductor and an integral plastic insulator rated for 150 degrees C located in the throat.

2.07 LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC) AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be manufactured using a single strip of hot dip galvanized high strength steel alloy, helically formed into a continuously interlocked flexible metal conduit. Trade size 1-1/4 inch and smaller conduits shall be provided with an integrally woven copper bonding strip.

2. Conduit shall be covered with an outside PVC jacket that is UV resistant, moisture-proof, and oil-proof. Conduit shall be UL 360 Listed. Conduits shall be Listed for and marked with maximum temperature ratings as follows:

a. 105 degrees C dry, 60 degrees C wet for all conduit installed against or within 2 inches of equipment capable of having a surface temperature of 80 degrees C or greater (e.g., blowers, incinerators, etc.)

b. 80 degrees C dry, 60 degrees C wet for all other locations

B. Conduit Termination Fittings for use with LFMC

1. Conduit termination fittings shall be constructed of either [Type 304][Type 316] stainless steel or an electro-galvanized malleable iron alloy which is coated on the exterior with a 40 mil (minimum) PVC jacket and coated on the interior with a 2 mil (minimum) layer of urethane. PVC coated fittings shall have a sealing sleeve constructed of PVC which covers the connection to conduit.

2. Termination fittings shall have a threaded end with matching locknut and sealing ring for termination to equipment and shall have an integral external bonding lug where required for proper bonding. Termination fittings shall have a plastic insulated throat and shall be watertight when assembled to the conduit and equipment.

2.08 LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC) AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be constructed of rigid polyvinyl chloride (PVC), fabricated to provide flexibility. Conduit shall be covered with an outside PVC jacket that is UV resistant, moisture-proof, and oil-proof. Conduit shall be UL 1660 Listed and be Type LFNC-B.

B. Conduit Termination Fittings for use with LFNC

1. Conduit termination fittings shall be constructed PVC and shall have a threaded end with matching locknut and sealing ring for termination to equipment. Termination fittings shall be watertight when assembled to the conduit and equipment.

2.09 FLEXIBLE METAL CONDUIT (FMC) AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be manufactured using a single strip of hot dip galvanized high strength steel alloy, helically formed into a continuously interlocked flexible metal conduit. Conduit shall be UL 1 Listed.

B. Conduit Termination Fittings for use with FMC

1. Conduit termination fittings shall be constructed of an electro-galvanized malleable iron alloy. Fittings shall have a threaded end with matching locknut for termination to equipment, and a compression-style connection to the associated conduit.

2.10 ELECTRICAL METALLIC TUBING (EMT) AND ASSOCIATED FITTINGS

A. Conduit

1. Conduit shall be hot dipped galvanized on the inside and outside and made of cold-rolled steel tubing. Conduit shall be manufactured in accordance with C80.3 and

shall be UL 797 Listed.

B. Conduit Bodies for use with EMT

1. Conduit bodies shall be constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish. Conduit bodies shall have integral threaded conduit hubs.

2. Conduit bodies shall be provided with galvanized sheet steel covers that are affixed in place by Type 304 stainless steel screws which thread directly into the conduit body. Covers that utilize wedge nuts or any other method of attachment to the conduit body are not acceptable. Covers shall be provided with matching gasket.

C. Conduit Couplings and Nipples for use with EMT

1. Couplings and nipples shall have threaded compression connectors with associated gland and shall be constructed of electro-galvanized steel. Fittings utilizing a set screw or indenter tool to secure the associated conduit to the fitting are not acceptable. Couplings and nipples shall be rain-tight and have a plastic insulated throat.

D. Conduit Expansion and Deflection Fittings for use with EMT

1. Conduit expansion fittings and conduit deflection fittings shall be constructed of an electro-galvanized malleable iron alloy which is coated with an acrylic paint finish. Expansion and deflection fittings shall have threaded conduit connections.

2. Expansion fittings shall have an integral bonding jumper and deflection fittings shall have an external bonding jumper.

E. Conduit Termination Fittings for use with EMT

1. Conduit termination fittings shall be constructed of electro-galvanized steel and have a plastic insulated throat. Termination fittings shall have a threaded compression connector with associated gland on one end and external threads on the other end. Termination fittings utilizing a set screw or indenter tool to secure the associated conduit to the fitting are not acceptable.

2. Conduit locknuts shall be constructed of zinc plated steel. Locknuts shall have internal threading. Locknuts shall have integral bonding screw where required for proper bonding.

2.11 CONDUIT BENDS

A. Rigid conduit bends, both factory-fabricated and field-fabricated, shall meet the same requirements listed in the articles above for the respective conduit type and material of construction.

B. Conduit bend radii for standard radius bends shall be no less than as follows:

Trade Size (inches)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
Min. Radius (inches)	4-1/2	5-3/4	7-1/4	8-1/4	9-1/2	10-1/2	13	15	16	24	30

C. Conduit bend radii for long radius bends shall be no less than as follows:

Trade Size (inches)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
Min. Radius (inches)	N/A	12	18	24	30	30	36	36	48	48	60

2.12 MISCELLANEOUS

A. Conduit Periphery Sealing

1. The sealing of the exterior surface of conduits to prevent water and/or air from passing around the conduit periphery from one space to another (where required) shall be through the use of one of the following:

   a. A conduit sleeve and pressure bushing sealing system. Acceptable products are FSK by OZ-GEDNEY, Link-Seal by Crouse-Hinds, or Engineer approved equal.

   b. A conduit sleeve that is two trade sizes larger than the conduit being sealed, with 2-hour fire rated UL 1479 Listed caulk filling the entire void between the conduit and sleeve. This method is only suitable for penetrations in non-fire rated walls and floors.

   c. Conduit penetrations through fire-rated walls and floors shall be made with an approved UL 1479 Listed product specifically intended for the trade size of the conduit.

2. See Part 3 herein for the specific application of the conduit periphery sealing requirements above that are to be used based on what the conduit will be penetrating.

B. Primer and Cement

1. Nonmetallic conduit shall be cleaned with primer and connected to fittings with the manufacturer’s recommended cement that is labeled Low VOC.

C. Galvanizing Compounds

1. Galvanizing compounds for field application shall be the cold-applied type,

containing no less than 93% pure zinc.

D. Conduit Interior Sealing

1. For all conduits that have cables inside, the sealing of the inside of the conduits against water ingress shall be achieved through the use of one of the following:

   a. Two-part expanding polyurethane foam sealing compound, dispensed from a single tube which mixes the two parts as it is injected into the conduit. Expanding foam shall be compatible with the conduit material of construction as well as the outer jacket of the cables in the conduit. Acceptable products are Q-Pak 2000 by Chemque, FST by American Polywater Corporation, or Hydra-seal S-60 by Duraline.

   b. Inflatable bag that provides seal around cables and around inside diameter of conduit. Provide appropriate quantity of additional fittings for applications with three or more cables in the conduit to be sealed. Acceptable products are Rayflate by Raychem, or Engineer approved equal. This sealing method is only applicable to conduits trade size 2 inch and larger.

   c. Neoprene sealing ring provided with the required quantity and diameter of holes to accommodate the cables in each conduit. Sealing ring shall be compressed by two Type 304 stainless steel pressure plates. Acceptable products are type CSB by OZ-GEDNEY, or Engineer approved equal. This sealing method is only applicable to metallic conduits containing 4 or less cables.

2. The use of aerosol-based expanding foam sealants or any other method of sealing against water ingress not listed above is not acceptable.

3. For conduits identified as spares, the sealing of the inside of the conduit against water ingress shall be achieved by using appropriately sized rubber expanding-style conduit plugs.

E. Pull Rope

1. Pull ropes for empty and/or spare conduits shall be woven polyester, ½-inch wide, with a minimum tensile strength of 1250 lbs. In addition, pull ropes for conduits that are installed concealed shall also have a 22-AWG (minimum) tin-plated copper conductor woven in to make the rope detectable.

2. Pull ropes for the Contractors use in installing conductors shall be the size and strength required for the pull and shall be made of a non-metallic material.

PART 3 – EXECUTION

3.01 GENERAL

A. All conduit and associated fittings and appurtenances shall be installed in accordance with NECA 1.

B. Minimum trade size for all rigid conduits shall be 1 inch if any portion of the conduit is installed in a ductbank and 3/4 inch for all other applications. Conduits installed within ductbanks shall be allowed to be increased in size to trade size 2 inch, at the Contractor's option, to accommodate the saddle size of the ductbank spacers. However, no combining of circuits shall be allowed in the larger conduits.

C. Minimum trade size for flexible conduits (where specifically allowed herein) shall be 1/2 inch in all applications.

D. Conduit routing and/or homeruns within structures is not shown on the Drawings. Conduits shall be installed concealed wherever practical and within the limitations specified herein. All other conduits not capable of being installed concealed shall be installed exposed.

E. Empty and/or spare conduits shall be provided with pull ropes which have no less than 12 inches of slack at each end.

F. Nonmetallic conduits for installations requiring less than a factory length of conduit shall be field cut to the required length. The cut shall be made square, cleaned of debris, and primer shall be applied to ready each joint for fusing. Conduits shall then be fused together with the conduit manufacturer's approved cement compound.

G. Metallic conduits for installations requiring less than a factory length of conduit shall be field cut to the required length. The cut shall be made square, be cleaned of all debris and be de-burred, then threaded. Conduit threading performed in the field shall be ¾ inch per foot tapered threads in accordance with ANSI B1.20.1.

H. Conduits shall be protected from moisture, corrosion, and physical damage during construction. Install dust-tight and water-tight conduit fittings on the ends of all conduits immediately after installation and do not remove until conductors are installed.

I. Conduits shall be installed to provide no less than 12 inches clearance from pipes that have the potential to impart heat upon the conduit. Such pipes include, but are not limited to, hot water pipes, steam pipes, exhaust pipes, and blower air pipes. Clearance shall be maintained whether conduit is installed in parallel or in crossing of pipes.

J. Where non-metallic instrumentation conduits are installed exposed, the following clearances to other conduit types shall be maintained:

Installation Scenario	**Clearance**
Parallel to conduits with conductors energized at 480V or above	18 inches
Parallel to conduits with conductors energized at 240V and below	12 inches

At right angles to conductors energized at 480V and below	6 inches
At right angles to conductors energized at voltages above 480V	12 inches

K. Where conduit fittings do not include an integral insulated bushing, an insulated bushing shall be installed at all conduit termination points.

L. Conduits which serve multi-section equipment shall be terminated in the section where wiring terminations will be made.

M. Conduits shall not penetrate the floors or walls inside liquid spill containment areas without specific written authorization from the Engineer. Liquid spill containment areas are indicated on the Drawings.

N. Conduits shall only penetrate the walls of liquid-holding tanks or basins above the maximum liquid elevation. Conduits shall not penetrate walls below this elevation. Maximum liquid elevations are indicated on the Drawings.

O. Conduits that terminate at roof mounted equipment shall be installed through the roof curb for the associated equipment to avoid additional roof penetrations wherever possible. Conduits that are installed horizontally on roof surfaces shall be supported by roof blocks that do not impact the roof manufacturer's warranty and shall be installed at least 7/8 inch above the roof surface to avoid the need to further de-rate the conductors inside.

P. In no case shall conduit be supported or fastened to another pipe or be installed in a manner that would prevent the removal of other pipes for repairs. Spring steel fasteners may only be used to affix conduits containing lighting branch circuits within EMT conduits to structural steel members.

Q. All field fabricated threads for rigid galvanized steel conduit shall be thoroughly coated with two coats of galvanizing compound, allowing at least two minutes to elapse between coats for proper drying.

R. The appropriate specialized tools shall be used for the installation of PVC coated conduit and conduit fittings. No damage to the PVC coating shall occur during installation. Conduit and conduit fittings with damaged PVC coating shall be replaced at the Contractor's cost. The use of PVC coating touch-up compounds is not permitted.

S. If multiple manufacturers of PVC coated conduit and conduit fittings are reviewed and approved for use by the Engineer, only one manufacturer shall be permitted to be used on the project throughout the entirety of the project. Consistency of a single manufacturer is critical to ensure proper fit and alignment, and to maintain the manufacturer's warranty throughout the PVC coated system. Use of multiple manufacturers' PVC coated products is not acceptable.

T. Conduits which emerge from within or below concrete encasement shall be PVC coated rigid galvanized steel in accordance with Standard Detail E-26-0102 where the conduit is not protected by an equipment enclosure that surrounds the conduit on all sides at the point where it emerges from the encasement.

U. Aluminum conduits shall not be installed in direct contact with concrete surfaces. Where aluminum conduits are routed along concrete surfaces, they shall be installed with one-hole electro-galvanized malleable iron alloy straps with matching clamp-backs to space the conduit ¼ inch away from concrete surface. Where aluminum conduit passes through concrete, CMU or brick walls, the penetration shall be made such that the aluminum conduit does not come in contact with concrete, CMU, brick or mortar.

3.02 CONCEALED AND EMBEDDED CONDUITS

A. Conduits are permitted to be installed concealed and/or embedded with the following requirements:

1. Conduits shall not be installed horizontally when concealed within CMU walls, only vertical installation is acceptable.

2. Conduits installed embedded within concrete floors or walls shall be located so as not to affect the designed structural strength of the floor or wall. Embedded conduits shall be installed in accordance with Standard Detail S-03-0403 and ACI 318.

3. Where conduit bends emerge from concrete embedment, none of the curved portion of the bend shall be visible. Only the straight portion of the bend shall be visible. The straight portion shall emerge perpendicular to the embedment (i.e., neatly oriented 90-degrees to floor/slab/grade). Conduits that emerge in a non-perpendicular orientation are not acceptable.

4. Where multiple conduits emerge from concrete embedment or from concealment below a concrete floor, ample clear space shall be provided between conduits to allow for the appropriate and required conduit termination fittings to be installed.

5. Conduits installed embedded within concrete encasement of any kind shall be installed such that conduit couplings for parallel conduits are staggered so that they are not side by side.

B. Conduits are NOT permitted to be installed concealed and/or embedded for the following situations:

1. Conduits shall not be installed embedded within any water-bearing floors or walls.

2. Conduits shall not be installed embedded within any liquid containment area floors or walls.

3. Conduits shall not be installed concealed within CMU walls or gypsum walls that are adjacent to Class I and II hazardous areas (Division 1 and Division 2).

4. Conduits shall not be installed concealed within CMU walls or gypsum walls that are adjacent to indoor Type 1 or Type 2 chemical storage/transfer areas.

3.03 CONDUIT USES AND APPLICATIONS

A. Rigid Conduit

1. Rigid conduit for non-hazardous areas shall be furnished and installed in the materials of construction as follows:

Rigid Conduit for Non-Hazardous Areas

	Conduit Category by Wiring / Circuit Type	
Installation Area Designation / Scenario	**Power and Control**	**Instrumentation**
Exposed in indoor wet process areas	Rigid aluminum conduit	Same as Power and Control
Exposed in outdoor areas	Rigid aluminum conduit	Same as Power and Control
Concealed within underground concrete-encased ductbanks	Schedule 40 rigid non-metallic PVC conduit	PVC coated rigid aluminum conduit
Direct-buried conduits (where specifically permitted)	Schedule 40 rigid non-metallic PVC conduit	PVC coated rigid aluminum conduit
Concealed within non-elevated (i.e., "slab-on-grade" construction) concrete slabs	Schedule 40 rigid non-metallic PVC conduit	PVC coated rigid aluminum conduit
Concealed below concrete slabs (within earth or fill material)	Schedule 40 rigid non-metallic PVC conduit	PVC coated rigid aluminum conduit
Emerging from concealment within or below a concrete floor and transitioning to exposed conduit (Reference Detail E-26-0102)	PVC coated rigid aluminum conduit	Same as Power and Control

2. The tables for the materials of construction for rigid conduits are intended to exhaustively cover all possible scenarios and installation areas under this Contract. However, if a scenario or installation area is found that is not explicitly governed by these tables, it shall be assumed for bid purposes that the conduit material of construction is to be rigid aluminum. This discrepancy shall be brought to the attention of the Engineer (in writing) immediately for resolution.

B. Conduit Bends

1. All conduit bends shall be the same material of construction as the rigid conduit listed in the tables above, with the following exceptions:

    a. All 90-degree bends or combinations of adjacent bends that form a 90-degree bend where concealed within concrete or below a concrete slab shall be PVC coated rigid aluminum.

2. Field fabricated bends of metallic conduit shall be made with a bending machine and shall have no kinks. Field fabricated standard radius and long radius bends shall have minimum bending radii in accordance with the associated tables in Part 2 herein.

3. Field bending of non-metallic conduits is not acceptable, factory fabricated bends shall be used.

4. Long radius bends shall be furnished and installed for the following specific applications, all other bends shall be standard radius:

    a. All conduits containing fiber optic cable.

    b. Where specifically indicated on the Drawings.

C. Flexible Conduit

1. Flexible conduit shall only be installed for the limited applications specified herein. Flexible conduit shall not be installed in any other application without written authorization from the Engineer. Acceptable applications are as follows:

    a. Connections to motors and engine-generator sets (and similar vibrating equipment)

    b. Connections to solenoid valves and limit switches

    c. Connections to lighting fixtures installed in suspended ceilings

    d. Connections to lighting transformers and combination power units

    e. Connections to pre-fabricated equipment skids

    f. Connections to HVAC equipment

    g. Connections to instrument transmitters and elements

    h. Where specifically indicated in the Standard Details

2. Flexible conduit length shall be limited to three (3) feet, maximum. Flexible conduit shall not be installed buried or embedded within any material.

3. Unless otherwise specified herein, flexible conduits shall be installed in accordance with the Installation Guidelines published within NEMA RV-3.

4. Flexible conduit for non-hazardous areas shall be furnished and installed in the materials of construction as follows:

Flexible Conduit for Non-Hazardous Areas

	Conduit Category by Wiring / Circuit Type	
Installation Area Designation / Scenario	**Power and Control**	**Instrumentation**
Exposed in indoor wet process areas	Liquid-tight flexible metal conduit	Same as Power and Control
Exposed in outdoor areas	Liquid-tight flexible metal conduit	Same as Power and Control

3.04 CONDUIT FITTING USES AND APPLICATIONS

A. General

1. Conduit fittings shall be furnished and installed in the materials of construction as indicated in Part 2, herein. Conduit fitting materials of construction are dependent on the material of construction used for the associated conduit.

2. Conduit fittings shall be provided in the trade size and configuration required to suit the application.

B. Conduit Bodies

1. Conduit bodies shall be installed where wire pulling points are desired or required, or where changes in conduit direction or breaking around beams is required.

2. Where conduit bodies larger than trade size 2 inches are intended to be used as a pull-through fitting during wire installation, oversized or elongated conduit bodies shall be used. Oversized or elongated conduit bodies shall not be required if the conduit body is intended to be used as a pull-out point during wire installation.

C. Conduit Nipples and Unions

1. Conduits with running threads shall not be used in place of 3-piece couplings (unions) or close nipples. After installation of a conduit fitting of any kind, there shall be no more than ¼ inch of exposed threads visible. Factory fabricated all-thread nipples may be used between adjacent enclosures, however, the same restriction applies regarding the length of exposed threads that are visible.

D. Conduit Expansion and Deflection Fittings

1. Conduit expansion fittings shall be installed where required by the NEC and where indicated on the Drawings. Expansion fittings shall also be installed for exposed straight metallic conduit runs of more than 75 feet, in both indoor and outdoor locations. Expansion fittings for runs of non-metallic conduit shall be installed in accordance with the NEC.

2. Conduit deflection fittings shall be installed where required by the NEC and where conduits are installed (exposed and concealed) across structural expansion joints.

3. Unless otherwise specified herein, conduit expansion and deflection fittings shall be installed in accordance with the Installation Guidelines published within NEMA FB 2.40.

E. Conduit Termination Fittings

1. Where conduits terminate at enclosures with a NEMA 4, 4X, or 3R rating and the enclosure does not have integral conduit hubs, an appropriately sized watertight conduit hub shall be installed to maintain the integrity of the enclosure. The use of locknuts with integral gasket in lieu of watertight conduit hubs is not acceptable.

2. Where conduits terminate at enclosures that do not require conduit hubs, a two-locknut system shall be used to secure the conduit to the enclosure. One locknut shall be installed on the outside of the enclosure, and the other inside, drawn tight against the enclosure wall. The locknut on the interior of the enclosure shall be the type with integral bonding lug, or a conduit bonding bushing may be used in place of the interior locknut.

3. Conduits shall not be installed such that conduit fittings penetrate the top of any enclosure located outdoors, except in cases where specifically required by the serving electric utility. Conduits which serve outdoor equipment or an enclosure from above shall instead be routed into the side of the enclosure at the bottom. The conduit termination fitting shall be provided with a conduit drain to divert moisture from the raceway away from the enclosure.

3.05 MISCELLANEOUS

A. Conduit Periphery Sealing

1. Unless otherwise indicated on the Drawings, below-grade conduit penetrations through exterior walls shall be sealed around the periphery using the appropriate products specified in Part 2 herein.

2. Unless otherwise indicated on the Drawings, all conduit penetrations through interior walls and floors and above-grade exterior walls shall be sealed using conduit sleeves and caulk as specified in Part 2 herein. Alternatively, where concrete or

masonry walls/floors are penetrated, mortar may be used to seal around the conduit periphery for conduit penetrations through interior walls and floors and above-grade exterior walls.

3. Conduit penetrations through fire-rated walls as floors shall be made with the appropriate fire rated penetration product.

B. Conduit Interior Sealing

1. All conduits (including spares) entering a structure below grade shall be sealed on the interior of the conduit against water ingress. Sealing shall be at an accessible location in the conduit system located within the building structure and shall be via one of the methods specified in Part 2 herein. If conduit sealing cannot be achieved at an accessible location within the building structure, sealing shall be placed in the conduits in the nearest manhole or handhole outside the structure.

2. Conduit interior sealing shall not be installed until conductors inside are tested and test results are deemed acceptable by the Engineer. Conduit interior sealing shall be installed prior to energization of the conductors inside.

3.06 CONDUIT IDENTIFICATION

A. Exposed conduits shall be identified at the source, load, and all intermediate components of the raceway system. Examples of intermediate components include but are not limited to junction boxes, pull boxes, and disconnect switches. Identification shall be by means of an adhesive label with the following requirements:

1. Labels shall consist of an orange background with black text. Text for the label shall be the conduit number as indicated in the conduit and wire schedules.

2. In addition, at the source end of the conduit, a second line of text shall be included to indicate the load equipment name. This second line shall consist of the word “TO:” and the text in the ‘TO’ column of the conduit and wire schedule (e.g., TO: Exhaust Fan EF-01). At the load end of the conduit, a second line of text shall be included to indicate the source equipment name. This second line shall consist of the word “FROM:” and the text in the ‘FROM’ column of the conduit and wire schedule (e.g., FROM: Panel-1). This requirement applies only to the source and load ends of the conduit, and not anywhere in between.

3. For conduits trade sizes 3/4 inch through 1-1/2 inch, the text shall be a minimum 18-point font. For conduits trade size 2 inch and larger, the text shall be a minimum 24-point font.

4. Label height shall be 3/4 inch minimum, and length shall be as required to fit required text. The label shall be installed such that the text is parallel with the axis of the

conduit. The label shall be oriented such that the text can be read without the use of any special tools or removal of equipment.

5. Labels shall be installed after each conduit is installed and, if applicable, after painting. Labels shall be printed in the field via the use of a portable label printing system using thermal transfer technology. Handwritten labels are not acceptable.

6. Labels shall be made of permanent vinyl with adhesive backing. Labels made of any other material are not acceptable.

B. Conduits that are not exposed but installed beneath free standing equipment enclosures shall be identified by means of a plastic tag with the following requirements:

1. The tag shall be made of white Tyvek material, and have an orange label with black text, as described above, adhered to it. Text for the label shall be the conduit number as indicated in the conduit and wire schedules.

2. The tag shall be affixed to the conduit by means of a nylon cable tie. The tag shall be of suitable dimensions to achieve a minimum text size of 18 points.

C. Conduits for lighting and receptacle circuits shall not require identification.

D. Any problems or conflicts with meeting the requirements above shall immediately be brought to the attention of the Engineer for a decision.

3.07 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. All conduit installed below grade or concrete encased shall be tested to ensure continuity and the absence of obstructions by pulling through each conduit a swab followed by a mandrel 85% of the conduit inside diameter. After testing, all conduits shall be capped after installation of a suitable pulling rope.

3.08 TRAINING OF INSTALLATION PERSONNEL

A. All Contractor personnel that install PVC coated rigid metal conduit shall be trained by the PVC coated conduit manufacturer. Training shall include proper conduit system assembly techniques, use of tools appropriate for coated conduit systems, and field bending/cutting/threading of coated conduit. Training shall have been completed within the past 24 months prior to the Notice to Proceed on this Contract to be considered valid. Contractor personnel not trained within this timeframe shall not be allowed to install coated conduit or shall be trained/re-trained as required prior to commencement of conduit installation.

END OF SECTION

SECTION 26 05 33.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install all pull boxes, junction boxes, and outlet boxes as specified herein, indicated on the Drawings, and as required. Requirements for other boxes and enclosures are not necessarily included in this Section. Reference each specific equipment specification section for requirements related to that equipment's respective enclosure.

B. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements

2. Section 26 05 33.13 – Conduit for Electrical Systems

3. Section 26 05 53 – Identification for Electrical Systems

1.02 CODES AND STANDARDS

A. All boxes shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. Boxes shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. National Electrical Manufacturers Association (NEMA):

   a. NEMA 250 – Enclosures for Electrical Equipment.

2. National Fire Protection Association (NFPA):

   a. NFPA 70 – National Electrical Code (NEC).

3. Underwriters Laboratories (UL):

   a. UL 50 – Enclosures for Electrical Equipment, Non-environmental Considerations.

   b. UL 50E – Enclosures for Electrical Equipment, Environmental Considerations.

   c. UL 514A – Metallic Outlet Boxes.

d. UL 514C – Standard for Non-metallic Outlet Boxes, Flush Device Boxes, and Covers.

e. UL 1203 – Standard for Explosion-proof and Dust-ignition-proof Electrical Equipment for use in Hazardous (Classified) Locations.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer(s) and submit the following:

1. Shop Drawings

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible Submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets for boxes, terminal strips, and all accessories

2. Overall bill of material for all boxes included under this Contract to summarize exactly what is being submitted for review. Bill of material shall at a minimum show each box type (i.e., pull, junction, or outlet), quantity, material of construction, dimensions, and proposed installation location.

1.05 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01.

B. As-built drawings showing dimensions, internal box layout, terminal strip information, and terminal strip identification information shall be provided for all junction boxes. As-built drawings are not required for pull boxes or outlet boxes.

1.06 IDENTIFICATION

A. Each pull and junction box shall be identified with the box name as indicated on the Contract Drawings (e.g., PPB-XXX, CJB-YYY) or as directed by the Engineer. A

nameplate shall be securely affixed in a conspicuous place on each box. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by this Specification is intended to be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

2.02 PULL AND JUNCTION BOXES

A. General

1. All pull and junction boxes shall be UL Listed and Labeled.

2. Pull and junction boxes shall not be provided with eccentric or concentric knockouts.

3. Pull and junction boxes mounted embedded in concrete shall be UL Listed for embedment.

4. Where metallic boxes are used, they shall be of all welded construction. Tack welded boxes are not acceptable.

B. Pull Boxes

1. Metallic pull boxes in non-hazardous locations and in hazardous locations where general-purpose enclosures are permitted (e.g., Class I, Division 2 locations) shall be provided with a matching gasketed cover. For covers with dimensions of less than 12 inches by 12 inches, the cover shall be held in place by stainless steel machine screws. Other screw types are not acceptable. For covers with dimensions 12 inches by 12 inches and larger, the cover shall be hinged and held in place by 1/4-turn style latches. Latch mechanism shall be all stainless steel. Hinge pins shall be removable.

2. Metallic pull boxes in hazardous locations where general-purpose enclosures are not permitted (e.g., Class I, Division 1 locations) shall be provided with a matching gasketed cover. Cover shall be hinged and held in place by stainless steel bolts. Hinge pins shall be removable. Covers shall be installed and bolts torqued in accordance with manufacturer requirements to maintain the hazardous location rating of the enclosure.

3. Non-metallic pull boxes shall be provided with a matching gasketed cover. The cover shall be hinged and held in place by quick-release (e.g., “flip”) latches. Latch material

of construction shall match the box material, and include stainless steel hasps. For covers with dimensions 24 inches by 24 inches and larger, a 3-point latching mechanism with external pad-lockable handle may be substituted. Latch mechanism and handle shall be all stainless steel. Hinge pins shall be removable.

4. Pull boxes shall not have any wire terminations inside, other than those for grounding/bonding. A ground bar shall be provided with the necessary number of screw type terminals. Twenty (20) percent of the total amount of terminals otherwise required for the pull box (minimum of two) shall be provided as spare terminations. Boxes requiring any other wire terminations shall be furnished and installed in accordance with the requirements for junction boxes herein.

5. Pull boxes shall be 6 inches wide by 6 inches tall by 4 inches deep, minimum. For applications requiring larger boxes, the box shall be sized in accordance with the fill requirements and dimensional requirements of the NEC.

6. Barriers shall be provided in pull boxes to isolate conductors of different voltages, types, and functions. Barrier material of construction shall match that of the box. Isolation shall be provided between the following groups:

    a. Power wiring

    b. AC control wiring

    c. DC control wiring

    d. Instrumentation wiring

C. Junction Boxes

1. Metallic junction boxes in non-hazardous locations shall be provided with a matching gasketed cover. For covers with dimensions of less than 12 inches by 12 inches, the cover shall be held in place by stainless steel machine screws. Other screw types are not acceptable. For covers with dimensions 12 inches by 12 inches and larger, the cover shall be hinged and held in place by 1/4-turn style latches. Latch mechanism shall be all stainless steel. Hinge pins shall be removable.

2. Metallic junction boxes in hazardous locations shall be provided with a matching gasketed cover. Cover shall be hinged and held in place by stainless steel bolts. Hinge pins shall be removable. Covers shall be installed and bolts torqued in accordance with manufacturer requirements to maintain the hazardous location rating of the enclosure.

3. Non-metallic junction boxes shall be provided with a matching gasketed cover. The cover shall be hinged and held in place by quick-release (e.g., “flip”) latches. Latch material of construction shall match the box material and include stainless steel hasps. For covers with dimensions 24 inches by 24 inches and larger, a 3-point

latching mechanism with external pad-lockable handle may be substituted. Latch mechanism and handle shall be all stainless steel. Hinge pins shall be removable.

4. Barriers shall be provided in junction boxes to isolate conductors and terminal blocks of different voltages, types, and functions. Barrier material of construction shall match that of the box. Isolation shall be provided between the following groups:

   a. Power wiring

   b. AC control wiring

   c. DC control wiring

   d. Instrumentation wiring

5. Junction boxes used for lighting and receptacle circuits only shall be allowed to have screw-on (wire nut) type connectors for wire terminations/junctions.

6. Junction boxes for all uses other than lighting and receptacle circuits shall be provided with terminal strips, consisting of the necessary number of screw type terminals. Current carrying parts of the terminal blocks shall be of ample capacity to carry the full load current of the circuits connected, with a 10A minimum capacity. Terminal strips shall be rated for the voltage of the circuits connected. A separate ground bar shall be provided with the necessary number of screw type terminals. Twenty (20) percent of the total amount of terminals otherwise required for the junction box (minimum of two) shall be provided as spare terminations. When barriers are provided within the box, separate terminal strips shall be provided in each barrier area. Terminals shall be lettered and/or numbered to conform to the wiring labeling scheme in place on the project.

7. Junction boxes shall be 6 inches wide by 6 inches tall by 4 inches deep, minimum. For applications requiring larger boxes, the box shall be sized in accordance with the fill requirements and dimensional requirements of the NEC. Terminal blocks (including spare terminals) shall be considered when sizing the junction box.

D. Enclosure Types and Materials

1. In non-hazardous locations, pull and junction boxes shall be furnished with the following enclosure type and material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	**Enclosure Type and Material**
Indoor Wet Process Area	NEMA 4X, Type 304 Stainless Steel
All Outdoor Areas	NEMA 4X, Type 304 Stainless Steel

2.03 OUTLET BOXES

A. General

1. Outlet boxes shall be provided with a trim appropriate for the wiring device installed inside. Reference Section 26 27 26 – Wiring Devices for outlet box trim requirements. An appropriate outlet box trim is required to achieve the NEMA rating of the outlet boxes as specified herein.

B. Surface Mount Outlet Boxes

1. Outlet boxes shall be the deep type, no less than 2.5 inches deep.

2. Outlet boxes shall be provided in single or multi-gang configuration as required, sized in accordance with the requirements of the NEC.

3. In non-hazardous locations, outlet boxes shall be furnished with the following enclosure type and material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	Enclosure Type and Material
Indoor Wet Process Area	NEMA 4X, Cast Aluminum
All Outdoor Areas	NEMA 4X, Cast Aluminum

4. Outlet boxes shall be provided with integral threaded conduit hubs mounted external to the box. Boxes with threaded conduit hubs mounted internal to the box or as a part of the box wall are not acceptable.

C. Flush Mount Outlet Boxes

1. Outlet boxes shall be no less than 2-1/8 inches deep, and 4-11/16 inches square. Boxes shall be UL Listed and labeled. Pre-punched single diameter conduit knockouts are acceptable; however, concentric and eccentric knockouts are not acceptable.

2. Outlet boxes mounted flush in CMU walls shall be made of galvanized, tack welded steel, and suitable for installation in masonry walls. Sectional type boxes are not acceptable for this application.

3. Outlet boxes mounted flush in gypsum walls shall be made of galvanized pressed steel. Tack welded boxes are not acceptable for this application. Sectional type boxes are not acceptable for this application.

4. Outlet boxes mounted cast into concrete shall be concrete tight and made of galvanized steel or PVC.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Pull and Junction Boxes

1. Pull boxes and junction boxes shall be solidly attached to structural members prior to installation of conduit and set true and plumb. Boxes shall not be supported by their associated conduits.

2. Wooden plugs are not permitted for securing boxes to concrete. Appropriately rated anchors specifically suited for use in concrete shall be used.

3. Box penetrations for conduits shall be made with a punch tool, and penetrations shall be of the size required for the conduit entry and/or hub. Oversized penetrations in boxes are not acceptable.

4. Watertight conduit hubs shall be provided for boxes where a NEMA 4X enclosure rating is specified. Reference Section 26 05 33.13 – Conduit for Electrical Systems for conduit hub requirements.

5. Pull and junction boxes may be installed flush mounted in gypsum, concrete, or CMU walls where appropriate provided that covers are easily removed or opened.

6. Pull and junction boxes shall be provided in the enclosure type and material of construction required for the area in which it is installed. Reference the requirements in Part 2 herein, and the area designations indicated on the Drawings.

B. Outlet Boxes

1. Outlet boxes shall be solidly attached to structural members prior to installation of conduit and set true and plumb. Boxes shall not be supported by their associated conduits.

2. Wooden plugs are not permitted for securing boxes to concrete. Appropriately rated anchors specifically suited for use in concrete shall be used.

3. Flush mounted outlet boxes shall be arranged and located so that tile and grout lines fit closely around the boxes, and so placed that the cover or device plate shall fit flush to the finished wall surface.

4. Outlet boxes shall be flush mounted in finished areas and other areas where practical. Flush mounted outlet boxes shall not be installed in hazardous areas and type 1 or 2 chemical storage/transfer areas.

5. Depending on the type of wiring device to be installed in the outlet box, mounting heights from the finished floor or finished grade (as applicable) to the center of the box shall be as follows, unless otherwise specified herein, indicated on the Drawings, or required by the Americans with Disability Act (ADA):

    a. Light switches and wall mounted occupancy sensors, 48 inches

    b. Receptacles in indoor dry process/non-process areas, 18 inches

    c. Receptacles in indoor wet process areas and all indoor chemical storage/transfer areas, 42 inches in open areas, or 6 inches (minimum) above adjacent surfaces (e.g., countertops, tables, etc.) where applicable

    d. Receptacles in outdoor locations, 26 inches

    e. Ceiling mounted occupancy sensors, as indicated on the Drawings

    f. Flush mounted outlet boxes in CMU walls shall be adjusted to a slightly greater height than required above to align the center of the box with the center of the CMU block.

6. Outlet boxes shall be provided in the material of construction required for the area in which it is installed. Reference the requirements in Part 2 herein, and the area designations indicated on the Drawings.

END OF SECTION

SECTION 26 05 53
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. All electrical equipment shall be properly identified in accordance with these Specifications and the Contract Drawings. All electrical equipment shall be identified in the manner described, or in an equally approved manner.

B. The types of electrical identification specified in this Section include, but are not limited to, the following:

1. Operational instructions and warnings.

2. Danger signs.

3. Equipment/system identification signs.

4. Nameplates.

1.02 SIGNS

A. "DANGER-HIGH-VOLTAGE" signs shall be securely mounted on the entry doors of all electrical rooms.

1.03 LETTERING AND GRAPHICS

A. The Contractor shall coordinate names, abbreviations, and other designations used in the electrical identification work with the corresponding designations shown, specified, or scheduled. Provide numbers, lettering, and wording as indicated or, if not otherwise indicated, as recommended by manufacturers or as required for proper identification and operation/maintenance of the electrical systems and equipment.

1.04 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit shop drawings. Each submittal shall be identified by the applicable Specification Section.

1.05 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The material covered by these Specifications is intended to be standard material of proven performance as manufactured by reputable concerns. Material shall be fabricated, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as specified herein and shown on the Drawings.

2.02 NAMEPLATES

A. Nameplates shall be engraved, high pressure plastic laminate, black foreground with white lettering.

B. Nameplates shall be attached to NEMA 4X enclosures utilizing UL-recognized mounting kits designed to maintain the overall UL Type rating of the enclosure. Mounting kit fasteners shall be stainless steel Type AHK10324X as manufactured by Hoffman, or Engineer approved equal.

2.03 HIGH VOLTAGE SIGNS

A. Standard "DANGER" signs shall be of baked enamel finish on 20 gauge steel; of standard red, black, and white graphics; 14 inches by 10 inches size except where 10 inches by 7 inches is the largest size which can be applied where needed, and except where a larger size is needed for adequate identification.

2.04 CONDUIT IDENTIFICATION

A. Conduit identification shall be as specified in Section 26 05 33.13 – Conduit for Electrical Systems.

2.05 WIRE AND CABLE IDENTIFICATION

A. Field installed wire and cable identification shall be as specified in Section 26 05 19 – Low Voltage Conductors and Cable.

B. A plastic laminate nameplate shall be provided at each panelboard, motor control center, switchgear assembly, and switchboard assembly. This nameplate shall be used to clearly convey the conductor identification means used at that piece of equipment (i.e., Phase A=Brown, Phase B=Orange, C = Yellow).

C. Wiring identification for factory installed wiring in equipment enclosures shall be as specified in the respective Section.

2.06 BOX IDENTIFICATION

A. Pull, junction and device box identification shall be as specified in Section 26 05 33.16 – Boxes for Electrical Systems.

PART 3 – EXECUTION

3.01 NAMEPLATES

A. Nameplates shall be attached to the equipment enclosures with two (2) stainless steel sheet metal screws for nameplates up to 2-inches wide. For nameplates over 2-inches wide, four (4) stainless steel sheet metal screws shall be used, one (1) in each corner of the nameplate. The utilization of adhesives is not permitted.

3.02 OPERATIONAL IDENTIFICATION AND WARNINGS

A. Wherever reasonably required to ensure safe and efficient operation and maintenance of the electrical systems and electrically connected mechanical systems and general systems and equipment, including prevention of misuse of electrical facilities by unauthorized personnel, install plastic signs or similar equivalent identification, instruction, or warnings on switches, outlets, and other controls, devices, and covers or electrical enclosures. Where detailed instructions or explanations are needed, provide plasticized tags with clearly written messages adequate for the intended purposes. Signs shall be attached as specified above for nameplates.

3.03 POWER SOURCE IDENTIFICATION

A. After installation of all field equipment (e.g., valves, motors, fans, unit heaters, instruments, etc.) install nameplates at each power termination for the field equipment. Nameplate data shall include equipment designation (tag number), power source (MCC number, panelboard, etc.), circuit number, conduit number from schedule and voltage/phase.

B. Contractor to coordinate with the Engineer and the Owner regarding exact nameplate placement during construction.

C. Nameplates shall be as specified herein.

END OF SECTION

SECTION 26 22 00
LOW VOLTAGE TRANSFORMERS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish, install, test, and place in satisfactory operation transformers for power and lighting distribution systems as specified herein, as indicated on the Drawings, and as required to complete the electrical installations.

B. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements

2. Section 26 05 53 – Identification for Electrical Systems

C. All equipment specified in this Section shall be furnished by the transformer manufacturer who shall be responsible for the suitability and compatibility of all included equipment.

1.02 CODES AND STANDARDS

A. All equipment shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. Transformers shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE):

a. ANSI/IEEE C57.12.01 – Standard for General Requirements for Dry -Type Distribution and Power Transformers.

2. National Electrical Manufacturers Association (NEMA):

a. NEMA ST 20 – Dry Type Transformers for General Applications.

3. National Fire Protection Association (NFPA):

a. NFPA 70 – National Electrical Code (NEC).

4. Underwriters Laboratories (UL):

a. UL 1561 – Dry-Type General Purpose and Power Transformers.

5. U.S. Department of Energy 2016 Efficiency Standards

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Division 01, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings.

2. Operation and Maintenance Manuals.

3. Spare Parts List.

4. Reports of Certified Shop Field Tests.

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein, and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Drawings showing clearly marked dimensions and weight for each transformer.

3. Sample equipment nameplate diagram.

D. The submittal information shall reflect the specific equipment identification number as indicated on the Drawings (e.g., TX-A).

E. The shop drawing information shall be complete and organized in such a way that the Engineer can determine if the requirements of these Specifications are being met. Copies of technical bulletins, technical data sheets from "soft-cover" catalogs, and similar information which is "highlighted" or somehow identifies the specific equipment items that the Contractor intends to provide are acceptable and shall be submitted.

1.05 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01.

1.06 SPARE PARTS

A. All spare parts as recommended by the equipment manufacturer shall be furnished to the Owner by the Contractor.

A. Reference Section 26 05 00 – Basic Electrical Requirements for spare parts delivery and handling requirements.

1.07 IDENTIFICATION

A. Each transformer shall be identified with the equipment item number indicated on the Contract Drawings and the accepted Shop Drawings. A nameplate shall be securely affixed in a conspicuous place on each transformer. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by this Specification is intended to be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. Dry type distribution transformers shall be Energy Star compliant and manufactured by the Square D Company, GE by ABB, Eaton, or Siemens Energy and Automation, Inc.

2.02 DRY TYPE TRANSFORMERS

A. Furnish and install single-phase and three-phase general purpose, dry-type transformers, as specified herein and indicated on the Drawings. The transformers shall be 60 Hz, self-cooled, quiet-design insulated of the two-winding type.

B. The transformers shall be UL 1561 Listed.

C. The primary windings shall be rated 480 VAC for use on 3-phase systems and connected delta unless indicated otherwise on the Drawings. KVA ratings shall be as shown on the Drawings. Furnish transformers with two 2-1/2% primary taps above, and four 2-1/2% primary taps below rated voltage for transformers 15 KVA and above, and two 2-1/2% primary taps above, and two 2-1/2% primary taps below rated voltage for transformers less than 15 kVA. All taps shall be full capacity rated.

D. The ratings of the secondary windings shall be as indicated on the Drawings.

E. Transformers shall be designed for continuous operation at rated KVA, 24 hours a day, 365 days a year, with normal life expectancy as defined in ANSI/IEEE C57.96. This performance shall be obtainable without exceeding 150 degrees Celsius average temperature rise by resistance or 180 degrees Celsius hot spot temperature rise in a 40 degrees Celsius maximum ambient and 30 degrees Celsius average ambient. The maximum coil hot spot temperature shall not exceed 220 degrees Celsius. All insulating materials shall be flame retardant and shall not support combustion as defined in ASTM Standard Test Method D 635. All insulating materials shall be in accordance with NEMA ST 20 Standard for a 220 degrees Celsius UL component recognized insulation system.

F. Transformer coils shall be of the continuous wound copper construction and shall be impregnated with non-hygroscopic, thermosetting varnish.

G. All cores are to be constructed of high grade, non-aging, grain-oriented silicon steel with high magnetic permeability and low hysteresis and eddy current losses. Magnetic flux densities are to be kept well below the saturation point. The core laminations shall be tightly clamped and compressed with structural steel angles. The completed core and coil shall then be bolted to the base by means of vibration-absorbing mounts to minimize sound transmission. There shall be no metal-to-metal contact between the core and coil assembly and the enclosure.

H. All transformers shall be equipped with a wiring compartment suitable for conduit entry and large enough to allow convenient wiring. The maximum temperature of the enclosure shall not exceed 90 degrees Celsius. Transformers shall be furnished with lugs of the size and quantity required and suitable for termination of the field wiring.

I. The core of the transformer shall be visibly grounded to the enclosure by means of a flexible grounding conductor sized in accordance with applicable NEMA, IEEE, and ANSI standards.

J. Transformers shall have core and coil assemblies mounted on rubber isolation pads to minimize the sound levels. Transformers shall not exceed the sound levels listed in NEMA ST-20.

K. Transformers shall be furnished with the following enclosure type and material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	Enclosure Type and Material
Indoor Wet Process Area	NEMA 3R, Painted Steel
Indoor Dry Process Area	NEMA 2, Painted Steel

Area Designation	Enclosure Type and Material
Indoor Dry Non-Process Area	NEMA 2, Painted Steel
All Outdoor Areas	NEMA 3R, Painted Steel

L. The enclosure shall be made of heavy gauge steel and shall be degreased, cleaned, primed, and finished with a baked weather-resistant enamel using the manufacturer's standard painting process. Color shall be ANSI 49 or 61 grey.

PART 3 – EXECUTION

3.01 INSTALLATION

A. The transformers shall be furnished and installed as shown on the Drawings and as recommended by the equipment manufacturer.

B. Conduit routed to and from the transformer shall be arranged for easy removal of the transformer access covers.

C. Where transformers 50 kVA and smaller are shown to be wall mounted, a transformer manufacturer supplied wall mounting kit shall be used. The lowest point of the wall mounting bracket shall be no lower than 7'-0" above the finished floor. Field fabricated mounting hardware is not acceptable unless reviewed and approved in writing by the Engineer.

D. Prior to final completion of the work, all metal surfaces of the equipment shall be cleaned thoroughly, and all scratches and abrasions shall be retouched with the same lacquer as used for shop finishing coats.

3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Certified Shop Tests

a. The transformers shall be given routine factory tests in accordance with the requirements of the ANSI and NEMA standards. Temperature rises may be certified from basic design.

b. As a minimum, the following tests shall be made on all transformers:

1) Ratio tests on the rated voltage connection and on all tap connections.

2) Polarity and phase-relation tests on the rated voltage connection.

3) Applied potential tests.

4) Induced potential tests.

5) No-load and excitation current at rated voltage on the rated voltage connection.

2. Field Tests

a. Field testing shall be done in accordance with the requirements specified in the General Conditions, Division 01, and NETA Acceptance Testing Specifications, latest edition.

b. Insulation between windings shall be tested by 1000 VDC Megohmmeter for one (1) minute. Resistance value shall be no less than 100 Megaohms.

END OF SECTION

SECTION 26 24 16
PANELBOARDS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish, install, test, and place in satisfactory operation panelboards as specified herein and indicated on the Drawings. Panelboards shall be furnished with circuit breaker ratings, number of breakers, number of poles, and arrangements/locations conforming to the panelboard schedules shown on the Drawings.

B. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements

2. Section 26 05 53 –Identification for Electrical Systems

3. Section 26 43 13 – Surge Protective Devices

1.02 CODES AND STANDARDS

A. All equipment shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. The equipment shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. National Electrical Contractors Association (NECA):

   a. NECA 407 – Standards for Installing and Maintaining Panelboards.

2. National Electrical Manufacturers Association (NEMA):

   a. NEMA PB 1 – Panelboards.

3. National Fire Protection Association (NFPA):

   a. NFPA 70 – National Electrical Code (NEC).

4. Underwriters Laboratories (UL):

   a. UL 50 – Enclosures for Electrical Equipment, Non-environmental Considerations.

   b. UL 67 – Standard for Panelboards.

c. UL 489 – Molded Case Circuit Breakers, Molded Case Switches, and Circuit Breaker Enclosures.

d. UL 943 – Ground Fault Circuit Interrupters.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings.

2. Spare Parts List.

3. Operation and Maintenance Manuals.

4. Reports of Field Tests.

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Complete assembly, layout, and installation drawings with clearly marked dimensions for each panelboard.

3. Complete panelboard schedules indicating circuit designations as shown on the Drawings for each panelboard.

4. The submittal information shall reflect the specific equipment identification number as indicated on the Drawings (e.g., Panel-1, Panel-2, etc.).

1.05 OPERATIONS AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01. The manuals shall include:

1. Instruction books and/or leaflets.

2. Recommended spare parts list.

3. Final as-built construction drawings included in the shop drawings incorporating all changes made in the manufacturing process and during field installation.

1.06 SPARE PARTS

A. For each panelboard, the Contractor shall furnish to the Owner all spare parts as recommended by the equipment manufacturer. All spaces in the panelboards shall be furnished with a spare breaker as indicated in the panelboard schedules shown on the Drawings.

A. Reference Section 26 05 00 – Basic Electrical Requirements for spare parts delivery and handling requirements.

1.07 IDENTIFICATION

A. Each panelboard shall be identified with the identification name/number indicated on the Drawings. A nameplate shall be securely affixed in a conspicuous place on each panelboard. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The Equipment shall be designed, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. It is the intent of these specifications that the panelboards be produced by a single manufacturer who shall be responsible for matching all components and providing equipment which functions together as a system.

C. Panelboards shall be the PRL1X or PRL2X Series by Eaton, NQ Series by Square D, GE by ABB equivalent, or Siemens Energy and Automation, Inc. equivalent.

2.02 PANELBOARDS

A. General

1. Panelboards shall be dead-front type and shall be of the configuration and rating as specified herein and indicated on the Drawings. Panelboards shall be UL 67 Listed and shall be constructed to NEMA PB1 standards.

2. Where specified herein, indicated on the Drawings, or required, panelboards shall be rated for service entrance and bear a service entrance label.

3. Panelboards shall be equipped with a main circuit breaker or main lugs complete with branch circuit breakers, as indicated on the Drawings. The panelboards shall be suitable for flush or surface mounting as indicated on the Drawings.

4. Panelboards shall be fully rated and shall have a minimum short circuit rating of 22,000 amperes symmetrical for units rated 240VAC and below, and 42,000 amperes symmetrical for units rated above 240VAC, unless otherwise indicated on the Drawings.

B. Enclosures

1. Enclosures shall be UL 50 Listed and have a NEMA rating as indicated on the Drawings. An Underwriter's Laboratories, Inc. inspection label shall appear on the interior of the cabinet. Enclosures designated as NEMA 4X shall be constructed of 304 stainless steel. Enclosures with all other NEMA ratings shall be constructed of No. 12 U.S.S. code gauge galvanized steel, painted ANSI 49 or 61 gray. The enclosure shall have wiring gutters on the sides and shall be at least 5-3/4 inches deep. Wiring gutters shall be large enough to allow compliance with NEC minimum bending radius requirements for all cables to be terminated, including future cables sized for any spare circuit breakers that are shown on the Drawings.

2. All panelboards shall be provided with a dead front style trim. Additional trim requirements are as follows:

   a. Distribution panelboards with enclosures that are rated other than NEMA 12 shall have hinged covers over each vertical wiring gutter to allow access to all branch mounted device terminations without removing the panel trim.

   b. Power, lighting, and instrumentation panelboards with enclosures that are rated other than NEMA 12 shall be provided with a full height hinge where it is attached to the panelboard box. Trim shall be attached to the panelboard enclosure using concealed trim clamps. Resultant trim assembly shall allow work inside the enclosure without the need to remove the panel trim from the enclosure.

3. Panelboard trims shall include a door over the dead front area to provide access to the circuit breakers and other devices. The access door shall be fastened to the trim with concealed hinges and be equipped with flush-type catches. Access doors exceeding 40 inches in height shall be equipped with a vertical bolt three-point locking mechanism, all other doors shall have a single-point mechanism. All locks shall be keyed alike.

4. The panelboard shall be provided with an information label. The information label shall include the panelboard designation, voltage, phase, number of wires, and bus ratings.

C. Bus Work

1. Where 3-wire bus is indicated on the Drawings, the panelboard shall be furnished with 3 phase busses and a ground bus. In addition, if a transformer with a grounded wye secondary is shown on the Drawings to be supplying a 3-wire panelboard, a neutral landing pad shall be furnished within the panelboard to provide a place to terminate the grounded conductor. Providing a 4-wire bus (3 phases plus neutral) for a 3-wire system is not acceptable.

2. Where a 4-wire bus is indicated on the Drawings, the panelboard shall be furnished with 3 phase busses, a neutral bus of equal ampacity to the phase bus, and a ground bus.

3. Main bus bars shall be of ample size so that a current density of not more than 1000 amperes per square inch of cross section will be attained. This current density shall be based on the application of the full load connected to the panel plus approximately 25% of the full load for spare capacity. The main bus shall be full capacity as based on the preceding for the entire length of the panel to provide full flexibility of circuit arrangement.

4. A separate ground bus shall be provided with lugs for termination of equipment grounding conductors.

5. Branch bus work shall be rated to match the maximum branch circuit breaker which may be installed in the standard space.

6. All bus shall be tin-plated copper and shall extend the entire useable length of the panelboard, including spaces.

7. Where required by the NEC, a bonding jumper, sized in accordance with the NEC, shall be installed between the panelboard ground bus and the neutral bus or neutral landing pad.

D. Circuit Breakers

1. Main and branch circuit breakers shall be bolt-on, UL 489 Listed molded-case type with trip ratings as indicated on the Drawings. Unless otherwise indicated, circuit breakers shall be manually operable, with automatic trip-free operation, and shall provide inverse-time-limit overload and instantaneous short-circuit protection. All circuit breakers shall have quick-make, quick-break, toggle mechanisms for manual as well as automatic operation.

2. Main circuit breakers shall be individually mounted. Branch-mounted main circuit breakers are not acceptable unless specifically indicated on the Drawings. Coordinate top or bottom mounting of main circuit breaker with incoming conduit location(s).

3. Tandem or half-size circuit breakers are not acceptable.

4. Circuit breaker voltage ratings shall meet or exceed the panelboard voltage indicated on the Drawings. The number of poles and trip ratings shall be as indicated on the Drawings. Where a trip rating is not indicated on the Drawings, provide a 20A circuit breaker.

5. Circuit breakers for panelboards rated 240VAC and below shall have an interrupting rating at 240 VAC that matches the panelboard short circuit rating. Circuit breakers for panelboards rated above 240VAC shall have an interrupting rating at 480 VAC that matches the panelboard short circuit rating.

6. Unless indicated otherwise on the Drawings, circuit breakers with smaller than 225-ampere frames shall be the thermal-magnetic type. Thermal and magnetic trip elements may be fixed or adjustable.

7. Where indicated on the Drawings, and for circuit breakers of 225-ampere frames and larger, circuit breakers shall have interchangeable electronic trip units (ETU) and adjustable trip elements and time delays. Provide electronic trip units with the adjustable functions indicated on the Drawings (e.g., Long, Short, Instantaneous, Ground, etc.).

8. Where indicated on the Drawings, or where required by Code, circuit breakers shall be equipped with integrally mounted ground fault circuit interrupters (i.e., GFI/GFCI) complete with "TEST" push button, and shall be of a type which fit standard panelboard spaces for the breaker continuous current rating required. Ground fault circuit interrupter style circuit breakers shall be UL 943 Listed. Circuit breakers used for lighting circuit switching shall be approved for the purpose and shall be marked "SWD". Where required by Article 440 of the NEC, circuit breakers installed for air conditioning units shall be HACR type.

9. Where indicated on the Drawings, circuit breakers shall be 100% rated.

10. Where indicated on the Drawings, main circuit breakers shall be provided with a shunt trip device to trip the breaker from a remote location by means of a trip coil energized from a separate circuit. A 120 VAC shunt trip shall be capable of operating at 55% or more of rated voltage. All other shunt trips shall be capable of operating at 75% or more of rated voltage.

11. Where indicated on the Drawings, or as required, circuit breakers shall be provided with a padlockable hasp or handle padlock attachment (lock-off device) for padlocking in the “OFF” position as required to meet the NEC requirement for

disconnecting means and/or OSHA lock-out/tagout standard. Locking hardware shall remain in place even when the padlock is removed. Where indicated on the Drawings, or as required, branch circuit breakers shall be provided with a similar attachment (lock-on device) for padlocking in the “ON” position for critical circuits (e.g., fire alarm control panel circuits) which must remain energized.

E. Directories

1. Approved directories with noncombustible plastic cover, and with typewritten designations of each branch circuit, shall be furnished and installed in each panelboard (including both new panelboards and existing panelboards modified under this project). The Contractor shall maintain in each panelboard, during the duration of the Contract, a handwritten directory clearly indicating the circuit breakers in service. This directory shall be updated as work progresses, and final, typewritten directories, as specified above, shall be installed at the end of the project. Designations and circuit locations shall conform to the panelboard schedules on the Drawings, except as otherwise authorized by the Engineer.

2.03 SURGE PROTECTIVE DEVICES

A. Surge protective devices (SPD) shall be provided either integral to the panelboard or as a separate unit external to the panelboard enclosure, as indicated on the Drawings. See Section 26 43 13 – Surge Protective Devices for SPD requirements.

B. Integral SPDs shall be installed within the panelboard enclosure in a location that allows the required quantity and rating of branch circuit breakers to be installed. Reducing the quantity of branch circuit breakers to less than that required by the panel schedules is not acceptable.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Panelboards shall be furnished and installed as shown on the Drawings and as recommended by the equipment manufacturer, and as required by NECA 407.

B. Panelboards shall be set true and plumb in locations as shown on the Drawings. The top of panelboard enclosure shall not exceed six (6) feet above finished floor elevation.

C. Enclosures shall not be fastened to concrete or masonry surfaces with wooden plugs. Appropriate cadmium plated or galvanized steel bolts shall be used with expansion shields or other metallic type concrete insert for mounting on concrete or solid masonry walls. Cadmium plated or galvanized steel toggle bolts shall be used for mounting on concrete block or other hollow masonry walls. Bolt diameter shall be as required considering the size and weight of the completed panelboard and enclosure to provide adequate structural support.

D. The Contractor shall not use factory furnished knockouts with surface mounted back boxes. The Contractor shall punch or drill required openings during installation and shall equip flush mounted back boxes with manufacturer's standard pattern of knockouts.

E. The Contractor shall install cabinets (and other enclosure products) in plumb with the building construction. Flush mounted enclosures shall be installed so that the trim will rest against the surrounding surface material and around the entire perimeter of the enclosure.

F. Bus loads in all panelboards shall be balanced between phases to within a tolerance of one (1) KVA. Convenience receptacles shall be distributed evenly among all phase buses as much as practical.

G. Prior to final completion of the work, all metal surfaces of the equipment shall be cleaned thoroughly, and all scratches and abrasions shall be retouched with the same lacquer as used for shop finishing coats.

3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Field Tests

a. Prior to termination of any conductors to the circuit breakers, all bus work and circuit breakers shall be tested from phase to phase and phase to ground with a 1000 VDC megohmmeter for 1 minute in accordance with NECA 407. Resistance values shall be recorded and shall not be less than 100 megohms.

b. Prior to terminating any wires to the circuit breakers, the resistance of the connection between the bus work and each circuit breaker shall be tested through the use of a low-resistance ohmmeter. Record the resistance values for each circuit breaker.

END OF SECTION

SECTION 26 28 16.13
ENCLOSED CIRCUIT BREAKERS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install enclosed circuit breakers of voltage and current ratings as specified herein and indicated on the Drawings.

B. This specification is intended to apply to circuit breakers separately-mounted from other equipment in an individual enclosure. This Section does not apply to circuit breakers as part of an equipment assembly such as motor control centers, panelboards, switchboards, etc.

C. Reference Section 26 05 00 – Basic Electrical Requirements, Section 26 05 53 – Identification of Electrical Systems, and Section 26 43 13 – Surge Protective Devices.

1.02 CODES AND STANDARDS

A. Enclosed circuit breakers shall comply with the following codes and standards:

1. UL 489 – Molded Case Circuit Breakers, Molded Case Switches, and Circuit Breaker Enclosures

2. UL 1203 – Standard for Explosion-proof and Dust-ignition-proof Electrical Equipment for use in Hazardous (Classified) Locations

3. NEMA 250 – Enclosures for Electrical Equipment

4. National Electrical Code

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings.

2. Spare Parts List.

3. Operation and Maintenance Manuals.

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Complete assembly, layout, and installation drawings with clearly marked dimensions for each enclosed circuit breaker.

1.05 SPARE PARTS

A. For each enclosed circuit breaker, the Contractor shall furnish to the Owner all spare parts as recommended by the equipment manufacturer.

1.06 IDENTIFICATION

A. Each enclosed circuit breaker shall be identified with the identification name and/or number indicated on the Drawings. A nameplate shall be securely affixed in a conspicuous place on the front of each enclosed circuit breaker. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The Equipment shall be designed, constructed and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. Enclosed circuit breakers shall be manufactured by Eaton, the General Electric Company, the Square D Company, or Siemens Energy and Automation, Inc.

2.02 ENCLOSED CIRCUIT BREAKERS

A. Circuit breakers shall be molded case type with trip and frame ratings as indicated on the Drawings. Provide electronic trip unit where indicated on the Drawings, with adjustable functions as indicated on the Drawings.

B. Circuit breakers shall have an interrupting rating of 65,000 amperes symmetrical at 480 VAC, unless otherwise indicated on the Drawings.

C. Enclosed circuit breakers in non-hazardous locations shall be UL 489 Listed. Circuit breakers in hazardous locations shall be UL 1203 Listed.

D. Enclosure Types and Materials

1. In non-hazardous locations, enclosed circuit breakers shall be furnished with the following enclosure type and material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

Area Designation	**Enclosure Type and Material**
Indoor Wet Process Area	NEMA 4X, Type 304 Stainless Steel
All Outdoor Areas	NEMA 4X, Type 304 Stainless Steel

E. Enclosed circuit breakers shall be quick-make, quick-break and with an interlocked cover which cannot be opened when the breaker is in the “ON” position and capable of being locked in the “OPEN” position.

F. An Underwriter's Laboratories, Inc. inspection label shall appear on the interior of the enclosure.

G. Enclosed circuit breakers shall be suitable for use as service entrance equipment where indicated on the Drawings and so labeled to suit the application.

H. Where indicated on the Drawings, enclosed circuit breakers shall be 100% rated.

I. Surge Protective Devices

1. Surge protective devices (SPD) shall be provided either integral to the circuit breaker enclosure or as a separate unit external to the circuit breaker enclosure, as indicated on the Drawings. See Section 26 43 13 – Surge Protective Devices for SPD requirements.

PART 3 – EXECUTION

3.01 INSTALLATION

A. The enclosed circuit breaker shall be furnished and installed as shown on the Drawings and as recommended by the equipment manufacturer.

B. Enclosed circuit breakers shall be set true and plumb in locations as shown on the Drawings. The top of enclosure shall not exceed six (6) feet above finished floor elevation.

C. Enclosed circuit breakers shall be provided in the enclosure type and material of construction required for the area in which it is installed. Reference the requirements in Part 2 herein, and the area designations indicated on the Drawings.

3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Witnessed Shop Tests

    a. None required

2. Field Tests

    a. Field testing shall be done in accordance with the requirements specified in the General Conditions, Division 01, and NETA Acceptance Testing Specifications, latest edition.

END OF SECTION

SECTION 26 32 13

ENGINE GENERATORS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install an NEC Article 701 Legally Required Standby power engine generator set complete with all accessories and appurtenances as required and as specified herein.

B. It is the intent under this Contract to require an installation complete in every detail whether or not indicated on the Drawings or specified. Consequently, the Contractor is responsible for all details, devices, accessories and special construction necessary to properly install, adjust, test, and place in successful and continuous operation the engine-generator set.

C. Use materials which are new, unused, and as specified. If not specifically indicated, use the best and most suitable materials of their kinds for the purpose intended, and for the design and expected conditions of service, subject to the approval of the Engineer.

D. Provide workmanship that is first class in every respect. Employ workers thoroughly experienced in such work. A neat and workmanlike appearance in the finished work shall be required.

E. All materials used shall bear the inspection labels of the Underwriter's Laboratories, if the material is of a class inspected by the Laboratory.

F. Unless otherwise indicated, the materials to be provided under this Specification shall be the products of manufacturers regularly engaged in the production of all such items and shall be the manufacturer's latest design. The products shall conform to the applicable standards of UL and NEMA, unless specified otherwise. International Electrotechnical Commission (IEC) standards are not recognized. Equipment designed, manufactured, and labeled in compliance with IEC standards is not acceptable.

G. The engine generator sets shall fully comply with all current Environmental Protection Agency (EPA) emission regulations including, but not limited to, the New Source Performance Standards (NSPS) for stationary and non-road generator sets. The engine generator set(s) shall meet the EPA new source performance requirements required at the time the engine generator set(s) submittal is approved by the Engineer. Engines manufactured previous to the submittal approval date that do not meet the current regulated emissions levels are not acceptable.

H. Reference Section 26 05 00 – Basic Electrical Requirements, Section 26 05 19 – Low-Voltage Conductors and Cables, Section 26 27 26 – Wiring Devices, Section 26 05 53 – Identification for Electrical Systems, Section 26 36 23 – Automatic Transfer Switches, Section 26 24 16 – Panelboards, and Section 23 13 01 - Fuel Systems.

1.02 CODES AND STANDARDS

A. The packaged engine-generator system shall comply with the following Codes and Standards as a minimum:

1. NEMA MG1 – Motors and Generators.

2. NEMA MG2 – Safety Standard for Construction and Guide for Selection, Installation and Use of Motors and Generators.

3. ISO STD 8528 – Reciprocating Internal Combustion Engines.

4. ISO STD 3046 – Performance Standard for Reciprocating Internal Combustion Engines.

5. NFPA 30 – Flammable and Combustible Liquids Code.

6. NFPA 70 – National Electrical Code

7. NFPA 70E – Standard for Electrical Safety in the Workplace

8. NFPA 110 – Standard for Emergency and Standby Power Systems.

9. UL 508 – Industrial Control Equipment.

10. EGSA – Electrical Generating Systems Association.

11. UL 2200 – Stationary Engine Generator Assemblies

12. ANSI C57 – Dry-Type Transformers.

13. UL 142 – Steel Aboveground Tanks for Flammable and Combustible Liquids.

14. UL 1236 – Standard for Battery Chargers for Charging Engine Starter Batteries.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings

2. Spare Parts List

3. Reports of Certified Shop and Field Tests

4. Operation and Maintenance Manuals

5. Manufacturer's Field Start-up Report

6. Manufacturer's Representative's Installation Certification

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings for each engine-generator set shall include but not be limited to:

1. A Compliance, Deviations, and Exceptions (CD&E) letter. If the shop drawings are submitted without this CD&E letter, the submittal will be rejected. The letter shall include all comments, deviations and exceptions taken to the Drawings and Specifications by the Contractor AND Equipment Manufacturer/Supplier. This letter shall include a copy of this Specification Section. In the left margin beside each and every paragraph/item, a letter “C”, “D”, or “E” shall be typed or written in. The letter “C” shall be for full compliance with the requirement. The letter “D” shall be for a deviation from the requirement. The letter “E” shall be for taking exception to a requirement. Any requirements with the letter “D” or “E” beside them shall be provided with a full typewritten explanation of the deviation/exception. Handwritten explanation of the deviations/exceptions is not acceptable. The CD&E letter shall also address deviations, and exceptions taken to each Drawing related to this Specification Section.

2. Manufacturers printed specification sheets showing critical engine and generator set specifications including the following:

a. Dimensions, and weights

b. Guaranteed fuel consumption at 25%, 50%, 75% and 100% of full rated load

c. Engine bhp available

d. Brake Mean Effective Pressure (BMEP)

e. Engine jacket water heat rejection

f. Exhaust flow rate and temperature at 100% of rated load

g. Ventilation and combustion air requirements

h. Exhaust backpressure limitation

i. Liquid refill capacities

j. Voltage regulation characteristics

k. Guaranteed noise levels

3. Alternator technical electrical data, including, but not limited to:

a. Alternator efficiency at 50%, 75%, and 100% load

b. Telephone Interference Factor (TIF)

c. Harmonic waveform distortion

d. Type of winding insulation and generator temperature rise

e. Per unit subtransient impedance X'' and X/R ratios for positive, negative, and zero sequences

f. Transient reactance (Xd')

g. Synchronous reactance (Xd)

h. Sub transient time constant (Td'')

i. Transient time constant (Td)

j. DC time constant (Tdc)

k. Decrement curve

4. Manufacturer's printed warranty statement of the engine and generator set showing single source responsibility by the engine manufacturer.

5. Generator control panel equipment and features. Include a written explanation of the auto start/stop logic and operation.

6. Engine-generator set and accessory product data sheets including, but not limited to, the following:

a. Alternator strip heater

b. Radiator

c. Seismically rated vibration isolators

d. Flexible exhaust coupling

e. Exhaust silencer

f. Batteries

g. Battery charger

h. Engine manufacturer’s shutdown contactors

i. Jacket coolant heater

j. Fuel cooler

k. Fuel tank(s) and pump(s)

l. Fuel level devices

m. Output circuit breaker and trip unit

n. Conduit

o. Wire and Cable

p. Wiring Devices

q. Lighting

7. Normal operating ranges for systems temperature, pressure and speed.

8. Manufacturer's part number for the engine and generator operation guide, parts book, service manual, warranty policy, and installation guide.

9. Location of other similar units showing compliance with the experience requirements specified herein.

10. Phone numbers of twenty-four (24) hour products support contacts and locations.

11. Drawing showing right hand, left hand, and top views of proposed assembly; battery rack, isolators, exhaust silencer, conduit stub up locations, and flexible fittings; wiring schematics, interconnection diagrams (point to point), and written description of engine generator controls and alarm circuits.

12. Control panel layout drawings and wiring diagrams.

13. EPA Certificate of Conformity for Exhaust Emissions

14. Drawings and specifications for base-mounted fuel storage tank with accessories.

15. Detailed drawings showing plan, front, and side views as well as appropriate section views of the weatherproof, engine-generator enclosure. Include product data sheets

for all appurtenances (e.g. exhaust fan, thermostat, lighting, switches, receptacles, combination power unit, etc.) to be furnished and installed in the enclosure. Drawings shall be of sufficient detail to assure proper installation by the Contractor.

D. The shop drawing information shall be complete and organized in such a way that the Engineer can determine if the requirements of these Specifications are being met. Copies of technical bulletins, technical data sheets from "soft-cover" catalogs, and similar information which is "highlighted" or somehow identifies the specific equipment items the Contractor intends to provide are acceptable and shall be submitted.

1.05 REPORTS OF CERTIFIED SHOP AND FIELD TESTS

A. Submit two (2) certified copies of all test reports. This includes all shop tests and field tests. Certified shop test reports for prototype engine-generator sets are unacceptable. The manufacturer’s serial number for the actual engine-generator set furnished for this project shall appear on all test reports.

1.06 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01. The manuals shall include:

1. Instruction books and/or leaflets.

2. Recommended spare parts list.

3. Final as-built construction drawings included in the shop drawings incorporating all changes made in the manufacturing process.

B. Manuals shall contain complete information in connection with assembly, operation, lubrication, adjustment, wiring diagrams and schematics, maintenance, and repair, including detailed parts lists with drawings or photographs identifying the parts. Manuals shall contain all information submitted as part of the shop drawing review process.

1.07 SPARE PARTS

A. Routine maintenance and adjustments shall be performed without the use of special tools or instruments. All spare parts as recommended by the equipment manufacturer shall be furnished to the Owner by the Contractor.

B. In addition to the manufacturer recommended spare parts, the Contractor shall furnish the following spare parts for each engine-generator set:

1. One (1) set of fuel oil particulate filters

2. One (1) set of air filters

3. One (1) set of lubrication oil filters

4. One (1) set of fuel/water separator filters

5. One (1) set of coolant filters

C. The spare parts shall be packed in containers suitable for long term storage, bearing labels clearly designating the contents and the pieces of equipment for which they are intended.

D. Spare parts shall be delivered at the same time as the equipment to which they pertain. The Contractor shall properly store and safeguard such spare parts until completion of the work, at which time they shall be delivered to the Owner.

E. Spare parts list, included with the shop drawing submittal, shall indicate specific sizes, quantities, and part numbers of the items to be furnished. Terms such as "1 lot of packing material" are not acceptable.

F. Parts shall be completely identified with a numerical system to facilitate parts inventory control and stocking. Each part shall be properly identified by a separate number. Those parts which are identical for more than one size, shall have the same parts number.

G. The dealer shall have sufficient parts inventory to maintain over-the-counter availability of at least 90% of any required part and 100% availability within 48 hours.

1.08 IDENTIFICATION

A. Each engine-generator set shall be identified with the identification name/number indicated on the Drawings (e.g., Generator No. 1). A nameplate shall be securely affixed in a conspicuous place on the generator main circuit breaker or output termination box enclosure. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

1.09 WARRANTY TERMS

A. The manufacturer's and Dealer's warranty shall in no event be for a period of less than four (4) years or five hundred (500) hours of operation, whichever comes first, from date of delivery of equipment to the project site and shall include repair labor, travel expense necessary for repairs at the jobsite, and expendables (lubricating oil, filters, coolant, and other service items made unusable by the defect) used during the course of repair. Submittals received without written warranties as specified shall be rejected in their entirety.

B. Provided warranty shall cover all equipment included in the scope of supply. This warranty shall include, but is not limited to, the following:

1. Engine-generator set and respective auxiliary equipment

2. All controls for the engine-generator set

C. Batteries shall be provided with two (2) year full replacement guarantee, and a 48-month pro-rated replacement schedule thereafter.

1.10 OIL SAMPLING KIT

A. The generator set supplier shall provide an oil sampling analysis kit which operating personnel shall utilize for scheduled oil sampling. All equipment needed to take oil samples shall be provided in a kit and shall include the following:

1. Sample extraction gun

2. Ten (10) Bottles

3. Ten (10) Postage-paid mailers

4. Written instructions

B. An additional oil sampling kit shall be made available to the Owner to continue the sampling when the above specified kit has been depleted. All kits in addition to that specified above shall be at an additional cost to the Owner, if the Owner desires to continue the sampling service.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by this Specification is intended to be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. Consideration will be given only to the equipment of those manufacturers who have furnished comparable size diesel engine-generator sets for at least two (2) similar installations that have been in regular successful operation for not less than five (5) years.

C. The engine-generator set manufacturers shall be Cummins or Caterpillar. No substitutions shall be permitted. The engine-generator set manufacturer and/or dealer shall be responsible for the entire engine-generator package including the engine-generator set with all accessories and equipment specified herein and all other devices required for a complete and operable system.

2.02 GENERAL DESCRIPTION

A. The engine-generator set shall be rated as specified herein and as indicated on the Drawings. It shall have the capability to operate at its rating for the duration of any power outage with all accessories including engine running devices, silencer, radiator, cooling fans, fuel system, and all appurtenances complete as it would be installed in the field. The

Contractor shall note and take appropriate action regarding the intended operation of the engine-generator sets while connected to motor driven loads controlled by variable frequency drives (VFDs).

2.03 ENGINE

A. The engine shall be diesel, 4 cycle, radiator cooled, and shall be turbocharged having an operating speed of 1800 RPM. Engine shall operate on ASTM D-975 Grade No. 2D S15 ultra-low sulfur diesel fuel. Engines requiring any other fuel type are not acceptable.

B. The engine will not be acceptable if the design is a conversion of a naturally aspirated engine to which a turbo-blower has been attached, unless the engine is certified by the manufacturer as having been analyzed and redesigned with ample provisions for increased stresses and bearing or heat loads due to increased pressures and rate of heat liberation.

C. Brake mean effective pressure (BMEP) shall not exceed 320 psi at rated load. Brake Horsepower (BHP), and Engine-Generator efficiency shall conform with ASME, IEEE and NEMA standards that electrical energy delivered by the machine is within the minimum certified guaranteed fuel oil consumption rate and evidence that these parameters have been met shall be furnished.

D. Only engine manufacturers' standard ratings shall be acceptable. No dealer special ratings will be acceptable.

E. The specified standby kW rating shall be for continuous electrical service during interruption of the normal utility source, per NEMA standards.

F. Engine speeds shall be governed by an electronic isochronous governor that will sense generator speed and provide accurate load transient correction capability at less than 0.5 percent regulation, from no load to full load generator output.

2.04 ALTERNATOR

A. The alternator shall conform to NEMA and IEEE standards and be rated as indicated on the Drawings. The alternator shall have a UL 2200 Listing. The alternator shall be brushless, salient pole, 2/3 pole pitch and synchronous for operation at 480VAC, wye connected, as indicated on the Drawings. The alternator shall be capable of delivering 500 SkVA (minimum) at an instantaneous voltage dip of no more than 20% voltage drop.

B. Laminations and windings shall be designed for minimum reactance, low voltage waveform distortion and maximum efficiency.

C. The main stator coils shall be random wound. Insulation shall be Class H with a temperature rise of no more than 125 degrees C according to NEMA standards. The insulation system shall be made of epoxies and polyesters which are inorganic compounds and shall prevent fungus growth.

D. The rotor shall be dynamically balanced and include amortisseur windings to minimize voltage deviations and heating effects under unbalanced load conditions.

E. Radio interference suppression (both directions) shall be provided in accordance with NEMA and IEEE Standards.

F. The alternator shall have a brushless, permanent magnet generator (PMG) excitation support system to provide input to the automatic voltage regulator to enable the alternator to support 300% of rated current for 10 seconds to allow fault clearing.

G. Waveform deviation shall not exceed 5% from true sine wave. The transient response from no load to full load in one step of the engine-generator set shall not exceed a voltage dip of 35%, a frequency dip of 20%, and shall recover to complete steady state performance within 12 seconds for both voltage and frequency. The transient response from full load to no load in one step shall not exceed a voltage overshoot of 7% and shall recover to steady state performance within 3 seconds. Transient performance shall be in accordance with ISO 8528.

H. The Telephone Influence Factor (TIF) shall be less than 50.

I. The voltage regulator shall be an adjustable, solid-state, three-phase RMS sensing, volts/hertz type. Voltage regulation shall be a minimum of +/-0.25% from no load to continuous rating. The voltage regulator shall provide +/-10% voltage adjustment. The voltage regulator shall be located within the engine control panel.

J. An alternator mounted strip heater shall be furnished and installed as part of the system. The strip heater shall be energized to prevent condensation when the engine generator set is not running.

2.05 CONTROLS

A. Engine generator monitoring and controls shall be mounted in a single NEMA 1 (gasketed) dust-tight enclosure. A suitable accessible terminal strip having all wires properly identified shall be furnished within the enclosure. The control panel shall be mounted at a height of 4'-8" measured from the center of the panel to the equipment pad or enclosure floor.

B. The control panel shall accept a dry contact input for engine starting from remote locations. The starting and stopping of the engine-generator set shall be initiated through the control panel only. When the engine starts, starting control shall automatically disconnect cranking controls. Four (4) cranking cycles of 10 seconds "ON", 10 seconds "OFF" shall be provided. The starting controls shall prevent re-cranking for a definite time after source voltage has been reduced to a low value, or the four (4) cranking cycles have been reached without a successful start. The automatic engine starting controls shall use industrial rated control type elements throughout, and controls shall have the capability to operate at 50% battery voltage.

C. Speed sensing shall be provided to protect against accidental starter engagement with a moving flywheel. Battery charging alternation output voltage is not acceptable for this purpose.

D. A UL 489 Listed generator/exciter field circuit breaker with shunt trip device shall be furnished and installed as part of the engine generator set. Shunt trip shall be activated upon engine-generator fault conditions.

E. Engine generator monitoring and control shall be provided using a microprocessor-based control panel complete with an LCD display. The devices necessary for automatic starting shall be on the engine and in the engine control panel. Generator output frequency and voltage shall be adjustable through the control panel keypad. The following hardware (minimum) shall be provided on the front of the control panel; the use of the LCD display and keypad to accomplish the same function is not acceptable:

1. Engine control mode switch or pushbuttons (Run-Off-Auto)

2. Large, red emergency stop pushbutton

F. The following parameters (minimum) shall be shown on the LCD display or otherwise be indicated at the control panel:

1. Engine oil pressure

2. Coolant temperature

3. Generator output voltage

4. Generator output current

5. Generator elapsed run time

6. Generator output frequency

7. Engine run

8. Engine fail

9. Low coolant temperature

10. Pre-high engine temperature

11. Pre-low fuel level

12. Engine speed (RPM)

G. The following events (minimum) shall cause an immediate shutdown of the engine-generator set if it is operating or prevent starting if it is not operating. The specific event

that causes the shutdown/prevents starting shall be shown on the LCD display or otherwise be indicated at the control panel. A reset shall be required to clear the fault and allow the unit to operate:

1. Engine coolant high temperature
2. Engine low oil pressure
3. Low fuel level
4. Engine overspeed
5. Engine overcrank
6. Engine tried to start but failed
7. Low coolant level

H. The generator control panel shall have a communication port capable of transmitting all available engine-generator set data via Modbus RTU protocol.

I. The generator control panel shall have Form C dry contacts rated 5A (minimum) at 120VAC/24VDC for the following signals:

1. Engine coolant high temperature
2. Engine low oil pressure
3. Pre-low fuel level
4. Low fuel level
5. Engine overspeed
6. Engine overcrank
7. Engine tried to start but failed
8. Low coolant level
9. Engine fail
10. Engine run

J. The normally closed (NC) contacts for all of the above signals (except engine run and Pre-low fuel level) shall be wired in series to provide a common "Generator System Failure" alarm for remote indication. Other contacts shall also be wired as a part of this alarm as specified elsewhere herein.

2.06 OUTPUT CIRCUIT BREAKERS

A. A main line circuit breaker as specified herein and sized as indicated on the Drawings shall be installed as a load circuit interrupting and protection device in a NEMA 1 (gasketed) dust-tight enclosure. Circuit breaker shall be UL 489 Listed and shall have an interrupting rating that is at least 10% greater than the maximum short circuit current available from the generator. Circuit breaker shall be 100% rated where indicated on the Drawings.

B. The circuit breaker shall be provided with an adjustable electronic trip unit. The trip unit shall be provided with adjustable long-time, short-time, ground fault, and instantaneous settings. It shall operate both manually for normal operation and automatically for protection against overload or short circuits. Generator/exciter field circuit breakers are not acceptable for this service.

2.07 ENGINE ACCESSORIES

A. Furnish and install the engine with all accessory equipment and appurtenances which are required for proper operation, including the following:

1. Heavy duty dry type air filter with restriction indicator

2. Heavy duty lubricating oil filter, bypass type, with replaceable absorbent-type elements

3. Lubricating oil cooler, water cooled

4. Heavy duty fuel oil filter, spin-on, with non-replaceable absorbent-type elements

5. Fuel oil fuel/water separator

6. Heavy duty crankcase vapor coalescer

7. Radiator mounted fuel cooler to cool recirculated fuel before it is re-deposited into the fuel tank as recommended by the manufacturer.

2.08 MOUNTING

A. Couple the engine and generator together through a flexible, non-backlash type, all metal coupling which overcomes all normal misalignment stresses and transmits full engine torque with ample safety factor. Also provide flexible connections for piping connections.

2.09 COOLING SYSTEM

A. Provide a radiator manufactured of a non-corrosive material mounted on the engine. The radiator core shall be coated with a corrosion resistant coating. Corrosion resistant coating shall be a corrosion resistant baked phenolic coating or similar.

B. Connect the radiator to the engine internal cooling system with flexible piping. Furnish appropriately sized coolant expansion tank for the cooling system.

C. The engine shall be cooled through a radiator sized to continuously maintain safe operation at full load and at 105°F outside ambient air with 50% ethylene glycol coolant. A blower type fan and low noise fan drive and controls shall be furnished. The fan and all rotating members and drive belts shall be guarded and meet OSHA standards. Proof of 105°F ambient temperature capability shall be required.

D. Coolant

1. After the cooling system is flushed and cleaned, provide an initial fill of coolant consisting of 50% ethylene glycol. An anti-corrosion treatment shall be added during the initial fill.

2. The coolant shall meet the requirements of the generator manufacturer including corrosion inhibitors provided in the coolant to protect the engine cooling system.

E. The engine shall be equipped with coolant heaters. Heaters shall be in accordance with the following:

1. Unit mounted thermal circulation type coolant heater with coolant recirculation pump shall be furnished to maintain engine jacket coolant temperature as recommended by manufacturer in an ambient temperature of minus 20°F. The heater shall be 208 VAC, 60 hertz, 3-phase, thermostatically controlled.

2. The heater shall be of sufficient capacity to keep the coolant at a suitable temperature for trouble-free starting.

3. Each heater shall be provided with a suitable contactor to automatically disconnect the heater when the engine is started.

2.10 ENGINE STARTING AND CHARGING SYSTEM

A. Engine starting batteries shall be sealed, lead-acid type, rated 12 volts, wired for 12V or 24V starting. Starting batteries shall have adequate capacity for rolling the engine for five (5), ten (10) second cycles without starting, and then operating the control devices in the local generator controls for two (2) hours. The batteries shall be mounted on a suitable non-corrosive rack which is provided with a battery heating pad that operates at 120VAC or 208VAC. Batteries shall have battery cables with lugs and shall be provided with lugs for connection to the battery charger.

B. Battery charger shall be a U.L. 1236 Listed, automatic, solid-state battery charger, 10 A (min.) current limited output, ±2% voltage regulation, ±10% line voltage variation, automatic float equalizing system, DC voltmeter, and DC ammeter. Provide a Form C unpowered (dry) contact to indicate a low battery alarm condition.

C. In addition, the engine shall be provided with an engine battery charging alternator that automatically charges the starting batteries during engine operation.

2.11 EXHAUST SILENCER

A. Furnish and install an exhaust silencer. Silencers shall be of critical type and sized to produce a high degree of silencing. Reference the sound attenuation requirements specified herein.

B. Silencer shall be mounted within or exterior to the generator enclosure dependent on generator size and manufacturers standards. Silencers mounted on the outside of the enclosure shall be 316 stainless steel construction on its interior and exterior. Silencers mounted within the generator enclosure shall be painted steel and insulated using a calcium silicate material covered by a brushed aluminum skin.

C. Connect the silencer to the engine exhaust manifold with a high corrosion and temperature resistant stainless steel flexible convoluted exhaust pipe. Use flange-type connections. Provide a taper-cut tail pipe complete with rain cap to exhaust the gases to the atmosphere. The silencer system shall be designed, furnished, and installed to prevent moisture and condensation from corroding the silencer. All exterior components of the exhaust system shall be made of 316 stainless steel.

D. The silencer (if installed inside), exhaust piping, and expansion fittings, including collector box, shall be completely covered with a removable insulation blanket in order to protect operating personnel and to reduce noise. Insulation shall be of composite fiberglass and stainless steel construction capable of withstanding 1200°F continuously. The insulation blankets shall be tailored and custom fabricated to fit the contours of the manifolds. Average weight of the insulating blanket shall be 1.5 psf. Insulation shall conform to MIL-1-16411D, Type II and shall be custom fabricated to fit the contours of the components.

2.12 WIRING

A. Furnish and install internal wiring in the engine-generator set. All internal wiring between the generator and engine-generator control panel, the on-board power source and all accessories shall be provided.

2.13 AUTOMATIC TRANSFER SWITCH

A. Furnish and install an automatic transfer switch as indicated on the Drawings and specified in Section 26 36 23 – Automatic Transfer Switches. The switch and its operation shall be considered to be part of the standby generator system.

2.14 BASE MOUNTED FUEL TANK

A. The generator set shall be supplied with a U.L.-142 listed base mounted fuel tank of sufficient capacity to operate the engine-generator set at full load for a minimum of 72 hours. The tank, painted in a color as selected by the Owner, shall be fabricated from steel

with a rupture basin and leak detection system. The alarm and indicator for the leak detection shall be mounted adjacent to the generator control panel and a contact for remote indication of a fuel leak condition shall be provided. This contact shall be wired as part of a common "Generator System Failure" alarm.

B. A level device shall also be furnished and installed to provide a local (generator control panel) and remote indication of pre-low fuel tank level and low fuel tank level. The pre-low fuel tank level shall activate a set of dry contacts for remote alarm indication. The low fuel tank level alarm shall shut down the engine to prevent the fuel level from dropping below the fuel pickup piping in the fuel tank. The pre-low fuel level alarm shall activate when only 6 hours of fuel for full load operation remains in the fuel tank. The remote low fuel tank level alarm shall be wired separate from the "Generator System Failure" alarm. A separate level device shall be furnished and installed to provide an analog remote indication of the fuel level in the tank. Level device shall have a 4-20mA output.

C. The tank shall be supplied with all necessary fuel supply, return, vent, and fill fittings and a fuel level gauge. The lockable fill port and level gauge shall be easily accessible from outside the enclosure. Provide a valve that automatically closes the fuel fill inlet when the tank level reaches 95% of its capacity. The vent line shall be piped to the outside and be equipped with a fill whistle. Four (4) spare 2-inch (minimum) ports shall be provided on top of the tank for future use, two (2) on each long side of the generator.

D. The underside of the tank shall not be in contact with the mounting surface (concrete pad).

2.15 WEATHERPROOF ENGINE - GENERATOR ENCLOSURE

A. Furnish and install an outdoor, weather-protective housing. The housing shall be furnished complete with a full sub-base floor resulting in complete enclosure. The enclosure shall be factory-assembled to the engine-generator set base and radiator cowling. Lifting eyes shall be provided. Housing shall provide ample airflow for generator set operation. The housing shall be constructed of 12-gauge (minimum) aluminum or 14 gauge (minimum) galvanized steel, reinforced to be vibration free in the operating mode. The housing shall have hinged side-access doors and rear control panel access door. Each door shall have at least two latch-bearing points. All doors shall be lockable. All steel sheet metal shall be primed for corrosion protection and finish painted in a color as selected by the Owner. Roof shall be peaked to allow drainage of rain water. Unit shall have sufficient guards to prevent entrance by small animals. Batteries shall fit inside enclosure and alongside the engine (batteries under the generator are not acceptable). Unit shall have engine coolant and oil drains piped to outside the unit to facilitate maintenance. Each drain line shall have a valve located near the fluid source.

B. A “Skin-tight” housing shall be provided. No walk-around access is required within the enclosure; however, adequate working clearance shall be provided as required by the NEC. Alternatively, access doors may be provided so that when opened, adequate working clearance is achieved in front of electrical equipment.

C. Enclosure shall be sound attenuated to provide sound level as specified herein.

D. The enclosure shall be furnished with a combination power unit as specified herein. This unit shall serve as the power distribution panel for all accessories specified herein and indicated on the Drawings (e.g. alternator mounted space heater, battery charger, leak detection system, etc.) that require “shore power”. The enclosure manufacturer shall furnish and install conduit and wire necessary to provide the power from the unit to all accessories.

1. The combination power unit shall be a combination of a dry type transformer and a lighting panelboard. Combination power unit shall be 30kVA minimum, or larger as required to serve all loads. Combination power unit shall be 208/120V to provide both 3 phase and single-phase power. The transformer and panelboard shall be as specified in Section 26 24 16 – Panelboards. Combination power units shall be suitable for the environment in which they are installed.

E. All hardware (nuts, bolts, screws, washers, etc.) that is installed on the exterior of the generator enclosure shall be stainless steel. Galvanized steel hardware is not acceptable.

F. Linear LED lighting shall be provided in sufficient quantity to maintain 20 foot-candles of illumination at floor level and shall be suitable for operation in cold weather. Compact fluorescent lighting fixtures are not acceptable. Interior lighting shall be controlled by 3-way light switches located at each door. Reference Section 26 27 26 – Wiring Devices.

G. Convenience receptacles shall be furnished at each door within the enclosure. Receptacles shall be 125V, 20A, UL 943 Listed, GFCI, two-pole, three wire grounded type. Reference Section 26 27 26 – Wiring Devices.

H. Conduit and wire shall be in accordance with Sections 26 05 33.13 – Conduit for Electrical Systems and Section 26 05 19 – Low-Voltage Conductors and Cables, respectively.

I. All air intake louvers shall be furnished with rain guards or designed to eliminate water intrusion to the interior of the enclosure when the generator is operating at full load (maximum airflow) during rain events.

2.16 SOUND ATTENUATION

A. Extreme care shall be exercised in providing equipment for and setting the engine-generator in place to guard against excessive noise transmission and vibrations. Fasten to the underside of the skids seismically-rated spring type isolators.

B. The engine-generator enclosure shall be designed, furnished, and installed to reduce source noise to 78 dB(A) as measured at seven (7) meters from the enclosure.

PART 3 – EXECUTION

3.01 INSTALLATION

A. The standby generator system shall be furnished and installed as indicated on the Drawings and as recommended by the equipment manufacturer.

B. The initial filling of the fuel storage tank shall be provided by the Contractor. Fuel tank shall be filled to its full capacity. At the conclusion of all field testing, the Contractor shall fill the fuel storage tank back to its full capacity. Fuel shall be ultra-low sulfur diesel Grade No. 2D S15 in accordance with ASTM D-975. Fuel shall be new and free from contaminants and water.

3.02 SERVICES OF MANUFACTURER'S REPRESENTATIVE

A. The Contractor shall provide the services of a qualified generator manufacturer's factory-trained technical representative who shall adequately supervise the installation and testing of all equipment furnished under this Contract. The manufacturer's representative shall certify in writing that the equipment has been installed in accordance with the manufacturer's recommendations. No further testing or equipment startup may take place until this certification is accepted by the Owner.

B. The manufacturer’s technical representative shall perform all startup and field testing of the generator assembly as specified herein.

C. The Contractor shall provide training for the Owner’s personnel. Training shall be conducted by the manufacturer's factory-trained representative who shall instruct Owner’s personnel in operation and maintenance of all equipment provided under this Section. Training shall be provided for two (2) sessions of four (4) hours each. Training shall not take place until after the generator has been installed and tested. Training shall be conducted at times coordinated with the Owner and shall occur during the same week as the training specified in Section 26 36 23 – Automatic Transfer Switches.

D. The services of the manufacturer's representative shall be provided for a period of not less than as follows:

1. One (1) trip of two (2) working days during installation of the engine-generator set.

2. One (1) trip of one (1) working day to perform startup of the engine-generator set.

3. One (1) trip of two (2) working days to perform the field testing of the engine-generator set.

4. One (1) trip of one (1) working day to perform training as specified herein.

5. One (1) trip of one (1) working day two (2) months before the warranty expiration to identify issues to be corrected under warranty. Any additional time required to achieve successful installation and operation shall be at the expense of the Contractor.

3.03 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 1. The following tests are required:

1. Witnessed Shop Tests

    a. None required.

2. Certified Shop Tests

    a. Fully test the engine-generator set with all accessories in the manufacturer's plant before shipment.

    b. Record complete test data for frequency, amperes, volts, power factor, exhaust temperature, coolant temperature, and oil pressure.

    c. Generator load tests shall be conducted through the use of balanced, three-phase, dry-type, reactive (0.8 power factor) load banks. Conduct a continuous run test using the load bank without shutdown for the engine-generator set under the following load conditions (in this specific order):

        1) 3 hours - full load

        2) 1 hour - 3/4 load

        3) 1 hour - 1/2 load

        4) 1 hour - 1/4 load

    d. Fuel, lubricants, and other fluids as required for the shop tests shall be furnished by the manufacturer.

3. Field Tests

    a. Field tests shall be performed by the generator manufacturer’s technical representative. The Contractor shall obtain from the manufacturer and submit a detailed field test plan and procedures documenting the intended field test program.

    b. In the presence of the Engineer and Owner, the representative shall inspect, adjust, and test the entire system after installation and leave in good working order. Field tests specific to each generator shall be conducted after the entire engine-generator system is installed including, but not limited to, the following: diesel fuel tanks including leak detection, exhaust silencer, radiators, enclosures, batteries, and all other equipment included in the complete system.

    c. Field test the generator enclosure to ensure the enclosure performs as specified herein. The generator enclosure field tests shall include water tests

to confirm the enclosure does not leak and that the air intake louvers eliminate water intrusion to the interior of the generator enclosure when the generator is operating at its full load capacity (maximum airflow). A garden hose shall be used to simulate falling rain for this test. Water supply and garden hose will be provided by the Owner for this test.

d. Field test, as far as practicable, all control, shutdown, and alarm circuits. Document the successful completion of these tests as witnessed by the Owner and the Engineer.

e. Generator load tests shall be conducted through the use of balanced, three-phase, dry-type, resistive (1.0 power factor) load banks. Conduct a continuous run test using the load bank without shutdown for the engine-generator set under the following load conditions (in this specific order) and in the presence of the Owner and Engineer:

   1) 5 hours, full load

   2) 1 hour, 3/4 load

   3) 1 hour, 1/2 load

   4) 1 hour, 1/4 load

f. Record complete test data for frequency, amperes, volts, power factor, exhaust temperature, coolant temperature, and oil pressure every 15 minutes during the continuous run test. If any failures, malfunctions, and/or shutdowns occur during this test, the problems shall be fixed and the test shall be restarted. The test shall not be considered complete until the generator has operated without any shutdowns for the required consecutive hours under the conditions listed above.

g. After successful completion of the load bank tests, the generator system shall then be operated for a minimum of four (4) hours with facility loads during a time period when the plant is operating at average demand. The same data shall be recorded at 15-minute intervals for this load test as for the load bank test.

h. It is the intent that the tests above take place utilizing facility loads. If the system cannot be fully loaded as required by the facility loads, the manufacturer shall connect a reactive load bank to a spare circuit breaker in the switchgear as needed to test the system under the loads described above. If any failures, malfunctions, and/or shutdowns occur during any of the transfer tests listed above, the problems shall be fixed and the test shall be restarted. Each test shall not be considered complete until the generator/switchgear system has performed the required number of transfers consecutively without any failures or malfunctions. During the transfer testing above, the loads shall

remain on the utility or generator source for at least five (5) minutes in between transfers.

i. All fuel, lubricants, and other fluids required to complete all field tests shall be paid for by the Contractor.

4. Oil Sampling and Analysis

a. The Contractor shall collect a sample of engine oil from each engine for analysis after the start-up and testing has been successfully completed. The oil samples shall be analyzed at an independent laboratory that is not a part of the engine supplier's facility. Immediate notification of results shall be provided to the Owner when the analysis shows any critical reading.

b. The sampling method shall be of the atomic absorption spectrophotometry method and be accurate to within a fraction of one part per million for the following elements:

1) Iron

2) Chromium

3) Copper

4) Aluminum

5) Silicon

6) Lead

c. The sample shall also be tested for the presence of water, fuel dilution, and coolant.

3.04 FIELD ADJUSTMENTS

A. The circuit breaker trip units shall be set in the field by a qualified representative of the manufacturer, or an outside testing company retained by the Contractor, in accordance with the settings designated in the coordination study. See Section 26 05 00 – Basic Electrical Requirements.

3.05 PAINTING

A. Prior to final completion of the work, all metal surfaces of the equipment shall be cleaned thoroughly, and all scratches and abrasions shall be retouched with the same coating as used for factory finishing coats.

END OF SECTION

SECTION 26 36 23
AUTOMATIC TRANSFER SWITCHES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish, install, connect, test and place in satisfactory operation automatic transfer switches as specified herein and indicated in Drawings.

B. All devices and components of the automatic transfer switch shall be NEMA rated. IEC rated devices are unacceptable and shall be cause for rejection of the submittals/equipment.

1.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Witnessed Shop Tests

    a. Shall be made available at manufacturing facilities if requested.

2. Certified Shop Tests and Reports

    a. Automatic transfer switches shall be given routine factory tests. The factory tests shall demonstrate that the completed switches function correctly and that the required timing has been set. Certification of these settings shall be submitted to the Engineer upon request.

    b. Test procedures shall be in accordance with UL-1008. During the 3-cycle withstand tests, there shall be no contact welding or damage.

    c. The three cycle tests shall be performed without the use of current limiting fuses.

    d. Oscillograph traces across the main contacts shall verify that contact separation has not occurred and there is contact continuity across all phases after completion of the test.

    e. When conducting temperature rise tests in accordance with UL-1008, include post-endurance temperature rise tests to verify the ability of the transfer switch to carry full rated current after completing the overload and endurance tests.

    f. Manufacturer shall submit test reports upon request.

3. Field Tests

   a. Field testing shall be done in accordance with the requirements specified in the General Conditions, Division 01, and Section 26 05 00 – Basic Electrical Requirements.

   b. Prior to acceptance of the installation, load test the equipment with all available motor load, but do not exceed the generator's or automatic transfer switch's nameplate rating. Correct defects which become evident during this test.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

   1. Shop Drawings

   2. Operation and Maintenance Manuals

   3. Spare Parts Lists

   4. Special Tools List

   5. Reports of certified shop tests shall be submitted which indicates a closing and withstand ampere rating as required based on short circuit study requirements. Rating shall be symmetrical, 3 cycles at 480 VAC.

   6. Guarantee/Warranty Program

B. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete or illegible submittals will be returned to the Contractor for resubmittal without review.

C. Shop drawings for each automatic transfer switch shall include but not be limited to:

   1. Product data sheets.

2. Complete assembly, layout, and installation drawings with clearly marked dimensions and conduit entrance locations.

3. Example equipment nameplate data sheet.

4. Complete internal schematic and interconnecting wiring diagrams.

5. Nameplate schedule.

6. Manufacturer's standard installation instructions.

7. Manufacturer's standard warranty.

D. The shop drawing information shall be complete and organized in such a way that the Engineer can determine if the requirements of these specifications are being met. Copies of technical bulletins, technical data sheets from "soft-cover" catalogs, and similar information which is "highlighted" or somehow identifies the specific equipment items the Contractor intends to provide are acceptable and shall be submitted.

E. Prior to completion and final acceptance of the project, the Contractor shall furnish and install "as-built" wiring diagrams for each automatic transfer switch. These final drawings shall be plastic laminated and securely placed inside each transfer switch and included in the O&M manuals.

1.05 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01.

1.06 TOOLS, SUPPLIES AND SPARE PARTS

A. The automatic transfer switches shall be furnished with all special tools necessary to disassemble, service, repair and adjust the equipment. All spare parts as recommended by the equipment manufacturer shall be furnished to the Owner by the Contractor.

B. The spare parts shall be packed in containers suitable for long term storage, bearing labels clearly designating the contents and the pieces of equipment for which they are intended.

C. Spare parts shall be delivered at the same time as the equipment to which they pertain. The Contractor shall properly store and safeguard such spare parts until completion of the work, at which time they shall be delivered to the Owner.

D. Spare parts lists, included with the shop drawing submittal, shall indicate specific sizes, quantities, and part numbers of the items to be furnished. Terms such as "1 lot of packing material" are not acceptable.

E. Parts shall be completely identified with a numerical system to facilitate parts inventory control and stocking. Each part shall be properly identified by a separate number. Those parts which are identical for more than one size, shall have the same parts number.

1.07 SERVICES OF MANUFACTURER'S REPRESENTATIVE

A. The Contractor shall provide the services of a qualified manufacturer's technical representative who shall adequately supervise the installation and testing of all equipment furnished under this Contract and instruct the Contractor's personnel and the Owner's operating personnel in its maintenance and operation as outlined elsewhere in Division 01 and Section 46 00 00 – Equipment General Provisions. The services of the manufacturer's representative shall be provided for a period of not less than as follows:

1. One trip of one (1) working day during installation of the equipment for each automatic transfer switch.

2. One trip of one (1) working day after acceptance of the equipment.

3. One trip of one (1) working day during the warranty period.

B. Any additional time required to achieve successful installation and operation shall be at the expense of the Contractor. The manufacturer's representative shall sign in and out at the office of the Engineer's Field Representative on each day they are at the project.

C. The manufacturer shall have an established network of service centers capable of servicing the specified equipment. The manufacturer shall have a service center within 200 miles of the project site which shall stock parts necessary to service the switch. The manufacturer shall include an 800 telephone number for a field service contact affixed to each enclosure.

D. Service center personnel shall be on call 24 hours a day, 365 days a year. Personnel shall be factory-trained and certified in the maintenance and repair of the specified equipment.

E. After-warranty service contracts shall be made available to the Owner by the manufacturer, through the service centers, to provide periodic maintenance and/or repair of the specified equipment.

1.08 IDENTIFICATION

A. Each automatic transfer switch shall be identified with the identification number indicated on the Drawings (e.g. ATS-1). A nameplate shall be securely affixed in a conspicuous place on each switch. Nameplates shall be as specified in Section 26 05 53, Identification for Electrical Systems.

1.09 TRAINING

A. The Contractor shall provide training for Owner personnel. Training shall be conducted by the manufacturer's factory trained specialists who shall instruct Owner personnel in operation and maintenance of all equipment provided under this Section. Training shall be in accordance with the requirements of Section 46 00 00 – Equipment General Provisions.

B. Provide the services of an experienced, factory trained technician or service engineer of the switch manufacturer at the jobsite for minimum of three (3) days for training of Owner personnel, beginning at a date mutually agreeable to the Contractor and the Owner. The technician shall be on duty at the site for at least 8 hours per day and shall be available 24 hours per day when required to advise concerning special problems with equipment and systems.

1.10 WARRANTY

A. The manufacturer shall warrant each automatic transfer switch for a minimum of five (5) years from date of shipment. In addition, the manufacturer shall repair or replace equipment found faulty under the terms of the warranty. The manufacturer shall submit data outlining the guarantee/warranty program.

1.11 CONSTRUCTION SEQUENCING

A. The Contractor shall reference 01 14 00 – Coordination with Owner’s Operation, of these Specifications.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The equipment covered by this Specification is intended to be standard equipment of proven performance as manufactured by reputable concerns. Equipment shall be designed, constructed and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. The equipment described herein, as a minimum, shall meet all of the requirements specified in this Section and shall be a product of a manufacturer who has produced automatic transfer switches for a period of at least five (5) years. The equipment shall be compatible with the loads to be served. Assembly of the switches by a fabricator is not acceptable.

C. The manufacturer of the automatic transfer switch shall verify that the switches are listed by Underwriters Laboratories, Inc., standard UL-1008, with 3-cycle withstand and close-in values as indicated on the Drawings or specified herein.

D. The automatic transfer switches shall be contactor style design, (Open Transition) as manufactured by Eaton, Square D, or ASCO.

2.02 AUTOMATIC TRANSFER SWITCH

A. General

1. Switches shall have ampere ratings and number of poles as indicated on the Drawings and shall be suitable for 480 VAC, three-phase, 60 Hertz operation.

2. For three phase, four-wire systems where a neutral is required, a true four-pole switch shall be supplied with all four electrically and mechanically identical poles mounted on a common shaft. The continuous current rating and the closing and withstand rating of the fourth pole shall be identical to the rating of the main poles.

3. The transfer switch shall be housed in a NEMA 4X (gasketed) free-standing or wall-mounted enclosure fabricated from 12-gauge steel. The enclosure shall exceed the UL-1008 minimum wire bending space requirements. The enclosure shall be equipped with an internal, welded steel, door-mounted print pocket.

4. The transfer switch shall have both top and bottom mounted cable access.

5. The switch shall be capable of switching all classes of load and rated for continuous duty when installed in a non-ventilated enclosure.

6. The three-cycle closing and withstand current rating of the switch shall be 65,000 amperes RMS (minimum). This rating shall not be restricted by the use of a specific manufacturer's circuit breaker.

7. This switch shall be complete with all accessories and listed by UL under Standard UL-1008 for use on emergency systems.

8. All bolted bus connections shall have Belleville compression type washers. Switches for four-wire systems shall be furnished with a fully rated solid neutral bus.

9. The switch shall be equipped with 90°C rated copper/aluminum solderless mechanical type lugs of the proper quantity and size to accommodate the termination of field wiring.

10. Switches shall be capable of normal operation during and after seismic loading. Seismic loading shall not cause false operation.

B. Design Requirements

1. Switches shall contain mechanically interlocked, contactor mechanisms with ampere ratings and number of poles as indicated on the Drawings and shall be suitable for 480 VAC, three-phase, 60 Hertz operation. A center-off-position shall be

provided as a neutral position during switching. Minimum transfer time shall 400 milliseconds. The switches shall be service entrance rated and shall bear the service entrance label as indicated on the Drawings.

2. Switches shall be capable of transferring successfully in either direction with 70 percent of rated voltage applied to the terminals.

3. The time delay between the opening of the closed contacts and the closing of the open contacts shall allow for voltage decay before transfer, allowing the motor and transformer loads to be re-energized after transfer with normal in-rush current. Switches using in-phase monitors are not acceptable.

4. Normal and standby contacts shall be positively interlocked mechanically and electrically to prevent simultaneous closing. Main contacts to be of silver-tungsten alloy, mechanically locked in position in both the normal and standby positions without the use of hooks, latches, or magnets. Provide separate arcing contacts, with magnetic blowouts on each pole. Interlocked molded case circuit breakers switches or contactors are not acceptable.

5. Equip the transfer switch with a permanently attached, safe, manual operator designed to prevent injury to personnel in the event the electrical operator should become energized during manual transfer. The manual operator shall provide the same contact-to-contact transfer speed as the electrical operator to prevent a flashover from slowly switching the main contacts.

C. Sequence of Operation

1. Should the voltage on any phase of the normal source drop below 80 percent or increase to 120 percent, or frequency drops below 90 percent, or increase to 110 percent, or 20 percent voltage differential between phases occur, after a programmable time delay period of 0-9999 seconds factory set at three (3) seconds to allow for momentary dips, the engine starting contact(s) shall close to start the standby generator.

2. Transfer to the standby power source shall occur when 90 percent of rated voltage and frequency has been reached by the standby power source.

3. After restoration of normal power on all phases to a preset value of 90 percent to 110 percent of rated voltage, at least 95 percent to 105 percent of rated frequency, and voltage differential is below 20 percent between phases, an adjustable time delay period of 0-9999 seconds factory set at 300 seconds shall delay the transfer to allow stabilization of the normal source. Should the standby source fail during this time delay period, the switch shall automatically retransfer to the normal source.

4. After retransfer to the normal power source, the standby generator shall operate at no load for a programmable period of 0-9999 seconds factory set at 300 seconds.

Should the normal power source fail during this time delay period, the transfer switch shall automatically return to the standby source.

D. Controls

1. The transfer switch shall be equipped with a microprocessor-based control system to provide all the operational functions of the automatic transfer switch. The controller shall have two asynchronous serial ports. The controller shall have a real time clock with Nicad battery back-up.

2. The CPU shall be equipped with self-diagnostics which perform periodic checks of the memory, I/O, and communication circuits with a watchdog power fail circuit.

3. The controller shall use industry standard open architecture communication protocol for high speed serial communications via multidrop connection to other controllers and to a master terminal with up to 4000 ft of cable, or further with the addition of a communication repeater. The serial communication port shall be RS422/485 compatible.

4. The serial communication port shall allow interface to either the manufacturer's or the Owner's furnished remote supervisory control system.

5. The controller shall have password protection to limit access to authorized personnel.

6. The controller shall include a 20 character LCD display with a keypad, which allows access to the system.

7. The controller shall include three-phase over/under voltage, over/under frequency, phase sequence detection, and phase differential monitoring on both normal and standby sources.

8. The controller shall be capable of storing the following records in memory for access either locally or remotely:

   a. Number of hours the transfer switch is in the standby position (total since record reset).

   b. Number of hours standby power source is available (total since record reset).

   c. Total transfer in either direction (total since record reset).

   d. Date, time, and description of the last four source failures.

   e. Date of the last exercise period.

   f. Date of record reset.

9. Light emitting diodes shall be mounted on the controller to indicate:

   a. Switch is in normal position

   b. Switch is in standby position.

   c. Controller is running.

10. A three-phase digital LCD voltage readout, with 1% accuracy shall display all three separate phase-to-phase voltages simultaneously for both the normal and standby source.

11. A digital LCD frequency readout with 1% accuracy shall display frequency for both the normal and standby source.

12. An LCD readout shall display both normal source and standby source availability.

13. The microprocessor controller shall meet the following requirements:

Storage conditions:	25°C to 85°C
Operation conditions:	20°C to 70°C ambient
Humidity:	0 to 99% relative humidity, non-condensing
Capable of withstanding infinite power interruptions	
Surge withstand per ANSI/IEEE C-37.90A-1978	

14. All control wiring shall be 18 gauge (minimum), 600 VAC, SIS switchboard type. All control wiring shall be identified at each termination (both ends) using tubular, sleeve-type wire markers.

15. The automatic transfer switch controller shall be a Model ATC-600 IQ transfer device as manufactured by Eaton, or equal. The controller shall be programmed by the manufacturer at the factory.

E. Accessories

1. Programmable three phase sensing of the normal source set to pickup at 90% and dropout at 80% of rated voltage and overvoltage to pickup at 120% and dropout out at 110% of rated voltage. Programmable frequency pickup at 95% and dropout at 90% and over frequency to pickup at 110% and dropout at 105% of rated frequency. Programmable voltage differential between phases, set at 20%, and phase sequence monitoring.

2. Programmable three phase sensing of the standby source set to pickup at 90% and dropout at 80% of rated voltage and overvoltage to pickup at 120% and dropout out

at 110% of rated voltage. Programmable frequency pickup at 95% and dropout at 90% and over frequency to pickup at 110% and dropout at 105% of rated frequency. Programmable voltage differential between phases, set at 20%, and phase sequence monitoring.

3. Time delay for override of momentary normal source power outages (delays engine start signal and transfer switch operation). Programmable 0-9999 seconds. Factory set at 3 seconds.

4. Time delay on retransfer to normal, programmable 0-9999 seconds, factory set at 300 seconds, with overrun to provide programmable 0-9999 second time delay, factory set at 300 seconds, unloaded engine operation after retransfer to normal.

5. Time delay on transfer to standby, programmable 0-9999 seconds, factory set at 3 seconds.

6. A maintained type load test switch shall be included to simulate a normal power failure, keypad initiated.

7. A time delay bypass on retransfer to normal shall be included. Keypad initiated.

8. Contact, rated 10 A at 30VDC, to close on failure of normal source to initiate engine starting.

9. A plant exerciser shall be provided with (10) 7 day events, programmable for any day of the week and (24) calendar events, programmable for any month/day, to automatically exercise the standby plant programmable in one minute increments. Also include a control switch for selection of either "no load" (switch will not transfer) or "load" (switch will transfer) during the exercise period. Keypad initiated.

10. Relay contacts which close when normal source fails wired to a terminal strip.

11. Relay contacts which open when normal source fails wired to a terminal strip.

12. Two auxiliary contacts rated 15 A at 120 VAC on main shaft, closed on normal and wired to a terminal strip.

13. Two auxiliary contacts rated 15 A at 120 VAC on main shaft, closed on standby and wired to a terminal strip.

2.03 PAINTING

A. Painting shall conform with the requirements of Section 09 90 00 – Painting. Finish coat shall be ANSI #61.

B. Prior to final completion of the work, all metal surfaces of the equipment shall be cleaned thoroughly, and all scratches and abrasions shall be retouched with the same coating as used for factory finishing coats.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Each automatic transfer switch shall be installed as shown on the Drawings and in accordance with the manufacturer's installation instructions.

B. The automatic transfer switch shall be provided with adequate lifting means for installation of wall or floor mounted enclosures.

C. The Contractor shall tighten all assembled bolted connections to the manufacturer's torque recommendations prior to energizing.

D. Install each switch to allow complete door swing required for component removal. This is specifically required where a switch is set next to a wall to the left of the switch enclosure.

3.02 RUBBER MATS

A. A three foot wide rubber mat shall be furnished and installed on the floor and in front of each automatic transfer switch. The mat shall be long enough to cover the full length of each enclosure. The mat shall be 1/4 inch thick with beveled edges, canvas back, solid type with corrugations running the entire length of the mat. The mat shall be guaranteed extra quality, free from cracks, blow holes or other defects detrimental to their mechanical or electrical strength. The mat shall meet OSHA requirements and the requirements of ANSI/ASTM D-178 J6-7 for Type 2, Class 2 insulating matting.

END OF SECTION

SECTION 26 43 13
SURGE PROTECTIVE DEVICES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish, install, and place in satisfactory operation the surge protective devices (SPD) as specified herein and indicated on the Drawings.

B. Reference the following Specification Sections:

1. Section 26 05 19 – Low-Voltage Conductors and Cables

2. Section 26 05 53 – Identification for Electrical Systems.

1.02 CODES AND STANDARDS

A. All equipment shall be Listed by and shall bear the Label of Underwriter's Laboratories, Incorporated (UL).

B. The equipment shall be designed, manufactured, and/or Listed to the following standards as applicable:

1. American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE):

a. C62.41.1 – IEEE Guide on the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits.

b. C62.41.2 – IEEE Recommended Practice on Characterization of Surges in Low -Voltage (1000 V and less) AC Power Circuits.

c. C62.45 – IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000 V and less) AC Power Circuits.

d. C62.62 – IEEE Standard Test Specifications for Surge -Protective Devices (SPDs) for Use on the Load Side of the Service Equipment in Low Voltage (1000 V and less) AC Power Circuits.

2. National Fire Protection Association (NFPA):

a. NFPA 70 – National Electrical Code (NEC).

3. Underwriters Laboratories (UL):

a. UL 1283, latest edition – Electromagnetic Interference Filters.

b. UL 1449, latest edition – Surge Protective Devices.

1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings

2. Operation and Maintenance Manuals

3. Spare Parts List

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for re-submittal.

C. Drawings submitted by the manufacturer shall be complete and documented to provide the Owner with operations and maintenance capabilities.

D. Shop drawings for each SPD shall include but not be limited to:

1. Product Data Sheets.

2. Detailed drawings showing weights and dimensions.

3. Wiring diagrams showing field connections.

4. Manufacturer’s Warranty Information

E. The shop drawing information shall be complete and organized in such a way that the Engineer can determine if the requirements of these Specifications are being met. Copies of technical bulletins, technical data sheets from "Soft Cover" catalogs, and similar information which is "highlighted" or somehow identifies the specific equipment items the Contractor intends to provide are to provide are acceptable and shall be submitted.

1.05 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall submit operation and maintenance manuals in accordance with the procedures and requirements set forth in the General Conditions and Division 01.

1.06 SPARE PARTS

A. All spare parts as recommended by the equipment manufacturer shall be furnished by the Contractor to the Owner.

B. The Contractor shall furnish one (1) spare field replacement module of each type and rating provided under this Contract if modules are field replaceable.

C. Reference Section 26 05 00 – Basic Electrical Requirements for spare parts delivery and handling requirements.

1.07 IDENTIFICATION

A. Each SPD shall be identified by the circuit number and equipment name as indicated on the Drawings. A nameplate shall be securely affixed in a conspicuous place on each SPD. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

1.08 WARRANTY

A. All SPDs, associated hardware, and supporting components shall be warranted to be free from defects in materials and workmanship, under normal use and in accordance with the instructions provided, for a period of ten (10) years after acceptance of the equipment by the Owner.

B. Any component or subassembly contained within the surge protection system that shows evidence of failure or incorrect operation during the warranty period, shall be replaced by the manufacturer at no additional cost to the Owner.

PART 2 – PRODUCTS

2.01 GENERAL

A. The SPD units shall be UL 1449 Listed. Units that are “manufactured in accordance with” UL 1449 or “component recognized” SPDs are not acceptable and will be rejected.

B. Type II SPD units shall be UL 1283 Listed. Units that are “manufactured in accordance with” UL 1283 or “component recognized” SPDs are not acceptable and will be rejected.

2.02 PRODUCTS

A. Type I surge protective devices (SPD) shall be furnished and installed when shown without upstream overcurrent protection on the Drawings. Type II SPDs shall be provided in all other locations. Type II SPDs shall not require the use of a specific upstream overcurrent device. SPDs shall be provided in the location and quantity as shown on the Drawings.

B. Each SPD shall be rated for the voltage and configuration of the equipment to which it is connected.

C. Each Type II SPD shall have UL 1283 EMI/RFI filtering with minimum attenuation of -50dB at 100kHz.

D. The short circuit current rating of each SPD shall match or exceed the rating of the equipment to which it is connected. The Contractor shall reference the Drawings for short circuit current rating of each piece of equipment.

E. Each SPD system shall provide surge protection in all possible modes. Surge protection shall be as follows:

System Configuration	Modes of Protection	Number of Modes
3-Phase Wye	L-N, L-G, N-G	7
3-Phase Delta	L-L, L-G	6
3-Phase Impedance Grounded	L-L, L-G	6
Single-Phase	L-N, L-G, N-G	3

F. Each SPD shall have a Maximum Continuous Operating Voltage (MCOV) of at least 115% of the nominal voltage of the equipment to which it is connected.

G. The Nominal Discharge Current (In) of each SPD shall be 20kA. Peak surge current ratings shall not be used as a basis for applying the SPD to the system.

H. The Voltage Protection Rating (VPR) of each SPD shall not exceed the following:

System Voltage	L-N	L-G	L-L	N-G
208Y/120	800V	800V	1200V	800V
480Y/277	1200V	1200V	1800V	1200V
480 DELTA	N/A	1800V	1800V	N/A
240 DELTA	N/A	1200V	1200V	N/A
120/240	800V	800V	1200V	800V

I. The surge current rating for each SPD shall be as indicated on the Drawings. Surge current ratings are indicated on single line diagrams and in panel schedules. Surge current rating indicated is on a per phase basis.

J. SPDs which are indicated to be installed externally mounted from the equipment that they protect shall be provided within a separate enclosure. The enclosure shall match or exceed the NEMA rating of the enclosure for the equipment that it is serving (e.g., NEMA1, NEMA 12, NEMA 4X, etc.).

K. Each SPD shall be provided with the following accessories:

1. Each individual module shall feature an LED indicating the individual module has all surge protection devices active. If any single component is taken off-line, the LED shall turn off and another LED shall illuminate, providing individual module as well as total system status indication.

2. Surge counter and audible alarm with reset/silence switch.

3. One set of Form C (SPDT) dry contacts rated for at least 5A at 120VAC.

L. SPDs which are indicated to be installed integral to (within) the equipment that they protect shall be manufactured by the same manufacturer as the equipment. SPDs which are indicated to be installed externally/separately mounted from the equipment that they serve shall be manufactured by Eaton, ASCO/Emerson Network Power, Current Technologies, GE by ABB, Siemens, or Square D.

PART 3 – EXECUTION

3.01 INSTALLATION

A. The SPD units shall be furnished and installed as shown on the Drawings and in accordance with the manufacturer's installation instructions.

B. SPDs which are indicated to be integral with the equipment that they protect shall be installed within the enclosure for that equipment.

C. Externally mounted SPDs shall be installed as follows:

1. The SPD units shall be mounted such that the conductor lengths are as short as possible, but no greater than 36 inches. Any installation resulting in a conductor length of greater than 36 inches shall be reviewed with the Engineer as a special type of cable may need to be installed. For equipment such as panelboards, the Contractor shall relocate the circuit breaker that is to be connected to the SPD as needed to achieve the shortest conductor length possible.

2. The Contractor shall use a close nipple to enclose the conductors between the SPD and the equipment served. However, if due to field conditions a 90-degree conduit bend is required to connect the SPD to the equipment that it serves, the bend shall have a minimum radius of 24 inches to eliminate any potential for sharp bends in the conductors.

3. Conductors between the equipment served and the SPD shall be 600V power wire and cable as specified in Section 26 05 19 – Low-Voltage Conductors and Cables. The individual phase conductors shall be gently twisted and all conductors shall be sized as indicated on the Drawings.

D. Prior to energizing, the following shall be performed for each SPD:

1. Verify that the SPD unit voltage and configuration is suitable for the system to which it is connected.

2. Verify that any neutral-to-ground bonding jumpers are installed as required.

3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Shop Tests

   a. Standard factory tests shall be performed on the equipment under this Section. All tests shall be in accordance with the latest version of NEMA, ANSI, and UL standards.

   b. All surge protective devices, subassemblies, and components shall be 100% tested and certified by the manufacturer to meet their published performance parameters.

2. Field Tests

   a. None required.

END OF SECTION

SECTION 31 00 01

EARTHWORK

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish all labor, equipment, and materials required to complete all work associated with excavation (including off-site borrow excavation), fill and backfill placement and compaction, coordination for testing of soil materials and compaction by an independent Materials Testing Consultant, payment for which shall be as specified in the Contract for Construction, constructing embankments, dewatering, construction of drainage layers, installing foundation and backfill aggregate, placing filter and separation fabrics, stockpiling topsoil and any excess suitable material, designing, installing, maintaining and removing excavation support systems, disposing of all excess and unsuitable materials, providing erosion and sedimentation control, encasing utility conduits, site grading, preparation of pavement and structure subgrades, and other related and incidental work as required to complete the work shown on the Drawings and as specified herein.

B. All excavations shall be in conformity with the lines, grades, and cross sections shown on the Drawings or established by the Engineer.

C. It is the intent of this Specification that the Contractor conduct the construction activities in such a manner that erosion of disturbed areas and off-site sedimentation be absolutely minimized.

D. Earthwork performed under this Contract shall be done in conformance with these specifications. Items and activities not addressed herein shall be subject to the limitations of the latest editions of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. If there is a conflict between this specification and the Standard Specifications for Road and Bridge, the more conservative of the two shall take precedent.

E. Erosion and Sediment Control shall be performed in accordance with Section 31 25 00 Erosion and Sedimentation Control of these specifications and with the latest edition of the Erosion and Sediment Control Designer and Review Manual" (ESCDRM) published by the Florida Department of Transportation and FDEP. If there is a conflict between this specification and the ESCDRM, the more conservative of the two shall take precedent.

F. All fill materials (soil, aggregate, topsoil, etc.) imported to the site and onsite materials to be reused as fill, backfill, or embankment shall be subjected to the testing requirements contained in Part 3.0 of this Section. The Contractor shall retain a Materials Testing Consultant who shall perform all testing. The test results shall be used to determine if a material meets the requirements included herein. The Contractor shall furnish all

necessary samples for laboratory testing and shall provide assistance and cooperation during field tests. The Contractor shall plan their operations to allow adequate time for laboratory tests and to permit taking of field density tests during compaction.

G. Any costs for re-testing required as a result of failure to meet compaction requirements shall be borne solely by the Contractor.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Requirements of related work are included in Divisions 01, 02, 31, and 32 of these Specifications.

1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Without limiting the generality of the other requirements of the Specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced Specifications, codes, and standards refer to the most current issue available at the time of Bid.

1. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition.

2. Occupational Safety and Health Administration (OSHA) 29 CFR 1926 Subpart P

3. American Society for Testing and Materials (ASTM):

   a. ASTM C127 – Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate.

   b. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

   c. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft^3 (600 kN-m/m^3))

   d. ASTM D1140 – Standard Test Method for Determining the Amount of Material Finer than 75-µm (No. 200) Sieve in Soils by Washing

   e. ASTM D1556 – Standard Test Method for Density and Unit Weight of Soil in Place by Sand Cone Method.

   f. ASTM D1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/lb^3 (2,700 kN-m/m^3)).

   g. ASTM D1883 – Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils.

h. ASTM D2216 – Test for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.

i. ASTM D2487 – Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

j. ASTM D4253 – Standard Test Method for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.

k. ASTM D4318 – Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

l. ASTM D5268-22 - Standard Specification for Topsoil Used for Landscaping and Construction Purposes

m. ASTM D6913 - Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

n. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth).

1.04 SUBSURFACE CONDITIONS

A. Information on subsurface conditions is referenced under Division 02, Subsurfae Exploration.

B. Attention is directed to the possible location of water pipes, sanitary pipes, storm drains, and other utilities located in the area of proposed excavation. In the event excavation activities disrupt service, the Contractor shall perform all repairs at no additional cost to the Owner. The Contractor shall contact Sunshine State One Call or 1-800-432-4770 to request underground utility location mark-out at least three (3) working days, not including the day the request is called in, but no more than ten (10) working days prior to the beginning of excavation. The Contractor shall also contact and request utility location mark-out from buried utility owners with utilities on the project site that are not participants of Sunshine State One Call.

1.05 SUBMITTALS

A. In accordance with the procedures and requirements set forth in Section 01 33 00 – Submittal Procedures, the Contractor shall submit the following:

1. Evidence the Contractor has a minimum of five (5) years of experience performing excavation and backfill similar in size to the work for this project.

2. Name and location of all material suppliers.

3. Certificate of compliance with the standards specified herein for each source of each material.

4. List of disposal sites for waste and unsuitable materials and all required permits for use of those sites.

5. Procedures for dewatering proposed by the Contractor shall be submitted to the Engineer for review and approval prior to any earthwork operations.

6. Construction drawings and structural calculations for any types of excavation support required. Drawings and calculations shall be sealed by a currently registered Professional Engineer in the State in which the project is located.

7. Monitoring plan and pre-construction condition inspection and documentation of all adjacent structures, utilities, and roadways near proposed installation of excavation support systems and near areas where dewatering is required to facilitate construction.

8. A representative sample of the on-site or off-site source of each class of fill material weighing approximately 50 lbs. The sample shall be delivered to a location designated by the Engineer.

9. Drawings and calculations on proposed excavation support systems sealed by a Professional Engineer currently registered in the in the State in which the project is located.

10. Earthwork contractor qualifications.

11. All required permits and a list of disposal sites for unsuitable materials within thirty (30) consecutive days after Notice to Proceed. If the disposal site is located on private property, the submittal shall also include written permission from the owner of record.

12. Except where borrow is to be obtained from a commercial source, a borrow source development, use, and reclamation plan jointly developed by the Contractor and the property owner prior to engaging in any land disturbing activity on the proposed source (other than material sampling that may be necessary). The Contractor's plan shall address the following

    a. Drainage: The source shall be graded to drain such that no water will collect or stand and a functioning drainage system shall be provided. If drainage is not practical, and the source is to serve as a pond, the minimum average depth below the water table shall be 4 feet or the source graded so as to create wetlands as appropriate, or as agreed to with the property owner.

    b. Slopes: The source shall be dressed and shaped in a continuous manner to contours which are comparable to and blend in with the adjacent topography, but in no case will slopes steeper than 3:1 be permitted.

c. Erosion Control: Except where borrow is to be obtained from a commercial source, the Contractor and the property owner shall jointly submit a Borrow Source Development, Use, and Erosion Control Plan to the appropriate State or Local permitting authority for approval and provide evidence of such to the Engineer for their approval prior to engaging in any land disturbing activity on the proposed source other than material sampling that may be necessary.

1.06 PRODUCT HANDLING

A. Soil and rock material shall be excavated, transported, placed, and stored in a manner so as to prevent contamination, segregation and excessive wetting. Materials which have become contaminated or segregated will not be permitted in the performance of the work and shall be removed from the site.

1.07 USE OF EXPLOSIVES

A. The use of explosives will not be allowed for the prosecution of this work.

PART 2 – PRODUCTS

2.01 FILL MATERIALS

A. The contractor shall be responsible for providing fill materials meeting the gradation requirements included herein.

B. All fill materials shall be free of organic material, environmental contaminants, or other unsuitable material.

C. Bedding material installed above and below the water table shall meet the requirements of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

D. Below-grade walls shall be backfilled with Select Fill.

E. When the excavated material from required excavations meets the requirements of Select Fill or Common Fill, but is replaced with off-site borrow material for the Contractor's convenience, the costs associated with such work and material shall be borne by the Contractor.

F. Where excavated material does not meet requirements for Select Fill or Common Fill, the Contractor shall furnish off-site borrow material meeting the specified requirements herein. Determination of whether the borrow material will be paid for as an extra cost will be made based on the contract documents.

G. Contractor may stockpile excavated material to be used as Select Fill, Common Fill, Drainage Fill or Topsoil on site in areas designated in the Contract Documents. Soil materials may be stockpiled as necessary to sort, segregate, test, and transfer the

materials. Excess material and materials considered unsuitable for reuse by the Engineer shall be removed from the site for off-site disposal. No stockpiling of excavated material is allowed in a manner or location that would permit erosion and its subsequent sedimentation in wetlands or other natural areas.

2.02 SELECT FILL

A. Select fill shall be used where shown on the Contract Drawings.

B. Select fill shall not include particles or lumps larger than 3 inches.

C. Select fill used as backfill against walls shall not contain any rock larger than 1½ -inches.

D. Select fill shall consist of non-plastic materials classifying as GW, GW-GM, GP, SW, SW-SM, SP-SM, or SP per ASTM D-2487. Select fill shall be free of organic material, environmental contaminants, or other unsuitable material.

E. Open-graded and dense-graded FDOT aggregates meeting the gradation requirements above may be used as Select Fill.

F. Select Fill to be used as pavement subbase material shall be FDOT Aggregate Base Course.

G. Select Fill shall be placed in 8-inch-thick lifts, with the exception of FDOT No. 57 aggregate, which may be placed in 12-inch-thick lifts.

H. Select Fill shall be compacted to not less than 98 percent of the maximum dry density obtainable by ASTM D 698 and does not contain unsuitable material.

I. Select Fill shall be compacted at a moisture content within 20 percent of the optimum moisture content of the fill material in accordance with the ASTM D 698, Standard Proctor.

J. All materials used as Select Fill are subject to approval by the Engineer.

2.03 DRAINAGE FILL

A. Drainage Fill shall be used where shown on the Contract Drawings.

B. Drainage Fill shall consist of FDOT No. 57 aggregate.

2.04 COMMON FILL

A. Common Fill shall be used where shown on the Contract Drawings.

B. Common Fill shall consist of non-organic on-site soils classifying as CH, MH, CL, ML, SC, SM, SP, SW, GC, GM, GP, or GW according to ASTM D 2487.

C. Common Fill shall be placed in 8-inch-thick loose lifts.

D. Common Fill shall be compacted to not less than 98 percent of the maximum dry density obtainable by ASTM D 698 and does not contain unsuitable material.

E. Common Fill shall be compacted at a moisture content within 20 percent of the optimum moisture content of the fill material in accordance with the ASTM D 698, Standard Proctor.

F. All material used as common fill is subject to approval by the Engineer. If there is insufficient suitable material onsite, import whatever additional material is required which conforms to the specifications, at no additional cost to the Owner.

G. Select Fill may be used as Common Fill, subject to approval by the Engineer. Select fill may be used as Common Fill at no change in the Contract Price.

2.05 TOPSOIL

A. Topsoil shall be friable and loamy (loam, sandy loam, silt loam, sandy clay loam, clay loam). It shall be free of debris, trash, stumps, rocks, roots, and noxious weeds, and shall give evidence of being able to support healthy vegetation. It shall contain no substance potentially toxic to plant growth.

B. All topsoil shall be tested before use on site by a recognized laboratory for the following criteria according to local standards (or at a minimum according to ASTM D5268-22, Table 1): Organic matter content shall not be less than 3% by weight. pH range shall be from 5.5 -7.5. If pH is less than 5.5, lime shall be added in accordance with test results or in accordance with the recommendations of the vegetative establishment practice being used. Soluble salts shall not exceed 2.5 mmhos/cm ppm. If additional topsoil is needed, it must meet the standards stated above.

C. Soils falling within the ranges of ASTM D5268-22, Table 1 shall form a suitable topsoil. Soils being used as a topsoil with organic content matter contents between 10% and 90% may need to be amended prior to use. If soils proposed for use as topsoil do not meet the criteria of Table 1, an engineered soil amendment may be added to meet the requirements. When using an engineered soil amendment, the organic matter values need to be greater than 75%.

PART 3 – EXECUTION

3.01 STRIPPING OF TOPSOIL

A. In all areas to be excavated, filled, or paved, the topsoil shall be stripped to its full depth.

B. Topsoil may be stockpiled for subsequent reuse on site at locations shown on the Contract Drawings or designated by the Owner or Engineer. Topsoil shall be kept separated from other excavated materials and shall be piled free of roots and other undesirable materials. Topsoil shall not be stored in areas where it will interfere with surface drainage or with the conservation of trees, shrubs, and other vegetation to remain. No stockpile shall be placed within 50-feet of a pond, stream, wetland, or stormwater inlet.

3.02 EXCAVATION

A. All material excavated, regardless of its nature or composition, shall be classified as UNCLASSIFIED EXCAVATION. Excavation shall include the removal of all soil, rock, weathered rock, rocks of all types, boulders, conduits, pipe, all other obstacles encountered, and all other obstacles shown to be removed within the limits of excavation shown on the Contract Drawings or specified herein. The cost of excavation shall be included in the Lump Sum Bid Price and no additional payment will be made for the removal of obstacles encountered within the excavation limits shown on the Drawings and specified herein.

B. All suitable material removed in the excavation shall be used as far as practicable in the formation of embankments, subgrades, and shoulders, and at such other places as may be indicated on the Drawings or indicated by the Engineer. No excavation shall be wasted except as may be permitted by the Engineer. Refer to the drawings for specific location and placement of suitable excavated materials in the formation of embankments, backfill, and structural and roadway foundations. THE ENGINEER AND/OR MATERIALS TESTING CONSULTANT WILL DESIGNATE MATERIALS THAT ARE UNSUITABLE. The Contractor shall furnish off-site disposal areas for the unsuitable material. Where suitable materials containing excessive moisture are encountered above grade in cuts, the Contractor shall construct above grade ditch drains prior to the excavation of the cut material when in the opinion of the Engineer and/or materials testing consultant such measures are necessary to provide proper construction.

C. All excavations shall be made in the dry and in such a manner and to such widths as will give ample room for properly constructing and inspecting the structures and/or piping they are to contain and for such excavation support, pumping and drainage as may be required. Excavation shall be made in accordance with the grades and details shown on the Drawings and as specified herein.

D. Excavation slopes shall be flat enough to avoid slides that will cause disturbance of the subgrade or damage of adjacent areas. Excavation requirements and slopes shall be as indicated in the Drawings.

E. The Contractor shall intercept and collect surface runoff both at the top and bottom of cut slopes. The intersection of slopes with natural ground surfaces, including the beginning and ending of cut slopes, shall be uniformly rounded as shown on the Drawings or as may be indicated by the Engineer. Concurrent with the excavation of cuts the Contractor shall construct intercepting berm ditches or earth berms along and on top of the cut slopes at locations shown on the Drawings or designated by the Engineer. All slopes shall be finished to reasonably uniform surfaces acceptable for seeding and mulching operations. No rock or boulders shall be left in place which protrude more than 1 foot within the typical section cut slope lines, and all rock cuts shall be cleaned of loose and overhanging material. All protruding roots and other objectionable vegetation shall be removed from slopes.

F. It is the intent of these Specifications that all structures shall bear on an aggregate base, crushed stone or screened gravel bedding placed to the thickness shown on the Drawings, specified in these Specifications, or not less than 6-inches. Bedding for process piping shall be as specified in Section 40 05 00 – Basic Mechanical Requirements, or as shown on the Drawings.

G. The bottom of all excavations for structures and pipes shall be examined by the Engineer and/or materials testing consultant for bearing value and the presence of unsuitable material. If, in the opinion of the Engineer and/or materials testing consultant, additional excavation is required due to the low bearing value of the subgrade material, or if the in place soils are soft, yielding, pumping or wet, the Contractor shall remove such material to the required width and depth and replace it with thoroughly compacted select fill, and/or crushed stone or screened gravel as indicated by the Engineer. Payment for such additional work ordered by the Engineer shall be made under separate unit price bid items for over-excavation and bedding if such bid items have been established; otherwise, payment will be made in accordance with a negotiated price. No payment will be made for subgrade disturbance caused by inadequate dewatering or improper construction methods.

H. All cuts shall be brought to the grade and cross section shown on the Drawings, or established by the Engineer, prior to final inspection and acceptance by the Engineer.

I. Slides and over-breaks which occur due to negligence, carelessness or improper construction techniques on the part of the Contractor shall be removed and disposed of by the Contractor as indicated by the Engineer at no additional cost to the Owner. If grading operations are suspended for any reason whatsoever, partially completed cut and fill slopes shall be brought to the required slope and the work of seeding and mulching or other required erosion and sedimentation control operations shall be performed.

J. Where the excavation exposes sludge, sludge contaminated soil or other odorous materials, the Contractor shall cover such material at the end of each workday with a minimum of 6 inches and a maximum of 24-inches of Common fill. The work shall be an odor abatement measure and the material shall be placed to the depth deemed satisfactory by the Engineer for this purpose.

3.03 EXCAVATION SUPPORT

A. The Contractor shall furnish, place, and maintain such excavation support which may be required to provide safe working conditions and support sides of excavation or to protect structures, pipes, and utilities from possible damage. The Contractor shall be exclusively responsible for maintaining safe working conditions and structure integrity without overstressing or damaging existing structures, pipes, and utilities resulting from the Contractor temporarily placing, moving, or removing loads on or adjacent to existing structures, pipes, and utilities. If the Engineer is of the opinion that at any point sufficient or proper supports have not been provided, the Engineer may order additional supports put in at the expense of the Contractor. The Contractor shall be responsible for the

adequacy of all supports used and for all damage resulting from failure of support system or from placing, maintaining and removing the support system.

B. The selection of and design of any proposed excavation support systems is exclusively the responsibility of the Contractor. Contractor shall submit drawings and calculations to the Engineer on the proposed systems sealed by a Professional Engineer currently registered in the in the State in which the project is located.

C. The excavation support system shall be installed by a specialized contactor with a minimum of five (5) years' experience installing the type of excavation support system proposed.

D. The Contractor shall exercise caution in the installation and removal of supports to ensure no excessive or unusual loadings or vibrations are transmitted to any new or existing structure. The Contractor shall promptly repair at their expense any and all damage that can be reasonably attributed to installation or removal of excavation support system.

E. Contractor shall monitor movement and vibration in the excavation support systems as well as movement and vibration at adjacent structures, utilities and roadways near excavation supports. Contractor shall submit a monitoring plan developed by the excavation support design engineer. All pre-construction condition assessment and documentation of adjacent structures on-site and off-site shall be performed by the Contractor. If any sign of distress such as cracking or movement occurs in any adjacent structure, utility or roadway during installation of supports, subsequent excavation, service period of supports, subsequent backfill and construction, or removal of supports, Engineer shall be notified immediately. The Contractor shall be exclusively responsible for repair of any damage to any roadway, structure, utility, pipes, etc. both on-site and off-site, as a result of their operations.

F. All excavation supports shall be removed upon completion of the work except as indicated herein. The Engineer may permit supports to be left in place at the request and expense of the Contractor. The Engineer may order certain supports left permanently in place in addition to that required by the Contract. The cost of the materials so ordered left in place, less a reasonable amount for the eliminated expense of the removal work omitted, will be paid under separate unit price bid items if such bid items have been established; otherwise, payment will be made in accordance with a negotiated price. Vibrations of new and existing structures shall be considered when the Contractor decides whether to remove excavation supports or leave them in place. Any excavation supports left in place shall be cut off at least two (2) feet below the finished ground surface or as directed by the Engineer.

3.04 PROTECTION OF SUBGRADE

A. To minimize the disturbance of bearing materials and provide a firm foundation, the Contractor shall comply with the following requirements:

1. Use of heavy rubber tired construction equipment shall not be permitted on the final subgrade unless it can be demonstrated that drawdown of groundwater throughout the entire area of the structure is at least 3 feet below the bottom of the excavation (subgrade). Even then, the use of such equipment shall be prohibited should subgrade disturbance result from concentrated wheel loads.

2. Subgrade soils disturbed through the operations of the Contractor shall be excavated and replaced with compacted select fill or crushed stone at the Contractor's expense as indicated by the Engineer.

3.05 PROOF-ROLLING

A. The subgrade of all structures and all areas that will support pavements or select fill shall be proof-rolled. After stripping of topsoil, excavation to subgrade and prior to placement of fills, the exposed subgrade shall be carefully inspected by probing and testing as needed. Any topsoil or other organic material still in place, wet, soft, or loose soil, and other undesirable materials shall be removed. The exposed subgrade shall be proof-rolled with a heavily loaded tandem-wheeled dump truck to check for pockets of soft material hidden beneath a thin crust of better soil. Any unsuitable materials thus exposed shall be removed and replaced with an approved compacted material, as directed by the Materials Consultant.

3.06 DEWATERING

A. The Contractor shall do all dewatering as required for the completion of the work. Procedures for dewatering proposed by the Contractor shall be submitted to the Engineer for review prior to any earthwork operations.

B. All water removed by dewatering operations shall be disposed of in accordance with the Best Management Practices (BMP’s) adopted by FDEP in the Florida Erosion and Sediment Control Inspector’s Manual (current edition).

C. The dewatering system shall be of sufficient size and capacity as required to control groundwater or seepage to permit proper excavation operations, embankment construction and reconstruction, subgrade preparation, and to allow concrete to be placed in a dry condition. The system shall include a sump system or other equipment, appurtenances and other related earthwork necessary for the required control of water. The Contractor shall drawdown groundwater to at least 2 feet below the bottom of excavations (subgrade), over the entire tempo, at all times in order to maintain a dry and undisturbed condition.

D. The Contractor shall control, by acceptable means, all water regardless of source. Water shall be controlled, and its disposal provided for at each berm, structure, etc. The entire periphery of the excavation areas shall be ditched and diked to prevent water from entering the excavation. The Contractor shall be fully responsible for disposal of the water and shall provide all necessary means at no additional expense to the Owner. The

Contractor shall be solely responsible for proper design, installation, proper operation, maintenance, and any failure of any component of the system.

E. The Contractor shall be responsible for and shall repair without cost to the Owner, any damage to work in place and the excavation, including damage to the bottom due to heave and including removal of material and pumping out of the excavated area. The Contractor shall be responsible for damages to any other area or structure caused by their failure to maintain and operate the dewatering system proposed and installed by the Contractor.

F. The Contractor shall be responsible for and shall repair, without cost to the Owner, any damage to work in place and nearby structures, roadways, and utilities which can be reasonably attributed to dewatering operations. This includes settlement of structures, roadways, and utilities due to dewatering of soils supporting the structures, roadways, and utilities.

G. The Contractor shall take all the steps that they consider necessary to familiarize himself with the surface and subsurface site conditions, and shall obtain the data that is required to analyze the water and soil environment at the site and to assure that the materials used for the dewatering systems will not erode, deteriorate, or clog to the extent that the dewatering systems will not perform properly during the period of dewatering. Copies of logs of borings and laboratory test results are available to the Contractor. This data is furnished for information only, and it is expressly understood that the Owner and Engineer will not be held responsible for any interpretations or conclusions drawn therefrom by the Contractor.

H. Prior to the execution of the work, the Contractor, Owner and Engineer shall jointly survey the condition of adjoining structures. Photographs and records shall be made of any prior settlement or cracking of structures, pavements, and the like, that may become the subject of possible damage claims.

3.07 FILL OR EMBANKMENTS

A. Contractor shall perform the construction of fill or embankments in such a manner that cut and fill slopes will be completed to final slopes and grade in a continuous operation. The operation of removing excavation material from any cut and the placement of embankment in any fill shall be a continuous operation to completion unless otherwise permitted by the Engineer.

B. Subgrades upon which fill or embankments are to be constructed shall be stripped of topsoil, organic material, rubbish and other extraneous materials. After stripping and prior to placing fill or embankment material, the Contractor shall compact the top 12inches of in place soil as specified under Paragraph 3.09, COMPACTION.

C. Any soft or unsuitable materials revealed before or during placement fill or embankment placement shall be removed as indicated by the Engineer and/or materials testing consultant and replaced with select fill and compacted as required.

D. Fill subgrades on which fill or embankment is to be placed, shall be scarified or stepped in a manner which will permit bonding of the embankment with the existing surface. The fill or embankment soils shall be as specified under Part 2 - Products, and shall be deposited and spread in successive, uniform, approximately horizontal layers. The loose thickness of each lift shall not exceed the thickness for each fill type noted in Paragraph 3.09, COMPACTION.

E. Hauling shall be distributed over the full width of the embankment, and in no case will deep ruts be allowed to form during the construction of the embankment. Fill or embankment subgrades shall be properly drained at all times and kept free of flowing or ponding water, snow, ice and frozen soils. Saturated soils, snow, ice, or frozen soils shall be removed as recommended by the Engineer.

F. Each layer of the embankment shall be thoroughly compacted to the density specified under Paragraph 3.09, COMPACTION.

G. The embankment or fill material in the layers shall be of the proper moisture content before rolling to obtain the prescribed compaction. Moisture conditions and manipulation of the fill or embankment material, when necessary, shall be performed to maintain a uniform moisture content throughout the layer. Should the material be too wet or too dry to permit proper compaction, earthwork operations shall be delayed until the material is adequately moisture conditioned. Samples of all fill or embankment materials for testing, both before and after placement and compaction, will be taken at frequent intervals. From these tests, corrections, adjustments, and modifications of methods, materials, and moisture content will be made to construct the embankment.

H. Where fill or embankments materials are to be placed and compacted on sloped subgrades steeper than 4:1 shall be benched. Benches shall be at least 6-feet wide.

I. When rock and other embankment material are excavated at approximately the same time, the rock shall be incorporated into the outer portions of the embankments and the other material which meets the requirements for select fill shall be incorporated into the formation of the embankments. Stones or fragmentary rock larger than 4 inches in their greatest dimension will not be allowed within the top 6 inches of the final grade. Stones, fragmentary rock, or boulders larger than 12 inches in their greatest dimension will not be allowed in any portions of embankments and shall be disposed of by the Contractor as indicated by the Engineer. When rock fragments or stone are used in embankments, the material shall be brought up in layers as specified or directed and every effort shall be exerted to fill the voids with finer material to form a dense, compact mass which meets the densities specified for embankment compaction.

3.08 BACKFILLING

A. All structures and pipes shall be backfilled with the type of materials shown on the Drawings and specified herein. Fill placed as structure or utility backfill shall be deposited in successive, uniform, approximately horizontal lifts. The thickness of each lift shall not exceed the requirements of Paragraph 3.09, COMPACTION.

B. Each lift of fill placed backfill shall be thoroughly compacted to the density specified for each type of fill included in Paragraph 3.09, COMPACTION.

C. Where excavation support is used, the Contractor shall take all reasonable measures to prevent loss of support beneath and adjacent to pipes and existing structures when supports are removed. If significant volumes of soil cannot be prevented from clinging to the extracted supports, the voids shall be continuously backfilled as rapidly as possible. The Contractor shall thereafter limit the depth below subgrade that supports will be installed in similar soil conditions or employ other appropriate means to prevent loss of support.

D. Backfill against concrete or masonry structure shall not be performed until the Work has been reviewed and backfilling permitted. Backfill against walls shall also be deferred until the structural slab for floors above the top fill line have been placed and attained design strength or earlier at the discretion of the Engineer. Partial backfilling against adequately braced wall may be considered by the Engineer on an individual situation basis. Where walls are to be waterproofed, all Work shall be completed and membrane materials dried or cured according to the manufacturer's instructions before backfilling.

E. Backfill against tanks and other structures which are to retain liquids shall not be performed until leakage tests are completed and accepted by the Engineer.

3.09 COMPACTION

A. The Contractor shall compact embankments, backfill, crushed stone, aggregate base, and in place subgrade in accordance with the requirements of this Section. The densities specified herein refer to percentages of maximum density as determined by the noted test methods. Compaction of materials on the project shall be in accordance with the following schedule:

	Density % Standard Proctor (D 698)	**Density % Mod. Proctor (D 1557)**	**Max. Lift Thickness as Compacted Inches**
Embankments Beneath Structures, Roadways, and Sidewalks*	98	98	6
Common Fill Areas	98	98	6
Backfill Around Structures	98	98	6
Backfill in Pipe Trenches	98	98	6
Backfill, not beneath paved areas or structures	95	95	6
Crushed Stone Beneath Structures	**	**	12
Select Sand	98	98	6

	Density Standard (D 698)	% Proctor	Density Mod. (D 1557)	% Proctor	Max. Lift Thickness as Compacted Inches
Aggregate Base Course (ABC) Beneath Structures, Roadways, and Sidewalks	**		**		6
Crushed Stone Backfill	**		**		12
Crushed Stone Pipe Bedding	**		**		12
In Place Subgrade Beneath Structures, Roadways, and Sidewalks	98		98		Top 12-inches

** Embankments beneath structures shall be considered to include a zone 10 feet out from the foundation of the structure extending down to the natural ground on a 45° slope.*
*** The aggregate shall be compacted to a degree acceptable to the Engineer by use of a vibratory compactor and/or crawler tractor.*

B. Compaction Near Existing Structures

1. Vibratory equipment shall not be used with 25 feet of any existing structure.

2. Within 25 feet of any existing structure, non-vibratory compaction equipment such as a drum roller with a maximum weight of 4 tons should be used. Within 5 feet of any existing structure, a walk behind vibratory sled or roller shall be used.

C. Field density tests will be made by the Materials Testing Consultant to determine if the specified densities have been achieved, and these tests shall be the basis for accepting or rejecting the compaction. In-place density tests will be performed in accordance with ASTM D 1556, ASTM D 1557, or ASTM D 6938. The Engineer, in conjunction with the Materials Testing Consultant, will be the judge as to which test method will be the most appropriate. Failure to achieve the specified densities shall require the Contractor to recompact the material or remove it as required. The Contractor shall, if necessary, increase the compactive effort by increasing the number of passes, using heavier or more suitable compaction equipment, or by reducing the thickness of the layers. The Contractor shall adjust the moisture contents of the soils to bring them within the optimum range by drying them or adding water as required.

D. Testing will be performed as frequently as deemed necessary by the Engineer and/or Materials Testing Consultant. As a minimum, one in place density test shall be performed for each 1000 cubic yards of embankment placed and 500 cubic yards of backfill placed or one test performed each day for either or as directed by the Engineer or recommended by Material Testing Consultant.

3.10 VIBRATION MONITORING

A. Vibration monitoring shall be performed at nearby structures when compaction work is ongoing. A single monitoring point using vibration monitoring equipment capable of detecting velocities of 0.1 inch/second or less and survey measurements shall be used for vibration monitoring at each of the nearest structures. An elevation measurement on nearby structures shall be taken before compaction work starts, and then at least twice a day during the work with one reading taken at the conclusion of the day's operations. Elevation measurements shall be recorded to an accuracy of 0.005 foot. If at any time the Contractor detects settlement or heave of 0.005-feet or more, or vibration levels of 1.0 inch/second or more, the vibratory compaction shall be stopped immediately, and the Engineer notified.

3.11 REMOVAL OF EXCESS AND UNSUITABLE MATERIALS

A. The Contractor shall remove and dispose of off-site all excess and unsuitable materials. Within thirty (30) consecutive days after Notice to Proceed, the Contractor shall submit to the Engineer for review all required permits and a list of disposal sites for the unsuitable materials. If the disposal site is located on private property, the submittal shall also include written permission from the owner of record.

B. All excess and unsuitable materials shall be disposed of in locations and under conditions that comply with federal, state and local laws and regulations.

C. The Contractor shall obtain an off-site disposal area prior to beginning demolition or excavation operations.

D. All excess and unsuitable materials shall be hauled in trucks of sufficient capacity and tight construction to prevent spillage. Trucks shall be covered to prevent the propagation of dust.

E. When all excess and unsuitable material disposal operations are completed, the Contractor shall leave the disposal sites in a condition acceptable to the Owner and Owner(s) of the disposal site(s).

3.12 BORROW EXCAVATION

A. Description

1. The work covered by this section consists of the excavation of approved material from borrow sources and the hauling and utilization of such material as required on the Drawings or directed by the Engineer. It shall also include the removing, stockpiling, and replacement of topsoil on the borrow source; the satisfactory disposition of material from the borrow source which is not suitable for use; and the satisfactory restoration of the borrow source and haul roads to an acceptable condition upon completion of the work.

2. Borrow excavation shall not be used before all available suitable unclassified excavation has been used for backfilling and incorporated into the embankments.

B. Coordination with Seeding Operations

1. The Contractor shall coordinate the work covered by this section with the construction of embankments and area fill.

C. Borrow Materials

1. All material shall meet the requirements of Section 2 for Select Fill or shall meet the requirements of Common Fill and classify as SM or coarser according to ASTM D 2487.

D. Construction Methods

1. General

a. The surface of the borrow area shall be thoroughly cleared and grubbed and cleaned of all unsuitable material including all organics, topsoil, etc., before beginning the excavation. Disposal of material resulting from clearing and grubbing shall be in accordance with Section 31 11 00 – Clearing and Grubbing.

b. Each borrow operation shall not be allowed to accumulate exposed, erodible slope area in excess of 1 acre at any one given time without the Contractor's beginning permanent seeding and mulching of the borrow source or other erosion control measures as may be approved by the Engineer.

c. The topsoil shall be removed and stockpiled at locations that will not interfere with the borrow operations and that meet the approval of the Engineer. Temporary erosion control measures shall be installed as necessary to prevent the erosion of the stockpile material. Once all borrow material has been removed from the source or portion thereof, the stockpiled topsoil shall be spread uniformly over the source.

d. Where it is necessary to haul borrow material over existing roads, the Contractor shall use all necessary precautions to prevent damage to the existing roads. The Contractor shall also conduct hauling operations in such a manner as to not interfere with the normal flow of traffic and shall always keep the traffic lanes free from spillage.

2. Owner Furnished Sources

a. Where borrow sources are furnished by the Owner the location of such sources will be as designated on the Drawings or as directed by the Engineer.

b. The Owner will furnish the necessary haul road right-of-way at locations designated by the Engineer. All haul roads required shall be built, maintained, and when directed by the Engineer, obliterated, at no cost to the Owner. Where the haul road is to be reclaimed for cultivation the Contractor shall plow or scarify the area to a minimum depth of 8 inches, or to the depth requested by the property owner.

c. The borrow sources shall be left in a neat and presentable condition after use. All slopes shall be smoothed, rounded, and constructed not steeper than 3:1. Where the source is to be reclaimed for cultivation the source shall be plowed or scarified to a minimum depth of 8 inches, disc harrowed, and terraces constructed. The source shall be graded to drain such that no water will collect or stand, and a functioning drainage system shall be provided.

d. All sources shall be seeded and mulched.

3. Contractor Furnished Sources

a. Prior to the approval of any off-site borrow source(s) developed for use on this project, the Contractor shall obtain certification from the State Historic Preservation Officer of the State Department of Cultural Resources certifying that the removal of the borrow material from the borrow source(s) will have no effect on any known district, site building, structure, or object that is included or eligible for inclusion in the National Register of Historic Places. A copy of this certification shall be furnished to the Engineer prior to performing any work on the proposed borrow source.

b. The approval of borrow sources furnished by the Contractor shall be subject to the following conditions:

1) The Contractor shall be responsible for acquiring the right to take the material and any rights of access that may be necessary; for locating and developing the source; and any clearing and grubbing and drainage ditches necessary.

a) Such right shall be in writing and shall include an agreement with the Owner that the borrow source may be dressed, shaped, seeded, mulched, and drained as required by these Specifications after all borrow has been removed.

2) The Contractor and the property owner shall jointly submit a borrow source development, use, and reclamation plan to the Engineer, as described in Paragraph 1.05, for approval prior to engaging in any land disturbing activity on the proposed source other than material sampling that may be necessary.

4. Maintenance

a. During construction and until final acceptance the Contractor shall use any methods approved by the Engineer which are necessary to maintain the work covered by this Section so that the work will not contribute to excessive soil erosion.

END OF SECTION

SECTION 31 11 00
CLEARING AND GRUBBING

PART 1 -- GENERAL

1.01 THE REQUIREMENT

A. Clear and grub all areas to be occupied by the proposed facilities including all areas to be excavated, filled, paved, or planted as shown on the Drawings and remove and/or dispose of material and debris resulting from these operations as specified herein.

B. Principal items of work include:

1. Notifying all authorities owning utility lines running to or on the property. Protecting and maintaining all utility lines to remain and capping those that are not required in accordance with instructions of the Utility Companies, and all other authorities having jurisdiction.

2. Boxing and protecting all trees, shrubs, lawns, and the like within areas to be preserved. Relocating trees and shrubs, so indicated on the Drawings, to designated areas.

3. Repairing all injury to trees, shrubs, and other plants caused by site preparation operations shall be repaired immediately. Work shall be done by qualified personnel in accordance with standard horticultural practice.

4. Disposing from the site all debris resulting from work under this Section.

1.02 PROTECTION OF PERSONS AND PROPERTY

A. All work shall be performed in such a manner to protect all personnel, workmen, pedestrians and adjacent property and structures from possible injury and damage.

B. All conduits, wires, cables, and appurtenances above or below ground shall be protected from damage.

C. Open excavation shall be backfilled or plated and provided with warning and barrier fence as required.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Section 31 00 01 – Earthwork

B. Section 31 25 00 – Erosion and Sedimentation Control – Stormwater Pollution Prevention

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 CLEARING OF SITE

A. Before removal of topsoil, and start of excavation and grading operations, the areas indicated on the Drawings shall be cleared and grubbed.

B. Clearing shall consist of cutting, removal, and satisfactory disposal of all trees, fallen timber, brush, bushes, rubbish, sanitary landfill material, fencing, and other perishable and objectionable material within the areas to be excavated or other designated areas. Prior to the start of construction, the Contractor shall survey the entire Contract site and shall prepare a plan which defines the areas to be cleared and grubbed, trees to be pruned, extent of tree pruning, and/or areas which are to be cleared but not grubbed. This plan shall be submitted to the Engineer for approval. Should it become necessary to remove a tree, bush, brush or other plants adjacent to the area to be excavated, the Contractor shall do so only after permission has been granted by the Engineer.

C. Excavation resulting from the removal of trees, roots and the like shall be filled with suitable material, as approved by the Engineer, and thoroughly compacted per the requirements contained in the Section titled "Excavation and Backfill for Utilities".

3.02 GRUBBING

A. Grubbing shall consist of the removal and disposal of all stumps, roots, logs, sticks and other perishable materials to a depth of at least 6-inches below ground surfaces.

B. Large stumps located in areas to be excavated may be removed during grading operations, subject to the approval of the Engineer.

3.03 DISPOSAL OF MATERIAL

A. All debris resulting from the clearing and grubbing work shall be disposed of by the Contractor as part of the work of this Contract. Material designated by the Engineer to be salvaged shall be stored on the construction site as directed by the Engineer for reuse in this Project or removal by others.

B. Burning of any debris resulting from the clearing and grubbing work will not be permitted at the site.

END OF SECTION

SECTION 31 12 00
SITE PREPARATION

PART 1 – GENERAL

1.01 DEFINITIONS

A. Interfering or Objectionable Material: Trash, rubbish, and junk; vegetation and other organic matter, whether alive, dead, or decaying; topsoil.

B. Clearing: Removal of interfering or objectionable material lying on or protruding above ground surface.

C. Grubbing: Removal of vegetation and other organic matter including stumps, buried logs, and roots greater than 2 inches caliper to a depth of 12 inches below subgrade.

D. Scalping: Removal of sod without removing more than upper 3 inches of topsoil.

E. Stripping: Removal of topsoil remaining after applicable scalping is completed.

F. Project Limits: Areas, as specified, within which Work is to be performed.

1.02 QUALITY ASSURANCE

A. Obtain Engineer's approval of staked clearing, grubbing, and stripping limits, prior to commencing clearing, grubbing, and stripping.

1.03 SCHEDULING AND SEQUENCING

A. Prepare site only after adequate erosion and sediment controls are in place. Limit areas exposed uncontrolled to erosion during installation of temporary erosion and sediment controls.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION

3.01 GENERAL

A. Clear grub and strip areas actually needed for waste disposal, borrow, or site improvements within limits specified.

B. Property obstructions which are to remain in-place, such as buildings, sewers, drains, water or gas pipes, bridges, etc., are to be carefully protected from damage.

C. Do not injure or deface vegetation that is not designated for removal. All branches potentially interfering with construction operations shall be pruned prior to starting work and following approval of the Town.

3.02 LIMITS

A. As follows, but not to extend beyond project limits.

1. Excavation Including Trenches: 5 feet beyond top of cut slopes or shored wall.

2. Fill:

a. Clearing and Grubbing: 5 feet beyond toe of permanent fill.

b. Stripping and Scalping: 2 feet beyond toe of permanent fill.

3. Waste Disposal:

a. Clearing: 5 feet beyond perimeter.

b. Scalping and Stripping: Not required.

c. Grubbing: Around perimeter as necessary for neat, finished appearance.

4. Overhead Utilities:

a. Clearing, Grubbing, Scalping, and Stripping: Wherever grading is required, including borrow pits, ditches, etc.

b. Other Areas: As shown.

B. Remove rubbish, trash, and junk from entire area within Project limits.

3.03 TEMPORARY REMOVAL OF INTERFERING PLANTINGS

A. Remove and store, as specified in the Contract Documents, trees, plants, and ground covers, shrubs and trees that are not designated for removal but do interfere with construction or could be damaged by construction activities.

B. Photograph and document location, orientation, and condition of each plant prior to its removal. Record sufficient information to uniquely identify each plant removed and to assure accurate replacement.

3.04 CLEARING

A. Clear areas within limits specified.

B. Fell trees so that they fall away from facilities and vegetation not designated for removal.

C. Cut stumps not designated for grubbing 12 inches below the ground surface.

D. Cut off shrubs, brush, weeds, and grasses to within 2 inches of ground surface.

3.05 GRUBBING

A. Grub areas within limits specified.

3.06 SCALPING

A. Do not remove sod until after clearing and grubbing is completed and resulting debris is removed.

B. Scalp areas within limits specified.

3.07 STRIPPING

A. Do not remove topsoil until after scalping is completed.

B. Strip areas within limits to minimum depths specified. Do not remove subsoil with topsoil.

C. Stockpile strippings, meeting requirements of Section 31 31 00, Soil Preparation, for topsoil, separately from other excavated material.

3.08 TREE REMOVAL OUTSIDE CLEARING LIMITS

A. Remove Within Project Limits:

1. Dead, dying, leaning, or otherwise unsound trees that may strike and damage Project facilities in falling.

2. Trees designated by Engineer.

3. Cut stumps off flush with ground, remove debris, grind stump and if disturbed, restore surrounding area to its original condition.

3.09 TREE TOPPING

A. Top trees designated by the Town so remaining portion will not strike facilities in falling. Where topping will remove more than 1/2 of a tree's crown, remove entire tree.

B. Treat wounds resulting from topping in accordance with standard horticultural practice to preserve the natural character of the tree.

3.10 PRUNING

A. Remove branches below the following heights:

1. Sixteen feet above roadways and shoulders.

2. Nine feet above sidewalks.

3. Six feet above roofs.

B. Prune only after planting and in accordance with standard horticultural practice to preserve the natural character of the plant. Perform in presence of the Engineer. Remove all dead wood, suckers, and broken or badly bruised branches. Use only clean, sharp tools. Do not cut lead shoot.

3.11 DISPOSAL

A. Clearing and Grubbing Debris:

1. Woody debris may be chipped. Chips may be sold to the Contractor's benefit or used for landscaping onsite as mulch or uniformly mixed with topsoil, provided that resulting mix will be fertile and not support combustion. Maximum dimensions of chipped material used onsite shall be 1/4-inch by 2 inches. Dispose of chips that are unsaleable or unsuitable for landscaping or other uses with unchipped debris.

2. Limit offsite disposal of clearing and grubbing debris to locations that are approved by federal, state, and local authorities, and that will not be visible from Project.

B. Scalpings: As specified for clearing and grubbing debris.

C. Strippings:

1. Dispose of strippings that are unsuitable for topsoil or that exceed quantity required for topsoil offsite or in waste disposal areas approved by Engineer.

2. Stockpile topsoil in sufficient quantity to meet Project needs. Dispose of excess strippings as specified for clearing and grubbing.

END OF SECTION

SECTION 31 23 00
EXCAVATION AND BACKFILL FOR UTILITIES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Excavate, grade, and backfill as required for underground piping systems and appurtenances as shown on the Drawings and specified herein.

B. All excavation for the project is unclassified.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. All applicable provisions of the Contract Requirements shall govern the work under this section.

1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Codes: All codes, as referenced herein, are specified in the Section entitled "Reference Standards".

B. Commercial Standards:

ASTM D422	Standard Test Method for Particle-Size Analysis of Soils.
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

1.04 SUBMITTALS

A. General: Submit information and samples to the Engineer for review as specified herein in accordance with the Section 01 33 00 - Submittal Procedures.

B. Dewatering: The Contractor shall submit to the Engineer its proposed methods of handling trench water and the locations at which the water will be disposed of. Methods shall be acceptable to the Engineer before starting the excavation.

C. Bedding and Backfill Materials: The Contractor shall notify the Engineer of the off-site sources of bedding and backfill materials.

1. Submit to the Engineer a representative sample weighing approximately 50 lbs. The sample shall be delivered to a location at the work site determined by the Engineer.

2. The Contractor shall notify the Engineer in writing of the sources of each material at least ten calendar days prior to the anticipated use of the materials.

D. Sheeting System: Drawings of the sheeting system and design computations shall be submitted to the Engineer; however, the review of these drawings shall in no way relieve the Contractor of the responsibility to provide a safe and satisfactory sheeting and shoring system. Sheeting and shoring shall be designed by the Contractor, and the proposed design shall be sealed by a Professional Engineer registered in the State of Florida. If the Engineer is of the opinion that at any point sufficient or proper supports have not been provided, it may order additional supports put in at the Contractor's expense.

E. Dewatering Permits: If the quantity or nature of water withdrawn requires approval/permits from regulatory agencies, the Contractor shall procure such permits at its expense and submit copies to the Engineer before commencing the work.

1.05 QUALITY CONTROL

A. Testing and Inspection Services:

1. Laboratory testing and checking and all certifications required by the Specifications, including the cost of transporting all samples and test specimens, shall be provided and paid for by the Contractor unless otherwise indicated in the Specifications.

2. An independent testing laboratory may be retained by the Town to do appropriate testing as described in the Section entitled "Quality Requirements". The Contractor shall schedule its work so as to permit a reasonable time for testing before placing succeeding lifts and shall keep the laboratory informed of his progress. A minimum of 48 hours of notice shall be provided to the testing laboratory to mobilize its activities.

B. Field Density Testing Frequency for Pipeline Backfill: The frequency of the field density testing shall be in accordance with the notes on the Drawings. If the Drawings do not indicate a frequency, then field density testing shall be as follows:

1. Pipeline installed: for each layer (i.e., lift) of compacted material perform a minimum of one density test at 100-foot interval.

1.06 SUBSURFACE INFORMATION

A. A separate geotechnical report is provided for information purposes with the Contract Documents. The report identifies properties below grade and also offers recommendations for foundation design, primarily for use of the Engineer. The recommendations shall not be construed as requirements of the Contract.

B. The Town and the Engineer will not assume responsibility for variations of sub-soil quality or conditions at locations other than places shown and at the time the geotechnical investigation was made. The Contractor shall examine the site and review the available geotechnical report or undertake its own subsurface investigation prior to submitting its bid, taking into consideration all conditions that may affect its work.

1.07 GROUNDWATER

A. The Contractor shall be responsible for anticipating groundwater conditions and shall provide positive control measures as required. Such measures shall ensure stability of excavations, groundwater pressure control, prevention of tanks, pipes, and other structures from being lifted by hydrostatic pressures, and avoiding the disturbance of subgrade bearing materials.

B. The Contractor shall be responsible for obtaining all permits required for dewatering operations.

1.08 TRENCH SAFETY ACT COMPLIANCE

A. The Contractor by signing and executing the contract is, in writing, assuring that it will perform any trench excavation in accordance with the Florida Trench Safety Act, Section 553.60 et. seq. The Contractor has further identified the separate item(s) of cost of compliance with the applicable trench safety standards as well as the method of compliance and has included it in the Contract for Construction.

B. The Contractor acknowledges that this cost is included in the applicable items of the Proposal and Contract and in the Grand Total Contract Price.

C. The Contractor is, and the Town and Engineer are not, responsible to review or assess the Contractor’s safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program, or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". The Contractor is, and the Town and Engineer are not, responsible to determine if any safety or safety related standards apply to the project, including but not limited to, the "Trench Safety Act".

1.09 PROTECTION OF PROPERTY AND STRUCTURES

A. The Contractor shall, at its own expense, sustain in place and protect from direct or indirect injury, all pipes, poles, conduits, walls, buildings, and all other structures, utilities, and property in the vicinity of its Work. Such sustaining shall be done by the Contractor. The Contractor shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings, and all other structures, utilities, and its Work. It shall be responsible for all damage, and assume all expenses, for direct or indirect injury and damage, caused by its Work, to any such pipe, structures, etc., or to any person or property, by reason of injury to them, whether or not such structures, etc., are shown on the Drawings.

B. Barriers shall be placed at each end of all excavations and at such places as may be necessary along excavations to warn all pedestrian and vehicular traffic of such excavations. Barricades with flashing lights shall also be placed along excavation from sunset each day to sunrise of the next day until such excavation is entirely refilled, compacted, and paved. All excavations shall be barricaded where required to meet OSHA, local and Federal Code requirements, in such a manner to prevent persons from falling or walking into any excavation within the site fenced property limits.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Materials shall be furnished as required from on-site excavations or from acceptable off-site sources as required. The Contractor shall notify the Engineer in writing of the sources of each material at least ten calendar days prior to the anticipated use of the materials.

2.02 BEDDING

A. Pipe Bedding: In general, clean sandy materials excavated from the utility trench, that is free from organics, clay and construction debris, can be used as pipe bedding when construction is in a dry condition and when the bedding is not sided by muck. Pipe bedding material shall be able to pass through a 3/4-inch sieve. Separation of suitable material for pipe bedding from other material shall be made during the excavation.

B. Sand shall be used for all copper and other service lines.

C. In the case of a “dry” installation, sand shall be used for PVC and ductile iron pipe where the bottom of the trench is located in the limestone zone.

D. In the case of a “wet” installation, pearock shall be used for PVC and ductile iron pipe where the bottom of the trench is located in the limestone zone.

E. Precast concrete items shall use crushed stone.

2.03 PEAROCK

A. Pearock shall consist of hard, durable particles of proper size and gradation, and shall be free from organic material, wood, trash, sand, loam, clay, excess fines, and other deleterious materials. Pearock shall conform to the requirements of ASTM C 33, Size Number 8, graded within the following limits:

Sieve Size	Percent Finer by Weight
1/2 inch	100
3/8 inch	85 to 100
No. 4	10 to 30
No. 8	0 to 10
No. 16	0 to 5

2.04 CRUSHED STONE (3/4-INCH ROCK)

A. Crushed stone shall consist of hard, durable, subangular particles of proper size and gradation, and shall be free from organic material, wood, trash, sand, loam, clay, excess fines, and other deleterious materials. Crushed stone shall conform to the requirements of ASTM C 33, Size Number 57, graded within the following limits:

Sieve Size	Percent Finer by Weight
1 1/2 inch	100
1 inch	95 to 100
1/2 inch	25 to 60
No. 4	0 to 10
No. 8	0 to 5

2.05 SAND

A. Sand shall be used for bedding polyvinyl chloride, fiberglass, HDPE and other plastic pipe when installed under dry trench conditions. Sand shall be graded sand with 100 percent passing a 3/8-inch sieve and not more than 5 percent passing a No. 200 sieve.

2.06 SELECT BACKFILL

A. Select Backfill: It is the intent of these specifications to obtain clean sandy material passing through a 3/4-inch sieve as select backfill material for utility and structural applications.

B. At locations where subsurface preparations for structures have been performed under this or other previous construction contracts, clean excavated material (structural fill) may be used as select backfill. Any excess fill shall be disposed of off-site by the Contractor.

2.07 GENERAL BACKFILL

A. General backfill (for grading applications) shall be placed above the select backfill. General backfill shall be clean granular soil, free of organics or other deleterious material, have a maximum size of 6 inches and shall contain no more that five percent fines passing a U.S. Standard No. 200 sieve.

B. General backfill used under roadways shall be compatible with the materials and compaction specified under the Sections entitled “Asphaltic Concrete Pavement” and “Concrete Curb and Sidewalk”.

PART 3 - EXECUTION

3.01 EXCAVATION

A. The Contractor shall perform all excavation of every description and of whatever substance encountered, to the dimensions, grades and depths shown on the Drawings, or as directed. For projects within the treatment plant, all excavations shall be made by open cut unless shown otherwise on the Drawings. For projects within the right-of-way, unless shown otherwise on the Drawings, all excavations shall be made by open cut, except for service connections to houses located across the road from the watermain, where directional boring shall be used. All existing utilities such as pipes, poles and structures shall be carefully located, supported and protected from injury; in case of damage, they shall be restored at the Contractor's expense.

B. Pipe trenches for piping unless otherwise indicated on the Drawings, shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation, or sheeting if used, of 8 inches to 12 inches. Where the pipe size exceeds 12 inches, the clearance shall be from 12 inches to 18 inches unless otherwise indicated on the Drawings. All pipe trenches shall be excavated to a level where suitable material is reached, a minimum of 8 inches below the excavated depth that will allow for a minimum of 36-inches of covering unless otherwise indicated on the Drawings. Excavation depths in other types of materials and conditions shall be made as hereinafter specified.

C. In areas where trench widths are not limited by right-of-way and/or easement widths, property line restrictions, existing adjacent improvements, including pavements, structures and other utilities, and maintenance of traffic, the trench sides may be sloped to a stable angle of repose of the excavated material but only from a point one foot above the crown of the pipe. A substantially and safely constructed movable shield, "box" or "mule" may be used in place of sheeting when the trench is opened immediately ahead of the shield and closed immediately behind the shield as pipe laying proceeds inside the shield.

D. Ladders or steps shall be provided for and used by Workmen to enter and leave trenches, in accordance with OSHA requirements.

E. Excavation for appurtenances shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation or sheeting, if used, of not less than 12 inches.

F. Excavated unsuitable material shall be removed from the site and disposed of by the Contractor. Materials removed from the trenches shall be stored and in such a manner that will not interfere unduly with any on-site operations, traffic on public roadways and sidewalks and shall not be placed on private property. In congested areas, such materials as cannot be stored adjacent to the trench or used immediately as backfill shall be removed to other convenient places of storage acceptable to the Town at the Contractor's expense.

G. Excavated material that is suitable for use as backfill shall be used in areas where sufficient material is not available from the excavation. Suitable material in excess of backfill requirements shall be either used on the site as directed by the Engineer or disposed of the Contractor.

H. Barriers shall be placed at excavations in accordance with OSHA requirements.

3.02 SHEETING AND BRACING

A. The Contractor shall furnish, place, and maintain sheeting and bracing to support sides of the excavation as necessary to provide safe working conditions in accordance with OSHA requirements, and to protect pipes, structures, and other Work from possible damage. Where wood sheeting or certain designs of steel sheeting are used, the sheeting shall be cut off at a level of 2 feet above the top of the installed pipe and that portion below the level shall be left in place. If interlocking steel sheeting is used, it may be removed providing removal can be accomplished without disturbing the bedding, pipe or alignment of the pipe. Any damage to the pipe bedding, pipe or alignment of the constructed utility caused by the removal of sheeting shall be cause for rejection of the affected portion of the work. The Town may permit sheeting to be left in place at the request and expense of the Contractor, or the Town may order him in writing to leave in place, for the preventing of damage to structures or property. Payment for sheeting ordered to remain in place shall be paid for at a negotiated price.

B. If the Engineer is of the opinion that at any point sufficient or proper supports, have not be provided, he may order additional supports put in at the Contractor’s expense. The Contractor shall be responsible for the adequacy of all sheeting used and for all damage resulting from sheeting and bracing failure or from placing, maintaining, and removing it.

3.03 REMOVAL OF WATER

A. General: It is a basic requirement of these Specifications unless otherwise authorized per Article 3.10, that excavations shall be free from water before pipe or structures are installed.

B. The Contractor shall provide pumps, and other appurtenant equipment necessary to remove and maintain water at such a level as to permit construction in a dry condition. The Contractor shall continue dewatering operations until backfilling has progressed to a sufficient depth over the pipe to prevent flotation or movement of the pipe in the trench or so that it is above the water table. If at any point during the dewatering operation it is determined that fine material is being removed from the excavation sidewalls, the dewatering operation shall be stopped. If any of the subgrade or underlying material is disturbed by movement of groundwater, surface water, or any other reason, it shall be replaced at the Contractor's expense with crushed stone or gravel.

C. The Contractor shall use dewatering systems that include automatic starting devices, and standby pumps that will ensure continuous dewatering in the event of an outage of one or more pumps.

D. Disposal: Water from the trenches and excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property, to the Work completed or in progress, to the surface of the streets, cause any interference with the use of the same by the public, or cause pollution of any waterway or stream. The Contractor shall submit his proposed methods of handling trench water and locations at which the water will be disposed of to the Engineer for review and shall receive acceptance before starting the excavation. Disposal to any surface water body will require silt screens to prevent any degration in the water body. The Contractor shall have responsibility for acquiring all necessary permits for disposal.

3.04 TRENCH STABILIZATION

A. No claim for extras, or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist and the Contractor shall correct such conditions so as to provide proper bedding or foundations for the proposed installation at no additional cost to the Town before placing the pipe or structures.

3.05 PIPE BEDDING

A. Pipe trenches shall be excavated as described in Article 3.01. The resulting excavation shall be backfilled with acceptable pipe bedding material, up to the level of the centerline of the proposed pipe barrel. This backfill shall be tamped and compacted to provide a proper bedding for the pipe and shall then be shaped to receive the pipe. Bedding shall be provided under the branch of all fittings to furnish adequate support and bearing under the fitting.

B. Any over excavation below the levels required for installation of the pipe shall be backfilled with acceptable bedding material, tamped, compacted and shaped to provide proper support for the proposed pipe, at the Contractor's expense.

3.06 BACKFILL

A. Pipeline trenches shall be backfilled to a level 12 inches above the top of the pipe with select backfill obtained from the trench excavation. When placed in the dry, such material shall be placed in 6-inch layers, each compacted to the densities specified in Article 3.07. Only hand operated mechanical compacting equipment shall be used within six inches of the installed pipe.

B. After the initial portion of backfill has been placed as specified above, and after all excess water has completely drained from the trench, backfilling of the remainder of the trench may proceed. The remainder of the backfill shall be selected material obtained from the excavation and shall be placed in horizontal layers, the depth of which shall not exceed the ability of the compaction equipment employed, and in no event shall exceed a depth of 6 inches. Each layer shall be moistened, tamped, puddled, rolled or compacted to the densities specified in Article 3.07.

3.07 COMPACTION AND DENSITIES

A. Compaction of backfill shall be 98 percent of the maximum density where the trench is located under structures or paved areas, and 95 percent of the maximum density elsewhere per ASTM D 1557. More thorough compaction may be required when Work is performed in other regulatory agencies jurisdictions, such as the FDOT. Methods of control and testing of backfill construction are:

1. Maximum density of the material in trenches shall be determined by ASTM D 1557.

2. Field density of the backfill material in place shall be determined by ASTM D 1556 or D 2922.

B. Testing: Laboratory and field density tests, which in the opinion of the Engineer are necessary to establish compliance with the compaction requirements of these Specifications, shall be ordered by the Engineer. The Contractor shall coordinate and cooperate with the testing laboratory. The testing program will be implemented by the Engineer establishing depths and locations of tests. Modifications to the program will be made as job conditions change.

C. Trench backfill which does not comply with the specified densities, as indicated by such tests, shall be reworked and recompacted until the required compaction is secured, at no additional cost to the Town. The costs for retesting such Work shall be paid for by the Contractor.

3.08 ADDITIONAL EXCAVATION AND BACKFILL

A. Where organic material, such as roots, muck, or other vegetable matter, or other material which, in the opinion of the Engineer, will result in unsatisfactory foundation conditions, is encountered below the level of the proposed pipe bedding material, it shall be removed to a depth of two feet below the outside bottom of the pipe or to a greater

depths as directed by the Engineer and removed from the site. Sheeting shall be installed if necessary to maintain pipe trenches within the limits identified by the Engineer. The resulting excavation shall be backfilled with suitable backfill material, placed in 12-inch layers, tamped and compacted up to the level of the bottom of the proposed pipe bedding material. Sufficient compaction of this material shall be performed to protect the proposed pipe against settlement. Lean concrete may be used in lieu of backfill when pipe installation is in the wet or at the Contractor's option. Construction shall then proceed in accordance with the provisions of Article 3.05 "Pipe Bedding".

B. Additional excavation (more than two feet below the pipe) shall be performed when ordered by the Engineer. Where organic or other material is encountered in the excavation, the Contractor shall bring the condition to the attention of the Engineer and obtain his determination as to whether or not the material will require removal, prior to preparing the pipe bedding. The excavation of material up to a depth of two feet below the outside bottom is an incidental item of construction and the Work shall be done at no additional cost to the Town. Where ordered by the Engineer, excavation greater than two feet below the pipe and additional backfill will be compensated by the Town.

3.09 FINE GRADING

A. After piping trenches backfilled, the disturbed areas of the site shall be fine graded. Any lumber, undesirable materials, and rocks larger than the 3-inch size shall be removed from the surface. The completed surface shall be to the preconstruction elevation unless otherwise directed by the Town. Minor adjustments to line and grade may be required as the work progresses in order to satisfy field conditions.

3.10 ALTERNATE METHOD OF CONSTRUCTION

A. Use of This Method: A combination of conditions in the substrate, water table, or method of disposal may be encountered during the course of the work which makes dewatering impossible, or only possible through the use of unusual methods, the cost of which is excessive. When such conditions are encountered, but only after all reasonable means (pumps, well points, etc.) to dewater the excavation have been employed without success, the Contractor, may request to employ the following Alternate Method of Construction. The concurrence of the Engineer shall be obtained in writing and shall limit the use of the alternate method of construction to such specific portions of the Work as the Engineer shall determine.

B. The requirements set forth in other sections of these Specifications shall establish the required standards of construction quality for this work. Use of the alternate method of construction described hereinafter shall in no way be construed as relieving the Contractor of the work. No additional payment will be made to the Contractor for excavation, backfill, sheeting or any cost incurred for Work or materials, or any other costs incurred as a result of the use of this alternate method of construction. The prices established in the Proposal shall be for full payment for the various items of work.

C. Subject to all the requirements stated herein, including written acceptance of the Engineer, construction will be permitted in accordance with the following specifications. All requirements of these Specifications shall apply to this construction unless otherwise specifically modified herein.

D. Removal of Water: The installation of pipe and appurtenances under water will be permitted and the requirements of Article 3.03 will be waived.

E. Excavation shall be performed in accordance with Article 3.01.

F. Pipe Bedding: Pipe bedding shall be placed from 6 inches below the outside bottom of the proposed pipe barrel up to the centerline of the pipe barrel. The bedding material shall be pearock as specified in Article 2.03 "Pearock". Limerock screenings, sand or other fine organic material shall not be used.

G. The bedding material shall be placed and then be shaped to receive the pipe at the intended elevation. Bedding shall be provided under the branch of all fittings to furnish adequate support and bearing under the fitting.

H. Backfill: After the pipe is installed, backfilling shall proceed in accordance with the provisions of Article 3.06 "Backfill" and 3.07 "Compaction and Densities". Select backfill material shall be used to backfill around the pipe and to a level one foot above the crown of the pipe. Under no circumstances will material other than select backfill or specified pipe bedding material be considered satisfactory for this purpose.

I. If the Alternate Method of Construction is used, all backfill material, including specified pipe bedding material, shall be carefully lifted into the trench and not released to fall freely therein until the bucket or container is at or just above water level. Under no circumstances will backfill material be dumped or pushed into the trenches containing water. Below existing water level, the backfill material shall be carefully rammed into place in uniform layers, of equal depth on each side of the pipe, up to the water level. Above the water level, backfill material shall be placed and compacted for normal backfill as previously specified.

3.11 RESTORATION OF EXISTING SURFACES

A. Restore all grassed areas disturbed by the trenching operations by resodding in accordance with the Section entitled “Sodding”.

B. Restore all asphaltic concrete pavement areas disturbed by the trenching operations in accordance with the Section entitled “Asphaltic Concrete Pavement.”

C. Restore all concrete pavement, curbs, and sidewalks disturbed by the trenching operations in accordance with the Section entitled “Concrete Curbs and Sidewalks”.

END OF SECTION

SECTION 31 23 01

EXCAVATION AND BACKFILL FOR STRUCTURES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. This Section includes, except as elsewhere provided, excavation, filling and compacting within the limits defined on the Contract Drawings for complete construction of structures for this project.

B. All excavation for the project is unclassified.

1.02 QUALITY CONTROL

A. Codes and Standards: Excavation and backfill work shall be performed in compliance with applicable codes, standards and requirements of governing authorities having jurisdiction in the area.

B. Testing and Inspection Services:

1. Laboratory testing and checking and all certifications required by the Specifications, including the cost of transporting all samples and test specimens, shall be provided and paid for by the Contractor unless otherwise indicated in the Specifications.

2. An independent testing laboratory may be retained by the Town to do appropriate testing as described in the Section entitled "Quality Requirements". The Contractor shall schedule its work so as to permit a reasonable time for testing before placing succeeding lifts and shall keep the laboratory informed of his progress. A minimum of 48 hours of notice shall be provided to the testing laboratory to mobilize its activities.

1.03 JOB CONDITIONS

A. General

1. A separate geotechnical report is provided for information purposes with the Contract Documents. The report identifies properties below grade and also offers recommendations for foundation design, primarily for use of the Engineer. The recommendations shall not be construed as requirements of the Contract unless specifically referenced by the Contract Documents.

2. The Town and/or the Engineer will not assume responsibility for variations of sub-soil quality or conditions at locations other than places shown and at the time the geotechnical investigation was made. The Contractor shall examine the site and review the available geotechnical report or undertake its own subsurface

investigation prior to submitting its bid, taking into consideration all conditions that may affect its work.

B. Existing Utilities

1. Locate existing underground utilities in the areas of work. Accurate "As Built" Information describing existing pipelines and underground utilities is not available. Test pits and hand excavation in critical areas will be required prior to initiating work.

2. All existing utilities including piping, electrical conduits, electric duct banks and telephone cables that are shown on the Contract Drawings to be relocated, shall be relocated prior to initiating earth work. Excavation and backfill for relocation of existing utilities shall conform to the requirements of Section 31 23 00. The Contractor shall coordinate relocation of utilities with utility companies having jurisdiction in the area. Should unknown or incorrectly identified piping or other utilities be encountered during excavation, the Contractor shall consult the Town and the Engineer of such piping or utility immediately for directions.

3. The Contractor shall cooperate with the Town and utility companies in keeping respective services and facilities in operation.

1.04 PROHIBITION OF BLASTING

A. The use of explosives for excavation work is strictly prohibited on this project.

1.05 SUBMITTALS

A. The Contractor shall submit information and samples to the Engineer for review as specified herein in accordance with the Section entitled “Submittal Procedures”. The information shall include:

1. Detailed description of dewatering method chosen and sequence of dewatering operations.

2. Plans showing the methods and location of dewatering and discharge. The drawings shall include a sufficient number of detailed sections to clearly illustrate the scope of work. The drawings showing all of the above information, including calculations, shall be prepared by a qualified Professional Engineer registered in the state of Florida, and shall bear its seal and signature. If required by regulatory agencies, a copy of the dewatering permit shall be submitted.

3. Lists of materials and equipment to be used. Detailed description of the method(s) of excavation, fill and compaction to be used.

4. Plans of open cut excavations showing side slopes and limits of the excavation at grade where not shown on the Contract Drawings.

5. Design computation of sheeting system. Sheeting and shoring plans shall be designed and sealed by a Professional Engineer registered in the State of Florida. Submittals shall indicate depth of penetration.

6. The Contractor shall furnish the Engineer, for approval, a representative sample of structural fill material from off-site sources at least ten calendar days prior to the date of anticipated use of such material. The sample shall be delivered to the site at a location determined by the Engineer. The submittal shall identify the source of the material.

1.06 PROTECTION OF PROPERTY AND STRUCTURES

A. The Contractor shall, at its own expense, sustain in place and protect from direct and indirect injury, its work at all times as well as all pipes, poles, conduits, walls, buildings, and all other structures, utilities and property in the vicinity of its work. Such sustaining shall be done by the Contractor. The Contractor shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings and all other structures, utilities, and property in the vicinity of its work. It shall be responsible for all damage, and assume all expenses, for direct or indirect injury and damage, caused by its work, to any such pipes, structures, etc., or to any person or property, by reason of injury to them, whether or not such structures, etc., are shown on the Drawings.

B. Barriers and lights shall be placed at all excavations in accordance with OSHA requirements.

C. Safe and suitable ladders for access to trenches shall be provided in accordance with OSHA requirements.

PART 2 - PRODUCTS

2.01 GENERAL

A. Specific locations/areas of work where these materials shall be utilized are defined on the Drawings.

2.02 STRUCTURAL FILL

A. Fill material shall be noncohesive, nonplastic, granular mixture of local clean sand or local clean sand and limerock free from vegetation, organic material, muck, or deleterious matter. Material shall conform to AASHTO-2 gradation with no more than ten (10) percent by weight passing the No. 200 sieve. All rock or hard material shall pass through a 3-inch diameter ring. Broken Portland cement or asphaltic concrete shall not be considered an acceptable fill material. Fill material containing limerock shall have sufficient sand to fill the voids in the limerock. Material placed in the upper 6-inches of all backfills or fills shall not contain any stones or rocks larger than 1-inch in

diameter. Limits of excavation and fill shall be as defined on the Drawings. All structural fill materials shall be obtained from off-site sources.

2.03 CRUSHED LIMESTONE

A. Crushed limestone placed below foundation slabs shall be hard, durable, subangular particles of proper size and gradation, and shall be free from organic materials, wood, trash, sand, loam, chalk, excess fines, and other deleterious materials. Maximum aggregate size shall be 3/4 inches.

2.04 OTHER MATERIALS

A. Requirements for any other fill material, if needed, are defined in the Drawings.

PART 3 - EXECUTION

3.01 CONTRACTOR INSPECTIONS

A. Examine the areas and conditions under which excavating, filling, and grading are to be performed. Do not proceed with the work until unsatisfactory conditions have been corrected.

B. Examine and accept existing grade of the project site walkways, pavements, etc., prior to commencement of work and report to Engineer if elevations of existing subgrade substantially vary from elevations shown on the Drawings.

3.02 EXCAVATION FOR STRUCTURES

A. Unless otherwise indicated on the Drawings, all excavation shall be made in such a manner, and to such widths, as will give ample room for properly constructing and inspecting the structures they are to contain. Excavation shall be made in accordance with the details shown on the Drawings, and as specified herein. Attention shall be given to the proper handling of storm water runoff. The Contractor shall intercept and collect surface run off both at the top and bottom of cut slopes. The excavating equipment shall operate in an organized fashion so as to remove silt from one edge of the excavation to the other so as not to trap silt within the undercut area.

B. Where required on the Drawings, unsuitable material (silt layer) beneath the groundwater encountered at the site shall be removed using a drag line or hydraulic excavator, as approved by the Engineer. The equipment shall operate in an organized manner so as to remove silt from one edge of the excavation to the other so as not to trap silt within the undercut area. Unsuitable material shall be hauled to and stockpiled temporarily by the Contractor at the “Temporary Muck Storage” location defined on the Drawings. Once drained, and during “dry” weather as determined by the Engineer in the field, the Contractor shall remove and dispose of it off-site. The Contractor shall be responsible for managing and maintaining the temporary muck storage area and shall ensure impact of this area, including providing dust control, runoff control, etc. is

minimized. Also, the Contractor shall clean all roadways impacted by his demucking, hauling, temporary stockpiling and removal operations at a frequency as determined by the Engineer in the field.

C. In excavating for footings, structures, and foundations, the Contractor shall take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.

D. The Contractor shall ensure that its excavation work does not adversely affect the bearing capacity of the structural subsurface. Also, the Contractor shall proceed with foundation work immediately after excavation work and as expeditiously as possible so as to minimize any potential for subsurface disturbance due to environmental factors, adverse weather, etc. The Contractor shall also take all necessary precautions to protect its work from potential adverse impacts. Where excavated areas are disturbed by subsequent operations or adverse weather, scarify surface reshape, fill as required and compact to required density.

E. All excavated soil material, removed underground utilities including pipes and fittings, electrical conduits and duct banks, and other undefined materials removed within the limits of the excavation, shall be disposed off-site by the Contractor.

F. Refer to the Drawings for additional requirements for excavation for specific locations/areas of work.

3.03 UNAUTHORIZED EXCAVATION

A. Excavation work carried outside of the work limits required by the Contract Documents shall be at the Contractor's expense and shall be backfilled by the Contractor at its own expense with structural fill, as directed by the Engineer. Where, in the judgement of the Engineer, such over-excavation requires use of lean concrete or crushed stone, the Contractor, at its expense, shall furnish and place such materials.

3.04 SHEETING AND BRACING

A. The term "sheeting" shall represent any type of shoring used to support sides of the excavation. Walls of the excavation shall be kept vertical where open cut is not practical and, if required to protect the safety of workmen, the general public, this or other work or structure, or excavation walls, the excavation shall be properly sheeted and braced for conditions encountered and OSHA requirements. Excavation for the structures shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation, sheeting, or bracing, of not less than two feet, unless otherwise indicated on the Drawings. Materials encountered in the excavation, which have a tendency to slough or flow into the excavation, undermine the bank, weaken the overlying strata, or are otherwise rendered unstable by the excavation operation shall be retained by sheeting, stabilization, grouting or other acceptable methods.

B. Minimum length of embedment below the deepest part of the excavation shall be 0.3 times the depth of excavation being supported or greater depending on the sheeting. The design of the sheeting arrangement shall be the responsibility of the Contractor.

C. Sheeting shall be removed provided its removal will not jeopardize pipes or structures. Any sheeting left in place shall be cut-off two feet below finished grade, or as directed. The Contractor will not receive extra compensation for sheeting left in place or the cut off work required.

3.05 REMOVAL OF WATER

A. General

1. The Contractor shall provide pumps, well points, and other appurtenant equipment necessary to remove and maintain water at such a level as to permit construction in the dry where defined on the Drawings. The ground water level shall be controlled so as to permit the placing and curing of concrete and the maintenance of supporting foundations and adjacent work and structures in the dry.

2. The Contractor shall use dewatering systems that include automatic starting devices, and standby pumps that will ensure continuous dewatering in the event of an outage of one or more pumps.

3. If excavations to be dewatered cannot be maintained dry by the Contractor's dewatering efforts, then the Contractor shall provide tremie seals at no additional cost to the Town. The placement of tremie seals shall not preclude dewatering operations specified herein. The limits of tremie seals shall be recommended by the Contractor and reviewed and accepted by the Engineer.

B. Disposal: The Contractor shall be responsible to dispose of water from the dewatering operation in accordance with the Contract Documents and shall obtain all necessary permits and conform to all local regulations and codes. Water from the excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property, to the work completed or in progress, to the surface of the streets, will not cause any interference with the use of the same by the public, or will not cause pollution of any waterway or stream. Water from dewatering operation may be disposed at locations directed by the Town with the proper installation of siltation screens and operation of the dewatering system in accordance with all local regulations and codes. The Contractor shall submit its dewatering method and point(s) of discharge to the Engineer for review at least twenty (20) days prior to any dewatering activities. The Contractor shall provide maintenance of canal(s) and drainage ditches to which it discharges. The cost of maintaining drainage ditches and canal(s) shall be included in the bid price. The Contractor shall remove siltation and haul and dispose of this material on a regular basis to maintain the original base conditions at all times so as not to impact drainage in the general area.

3.06 FILL PLACEMENT AND COMPACTION

A. General

1. Fill material (including structural fill and other fill material) shall be placed within the limits of excavations as shown on the Drawings. When placed in the wet, fill material shall be placed in standing groundwater to a level one foot above stabilized groundwater. The material shall be placed at one edge of the excavation and pushed to the other so as to move residuals across the bottom of the excavation. The leading edge of the fill should be cleaned regularly to remove it of the advancing residuals. All residuals shall be disposed at off-site locations shown on the Drawings or specified herein.

2. Once fill materials have been placed one foot above the stabilized groundwater, then the entire lift should be rolled with six passes from a 10-ton roller. The coverages shall be overlapping and shall occur while the compactor operated at a travel speed of not more than two feet per second. If a vibratory compactor is used, it should be operated with the vibrator off so as not to induce capillary moisture into the dry fill soils.

3. Fill materials placed following this initial lift shall be placed in the dry with loose lift thickness of six inches or less. Each lift shall be compacted to achieve a minimum of 98 percent Modified Proctor maximum dry density in accordance with ASTM D1557. Fill materials shall be placed within two percent of optimum moisture content.

B. Inspection and Testing: The fill placement and compaction shall be observed by the Engineer. As a minimum, an in-place density test will be made in each lift of compacted soil for every 2,500 square feet of area. The Contractor shall coordinate and cooperate with the testing laboratory.

C. Final Grades: Final structure fill grades shall be within 0.1 feet of elevations shown. Where shown on the Drawings, surfaces shall be sloped for drainage or other surfaces.

D. Refer to the Drawings for additional fill and compaction requirements for specific locations/areas of work.

3.07 BACKFILL AGAINST STRUCTURES

A. Backfill against nonwater holding structures shall not be performed until the concrete has been inspected by the Engineer. Backfill against walls shall also be deferred until the structural slab for floors above the top fill line have been placed and attained design strength. Partial backfilling against adequately braced walls may be considered by the Engineer on an individual situation basis. Where walls are to be waterproofed, all work shall be completed, and membrane materials dried or cured according to the manufacturer's instructions before backfilling.

B. Backfill against tanks and other structures which are to retain liquids shall not be performed until leakage tests are completed and accepted by the Engineer.

END OF SECTION

SECTION 31 23 19
DEWATERING

PART 1 – GENERAL (NOT USED)

PART 2 – PART 2 - MATERIALS (NOT USED)

PART 3 – PART 3 – EXECUTION

3.01 GENERAL

A. The Contractor shall be responsible for design, installation, and operation of a dewatering system to dewater specified excavations.

1. The dewatering system shall be designed in accordance with the Best Management Practices (BMP's) adopted by FDEP.

2. Inspection and control of dewatering system operations will be in accordance with the FDEP guidelines established in the Florida Erosion and Sediment Control Inspector's Manual (current edition).

B. Continuously manage and control excavation water recharge in order to facilitate and not impede construction activities at all times, including weekends, holidays, and during periods of work stoppages, and furnish and install, and operate, a contingency backup dewatering system to maintain control of excavation water levels to facilitate construction (i.e.; no construction delays).

3.02 SUBMITTALS

A. Submittals shall be made in accordance with the requirements specified in Contract Documents and the requirements of this Section.

B. Provide name, address, and phone numbers of all subcontractors.

C. The Contractor shall submit a Dewatering Best Management Practices (BMP) Plan prior to the start of excavation expected to include dewatering operations. The Plan shall provide detailed descriptions of dewatering procedures to be utilized to meet the requirements of this Section. Methodologies to control dewatering discharge contamination include, but are not limited to:

1. Holding tanks of adequate size and volume.

2. Wellpoint systems.

3. Sump pumping systems.

4. Chemical precipitation of particulates.

5. Filter systems and siltation controls.

6. Outfall booms.

D. The Contractor shall provide a Site Health and Safety Plan and Activity Hazard Analysis (AHA) for contaminated soil as specified in the Contract Documents and/or groundwater as specified in this Section, to include the following:

1. A written description of the proposed method for temporary stockpiling, transportation, and disposal of all wastes.

2. Copy of permits of disposal facilities.

3. Certification of disposal of all wastes.

4. Directions to the nearest hospital and phone number.

5. Emergency contact phone numbers.

6. Laboratory analyses and sampling plan required for transportation and disposal of all wastes in accordance with applicable federal, state, and local requirements.

E. Upon Completion of Remediation Activities, the following shall be provided:

1. Copy of manifests for all wastes leaving the site.

2. Copy of the laboratory analyses results from all sampling activities.

3. Copy of closure reports that may be required.

3.03 SURFACE WATER CONTROL

A. Remove surface runoff controls when no longer needed.

B. Seal off or berm catch basins in the area of construction to prevent discharge of untreated dewatering effluent or runoff from unstabilized construction areas into storm drains.

C. All drain inlets or catch basins used for dewatering discharge shall be provided with silt and sediment removal barriers as approved by the Engineer.

1. All barriers shall be cleaned regularly to avoid sediment discharge into the storm drain system.

2. Construction activities will be stopped at no cost to the Town until sediment controls are properly maintained, installed, and in compliance with the dewatering permit.

3. All barriers shall be removed upon issuance of a hurricane warning.

3.04 DEWATERING SYSTEMS

A. Design, furnish, and install, operate, and maintain a dewatering system of sufficient size and capacity to permit excavation and subsequent construction activities in water-free conditions, and to lower and maintain the excavation area groundwater level a minimum of 2 feet below the lowest point of excavation. The dewatering system shall be designed and operated such that the system continuously maintains excavations water levels so as to maintain the excavation water level in order to allow for the initiation and completion of excavation backfill compaction and restoration activities.

B. Dewatering systems shall include, but is not limited to, furnishing and installing wells or well points, and or other equipment and appurtenances as may be necessary, including system components or equipment, installed outside the outermost perimeter of the excavation limits, and sufficiently below lowest point of excavation, to maintain the specified or required groundwater elevation.

C. Open trench pumping maybe permitted upon the approval of the Engineer.

D. Design and Operate Dewatering Systems:

1. To prevent loss of ground as water is removed.

2. To avoid inducing settlement or damage to existing facilities, completed Work, or adjacent property.

3. Avoid surface water pollution or discharge of sediment to storm drain systems or waterways.

E. Provide supplemental ditches and sumps only as necessary to collect water from local seeps. Do not use ditches and sumps as primary means of dewatering. The Contractor shall not direct any flow of water over pavement surfaces. Discharge of water shall be conducted as approved by the local, state, and federal agencies and the Engineer.

F. Provide controls to prevent surface water from entering excavation pits, trenches, or stockpiled materials.

3.05 PIPELINES CONSTRUCTED UNDER WATER

A. In the event that it is found that the water in a trench cannot be lowered by ordinary means, i.e., well points and pumps, an alternate construction method may be

proposed by the Contractor. Complete details, specifications, manufacturer's descriptive literature, installation lists and any other pertinent data regarding the proposed alternate method shall be submitted as an alternate by the Contractor to the Town within 5 calendar days of the time that the Contractor anticipates using such alternate method.

B. If the Town approves the alternate method in writing, it may be used, so long as the Work is performed in a manner which, in the opinion of the Engineer, conforms to the method and procedure as set forth in the information supplied by the Contractor in his original application for use of an alternate method. The Town may revoke approval of the alternate method if at any time, in his opinion, the Work is not conforming to any applicable portion of these Specifications.

C. No pipeline shall be laid under water without approval of the Town.

D. If the dewatering system is eliminated or the effort reduced, and the pipe is laid underwater, additional pipe zone material will be required as backfill to the water table elevation, or to the level it was reduced to.

3.06 DISPOSAL OF WATER

A. All water generated, pumped, or removed from excavations as a result of excavation dewatering activities shall be collected, containerized, and managed prior to discharge and or treatment at an approved discharge point or facility, in accordance with FDEP and or SFWMD as applicable. Contractor shall secure, obtain, and pay for all necessary local, state, and federal permits, licenses, fees, and or approvals to discharge water or perform onsite or offsite treatment and disposal. Treat water collected by dewatering operations as required by regulatory agencies, prior to discharge.

B. Discharge water as permitted, and in regulatory compliance with Contractor obtained discharge permits/licenses.

1. All discharge activities shall be performed so as to prevent silt and sediment discharge and eliminate any soil erosion or flooding, or otherwise damage existing facilities, completed Work, or adjacent property.

2. Maximum allowable turbidity of discharges to surface waters or storm drains will be 10 NTU's or the maximum permitted by the agency having jurisdiction, whichever is less.

3. Sump discharges cannot be discharged directly to storm drains or surface waters without treatment.

C. Affected storm sewer outfalls shall be protected with floating silt booms as approved by the Town and the Engineer. All accumulated debris resulting from the dewatering discharge collecting in the boom shall be removed on a daily basis.

D. Visible silt plumes emanating from the area around the outfalls will be considered a failure of the silt and sediment removal measures and may result in a Notice of Violation issued by FDEP and or SFWMD as applicable. The Contractor will be responsible for all fines associated with the violation of the dewatering permit conditions issued to the Contractor.

E. Failure to control dewatering discharges as described above and as detailed in the Florida Erosion and Sediment Control Inspector's Manual, may result in an order to cease dewatering operations until the discharge problems are corrected. No claims will be accepted for costs or delays associated with unacceptable dewatering discharge practices.

3.07 WELL POINT REMOVAL

A. Well point holes shall be filled with sand which shall be washed into the hole.

B. Well point holes located within asphalt pavement surfaces or concrete pavements, shall be filled with sand to the subgrade. The remaining hole shall be filled with nonshrink grout.

3.08 CONTAMINATED GROUNDWATER AND DISPOSAL REQUIREMENTS

A. If Contractor suspects, witnesses, or identifies, groundwater contamination at any time during the performance of the Work, Contractor shall notify the Town immediately. Results will be obtained by the onsite mobile laboratory.

B. If analytical testing documents and indicates elevated concentrations above FDEP action levels (Chapter 62-777, Florida Administrative Code) dewatering operations will be suspended until appropriate treatment and or construction measures can be implemented. Contractor shall not resume operations until notified to do so in writing by the Town and construction of the remaining pipelines in that area will be installed in the wet or normal construction activities shall be resumed in another areas determined by the Engineer. There shall be no delay or mobilization claim associated with moving to another project area, unless all other Work has been completed. In addition, the local agency will be immediately notified via telephone and in writing by the Contractor. Dewatering activities in the area will not proceed until review of the matter with the local agency is resolved and written authorization is issued.

C. The Contractor shall submit a dewatering plan to the Town for review. The Contractor is advised that the SFWMD, FDOT, etc. may require that a dewatering plan, prepared by a state of Florida licensed Professional Engineer or registered Professional Geologist, be submitted and approved prior to issuance of a dewatering permit. The Contractor will retain a state of Florida licensed Professional Engineer or registered Professional Geologist to provide an initial report of potential dewatering issues in the site vicinity. The Contractor shall retain a state of Florida licensed Professional Engineer or registered Professional Geologist to provide any additional

services required by regulatory agencies regarding dewatering and contaminated sites.

D. The Contractor is advised that the FDEP may have identified contaminated sites within ¼ mile radius of the project site. The Contractor may be required to provide testing and monitoring of the dewatering operations, and to institute dewatering methods and controls, as required by SFWMD, FDOT etc. The contractor will be responsible for all costs associated with means and methods of dewatering which will be set forth by dewatering permits.

E. Treatment of the groundwater will include three options depending on the magnitude of the contamination in the trench or as determined by the Engineer: Granular Activated Carbon (GAC) Treatment Vessels, Mobile Air Stripping Units, or Vacuum Truck Removal and Disposal or other method as approved by the Engineer. The Contractor will provide a submittal list of all qualified groundwater remediation subcontractors for GAC vessel treatment/portable air stripping unit and vacuum truck disposal including phone numbers, contact names, and addresses prior to start of construction. The selected groundwater treatment/recycling facility for hauling contaminated groundwater shall also be identified.

F. If contaminated groundwater in the dewatering trench is encountered, remediation operations will begin once local agency approval is obtained. Contaminated water will be disposed first into a high volume holding (FRAC) tank and then treated through a GAC unit/portable air stripper or recovered into vacuum hauling trucks for disposal.

G. Effluent water from the treatment system will be analyzed by the onsite mobile laboratory to confirm that concentrations are below regulatory limits. Effluent water will then be directed to a pre-approved alternative location as determined by local agency and/or the Engineer.

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROL - STORMWATER POLLUTION PREVENTION

PART 1 – GENERAL

1.01 DESCRIPTION

A. Provide all work and take all measures necessary to control soil erosion resulting from construction operations, prevent flow of sediment from construction site, and contain construction materials (including excavation and backfill) within protected working area as to prevent damage to any stream or wetlands.

B. The Contractor is responsible for creating a Stormwater Pollution Prevention Plan (SWPPP) for regulatory approval and enforcing its requirements in accordance with applicable Federal, State, and local regulations. The complete SWPPP shall be submitted by the Contractor and approved by the regulatory agencies having jurisdiction before the start of construction. The Contractor shall provide all labor, materials, and equipment required in the prevention of environmental pollution and degradation and thereby for the protection of all environmental resources encountered during construction.

C. The Contractor is responsible for all permitting and reporting forms as required through the Florida Department of Environmental Protection (FDEP) – National Pollutant Discharge Elimination System (NPDES) program for construction activities.

D. Temporary erosion controls may include, but are not limited to, mulching, netting, and watering on site surfaces and spoil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations that will ensure erosion during construction will be either eliminated or maintained within acceptable limits as established by the Town.

E. Temporary sedimentation controls may include, but are not limited to, silt dams, barriers, turbidity curtains, hay bales, drop inlet protection, curb inlet protection, and appurtenances at the foot of sloped surfaces and other areas that will ensure sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Town.

1.02 REFERENCE

A. “Guidelines for Erosion and Sediment Control, Planning and Implementation” published by the United States Environmental Protection Agency.

B. “Processes, Procedures and Methods to Control Pollution Resulting from all Construction Activity”, published by the United States Environmental Protection Agency.

C. “The Florida Stormwater, Erosion, and Sedimentation Control Inspector’s Manual”

published by the Florida Department of Environmental Protection.

D. "Erosion and Sediment Control Designer and Review Manual" (ESCDRM) published by the Florida Department of Transportation and FDEP.

E. NPDES Stormwater Program: www.dept.state.fl.us/water/stormwater/npdes/

1.03 SUBMITTALS

A. Contractor shall provide a copy of all permit applications, approvals, and reporting documentation submitted in support to SWPPP.

B. Contractor shall submit a copy of the SWPPP in accordance with the Section entitled "Submittals".

1.04 QUALITY ASSURANCE

A. Operations restricted to areas of work indicated on drawings and area which must be entered for construction of temporary or permanent facilities.

B. Engineer has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct immediate permanent or temporary pollution control measures to prevent contamination of any stream or wetlands, including construction of temporary berms, dikes, dams, sediment basins, sediment traps, slope drains, and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion.

PART 2 – PRODUCTS

2.01 GENERAL

A. All products shall be in accordance with Drawings and approved SWPPP.

PART 3 – EXECUTION

3.01 GENERAL

A. Prior to the start of work, provide and install the site sedimentation and erosion control as indicated on the Drawings and the Contractor prepared SWPPP and as required by applicable regulations. Maintain such system for the duration of the project.

B. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results that comply with the requirements of the Town or SWPPP, Contractor shall immediately take any and all necessary steps to correct the deficiency at his own expense.

C. Construct earth berms or diversions to intercept and divert runoff water from critical areas.

D. Discharge silt-laden water from excavations onto filter fabric mat and/or baled hay or straw sediment traps to ensure that only sediment-free water is returned to watercourses.

E. Do not place excavated soil material adjacent to watercourse in manner that will cause it to wash away by high water or runoff.

F. Prevent damage to vegetation by excessive watering or silt accumulation in the discharge area.

G. Do not dump soiled material into any streams, wetlands, surface waters, or unspecified locations.

H. Do not pump silt-laden water from trenches or excavations into surface waters, streams, wetlands, or natural or man-made channels leading thereto.

I. Prevent damage to vegetation adjacent to or outside of construction area limits.

J. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete trucks or hydroseeders, or any other pollutant in streams, wetlands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.

K. Do not alter flow line of any stream unless indicated or specified.

L. All exposed graded, cleared, filled, etc. land to remain shall be stabilized with sod, filter fabric, and/or vegetation acceptable to the Owner.

END OF SECTION

SECTION 31 31 00
SOIL PREPARATION

PART 1 – GENERAL

1.01 SEQUENCING AND SCHEDULING

A. Rough grade areas to be planted or seeded prior to performing Work specified under this Section.

1.02 APPLICABLE STANDARDS AND SPECIFICATIONS

A. Comply with the following standards and specifications for all materials, methods, and workmanship unless otherwise noted:

1. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, current edition.

PART 2 – PRODUCTS

2.01 TOPSOIL

A. General: Uniform mixture of 50 percent sand and 50 percent muck in a loose friable condition, free from objects larger than 1-1/2 inches maximum dimension, and free of subsoil, roots, grass, other foreign matter, hazardous or toxic substances, and deleterious material that may be harmful to plant growth or may hinder grading, planting, or maintenance.

B. Textural Amendments: Amend as necessary to conform to required composition.

C. Source: Import topsoil if onsite material fails to meet specified requirements or is insufficient in quantity.

2.02 SOURCE QUALITY CONTROL

A. Topsoil Analysis/Testing: Performed by the Town or state soil testing service or approved certified independent testing laboratory.

B. Should soil tests prove the topsoil to alkaline or above the accepted minimum for salt content, the topsoil shall be removed and replaced by acceptable material at Contractor’s expense.

PART 3 – EXECUTION

3.01 SUBGRADE PREPARATION

A. The subgrade shall be 4 inches lower than finished grade with 2 inches of topsoil added to sod areas.

B. Scarify subgrade to minimum depth of 6 inches where topsoil is to be placed.

C. Remove stones over 2-1/2 inches in any dimension, sticks, roots, rubbish, and other extraneous material.

D. Limit preparation to areas which will receive topsoil within 2 days after preparation.

3.02 TOPSOIL PLACEMENT

A. Topsoil Thickness:

1. Sodded Areas: 2 inches.

2. Planting Beds: 6 inches.

B. Do not place topsoil when subsoil or topsoil is excessively wet or otherwise detrimental to the Work.

C. Mix soil amendments with topsoil before placement or spread on topsoil surface and mix thoroughly into entire depth of topsoil before planting or seeding.

D. Uniformly distribute to within 1/2-inch of final grades. Fine grade topsoil eliminating rough or low areas and maintaining levels, profiles, and contours of subgrade.

E. Remove stones exceeding 1-1/2 inches, roots, sticks, debris, and foreign matter during and after topsoil placement.

F. Remove surplus subsoil and topsoil from site. Grade stockpile area as necessary and place in condition acceptable for planting or seeding.

END OF SECTION

SECTION 32 12 00
ASPHALT CONCRETE PAVEMENT

PART 1 – GENERAL

1.01 STANDARD SPECIFICATIONS

A. When referenced in this section, Standard Specifications shall mean Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, current edition.

1.02 QUALITY ASSURANCE

A. Qualifications:

1. Independent Testing Laboratory: In accordance with ASTM E329.

2. Asphalt concrete mix formula shall be prepared by an approved certified independent laboratory under the supervision of a certified asphalt technician.

1.03 SUBMITTALS

A. The Contractor shall submit its proposed formula for the asphaltic concrete paving for review in accordance with the Section entitled “Submittal Procedures”.

1.04 ENVIRONMENTAL REQUIREMENTS

A. Temperature: Do not apply asphalt materials or place asphalt mixes when ground temperature is lower than 10 degrees C (50 degrees F), or air temperature is lower than 4 degrees C (40 degrees F). Measure ground and air temperature in shaded areas away from heat sources or wet surfaces.

B. Moisture: Do not apply asphalt materials or place asphalt mixes when application surface is wet.

PART 2 – MATERIALS

2.01 MATERIALS

A. Prime Coat: Cut-back asphalt, Grades RC-70 or RC-250 meeting the requirements of the Standard Specifications.

B. Tack Coat: Emulsified asphalt, Grade RS-2, SS-1, or SS-1H meeting the requirements of the Standard Specifications. The bituminous material shall be heated to a suitable consistency as directed by the Town.

C. Sand (Blotter Material): Clean, dry, with 100 percent passing a 4.75 mm (No. 4) sieve, and a maximum of 10 percent passing a 75 mm (No. 200) sieve.

2.02 ASPHALT CONCRETE MIX

A. General:

1. Mix formula shall not be modified except with the written approval of Town.

2. Source Changes:

a. Should material source(s) change, establish a new asphalt concrete mix formula before the new material(s) is used.

b. Perform check tests of properties of the plant-mix bituminous materials on the first day of production and as requested by Town to confirm that properties are in compliance with design criteria.

c. Make adjustments in gradation or asphalt content as necessary to meet design criteria.

B. Asphalt Concrete: Type SP meeting the requirements of the Standard Specifications.

C. Composition: Hot-plant mix of aggregate, mineral filler, and paving grade asphalt cement. The several aggregate fractions shall be sized, uniformly graded, and combined in such proportions that the resulting mixture meets the grading requirements of the mix formula.

D. Aggregate:

1. The aggregate shall meet the requirements of the Standard Specifications.

2. Mineral Filler shall meet the requirements of the Standard Specifications

E. Asphalt Cement: Paving Grade AC-30 meeting the requirements of the Standard Specifications.

PART 3 – EXECUTION

3.01 GENERAL

A. Traffic Control: Minimize inconvenience to traffic, but keep vehicles off freshly treated or paved surfaces to avoid pickup and tracking of asphalt.

B. Driveways: Repave driveways from which pavement was removed. Leave driveways in as good or better condition than before start of construction.

3.02 LINE AND GRADE

A. Provide and maintain intermediate control of line and grade, independent of the underlying base to meet finish surface grades and minimum thickness.

B. Shoulders: Construct to line, grade, and cross-section shown.

3.03 PREPARATION

A. Prepare subgrade as specified in the Contract Documents.

B. Existing Roadway:

1. Modify profile by grinding, milling, or overlay methods as approved, to provide meet lines and surfaces and to produce a smooth riding connection to existing facility.

2. Resurface entire roadway following adjustment of base and asphalt grades.

3. Paint edges of meet line with tack coat prior to placing new pavement.

C. Thoroughly coat edges of contact surfaces (curbs, manhole frames) with emulsified asphalt or asphalt cement prior to laying new pavement. Prevent staining of adjacent surfaces.

3.04 PAVEMENT APPLICATION

A. General: Place asphalt concrete mixture on an approved, prepared base in conformance with this Section.

B. Cold Milling

1. Milling of existing asphalt pavement shall be at the depth and location as indicated on the Construction Drawings or as directed by the Town.

2. The milled surface shall be reasonably smooth and free of excessive scarification marks, gouges, ridges, continuous grooves, or other damage. The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material by the use of power brooms, power blowers, power vacuums or other means.

3. The Contractor shall coordinate the adjustment of maintenance access structures, meter boxes, drainage inlets, and valve boxes with the milling operation.

4. All milled material shall become the property of the Contractor and shall be disposed of off-site or used in conformance with the Contract Documents, or for utilization as Reclaimed Asphalt Pavement, in conformance with the specification provided above, as approved by the Town.

C. Prime Coat:

1. Heat cut-back asphalt between 100 degrees F and 150 degrees F prior to application.

2. Apply uniformly to clean, dry surfaces. Avoiding overlapping of applications.

3. Do not apply when moisture content of upper 3 inches of base exceeds optimum moisture content of base, or if free moisture is present.

4. Application Rate: Minimum 0.1 gallons per square yard of surface area.

5. Remove or redistribute excess material.

6. Allow a minimum of 5 full days for curing of primed surface before placing asphalt concrete.

D. Tack Coat:

1. Apply uniformly to clean, dry surfaces. Avoiding overlapping of applications.

2. Do not apply more tack coat than necessary for the day's paving operation.

3. Touch up missed or lightly coated surfaces and remove excess material.

4. Application Rate:

a. Minimum 0.05 gallons to maximum 0.12 gallons of asphalt (residual if diluted emulsified asphalt) per square yard of surface area.

b. Apply at rate, within range specified, sufficient to assure good bonding, but not so heavy that surplus asphalt flushes into asphalt concrete being placed.

E. Pavement Mix:

1. Prior to Paving:

a. Sweep primed surface free of dirt, dust, or other foreign matter.

b. Patch holes in primed surface with asphalt concrete pavement mix.

c. Blot excess prime material with sand.

2. Place asphalt concrete pavement mix in lifts as shown.

3. Compacted Lift Thickness:

a. Minimum: Twice the maximum aggregate size, but in no case less than 1 inch. Minimum thickness for Type SP-9.5 is 1.0 inches.

b. Maximum: 4 inches.

4. Total Compacted Thickness: Per Contract Documents.

5. Apply such that meet lines are straight and edges are vertical.

6. Collect and dispose of segregated aggregate from raking process. Do not scatter material over finished surface.

7. Joints:

    a. Offset edge of each layer a minimum of 6 inches so joints are not directly over those in underlying layer.

    b. Offset longitudinal joints in roadway pavements, so longitudinal joints in wearing layer coincide with pavement centerlines and lane divider lines.

    c. Form transverse joints by cutting back on previous day's run to expose full vertical depth of layer.

8. Succeeding Lifts: Apply tack coat to pavement surface between each lift.

9. After placement of pavement, seal meet line by painting a minimum of 6 inches on each side of the joint with cut-back or emulsified asphalt. Cover immediately with sand.

F. Compaction:

1. Roll until roller marks are eliminated and compacted to 100 percent of the laboratory compacted mixture.

2. Joint Compaction:

    a. Place top or wearing layer as continuously as possible.

    b. Pass roller over unprotected end of freshly laid mixture only when placing of mix is discontinued long enough to permit mixture to become chilled.

    c. Cut back previously compacted mixture when Work is resumed to produce a slightly beveled edge for full thickness of layer.

    d. Cut away waste material and lay new mix against fresh cut.

G. Tolerances:

General: Conduct measurements for conformity with crown and grade immediatelyafter initial compression. Correct variations immediately by removal or addition of materials and by continuous rolling.

1. Completed Surface or Wearing Layer Smoothness:

    a. Uniform texture, smooth, and uniform to crown and grade.

b. Maximum Deviation: 1/8 inch from lower edge of a 12-foot straightedge, measured continuously parallel and at right angle to centerline.

c. If surface of completed pavement deviates by more than twice the specified tolerances, remove and replace wearing surface.

2. Transverse Slope Maximum Deviation: ¼ inch in 12 feet from the rate of slope shown.

3. Finished Grade:

a. Perform a field differential level survey on a maximum 50-foot grid and along all grade breaks.

b. Maximum Deviation: 0.02 foot from the grade shown.

H. Seal Coat:

1. General: Apply seal coat of paving grade or emulsified asphalt to finished surface at longitudinal and transverse joints, joints at abutting pavements, areas where the asphalt concrete was placed by hand, patched surfaces, and other areas as directed by the Town.

2. Preparation:

a. Maintain surfaces that are to be sealed free of holes, dry, and clean of dust and loose material.

b. Seal in dry weather and when the temperature is above 35 degrees F.

3. Application:

a. Fill cracks over 1/16 inch in width with an asphalt-sand slurry or approved crack sealer prior to sealing.

b. When sealing patched surfaces and joints with existing pavements, extend minimum 6 inches beyond edges of patches.

3.05 PAVEMENT OVERLAY

A. Preparation:

1. Remove fatty asphalt, grease drippings, dust, and other deleterious matter.

2. Surface Depressions: Fill with asphalt concrete mix, and thoroughly compact.

3. Damaged Areas: Remove broken or deteriorated asphalt concrete and patch as specified in Article Patching.

4. Portland Cement Concrete Joints: Remove joint filler to minimum 1/2 inch below surface.

B. Application:

1. Tack Coat: As specified in this Section.

2. Place and compact asphalt concrete as specified in Article Pavement Application.

3. Place first layer to include widening of pavement and leveling of irregularities in the surface of the existing pavement.

4. When leveling irregular surfaces and raising low areas, the actual compacted thickness of any one lift shall not exceed 2 inches.

5. The actual compacted thickness of intermittent areas of 120 square yards or less may exceed 2 inches, but not 4 inches.

6. Final wearing layer shall be of uniform thickness, and meet grade and cross-section as shown.

3.06 PATCHING HOT MIX ASPHALT

A. Preparation:

1. Remove damaged, broken, or unsound asphalt concrete adjacent to patches. Trim to straight lines exposing smooth, sound, vertical edges.

2. Prepare patch subgrade as specified in the Contract Documents.

B. Application:

1. Patch Thickness: 3 inches or thickness of adjacent asphalt concrete, whichever is greater.

2. Place asphalt concrete mix across full width of patch in layers of equal thickness.

3. Spread and grade asphalt concrete with hand tools or mechanical spreader, depending on size of area to be patched.

C. Compaction:

1. Roll patches with power rollers capable of providing compression of 200 to 300 pounds per linear inch. Use hand tampers where rolling is impractical.

2. Begin rolling top course at edges of patches, lapping adjacent asphalt surface at least 1/2 the roller width. Progress toward center of patch overlapping each preceding track by at least 1/2 the width of roller.

3. Make sufficient passes over entire area to remove roller marks and to produce desired finished surface.

D. Tolerances:

1. Finished surface shall be flush with and match grade, slope, and crown of adjacent surface.

2. Tolerance: Surface smoothness shall not deviate more than plus 1/4 inch or minus 0 when a straightedge is laid across patched area between edges of new pavement and surface of old surfacing.

3.07 FIELD QUALITY CONTROL

A. General: Provide services of an approved certified independent testing laboratory to conduct tests.

B. Field Density Tests:

1. Perform tests from cores or sawed samples.

2. Measure with properly operating and calibrated nuclear density gauge.

3. Maximum Density: In accordance with ASTM D2041, using a sample of mix taken prior to compaction from the same location as the density test sample.

C. Testing Frequency:

1. Quality Control Tests:

a. Asphalt Content, Aggregate Gradation: Once per every 500 tons of mix or once every 4 hours, whichever is greater.

b. Mix Design Properties, Measured Maximum (Rice's) Specific Gravity: Once every 1,000 tons or once every 8 hours, whichever is greater.

2. Density Tests: Once every 500 tons of mix or once every 4 hours, whichever is greater.

END OF SECTION

SECTION 32 15 00

LIMEROCK BASE

PART 1 – GENERAL

1.01 DEFINITIONS

A. Completed Course: Compacted, unyielding, free from irregularities, with smooth, tight, even surface, true to grade, line, and cross section.

B. Completed Lift: Compacted with uniform surface reasonably true to cross-section.

PART 2 – MATERIALS

2.01 LIMEROCK BASE ROCK

A. The material used in limerock base shall be material classified as Miami Oolite or Ocala Formation.

B. The minimum of carbonates of calcium and magnesium in the limerock shall be 70 percent. The maximum percentage of water-sensitive clay material shall be 3.

C. Limerock material shall be uniform in color and not contain cherty or other extremely hard pieces, or lumps, balls, or pockets of sand or clay size material in sufficient quantities as to be detrimental to the proper bonding, finishing, or strength of the limerock base.

D. The limerock base shall be uniformly graded from coarse to fine with 97 percent passing a 3-1/2-inch sieve, 80 percent passing a 2-inch sieve. The fine material shall consist entirely of dust of fracture. All crushing or breaking up, which might be necessary in order to meet such size requirements, shall be done before the material is placed on the road.

E. Physical Qualities:

1. Liquid Limit, AASHTO T89: Maximum 35 percent.

2. Nonplastic.

3. Limerock material shall have an average limerock bearing ratio (LBR) value of not less than 100.

2.02 SOURCE QUALITY CONTROL

A. Contractor: Perform tests necessary to locate acceptable source of materials meeting specified requirements.

B. Final approval of aggregate material will be based on materials' test results on installed materials.

C. Should separation of coarse from fine materials occur during processing or stockpiling, immediately change methods of handling materials to correct uniformity in grading.

PART 3 – EXECUTION

3.01 SUBGRADE PREPARATION

A. As specified in the Contract Documents.

B. Obtain Town’s acceptance of subgrade before placement of limerock base rock.

C. Do not place base materials on soft, muddy subgrade.

3.02 EQUIPMENT

A. Use mechanical rock spreaders, equipped with a device that strikes off the rock uniformly to laying thickness, capable of producing even distribution. For areas where the use of a mechanical spreader is not practicable, the Contractor may spread the rock using bulldozers or blade graders.

3.03 HAULING AND SPREADING

A. Hauling Materials:

1. The limerock shall be transported to the point where it is to be used and dumped on the end of the preceding spread.

2. Do not haul over surfacing in process of construction.

3. Loads: Of uniform capacity.

4. Maintain consistent gradation of material delivered; loads of widely varying gradations will be cause for rejection.

B. Spreading Materials:

1. Distribute material to provide required density, depth, grade and dimensions with allowance for subsequent lifts.

2. Produce even distribution of material upon roadway without segregation.

3. Should segregation of coarse from fine materials occur during placing, immediately change methods of handling materials to correct uniformity in grading.

3.04 CONSTRUCTION OF COURSES

A. General: Complete each lift in advance of laying succeeding lift to provide required results and adequate inspection.

B. Limerock Base:

1. Maximum Completed Lift Thickness: 6 inches or equal thickness.

2. Completed Course Total Thickness: As shown on the Drawings.

3. Spread lift on preceding course to required cross-section.

4. Lightly blade and roll surface until thoroughly compacted.

5. Blade or broom surface to maintain true line, grade, and cross-section.

C. Gravel Surfacing:

1. Maximum Completed Lift Thickness: 6 inches or equal thickness.

2. Completed Course Total Thickness: As shown on the Drawings.

3. Spread on preceding course in accordance with cross-section shown.

4. Blade lightly and roll surface until material is thoroughly compacted.

3.05 ROLLING AND COMPACTION

A. Commence compaction of each layer of base after spreading operations and continue until density of 98 percent of maximum density has been achieved as determined by AASHTO T 180.

B. Density tests will be conducted every 500 square yards or as directed by the Town.

C. Roll each course of surfacing until material shall not creep under roller before succeeding course of surfacing material is applied.

D. Commence rolling at outer edges of surfacing and continue toward center; do not roll center of road first.

E. When the material does not have the proper moisture content to ensure the required density, wet or dry, as required. When adding water, uniformly mix it in by disking to the full depth of the course that is being compacted. During wetting or drying operations, manipulate as a unit, the entire width and depth of the course that is being compacted.

F. Place and compact each lift to required density before succeeding lift is placed.

G. Bind up preceding course before placing leveling course. Remove floating or loose stone from surface.

H. Blade or otherwise work surfacing as necessary to maintain grade and cross-section at all times, and to keep surface smooth and thoroughly compacted.

I. Surface Defects: Remedy surface defects by loosening and rerolling. Reroll entire area, including surrounding surface, until thoroughly compacted.

J. Finished Surface: True to grade and crown before proceeding with surfacing.

3.06 SURFACE TOLERANCES

A. Finished Surface of Base Course and Leveling Course: Within plus or minus 0.04-foot of grade shown at any individual point.

B. Compacted Surface of Leveling Course: Within 0.04-foot from lower edge of 10-foot straightedge placed on finished surface, parallel to centerline.

C. Overall Average: Within plus or minus 0.01-foot from crown and grade specified.

3.07 GRAVEL DRIVEWAY RESURFACING

A. Replace gravel surfacing on driveways which were gravel surfaced prior to construction.

B. Provide compacted gravel surfacing to depth equal to original, but not less than 4 inches.

C. Leave each driveway in as good or better condition as it was before start of construction.

3.08 FIELD QUALITY CONTROL

A. In-Place Density Tests:

1. Construct base course so areas shall be ready for testing.

2. Allow reasonable length of time for Town to perform tests and obtain results during normal working hours.

3.09 CLEANING

A. Remove excess material; clean stockpile areas of aggregate.

END OF SECTION

SECTION 32 16 00
CONCRETE CURBS AND SIDEWALKS

PART 1 - GENERAL (NOT USED)

PART 2 - MATERIALS

2.01 EXPANSION JOINT FILLER

A. 1/2-inch thick, preformed asphalt-impregnated, expansion joint material meeting AASHTO M153 Type I, II, or III, or AASHTO M213, or cellulose fiber types meeting the requirements of AASHTO M213, except the asphalt content is acceptable provided they contain minimum of 0.2 percent copper pentachlorophenate as a preservative and 1 percent water proofing wax.

2.02 CONCRETE

A. Ready-mixed meeting ASTM C94, Option A, with compressive strength of 3,000 psi at 28 days.

B. Maximum Aggregate Size: 1-1/2 inch.

C. Slump: 2 to 4 inches.

2.03 CURING COMPOUND

A. Liquid membrane-forming, clear or translucent, suitable for spray application and meeting ASTM C309, Type 1.

PART 3 - EXECUTION

3.01 FORMWORK

A. Lumber Materials:

1. 2-inch dressed dimension lumber, or metal of equal strength, straight, free from defects that would impair appearance or structural quality of completed curb and sidewalk.

2. 1-inch dressed lumber or plywood may be used where short-radius forms are required.

B. Metals: Steel in new undamaged condition.

C. Setting Forms:

1. Construct forms to shape, lines, grades, and dimensions.

2. Stake securely in place.

D. Bracing:

1. Brace forms to prevent change of shape or movement resulting from placement.

2. Construct short-radius curved forms to exact radius.

E. Tolerances:

1. Do not vary tops of forms from gradeline more than 1/8 inch when checked with 10-foot straightedge.

2. Do not vary alignment of straight sections more than 1/8 inch in 10 feet.

3.02 PLACING CONCRETE

A. Excavate to the required depth, place and compact limerock base rock as specified in the Contract Documents. Compact directly under the area and 1 foot beyond each side of the sidewalk and curb.

B. Prior to placing concrete, remove water from excavation and debris and foreign material from forms.

C. Place concrete as soon as possible, and within 1-1/2 hours after adding cement to mix without segregation or loss of ingredients, and without splashing.

D. Place, process, finish, and cure concrete in accordance with applicable requirements of ACI 304, and this section. Wherever requirements differ, the more stringent shall govern.

E. To compact, vibrate until concrete becomes uniformly plastic.

F. All edges shall be smooth and rounded.

3.03 CURB CONSTRUCTION

A. Construct ramps at pedestrian crossings in compliance with FDOT minimum standards. Standards apply to work in the Town’s Rights of Way.

B. Expansion Joints: Place at maximum 20-foot intervals and at the beginning and end of curved portions of curb, and at connections to existing curbs. Install expansion joint filler at each joint.

C. Gutter minimum slope shall be 0.33% unless otherwise approved by the Town.

D. Curb Facing: Do not allow horizontal joints within 7 inches from top of curb.

E. All gutters and curb and gutters shall have a minimum 4” think limerock “curb pad” LBR 100.

F. Contraction Joints:

1. Maximum 10-foot intervals in curb.

2. Provide open joint type by inserting thin, oiled steel sheet vertically in fresh concrete to force coarse aggregate away from joint.

3. Insert steel sheet to full depth of curb.

4. Remove steel sheet with sawing motion after initial set has occurred in concrete and prior to removing front curb form.

5. Finish top of curb with steel trowel and finish edges with steel edging tool.

G. Front Face:

1. Remove front form and finish exposed surfaces when concrete has set sufficiently to support its own weight.

2. Finish formed face by rubbing with burlap sack or similar device to produce uniformly textured surface, free of form marks, honeycomb, and other defects.

3. Remove and replace defective concrete.

4. Apply curing compound to exposed surfaces of curb upon completion of finishing.

5. Continue curing for minimum of 5 days.

H. Backfill curb with earth upon completion of curing period, but not before 7 days has elapsed since placing concrete.

1. Backfill shall be free from rocks 2 inches and larger and other foreign material.

2. Compact backfill firmly.

3.04 SIDEWALK CONSTRUCTION

A. Thickness:

1. 6 inches.

B. Connection to Existing Sidewalk:

1. Remove old concrete back to an existing contraction joint.

2. Clean the surface.

3. Apply a neat cement paste immediately prior to placing new sidewalk.

C. Expansion Joints: Place at maximum 20-foot intervals, at adjacent curb expansion joint, where sidewalk ends at curb, and around posts, poles, or other objects penetrating sidewalk. Install expansion joint filler at each joint.

D. Contraction Joints:

1. Provide transversely to walks at locations opposite contraction joints in curb.

2. Dimensions: 3/16-inch by 1-inch weakened plane joints.

3. Construct straight and at right angles to surface of walk.

E. Finish:

1. Broom surface with fine-hair broom at right angles to length of walk and tool at edges, joints, and markings.

2. Ensure that the surface variations are not more than ¼ inch under a 10-foot straightedge, or more than 1/8 inch on a 5-foot transverse section.

3. Mark walks transversely at 5-foot intervals, or in pattern shown on Drawings, with jointing tool; finish edges with rounded steel edging tool.

4. Apply curing compound to exposed surfaces upon completion of finishing.

5. Protect sidewalk from damage and allow to cure for at least 7 days.

F. Curb Ramps:

1. All curb ramps and detectable warnings shall comply with the current FDOT Index 304 and the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way by the United States Access Board.

END OF SECTION

SECTION 32 92 23

SODDING

PART 1 – GENERAL

1.01 DEFINITIONS

A. Maintenance Period: Begin maintenance immediately after each area is planted (sod) and continue for a period of 8 weeks after all planting under this Section is completed.

B. Satisfactory Stand:

1. Grass or section of grass that has:

a. No bare spots larger than 3 square feet.

b. Not more than 10 percent of total area with bare spots larger than 1 square foot.

c. Not more than 15 percent of total area with bare spots larger than 6 square inches.

1.02 DELIVERY, STORAGE, AND PROTECTION

A. Sod:

1. Do not harvest if sod is excessively dry or wet to the extent survival may be adversely affected.

2. Harvest and deliver sod only after laying bed is prepared for sodding.

3. Roll or stack to prevent yellowing.

4. Deliver and lay within 24 hours of harvesting.

5. Keep moist and covered to protect from drying from time of harvesting until laid.

1.03 WEATHER RESTRICTIONS

A. Perform Work under favorable weather and soil moisture conditions as determined by accepted local practice.

1.04 SEQUENCING AND SCHEDULING

A. Prepare topsoil as specified in the Contract Documents, before starting Work of this Section.

B. Complete Work under this section within ten (10) days following completion of soil preparation.

C. Notify Town at least three (3) days in advance of:

1. Each material delivery.

2. Start of planting activity.

D. Planting Season: Those times of year that are normal for such Work as determined by accepted local practice. At a minimum, Contractor shall avoid planting in January or February.

1.05 MAINTENANCE SERVICE

A. Contractor: Perform maintenance operations during maintenance period to include:

1. Watering: Keep surface moist.

2. Washouts: Repair by filling with topsoil, and replace sodded areas.

3. Mowing: Mow to 2 inches after grass height reaches 3 inches, and mow to maintain grass height from exceeding 3 1/2 inches.

4. Re-sod unsatisfactory areas or portions thereof immediately at the end of the maintenance period if a satisfactory stand has not been produced, at which time maintenance period shall recommence.

5. Re-sod during next planting season if scheduled end of maintenance period falls after September 15.

PART 2 – PART 2 – MATERIALS

2.01 FERTILIZER

A. Commercial, uniform in composition, free-flowing, suitable for application with equipment designed for that purpose. Minimum percentage of plant food by weight.

B. Mix:

1. Nitrogen: Sixteen.

2. Phosphoric Acid: Four.

3. Potash: Eight.

2.02 SOD

A. Unless a particular type of sod is called for, sod may be of either St. Augustine Floritam, Bahia grass or Seashore Paspalum, in accordance with the following:

1. Use Bahia grass where no irrigation system exists.

2. Use St. Augustine Floritam where an irrigation system is in place. If original sod being replaced is St. Augustine Floritam, replacement sod shall match.

3. Seashore Paspalum sod will be used in areas prone to saltwater flooding.

B. Strongly rooted pads, capable of supporting own weight and retaining size and shape when suspended vertically from a firm grasp on upper 10 percent of pad.

1. Grass Height: Normal.

2. Strip Size: Supplier's standard, commercial size rectangles.

3. Soil Thickness: Uniform; 1-inch plus or minus 1/4-inch at time of cutting.

4. Age: Not less than 10 months or more than 30 months.

5. Condition: Healthy, green, moist; free of diseases, nematodes and insects, and of undesirable grassy and broadleaf weeds. Yellow sod, or broken pads, or torn or uneven ends will not be accepted

6. Any netting contained within the sod shall be certified by the manufacturer to be bio-degradable within a period of 3 months from installation.

PART 3 – PART 3 - EXECUTION

3.01 PREPARATION

A. Grade Areas to Smooth, Even Surface with Loose, Uniformly Fine Texture:

1. Roll and rake, remove ridges, fill depressions to meet finish grades.

2. Limit such Work to areas to be planted within immediate future.

3. Remove debris, foreign material and stones larger than 1 1/2 inches diameter, and other objects that may interfere with planting and maintenance operations.

B. Moisten prepared areas before planting if soil is dry. Water thoroughly and allow surface to dry off before seeding. Do not create muddy soil.

C. Restore prepared areas to specified condition if eroded or otherwise disturbed after preparation and before planting.

D. Limit preparation to those areas that can be sodded within 72 hours after preparation.

3.02 FERTILIZER

A. Apply evenly over area in accordance with manufacturer's instructions. Mix into top 2 inches of top soil.

B. Application Rate: 20 pounds per 1,000 square feet (1,000 pounds per acre).

3.03 SODDING

A. Do not plant dormant sod, or when soil conditions are unsuitable for proper results.

B. Pre-wet the area prior to placing sod. Lay sod to form solid mass with tightly fitted joints; butt ends and sides, do not overlap:

1. Stagger strips to offset joints in adjacent courses.

2. Work from boards to avoid damage to subgrade or sod.

3. Tamp or roll lightly to ensure contact with subgrade; work sifted soil into minor cracks between pieces of sod, remove excess to avoid smothering adjacent grass.

4. Complete sod surface true to finished grade, even, and firm.

C. Fasten sod on slopes to prevent slippage with wooden pins 6 inches long driven through sod into subgrade, until flush with top of sod. Install at sufficiently close intervals to securely hold sod.

D. Water sod with fine spray immediately after planting. During first month, water daily or as required to maintain moist soil to depth of 4 inches.

3.04 FIELD QUALITY CONTROL

A. Eight weeks after sodding is complete and on written notice from Contractor, Town will, within 15 days of receipt, determine if the sod has been satisfactorily established.

B. If the sod is not satisfactorily established, Contractor shall replace the sod and repeat the requirements of this Section.

END OF SECTION

SECTION 33 05 61
UTILITY STRUCTURES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Furnish all materials, labor, equipment, and tools required for the design, fabrication, delivery and installment of utility structures and appurtenances in accordance with the Drawings and as specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 31 00 01 – Earthwork

B. Section 03 31 10 – Cast-in-Place Concrete (streamlined)

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

1. ASTM C32 - Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)

2. ASTM C139 - Standard Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes

3. ASTM C478 – Specification for Precast Reinforced Concrete Manhole Sections

4. ASTM C857 – Minimum Structural Design Loading for Underground Precast Concrete Utility Structures

5. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals

6. ASTM C990 – Specifications for Joints in Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants

7. ASTM C1244 - Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill

8. ASTM C1478 - Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes, and Laterals

9. ASTM F2510 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Corrugated Dual- and Triple-Wall Polyethylene and Polypropylene Pipes

1.04 SUBMITTALS

A. Submit samples and/or Shop Drawings in accordance with Section 01 33 00 – Submittal Procedures.

B. Precast Concrete, Shop Drawings shall include, but not be limited to:

1. Complete layout and installation Drawings and schedules with clearly marked dimensions.

2. Material certificates on all piping materials.

3. Structural design calculations sealed by a Professional Engineer registered in the State or Commonwealth in which the project is located. Design calculations for precast manholes and vaults shall include confirmation structures adequately resist flotation when they are totally empty and subjected to groundwater full height of structure.

4. Results of leakage test

PART 2 – PRODUCTS

2.01 PRECAST MANHOLES, VAULTS, AND METER BOXES

A. Precast utility structures shall be furnished with water-stops, sleeves and openings as noted on the Drawings. Box out for wall pipes shall conform accurately to the sizes and elevations of the adjoining pipes. Precast utility structures shall be watertight and conform to the requirements of ASTM C 478 and ASTM C857 with the following modifications there to:

1. Manholes shall meet the following:

a. Manhole section shall have an internal diameter of 4'-0", unless noted otherwise. Clear lid openings shall be 24-inch diameter.

b. Minimum manhole wall thicknesses shall be 8 inches.

c. Manholes and utility structures shall include ballast concrete and/or other means necessary to ensure manholes resist flotation when empty and subjected to groundwater full height of structure.

d. Precast manholes and utility structures shall be as manufactured by Oldcastle, Tindall Corporation, or equal.

2. The date and name of manufacturer shall be marked inside each precast section.

3. No more than two lift holes may be cast or drilled in each section.

4. Dimensions shall be as shown on the Drawings.

5. Covers and frames shall be as specified in Paragraph 2.12.

6. Mechanical Details such as piping, electrical, and other details shall be as shown on the Drawings.

B. Joints between manhole and utility structures riser sections and at base slabs shall be groove type.

2.02 BRICK

A. Brick shall be sound, hard-burned common brick conforming to ASTM C32, Grade MS.

2.03 MORTAR

A. Mortar shall be as indicated on the Drawings.

2.04 CONCRETE

A. Concrete shall conform to Section 03 31 10 – Cast-in-Place Concrete.

2.05 REINFORCING

A. Reinforcing shall conform to Section 03 31 10 – Cast-In-Place Concrete.

2.06 CONCRETE BLOCK

A. Concrete block shall be solid, rectangular concrete masonry units conforming to ASTM C139.

2.07 CASTINGS

A. Castings shall be of the type and size indicated on the Drawings.

2.08 STEPS

A. Steps shall be constructed of Grade 60 steel reinforcing rod (min. 1/2-inch) and completely encapsulated with a wear resistant and chemical resistant rubber.

B. Each step shall have a minimum vertical load resistance of 800 pounds and a minimum pull-out resistance of 400 pounds.

C. The steps shall have 11-inch minimum tread width and shall be placed at 16-inches on center, as shown on the Drawings.

D. Steps shall be cast in place with the concrete.

E. Steps shall only be installed as shown on the Drawings or required in the Specifications.

2.09 JOINT SEALANT

A. Joint sealant shall be a preformed flexible sealant conforming to the requirements of ASTM C990, paragraph 6.2, Butyl Rubber Sealant. Joint sealant shall be Pro-Stik Butyl Sealant by Press-Seal Corporation, Butyl-Nek Join Sealant by Henry Company, CS-102 Butyl Rubber Sealant for all Precast Structures by ConSeal Concrete Sealants, Inc., or equal.

2.10 PIPE TO MANHOLE CONNECTIONS

A. The spring set type shall have a stainless-steel interior power sleeve or expander and shall be the PSX assembly by Press-Seal Gasket Corporation, the Kor-N-Seal® | 106-406 Series assembly by National Pollution Control Systems, or QUIK-LOK Boot Connector by A-LOK Products, Inc, or equal.

B. The cast-in-place type shall conform to ASTM C923-18 for sanitary sewer connections between reinforced concrete manhole structures, pipes, and laterals, ASTM C1478-19 for storm drain connections between pipes, and laterals, and ASTM F2510 for storm drain connections between reinforced concrete manhole structures, and dual and triple-wall polyethylene and polypropylene pipes. Sleeves shall include stainless steel take up clamps.

C. Flexible seal assemblies shall permit at least an eight (8) degree deflection from the center line of the opening in any direction while maintaining a watertight connection.

2.11 COVERS AND FRAMES

A. Covers and frames shall be of the type and size indicated on the Drawings.

B. Manhole covers and frames shall meet the following requirements:

1. Locate so that there is ready access to the manhole steps

2. Clear opening shall be a minimum of 22 inches, unless otherwise indicated on the Drawings.

3. Watertight manhole frames and covers shall be suitable for 20 psi internal pressure and shall be as called for in the plans or equal, cast in place.

4. Storm drain grated inlet frames and grates shall be as called for in the plans, or equal.

5. Curb inlet frames and grates shall be as called for in the plans, or equal, and shall include frame, grate, and hood.

C. Vault covers shall have lifting handles and shall be bolted with stainless steel bolts and shall be of the type and size indicated on the Drawings.

D. Frames and covers shall be identical throughout the Contract.

2.12 GRATES

A. Grates shall be of the type and size indicated on the Drawings.

2.13 CONCRETE BALLAST

A. Concrete ballast shall be Class B concrete in conformance with Section 03 31 10 – Cast-in-Place Concrete (streamlined). Ballast shall be provided as necessary to ensure manhole resists flotation when empty and subjected to full height groundwater conditions.

2.14 FLEXIBLE JOINT SEALER

A. Flexible joint sealer shall be a rubber ring waterstop as manufactured by Fernco Joint Sealer Co., or equal.

2.15 EPOXY BONDING AGENT

A. Epoxy bonding agent shall be as indicated on the Drawings.

PART 3 – EXECUTION

3.01 DESIGN CRITERIA

A. Minimum structural design loading for underground precast concrete vaults shall be as indicated in ASTM C857, unless otherwise noted herein. Precast items subjected to vehicular traffic shall be designed for H-20 traffic loading. Other precast items shall be designed for a vertical live load of 300 psf.

B. Walls of precast items shall be designed for a vertical surcharge resulting in a 100 psf horizontal load.

C. Precast manholes and vaults shall be designed to resist flotation when totally empty and subjected to groundwater full height of the manhole/vault.

3.02 FABRICATION AND CASTING

A. Fabrication and casting shall conform to Section 03 31 10 – Cast-in-Place Concrete.

B. All base sections designated to receive concrete ballast and all electrical manholes shall extend monolithically a minimum of 6 inches beyond the outside face of the wall for the entire periphery. All other utility structures shall have a standard base.

C. Utility structures built around existing pipe shall have a cast-in-place base slab.

3.03 HANDLING, TRANSPORTING, AND STORING

A. Handling, transporting, and storing of precast items shall comply with Section 03 40 00 – Precast Concrete.

3.04 INSTALLATION

A. Installation shall conform with the manufacturer's recommendations or to Section 03 31 10 – Cast-in-Place Concrete.

B. Frames and covers or grates shall be set so that tops are at elevations indicated on the Drawings or flush with finished grade where no elevation is indicated.

C. Joints between riser sections shall be sealed with joint sealant.

D. All openings in utility structures shall have flexible rubber sleeves sized to fit the connecting pipe and installed to provide watertight joints in accordance with the manufacturer's recommendations. The interior of the sleeve shall be filled with Class B concrete.

E. Openings that are too large for flexible rubber sleeves shall utilize rubber bladder seals which are expanded by water injected using a pressure pump.

F. All units shall be installed plumb and level.

G. All lift holes and joints shall be filled with non-shrink grout conforming to Section 03 60 00 – Grout, grout inside and out.

H. The manhole frames shall be set to their required elevations either with grade rings or with two to four courses of brick masonry laid around the top of the upper wall section. Such brick work shall be given a 1-inch mortar coat on the inside and out.

I. Concrete ballast shall be placed so that it bears directly on the utility structure base against the outer wall monolithically encircling the structure for the full height indicated on the Drawings. Additional ballast may be required where the depth or elevation of the structure varies from the Drawings.

J. Brick or Concrete Block

1. Brick or concrete block shall be laid with broken joints and all horizontal and vertical joints filled with cement-sand mortar. Outside of walls shall be plastered with a minimum 1-inch-thick coat of cement-sand mortar troweled smooth.

K. Connection to Existing Pipe

1. Verify the diameter and invert elevation of existing pipe to be connected to new utility structures prior to beginning work on the structures.

2. Provide adequate protection to prevent damage to the existing pipe.

3. Provide adequate means for plugging and/or transferring the existing flow in the pipe to allow for the construction of inverts and grouting.

4. Cut off the existing pipe sufficiently for connection to the new structure and remove.

5. Thoroughly clean all foreign matter and coat the pipe surface with epoxy adhesive where the pipe joins the new structure.

6. Install a flexible joint sealer around the pipe.

7. Grout inside and outside of wall penetration with non-shrink grout.

L. Backfill structures in accordance with Section 31 00 01 – Earthwork.

M. Clean all structures of any accumulation of silt, debris, or foreign matter and keep clean until final acceptance of the work.

N. Excavation shall conform to Section 31 00 01 – Earthwork.

O. Structure bases shall bear on a minimum of 8-inches of compacted stone unless otherwise indicated on the Drawings.

P. Channel Inverts

1. Inverts shall be placed using Class B concrete with forms sufficient to provide a smooth half-round shape as shown on the Drawings. Manhole bases employing full depth precast inverts are acceptable.

2. Where the slope of the line does not change through a manhole, a constant slope shall be maintained in the invert. Where slope changes occur within a given manhole, the transition shall be smooth and shall occur at the approximate center of the manhole.

3. Inverts shown on the Drawings are taken at the center of the manhole unless otherwise noted.

3.05 ADJUSTMENTS TO EXISTING UTILITY STRUCTURES

A. Adjust structures as indicated on the Drawings using bricks, concrete or cast iron adjustment rings or methods as approved by the Engineer.

B. Clean covers and inlet castings of all foreign material.

3.06 ADJUSTING COLLARS AND FINAL ADJUSTMENTS

A. Adjusting collars shall be as shown on the Drawings, or as necessary to meet final grade. Final adjustments shall be made so that the manhole ring and cover will be smooth and flush with the finished grade of the adjacent surface, or as otherwise indicated on the Drawings for manholes shown above grade.

3.07 LEAKAGE TESTING FOR MANHOLES

A. All manholes shall be vacuum tested as specified below. Refer to Section 40 05 00 – Basic Mechanical Requirements for sanitary pipe testing methods and requirements.

B. Manhole vacuum testing shall include the following minimum requirements:

1. Testing shall be done in accordance with ASTM C1244 (latest revision).

2. Prior to testing all pipes, holes, and vents entering manhole shall be plugged and braced.

3. Contractor shall have an approved test head and copy of instructions for use by the manufacturer.

4. Contractor shall furnish two (2) certified and calibrated vacuum test gauges for the test.

   a. A vacuum of 10-inch hg shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time for the vacuum pressure to drop to 9-inch hg shall be measured. If the test time meets or exceeds the test time as specified in Table 1 on the following page, the manhole is acceptable; otherwise, the test has failed and the manhole should be checked for leaks, repaired, and re-tested.

Table 1
Minimum Vacuum Test Times (Seconds) for Various Manhole Diameters and Depths

	Manholes Ø (inches)						
Depth (ft)	**48**	**60**	**72**	**84**	**96**	**108**	**120**
6’	15	20	25	29	34	38	43
8	20	26	33	38	45	51	57
10	25	33	41	48	56	63	71
12	30	39	49	57	67	76	85
14	35	46	57	67	78	89	100
16	40	52	67	76	89	101	114
18	45	59	73	86	100	114	128
20	50	65	81	95	111	126	142
22	55	72	89	105	122	139	156
24	59	78	97	114	133	152	170
26	64	85	105	124	144	164	185
28	69	91	113	133	155	177	199
30	74	98	121	143	166	189	213
Add. VF	+2.5	+3.25	+4.0	+4.75	+5.5	+6.5	+7.0

3.08 FLUSHING AND TESTING OF SEWERS

A. After backfilling, all sewers shall be inspected for obstructions and shall be flushed with water. Flushing shall be a minimum velocity of 2.5 feet per second for a duration acceptable to the Design Consultant. Flushing shall remove all dirt, stones, pieces of wood and other debris which accumulated in the sewer during construction. The Contractor shall provide a means acceptable to the Design Consultant for removal of debris flushed from each section of sewer. If after flushing, any obstructions remain, they shall be removed at the Contractor's expense.

B. Visual Inspection – Sewer lines shall be visually inspected from every manhole by use of mirrors, television cameras, or other devices for visual inspection, and the lines shall all exhibit a fully circular pattern when viewed from one manhole to the next. Lines which do not exhibit a true line and grade or have structural defects shall be corrected to meet these qualifications. Any visual water infiltration of water into the manhole shall be repaired using hydraulic cement or other approved materials.

C. Leakage – Sewers shall be tested for leakage. The program of testing shall fit the conditions as mutually determined by the Design Consultant and the Contractor. The Contractor shall take all necessary precautions to prevent any joints from drawing while the sewers or their appurtenances are being tested. The Contractor shall, at his own expense, correct any excess leakage and repair any damage to the pipe and their appurtenances, or to any structures resulting from or caused by these tests.

D. Leakage Test Procedure – Each section of sewer shall be tested by closing the lower end of the sewer to be tested and the inlet sewer of the upper manhole with stoppers and filling the pipe and manhole with water to a point 6 feet above the crown of the open sewer in the upper manhole, or, if ground water is present, 6 feet above the sections average adjacent ground water level as indicated by a monitor well installed adjacent to each manhole. The line shall be filled with water prior to testing and allowed to stand until the pipe has reached its maximum absorption, but not less than two (2) hours. After maximum absorption has been reached, the head shall be reestablished and tested for at least six (6) hours maintaining the head specified above by measured additions of water. The sum of these additions shall be the leakage for the test period.

    1. If ground water is present to a height of at least 6 feet above the crown of the sewer at the upper end of the pipe section to be tested, the leakage test may be made by measuring the rate of infiltration using a suitable weir or other measuring device approved by the Design Consultant. Whether the test is made by infiltration or exfiltration, the allowable leakage shall not exceed 100 gallons per day per inch of diameter per mile of sewer being tested.

    2. Where the actual leakage exceeds the allowable, the Contractor shall discover the cause and correct it before the sewer will be accepted. For the purpose of this subsection, a section of sewer is defined as that length of sewer between successive manholes or special structures or stub-outs for future connections.

E. Low Pressure Compressed Air Test – If the leakage cannot be located by infiltration or exfiltration testing, this type test may be used. The pipeline shall be considered acceptable, when tested at an average pressure of 3.0 psi greater than the average back pressure of any groundwater that may submerge the pipe, if the section under test does not lose air at a rate greater than 0.0030 cfm per sq. ft. of internal pipe surface.

F. Deflection Test – No sooner than thirty (30) days after final backfill installation, each section of PVC pipe shall be checked for vertical deflection using an electronic deflectometer or a rigid "GoNoGo" device. Vertical deflection shall not exceed five (5) percent of the inside pipe diameter for PVC pipe.

1. Where the actual deflection exceeds the allowable, the Contractor shall discover the cause and correct it before the pipe will be acceptable. For the purpose of this subsection, a section of sewer is defined as that length of sewer between successive manholes or special structures or stubouts for future connections.

G. Cost of Testing and Repairs – Any and all work necessary to bring the line into conformance with the infiltration and deflection specifications shall be performed by the Contractor at no extra cost to the Owner. All apparent sources of infiltration and excessive deflection shall be repaired by the Contractor.

1. The Contractor shall provide all water, plugs, hoses, pumps, equipment, etc. necessary for the proper flushing and testing of the sewers.

END OF SECTION

SECTION 33 42 20
REINFORCED CONCRETE PIPE

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install all reinforced concrete drainpipes and all appurtenant work, complete in place and in accordance with the requirements of FDOT and the Contract Documents.

PART 2 – PRODUCTS

2.01 CONCRETE DRAINPIPE

A. All reinforced concrete drainpipe shall be manufactured in accordance with ASTM C76 (titled “Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe”), Wall Type B or C, and shall be of the class that equals or exceeds the pipe class as specified herein or as shown on the Contract Drawings. Minimum pipe laying lengths shall be four (4) feet. Portland cement shall conform to ASTM C150, Type II.

B. Joints for the reinforced concrete drainpipe shall have bell and spigot ends with flexible plastic gaskets meeting the requirements of AASHTO M198, Type B.

C. All pipe shall be aged at the manufacturing plant for at least fourteen (14) days before delivery to the job site.

PART 3 – EXECUTION

3.01 INSTALLATION

A. All piping shall be aligned and routed as shown and installed in accordance with the Contract Drawings.

B. All pipe joints shall be wrapped with geotextile filter fabric prior to backfilling in accordance with FDOT standards.

C. All penetrations into inlet structures shall be grouted completely using non-shrink grout.

3.02 FLUSHING

A. Flushing - After backfilling, all storm sewers shall be flushed with water. Flushing shall be a minimum velocity of 2.5 feet per second for a duration acceptable to the Engineer. Flushing shall remove all dirt, stones, pieces of wood and other debris which accumulated

in the sewer during construction. The Contractor shall provide a means acceptable to the Engineer for removal of debris flushed from each section of storm sewer. If after flushing, any obstructions remain, they shall be removed at the Contractor's expense. The Contractor shall provide all water, plugs, hoses, pumps, equipment, etc. necessary for the proper flushing and testing of the storm sewers.

3.03 INSPECTION

A. All new storm drain pipeline shall be inspected via robotic camera. The recorded DVD shall be delivered to the Town no later than 2 (two) Working Days after completion of the inspection. The DVD shall become the property of the Town. The Town will review the CCTV inspection records within ten (10) Working Days and will notify the Contractor if:

1. The review revealed a satisfactory installation, or

2. The review revealed deficiencies.

B. The following deficiencies in storm drain installation that are identified by the Inspector or by television inspection shall be corrected by the Contractor at no cost to the Town:

1. Joint separation greater than one-half inch (1/2”).

2. Offset joints greater than one-half the pipe wall thickness.

3. Joint deflection of more than seventy-five percent (75%) of manufacturer’s recommended maximum.

4. Cracked or damaged pipe, including liner pipe.

5. Debris in the line.

6. Identifiable sags or high points in the line greater than ¾ inches in pipes 6” and larger.

C. The Contractor will be notified in writing of any deficiencies revealed by the television inspection that will require repair. The Contractor may request a review of the video with The Town. Upon completion of the required corrective actions, the storm drain will be re-televised at no additional cost to the Town. This process shall be repeated until the review of the recorded television inspection reveals a satisfactory installation.

3.04 CLEANING OF EXISTING STORMWATER STRUCTURES

A. The Contractor shall clean and remove all debris from existing drainage structure when the proposed stormwater pipe connects to the existing drainage structure.

B. The Contractor shall dispose all debris in accordance with all local, State, and Federal requirements.

END OF SECTION

SECTION 33 71 19
UNDERGROUND ELECTRICAL

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install underground duct systems, electric manholes, and electric handholes as specified herein and as indicated on the Drawings. The work shall be complete and shall include excavation, concrete construction, backfilling, and all materials, items, and components required for a complete system.

B. The provisions of this Section are applicable to all underground conduit work. All work shall be coordinated with that of the various utility companies and other Contractors. The Contractor shall adhere to all utility company requirements including the serving electric utility.

C. Reference the following Specification Sections:

1. Section 26 05 00 – Basic Electrical Requirements
2. Section 26 05 33.13 – Conduit for Electrical Systems
3. Section 26 05 13 – Medium Voltage Cables
4. Section 26 05 26 – Grounding and Bonding for Electrical Systems
5. Applicable sections of Division 31, Earthwork
6. Section 03 21 00 – Reinforcing Steel
7. Section 03 30 00 – Cast-In-Place Concrete
8. Section 33 05 61 – Utility Structures

1.02 CODES AND STANDARDS

A. Products specified herein shall be designed, manufactured, and/or listed to the following standards as applicable:

1. AASHTO H20
2. ANSI/SCTE 77-2010 – Specification for Underground Enclosure Integrity

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1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit Shop Drawings. Each submittal shall be identified by the applicable Specification Section.

1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to, the following:

1. Product data sheets.

2. Outline and dimensional drawings including detailed sections of the manholes and/or handholes.

3. Materials specifications and structural calculations for the manholes sealed by a Professional Engineer licensed in the State or Commonwealth in which the project is located.

1.05 IDENTIFICATION

A. Each electric manhole and handhole cover shall be lettered with the word “Electric”, the manhole or handhole identification number, manufacturer's name or trademark, and such other information as the manufacturer may consider necessary, or as specified, for complete identification.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. The material covered by this Specification is intended to be standard material of proven performance as manufactured by reputable concerns. Material shall be fabricated, constructed, and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as specified herein and indicated on the Drawings.

2.02 DUCT SYSTEM

A. The underground duct system shall be comprised of conduits, conduit bends, and conduit fittings as specified in Section 26 05 33.13 – Conduit for Electrical Systems. Conduits shall be encased in reinforced concrete envelopes, unless otherwise specified herein or indicated on the Drawings.

B. Base and intermediate conduit spacers shall be furnished to provide a minimum of two-inch (2") separation between conduits. Conduit spacers shall be provided in the proper size as required for the conduit that they secure. For example, a 4" conduit spacer shall not be used to secure a 2" conduit. Conduit spacers shall be as manufactured by Carlon Electrical Products Company, Aeroquip Corporation, Underground Devices, Incorporated, or Engineer approved equal.

2.03 ELECTRIC HANDHOLES

A. The electric handholes shall be a precast polymer concrete enclosure suitable for use as part of an underground electric raceway system. The enclosure shall meet or exceed the requirements of ANSI/SCTE 77-2010.

B. The enclosure and cover design and test load rating shall be Tier 15. Covers shall be provided with cover hooks.

C. The enclosure shall be the straight side design to allow easy adjustment of box to grade. The box shall be stackable for increased depth.

D. Handhole opening size shall be as required to suit the application, 6" x 8", minimum.

E. The electric handholes shall be manufactured by Hubbell, Pencell Plastics equivalent, Highline Products equivalent, or Engineer approved equal.

PART 3 – EXECUTION

3.01 GENERAL

A. The underground duct system, manholes, and handholes shall be installed as specified herein, indicated on the Drawings, and in accordance with manufacturers' instructions.

3.02 DUCT SYSTEM

A. All underground conduits shall be encased in concrete and shall be reinforced. Encasement and reinforcement shall be as indicated in the Standard Details. Concrete shall be furnished and installed in accordance with Section 03 30 00 – Cast-In-Place Concrete. Reinforcing steel shall be furnished and installed in accordance with Section 03 21 00 – Reinforcing Steel.

B. Concrete pours shall be complete from handhole to handhole and from manhole to manhole where practicable. Partial pours in general shall not be permitted. Where a complete pour is impractical, written authorization shall be obtained from the Engineer for the partial pour.

C. Conduit ductbank elevations at the manholes and handholes shall be based on minimum ductbank cover as indicated in the Standard Details, or deeper to avoid conflicts with other obstacles. Where deviation is necessary to clear unforeseen obstacles, the elevations may be changed after authorization by the Engineer.

D. Slope all conduits continuously away from structures and buildings with a minimum slope of 3” per 100’ unless otherwise indicated on the Drawings.

E. The minimum clearance from the top of the concrete encasement and finished grade shall be as indicated in the Standard Details, except where otherwise accepted in writing by the Engineer or shown on the Drawings.

F. Care shall be exercised during excavation for the duct banks to prevent digging too deep. Backfilling of low spots with earth fill will not be permitted unless thoroughly compacted and acceptable to the Engineer.

G. If a specific ductbank arrangement is shown on the Drawings, the conduits in that ductbank shall be arranged as shown. Where no specific ductbank arrangement is shown on the Drawings, the Contractor shall arrange conduits within each ductbank based on field conditions. Spare conduits shown going from ductbanks into buildings or structures shall be stubbed up in the location(s) as indicated on the Drawings.

H. The ends of the bare copper cables embedded in the concrete ductbank shall be connected to structure and/or building ground rings where the ductbanks terminate, and to each other in manholes and handholes as specified herein.

I. Care shall be exercised and temporary plugs shall be installed during installation to prevent the entrance of concrete, mortar, or other foreign matter into the conduit system. Conduit spacers shall be utilized to support conduit during the pouring of concrete to prevent movement and misalignment of the conduits. Conduit spacers shall be installed in accordance with manufacturer’s instructions unless otherwise noted. Horizontal spacing of conduit spacers along ductbank shall be as indicated on the Standard Details.

J. Where connections to existing underground conduits are indicated, excavate to the maximum depth necessary. After addressing the existing conductors, cut the conduits and remove loose concrete from the conduits before installing new concrete encased ducts. Provide a reinforced concrete collar, poured monolithically with the new duct line, to take the shear at the joint of the duct lines.

K. Construct concrete-encased conduits connecting to underground structures to have a flared section adjacent to the manhole to provide shear strength. Construct underground

structures to provide shear strength. Construct underground structures to provide for keying the concrete encasement of the duct line into the wall of the structure. Use vibrators when this portion of the encasement is poured to ensure a seal between the encasement and the wall of the structure.

L. Six (6) inches above all duct banks, the Contractor shall furnish and install a two (2) inch wide red plastic electrical hazard tape. Tapes shall be metallic detectable type and shall have a continuous message in bold black letters: “ELECTRIC LINE BURIED BELOW.” Tape shall be Detectable Identoline by Brady or Engineer approved equal.

M. The Contractor shall perform all earthwork including excavation, backfill, bedding, compaction, shoring and bracing, grading, and restoration of surfaces and seeded areas disturbed during the execution of the Work.

N. All conduit joints in the duct system shall be staggered such that adjacent conduits do not have joints in the same location.

3.03 ELECTRIC HANDHOLES

A. Electric handholes shall be installed to a sufficient depth to accommodate the required grading of ducts as well as maintaining a minimum distance of 9” from the bottom of the lowest duct centerline entrances to finished floor line and/or highest duct centerline entrance to roof. All handholes shall be installed in accordance with Standard Detail E-33-0103.

B. Duct envelopes and conduit with bell ends shall enter at approximately right angles to the walls, except as may otherwise be shown on the Drawings.

C. All individual cables and/or bundles of conductors shall be identified and “dressed” along the wall of the enclosure. Cable racks as specified herein shall be provided if any handhole dimension exceeds 24 inches.

3.04 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Field tests

   a. Field tests for all completed duct systems shall consist of pulling a swab through each conduit followed by a mandrel equal in size to 85% of the conduit inside diameter.

   b. After testing, all conduits shall be capped after installation of a suitable pull rope. All field tests shall be witnessed by the Engineer.

END OF SECTION

SECTION 40 05 00
BASIC MECHANICAL REQUIREMENTS

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install to the required line and grade, all piping together with all fittings and appurtenances, required for a complete installation. Piping to be backfilled and/or encased in concrete is considered to be buried piping. Piping that is not buried is considered to be exposed.

B. The Contractor shall furnish and install fittings, couplings, connections, sleeves, adapters, harness rods and closure pieces as required to connect pipelines of dissimilar materials and/or sizes herein included under this Section and other concurrent Contracts for a complete installation.

C. The Contractor shall furnish all labor, materials, equipment, tools, and services required for the furnishing, installation and testing of all piping as shown on the Drawings, specified in this Section and required for the Work. Piping shall be furnished and installed of the material, sizes, classes, and at the locations shown on the Drawings and/or designated in this Section. Piping shall include all fittings, adapter pieces, couplings, closure pieces, harnessing rods, hardware, bolts, gaskets, wall sleeves, wall pipes, hangers, supports, and other associated appurtenances for required connections to equipment, valves, or structures for a complete installation.

D. Piping assemblies under 4-inch size shall be generally supported on walls and ceilings, unless otherwise shown on the Drawings or ordered by the Engineer, being kept clear of openings and positioned above "headroom" space. Where practical, such piping shall be run in neat clusters, plumb and level along walls, and parallel to overhead beams.

E. The Contractor shall provide taps on piping where required or shown on the Drawings. Where pipe or fitting wall thicknesses are insufficient to provide the required number of threads, a boss or pipe saddle shall be installed.

F. The work shall include, but not be limited to, the following:

1. Connections to existing pipelines.

2. Test excavations necessary to locate or verify existing pipe and appurtenances.

3. Installation of all new pipe and materials required for a complete installation.

4. Cleaning, testing, and disinfecting as required.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Division 01 – General Requirements

B. Division 02 – Existing Conditions

C. Division 26 – Electrical

1.03 MATERIAL CERTIFICATION AND SHOP DRAWINGS

A. The Contractor shall furnish to the Owner (through the Engineer) a Material Certification stating that the pipe materials and specials furnished under this Section conform to all applicable provisions of the corresponding Specifications. Specifically, the Certification shall state compliance with the applicable standards (ASTM, AWWA, etc.) for fabrication and testing.

B. Shop Drawings for major piping (2-inches in diameter and greater) shall be prepared and submitted in accordance with Section 01 33 00 – Submittal Procedures. In addition to the requirements of Section 01 33 00 – Submittal Procedures, the Contractor shall submit laying schedules and detailed Drawings in plan and profile for all piping as specified and shown on the Drawings.

C. Shop Drawings shall include, but not be limited to, complete piping layout, pipe material, sizes, class, locations, necessary dimensions, elevations, supports, hanger details, pipe joints, and the details of fittings including methods of joint restraint. No fabrication or installation shall begin until Shop Drawings are approved by the Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

A. Manufacturers shall be as specified or indicated on the Drawings.

B. All specials and every length of pipe shall be marked with the manufacturer's name or trademark, size, class, and the date of manufacture. Special care in handling shall be exercised during delivery, distribution, and storage of pipe to avoid damage and unnecessary stresses. Damaged pipe will be rejected and shall be replaced at the Contractor's expense. Pipe and specials stored prior to use shall be stored in such a manner as to keep the interior free from dirt and foreign matter.

C. Testing of pipe before installation shall be as described in the corresponding ASTM or AWWA Specifications and in the applicable standard specifications listed in the following sections. Testing after the pipe is installed shall be as specified in Part 3.

D. Joints in piping shall be as specified or as shown on the Drawings.

E. All buried piping shall have restrained joints for thrust protection unless otherwise specified or shown on the Drawings. All exposed piping shall have flanged joints, unless otherwise specified or shown on the Drawings.

F. The Drawings indicate work affecting existing piping and appurtenances. The Contractor shall excavate test pits as required of all connections and crossings which may affect the Contractor's work prior to ordering pipe and fittings to determine sufficient information for ordering materials. The Contractor shall take whatever measurements that are required to complete the work as shown or specified.

2.02 WALL PIPES

A. Where wall sleeves or wall pipes occur in walls that are continuously wet on one or both sides, they shall have water stop flanges at the center of the casting or as shown on the Drawings. Ends of wall pipes shall be flange, mechanical joint, plain end, or bell as shown on the Drawings, or as required for connection to the piping. Wall pipes shall be of the same material as the piping that they are connected to. If welded waterstop flanges are employed, welds shall be 360 degrees continuous on both sides of flange. Unless otherwise shown on the Drawings, waterstop flanges shall conform to the minimum dimensions shown below:

Pipe Size	Waterstop Flange Diameter	Waterstop Flange Thickness
4" - 12"	OD + 3.10"	0.50"
14" - 24"	OD + 4.15"	0.75"
30" - 36"	OD + 4.50"	1.00"
42" - 48"	OD + 5.00"	1.25"
54"	OD + 5.90"	1.50"

2.03 SLEEVES

A. Unless shown otherwise, all piping passing through walls and floors shall be installed in sleeves or wall castings accurately located before concrete is poured or placed in position during construction of masonry walls. Sleeves passing through floors shall extend from the bottom of the floor to a point 3 inches above the finished floor, unless shown otherwise. Water stop flanges are required on all sleeves located in floors or walls which are continually wet or under hydrostatic pressure on one or both sides of the floor or wall.

B. Sleeves shall be cast iron, black steel pipe, or fabricated steel in accordance with details shown on the Drawings. If not shown on the Drawings, the Contractor shall submit to the Engineer the details of sleeves he proposes to install; and no fabrication or installation thereof shall take place until the Engineer's approval is obtained. Steel sleeves shall be fabricated of structural steel plate in accordance with the standards and procedures of AISC and AWS. Steel sleeve surfaces shall receive a commercial sandblast cleaning and then be shop painted in accordance with Section 09 90 00 – Painting.

C. When shown on the Drawings or otherwise required, the annular space between the installed piping and sleeve shall be completely sealed against a maximum hydrostatic pressure of 20 psig. Seals shall be mechanically interlocked, solid rubber links, trade name "Link-Seal", as manufactured by Garlock Pipeline Technologies (GPT) or equal. Rubber link, seal-type, size, and installation thereof, shall be in strict accordance with the manufacturer's recommendations. For non-fire rated walls and floors, pressure plate shall be glass reinforced nylon plastic with EPDM rubber seal and 316 stainless steel bolts and nuts. For fire rated walls and floors, two independent seals shall be provided consisting of low carbon steel, zinc galvanized pressure plates, silicon rubber seals and 316 stainless steel bolts and nuts.

D. Cast iron mechanical joint adapter sleeves shall be Clow # 1429, as manufactured by the Clow Corp., or equal. Mechanical joint adapter sleeves shall be provided with suitable gasket, follower ring, and bolts to affect a proper seal. In general, sleeves installed in walls, floors, or roofs against one side of which will develop a hydrostatic pressure, or through which leakage of liquid will occur, shall be so sealed. If welded waterstop flanges are employed, welds shall be 360-degree continuous on both sides of flange.

2.04 SOLID SLEEVE COUPLINGS (FOR BURIED SERVICE THROUGH 54-INCH)

A. Solid sleeve couplings shall be used to connect buried service piping where shown on the Drawings. Solid sleeves shall be ductile iron, long body and shall conform to the requirements of ANSI A21.10 (AWWA C110). Unless otherwise shown or specified, solid sleeve couplings shall be Style A11760 as manufactured by American Cast Iron Pipe Co., or equal. Solid sleeve couplings shall be restrained with wedge-type restraining glands to meet the pressures specified in the plans.

B. Alternatively, EBAA Iron 3800 Mega-Coupling is acceptable.

2.05 SLEEVE TYPE COUPLINGS (FOR EXPOSED SERVICE AND BURIED SERVICE ABOVE 54-INCH)

A. Sleeve type, flexible couplings shall be furnished and installed where shown on the Drawings or otherwise required to resist internal operating pressures. In addition to that specified herein, harnessed, sleeve type flexible couplings shall be provided on all exposed pipe 3 inches and larger in diameter that spans any expansion joint in a building or structure.

B. Materials shall be of high strength steel and couplings shall be rated for the same pressures as the connecting piping.

C. Gaskets shall be rubber. Bolts and nuts shall be alloy steel, corrosion-resistant and prime coated.

D. Harnessing for exposed applications shall be by rodding across the sleeve type coupling to the nearest pipe joint on either side of the coupling using threaded rods and rod tabs unless otherwise approved by the Engineer.

E. Couplings shall be as manufactured by Smith-Blair Model 411, Romac Industries Model 400, Dresser Industries Style 38, or equal as required and shown on the Drawings. All couplings shall be provided without interior pipe stop.

F. Couplings shall be provided with manufacturer's fusion bonded epoxy painting system.

2.06 STEEL TRANSITION COUPLINGS

A. Steel transition couplings shall be provided where shown on the drawings to connect existing reinforced concrete pipe to ductile iron pipe.

B. Couplings shall conform to AWWA C219.

C. Couplings shall be constructed of ASTM A53, ASTM 513, or carbon steel. The coupling shall be coated with an epoxy based fusion coated finish.

D. Couplings shall be anchored per manufacturer's recommendations to provide restraint.

E. Couplings shall be as manufactured by Smith Blair Model 415, or equal.

2.07 FLANGED COUPLING ADAPTERS

A. Flanged coupling adapters shall be furnished as required and as shown on the Drawings.

B. Flanged coupling adapters shall be of ductile iron or carbon steel construction and shall be rated for the same pressure as the connected piping.

C. All flanged coupling adapters shall be harnessed by tying the adapter to the nearest pipe joint flange using threaded rods and rod tabs unless otherwise approved by the Engineer.

D. Flanged coupling adapters shall be manufactured by Smith-Blair Model 912 or 913, Romac Industries Model FCG or FC 400, Dresser Industries Model 128-W, or equal.

E. Flanged coupling adapters shall be provided with manufacturer's fusion bonded epoxy painting system.

2.08 DISMANTLING JOINTS

A. Dismantling joints shall be furnished at locations shown on the Drawings.

B. Dismantling joints for sizes less than 12-inch shall be of ductile iron or carbon steel construction and shall be rated for the same pressure as the connected piping. Dismantling joints for sizes greater than 12-inches shall be of carbon steel construction and shall be rated for the same pressure as the connected piping.

C. Flanges for dismantling joints shall match the bolt pattern and pressure rating of the flanges for the connected piping.

D. All dismantling joints shall be restrained utilizing restraining rods provided by the

manufacturer. Restraining rods shall be constructed from ASTM A193 Grade B7 steel. Restraining rods and restraint system shall be installed in strict accordance with manufacturer's recommendations.

E. Dismantling joints shall be provided with manufacturer's fusion bonded epoxy painting system.

F. Dismantling joints shall be manufactured by Smith Blair Model 975, Romac Industries Model DJ400, or equal.

2.09 GROOVED COUPLINGS

A. Grooved end pipe couplings shall be furnished as specified or shown on the Drawings.

B. Materials shall be of malleable iron and couplings shall be rated for the same pressures as the connecting piping.

C. Gaskets shall be rubber. Bolts and nuts shall be heat treated carbon steel track bolts and shall be plated.

D. After installation, buried couplings shall receive two heavy coats of an approved coal tar which is compatible with the finish of the coupling. Exposed couplings shall be painted in accordance with the plans.

E. Couplings shall be manufactured by Victaulic Company of America Style 31 or equal.

2.10 TAPPING SLEEVES AND TAPPING SADDLES

A. Tapping sleeves shall be similar to Mueller Outlet Seal, American Uniseal or Kennedy Square Seal. All sleeves shall have a minimum working pressure of 150 psi. All sleeves shall be ductile iron. All taps shall be machine drilled; no burned taps will be allowed.

B. Tapping saddles may be used on mains sixteen (16) inches and larger where the required tap size does not exceed one-half the size of the main (i.e. 8-inch tapping saddle for use on a 16-inch main). Tapping saddles shall be manufactured of ductile iron providing a factor of safety of at least 2.5 at a working pressure of 250 psi. Saddles shall be equipped with a standard AWWA C-110-77 flange connection on the branch. Sealing gaskets shall be "O" ring type, high quality molded rubber having an approximate seventy durometer hardness, placed into a groove on the curved surface of the tapping saddles. Straps shall be of alloy steel. The tapping saddle shall be the American tapping saddle, U.S. Pipe tapping saddle, or equal. All taps shall be machine cut, no burned taps will be allowed.

2.11 UNIONS

A. For ductile iron, carbon steel, and grey cast iron pipes assembled with threaded joints and malleable iron fittings, unions shall conform to ANSI B16.39.

B. For copper piping, unions shall have ground joints and conform to ANSI B16.18.

C. For PVC and CPVC piping, unions shall be socket weld type with Viton O-ring.

2.12 THERMOPLASTIC TUBING AND FITTINGS

A. Thermoplastic tubing shall be manufactured from polyallomor tubing. Tubing shall be protected from ultraviolet radiation degradation with a black coating or integral color conforming to ASTM D-1248, Type 1, Class C, Category 3. Fittings and connectors used with thermoplastic tubing shall be the flareless tube type constructed of brass conforming to SAE CA377, SAE CA360 or equal. Brass sleeves shall be used.

B. Assembly of the thermoplastic tubing shall consist of pushing the tubing into the fitting and hand tightening the nut with final tightening with a wrench. Care shall be taken not to overtighten the nut. Plastic tube racks and bend holders shall be provided for holding the tubing in position. Needle valves used with thermoplastic tubing shall be the globe type constructed with a brass body, stem and seat and Buna-N "O"-ring seals. Installation shall be in accordance with the manufacturer's recommendations. Thermoplastic tubing shall be the Impolene (polyallomor) system and needle valves, fittings and connectors shall be the Poly-Flo with 261 UB Universal Nut and Sleeve system as manufactured by Imperial Eastman, or equal.

2.13 FLEXIBLE RESTRAINED EXPANSION JOINTS

A. Restrained expansion joints shall be manufactured of 60-42-10 ductile iron conforming to material and other applicable requirements of ANSI/AWWA C153/A21.53.

B. Each pressure containing component shall be lined with a minimum of 15 mils of fusion bonded epoxy conforming to the materials requirements of, and tested in accordance with, ANSI/AWWA C213 and shall meet or exceed the requirements of ANSI/AWWA C550.

C. Seals shall conform to the applicable requirements of ANSI/AWWA C111/A21.11.

D. All bolts used in the assemblies shall be stainless steel and shall be coated with a premium quality epoxy.

E. Flanged ends shall comply with ANSI/AWWA C110/A21.10, with the addition of O-ring groove and O-ring.

F. Mechanical joint ends shall comply with ANSI/AWWA C153/A21.53.

G. Restrained expansion joints shall have a minimum pressure rating of 350 psi with a minimum safety factor of 3:1. Each assembly shall be tested at 350 psi before shipment.

H. Restrained expansion joints shall provide for self-restraint without tie rods and shall provide for expansion and contraction capabilities cast as an integral part of the end connection.

I. Flexible restrained expansion joints shall allow for 8-inches (+6"-2") minimum expansion.

J. Flexible restrained expansion joints shall consist of an expansion joint designed and cast as an integral part of a ball and socket type flexible joint having a minimum of 15□ deflection per ball.

K. Restrained expansion joints shall be the Single Ball or Double Ball FLEX-TEND Expansion Joint as manufactured by EBAA Iron Inc., or equal.

PART 3 – EXECUTION

3.01 INSTALLATION

A. All piping shall be installed by skilled workmen and in accordance with the best standard practice for piping installation as shown on the Drawings specified or recommended by the pipe manufacturer. Proper tools and appliances for the safe and convenient handling and installing of the pipe and fittings shall be used. Great care shall be taken to prevent any pipe coating from being damaged on the inside or outside of the pipe and fittings. All pieces shall be carefully examined for defects, and no piece shall be installed which is known to be cracked, damaged, or otherwise defective. If any defective pieces should be discovered after having been installed, it shall be removed and replaced with a sound one in a satisfactory manner by the Contractor and at his own expense. Pipe and fittings shall be thoroughly cleaned before they are installed and shall be kept clean until they are accepted in the complete work. All piping connections to equipment shall be provided with unions or coupling flanges located so that piping may be readily dismantled from the equipment. At certain applications, Dresser, Victaulic, or equal, couplings may also be used. All piping shall be installed in such a manner that it will be free to expand and contract without injury to itself or to structures and equipment to which it is connected. All piping shall be erected to accurate lines and grades with no abrupt changes in line or grade and shall be supported and braced against movement, temporary, or permanent. All exposed piping shall be installed with vertical and horizontal angles properly related to adjoining surfaces or pipes to give the appearance of good workmanship. Unless otherwise shown or approved, provided a minimum headroom clearance under all piping of 7 feet 6 inches.

B. Unless otherwise shown or specified, all waste and vent piping shall pitch uniformly at a 1/4-inch per foot grade and accessible cleanouts shall be furnished and installed as shown and as required by local building codes. Installed length of waste and vent piping shall be determined from field measurements in lieu of the Drawings.

C. All excavation shall be made in such a manner and to such widths as will provide ample room for properly installing the pipe and permit thorough compaction of backfill around the pipe. The minimum trench widths shall be in strict accordance with the "Trench Width Excavation Limits" as shown on the Drawings. All excavation and trenching shall be done in strict accordance with these specifications and all applicable parts of the OSHA Regulations, 29CFR 1926, Subpart P.

D. ALL EXCAVATION REQUIRED BY THIS CONTRACT SHALL BE UNCLASSIFIED. NO ADDITIONAL PAYMENT WILL BE MADE FOR ROCK EXCAVATION REQUIRED FOR THE INSTALLATION OF PIPE OR STRUCTURES SHOWN ON THE DRAWINGS.

E. Enlargements of the trench shall be made as needed to give ample space for operations at pipe joints. The width of the trench shall be limited to the maximum dimensions shown on the Drawings, except where a wider trench is needed for the installation of and work within sheeting and bracing. Except where otherwise specified, excavation slopes shall be flat enough to avoid slides which will cause disturbance of the subgrade, damage to adjacent areas, or endanger the lives or safety of persons in the vicinity.

F. Hand excavation shall be employed wherever, in the opinion of the Engineer, it is necessary for the protection of existing utilities, poles, trees, pavements, or obstructions.

G. No greater length of trench in any location shall be left open, in advance of pipe laying, than shall be authorized or directed by the Engineer and, in general, such length shall be limited to approximately one hundred (100) feet. The Contractor shall excavate the trenches to the full depth, width and grade indicated on the Drawings including the relevant requirements for bedding. The trench bottoms shall then be examined by the Engineer as to the condition and bearing value before any pipe is laid or bedding is placed.

H. No pressure testing shall be performed until the pipe has been properly backfilled in place. All pipe passing through walls and/or floors shall be provided with wall pipes or sleeves in accordance with the specifications and the details shown on the Drawings. All wall pipes shall be of ductile iron and shall have a water stop located in the center of the wall. Each wall pipe shall be of the same class, thickness, and interior coating as the piping to which it is joined. All buried wall pipes shall have a coal tar outside coating on exposed surfaces.

I. JOINT DEFLECTION SHALL NOT EXCEED 75 PERCENT OF THE MANUFACTURER'S RECOMMENDED DEFLECTION. Excavation and backfilling shall conform to the requirements of Section 31 00 01 – Earthwork, and as specified herein. Maximum trench widths shall conform to the Trench Width Excavation Limits shown on the Drawings. All exposed, submerged, and buried piping shall be adequately supported and braced by means of hangers, concrete piers, pipe supports, or otherwise as may be required by the location.

J. Following proper preparation of the trench subgrade, pipe and fittings shall be carefully lowered into the trench so as to prevent dirt and other foreign substances from gaining entrance into the pipe and fittings. Proper facilities shall be provided for lowering sections of pipe into trenches. UNDER NO CIRCUMSTANCES SHALL ANY OF THE MATERIALS BE DROPPED OR DUMPED INTO THE TRENCH.

K. Water shall be kept out of the trench until jointing and backfilling are completed. When work is not in progress, open ends of pipe, fittings, and valves shall be securely closed so that no water, earth, or other substance will enter the pipes, fitting, or valves. Pipe ends left for future connections shall be valved, plugged, or capped, and anchored as required.

L. All piping shall be installed in such a manner that it will be free to expand and/or contract without injury to itself or to structures and equipment to which it is connected. All piping shall be erected to accurate lines and grades with no abrupt changes in line or grade and shall be supported and braced against movement, temporary, or permanent. All exposed piping shall be installed with vertical and horizontal angles properly related to adjoining surfaces or pipes to give the appearance of good workmanship. Pipes crossing within a vertical distance of less than or equal to one (1) foot shall be encased and supported with concrete at the point of crossing to prevent damage to the adjacent pipes as shown on the Drawings.

M. The full length of each section of pipe shall rest solidly upon the bed of the trench, with recesses excavated to accommodate bells, couplings, joints, and fittings. Before joints are made, each pipe shall be well bedded on a solid foundation; and no pipe shall be brought into position until the preceding length has been thoroughly bedded and secured in place. Pipe that has the grade or joint disturbed after laying shall be taken up and relaid by the Contractor at his own expense. Pipe shall not be laid in water or when trench conditions are unsuitable for work.

N. Proper and suitable tools and appliances for the safe convenient handling and laying of pipe shall be used and shall in general agree with manufacturer's recommendations.

O. AT THE CLOSE OF EACH WORKDAY, THE END OF THE PIPELINE SHALL BE TIGHTLY SEALED WITH A CAP OR PLUG SO THAT NO WATER, DIRT, OR OTHER FOREIGN SUBSTANCE MAY ENTER THE PIPELINE, AND THIS PLUG SHALL BE KEPT IN PLACE UNTIL PIPE LAYING IS RESUMED.

P. During the laying of pipe, each pipe manufacturer shall provide his own supervisor to instruct the Contractor's pipe laying personnel in the correct procedure to be followed.

Q. Ordinarily only full lengths of pipe (as furnished by the pipe manufacturer) shall be used exceptions: closure pieces at manholes and areas where joint deflection is required.

R. For gravity sewer installations, the Contractor shall use a laser device to maintain the trench and pipe alignment. The laser device shall be re-checked for correct elevation and pipe alignment prior to pipe installation if the device is left in the pipe overnight. Corrected invert elevations at each manhole and any adjustments will be coordinated and approved by the Engineer.

S. ALL PIPING SHALL HAVE BEDDING AS SHOWN ON THE DRAWINGS, UNLESS OTHERWISE SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS.

T. Detector tape shall be installed 12 inches below final grade and directly above all buried potable water piping. The tape shall be blue and silver and shall be clearly and permanently labeled "Water". Detector tape shall be Lineguard III as manufactured by Lineguard, Inc., or equal.

U. AT THE CLOSE OF WORK EACH DAY, PIPELINE TRENCHES SHALL BE COMPLETELY BACKFILLED. IN PAVED AREAS THE SURFACE SHALL BE RESTORED AS SPECIFIED IN SECTION 32 12 10 – Asphalt Concrete Pavement for traffic over trench during non-working hours. UNDER NO CONDITIONS SHALL ANY PIPELINE TRENCH BE LEFT OPEN DURING NON-WORKING HOURS.

V. Installation of steel pipe shall be by skilled workmen and shall conform to the applicable sections of AWWA Manual M-11. Joints for steel piping shall be either screwed, welded, or flanged as shown on the Drawings or as specified.

W. Welding in the field shall be performed only when requested on the shop drawings and permitted by the Engineer for carbon steel pipe. No welding of stainless-steel pipe shall be allowed in the field. All field welds shall be radiographically inspected.

X. Installation of the steel casing pipe shall be by skilled workmen and in accordance with the best standard practice for steel pipe installation. Joints for steel casing pipe shall be butt welded.

1. The boring equipment to be used for installing the jacked casing shall be of such size and capacity to allow the boring to proceed in a safe and expeditious manner. The installation of the casing and boring of the hole shall be done simultaneously to avoid cave-ins or settlement and for safety of traffic above.

2. The Contractor shall check the vertical and horizontal alignment of the casing by survey instrument at least once during each four feet of advance, or as directed by the Engineer. Pits shall be well sheeted and braced as necessary for safe and adequate access for workmen, inspectors and materials and shall be of a size suitable to equipment and material handling requirements.

3. Under no conditions shall jetting or wet boring of encasement under pavement be allowed.

4. After installation of the carrier pipe, each end of the casing pipe shall be made watertight with a brick masonry bulkhead. In addition, a Class B concrete cradle shall be provided from each end of the bulkhead to the first pipe joint outside of the bulkhead.

3.02 JOINTS IN PIPING

A. Restrained joints shall be provided on all pipe joints as specified herein and shown on the Drawings. Restrained joints shall be made up similar to that for push-on joints.

B. Push-on joints include a single rubber gasket which fits into the bell end of the pipe. The gasket shall be wiped clean, flexed, and then placed in the socket. Any bulges in the gasket which might interfere with the entry of the plain end of the pipe shall be removed. A thin film of lubricant shall be applied to the gasket surface which will come into contact with the spigot end of the pipe. The lubricant shall be furnished by the pipe manufacturer. The plain end of the pipe, which is tapered for ease of assembly, shall be wiped clean and

a thick film of lubricant applied to the outside. The pipe shall be aligned and carefully entered into the socket until it just makes contact with the gasket. The joint assembly shall be completed by entering the pipe past the gasket until it makes contact with the bottom of the socket. The pipe shall be pulled "home" with an approved jack assembly as recommended by the pipe manufacturer. If assembly is not accomplished by reasonable force, the plain end shall be removed, and the condition corrected.

C. Flanged joints shall be brought to exact alignment and all gaskets and bolts or studs inserted in their proper places. Bolts or studs shall be uniformly tightened around the joints. Where stud bolts are used, the bolts shall be uniformly centered in the connections and equal pressure applied to each nut on the stud. Pipes in all lines subject to temperature changes shall be cut short and cold sprung into place to compensate for expansion when hot.

D. Mechanical joints shall be made up with gaskets, glands, and bolts. When a joint is to be made up, the bell or socket and plain end shall be cleaned and washed with a solution of mild soap in water; the gland and gasket shall be slid onto the plain end and the end then entered into the socket until it is fully "home" on the centering ring. The gasket shall then be painted with soapy water and slid into position, followed by the gland. All bolts shall be inserted and made-up hand tight and then tightened alternately to bring the gland into position evenly. Excessive tightening of the bolts shall be avoided. All nuts shall be pulled up using a torque wrench which will not permit unequal stresses in the bolts. Torque shall not exceed the recommendations of the manufacturer of the pipe and bolts for the various sizes. Care shall be taken to assure that the pipe remains fully "home" while the joint is being made. Joints shall conform to the applicable AWWA Specifications.

E. Threaded and/or screwed joints shall have long tapered full depth threads to be made with the appropriate paste or jointing compound, depending on the type of fluid to be processed through the pipe. All pipe up to, and including 1-1/2-inches, shall be reamed to remove burr and stood on end and well pounded to remove scale and dirt. Wrenches on valves and fittings shall be applied directly over the joint being tightened. Not more than three pipe threads shall be exposed at each connection. Pipe, in all lines subject to temperature changes shall be cut short and cold sprung into place to compensate for expansion when hot. Joints in all piping used for chlorine gas lines shall be made up with a glycerine and litharge cement. Joints in plastic piping (PVC/CPVC) shall be laid and joints made with compounds recommended by the manufacturer. Installation shall conform to the requirements of ASTM D2774 and ASTM D2855. Unions required adjacent to valves and equipment.

F. Soldered joints shall have the burrs removed and both the outside of pipe and the inside of fittings shall be thoroughly cleaned by proper tools recommended for that purpose. Flux shall be applied to both pipe and inside of fittings and the pipe placed into fittings and rotated to insure equal distribution of flux. Joints shall be heated and solder applied until it shows uniformly around the end of joints between fitting and pipe. All joints shall be allowed to self-cool to prevent the chilling of solder. Combination flux and solder paste

manufactured by a reputable manufacturer is acceptable. Unions required adjacent to valves and equipment.

G. Welded joints shall be made by competent operators in a first-class workmanlike manner, in complete accordance with ANSI B31.1 and AWWA C206. Welding electrodes shall conform to ASTM A233, and welding rod shall conform to ASTM A251. Only skilled welders capable of meeting the qualification tests for the type of welding which they are performing shall be employed. Tests, if so required, shall be made at the expense of the Contractor, if so ordered by the Engineer. Unions shall be required adjacent to valves and equipment.

H. Copper joints shall be thoroughly cleaned, and the end of pipes uniformly flared by a suitable tool to the bevels of the fittings used. Wrenches shall be applied to the bodies of fittings where the joint is being made and in no case to a joint previously made. Dimensions of tubing and copper piping shall be in complete accordance with the fittings used. No flare joints shall be made on piping not suited for flare joints. Installations for propane gas shall be in accordance with NFPA 54 and/or 58.

I. Solvent or adhesive welded joints in plastic piping shall be accomplished in strict accordance with the pipe manufacturer's recommendations, including necessary field cuttings, sanding of pipe ends, joint support during setting period, etc. Care shall be taken that no droppings or deposits of adhesive or material remain inside the assembled piping. Solvent or adhesive material shall be compatible with the pipe itself, being a product approved by the pipe manufacturer. Unions are required adjacent to valves and equipment. Sleeve-type expansion joints shall be supplied in exposed piping to permit 1-inch minimum of expansion per 100 feet of pipe length.

J. Dielectric isolation such as flange isolation kits, dielectric unions, or similar, shall be installed wherever dissimilar metals are connected according to the following table.

	Zinc	Galvanized Steel	Aluminum	Cast Iron	Ductile Iron	Mild Steel/ Carbon Steel	Copper	Brass	Stainless Steel
Zinc			●	●	●	●	●	●	●
Galvanized Steel			●	●	●	●	●	●	●
Aluminum	●	●		●	●	●	●	●	●
Cast Iron	●	●	●				●	●	●
Ductile Iron	●	●	●				●	●	●
Mild Steel/Carbon Steel	●	●	●				●	●	●

	Zinc	Galvanized Steel	Aluminum	Cast Iron	Ductile Iron	Mild Steel/ Carbon Steel	Copper	Brass	Stainless Steel
Copper	●	●	●	●	●	●			●
Brass	●	●	●	●	●	●			●
Stainless Steel	●	●	●	●	●	●	●	●	

Notes:

● *signifies dielectric isolation is required between the two materials noted.*

Consult Engineer for items not listed in table.

Provide flange isolation kits for all flanged connections of dissimilar metals and hardware including connections to equipment.

Contractor shall include all isolation descriptions with piping submittals.

K. Eccentric reducers shall be installed where air or water pockets would otherwise occur in mains because of a reduction in pipe size.

L. Joints in polypropylene and polyvinylidene fluoride pipe shall be butt fusion weld. All butt welding shall follow the requirements of ASTM D-2657 and the manufacturer's recommendations.

3.03 FLUSHING AND TESTING

A. All piping shall be properly flushed and tested unless specifically exempted elsewhere in the Specifications or otherwise approved by the Engineer. This shall also be accomplished by launching a foam pig without the use of launching pits. Air and gas pipelines shall be flushed and tested with compressed air. Gravity sewer piping shall be flushed and tested as specified in Section 33 05 61 – Utility Structures. All other liquid conveying pipelines shall be flushed and tested with water. The Contractor shall furnish and install all means and apparatus necessary for getting the air or water into the pipeline for flushing and testing including pumps, compressors, gauges, and meters, any necessary plugs and caps, and any required blow-off piping and fittings, etc., complete with any necessary reaction blocking to prevent pipe movement during the flushing and testing. All pipelines shall be flushed and tested in such lengths or sections as agreed upon among the Owner, Engineer, and Contractor. Test pressures shall be as specified or indicated on the Drawings and shall be measured at the lowest point of the pipe segment being tested. The Contractor shall give the Owner and Engineer reasonable notice of the time when he intends to test portions of the pipelines. The Engineer reserves the right, within reason, to request flushing and testing of any section or portion of a pipeline.

B. The Contractor shall provide water for all flushing and testing of liquid conveying pipelines. Raw water, reuse or non-potable water may be used for flushing and testing liquid

pipelines not connected to the potable water system. Only potable water shall be used for flushing and testing the potable water system.

C. Air and gas piping shall be completely and thoroughly cleaned of all foreign matter, scale, and dirt prior to start-up of the air or gas system.

D. At the conclusion of the installation work, the Contractor shall thoroughly clean all new liquid conveying pipe by flushing with water or other means to remove all dirt, stones, pieces of wood, etc., which may have entered the pipe during the construction period. If after this cleaning any obstructions remain, they shall be corrected by the Contractor, at his own expense, to the satisfaction of the Engineer. Liquid conveying pipelines shall be flushed at the rate of at least 2.5 feet per second for a duration suitable to the Engineer or shall be flushed by other methods approved by the Engineer.

E. Compressed/service air and gas piping shall be flushed by removing end caps from the distribution lines and operating one (1) compressor, in accordance with the manufacturer's instructions.

F. After flushing, all air piping shall be pressure and leak tested prior to coating and wrapping of welded joints. Immediately upon successful completion of the pressure and leak test, welded joints shall be thoroughly cleaned of all foreign matter, scale, rust, and discoloration and coated in accordance with the Specifications.

G. All process air piping shall be leak tested by applying a soap solution to each joint. Leak tests shall be conducted with one (1) blower in service at normal operating pressure.

H. During testing the piping shall show no leakage. Any leaks or defective piping disclosed by the leakage test shall be repaired or replaced by the Contractor, at his own expense, and the test repeated until all such piping shows tight.

I. All buried process air piping shall be pressurized to 25 psig and tested for leaks by applying a soap solution to each joint. The air supply shall be stopped, and the pipe pressure monitored. System pressure shall not fall by more than 0.5% of the 25 psig test pressure over a one-hour test period. Should the system fail to hold the required pressure for one hour, the cause shall be determined and corrected, and the test repeated until a successful test of the entire system is obtained.

J. Field leakage tests shall be performed for all submerged process air piping. The procedure shall consist of operating the system under clear nonpotable water for visual identification of all leaks. All field leakage tests shall be witnessed by the Engineer. All submerged piping shall be installed free of any leaks.

K. After flushing, all liquid conveying pipelines shall be hydrostatically tested at the test pressure specified in the plans. The procedure used for the hydrostatic test shall be in accordance with the requirements of AWWA C600. Each pipeline shall be filled with water for a period of no less than 24 hours and then subjected to the specified test pressure for 2 hours. During this test, exposed piping shall show no leakage. Allowable leakage in buried piping shall be in accordance with AWWA C600.

L. Any leaks or defective pipe disclosed by the hydrostatic test shall be repaired or replaced by the Contractor, at his own expense, and the test repeated until all such piping shows tight.

M. After flushing, all gas piping shall be leak tested in accordance with all local codes and regulations and in conformance with the recommendations or requirements of any National Institute or Association for the specific service application.

3.04 DISINFECTION

A. All pipe and fitting connected to and forming a part of a potable water supply shall be disinfected in accordance with the procedures described in AWWA C 651. Disinfection shall also be in accordance with the requirements of the Florida Department of Environmental Protection and the Owner.

B. Disinfection shall be accomplished after the pipe has been flushed, if applicable, and passed the hydrostatic test. Such piping shall be filled with 50 parts per million (PPM) of chlorine and held in contact for not less than 24 hours. Final tests after 24 hours contact time shall show a minimum residual chlorine content of 10 ppm in all parts of the system. Disinfection shall be repeated as often as necessary, and as directed by the Engineer and/or the Owner until the minimum residual chlorine content of 10 ppm has been reached. The Contractor shall obtain certificates of satisfactory bacteriological tests and furnish them to the Owner before the request is made for acceptance of the work. The Contractor shall furnish and install, at his own expense, all means and apparatus necessary for performing the disinfection. The chlorine solution shall be thoroughly flushed out prior to placing the new sections of pipe in service. The Contractor is cautioned that the spent chlorine solution must be disposed of in such a way as not to be detrimental to animal, plant, or fish life. Chlorine residual tests will be made after flushing to assure that residual is not in excess of 1 ppm at any point in system.

3.05 PAINTING AND COLOR-CODING SYSTEM

A. All exposed piping specified shall be color coded in accordance with the Owner's standard color designation system for pipe recognition. In the absence of a standard color designation system, the Engineer will establish a standard color designation for each piping service category from color charts submitted by the Contractor.

B. All piping specified in this Section shall be as specified or indicated on the Drawings, except as follows:

1. Copper pipe

2. Stainless steel pipe. Flanges and supports or hangers shall be painted.

END OF SECTION

SECTION 40 05 19

DUCTILE IRON PIPE

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install ductile iron pipe and all appurtenant Work, complete in place, all in accordance with the requirements of the Contract Documents.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01 33 00 – Submittal Procedures

C. Section 31 23 00 – Excavation and Backfill for Utilities

E. Section 40 05 00 – Basic Mechanical Requirements

1.03 REFERENCED SPECIFICATIONS, CODES, AND STANDARDS

A. Commercial Standards:

AWWA C104	Cement Mortar Lining for Ductile Iron Pipe and Fittings For Water.
AWWA C110	Ductile-iron and Gray-Iron Fittings.
AWWA C111	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
AWWA C150	Thickness design of ductile iron pipe.
AWWA C151	Ductile-iron Pipe, Centrifugally Cast, For Water.
AWWA C600	Installation of Ductile-Iron Water Mains and Their Appurtenances.

1.04 SUBMITTALS

A. Shop Drawings: The Contractor shall submit Shop Drawings of pipe and fittings in accordance with the requirements set forth in the Sections entitled “Basic Mechanical Requirements” and “Submittal Procedures.”

B. Contractor shall submit certification that all materials coming in contact with potable water comply with the requirements of NSF 61.

PART 2 – PRODUCTS

2.01 GENERAL

A. Pipe shall be centrifugally cast in metal molds or sand lined molds in accordance with AWWA C151 of grade 60-42-10 ductile iron. The above standard covers ductile iron pipe with nominal pipe sizes from three inches up to and including sixty-four inches in diameter. Working pressure shall be as specified herein.

B. Wall Thickness

1. Buried Pipe:

a. 30-inch diameter and greater shall be Pressure Class 300.

b. 24-inch diameter and smaller shall be Pressure Class 350.

2. Flanged Pipe: Pipe wall thickness of threaded pipe for a flanged pipe end shall be minimum special thickness Class 53 from 4-inch to 54-inch and/or minimum Pressure Class 350 for 60-inch to 64-inch diameter pipe in accordance with AWWA C115.

3. Grooved Pipe: Grooved coupling pipe shall be special thickness Class 54, or greater if required by pipe manufacturer. Pipe groove dimensions shall be for rigid joints unless otherwise indicated on the drawings.

C. Joints

1. Ductile iron pipe above grade shall be flanged.

2. All pipe and fittings below grade shall be restrained joint type.

3. Mechanical and push-on type joints shall be in accordance with AWWA C111.

4. Flanges for flanged pipe shall be in accordance with AWWA C115, shall be ductile iron, shall be rated at 250 psi maximum working pressure, and shall be similar to flange Class 125 per ASME B16.1. Where shown on the Drawings, pipe and fittings shall be furnished with flanges similar to flange Class 250 per ASME B16.1. Fittings shall be provided with flanges having a bolt circle and bolt pattern the same as the adjacent pipe and/or mechanical devices. Joint materials shall be ANSI sized and approved and shall consist of hot dip galvanized carbon steel bolts and nuts and full faced gaskets, unless otherwise specified.

5. No raised face flanges shall be used. The raised faces shall be milled flat.

6. Flange gaskets shall be full face Toruseal gaskets by American Cast Iron Pipe Co., or FLANGE-TYTE gaskets by U.S. Pipe, or equal. Gaskets shall be nominal 1/8” thick SBR rubber.

D. Restrained Joints

1. All ductile iron pipe and fittings below grade shall be restrained joint.

2. Manufactured Proprietary Restrained Joint Piping: Restrained joint pipe shall be as specified or indicated on the Drawings.

3. Restrained Mechanical Joint Fittings: All mechanical joint fittings, valves and appurtenances shall be restrained as described herein. Restrained joint fittings shall be mechanical joint fittings with restraint assemblies such as Stargrip by Star Pipe Systems, Mega Lug by EBAA Iron, ONE LOK by Sigma, or approved equal. Manufacturers and model numbers shall be as specified or indicated on the Drawings. Use of this restraining system shall be approved by the Engineer for each application.

E. Fittings

1. General: Fittings shall be manufactured in accordance with AWWA C110 or the manufacturer's standard. Fittings shall be as specified or indicated on the Drawings.

2. Pressure Rating: 350 psi minimum working pressure for 4- to 24-inch fittings and 250 psi minimum working pressure for 30- to 64-inch fittings.

3. Materials: Fittings shall be ductile iron.

4. Joints - General: Fittings shall be either flanged, mechanical joint or manufactured proprietary restrained joint type as indicated on the Drawings and specified herein.

5. Flanged Joint Fittings: Above ground fittings shall be flanged.

6. Manufacturer Proprietary Restrained Joint Fittings: Unless otherwise indicated on the Drawings or specified herein, all below ground fittings 30 inches in diameter and greater shall be manufacturer proprietary restrained joint type.

7. Mechanical Joint Fittings: Underground ductile iron fittings 24 inches in diameter and less shall be mechanical joint type fittings.

F. Pipe Lining and Coating General: Pipe linings and coatings shall be as follows:

1. Buried Service: The piping manufacturer's standard asphaltic coating shall be applied prior to shipment to the exterior wall of buried pipe and fittings in accordance with AWWA C151.

2. Above Ground Piping and Exposed Piping within Underground Vaults: A coating of rust inhibitive primer shall be applied to the pipe exterior prior to shipment for piping that is above ground and exposed piping within vaults. Primer for pipe used for potable water main applications shall be compliant with NSF Standard 61.

3. Cement-Mortar Lining: Pipe and fittings for potable water service shall be cement-lined and seal-coated in accordance with AWWA C104, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

4. Protecto 401 Ceramic Epoxy Lining: The interior of all ductile iron pipe and fittings for wastewater services shall be lined with an epoxy lining. The epoxy lining shall be Protecto 401 Ceramic Epoxy as manufactured by the Protecto Division of Vulcan Painters, Inc, or equal. All pipe and fittings shall be lined with a minimum dry film thickness of 40 mils, except for the gasket groove and spigot end up to six inches back from the end of the spigot which shall be lined with ten mils of the material. All ductile iron pipe and fittings shall be checked for dry film thickness in accordance with the SSPC-PA2. Each pipe joint and fitting shall be marked with the date of application of the lining system and with its numerical sequence of application on that date. The pipe supplier shall furnish a certificate stating that lining applicator has complied with all specification requirements relative to the material, its application and inspection. Surface preparation, number of coats, application of the lining material and field touch-up shall be in strict accordance with the lining material manufacturer's recommendations. During the installation of the pipe, the lining material manufacturer shall provide the services of a field engineer to instruct and demonstrate to the Contractor's personnel, the procedure for the field touch-up of lining where field cuts and taps were required. Holiday inspection shall be conducted using test equipment described in American Water Works Association Standard, AWWA C210, Section 5.3.3.1. In accordance with coating manufacturer's recommendation, holiday testing may be conducted any time after the coating has reached sufficient cure.

5. Polyethylene Encasement: Not Used

PART 3 - EXECUTION

3.01 INSTALLATION

A. The Contractor shall perform all earthwork including excavation, backfill, bedding, compaction, sheeting, shoring and bracing, dewatering and grading in accordance with Division 31 - Earthwork.

B. Unless otherwise directed, ductile iron pipe shall be laid with the bell ends facing upstream in the normal direction of flow and in the direction of laying.

C. Thrust restrained and mechanical joints shall be made in accordance with the manufacturer's standards except as otherwise specified herein. Joints between mechanical joint pipe and/or fittings shall be made in accordance with AWWA C600, except that deflection at joints shall not exceed one-half of the manufacturer's recommended allowable deflection, or one-half of the allowable deflection specified in AWWA C600, whichever is the lesser amount.

D. Before laying thrust restrained and mechanical joint pipe and fittings, all lumps, blisters and excess bituminous coating shall be removed from the bell and spigot ends. The outside of each spigot and the inside of each bell shall be wire brushed, and wiped clean and dry. The entire gasket groove area shall be free of bumps or any foreign matter which might displace the gasket. The cleaned spigot and gasket shall not be allowed to touch the trench walls or trench bottom at any time. Vegetable soap lubricant shall be applied in accordance with the pipe manufacturer's recommendations, to aid in making the joint. The Contractor shall exercise caution to prevent damage to the gasket or the adherence of grease or particles of sand or dirt. Deflections shall only be made after the joint has been assembled.

E. Prior to making up flanged joints in ductile iron pipe and fittings, the back of each flange under the bolt heads and the face of each flange shall have all lumps, blisters and excess bituminous coating removed and shall be wire brushed and wiped clean and dry. Flange faces shall be kept clean and dry when making up the joint, and the Contractor shall exercise caution to prevent damage to the gasket or the adherence of grease or particles of sand or dirt. Bolts and nuts shall be tightened by opposites in order to keep flange faces square with each other, and to ensure that bolt stresses are evenly distributed.

F. Bolts and nuts in thrust restrained, mechanical and flanged joints shall be tightened in accordance with the recommendations of the pipe manufacturer for a leak-free joint. The mechanics shall exercise caution to prevent overstress. Torque wrenches shall be used until, in the opinion of the Engineer, the mechanics have become accustomed to the proper amount of pressure to apply on standard wrenches.

G. Cutting of the ductile iron pipe for inserting valves, fittings, etc., shall be done by the Contractor in a neat and professional manner without damage to the pipe, the lining, or the coating. Pipe 16 inches and larger in diameter shall be cut with a mechanical pipe saw. After cutting the pipe, the plain end shall be beveled with a heavy file or grinder to remove all sharp edges.

H. Areas of loose or damaged lining associated with field cutting shall be repaired or replaced as recommended by the pipe manufacturer and required by the Engineer. Repair methods shall be as recommended by the manufacturer and shall be submitted to the Engineer for review.

I. Any work within the pipe shall be performed with care to prevent damage to the lining. No cable, lifting arms or other devices shall be inserted into the pipe. All lifting, pulling or pushing mechanisms shall be applied to the exterior of the pipe barrel.

J. Homing the pipe shall be accomplished by the use of a hydraulic or mechanical pulling device, unless otherwise accepted by the Engineer. No pipe shall be driven or struck in order to seat it home.

K. Cleaning: Cleaning methods shall be acceptable to the Engineer, and must be sufficient to remove silt, rocks, or other debris which may have entered the pipeline during its installation and shall also follow the requirements of the Section entitled "Basic Mechanical Requirements"

END OF SECTION

SECTION 40 05 31

PVC/CPVC PIPE

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Reference Section 40 05 00 – Basic Mechanical Requirements.

B. Thermoplastic pipe and fittings used in raw, partially treated or finished drinking water or chemical additive services shall be NSF/ANSI/CAN 61 certified for drinking water service.

PART 2 – PRODUCTS

2.01 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. PVC pipe and fittings shall be manufactured in accordance with ASTM D1785, D1784 and F441, "normal impact" pipe, Schedule 40 or 80 as specified.

B. Fittings used with this pipe shall be socket type or flanged type as specified herein, in Section 40 06 20 – Process Pipe, Valve, and Gate Schedules, or indicated on the Drawings. Plastic piping shall be installed in full accordance with the manufacturer's recommendations for the specific installation. No field bending or distortion of the pipe will be permitted.

C. PVC pipe shall be Type 1 Grade 1 conforming to ASTM D1784 and D1785. Fittings shall conform to the following standard specifications:

1. Socket Type: (Schedule 40); ASTM D2466

2. Socket Type: (Schedule 80); ASTM D2467

D. Provide flanged fittings of the same material as the specified pipe and material conforming to ANSI B16.5 at all valves and equipment except at true (double) union valves. Flange gaskets shall be natural rubber or other material fully compatible with the fluid being conveyed. Where flanged piping is used with chemical systems, the gasket material shall conform to the requirements of the following table. Flange bolts shall be type 316 stainless steel minimum, with higher grade materials used where necessary for fluid (chemical) compatibility.

Chemical	Elastomer Material
Calcium Hydroxide (Lime) Slurry	FKM, Hypalon, Neoprene
Sodium Hypochlorite	FKM

E. Acceptable materials of construction of elastomers for non-chemical service shall be as follows:

Non-Chemical Service	Elastomer Material
Non-Potable Water	EPDM
Process Drain (Gravity)	EPDM, FKM
Process Drain (Pressure)	EPDM, FKM
Potable Water	EPDM

F. Solvent cement for socket type joints shall conform to ASTM D2564 for PVC pipe and fittings. Solvent cement for chemical service shall be Weld-On 724 as manufactured by IPS Corporation, or equal.

G. C900-Class 200 shall be in sizes between 4 inches and 12 inches and shall meet the requirements of AWWA C900 "Poly Vinyl Chloride (PVC) Pressure Pipe" and shall conform to all the requirements of ASTM D1784 and ASTM D2241. The pipe shall be a minimum of DR 14 and shall be capable of withstanding the overburden pressures determined by the depth of burial in the field.

1. Pipe material shall be made from clean, virgin, NSF approved Class 12454-A PVC compound conforming to resin specification ASTM D1784. Standard laying lengths shall be 20-feet (±1 inch). Random lengths of not more than 15% of the total footage of each size may be shipped in lieu of the standard lengths. Reruns of reclaimed material shall not be accepted.

2. The pipe shall have bell and spigot ends with push-on, O-ring rubber gasket, compression type joints conforming to the requirements of ASTM D2672. Elastomeric gaskets shall conform to the requirements of ASTM F477.

3. Minimum pipe stiffness (F/dY) at 5% deflection shall be 914 psi for all sizes when tested in accordance with D2241.

4. The pipe shall be designed to pass a quick burst test pressure of 985 psi applied in 60 to 70 seconds when tested in accordance with ASTM D1599, as referenced in ASTM D2241.

5. Fittings for C900-Class 200, DR 14 shall be ductile iron, bolted mechanical joint.

H. C900-Class 150 shall be in sizes between 4 inches and 12 inches and shall meet the requirements of AWWA C900 "Poly Vinyl Chlorine (PVC) Pressure Pipe" and shall conform to all the requirements of ASTM D1784 and ASTM D2241. The pipe shall be a minimum of DR 18 and shall be capable of withstanding the overburden pressures determined by the depth of burial in the field.

1. Pipe material shall be made from clean, virgin, NSF approved Class 12454-A PVC compound conforming to resin specification ASTM D1784. Standard laying lengths shall be 20-feet (±1 inch). Random lengths of not more than 15% of the total footage of each size may be shipped in lieu of the standard lengths. Reruns of reclaimed material shall not be accepted.

2. The pipe shall have bell and spigot ends with push-on, O-ring rubber gasket, compression type joints conforming to the requirements of ASTM D2672. Elastomeric gaskets shall conform to the requirements of ASTM F477.

3. Minimum pipe stiffness (F/dY) at 5% deflection shall be 435 psi for all sizes when tested in accordance with D2241.

4. The pipe shall be designed to pass a quick burst test pressure of 755 psi applied in 60 to 70 seconds when tested in accordance with ASTM D1599, as referenced in ASTM D2241.

5. Fittings for C900-Class 150, DR 18 shall be ductile iron, bolted mechanical joint.

I. PVC pressure rated pipe (PR 160) shall be in sizes between 1 1/2 inches and 12 inches and shall conform to all the requirements of ASTM D1784 and ASTM D2241 and shall be a minimum of SDR 26 and shall be capable of withstanding the overburden pressures determined by the depth of burial in the field.

1. Pipe material shall be made from clean, virgin, NSF approved Class 12454-A PVC compound conforming to resin specification ASTM D1784. Standard laying lengths shall be 20-feet (1± inch). Random lengths of not more than 15% of the total footage of each size may be shipped in lieu of the standard lengths. Reruns of reclaimed materials shall not be accepted.

2. The pipe shall have bell and spigot ends with push-on, O-ring rubber gasket, compression type joints conforming to the requirements of ASTM D2672. Elastomeric gaskets shall conform to the requirements of ASTM F477.

3. Minimum pipe stiffness (F/dY) at 5% deflection shall be 135 psi for all sizes when tested in accordance with ASTM D2241.

4. The pipe shall be designed to pass a quick burst test pressure of 500 psi applied in 60 to 70 seconds when tested in accordance with ASTM D1599, as referenced in ASTM D2241.

5. The pipe shall be designed to pass for 1000 hours a sustained test pressure of 340 psi when tested in accordance with ASTM D1598, as referenced in ASTM D2241.

J. Fittings for PR 160, SDR 26 shall be PVC and designed for the pipe being supplied.

K. Acrylonitrile-butadiene-styrene (ABS) shall conform to the requirements of ASTM D2661. Pipe and fittings shall have socket type couplings with solvent cement joints. Solvent cement shall conform to ASTM D2235.

L. Type PSM polyvinyl chloride (PVC) pipe and fittings shall conform to the requirements of ASTM D3034 with a maximum SDR of 35. Pipe and fittings shall have bell and spigot ends with O-ring rubber gasketed, compression type joints. Joints shall conform to the requirements of ASTM Specification D3212. Reruns of reclaimed materials shall not be accepted. Unless indicated otherwise, PVC wall pipes shall be provided for all piping passing through exterior walls. Wall pipes shall have a water stop solvent-welded to the pipe. Each wall pipe shall be of the same class and type as the piping to which it is joined.

M. Perforated and closed drainage pipe and fittings shall be rigid PVC pipe, Schedule 40 unless otherwise shown or specified with solvent welded type joints, or approved equal. Pipe shall be slotted or have two rows of 1/4-inch diameter holes spaced 4-inches apart along the circumference of the pipe. Longitudinal spacing of holes shall be 5-inches maximum.

2.02 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND FITTINGS

A. CPVC shall be manufactured in accordance with ASTM D1785, D1784 and F441, "normal impact" pipe, Schedule 40 or 80 as specified.

B. Fittings used with this pipe shall be socket type or flanged type as specified herein or indicated on the Drawings. Plastic piping shall be installed in full accordance with the manufacturer's recommendations for the specific installation. No field bending or distortion of the pipe will be permitted.

C. CPVC pipe shall be Type 4, Grade 1, Schedule 80, conforming to ASTM D1784 and ASTM F441. CPVC fittings shall be socket type conforming to ASTM F439.

D. Solvent cement for socket type joints shall conform to ASTM F493 for CPVC pipe and fittings. Solvent cement for chemical service shall be Weld-On 724 as manufactured by IPS Corporation, or equal.

2.03 REINFORCED THERMOPLASTIC HOSE AND FITTINGS (REFER TO DRAWINGS)

PART 3 – EXECUTION

3.01 INSTALLATION

A. Polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC) and High Density Polyethylene (HDPE) pipe shall be laid and joints assembled according to the respective manufacturer's recommendation. PVC pipe installation shall comply with applicable sections of the Uni-Bell PVC Pipe Association Recommended Standard Specifications.

B. Plastic piping shall not be installed when the temperature is less than 60 degrees F except as otherwise recommended by the manufacturer and approved by the Engineer.

END OF SECTION

SECTION 40 05 51

VALVES, GENERAL

PART 1 - GENERAL

1.01 THE REQUIREMENT

A. The Contractor shall furnish and install, complete with all assemblies and accessories, all valves shown on the Drawings and specified herein including all fittings, appurtenances and transition pieces required for a complete and operable installation.

B. All valves shall be constructed of first quality materials which have strength, wearing, and corrosion resistance characteristics entirely suitable for the types of service for which the individual valves are designated. Except where noted otherwise, valves designated for water service shall conform to pertinent sections of the latest revision of AWWA C500 Specifications. Cast iron valve bodies and parts shall meet the requirements of the latest revision of ASTM Designation A-126, "Standard Specifications for Gray Iron Castings for Valves, Flanges, and Pipe Fittings, Class B."

C. All valve body castings shall be clean, sound, and without defects of any kind. No plugging, welding, or repairing of defects will be allowed.

D. Valves shall have flanged ends for exposed service and mechanical joint ends for buried service, unless otherwise shown on the Drawings or specified herein. Flanged ends shall be flat-faced, 125 lb. American Standard unless otherwise shown or specified in accordance with ANSI B16.1. All bolt heads and nuts shall be hexagonal of American Standard size. The Contractor shall be responsible for coordinating connecting piping. Valves with screwed ends shall be made tight with Teflon tape. Unions are required at all screwed joint valves.

E. Valve Labeling: A label shall be provided on all shut-off valves exclusive of hose bibbs. The label shall be of 1/16-inch stainless steel, minimum 2 inches by 4 inches in size, and shall be permanently attached to the valve or on the wall adjacent to the valve or as indicated by the Engineer.

F. Provide required spare parts, special tools and one year supply of lubricants for all valves.

1.02 SUBMITTALS

A. The Contractor shall furnish to the Town, through the Engineer, a Performance Affidavit where required in individual valve specifications. Performance tests shall be conducted in accordance with the latest revision of AWWA C500 and affidavits shall conform to the requirements of the Specifications.

B. Shop Drawings conforming to the requirements of Section 01 33 00, Submittal Procedures, are required for all valves, and accessories. Submittals shall include all layout dimensions, size and materials of construction for all components, information on support and anchoring where necessary, pneumatic and hydraulic characteristics and complete descriptive information to demonstrate full compliance with the Documents. Shop Drawings for electrically operated/controlled valves shall include all details, notes, and diagrams which clearly identify required coordination with the electrical power supply and remote status and alarm indicating devices. Electrical control schematic diagrams shall be submitted with the Shop Drawings for all electrical controls. Diagrams shall be drawn using a ladder-type format in accordance with JIC standards. Shop Drawings for pneumatically operated/controlled valves shall include all details, notes, and diagrams which clearly identify required coordination with the compressed air (service air) system and electrical controls.

C. Operation and maintenance manuals and installation instructions shall be submitted for all valves and accessories in accordance with the Specifications. The manufacturer(s) shall delete all information which does not apply to the equipment being furnished.

D. Spare parts list

E. Special tools list

1.03 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor shall provide the services of a qualified representative of the manufacturer(s) of the equipment named below to check out and certify the installation(s), to supervise the initial operation, and to instruct the Town's operating personnel in proper operation and maintenance procedures.

B. Any additional time required to achieve successful installation and operation shall be at the expense of the Contractor. The manufacturer's representative shall sign in and out at the office of the Engineer's Resident Project Representative on each day he is at the project.

C. A written report covering the representative's findings and installation approval shall be mailed directly to the Engineer covering all inspection and outlining in detail any deficiencies notes.

D. The times specified are exclusive of travel time to and from the facility and shall not be construed as to relieve the manufacturer of any additional visits to provide sufficient service to place the equipment in satisfactory operation.

PART 2 - PRODUCTS

2.01 GENERAL

A. Manufacturers shall be as specified or indicated on the Drawings.

2.02 CORPORATION STOPS

A. Corporation stops shall be of bronze with tapered male iron pipe threads on inlets and outlets. Terminal outlets shall have screwed bronze hex head dust plugs or caps. Unions shall be used on all corporation stop outlets with connecting piping. Corporation stops shall have a minimum working pressure rating of 250 psi and shall be as manufactured by Mueller Co., Hays Mfg. Div. of Zurn Industries, or equal.

2.03 FLOOR BOXES

A. Floor boxes shall be provided for all nut operated or floor accessed valves. Floor boxes shall be of the adjustable, sliding type, cast iron, suitable to withstand heavy traffic, as manufactured by James B. Clow & Sons, Kennedy Valve Mfg. Co., or equal. The covers shall be marked with appropriate designations of piping contents (i.e.: water, sewer) and bases shall be the round type. All nut operated valves in this Section shall be clearly identified by stainless steel or laminated plastic identification tags. The tags shall be permanently affixed to the inside of the floor boxes, under grating, etc. and shall bear the embossed letters which clearly identify each valve by its appropriate designation.

B. Two (2) valve operating wrenches shall be supplied in 4 foot lengths with tee handles for each size nut supplied. Valve wrenches shall be Model No. F-2520 as manufactured by James B. Clow & Sons, Kennedy Valve Mfg. Co., Figure No. 122, or equal.

2.04 VALVE BOXES

A. The Contractor shall furnish and install valve boxes as shown on the Drawings and specified herein.

B. All valve boxes shall be placed so as not to transmit shock or stress to the valve and shall be centered and plumb over the operating nut of the valve. The ground in the trench upon which the valve boxes rest shall be thoroughly compacted to prevent settlement. The boxes shall be fitted together securely and set so that the cover is flush with the finished grade of the adjacent surface. A concrete pad as detailed on the Drawings shall be provided around the valve box, sloped outwards.

C. All valve boxes shall be 2-piece cast iron, sliding type, 5-1/4" shaft, with heavy duty traffic weight collar and the lid marked with the appropriate carrier product (i.e.: WATER). Bronze identification disks are required. Boxes and ID tags shall be as specified or indicated on the Drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Except where noted otherwise herein, all valves shall be installed and tested in accordance with the latest revision of AWWA C500. Before installation, all valves shall be lubricated, manually opened and closed to check their operation and the interior of the valves shall be thoroughly cleaned. Valves shall be placed in the positions shown on the Drawings. Joints shall be made as directed under the Piping Specifications. The valves shall be so located that they are easily accessible for operating purposes, and shall bear no stresses due to loads from the adjacent pipe. The Contractor shall be responsible for coordinating connecting piping.

B. All valves shall be tested at the operating pressures at which the particular line will be used. Any leakage or "sweating" of joints shall be stopped, and all joints shall be tight. All motor operated and cylinder operated valves shall be tested for control operation as directed by the Engineer.

C. Provide valves in quantity, size, and type with all required accessories as shown on the Drawings.

D. Install all valves and appurtenances in accordance with manufacturer's instructions. Install suitable corporation stops at all points shown or required where air binding of pipe lines might occur. Install all valves so that operating handwheels or wrenches may be conveniently turned from operating floor but without interfering with access, and as approved by Engineer. Unless otherwise approved, install all valves plumb and level. Valves shall be installed free from distortion and strain caused by misaligned piping, equipment or other causes.

E. Valve boxes shall be set plumb and centered with the bodies directly over the valves so that traffic loads are not transmitted to the valve. Earth fill shall be carefully tamped around each valve box to a distance of 4 feet on all sides of the box, or to the undisturbed trench face, if less than 4 feet.

3.02 SHOP AND FIELD TESTING

A. Shop and field testing of valves shall be as follows:

1. Certified factory testing shall be provided for all components of the valve and operator system. Valves and operators shall be shop tested in accordance with the requirements in the latest revision of AWWA C500, including performance tests, leakage test, hydrostatic tests, and proof-of-design tests. The manufacturer through the Contractor shall submit certified copies of the reports covering the test for acceptance by the Engineer.

2. Shop testing shall be provided for the operators consisting of a complete functional check of each unit. Any deficiencies found in shop testing shall be corrected prior to

shipment. The system supplier through the Contractor shall submit written certification that shop tests for the electrical/pneumatic system and all controls were successfully conducted and that these components provide the functions specified and required for proper operation of the valve operator system.

3. The Contractor shall conduct field tests to check and adjust system components, and to test and adjust operation of the overall system. Preliminary field tests shall be conducted prior to start-up with final field tests conducted during start-up. The factory service representative shall assist the Contractor during all field testing and prepare a written report describing test methods, and changes made during the testing, and summarizing test results. The service representative shall certify proper operation of the valve operator system upon successful completion of the final acceptance field testing.

4. Preliminary and final field tests shall be conducted at a time approved by the Engineer. The Engineer shall witness all field testing.

5. All costs in connection with field testing of equipment such as energy, light, lubricants, water, instruments, labor, equipment, temporary facilities for test purposes, etc. shall be borne by the Contractor. The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Town formally takes over the operation thereof.

6. Preliminary field tests shall be conducted prior to start-up and shall include a functional check of the entire valve operator system and all system components. Preliminary field tests shall demonstrate that the valve operator system performs according to specifications and that all equipment, valves, controls, alarms, interlocks, etc., function properly. The preliminary field test report must be approved by the Engineer prior to conducting final field acceptance tests. Based on results of preliminary field tests, the Contractor shall make any adjustments required to settings, etc., to achieve the required valve closing time and operation specified or otherwise directed by the Engineer.

7. Final field acceptance tests shall be conducted simultaneously with the start-up and field testing of the pumps, air compressors, process air blowers, etc. Field tests shall be conducted for the full range of operating modes and conditions specified and as directed by the Engineer. Each of the valves shall be tested at minimum, maximum, and normal head/flow conditions, and under all specified conditions of opening and closing. Performance of pneumatic valves and compressed air system under normal operating conditions and during simulated power failures shall be checked.

8. Field testing shall include optimization of opening and closing times of the valves. The Contractor shall provide the means for accurate measurement of pipeline pressures as directed by the Engineer. Valve opening and closing times shall be adjusted based on process requirements to optimize operation of the valves. Final

valve opening and closing times as determined by field tests shall be approved by the Engineer prior to final acceptance of the system.

END OF SECTION

SECTION 40 05 65.23

CHECK VALVES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Reference Section 40 05 00 – Basic Mechanical Requirements.

B. Valves intended for chemical service shall be constructed of materials suitable for the intended service.

PART 2 – PRODUCTS

2.01 SWING CHECK VALVES (WATER SERVICE)

A. Unless otherwise specified, check valves 3-inches and less shall be bronze, Y-pattern, swing check valves of the regrinding type. Valves shall have a minimum 200 psi non-shock cold water pressure rating and shall be as manufactured by Jenkins Bros. Corp., Crane Company, or equal.

B. Check valves larger than 3-inches shall be cushioned swing check valves rated for a minimum working pressure of 250 psi and shall be of the "Shockless Swing-Check" type as manufactured by G.A. Industries, or equal.

C. Valve closure shall be controlled by an external weighted lever arm, the action of which is cushioned by a hydraulic oil or pneumatic cylinder. Counterweights and cushion cylinders shall be designed so that adjustments can be made in the field to minimize surge and to prevent backflow and hammering noises during actual service conditions. The hydraulic oil or pneumatic cushion system shall be completely self-contained.

D. Valve bodies, cover discs, levers, and disc arms shall be constructed of heavy cast iron or cast steel fully conforming to the latest revision of ASTM A-126 Class B or Class WCB, respectively. Valve ends shall be Standard American 125 pound flat-faced flanged, in accordance with ANSI B16.1. Each valve disc shall be suspended from a noncorrosive shaft which shall pass through a stuffing box and be connected on the outside of the valve to the cushion and counterweight mechanism.

E. Valve seating shall be rubber-to-metal designed for drop-tight shutoff. The body seat ring shall be made of bronze or stainless steel and the disc seat ring of 80 Durometer rubber. Body and disc seats shall be renewable.

F. With the exception of the valve body and seat, all parts in contact with water shall be manufactured from noncorrosive materials. Internal corrosive surfaces shall be shop painted with two coats of epoxy for corrosion resistance. Exterior surfaces shall be painted in accordance with the requirements of Section 09 90 00 – Painting.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 40 05 68.13
PVC AND CPVC VALVES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Reference Section 40 05 00 – Basic Mechanical Requirements.

PART 2 – PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

A. Valves shall be constructed of materials suitable for the intended service. PVC valves shall be provided in PVC piping and CPVC valves shall be provided in CPVC piping.

B. PVC valve bodies shall be constructed of PVC which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784. CVPC valve bodies shall be constructed of CPVC which shall meet or exceed the requirements of cell classification 23447 according to ASTM D1784.

C. Materials of construction of other valve components shall be as specified below for the particular type of valve.

D. Acceptable materials of construction of elastomers for non-chemical service shall be as follows:

Non-Chemical Service	Elastomer Material
Non-Potable Water	EPDM
Process Drain (Gravity)	EPDM, FKM
Process Drain (Pressure)	EPDM, FKM
Potable Water	EPDM
Reclaimed Water	EPDM, FKM
Sample	EPDM, FKM
Sump Pump Discharge	EPDM, FKM
Raw Sewage	EPDM, FKM

E. All flanged valves shall be flat face flanged end type conforming to ANSI B16.5 bolt pattern for 150 lb. flanges.

2.02 PVC/CPVC BALL VALVES (BLV-P/BLV-C)

A. Ball valves shall be true union design with flanged, socket, or threaded ends as required and as specified in Section 40 06 20 – Process Pipe, Valve, and Gate Schedules. All valves shall be full-port design and allow for bi-directional flow. Valve stems shall contain double o-ring seals. Valves shall have removable handles and integrally molded mounting features for actuator installation. Ball valves shall be rated for a minimum pressure of 150 psi at 70°F.

B. Valve bodies, stems, balls, and unions shall be constructed of PVC or CPVC as specified in 2.01 B. Ball seats shall be made of PTFE, and o-ring seals shall be as specified in 2.01 D and 2.01 E.

C. Ball valves shall be manufactured by Asahi/America, Nibco/Chemtrol, IPEX, Hayward Flow Control, Plastomatic, or equal.

D. Where valves are installed in piping to be insulated and jacketed, stem extensions shall be furnished and installed such that the valve can be operated without any interference with these components.

2.03 PVC/CPVC SWING CHECK VALVES (CV-PS/CV-CS)

A. Swing check valves shall be single-disc design with pivoting swing arm/disc clapper assembly and flanged ends. Valves shall be full flow, gravity operated, and suitable for either horizontal or vertical applications. Valves shall be capable of top entry to facilitate cleaning and repair without removal from the line. Swing check valves shall be pressure rated for 150 psi at 70°F.

B. Valve bodies, bonnets, swing arms, and discs shall be constructed of PVC or CPVC as specified in 2.01 B. O-ring seals and shutters shall be as specified in 2.01 D and 2.01 E.

C. Swing check valves shall be manufactured by Asahi/America, IPEX, Hayward Flow Control, or equal.

2.04 PVC/CPVC BALL AND DIAPHRAGM CHECK VALVES (DCV-P/DCV-C)

A. Ball and diaphragm check valves shall be true union design with flanged, socket, or threaded ends as required and as specified in Section 40 06 20 – Process Pipe, Valve, and Gate Schedules. Primary seat shall be square-cut design to ensure proper seating. Valves shall be suitable for either horizontal or vertical applications. Ball and diaphragm check valves shall be pressure rated for 150 psi at 70°F.

B. Valve bodies, balls or diaphragms, end connectors, and unions shall be constructed of PVC or CPVC as specified in 2.01 B. O-ring seals shall be as specified in 2.01 D and 2.01 E.

C. Ball and diaphragm check valves shall be manufactured by Asahi/America, Nibco/Chemtrol, IPEX, Hayward Flow Control, Plastomatic, or equal.

2.05 PVC/CPVC DIAPHRAGM VALVES (DV-P/DV-C)

A. Diaphragm valves shall be weir-type design with multi-turn handwheel for throttling applications. Diaphragm valves shall have flanged, socket, or threaded ends as specified in Section 40 06 20 – Process Pipe, Valve, and Gate Schedules. Valves shall have a position indicator and adjustable travel stop. Diaphragm valves shall be pressure rated for 150 psi at 70°F.

B. Valve bodies, bonnets, end connectors, and unions shall be constructed of PVC or CPVC as specified in 2.01 B. Valve diaphragms and o-rings shall be as specified in 2.01 D and 2.01 E. PVDF vapor barrier shall be provided for PTFE diaphragms.

C. Diaphragm valves shall be manufactured by Asahi/America, IPEX, Hayward Flow Control, Plastomatic, or equal.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 40 05 68.23
MISCELLANEOUS VALVES

PART 1 – GENERAL

1.01 THE REQUIREMENT

A. Reference Section 40 05 00 – Basic Mechanical Requirements.

B. Valves intended for chemical service shall be constructed of materials suitable for the intended service.

PART 2 – PRODUCTS

2.01 GLOBE VALVES (NOT USED)

2.02 SOLENOID VALVES (NOT USED)

2.03 BACKFLOW PREVENTION VALVES

A. Backflow preventers shall be as specified or indicated on the Drawings.

2.04 PRESSURE RELIEF, REDUCING AND REGULATING VALVES – NOT USED

2.05 SEWAGE AIR AND VACUUM/PRESSURE AIR RELEASE VALVES (CRV)

A. Combination sewage air and vacuum/pressure air release valve assemblies shall be installed at all the locations specified herein or indicated on the Drawings and shall be installed complete with all appurtenant piping and valves as required for a complete and operable installation. The valves shall be constructed of cast iron with stainless steel float, and all working parts shall be bronze, brass, stainless steel, or other corrosion resistant material. The valves shall be designed for a minimum working pressure of 150 psi and a test pressure of 300 psi. The valves shall include isolation valve and backflushing attachments which shall consist of blow-off valves, quick disconnect couplings, and a minimum of 5 feet of rubber hose suitable for backflushing without dismantling the valve. All air and vacuum valves shall be provided with "soft seating" material to provide drip tight closure at 1 to 65 psig. The exhaust from the valve shall be piped to a suitable disposal point. All valves 1-inch diameter and larger shall have a 1/4-inch min. diameter drain plug.

B. The pressure air release valves shall have a 2-inch (minimum) threaded connection. The pressure air release valves shall have a discharge capacity of 30 scfm, minimum, at a differential pressure range from 3 psi to 65 psi, and an orifice of 1/4-inch diameter, minimum.

C. All internal and external ferrous components and surfaces of the valves, with the exception of stainless steel and finished or bearing surfaces, shall be shop painted with two coats (10 mils min. dry film thickness) of the manufacturer's premium epoxy for corrosion resistance. Damaged surfaces shall be repaired in accordance with the manufacturer's recommendations.

D. The air and vacuum valves and pressure air release valves shall be Model 990 (for 2") or 986 (larger than 2") as manufactured by H-Tec, no substitutions.

2.06 PRESSURE AIR RELEASE VALVE (POTABLE WATER ONLY) (ARV) (NOT USED)

2.07 HOSE VALVES (HV) (NOT USED)

2.08 NEEDLE VALVES (NV) (NOT USED)

2.09 PINCH VALVES – (NOT USED)

2.10 MUD VALVES (MDV) (NOT USED)

2.11 TELESCOPING VALVES (TSV) (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

EXHIBIT B

TOWN OF JUPITER
PUBLIC WORKS - SITE WORK
EPW 2025-31

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1	Indemnification	1	LS	$ 100.00	$ 100.00
2	Mobilization / Demobilization / etc.	1	LS	$ 253,000.00	$ 253,000.00
3	Survey / Control / Record Drawings (As-Builts)	1	LS	$ 14,400.00	$ 14,400.00
4	Temporary Traffic Control	1	LS	$ 2,715.00	$ 2,715.00
5	Stormwater Polution Prevention / Erosion Control	1	LS	$ 2,500.00	$ 2,500.00
6	18" CMP	30	LF	$ 175.00	$ 5,250.00
7	30" CMP	22	LF	$ 200.00	$ 4,400.00
8	15" RCP	390	LF	$ 150.00	$ 58,500.00
9	18" RCP	30	LF	$ 200.00	$ 6,000.00
10	30" RCP	45	LF	$ 300.00	$ 13,500.00
11	Type "C" Ditch Bottom Inlet (2'-0" x 3'-1")	2	EA	$ 10,000.00	$ 20,000.00
12	Storm Manhole 4' Dia. Precast Manhole w/8 Top Slab	1	EA	$ 7,000.00	$ 7,000.00
13	Type "E" Control Structure	1	EA	$ 10,500.00	$ 10,500.00
14	4'x4' Precast Inlet W/8" Top Slab	1	EA	$ 8,000.00	$ 8,000.00
15	8" Precast Concrete Top Slab w/ Concrete Collar	1	EA	$ 6,000.00	$ 6,000.00
16	Install 2" Asphalt (SP-9.5) in two 1" lifts including Pavement Markings	352	TN	$ 270.00	$ 95,040.00
17	Construct 6" Concrete Ramp (20' x 12' x 6"thick')	5	CY	$ 720.00	$ 3,600.00
18	Construct 12" Concrete Slab (102' x 35' x 12"thick)	133	CY	$ 365.00	$ 48,545.00
19	Remove Concrete Slab (60' x 30' x 2'thick edges & 6"thick in center)	109	TN	$ 50.00	$ 5,450.00
20	Remove Concrete Slab (60' x 20' x 1.5'thick edges & 6" thick in center)	82	TN	$ 45.00	$ 3,690.00
21	5" Base Rock	2,465	SY	$ 9.00	$ 22,185.00
22	11" Base Rock	3,300	SY	$ 17.00	$ 56,100.00
23	12" Compacted Subgrade	5,765	SY	$ 5.00	$ 28,825.00
24	Excavate, Prep, Spread & Compact 5" Asphalt Millings (owner provided)	2,465	SY	$ 7.00	$ 17,255.00
25	Site Demolition (Including but not limited to: Slabs, Curbs, Ramps, Fences, Buildings, Pavement, Drainage, Lighting, Trees, Signage and Striping)	1	LS	$ 25,000.00	$ 25,000.00
26	Type FDOT Jersey Barriers	250	LF	$ 132.00	$ 33,000.00
27	Remove Existing & Furnish & Install New Chain Link Fence	825	LF	$ 75.00	$ 61,875.00
28	Construction of Lake Area (Including but not limited to: Cutting & Filling as required, establsihment of Banks & Bottom, & Fine Grading)	1	LS	$ 130,000.00	$ 130,000.00
29	Cut Swale / Grading	515	LF	$ 40.00	$ 20,600.00
30	Clearing & Grubbing	1	LS	$ 20,000.00	$ 20,000.00
31	Irrigation System Restoration	1	LS	$ 10,000.00	$ 10,000.00
32	Furnish and Install Bahia Sod including ground preparation	2,480	SY	$ 9.00	$ 22,320.00

TOWN OF JUPITER
PUBLIC WORKS - SITE WORK
EPW 2025-31

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
33	Signage and Striping, Pavement Markings	1	LS	$ 10,000.00	$ 10,000.00
34	Furnish and Install Bollard	26	EA	$ 300.00	$ 7,800.00
35	Wheel Stop	20	EA	$ 200.00	$ 4,000.00
36	Turbidity Barriers	90	LF	$ 75.00	$ 6,750.00
37	Electrical	1	LS	$ 300,000.00	$ 300,000.00
				TOTAL BID	$ 1,343,900.00

ALTERNATE

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1	Furnish 5" Millings	1,750	SY	$ 14.00	$ 24,500.00
				TOTAL ALTERNATE:	$ 24,500.00

CHECK TOTALS! The Town is not responsible for mathematical errors.

INSTRUCTIONS

Bids must be received no later than the date and time stated in the Advertisement. Bids received after that time & date will not be considered.

This form must be returned with bid. Bids on any other form will not be accepted.

CREATIVE Contracting Group
Company Name

3141 Fortune WAY S-16
Street Address

Wellington FL 33414
City, State, Zip

561- 333- 1445
Telephone

LISA Addis
Name of Authorized Representative (Print)

V.P.
Title

creativecontractor@comcast.net.
E-mail Address

Authorized Signature

BIDDER'S QUALIFICATION STATEMENT

The signatory of the Statement guarantees the truth and accuracy of all statements and of answers to all questions hereinafter made. Failure to complete and return this Statement, or any false statement therein may render a bid non-responsive at the sole discretion of the Town of Jupiter. All portions of the Statement must be completed.

Bid RFB# EPW2025-31
Company Name Creative Contracting Group
Address 3141 Fortune Way S-16, Wellington FL 33414
Telephone 561-333-1445
E-mail Address creativecontractor@comcast.net.

1. If a corporation, please answer the following:
   Date of Incorporation: 10/09/2003
   In what state: Florida
   President's Name: N/A
   Vice President's Name: Lisa Addis
   Secretary's Name: Frank Addis
   Treasurer's Name: N/A

2. If a partnership, please answer the following:
   Date of Organization: N/A
   General or association?
   Name and Address of each general partner

3. If neither a corporation nor partnership, please provide the following information:
   Type of business organization: N/A
   Date of Organization:
   Name and Address of each principal:

4. Name and title of person that will sign contract: Lisa Addis, V.P.

5. Current State of Florida Certified Contractor's License Number Expiration Date
   CGC1513410, 8/31/2026 (see copy next page)

6. Name of license holder/ qualifying agent exactly as it appears on file with the State of Florida's Construction Industry Licensing Board: Lisa M. Addis

7. Current Town of Jupiter Occupational License Number (if applicable):
   Expiration Date: On File, will renew if awarded.

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

ADDIS, LISA M.

CREATIVE CONTRACTING GROUP
3141 FORTUNE WAY
SUITE 16
WELLINGTON FL 33414

LICENSE NUMBER: CGC1513410

EXPIRATION DATE: AUGUST 31, 2026

Always verify licenses online at MyFloridaLicense.com

ISSUED: 07/17/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Sunbiz.org Division of CORPORATIONS an official State of Florida website

Detail by Entity Name

Florida Profit Corporation
E&F FLORIDA ENTERPRISES INC.

Filing Information

Document Number	P03000112054
FEI/EIN Number	20-0261053
Date Filed	10/09/2003
State	FL
Status	ACTIVE

Principal Address

3141 FORTUNE WAY
SUITE 16
wellington, FL 33414

Changed: 05/28/2020

Mailing Address

17682 SEALAKES DRIVE
BOCA RATON, FL 33498

Registered Agent Name & Address

BUDNER, MORDECAI
17682 SEALAKES DRIVE
BOCA RATON, FL 33498

Officer/Director Detail

Name & Address

Title VP

ADDIS, LISA
17682 SEALAKES DRIVE
BOCA RATON, FL 33498

Title Secretary

ADDIS, FRANK
11376 REGATTA LANE
WELLINGTON, FL 33449

Annual Reports

8. DUNS #: 16-289-6646

9. Federal Employer ID # (FEIN): 200261053

10. Are you a Disadvantage Business Enterprise (DBE) or Woman-Owned Business Enterprise (WBE)? Yes ☑ No ☐ If yes, provide Certificate. See Attached next page

11. Are you a small business as defined by the SBA? Yes ☑ No ☐ If yes, number of employees 14

12. Number of years in business under this name: 22.5

13. Number of years in business under other names: N/A

14. How many years' experience in performing the type of work called for in this bid? 22.5

15. In what other lines of business do you or your organization or any partners thereof have financial interests? Real estate Broker.

16. Does your firm have any officer, owner, employee or agent who is also an officer, employee or advisory board member of the Town of Jupiter? Yes ☐ No ☑ If yes, you may not submit a bid (see instructions to bidders).

17. Have you or your organization, or any office or partner thereof, failed to complete a contract? Yes ☐ No ☑

18. Has your organization ever been assessed liquidated damages for failing to complete a Contract within the time specified in the Contract Documents?
Yes ☐ No ☑

19. Has your organization been assessed any penalties for non-compliance violations of the Federal or State Labor laws and/or regulations within the last five (5) years?
Yes ☐ No ☑

20. Does your organization have any outstanding judgments, demands or liens resulting from violating the State Labor laws, the Business and Professions Regulation statutes, Civil or Criminal decisions?
Yes ☐ No ☑

21. Have there been any suits, liens or surety claims against you or your organization over the past five (5) years for non-payment of sums due subcontractors or suppliers for work completed?
Yes ☐ No ☑

22. Has your organization been cited for violations of OSHA standards and requirements within the past 5 years?
Yes ☐ No ☑

WOMAN OWNED BUSINESS CERTIFICATION

The City of West Palm Beach's Minority/Women Business Program

Certifies that

CREATIVE CONTRACTING GROUP

Has met the necessary requirements for certification as a Woman Owned Business under the Minority/Women Business Program as prescribed by the City of West Palm Beach's Ordinance Number 4679-18

The following List of Services and/or Product are covered under this certification:

* * * *

- Construction Services, General

* * * *

Issued by the City of West Palm Beach for a three-year period March 4, 2025 to March 3, 2028

Certificate Vendor Number: 1057134

Frank Hayden
Procurement Official

SMALL BUSINESS CERTIFICATION

The City of West Palm Beach's Small Business Program

Certifies that

CREATIVE CONTRACTING GROUP

Has met the necessary requirements for certification as a Small Business under the Small Business Program as prescribed by the City of West Palm Beach's Ordinance Number 3366-00.

The following List of Services and/or Product are covered under this certification:

* * * *

- Construction Services, General

* * * *

Issued by the City of West Palm Beach for a three-year period March 4, 2025 to March 3, 2028

Certificate Vendor Number: 1057134

Frank Hayden
Director Office of Equal Opportunity

* EMR

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	2024	EMR	.90
YEAR	2023	EMR	.89
YEAR	2022	EMR	.89
YEAR	2021	EMR	.90
YEAR	2020	EMR	.88

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	2024	TRFR	0
YEAR	2023	TRFR	0
YEAR	2022	TRFR	0
YEAR	2021	TRFR	0
YEAR	2020	TRFR	0

Total number of man-hours worked for the last 5 Years:

YEAR	2024	TOTAL NUMBER OF MAN-HOURS	98,600
YEAR	2023	TOTAL NUMBER OF MAN-HOURS	97,300
YEAR	2022	TOTAL NUMBER OF MAN-HOURS	95,500
YEAR	2021	TOTAL NUMBER OF MAN-HOURS	94,700
YEAR	2020	TOTAL NUMBER OF MAN-HOURS	96,200

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	2024	DART	0
YEAR	2023	DART	0
YEAR	2022	DART	0
YEAR	2021	DART	0
YEAR	2020	DART	0

13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

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23. Is either the Bidder or its principals presently debarred, suspended, proposed for disbarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal department or agency? Yes ☐ No ☑

24. Do you have a minimum of five (5) years' experience working on commercial construction projects in the Town of Jupiter? Yes ☑ No ☐

Please explain all questions answered "yes" in questions above on a separate sheet of paper along with this Statement, if necessary.

Bidder must provide proof of a minimum of five (5) projects **similar to this scope of services** (project assignments) performed within the last five years:

Project Name Remembrance Park.
Location 483 Seabrook Rd. TEQUESTA FL 33469
Description of Work Constructed a park from scratch, site work, irrigation, Fencings, Gazebo's, electric, landscaping etc. grading, parking lot, pavers, signage. C-inlets, concrete, asphalt
Date of Contract 4-11-24
Contract Award Amount 1,176,900.00
Contact Person Doug Chambers
Telephone Number 561-768-0483
E-mail Address dchambers@tequesta.org.

Project Name Anchorage Park. DRY STORAGE Renovation.
Location 603 Anchorage dr, NPB FL 33408.
Description of Work renovated 3 large DRY storage Boat lots, including, site work, Fencings, C-inlets, landscaping etc. signage, pollution Baffle, grading, HDPE
Date of Contract 11/24
Contract Award Amount 415,909.00.
Contact Person Jamie mount
Telephone Number 561-296-1077
E-mail Address Jmount@village-npb.org.

Project Name Greenbrier drive Gateway Project.
Location Congress ave + Greenbrier dr, Palm Springs FL.
Description of Work Renovate two large lots + roadway, included, irrigation, Contrete sidewalks, + curbing, grading, two large walls with signs, electric lighting, asphalt roadways, island, landscaping, signage, pavers, etc.
Date of Contract 2-24-25
Contract Award Amount 1,059,900.00
Contact Person Felipe Lofaso
Telephone Number 561-352-5631
E-mail Address flofaso@VPSFL.org.

Project Name JCP&ACP Tennis courts + pickleball conversion.
Location 1201 Island way + 1501 Fredrick Small Rd, Jupiter FL 33458
Description of Work Concrete sidewalks, Handrails, fencing, resurfacing, irrigation, landscaping, pavers, etc.
Date of Contract 10-17-23
Contract Award Amount 349,500.00
Contact Person Scott Sberner
Telephone Number 561-741-2281
E-mail Address Scotts@Jupiter.fl.us.
Project Name

* Numerous other projects performed for TOWN of JUPITER.

Project name: PATHWAYS Parks

Location Avis Rd, Palm Springs
Description of Work over three miles of concrete sidewalks + curbing, driveways, asphalt, pavers, Irrigation, signage, grading, sod, etc
Date of Contract 4/21
Contract Award Amount $12,510.00
Contact Person Andrew Klausner
Telephone Number 561-584-8200 / 8721
E-mail Address AKlausner@vpsfl.org

Authorized Signature

Lisa Addis
Name

V.P.
Title

PUBLIC ENTITY CRIME - SWORN STATEMENT

PURSUANT TO SECTION 287.133(3)(a),FLORIDA STATUES,
ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to Town of Jupiter

by Lisa Addis, V.P

for CREATIVE Contracting Group

whose business address is 3141 Fortune Way S-16

Wellington FL 33414

and (if applicable) its Federal Employer Identification Number (FEIN) is:

200261053

If the entity has no FEIN, include the Social Security Number of the individual signing this sworn Statement: N/A

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), **Florida Statutes**, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), **Florida Statutes**, means a finding or guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), **Florida Statutes**, means:

    1. A predecessor or successor of a person convicted of a public entity crime: or

2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term affiliate includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate which statement applies.]**

☑ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

☐ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

☐ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in public interest to place the entity submitting this sworn statement on the convicted vendor list.
[attach a copy of the final order]

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED, I ALSO

UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____, Lisa Addis, V.P.

[signature]

Sworn to and subscribed before me this 1ST day of April, 2026

Personally known ✓

OR Produced identification N/A Notary Public – State of Florida

My commission expires _____

JOSEPH PATALANO
Notary Public - State of Florida
Commission # HH 264974
My Comm. Expires May 15, 2026
Bonded through National Notary Assn.

_____

(Printed typed or stamped commissioned name notary public)

BID BOND

**This page should be clearly marked with a tab for easy identification during the bid opening process.*

Bidder	**Surety**
Name: E&F Florida Enterprises, Inc. dba Creative Contracting Group Phone: 561-333-1445 Address *(principal place of business)*: 3141 Fortune Way S-16 Wellington, FL 33414	Name: United States Fire Insurance Company Phone: 973-490-6600 Address *(principal place of business)*: 305 Madison Avenue Morristown, NJ 07960
Owner	**Bid**
Name: Town of Jupiter Phone: 561-741-2737 Address *(principal place of business)*: Town Hall 210 Military Trail Jupiter, FL 33458	Project *(name and location)*: Public Works Site Work - ITB #EPW2025-31 3131 Washington Street Jupiter, FL 33458 Bid Due Date: April 2nd, 2026

Bond

Penal Sum: 5% of amount bid — Date of Bond: April 2nd, 2026

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative. Surety affirms it is authorized to do business in the State of Florida, and the Town of Jupiter, and as having an Agent resident therein.

Bidder	Surety
E&F Florida Enterprises, Inc. dba Creative Contracting Group *(Full formal name of Bidder)*	United States Fire Insurance Company *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: LISA Addis *(Printed or typed)*	Name: Brett Rosenhaus *(Printed or typed)*
Title: V.P.	Title: Attorney-In-Fact
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: FRANK A ADDIS *(Printed or typed)*	Name: Julie Caporale *(Printed or typed)*
Title: Secretary.	Title: Witness

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

POWER OF ATTORNEY
UNITED STATES FIRE INSURANCE COMPANY
PRINCIPAL OFFICE - MORRISTOWN, NEW JERSEY

02725

KNOW ALL MEN BY THESE PRESENTS: That United States Fire Insurance Company, a corporation duly organized and existing under the laws of the state of Delaware, has made, constituted and appointed, and does hereby make, constitute and appoint:

Brett Rosenhaus, Dale Belis, Christian Collins

each, its true and lawful Attorney(s)-In-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver: Any and all bonds and undertakings of surety and other documents that the ordinary course of surety business may require, and to bind United States Fire Insurance Company thereby as fully and to the same extent as if such bonds or undertakings had been duly executed and acknowledged by the regularly elected officers of United States Fire Insurance Company at its principal office, in amounts or penalties: **Unlimited**

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein, and they have no authority to bind United States Fire Insurance Company except in the manner and to the extent therein stated.

This Power of Attorney is granted pursuant to Article IV of the By-Laws of United States Fire Insurance Company as now in full force and effect, and consistent with Article III thereof, which Articles provide, in pertinent part:

> Article IV, Execution of Instruments - Except as the Board of Directors may authorize by resolution, the Chairman of the Board, President, any Vice-President, any Assistant Vice President, the Secretary, or any Assistant Secretary shall have power on behalf of the Corporation:
>
> (a) to execute, affix the corporate seal manually or by facsimile to, acknowledge, verify and deliver any contracts, obligations, instruments and documents whatsoever in connection with its business including, without limiting the foregoing, any bonds, guarantees, undertakings, recognizances, powers of attorney or revocations of any powers of attorney, stipulations, policies of insurance, deeds, leases, mortgages, releases, satisfactions and agency agreements;
> (b) to appoint, in writing, one or more persons for any or all of the purposes mentioned in the preceding paragraph (a), including affixing the seal of the Corporation.
>
> Article III, Officers, Section 3.11, Facsimile Signatures. The signature of any officer authorized by the Corporation to sign any bonds, guarantees, undertakings, recognizances, stipulations, powers of attorney or revocations of any powers of attorney and policies of insurance issued by the Corporation may be printed, facsimile, lithographed or otherwise produced. In addition, if and as authorized by the Board of Directors, dividend warrants or checks, or other numerous instruments similar to one another in form, may be signed by the facsimile signature or signatures, lithographed or otherwise produced, of such officer or officers of the Corporation as from time to time may be authorized to sign such instruments on behalf of the Corporation. The Corporation may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Corporation, notwithstanding the fact that he may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, United States Fire Insurance Company has caused these presents to be signed and attested by its appropriate officer and its corporate seal hereunto affixed this 4th day of April, 2025.

UNITED STATES FIRE INSURANCE COMPANY

Matthew E. Lubin, President

State of New Jersey }
County of Morris }

On this 4th day of April, 2025, before me, a Notary public of the State of New Jersey, came the above named officer of United States Fire Insurance Company, to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seal of United States Fire Insurance Company thereto by the authority of his office.

ETHAN SCHWARTZ
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMMISSION EXPIRES 6/25/2029
COMMISSION: #50223171

Ethan Schwartz (Notary Public)

I, the undersigned officer of United States Fire Insurance Company, a Delaware corporation, do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy is still in force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of United States Fire Insurance Company on the 2nd day of April 20 26

UNITED STATES FIRE INSURANCE COMPANY

Michael C. Fay, Senior Vice President

CONTACT INFORMATION: Bond Verifications: surety@cfins.com / Claims: SuretyClaimsSupport@cfins.com

BID BOND (CONTINUED)

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds, Power of Attorney(s), and Certificate(s) of Insurance required by the Bidding Documents.
3. This obligation will be null and void if:
   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds, Power of Attorney(s), and Certificate(s) of Insurance required by the Bidding Documents, or
   3.2. All Bids are rejected by Owner, or
   3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

List of Subcontractors/Suppliers

The Bidder shall list below the name and location of the place of business of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the Work or improvement, or a subcontractor licensed by the State who, under subcontract to the prime contractor, specially fabricates and installs a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of two percent (2%) of the prime contractor's total bid. Failure to comply with requirements may render the Bid non-responsive and may cause its rejection. If Prime Contractor will self-perform any of the work listed below is shall be indicated as self-perform under Subcontractor License Number.

Work to be Performed	Subcontract or License Number	Percent of Total Contract	Subcontractor's Name & Address
Plumbing	CAC-1816882	10%	Romark A/C + Plumbing 1732 S Congress Ave, S-292 Palm Springs FL 33461
Electric	EC-13007360	22.3%	Kase Services LLC 8185 Via Ancho Rd. Boca Raton FL 33433
Asphalt	U-20333	13%	Arc American Asphalt 4311 Okeechobee Blvd # 46 WPB FL 33409

Note: Provide licenses, certifications, experience, and qualification forms for those subcontractors listed above. Attach additional pages as needed.

CREATIVE CONTRACTING GROUP

3141 FORTUNE WAY SUITE 16
WELLINGTON, FL 33414
561-333-1445 / USECCG.COM
Lic # CGC1513410

SUBSCONTRACTORS EXPERIENCE

Kaje Services LLC, 24 years of experience

Romar A/C & Plumbing Inc, 19 years of experience

All American Asphalt, 22 years of experience

Thanks,

Lisa Addis V.P.

Attachment 1 - Resolution 31-26 with Contract

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

ELECTRICAL CONTRACTORS' LICENSING BOARD

THE ELECTRICAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

SOLENDER, SEAN BRIAN

KAJE SERVICES LLC.
8185 VIA ANCHO RD UNIT 880848
BOCA RATON FL 33488

LICENSE NUMBER: EC13007360

EXPIRATION DATE: AUGUST 31, 2026

Always verify licenses online at MyFloridaLicense.com

ISSUED: 09/13/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE PLUMBING CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

YODER, ROBERT DANIEL

ROMARK A/C & PLUMBING LLC
421 LOS ALTOS RD
PALM SPRINGS FL 33461

LICENSE NUMBER: CFC1427574

EXPIRATION DATE: AUGUST 31, 2026

Always verify licenses online at MyFloridaLicense.com

ISSUED: 08/29/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Palm Beach County

(561) 233-5525

Planning, Zoning & Building Department
Contractor Regulations Division
2300 N. Jog Road, 2nd Floor, Suite 2W-61
West Palm Beach, FL 33411

GEORGE S STEVENS
1645 PALM BEACH LAKES BLVD
SUITE 1200
WEST PALM BEACH, FL 33401

Congratulations on obtaining your **PAVING INSTALLER** registration in Palm Beach County.

Richard Torrance, Director

Installer Number	Type of Installer
I-20333	PAVING INSTALLER

The individual named below was duly certified as a [trade] under the Standards and Certified Trades, pursuant to Special Act Chapter 67-1876, Laws of Florida, as amended and required by state statute. Effective July 1, 2025, House Bill 735 preempts this trade classification, placing it under the occupational-licensing framework. This installer registration attests that the individual demonstrated

NAME : GEORGE S STEVENS

FIRM : ALL AMERICAN ASPHALT LLC

DBA :

1645 PALM BEACH LAKES BLVD

SUITE 1200

WEST PALM BEACH, FL 33401

Issued : 09/26/2023

Expiration date: 09/30/2026

CONTRACTOR E-VERIFY AFFIDAVIT

I hereby certify that Creative Contracting Group does not employ, contract with, or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.

All employees hired on or after January 1, 2021 have had their work authorization status verified through the E-Verify system.

A true and correct copy of Creative Contracting Group proof of registration in the E-Verify system is attached to this Affidavit.

Print Name: Lisa Addis

Date: 4-1-26

STATE OF FLORIDA

COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me by means of/physical presence or / online notarization, this 4-1-26 (date) by Lisa Addis, V.P. (name of officer or agent, title of officer or agent) of Creative Contracting Group (name of contractor company acknowledging), a Florida (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced n/a (type of identification) as identification.

[Notary Seal]

JOSEPH PATALANO
Notary Public - State of Florida
Commission # HH 264974
My Comm. Expires May 15, 2026
Bonded through National Notary Assn.

Notary Public

Joseph Patalano

Name typed, printed or stamped

My Commission Expires: 5/15/26

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 1634027

Information Required for the E-Verify Program Information relating to your Company:	
Company Name	E & F Florida Enterprises Inc
Company Facility Address	3141 Fortune Way SUITE 16 Wellington, FL 33414
Company Alternate Address	3141 Fortune Way SUITE 16 Wellington, FL 33414
County or Parish	PALM BEACH
Employer Identification Number	200261053
North American Industry Classification Systems Code	236
Parent Company	
Number of Employees	5 to 9
Number of Sites Verified for	1 site(s)

Form Acknowledged. To be processed if awarded Bid.

PERFORMANCE BOND

Contractor	**Surety**
Name:	Name:
Phone:	Phone:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: Town of Jupiter	Description *(name and location)*:
Phone: 561-741-2737	
Mailing address *(principal place of business)*:	
Town Hall 210 Military Trail Jupiter, FL 33458	Contract Price: _____ Effective Date of Contract: _____

Bond Number: _____

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form: ☐ None ☒ See Paragraph 17

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

Acknowledged, To be processed upon award.

PAYMENT BOND

Contractor	Surety
Name: Phone: Address (principal.place.of.business):	Name: Phone: Address (principal.place.of.business):
Owner Name: Town of Jupiter Phone: 561-741-2737 Mailing address (principal.place.of.business): Town Hall 210 Military Trail Jupiter, FL 33458	**Contract** Description (name.and.location): Contract Effective Date of Contract:

Bond Number: _____

Bond _____

Date of Bond: _____

(Date.of.Bond.cannot.be.earlier.than.Effective.Date.of.Contract)

Modifications to this Bond form: ☐ None ☒ See Paragraph 19

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ (Full.formal.name.of.Contractor)	_____ (Full.formal.name.of.Surety).(corporate.seal)
By: _____ (Signature)	By: _____ (Signature)(Attach.Power.of.Attorney)
Name: _____ (Printed.or.typed)	Name: _____ (Printed.or.typed)
Title: _____	Title: _____
Attest: _____ (Signature)	Attest: _____ (Signature)
Name: _____ (Printed.or.typed)	Name: _____ (Printed.or.typed)
Title:	Title:

Notes¿(7).Provide.supplemental.execution.by.any.additional.parties?such.as.joint.venturers¡.(8).Any.singular.reference.to.Contractor?Surety?Owner?or.other.party.is.considered.plural.where.applicable¡

ADDENDUM NO. 1
Architect and Building Envelope Continuing Services
Contract No. EPW 2026-12
March 12, 2026

By: Dereck Winning, Engineering Project Manager

The following modifications and clarifications are being made to the subject Request for Proposal (RFQ) for the above referenced project:

1. The Non-Mandatory Pre-Bid Meeting has been Rescheduled for Tuesday, March 17, 2026 at 2:00 PM EST at 3131 Washington St, Jupiter, FL. We will meet outside the main entrance gate.

This is the end of Addendum Number 1.

ADDENDUM NO. 2
Public Works Site Work
Contract No. EPW 2025-31
March 23, 2026

By: Dereck Winning, Engineering Project Manager

The following modifications and clarifications are being made to the subject Request for Proposal (RFQ) for the above referenced project:

1. The bid opening date due date has been changed to 2:00 P.M. (EST), Thursday, April 2, at the same location, in the Town of Jupiter Community Room, Room 108 at 210 Military Trail, Jupiter, FL 33458.

This is the end of Addendum Number 2.

ADDENDUM NO. 3
Public Works Site Work
Contract No. EPW 2025-31
March 24, 2026

By: Dereck Winning, Engineering Project Manager

The following modifications and clarifications are being made to the subject Request for Proposal (RFQ) for the above referenced project:

1. The bid opening date due date has been changed to 1:30 P.M. (EST), Thursday, April 2, at the same location, in the Town of Jupiter Community Room, Room 108 at 210 Military Trail, Jupiter, FL 33458.

This is the end of Addendum Number 3.

ADDENDUM NO. 4
Public Works Site Work
Contract No. EPW 2025-31
March 25, 2026

By: Dereck Winning, Engineering Project Manager

The following modifications and clarifications are being made to the subject Request for Proposal (RFQ) for the above referenced project:

1) Question: Will you be extending the due date and coming out with an addendum?
    a. Response: Yes, the bid opening date was extended. This is the addenda following the site meeting and questions sent in.

2) Question: Is there a budget/engineers estimate for this?
    a. Response: Yes. Posted on the project advertisement for this project, last section entitled "Project Budget." = $1.2 million

3) Question: There are water and sewer plans but no bid items. Are the water and sewer part of this bid?
    a. Response: The water and sewer work have already been completed and are no longer part of this project's scope. Please refer to the redlined drawing set that is part of this addendum along with the updated bid form. The installation of the 8" water main, fire hydrant, and water services to Bldg – B were previously completed.

4) Question: Plans show 11" baserock for paved areas. Bid item shows 8" baserock. Which one is correct?
    a. Response: 11" of baserock. Please refer to updated bid form.

5) Question: Plans call for 5" baserock. There is no bid item for this.
    a. Response: Please refer to updated bid form.

6) Question: Bid item unit of measure for 8" base is stated as CY. Should this be SY?
    a. Response: Yes. Please refer to updated bid form. The 8" has been revised to 5" and 11".

7) Question: Bid item unit of measure for compacted subgrade is stated as CY. Should this be SY?
    a. Response: Yes. Please refer to updated bid form.

8) Question: I was told at the pre bid meeting that the electrical had already been completed. Should this bid item No. 35 be deleted?
    a. Response: FP&L is in process of installing new transformer and underground lines from existing FPL TX to new FP&L transformer (refer to electrical site plan for additional info). The underground portion of FP&L work between the existing transformer and the new transformer, including the construction of the new FP&L transformer concrete pad, are in the process of being completed and excluded from this scope of work. All remaining site electrical work specified in the electrical drawings and specifications, are part of this project's scope of work and shall be included with each final bid package.

9) Question: Will the town pay all permit fees?
    a. Response: No. The permit fees from the Town Building Dept. & Engineer Dept. along with SFWMD have been paid by the Town. All other permits are responsibility of GC.

10) Question: Will the town pay for testing?
    a. Response: Yes.

11) Question: Please provide a typical section of the proposed stabilized gravel area. (Is it 5" milling base on a compacted subgrade?)
    a. Response: Yes. It is 5" milling on 12" compacted subgrade. Refer to updated note on redlined drawing set, sheet CS-01.

12) Question: We estimate the following quantities for the below listed bid items:
    a. 2" asphalt 352 Tons
    b. 8" Baserock 3200 SY
    c. 5" Millings 1750 SY
    d. 12" compacted subgrade 4350 SY

    Please check your quantities

    Response: Refer to updated bid form.

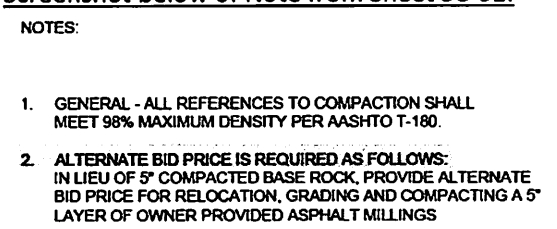
13) Question: Are all items in drawings and bid form to be included in our bid?
    a. Response: Refer to redlined drawings & notes, along with the updated bid form included with this addendum help determine what portions of work have been removed/revised.

14) Statement: Refer to Addenda No. 4 attachments for recent soil boring samples/geotechnical report for retention area of site.

15) Statement: propose adding vehicular access gate to retention area from paved area. Include ability to lock/secure gate when not in use and when site is closed.

16) Option 2 – Alternative Access Option: As part of means & methods you can propose using alternative road access from east of site off Limerock Creek Road to access retention pond area. GC is responsible for any PB County temporary road access permits, protecting site by laying down base rock along access path, cleaning up and restoration of alternate access route. GC to provide video footage prior to and after using alternative access route.

17) Question: Should we provide an alternative bid price using millings by owner?
    a. Response: Yes. Refer to note on sheet SC-01.
        i. Screenshot below of Note from Sheet SC-01:


NOTES:

1. GENERAL - ALL REFERENCES TO COMPACTION SHALL MEET 98% MAXIMUM DENSITY PER AASHTO T-180.
2. ALTERNATE BID PRICE IS REQUIRED AS FOLLOWS: IN LIEU OF 5" COMPACTED BASE ROCK, PROVIDE ALTERNATE BID PRICE FOR RELOCATION, GRADING AND COMPACTING A 5" LAYER OF OWNER PROVIDED ASPHALT MILLINGS

18) Question: Is there a list of attendees for the non-mandatory pre-bid meeting?
    a. Response: Yes. Please see attached list.

This is the end of Addendum Number 4.

ADDENDUM NO. 5
Public Works Site Work
Contract No. EPW 2025-31
March 27, 2026

By: Dereck Winning, Engineering Project Manager

The following modifications and clarifications are being made to the subject Request for Proposal (RFQ) for the above referenced project:

1. Question: Please confirm the new 8'h fence fabric. The perimeter is 10'h with 3 strands of barbed wire, are we to price 8'h galvanized with barbed wire?
    a. Response: The new 8' high metal fence shall be 6-gauge galvanized chain link fence with three (3) strand barbed wire at the top, using round metal galvanized posts. The existing perimeter fencing is 7'-6"h with three (3) strands of barbed wire.

This is the end of Addendum Number 5.

BID TABULATION
Public Works Site Work
Contract/Bid Number: EPW 2025-31
TOWN OF JUPITER

Contractor Name & Address	Total Base Bid Sum	Reviewed Calculated Bid
BDI Marine Contractors LLC.	$1,552,315.00	$1,552,315.00
West Construction, Inc.	$2,174,285.90	$2,174,285.90
GRSC Inc.	$1,815,545.00	$1,815,545.00
Intercounty Engineering, Inc. 1540 North Powerline Rd Pompano Beach, FL 33069	$3,870,065.00	$3,870,065.00
Creative Contracting Group	$1,343,900.00	$1,343,900.00
SoCal Shaker Plates & Construction Site Services LLC dba National General Construction 643 US Hwy 1 Unit 13094 North Palm Beach, FL 33408	$1,511,320.00	$1,511,320.00
JW Cheatham LLC 7396 Westport Place West Palm Beach, FL 33413	$1,532,108.25	$1,532,108.25

TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
2025 - 2029

Project Name:	**Department:**	
Public Works Maintenance Facilities Renovations	Engineering	
Link to Strategic Plan/Strategic Result:	**Project #:**	**Projected In-Service Date:**
Organizational Excellence	E2200	2025

Project Description and Justification:

Project Description: This scope of work expands the compound fence, provides additional graded base rock area for outdoor storage, constructs a 4,500 SF structure with one air conditioned bay, constructs a three bay metal storage structure, demolishes existing pole barn, constructs a open air area for storage of equipment/materials, constructs bulk material bins, a larger diesel storage tank for Town vehicles, and provides the stormwater infrastructure to support these facilities. This project also modifies the existing Public Works Storage Building to add a backup generator, additional insulation as needed, and air conditioned office space. This project also provides a master plan of the maintenance complex, reviewing all functions and department spaces which operate in the area so the Town can plan for future renovations and space needs.

Justification: The Town's growth has led to the need for additional office and equipment/material storage within the Maintenance Complex. This project provides office space and dry storage/protection from the elements for various valuable materials/equipment and a segregated storage location for various materials; base rock, crusher stone, and sand as well as spoil or waste (such as damaged concrete sidewalks).

Fiscal Yr	**Scope**	**Budget**
2025	**Construction:** Construction compound fence, provides additional graded base rock area for outdoor storage, constructs a 4,500 SF structure with one air conditioned bay with office space, constructs a three bay metal storage structure, demolishes existing pole barn, constructs a open air area for storage of equipment/materials, add air conditioning and office space to one bay of exisiting metal building, constructs bulk material bins, a larger diesel storage tank for Town vehicles, and provides the stormwater infrastructure to support these facilities. The work also includes field office upgrades.	$2,075,000
2026		
2027		
2028		
2029		

Project Photo(s) / Map of Location





TOWN OF JUPITER
COMMUNITY INVESTMENT PROGRAM
FINANCIAL INFORMATION
2025 - 2029

Project Name:	**Department:**
Public Works Maintenance Facilities Renovations	Engineering
Link to Strategic Plan/Strategic Result:	**Project #:**
Organizational Excellence	E2200

Project Budget:	**Prior to 2025**	**2025**	**2026**	**2027**	**2028**	**2029**	**Total**
Land acquisition	$0	$0	$0	$0	$0	$0	$0
Planning / Design	$0	$0	$0	$0	$0	$0	$0
Engineering	$364,746	$0	$0	$0	$0	$0	$364,746
Construction	$0	$2,075,000	$0	$0	$0	$0	$2,075,000
Equipment	$40,000	$0	$0	$0	$0	$0	$40,000
Other	$0	$0	$0	$0	$0	$0	$0
Total Budget	**$404,746**	**$2,075,000**	**$0**	**$0**	**$0**	**$0**	**$2,479,746**

Funding Sources:	**Prior to 2025**	**2025**	**2026**	**2027**	**2028**	**2029**	**Total**
General revenues	$404,746	$0	$0	$0	$0	$0	$404,746
Impact fees	$0	$0	$0	$0	$0	$0	$0
Surtax proceeds	$0	$2,075,000	$0	$0	$0	$0	$2,075,000
Escrow & deposits	$0	$0	$0	$0	$0	$0	$0
Grant revenues	$0	$0	$0	$0	$0	$0	$0
Stormwater revenues	$0	$0	$0	$0	$0	$0	$0
Stormwater R&R funds	$0	$0	$0	$0	$0	$0	$0
Water R & R funds	$0	$0	$0	$0	$0	$0	$0
Off-site fees	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$404,746**	**$2,075,000**	**$0**	**$0**	**$0**	**$0**	**$2,479,746**

Previous Years:	**Prior to FY 2020**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**Total**
Amount Budgeted	$0	$0	$0	$20,000	$186,000	$198,746	$404,746
Amount Expended	$0	$0	$0	$0	$0	$4,779	$4,779
Balance							**$399,967**

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 24, 2026

Re: Procurement Review Memo – Resolution 31-26 Contract EPW2025-31 award to Creative Contracting Group for Public Works Site (3131 Washington Street)

Upon review of Resolution No. 31-26 to award contract EPW2025-31 to Creative Contracting Group for the Public Works Site Work Project (3131 Washington Street) in the amount of $1,343,900.00, I have found that the procurement meets all requirements of F.S 255.20.

The procurement was competitively solicited as an Invitation to Bid and the Recommendation to Award is being made to the lowest responsible and responsive bidder.

Resolution No. 31-26 and Contract EPW2025-31 complies with all Federal, State, County, and Local procurement requirements, including Town of Jupiter Procurement Polices and Florida State Statutes.

TOWN OF JUPITER

Contract for Supplying Sulfuric Acid

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Amanda Barnes, Utilities Director
SUBJECT	Resolution 41-26: Approving a contract with Interacid North America, Inc. for Supplying Sulfuric Acid (W2604L) for a unit price of $338 per ton.

EXECUTIVE SUMMARY

Resolution 41-26 provides for award of a contract to Interacid North America, Inc. (Interacid) to supply sulfuric acid (W2604L) to Jupiter's water treatment plant for a unit price of $338 per ton including freight, for an estimated total value of $1,700,985 for the initial 495-day term (May 23, 2026, through September 30, 2027). The proposed contract contains provisions for unit price adjustment on a semiannual basis (every 6 months) based on the U.S. Department of Labor (USDOL) Bureau of Labor Statistics (BLS) Producer Price Index (PPI) for sulfuric acid. The contract also contains provisions for annual renewal for up to 2 individual and consecutive 1-year terms, by written amendment and mutual agreement by both parties.

Sulfuric acid is utilized in various water treatment processes for pH adjustment. The Town's water treatment plant introduces 98% sulfuric acid in multiple locations of its processes, including 1) before the nanofiltration (NF) membranes to optimize membrane performance, 2) after NF and reverse osmosis (RO) membrane treatment to facilitate hydrogen sulfide gas removal and 3) in the RO concentrate treatment facility.

The Town's existing contract to supply sulfuric acid (W2604B) for $228.20 per ton (including freight) with Shrieve Chemical Company (Shrieve) commenced on October 1, 2025, for a 1-year term. Nearly 4 months later, on January 23, 2026, staff was notified by Shrieve of its decision to cancel the contract due to challenging supply demands and rising prices for the raw materials used to produce sulfuric acid. The existing contract does not contain provisions for price adjustment and cancellation is allowed with a 120-day advance written notice, which Shrieve provided. Shrieve is honoring their commitment to continue to supply 98% sulfuric acid to the Town's water plant at the contract unit price through the 120-day notice period, which ends on May 23, 2026, and is therefore not in default of their contract.

A contract to supply 98% sulfuric acid was re-bid and on March 17, 2026, one bid was received from Shrieve for a unit price of $345 per ton, including freight. The bid was rejected, and the contract was re-bid for a 2nd time on April 2, 2026, in an attempt to obtain multiple competitive bids. The 2nd re-bid also resulted in one bid, though from a different bidder, Interacid North America, for a unit price of $338 per ton, including freight. A detailed bid tabulation for both rebids is provided as an attachment for comparison purposes, though the March 17, 2026, bid was rejected. In accordance with provisions of the Town's Procurement

Policy, an award to a sole bidder may proceed if it is not practical to re-bid, or if the bid price is determined to be competitive, fair and reasonable, or if there is sufficient reason to believe that a rebid will not generate additional competitive bids. Rebidding the contract a 3rd time is not expected to generate additional bids. Interacid's bid pricing is the lowest of the two recent bids received.

Town Council's consideration of awarding a contract to Interacid based on their April 2, 2026, bid is requested. Interacid's bid was reviewed and found to be responsive to the bid requirements. Interacid's total bid unit price is 2% lower than Shrieve's rebid price and 48% higher than the existing contract unit price. Factors contributing to the large price increase for sulfuric acid include a shortage of sulfur raw material supplies due to constraints on exports from other countries and strong demand for sulfur from the fertilizer and EV battery industries forcing sulfuric acid producers to raise prices to maintain margins. Graphs illustrating the historical trend in sulfuric acid pricing according to the PPI and the Town's acid supply contracts are attached.

Anticipated total expenditures for sulfuric acid under the proposed contract for the remainder of fiscal year (FY) 2026 are estimated to be $446,723. Funding for the remainder of FY 2026 is appropriated and available in the FY 2026 Water Utility operating budget as indicated in the Funding Source table at the end of this executive summary. Total expenses for FY 2027 are estimated to be $1,254,262 without consideration of unit price adjustments. Funds will be budgeted in the FY 2027 Water Utility operating budget and subject to Town Council appropriation. It is important to note that the quantities for acid supply presented in the proposed contract are estimated for bid purposes based on historical use and actual quantities may differ depending on treatment process needs.

The Town Attorney has reviewed the attached contract and finds it to be in acceptable form. Approval of this item will authorize the Mayor to sign the contract on the Town's behalf.

ANALYSIS

The existing contract to supply sulfuric acid for FY 2026 was canceled by the supplier and will terminate on May 23, 2026. A new contract was advertised and re-bid twice with one bid being received each time. Town Council approval to award a contract to Interacid North America for supplying 98% sulfuric acid (W2604L) to the Town's water plant is requested based on Interacid's bid submitted on April 2, 2026, for a unit price of $338 per ton, including freight and an initial contract term of 495 days (May 23, 2026, through September 30, 2027). Interacid's bid is responsive to the bid requirements and suitable for award. Total expenditures under the proposed contract for the remainder of FY 2026 are estimated to be $446,723 and funding is available in the FY 2026 Water Utility Enterprise fiscal year operating budget. Estimated total expenses for sulfuric acid in FY 2027 are estimated to be $1,254,262 without consideration of cost adjustment. Funds will be budgeted in the FY2027 Water Utility Enterprise operating budget and subject to Town Council appropriation. The proposed contract contains provisions for biannual (every 6 months) unit price adjustment based on the USDOL BLS PPI specific to sulfuric acid and annual renewal for up to 2 individual and consecutive 1-year terms.

STRATEGIC PRIORITY

- Fiscal Responsibility
- Safety

ATTACHMENTS

1. Resolution 41-26
2. Bid Tabulation
3. Historical Sulfuric Acid Pricing
4. Interacid's Bid
5. Draft Contract between Town and Interacid
6. Procurement Review Memo

FUNDING SOURCE

Amount of this Request	$ 446,723 $1,254,262 $1,700,985	FY2026 (5/23/26-9/30/26) FY2027 (10/1/26-9/30/27) Total
Amount Approved in Budget	$ 446,723	Sources: FY2026 Operating Budget - Water Plant Chemical Accounts
Additional Funding Requested*	$1,254,262	FY2027 Subject to Appropriation

*Funds for FY2027 and subsequent renewal terms will be subject to Town Council appropriation of fiscal year operating budget funds.

For more information or to request attachments, please contact Haley Johnson at HaleyJ@jupiter.fl.us and/or 561-741-2469.

RESOLUTION NO. 41-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE A CONTRACT FOR SUPPLYING SULFURIC ACID TO THE TOWN'S WATER TREATMENT PLANT

WHEREAS, the Town of Jupiter (Town) is a municipality with those powers and responsibilities enumerated by Chapter 166, Florida Statutes and the Florida Constitution; and

WHEREAS, the Town is empowered to enter into contractual arrangements with public agencies, private corporations, or other persons, pursuant to Florida Statutes; and

WHEREAS, the Town of Jupiter Utility System currently owns and maintains a 13.7 million gallon per day (mgd) reverse osmosis water treatment facility, a 14.5 mgd nanofiltration water treatment facility, and a 1.8 mgd anion exchange water treatment facility each of which use various chemicals in the treatment process; and

WHEREAS, the Town of Jupiter has prepared and competitively bid a contract which sets forth the scope of work and responsibilities of the chemical supplier; and

WHEREAS, the lowest responsive bid received by the Town on April 2, 2026, for supplying sulfuric acid was submitted by Interacid North America, Inc. (Interacid) in an amount of $338 per ton, estimated to be $1,700,985 for the initial 495-day term, based on an estimated demand of 305 tons per month; and

WHEREAS, the bid for supplying sulfuric acid submitted by Interacid is responsive to the bid requirements and suitable for award for the initial contract term, beginning May 23, 2026 and ending September 30, 2027; and

WHEREAS, the Town has budgeted funds in the Water Enterprise Fiscal Year 2026 Operating Budget for the supply of sulfuric acid as part of this contract for the remainder of FY2026. Funds for FY2027 and future possible renewal terms will be subject to Town Council appropriation of fiscal year operating budgets.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA:

Section 1. The contract between the Town of Jupiter and Interacid North America, Inc. for supplying sulfuric acid (W2604L) to the Town's Water Utility, is hereby accepted.

Section 2. The Mayor is authorized and directed to execute said contract on behalf of the Town.

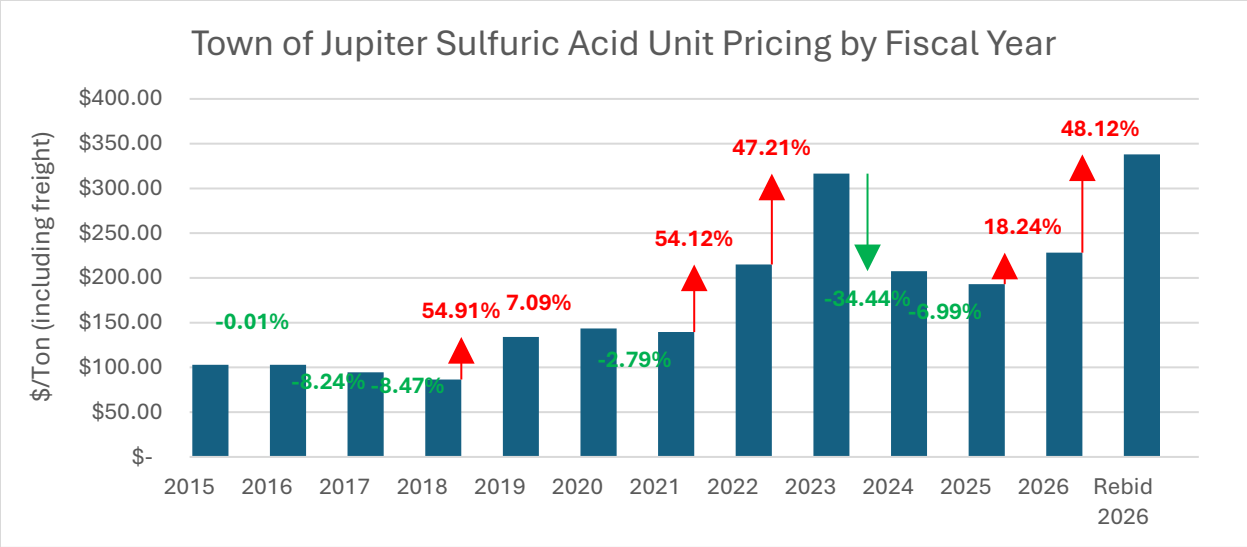
Section 3. Upon the acceptance and execution of the contract, Interacid shall be responsible for carrying out all responsibilities which have been established therein.

Section 4. This Resolution shall take effect immediately upon its execution.

5/5/2026

Town of Jupiter Utilities
Contract for Supplying Sulfuric Acid Re-bid (W2604L & W2604K)

SUPPLIER				INTERACID NORTH AMERICA, INC. 4/2/2026 Bid Opening		SHRIEVE CHEMICAL COMPANY, LLC 3/17/2026 Bid Opening	
ITEM NO.	ITEM DESCRIPTION	ESTIMATED MONTHLY QUANTITY	UNIT	UNIT PRICE	EXTENDED VALUE	UNIT PRICE	EXTENDED VALUE
BID ITEMS							
1	Sulfuric Acid Unit Price (F.O.B.)	305	tons	$278.00	$84,790.00	$282.49	$86,159.45
2	Freight (F.O.B.)	305	tons	$60.00	$18,300.00	$62.51	$19,065.55
Total Bid Unit Price including Freight (F.O.B.) ($/ton): (Item Nos. 1+2) =				**$338.00**	**$103,090.00**	**$345.00**	**$105,225.00**
Total Estimated 16-month Value w/o Cost Adjustment=					**$1,649,440.00**		**$1,683,600.00**
Total Estimated Value for the Initial 495 Day Term w/o biannual unit price adjustment =					**$1,700,985.00**		**$1,736,212.50**

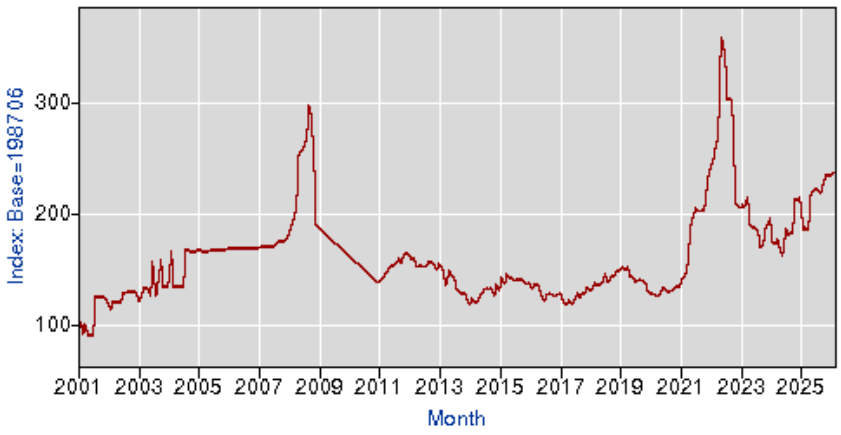


Data extracted on: April 16, 2026 (1:19:34 PM)

PPI Commodity Data from U.S. Bureau of Labor Statistics www.bls.gov

PPI Commodity Data

Series Id: WPU0613020T1
Not Seasonally Adjusted
Series Title: PPI Commodity data for Chemicals and allied products-Sulfuric acid, not seasonally adjusted
Group: Chemicals and allied products
Item: Sulfuric acid
Base Date: 198706



BID PROPOSAL

Bidding Company Name: Interacid North America, Inc.

Town of Jupiter Utilities
210 Military Trail
Jupiter, FL 33458

Gentlemen:

The undersigned, as Bidder, hereby declares that the only Persons, company, or parties interested in the Proposal or the Contract to be entered into, as principals, are named herein; and that this Proposal is made without connection with any other person, company, or parties making a Bid or Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

That the Bidder has carefully and to his full satisfaction examined the attached Instructions to Bidders, detailed Specifications, and that Bidder has read all addenda issued prior to the opening of Bids; and that Bidder has fully examined the site and the project documents and hereby agrees to furnish, unless otherwise provided, all implements, machinery, equipment, transportation, tools, materials, supplies, labor and other things necessary to fulfill the requirements of the proposed contract to:

> Supply the Town of Jupiter Utilities Water Treatment Plant with 98% sulfuric acid for use in the treatment of drinking water in accordance with the bid/contract documents, for a period of 495 days, beginning May 23, 2026 through September 30, 2027, with the option to renew the contract for up to two (2) individual and consecutive one (1) year terms, with semiannual price adjustments in accordance with contract provisions.

It is proposed that the contract herein described shall be supplied for the guaranteed Unit Prices as follows, all in accordance with the requirements and provisions of the Bidding/contract Documents. Quantities provided are one (1) month estimates, based on projected water production demands. Actual quantities supplied under this contract may be less than or exceed the estimated quantities below. Owner will only pay for actual quantities supplied and found to be acceptable, in Owner's sole opinion. Bidder must complete the Bid Form in its entirety. Bid pricing quoted in the sealed Bids shall be firm and guaranteed for the contract term.

The undersigned further declares that Supplier proposes to furnish the item(s) called for within the specified time in this Proposal for the Unit Prices stated on the Bid Form-Bid Schedule of Values. If awarded the Contract, the undersigned agrees to supply and deliver chemicals in accordance with the terms and conditions included in the Bidding Documents and all addenda, including but not limited to honoring bid unit pricing and accepting allowable price adjustments as described therein for the full duration of the contract. The Bidding Documents and addenda will form the basis of the Contract Documents.

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BID SCHEDULE OF VALUES (BID FORM)
CONTRACT FOR SUPPLYING SULFURIC ACID RE-BID (W2604L)

SUPPLIER NAME: Interacid North America, Inc.

ITEM NO.	ITEM DESCRIPTION	ESTIMATED MONTHLY QUANTITY	UNIT	UNIT PRICE	EXTENDED VALUE
Delivery Location: Jupiter Water Treatment Plant, 17403 Central Boulevard, Jupiter, FL 33458					
1	Sulfuric Acid Unit Price (F.O.B.)	305	tons	$278.00	$84,790.00
2	Freight (F.O.B.)	305	tons	$60.00	$18,300.00
	Total Bid Unit Price including Freight (F.O.B.) ($/ton) (Item Nos. 1+2):			$338.00	$103,090.00
	Total Estimated Value for the Initial 16-Month Term without consideration of unit price adjustment (Monthly Extended Value x 16) =				$1,649,440.00

Total Bid Unit Price including Freight (F.O.B) ($/Ton) in Words: Three hundred and thirty eight dollars

Total Estimated Monthly Extended Value including Freight (based on 305 tons) in Words:

One hundred three thousand ninety dollars

Total Estimated Value for the Initial 16-Month Term, including Freight without consideration of unit price adjustment (based on 4,880 tons) in Words:

One million six hundred forty-nine thousand, four hundred and forty dollars

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QUALIFICATION REQUIREMENTS

(Complete these pages entirely and include with Sealed Bid.)

THE UNDERSIGNED GUARANTEES THE TRUTH AND ACCURANCY OF ALL STATEMENTS AND ANSWERS HEREIN CONTAINED:

A. Any information for which OWNER cannot corroborate is grounds for rejection of Bid. (Use additional sheets as needed to provide the required information.)

1. State the numbers of years your organization has been doing business in the State of Florida: 37 Years

2. Has Bidder ever failed to fulfill its contractual obligations satisfactorily under a previous contract for the Town or other entity? If so, provide explanation.

   No we have not.

3. State the location of the office from which this contract will be managed.

   10210 Highland Manor Dr. Suite 140, Tampa FL 33610

4. Provide the name of Bidder's Contract Manager who will be assigned to this contract, if awarded.

   Susan Forney, Supply Chain Manager and Katie Bain, Customer Service - Truck orders

5. Provide the company name and contact information of the Bidder's sub-contractor to be used for chemical transportation, hauling and delivery, if applicable. If the Bidder provides chemical transportation, hauling and delivery then mark this section as "Self-Perform".

   K.C. Industries Trucking, Mulberry Fl Dispatch (863)425-2252

6. Bidder shall demonstrate its ability to supply the required chemical at the estimated quantities, unit prices and terms for the duration of the Contract. List ALL Contracts awarded within the last three (3) years that were terminated or cancelled before the end of the Contract Term and explain the reason for early cancellation. Attach additional pages as needed:

   CONTRACT NAME: Not Applicable

   OWNER NAME/CONTACT INFO: _____

   CONTRACT COMPLETION DATE: _____

ACTUAL COMPLETION DATE: _____

REASON FOR EARLY CANCELLATION/TERMINATION: _____

_____

7. List ALL Contracts within the past five (5) years (underway or completed) in which adverse litigation, including but not limited to mediation, involving the Owner, occurred, either directly or indirectly with the Bidder or his/her subcontractors. Attach additional pages as needed:

   PROJECT: Not Applicable

   OWNER: _____

   TYPE OF LITIGATION: _____

   REASON FOR LITIGATION: _____

   _____

A copy of Bidder's most recent audited financial statement may be requested as additional information after bids are received during the bid evaluation process.

8. Only Bidders who are deemed qualified, at Owner's sole discretion, will be considered for contract award. Failure to provide previous experience and qualification information as requested in the Bid Documents, or if the Owner cannot corroborate the previous experience and qualification information submitted by Bidder, may result in Bid disqualification.

   NOTE: Bidder shall complete and submit with the Sealed Bid the Bidder Qualification forms documenting previous experience of the chemical Supplier and the chemical trucking and delivery company. All information requested on the following forms shall be provided in sufficient detail for Owner to perform a comprehensive review of previous experience. For the chemical Supplier, provide previous experience and qualifications for at least five (5) references completed over the past five (5) years. For delivery and trucking company, provide previous experience and qualifications for at least three (3) references completed over the past three (3) years. Bidders may provide additional information to assist Owner in evaluating previous experience and qualifications. Copy the forms and attach additional pages as needed.

   NOTE: In order to be deemed acceptable for the purpose of determining Bidder Qualification, similar projects shall be listed on the following forms and have all information completed (blanks correctly filled in). Bidder is responsible to make copies of the provided reference pages and obtain delivery and trucking information.

QUALIFICATION REQUIREMENTS (CONTINUED)

As Bidder, we certify the following:

(1) NAME & LOCATION OF CONTRACT: City of Tampa

OWNER CONTACT NAME AND PHONE NUMBER: Brad May (813)231-6145

NAME OF CHEMICAL SUPPLIED: 93% Sulfuric Acid

ANNUAL QUANTITY OF CHEMICAL SUPPLIED: 10,000 short tons

CONTRACT VALUE: 2,000,000.00

CONTRACT START AND COMPLETION DATES: June 2022 - June 2027

WAS CONTRACT TERMINATED PRIOR TO THE COMPLETION DATE (IF SO, EXPLAIN): No

ADDITIONAL INFORMATION: We have supplied the City of Tampa for over 21+ years.

(2) NAME & LOCATION OF CONTRACT: Tampa Bay Water

OWNER CONTACT NAME AND PHONE NUMBER: Brian Borden (813)205-9231

NAME OF CHEMICAL SUPPLIED: 93% Sulfuric Acid

ANNUAL QUANTITY OF CHEMICAL SUPPLIED: 10,000 short tons

CONTRACT VALUE: $2,250,000.00

CONTRACT START AND COMPLETION DATES: October 2025 - September 2026

WAS CONTRACT TERMINATED PRIOR TO THE COMPLETION DATE (IF SO, EXPLAIN): No

ADDITIONAL INFORMATION: We have been supplying Tampa Bay Water for over 20+ years.

QUALIFICATION REQUIREMENTS (CONTINUED)

(3) NAME & LOCATION OF CONTRACT: Seacoast Utility Authority

OWNER CONTACT NAME AND PHONE NUMBER: Jessica Decker (561)627-2900 Ext 1357

NAME OF CHEMICAL SUPPLIED: 93% Sulfuric Acid

ANNUAL QUANTITY OF CHEMICAL SUPPLIED: 5,300 short tons

CONTRACT VALUE: 1,500,000.00

CONTRACT START AND COMPLETION DATES: July 2022 through September 2027

WAS CONTRACT TERMINATED PRIOR TO THE COMPLETION DATE (IF SO, EXPLAIN): No

ADDITIONAL INFORMATION: We have supplied SUA for over 11+ years.

(4) NAME & LOCATION OF CONTRACT: City of Port St. Lucie

OWNER CONTACT NAME AND PHONE NUMBER: Dan Burdette (772)873-6474

NAME OF CHEMICAL SUPPLIED: 93% Sulfuric Acid

ANNUAL QUANTITY OF CHEMICAL SUPPLIED: 1,750 Short tons

CONTRACT VALUE: $450,000.00

CONTRACT START AND COMPLETION DATES: July 2022 through September 2027

WAS CONTRACT TERMINATED PRIOR TO THE COMPLETION DATE (IF SO, EXPLAIN): No

ADDITIONAL INFORMATION: We have been supplying the City of PSL for over 15+ years.

QUALIFICATION REQUIREMENTS (CONTINUED)

(5) NAME & LOCATION OF CONTRACT: Town of Davie

OWNER CONTACT NAME AND PHONE NUMBER: Darryl Cotton (954)327-3760

NAME OF CHEMICAL SUPPLIED: 93% Sulfuric Acid

ANNUAL QUANTITY OF CHEMICAL SUPPLIED: 1,450 short tons

CONTRACT VALUE: $420,000.00

CONTRACT START AND COMPLETION DATES: June 2019 through August 2028

WAS CONTRACT TERMINATED PRIOR TO THE COMPLETION DATE (IF SO, EXPLAIN): No

ADDITIONAL INFORMATION: We have been supplying the Town of Davie for over 6+ years.

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If awarded the Contract, the undersigned agrees to execute the attached Contract within fifteen (15) calendar days from the date set forth in the Notice of Intent to Award or Notice of Award, whichever one is received first.

The undersigned understands and accepts that the initial term of the Contract commences on May 23, 2026 and continues for 495 days, ending September 30, 2027, and contains provisions for renewal of two additional 1-year terms beginning October 1, 2027.

The undersigned agrees that all bid documents issued for this Contract, including addenda, have been reviewed and site visits performed, as necessary to provide a comprehensive bid. The undersigned acknowledges receipt of N/A (insert number) Addenda for this Bid.

The undersigned acknowledges that payments made by the Town of Jupiter will be made via electronic funds transfers (EFT) and vendor will provide the Town of Jupiter with the information required to make EFT payments.

The undersigned understands and accepts that if a contract is awarded, Owner will issue a Purchase Order (PO) to Supplier when the contract commences and at the beginning of each fiscal year thereafter. The value of each PO will be based on the Contract Unit Price, ($ per Ton) including freight (F.O.B.), at the time the PO is issued and the estimated quantity of chemical for the fiscal year or applicable portion of the fiscal year. Payment to the Supplier will be based on the actual quantity of chemical meeting the contract specifications and safely delivered and conveyed to Owner's facilities and the contract unit pricing as indicated on the bid form or as adjusted by contract amendment in accordance with the contract provision.

The undersigned is aware that the Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this contract and in furtherance thereof may demand and obtain records and testimony from the contractor and its subcontractors and lower tier subcontractors. The contractor understands and agrees that in addition to other remedies and consequences provided by law, the failure of the contractor or its subcontractors or lower tier subcontractors to fully cooperate with the Inspector General when requested may be deemed by the municipality to be a material breach of this contract justifying its termination.

The undersigned understands that time is of the essence and that deliveries of chemical to Owner shall be handled with urgency as may be needed for the public health and safety of Owner's water supply.

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PROPOSAL (CONTINUED)

The undersigned states that this bid proposal is the only proposal for this project in which he is interested and certifies that all of the information provided in this bid proposal is true and correct.

SUBMITTAL DATE March 30, 2026

FIRM NAME Interacid North America, Inc.

FEDERAL EMPLOYER IDENTIFICATION NUMBER (FEIN) 59-3424337
(If the entity has no FEIN, include the Social Security Number of the individual signing this Proposal.)

SIGNATURE OF RESPONSIBLE OFFICIAL Brent Shonka

PRINT NAME AND TITLE OF RESPONSIBLE OFFICIAL Brent Shonka, General Manager

EMAIL ADDRESS OF RESPONSIBLE OFFICIAL contract@interacidna.com

BUSINESS ADDRESS 10210 Highland Manor Dr. Suite 140, Tampa FL 33610

BUSINESS TELEPHONE (813)225-2000

STATE OF INCORPORATION Florida

FULL NAMES AND ADDRESSES OF PERSONS OR PARTIES INTERESTED IN THE FOREGOING BID, AS PRINCIPALS:

Title President - Brent Shonka, Title Directors - Masay Sato and Masataka Tani, Title Treasurer - Chris Clark and Title Secretary John Beystehner. All at 10210 Highland Manor Dr. Suite 140 Tampa FL 33610

FULL NAME, TITLE, EMAIL ADDRESS, AND PHONE NUMBER OF PERSON MANAGING THE WORK UNDER THIS CONTRACT:

Katie Bain, Customer Service, KBain@interacidna.com (813)225-2000

Subscribed and sworn to before me, by means of ☑ physical presence or ☐ online notarization this 30th day of March, 2026 by Brent Shonka of Interacid North America, Inc., who [X] is personally known to me or [ ] has produced N/A as identification and who did (did not) take an oath.

Notary Public State of Florida
Kathryn Bain
My Commission HH 744778
Expires 3/23/2030

Kathryn Bain

NOTARY PUBLIC

CONTRACTOR E-VERIFY AFFIDAVIT

I hereby certify that Interacid North America, Inc. [insert contractor company name] does not employ, contract with, or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.

All employees hired on or after January 1, 2021 have had their work authorization status verified through the E-Verify system.

A true and correct copy of Interacid North America, Inc. [insert contractor company name] proof of registration in the E-Verify system is attached to this Affidavit.

Print Name: Brent Shonka

Date: March 30, 2026

STATE OF FLORIDA

COUNTY OF Hillsborough

The foregoing instrument was acknowledged before me by means of/physical presence or / online notarization, this 03/30/2026 (date) by Brent Shonka (name of officer or agent, title of officer or agent) of Interacid North America, Inc. (name of contractor company acknowledging), a Florida (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced N/A (type of identification) as identification.

[Notary Seal]

Notary Public State of Florida
Kathryn Bain
My Commission HH 744778
Expires 3/23/2030

Notary Public

Kathryn Bain

Name typed, printed or stamped

My Commission Expires: March 23, 2030

SUBCONTRACTOR E-VERIFY AFFIDAVIT

I hereby certify that K.C. Industries Trucking, LLC [insert subcontractor company name] does not employ, contract with, or subcontract with an unauthorized alien, and is otherwise in full compliance with, section 448.095, Florida Statutes.

All employees hired on or after January 1, 2021 have had their work authorization status verified through the E-Verify system.

A true and correct copy of K.C. Industries Trucking, LLC [insert subcontractor company name] proof of registration in the E-Verify system is attached to this Affidavit.

Timothy McCarter

Print Name: Timothy McCarter

Date: March 30, 2026

STATE OF FLORIDA

COUNTY OF Florida

The foregoing instrument was acknowledged before me by means of/physical presence or / online notarization, this 03/30/2026 (date) by Timothy McCarter (name of officer or agent, title of officer or agent) of K.C. Industries Trucking, LLC (name of contractor company acknowledging), a Florida (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced N/A (type of identification) as identification.

[Notary Seal]

Notary Public State of Florida
Kathryn Bain
My Commission HH 744778
Expires 3/23/2030

Notary Public

Kathryn Bain

Name typed, printed or stamped

My Commission Expires: March 23, 2030

SWORN STATEMENT

PURSUANT TO SECTION 287.133(3)(a), FLORIDA STATUTES,
ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to Interacid North America, Inc.
[print name of the public entity]

by Brent Shonka
[print individual's name and title]

for Interacid North America, Inc.
[print name of entity submitting sworn statement]

whose business address is 10210 Highland Manor Dr. Suite 140, Tampa FL 33610

and (if applicable) its Federal Employer Identification Number (FEIN) is: 59-3424337
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn Statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), **Florida Statutes**, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), **Florida Statutes**, means a finding or guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), **Florida Statutes**, means:
    1. A predecessor or successor of a person convicted of a public entity crime: or

    2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term affiliate includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate which statement applies.]**

   X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

   ___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

   ___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in public interest to place the entity submitting this sworn statement on the convicted vendor list.
   [attach a copy of the final order]

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED, I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Brent Shonka
[signature]

Sworn to and subscribed before me this 30th day of March, 2026

Personally known Brent Shonka

OR Produced identification N/A Notary Public – State of Florida

My commission expires March 23, 2030

Kathryn Bain
(Printed typed or stamped commissioned name notary public)

Notary Public State of Florida
Kathryn Bain
My Commission HH 744778
Expires 3/23/2030

Interacid GROUP

Town of Jupiter Utilities
Chemical Bid W2604L
Contract for Supplying Sulphuric Acid

Certificate of Compliance

The sulphuric acid represented by this bid complies with all applicable specifications referenced herein and will be sourced from Interacid North America, Inc. Terminal in Tampa, Florida; this entity is certified by **ANSI/NSF Standard 60, the NSF Drinking Water Additives Certification Program.** This Certification represents that this product conforms to all applicable requirements of **NSF Standard 60** and all applicable program policies.

Signed by: _____ Date: March 30, 2026

ACTION OF THE DIRECTORS
OF INTERACID NORTH AMERICA, INC.
BY UNANIMOUS WRITTEN CONSENT
IN LIEU OF ANNUAL MEETING

The undersigned, constituting all the directors of Interacid North America, Inc., a Florida corporation (the "Company"), do hereby unanimously agree, declare, and consent in writing, without a meeting and in lieu of the annual meeting thereof, pursuant to and in accordance with Sections 607.0820 and 607.0821 of the Florida Business Corporation Act, to the adoption of, and do hereby adopt, as of the ____ day of April **2025**, the following resolutions and the actions specified therein:

RATIFICATION OF OFFICERS' ACTS

RESOLVED, that the lawful actions of the officers of the Company on behalf of the Company during the preceding fiscal year (April 1, 2024 – March 31, 2025) are approved and ratified to the extent permitted by law.

DELEGATION OF AUTHORITY TO President & Treasurer

RESOLVED, that, effective _____ **2025**, Brent Shonka, President, and Christopher Clark, Treasurer, are hereby authorized and directed to make any and all contracts, agreements, and orders which he may deem necessary, appropriate, or advisable from time to time in the ordinary course of conducting the business of the Company in their capacities as President or Treasurer, subject to any existing limitations or restrictions requiring approval of another officer of the Company or the Board of Directors.

ELECTION OF OFFICERS

RESOLVED, that the following persons are elected to the corporate office indicted opposite their names below to serve for the respective terms provided in the bylaws or until their earlier death, resignation, or removal from office.

Name	Office
Brent Shonka	President
Brent Shonka	Secretary
Christopher Clark	Treasurer

RESOLVED, that all actions related to the foregoing were deemed appropriate and have been approved and ratified.

The foregoing Resolutions will be effective on the latest date executed by all the directors of the Company set forth below:

EXECUTED: 25th April 2025

Masataka Tani, Director

EXECUTED: Apr 25, 2025

Masaya Sato

Masaya Sato, Director

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

Interacid North America, Inc.

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☑ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . .

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

10210 Highland Manor Drive, Suite 140

Requester's name and address (optional)

6 City, state, and ZIP code

Tampa, FL 33610

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

5	9	–	3	4	2	4	3	3	7

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | **Signature of U.S. person** | **Date** 4/1/25

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

DIVISION OF CORPORATIONS

Sunbiz.org DIVISION of CORPORATIONS an official State of Florida website

Detail by Entity Name

Florida Profit Corporation
INTERACID NORTH AMERICA, INC

Filing Information

Document Number	P97000008780
FEI/EIN Number	59-3424337
Date Filed	01/29/1997
Effective Date	01/22/1997
State	FL
Status	ACTIVE
Last Event	NAME CHANGE AMENDMENT
Event Date Filed	03/28/2025
Event Effective Date	NONE

Principal Address

10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Changed: 04/01/2025

Mailing Address

10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Changed: 04/01/2025

Registered Agent Name & Address

CF REGISTERED AGENT, INC
100 S. ASHLEY DRIVE
SUITE 400
TAMPA, FL 33602

Name Changed: 03/30/2016

Address Changed: 03/30/2016

Officer/Director Detail

Name & Address

Title President

SHONKA, BRENT R
10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Title Director

Sato, Masaya R
10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Title Treasurer

Clark, Christopher R
10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Title Director

Tani, Masataka R
10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Title Secretary

Beystehner, John
10210 Highland Manor Drive
Suite 140
TAMPA, FL 33610

Annual Reports

Report Year	Filed Date
2025	03/28/2025
2025	04/01/2025
2026	01/12/2026

Document Images

01/12/2026 -- ANNUAL REPORT	View image in PDF format
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03/28/2025 -- Name Change	View image in PDF format
07/24/2024 -- AMENDED ANNUAL REPORT	View image in PDF format

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01/31/2022 -- ANNUAL REPORT	View image in PDF format
02/05/2021 -- ANNUAL REPORT	View image in PDF format
03/13/2020 -- ANNUAL REPORT	View image in PDF format
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03/30/2016 -- ANNUAL REPORT	View image in PDF format
04/14/2015 -- ANNUAL REPORT	View image in PDF format
04/21/2014 -- ANNUAL REPORT	View image in PDF format
11/08/2013 -- AMENDED ANNUAL REPORT	View image in PDF format
09/05/2013 -- AMENDED ANNUAL REPORT	View image in PDF format
08/01/2013 -- AMENDED ANNUAL REPORT	View image in PDF format
04/11/2013 -- AMENDED ANNUAL REPORT	View image in PDF format
02/06/2013 -- ANNUAL REPORT	View image in PDF format
01/30/2012 -- ANNUAL REPORT	View image in PDF format
01/28/2011 -- ANNUAL REPORT	View image in PDF format
12/14/2010 -- Amendment	View image in PDF format
03/01/2010 -- ANNUAL REPORT	View image in PDF format
12/04/2009 -- Amendment	View image in PDF format
04/27/2009 -- ANNUAL REPORT	View image in PDF format
04/11/2008 -- ANNUAL REPORT	View image in PDF format
02/14/2007 -- ANNUAL REPORT	View image in PDF format
03/31/2006 -- ANNUAL REPORT	View image in PDF format
02/25/2005 -- ANNUAL REPORT	View image in PDF format
03/31/2004 -- ANNUAL REPORT	View image in PDF format
04/17/2003 -- ANNUAL REPORT	View image in PDF format
06/25/2002 -- Amendment	View image in PDF format
04/02/2002 -- ANNUAL REPORT	View image in PDF format
02/26/2001 -- ANNUAL REPORT	View image in PDF format
10/03/2000 -- Amendment	View image in PDF format
02/04/2000 -- ANNUAL REPORT	View image in PDF format
02/24/1999 -- ANNUAL REPORT	View image in PDF format
05/28/1998 -- ANNUAL REPORT	View image in PDF format
01/29/1997 -- Domestic Profit Articles	View image in PDF format

OFFICIAL LISTING

NSF certifies that the products appearing on this Listing conform to the requirements of NSF/ANSI/CAN 60 - Drinking Water Treatment Chemicals - Health Effects

This is the Official Listing recorded on June 2, 2025.

Interacid North America, Inc.
10210 Highland Manor Dr.
Ste 140
Tampa, FL 33610
800-633-1358
813-225-2000

Facility: Tampa, FL

Chemical/ Trade Name	Function	Max Use
Sulfuric Acid		
Sulfuric Acid	Corrosion & Scale Control pH Adjustment	50 mg/L
Sulphuric Acid	Corrosion & Scale Control pH Adjustment	50 mg/L

NOTE: Only products bearing the NSF Mark on the product, product packaging, and/or documentation shipped with the product are Certified.

Facility: Stockton, CA

Chemical/ Trade Name	Function	Max Use
Sulfuric Acid		
Sulfuric Acid	Corrosion & Scale Control pH Adjustment	50 mg/L
Sulphuric Acid	Corrosion & Scale Control pH Adjustment	50 mg/L

Note: Additions shall not be made to this document without prior evaluation and acceptance by NSF.

0F460

789 N. Dixboro Road, Ann Arbor, Michigan 48105-9723 USA
1-800-NSF-MARK / 734-769-8010
www.nsf.org

An official website of the United States government Here's how you know

E-Verify Menu

My Company Account

My Company Profile

Company Information

Company Name
Interacid North America, Inc.

Doing Business As (DBA) Name

Company ID
2469417

Enrollment Date
Jun 17, 2024

Employer Identification Number (EIN)
593424337

Unique Entity Identifier (UEI)

DUNS Number

Total Number of Employees
20 to 99

NAICS Code
424

Sector
Wholesale Trade

Subsector
Merchant Wholesalers, Nondurable Goods

Edit Company Information

Employer Category

Employer Category

None of these categories apply

Edit Employer Category

Company Addresses

Physical Address

10210 Highland Manor Drive
Suite 140
Tampa, FL 33610

Mailing Address

Same as Physical Address

Edit Company Addresses

Hiring Sites

Number of Sites

8

Edit Hiring Sites

Company Access

My Company is configured to:

Verify Its Own Employees

Memorandum of Understanding

View Current MOU





SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS REVISION 7, OSHA 29CFR 1910.1200

Issue Date: April 29, 2015 **Revision Date: December 15, 2025**

Section 1: Chemical Product and Company Identification

PRODUCT NAME: **SULPHURIC ACID 93 – 99%**
FORMULA: H_2SO_4
PRODUCT USE: Manufacture of Fertilizers, Batteries, Industrial chemicals, Water treatment, Pulp & Paper, Mining

EMERGENCY TELEPHONE
Chemtrec U.S.-Canada: 800-424-9300
Chemtrec International: 703-527-3887

CHEMICAL SUPPLIER COMPANY NAME: Interacid North America, Inc.

Headquarters:
10210 Highland Manor Drive, Suite 140
Tampa, Florida 33610
Information 800-633-1358
Fax: 813-225-1001

Roswell Location:
560 West Crossville Road, Suite 204
Roswell, Georgia 30075
Information 678-461-0456

Safety Data Sheet Competent Person: Luke Allen LAllen@interacidna.com

Section 2: Hazards Identification

GHS Hazard Class



Skin Corrosive	Category 1
Eye Corrosive	Category 1
Acute Toxicity Oral	Category 5
Corrosive to Metals	Category 1

Signal word: Danger

Hazard Statement:		H314	Causes severe skin burns and eye damage
		H318	Causes serious eye damage
		H301	May be harmful if swallowed
		H290	May be corrosive to metals
Precautionary	Prevention	P260	Do not breathe dusts or mists.
Statements:		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P264	Wash hands thoroughly after handling.
		P234	Keep only in original packaging.
	Response	P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
		P363	Wash contaminated clothing before reuse.
		P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		P310	Immediately call a POISON CENTER or doctor/physician.
		P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
		P312	Call a Poison Control center or doctor/physician if you feel unwell
		P390	Absorb spillage to prevent material damage
	Storage	P405	Store locked up.
		P406	Store in corrosion resistant container with a resistant inner liner.
	Disposal	P501	Dispose of contents/container by following the waste disposal requirements of your country, state, or local authorities.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

HAZARD CLASSIFICATION:	Classified as hazardous based on IATA, IMDG, and DOT.
FIRE AND EXPLOSION:	Not considered flammable or combustible.
POTENTIAL HEALTH EFFECTS:	<0 % of mixture consists of ingredients of unknown acute toxicity
APPEARANCE:	Clear, colorless to amber (light)

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EINECS/ ELINCS	CANADA DSL
Sulphuric Acid (H2SO4)	>93	7664-93-9	231-639-5	7664-93-9
Water (H2O)	<7	7732-18-5	231-791-2	7732-18-5

Some items on this SDS may be designated as trade secrets (TS). Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

Description of First Aid Measures

Inhalation

Move victim to fresh air. If not breathing, provide CPR (cardio pulmonary resuscitation). Do Not use mouth-to-mouth if victim ingested or inhaled with substance: give CPR with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get immediate medical attention.

Skin Contact

Immediately flush skin with running water for at least 15 minutes. (Pay particular attention to folds, crevices, creases, groin). Start flushing while removing contaminated clothing. While in transport continue applying cold, wet compresses. If medical treatment is delayed, repeat the flushing or immerse the affected area in cold water. Creams and ointments should NOT be applied before or during the washing process. Discard heavily contaminated clothing and shoes, otherwise wash clothing separately before reuse.

Eye Contact

Immediately flush eyes with running water for at least 15 minutes. Hold eyelids open during flushing. Get immediate medical attention.

Ingestion

DO NOT INDUCE VOMITING. Never give anything to an unconscious person. If victim is alert and conscious, rinse mouth with water to dilute material. Spontaneous Vomiting: have victim lean forward with head down to avoid aspiration. Rinse mouth and administer more water. Immediately contact local poison control center. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Symptoms/Injuries after Skin Contact

May be harmful if absorbed through skin. Causes skin burns. Causes skin irritation.

Symptoms/Injuries after Eye Contact

Causes severe eye burns. Causes eye irritation.

Symptoms/Injuries after Ingestion

May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Pulmonary edema. Effects may be delayed, to the best of our knowledge; the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 5: Fire-fighting Measures

Suitable extinguishing media

Small Fire	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Large Fire	Flood fire area with large quantities of water while knocking down vapors with water fog. If insufficient water supply, knock down vapors only.
Unsuitable extinguishing media	No information available
Special hazards arising from the substance or mixture	Non-combustible Hazardous combustion products: Releases of sulfur dioxide at extremely high temperatures.
Special remarks on Fire Hazards	Not flammable but highly reactive. Strong dehydrating agent, which may cause ignition of finely divided combustible materials on contact.
Special remarks on Explosion Hazards	Reacts violently with water with the evolution of heat. Reacts with most metals, especially when diluted. Hydrogen gas release (extremely flammable, explosive).
Protective actions fire-fighters	Wear standard protective equipment, self-contained breathing apparatus and full fire-fighting gear. Runoff from fire control may cause pollution. Neutralize run-off with lime or soda ash.
Further information	Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures
Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide sufficient ventilation, use respirator if ventilation is not satisfactory. Wear proper personal protective equipment (see Section 8).

Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent spills or contaminated rinse water from entering sewers or watercourses. Inform the local authorities if the product has caused environmental pollution.

Methods and materials for containment and cleaning up

Small Spills: Absorb with dry materials such as earth or sand. Place in a chemical waste container.

Large spills: Dike the spill with earth or sand if possible. Restrict access to area until completion of clean up. Ensure trained personnel conduct clean up. Use proper personal protection equipment (see Section 8). Prevent liquid from entering waterways or sewers. Collect into plastic containers for disposal. Call emergency services. Comply with Federal, Provincial/State and local regulations on reporting releases. (For disposal reference section 13).

Section 7: Handling and Storage

Precautions for safe handling
Use only with adequate ventilation.
Do not inhale vapors.
Wear proper protective equipment when handling this material.
Avoid contact with skin, eyes, or clothing.
Wash hands and face after handling this material.

Conditions for safe storage, including any incompatibilities
Keep container closed when not in use.
Utilize chemical segregation.
Follow all applicable local regulations for handling and storage.

Specific uses
Manufacture of Fertilizers, Batteries, Industrial chemicals, Water treatment, Pulp & Paper, Mining

Section 8: Exposure Controls/Personal Protection

Control Parameters

PRODUCT COMPOSITION	ACGIH TLV	OSHA PEL	NIOSH REL
Sulphuric acid	0.2 mg/m^3	1 mg/m^3	1 mg/m^3

Exposure controls

VENTILATION:	Always provide good general, mechanical room ventilation where this chemical/material is used.
SPECIAL VENTILATION CONTROLS:	Use this material inside totally enclosed equipment, or use it with local exhaust ventilation at points where vapors can be released into the workspace air.
RESPIRATORY PROTECTION:	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the CEN European Standards (EU). Use a NIOSH/MSHA or European Standard (EN) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
PROTECTIVE GLOVES:	Neoprene, butyl, or nitrile rubber gloves are recommended.
EYE PROTECTION:	Safety glasses or splash goggles with face shield.
SKIN PROTECTION:	Complete personal protective equipment against chemical. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Recommended: Acid resistant rubber apron with long sleeves, boots.
WORK/HYGIENE PRACTICES:	Avoid breathing vapor. Avoid contact with eyes. Wash hands after handling.
OTHER EQUIPMENT:	Make safety shower, eyewash stations, and hand washing equipment available in the work area.

Section 9: Physical and Chemical Properties

	PRODUCT CRITERIA
APPEARANCE - COLOR:	Clear, colorless to amber (light)
PHYSICAL STATE:	Liquid (oily liquid, clear to turbid)
ODOR:	Odorless
ODOR THRESHOLD	Not available
PH	<1 (1% solution/water
MELTING POINT/FREEZING POINT:	-31°F to 52°F (-35°C to 11°C)
INITIAL BOILING POINT AND BOILING RANGE:	379°F to 621°F (193°C to 327°C) at 760 mm Hg
FLASH POINT:	Not Applicable
EVAPORATION RATE:	Not available
FLAMMABILITY (Solid, gas)	Not Available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Not available
VAPOR PRESSURE	<1 Mm Hg, 77°F
VAPOR DENSITY (AIR = 1)	3.4 [Air = 1]
RELATIVE DENSITY (@25 °C):	1.84
SOLUBILITY(IES)	Yes (water)
OXIDIZING PROPERTIES	Not available
PARTITION COEFFICIENT: n-octanol/water	Not available
AUTO IGNITION TEMPERATURE	Not available
DECOMPOSITION TEMPERATURE	>340°C
VISCOSITY	28 – 36 cP @ 60°F

Section 10: Stability and Reactivity

Reactivity:	Reacts violently with water, organic substances and base solutions with evolutions of heat and hazardous mists.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	Under normal conditions of storage and use will not occur. Reacts violently with water
Conditions to Avoid:	Heat, sources of ignition
Incompatibility (Materials to Avoid):	Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrate's, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, e.g. potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with:, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals
Hazardous Decomposition Products:	Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapors (sulfur oxides SO_2, SO_3).

Section 11: Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50 (Oral/Rat):	2140 mg/kg		Sulphuric acid
	LC50 (Inhalation/Rat):	510 mg/m3	2 hours	Sulphuric acid
Skin Corrosion/Irritation	Skin - Rabbit - Extremely corrosive and destructive to tissue.			Sulphuric acid
Serious Eye Damage / Eye Irritation	Eyes - Rabbit - Corrosive to eyes			Sulphuric acid
Respiratory or Skin Sensitization		Data not available		
Germ Cell Mutagenicity		Data not available		
Carcinogenicity		Not listed	NTP	
		Not listed	IARC	
		Not listed	OSHA	
Reproductive Toxicity		Data not available		
STOT -- Single Exposure		Data not available		
STOT – Repeated Exposure		Data not available		
Aspiration Hazard		Data not available		

STOT = Specific Target Organ Toxicity

Section 12: Ecological Information

Toxicity:	Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h	Sulphuric acid
	EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h	Sulphuric acid
Persistence and degradability:	No information is available.	
Bioaccumulative potential	No information is available.	
Mobility in soil:	No information is available.	
PBT and vPvB assessment:	No information is available.	
Other adverse effects:	No information is available.	

Section 13: Disposal Considerations

Waste from residues/unused products: Follow the waste disposal requirements of your country, state, or local authorities. Contact a licensed professional, waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Contaminated packaging material should be disposed of as stated above for residues and unused product.

Rinsate: Do not dispose of rinse water containing product in a sanitary sewer system or stormwater drainage system.

Section 14: Transport Information

ROAD TRANSPORT:
ADR = International Carriage of Dangerous Goods by Road

UN NUMBER:	UN 1830
DOT PROPER SHIPPING NAME	Sulfuric Acid
DOT / ADR HAZARD CLASS:	Corrosive
DOT / ADR LABELS:	Class 8
PLACARD:	Corrosive, Class 8
DOT / ADR PACKAGING GROUP:	II
REPORTABLE QUANTITY (RQ)	1000 LBS (454 Kgs)



SEA TRANSPORT: IMDG

PROPER SHIPPING NAME	Sulfuric Acid
UN NUMBER SEA	UN 1830
CLASS:	8
PACKING GROUP:	II
EmS No.:	F-A, S-B
MARINE POLLUTANT:	No
SEA TRANSPORT NOTES:	Category C. For Steel drums Category B.

AIR TRANSPORT: IATA/ICAO

UN NUMBER:	UN 1830
PROPER SHIPPING NAME	Sulfuric Acid
HAZARD CLASS:	8
PACKAGING GROUP:	II

Section 15: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA Inventory.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all SDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: Sulfuric acid

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: None

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Florida Toxic Substance(s):	Not listed
Massachusetts's hazardous substance(s):	Sulfuric acid
Pennsylvania hazardous substance code(s):	Sulfuric acid
New Jersey	Sulfuric acid

CANADA:

This SDS contains all of the information required by the Controlled Products Regulations (CPR).

WHMIS-INFORMATION:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), SOR/88-66, Current to February 20, 2012. The classes of controlled products listed in the CPR, Section 32, Part IV, have been reviewed and based on Professional Judgment this product has been determined to be WHMIS controlled as a corrosive material.

Sulphuric acid:

D1A - Poisonous and infectious material - Immediate and serious effects - Very toxic

E - Corrosive material

EUROPEAN UNION:

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures. None of the chemicals used in this product are on the EU's REACH SVHC (Substances of Very High Concern) chemicals list (as of June 16, 2014).

Section 16: Other Information

NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
SULPHURIC ACID	3	0	2	~~W~~

Initial issue date:	April 29, 2015
Final revision date:	December 15, 2025
Revision Number:	5
Revision explanation	GHS rev 7 update
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

"Disclaimer: This document is generated to distribute health, safety and environmental data. It is not a specification sheet and none of the displayed data should be construed as a specification. Information on this SDS sheet was obtained from sources which we believe are reliable, and we believe that the information is complete and accurate. However, the information is provided without any warranty, express or implied, regarding its correctness. Some of the information presented and conclusions drawn are from sources other than direct test data of the substance. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may also be beyond our knowledge. It is the user's responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. If the product is used as a component in another product, this SDS information may not be applicable. For these reasons, we do not assume any responsibility and expressly disclaim liability for any loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product."

CHEM ALTAMIRA
H2SO4
CERTIFICATE OF ANALYSIS
INTERACID NA, INC

AmSpec MTS, Inc.

FEBRUARY 23, 2026
SATCO
TAMPA, FL
REFERENCE NO.: 26-0856

CERTIFICATE OF ANALYSIS

TEST	METHOD	RESULT
1.TANK 2		
TOTAL NITRATE (NO3)	AOAC 892.01	<1 ppm
SULFUR DIOXIDE (SO2)	ASTM E-223	7 ppm
IRON (Fe)	AFPC XI-14B	6 ppm
ARSENIC (As)	AFPC XI-14B	<1 ppm
MERCURY (Hg)	EPA 245.1	< 0.5 ppm
H2SO4	ASTM E223-08	98.49 %
DENSITY	TFI IV-D1	1.84155 g/cm3
CLARITY	VISUAL	CLEAR
TURBIDITY	ASTM D6855	17.0 NTU

Final

The above analytical result applies solely to the sample as received and is subject to the limitations of method uncertainty. This report shall not be reproduced, except in full, without approval of the laboratory.

Sample/s were tested at the following location: 2740 Causeway Center Dr. Tampa, FL 33619

AmSpec MTS, Inc.

Larry C. Zeringue, Operations

2025 - 2026 HILLSBOROUGH COUNTY BUSINESS TAX RECEIPT

EXPIRES SEPTEMBER 30, 2026

ACCOUNT NO.
13735
RENEWAL

OCC. CODE

380.003001 WHOLESALE MERCHANT/RETAIL SALES

Receipt Fee	30.00
Hazardous Waste Surcharge	0.00
Law Library Fee	0.00

BUSINESS INTERACID NORTH AMERICA INC
4041 MARITIME BLVD
TAMPA, FL 33605

2025 - 2026

NAME INTERACID NORTH AMERICA INC
MAILING ADDRESS 10210 HIGHLAND MANOR DRIVE
SUITE 140
TAMPA, FL 33610

Paid 25-0-325826
02/20/2026 37.50

BUSINESS TAX RECEIPT

HAS HEREBY PAID A PRIVILEGE TAX TO ENGAGE
IN BUSINESS, PROFESSION, OR OCCUPATION SPECIFIED HEREON

NANCY C MILLAN, TAX COLLECTOR
813-635-5200
THIS BECOMES A TAX RECEIPT WHEN VALIDATED.

Receipt # 1672962 | Control No. 0049215

For Period Commencing JULY 1ST, 2025 | and ending September 30, 2026

Total: 21,209.14 | Dated 03/11/2026 | Application No. 0049215

This Business Tax Receipt does not permit the holder to operate in violation of any City Law or Ordinance including, but not limited to, Zoning and other land use regulations. If in doubt, the holder should verify that he or she has the appropriate zoning by calling the Office of Land Development Coordination at 274-3100. This Business Tax Receipt must be conspicuously posted in place of business.

Classification	Description	Amount
087620	INVENTORY	$20,967.62
087158	CHEMICALS WHSL	$231.52
993000	ADMIN HANDLING FEE	$10.00

2026

CITY OF TAMPA
TAX RECEIPT
BUSINESS
TAX
DIVISION

By: WEB

Business Name and Address

INTERACID NORTH AMERICA INC
C/O CHRISTOPHER CLARK
10210 HIGHLAND MANOR DR STE 140
TAMPA FL 33610

Business Name and Location

INTERACID NORTH AMERICA, INC
4041 MARITIME BLVD
TAMPA FL 33605-6849

KC Industries Trucking LLC

2210 Peerless Road
PO Box 674
Mulberry, Florida 33860
863 425-2252 (main)

Trade References

Interacid North America

Contact: Katie Bain

10210 Highland Manor Dr. Suite 140

Tampa, FL 33610

Phone: 800-633-1358

Email: KBain@interacidNA

Shrieve Chemical

Contact: Wanda Stewart

1422 Lake Front Circle Suite 500

The Woodlands, TX 77380

Phone: 281-367-4226

Email: WStewart@Shrieve.com

Kemira Water Solutions, Inc.

Contact: Sharon Taylor

3233 Delta Ave.

Bartow, FL 33830

Phone: 863-410-2738

Email: Sharon.Taylor@Kemira.com

Hawkins, Inc.

Contact: Brandon Rice

2263 Clark Street

Apopka, FL 32703

Phone: 321-299-9810

Email: Brandon.Rice@HawkinsInc.com

KC Industries Trucking LLC

2210 Peerless Road
PO Box 674
Mulberry, Florida 33860
863 425-2252 (main)

KC Industries Trucking (KCIT) specializes in transporting bulk liquid and hazardous chemicals, including Ammonia, Sulfuric Acid, Alum, Ferric Chloride, Hydrochloric Acid, Caustic Soda, and more.

KCIT was established in 2001 to serve the local Chemical Industry. Applying the core principles of Safety and Reliability, KCIT expanded its service area and attracted a broad customer base.

We have a variety of clients in the Mining, Agriculture, Energy, Water Treatment, Paper and Fertilizer Industries including municipalities, power plants, chemical distributors and Fortune 500 companies.

Throughout its history, KCIT has created a company culture dedicated to excellence. According to DOT safety statistics, KCIT consistently has the best CSA (DOT) safety rating in the industry and the company demonstrates its commitment to high standards and exceptional customer service every day.

The company provides a training program that exceeds industry standards with on-going training to ensure drivers provide safe, accurate and on-time service. KCIT dispatchers are an important part of the company's success. From the moment the customer places an order, the dispatch team monitors the entire process. Orders are tracked from the source to the destination and the dispatchers resolve any issues that may impact the safe and reliable delivery of the customer's product.

KCIT uses a state-of-the-art tracking system that allows rapid response to equipment issues, weather changes, road closures and an assortment of other emergencies. This combination of highly trained drivers, experienced dispatchers and the best logistics in the business means customers receive their product safely, on time, as promised!

An official website of the United States government Here's how you know

My Company Profile

Company Information

Company Name
KC Industries Trucking, LLC

Doing Business As (DBA) Name

Company ID
964325

Enrollment Date
Apr 18, 2016

Employer Identification Number (EIN)
593697076

Unique Entity Identifier (UEI)

DUNS Number

Total Number of Employees
20 to 99

NAICS Code
493

Sector
Transportation and Warehousing

Subsector
Warehousing and Storage

Edit Company Information

Employer Category

Employer Category
None of these categories apply

Edit Employer Category

Company Addresses

Physical Address
2420 Old Hwy 60
Mulberry, FL 33860

Hiring Sites

Number of Sites
1

Mailing Address

Po Box 674
Mulberry, FL 33860

Edit Hiring Sites

Edit Company Addresses

Company Access and MOU

My Company is configured to:

Verify Its Own Employees

Memorandum of Understanding

View Current MOU

U.S. Department of Homeland Security U.S. Citizenship and Immigration Services

Accessibility Plug-ins Site Map

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/28/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Willis Towers Watson Northeast, Inc.
c/o 26 Century Blvd
P.O. Box 305191
Nashville, TN 372305191 USA

CONTACT NAME: WTW Certificate Center
PHONE (A/C, No, Ext): 1-877-945-7378 FAX (A/C, No): 1-888-467-2378
E-MAIL ADDRESS: certificates@wtwco.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : National Union Fire Insurance Company of P	19445
INSURER B : Everest National Insurance Company	10120
INSURER C : Everest Denali Insurance Company	16044
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Interacid North America, Inc. (fka Sulphuric Acid Trading Company Inc)
10210 Highland Manor Drive, Ste. 140
Tampa, FL 33610

COVERAGES **CERTIFICATE NUMBER:** W41272371 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR X Marine GL / X Marine Term Operators GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [X] PRO-JECT [X] LOC X OTHER: Action Over/Indemnity incld, Pollution SIA	Y	Y	045780547	04/15/2025	04/01/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Ded	$ $ $ $ $ $ $	1,000,000 1,000,000 5,000 1,000,000 1,000,000 1,000,000 25,000
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY	Y		EN6CA00141251	10/30/2025	04/01/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $ $	1,000,000
A	[ ] UMBRELLA LIAB [X] OCCUR X EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			045780550	04/15/2025	04/01/2026	EACH OCCURRENCE AGGREGATE	$ $ $	2,000,000 2,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N No (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		EN6WC00088251	10/30/2025	04/01/2026	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $	1,000,000 1,000,000 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: Contract for Supplying Sulfuric Acid (W2405B)

Bumbershoot Liabilities - policy nos. and underwriters are as follows:

National Union Fire Insurance Company of Pittsburgh, PA
50%

CERTIFICATE HOLDER

Town of Jupiter
210 Military Trail
Jupiter, FL 33458

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Patricia A Forry

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AGENCY CUSTOMER ID: _____

LOC #: _____

ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED
Willis Towers Watson Northeast, Inc.		Interacid North America, Inc. (fka Sulphuric Acid Trading Company Inc) 10210 Highland Manor Drive, Ste. 140 Tampa, FL 33610
POLICY NUMBER See Page 1		
CARRIER See Page 1	NAIC CODE See Page 1	EFFECTIVE DATE: See Page 1

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

Policy # 45780550

Liberty Mutual Insurance Company
25%
Policy # NYABDEO5009

Zurich American Insurance Co.
25%
Policy # MAR5846827-01

The Town of Jupiter is included as Additional Insured as respects to General Liability and Auto Liability.

General Liability policy shall be Primary with any other insurance in force for or which may be purchased by Additional Insured.

Waiver of Subrogation applies in favor of Additional Insured with respects to General Liability.

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CONTRACT BETWEEN OWNER AND SUPPLIER

This Contract made this_____ day of _____, _____ by and between the Town of Jupiter, a public agency of the State of Florida hereinafter designated as the "the TOWN" and "OWNER", and Interacid North America, Inc., 10210 Highland Manor Drive, Suite 140, Tampa, FL 33610, a state of Florida Corporation, 59-3424337 (FEIN), hereinafter designated as "SUPPLIER", in consideration of the mutual covenants hereinafter set forth agree as follows:

Article 1. WORK.

1.1 SUPPLIER shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Supply the Town of Jupiter Utilities Water Treatment Plant with 98% sulfuric acid for an initial term of 495 days beginning May 23, 2026 through September 30, 2027 in accordance with the Bid and Contract Documents, including all addenda and technical specifications.

1.2 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **CHEMICAL BID W2604L, CONTRACT FOR SUPPLYING SULFURIC ACID RE-BID FOR THE TOWN OF JUPITER UTILITIES, JUPITER, FLORIDA**

Article 2. GOODS AND SERVICES.

2.1 SUPPLIER shall furnish the Goods and other services as specified or indicated in the Bidding/Contract Documents. The Goods to be furnished are generally described as follows.

Town of Jupiter Utilities
Chemical Bid W2604L
Contract for Supplying Sulfuric Acid Re-bid

Article 3. POINT OF DELIVERY.

3.1 The place where the Goods are to be delivered is the point of delivery and is designated as:

Town of Jupiter Water Treatment Plant
17403 Central Boulevard
Jupiter, Florida 33458

Article 4. CONTRACT TIME.

4.1 The Goods are to be delivered to the point of delivery and ready for OWNER's acceptance of delivery as outlined in the contract documents, or otherwise as agreed to by written contract amendment between the OWNER and SUPPLIER.

4.2 The initial term of the Contract will be 495 calendar days from the date of Notice to Proceed. With 120 days' prior notice to expiration, OWNER and SUPPLIER may agree to renew the Contract for two (2) individual and consecutive one (1) year (365 calendar day) terms, for a total maximum contract duration of three (3) years and four (4) months, in accordance with the Town of Jupiter's Procurement Policy and the terms of the original Contract. Renewals will be in writing by contract amendment and are subject to the same terms and conditions set forth in the initial Contract and all subsequent written amendments signed by both parties (OWNER and SUPPLIER). No compensation shall be made for costs associated with renewal of the Contract. Renewals are contingent upon satisfactory performance evaluations by OWNER and subject to the availability of fiscal year funding approved by the Jupiter Town Council. SUPPLIER may elect not to renew the Contract but must provide 120 days advance written notice to OWNER. OWNER is not obligated to renew the Contract. Regardless of anything to the contrary,

this Contract may be terminated by OWNER at any time and for any reason. Further, SUPPLIER agrees that it will not be entitled to any claims and/or damages resulting from such termination, including, but not limited to, lost profits, direct or indirect damages, and consequential special or punitive damages.

4.3 The parties agree that the TIME IS OF THE ESSENCE, in the performance of each and every obligation under this Contract. The Contract may be changed only by written amendment to the Contract, signed by both parties. However, Supplier's failure to sign an amendment shall not prohibit OWNER from signing and implementing the changes, as long the changes are supported by provisions of the contract.

Article 5. TERMINATION.

5.1 OWNER reserves the right to cancel the contract at any time with thirty (30) days advance written notice to SUPPLIER. OWNER shall only be obligated to pay SUPPLIER for chemical received and off-loaded into the TOWN'S allotted storage facility prior to the end of the thirty (30) day notice period.

5.2 If SUPPLIER elects to cancel the Contract at any time during the Contract Term, SUPPLIER shall provide one hundred twenty (120) days advance written notice to OWNER and shall continue to supply the chemical at the then contract unit price for the duration of the 120-day notice period, with no adjustment to unit pricing.

Article 6. CONTRACT PRICE.

6.1 OWNER will be obliged to pay SUPPLIER for furnishing the Goods and Services in accordance with the Contract Documents in current funds according to Contract Unit Pricing F.O.B. Delivered ($/Ton), as indicated in SUPPLIER's sealed Bid and subsequent price adjustments in accordance with contract provisions, documented by written amendment signed by both parties, for the term of the contract.

6.2 Semiannual adjustment (every 6 months) of contract unit pricing for the chemical only shall be evaluated by Owner based on the most recent annual percentage change available on November 23rd and May 23rd in the Producer Price Index (PPI): *Commodity data for Chemicals and Allied Products: Sulfuric Acid, not seasonally adjusted (WPU0613020T1)*, obtained from the U.S. Department of Labor Bureau of Labor Statistics (BLS) Website, https://www.bls.gov/ppi/, by emailing the PPI at ppi-info@bls.gov, or by calling (202) 691-7705. Owner shall prepare an amendment to the contract adjusting the contract unit price for the chemical for Supplier's review and signature. Semiannual price adjustments shall apply to new orders placed on or after the effective date of the executed written amendment. No adjustments outside of the semiannual adjustments described herein shall be allowed. Supplier's failure to sign the amendment shall not preclude the Owner from adjusting the contract unit price for chemical as described herein and making payments to Supplier at the adjusted contract unit price. OWNER may require additional documentation in addition to PPI data to support price adjustments and demonstrate consistency with comparable water utilities with similar contracts. In the event that the previously referenced PPI is unavailable or permanently discontinued, then the PPI for *Commodity data for Chemicals and Allied Products: Industrial Chemicals (WPU061)* shall be used to calculate the semiannual price adjustments.

6.3 The contract unit price for freight is firm and not subject to adjustment for the duration of the contract term.

Article 7. PAYMENT PROCEDURES.

7.1 Payments made by the OWNER will be made via Electronic Funds Transfer (EFT). SUPPLIER will complete a Town of Jupiter Vendor application form providing OWNER with financial information required for EFT payments.

7.2 SUPPLIER shall invoice the OWNER within thirty (30) days of delivery of the chemical to OWNER. Invoicing shall be based on the contract unit price at the time of delivery. OWNER shall not be obligated to pay for product delivered to the site that is found by OWNER to be out of compliance with the contract requirements and chemical specifications.

7.3 SUPPLIER is responsible to ensure that invoices are based on the correct Contract Unit Price. OWNER is only obligated to pay for chemical supplied, delivered, and accepted based on correct Contract Unit Pricing, as documented in the contract or subsequent amendments to the contract.

Article 8. SUPPLIER'S REPRESENTATIONS. In order to induce OWNER to enter into this Contract, SUPPLIER makes the following representations:

8.1 SUPPLIER has reviewed and understands the nature and extent of the Bidding/Contract Documents and has given OWNER written notice of all conflicts, errors or discrepancies discovered and agrees written resolution thereof by OWNER is acceptable to SUPPLIER.

8.2 SUPPLIER is familiar with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect the production and delivery of the Goods and furnishing of Special Services or other services in connection therewith.

8.3 SUPPLIER does not require additional information from OWNER to enable SUPPLIER to furnish the Goods and Special services at the Contract Unit Prices, within the Contract Time and in accordance with the other terms and conditions of the Bidding/Contract Documents.

Article 9. CONTRACT DOCUMENTS.

9.1 The Contract Documents which comprise the entire Contract between SUPPLIER and OWNER are attached to this Contract, made a part hereof and consists of the following:

- 9.1(a) Table of Contents
- 9.1(b) Invitation to Bid
- 9.1(c) Instructions to Bidders
- 9.1(d) Bid Proposal including Qualification Requirements
- 9.1(e) Contractor E-Verify Affidavit
- 9.1(f) Subcontractor E-Verify Affidavit
- 9.1(g) Sworn Statement
- 9.1(h) Notice of Intent to Award
- 9.1(i) Notice of Award
- 9.1(j) Contract between OWNER and SUPPLIER
- 9.1(k) Notice to Proceed
- 9.1(l) Technical Specifications bearing the title: Contract for Supplying Sulfuric Acid Re-bid (W2604L)
- 9.1(m) Any Addenda issued to the Bid Documents
- 9.1(n) Any Modifications, including written contract amendments, duly delivered after execution of this Contract.

Article 10. MISCELLANEOUS.

10.1 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no

assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.2 OWNER and SUPPLIER each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

10.3 The Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this Contract and in furtherance thereof may demand and obtain records and testimony from the Contractor and its subcontractors and lower tier subcontractors. The Contractor understands and agrees that in addition to other remedies and consequences provided by law, the failure of the Contractor or its subcontractors or lower tier subcontractors to fully cooperate with the Office of Inspector General of Palm Beach County when requested may be deemed by the municipality to be a material breach of this contract justifying its termination. The Office of Inspector General in Palm Beach County is established by Palm Beach County Code, Section 2-421 - 2-440. Failure to cooperate with the Inspector General or interfering with or impeding any investigation shall be in violation of Palm Beach County Code, Section 2-421 – 2-440, and be punished pursuant to Section 125.69, Florida Statutes, in the same manner as a second-degree misdemeanor.

10.4 This Contract is subject to and governed by the laws of the State of Florida, including without limitation Chapter 119, Florida Statutes, which generally makes public all records or other writings made by or received by the parties. The Supplier acknowledges its legal obligation to comply with § 119.0701, Florida Statutes.

10.4(a) A request to inspect or copy public records relating to a public agency's contract for services must be made directly to the public agency. If the public agency does not possess the requested records, the public agency shall immediately notify the Supplier of the request, and the Supplier must provide the records to the public agency or allow the records to be inspected or copied within a reasonable time.

10.4(b) If a Supplier does not comply with the public agency's request for records, the public agency shall enforce the contract provisions in accordance with the contract.

10.4(c) A Supplier who fails to provide the public records to the public agency within a reasonable time may be subject to penalties under s. 119.10.

10.4(d) **IF THE SUPPLIER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE SUPPLIER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 561-741-2752, TOWNCLERK@JUPITER.FL.US, OR 210 MILITARY TRAIL, JUPITER, FL 33458.**

10.5 EMPLOYMENT ELIGIBILITY REQUIREMENTS (E-VERIFY REGISTRATION AND USE)

10.5(a) Provisions for employment eligibility under Section 448.095 F.S. (Florida Statutes) shall apply to all Suppliers, and subcontractors performing Work, providing supplies, or providing services under this Contract.

10.5(b) Bidders are responsible to review Section 448.095 F.S. in its entirety and ensure that all obligations of the Statute are complied with.

10.5(c) Bidder shall register and use the E-Verify system as required by Section 448.095 F.S. and require their subcontractors and suppliers to do the same.

10.5(d) The Apparent Successful Bidder shall provide Owner with any information or documentation necessary for compliance with the E-Verify requirements of Section 448.095 F.S. as requested in writing by Owner.

10.5(e) Pursuant to Section 448.095, Florida Statutes, beginning January 1, 2021, Supplier shall register with and use the U.S. Department of Homeland Security's E-Verify system, https://e-verify.uscis.gov/emp, to verify the work authorization status of all Supplier employees hired on and after January 1, 2021.

(i) Supplier must provide evidence of compliance with Section 448.095, Florida Statutes. Evidence shall consist of an affidavit from the Supplier (refer to Bid Proposal forms) stating all employees hired on and after January 1, 2021 have had their work authorization status verified through the E-Verify system and a copy of their proof of registration is in the E-Verify system.

(ii) Failure to comply with this provision is a material breach of the Contract, and shall result in the immediate termination of the Contract without penalty to the Town. Supplier shall be liable for all costs incurred by the Town to secure a replacement Contract, including but not limited to, any increased costs for the same services, any costs due to delay, and rebidding costs, if applicable.

10.6 ENTITIES OF FOREIGN COUNTRIES OF CONCERN

10.6(a) Section 287.138, Florida Statutes, prohibits the TOWN from entering in to a Contract which would give access to an individual's personal identifying information with an entity with; a Controlling Interest (as that term is defined in sub-section 287.138(1)(a)), or full ownership, held by a Foreign Country of Concern (as that term is defined in sub-section 287.138(1)(c), or with a principal place of business in a Foreign Country of Concern, unless the entity provides the TOWN with an affidavit signed by an officer or representative of the entity under penalty of perjury attesting that the entity does not meet any of the criteria in paragraphs (2)(a)-(c) of the statute.

10.6(b) The SUPPLIER, by its execution of this CONTRACT, certifies, under penalty of perjury, compliance with section 287.138, Florida Statutes, that SUPPLIER is not owned by the government of a Foreign Country of Concern, is not organized under the laws of, nor has its principal place of business in a Foreign Country of Concern, and the government of a Foreign Country of Concern does not have a Controlling Interest in the Entity.

10.6(c) The TOWN reserves the right to terminate this CONTRACT if the SUPPLIER is found to have provided a false certification or otherwise violates Section 287.138, Florida Statutes. The TOWN, in the event of such termination, shall not incur any liability to the SUPPLIER for any work or materials furnished.

10.7 SCRUTINIZED COMPANIES LIST

10.7(a) Section 287.135(2), Florida Statutes, prohibits the TOWN from entering in to a Contract with a SUPPLIER that is on the Scrutinized Companies that Boycott Israel List (created pursuant to section 215.4725, Florida Statutes) or is engaged in a boycott of Israel, that is on the Scrutinized Companies with Activities in Sudan List (created pursuant to section 215.473, Florida Statutes), Scrutinized Companies with Activities in Iran Terrorism Sectors List (created pursuant to section 215.473, Florida Statutes) or that is engaged in business operations in Cuba or Syria.

10.7(b) The SUPPLIER, by its execution of this CONTRACT, certifies, under penalty of perjury and pursuant to section 287.135(5), that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in Iran Terrorism Sectors List, that it does not have business operations in Cuba or Syria, and it is not participating in a boycott of Israel, for goods or services of any amount.

10.7(c) The TOWN reserves the right to terminate this CONTRACT if the SUPPLIER is found to have submitted a false certification or has been placed on a list created pursuant to sections 215.4725 or 215.473. The TOWN, in the event of such termination, shall not incur any liability to the SUPPLIER for any work or materials furnished.

IN WITNESS WHEREOF, the parties hereto have signed two (2) copies of this Contract. At least one counterpart each has been delivered to OWNER and SUPPLIER. All portions of the Contract Documents have been signed or identified by OWNER and SUPPLIER.

OWNER	SUPPLIER
Town of Jupiter 210 Military Trail Jupiter, FL 33458	Interacid North America, Inc. 10210 Highland Manor Dr., Suite 140 Tampa, FL 33610
By:	
_____ Jim Kuretski, Mayor	_____ Brent Shonka, President
(TOWN SEAL)	(CORPORATE SEAL)
ATTEST	ATTEST
_____ Merriane Lahmeur, Town Clerk	_____ SIGNATURE _____ PRINT NAME AND POSITION

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 20, 2026

Re: Procurement Review Memo – Resolution No. 41-26

Sulfuric Acid Contract (W2604L) with Interacid North America, Inc.

Upon review of Resolution No. 41-26 to award contract W2604L to Interacid North America, Inc to supply Sulfuric Acid to Jupiter's water treatment plant in an estimated amount of $1,700,985 for the 495-day term, I have found that the procurement was competitively solicited as an Invitation to Bid and the Recommendation to Award is being made to the lowest responsible and responsive bidder.

Resolution No. 41-26 and Contract W2604L complies with all Federal, State, County, and Local procurement requirements, including Town of Jupiter Procurement Polices and Florida State Statutes.

TOWN OF JUPITER
FY2026 Mid-Year Budget Amendment

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Scott Reynolds, Finance Director
SUBJECT	**Resolution 51-26**, Approving the FY2026 Mid-Year Budget Amendment

EXECUTIVE SUMMARY

Staff seeks Town Council approval of Resolution 51-26 providing for an amendment to the fiscal year ending September 30, 2026 operating and CIP budgets. The amendment includes budget transfers and amendments recorded from October 1, 2025 through March 31, 2026 as detailed in the attached budget transfer summary. The most significant amendments by fund are listed below.

The Town Attorney has reviewed the attached documents and finds them to be in acceptable form.

ANALYSIS

General Fund:

Amendments to the General Fund budget were required for the following:

1. To transfer and use Council Contingency to fund salary and benefit costs associated with the authorized Police Department Union Contract.
2. To carry forward unspent FY2025 funds for the previously approved Wayward Signs on the new Town Hall Campus.
3. To amend and carry forward operating funds from FY2025 for Roger Dean Stadium Improvement contributions not completed by year-end.

General Fund Contingency Use:

The $1,000,000 General Fund contingency has been fully allocated for the police union contract, with no remaining balance.

Fire Fund:

1. To carry forward remaining funds from FY2025 for contracts, apparatus and equipment purchases not completed by year-end.
2. To appropriate received funds from Opioid Settlement proceeds.

Fire Fund Contingency Use:

There has been no use of Fire contingency funds for FY2026, with a remaining balance of $500,000.

Community Investment Plan (CIP):
Amendments to the CIP fund were required for the following:

1. To carry forward unspent FY2025 funds on previously approved C-I-P projects and related revenues.

Water and Stormwater:
Amendments to the Water Fund and Stormwater Fund budgets were required for the following:

1. To carry forward unspent FY2025 operating funds on previously approved vehicle and operating items.
2. To carry forward previously approved FY2025 professional services for the S Island Way Water Main Project.
3. To carry forward unspent water connection fee funds previously approved FY2025 CIP project funding.
4. To carry forward unspent FY2025 funds on the previously approved infrastructure R&R projects.
5. To appropriate additional funding for a construction contract for construction and improvements at the Town's Deep Injection Well project, approved by the Town Council on 12-16-2025 through Resolution 104-25.
6. To amend and appropriate additional funds for a contract for Advanced Metering Infrastructure, approved by Town Council on 12-2-2025 through Resolution 86-25.
7. To carry forward unspent FY2025 funds on the previously approved Stormwater improvement grants CIP project.
8. To carry forward unspent FY2025 funds on previously approved Stormwater R&R Fund CIP projects.

Water and Stormwater Fund Contingency Use:
There has been no use of Water contingency funds for FY2026, with a remaining balance of $598,600.
There has been no use of Stormwater contingency funds for FY2026, with a remaining balance of $100,000.

Building Fund:
To amend and restrict funds for future Building Fund projects that are currently identified as unrestricted.

STRATEGIC PRIORITY
● Fiscal Responsibility

ATTACHMENTS
1. Resolution 51-26

FUNDING SOURCE
Additional Funding Requested As Detailed in Resolution - Exhibit A

For more information or copies of the attachments, please contact Scott Reynolds at scottr@jupiter.fl.us or 561-741-2327.

RESOLUTION NO. 51-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, AMENDING RESOLUTION 102-25, THE TOWN'S BUDGET FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2026; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Town of Jupiter has adopted its Fiscal Year 2025-2026 Budget and Pay Plan pursuant to Resolution 102-25 on September 18, 2025; and

WHEREAS, the Town Manager recognizes that periodic modifications to the adopted budget for the fiscal year are necessary for fiscal management purposes and to implement those changes to the Town Council's fiscal policy which occur after the adoption of the Fiscal Year 2025-2026 Budget; and

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA:

SECTION 1. The Town Council hereby amends Resolution 102-25, the Town's Budget for Fiscal Year 2025-2026 to provide for certain adjustments and amendments to the Town Council's fiscal policy which it has made during the course of the fiscal year.

SECTION 2. The Town Council hereby adopts those Budget transfers recorded through March 31, 2026 which are attached hereto as Exhibit A and incorporated herein.

SECTION 3. To the extent not amended herein, all other provisions of the Annual Budget for Fiscal Year Ending September 30, 2026 remain in full force and effect.

SECTION 4. If any section, subsection, sentence, clause, phrase, or portion of this Resolution is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portion of this Resolution.

SECTION 5. This Resolution shall become effective immediately upon execution.

EXHIBIT A

TOWN OF JUPITER
BUDGET TRANSFERS
APPROPRIATING FUND BALANCE / RETAINED EARNINGS
October 1, 2025 - March 31, 2026

	Increase	Decrease
GENERAL FUND:		
CLERK:		
Other Contractual Service	372	
CFS-Filing Fee		(372)
To transfer and amend from state election assessment fees collected to cover cost.		
FINANCE:		
Repairs & Maintenance	11,197	
Designated Fr Fund Balance		(11,197)
To carryforward unspent FY2025 funds for previously approved modular office improvements.		
PLANNING AND ZONING:		
Repairs & Maintenance	9,877	
Designated Fr Fund Balance		(9,877)
To carryforward unspent FY2025 funds for previously approved modular office improvements.		
POLICE DEPARTMENT:		
Other Current Charges	3,000	
Donation-Police Department		(3,000)
To appropriate additional donated funds received for the Town Police Department's Shop with a Cop program.		
Machinery & Equipment	20,535	
Oth Rev-Insurance Reimburse		(20,535)
To appropriate received funds from insurance proceeds and disposition funds to replace a police vehicle due to an accident.		
Machinery & Equipment	25,370	
Tfr Fr-General Fund		(25,370)
To appropriate FY2025 received funds from insurance proceeds and disposition funds to replace a police vehicle due to an accident.		
Machinery & Equipment	178,570	
Designated Fr Fund Balance		(178,570)
To carryforward unspent FY2025 funds for previously approved CNV Van.		

EXHIBIT A

TOWN OF JUPITER
BUDGET TRANSFERS
APPROPRIATING FUND BALANCE / RETAINED EARNINGS
October 1, 2025 - March 31, 2026

	Increase	Decrease
Regular Salaries	188,957	
FICA Taxes	15,495	
Regular Salaries	169,734	
FICA Taxes	13,944	
Regular Salaries	566,510	
FICA Taxes	45,360	
Contingency		1,000,000

To transfer and use Council Contingency to fund salary and benefit costs associated with authorized Police Department Union Contract.

OTHER GENERAL GOVERNMENT:

Operating Supplies - Wayfinding Signs	343,322	
Designated Fr Fund Balance	(343,322)	

To carryforward unspent FY2025 funds for previously approved Wayward Signs on the new Town Hall Campus.

Tfr To-Capital Improvement Fund	25,000	
Designated Fr Fund Balance	(25,000)	

To transfer and amend the FY2026 CIP budget to fund the Town Council Legacy Memorial.

Aid to Gov Agency-PBC RDS	750,000	
Designated Fr Fund Balance	(750,000)	

To amend and carryforward operating funds from FY2025 for Roger Dean Stadium Improvement contributions not completed by year-end.

LAW ENFORCEMENT GRANT FUND:

Communication Services	3,102	
Operating Supplies	3,869	
Fed Grant-Justice Assistance	(6,971)	

To appropriate and recognize Federal Law Enforcement grant funds for equipment and training weapons.

COMMUNITY INVESTMENT PROGRAM:

Town Council Legacy Memorial Project	25,000	
Tfr Fr-General Fund	(25,000)	

To transfer and amend the FY2026 CIP budget to fund the Town Council Legacy Memorial.

N Pennock Ln Sidewalk Improvements	7,185	
CDBG Funding	(7,185)	
Other Contractual Services - Admin Fees		7,184
CDBG Funding		(7,184)

To transfer and amend the FY2026 CIP budget to increase CDBG funding for N Pennock Ln Sidewalk Improvements

EXHIBIT A

TOWN OF JUPITER
BUDGET TRANSFERS
APPROPRIATING FUND BALANCE / RETAINED EARNINGS
October 1, 2025 - March 31, 2026

	Increase	Decrease
Athletic Fields R&R	63,585	
Designed Fr Fund Balance		(63,585)

To appropriate additional funding for a construction contract for the Jupiter Community Park Athletic Field Renovations project. Approved by the Town Council on 3-17-2026 Resolution -26.

Previously Approved CIP Projects	47,567,733	
Fed Grant-CDBG		(7,579)
Fed Grant-HUD-CDBG		(377,493)
Fed Grant-Culture/Recreation		(24,771)
State Grant-LRPI		(100,000)
State Grant-FDOT		(2,425,000)
Local Grant-Other Transportatn		(1,000,000)
Designated Fr Fund Balance		(19,382,487)
Designated Fr Escrow Funds		(771,621)
Designated Fr Open Space Funds		(305,689)
Tfr Fr-Surtax Fund		(2,530,000)
Tfr Fr-Impact Fee: Road		(1,669,834)
Tfr Fr-JFRD Debt Service		(18,000,000)
Capital Contributions Private		(973,259)

To carryforward unspent previously approved FY2025 CIP project funding.

FIRE/EMS FUND:

Other Contractual Svc - Opioid	10,000	
Operating Supplies	11,250	
State Grant - Dept of Health		(11,250)
Oth Rev-Opioid Settlement Fund		(10,000)

To amend the FY2026 budget to accept State grant funds and opioid settlement funds received.

Previously approved impementation expenses:	4,919,650	
Designated Fr Fund Balance		(4,919,650)

To carryforward remaining funds from FY2025 for contracts, apparatus and equipment purchases not completed by year-end.

WATER FUND:

WATER ADMINISTRATION:

Professional Services	49,194	
Designated Fr Fund Balance		(49,194)

To carryforward previously approved FY2025 professional services for the S Island Way Water Main Project.

EXHIBIT A

TOWN OF JUPITER
BUDGET TRANSFERS
APPROPRIATING FUND BALANCE / RETAINED EARNINGS
October 1, 2025 - March 31, 2026

	Increase	Decrease
Equipment	60,640	
Designated Fr Fund Balance	(60,640)	
To carryforward unspent FY2025 operating funds on previously approved vehicle and operating items.		
Promotional Activities	500	
Donation-Drop Savers	(500)	
To amend and recognize donation proceeds for the FY2026 Drop Savers Program.		
Repairs & Maintenance	20,700	
Oth Rev-Insurance Reimburse	(20,700)	
To amend and recognize insurance proceeds for damaged RO permeate header pipe at the RO plant.		
WATER CONNECTION FEE FUND:		
Meters	35,711	
Designated Fr Fund Balance	(35,711)	
To carryforward unspent previously approved FY2025 CIP project funding.		
WATER R&R FUND:		
Previously Approved CIP Projects	55,764,467	
Fed Grant-WTP Hardening	(1,939,152)	
Designated Fr Fund Balance	(53,692,729)	
Tfr Fr-ARPF	(132,586)	
To carryforward unspent FY2025 funds on the previously approved infrastructure R&R projects.		
Wells	3,216,563	
Designated Fr Fund Balance	(3,216,563)	
To appropriate additional funding for a construction contract for construction and improvements at the Town's Deep Injection Well Project. Approved by the Town Council on 12-16-2025 Resolution 104-25		
AMRR/Nano Bldg Roof Repairs	135,876	
AMRR/Painting		135,876
To transfer funding for a construction contract for roof repairs to the Nanofiltration Water Plant. Approved by the Town Council on 2-17-2026 Resolution 4-26		
Meters	1,001,425	
Designated Fr Fund Balance	(1,001,425)	
To amend and appropriate additional funds for a contract for Advanced Metering Infrastructure. Approved by Town Council on 12-2-2025 Resolution 86-25.		

EXHIBIT A

TOWN OF JUPITER
BUDGET TRANSFERS
APPROPRIATING FUND BALANCE / RETAINED EARNINGS
October 1, 2025 - March 31, 2026

	Increase	Decrease
STORMWATER FUND:		
STORMWATER OTHER:		
Private SW Improvement Grant	322,590	
Designated Fr Fund Balance	(322,590)	
To carryforward unspent FY2025 funds on previously approved SW improvement grants CIP projects.		
STORMWATER R&R FUND:		
Previously Approved CIP Projects	4,792,906	
State Grant-LRPI	(175,255)	
Local Grant-SFWMD	(130,000)	
Designated Fr Fund Balance	(4,487,651)	
To carryforward unspent FY2025 funds on previously approved stormwater R&R fund CIP projects.		
BUILDING FUND:		
Designated from Unrestricted Reserves		13,666,095
Net Asset Restricted Software Replacment	(3,955,070)	
Net Asset Restricted New Facility Improvement	(9,000,000)	
Net Asset Restricted Virtual Inspection	(500,000)	
Net Asset Restricted License Training	(211,025)	
To amend and restrict excess funds for future Building Fund projects as required by FS 553.80.		

EXHIBIT B

TOWN OF JUPITER
FY2025 CIP BALANCE CARRYFORWARD AMOUNTS

CIP Fund - Project Title	Carryforward Balance
Mast Arm Signal General	362,416
Collector Rdwy Lgt	200,447
Street Resurfacing	1,341,957
S Extension of Island Way	7,812,666
Traffic Mgmt & Safety Impr	437,499
Jup Park Dr/Central	866,460
Community Center Reno	390,423
Arterial Rd Landscape II	585,681
Public Works Storage Bldg Ph II	1,318,950
N Pennock Ln SW CDBG	509,260
TPD & Bush Rd Intersection	700,000
ITR Western Corr Ph II	2,433,701
WWII Barracks	102,175
Piatt Pl Fire Facility	10,353,124
Cinquez Pk Fire Facility	10,492,922
Marlins Quad Reno	30,000
Police Vehicle Repl Prgm	659,863
Enhance Gateways	88,235
Aid to Gov Agen-PD Radio Sys Repl	2,247,922
Aid to Gov Agen-Beach Renoursh	867,977
Community Webcams	7,325
Aid-Roof Repl Program-CDBG	7,579
Police Memorial	149,237
Mary Hinton Memorial	13,710
Tactical Vehicle	566,992
Open Space Prgm	264,453
Park Restore Prgm	223,670
Sawfish Bay Pk Train Depot	1,123,056
Sims Creek Preserve	297,011
Jup Comm Pk Reno	1,509,259
Indian Cr Pk Rstrm	364,447
Parks Playground R&R	714,715
Playground Equip CDBG-CV	24,771
Civic Center Reno	75,000
Abacoa Community Park Reno	349,830
Athletic Field R&R	75,000
Total	47,567,733

EXHIBIT B

TOWN OF JUPITER
FY2025 CIP BALANCE CARRYFORWARD AMOUNTS

Water R&R Fund - Project Title	Carryforward Balance
Meter Replacements	3,492,580
N Limestone Creek Wellfd	6,823,794
Large Meter Replacements	254,823
Software-UBS & EAM Replacement	556,186
Asset Maintenance R&R Program	4,423,896
Pump Replacement Program	686,884
MBA Rehab RO Permeate Od	198,204
RO Membrance Repl	1,200,579
Piping Upgr-Central Bd PS	198,650
Nitrogen Blanket in Sulf	99,357
RO and SA Well Replacements	5,505,029
WTP Control Syst Securty	136,522
WTP Hard Server Bldg	4,332,378
RO RW Degrad-Inter Boost	2,924,153
Floridan Aqui RO14/15/16	6,345,511
Fishermans Landing WM Repl	1,304,771
Distr Sys Wtr Qlty Samp St	46,116
RO Permeate Degasifier	10,000
Dolphin Dr WM Repl	282,093
Pennock Ind Pk Valves/Hydr	125,075
NF Conc Blend w/RO RawWt	100,000
Deep Injection Well Syst	12,565,721
Toney Penna WM & Valves	
Ammonia Inj Reloc/4-Log	760,400
ITR WM Fitting Repl	235,585
Emergency 24" FA RWM Repl	1,416,431
NF Acid Tank Emerg Repl	1,273,730
Eganfuskee/Carl/Clark Impr	465,999
Total	55,764,467

Water Connection Fee Fund - Project Title	Carryforward Balance
Meters New	35,711
Total	35,711

EXHIBIT B

TOWN OF JUPITER
FY2025 CIP BALANCE CARRYFORWARD AMOUNTS

Stormwater Fund - Project Title	Carryforward Balance
Private SW Improvement Grt	322,590
Total	322,590

Stormwater R&R Fund - Project Title	Carryforward Balance
N Pennock Ln Swale Impr	59,300
Stormwater System Rehab	592,847
Asset Maintenance R&R Program	1,190,466
Seminole Ave SW Basin Imp	15,000
Old Jupiter Bch Rd Drain	677,485
Fishermans Landing Drain	429,122
Dolphin Dr Drainage Impr	684,897
Curb Replacements	301,654
Pennock Ind Pk Drain Impr	224,428
Bush Rd Drainage Impr	416,294
Infr-Daniels Way Wtr Quality	61,624
Dover Ditch Wtr Quality	139,789
Total	4,792,906

TOWN OF JUPITER
FIND Grant for Waterway Access and Rescue Vessels

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Darrel Donatto, Fire Chief
SUBJECT	Resolution 56-26 Authorizing the Submittal of a FIND Grant Application for Waterway Access and Rapid Rescue Vessels Response Initiative

EXECUTIVE SUMMARY

Staff is seeking approval of a resolution that authorizes the submittal of a grant application to the Florida Inland Navigation District (FIND) Waterways Assistance Program for the Jupiter Waterway Access & Rapid Rescue Vessels Response Initiative. This project aims to acquire two shallow-water rescue vessels to improve emergency response in the Intracoastal Waterway (ICW), the Loxahatchee River, and associated waterway systems. The total estimated project cost is $100,000, with the grant providing a 50% match ($50,000).

The Town Attorney has reviewed the attached resolution and finds it to be in acceptable form.

ANALYSIS

Staff is seeking approval to submit the FIND grant application. The Jupiter Fire Rescue Department (JFRD) has identified significant access gaps in the local waterway system due to shifting sandbars, low-clearance bridges, and shallow-water areas that are inaccessible to traditional deep-draft marine rescue vessels. These environmental factors can hinder emergency response and delay the delivery of Advanced Life Support (ALS) care during medical emergencies or boating accidents.

By securing two specialized shallow-water rescue vessels, JFRD will ensure rapid deployment and effective emergency service coverage for all residents and visitors utilizing the Town's waterways. This grant application aligns with the Town’s "Safe & Livable Community" strategic priority by leveraging external funding to enhance public safety infrastructure. Approval of Resolution 56-26 will authorize the Town Manager to execute the grant application.

STRATEGIC PRIORITY

- Safety
- Fiscal Responsibility

ATTACHMENTS

1. Resolution 56-26 and Grant Application
2. Procurement Review Memo

FUNDING SOURCE
Funding is not necessary for this request

For more information or copies of the attachments, please contact Deputy Fire Chief Stephen Shaw at stephens@jupiter.fl.us or 561-741-2459.

RESOLUTION NO. 56-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, AUTHORIZING THE TOWN MANAGER TO SUBMIT AN APPLICATION FOR FINANCIAL ASSISTANCE TO THE FLORIDA INLAND NAVIGATION DISTRICT WATERWAYS ASSISTANCE PROGRAM; AUTHORIZING THE EXECUTION OF THE GRANT AGREEMENT AND RELATED DOCUMENTS; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

WHEREAS, the Town of Jupiter (Town) is interested in establishing a "Jupiter Waterway Access & Rapid Rescue Vessels Response Initiative" (the Project) in furtherance of the health, safety and welfare of the general public; and

WHEREAS, the Project would permit specialized shallow-draft vessels to access restricted areas of the Intracoastal Waterway and the Loxahatchee River; and

WHEREAS, the Florida Inland Navigation District (FIND) provides financial assistance to local governments through its Waterways Assistance Program for projects that improve public navigation and safety; and

WHEREAS, the Town Council has determined that it is appropriate to commit to a 50% matching grant provided FIND awards a grant to the Town.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, AS FOLLOWS:

Section 1. The recitals are incorporated herein.

Section 2. The Town 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 for any assistance awarded

under the attached proposal F.A.C. and which will be a part of a Project Agreement for any assistance awarded under the attached proposal.

2. That it is in 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 FIND.

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 the Town for public use.

4. That is 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 to, or in conjunction with, request for the final 10 percent of the funding agreed to by FIND.

Section 3. The Town Council hereby authorizes the Town Manager to make an application to the Florida Inland Navigation District for a Waterways Assistance Program grant

and to confirm that the Town will contribute the amount of $50,000.00, representing 50% of the $100,000.00 total project cost.

Section 4. The Town Manager is further authorized to execute the grant application attached hereto as **Exhibit 1**, the standard FIND Resolution for Assistance, and any subsequent grant agreements or documents required to facilitate the Project.

Section 5. This resolution shall take effect immediately upon its execution.

#7810689 v1 26503-00001

Exhibit 1



WATERWAYS ASSISTANCE PROGRAM

APPLICATION PACKAGE

Part 2. Attachment E



Florida Inland Navigation District

FY 2026-2027

WATERWAYS ASSISTANCE PROGRAM

APPLICATION PACKAGE

Part 2. Attachment E

The following attachments E-1 through E-6, in addition to the requirements of items 7 through 9 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 March 30, 2026.

Application Submission:

Electronic copies (2 separate attachments per instructions):

Attachment 1: Items 1-9, and Attachment 2: Items 10-12



Electronic submission via email to:

CKelley@aicw.org

(pdf file size 15MB or less)

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 -- 30th of March; Property control/Technical sufficiency items – 18th of May, Permits – 21st 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 eligibleas 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 two (2) pdf attachments (15mb max size and see attachment instructions on the next page). Make sure to label your pdf attachments 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 March 30, 2026.

ATTACHMENT E-1
Waterways Assistance Program FY2026
Applicant Checklist

Project Title:	Jupiter Waterway Access & Rapid Rescue Vessels Response Initiative (ICW/Lox River)
Applicant:	Town of Jupiter, Fire Rescue Department, Florida

This checklist and the other items listed below in items 1 through 11 constitute your application. The required information shall be submitted in the order listed.

Electronic copies (2 separate PDF files per instructions – PDF File 1: Items 1-8, PDF File 2: Items 9-11) shall be emailed (15mb maximum file size) to CKelley@aicw.org. Applications must be received by the deadline, no exceptions.

		YES	NO
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)**	Janet Zimmerman, on behalf of Commissioner Burkett, states no meeting needed at this time.	
2.	Application Checklist Attachment E-1 (Form No. 25-10, 2 pages) **(Form must be signed and dated)**	◉	○
3.	Application and Evaluation Worksheet Attachment E-2 (Form No. 25-15) **(First Page of Form Must be Signed)**	◉	○
4.	Project Cost Estimate Attachment E-3 (Form No. 25-20, 1 page) **(Must be on District form)**	◉	○
5.	Project Timeline Attachment E-4 (Form No. 25-25, 1 page)	◉	○
6.	County/City Location Map	◉	○
7.	Project Boundary Map	◉	○
8.	Clear and Detailed Site Development Plan Map	○	◉

Continued on Next Page

	YES	NO
9. Official Resolution Form Attachment E-5 (Form No. 25-30, 2 pages)(Resolution must be on District Form and includes items 1-6)	◉	○
10. Attorney's Certification (Land Ownership) Attachment E-6 (Form No. 25-35, 1 page)	○	◉
11. Copies of all Required Permits: ACOE, DEP, WMD (Requirement of Construction & Dredging Projects)	○	◉

The undersigned, as applicant, acknowledges that Items 1 through 11 above constitutes a complete application and that this information is due in the District office no later than 4:30 PM, March 30, 2026. By May 18, 2026, 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 11 is due to the District no later than September 21, 2026. If the information in Item 11 is not submitted to the District office by September 21, 2026, I am aware that my application will be removed from any further funding consideration by the District.

Jason J. Sekula	Battalion Chief
Print Liaison Name	Title
Jason Sekula Digitally signed by Jason Sekula Date: 2026.02.26 09:58:31 -05'00'	2/25/26
Liaison Signature	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

Waterways Assistance Program FY2026

Application and Evaluation Worksheet

Local Sponsor: Town of Jupiter, Florida	Department: Fire Rescue
Project Title: Jupiter Waterway Access & Rapid Rescue Vessels Response Initiative	Use "Phase I" for Design Projects. Use "Phase II" for Construction if you received FIND funding for Phase I Work.
Project Director: Chief Jason Sekula	Email: jasons@jupiter.fl.us
Grant Liaison: (If Different from Director) Chief Jason Sekula	Email: jasons@jupiter.fl.us
Mailing Address: 210 Military Trail	
City: Jupiter	Zip Code: 33458
Phone Number: 561-674-2430	
Project Address: 3133 Washington St., Jupiter, Fl 33458	
Requested FIND Funding:	$50,000.00
Eligible Matching Funds Amount:	$50,000.00
Match Percentage:	50%
Total Project Costs:	$100,000.00
Applicant's Funding Source:	TOJFR CIP Budget Request for Fiscal Year 2026/2027

Jason Sekula Digitally signed by Jason Sekula Date: 2026.02.26 10:27:50 -05'00'

Applicant Signature Certifying the Above Information

Jason Sekula

Print Name

Project Summary: Maximum 200 Words

The Town of Jupiter Fire Rescue Department (JFRD) seeks funding to acquire specialized, shallow-draft rescue vessels to provide life-saving Emergency Medical Services (EMS) and Technical Rescue within the Jupiter Intracoastal Waterway and Loxahatchee River systems.

The Town of Jupiter, due to its geographical location, faces significant hazards along the Intracoastal Waterway (ICW) and Loxahatchee River Ways. Events such as Hurricanes, Tidal Surges, and Rain Storms add to the dangers of this unique waterway system, specifically impacting emergency access in low-lying residential (canal neighborhoods) and coastal areas.

As the Town of Jupiter begins it's services October 1, 2026, there is a critical need to bridge the "access gap" where traditional deep-draft law enforcement boats and land-based apparatus cannot reach stranded or injured patients/victims. This project will establish dedicated, Marine Rescue Vessels capable of navigating shoaled areas, mangrove shorelines, and sandbars to ensue rapid extraction and advanced life support (ALS) intervention.

Jupiter manages 23 square miles of territory, mostly high-traffic ICW waterway and Loxahatchee River Systems. Shifting sandbars, frequent shoaling and low clearance bridges make large portions of the waterway inaccessible to standard rescue vessels. Currently, recreational accidents such as sandbar emergencies or kayaking accidents in shallow areas face delayed care and treatment because access concerns noted above.

1. Priority Category:

a) Choose one priority category of this project from the application instructions based upon the predominant cost of the project elements.

Boating safety projects directly related to the waterways. Ref: Access for rescue and emergency services.

b) Explain how the project fits into this priority category

The town of Jupiter manages 23 square miles of mostly high-traffic ICW and Loxahatchee River Waterways. Shifting sandbars, frequent shoaling and low clearance bridges make large portions of the waterway inaccessible to standard rescue vessels. Currently, recreational accidents such as sandbar emergencies or non motorized watercraft accidents in shallow areas face delayed treatment/extraction due to access barriers mostly categorized by shallow zones and need for shallow draft rescue vessels.

c) Explain how the project relates to the District's Waterways and the mission of the Florida Inland Navigation District.

Our project falls in line with the FIND mission. As stated above under a) JFRD's goal is to provide life saving emergency services to the residents and visitors of Jupiter and surrounding waterways. This project will assist in the purchase of two vessels, capable of accessing narrow, shallow and otherwise inaccessible parts of the vast waterway system working through the Town's jurisdiction, to enhance response time of ALS care to the patient, and extraction to land or air transport to hospital.

2. Ownership of Project Site:

Own ☐ Leased ☐ Other ☑

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 ☑

4. If yes, please list the project name, number and funding amount received:

N/A

5. 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.) if applicable?

N/A

6. How many additional ramps, slips, parking spaces or other access features will be added by this project, and what is the approximate number of registered vessels estimated to use the constructed project?

N/A

7. Public Usage & Benefits:

a) What public access or navigational benefit to the District's waterways will result from this project? How will this project enhance public access to the District's waterways, and what specific navigational benefits will it provide to the community?

Specifically, this project will provide JFRD emergency responders navigational access to provide emergency life saving services and extraction to the residents/visitors in our jurisdiction. Furthermore, these vessels provide the ability to have vessels in the water during high-traffic hours, boat raft-up events and holiday celebrations where channels become congested and sandbars full, limiting access of traditional deep-draft marine vessels, to provide rapid access in the event of an emergency.

b) What is the current demand for public access or navigation facilities in the area, and how does this project address unmet needs or improve upon existing facilities?

There is a huge demand for these shallow water vessels. Jupiter PD does have marine vessels available, however due to their size, access to the shallow, sandbar areas is only possible during high tide. Moreover, access to low-lying residential neighborhoods (river/canal waterfront), where in some cases the distance can exceed 40 ft from side to side, and blocked by low clearance bridges is impossible by deep-draft PD vessels. The current plan would be to deploy a swimmer from land to effect a "dirty rescue", with delays in response time since its a land based response. These vessels, deployed from Piatt Fire Station would drastically improve response time, ALS care, and extraction.

c) How does the project fit within regional or local maritime management plans, public access initiatives, or comprehensive plans, and how does it contribute to broader public usage goals?

Currently the TOJ's marine response is provided by PBCFR. At this time, PBCFR's marine assets include two (2) Jetski watercraft and one (1) 32' Contender similar to the JPD vessel. PBCFR's marine assets provide service throughout PBC. The Town takes over service October 1, and will "bridge the access gap" with these shallow water vessels, improving on current services,with the ability to rescue up to (5) patients each and dedicated to the Town's jurisdiction and neighboring communities.

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

The TOJ has immediate plans to effect a "Public Safety Access Dock" which will be located on the West side of US-1, across from Burt Reynolds park, behind the Piatt Fire Station. This dock will allow the JFRD instant access to prime, unobstructed waterways leading to all areas of the ICW and River waterways. At this time, the channel is zoned for "no wake" however emergency vessels are permitted to exceed "no wake" speeds when responding to an emergency, with caution.

8. Fees & Maintenance:

Are there any fees associated with the use of this facility? Yes ☐ No ☑

If answered Yes:

a) List or provide a fee schedule.

N/A

b) Provide a listing of the fees charged by similar facilities, public and private, in the project area.

N/A

c) Pursuant to Rule 66B-2.004(11), if there are any fees, please explain how these fees are tracked and what they are used for.

N/A

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

JFRD is establishing Policies and Procedures for the routine maintenance of the trailer, motors and hull as recommended by manufacturer. Furthermore, the 26/27 fiscal budget proposal will include a fire operations, maintenance and repair budget that will include funds allocated for marine assets. Additionally,standard warranties will be available for hull and trailer and Mercury provides a warranty on the motors.

9. Please list all Environmental Resource Permits required for this project:

Agency	Y/N	Date Applied	Date Received
Water Management District			
Dept of Environmental Protection			
USACE			

10. a) Construction
This question is to be answered **only** if this application is for a **Construction** project.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

PERMITTING:

- Have all required environmental permits been applied for? (USACE, DEP and WMD) If permits are NOT required, explain why not.
- Detail any significant impediments that may have been identified that would potentially delay the timely issuance of the required permits.
- For Phase I design, permitting, and engineering projects, please provide a general cost estimate for the future Phase II construction work.

CONSTRUCTION TECHNIQUES:

- What is the design life of the project and proposed materials?
- What considerations, if any, have been made for storm surge and hurricane impacts in the design and life span of this project?

Construction Project: Maximum 200 Words (Address all bullet points above)

N/A

10. b) Environmental Education
This question is to be answered **only** if this application is for an Environmental Education project.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

DILIGENCE:

- Who is the primary target audience or user group for the project and how were they identified?
- How have the needs of the target audience been evaluated and met?
- How many people will the program serve on an annual basis? What will be the measurable results?
- Describe the materials and project deliverables to be produced by this project.
- Describe the plan for dissemination of the materials produced through the project,

EXPERIENCE & QUALIFICATIONS:

- Please briefly describe the qualifications of the program administrator(s), including prior experience, and areas of expertise.
- What previous projects of this nature have been completed by the program manager?

PROJECT GOALS:

- What are the long-term goals of this project as it relates to the ICW?
- What is the expected duration/frequency of this program?

Environmental Education Project: Maximum 400 Words (Address all bullet points above)

N/A

10. c) Law Enforcement and Boating Safety Projects
This question is to be answered **only** if this application is for Law Enforcement and Boating Safety projects.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

WATERWAY RELATIONSHIP:

- Describe how the project will enhance boating access, safety, or enforcement efforts on the waterway, and address the identified needs or benefits for public safety.

EXPERIENCE & QUALIFICATIONS:

- List the personnel tasked with the implementation of this project, their qualifications, previous training and experience.

DELIVERABLES:

- Describe the project deliverables and why this particular law enforcement vessel, equipment or facility improvements was selected or are necessary.

AREA OF COVERAGE

- What is the range or area of coverage for this project?

Law Enforcement and Boating Safety Project: Maximum 200 Words (Address all bullet points above)

1. Waterway relationship: The shallow water vessels allow access to areas within the Jupiter waterways that are not accessible due to shallow sandbar type areas that change location often, which may be obstructed by low clearance bridges or narrow canal-like low lying residential areas. This allows a public safety presence in the water ways during high traffic times of day or large events such as holiday weekends with above average populations in the waterways, providing rapid access and advanced life support intervention in the event of medical emergency or traumatic watercraft event.
2. Experience/Qualifications: This is in development, the plan is to create a rigorous training program which will include a State of Florida Safe Boater certification, Boat Operator training program to include 20 hours of marine and emergency swift-water operations, along with a rescue swimmer certification certified by the JFRD training division. All crew members will be required to re-certify annually. Bi-annual joint training will be scheduled with JPD, and offered to neighboring agencies.
3. Deliverables: This package includes a double stack transport trailer, (1) 1660 rescue boat, (1) 14'2" Heavy duty Inflatable boat, (1) 40hp Mercury 4 stroke motor, (1) 25hp Mercury 4 stroke motor. This boat was designed for public safety use and meets our operational needs and mission requirements.
4. Area of coverage: These assets are intended for use within the TOJ's waterway systems, including the ICW and Loxahatchee River Waterway systems. These may be requested if needed by nearby agencies.

10. d) Inlet or Public Navigation

This question is to be answered **only** if this application is for an Inlet or Public Navigation dredging project.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

WATERWAY RELATIONSHIP:

- Will the project inhibit sediment inflow into, or reduce the dredging frequency of the Intracoastal Waterway channel?
- How does the project directly benefit the Intracoastal Waterway channel?
- Identify any long-term sedimentation problems and briefly discuss any methods or activities that will address these issues.

PUBLIC ACCESS

- Describe in brief detail how the project will enhance public access to or from the Intracoastal Waterway? List the upstream publicly accessible facilities with improved access because of this project.

BENEFICIAL PROJECT ELEMENTS:

- Describe any economic benefits to be realized by implementing this project.

PROJECT MAINTENANCE:

- When was this area last dredged? What is the expected frequency of future dredging? Where will the dredged material be relocated to?

Inlet or Public Navigation Project: Maximum 200 Words (Address all bullet points above)

N/A

10. e) Beach Renourishment

This question is to be answered **only** if this application is for a Beach Renourishment project.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

WATERWAY RELATIONSHIP:

- Describe how the District and other navigation interests will benefit from the implementation of this project.

VIABILITY:

- Is the project site defined as critically eroded area by a statewide beach management plan?
- Cite the quantifiable rate of erosion in this area.
- Is the project an important component of an overall beach management effort?

PUBLIC BENEFITS:

- Are there quantifiable public benefits demonstrated by the project?
- Is there adequate public access to the project area? Please describe location and amount.

PROJECT FUNDING:

- Describe any assistance funding from other sources.
- Clarify the availability of long-term funding for this project.

Beach Renourishment Project: Maximum 200 Words (Address all bullet points above)

N/A

11. Disaster Relief

This question is to be answered **only** if this application is for repairs/construction of waterways facilities damaged by a declared natural disaster.

In the summary box at the bottom of this page, please address each of the bullet points listed below to maximize your score for this competitive grant application.

STORM DAMAGE EVALUATION:

- List the State of Emergency declaration order or proclamation & the name and date of the storm/event. [Pursuant to State of emergency declared under Chapter 252, F.S.]
- Describe the extent of the damage that was caused due to the storm/event and any Construction/Resiliency Improvements planned for the project.
- What is the current status of your FEMA paperwork for the project?

PROJECT FUNDING:

- Describe the other funding mechanisms and financial assistance that will be applied to defray the reconstruction costs or damage repair

Disaster Relief Project: Maximum 200 Words (Address all bullet points above)

N/A

ATTACHMENT E-3

Waterway Assistance Program FY2026

PROJECT COST ESTIMATE

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

Project Title:	Jupiter Waterway Access & Rapid Vessels Response Initiative
Applicant:	Town Of Jupiter, Fire Rescue Department

Project Elements *(Please list the MAJOR project elements and provide general costs for each one.)*	**Total Estimated Cost**	**Applicant's Cost** (To the nearest $50)	**FIND Cost** (To the nearest $50)
Vessel purchase and build	$ 100,000	$ 50,000	$ 50,000

****TOTALS =**	$ 100,000	$ 50,000	$ 50,000

ATTACHMENT E-4

Waterways Assistance Program FY2026

PROJECT TIMELINE

Project Title:	Jupiter Waterway Access & Rapid Response Vessel Initiative
Applicant:	Town of Jupiter, Fire Rescue Department

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.

2/24/26 - Quotes received, budgetary requirement calculated and project approved to proceed for FIND Grant Application Request.

3/30/26 - Deadline for application submission. Will be submitted prior to.

10/1/26 - Anticipated Grant approval and award.

10/5/26 - Proceed with selection, purchase and build out of vessels. Submit required deposit to begin work.

12/29/26 - Estimated 10 week delivery date.

ATTACHMENT E-5
RESOLUTION FOR ASSISTANCE 2026
UNDER THE FLORIDA INLAND NAVIGATION DISTRICT
WATERWAYS ASSISTANCE PROGRAM

WHEREAS, THE Jupiter Fire Rescue Department is interested in carrying out the
(Name of Agency)
following described project for the enjoyment of the citizenry of Town of Jupiter and the State of Florida:

Project Title Jupiter Waterway Access & Rapid Vessels Response Initiative

Total Estimated Cost $ $100,000.00

Brief Description of Project:

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

NOW THEREFORE, be it resolved by the Jupiter Fire Rescue Department
(Name of Agency)
that the project described above be authorized,

AND, be it further resolved that said Jupiter Fire Rescue Department
(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 Jupiter Fire Rescue Department
(Name of Agency)

AND, be it further resolved by the Jupiter Fire Rescue Department
(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.

(1)

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 TOJ, Fire Rescue Department 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 Town of Jupiter at a legal meeting

(Agency Governing Board)

held on this_____day of_____20____.

Attest	Signature
Title	Title

(2)

ATTACHMENT E-6

ATTORNEY'S CERTIFICATION OF TITLE

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

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

(Date), 2026

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)

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 23, 2026

Re: Procurement Review Memo – Resolution 47-26 Authorizing FIND Grant application for Waterway Access and Rapid Rescue Vessels Response Initiative

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After reviewing the request to pass Resolution 47-26 to approve the submittal of the application for the Florida Inland Navigational District (FIND) Waterways Assistance Program grant for Waterway Access and Rapid Rescue Vessels Response Initiative, I have found that the application meets with all Town of Jupiter policy requirements.

TOWN OF JUPITER
Establishing an Initial Non-ad Valorem Assessment Rate Schedule for Fire Protection Services

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Scott Reynolds, Finance Director
SUBJECT	Resolution 59-26, Adopting an Initial Rate Schedule for a Non-Ad Valorem Assessment For Fire Rescue Services.

EXECUTIVE SUMMARY

The proposed resolution establishes the Town of Jupiter's initial Fire Protection Assessment program in preparation to fund the Jupiter Fire Rescue Department beginning October 1, 2026.

The resolution conforms to the Town's Master Capital Project and Service Assessment Ordinance (Ordinance No. 27-26) and applicable Florida law. It serves as the Initial Assessment Resolution, formally initiating the process to levy a non-ad valorem assessment fee to fund fire protection services, facilities, and programs.

With the Town assuming responsibility for fire services, a dedicated and equitable funding source may be established. The Fire Protection Assessment ensures that costs are allocated based on the benefit received by properties, consistent with Florida law.

The Town Attorney has reviewed the attached documents and finds them to be in acceptable form.

ANALYSIS

Assessment Rates

A detailed rate schedule is established based on property type and building size. For example:

- Small residential units (under 500 sq. ft.): $3 annually
- Typical single-family homes (2,000–3,099 sq. ft.): $60 annually
- Commercial properties of similar size: $157 annually

Exemptions

The resolution provides targeted exemptions, including:

- Government-owned property used for public purposes
- Certain tax-exempt institutional properties
- Qualified senior homesteads (Additional Seniors' Exemption)
- Totally disabled veterans' homesteads

- Certain agricultural structures as required by law

If Council approves this resolution, next steps include:

- Preparation of the preliminary assessment roll
- Required mailed and published notices by May 26, 2026
- Public hearing scheduled for June 16, 2026 at 7:00 PM at Town Hall

Fiscal Impact
The assessment will generate approximately $2.52 million toward the Fire Department budget. Any remaining costs will be funded through ad valorem taxes and transport fees.

STRATEGIC PRIORITY
● Fiscal Responsibility
● Safety
● Strong Local Economy

ATTACHMENTS
1. Resolution 59-26 and attachments
2. Presentation

FUNDING SOURCE
Funding is not necessary for this request.

For more information or copies of the attachments, please contact Scott Reynolds at scottr@jupiter.fl.us or 561-741-2327.

RESOLUTION NO. 59-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, RELATING TO THE PROVISION OF FIRE PROTECTION SERVICES, FACILITIES AND PROGRAMS THROUGHOUT THE TOWN OF JUPITER; ESTABLISHING THE TERMS AND CONDITIONS FOR A FIRE PROTECTION ASSESSMENT PROGRAM; PROVIDING FOR THE TOWN COUNCIL'S AUTHORITY, PURPOSES, AND DEFINITIONS AND LEGISLATIVE FINDINGS; DESCRIBING THE APPORTIONMENT METHODS FOR ASSESSING THE FIRE PROTECTION ASSESSED COST AGAINST ASSESSED PROPERTIES LOCATED WITHIN THE TOWN OF JUPITER; ESTABLISHING THE ESTIMATED FIRE PROTECTION ASSESSED COST AND ASSESSMENT RATES FOR FIRE PROTECTION ASSESSMENTS FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2026; DIRECTING THE PREPARATION OF AN ASSESSMENT ROLL; PRESCRIBING THE METHOD OF COLLECTION; AUTHORIZING A PUBLIC HEARING AND DIRECTING THE PROVISION OF NOTICE THEREOF; PROVIDING FOR THE APPLICATION OF ASSESSMENT PROCEEDS; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA:

SECTION 1. AUTHORITY. This resolution is adopted pursuant to the provisions of the Master Capital Project and Service Assessment Ordinance (Ordinance No. 27-26), as codified in Chapter 18 of the Town of Jupiter Code of Ordinances (the "Ordinance"); the Town of Jupiter Home Rule Charter; Article VIII, Section 2 of the Florida Constitution; sections 166.021 and 166.041, Florida Statutes; and other applicable provisions of law.

SECTION 2. PURPOSE AND DEFINITIONS.

(A) This Resolution constitutes the Initial Assessment Resolution as provided in Section 18-186 of the Ordinance.

(B) Unless the context indicates otherwise, words imparting the singular number, include the plural number, and vice versa; the terms "hereof," "hereby," "herein," "hereto," "hereunder" and similar terms refer to this resolution; and the term "hereafter" means after, and the term "heretofore" means before, the effective date of this resolution. Words of any gender include the correlative words of the other genders, unless the sense indicates otherwise. Words imparting the singular number, include the plural number, and vice versa.

(C) All capitalized words and terms not otherwise defined herein shall have the meanings set forth in the Ordinance. As used in this resolution, the following terms shall have the following meanings, unless the context hereof otherwise requires:

"Additional Seniors' Exemption" means the property tax exemption pursuant to the additional homestead exemption for seniors set forth in section 196.075, Florida Statutes.

"Assessment Study" means that certain report entitled "Town of Jupiter, Florida Fire Assessment Memorandum," dated March 2026, prepared by Accenture Infrastructure and Capital Projects Consulting, LLC, which is attached hereto as Appendix G and incorporated herein by reference.

"Building Area" means the adjusted area of a Building expressed in square feet and reflected on the Tax Roll or, in the event such information is not reflected or

determined not to be accurately reflected on the Tax Roll, that area determined by the Town.

"Building Use Codes" mean the building improvement codes assigned by the Property Appraiser to Tax Parcels within the Town as specified in Appendix C attached hereto and incorporated herein by reference or assigned by the Town to Tax Parcels within the Town after field verification.

"Code Descriptions" mean the descriptions listed in the Situation Found Codes, the Fixed Property Use Codes, the DOR Codes, and the Building Use Codes.

"Commercial Property" means collectively those Tax Parcels with a Code Description designated as "Commercial" in the Building Use Codes specified in Appendix C and those Tax Parcels determined to have a commercial use by the Town.

"Cost Apportionment" means the apportionment of the Fire Protection Assessed Cost among all Property Use Categories according to the Demand Percentages established pursuant to the apportionment methodology described in Section 6 of this Initial Assessment Resolution.

"Demand Percentage" means the percentage of demand for fire protection services, facilities, and programs attributable to each Property Use Category determined by analyzing the historical demand for fire protection services as reflected in Fire Protection Incident Reports under the methodology described in Section 6 of this Initial Assessment Resolution.

"DOR Code" means a property use code established in Rule 12D-8.008, Florida Administrative Code, assigned by the Property Appraiser to Tax Parcels within the Town, which are attached hereto as Appendix D and incorporated herein by reference.

"Dwelling Unit" means (1) a Building, or a portion thereof, available to be used for residential purposes, consisting of one or more rooms arranged, designed, used, or intended to be used as living quarters for one family only, or (2) the use of land in which lots or spaces are offered for rent or lease for the placement of mobile homes for residential purposes.

"Emergency Medical Services" means those services recorded in the Incident Reports that assign a Situation Found Code of 300, 311, 320, 321, 322, 323, 381, 554, or 611.

"Emergency Medical Services Cost" means the amount, other than first response medical rescue services, determined by the Council to be associated with Emergency Medical Services.

"Estimated Fire Protection Assessment Rate Schedule" means that rate schedule specifying the Fire Protection Assessed Cost and the estimated Fire Protection Assessments established in Section 8 of this Initial Assessment Resolution.

"FFIRS" means the Florida Fire Incident Reporting System maintained by the Florida State Fire Marshal.

"Fire Protection Assessment" means the Service Assessment, as defined in the Ordinance, lawfully imposed by the Council against Assessed Property to fund all or any portion of the cost of the provision of fire protection services, facilities, and programs providing a special benefit to property as a consequence of possessing a logical relationship to the value, use, or characteristics of the Assessed Property.

"Fire Protection Assessed Cost" means the Service Cost, as defined in the Ordinance, and hereby more specifically defined as:

(1) the amount determined by the Council to be assessed in any Fiscal Year to fund all or any portion of the cost of the provision of fire protection services, facilities, and programs which provide a special benefit to Assessed Property, and shall include, but not be limited to, the following components: (A) the cost of physical construction, reconstruction or completion of any required facility or improvement; (B) the costs incurred in any required acquisition or purchase; (C) the cost of all labor, materials, machinery, and equipment; (D) the cost of fuel, parts, supplies, maintenance, repairs, and utilities; (E) the cost of computer services, data processing, and communications; (F) the cost of all lands and interest therein, leases, property rights, easements, and franchises of any nature whatsoever; (G) the cost of any indemnity or surety bonds and premiums for insurance; (H) the cost of salaries, volunteer pay, workers' compensation insurance, or other employment benefits; (I) the cost of uniforms, training, travel, and per diem; (J) the cost of construction plans and specifications, surveys and estimates of costs; (K) the cost of engineering, financial, legal, and other professional services; (L) the costs of compliance with any contracts or agreements entered into by the Town to provide fire protection services; (M) all costs associated with the structure, implementation, collection, and enforcement of the Fire Protection Assessments, including any service charges of the Tax Collector or Property Appraiser and amounts necessary to off-set discounts received for early payment of Fire Protection Assessments pursuant to the Uniform Assessment Collection Act or for early payment of Fire Protection Assessments collected pursuant to Sections 18-216 or 18-217 of the Ordinance; (N) all other costs and expenses necessary or incidental to the acquisition, provision, or construction of fire protection services, facilities, and programs, and such

other expenses as may be necessary or incidental to any related financing authorized by the Council by subsequent resolution; (O) a reasonable amount for contingency and anticipated delinquencies and uncollectible Fire Protection Assessments; and (P) reimbursement to the Town or any other Person for any moneys advanced for any costs incurred by the Town or such Person in connection with any of the foregoing components of Fire Protection Assessed Cost.

(2) In the event the Town also imposes an impact fee upon that part of new growth or development for fire protection services related capital, the Fire Protection Assessed Cost shall not include costs attributable to capital improvements necessitated by new growth or development that will be paid by such impact fees.

(3) In no event shall the Fire Protection Assessed Cost include any amount attributable to the Emergency Medical Services Cost.

"Fire Protection Assessment Roll" means the Assessment Roll as defined in the Ordinance relating to the Fire Protection Assessments.

"Fire Protection Incident Report" means an Incident Report that does not record Emergency Medical Services.

"Fixed Property Use Codes" mean the property use codes used in FFIRS to assign property use for each Fire Protection Incident Report, which codes are specified in Appendix B attached hereto and incorporated herein by reference.

"Incident Report" means an individual report filed with FFIRS that documents an emergency response within the Town, the type of situation found, and the property response address and type.

"Industrial/Warehouse Property" means those Tax Parcels with a Code Description designated as "Industrial/Warehouse" in the Building Use Codes specified in Appendix C, and those Tax Parcels determined to have an industrial/warehouse use by the Town.

"Institutional Property" means those Tax Parcels with a Code Description designated as "Institutional" in the Building Use Codes specified in Appendix C, and those Tax Parcels determined to have institutional use by the Town.

"Mixed Use Property" means a Tax Parcel that contains Buildings whose use descriptions are capable of assignment under a Code Description in the Building Use Codes in more than one Property Use Category.

"Non-Residential Property" means, collectively, Commercial Property, Industrial/Warehouse Property, Institutional Property, and Nursing Home Property.

“Nursing Home Property” means those Tax Parcels with a Code Description designated as "Nursing Home" in the Building Use Codes specified in Appendix C, and those Tax Parcels determined to have a nursing home use by the Town.

"Parcel Apportionment" means the further apportionment of the Fire Protection Assessed Cost allocated to each Property Use Category by the Cost Apportionment among the Tax Parcels under the methodology established in Section 7 of this Initial Assessment Resolution.

"Pole Barn" means a nonresidential farm building in which 70 percent or more of the perimeter walls are permanently open and allow free ingress and egress as defined in Section 170.01(4), Florida Statutes.

"Property Use Categories" mean, collectively, Residential Property and all categories of Non-Residential Property.

"Residential Property" means those Tax Parcels with a Code Description designated as "Residential" in the Building Use Codes specified in Appendix C, and those Tax Parcels determined to have a residential use by the Town.

"Situation Found Codes" mean codes used by FFIRS to designate the type of emergency response for each Incident Report, as specified in Appendix A attached hereto and incorporated herein by reference.

"Tax Parcel" means a parcel of property located within the Town to which the Property Appraiser has assigned a distinct ad valorem property tax identification number.

"Veterans' Exemption" means the property tax exemption for certain veterans pursuant to Sections 196.081 or 196.091, Florida Statutes, but not including those qualifying for an ad valorem tax exemption pursuant to Section 196.081(6), Florida Statutes.

SECTION 3. PROVISION AND FUNDING OF FIRE PROTECTION SERVICES.

(A) Upon the imposition of a Fire Protection Assessment for fire protection services, facilities, and programs against Assessed Property located within the incorporated area of the Town, which shall be the Assessment Area, the Town shall provide fire protection services to such Assessed Property. All or a portion of the cost to provide such fire protection services, facilities, and programs shall be funded from proceeds of the Fire Protection Assessments. The remaining cost required to provide

fire protection services, facilities, and programs shall be funded by other legally available Town revenues other than Fire Protection Assessment proceeds.

(B) It is hereby ascertained, determined, and declared that each parcel of Assessed Property located within the Town will benefit from the Town's provision of fire protection services, facilities, and programs in an amount not less than the Fire Protection Assessment imposed against such parcel, computed in the manner set forth in this Initial Assessment Resolution.

SECTION 4. IMPOSITION AND COMPUTATION OF FIRE PROTECTION ASSESSMENTS. Unless exempted as provided herein or pursuant to state law, Fire Protection Assessments shall be imposed against all Tax Parcels within the Property Use Categories in the Town. Fire Protection Assessments shall be computed in the manner set forth in this Initial Assessment Resolution.

SECTION 5. LEGISLATIVE DETERMINATIONS OF SPECIAL BENEFIT AND FAIR APPORTIONMENT. It is hereby ascertained and declared that expenditure of the Fire Protection Assessments in conformance with the Fire Protection Assessed Cost provides a special benefit to the Assessed Property based upon the following legislative determinations and based upon the Assessment Report.

General

(A) Upon the adoption of this Initial Assessment Resolution determining the Fire Protection Assessed Cost and identifying the Assessed Property to be included in the Fire Protection Assessment Roll, the legislative determinations ascertained and declared in Section 18-172 of the Ordinance are hereby ratified and confirmed.

(B) The Town's professional and comprehensive fire protection services and programs possess a logical relationship to the use and enjoyment of property and thereby provide a special benefit to property by: (1) protecting the value and integrity of the property improvements and structures through the provision of available fire protection services; (2) protecting the life and safety of intended occupants in the use and enjoyment of property; (3) preserving or reducing the cost of fire insurance by the presence of a professional and comprehensive fire program within the Town; (4) containing the spread of fire incidents occurring on land with the potential to spread and endanger property and property features on improved properties within the Town; and (5) preserving and enhancing the value of property within the Town.

(C) The availability and provision of comprehensive fire protection services enhances and strengthens the relationship of such services to the use and enjoyment of the parcels of property, the market perception of the area and, ultimately, the property and rental values within the Town.

(D) It is fair and reasonable to use the Building Use Codes and the DOR Codes for the Cost Apportionment and Parcel Apportionment because: (1) the Tax Roll database employing the use of such property use codes is the most comprehensive, accurate, and reliable information readily available to determine the property use and Building Area for improved properties within the Town; and (2) the Tax Roll database employing the use of such property use codes is maintained by the Property Appraiser and is thus consistent with parcel designations on the Tax Roll, which compatibility permits the development of a Fire Protection Assessment Roll in conformity with the requirements of the Uniform Method of Collection.

(E) The data available in the Building Use Codes is more useful and accurate to determine property use and Building Area than relying exclusively upon the data maintained in the DOR Codes alone because: (1) the data maintained in the Building Use Codes reveals the existence of Buildings with a different use than the uses described by the DOR Code; (2) the Building Use Codes represent records maintained by the Property Appraiser with the most information relative to Building Area regardless of property use; and (3) if needed, the Town conducted field work to ascertain property use and Building Area when sufficient information was not available.

Cost Apportionment

(F) Apportioning Fire Protection Assessed Cost among classifications of property based upon historical demand for fire protection services, but not Emergency Medical Services, is fair and reasonable method of Cost Apportionment because it reflects the property uses' potential fire risk based upon Building use and is a reasonable proxy for the amount of fire flow, firefighters, quantity and size of apparatus, and other special firefighting equipment that must be available in accordance with the Town's standards and practices.

(G) It is fair and reasonable and consistent with the decision from the Florida Supreme Court in *City of North Lauderdale v. SMM Properties, Inc.*, 825 So. 2d 343 (Fla. 2002), to exclude from the Fire Protection Assessed Cost those amounts determined to constitute the Emergency Medical Services Cost.

(H) Apportioning the Fire Protection Assessed Cost among classifications of improved property based upon historical demand for fire protection services, but not Emergency Medical Services, is fair and reasonable and proportional to the special

benefit received, and will ensure that no property is assessed an amount greater than the special benefit received.

(I) The Fire Protection Incident Reports are the most reliable data available to determine the potential demand for fire protection services from property uses and to determine the benefit to property uses resulting from the availability of fire protection services to protect and serve Dwelling Units and Buildings located within Assessed Property and their intended occupants. There exist sufficient Fire Protection Incident Reports that document the historical demand for fire protection services from Assessed Property within the Property Use Categories. The Demand Percentage that has been determined for each Property Use Category by an examination of such Fire Protection Incident Reports is consistent with the experience of the Town. Therefore, the use of Demand Percentages that were determined by an examination of Fire Protection Incident Reports is a fair and reasonable method to apportion the Fire Protection Assessed Cost among the Property Use Categories.

(J) The Town's budget is sized based upon its ability to provide service to improved property within its boundaries. The level of services required to meet anticipated demand for fire protection services and the corresponding annual fire protection budget required to fund fire protection services provided to unimproved, non-specific property uses would be required notwithstanding the occurrence of any incidents from such non-specific property uses. Therefore, it is fair and reasonable to omit from the Demand Percentage calculation the Fire Protection Incident Reports documenting fire protection services provided to non-specific property uses.

(K) As a result of the urbanized character of the Town, the suppression and containment of fire on land and other unimproved property primarily benefits Buildings on adjacent improved properties by the containment of the spread of fire rather than the preservation of the unimproved property. Additionally, the potential need for the Town's fire protection resources is generated primarily by improved properties and the level of services required to meet anticipated demand for fire protection services and the corresponding annual fire protection budget required to fund fire protection services provided to land and other unimproved property would be required notwithstanding the occurrence of any incidents from such property uses. Therefore, it is fair and reasonable not to apportion any of the Fire Protection Assessed Cost to land and other unimproved property.

Parcel Apportionment

(L) The greater the Building Area, the greater the potential for a large fire and the greater amount of firefighting resources that must be available in the event of a fire in a structure of that Building's size. Therefore, it is fair and reasonable to use Building Area as the Assessment Unit and a proxy for determining the Tax Parcel's Fire Protection Assessment.

(M) The assessment of Residential and Non-Residential Property by square footage classification ranges is fair and reasonable for the purpose of Parcel Apportionment because the demand for fire protection service, fire flow, fire fighters, quantity and size of apparatus, and other special firefighting equipment is determined and measured by the square footage of structures and improvements within benefited parcels.

(N) The risk of loss and the demand for fire protection service availability is substantially the same for Buildings below a certain minimum size. Because the value and anticipated occupancy of Dwelling Units and other Buildings below a certain minimum size is less, it is fair, reasonable and equitable to provide a lesser assessment burden on improved property by the creation of specific Building Area classification ranges for such parcels.

(O) The separation of improved property into Building Area classification ranges is fair and reasonable for the purposes of Parcel Apportionment because: (1) the absence of a need for precise square footage data within the ad valorem tax records maintained by the Property Appraiser undermines the use of actual Building Area within each improved parcel as a basis for Parcel Apportionment; (2) the administrative expense and complexity created by an on-site inspection to determine the actual Building Area within each improved parcel assessed is impractical; (3) the demand for fire protection service availability is not precisely determined or measured by the actual Building Area within benefitted parcels; and (4) the classification of parcels within Building Area classification ranges is a fair and reasonable method to classify benefitted parcels and to apportion costs among benefitted parcels that create similar demand for the availability of fire protection services.

(P) The demand for the availability of fire protection services diminishes at the outer limit of Building size because a fire occurring in a Building greater than a certain size cannot be suppressed under expected conditions with the Town's existing fire flow, apparatus, equipment, and other resources and the fire control activities under such circumstances are directed to avoid the spread of the fire event to adjacent Buildings.

Therefore, it is fair and reasonable to place a cap on the Building Area classification ranges of benefitted parcels at 191,400 square feet based upon the Town's fire protection resources and the National Fire Protection Association's "NFPA 220 Standards on Types of Building Construction: Fire-Flow Guide."

(Q) The historical demand for fire protection service availability for multi-family and single-family Residential Property is substantially similar and any difference in the percentage of documented fire protection calls to such specific property uses is statistically insignificant.

(R) The size of Dwelling Units on Residential Property within the Town varies considerably from a low of about 375 square feet to more than 43,000 square feet, necessitating a non-residential fire protection response and resource allocation for these larger Dwelling Units. Accordingly, it is fair and reasonable to treat Residential Property in the same manner as Non-Residential Property by separating them into square footage classification ranges for the purpose of Parcel Apportionment.

Policies

(S) Government Property provides facilities and uses to the community, local constituents, and the public in general that serves a legitimate public purpose and provides a public benefit. Therefore, it is fair and reasonable not to impose Fire Protection Assessments upon such parcels of Government Property.

(T) Government Property owned by federal government mortgage entities, such as the VA and HUD, due to foreclosures are not serving a governmental purpose nor providing a public benefit but are instead held by these federal government mortgage entities in a proprietary capacity. Accordingly, these properties shall not be

considered Government Property for purposes of the Fire Protection Assessments and shall not be afforded an exemption from the Fire Protection Assessment that is granted to other Government Property.

(U) Institutional Property whose Building use is wholly exempt from ad valorem taxation under Florida law provides facilities and uses to the ownership, occupants, membership as well as the public in general that otherwise might be requested or required to be provided by the Town and such property uses serve a legitimate public purpose and provide a public benefit. Therefore, it is fair and reasonable not to impose Fire Protection Assessments upon the Buildings categorized as Institutional Property whose Building use is wholly exempt from ad valorem taxation under Florida law.

(V) In accordance with Section 170.01(4), Florida Statutes, the Town is required to exempt the following from the Fire Protection Assessment: (i) Buildings of Non-Residential Property with a just value of $10,000 or less that are located on lands classified as agricultural lands pursuant to Section 193.461, Florida Statutes; and (ii) any Pole Barns located on lands classified as agricultural lands pursuant to Section 193.461, Florida Statutes. Accordingly, it is fair and reasonable to comply with the law and not to impose Fire Protection Assessments upon such land and Buildings.

(W) It is in the best interest of the citizens of the Town to assist senior citizens who are Owners of homesteaded Residential Property with the financial burden created by the imposition of a Fire Protection Assessment. Accordingly, it is fair and reasonable not to impose Fire Protection Assessments upon those homesteaded Residential

Properties determined by the Property Appraiser to qualify for the Additional Seniors' Exemption.

(X) It is in the best interest of the citizens of the Town to assist totally and permanently disabled veterans and their surviving spouses who are Owners of homesteaded Residential Property with the financial burden created by the imposition of a Fire Protection Assessment. Accordingly, it is fair and reasonable not to impose Fire Protection Assessments upon those homesteaded Residential Properties determined by the Property Appraiser to qualify for a total property tax exemption pursuant to the Veterans' Exemption.

(Y) It is fair and reasonable to impose a Fire Protection Assessment against Nursing Home Property within the rates established for Commercial Property notwithstanding the Demand Percentage determined for Nursing Home Property because such properties provide a vital public service that may otherwise have to be subsidized or provided by public funds.

SECTION 6. COST APPORTIONMENT METHODOLOGY.

(A) Using data from the Fire Protection Incident Reports related to the type of calls and physical location of each call with field verification if needed, the Town assigned fire protection incidents within the Town to Property Use Categories by correlating the Code Descriptions within the Fixed Property Use Codes to the Building Use Codes and DOR Codes.

(B) Based upon such assignment of Fire Protection Incident Reports to specific properties, the number of Fire Protection Incident Reports filed within a sampling period was determined for each Property Use Category.

(C) A Demand Percentage was then determined for each Property Use Category by calculating the percentage that Fire Protection Incident Reports allocated to each Property Use Category bear to the total number of Fire Protection Incident Reports documented for all Property Use Categories within the sampling period.

(D) The Demand Percentage for each Property Use Category was then applied to the Fire Protection Assessed Cost and the resulting product is the cost allocation of that portion of the Fire Protection Assessed Cost allocated to each individual Property Use Category.

SECTION 7. PARCEL APPORTIONMENT METHODOLOGY.

(A) The apportionment among Tax Parcels of that portion of the Fire Protection Assessed Cost allocated to each Property Use Category under the Cost Apportionment shall be consistent with the Parcel Apportionment methodology described and determined in this Section 7, which is hereby approved and shall be applied in the calculation of the estimated Fire Protection Assessment rates established in Section 8 of this Initial Assessment Resolution.

(B) The Cost Apportionment to each Property Use Category shall be apportioned among the Tax Parcels within each Property Use Category as follows:

(1) RESIDENTIAL PROPERTY AND NON-RESIDENTIAL PROPERTY. The Fire Protection Assessment for each Dwelling Unit of Residential Property and each Building of Non-Residential Property, except for Nursing Home Property, shall be computed as follows:

(a) Respectively, multiply the Fire Protection Assessed Cost by the Demand Percentage attributable to Residential Property and each category

of Non-Residential Property. The resulting dollar amounts reflect the portions of the Town's fire protection budget to be respectively funded from Fire Protection Assessment revenue derived from each of these Property Use Categories.

(b) Separate each Dwelling Unit in the Residential Property Use Category and each Building in each of the non-residential Property Use Categories into one of the following square footage categories. All Dwelling Units and Buildings with a Building Area exceeding 191,400 square feet will be assigned 191,400 square feet:

(1) Dwelling Units/Buildings with a Building Area of 499 square feet or less;

(2) Dwelling Units/Buildings with a Building Area between 500 square feet and 1,199 square feet;

(3) Dwelling Units/Buildings with a Building Area between 1,200 square feet and 1,999 square feet;

(4) Dwelling Units/Buildings with a Building Area between 2,000 square feet and 3,099 square feet;

(5) Dwelling Units/Buildings with a Building Area between 3,100 square feet and 4,499 square feet;

(6) Dwelling Units/Buildings with a Building Area between 4,500 square feet and 6,099 square feet;

(7) Dwelling Units/Buildings with a Building Area between 6,100 square feet and 7,999 square feet;

(8) Dwelling Units/Buildings with a Building Area between 8,000 square feet and 9,999 square feet;

(9) Dwelling Units/Buildings with a Building Area between 10,000 square feet and 12,399 square feet;

(10) Dwelling Units/Buildings with a Building Area between 12,400 square feet and 14,999 square feet;

(11) Dwelling Units/Buildings with a Building Area between 15,000 square feet and 17,799 square feet;

(12) Dwelling Units/Buildings with a Building Area between 17,800 square feet and 20,899 square feet;

(13) Dwelling Units/Buildings with a Building Area between 20,900 square feet and 24,199 square feet; and

(14) Dwelling Units/Buildings with a Building Area between 24,200 square feet and 27,799 square feet; and

(15) Dwelling Units/Buildings with a Building Area between 27,800 square feet and 31,699 square feet; and

(16) Dwelling Units/Buildings with a Building Area between 31,700 square feet and 35,699 square feet; and

(17) Dwelling Units/Buildings with a Building Area between 35,700 square feet and 39,999 square feet; and

(18) Dwelling Units/Buildings with a Building Area between 40,000 square feet and 44,599 square feet; and

(19) Dwelling Units/Buildings with a Building Area between 44,600 square feet and 49,399 square feet; and

(20) Dwelling Units/Buildings with a Building Area between 49,400 square feet and 54,499 square feet; and

(21) Dwelling Units/Buildings with a Building Area between 54,500 square feet and 59,799 square feet; and

(22) Dwelling Units/Buildings with a Building Area between 59,800 square feet and 65,399 square feet; and

(23) Dwelling Units/Buildings with a Building Area between 65,400 square feet and 71,199 square feet; and

(24) Dwelling Units/Buildings with a Building Area between 71,200 square feet and 77,199 square feet; and

(25) Dwelling Units/Buildings with a Building Area between 77,200 square feet and 83,499 square feet; and

(26) Dwelling Units/Buildings with a Building Area between 83,500 square feet and 89,999 square feet; and

(27) Dwelling Units/Buildings with a Building Area between 90,000 square feet and 96,799 square feet; and

(28) Dwelling Units/Buildings with a Building Area between 96,800 square feet and 103,899 square feet; and

(29) Dwelling Units/Buildings with a Building Area between 103,900 square feet and 111,199 square feet; and

(30) Dwelling Units/Buildings with a Building Area between 111,200 square feet and 118,699 square feet; and

(31) Dwelling Units/Buildings with a Building Area between 118,700 square feet and 126,499 square feet; and

(32) Dwelling Units/Buildings with a Building Area between 126,500 square feet and 134,499 square feet; and

(33) Dwelling Units/Buildings with a Building Area between 134,500 square feet and 142,799 square feet; and

(34) Dwelling Units/Buildings with a Building Area between 142,800 square feet and 151,299 square feet; and

(35) Dwelling Units/Buildings with a Building Area between 151,300 square feet and 159,999 square feet; and

(36) Dwelling Units/Buildings with a Building Area between 160,000 square feet and 169,099 square feet; and

(37) Dwelling Units/Buildings with a Building Area between 169,100 square feet and 178,299 square feet; and

(38) Dwelling Units/Buildings with a Building Area between 178,300 square feet and 187,799 square feet; and

(39) Dwelling Units/Buildings with a Building Area of 187,800 square feet or greater.

(c) For Residential Property and for each non-residential Property Use Category multiply the number of Buildings categorized in:

(1) Subparagraph (b)(1) of this subsection by 100 square feet;

(2) Subparagraph (b)(2) of this subsection by 500 square feet;

(3) Subparagraph (b)(3) of this subsection by 1,200 square feet;

(4) Subparagraph (b)(4) of this subsection by 2,000 square feet;

(5) Subparagraph (b)(5) of this subsection by 3,100 square feet;

(6) Subparagraph (b)(6) of this subsection by 4,500 square feet;

(7) Subparagraph (b)(7) of this subsection by 6,100 square feet;

(8) Subparagraph (b)(8) of this subsection by 8,000 square feet;

(9) Subparagraph (b)(9) of this subsection by 10,000 square feet;

(10) Subparagraph (b)(10) of this subsection by 12,400 square feet;

(11) Subparagraph (b)(11) of this subsection by 15,000 square feet;

(12) Subparagraph (b)(12) of this subsection by 17,800 square feet;

(13) Subparagraph (b)(13) of this subsection by 20,900 square feet;

(14) Subparagraph (b)(14) of this subsection by 24,200 square feet;

(15) Subparagraph (b)(15) of this subsection by 27,800 square feet;

(16) Subparagraph (b)(16) of this subsection by 31,700 square feet;

(17) Subparagraph (b)(17) of this subsection by 35,700 square feet;

(18) Subparagraph (b)(18) of this subsection by 40,000 square feet;

(19) Subparagraph (b)(19) of this subsection by 44,600 square feet;

(20) Subparagraph (b)(20) of this subsection by 49,400 square feet;

(21) Subparagraph (b)(21) of this subsection by 54,500 square feet;

(22) Subparagraph (b)(22) of this subsection by 59,800 square feet;

(23) Subparagraph (b)(23) of this subsection by 65,400 square feet;

(24) Subparagraph (b)(24) of this subsection by 71,200 square feet;

(25) Subparagraph (b)(25) of this subsection by 77,200 square feet;

(26) Subparagraph (b)(26) of this subsection by 83,500 square feet;

(27) Subparagraph (b)(27) of this subsection by 90,000 square feet;

(28) Subparagraph (b)(28) of this subsection by 96,800 square feet;

(29) Subparagraph (b)(29) of this subsection by 103,900 square feet;

(30) Subparagraph (b)(30) of this subsection by 111,200 square feet;

(31) Subparagraph (b)(31) of this subsection by 118,700 square feet;

(32) Subparagraph (b)(32) of this subsection by 126,500 square feet;

(33) Subparagraph (b)(33) of this subsection by 134,500 square feet;

(34) Subparagraph (b)(34) of this subsection by 142,800 square feet;

(35) Subparagraph (b)(35) of this subsection by 151,300 square feet;

(36) Subparagraph (b)(36) of this subsection by 160,000 square feet;

(37) Subparagraph (b)(37) of this subsection by 169,100 square feet;

(38) Subparagraph (b)(38) of this subsection by 178,300 square feet; and

(39) Subparagraph (b)(39) of this subsection by 187,800 square feet.

(d) For Residential Property and each non-residential Property Use Category, add the products of subparagraphs (c)(1) through (c)(39) of this subsection. The sum of these products reflects an aggregate square footage area for each of those Property Use Categories to be used by the Town in the computation of Fire Protection Assessments.

(e) Divide the product of subparagraph (a) of this subsection relative to Residential Property and each of the non-residential Property Use Categories by the sum of the products for Residential Property and each non-residential Property Use Category, respectively, described in subparagraph (d) of this subsection. The resulting quotient expresses a dollar amount adjusted or

weighted per square foot of improved area to be used in computing Fire Protection Assessments for each of those Property Use Categories.

(f) For Residential Property and each of the non-residential Property Use Categories, multiply the resulting quotients from subparagraph (e) of this subsection by each of the respective products in subparagraphs (c)(1) through (c)(39) of this subsection. The resulting products for Residential Property and each non-residential Property Use Category, expresses a series of gross dollar amounts expected to be funded by all Dwelling Units and/or Buildings in the respective Property Use Categories in each of the square footage categories described in subparagraph (b) of this subsection.

(g) For Residential Property and each of the non-residential Property Use Categories, divide each of the respective products of subparagraph (f) of this subsection by the number of Dwelling Units for Residential Property or Buildings of Non-Residential Property determined to be in each of the square footage categories identified in subparagraph (b) of this subsection. The result expresses the respective dollar amounts of the Fire Protection Assessments to be imposed upon each Dwelling Unit or Building, as applicable, in each of those Property Use Categories.

(2) NURSING HOME PROPERTY. Notwithstanding the procedure in subsection (1) above for Non-Residential Property, the Fire Protection Assessments for each Building of Nursing Home Property shall be computed as follows:

(a) Assign the respective dollar amounts of the Fire Protection Assessments determined in Section 7(B)(1)(g) for Commercial Property to the

comparable square footage category ranges of Nursing Home Property. Such amount shall be the amount of the Fire Protection Assessments imposed upon each Building of Nursing Home Property.

(b) Multiply the amount directed to be imposed as Fire Protection Assessments on Nursing Home Property in subparagraph (a) of this subsection by the number of Buildings determined to be in each of the square footage category ranges related to Nursing Home Property in Section 7(B)(1)(b)(1) to (39). All Buildings of Nursing Home Property with a Building Area exceeding 191,400 square feet will be assigned 191,400 square feet. The sum of the resulting products represents the aggregate revenue to be derived from Fire Protection Assessments imposed upon Nursing Home Property.

(c) The remaining portion of the Town's fire protection budget otherwise attributable to Nursing Home Property, and not funded through Fire Protection Assessments imposed upon Nursing Home Property, shall be funded from legally available Town revenue other than Fire Protection Assessment proceeds.

(3) MIXED USE PROPERTY. The Fire Protection Assessments for each Tax Parcel classified in two or more Property Use Categories shall be the sum of the Fire Protection Assessments computed for each Property Use Category.

SECTION 8. DETERMINATION OF FIRE PROTECTION ASSESSED COST; ESTABLISHMENT OF INITIAL FIRE PROTECTION ASSESSMENTS.

(A) The Fire Protection Assessed Cost to be assessed and apportioned among benefited parcels pursuant to the Cost Apportionment and the Parcel Apportionment for the Fiscal Year commencing October 1, 2026, is $2,520,298.00.

(B) The estimated Fire Protection Assessments to be assessed and apportioned among benefited parcels pursuant to the Cost Apportionment and Parcel Apportionment to generate the estimated Fire Protection Assessed Cost for the Fiscal Year commencing October 1, 2026, are hereby established as follows for the purpose of this Initial Assessment Resolution:

FIRE PROTECTION ASSESSMENTS

Building Classifications	Property Use Categories				
(in square foot ranges)	Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0 -499	$3	$8	$3	$8	$8
500 - 1,199	$15	$40	$11	$39	$40
1,200 -1,999	$36	$94	$26	$92	$94
2,000 - 3,099	$60	$157	$42	$154	$157
3,100 - 4,499	$93	$242	$65	$238	$242
4,500 - 6,099	$134	$352	$95	$345	$352
6,100 - 7,999	$182	$477	$128	$467	$477
8,000 - 9,999	$238	$625	$168	$613	$625
10,000 - 12,399	$298	$781	$210	$766	$781
12,400 - 14,999	$369	$968	$260	$950	$968
15,000 - 17,799	$447	$1,171	$314	$1,149	$1,171
17,800 - 20,899	$530	$1,390	$373	$1,363	$1,390
20,900 - 24,199	$622	$1,632	$438	$1,600	$1,632
24,200 - 27,799	$720	$1,889	$507	$1,853	$1,889
27,800 - 31,699	$827	$2,170	$582	$2,128	$2,170
31,700 - 35,699	$943	$2,474	$664	$2,427	$2,474
35,700 - 39,999	$1,062	$2,787	$748	$2,733	$2,787
40,000 - 44,599	$1,190	$3,122	$838	$3,062	$3,122
44,600 - 49,399	$1,327	$3,481	$934	$3,414	$3,481
49,400 - 54,499	$1,469	$3,856	$1,034	$3,781	$3,856
54,500 - 59,799	$1,621	$4,254	$1,141	$4,172	$4,254

59,800 - 65,399	$1,779	$4,667	$1,252	$4,577	$4,667
65,400 - 71,199	$1,945	$5,104	$1,369	$5,006	$5,104
71,200 - 77,199	$2,118	$5,557	$1,491	$5,450	$5,557
77,200 - 83,499	$2,296	$6,025	$1,616	$5,909	$6,025
83,500 - 89,999	$2,483	$6,517	$1,748	$6,391	$6,517
90,000 - 96,799	$2,677	$7,024	$1,884	$6,889	$7,024
96,800 - 103,899	$2,879	$7,555	$2,026	$7,409	$7,555
103,900 - 111,199	$3,090	$8,109	$2,175	$7,953	$8,109
111,200 - 118,699	$3,307	$8,679	$2,328	$8,512	$8,679
118,700 - 126,499	$3,530	$9,264	$2,485	$9,086	$9,264
126,500 - 134,499	$3,762	$9,873	$2,648	$9,683	$9,873
134,500 - 142,799	$4,000	$10,497	$2,815	$10,295	$10,497
142,800 - 151,299	$4,247	$11,145	$2,989	$10,930	$11,145
151,300 - 159,999	$4,499	$11,808	$3,167	$11,581	$11,808
160,000 - 169,099	$4,758	$12,487	$3,349	$12,247	$12,487
169,100 - 178,299	$5,029	$13,197	$3,539	$12,943	$13,197
178,300 - 187,799	$5,302	$13,915	$3,732	$13,647	$13,915
≥187,800	$5,585	$14,657	$3,931	$14,374	$14,657

(C) The following exemptions shall apply to the Fire Protection Assessment program:

(1) No Fire Protection Assessment shall be imposed upon a parcel of Government Property; however, Government Property that is owned by federal mortgage entities, such as the VA and HUD, and obtained by foreclosure or a deed in lieu of foreclosure shall not be exempted from the Fire Protection Assessment.

(2) No Fire Protection Assessment shall be imposed on Buildings of Institutional Property whose building use is wholly exempt from ad valorem taxation under Florida law.

(3) In accordance with Section 170.01(4), Florida Statutes, no Fire Protection Assessment shall be imposed against any Building of Non-Residential Property located on a Tax Parcel that is classified by the Property Appraiser as agricultural lands pursuant to Section 193.461, Florida Statutes, unless that Building

exceeds a just value of $10,000 as determined by the Property Appraiser and is not a Pole Barn.

(4) No Fire Protection Assessment shall be imposed upon homesteaded Residential Property that is provided the Additional Seniors' Exemption by the Property Appraiser.

(5) No Fire Protection Assessment shall be imposed upon homesteaded Residential Property that is provided the Veterans' Exemption by the Property Appraiser.

(D) Any shortfall in the expected Fire Protection Assessment proceeds due to any reduction or exemption from payment of the Fire Protection Assessments required by law or authorized by the Council shall be supplemented by any legally available funds, or combination of such funds, and shall not be paid for by proceeds or funds derived from the Fire Protection Assessments. It is the legislative determination of the Council that, in the event a court of competent jurisdiction determines any exemption or reduction by the Council improper or otherwise adversely affects the validity of the Fire Protection Assessment imposed for this Fiscal Year, the sole and exclusive remedy shall be the imposition of a Fire Protection Assessment upon each affected Tax Parcel in the amount of the Fire Protection Assessment that would have been otherwise imposed save and except for such reduction or exemption afforded to such Tax Parcel by the Council.

(E) The estimated Fire Protection Assessments established in this Initial Assessment Resolution shall be the estimated assessment rates applied by the Town Manager in the preparation of the preliminary Fire Protection Assessment Roll for the

Fiscal Year beginning October 1, 2026, as provided in Section 9 of this Initial Assessment Resolution.

(F) The approval of the Estimated Fire Protection Assessment Rate Schedule by the adoption of this Initial Assessment Resolution determines the amount of the Fire Protection Assessed Cost. The remainder of such Fiscal Year budget for fire protection services, facilities, and programs shall be funded from available Town revenue other than Fire Protection Assessment proceeds.

SECTION 9. FIRE PROTECTION ASSESSMENT ROLL.

(A) The Town Manager is hereby directed to prepare, or cause to be prepared, a preliminary Fire Protection Assessment Roll for the Fiscal Year beginning October 1, 2026, in the manner provided in Section 18-187 of the Ordinance. The Fire Protection Assessment Roll shall include all Tax Parcels within the Property Use Categories in the Town. The Town Manager shall apportion the estimated Fire Protection Assessed Cost to be recovered through Fire Protection Assessments in the manner set forth in this Initial Assessment Resolution.

(B) A copy of the Ordinance, this Initial Assessment Resolution, documentation related to the estimated amount of the Fire Protection Assessed Cost to be recovered through the imposition of Fire Protection Assessments, and the preliminary Fire Protection Assessment Roll shall be maintained on file in the Office of the Town Clerk and open to public inspection. The foregoing shall not be construed to require that the preliminary Fire Protection Assessment Roll be in printed form if the amount of the Fire Protection Assessment for each Tax Parcel of property can be determined by the use of a computer terminal available to the public.

(C) It is hereby ascertained, determined, and declared that the method of determining the Fire Protection Assessments for fire protection services as set forth in this Initial Assessment Resolution is a fair and reasonable method of apportioning the Fire Protection Assessed Cost among parcels of Assessed Property located within the Town.

SECTION 10. METHOD OF COLLECTION. It is hereby declared that the Fire Protection Assessments shall be collected and enforced pursuant to Uniform Assessment Collection Act as provided in Section 18-215 of the Ordinance for Fiscal Year beginning October 1, 2026.

SECTION 11. AUTHORIZATION OF PUBLIC HEARING. A public hearing shall be held at 7:00 p.m. on June 16, 2026, in the Town Council Chambers, Jupiter Town Hall, 210 Military Trail, Jupiter, Florida, at which time the Council will receive and consider any comments on the Fire Protection Assessments from the public and affected property owners and consider imposing Fire Protection Assessments.

SECTION 12. NOTICE BY PUBLICATION. The Town Manager shall publish a notice of the public hearing authorized by Section 11 hereof in the manner and time provided in Section 18-188 of the Ordinance. The notice shall be published no later than May 26, 2026, in substantially the form attached hereto as Appendix E.

SECTION 13. NOTICE BY MAIL.

(A) The Town Manager shall also provide notice by first class mail to the Owner of each parcel of Assessed Property in the manner and time provided in Section 18-189 of the Ordinance.

(B) For Tax Parcels with exempt "home addresses" pursuant to Section 119.071(4), Florida Statutes, the Town Manager shall work with the Property Appraiser and/or Tax Collector for provision of notice.

(C) All notices shall be mailed no later than May 26, 2026, in substantially the form attached hereto as Appendix F.

(D) Additionally, pursuant to Chapter 92-264, Laws of Florida, as amended by Chapter 2003-348, Laws of Florida, a special act relating to Palm Beach County, notice of the Fire Protection Assessment imposed by the Town shall also be included by the Property Appraiser as part of the notice of proposed property taxes under Section 200.069, Florida Statutes, the truth-in-millage notification.

SECTION 14. APPLICATION OF ASSESSMENT PROCEEDS. The revenue derived from the Town's Fire Protection Assessments will be utilized for the provision of fire protection services, facilities, and programs to properties within the Town, as reflected by the Fire Protection Assessed Cost. In the event there is any fund balance remaining at the end of the Fiscal Year, such balance shall be carried forward and used only to fund fire protection services, facilities, and programs provided to properties within the Town.

SECTION 15. CONFLICTS. This Initial Assessment Resolution shall prevail in the event of any conflicts with any other resolution of the Town of Jupiter.

SECTION 16. SEVERABILITY. In the event any portion of this Resolution is deemed invalid by any court of competent jurisdiction, the invalid portion shall be considered severed, and the remainder of this Resolution shall continue in effect.

SECTION 17. EFFECTIVE DATE. This Initial Assessment Resolution shall take effect immediately upon its passage and execution.

PASSED AND ADOPTED this 5th day of May, 2026.

TOWN OF JUPITER

_____
Jim Kuretski, Mayor

ATTEST:

_____
Merriane Lahmeur, Town Clerk

Approved as to Form and Legal Sufficiency:

_____
Thomas J. Baird, Town Attorney

APPENDIX A

SITUATION FOUND CODES

APPENDIX A

SITUATION FOUND CODES

Situation Found Code	Description	EMS Call
100	Fire, Other	No
111	Building Fire	No
112	Fires in structures other than in a building	No
113	Cooking fire, confined to a container	No
118	Trash or rubbish fire, contained	No
130	Mobile property (vehicle) fire, other	No
131	Passenger vehicle fire	No
132	Road freight or transport vehicle fire	No
142	Brush, or brush and grass mixture fire	No
150	Outside rubbish fire, other	No
151	Outside rubbish, trash or waste fire	No
154	Dumpster or other outside trash receptacle fire	No
162	Outside equipment fire	No
240	Explosion (no fire), other	No
300	Rescue, EMS call, other	Yes
311	Medical assist, assist EMS crew	Yes
320	Allergic reaction	Yes
321	EMS call, excluding vehicle accident with injury	Yes
322	Vehicle accident with injuries	Yes
323	Motor vehicle/pedestrian accident (MV Ped)	Yes
324	Motor Vehicle Accident, No Injuries	No
331	Lock-in (if lock out, use 511)	No
352	Extrication of victim(s) from vehicle	No
353	Removal of victim(s) from stalled elevator	No
356	High angle rescue	No
364	Surf rescue	No
381	Rescue or EMS standby	Yes
400	Hazardous condition, other	No
411	Gasoline or other flammable liquid spill	No
412	Gas leak	No
413	Oil or other combustible liquid spill	No
421	Chemical hazard (no spill or leak)	No
422	Chemical spill or leak	No
424	Carbon monoxide incident	No
440	Electrical wiring/equipment problem, other	No
442	Overheated motor	No
444	Power line down	No

Situation Found Code	Description	EMS Call
445	Arcing, shorted electrical equipment	No
460	Accident, potential accident, other	No
463	Vehicle accident, general cleanup	No
480	Attempted burning, illegal action, other	No
500	Service call, other	No
510	Person in distress, other	No
511	Lock-out	No
520	Water problem, other	No
522	Water or steam leak	No
531	Smoke or odor removal	No
541	Animal problem	No
542	Animal rescue	No
550	Public service assistance, other	No
551	Assist police or other governmental agency	No
552	Police matter	No
553	Public service	No
554	Assist invalid	Yes
555	Defective Elevator	No
561	Unauthorized burning	No
600	Good intent call, other	No
611	Dispatched & canceled en route	Yes
622	No incident found upon arrival	No
631	Authorized controlled burning	No
641	Vicinity alarm (incident in other location)	No
650	Steam, other gas mistaken for smoke, other	No
651	Smoke scare, odor of smoke	No
652	Steam, vapor, fog or dust thought to be smoke	No
671	Hazmat release investigation w/no hazmat	No
672	Biological hazard investigation, none found	No
700	False alarm or false call, other	No
710	Malicious, mischievous false call, other	No
711	Municipal alarm system, malicious false alarm	No
713	Telephone, malicious false alarm	No
714	Central station, malicious false alarm	No
715	Local alarm system, malicious false alarm	No
721	Bomb scare, no bomb	No
730	System malfunction	No
733	Smoke detector activation due to malfunction	No
734	Heat detector activation due to malfunction	No
735	Alarm system sounded due to malfunction	No
736	CO detector activation due to malfunction	No

Situation Found Code	Description	EMS Call
740	Unintentional transmission of alarm, other	No
741	Sprinkler activation, no fire - unintentional	No
743	Smoke detector activation, no fire - unintentional	No
744	Detector activation, no fire - unintentional	No
745	Alarm system sounded, no fire - unintentional	No
746	Carbon monoxide detector activation, no CO	No
900	Special type incident, other , Dumpster fire	No

APPENDIX B

FIXED PROPERTY USE CODES

APPENDIX B

FIXED PROPERTY USE CODES

Fixed Property Use Code	Description	Category
0	FIXED PROP USE UNDETERMINED	NON-SPECIFIC
100	UNKNOWN OTHER	NON-SPECIFIC
110	FIXED USE RECREATION, OTHER	COMMERCIAL
111	BOWLING ESTABLISHMENT	COMMERCIAL
112	BILLIARD CENTER	COMMERCIAL
115	ROLLER RINK	COMMERCIAL
116	SWIMMING FACILITY	COMMERCIAL
120	VARIABLE USE AMUSEMENT/RECREATION	COMMERCIAL
121	BALLROOM,GYMNASIUM	COMMERCIAL
122	EXHIBITION HALL	COMMERCIAL
123	ARENA/STADIUM	COMMERCIAL
124	PLAYGROUND	COMMERCIAL
130	PLACES OF WORSHIP,CHURCH,FUNERAL PARLOR	INSTITUTIONAL
131	CHURCH/CHAPEL	INSTITUTIONAL
134	FUNERAL PARLOR/CHAPEL	COMMERCIAL
140	CLUBS, OTHER	COMMERCIAL
141	ATHLETIC CLUB/YMCA	INSTITUTIONAL
142	CLUB HOUSE	COMMERCIAL
150	PUBLIC, GOVT, OTHER	INSTITUTIONAL
151	LIBRARY	INSTITUTIONAL
152	MUSEUM, ART GALLERY	INSTITUTIONAL
160	EATING/DRINKING PLACES	COMMERCIAL
161	RESTAURANT	COMMERCIAL
162	NIGHTCLUB	COMMERCIAL
171	AIRPORT TERMINAL	COMMERCIAL
173	BUS TERMINAL	COMMERCIAL
180	THEATER, STUDIO OTHER	COMMERCIAL
181	THEATER, STUDIO OTHER	COMMERCIAL
182	AUDITORIUM, CONCERT HALL	COMMERCIAL
183	MOVIE THEATER	COMMERCIAL
200	EDUCATIONAL PROPERTY OTHER	INSTITUTIONAL
210	SCHOOLS NON-ADULT OTHER	INSTITUTIONAL
211	PRE-SCHOOL	INSTITUTIONAL
213	ELEMENTARY SCHOOL	INSTITUTIONAL
215	HIGH SCHOOL/JR HIGH/MIDDLE SCHOOL	INSTITUTIONAL
241	COLLEGE/UNIVERSITY	INSTITUTIONAL
254	DAY CARE-IN COMMERCIAL PROPERTY	COMMERCIAL

Fixed Property Use Code	Description	Category
300	HEALTHCARE/DETENTION OTHER	INSTITUTIONAL
311	CARE OF THE AGED/NURSING STAFF	NURSING HOME
331	HOSPITAL-MEDICAL/PSYCHIATRIC	INSTITUTIONAL
332	HOSPICES	INSTITUTIONAL
340	CLINICS, OTHER	INSTITUTIONAL
341	CLINIC, CLINIC-TYPE INFIRMARY	INSTITUTIONAL
342	DOCTOR/DENTIST/SURGEONS OFFICE	COMMERCIAL
343	HEMODIALYSIS UNIT	INSTITUTIONAL
361	JAIL/PRISON - NOT JUVENILE	INSTITUTIONAL
365	POLICE STATION	INSTITUTIONAL
400	RESIDENTIAL OTHER	RESIDENTIAL
419	ONE- AND TWO-FAMILY DWELLING	RESIDENTIAL
429	MULTI-FAMILY DWELLINGS	RESIDENTIAL
449	HOTELS, MOTELS, INNS, LODGES	COMMERCIAL
459	RESIDENTIAL BOARD AND CARE	NURSING HOME
460	DORMITORIES OTHER	INSTITUTIONAL
500	MERCANTILE PROPERTIES OTHER	COMMERCIAL
511	CONVENIENCE STORE	COMMERCIAL
519	FOOD, BEVERAGE SALES, GROCERY STORE	COMMERCIAL
549	SPECIALTY SHOPS	COMMERCIAL
557	BARBER, BEAUTY SHOP, PERSONAL SERVICES	COMMERCIAL
559	RECREATIONAL, HOBBY,HOME SALES, PET STORE	COMMERCIAL
571	SERVICE STATION	COMMERCIAL
579	MOTOR VEHICLE, BOAT SALES/SERVICE/REPAIRS	COMMERCIAL
580	GENERAL ITEM STORES, OTHER	COMMERCIAL
581	DEPARTMENT STORE	COMMERCIAL
592	BANK W/FIRST STORY BANKING FACILITY	COMMERCIAL
599	BUSINESS OFFICES	COMMERCIAL
629	LABORATORIES	INDUSTRIAL/WAREHOUSE
635	COMPUTER, DATA PROCESSING CNTR	INDUSTRIAL/WAREHOUSE
639	COMMUNICATIONS CENTER	INDUSTRIAL/WAREHOUSE
642	ELECTRIC TRANSMISSION DISTIB SYSTEM	INDUSTRIAL/WAREHOUSE
644	GAS DISTRIBUTION SYSTEM, PIPELINE	INDUSTRIAL/WAREHOUSE
647	WATER UTILITY	INDUSTRIAL/WAREHOUSE
700	MANUFACTURING PROPERTY, PROCESSING	INDUSTRIAL/WAREHOUSE
800	STORAGE PROPERTY OTHER	INDUSTRIAL/WAREHOUSE
807	OUTSIDE MATERIAL STORAGE AREA	INDUSTRIAL/WAREHOUSE
880	VEHICLE STORAGE; OTHER	INDUSTRIAL/WAREHOUSE
881	RESIDENTIAL PARKING STORAGE	INDUSTRIAL/WAREHOUSE
882	GENERAL VEHICLE PARKING GARAGE	INDUSTRIAL/WAREHOUSE
888	FIRE STATIONS	INSTITUTIONAL

Fixed Property Use Code	Description	Category
891	GENERAL WAREHOUSE	INDUSTRIAL/WAREHOUSE
898	WHARF, PIER	COMMERCIAL
899	RESIDENTIAL OR SELF STORAGE UNITS	INDUSTRIAL/WAREHOUSE
900	OUTSIDE, SPECIAL PROPERTIES; OTHER	NON-SPECIFIC
931	OPEN LAND, FIELD	VACANT LAND
936	VACANT LOT	VACANT LAND
937	BEACH	NON-SPECIFIC
940	WATER AREAS, OTHER	NON-SPECIFIC
941	IN OPEN SEA, TIDAL WATERS	NON-SPECIFIC
946	LAKE/RIVER/STREAM	NON-SPECIFIC
960	STREET, OTHER	NON-SPECIFIC
961	DIVIDED HIGHWAY, HIGHWAY	NON-SPECIFIC
962	PAVED PUBLIC STREET, RESIDENTIAL	NON-SPECIFIC
963	PAVED PRIVATE STREET, COMMERCIAL	NON-SPECIFIC
965	UNCOVERED PARKING AREA	NON-SPECIFIC
981	CONSTRUCTION SITE	NON-SPECIFIC
983	PIPELINE, POWER LINE RIGHT OF WAY	NON-SPECIFIC
NNN	NONE	NON-SPECIFIC
UUU	UNDETERMINED	NON-SPECIFIC

APPENDIX C

BUILDING USE CODES

APPENDIX C

BUILDING USE CODES

Building Use Codes & Description	Category
00 - GSG - VACANT/BLDG RAZED	No Charge
0000 - CONDO ONLY LAND	No Charge
0010 - VACANT TOWNHOUSE	No Charge
0030 - VACANT ZERO LOT LINE	No Charge
0040 - WATER POINTE OF JUPITER FLORIDA CONDO	Residential
0100 - SFR	Residential
0110 - TOWNHOUSE-COMM ZONING	Residential
0130 - ZERO LOT LINE	Residential
0150 - SFR-C	Residential
0200 - SFT-MFG	Residential
0300 - SFR-ZERO LOT LINE	Residential
0400 - CONDO	Residential
0410 - TOWNHOUSE	Residential
0420 - TIMESHARE	Undetermined - requires fieldwork
0430 - ZERO LOT LINE	Residential
0440 - TWNHS-VILLA	Residential
0450 - SFR-C	Residential
0460 - CONDO COMM	Commercial
0460D - DOCK CONDOMINIUM	No Charge
0500 - EXC-ZERO LOT	Residential
060 - EFFICIENCY APT	Residential
0700 - EXC TWHSE/VILLA	Residential
0800 - MOBILE HOME	Residential
0900 - EXC-RESIDENT	Residential
0909 - EXC-LUX.RES	Residential
1204 - STORE/OFF/RES C	Commercial
170 - DORMITORY	Institutional
1704 - OFFICE 1 STORY	Commercial
1904 - PROF OFFICES CO	Commercial
2004 - AIRPORT/MARINA	Commercial
210 - APARTMENTS	Residential
220 - APARTMENTS LOW RISE	Residential
2200 - MFR LOW RISE	Residential
230 - APARTMENTS HIGH RISE	Residential
240 - APARTMENTS - TO	Residential
2500 - MFR ROW HOUSE	Residential
260 - APARTMENTS - SENIOR	Residential

Building Use Codes & Description	Category
2700 - DUPLEX	Residential
2800 - TRIPLEX	Residential
2900 - QUADRAPLEX	Residential
301 - SFR CONVERT TO COMM	Commercial
340 - COMMERCIAL MIXED	Commercial
350 - RETAIL SINGLE OCC	Commercial
351 - DRUG STORE FREE	Commercial
360 - DISCOUNT DEPT S	Commercial
361 - MEGA DISCOUNT STORE	Commercial
362 - VETERINARY CLIN	Commercial
363 - MEGA DISCOUNT STORE	Commercial
364 - HOME IMPROVEMEN	Commercial
365 - FURNITURE STORE	Commercial
370 - DEPARTMENT STORE	Commercial
371 - DOWNTOWN ROW TY	Commercial
374 - RETAIL MULTI OCC	Commercial
380 - STRIP SHOPPING	Commercial
390 - COMM SHOPPING CTR	Commercial
420 - SUPERMARKET	Commercial
430 - CONVENIENCE FOOD	Commercial
440 - HOTEL/MOTEL BUS	Commercial
450 - RESORT HOTEL	Commercial
460 - HOTEL/MOTEL LO	Commercial
470 - HOTEL- HI RISE	Commercial
4804 - WAREH/DIST TERM	Industrial/Warehouse
490 - OFFICE BLDG L/R	Commercial
4960 - CONDO COMM	Commercial
500 - OFFICE H-R 5ST	Commercial
520 - MEDICAL OFFICE	Commercial
530 - HOSPITALS	Institutional
540 - NURSING HOME	Nursing Home
550 - BAR/TAVERN	Commercial
551 - COCKTAIL LOUNGE	Commercial
560 - RESTAURANT	Commercial
570 - FRANCHISE FOOD	Commercial
580 - BOWLING ALLEY	Commercial
582 - SKATING RINK	Commercial
583 - HEALTH CLUB	Commercial
587 - COUNTRY CLUB	Commercial
588 - PRIVATE CLUB	Commercial
589 - COUNTRY CLUB/W GOLF CRSE	Commercial

Building Use Codes & Description	Category
590 - ARENA	Commercial
591 - GYMNASIUM	Commercial
593 - DOG/HORSE TRACK	Commercial
600 - AUDITORIUM	Commercial
610 - CINEMA/THEATER	Commercial
614 - RADIO/TV/ PIC S	Commercial
620 - BANK/MAIN OFFIC	Commercial
630 - NEIGHBORHOOD BANK	Commercial
640 - SERVICE STATION	Commercial
641 - SERVICE STATION	Commercial
650 - CAR WASH - AUTO	Commercial
651 - CAR WASH - MANU	Commercial
652 - CAR WASH SERVIC	Commercial
660 - AUTO SERVICE GARAGE	Commercial
662 - KWIK LUBE	Commercial
665 - GARAGE STORAGE	Industrial/Warehouse
670 - OFFICE/WAREHOUS	Undetermined - requires fieldwork
680 - FUNERAL HOME	Commercial
690 - CLUBHOUSE	Institutional
691 - SOCIAL/FRATERNAL	Institutional
695 - GUARDHOUSE	No Charge
700 - COLD STORAGE	Industrial/Warehouse
710 - RAIL/BUS/AIR TE	Commercial
712 - TELECOMMUNICATI	Industrial/Warehouse
720 - PARKING GARAGE	Industrial/Warehouse
721 - RADIO/TV TRANSM	Industrial/Warehouse
730 - DAY CARE CENTER	Commercial
750 - AUTO DEALER/F-S	Commercial
800 - LIGHT MANUFACTURING	Industrial/Warehouse
810 - HEAVY MANUFACTURING	Industrial/Warehouse
820 - WAREHOUSE DISTR	Industrial/Warehouse
830 - MINI WAREHOUSE	Industrial/Warehouse
840 - WAREHOUSE STORAGE	Industrial/Warehouse
8400 - DETACHED GAR	Industrial/Warehouse
841 - WAREHOUSE SINGLE	Industrial/Warehouse
850 - HANGAR	Industrial/Warehouse
861 - RESIDENTIAL BARN	No Charge
870 - PREFAB WAREHOUSE	Industrial/Warehouse
880 - TECHNICAL MANUF	Industrial/Warehouse
900 - SCHOOL	Institutional
901 - COLLEGES / UNIV	Institutional

Building Use Codes & Description	Category
910 - RELIGIOUS	Institutional
912 - LIBRARY	Institutional
920 - EDUCATION/RELIG	Institutional
930 - GOVERNMENTAL	Institutional
950 - POLICE/FIRE STN	Institutional
960 - CORRECTIONAL	Institutional
970 - CULTURAL FACILITY	Institutional
INSTOV - Institutional Override	Institutional

APPENDIX D

DOR CODES

APPENDIX D

DOR CODES

DOR Codes & Property Use Description
0000 - VACANT
0010 - VACANT TOWNHOUSE
0030 - VACANT ZERO LOT LINE
0040 - VACANT CONDO LAND
0050 - VACANT SFR CONDO
0100 - SINGLE FAMILY
0101 - SINGLE FAMILY-COMM ZONING
0104 - SINGLE FAMILY-IND ZONING
0110 - SINGLE FAMILY-COMM ZONING
0130 - ZERO LOT LINE
0140 - SINGLE FAMILY-IND ZONING
0150 - SFR-C
0200 - MOBILE HOME
0210 - TANGIBLE MOBILE HOME
0300 - MULTIFAMILY
0304 - MULTIFAMILY CONDO CONVERSION
0305 - MULTIFAMILY > 10 UNITS Income Restricted
0400 - CONDOMINIUM
0410 - TOWNHOUSE/VILLA
0420 - TIMESHARE
0430 - ZERO LOT LINE
0450 - SFR-C
0460 - CONDO COMMERCIAL
0469 - COMMERCIAL CONDO
0500 - MHT COOP
0510 - COOPERATIVE
0600 - RETIREMENT
0605 - RETIREMENT Income Restricted
0620 - LIFE CARE HX
0630 - REHAB-DETOX
0700 - MISC RESIDENCE SFR
0800 - MULTIFAMILY < 10 UNITS
0801 - MULTIFAMILY < 10 UNITS-COMM ZONING
0804 - MULTIFAMILY < 10 UNITS-IND ZONING
0805 - MFR-Imp Non Contributing
0810 - MULTIFAMILY < 10 UNITS-COMM ZONING

DOR Codes & Property Use Description	
0840 - MULTIFAMILY < 10 UNITS-IND ZONING	
0900 - RESIDENTIAL COMMON AREA/ELEMENT	No Charge
1000 - VACANT COMMERCIAL	
1100 - STORES	
1104 - STORES CONDO	
1200 - STORE/OFFICE/RESIDENTIAL	
1204 - STORE/OFF/RES CONDO	
1300 - DEPARTMENT STORE	
1301 - SMALL DISCOUNT STORE < 25000 SF	
1400 - SUPERMARKET/DRUG STORE	
1500 - SHOPPING CENTER REGIONAL	
1600 - SHOPPING CENTER CMMITY	
1700 - OFFICE ONE STORY	
1704 - OFFICE 1 STORY CONDO	
1800 - OFFICE MULTISTORY	
1900 - PROF OFFICES	
1904 - PROF OFFICES CONDO	
2000 - AIRPORT/MARINA	No Charge
2004 - AIRPORT/MARINA CONDO	No Charge
2010 - WORKING WATERFRONT	
2100 - RESTAURANT	
2104 - RESTAURANT CONDO	
2200 - RESTAURANT, DRIVE IN	
2300 - FINANCIAL	
2400 - INSURANCE	
2500 - SERVICE SHOPS	
2600 - SERVICE STATION	
2700 - AUTO SALES	
2800 - PKG LT / MH PK	
2900 - WHOLESALER	
3000 - FLORIST	
3100 - DRV-IN THEATER	
3200 - THTR/AUD/CLBHS	
3300 - NIGHT CLUBS	
3400 - BOWLING ALLEY	
3500 - TOURIST ATTRAC	
3600 - CAMPS	
3700 - RACETRACK	
3800 - GOLF COURSE	
3900 - MOTEL	

DOR Codes & Property Use Description
3942 - HOTEL TIMESHARE
4000 - VACANT INDUSTRIAL
4004 - VACANT INDUS CONDO
4100 - LIGHT MFG
4200 - HEAVY MFG
4300 - LUMBER YARD/MILL
4400 - PACKING
4500 - BOTTLER
4600 - FOOD PROCESSING
4700 - MIN PROCESSING
4800 - WAREH/DIST TERM
4804 - WAREH/DIST TERM CONDO
4805 - SELF STORAGE
4900 - OPEN STORAGE
4960 - CONDO - NON RESIDENTIAL
4969 - COMMERCIAL CONDO
5000 - IMPROVED ARGI
5100 - CROP SOIL CLASS 1
5200 - CROP SOIL CLASS 2
5300 - CROP SOIL CLASS 3
5400 - TIMBER SI 90+
5500 - TIMBER SI 80-89
5600 - TIMBER SI 70-79
5700 - TIMBER SI 60-69
5800 - TIMBER SI 50-59
5900 - TIMBER NOT CLASSED
6000 - GRAGSOIL CLASS 1
6100 - GRZGSOIL CLASS2
6200 - GRZGSOIL CLASS3
6300 - GRZGSOIL CLASS4
6400 - GRZGSOIL CLASS5
6500 - GRZGSOIL CLASS6
6600 - ORCHARD GROVES
6700 - POUL/BEES/FISH
6800 - EQUESTRIAN
6900 - ORN/MISC AGRI
7000 - VACANT INSTIT
7100 - RELIGIOUS10
7200 - PRV SCHL/COLL
7300 - PRV HOSPITAL

DOR Codes & Property Use Description	
7400 - NURSING HOME	
7500 - ORPHNG/NON-PROF	
7600 - MORT/CEMETERY	
7700 - CLB/LDG/UN HALL	
7800 - SANI/ REST HOME	
7900 - CULTURAL	
8000 - DISTRICTS	
8100 - MILITARY	
8200 - FOREST/PK/REC	
8205 - TRANSFER DEVELOPMENT RIGHTS	No Charge
8300 - PUB CTY SCHOOL	
8400 - COLLEGE	
8500 - HOSPITAL	
8600 - CITY INC NONMUNI	
8700 - STATE	
8800 - FEDERAL	
8900 - MUNICIPAL	
9000 - LEASEHOLD INT	
9100 - UTILITY	
9300 - SUBSURF RIGHTS	No Charge
9400 - R/W - BUFFER	No Charge
9500 - RIVER/LAKES	No Charge
9600 - SEWG/WASTE LAND	No Charge
9700 - OUTDR REC/PARK LAND	No Charge
9800 - CENTRALLY ASSESSED	No Charge
9900 - NON AG	
9999 - EXEMPT	No Charge

APPENDIX E

FORM OF NOTICE TO BE PUBLISHED

APPENDIX E
FORM OF NOTICE TO BE PUBLISHED

To Be Published by May 26, 2026

NOTICE OF HEARING TO IMPOSE AND PROVIDE FOR COLLECTION OF FIRE PROTECTION SPECIAL ASSESSMENTS

Notice is hereby given that the Town Council of the Town of Jupiter, Florida will conduct a public hearing to consider the imposition of annual fire protection special assessments for the provision of fire protection services within the Town and collection of these assessments pursuant to the tax bill collection method.

The hearing will be held at 7:00 p.m. on June 16, 2026, in the Town Council Chambers, Jupiter Town Hall, 210 Military Trail, Jupiter, Florida, for the purpose of receiving public comment on the proposed assessments. All affected property owners have a right to appear at the hearing and to file written objections with the Town within 20 days of this notice. If a person decides to appeal any decision made by the Town Council with respect to any matter considered at the hearing, such person will need a record of the proceedings and may need to ensure that a verbatim record is made, including the testimony and evidence upon which the appeal is to be made.

In accordance with the Americans with Disabilities Act, persons needing a special accommodation or an interpreter to participate in this proceeding should call the Town Clerk at (561) 741-2530 or TownClerk@jupiter.fl.us, at least two (2) business days prior to the date of the hearing.

The assessment for each parcel of property will be based upon each parcel's classification and the total number of assessment billing units attributed to that parcel.

The following table reflects the proposed Fire Protection Assessment rate schedule for the Fiscal Year beginning on October 1, 2026.

FIRE PROTECTION ASSESSMENTS

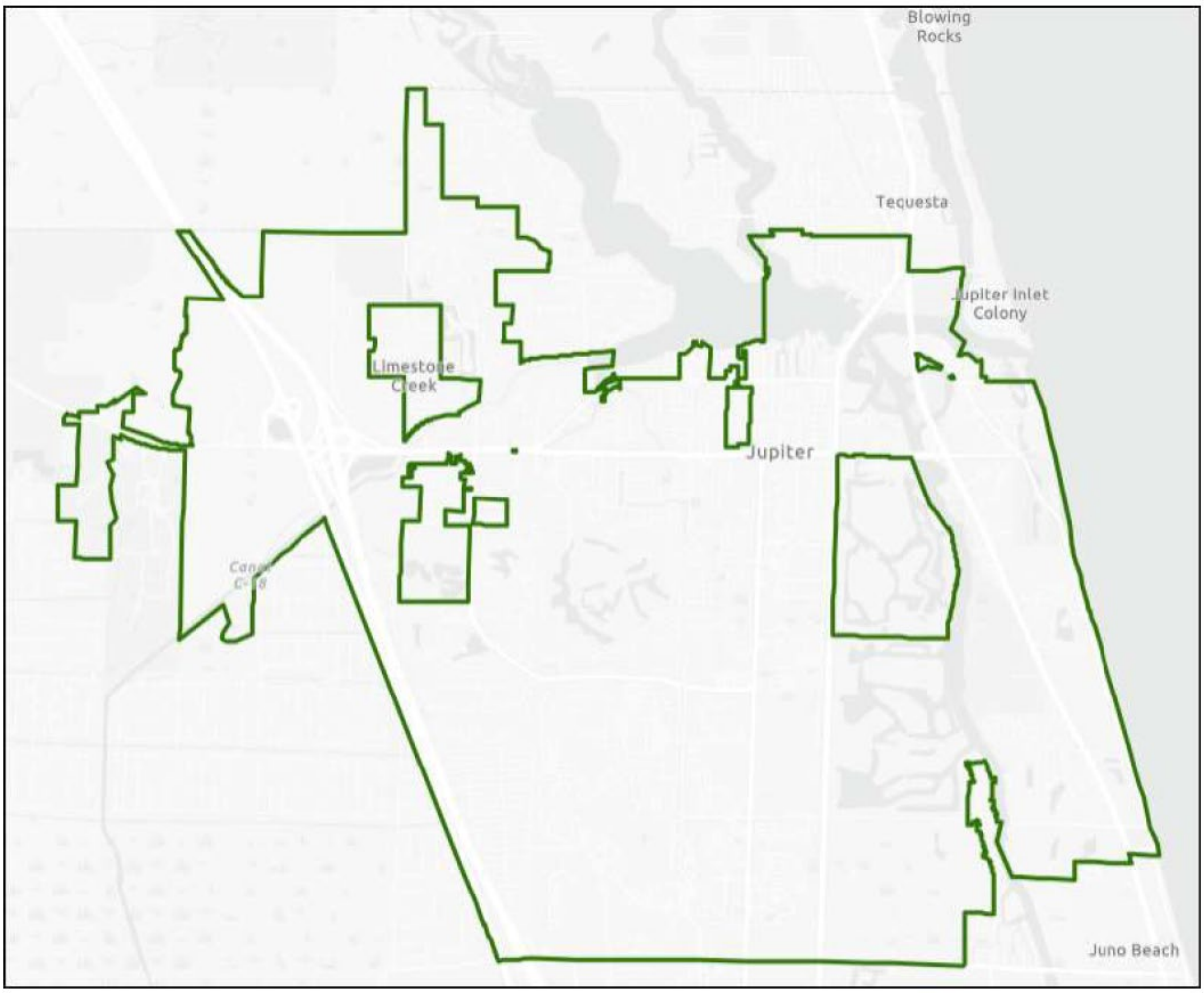
Building Classifications	Property Use Categories				
(in square foot ranges)	Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0 -499	$3	$8	$3	$8	$8
500 - 1,199	$15	$40	$11	$39	$40
1,200 -1,999	$36	$94	$26	$92	$94
2,000 - 3,099	$60	$157	$42	$154	$157
3,100 - 4,499	$93	$242	$65	$238	$242
4,500 - 6,099	$134	$352	$95	$345	$352
6,100 - 7,999	$182	$477	$128	$467	$477
8,000 - 9,999	$238	$625	$168	$613	$625
10,000 - 12,399	$298	$781	$210	$766	$781
12,400 - 14,999	$369	$968	$260	$950	$968
15,000 - 17,799	$447	$1,171	$314	$1,149	$1,171
17,800 - 20,899	$530	$1,390	$373	$1,363	$1,390
20,900 - 24,199	$622	$1,632	$438	$1,600	$1,632
24,200 - 27,799	$720	$1,889	$507	$1,853	$1,889
27,800 - 31,699	$827	$2,170	$582	$2,128	$2,170
31,700 - 35,699	$943	$2,474	$664	$2,427	$2,474
35,700 - 39,999	$1,062	$2,787	$748	$2,733	$2,787
40,000 - 44,599	$1,190	$3,122	$838	$3,062	$3,122
44,600 - 49,399	$1,327	$3,481	$934	$3,414	$3,481
49,400 - 54,499	$1,469	$3,856	$1,034	$3,781	$3,856
54,500 - 59,799	$1,621	$4,254	$1,141	$4,172	$4,254
59,800 - 65,399	$1,779	$4,667	$1,252	$4,577	$4,667
65,400 - 71,199	$1,945	$5,104	$1,369	$5,006	$5,104
71,200 - 77,199	$2,118	$5,557	$1,491	$5,450	$5,557
77,200 - 83,499	$2,296	$6,025	$1,616	$5,909	$6,025
83,500 - 89,999	$2,483	$6,517	$1,748	$6,391	$6,517
90,000 - 96,799	$2,677	$7,024	$1,884	$6,889	$7,024
96,800 - 103,899	$2,879	$7,555	$2,026	$7,409	$7,555
103,900 - 111,199	$3,090	$8,109	$2,175	$7,953	$8,109
111,200 - 118,699	$3,307	$8,679	$2,328	$8,512	$8,679
118,700 - 126,499	$3,530	$9,264	$2,485	$9,086	$9,264
126,500 - 134,499	$3,762	$9,873	$2,648	$9,683	$9,873
134,500 - 142,799	$4,000	$10,497	$2,815	$10,295	$10,497
142,800 - 151,299	$4,247	$11,145	$2,989	$10,930	$11,145
151,300 - 159,999	$4,499	$11,808	$3,167	$11,581	$11,808
160,000 - 169,099	$4,758	$12,487	$3,349	$12,247	$12,487
169,100 - 178,299	$5,029	$13,197	$3,539	$12,943	$13,197
178,300 - 187,799	$5,302	$13,915	$3,732	$13,647	$13,915
≥187,800	$5,585	$14,657	$3,931	$14,374	$14,657

Copies of the Master Capital Project and Service Assessment Ordinance, the Initial Assessment Resolution for Fire Protection Services, and the preliminary Fire Protection Assessment Roll are available for inspection in the Town Clerk's Office located at 210 Military Trail, Jupiter, Florida.

The fire protection non-ad valorem assessment will be collected on the annual ad valorem tax bill mailed in November of each year that the assessment is imposed, as authorized by section 197.3632, Florida Statutes. Failure to pay the assessment will cause a tax certificate to be issued against the property in accordance with the provisions of Florida law, which may result in a loss of title. Unless proper steps are initiated in a court of competent jurisdiction to secure relief within 20 days from the date of Town Council action at the above hearing (including the method of apportionment, the rate of assessment, and the imposition of assessments), such action shall be the final adjudication of the issues presented.

If you have any questions regarding the fire protection special assessment please contact the Town of Jupiter at TOJfireNAV@jupiter.fl.us.

TOWN OF JUPITER BOUNDARY



TOWN COUNCIL
TOWN OF JUPITER, FLORIDA

APPENDIX F

FORM OF NOTICE TO BE MAILED

APPENDEX F
FORM OF NOTICE TO BE MAILED

Town of Jupiter
210 Military Trail
Jupiter, FL 33459

DRAFT

NOTICE OF HEARING TO IMPOSE AND PROVIDE
FOR COLLECTION OF FIRE PROTECTION SERVICES
NON-AD VALOREM SPECIAL ASSESSMENTS
NOTICE DATE: MAY 26, 2026

«OwnerName»
«OwnerAdd1»
«City» <State> <Zip>

Parcel Tax ID: «PID»
Seq. Number: «SeqPrefix»«SeqNum»
Legal: <LegalDesc>

Beginning **October 1, 2026**, the Town of Jupiter will launch the Jupiter Fire Rescue Department (JFRD). In its first year, JFRD is expected to save Jupiter property owners approximately $10 million compared to the current cost of service.

To fund these services, the Town is evaluating several options. One option is an annual special assessment, or **non-ad valorem assessment**. Special assessments are commonly used throughout Florida and are governed by state law.

What This Means for You

- The Town is considering a non-ad valorem special assessment to help fund fire protection services, facilities, and programs to be provided by JFRD
- A **public hearing** will be held to receive public comment on the proposed annual special assessment
- All affected property owners have the right to appear and speak at the hearing and submit written comments to the Town within 20 days of this notice
- If approved, this non-ad valorem special assessment would be included on your property tax bill, listed at the bottom in the section labeled "NON-AD VALOREM ASSESSMENT." You will no longer be charged for the item on your bill labelled "Jupiter Fire/Rescue," which equates to a millage rate of 1.7251.

This notice and all the information below are part of the legally required process to inform property owners and provide an opportunity for public input.

Public Hearing Information
Date: Tuesday, June 16, 2026
Time: 7:00 pm
Location: Town Council Chambers (210 Military Trail, Jupiter, FL)
Town Council will receive public comment on the proposed annual non-ad valorem special assessment to fund fire protection services, facilities, and other programs that may be levied on your property using the tax bill collection method for the fiscal year October 1, 2026 – September 30, 2027, and future fiscal years.

Property owners will have the opportunity to speak about the proposed special assessment. Town Council will consider and vote on a resolution (No. xx-26) to adopt the assessment at this meeting or at any future meeting.

How much will be collected?
The Town estimates collecting $2,520,298 for fiscal year Oct. 1, 2026 – Sept. 30, 2027, if this special assessment is approved. The remaining portion of fire rescue services will be funded by existing sources of revenue for the Town, such as property taxes, and transport fees.

How is my assessment calculated?

Your fire protection special assessment is based on the classification of each building on your property (such as residential or commercial) and the amount of square footage contained therein.

Your Estimated Assessment
The proposed special assessment for your property is listed below. If you have multiple properties, you may receive multiple notices like this one. This special assessment is listed separately on your tax bill from your property taxes, which are calculated using your property's value and a millage (tax) rate.

Category	Type and Number of Billing Units	Fiscal Year 26-27 Assessment
«Category»	«Units» «UnitDesc»	$«AsmtBldg»
	Total	**$«TotalAsmtAmt»**

The maximum annual fire protection assessment that can be imposed without further notice for fiscal year 2026-2027 and future fiscal years for the above property is **$«TotalAsmtAmt»**.

How can I review more information?
You may review the Fire Services Assessment Ordinance, Initial Assessment Resolution and Preliminary Assessment Roll at:
Town Clerk's Office
210 Military Trail
Jupiter, FL

How will the special assessment be collected?
The special assessment will be collected by the Palm Beach County Tax Collector as part of your annual property tax bill, as authorized by Section 197.3632, Florida Statutes.

What happens if the assessment is not paid?
As with any of the items listed on your annual property tax bill, failure to pay the special assessment will cause a tax certificate to be issued against the property, which may result in a loss of title.

How to Provide Input
All property owners have the right to speak at the public hearing on June 16, 2026. You may also submit a written objection within 20 days of this notice. Your written objection must include your name, your parcel number, and the reason for your objection.

Send or deliver your written objection to:
Town Clerk – Objections to Non-Ad Valorem Assessments
210 Military Trail
Jupiter, FL 33458

Important Information
If you decide to appeal any decision made by the Town Council with respect to any matter considered at the hearing, you will need a record of the recordings and may need to ensure that a verbatim record is made, including the testimony and evidence upon which the appeal is to be made. In accordance with the Americans with Disabilities Act, persons needing a special accommodation or an interpreter to participate in this proceeding should call 561-741-2530 at least two (2) business days prior to the date of the hearing.

If you wish to challenge the assessment in court, you must take legal action within 20 days after the Town Council's decision at the hearing on June 16, 2026. This includes challenges to the method used to calculate the assessment, the rate of the assessment, or the decision to impose the assessment. If no legal action is taken within that time, the decision will be considered final.

Questions?
If there is a mistake on this notice, it will be corrected.

If you have questions about the proposed fire assessment, please contact the Town of Jupiter at TOJFireNAV@jupiter.fl.us. For additional frequently asked questions on this proposed amendment, visit www.jupiter.fl.us/FundingJFRD.

*******THIS IS NOT A BILL*******

APPENDIX G

FIRE ASSESSMENT MEMORANDUM

APPENDIX G

Town of Jupiter, Florida

Fire Assessment Memorandum

March 2026

Presented by:
Accenture Infrastructure and
Capital Projects Consulting, LLC
3800 Esplanade Way, Suite 100
Tallahassee, Florida 32311

accenture

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Introduction

Accenture Infrastructure and Capital Projects Consulting, LLC, (Accenture) specializes in government finance and taxation issues by working with cities, counties, special districts and state agencies to develop unique funding and service delivery solutions for critical infrastructure and service needs. Accenture has developed extensive experience in structuring and implementing alternative revenue sources in Florida.

The Town of Jupiter (Town) has entered into a professional services agreement with Accenture to provide specialized services in the development and implementation of a non-ad valorem assessment program to fund fire services within the incorporated area of the Town (Fire Assessment Project). The law firm of Nabors, Giblin & Nickerson, P.A. (NG&N) was retained to provide legal guidance on this project.

The objective of the Fire Assessment Project was to develop and implement an annual assessment program to fund the Town's provision of fire services (Fire Assessment). The annual fire assessment will, subject to Town Council approval, be collected using the property tax bill beginning in November 2026. This document is the Fire Assessment Memorandum (Assessment Memorandum), which is one of the project deliverables specified in the scope of services.

The work effort, documented by this Assessment Memorandum, focuses on the calculation of assessment rates and classifications required to fully fund the identified assessable costs to provide fire services within the Town for Fiscal Year 2026-27. However, the Town has the choice of funding all or only a portion of the assessable costs based on policy direction. In addition, the work effort recorded in this Assessment Memorandum required the identification of the full costs of assessable fire services (minus all revenues) and the allocation of those costs to properties that specially benefit from the provision of such fire services.

Objectives

The Town retained Accenture to develop an annual recurring special assessment program that is capable of funding all of the assessable costs associated with providing fire protection services. Commencing with Fiscal Year 2026-27, subject to Town Council approval, the fire assessment will be collected using the property tax bill collection process provided in section 197.3632, Florida Statutes (Uniform Method). Because the fire assessment will be collected using the Uniform Method, the data available on the ad valorem tax roll was used to develop the Fiscal Year 2026-27 assessment program, and will be used in subsequent years' programs.

Accordingly, the challenge for the Town is to develop a non-ad valorem assessment program which uses property information that is or will be on the ad valorem tax roll. To this end, Accenture has been charged to fully cost the services to be provided by the Town, develop a fair and reasonable apportionment methodology for such assessable costs, and determine assessment rates and parcel classifications that are accurate, fair and reasonable.

The fire non-ad valorem assessments must meet the Florida case law requirements for a valid special assessment. These requirements are:

- The service provided must confer a special benefit to the property being assessed; and
- The costs assessed must be fairly and reasonably apportioned among the properties that receive the special benefit.

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The work effort of this project required the evaluation of data obtained from the Town, Palm Beach County Property Appraiser, Palm Beach County Fire Rescue, and the State Fire Marshal's database to develop a fire assessment program that focuses upon the proposed Fiscal Year 2026-27 assessable cost calculations. The objectives of this initial effort were to:

- Review the fire protection services that Palm Beach County Fire Rescue is currently providing through a contract with the Town;
- Review the fire protection services that the Town will begin providing in-house starting with Fiscal Year 2026-27;
- Determine any additional services the Town anticipates implementing in future years;
- Determine the full costs of providing fire protection services within the Town;
- Review such final cost determination with the Town to confirm that all elements provide the requisite special benefit to the assessed property;
- Determine the relative benefit anticipated to be derived by categories of property use within the Town from the projected delivery of fire protection services;
- Recommend the fair and reasonable apportionment of assessable costs among benefited parcels within each category of property use; and
- Calculate assessment rates and parcel classifications for Fiscal Year 2026-27.

Apportionment Methodology

The calculation of assessment rates for fire protection services depends on three separate, but interconnected, pieces of data. The first data element is the identification of the full cost of providing fire protection services through the development and determination of the assessable costs of providing such services. The second data element is the analysis of service delivery data, segregated to property use categories (i.e., fire call data). The third and final data component is a comprehensive analysis of all property use categories within the Town to determine which parcels receive a special benefit from the provision of fire protection services and to identify a fair and reasonable method of apportioning the assessable costs among all benefited parcels within each property use category.

The recommended fire protection services apportionment methodology allocates assessable costs on the basis of the anticipated demand for fire services by categories of real property use as identified on the real property assessment roll prepared for the levy of ad valorem taxes. The assessable fire costs are allocated among real property use categories based upon the historical demand for these services. This demand is identified by examining the fire incident data as reported by Palm Beach County Fire Rescue for the Town to the State Fire Marshal's office.

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Service Description

Currently the Town's fire rescue services are provided by Palm Beach County Fire Rescue through a contract with the Town.

Starting with Fiscal Year 2026-27 (October 1, 2026), the newly formed Town of Jupiter Fire Rescue Department will begin providing fire rescue services to the incorporated area of the Town. The services that will be provided by the Town's Fire Rescue Department include fire suppression, fire prevention, building inspections and plans review, fire investigations, public fire safety education, disaster management, rescue, emergency medical services with transport, and response to other emergencies as needed.

The Town of Jupiter's Fire Rescue Department (Fire Department) facilities inventory is comprised of three fire station. Table 1 identifies the Fire Department's building/facility inventory, as well as the corresponding physical location.

Table 1
Fire Department Building/Facility Inventory

Station	Location
Abacoa Station	3550 Military Trail
Cinquez Station	2197 W Indiantown Rd
Piatt Place Station	500 N US Highway 1

Source: *Town of Jupiter*

The Town has mutual aid agreements with the City of Palm Beach Gardens for fire rescue assistance and fire rescue training. There is no compensation for these services.

The Town has an interlocal agreement with Palm Beach County to provide dispatch services for the Town. The dispatch services are funded through a countywide ad valorem tax.

Tables 2 through 4 describe the Fire Department's staffing, apparatus and fire flow of each station, the organizational structure of the Fire Department, and the fire rescue response protocol, respectively. These tables are used to develop the Administrative Factor described in the Development of Factors section of this Assessment Memorandum.

Table 2
Fire Rescue Department Stations, Staffing, Apparatus & Fire Flow

Station	Staffing	Apparatus	Fire Flow
Abacoa Station	Captain	Engine	1500
	Lieutenant	Rescue	
	Driver/Engineer		
	2 Firefighters/Paramedics		
	1 Firefighter/EMT		
Cinquez Station	Battalion Chief	Battalion	
	Captain	Squad/Engine	1500
	Lieutenant	Rescue	
	Driver/Engineer	Brush	245
	2 Firefighters/Paramedics		

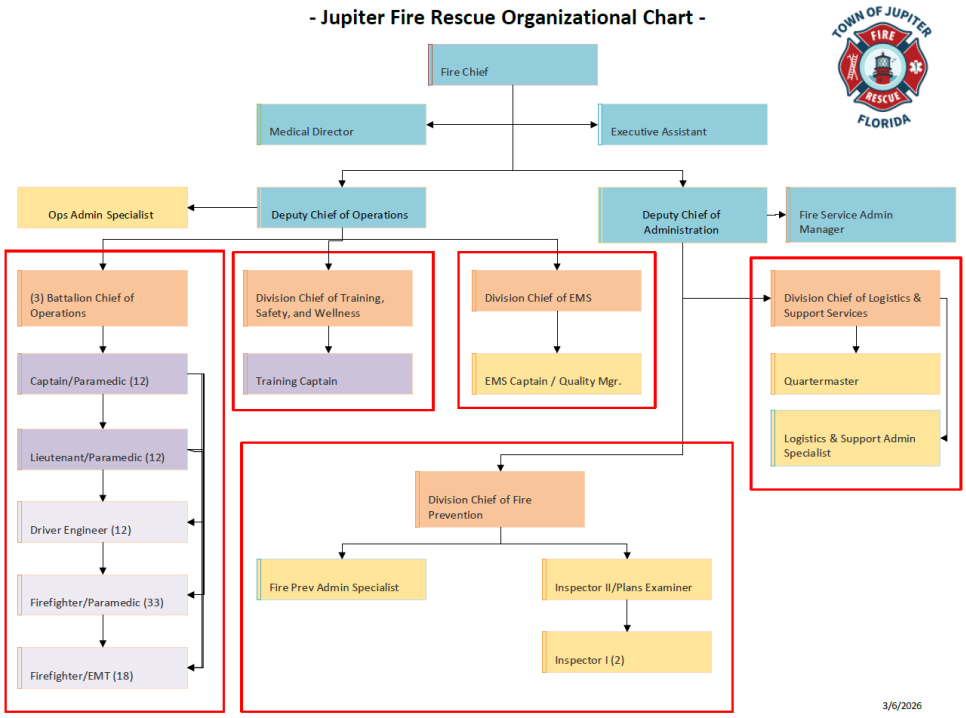
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Station	Staffing	Apparatus	Fire Flow
	1 Firefighter/EMT		
Piatt Place Station	2 Captains	Ladder	1500
	Lieutenant	Engine	1500
	2 Driver/Engineers	Rescue	
	4 Firefighters/Paramedics		
	1 Firefighter/EMS		
Reserves		Engine	1500
		Rescue	
Total			**7745**

Source: Town of Jupiter

The current pumping capacity is defined as the combined amount of water that all personnel and apparatus in the Fire Department can pump to a first alarm, non-residential fire in gallons per minute (GPM). As outlined by Table 2, the pumping capacity of the Fire Department is 7,745 gallons per minute. Accordingly, based on National Fire Protection Association firefighting standards for fire flow (assuming ordinary construction), the Fire Department currently has sufficient fire flow capacity to provide service coverage in the event of a structure fire involving 191,400 square feet.[1] Therefore, it is reasonable and appropriate to place a cap on the square footage of structures of 191,400 square feet.

Table 3
Town of Jupiter Fire Rescue Organizational Chart



[1] Source: Nation Fire Protection Association, *"NFPA 1 Fire Code, 2015, Chapter 18"*.

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Table 4
Fire Department Minimum Response Protocol

Incident Type	Response
Medical	1 Rescue or Engine
ALS Critical Medical	1 Rescue, 1 Engine
Vehicle Accident	1 Engine, 1 Rescue (on highway add 1 Engine)
Vehicle Accident w/Extrication	1 Rescue, 2 Engines, Batt Chief
Vehicle Fire	1 Engine, 1 Rescue, 1 Batt. Chief
Residential Structure Fire	3 Engines, 1 Ladder, 1 Batt Chief, 1 EMS Captain (or 2nd Batt Chief), 2 Rescue
Commercial Structure Fire	3 Engines, 2 Ladder, 1 Batt Chief, 1 EMS Captain (or 2nd Batt Chief), 2 Rescue
Brush Fire	Brush Truck, Engine, Battalion

Source: Town of Jupiter

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Assessable Cost Calculations

The cost calculations, apportionment methodology and assessable rates developed apply to the Town's fire services serving the incorporated area of the Town.

Development of Factors

Fire Rescue v. Emergency Medical Services

In June 2000, litigation over the City of North Lauderdale fire rescue assessment program resulted in a decision by the Fourth District Court of Appeals in the case of SMM Properties, Inc. v. City of North Lauderdale, 760 So.2d 998 (Fla. 4th DCA 2000), aff'd 825 So.2d 343 (Fla. 2002) (the "North Lauderdale" case). The Fourth District Court of Appeals concluded that Emergency Medical Services (EMS) did not provide a special benefit to property. The Court, however, reaffirmed that fire suppression, fire prevention, fire/building inspections and first response medical services do provide a special benefit to property. The Florida Supreme Court affirmed this decision in City of North Lauderdale v. SMM Properties, 825 So.2d 343 (Fla. 2002).

To address these concerns, Accenture developed a methodology that removed the costs associated with emergency medical services. This method of splitting the fire and EMS portions of a consolidated public safety department's budget was upheld by the Fourth District Court of Appeals in Desiderio Corporation, et al. vs. The City of Boynton Beach, Florida, et al., 39 So.3d 487 (Fla. 4th DCA 2010).

The proposed fire rescue department's line item costs were allocated between fire rescue and emergency medical services as a result of the Florida Supreme Court's opinion in City of North Lauderdale v. SMM Properties that emergency medical services (above the level of first response) do not provide a special benefit to property. Accordingly, the Town's fire rescue costs were split from emergency medical service costs based on the following general guidelines.

Direct Allocations

To the extent that certain budget line items could be allocated directly to fire, direct allocations were made. Additionally, any costs or revenues directly related to emergency medical services were allocated entirely to EMS or were removed entirely. For example, all costs associated with fire equipment for engines and ladder truck were entirely allocated to fire, while medical supplies and stretchers were entirely allocated to EMS.

Administrative Factor

Certain line items were allocated between fire and EMS based on an Administrative Factor. The Administrative Factor is derived by creating a ratio between non-EMS or fire personnel and total combat personnel per shift. The administrative factor calculations are based on the Town's total Fire Rescue Department combat personnel staffing. Under normal staffing the Town will have 14 non-EMS personnel and 9 EMS personnel for a total of 23 combat personnel. This normal staffing yields a 60.87% percent non-EMS Administrative Factor. The Administrative Factor is applied to

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line items, such as salaries, that are substantially influenced by the personnel split between the fire and EMS functions.

This percentage was applied to all applicable line items to allocate the costs that could not be directly allocated as fire costs or EMS costs, and that could not be operationally allocated. For example, the Administrative Factor was applied to line items such as salaries and benefits to determine the fire service costs of these line items. Similarly, the Administrative Factor was applied to operating expenditures such as "Travel & Per Diem", "Uniforms" and "Office Supplies" to determine the fire service costs for these line items.

Operational Factor

Other assessable cost line items may also be allocated between fire and EMS based on an Operational Factor. The Operational Factor is derived by creating a ratio between non-EMS (i.e. fire) calls and EMS calls. The Operational Factor is assigned to line items such as "Gas Oil & Lube" that are substantially influenced by the number of service calls.

To develop the Operational Factor for the Town, Accenture obtained fire rescue incident data identifying the number of fire rescue calls made to property categories within the Fire Services Area during Calendar Years 2022, 2023 and 2024.

The State Fire Marshal's office uses the Florida Fire Incident Reporting System (FFIRS). This system is a tool for fire rescue departments to report and maintain computerized records of fire rescue incidents and other department activities in a uniform manner. Under this system, a series of basic phrases with code numbers are used to describe fire rescue incidents. Appendix A provides a codes list for the "type of situation found" as recorded on the fire rescue incident reports used to identify EMS and non-EMS calls.

The ratio between non-EMS (i.e. fire) calls and EMS calls is then applied to all applicable line items to allocate the costs that could not be directly allocated as fire costs or EMS costs, and that could not be administratively allocated. For Calendar Years 2022, 2023, and 2024, the Town recorded 26,000 total fire rescue incidents, of which 5,081 were non-EMS (i.e. fire) calls and 20,919 were EMS calls. This information results in a 19.54% non-EMS Operational Factor. For example, the Operational Factor was applied to line items such as "Gas Oil & Lube" and "Vehicle R&M" to determine the fire service costs for these line items

Assessable Cost Calculations

The fire services assessable cost calculations for Fiscal Years 2026-27 through 2030-31 are based on the following assumptions for the purpose of this Fire Assessment Memorandum.

- The Town provided the proposed Fiscal Year 2027 Fire Department budget. The Town also provided the 5-Year Capital Improvement Plan.
- A five percent annual increase was applied across all personnel line items.
- A three percent annual increase was applied across most operating expense line items.
- All capital expenditures and the debt service transfers were based on actual projected costs.

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- Revenues are shown as a reduction of the total projected expenditures for each fiscal year, thereby reducing the total assessable costs for that year.
- The line item "Statutory Discount" under "Miscellaneous Assessable Expenditures" reflects a 95% collection of the Fire Rescue Assessment to cover the 4% statutory discount allowed by the Uniform Method and 1% reserve for under collection. Accordingly, the statutory discount is budgeted at 5% of the total assessable costs.
- The line item "Notice Costs" under "Miscellaneous Assessable Expenditures" is for the cost of producing and mailing the first-class notices required to use the tax bill collection method. These costs are reimbursable through the assessment program.
- Pursuant to section 197.3632, Florida Statutes, the tax collector and property appraiser may each enter into an agreement with the local government for reimbursement of necessary administrative costs incurred from the collection of the non-ad valorem assessment. Accordingly, if any such fee(s) is charged, the fee may be recouped as an add-on to the total assessable costs for the year.

  The line item "Collection Costs (TC @ 2%)" under "Additional Costs" reflects reimbursement for the collection costs associated with the non-ad valorem assessment incurred by the Tax Collector. Pursuant to section 197.3632, Florida Statues, a municipal or county government shall only compensate the tax collector for the actual costs of collecting the non-ad valorem assessment. The applied collection charge is estimated to be adequate to cover the Tax Collector's actual collection costs.

  The line item "Collection Costs (PA @ 2%)" under "Additional Costs" reflects reimbursement for the collection costs associated with the non-ad valorem assessment incurred by the Property Appraiser. The applied collection charge is estimated to be adequate to cover the Property Appraiser's actual collection costs.

Table 5 provides a calculation of the assessable costs for Fiscal Year 2026-27 based on an application of the above factors to the Fiscal Year 2026-27 proposed budget. The calculation yields an assessable cost of $15,635,312 for Fiscal Year 2026-27.

Table 5
Fire Rescue Department Fiscal Year 2026-27 Assessment Budget

Description	Proposed FY 2026-27	FY 2026-27 Assessable
Personnel		
Executive Salaries	211,305	128,621
Regular Salaries	10,083,342	6,137,730
Experience Pay	654,067	398,131
Overtime	400,000	243,480
FICA Taxes	787,787	479,526
FRS	3,783,978	2,303,307
Life & Health Insurance	2,720,469	1,655,949
Workers Comp Insurance	390,308	237,580
Total Personnel	**$19,031,256**	**$11,584,325**
Operating		
Professional Services	423,000	255,175
Town Attorney	55,000	33,479
Travel & Per Diem	45,200	27,513
Communication Services	42,910	26,119
Postage	1,460	889

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Description	Proposed FY 2026-27	FY 2026-27 Assessable
Rent/Lease	7,800	4,748
Insurance	50,000	30,435
Repair and Maintenance	52,505	$23,427
Vehicle R&M	96,500	18,856
Printing & Binding	3,000	1,826
Recruiting Advertisements	1,000	609
Office Supplies	1,000	609
Operating Supplies	462,476	$171,472
Uniforms	572,625	348,557
Gas Oil & Lube	142,500	27,845
Books Dues Pubs Subscriptions	42,450	25,839
Debt Service Transfer	1,881,754	1,145,424
Software	129,000	78,522
Total Operating	**$4,010,180**	**$2,221,343**
Other		
Contingency	500,000	304,350
Total Other	**$500,000**	**$304,350**
CIP		
Facilities	450,000	273,915
Vehicles	68,000	41,392
Total CIP	**$518,000**	**$315,307**
Total Expenditures	**$24,059,436**	**$14,425,325**
Revenues		
Transport Fees	$1,400,000	$0
Fire Inspection Fees	$300,000	$300,000
Total Revenue	**$1,700,000**	**$300,000**
Net Expenditures	**$22,359,436**	**$14,125,325**
Miscellaneous. Assessment Expenditures		
Notice Costs (30,000 x $1.63)		48,900
Statutory Discount		822,911
Collection Costs (PA @ 2%)		319,088
Collection Costs (TC @ 2%)		319,088
Total Miscellaneous Assessment Expenditures		**$1,509,987**
Net Assessable Expenditures		**$15,635,312**

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Table 6 shows the calculation of the full cost of the Fire Rescue Assessment Program for Fiscal Year 2026-27 through Fiscal Year 2030-31, as well as the five-year average assessable budget.

Table 6
Fire Rescue Assessable Cost Calculations Proforma Budget (Fiscal Years 2026-27 through 2030-31)

Description	FY 2026-27 Assessable	FY 2027-28 Assessable	FY 2028-29 Assessable	FY 2029-30 Assessable	FY 2020-31 Assessable	5-Year Average Assessable
Personnel						
Executive Salaries	128,621	135,052	141,805	148,895	156,340	142,143
Regular Salaries	6,137,730	6,444,617	6,766,848	7,105,190	7,460,450	6,782,967
Experience Pay	398,131	418,037	438,939	460,886	483,930	439,985
Overtime	243,480	255,654	268,437	281,859	295,951	269,076
FICA Taxes	479,526	503,502	528,677	555,111	582,867	529,937
FRS	2,303,307	2,418,473	2,539,396	2,666,366	2,799,685	2,545,445
Life & Health Insurance	1,655,949	1,738,747	1,825,684	1,916,969	2,012,817	1,830,033
Workers Comp Insurance	237,580	249,459	261,932	275,029	288,780	262,556
Total Personnel	**$11,584,325**	**$12,163,542**	**$12,771,719**	**$13,410,305**	**$14,080,820**	**$12,802,142**
Operating						
Professional Services	255,175	262,830	270,715	278,837	287,202	270,952
Town Attorney	33,479	34,483	35,517	36,583	37,680	35,548
Travel & Per Diem	27,513	28,339	29,189	30,064	30,966	29,214
Communication Services	26,119	26,903	27,710	28,541	29,398	27,734
Postage	889	915	943	971	1,000	944
Rent/Lease	4,748	4,890	5,037	5,188	5,344	5,041
Insurance	30,435	31,348	32,288	33,257	34,255	32,317
Repair and Maintenance	$23,427	24,130	24,854	25,600	26,368	24,876
Vehicle R&M	18,856	19,422	20,004	20,605	21,223	20,022
Printing & Binding	1,826	1,881	1,937	1,995	2,055	1,939
Recruiting Advertisements	609	627	646	665	685	646
Office Supplies	609	627	646	665	685	646
Operating Supplies	$171,472	176,616	181,914	187,372	192,993	182,073
Uniforms	348,557	359,014	369,784	380,877	392,304	370,107
Gas Oil & Lube	27,845	28,680	29,540	30,426	31,339	29,566
Books Dues Pubs Subscriptions	25,839	26,614	27,413	28,235	29,082	27,437
Debt Service Transfer	1,145,424	1,145,424	1,145,424	1,145,424	1,145,424	1,145,424
Software	78,522	80,878	83,304	85,803	88,378	83,377
Total Operating	**$2,221,343**	**$2,253,620**	**$2,286,866**	**$2,321,110**	**$2,356,380**	**$2,287,864**
Other						
Contingency	304,350	304,350	304,350	304,350	304,350	304,350
Total Other	**$304,350**	**$304,350**	**$304,350**	**$304,350**	**$304,350**	**$304,350**
CIP						
Facilities	273,915	0	0	0	0	54,783
Vehicles	41,392	0	278,000	41,392	0	72,157
Total CIP	**$315,307**	**$0**	**$278,000**	**$41,392**	**$0**	**$126,940**
Total Expenditures	**$14,425,325**	**$14,721,512**	**$15,640,935**	**$16,077,156**	**$16,741,550**	**$15,521,296**
Revenues						
Transport Fees	$0	0	0	0	0	0
Fire Inspection Fees	$300,000	300,000	300,000	300,000	300,000	300,000
Total Revenue	**$300,000**	**$300,000**	**$300,000**	**$300,000**	**$300,000**	**$300,000**

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Description	FY 2026-27 Assessable	FY 2027-28 Assessable	FY 2028-29 Assessable	FY 2029-30 Assessable	FY 2020-31 Assessable	5-Year Average Assessable
Net Expenditures	**$14,125,325**	**$14,421,512**	**$15,340,935**	**$15,777,156**	**$16,441,550**	**$15,221,296**
Miscellaneous. Assessment Expenditures						
Notice Costs (30,000 x $1.63)	48,900	1,000	1,000	1,000	1,000	10,580
Statutory Discount	822,911	837,326	890,705	916,030	954,603	884,315
Collection Costs (PA @ 2%)	319,088	324,677	345,375	355,195	370,152	342,898
Collection Costs (TC @ 2%)	319,088	324,677	345,375	355,195	370,152	342,898
Total Miscellaneous Assessment Expenditures	**$1,509,987**	**$1,487,681**	**$1,582,455**	**$1,627,421**	**$1,695,907**	**$1,580,690**
Net Assessable Expenditures	**$15,635,312**	**$15,909,193**	**$16,923,390**	**$17,404,577**	**$18,137,457**	**$16,801,986**

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Determination of Fire Services Demand

Incident Data

Accenture obtained information from Palm Beach County Fire Rescue for the Town in an electronic format, identifying the number and type of fire rescue incident responses in the Town for a three-year period (Calendar Years 2022, 2023, 2024).

The Palm Beach County Fire Rescue Department uses the Florida Fire Incident Reporting System (FFIRS) to record its fire incidents. The FFIRS is a tool for fire departments to report and maintain computerized records of fire incidents and other department activities in a uniform manner. Under this system, a series of basic phrases with code numbers are used to describe fire rescue incidents. Appendix A provides a codes list for the "type of situation found" as recorded on the fire rescue incident reports used to identify EMS and non-EMS (fire) calls.

Another data field in the FFIRS, "fixed property use", identifies the type of property that fire departments respond to for each fire rescue incident. The fixed property uses correlate to property uses determined by the Palm Beach County Property Appraiser on the ad valorem tax roll. Appendix B provides a codes list for the "fixed property use" as recorded on the fire incident reports.

Accenture analyzed the three-year fire rescue incident data for the Town from the FFIRS files to evaluate trends and determine if aberrations were present. The fire rescue incident data for the three-year period represents 26,000 fire rescue incidents.

Of the 26,000 fire rescue incidents, there were 20,919 incidents classified as EMS type incidents based on the type of situation found indicated on the incident report. The 20,919 EMS type incidents were not included in the analysis.

There are certain fire incidents that could not be assigned to a specific property use or parcel. These calls represent non-specific type incidents, which are incidents that either could not be correlated to a specific parcel or calls that involved auto accidents and other types of incidents along roads and highways.

Of the 5,081 remaining fire type incidents, 3,705 were calls to specific property uses. The remaining 1,376 incidents were considered non-specific type incidents. Because of the inability to correlate these non-specific type incidents to specific property categories, the call analysis does not include these 1,376 incidents. The Town's budget is sized based upon its ability to provide service to improved property within its boundaries. Therefore, the level of services required to meet the anticipated demand for fire rescue services and the corresponding annual fire rescue budget required to fund fire rescue services provided to non-specific property uses would be required notwithstanding the occurrence of any incidents from such non-specific property uses.

Because of the urbanized character of the Town, the suppression of fires on vacant land property primarily benefits adjacent property by containing the spread of fire rather than preserving the integrity of the vacant parcel. Thus, incidents to vacant property were not included in the final analysis of the fire call database. The 19 calls to the vacant land property use category were removed.

Using the fixed property use codes, the remaining 3,686 fire type incidents corresponding to specific properties were assigned to the following property use categories: residential,

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commercial, industrial/warehouse, institutional and nursing homes. Incidents to government properties, religious buildings, institutional parcels, and educational properties were aggregated into an "institutional" category.

Table 7 illustrates the final assignment of fire rescue incidents and proportion of calls by property use category.

Table 7
Fire Calls by Category (Calendar Years 2022, 2023, 2024)

Category	Number of Incidents	Percentage of Calls
Residential	2,351	63.78%
Commercial	729	19.78%
Industrial/Warehouse	103	2.79%
Institutional	320	8.68%
Nursing Home	183	4.96%
Total	**3,686**	**100%**

Property Data

Accenture obtained information from the ad valorem tax roll from the Palm Beach County Property Appraiser's office to develop the preliminary assessment roll.

Each property use within the assessable area on the ad valorem tax roll was assigned to one or more of the property use categories based on their assignment of use by the Palm Beach County Property Appraiser or verification of use obtained through field research. The Property Appraiser assigns a building improvement code based on a building's assigned use on a parcel of property. Accenture conducted an analysis regarding building improvement types based on the assignment of use by the Palm Beach County Property Appraiser or verification obtained through field research. A list of building improvement codes used by the Palm Beach County Property Appraiser is provided as Appendix C.

Further analysis was conducted of the parcels based on the Florida Department of Revenue (DOR) four- digit property use codes reflected in the Rule 12D-8.008, Florida Administrative Code. A listing of DOR codes and associated property description is provided as Appendix D.

For parcels assigned to the Residential Property Use Category, Accenture utilized the amount of square footage of the residential structures as determined from the building files on the ad valorem tax roll or through the use of field research.

For parcels within the Non-Residential Property Use Categories, Accenture utilized the amount of square footage of the non-residential structures as determined from the building files on the ad valorem tax roll or through the use of field research.

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Computation of Fire Assessments

Assessment Classifications

This section of the memorandum includes the recommended parcel classifications and preliminary assessment rates as calculated within this Assessment Memorandum.

The fire assessment cost calculations provided herein are primarily based on information supplied by the Town. The assessable cost projections developed by Accenture are designed to forecast preliminary assessment rates within each property use category for Fiscal Year 2026-27 based on the five-year average assessable budget.

Special Benefit Assumptions

The following assumptions support a finding that the fire services, facilities, and programs provided by the Town provide a special benefit to the assessed parcels.

- Fire services, facilities, and programs possess a logical relationship to the use and enjoyment of property by: (i) protecting the value and integrity of improvements, structures and land through the availability and provision of comprehensive fire services; (ii) protecting the life and safety of intended occupants in the use and enjoyment of property; (iii) lowering the cost of fire insurance by the presence of a professional and comprehensive fire program; and (iv) containing fire incidents occurring on land with the potential to spread and endanger other property and property features.
- The availability and provision of comprehensive fire services enhance and strengthen the relationship of such services to the use and enjoyment of the parcels of property, the market perception of the area and, ultimately, the property and rental values within the assessable area.

Apportionment Methodology

Each assessed parcel must receive a special benefit that equals or exceeds the amount of the special assessment actually imposed on the parcel. All improved parcels within the Town benefit from the fire services.

The following section describes the recommended assessment apportionment methodology for fire services based on: (i) the fire assessable cost calculations; (ii) the ad valorem tax roll maintained by the property appraiser and the availability of the data residing on the database; and (iii) the fire incident data.

Cost Apportionment

The Fiscal Year 2026-27 assessable costs were apportioned among property use categories based upon the historical demand for fire services reflected by the fire incident data for the three year period (Calendar Years 2022, 2023, 2024). This apportionment is illustrated in Table 8.

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Table 8

Cost Apportionment (Calendar Years 2022, 2023, 2024 Fire Call Data)

Property Category	Number of Fire Incidents	% of Incidents	Portion of Five-Year Average Assessable Costs
Residential	2,351	63.78%	$10,716,622
Commercial	729	19.78%	$3,323,019
Industrial/Warehouse	103	2.79%	$469,507
Institutional	320	8.68%	$1,458,664
Nursing Home	183	4.96%	$834,173
Total	3,686	100%	$16,801,986

Parcel Apportionment

The share of the assessable costs apportioned to each property use category was further apportioned among the individual buildings of property within each property use category in the manner described in Table 9.

Table 9

Parcel Apportionment within Property Use Categories

Category	Parcel Apportionment
Residential	
Non-Residential	
Commercial	
Industrial/Warehouse	Square Footage Ranges
Institutional	
Nursing Home	

Applying the foregoing parcel apportionment methodology, fire assessment rates were computed for each property use category. The specific methodology, underlying special benefit and fair apportionment assumptions are included below and generally described.

Residential Parcel Apportionment Assumptions

The following assumptions support findings that the parcel apportionment applied in the Residential Property Use category is fair and reasonable. The Residential Property Use Category includes such properties as single-family, multi-family and mobile homes.

- The size of single family residential houses in the Town varies considerably from 375 square feet to 43,297 square feet. The average single family residential building in the Town is 2,688 square feet. Over 20% of the single family residential buildings have less than 1,500 square feet and over 29% of the single family residential buildings exceed 3,000 square feet. Therefore, the demand for fire services is determined and measured by the size of the residential structures and improvements within the benefit area.
- The separation of the residential buildings by square foot classification ranges is fair and reasonable for the purpose of parcel apportionment because the demand for fire services is determined and measured by the size of structures and improvements within benefited

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parcels.

- The greater the Building Area, the greater the potential for a large fire and the greater the number of firefighting resources that must be available in the event of a fire in a structure of that building's size. Therefore, it is fair and reasonable to use building area as a proxy for determining the parcels' fire assessment.

- Structures in the lowest tier (499 square feet or less) were assigned 100 square feet for rate calculation purposes. Structures in all other tiers were assigned the lowest square footage of each tier for rate calculation purposes. Structures under 100 square feet were not included in the building unit counts and were not assessed.

The historical demand for fire protection service availability for multi-family and single-family residential property is substantially similar and any difference in the percentage of documented fire protection calls to such specific property uses is statistically insignificant.

Apportioning the assessable costs for fire services attributable to the residential property use category on a square foot classification range is a fair and reasonable method of parcel apportionment based upon historical demand for services.

Residential Parcel Apportionment Calculation

Based upon the historical demand for fire services, property in the Residential Property Use Category will be responsible for funding a percentage of assessable costs. The amount of the assessable costs allocable to each residential parcel will be based upon the aggregate of all residential buildings within each square foot tier situated on the parcel.

The residential assessment rate was determined by multiplying the percent of total fire calls attributable to residential property by the total assessable costs. This calculated amount of assessable costs was then divided by the number of assigned residential square feet to obtain an assessment amount per building within the residential property category.

Table 10 illustrates the number of buildings in each square foot range for the residential property use category.

Table 10

Parcel Apportionment Residential Buildings by Square Foot Range

Square Foot Range		Residential Building Count
Mini	Maxi	
0	499	4
500	1,199	4,269
1,200	1,999	11,189
2,000	3,099	6,783
3,100	4,499	3,387
4,500	6,099	1,291
6,100	7,999	516
8,000	9,999	133
10,000	12,399	89
12,400	14,999	48
15,000	17,799	22
17,800	20,899	7

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Square Foot Range		Residential Building Count
Mini	Maxi	
20,900	24,199	8
24,200	27,799	4
27,800	31,699	9
31,700	35,699	3
35,700	39,999	1
40,000	44,599	4
44,600	49,399	3
49,400	54,499	2
54,500	59,799	3
59,800	65,399	1
65,400	71,199	1
71,200	77,199	1
77,200	83,499	3
83,500	89,999	2
90,000	96,799	0
96,800	103,899	0
103,900	111,199	0
111,200	118,699	1
118,700	126,499	1
126,500	134,499	0
134,500	142,799	1
142,800	151,299	0
151,300	159,999	1
160,000	169,099	1
169,100	178,299	0
178,300	187,799	0
187,800	1,000,000	0

Source: Palm Beach County Property Appraiser (2025)

Non-Residential Parcel Apportionment Assumptions

The Non-Residential Property Use category includes all non-residential property uses. The capacity to handle fires and other emergencies in the Non-Residential Property Use category is governed by the following:

- The current pumping capacity is defined as the combined amount of water that all apparatus in the Fire Department can pump to a first alarm non-residential fire. As outlined by Table 2 above, the pumping capacity of the Fire Department is 7,745 gallons per minute. Accordingly, based on National Fire Protection Association firefighting standards for fire flow, the Fire Department currently has sufficient fire flow capacity to provide service coverage in the event of a fire involving structures of 191,400.[2] Therefore, it is reasonable and appropriate to place a cap on the square footage of structures of 191,400 square feet.
- The separation of the non-residential buildings by square foot classification ranges is fair and reasonable for the purpose of parcel apportionment because the demand for fire services, fire flow, fire fighters, quantity and size of apparatus, and other special firefighting equipment is determined and measured by the size of structures and improvements within benefited

[2] Source: National Fire Protection Association, "*NFPA 1 Fire Code, 2015, Chapter 18*"

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parcels.

- The greater the Building Area, the greater the potential for a large fire and the greater the number of firefighting resources that must be available in the event of a fire in a structure of that building's size. Therefore, it is fair and reasonable to use building area as a proxy for determining the parcels' fire assessment.

- Structures in the lowest tier (499 square feet or less) were assigned 100 square feet for rate calculation purposes. Structures in all other tiers were assigned the lowest square footage of each tier for rate calculation purposes. Structures under 100 square feet were not included in the building unit counts and were not assessed.

Apportioning the assessable costs for fire services attributable to the non-residential property use categories on a square foot classification range is a fair and reasonable method of parcel apportionment based upon historical demand for services.

Non-Residential Parcel Apportionment Calculations

Based upon the historical demand for fire services, property in the Non-Residential Property Use Category will be responsible for funding a percentage of assessable costs. The amount of the assessable costs allocable to each non-residential parcel will be based upon the aggregate of all non-residential buildings within each square foot tier situated on the parcel.

The non-residential assessment rate was determined by multiplying the percent of total fire calls attributable to non-residential property by the total assessable costs. This calculated amount of assessable costs was then divided by the number of assigned non-residential square feet to obtain an assessment amount per building within the non-residential property category. For buildings containing non-residential improvements of 187,800 square feet or more, an assignment of improved area of 187,800 square feet was made.

Table 11 illustrates the assignment of buildings in each square foot range for each non-residential property use category.

Table 11
Parcel Apportionment Non-Residential Buildings by Property Use Category and Square Foot Range

Square Foot Range					
Mini	Maxi	Commercial Bldg Count	Industrial/Warehouse Bldg Count	Institutional Bldg Count	Nursing Home Bldg Count
0	499	27	7	6	0
500	1,199	444	154	11	0
1,200	1,999	275	111	12	0
2,000	3,099	122	75	12	0
3,100	4,499	79	41	9	0
4,500	6,099	61	61	19	0
6,100	7,999	54	37	16	0
8,000	9,999	35	33	4	0
10,000	12,399	23	16	4	1
12,400	14,999	17	11	2	0
15,000	17,799	23	13	4	0
17,800	20,899	13	13	5	0
20,900	24,199	10	5	2	0

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Square Foot Range					
Mini	Maxi	Commercial Bldg Count	Industrial/Warehouse Bldg Count	Institutional Bldg Count	Nursing Home Bldg Count
24,200	27,799	7	6	3	1
27,800	31,699	10	3	1	0
31,700	35,699	5	0	3	1
35,700	39,999	6	1	2	0
40,000	44,599	9	2	3	0
44,600	49,399	4	1	3	2
49,400	54,499	6	1	2	0
54,500	59,799	1	1	2	0
59,800	65,399	4	2	1	0
65,400	71,199	3	0	0	1
71,200	77,199	1	0	1	0
77,200	83,499	2	1	3	2
83,500	89,999	0	0	1	0
90,000	96,799	2	2	0	0
96,800	103,899	0	0	1	0
103,900	111,199	0	0	3	0
111,200	118,699	1	1	2	0
118,700	126,499	0	0	0	0
126,500	134,499	0	1	0	0
134,500	142,799	2	0	1	0
142,800	151,299	1	0	0	1
151,300	159,999	0	0	0	0
160,000	169,099	1	0	0	0
169,100	178,299	0	0	0	0
178,300	187,799	0	1	0	0
187,800	1,000,000	0	0	2	0

Source: Palm Beach County Property Appraiser, (2025)

Mixed-Use Property Calculation and Classification

For residential parcels that contain non-residential buildings, the non-residential improvements located on the parcel were treated according to their non-residential property use category and size to compute the parcel's non-residential fire services assessment. This assessment was then added to the parcel's residential fire services assessment.

For non-residential parcels that contain a residence, the residential improvements located on the parcel were treated according to their residential property use and the size to compute the parcel's residential fire services assessment. This assessment was then added to the parcel's non-residential fire services assessment.

Computation of Fire Assessment Rates

Applying the parcel apportionment methodology, fire protection assessment rates were computed for each specified property use category based on the assessable costs of providing fire protection services, the number of fire calls apportioned to specific property categories and the number of billing units within the specified property categories.

Table 12 illustrates the preliminary assessment rates after application of the assessment

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methodology based on 100 percent funding of the total assessable costs for Fiscal Year 2026-27 based on the five-year average assessable costs.

Table 12

FY 2026-27 Preliminary Fire Assessment Rates (100% of Assessable Costs)

Square Foot Range		Property Use Category				
		Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0	499	$20	$53	$14	$52	$162
500	1,199	$100	$261	$70	$256	$806
1,200	1,999	$238	$625	$168	$613	$1,934
2,000	3,099	$397	$1,041	$280	$1,021	$3,223
3,100	4,499	$615	$1,613	$433	$1,582	$4,996
4,500	6,099	$893	$2,342	$628	$2,297	$7,251
6,100	7,999	$1,210	$3,174	$852	$3,113	$9,829
8,000	9,999	$1,586	$4,163	$1,117	$4,083	$12,891
10,000	12,399	$1,983	$5,203	$1,396	$5,103	$16,114
12,400	14,999	$2,459	$6,452	$1,731	$6,328	$19,981
15,000	17,799	$2,974	$7,805	$2,093	$7,654	$24,170
17,800	20,899	$3,529	$9,261	$2,484	$9,083	$28,682
20,900	24,199	$4,144	$10,874	$2,917	$10,665	$33,677
24,200	27,799	$4,798	$12,591	$3,377	$12,349	$38,994
27,800	31,699	$5,511	$14,464	$3,879	$14,186	$44,795
31,700	35,699	$6,285	$16,493	$4,423	$16,176	$51,079
35,700	39,999	$7,078	$18,574	$4,981	$18,217	$57,524
40,000	44,599	$7,930	$20,811	$5,581	$20,411	$64,453
44,600	49,399	$8,842	$23,205	$6,223	$22,758	$71,865
49,400	54,499	$9,793	$25,702	$6,893	$25,207	$79,599
54,500	59,799	$10,804	$28,355	$7,604	$27,809	$87,817
59,800	65,399	$11,855	$31,113	$8,344	$30,514	$96,357
65,400	71,199	$12,965	$34,026	$9,125	$33,371	$105,380
71,200	77,199	$14,115	$37,044	$9,935	$36,331	$114,726
77,200	83,499	$15,304	$40,165	$10,772	$39,392	$124,393
83,500	89,999	$16,553	$43,443	$11,651	$42,607	$134,545
90,000	96,799	$17,842	$46,825	$12,558	$45,923	$145,018
96,800	103,899	$19,190	$50,363	$13,506	$49,393	$155,975
103,900	111,199	$20,597	$54,057	$14,497	$53,016	$167,415
111,200	118,699	$22,044	$57,855	$15,515	$56,741	$179,178
118,700	126,499	$23,531	$61,757	$16,562	$60,568	$191,263
126,500	134,499	$25,077	$65,815	$17,650	$64,548	$203,831
134,500	142,799	$26,663	$69,977	$18,766	$68,630	$216,721
142,800	151,299	$28,309	$74,295	$19,924	$72,865	$230,095
151,300	159,999	$29,994	$78,717	$21,110	$77,202	$243,791
160,000	169,099	$31,718	$83,244	$22,324	$81,641	$257,810
169,100	178,299	$33,522	$87,978	$23,594	$86,285	$272,472
178,300	187,799	$35,346	$92,765	$24,877	$90,979	$287,296
187,800	1,000,000	$37,229	$97,707	$26,203	$95,826	$302,604

*Estimated Gross Revenue: $16,801,986; Estimated Exempt Buy-Down: $2,064,337; Estimated Net Revenue: $14,737,649

Table 13 illustrates the preliminary assessment rates after application of the assessment methodology based on 50 percent funding of the total assessable costs for Fiscal Year 2026-27

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based on the five-year average assessable costs.

Table 13
FY 2026-27 Preliminary Fire Assessment Rates (50% of Assessable Costs)

Square Foot Range		Property Use Category				
		Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0	499	$10	$27	$7	$26	$81
500	1,199	$50	$131	$35	$128	$403
1,200	1,999	$119	$313	$84	$307	$967
2,000	3,099	$199	$521	$140	$511	$1,612
3,100	4,499	$308	$807	$217	$791	$2,498
4,500	6,099	$447	$1,171	$314	$1,149	$3,626
6,100	7,999	$605	$1,587	$426	$1,557	$4,915
8,000	9,999	$793	$2,082	$559	$2,042	$6,446
10,000	12,399	$992	$2,602	$698	$2,552	$8,057
12,400	14,999	$1,230	$3,226	$866	$3,164	$9,991
15,000	17,799	$1,487	$3,903	$1,047	$3,827	$12,085
17,800	20,899	$1,765	$4,631	$1,242	$4,542	$14,341
20,900	24,199	$2,072	$5,437	$1,459	$5,333	$16,839
24,200	27,799	$2,399	$6,296	$1,689	$6,175	$19,497
27,800	31,699	$2,756	$7,232	$1,940	$7,093	$22,398
31,700	35,699	$3,143	$8,247	$2,212	$8,088	$25,540
35,700	39,999	$3,539	$9,287	$2,491	$9,109	$28,762
40,000	44,599	$3,965	$10,406	$2,791	$10,206	$32,227
44,600	49,399	$4,421	$11,603	$3,112	$11,379	$35,933
49,400	54,499	$4,897	$12,851	$3,447	$12,604	$39,800
54,500	59,799	$5,402	$14,178	$3,802	$13,905	$43,909
59,800	65,399	$5,928	$15,557	$4,172	$15,257	$48,179
65,400	71,199	$6,483	$17,013	$4,563	$16,686	$52,690
71,200	77,199	$7,058	$18,522	$4,968	$18,166	$57,363
77,200	83,499	$7,652	$20,083	$5,386	$19,696	$62,197
83,500	89,999	$8,277	$21,722	$5,826	$21,304	$67,273
90,000	96,799	$8,921	$23,413	$6,279	$22,962	$72,509
96,800	103,899	$9,595	$25,182	$6,753	$24,697	$77,988
103,900	111,199	$10,299	$27,029	$7,249	$26,508	$83,708
111,200	118,699	$11,022	$28,928	$7,758	$28,371	$89,589
118,700	126,499	$11,766	$30,879	$8,281	$30,284	$95,632
126,500	134,499	$12,539	$32,908	$8,825	$32,274	$101,916
134,500	142,799	$13,332	$34,989	$9,383	$34,315	$108,361
142,800	151,299	$14,155	$37,148	$9,962	$36,433	$115,048
151,300	159,999	$14,997	$39,359	$10,555	$38,601	$121,896
160,000	169,099	$15,859	$41,622	$11,162	$40,821	$128,905
169,100	178,299	$16,761	$43,989	$11,797	$43,143	$136,236
178,300	187,799	$17,673	$46,383	$12,439	$45,490	$143,648
187,800	1,000,000	$18,615	$48,854	$13,102	$47,913	$151,302

*Estimated Gross Revenue: $8,400,993; Estimated Exempt Buy-Down: $1,032,333; Estimated Net Revenue: $7,368,660

Table 14 illustrates the preliminary assessment rates after application of the assessment methodology based on 25 percent funding of the total assessable costs for Fiscal Year 2026-27 based on the five-year average assessable costs.

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Table 14

FY 2026-27 Preliminary Fire Assessment Rates (25% of Assessable Costs)

Square Foot Range		Property Use Category				
		Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0	499	$5	$14	$4	$13	$41
500	1,199	$25	$66	$18	$64	$202
1,200	1,999	$60	$157	$42	$154	$484
2,000	3,099	$100	$261	$70	$256	$806
3,100	4,499	$154	$404	$109	$396	$1,249
4,500	6,099	$224	$586	$157	$575	$1,813
6,100	7,999	$303	$794	$213	$779	$2,458
8,000	9,999	$397	$1,041	$280	$1,021	$3,223
10,000	12,399	$496	$1,301	$349	$1,276	$4,029
12,400	14,999	$615	$1,613	$433	$1,582	$4,996
15,000	17,799	$744	$1,952	$524	$1,914	$6,043
17,800	20,899	$883	$2,316	$621	$2,271	$7,171
20,900	24,199	$1,036	$2,719	$730	$2,667	$8,420
24,200	27,799	$1,200	$3,148	$845	$3,088	$9,749
27,800	31,699	$1,378	$3,616	$970	$3,547	$11,199
31,700	35,699	$1,572	$4,124	$1,106	$4,044	$12,770
35,700	39,999	$1,770	$4,644	$1,246	$4,555	$14,381
40,000	44,599	$1,983	$5,203	$1,396	$5,103	$16,114
44,600	49,399	$2,211	$5,802	$1,556	$5,690	$17,967
49,400	54,499	$2,449	$6,426	$1,724	$6,302	$19,900
54,500	59,799	$2,701	$7,089	$1,901	$6,953	$21,955
59,800	65,399	$2,964	$7,779	$2,086	$7,629	$24,090
65,400	71,199	$3,242	$8,507	$2,282	$8,343	$26,345
71,200	77,199	$3,529	$9,261	$2,484	$9,083	$28,682
77,200	83,499	$3,826	$10,042	$2,693	$9,848	$31,099
83,500	89,999	$4,139	$10,861	$2,913	$10,652	$33,637
90,000	96,799	$4,461	$11,707	$3,140	$11,481	$36,255
96,800	103,899	$4,798	$12,591	$3,377	$12,349	$38,994
103,900	111,199	$5,150	$13,515	$3,625	$13,254	$41,854
111,200	118,699	$5,511	$14,464	$3,879	$14,186	$44,795
118,700	126,499	$5,883	$15,440	$4,141	$15,142	$47,816
126,500	134,499	$6,270	$16,454	$4,413	$16,137	$50,958
134,500	142,799	$6,666	$17,495	$4,692	$17,158	$54,181
142,800	151,299	$7,078	$18,574	$4,981	$18,217	$57,524
151,300	159,999	$7,499	$19,680	$5,278	$19,301	$60,948
160,000	169,099	$7,930	$20,811	$5,581	$20,411	$64,453
169,100	178,299	$8,381	$21,995	$5,899	$21,572	$68,118
178,300	187,799	$8,837	$23,192	$6,220	$22,745	$71,824
187,800	1,000,000	$9,308	$24,427	$6,551	$23,957	$75,651

*Estimated Gross Revenue: $4,200,497; Estimated Exempt Buy-Down: $516,447; Estimated Net Revenue: $3,684,050

Table 15 illustrates the preliminary assessment rates after application of the assessment methodology based on 15 percent funding of the total assessable costs for Fiscal Year 2026-27 based on the five-year average assessable costs.

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Table 15

FY 2026-27 Preliminary Fire Assessment Rates (15% of Assessable Costs)

Square Foot Range		Property Use Category				
		Residential	Commercial	Industrial/ Warehouse	Institutional	Nursing Home
0	499	$3	$8	$3	$8	$25
500	1,199	$15	$40	$11	$39	$121
1,200	1,999	$36	$94	$26	$92	$291
2,000	3,099	$60	$157	$42	$154	$484
3,100	4,499	$93	$242	$65	$238	$750
4,500	6,099	$134	$352	$95	$345	$1,088
6,100	7,999	$182	$477	$128	$467	$1,475
8,000	9,999	$238	$625	$168	$613	$1,934
10,000	12,399	$298	$781	$210	$766	$2,417
12,400	14,999	$369	$968	$260	$950	$2,998
15,000	17,799	$447	$1,171	$314	$1,149	$3,626
17,800	20,899	$530	$1,390	$373	$1,363	$4,303
20,900	24,199	$622	$1,632	$438	$1,600	$5,052
24,200	27,799	$720	$1,889	$507	$1,853	$5,850
27,800	31,699	$827	$2,170	$582	$2,128	$6,720
31,700	35,699	$943	$2,474	$664	$2,427	$7,662
35,700	39,999	$1,062	$2,787	$748	$2,733	$8,629
40,000	44,599	$1,190	$3,122	$838	$3,062	$9,668
44,600	49,399	$1,327	$3,481	$934	$3,414	$10,780
49,400	54,499	$1,469	$3,856	$1,034	$3,781	$11,940
54,500	59,799	$1,621	$4,254	$1,141	$4,172	$13,173
59,800	65,399	$1,779	$4,667	$1,252	$4,577	$14,454
65,400	71,199	$1,945	$5,104	$1,369	$5,006	$15,807
71,200	77,199	$2,118	$5,557	$1,491	$5,450	$17,209
77,200	83,499	$2,296	$6,025	$1,616	$5,909	$18,659
83,500	89,999	$2,483	$6,517	$1,748	$6,391	$20,182
90,000	96,799	$2,677	$7,024	$1,884	$6,889	$21,753
96,800	103,899	$2,879	$7,555	$2,026	$7,409	$23,397
103,900	111,199	$3,090	$8,109	$2,175	$7,953	$25,113
111,200	118,699	$3,307	$8,679	$2,328	$8,512	$26,877
118,700	126,499	$3,530	$9,264	$2,485	$9,086	$28,690
126,500	134,499	$3,762	$9,873	$2,648	$9,683	$30,575
134,500	142,799	$4,000	$10,497	$2,815	$10,295	$32,509
142,800	151,299	$4,247	$11,145	$2,989	$10,930	$34,515
151,300	159,999	$4,499	$11,808	$3,167	$11,581	$36,569
160,000	169,099	$4,758	$12,487	$3,349	$12,247	$38,672
169,100	178,299	$5,029	$13,197	$3,539	$12,943	$40,871
178,300	187,799	$5,302	$13,915	$3,732	$13,647	$43,095
187,800	1,000,000	$5,585	$14,657	$3,931	$14,374	$45,391

*Estimated Gross Revenue: $2,520,298; Estimated Exempt Buy-Down: $309,921; Estimated Net Revenue: $2,210,377

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Exemptions and Impact of Exemptions

Because the fire protection assessment is being developed to meet the case law standards for a valid special assessment, any proposed exemptions require special scrutiny. The crafting of an exemption must be founded upon a legitimate public purpose, and not tramp on State or Federal constitutional concepts of equal protection and constitutional prohibitions against establishment of religion or the use of the public treasury directly or indirectly to aid religious institutions. Furthermore, to ensure public acceptance, any exemption must make common sense and be fundamentally fair. Finally, the impact of any proposed exemption should be evaluated in terms of its magnitude and fiscal consequences on the Town's general funds.

Whenever crafting an exemption, it is important to understand that the fair apportionment element required by Florida case law prohibits the shifting of the fiscal costs of any special assessment from exempt landowners to other non-exempt landowners. In other words, the funding for an exemption from a special assessment must come from a legally available external revenue source, such as the Town's general fund. Funding for fire assessment exemptions cannot come from the proceeds derived directly from the imposition of special assessments for fire services and facilities. Because any exemption must be funded by an external funding source, such as the general fund, the grant of any exemption will not have any impact upon the fire assessment to be imposed upon any other non-exempt parcels.

Whether or not the Town decides to fund exemptions for fire protection assessments on property owned by non-governmental entities would be based upon a determination that such exemptions constituted a valid public purpose. The importance of special assessments on non-governmental, tax-exempt parcels has been addressed by the Florida Supreme Court in Sarasota County v. Sarasota Church of Christ, 667 So.2d 180 (Fla. 1995) (In reciting the facts of the case on appeal, the Court stated that the party challenging the assessment consisted of religious organizations or entities owning developed real property in Sarasota County [the Churches] that are exempt from ad valorem taxes but not from special assessments.) The funding of exemptions for non-governmentally owned institutional property wholly exempt from ad valorem taxes could be based on a finding that such properties provide facilities and uses to their ownership, occupants or membership, as well as the public in general, that otherwise might be required to be provided by the Town. Such a finding would be the basis for a determination that such properties served a legitimate public purpose or provided a public benefit that merited the Town's funding of an exemption from the fire protection assessment.

In identifying an appropriate exemption scheme, the Town should be cautious not to confuse the ownership of a parcel with the parcel's use. For example, a determination to exempt properties used for institutional purposes would have to be extended to similar institutional property owned by entities created for profit, as well as institutional property owned by non-profit or governmental entities. However, if the Town wanted to make the policy decision to narrow the exemption to only institutional property owned by not-for-profit entities, it might consider adding a second test to the exemption which afforded exemptions to institutional properties which were wholly exempt from ad valorem taxes. Adding the tax- exempt criteria further narrows the exemption on a well-tested tax-exempt premise.

Whether the Town decides to charge governmental entities or fund exemptions on governmentally owned property requires somewhat different considerations. First, a forced sale

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of government property is not available as an enforcement mechanism. The charge to governmentally owned parcels would be more akin to a service fee for each government parcel's proportionate benefit from the availability and provision of fire protection services by the Town. The billing would be direct, received by government buildings and facilities. Enforcement would be by judicial proceedings to require payment. As to each level of government, differing concepts of immunity and other statutory provisions or case law decisions may prevent collection or frustrate special assessment imposition.

State and Federal laws contain a patchwork of provisions exempting certain governmental property owners from the payment of special assessments. For example, section 423.02, Florida Statutes, exempts certain housing projects from the payment of special assessments. This general law does provide that a housing authority may agree with a local government to make payments in lieu of taxes, but past experience is that such an agreement, if in existence at all, under-funds the impact of such properties on a Town's fire assessable cost calculations.

Accordingly, if the Town chooses to exempt governmentally-owned property from the fire protection assessment and fund such costs from inter-local agreement with the affected government or from the Town's general fund, it is important that the Town take steps to set up a reasonable contingency within its general budget to fund the cost incurred in providing fire protection services to governmentally–owned properties.

In accordance with Section 170.01(4), no fire protection assessment shall be imposed against land classified by the Property Appraiser as agricultural lands pursuant to Section 193.461 or upon any building of non-residential property located on a tax parcel that is classified by the Property Appraiser as agricultural lands pursuant to Section 193.461, Florida Statutes, unless that building exceeds a just value of $10,000 as determined by the Property Appraiser and is not an agricultural pole barn.

Table 16 summarizes the estimated impact for Fiscal Years 2026-27 of exempting institutional wholly tax-exempt property, governmental wholly tax-exempt property, VA exempt property, senior exempt property, and buying down nursing home parcels to the commercial rate based on 100 percent of the assessable costs.

Table 16

Estimated Impact of Exemptions (FY 2026-27) (100% Funding)

Financial Classification	Amount
Estimated Assessable Costs	**$16,801,986**
Estimated Buy-down for Governmental Tax Exempt Properties	$986,981
Estimated Buy-down for Institutional Tax-Exempt Properties	$328,315
Estimated Buy-down for Senior Exempt Parcels	$110,139
Estimated Buy-down for VA Exempt Parcels	$74,072
Estimated Buy-down Nursing Home to Commercial Rate	$564,830
Estimated Revenue Generated	**$14,737,649**

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Outstanding Issues

Issue 1: Exemption Of Institutional, Tax-Exempt Parcels (Non-Governmental)

The aggregate cost for the fire services that are available to institutional, wholly tax-exempt properties was estimated as part of the Institutional Property Use Category based on an analysis of each parcel's use. The fair apportionment concepts in the methodology provided within this Assessment Memorandum require an identification of the calls for service to these properties and, therefore, their respective costs. In the event that a policy decision is made to exempt institutional, tax-exempt property, the proportional assessed costs allocated to such exemptions must be funded from other legally available sources because the financial burden of such exemption cannot be apportioned to non-exempt parcels. With any exemption, care should be taken to craft and ensure a non-discriminatory exemption class based upon valid public purpose concepts.

Issue 2: Exemption Of Governmental Parcels

In addition to the institutional, wholly tax-exempt properties, the aggregate cost for fire services provided to schools and governmental properties (municipalities, county, state, federal and any sovereign state or nation) was also estimated as part of the Institutional Property Use Category based on an analysis of each parcel's use. The fair apportionment concepts in the methodology provided within this Assessment Memorandum require an identification of the calls for service to these properties and, therefore, their respective costs. In the event that a policy decision is made to exempt governmental property, the proportional assessed costs allocated to such exemptions must be funded from other legally available sources because the financial burden of such exemption cannot be apportioned to non-exempt parcels.

Issue 3: Collection of Assessments from Governmental Property

A special assessment can be imposed against governmental property to pay for the benefits that such property receives. However, as to each level of government, differing concepts of immunity and other statutory provisions or case law may prevent collection or frustrate special assessment imposition. In addition, Florida case law is clear that the payment of such assessments cannot be enforced by a lien against the public property. Rather, the enforcement remedy would be a judicial action to compel payment. Collateral issue is in enforcing payment are claims of sovereign immunity, and is the legislative authorization of the public agency to pay the charge or special assessment imposed. Thus, the law establishing the expenditure authority of the specific governmental or public agency or its appropriation discretion must be examined to determine whether the governmental unit has the authority to pay a charge or assessment for fire services provided by the Town. From a collection standpoint, each governmental unit should be sent a separate bill and no attempt should be made to collect the special

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assessment using the Uniform Method.

Issue 4: Apportionment Methodology

The apportionment methodology is based on the level of services and resources anticipated to be provided by the Town. Any changes in the level of services or resources within the Town could affect the apportionment methodology and should be analyzed prior to imposition of future fire assessments.

Issue 5: Administrative Factor Calculation

The administrative factor calculation was based on the information provided by the Town for the proposed normal staffing levels. Any changes to the staffing levels could result in a revised administrative factor which could increase or lower the amount of assessable costs to be collected.

Issue 6: Verification of Real Property Assessment Roll Data.

Data utilized to assign property use categories and the number of billing units per category is based upon information maintained on the real property assessment roll maintained by the Palm Beach County Property Appraiser for the levy of ad valorem taxes. A successful assessment program collected under the Uniform Method must use the information maintained by the property appraiser on the ad valorem tax roll. However, property appraisers are charged only with the responsibility of determining the value of all property within each County and maintaining certain records contained therewith, specifically the preparation of the ad valorem tax roll. The ad valorem tax roll is designed solely to provide the data required by property appraisers to fulfill their charge of assessing the value of property. In contrast, assessment programs focus on property use, size of improvements and other characteristics. A majority of the information used for the development of the assessment rates was provided in the ad valorem tax roll. However, further verification of the data for some parcels of property was conducted by Town staff.

Issue 7: Non-Specific Calls

In the fire call analysis, certain fire related calls were classified as non-property specific, because of the location of occurrence in the incident report. These calls represent non- specific incidents that either could not be correlated to a specific parcel or involved auto accidents or other types of incidents along roads and highways. These calls are excluded from the analysis that determines the percentage of calls for service to respective property types and therefore, are not considered in the determination of the extent of budget required to fund the department. Because the budget is established based on the ability of the department to adequately protect structures, no adjustment has been made to the budget due to non-property specific calls. Further, even if such calls did affect the cost of the department's operations, there are sufficient non-assessment revenues available to offset any impact upon the budget.

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Issue 8: Hardship Assistance Program

The Town has the option of creating a Hardship Assistance Program to assist residential property owners with homesteaded property, who meet the eligibility criteria, with the financial burden created by the imposition of the Fire Assessment. The eligibility criteria are typically based upon Federal Government Poverty Level Guidelines established by the United States Department of Health and Human Services, as adjusted for family size, but may also be based upon criteria from an existing hardship assistance program. Eligibility for hardship assistance would be determined by Town Staff.

Issue 9: Validation of Data

The apportionment methodology is based primarily on the incident data maintained by the Palm Beach County Fire Rescue Department and projections provided by the Town for the level of services and resources anticipated. It is recommended that the Town review the apportionment methodology and levels of service after there is sufficient Town data available.

Issue 10: Nursing Home Property

Based on fire incident data, Nursing Home rates have been developed which reflect the moderately high call frequency for this property use category. Applying these rates to the relatively small number of nursing homes results in a higher assessment burden being placed upon these properties than other properties in the institutional category. The effect of these facilities providing a public service and assessing them at a rate which might constitute an undue hardship, require that the rates for this property use category be further analyzed. Based on future rate calculations, the Town should review these rates by a comparison to other non-residential properties to ensure that they do not constitute an unfair burden. The Town may determine that it is appropriate to cap the assessment charges to these facilities at the highest rate calculated for other commercial or institutional property uses of the same size and to pay the unfunded portion of the fire rescue assessment for such property use category from other available Town revenues. Approximately $570,014 would be required from the Town's general fund or other legally available source to assess nursing home properties at the institutional rates, based on funding 100% of the assessable costs. Further verification of this data, and refinement of rates based on Town direction will take place during the implementation phase of the assessment process.

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Implementation

Tax Bill Collection Method for Fiscal Year 2026-27 and Thereafter

The following section describes all of the steps required to implement and collect the Fire Assessment on the ad valorem tax bill for Fiscal Year 2026-27 and thereafter. Following this section is a critical events schedule identifying specific dates for all significant remaining events for the Town to comply with that are expected to be prescribed by the Town's proposed home rule ordinance authorizing the imposition of the annual Fire Assessments.

To use the tax bill collection process, a local government must follow the strict procedures provided in section 197.3632, Florida Statutes (Uniform Method). A local government must initiate the process almost a year before it intends to begin using the Uniform Method to collect the assessments. The process begins with the passage of a resolution of intent prior to January 1 or, if the property appraiser, tax collector, and local government agree, March 1. The adoption of a resolution of intent does not obligate the local government to use the method or to impose a special assessment, but it is a prerequisite to using the Uniform Method. The Town adopted a resolution of intent in October 2025.

Under section 197.3632, Florida Statutes, property appraisers must annually provide certain information to local governments by June 1 to assist the local government in the preparation of special assessment rolls to be collected under the Uniform Method.

Assuming the Town decides to proceed, a home rule ordinance will need to be adopted that outlines the procedural steps and notifications required to impose a recurring annual fire assessment using the tax bill collection method.

Pursuant to the Home Rule Ordinance, an initial assessment resolution to be adopted by the Town will be required. Such initial assessment resolution should, among other things, briefly describe the Fire Assessment Program, the method of apportionment, set a public hearing date for final consideration, and direct and authorize the mailed and published notifications to those property owners included on an initial assessment roll.

Upon adoption of the initial assessment resolution, the Town will have made the tentative decision to move forward with the imposition of special assessments to fund the fire assessable cost calculations. After adopting the necessary implementing documentation, the local government must develop a computerized, non-ad valorem assessment roll that contains the basis and rate of the assessment and electronically applies it to each building subject to the assessment. The non-ad valorem assessment roll must utilize the parcel identification number and property use code classifications maintained by the property appraiser and be compatible with the ad valorem tax roll.

Statutory requirements to use the tax bill collection method provide that a service assessment roll must be adopted at a public hearing between January 1 and September 15 so the tax collector can merge it with the ad valorem tax roll and mail a single bill for the combined collection of assessments and ad valorem taxes. At least 20 days prior to the public hearing, a local government must publish notice of the hearing in a newspaper of general circulation within the government's boundaries and by individual first class United States mail to the owners of property subject to the assessment. The mailed notice can either be a separate notice or the Town may have the option to

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use the Truth-In-Millage (TRIM) notice to notify property owners of their respective fire assessment amount. The use of TRIM is dependent upon the agreement of the property appraiser.

Pursuant to Chapter 92-264, Laws of Florida, as amended by Chapter 2003-348, Laws of Florida (collectively, the "Special Act"), a special act relating to the County, notice of the Fire Services Assessment for each Tax Parcel shall be included by the Property Appraiser as part of the notice of proposed property taxes under Section 200.069, Florida Statutes, the truth-in-millage notification ("TRIM notice"). The Town Manager shall provide to the Property Appraiser, no later than August 1 of each year, the Fire Services Assessment rate expressed in dollars and cents per billing unit, the associated Fire Services Assessment amount, and the purpose of the Fire Services Assessment. The Property Appraiser shall include notice of the Fire Services Assessment in the TRIM notice in the manner directed by the Special Act. However, at this time, the TRIM notice does not comply with the requirements of section 197.3632, Florida Statutes, therefore, the Town must provide separate first class mailed notices to affected property owners.

At the public hearing, the Town will adopt a final assessment resolution, which, among other things, will confirm the initial assessment resolution, articulate the rate of assessments, approve the assessment roll, and direct and authorize the method of collection.

Once the final assessment resolution is adopted and the roll certified by September 15th to the Palm Beach County Tax Collector to be collected along with ad valorem taxes, any minor modifications, corrections or errors must be made in accordance with the procedure applicable to the correction of errors on the tax roll, upon written direction from the Town to the Palm Beach County Tax Collector.

Collection of the special assessments and ad valorem taxes begins in November. Failure to pay the assessments and taxes results in the issuance of a tax certificate and may result in the sale of a tax deed.

Implementation Schedule

Outlined in Table 17 is a critical events schedule identifying general dates for all significant remaining events for the Town to implement the fire assessment program and collect the assessments using the tax bill collection method for Fiscal Year 2026-27.

Table 17

Critical Events Schedule

Event	Date
First Reading of Service Assessment Ordinance	April 2026
Town Advertises Service Assessment Ordinance	April 2026
Town adopts Service Assessment Ordinance	April – May 2026
Town adopts Initial Assessment Resolution	May 2026
Town publishes Notice of Public Hearing to Adopt Final Assessment Resolution	June 2026
Mail First Class Notices to Property Owners	June – August 2026
Public Hearing to Adopt Final Assessment Resolution	July 2026
Property Appraiser Mails TRIM Notices with Fire Assessment	August 2026
Certify Assessment Roll to Tax Collector	By September 15, 2026

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Appendix A

Situation Found Use Codes & Descriptions

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Situation Found Code	Description	EMS Call
100	Fire, Other	No
111	Building Fire	No
112	Fires in structures other than in a building	No
113	Cooking fire, confined to a container	No
118	Trash or rubbish fire, contained	No
130	Mobile property (vehicle) fire, other	No
131	Passenger vehicle fire	No
132	Road freight or transport vehicle fire	No
142	Brush, or brush and grass mixture fire	No
150	Outside rubbish fire, other	No
151	Outside rubbish, trash or waste fire	No
154	Dumpster or other outside trash receptacle fire	No
162	Outside equipment fire	No
240	Explosion (no fire), other	No
300	Rescue, EMS call, other	Yes
311	Medical assist, assist EMS crew	Yes
320	Allergic reaction	Yes
321	EMS call, excluding vehicle accident with injury	Yes
322	Vehicle accident with injuries	Yes
323	Motor vehicle/pedestrian accident (MV Ped)	Yes
324	Motor Vehicle Accident, No Injuries	No
331	Lock-in (if lock out, use 511)	No
352	Extrication of victim(s) from vehicle	No
353	Removal of victim(s) from stalled elevator	No
356	High angle rescue	No
364	Surf rescue	No
381	Rescue or EMS standby	Yes
400	Hazardous condition, other	No
411	Gasoline or other flammable liquid spill	No
412	Gas leak	No
413	Oil or other combustible liquid spill	No
421	Chemical hazard (no spill or leak)	No
422	Chemical spill or leak	No
424	Carbon monoxide incident	No
440	Electrical wiring/equipment problem, other	No
442	Overheated motor	No
444	Power line down	No
445	Arcing, shorted electrical equipment	No
460	Accident, potential accident, other	No
463	Vehicle accident, general cleanup	No
480	Attempted burning, illegal action, other	No
500	Service call, other	No
510	Person in distress, other	No
511	Lock-out	No

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Situation Found Code	Description	EMS Call
520	Water problem, other	No
522	Water or steam leak	No
531	Smoke or odor removal	No
541	Animal problem	No
542	Animal rescue	No
550	Public service assistance, other	No
551	Assist police or other governmental agency	No
552	Police matter	No
553	Public service	No
554	Assist invalid	Yes
555	Defective Elevator	No
561	Unauthorized burning	No
600	Good intent call, other	No
611	Dispatched & canceled en route	Yes
622	No incident found upon arrival	No
631	Authorized controlled burning	No
641	Vicinity alarm (incident in other location)	No
650	Steam, other gas mistaken for smoke, other	No
651	Smoke scare, odor of smoke	No
652	Steam, vapor, fog or dust thought to be smoke	No
671	Hazmat release investigation w/no hazmat	No
672	Biological hazard investigation, none found	No
700	False alarm or false call, other	No
710	Malicious, mischievous false call, other	No
711	Municipal alarm system, malicious false alarm	No
713	Telephone, malicious false alarm	No
714	Central station, malicious false alarm	No
715	Local alarm system, malicious false alarm	No
721	Bomb scare, no bomb	No
730	System malfunction	No
733	Smoke detector activation due to malfunction	No
734	Heat detector activation due to malfunction	No
735	Alarm system sounded due to malfunction	No
736	CO detector activation due to malfunction	No
740	Unintentional transmission of alarm, other	No
741	Sprinkler activation, no fire - unintentional	No
743	Smoke detector activation, no fire - unintentional	No
744	Detector activation, no fire - unintentional	No
745	Alarm system sounded, no fire - unintentional	No
746	Carbon monoxide detector activation, no CO	No
900	Special type incident, other , Dumpster fire	No

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Appendix B

Fixed Property Use Codes & Descriptions

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Fixed Property Use Code	Description	Category
0	FIXED PROP USE UNDETERMINED	NON-SPECIFIC
100	UNKNOWN OTHER	NON-SPECIFIC
110	FIXED USE RECREATION, OTHER	COMMERCIAL
111	BOWLING ESTABLISHMENT	COMMERCIAL
112	BILLIARD CENTER	COMMERCIAL
115	ROLLER RINK	COMMERCIAL
116	SWIMMING FACILITY	COMMERCIAL
120	VARIABLE USE AMUSEMENT/RECREATION	COMMERCIAL
121	BALLROOM,GYMNASIUM	COMMERCIAL
122	EXHIBITION HALL	COMMERCIAL
123	ARENA/STADIUM	COMMERCIAL
124	PLAYGROUND	COMMERCIAL
130	PLACES OF WORSHIP,CHURCH,FUNERAL PARLOR	INSTITUTIONAL
131	CHURCH/CHAPEL	INSTITUTIONAL
134	FUNERAL PARLOR/CHAPEL	COMMERCIAL
140	CLUBS, OTHER	COMMERCIAL
141	ATHLETIC CLUB/YMCA	INSTITUTIONAL
142	CLUB HOUSE	COMMERCIAL
150	PUBLIC, GOVT, OTHER	INSTITUTIONAL
151	LIBRARY	INSTITUTIONAL
152	MUSEUM, ART GALLERY	INSTITUTIONAL
160	EATING/DRINKING PLACES	COMMERCIAL
161	RESTAURANT	COMMERCIAL
162	NIGHTCLUB	COMMERCIAL
171	AIRPORT TERMINAL	COMMERCIAL
173	BUS TERMINAL	COMMERCIAL
180	THEATER, STUDIO OTHER	COMMERCIAL
181	THEATER, STUDIO OTHER	COMMERCIAL
182	AUDITORIUM, CONCERT HALL	COMMERCIAL
183	MOVIE THEATER	COMMERCIAL
200	EDUCATIONAL PROPERTY OTHER	INSTITUTIONAL
210	SCHOOLS NON-ADULT OTHER	INSTITUTIONAL
211	PRE-SCHOOL	INSTITUTIONAL
213	ELEMENTARY SCHOOL	INSTITUTIONAL
215	HIGH SCHOOL/JR HIGH/MIDDLE SCHOOL	INSTITUTIONAL
241	COLLEGE/UNIVERSITY	INSTITUTIONAL
254	DAY CARE-IN COMMERCIAL PROPERTY	COMMERCIAL
300	HEALTHCARE/DETENTION OTHER	INSTITUTIONAL
311	CARE OF THE AGED/NURSING STAFF	NURSING HOME
331	HOSPITAL-MEDICAL/PSYCHIATRIC	INSTITUTIONAL
332	HOSPICES	INSTITUTIONAL
340	CLINICS, OTHER	INSTITUTIONAL
341	CLINIC, CLINIC-TYPE INFIRMARY	INSTITUTIONAL

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Fixed Property Use Code	Description	Category
342	DOCTOR/DENTIST/SURGEONS OFFICE	COMMERCIAL
343	HEMODIALYSIS UNIT	INSTITUTIONAL
361	JAIL/PRISON - NOT JUVENILE	INSTITUTIONAL
365	POLICE STATION	INSTITUTIONAL
400	RESIDENTIAL OTHER	RESIDENTIAL
419	ONE- AND TWO-FAMILY DWELLING	RESIDENTIAL
429	MULTI-FAMILY DWELLINGS	RESIDENTIAL
449	HOTELS, MOTELS, INNS, LODGES	COMMERCIAL
459	RESIDENTIAL BOARD AND CARE	NURSING HOME
460	DORMITORIES OTHER	INSTITUTIONAL
500	MERCANTILE PROPERTIES OTHER	COMMERCIAL
511	CONVENIENCE STORE	COMMERCIAL
519	FOOD, BEVERAGE SALES, GROCERY STORE	COMMERCIAL
549	SPECIALTY SHOPS	COMMERCIAL
557	BARBER, BEAUTY SHOP, PERSONAL SERVICES	COMMERCIAL
559	RECREATIONAL, HOBBY,HOME SALES, PET STORE	COMMERCIAL
571	SERVICE STATION	COMMERCIAL
579	MOTOR VEHICLE, BOAT SALES/SERVICE/REPAIRS	COMMERCIAL
580	GENERAL ITEM STORES, OTHER	COMMERCIAL
581	DEPARTMENT STORE	COMMERCIAL
592	BANK W/FIRST STORY BANKING FACILITY	COMMERCIAL
599	BUSINESS OFFICES	COMMERCIAL
629	LABORATORIES	INDUSTRIAL/WAREHOUSE
635	COMPUTER, DATA PROCESSING CNTR	INDUSTRIAL/WAREHOUSE
639	COMMUNICATIONS CENTER	INDUSTRIAL/WAREHOUSE
642	ELECTRIC TRANSMISSION DISTIB SYSTEM	INDUSTRIAL/WAREHOUSE
644	GAS DISTRIBUTION SYSTEM, PIPELINE	INDUSTRIAL/WAREHOUSE
647	WATER UTILITY	INDUSTRIAL/WAREHOUSE
700	MANUFACTURING PROPERTY, PROCESSING	INDUSTRIAL/WAREHOUSE
800	STORAGE PROPERTY OTHER	INDUSTRIAL/WAREHOUSE
807	OUTSIDE MATERIAL STORAGE AREA	INDUSTRIAL/WAREHOUSE
880	VEHICLE STORAGE; OTHER	INDUSTRIAL/WAREHOUSE
881	RESIDENTIAL PARKING STORAGE	INDUSTRIAL/WAREHOUSE
882	GENERAL VEHICLE PARKING GARAGE	INDUSTRIAL/WAREHOUSE
888	FIRE STATIONS	INSTITUTIONAL
891	GENERAL WAREHOUSE	INDUSTRIAL/WAREHOUSE
898	WHARF, PIER	COMMERCIAL
899	RESIDENTIAL OR SELF STORAGE UNITS	INDUSTRIAL/WAREHOUSE
900	OUTSIDE, SPECIAL PROPERTIES; OTHER	NON-SPECIFIC
931	OPEN LAND, FIELD	VACANT LAND
936	VACANT LOT	VACANT LAND
937	BEACH	NON-SPECIFIC
940	WATER AREAS, OTHER	NON-SPECIFIC

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Fixed Property Use Code	Description	Category
941	IN OPEN SEA, TIDAL WATERS	NON-SPECIFIC
946	LAKE/RIVER/STREAM	NON-SPECIFIC
960	STREET, OTHER	NON-SPECIFIC
961	DIVIDED HIGHWAY, HIGHWAY	NON-SPECIFIC
962	PAVED PUBLIC STREET, RESIDENTIAL	NON-SPECIFIC
963	PAVED PRIVATE STREET, COMMERCIAL	NON-SPECIFIC
965	UNCOVERED PARKING AREA	NON-SPECIFIC
981	CONSTRUCTION SITE	NON-SPECIFIC
983	PIPELINE, POWER LINE RIGHT OF WAY	NON-SPECIFIC
NNN	NONE	NON-SPECIFIC
UUU	UNDETERMINED	NON-SPECIFIC

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Appendix C

Palm Beach County Property Appraiser
Building Use Codes & Descriptions

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Building Use Codes & Description	Category
00 - GSG - VACANT/BLDG RAZED	No Charge
0000 - CONDO ONLY LAND	No Charge
0010 - VACANT TOWNHOUSE	No Charge
0030 - VACANT ZERO LOT LINE	No Charge
0040 - WATER POINTE OF JUPITER FLORIDA CONDO	Residential
0100 - SFR	Residential
0110 - TOWNHOUSE-COMM ZONING	Residential
0130 - ZERO LOT LINE	Residential
0150 - SFR-C	Residential
0200 - SFT-MFG	Residential
0300 - SFR-ZERO LOT LINE	Residential
0400 - CONDO	Residential
0410 - TOWNHOUSE	Residential
0420 - TIMESHARE	Undetermined - requires fieldwork
0430 - ZERO LOT LINE	Residential
0440 - TWNHS-VILLA	Residential
0450 - SFR-C	Residential
0460 - CONDO COMM	Commercial
0460D - DOCK CONDOMINIUM	No Charge
0500 - EXC-ZERO LOT	Residential
060 - EFFICIENCY APT	Residential
0700 - EXC TWHSE/VILLA	Residential
0800 - MOBILE HOME	Residential
0900 - EXC-RESIDENT	Residential
0909 - EXC-LUX.RES	Residential
1204 - STORE/OFF/RES C	Commercial
170 - DORMITORY	Institutional
1704 - OFFICE 1 STORY	Commercial
1904 - PROF OFFICES CO	Commercial
2004 - AIRPORT/MARINA	Commercial
210 - APARTMENTS	Residential
220 - APARTMENTS LOW RISE	Residential
2200 - MFR LOW RISE	Residential
230 - APARTMENTS HIGH RISE	Residential
240 - APARTMENTS - TO	Residential
2500 - MFR ROW HOUSE	Residential
260 - APARTMENTS - SENIOR	Residential
2700 - DUPLEX	Residential
2800 - TRIPLEX	Residential
2900 - QUADRAPLEX	Residential
301 - SFR CONVERT TO COMM	Commercial
340 - COMMERCIAL MIXED	Commercial
350 - RETAIL SINGLE OCC	Commercial
351 - DRUG STORE FREE	Commercial

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Building Use Codes & Description	Category
360 - DISCOUNT DEPT S	Commercial
361 - MEGA DISCOUNT STORE	Commercial
362 - VETERINARY CLIN	Commercial
363 - MEGA DISCOUNT STORE	Commercial
364 - HOME IMPROVEMEN	Commercial
365 - FURNITURE STORE	Commercial
370 - DEPARTMENT STORE	Commercial
371 - DOWNTOWN ROW TY	Commercial
374 - RETAIL MULTI OCC	Commercial
380 - STRIP SHOPPING	Commercial
390 - COMM SHOPPING CTR	Commercial
420 - SUPERMARKET	Commercial
430 - CONVENIENCE FOOD	Commercial
440 - HOTEL/MOTEL BUS	Commercial
450 - RESORT HOTEL	Commercial
460 - HOTEL/MOTEL LO	Commercial
470 - HOTEL- HI RISE	Commercial
4804 - WAREH/DIST TERM	Industrial/Warehouse
490 - OFFICE BLDG L/R	Commercial
4960 - CONDO COMM	Commercial
500 - OFFICE H-R 5ST	Commercial
520 - MEDICAL OFFICE	Commercial
530 - HOSPITALS	Institutional
540 - NURSING HOME	Nursing Home
550 - BAR/TAVERN	Commercial
551 - COCKTAIL LOUNGE	Commercial
560 - RESTAURANT	Commercial
570 - FRANCHISE FOOD	Commercial
580 - BOWLING ALLEY	Commercial
582 - SKATING RINK	Commercial
583 - HEALTH CLUB	Commercial
587 - COUNTRY CLUB	Commercial
588 - PRIVATE CLUB	Commercial
589 - COUNTRY CLUB/W GOLF CRSE	Commercial
590 - ARENA	Commercial
591 - GYMNASIUM	Commercial
593 - DOG/HORSE TRACK	Commercial
600 - AUDITORIUM	Commercial
610 - CINEMA/THEATER	Commercial
614 - RADIO/TV/ PIC S	Commercial
620 - BANK/MAIN OFFIC	Commercial
630 - NEIGHBORHOOD BANK	Commercial
640 - SERVICE STATION	Commercial
641 - SERVICE STATION	Commercial

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Building Use Codes & Description	Category
650 - CAR WASH - AUTO	Commercial
651 - CAR WASH - MANU	Commercial
652 - CAR WASH SERVIC	Commercial
660 - AUTO SERVICE GARAGE	Commercial
662 - KWIK LUBE	Commercial
665 - GARAGE STORAGE	Industrial/Warehouse
670 - OFFICE/WAREHOUS	Undetermined - requires fieldwork
680 - FUNERAL HOME	Commercial
690 - CLUBHOUSE	Institutional
691 - SOCIAL/FRATERNAL	Institutional
695 - GUARDHOUSE	No Charge
700 - COLD STORAGE	Industrial/Warehouse
710 - RAIL/BUS/AIR TE	Commercial
712 - TELECOMMUNICATI	Industrial/Warehouse
720 - PARKING GARAGE	Industrial/Warehouse
721 - RADIO/TV TRANSM	Industrial/Warehouse
730 - DAY CARE CENTER	Commercial
750 - AUTO DEALER/F-S	Commercial
800 - LIGHT MANUFACTURING	Industrial/Warehouse
810 - HEAVY MANUFACTURING	Industrial/Warehouse
820 - WAREHOUSE DISTR	Industrial/Warehouse
830 - MINI WAREHOUSE	Industrial/Warehouse
840 - WAREHOUSE STORAGE	Industrial/Warehouse
8400 - DETACHED GAR	Industrial/Warehouse
841 - WAREHOUSE SINGLE	Industrial/Warehouse
850 - HANGAR	Industrial/Warehouse
861 - RESIDENTIAL BARN	No Charge
870 - PREFAB WAREHOUSE	Industrial/Warehouse
880 - TECHNICAL MANUF	Industrial/Warehouse
900 - SCHOOL	Institutional
901 - COLLEGES / UNIV	Institutional
910 - RELIGIOUS	Institutional
912 - LIBRARY	Institutional
920 - EDUCATION/RELIG	Institutional
930 - GOVERNMENTAL	Institutional
950 - POLICE/FIRE STN	Institutional
960 - CORRECTIONAL	Institutional
970 - CULTURAL FACILITY	Institutional
INSTOV - Institutional Override	Institutional

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Appendix D

Department of Revenue
Property Use Codes & Descriptions

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DOR Codes & Property Use Description	
0000 - VACANT	
0010 - VACANT TOWNHOUSE	
0030 - VACANT ZERO LOT LINE	
0040 - VACANT CONDO LAND	
0050 - VACANT SFR CONDO	
0100 - SINGLE FAMILY	
0101 - SINGLE FAMILY-COMM ZONING	
0104 - SINGLE FAMILY-IND ZONING	
0110 - SINGLE FAMILY-COMM ZONING	
0130 - ZERO LOT LINE	
0140 - SINGLE FAMILY-IND ZONING	
0150 - SFR-C	
0200 - MOBILE HOME	
0210 - TANGIBLE MOBILE HOME	
0300 - MULTIFAMILY	
0304 - MULTIFAMILY CONDO CONVERSION	
0305 - MULTIFAMILY > 10 UNITS Income Restricted	
0400 - CONDOMINIUM	
0410 - TOWNHOUSE/VILLA	
0420 - TIMESHARE	
0430 - ZERO LOT LINE	
0450 - SFR-C	
0460 - CONDO COMMERCIAL	
0469 - COMMERCIAL CONDO	
0500 - MHT COOP	
0510 - COOPERATIVE	
0600 - RETIREMENT	
0605 - RETIREMENT Income Restricted	
0620 - LIFE CARE HX	
0630 - REHAB-DETOX	
0700 - MISC RESIDENCE SFR	
0800 - MULTIFAMILY < 10 UNITS	
0801 - MULTIFAMILY < 10 UNITS-COMM ZONING	
0804 - MULTIFAMILY < 10 UNITS-IND ZONING	
0805 - MFR-Imp Non Contributing	
0810 - MULTIFAMILY < 10 UNITS-COMM ZONING	
0840 - MULTIFAMILY < 10 UNITS-IND ZONING	
0900 - RESIDENTIAL COMMON AREA/ELEMENT	No Charge
1000 - VACANT COMMERCIAL	
1100 - STORES	
1104 - STORES CONDO	
1200 - STORE/OFFICE/RESIDENTIAL	
1204 - STORE/OFF/RES CONDO	

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DOR Codes & Property Use Description	
1300 - DEPARTMENT STORE	
1301 - SMALL DISCOUNT STORE < 25000 SF	
1400 - SUPERMARKET/DRUG STORE	
1500 - SHOPPING CENTER REGIONAL	
1600 - SHOPPING CENTER CMMITY	
1700 - OFFICE ONE STORY	
1704 - OFFICE 1 STORY CONDO	
1800 - OFFICE MULTISTORY	
1900 - PROF OFFICES	
1904 - PROF OFFICES CONDO	
2000 - AIRPORT/MARINA	No Charge
2004 - AIRPORT/MARINA CONDO	No Charge
2010 - WORKING WATERFRONT	
2100 - RESTAURANT	
2104 - RESTAURANT CONDO	
2200 - RESTAURANT, DRIVE IN	
2300 - FINANCIAL	
2400 - INSURANCE	
2500 - SERVICE SHOPS	
2600 - SERVICE STATION	
2700 - AUTO SALES	
2800 - PKG LT / MH PK	
2900 - WHOLESALER	
3000 - FLORIST	
3100 - DRV-IN THEATER	
3200 - THTR/AUD/CLBHS	
3300 - NIGHT CLUBS	
3400 - BOWLING ALLEY	
3500 - TOURIST ATTRAC	
3600 - CAMPS	
3700 - RACETRACK	
3800 - GOLF COURSE	
3900 - MOTEL	
3942 - HOTEL TIMESHARE	
4000 - VACANT INDUSTRIAL	
4004 - VACANT INDUS CONDO	
4100 - LIGHT MFG	
4200 - HEAVY MFG	
4300 - LUMBER YARD/MILL	
4400 - PACKING	
4500 - BOTTLER	
4600 - FOOD PROCESSING	
4700 - MIN PROCESSING	

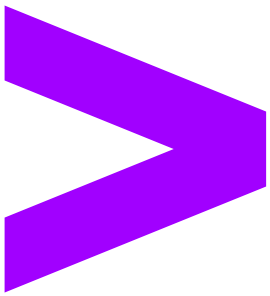
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DOR Codes & Property Use Description	
4800 - WAREH/DIST TERM	
4804 - WAREH/DIST TERM CONDO	
4805 - SELF STORAGE	
4900 - OPEN STORAGE	
4960 - CONDO - NON RESIDENTIAL	
4969 - COMMERCIAL CONDO	
5000 - IMPROVED ARGI	
5100 - CROP SOIL CLASS 1	
5200 - CROP SOIL CLASS 2	
5300 - CROP SOIL CLASS 3	
5400 - TIMBER SI 90+	
5500 - TIMBER SI 80-89	
5600 - TIMBER SI 70-79	
5700 - TIMBER SI 60-69	
5800 - TIMBER SI 50-59	
5900 - TIMBER NOT CLASSED	
6000 - GRAGSOIL CLASS 1	
6100 - GRZGSOIL CLASS2	
6200 - GRZGSOIL CLASS3	
6300 - GRZGSOIL CLASS4	
6400 - GRZGSOIL CLASS5	
6500 - GRZGSOIL CLASS6	
6600 - ORCHARD GROVES	
6700 - POUL/BEES/FISH	
6800 - EQUESTRIAN	
6900 - ORN/MISC AGRI	
7000 - VACANT INSTIT	
7100 - RELIGIOUS10	
7200 - PRV SCHL/COLL	
7300 - PRV HOSPITAL	
7400 - NURSING HOME	
7500 - ORPHNG/NON-PROF	
7600 - MORT/CEMETERY	
7700 - CLB/LDG/UN HALL	
7800 - SANI/ REST HOME	
7900 - CULTURAL	
8000 - DISTRICTS	
8100 - MILITARY	
8200 - FOREST/PK/REC	
8205 - TRANSFER DEVELOPMENT RIGHTS	No Charge
8300 - PUB CTY SCHOOL	
8400 - COLLEGE	
8500 - HOSPITAL	

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DOR Codes & Property Use Description	
8600 - CITY INC NONMUNI	
8700 - STATE	
8800 - FEDERAL	
8900 - MUNICIPAL	
9000 - LEASEHOLD INT	
9100 - UTILITY	
9300 - SUBSURF RIGHTS	No Charge
9400 - R/W - BUFFER	No Charge
9500 - RIVER/LAKES	No Charge
9600 - SEWG/WASTE LAND	No Charge
9700 - OUTDR REC/PARK LAND	No Charge
9800 - CENTRALLY ASSESSED	No Charge
9900 - NON AG	
9999 - EXEMPT	No Charge

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May 5, 2026

TOWN OF JUPITER

Funding Jupiter Fire Rescue:

Establishing a Fire Protection Per-Property Fee

TOWN OF JUPITER

Resolution #59-26

Tonight's Resolution:

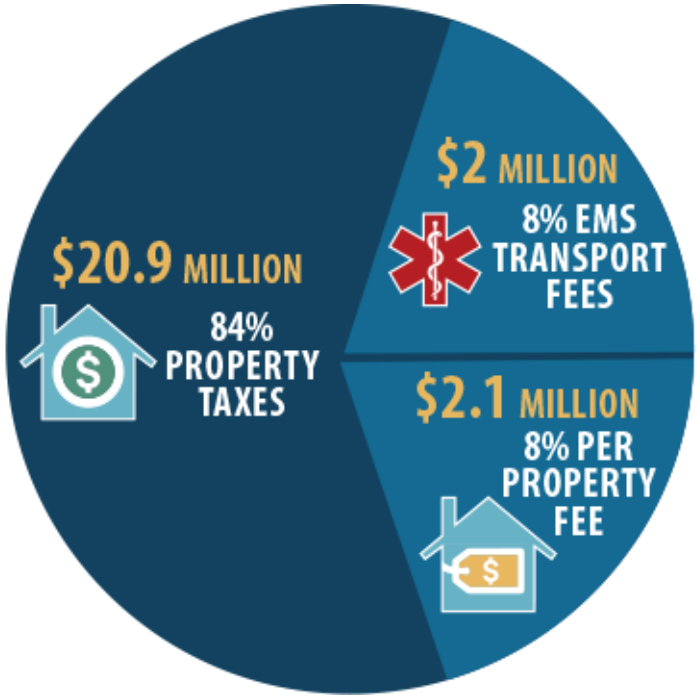
- Establishes the estimated initial per-property fire protection fee to be assessed beginning October 1, 2026.
- Ensures a transparent process for establishing the fee.
- Requires a final hearing on June 16, 2026 to adopt a final fee after public notification.

TOWN OF JUPITER

Funding Options

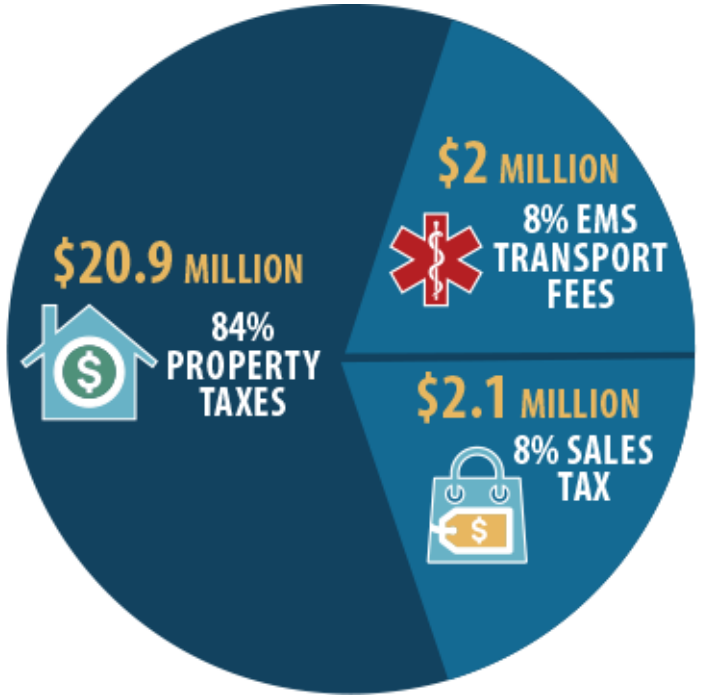
Property Taxes, EMS Transport Fees, Per-Property Fee

$25 million total budget



Property Taxes, EMS Transport Fees, Sales Tax

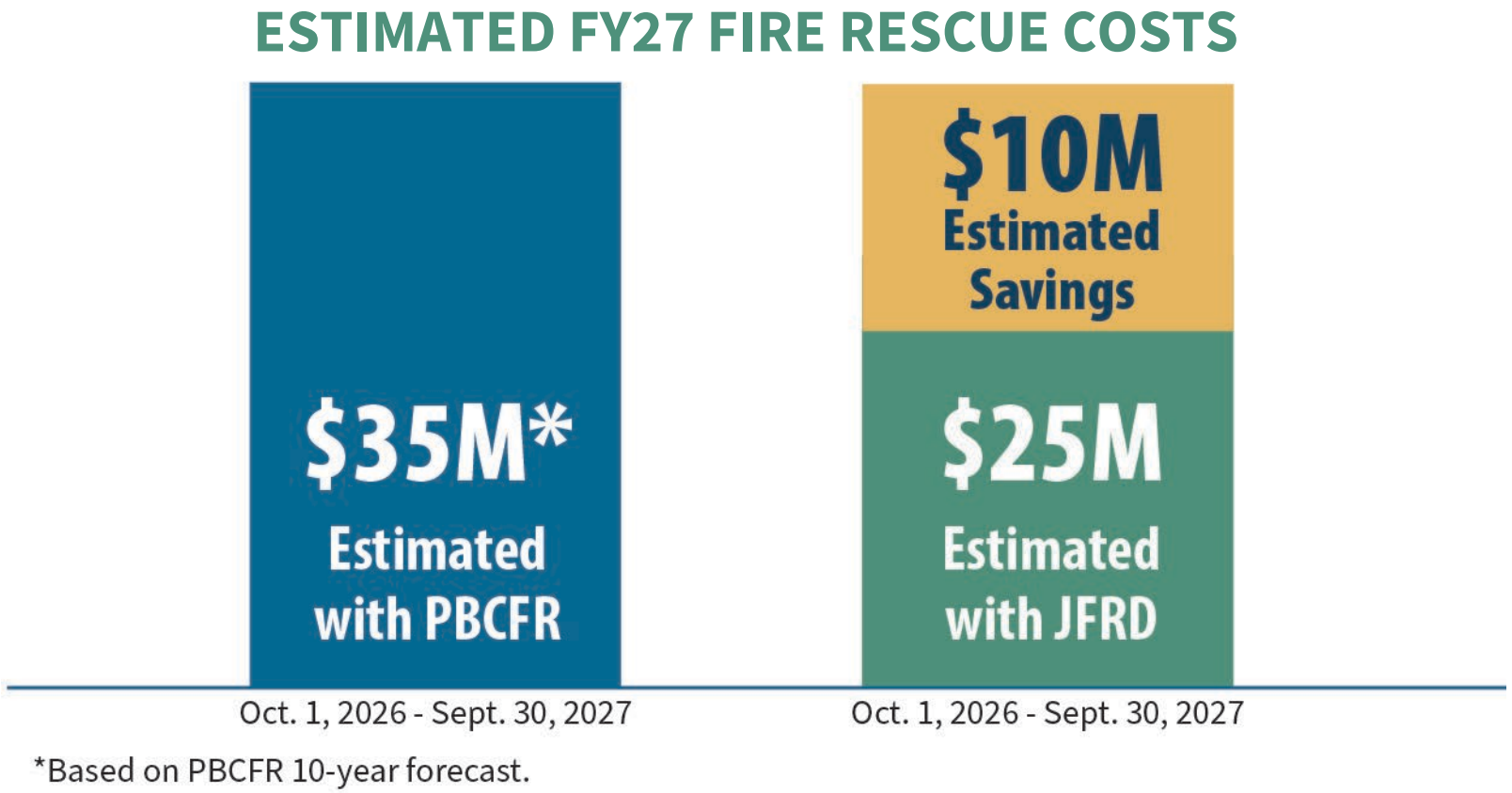
$25 million total budget



TOWN OF JUPITER

Immediate Savings for Property Owners

Regardless of the funding method used, JFRD will save Jupiter's property owners millions of dollars beginning in year one.



TOWN OF JUPITER

Future Steps

If Town Council selects the per-property fee:

- **Tuesday, May 26:** Notices for Public Hearings Mailed to Property Owners.
- **Tuesday, June 16:** Final Resolution Considered by Town Council.

TOWN OF JUPITER

TOWN OF JUPITER
Authorization of Purchase Agreement for Facility Located at 3126 Jupiter Park Drive

DATE	May 5, 2026
TO	Honorable Mayor and Members of Town Council
THRU	Frank Kitzerow, Town Manager
FROM	Scott Reynolds, Finance Director
SUBJECT	**Resolution 60-26,** requesting approval of a Option Purchase Agreement for a facility located at 3126 Jupiter Park Drive.

EXECUTIVE SUMMARY

Staff seeks Town Council authorization of the attached Option Purchase Agreement ("Agreement") for the purchase of a facility situated on a 1.92-acre site located at 3126 Jupiter Park Drive, Jupiter, Palm Beach County, Florida, for a total purchase price of $10,660,000. This acquisition is governed by Florida Statute 166.045, which establishes required procedures for municipal real property purchases, including public notice and disclosure requirements.

Over the past year and a half, the Town has been reserving Building Fund resources in anticipation of constructing a facility to house personnel responsible for enforcement of the Town's building code. However, due to significant escalation in construction costs in recent years, staff has evaluated alternative options, including the acquisition of an existing facility.

Through staff's research, a facility has been identified that can be acquired with minimal improvement costs while meeting the operational needs of the Building Department. In addition, the facility supports the establishment of a training space. Acquiring an existing facility with limited renovation requirements is expected to reduce overall costs to both the Building Fund and the General Fund, while also avoiding continued exposure to construction cost escalation.

Because the facility will serve multiple purposes, including General Fund activities, the General Fund will be responsible for its proportionate share of acquisition and related costs.

The facility will primarily support Building Department operations, including building inspectors, plans examiners, code compliance officers, fire inspectors, and plan reviewers associated with construction activity. The facility is not intended for public access; all public-facing Building Department services will continue to be provided at the Town Hall complex.

The Town Attorney has reviewed the attached agreement and finds it to be in acceptable form.

ANALYSIS

Florida Statute 166.045 contemplates the use of a purchase agreement, with execution occurring no earlier than 30 days following public notice. Approval of this Agreement will initiate the required 30-day public notice period.

The statute further requires that all appraisals, offers, and counteroffers be documented in writing. In compliance, both appraisals have been included as attachments for public review and to support Council deliberation.

Appraisals and Purchase Price Compliance

Pursuant to statutory requirements for acquisitions exceeding $500,000, two independent appraisals were obtained:

- Appraisal 1 (April 1, 2026): $10,800,000
- Appraisal 2 (April 2, 2026): $10,520,000

The average appraised value is $10,660,000, which matches the negotiated purchase price.

Funding Strategy

The acquisition will be funded through a combination of Building Fund reserves and General Fund reserves:

- **Building Fund Contribution:** $9,000,000
    - As of 9/30/25, the Building fund reserve balance is $19.0 million. The current excess reserves are $13.6 million.
    - The remaining excess reserve balance after this purchase would be $4.6 million (to be used for identified software and training needs).
- **General Fund Contribution:** $1,660,000
    - The current available General Fund fund balance is approximately $43.4 million, following prior allocations. This includes funding for JFRD and other Town obligations.

STRATEGIC PRIORITY

● Fiscal Responsibility
● Organizational Excellence
● Safety
● Strong Local Economy

ATTACHMENTS

1. Resolution 60-26 and Purchase Contract
2. Appraisal 1
3. Appraisal 2
4. Presentation
5. Procurement Review Memo - 3126 Jupiter Park Drive

FUNDING SOURCE

Amount of this Request	$10,660,000	
Amount Approved in Budget	$	Sources:
Additional Funding Requested	$9,000,000 $1,660,000	Sources: Building Fund Reserves General Fund Reserves

For more information or copies of the attachments, please contact Scott Reynolds at scottr@jupiter.fl.us or 561-741-2327.

RESOLUTION NO. 60-26

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA, AUTHORIZING THE PURCHASE OF THE REAL PROPERTY LOCATED AT 3126 JUPITER PARK DRIVE, JUPITER, FLORIDA; AUTHORIZING THE TOWN MANAGER TO EXECUTE ALL CLOSING DOCUMENTS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Jupiter ("Town") maintains funds collected pertaining to development permits; and

WHERERAS, the funds collected are restricted for use for the purpose of the Town's Building Department and other departments' for their use, including for the enforcement of the building code; and

WHEREAS, the Town Manager has identified a facility located at 3126 Jupiter Park Drive, Jupiter, Florida, consisting of approximately 1.92 acres ("Property"), which can meet the operational needs of the Town and in the enforcement of the building code and other related codes, consistent with the statutory restrictions on their expenditure; and

WHEREAS, the Property will primarily support Building Department operations, including inspectors, plans examiners, code compliance officers, fire inspectors, and plan reviewers; and

WHEREAS, the Town Manager has agreed to recommend the purchase of the Property based upon the average of two appraisals, the appraised value of which is $10,660,000;

WHEREAS, the average of the two appraisals is equal to the negotiated purchase price of the Property; and

WHEREAS, the Town Council finds that the purchase of the Property would serve a valid public purpose; and

WHEREAS, funding for the acquisition will be provided through a combination of reserves from the Building Fund and the General Fund, proportionate to the intended use of the Property; and

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JUPITER, FLORIDA:

Section 1. The foregoing recitals are hereby ratified and confirmed as true and correct and are incorporated herein by this reference.

Section 2. The Town Council hereby approves the Purchase and Sale Agreement ("Agreement") for the acquisition of the Property located at 3126 Jupiter Park Drive, Jupiter,

Florida, for a purchase price of $10,660,000, in substantially the form attached hereto as Exhibit 1.

Section 3. The Town Manager is hereby authorized to execute the Agreement, after completion of the required 30-day public notice period pursuant to Florida Statute 166.045, and to execute all closing documents and take all actions necessary to effectuate the acquisition of the Property.

Section 4. The Town Council hereby authorizes the use of Building Fund reserves in the amount of $9,000,000 and General Fund reserves in the amount of $1,660,000, or such amounts as may be necessary, to complete the acquisition and related closing costs.

Section 6. This Resolution shall take effect immediately upon its execution.

#7829925 v1 26503-00001

05/05/2026

Docusign Envelope ID: 10D412E1-AA4E-8DBC-804E-9FCCD92644A1

OPTION

PURCHASE AGREEMENT

By and Between

FRESH AIRE VENTURES LLC

("***Seller***")

and

TOWN OF JUPITER, a Florida municipality

("***Buyer***")

OPTION PURCHASE AGREEMENT

THIS OPTION PURCHASE AGREEMENT (the "***Agreement***") is made and entered into as of the 23rd day of April, 2026 (the "***Effective Date***"), by and between **FRESH AIRE VENTURES LLC** having an address of 18778 RIO Vista Dr, Jupiter, FL 33469 (the "***Seller***"), and **TOWN OF JUPITER, a Florida municipality**, having an address of 210 Military Trail, Jupiter, Florida 33458 ("***Buyer***").

RECITALS:

A. Seller is the owner of that certain real property, located at 3126 Jupiter Park Dr, Jupiter, Florida , in Palm Beach County, Florida which is more particularly described on Exhibit "A" attached hereto and made a part hereof (the "***Land***").

B. Seller desires to sell to Buyer the Property (defined below) pursuant to the terms of this Agreement, and Buyer desires to acquire the Property pursuant to the terms of this Agreement, as hereinafter set forth.

C. This Agreement is designated as an "Option Purchase Agreement" in conformity with Florida Statutes §166.045(1) and is subject to the approval of the Buyer's governing body at a public meeting after requisite notice has been given. The Buyer will not be under any obligation to exercise the option unless this Agreement is approved by the governing body at the public hearing specified in the statute. Notwithstanding the foregoing, Buyer acknowledges and assumes the contractual risks expressly set forth herein pending such approval.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged by the parties hereto, the parties agree, covenant and contract as follows:

ARTICLE I

PROPERTY

The property to be sold, conveyed, assigned or otherwise transferred by Seller to Buyer at closing (hereinafter collectively called the "***Property***") consists of the following:

1.1. the Land;

1.2. the building and improvements located on the Land (the "***Improvements***", and together with the Land, hereinafter the "***Real Property***");

1.3. the easements, rights of way, appurtenances and other rights and benefits of Seller in and to the Land, including all right, title and interest in and to any adjoining sidewalk and in and to any adjoining street or alley to the centerline thereof;

1.4. All of Seller's right, title and interest, and to the extent assignable by Seller, in, to and under the service and other contracts for the Real Property (each a "***Service Contract***" and

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FJK — Buyer's Initials

collectively, the "***Service Contracts***") which Buyer elects to assume. Buyer shall provide notice to Seller of which Service Contracts it elects to assume by the end of the Investigation Period.

1.5. All of Seller's right, title and interest, if any, and to the extent assignable by Seller, in and to the intangible personal property arising in connection with the design, development, construction, ownership, operation and use of the Real Property, including, but not limited to, all licenses, permits, plans, warranties, guarantees, approvals, certificates, agreements and arrangements of every kind and nature with or from all boards, agencies, departments, governmental or otherwise, relating, directly or indirectly, to the design, development, construction, ownership, operation and use of the Real Property, whether heretofore or hereafter issued or executed, and general intangibles (collectively, "Intangible Personal Property"); provided, however, the Intangible Personal Property shall not include any intangible property.

ARTICLE II

DEPOSIT

2.1. Within three (3) business days following the Effective Date, Buyer shall deliver to **JONES FOSTER P.A.**, as escrow agent (the "***Escrow Agent***"), the sum of Fifty Thousand and 00/100ths Dollars ($50,000.00) (the "***Initial Deposit***") securing the obligations of the Buyer hereunder, which shall be held in escrow by the Escrow Agent in accordance with the terms and conditions of this Agreement. Within three (3) business days following the expiration of the Inspection Period, Buyer shall deposit with Escrow Agent the sum of Two Hundred Fifty Thousand No/100 Dollars ($250,000.00) (the "***Additional Deposit***"). The Initial Deposit and the Additional Deposit, if and when made, shall be collectively referred to herein as the "***Deposit***". Any deposits received hereunder by the Escrow Agent shall be placed by Escrow Agent in a non-interest bearing escrow account at a federally insured bank. The address for Escrow Agent is as follows: Jones Foster P.A., Attn: Scott L. McMullen, 4741 Military Trail, Suite 200, Jupiter, FL 33458. At the Closing, the Deposit shall be credited against the cash due at such closing. After the end of the Inspection Period, the Deposit shall be non-refundable except upon a default by Seller under this Agreement or the failure of any condition precedent to Buyer's obligation to close as set forth herein..

ARTICLE III

PURCHASE PRICE AND TITLE

3.1. The purchase price ("***Purchase Price***") for the Property is Ten Million Six Hundred Sixty Thousand and 00/100ths Dollars ($10,660,000.00), subject to adjustment and prorations as hereinafter provided. The Purchase Price shall be paid to Seller as follows:

$300,000.00 being the Deposit, which sum shall be delivered to Escrow Agent as provided in Section 2.1 above and paid to Seller at Closing.

$10,360,000.00 approximately, in cash, subject to prorations and adjustments, as hereinafter provided, to be paid by wire transfer of federal funds,

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FJK — Buyer's Initials

cashier's check or Escrow Agent trust account check on the Closing Date.

$10,660,000.00 TOTAL PURCHASE PRICE.

3.2. Buyer, at Buyer's expense, shall have 15 calendar days from the Effective Date to obtain a title insurance commitment (the "***Commitment***") binding the Title Company to insure good, marketable and insurable fee simple title to the Property in Buyer by its ALTA Form B Owner's Title Insurance Policy, at then current standard rates with insurance in the amount of the Purchase Price (the "***Owner's Policy***") upon the recording of the warranty deed to be given by Seller. The Commitment and Owner's Policy shall be issued by Jones Foster P.A., as agent for Old Republic National Title Insurance Company ("***Title Company***"). Within five (5) days from the Effective Date of this Agreement, Seller shall deliver to Buyer a copy, or copies, of a prior owner's title insurance policy or policies which shall be acceptable to the Title Company for use as a title base with respect to the Property (the "***Title Evidence***"). The Commitment shall show Seller to be vested with good and marketable and insurable fee simple title to the Property, free and clear of all liens and encumbrances, except ad valorem real estate taxes for the year of closing and subsequent years.

3.3. Buyer shall have 30 days from the Effective Date of this Agreement to specifically object in writing to any particular condition of title or exception revealed by the Commitment, other than the Permitted Exceptions. As used herein, "***Permitted Exceptions***" shall mean those exceptions to title which are more fully described on Exhibit B attached hereto and such other title exceptions which become Permitted Exceptions as provided in this Section 3.3. If Buyer fails to specifically object in writing to any particular condition of title or exception set forth in the Commitment within said 30 day period, then same shall be deemed waived and such condition of title or exception shall be deemed to constitute a Permitted Exception. Seller shall utilize its best efforts to eliminate or cure any title defects raised by Buyer on or before the Closing Date (the "Cure Period") to cure such objections. The Closing Date shall be extended, if necessary, to allow for the expiration of the Cure Period; provided, however, that in no event shall the Closing occur after the Outside Closing Date, as that term is defined herein below at Article 8.1. If Seller fails to cure such objections within the Cure Period, Buyer may elect, as its sole remedy, to either (i) terminate this Agreement and receive a return of the Deposit, or (ii) waive such objections and proceed to Closing.

3.4. Buyer shall have 30 days from the Effective Date of this Agreement, to obtain an accurate survey (the "***Survey***") of the Property to be made at Buyer's sole cost and expense, by a surveyor licensed in the State of Florida. If the Survey shows any encroachments, gaps, gores, easements, rights-of-way or any other type of encumbrance or impediment not authorized by this Agreement, Buyer shall give written notice of such defect to Seller on or before the last day for raising objections to title under Section 3.3 in which event said defect shall be governed in the same manner and time as objections to title are dealt with in Section 3.3 and the parties shall have the same rights, privileges and obligations as if the defect was an objection to title as specified in Section 3.3 of this Agreement.

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Buyer's Initials

ARTICLE IV

STATUS OF PROPERTY

4.1. Seller grants to Buyer and its agents, as well as contractors employed by or hired by Buyer, during the Investigation Period, as hereinafter defined, the right to enter the Property to do and perform such reasonable acts and things as Buyer deems necessary or appropriate, to make soil tests, borings, engineering studies, environmental tests, surveys and like tests and studies of the Property. Buyer agrees to repair or restore promptly any damage to the Property caused by Buyer, its agents and contractors and restore same to its original condition. Buyer agrees to pay for all such work, labor and services that shall be performed and to obtain waivers of lien or paid bills therefore.

4.2. Intentionally omitted.

4.3. Buyer shall have 30 days from the Effective Date of this Agreement (the "***Investigation Period***") to do such investigations and tests of the Property as authorized in Section 4.1 of this Agreement and to investigate all other matters pertaining to the Property including the zoning, and the environmental condition of the Property and to determine whether the Property is acceptable to Buyer, in Buyer's sole discretion. In the event that Buyer is not satisfied with the condition of the Property, in Buyer's sole discretion, for any reason or no reason at all, then on or prior to the expiration of the Investigation Period, Buyer shall have the option of either: (i) waiving the condition and Closing in accordance with the terms of this Agreement without reduction in the Purchase Price, or (ii) canceling this Agreement by written notice to Seller given on or prior to the end of the Investigation Period, in which event the Escrow Agent shall return the Deposit to Buyer, whereupon the parties shall be released from any further obligations under this Agreement except for those obligations contained in Section 4.1.

4.4. Upon the expiration of the Investigation Period, Buyer shall be deemed to have accepted the Property and shall be deemed to represent to Seller that it has concluded whatever studies, tests and investigations Buyer desires relating to the Property and, the sale shall proceed on an "all cash" basis in an "AS IS" condition, except as hereinafter provided.

4.5. Within five (5) days after the Effective Date of this Agreement, Seller shall provide Buyer with copies of all title insurance policies, surveys, soil tests, environmental reports, appraisals, development orders, copies of the Permitted Exceptions, appraisals, site plans, and any other tests, studies, reports, and approvals which are in Seller's possession or control concerning the Property with no representation as to their accuracy.

4.6. Seller covenants and agrees that from the Effective Date until the Closing Date, Seller shall continue to maintain the Property in the same manner that Seller is currently maintaining the Property and that the Property shall be kept free from any environmental contamination first arising from and after the Effective Date of this Agreement.

4.7. Buyer acknowledges and agrees that, except as expressly set forth in this Agreement, Seller has not made and does not make any representations or warranties, express or implied, regarding the Property, including, without limitation, any matters relating to the physical

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Buyer's Initials

condition, environmental condition, zoning, or suitability of the Property for Buyer's intended use, and Buyer is purchasing the Property in its "AS IS, WHERE IS" condition with all faults.

ARTICLE V

REPRESENTATIONS AND WARRANTIES OF SELLER

In order to induce Buyer to purchase the Property, and to close pursuant to this Agreement, Seller represents and warrants to Buyer that:

5.1. Seller has full power and authority to enter into this Agreement and otherwise perform all obligations of Seller under this Agreement in accordance with its terms.

5.2. This Agreement, when executed and delivered, will be a valid and binding obligation of Seller, enforceable in accordance with its terms.

5.3. Seller is not the subject of any proceeding or lawsuit, actual or threatened, at law or in equity, nor is Seller now the subject of pending, threatened or contemplated bankruptcy proceeding which might affect its ability to sell the Property according to the terms hereof.

5.4. Seller has good, marketable and insurable title in fee simple to the Property, free of all liens, reversions, restrictions, claims of third parties and reservations of whatsoever type and nature, excepting only the "Permitted Exceptions".

5.5. Seller shall not commit or knowingly permit any waste of or to the Property.

5.6. All amounts owed for labor, materials supplied, services rendered and/or any other bills or amounts incurred by Seller with respect to Seller's ownership and/or operation of the Property have been paid and no party is entitled to a mechanic's or materialmen's lien with respect to the Property.

5.7. Prior to Closing, no portion of the Property or any interest therein shall have been conveyed or encumbered. Seller shall, prior to Closing, comply in all material respects with all laws, rules, regulations, and ordinances of all governmental authorities having jurisdiction over the Property, which are applicable to the Property.

5.8. Seller has not received any notice(s) that the Property is not in compliance in all material respects with the following (herein collective called the "Environmental Laws"): the Resource Conservation and Recovery Act of 1976 ("RCRA"), 41 U.S.C. § 6901, et seq., as amended, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. § 9601 et seq., and any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous substance. Seller has not received notice of any liens on the Property created, permitted or imposed by any Environmental Laws. Seller has not received notice of or is aware of any actual, asserted or threatened, liability or obligation of the Seller, related to the Property, under any Environmental Laws. To Seller's knowledge without investigation, no toxic or hazardous substance, including without limitation, asbestos and the group of organic compounds known as

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polychlorinated biphenyls has been generated, treated, or disposed of, or otherwise deposited in or located on, or released on or to the Property, including, without limitation, the surface and subsurface waters of the Property by Seller, or to the best of Seller's knowledge without investigation, by any other party. Neither Seller, nor, to Seller's knowledge without investigation, any other party has engaged in any activity on the Property which has caused (A) the Property to be a hazardous waste treatment, storage or disposal facility within the meaning of or otherwise bring such Property within the ambit of the RCRA, as amended, or any similar state law or local ordinance or other Environmental Law, or (B) the discharge of pollutants or effluents into any water source or system, or the discharge into the air of any emissions, which require a permit under the Federal Water Pollution Act, 33 U.S.C. § 1251, et seq., or the Clean Air Act, 42 U.S.C. § 7401, et seq., or any similar state law or local ordinance or any other Environmental Law, and (iii) to Seller's knowledge without investigation, no underground storage tank is located on or under the Property. As used in this subpart (o), the terms "hazardous substance", and "release", shall have the meanings specified in CERCLA and "solid waste" and "disposal" (or "disposed") shall have the meanings specified in RCRA provided, in the event any Environmental Law is amended during the term of this Agreement so as to broaden the meaning of any term defined thereby, such broader meaning shall apply subsequent to the effective date of such amendment, and provided further, to the extent that the laws of the State of Florida establish a meaning for such terms which is broader than that specified in this subsection, such broader meaning shall apply.

5.9. To Seller's knowledge without investigation, no portion of the Property is being acquired by any government authority in the exercise of its power to condemn or to acquire through eminent domain or private purchase in lieu thereof nor, to Seller's knowledge without investigation, are any of these proceedings or actions threatened or imminent.

5.10. There are no actions, suits or proceedings, existing, pending or, to the best of Seller's knowledge, threatened against, or by Seller in any court or before any government agency relating to the Property, the ownership of the Property, or Seller's ability to convey the Property, except as otherwise disclosed herein.

ARTICLE VI

REPRESENTATIONS AND WARRANTIES OF BUYER

In order to induce Seller to sell the Property, and to close pursuant to this Agreement, Buyer hereby represents and warrants to Seller, that:

6.1. BUYER has full power and authority to enter into this Agreement, and upon its' approval, in accordance with Florida Statutes section 166.045(1), will have full power and authority to otherwise perform all of its obligations under this Agreement in accordance with its terms.

6.2. BUYER is not the subject of any proceeding or lawsuit, actual or threatened, at law or in equity, nor is Buyer now the subject of pending, threatened or contemplated bankruptcy proceeding which might affect its ability to purchase the Property according to the terms hereof.

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Buyer's Initials

ARTICLE VII

CONDITIONS PRECEDENT TO CLOSING

Unless waived by Buyer in writing, the obligation of Buyer to close is conditional upon satisfaction of the following conditions by the Closing Date:

7.1. All representations and warranties of Seller shall remain true and correct as of closing.

7.2. Seller shall have performed (or tendered performance of) all material covenants, obligations, terms and provisions of this Agreement to be performed by Seller.

7.3. Approval of this Option Purchase Agreement by the governing body (i.e., Commission) of the Town of Jupiter, Florida, by no later than May 6, 2026 (hereinafter "***Approval Deadline***") in accordance with the requirements of law. Buyer shall use diligent, continuous, and good faith efforts to obtain approval of this Agreement by its governing body at the earliest available public meeting, and in all events on or before the Approval Deadline. Buyer shall promptly schedule all required hearings and shall not take any action, or fail to take any action, that would reasonably be expected to delay such approval.

In the event any of the conditions precedent to closing set forth in 7.1 and 7.2 above are not satisfied by the Closing Date, then in such event Buyer shall have the option of (i) canceling this Agreement in which event the Escrow Agent shall return the Deposit to Buyer and the parties shall be released from any further obligations under this Agreement, or (ii) waiving the condition and Closing in accordance with the terms of this Agreement without reduction in the Purchase Price except for the obligations under Sections 4.1 of this Agreement. In the event the condition precedent to Closing set forth in Section 7.3 above is not satisfied by the Approval Deadline, this Agreement shall automatically terminate, in which event the Escrow Agent shall return the Deposit to Buyer and the parties shall be released from any further obligations under this Agreement.

ARTICLE VIII

CLOSING

8.1. Closing Date. The closing ("***Closing***") shall occur on or before June 30, 2026 (the "***Outside Closing Date***") Buyer shall provide Seller with a Notice to Close at least fifteen (15) days prior to Closing, time being of the essence, at the office of the Escrow Agent, or at such other time or place as the parties may mutually determine (the "***Closing Date***"), but in no event shall the Closing occur after the Outside Closing Date, unless mutually agreed upon in writing by the Parties.

8.2. Seller Deliveries at Closing. Seller, at Seller's expense, shall deliver to Buyer at Closing:

8.2.1. A statutory warranty deed conveying the Property to Buyer, in recordable form, subject only to the Permitted Exceptions.

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8.2.2. A mechanic's lien, possession and gap affidavit in favor of the Buyer.

8.2.3. An Assignment and Assumption Agreement (the "***Assignment of Contracts***"), assigning Seller's interest in and under such of the Service Contracts as Buyer elects to assume.

8.2.4. Letter to vendors under assumed Service Contracts informing them of the sale of the Property to Buyer.

8.2.5. A General Assignment of Intangible Personal Property (the "**General Assignment**").

8.2.6. A Conditional Lease Termination Agreement (the "***CLTA***") in a form substantially similar to the CLTA attached hereto as Exhibit "C"

8.2.7. A certificate of non-foreign status, pursuant to Section 1455 of the Internal Revenue Code for the benefit of the Buyer.

8.2.8. A counterpart of the Closing Statement.

8.2.9. Any additional documents reasonably required by the Title Company and/or Buyer's attorney to consummate this transaction.

8.3. Buyer Deliveries at Closing. Buyer, at Buyer's expense, shall deliver to Seller or cause to be delivered to Seller at closing:

8.3.1. The amount due Seller on closing under Article III, by wire transfer of immediately available federal funds, subject to adjustments and prorations required under this Agreement.

8.3.2. A counterpart to the Assignment of Contracts.

8.3.3. A counterpart of the Closing Statement.

8.3.4. Any additional documents reasonably required by the Title Company and/or Seller's attorney to consummate this transaction.

8.4. Prorations. The following items shall be prorated and adjusted as of Midnight of the day prior to the Closing Date or as otherwise provide herein:

8.4.1. General real estate taxes for the then current year relating to the Property shall be prorated as of the Closing Date with due allowance for the maximum discount then available by law. If the Closing shall occur before the tax rate is fixed for the then current year, the apportionment of taxes shall be upon the basis of the tax rate for the immediately preceding year applied to the latest assessed valuation of the Property. In such event, the parties agree to reprorate the taxes within thirty (30) days of demand by either party. This provision shall survive Closing.

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8.4.2. Certified liens for governmental improvements as of the Closing Date, if any, shall be paid in full by Seller and pending liens for governmental improvements as of the end of the Closing Date shall be assumed by Buyer. All other liens for governmental improvements shall be paid by Buyer. "Certified" for this purpose shall be deemed to mean that the improvement has been substantially completed as of the end of the Closing Date.

8.4.3. All insurance policies with respect to the Property shall be cancelled on the Closing Date and not prorated.

8.4.4. Charges for all electricity, steam, gas, sewer, water and other utility services (collectively, the "Utilities") shall be the responsibility of the Seller for periods prior to the Closing Date and, the responsibility of the Buyer for periods after and including the Closing Date. The parties shall cooperate and take such reasonable actions as are necessary to arrange that the billings for all Utilities be billed to the Buyer from and after the Proration Date. If for any reason such changeover in billing is not practicable as of the Proration Date as to any Utility, such Utility shall be prorated on the basis of actual current readings or, if such readings have not been made, on the basis of the most recent bills that are available. If any proration is not based on an actual current reading, then upon the taking of a subsequent actual reading, the parties shall, within ten (10) business days following notice of the determination of such actual reading, readjust such proration and Seller shall promptly deliver to Buyer, or Buyer shall promptly deliver to Seller, as the case may be, the amount determined to be due upon such adjustment.

8.5. Closing Costs. Seller shall pay for the State Documentary Stamps which are required to be affixed to the Warranty Deed, and the cost to record any corrective documents. The Buyer shall pay the cost of recording the Warranty Deed, the cost for the Survey, and the cost for the Owner's Title Policy, including title search fees. Each party shall bear the cost of the fees of their own respective attorneys and other professionals and the cost of their own respective performance under this Agreement.

ARTICLE IX

CONDEMNATION/CASUALTY

9.1. Seller agrees to give Buyer prompt notice of any actual or threatened condemnation of all or part of the Property, or any appurtenance thereto, or of any actual, proposed or threatened modification or termination of the current access to or from the Property.

9.2. If prior to the Closing there shall occur (i) the taking by condemnation of all or such portion of the Property as would materially interfere with Buyer's intended use, in Buyer's sole discretion; or (ii) the material modification or termination of the current access to or from the Property or of sewer or other utility service to or from the Property, then, and in any such event, Buyer may terminate this Agreement by written notice given to Seller within seven (7) days after Buyer has received the notice referred to in Section 9.1 hereof, or at the Closing, whichever is

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earlier. If Buyer does not elect to terminate this Agreement, then the Closing shall take place as herein provided without abatement of the Purchase Price, and there shall be assigned to Buyer at the Closing all of Seller's interest in any condemnation awards which may be payable to Seller on account of any such condemnation and Buyer shall receive a credit at Closing in an amount equal to any such condemnation awards paid to Seller prior to Closing.

9.3. If prior to the Closing there shall occur the taking by condemnation of a portion of the premises which either (i) is not material to the use or enjoyment thereof or (ii) is for the purpose of providing utility services (including sewer) to the Property or the surrounding area; then, and in either such event, Buyer shall have no right to terminate this Agreement, but there shall be assigned to Buyer at the Closing all interest in any condemnation awards which may be payable to Seller on account of any such condemnation, and Buyer shall receive a credit at Closing in an amount equal to any such condemnation awards paid to Seller prior to Closing.

9.4. Casualty. Seller shall promptly notify Buyer of any casualty affecting the Property prior to Closing. For purposes of this Agreement, a "Material Casualty" shall mean damage to the Property for which the reasonably estimated cost of repair exceeds five percent (5%) of the Purchase Price.

If a casualty occurs, Seller shall have the option, exercisable by written notice to Buyer within ten (10) days after such casualty, to elect to repair and restore the Property at Seller's sole cost and expense. If so elected, Seller shall diligently pursue such repair and restoration.

If Seller elects to repair and restore the Property and such repair and restoration can be completed on or before the Closing Date, then this Agreement shall remain in full force and effect and the parties shall proceed to Closing without adjustment to the Purchase Price.

If Seller elects to repair and restore the Property but such repair and restoration is not completed on or before the Closing Date, then the parties shall nevertheless proceed to Closing as scheduled, and an amount equal to one hundred twenty-five percent (125%) of the reasonably estimated cost to complete such repair and restoration (as determined by a mutually agreed independent contractor or engineer) shall be withheld from Seller's proceeds at Closing and deposited into an escrow pursuant to an escrow agreement reasonably acceptable to Buyer and Seller. Such escrowed funds shall be disbursed to pay the costs of completing such repair and restoration, with any excess funds released to Seller upon completion of the work. If so elected, Seller shall continue to diligently pursue completion of such repair and restoration following Closing.

If Seller does not elect to repair and restore the Property, then Buyer shall proceed to Closing unless the casualty constitutes a Material Casualty, in which event Buyer may elect, by written notice given within ten (10) days after receipt of Seller's casualty notice, to either (i) terminate this Agreement and receive a return of the Deposit, or (ii) proceed to Closing without reduction of the Purchase Price. In either case where Buyer proceeds to Closing (whether or not the casualty is a Material Casualty), Seller shall assign to Buyer all of Seller's right, title, and interest in and to any insurance proceeds payable in connection with such casualty and shall cooperate with Buyer in the prosecution of such claim.

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In all events where Buyer proceeds to Closing following a casualty, Seller shall provide Buyer a credit at Closing for the amount of any applicable insurance deductible; provided, however, that the aggregate of (i) insurance proceeds assigned to Buyer and (ii) any deductible credit provided by Seller shall not exceed the reasonably estimated cost to repair the casualty.

In the event insurance proceeds have not been received as of Closing, Seller shall assign the applicable insurance claim to Buyer, and Buyer shall assume control of such claim following Closing, with Seller reasonably cooperating, at no out-of-pocket cost to Seller. In no event shall Seller be obligated to repair or restore the Property prior to Closing except to the extent Seller affirmatively elects to do so as provided above.

ARTICLE X

DUTIES OF ESCROW AGENT

The Deposit shall be held by the Escrow Agent, in trust, on the terms hereinafter set forth:

10.1. If the Closing takes place under this Agreement, the Escrow Agent shall deliver the Deposit thereon to Seller.

10.2. Subject to the provisions of Section 10.4 below, if the Agreement is terminated in accordance with the terms hereof or if the Closing does not take place under this Agreement by reason of the failure of either party to comply with its obligations hereunder, the Escrow Agent shall deliver the Deposit to the party entitled thereto in accordance with the provisions of this Agreement.

10.3. It is agreed that the duties of the Escrow Agent are only as herein specifically provided and purely ministerial in nature, and the Escrow Agent shall incur no liability whatever except for willful misconduct or gross negligence, as long as the Escrow Agent has acted in good faith. The Seller and Buyer each release the Escrow Agent from any act done or omitted to be done by the Escrow Agent in good faith in the performance of its duties hereunder.

10.4. The Escrow Agent is acting as stakeholder only with respect to the Deposit and the cash to close. If there is any valid dispute as to whether the Escrow Agent is obligated to deliver the Deposit or the cash to close or as to whom the Deposit or cash to close is to be delivered, the Escrow Agent shall not make any delivery, but in such event, the Escrow Agent shall hold same until receipt by it of an authorization in writing, signed by all parties having interest in such dispute, directing the disposition of same; or in the absence of such authorization, the Escrow Agent shall hold the Deposit and/or the cash to close until final determination of the rights of the parties in the appropriate proceedings. If such written authorization is not given or proceedings for such determination are not begun within thirty (30) days of the Closing date and diligently continued, the Escrow Agent shall bring an appropriate action or proceeding to interplead the Deposit. The Escrow Agent shall be reimbursed for all costs and expenses of such action or proceeding, including, without limitation, reasonable attorneys' fees and disbursements, by the party determined not to be entitled to the Deposit and/or the cash to close. Upon making delivery of the

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Deposit and/or the cash to close, the Escrow Agent shall have no further liability. Seller acknowledges that the Escrow Agent also acts as legal counsel to Buyer and can represent Buyer hereunder in the event of any dispute hereunder, concerning the Deposit and/or the cash to close or otherwise, and Seller waives any right to object to same.

ARTICLE XI

DEFAULT

11.1. If Buyer, in breach of provisions of this Agreement, fails to conclude the transaction described herein, or otherwise fails to comply with any of the requirements on the part of the Buyer to be performed hereunder, and Seller is capable of performing hereunder, Seller may retain the Deposit as agreed upon and as liquidated damages as the result of such breach by the Buyer, whereupon the parties shall be released and relieved of all other and further obligations or liabilities hereunder except for the liabilities under Sections 4.1. It is agreed by the parties that such amount being paid to Seller is a fair and reasonable measure of the damages which will be suffered by Seller in the event of such default, the parties recognizing that Seller will, in such event, have relinquished potential offers from other parties to purchase the property, the parties recognizing that such occurrences cannot be subject to the ascertainment of any exact amount of damages. Said liquidated and agreed upon damages are, however, bona fide provisions for such and are not a penalty.

11.2. If Seller defaults in the performance of its obligations under this Agreement, Buyer may elect to receive the return of the Deposit, together with interest accrued thereon; or pursue specific performance.

ARTICLE XII

MISCELLANEOUS

12.1. Notices. All notices, consents, approvals, waivers and elections which any party shall be required or shall desire to make or give under this Agreement shall be in writing and shall be sufficiently made or given when hand delivered, telecopied, mailed by certified mail, return receipt requested, with proper postage affixed, or sent by email addressed to:

As to Seller: FRESH AIRE VENTURES LLC
c/o Sean C. Selk, P.A.
Attn: Sean C. Selk, Esq.
3801 PGA BLVD, STE 600
Palm Beach Garden, FL 33410
Telephone: 561-228-1848
Facsimile: 561-228-1667
Email: sselk@selklaw.com

with copy to:

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Sean C. Selk, Esq.
Sean C. Selk, P.A.
3801 PGA BLVD, STE 600
Palm Beach Garden, FL 33410
Telephone: 561-228-1848
Facsimile: 561-228-1667
Email: sselk@selklaw.com

As to Buyer: TOWN OF JUPITER
Attn: Scott Reynolds, Finance Director
210 Military Trail
Jupiter, Florida 33458
Telephone: 561-746-2327
Fax: _____
Email: scottr@jupiter.fl.us

with copy to: Thomas J. Baird, Esq.
Jones Foster P.A.
4741 Military Trail, Suite 200
Jupiter, FL 33458
Telephone: 561-659-3000
Fax: 561-650-5300
Email: tbaird@jonesfoster.com

As counsel and on behalf of Escrow Agent

or to such other address as any party hereto shall designate by like notice given to the other parties hereto. Notices, consents, approvals, waivers and elections given or made as aforesaid shall be deemed to have been given and received when hand delivered, upon receipt of the telecopy, on the date of receipt or date delivery is refused if mailed by certified mail, return receipt requested, or on the date sent by email.

12.2. The validity of this Agreement and all of its terms or provisions, as well as the rights and duties of the parties hereunder, shall be interpreted and construed to and in accordance with the laws of the State of Florida. Proper venue for any litigation involving this Agreement shall be in Palm Beach County, Florida.

12.3. Time is of the essence with respect to all matters contained herein.

12.4. All time periods will be computed in calendar days.

12.5. The parties hereto agree to execute any and all further instruments and documents and take all such action as may be reasonably required by either party to effectuate the terms and provisions of this Agreement and the transactions contemplated herein.

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12.6. This Agreement constitutes the entire agreement of the parties and the same may not be amended or modified orally. All understandings and agreements heretofore had between the parties are merged in this Agreement which alone fully and completely expresses their understanding.

12.7. All representations and warranties of Seller contained herein shall survive the Closing for a period of six (6) months and shall thereafter terminate and be of no further force or effect. Buyer shall not be entitled to bring any claim for breach of any representation or warranty after the expiration of such survival period.

12.8. For purposes of this Agreement, "Seller's knowledge" shall mean the actual knowledge of the individual executing this Agreement on behalf of Seller, without any duty of inquiry or investigation.

12.9. In no event shall Seller be liable for any consequential, incidental, special, or punitive damages arising out of or relating to this Agreement or the transactions contemplated hereby.

12.10. Notwithstanding anything to the contrary contained herein, Seller shall have no liability to Buyer after Closing except with respect to breaches of Seller's representations and warranties, and Seller's aggregate liability for any and all such claims shall not exceed the amount of the Deposit actually received by Seller.

12.11. Wherever used, the singular number shall include the plural and the plural the singular and the use of any gender shall include the others.

12.12. Failure to insist upon strict compliance with any of the terms, covenants, or conditions hereof shall not be deemed a waiver of such terms, covenants or conditions nor shall any waiver or relinquishment of any right or power hereunder at any one or more times be deemed a waiver or relinquishment of such right or power at any other time or times.

12.13. In the event that any term or provision of this Agreement is determined by appropriate judicial authority to be illegal or otherwise invalid, said provision shall be given its nearest legal meaning or be construed as deleted as such authority determines, and the remainder of this Agreement shall be construed to be in full force and effect.

12.14. The "Effective Date" of this Agreement shall be the date set forth at the outset hereof.

12.15. This Agreement may be executed in counterparts by the parties hereto and each shall be considered an original insofar as the parties are concerned but together said counterparts shall comprise only one Agreement. A facsimile signature shall be accepted as if an original.

12.16. The provisions of this Agreement are to apply to and bind the legal representatives, successors and assigns of the respective parties; provided, however, that without the prior written consent of Seller, Buyer shall not have the right to assign or transfer its interest under this Agreement, or to direct that the Property be conveyed to a person or entity other than Buyer.

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12.17. All terms, covenants and conditions contained herein are and shall be binding upon in and or to the benefit of the respective parties hereto and those successors and assigns.

12.18. Buyer and Seller each represent and warrant to the other that it has not had any dealings with any broker licensed in Florida in connection with the negotiations of this Agreement and/or the consummation of the purchase and sale contemplated hereby except Illustrated Properties, representing Seller, and Premier Properties of South Florida, representing Buyer, and no broker or other person, firm or entity is entitled to any commission in connection with this transaction. If a claim for brokerage in connection with this transaction is made by any broker, salesman or finder claiming to have dealt through or on behalf of one of the parties hereto (the said party being called the "Indemnitor"), said Indemnitor shall indemnify, defend and hold the other party hereunder and such other party's officers, directors, agents and representatives (collectively the "Indemnities") harmless from any liabilities, damages, claims, costs, fees and expenses whatsoever (including reasonable attorneys' fees and court costs) with respect to said claim for brokerage. This provision shall survive the termination of this Agreement.

12.19. BUYER AND SELLER HEREBY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE THE RIGHTS THAT THEY MAY HAVE TO TRIAL BY JURY IN RESPECT OF ANY LITIGATION BROUGHT BY ANY PARTY BASED UPON, OR ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT AND ANY DOCUMENTS EXECUTED IN CONJUNCTION THEREWITH, OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER ORAL OR WRITTEN) OR ACTIONS OF BUYER OR SELLER ARISING IN CONNECTION WITH THIS AGREEMENT. THIS PROVISION IS A MATERIAL INDUCEMENT FOR SELLER ENTERING INTO THIS AGREEMENT.

[SIGNATURE PAGE TO FOLLOW]

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IN WITNESS WHEREOF, the parties have set their hands and respective seals to be attached hereto on the day and year first above written.

SELLER:

FRESH AIRE VENTURES LLC

By: Signed by: 6108479E8B094CD...
Print Name: Christopher Willette
Title: Authorized Member/Manager
Date Executed: 4/22/2026

BUYER:

TOWN OF JUPITER, a Florida municipality

By: Frank J. Kitzerow (Apr 22, 2026 18:15:32 EDT)
Print Name: Frank J. Kitzerow
Its: Town Manager

Date Executed: Apr 22, 2026

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RECEIPT

The undersigned Escrow Agent acknowledges receipt of the Initial Deposit in the amount of Fifty Thousand and 00/100ths Dollars ($50,000.00) to be held as the Initial Deposit pursuant to the foregoing Agreement.

ESCROW AGENT:

JONES FOSTER P.A.

By:_____
Print Name:_____
Date Executed:_____

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EXHIBIT "A"

LEGAL DESCRIPTION – PROPERTY

Lot 33, JUPITER PARK OF COMMERCE, PHASE IIB, according to the plat thereof as recorded in Plat Book 78, Page 28 of the Public Records of Palm Beach County, Florida.

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EXHIBIT "B"

PERMITTED EXCEPTIONS

1. General or special taxes and assessments required to be paid in the year 2026 and subsequent years, which are not yet due and payable.
2. All matters contained on the Plat of Jupiter Park Commerce, Phase IIB, as recorded in Plat Book 78, Page 28, Public Records of Palm Beach County, Florida.
3. Covenants, conditions and restrictions recorded August 30, 1985 in O.R. Book 4639, Page 927; Joinder and Consent recorded in O.R. Book 4719, Page 1602; Modifications recorded in O.R. Book 5475, Page 398; Amendments recorded in O.R. Book 5801, Page 258, O.R. Book 6574, Page 1405, O.R. Book 8982, Page 986, O.R. Book 9981, Page 1255 (Jupiter Park of Commerce Phase IIB added), and O.R. Book 10736, Page 1706, Marketable Record Title Act Notice recorded in O.R. Book 31136, Page 109, Public Records of Palm Beach County, Florida, which contain provisions creating use, easements and assessments.
4. Easement to Florida Power and Light Company recorded in O.R. Book 20208, Page 1885, Public Records of Palm Beach County, Florida
5. Easement to the Town of Jupiter, Florida, for the construction, operation and maintenance of water utility appurtenances, recorded in O.R. Book 20566, Page 1356, together with Bill of Sale recorded in O.R. Book 20566, Page 1353, Public Records of Palm Beach County, Florida.
6. Easement in favor of South Indian River Water Control District for the purpose of access and drainage maintenance, contained in instrument recorded in O.R. Book 4841, Page 689, Public Records of Palm Beach County, Florida.
7. Sewer Easement in favor of Loxahatchee River Environmental Control District, contained in instrument recorded in O.R. Book 4473, Page 525 and O.R. Book 5002, Page 80, Public Records of Palm Beach County, Florida.
8. Agreement between Loxahatchee River Environmental Control District and Jupiter West, Inc. for the purpose of wastewater facilities, as recorded in O.R. Book 4445, Page 1181, Public Records of Palm Beach County, Florida.
9. Terms and conditions of Memorandum of Agreement with Developer for Water Service between Jupiter West, Inc. and the Town of Jupiter, Florida as recorded in O.R. Book 4740, Page 557, Public Records of Palm Beach County, Florida.
10. Terms and conditions of Memorandum of Agreement with South Indian River Water Control District for Water Service recorded in O.R. Book 8582, Page 1178; Resolution Approving Agreement recorded in O.R. Book 8582, Page 1183, Public Records of Palm Beach County, Florida.
11. Terms, conditions and lien rights contained in Agreement between Loxahatchee River Environmental Control District and South Indian River Water Control District for the purpose of wastewater system, as recorded in O.R. Book 8678, Page 266, Public Records of Palm Beach County, Florida.
12. Notice of Lien Rights of The Loxahatchee River Environmental Control District recorded August 26, 1986 in O.R. Book 4984, Page 1254 and Revised Notice of Lien Rights recorded December 9, 1991 in O.R. Book 7048, Page 655 together with Second Revised Notice of Lien Rights recorded April 3, 1992 in O.R. Book 7187, Page 1712, Public Records of Palm Beach County, Florida.
13. Chapter 86-430, House Bill No. 1064, recorded in O.R. Book 4984, Page 1256, Revised

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Notice recorded in O.R. Book 7048, Page 656, Public Records of Palm Beach County, Florida.

14. Final Judgment concerning Septic Tank Permits recorded in O.R. Book 1993, Page 192, Public Records of Palm Beach County, Florida.

15. Terms and conditions of Memorandum of Agreement with South Indian River Water Control District for Water Service recorded in O.R. Book 7690, Page 99; Resolution Approving Agreement recorded in O.R. Book 7690, Page 82, Public Records of Palm Beach County, Florida

16. Terms and conditions of Interlocal Agreement South Indian River Water Control District and the Town of Jupiter, for the purpose of drainage and water service recorded in O.R. Book 7690, Page 86, Public Records of Palm Beach County, Florida.

17. Ordinances of the Town of Jupiter providing for annexation of land, recorded in O.R. Book 4001, Page 655, and O.R Book 4020, Page 1502, Public Records of Palm Beach County, Florida.

18. Affidavit of Exemption for Subdivision and Platting Regulation recorded in O.R. Book 5675, Page 1831, and Official Record Book 5686, Page 1778, Public Records of Palm Beach County, Florida.

19. Judgments extending Corporate Life of the South Indian River Water Control District recorded in O.R. Book 3417, Page 407, and O.R. Book 3417, Page 412, Public Records of Palm Beach County, Florida.

20. Order approving report of Improvement Plan of the South Indian River Water Control District recorded in O.R Book 6740, Page 366, Public Records of Palm Beach County, Florida.

21. Unity of Title recorded in O.R. Book 19438, Page 912, Public Records of Palm Beach County, Florida.

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AN APPRAISAL OF

THE OFFICE/WAREHOUSE PROPERTY
LOCATED IN THE JUPITER COMMERCE PARK
AT 3126 JUPITER PARK DRIVE
IN THE TOWN OF JUPITER,
PALM BEACH COUNTY, FLORIDA

FILE NUMBER 26-87681-REVISED

PREPARED FOR

THE TOWN OF JUPITER

AS OF

APRIL 1, 2026

BY
STEPHEN D. SHAW, MAI, AI-GRS
CALLAWAY & PRICE, INC.

Callaway & Price, Inc.

Real Estate Appraisers and Consultants
Licensed Real Estate Brokers
www.callawayandprice.com

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Curtis L. Phillips, MAI
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Phone (321) 726-0970

Curtis L. Phillips, MAI
Cert Gen RZ2085
c.phillips@callawayandprice.com

April 8, 2026

Mr. Scott Reynolds
Finance Director
Town of Jupiter
210 Military Trail
Jupiter, FL 33458

Dear Mr. Reynolds:

We have made an investigation and analysis of the office/warehouse property located in the Jupiter Commerce Park at 3126 Jupiter Park Drive, Jupiter, Palm Beach County, Florida. The Subject comprises an office/warehouse building containing 30,377 gross and net rentable square feet situated on a 1.92-acre industrially zoned site. The Subject is currently encumbered by a non-arm's length lease between the owner and a related entity and is currently essentially vacant. We have given no consideration to the existing lease. The Subject Property will be further described both narratively and legally within the Appraisal Report.

The purpose of this investigation and analysis was to provide our opinion of the Market Value of the Fee Simple Estate of the Subject Property as of April 1, 2026.

This report has been prepared for our client, the Town of Jupiter. The intended use was to assist the client with internal decision making. The scope of work performed is specific to the needs of the intended user and the intended use. No other use is intended, and the scope of work may not be appropriate for other uses.

The scope of work performed included a complete analysis of the Subject Property. A detailed scope of work description can be found in the body of this report.

Based upon the scope of the assignment, our investigation and analysis of the information contained within this report, as well as our general knowledge of real estate valuation procedures and market conditions, it is our opinion that:

The Market Value of the
Fee Simple Estate of
The Subject Property
As of April 1, 2026 was: **$10,800,000**

A description of the property appraised, together with an explanation of the valuation procedures utilized, is contained in the body of the attached report. For your convenience, an Executive Summary follows this letter. Your attention is directed to the Limiting Conditions and underlying assumptions upon which the value conclusions are contingent.

Respectfully submitted,

CALLAWAY & PRICE, INC.

Stephen D. Shaw, MAI, AI-GRS

Digitally signed by Stephen D. Shaw, MAI, AI-GRS
DN: cn=Stephen D. Shaw, MAI, AI-GRS, o=Callaway & Price, Inc., ou, email=s.shaw@callawayandprice.com, c=US
Date: 2026.04.08 10:55:17 -04'00'

Stephen D. Shaw, MAI, AI-GRS
Cert Gen RZ1192

Cathleen A. Romaguera

Digitally signed by Cathleen A. Romaguera
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Date: 2026.04.08 10:56:35 -04'00'

Cathleen A. Romaguera, Associate Appraiser
Cert Gen RZ1638

SDS/CAR/js/26-87681-Revised
Attachments

PROPERTY TYPE	:	Office/Warehouse
LOCATION	:	The Subject Property is located in the Jupiter Commerce Park on the south side of the southwestern curve of Jupiter Park Drive, Palm Beach County, Florida. The property address is 3126 Jupiter Park Drive, Jupiter, FL 33458.
DATE OF VALUATION	:	April 1, 2026
DATE OF REPORT	:	April 8, 2026 - Revised
PROPERTY DESCRIPTION:		
LAND	:	1.92 acres (83,800 square feet)
IMPROVEMENTS	:	The Subject Property is improved with a CBS office/warehouse building that was constructed in 2006 (20 years old). The building contains 30,377 gross and net rentable square feet of building area with approximately 100% air-conditioned space of which 28% (8,459 square feet) is finished office area. The property was recently extensively renovated and observed to be in good condition for its age and functional for use as an office/warehouse.
ZONING	:	Industrial Park Light Industry, by the Town of Jupiter.
FUTURE LAND USE PLAN	:	General Industrial with a Bioscience Research Overlay, by the Town of Jupiter.
HIGHEST AND BEST USE	:	Continued use of the existing improvements as an office/warehouse building.
VALUE INDICATIONS		
SALES COMPARISON APPROACH	:	$11,000,000
INCOME APPROACH	:	$10,000,000
MARKET VALUE OF THE FEE SIMPLE ESTATE OF THE SUBJECT PROPERTY AS OF APRIL 1, 2026	:	$10,800,000

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ADDENDA

Qualifications:
Stephen D. Shaw, MAI, AI-GRS
Cathleen A. Romaguera, Associate Appraiser

CERTIFICATION

We certify that, to the best of our knowledge and belief:

1. The statements of fact contained in this report are true and correct.

2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

3. We have no present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.

4. We have not performed services, as an appraiser or in any other capacity, regarding the property that is the subject of this appraisal report within the three-year period immediately preceding the agreement to perform this assignment.

5. We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.

6. Our engagement in this assignment was not contingent upon developing or reporting predetermined results.

7. Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

8. The analyses, opinions, and conclusion were developed, and this report was prepared, in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP) and The Interagency Appraisal and Evaluation Guidelines, December 10, 2010.

9. Stephen D. Shaw, MAI, AI-GRS has made a personal inspection of the property that is the subject of this report. Cathleen A. Romaguera is signing the report having not inspected the property.

10. No one provided significant real property appraisal assistance to the persons signing this certification.

11. The use of this report is subject to the requirements of the State of Florida relating to review by the Florida Real Estate Appraisal Board.

12. This appraisal assignment was not based on a requested minimum valuation, a specific valuation, or the approval of a loan.

13. The reported analyses, opinions and conclusions were developed, and this report was prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.

14. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

15. As of the date of this report, Stephen D. Shaw, MAI, AI-GRS has completed the continuing education program for Designated Members of the Appraisal Institute.

Stephen D. Shaw, MAI, AI-GRS

Digitally signed by Stephen D. Shaw, MAI, AI-GRS
DN: cn=Stephen D. Shaw, MAI, AI-GRS, o=Callaway & Price, Inc., ou, email=s.shaw@callawayandprice.com, c=US
Date: 2026.04.08 10:55:50 -04'00'

Stephen D. Shaw, MAI-AI-GRS
Cert Gen RZ1192

Cathleen A. Romaguera

Digitally signed by Cathleen A. Romaguera
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Date: 2026.04.08 10:56:09 -04'00'

Cathleen A. Romaguera, Associate Appraiser
Cert Gen RZ1638

GENERAL ASSUMPTIONS

1. Unless otherwise stated, the value appearing in this appraisal represents the opinion of the Market Value or the Value Defined AS OF THE DATE SPECIFIED. Market Value of real estate is affected by national and local economic conditions and consequently will vary with future changes in such conditions.

2. The value opinion in this appraisal report is gross, without consideration given to any encumbrance, restriction or question of title, unless specifically defined.

3. It is assumed that the title to the premises is good; that the legal description is correct; that the improvements are entirely and correctly located on the property described and that there are no encroachments on this property, but no investigation or survey has been made.

4. No responsibility is assumed for matters legal in nature, nor is any opinion of title rendered. No right to expert testimony is included, unless other arrangements have been completed. In the performance of our investigation and analysis leading to the conclusions reached herein, the statements of others were relied on. No liability is assumed for the correctness of these statements; and, in any event, the appraiser's total liability for this report is limited to the actual fee charged.

5. No rights to expert witness testimony, pre-trial or other conferences, depositions, or related services are included with this appraisal. If as a result of this appraisal process Callaway and Price, Inc., or any of its principals, its appraisal consultants or experts are requested or required to provide any litigation services, such shall be subject to the provisions of the engagement letter or, if not specified therein, subject to the reasonable availabilty of Callaway and Price, Inc. and/or said principals or appraisers at the time and shall further be subject to the party or parties requesting or requiring such services paying the then applicable professional fees and expenses of Callaway and Price, Inc. either in accordance with the engagement letter or arrangements at the time, as the case may be.

6. Any material error in any of the data relied upon herein could have an impact on the conclusions reported. We reserve the right to amend conclusions reported if made aware of such error. Accordingly, the client-addressee should carefully review all assumptions, data, relevant calculations, and conclusion within 30 days of delivery of this reported and should immediately notify us of any questions or errors.

7. The market value reported herein assumes that all taxes and assessments have been paid and assumes a fee simple interest unless otherwise reported. The body of the report will define the interest appraised if it differs.

8. Neither all nor any part of the contents of this report (especially any conclusions, the identity of the appraiser or the firm with which he is connected, or any reference to the Appraisal Institute or any of its designations) shall be disseminated to the public through advertising media, public relations media, news media, sales media or any other public means of communication without our prior written consent and approval.

9. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures which would render it more or less valuable. The appraiser assumes no responsibility for such conditions or the engineering which might be required to discover these factors.

10. Our opinion of value was based on the assumption of competent marketing and management regarding the property. If there is no competent marketing and management, then the market value opinion herein may not apply.

11. We have utilized the square footage in our analysis as indicated by the Palm Beach County Property Appraiser's indicated square footage of 30,377. Should professional measurements indicate a square footage significantly different, the value herein may be subject to revision.

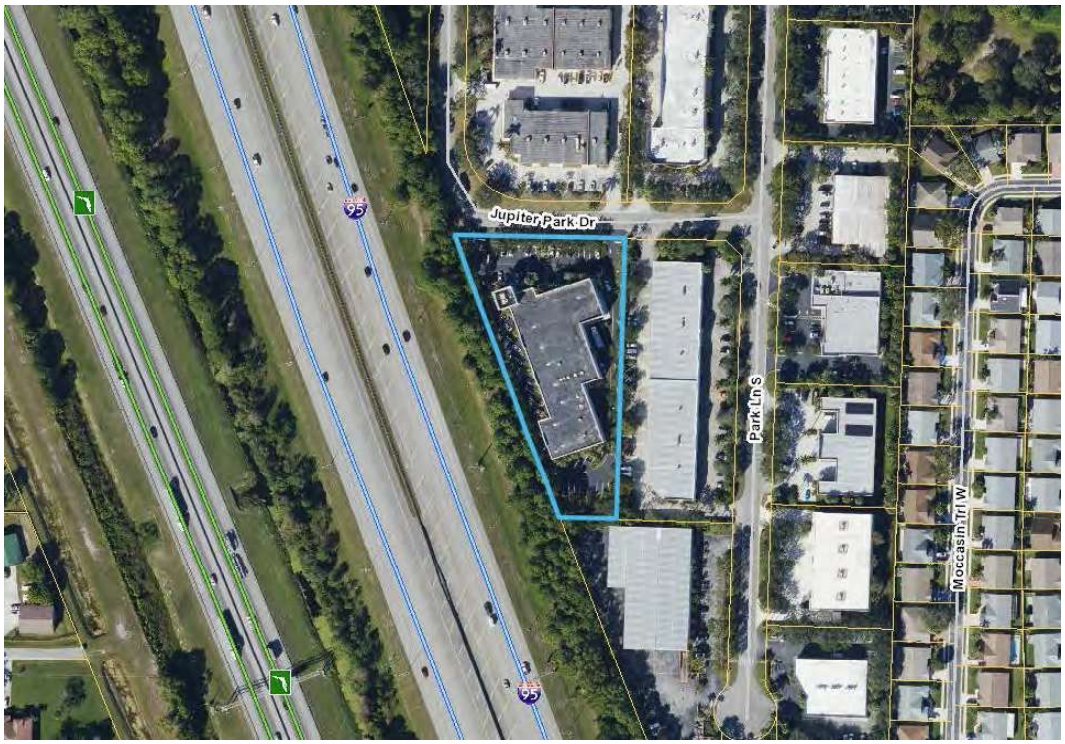
LIMITING CONDITIONS

1. No hypothetical conditions are part of this appraisal assignment.

2. No extraordinary assumptions are part of this appraisal assignment.

3. Unless otherwise stated in this report, the existence of hazardous substances, including without limitation stachybotrys chartarum (mold), asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, was not called to the attention of, nor did the appraisers become aware of such during their inspection. The appraisers have no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraisers, however, are not qualified to test for such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimated is predicated on the assumption that there is no such proximity thereto that would cause a loss in value. We are unaware of very wet conditions that may have existed for days or weeks which are required to grow mold. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them.

4. The Americans with Disabilities Act ("ADA") became effective January 26, 1992. The appraisers have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since the appraisers have no direct evidence relating to this issue, possible noncompliance with the requirements of ADA in estimating the value of the property has not been considered.



AERIAL



VIEW SOUTHEAST AT SUBJECT



VIEW SOUTH AT ENTRANCE INTO BUILDING



VIEW NORTHEAST AT SUBJECT



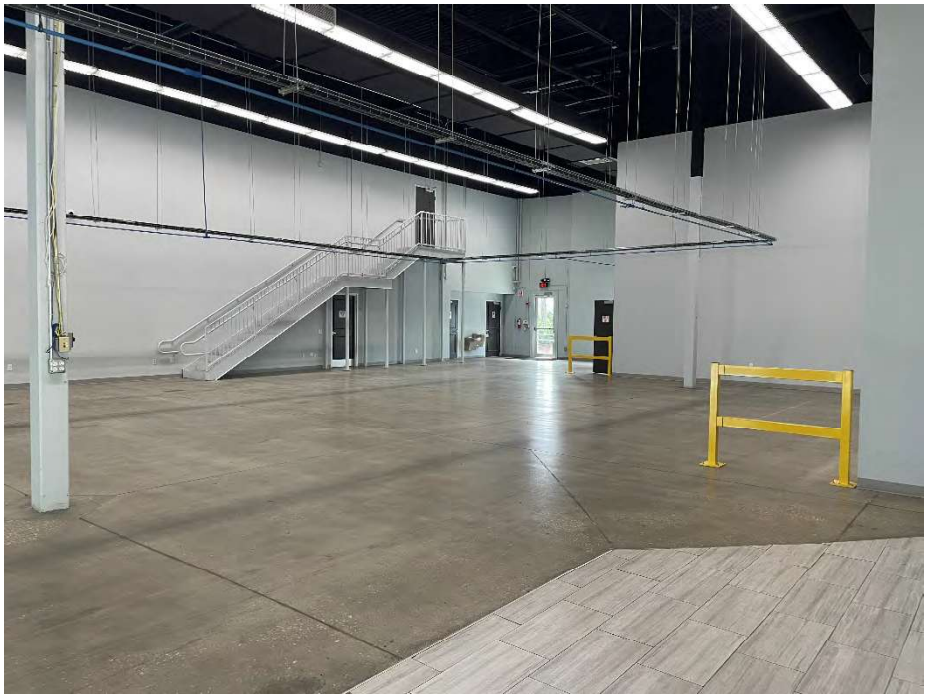
VIEW SOUTH AT ENTRANCE TO PROPERTY FROM JUPITER PARK DRIVE CURVE



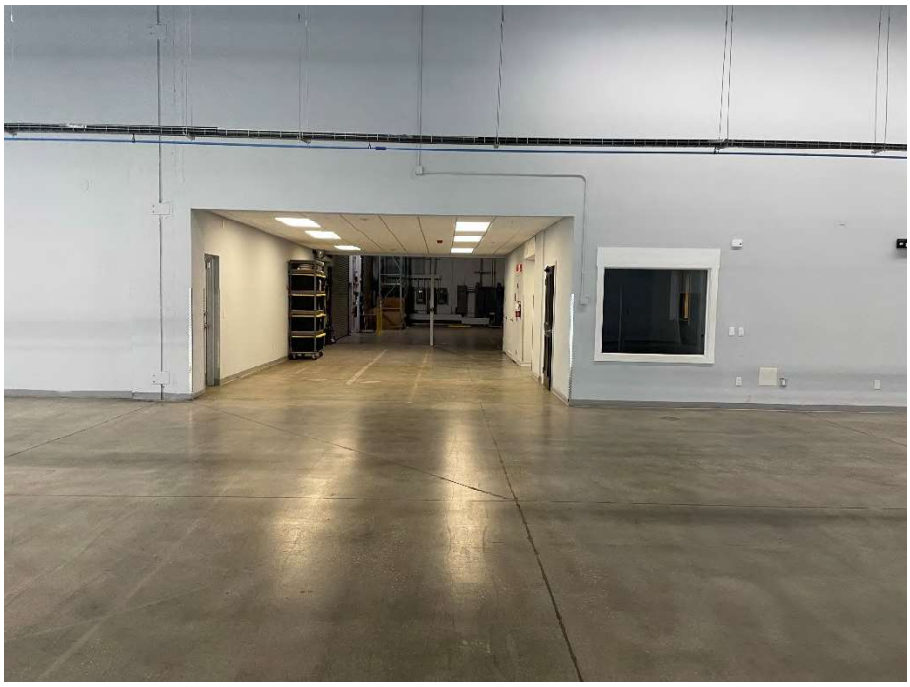
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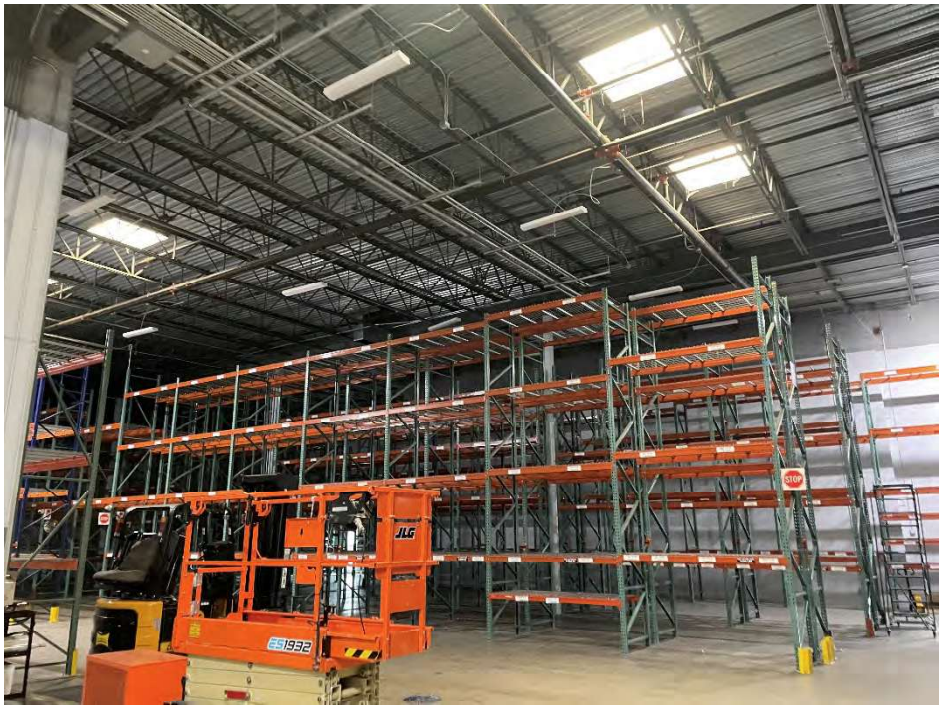
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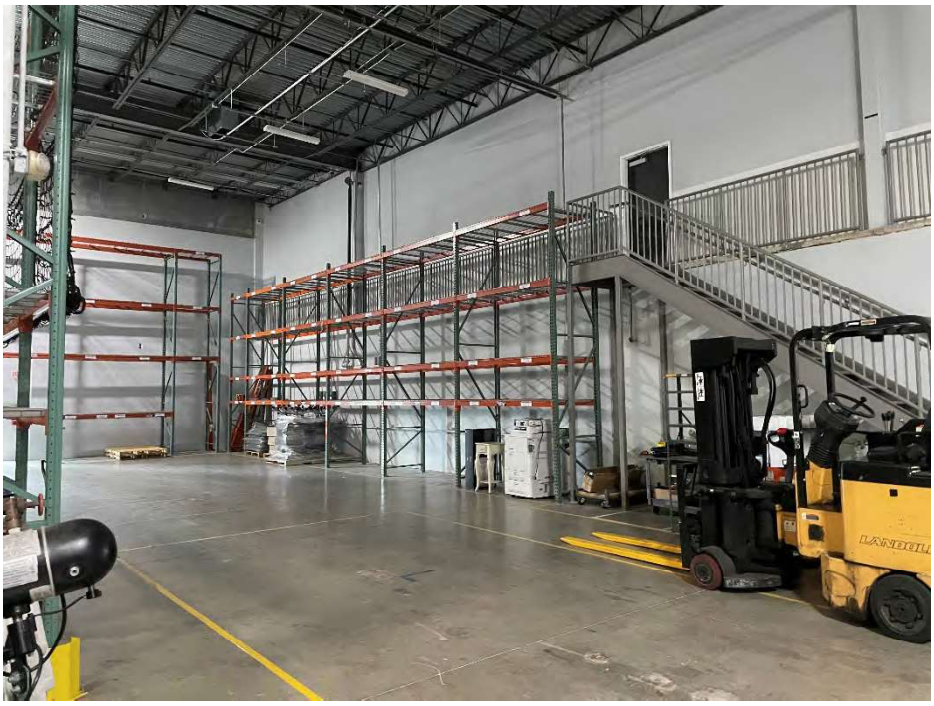
INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



INTERIOR



VIEW EAST AT JUPITER PARK DRIVE. SUBJECT ON RIGHT.



VIEW NORTHWEST AT JUPITER PARK DRIVE FROM SUBJECT

DEFINITION OF THE APPRAISAL PROBLEM

Purpose, Date of Value, and Interest Appraised

The purpose of this investigation and analysis was to provide our opinion of the Market Value of the Fee Simple Estate of the Subject Property as of April 1, 2026.

Intended Use and User of Appraisal

This report has been prepared for our client, the Town of Jupiter. The intended use was to assist the client with internal decision making. The scope of work performed is specific to the needs of the intended user and the intended use. No other use is intended, and the scope of work may not be appropriate for other uses.

Market Value

> "As defined in the Agencies' appraisal regulations, the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> a. Buyer and seller are typically motivated;
>
> b. Both parties are well informed or well advised, and acting in what they consider their own best interests;
>
> c. A reasonable time is allowed for exposure in the open market;
>
> d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
>
> e. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."

Source: The Interagency Appraisal and Evaluation Guidelines, Federal Register, Volume 75, No. 237, December 10, 2010, Pgs. 61-62.

Fee Simple Estate

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute, defines Fee Simple Estate on page 73 as follows:

> "Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat."

Legal Description

Lot 33, Jupiter Park of Commerce, Phase IIB, according to the plat thereof as recorded in Plat Book 78, Page 28, Public Records of Palm Beach County, Florida.

Source: Warranty Deed recorded in Palm beach County Official Record Book 31988 Page 1581.

Exposure Time

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute, defines Exposure Time on pages 67 - 68 as follows:

1. "The time a property remains on the market."

2. "An opinion, based on supporting market data, of the length of time that the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal."

There is a requirement under Standard Two to report exposure time according to the latest USPAP publication. "Exposure Time" is different for various types of property under different market conditions.

We have reviewed the exposure time on the sales contained in the Sales Comparison Approach in this appraisal. Based on that data and the current market, it is our opinion that the Subject Property would have had an exposure time of approximately 12 months or less.

Marketing Time

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute, defines Marketing Time on page 116 as follows:

> "An opinion of the amount of time to sell a property interest at the concluded market value or at a benchmark price during the period immediately after the effective date of an appraisal. Marketing time differs from exposure time, which precedes the effective date of an appraisal."

"Advisory Opinion 7 of the Appraisal Standards Board of The Appraisal Foundation and Statement on Appraisal Standards No. 6, "Reasonable Exposure Time in Real Property and Personal Property Market Value Opinions" address the determination of reasonable exposure and marketing time."

We have reviewed the marketing time on the sales used in this appraisal, as well as other sales and current listings in the market. As in most markets, properties which are priced competitively and are professionally marketed will sell quicker than those which have higher or above market prices. It is our opinion that the Subject Property would have had a marketing period of 12 months or less.

SCOPE OF WORK

According to the 15th Edition of The Appraisal of Real Estate, page 75, "In the valuation process, the identification of the assignment elements leads directly into the determination of the scope of work of an assignment, i.e., the type and extent of research needed to solve an appraisal problem. Professional valuation standards place the responsibility for determining the appropriate scope of work in an appraisal assignment squarely on the shoulders of the appraiser. The scope of work for an assignment is acceptable if it leads to credible assignment results, is consistent with the expectations of parties who are regularly intended users for similar assignments and is consistent with what the actions of an appraiser's peers would be in the same or a similar assignment.

The first step in the appraisal process is the identification of the appraisal problem which included the purpose and date of value, determining the interest being appraised, intended use and user of the appraisal, and identifying the real estate (legal description). This step also determines if the appraisal were subject to any extraordinary assumptions or hypothetical conditions.

The next step involved the inspection of the Subject Property in April 2026 by Stephen D. Shaw, MAI, AI-GRS. Cathleen A. Romaguera has done an exterior only inspection of the Subject. The inspection allowed us to understand the physical components of the Subject Property. In addition to the inspection of the Subject Property, we also began the data-collection process and, subsequently, an analysis of the factors that affect the market value of the Subject Property, including property data analysis. We gathered and reviewed information from the Palm Beach County Property Appraiser's Office, the Town of Jupiter, and the Subject Property owner's representative to understand and describe the Subject Property and its surroundings.

The third step in the process was to determine the Highest and Best Use of the Subject Property. Through the Highest and Best Use analysis, we determined the issues that have an effect on the final opinion of value. To determine the Highest and Best Use, we relied on information obtained from the data-collection process.

The fourth step was the application of the appropriate approaches for the valuation of the Subject Property. No approaches were specifically omitted from this appraisal by the client. The Subject comprises an office/warehouse building containing 30,377 gross and net rentable square feet situated on a 1.92-acre industrially zoned site. The Subject is currently encumbered by a non-arm's length lease between the owner and a related entity and is currently essentially vacant. We have given no consideration to the existing lease. The property is currently vacant and listed for sale at $11,495,000 or $378.41 per square foot.

We have considered all three approaches to value regarding the Subject Property, however, have utilized only two. The Cost Approach was not performed as the Subject Property is improved with a building that was 20 years old as of the appraisal date. The Cost Approach is typically only applicable for improvements that are new or proposed. In addition, the Cost Approach is not considered by participants in this market.

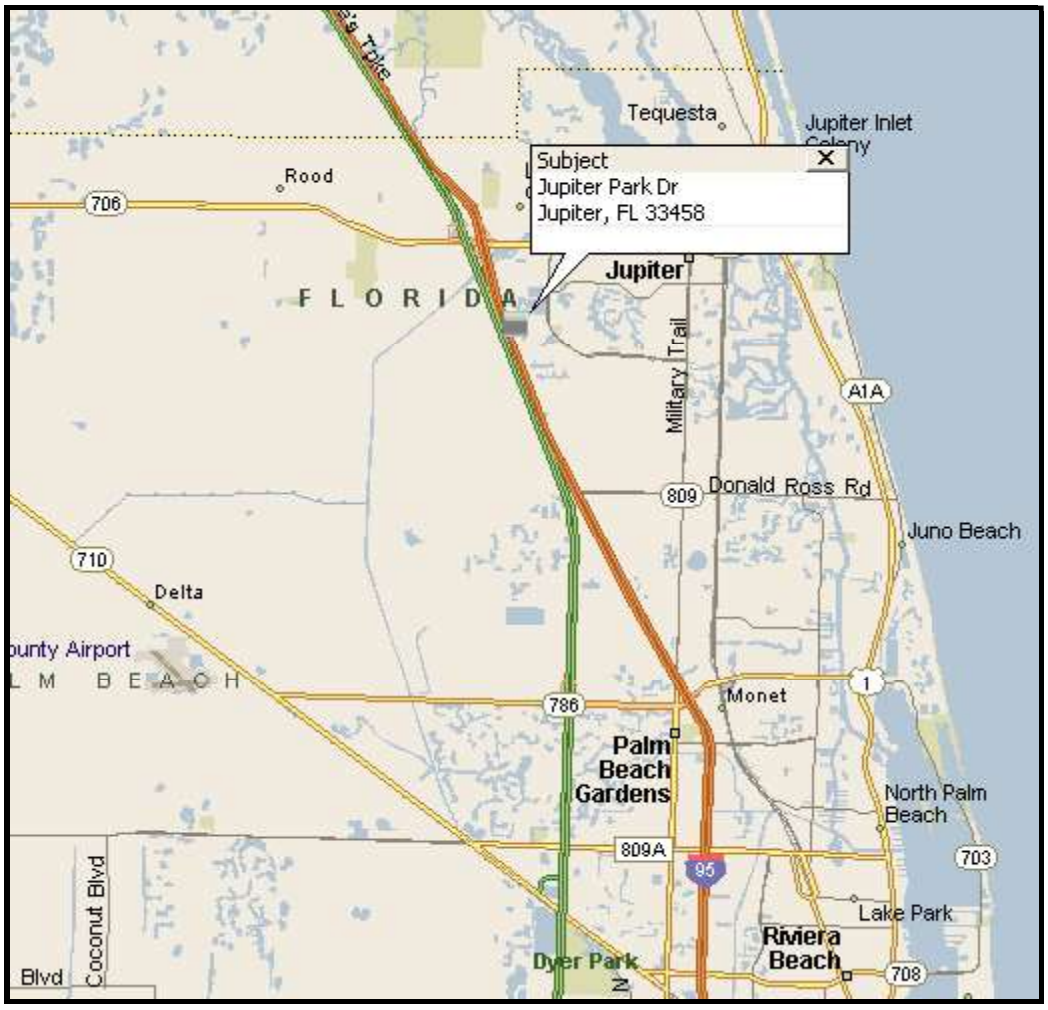
The Sales Comparison Approach has as its premise a comparison of the Subject Property with others of similar design, utility and use that have sold in the market in the recent past. To indicate a value for the Subject Property, adjustments are made to the comparables to account for differences from the Subject. If some time has elapsed between the date of sale and the date of the appraisal, adjustments may be needed to recognize any value changes that may have occurred in the intervening time span. The Sales Comparison Approach was performed and the quantity and quality of the data used in this approach was considered to render a reliable indication of value for the Subject Property.

The Income Capitalization Approach, as used for investment properties, has as its premise the estimation of the amount of net income, which when capitalized in a manner that is commensurate with the risk and life expectancy of the improvements, will indicate the present value of the income stream. In this method, the potential rental income that the property could command in the market is estimated, reduced by an appropriate market supported vacancy factor, and then further reduced by the operating expenses that will be borne by the property owner. The result is the net income the property is expected to earn. The net income, when capitalized by a rate which reflects the market return on investment for similar properties, produces a value indication by this approach. The Direct Capitalization Method is used by market participants for income producing properties. However, it is not always considered by market participants in purchasing property for owner-occupancy. We have performed a Direct Capitalization for the Subject and the value indication produced by this approach was considered to be generally reliable.

Since more than one approach to value was used, a reconciliation of value was performed to arrive at our final opinion of Market Value. The reconciliation involves a weighting of the strengths and weaknesses of the valuation procedures used.

NEIGHBORHOOD DATA

The relationship of the Subject Property with surrounding properties forms the basis of neighborhood analysis. The Appraisal of Real Estate, 15th Edition on page 141 states: "The boundaries of market areas, neighborhoods, and districts identify the areas that influence a subject property's value. These boundaries may coincide with observable changes in land use or demographic characteristics. Physical features such as structure types, street patterns, terrain, vegetation, and lot sizes help to identify land use districts. Transportation arteries (highways, major streets, and railroads), bodies of water (rivers, lakes, and streams), and changing elevation (hills, mountains, cliffs, and valleys) can also be significant boundaries."



The Subject neighborhood is considered to include the area bounded on the north by Indiantown Road, on the south by Donald Ross Road, on the east by the Intracoastal Waterway, and on the west by I-95. The neighborhood includes portions of the Town of Jupiter, and some unincorporated areas of Palm Beach County.

The primary north/south traffic arteries providing access to and through the Subject neighborhood are Alternate A1A, Military Trail and Central Boulevard. Alternate A1A is a major commuter route, which begins at County Line Road (north of the Subject neighborhood), extends southerly to Northlake Boulevard (south of the Subject neighborhood). Military Trail is an arterial roadway which begins at Indiantown Road and traverses south through Palm Beach County and into Broward County. Central Boulevard begins at Indiantown Road and runs south through the Abacoa development, to its termination at PGA Boulevard.

Frederick Small Road, Donald Ross Road and Indiantown Road (State Road 706) provide east/west travel, which is restricted mostly to local streets within the Subject neighborhood. Access to Interstate 95 and Florida's Turnpike is provided via Donald Ross Road and Indiantown Road.

The predominant property use within the neighborhood is residential, with numerous single and multifamily developments. Industrial development is situated mainly in the Jupiter Commerce Park, and the Pennock Industrial Park, on the south side of Indiantown Road. Commercial development within the Subject neighborhood is concentrated primarily along Indiantown Road, Donald Ross Road and Military Trail.

The development which has had the greatest impact on the neighborhood in the past is Abacoa. This project is located in southern Jupiter and contains approximately 2,055 acres. The project contains 6,280 dwelling units, of which 3,926 are detached single family, with the remaining 2,354 units being multifamily. The development is nearly built out.

The community also contains 608 recreational acres, including an 18-hole public golf course, a skate park, nature preserve lands, and 167 acres of institutional land, and includes three public schools. The project also has 142 acres of commercial acreage situated throughout the community. However, its focal point is the "Abacoa Town Center" with retail/office space, apartments/condominiums, and the Roger Dean Chevrolet Stadium. The stadium is Spring Training home to the Major League St. Louis Cardinals and Florida Marlins and home to the Jupiter Hammerheads and Palm Beach Cardinals minor league baseball teams.

Further, Florida Atlantic University (FAU) has its northern campus in Abacoa. This campus of FAU has the capacity to accommodate 4,900 students and is an Honors College and offers an accredited medical school. Additionally, the Scripps Research Institute (SRI) has developed a facility on 30 acres of land within FAU's Abacoa campus with room for expansion on 70 acres of the Alton parcel. Scripps Florida Biotechnology Research Institute constructed three buildings which contain 364,000 square feet on FAU's campus. The Max Planck Florida Institute is a 100,000 square foot high-tech laboratory adjacent to Scripp's. The Max Planck Society for the Advancement of Science is a Munich-based, internationally renowned non-profit research organization that has created more than 1,800 jobs and helped establish the region as a biotech research hub.

Also planned is the new Alan B. Miller Medical Center hospital, which is currently under construction, just south of the Subject neighborhood. The project is located between I-95 and Pasteur Boulevard, and between Donald Ross Road and Hood Road. The hospital is to contain 365,000 square feet and 300 beds. Groundbreaking occurred in March 2023 and the facility is expected to open in 2026.

Existing healthcare facilities are currently provided by the Jupiter Medical Center, which is located directly a short distance north of the Subject Property. Jupiter Medical Center recently completed an expansion program in early 2026 with the new 5-story $135 million Jayne Donahue Patient Care Tower.

All levels of the Palm Beach County Public School System are available and located within, south and west of the Subject neighborhood in and around the Town of Jupiter. The Town of Jupiter currently also has approximately 8 private schools. The Town also offers numerous parks and recreational opportunities.

Conclusion

The Subject neighborhood is a portion of the Jupiter area of northern Palm Beach County. The character of the Subject neighborhood is a relatively good mix of both commercial and residential development, with a limited amount of industrial development. This area of northern Palm Beach County is generally considered to be prestigious and desirable. The character of the neighborhood is not expected to change substantially, and property values are expected to continue to increase/stabilize. In our opinion, the long-term outlook for the Subject neighborhood remains positive; the area should continue to see value appreciation.

PALM BEACH/JUPITER INDUSTRIAL MARKET OVERVIEW

Overview

Palm Beach Industrial

12 Mo Deliveries in SF	12 Mo Net Absorption in SF	Vacancy Rate	Market Asking Rent Growth
$813.6K	-$219.7K	7.3%	-

Palm Beach's trailing 12-month industrial net absorption has slowed to -220,000 SF, down from elevated levels of 2.2 million SF during early 2022. Absorption of new space, built since 2023, has driven the bulk of positive gains over the last year, with older properties seeing net move-outs.

Smaller properties of less than 100,000 SF have seen a continual softening in occupancy since 2023, resulting in rising vacancies from a low of 2.6% in 2022 to 7.3% as of the second quarter of 2026. That said, despite a slower economic environment weighing on lease volume, there is still limited availability of existing space, with vacancies remaining below the U.S. average of 7.6%.

Palm Beach's tight market conditions have provided landlords with enough bargaining power to increase rents by 2.1% over the past year, above U.S. average gains of 1.2%. Despite recent gains, slowing demand and rising vacancies have resulted in a moderation in rent gains from peak levels of over 10% year-over-year recorded in 2022. Further deceleration is likely as higher interest rates weigh on economic growth.

Modern logistics space is scarce in Palm Beach, with 10% of inventory being built since 2010 versus 23% on average across the U.S. However, with 810,000 SF underway, the area continues to see some supply, in line with average annual under-construction square footage of 1.3 million over the last five years. Recent supply additions have also impacted vacancies, with over 1.5 million SF of space available in properties built since 2020.

Further deliveries will drag on vacancy, as over 70% of space remains available in properties underway. Despite this recent rise, vacancies are expected to remain at or below 6% and below the U.S. average over the near-term forecast.

The Palm Beach industrial market remains a critical logistics hub, providing access to the large population pool in South Florida, the ninth-largest U.S. metropolitan statistical area. Despite ranking fourth after Jaxport, PortMiami, and Port Everglades in containerized cargo, the Port of Palm Beach provides significant infrastructure for businesses. The rise of buying power in Palm Beach and a lack of available space in Fort Lauderdale and Miami should continue to help drive businesses northward into the market.

Although sales volume has moderated after a historic boom in 2021-22, annual activity totals $618 million, above long-term average annual volume of $446 million over the past 10 years. Additionally, despite an interest rate-driven cap rate expansion, a limited supply of space and healthy demand should continue to result in rent growth and value outperformance relative to other U.S. markets with more significant imbalances between demand and supply.

KEY INDICATORS

Current Quarter	RBA	Vacancy Rate	Market Asking Rent	Availability Rate	Net Absorption SF	Deliveries SF	Under Construction
Logistics	48,692,806	9.0%	$17.03	9.0%	(114,329)	0	306,744
Specialized Industrial	12,029,363	3.1%	$18.23	8.2%	0	0	499,991
Flex	11,415,743	4.5%	$22.25	4.6%	(3,110)	0	0
Market	**72,137,912**	**7.3%**	**$18.05**	**8.2%**	**(117,439)**	**0**	**806,735**

Annual Trends	12 Month	Historical Average	Forecast Average	Peak	When	Trough	When
Vacancy	-	5.1%	6.9%	10.9%	2009 Q4	2.1%	2018 Q3
Net Absorption SF	-$219.7K	666,513	747,010	2,281,215	2005 Q3	(2,353,382)	2009 Q3
Deliveries SF	$813.6K	906,512	823,623	2,527,887	2024 Q3	31,589	2013 Q4
Market Asking Rent Growth	-	3.3%	3.4%	10.3%	2022 Q3	-3.6%	2009 Q4
Sales Volume	$618.2M	$264.8M	N/A	$834.4M	2022 Q2	$36.5M	2010 Q1

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Overview

Jupiter Industrial

12 Mo Deliveries in SF	12 Mo Net Absorption in SF	Vacancy Rate	Market Asking Rent Growth
$0	-$58.5K	3.4%	-

The Jupiter industrial submarket has a vacancy rate of 3.4% as of the second quarter of 2026. Over the past year, the submarket's vacancy rate has changed by 2.0%, a result of no net delivered space and -58,000 SF of net absorption.

Jupiter's vacancy rate of 3.4% compares to the submarket's five-year average of 1.5% and the 10-year average of 1.6%. Overall submarket vacancy is forecast to end 2026 at 3.7%.

The Jupiter industrial submarket has roughly 100,000 SF of space listed as available, for an availability rate of 3.5%. As of the second quarter of 2026, there is no industrial space under construction in Jupiter. Nothing has been under construction in the submarket for the past 10 years.

The Jupiter industrial submarket contains roughly 3.0 million SF of inventory. The submarket has approximately 1.7 million SF of logistics inventory, 940,000 SF of flex inventory, and 360,000 SF of specialized inventory.

Market rents in Jupiter are $24.00/SF. Rents average around $25.00/SF for logistics buildings, $23.00/SF for flex properties, and $22.00/SF for specialized assets.

Rents have changed by 1.9% year over year in Jupiter, compared to a change of 2.1% market wide. Market rents have changed by 1.5% in logistics buildings year over year, 2.3% in flex buildings, and 2.7% in specialized buildings. In Jupiter, five-year average annual rent growth is 7.0% and 10-year average annual rent growth is 6.3%. Overall annual rent growth in the Jupiter industrial submarket is forecast to end 2026 at 1.1% compared to the Palm Beach average of 1.2%.

KEY INDICATORS

Current Quarter	RBA	Vacancy Rate	Market Asking Rent	Availability Rate	Net Absorption SF	Deliveries SF	Under Construction
Logistics	1,670,434	5.1%	$24.80	4.4%	(728)	0	0
Specialized Industrial	362,892	0.3%	$22.42	1.8%	0	0	0
Flex	943,453	1.4%	$22.70	2.6%	0	0	0
Submarket	**2,976,779**	**3.4%**	**$23.84**	**3.5%**	**(728)**	**0**	**0**

Annual Trends	12 Month	Historical Average	Forecast Average	Peak	When	Trough	When
Vacancy	-	3.5%	3.9%	8.7%	2000 Q4	0.4%	2022 Q3
Net Absorption SF	-$58.5K	32,543	(12,085)	232,444	2001 Q3	(84,094)	2009 Q3
Deliveries SF	$0	36,162	0	233,230	2008 Q1	0	2026 Q1
Market Asking Rent Growth	-	3.2%	3.5%	9.7%	2022 Q3	-3.1%	2009 Q4
Sales Volume	$45.6M	$15.8M	N/A	$70M	2019 Q2	$725.6K	2010 Q2

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Conclusion

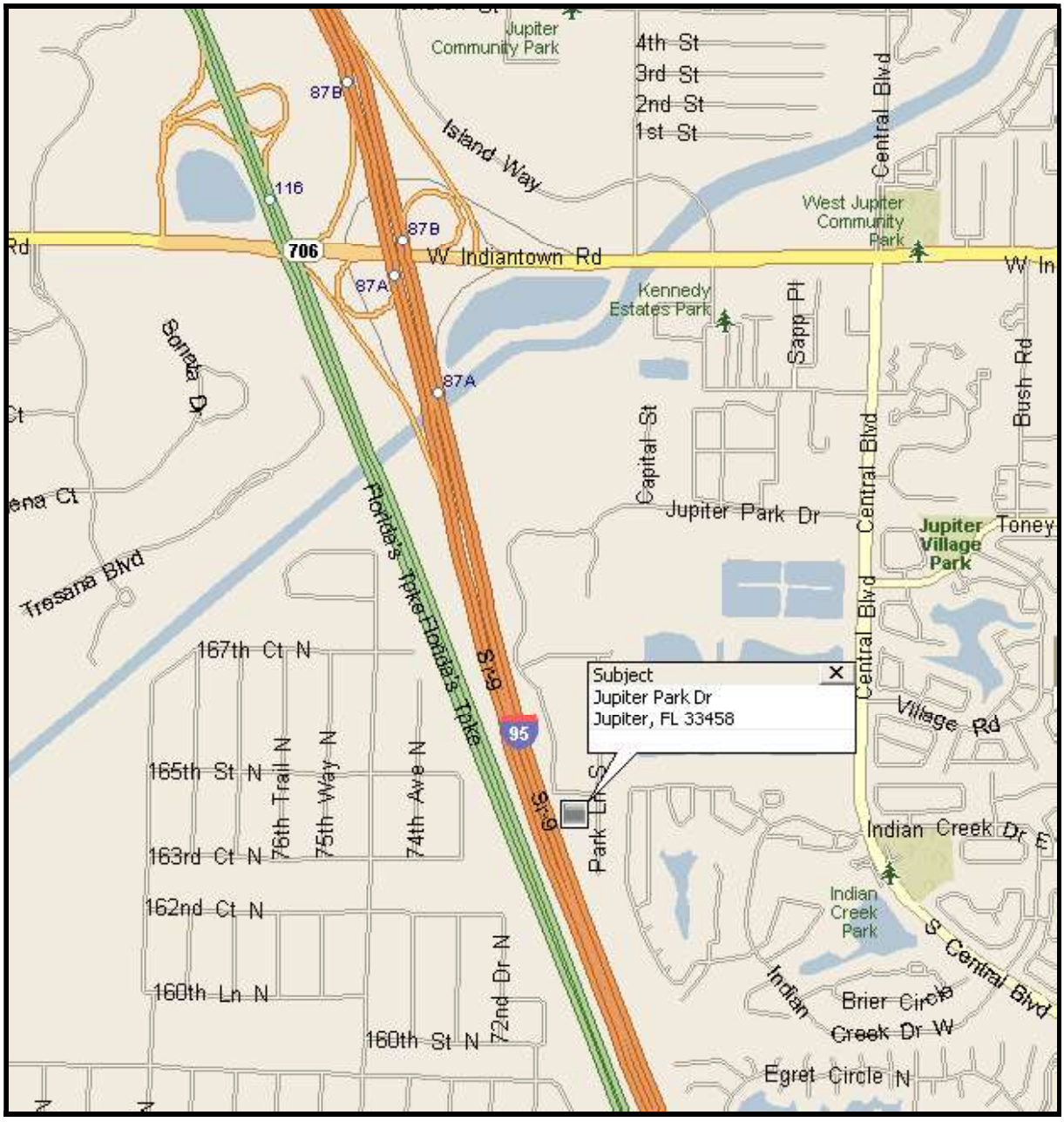
The industrial market in Palm Beach County is generally strong at this time. Vacancies are expected to remain relatively low and rental rates are anticipated to remain rather stable in 2026. Further, the Subject's submarket is strong as well. Therefore, the long-term prospects for market conditions are expected to remain strong and generally stable.

PROPERTY DATA

Location

The Subject Property is located in the Jupiter Commerce Park on the south side of the southwest bend of Jupiter Park Drive in the Town of Jupiter, Palm Beach County, Florida. The property address is 3126 Jupiter Park Drive, Jupiter, FL 33458.

Subject Property Location Map



Zoning

The Subject Property is zoned Industrial Park Light Industry with a Bioscience Research Overlay by the Town of Jupiter. This zoning permits a wide variety of light industrial and research uses. The existing use of the Subject Property as an office/warehouse building is a permitted use in this district.

Land-Use Plan

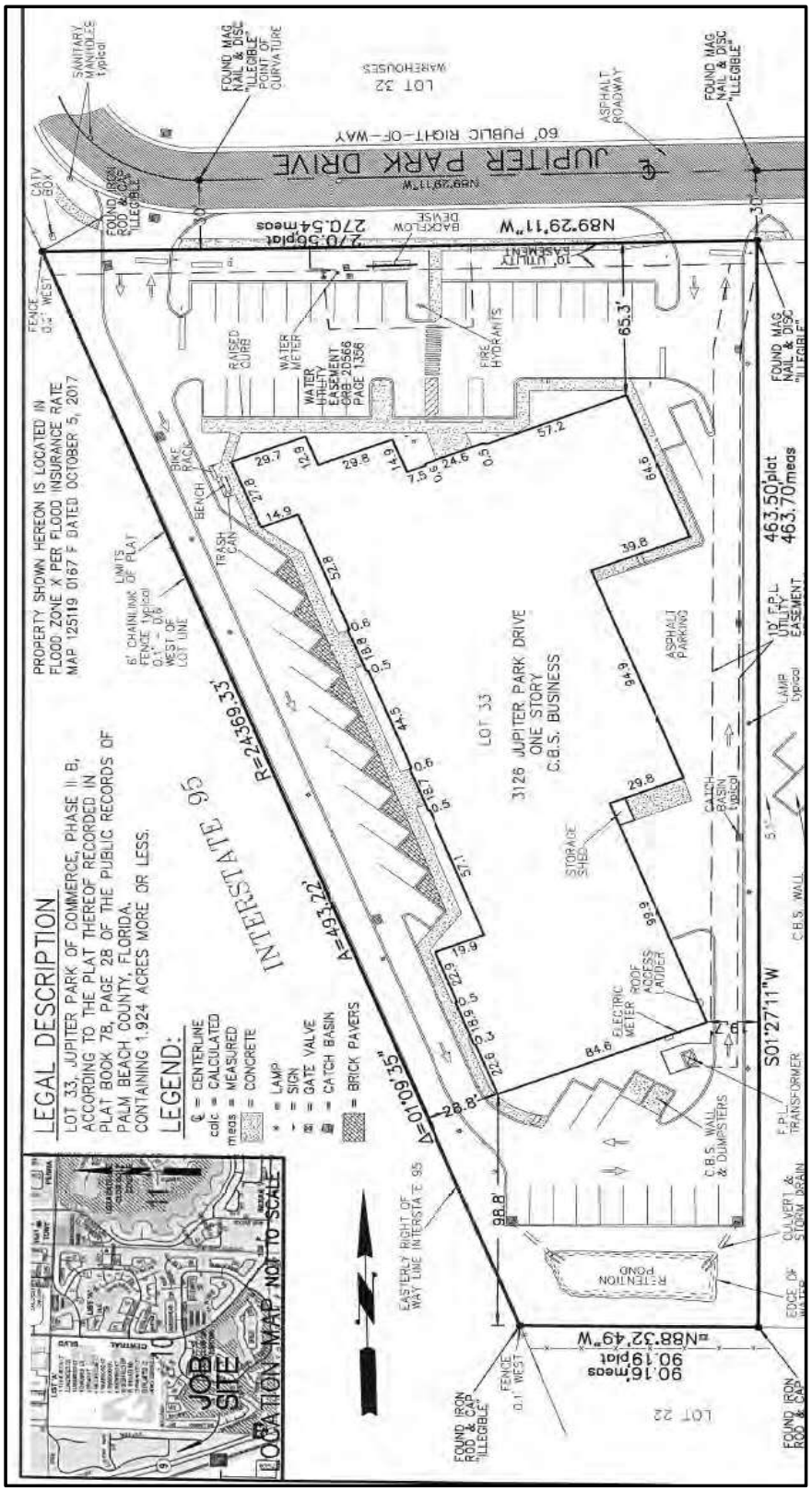
The Subject Property is designated General Industrial by the Town of Jupiter, which is consistent with the current zoning.

Site Size, Shape and Access

The Subject site is irregular in shape most closely resembling triangle in shape and contains 83,800 square feet or 1.92 acres. The site has about 270 feet of frontage on and access to Jupiter Park Drive, which is an asphalt paved street that extends along the north boundary.



Aerial


LEGAL DESCRIPTION
LOT 33, JUPITER PARK OF COMMERCE, PHASE II B, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 78, PAGE 28 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. CONTAINING 1.924 ACRES MORE OR LESS.
LEGEND:
℄ = CENTERLINE
calc = CALCULATED
meas = MEASURED
= CONCRETE
= LAMP
= SIGN
= GATE VALVE
= CATCH BASIN
= BRICK PAVERS
PROPERTY SHOWN HEREON IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP 125119 0167 F DATED OCTOBER 5, 2017
JUPITER PARK DRIVE
60' PUBLIC RIGHT-OF-WAY
N89°29'11"W 270.54meas 270.50plat
3126 JUPITER PARK DRIVE ONE STORY C.B.S. BUSINESS
LOT 33
INTERSTATE 95
R=24369.33'
A=01°09'35"
A=493.72'
S01°27'11"W 463.50plat 463.70meas
N88°32'49"W 90.19plat 90.16meas
LOCATION MAP NOT TO SCALE
JOB SITE
FOUND MAG NAIL & DISC "ILLEGIBLE"
FOUND IRON ROD & CAP "ILLEGIBLE"
FOUND IRON ROD & CAP
EASTERLY RIGHT OF WAY LINE INTERSTATE 95
RETENTION POND
LOT 32
LOT 22
WAREHOUSES
ASPHALT ROADWAY
ASPHALT PARKING
SANITARY MANHOLE typical
CATV BOX
FENCE 0.1' WEST
BACKFLOW DEVICE
10' UTILITY EASEMENT
WATER METER
WATER UTILITY EASEMENT ORB 20566 PAGE 1356
FIRE HYDRANTS
RAISED CURB
BIKE RACK
BENCH
TRASH CAN
6' CHAINLINK FENCE typical 0.1' WEST OF LOT LINE
LIMITS OF PLAT
10' F.P.L. UTILITY EASEMENT
LAMP typical
CATCH BASIN typical
STORAGE SHED
ELECTRIC METER
ROOF ACCESS LADDER
C.B.S. WALL & DUMPSTERS
F.P.L. TRANSFORMER
C.B.S. WALL
CULVERT & STORM DRAIN
EDGE OF WATER

Easements and Deed Restrictions

Based upon a brief review of the Palm Beach County Public Records and our on-site inspection, there are no obvious atypical easements or adverse deed restrictions that would negatively affect the value of the Subject Property.

Utilities

All public utilities are available to the Subject Property with water and sewer service provided by the Town of Jupiter, electricity by Florida Power and Light Company, and telephone and internet service by a variety of providers.

Topography

The Subject Property is level and at the approximate grade of the adjacent lands and streets. The site is all upland and useable with no obvious drainage problems.

Census Tract

FFIEC

2025 FFIEC Geocode Census Report

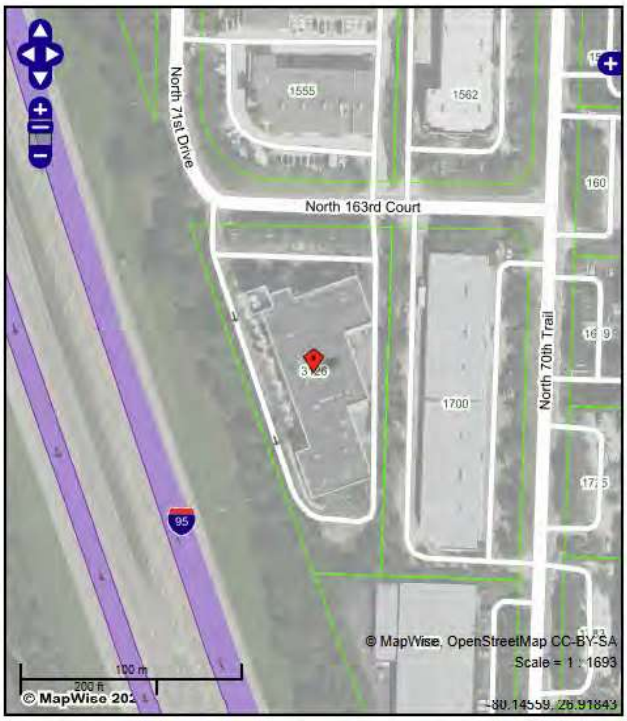
Address: 3126 Jupiter Park Dr, Jupiter, Florida, 33458
MSA: 48424 - WEST PALM BEACH-BOCA RATON-DELRAY BEACH, FL
State: 12 - FLORIDA
County: 099 - PALM BEACH COUNTY
Tract Code: 0002.13

Summary Census Demographic Information

Tract Income Level	Moderate
Underserved or Distressed Tract	No
2025 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	$111,800
2025 Estimated Tract Median Family Income	$86,980
2020 Tract Median Family Income	$62,078
Tract Median Family Income %	77.80
Tract Population	3014
Tract Minority %	43.43
Tract Minority Population	1309
Owner-Occupied Units	860
1- to 4- Family Units	857

Flood Hazard Zone

Address (from parcels)	3126 PARK DR
FEMA Data Source	DFIRM - Digital Flood Information Rate Map
Inside Special Flood Hazard Area?	OUTSIDE SPECIAL FLOOD HAZARD AREA
Risk Level	MODERATE TO LOW RISK AREAS
Flood Zone(s)	X
Description(s)	X = OUTSIDE FLOODPLAIN
Base Flood Elevation	N/A
NFIP Community Name	Town of Jupiter
County	PALM_BEACH
State	Florida
NFIP Community Number	125119
NFIP Map Number or Community Panel Number	12099C0167G
Inside CBRA?	FALSE
CBRA Type	N/A
Map Panel Effective Date	12/20/2024
LOMA/LOMR (yes/no)	UNKNOWN - check map
LOMA/LOMR Date	UNKNOWN - check map



Assessed Value and Taxes

The 2025 assessed value and taxes for the Subject Property were as follows:

2025 Assessed Value and Taxes

Folio Number	Land Market Value	Building Market Value	Total Market Value	Total Assessment	Ad Valorem Taxes	Non Ad Valorem Taxes	Total Taxes
30-42-41-09-03-000-0330	$1,539,491	$4,900,941	$6,440,432	$6,156,193	$106,414	$8,071	$114,485

87681

According to the Palm Beach County Tax Collector web site, the 2025 taxes have been paid.

Property History

The Subject Property has been under the ownership of Fresh Air Ventures, LLC since it was purchased in December 2020 for $5,000,000 or $164.60 per square foot. The Subject was recently renovated in 2025 at a reported cost of over $800,000. The Subject is currently listed for sale at $11,495,000 or $378.41 per square foot. We have not been made aware of any offers on the property.

DESCRIPTION OF IMPROVEMENTS

Land Improvements

As shown below, most of the site that is not covered by the building is asphalt paved for access and parking (53 spaces). There is attractive native landscaping throughout the property.





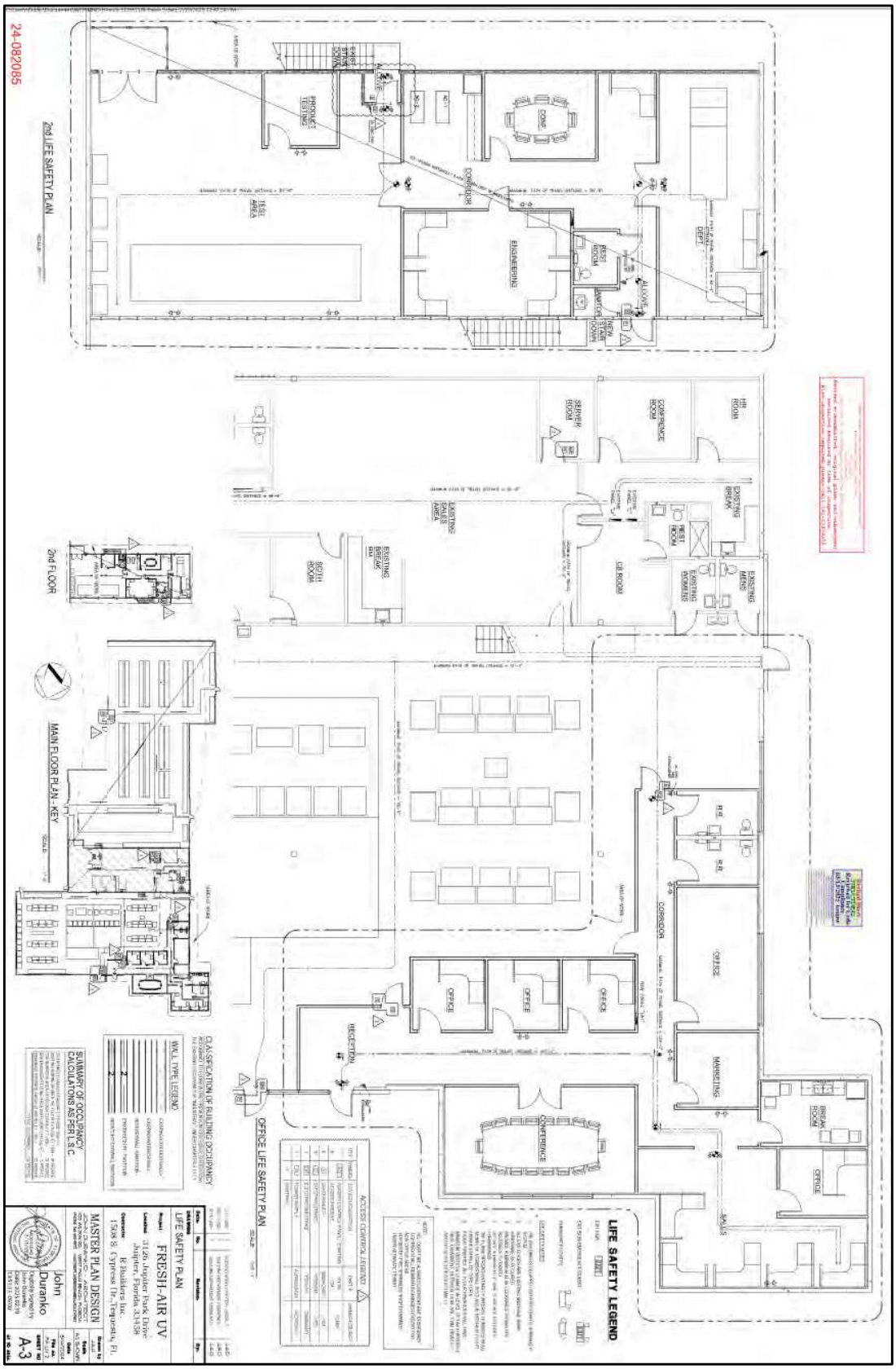
Building Improvements

Type of Building	:	Office/Warehouse
Date of Construction	:	2006. Extensively renovated in 2025.
Type of Construction	:	Concrete Tilt Wall
Roof	:	Flat corrugated metal over metal beams. 21' clear height
Exterior Walls	:	Painted stucco over concrete
Windows	:	Glass in aluminum frames.
Floor	:	Commercial grade carpet, ceramic tile, finished concrete.
Doors	:	Glass store front entry doors in aluminum frames, hollow wood interior doors, 4 grade level roll up metal overhead doors.

Interior Walls	:	Painted drywall and concrete wall
Ceilings	:	The office areas have suspended acoustic ceiling. The warehouse area has 21-foot-high exposed metal beams.
Air Conditioning & Heat	:	100% central air conditioning.
Electricity	:	Adequate
Lighting	:	Recessed fluorescent fixtures in the office and surface-mounted fixtures in the showroom and warehouse
Plumbing	:	Adequate. The building has a fire sprinkler system.
Contains & Condition	:	The Subject is improved with a single CBS office/warehouse building that contains 30,377 square feet of 100% air-conditioned building area of which 28% (8,459 square feet) is finished office space. The property was observed to be in good condition for its age and functional for use as an office/warehouse. The floorplan is shown on the following page.

Based on the physical condition of the property, we estimate that the Subject has an economic life as follows:

Total Economic Life	:	50 years
Actual Age	:	20 years
Estimated Effective Age	:	10 years
Remaining Economic Life	:	40 years
Indicated Depreciation	:	20%


24-082085
2nd LIFE SAFETY PLAN
2nd FLOOR
MAIN FLOOR PLAN - KEY
OFFICE LIFE SAFETY PLAN
LIFE SAFETY LEGEND
LIFE SAFETY PLAN
FRESH-AIR UV
MASTER PLAN DESIGN
John Duranko
A-3
ENGINEERING
CONFERENCE
RECEPTION
MARKETING
SALES
OFFICE
BREAK ROOM
CORRIDOR
SUMMARY OF OCCUPANCY CALCULATIONS AS PER L.S.C.
WALL TYPE LEGEND
CLASSIFICATION OF BUILDING OCCUPANCY

HIGHEST AND BEST USE

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute defines Highest and Best Use on pages 88 - 89 as follows:

1. "The reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity."

To estimate the Highest and Best Use of the Subject, we have considered those uses which are legally permissible, physically possible, financially feasible, and maximally productive. Consideration was given to individual features of the land such as size, shape, location, access to roadways, and the availability of utilities. Consideration was also given to the surrounding land uses and the demand for property in the current real estate market.

In cases where properties are improved, the Highest and Best Use of the site "as though vacant" and the Highest and Best Use of the property "as improved" may be different. This is due to the principle of "contribution" which holds that if an improvement adds value to the site over and above land value, the Highest and Best Use of the property is as improved until such time as the improvements add no contributory value to the property.

Conclusion- As Vacant

If the site was vacant, it is our opinion that the Highest and Best Use would be for light industrial type development.

Conclusion- As Improved

It is our opinion that the Highest and Best Use of the Subject Property is for continued use of the existing improvements as an office/warehouse building. The reasons for this conclusion are as follows:

1. The Subject Property is zoned Industrial Park Light Industry in the Bioscience Research Overlay. The existing use of the Subject Property as an industrial office/warehouse building is one of the permitted uses in this district. Therefore, the current use of the existing improvements as an industrial office/warehouse building is legally permissible.

2. The Subject Property was constructed in 2006 with renovations in 2025 and contains 30,377 square feet of rentable area with approximately 8,459 square feet or 28% of the rentable building area being office space. The building was observed to be in good condition for its age. The Subject Property has adequate access for this property type, a functional floor plan and is physically suitable for continued use as an industrial office/warehouse building.

3. The Subject is located in Jupiter where there is limited light industrial space which is in generally high demand. Further, the Subject's location in close proximity to I-95 and Florida's Turnpike is appealing.

4. From indications, continued use as an industrial office/warehouse building is financially feasible. The improvements add significant contributory value to the Subject site. As shown in the following Sales Comparison and Income Approaches, both the sales and rents indicate there is a demand for this property type in the market area.

5. The maximally productive use of the Subject Property would be for continued use of the existing improvements as an industrial office/warehouse building.

SALES COMPARISON APPROACH

Preface

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute defines Sales Comparison Approach on page 170 as follows:

> "The process of deriving a value indication for the subject property by comparing sales of similar properties to the property being appraised, identifying appropriate units of comparison, and making adjustments to the sale prices (or unit prices, as appropriate) of the comparable properties based on relevant, market-derived elements of comparison. The sales comparison approach may be used to value improved properties, vacant land, or land being considered as though vacant when an adequate supply of comparable sales is available."

The Subject Property is improved with a concrete industrial office/warehouse building containing 30,377 square feet of 100% air-conditioned rentable building area including approximately 8,459 square feet (28%) office space. The building is located in the Jupiter Commerce Park and was constructed in 2006 (20 years old). The property was extensively renovated in 2025 and observed to be in good condition for its age and functional for use as industrial office/warehouse buildings.

We have concentrated our efforts on the Sales Comparison Approach and analyzed similar office/warehouse buildings that have recently sold in the Palm Beach County market. The sales were analyzed on a price per square foot of rentable building area, which is the unit of comparison most commonly used by participants in this market.

A sales summary chart, an improved sales location map, photographs of each sale utilized, and a discussion of the adjustments, are included on the following pages

Discussion of Improved Sales

As shown on the chart below, our search revealed four recent sales of improved properties that were considered to be suitable for direct comparison to the Subject Property. The comparable sales indicate a non-adjusted range from $252.46 to $368.76 per square foot of rentable building area, with an average of $334.16 per square foot. The Subject is currently listed for sale for $378.41 per square foot.

IMPROVED SALES
3126 Jupiter Park Drive, Jupiter
Callaway & Price, Inc. #26-87681

Sale Number	Subject	Sale 1	Sale 2	Sale 3	Sale 4
Record		12807	12809	12810	12811
ORBK/PG	Listing	35934/271	35765/1983	35743/989	35525/1315
Location	**3126 Jupiter Park Drive**	**870 Industrial Avenue**	**1300 Wallace Drive**	**1838 Park Lane S**	**1160 S Rogers Circle**
City	Jupiter	Boynton Beach	Delray Beach	Jupiter	Boca Raton
Date of Sale/Closing	Current	Aug-25	May-25	May-25	Jan-25
Sale Price	$11,495,000	$6,100,000	$3,898,500	$8,500,000	$12,050,000
Building Area	**30,377**	**24,162**	**11,404**	**23,050**	**40,225**
Price/Square Foot	**$378.41**	**$252.46**	**$341.85**	**$368.76**	**$299.56**
Year Built	2006	1989 & 2024	2004	2002	1988
Land Size (Sq. Ft.)	83,800	62,291	29,961	127,308	87,120
Air Conditioned/Office Space	100%/ 28%	66%/ 2%	100%/ 9%	100%/ 27%	100%/ 28%
Land to Bldg. Ratio	2.76	2.58	2.63	5.52	2.17
Terms of Financing		0%	0%	0%	0%
Cond of Sale/P. Rights		0%	0%	0%	0%
Time/Market Conditions		0%	0%	0%	0%
Time Adj. Price Per SF Bldg		$252.46	$341.85	$368.76	$299.56
Physical Adjustments					
Location/Exposure		10%	0%	0%	0%
Size		0%	-10%	0%	5%
Age & Condition		10%	5%	5%	10%
Quality /Build Out		20%	10%	0%	0%
Land:Building Ratio		0%	0%	-5%	0%
Other		0%	0%	0%	0%
Total Physical Adjustment		40%	5%	0%	15%
Adjusted Price Per SF Bldg	**$378.41**	**$353.45**	**$358.95**	**$368.76**	**$344.50**

Minimum	$344.50
Maximum	$368.76
Average	$356.41

Improved Sales Map



Improved Sale No. 1




Property Identification

Record ID	12807
Property Type	Industrial
Address	870 Industrial Avenue, Boynton Beach, Palm Beach County, Florida 33426
Tax ID	08434520200000020
MSA	Boynton Beach
Market Type	Industrial

Sale Data

Grantor	Amp II Holdings, LLC
Grantee	Hudson's Workplace, LLC
Sale Date	August 07, 2025
Deed Book/Page	35934/271
Conditions of Sale	Arm's Length
Financing	Cash to seller
Verification	Confirmed by Cathy Romaguera
Sale Price	$6,100,000
Cash Equivalent	$6,100,000

Land Data

Land Size	1.430 Acres or 62,291 SF
Zoning	M-1
Fencing	Chain link with rolling gate

General Physical Data-

Building Type	Single Tenant

Improved Sale No. 1 (Cont.)

SF	15,912
Construction Type	Concrete
Roof Type	Flat Concrete Twin T
Foundation	Concrete
Electrical	2500 amp
HVAC	100% New 5 ton split
Stories	1
Floor Height	16
Year Built	1989
Condition	Good
Clear Span	16'
Drive-in Doors	8
Other	30 & 40 ton air cooled water chillers plumbed throughout facility. Central compressed air system

General Physical Data

Building Type	Single Tenant
SF	8,250
Construction Type	Metal
Roof Type	Metal
Foundation	Concrete
Stories	1
Floor Height	20'
Year Built	2024
Condition	Good
Clear Span	20'
Drive-in Doors	3 10x12

Summary for Multiple Buildings

Building Name	Construction Type	Year Built	Sq. Ft.	Sq. Ft.	No. Stories	Avg. Fl. Ht.
	Concrete	1989	15,912		1	16
	Metal	2024	8,250		1	20'
SF	24,162					

Indicators

Sale Price/ SF	$252.46
Floor Area Ratio	0.39
Land to Building Ratio	2.57:1

Remarks

This sale includes 2 buildings which total 24,162 square feet. The property was an owner/user and vacant at the time of sale. The property offers 400 square feet (2%) office space.

Improved Sale No. 2



Property Identification

Record ID	12809
Property Type	Industrial
Address	1300 Wallace Drive, Delray Beach, Palm Beach County, Florida 33444
Tax ID	12434620190000010
MSA	Delray Beach
Market Type	Industrial

Sale Data

Grantor	Polly Properties, Inc.
Grantee	Angid Holdings, Inc.
Sale Date	May 20, 2025
Deed Book/Page	35765/1983
Conditions of Sale	Arm's Length
Financing	Cash to Seller
Verification	Confirmed by Cathy Romaguera
Sale Price	$3,898,500
Cash Equivalent	$3,898,500

Land Data

Land Size	0.688 Acres or 29,961 SF
Zoning	MIC-Mixed Industrial & Commercial

Improved Sale No. 2 (Cont.)

General Physical Data

Building Type	Single Tenant
SF	11,404
Construction Type	Concrete
Roof Type	Flat
Foundation	Concrete
Electrical	3 phase
HVAC	100% air conditioned
Stories	1
Floor Height	24'
Year Built	2004
Condition	Good
Clear Span	24'
Dock Height	1
Drive-in Doors	1

Indicators

Sale Price/ SF	$341.85
Floor Area Ratio	0.38
Land to Building Ratio	2.63:1

Remarks

This building includes 1,056 square feet (12%) of office space.

Improved Sale No. 3



Property Identification

Record ID	12810
Property Type	Industrial
Address	1838 Park Lane S, Jupiter, Palm Beach County, Florida 33458
Tax ID	30424109030000210
MSA	Jupiter
Market Type	Industrial

Sale Data

Grantor	Christopher Willette, et al
Grantee	Albers Land Company, LLC
Sale Date	May 01, 2025
Deed Book/Page	35743/989
Conditions of Sale	Arm's Length
Financing	Cash to Seller
Verification	costar; Confirmed by Cathy Romaguera
Sale Price	$8,500,000
Cash Equivalent	$8,500,000

Land Data

Land Size	2.923 Acres or 127,308 SF
Zoning	I-1

Improved Sale No. 3 (Cont.)

General Physical Data

Building Type	Single Tenant
SF	23,050
Construction Type	Concrete
Roof Type	Flat
Foundation	Concrete
Electrical	3 phase
HVAC	100% air conditioned
Sprinklers	Yes
Stories	18'
Year Built	2002
Condition	Good
Clear Span	18'
Dock Height	1
Drive-in Doors	3

Indicators

Sale Price/ SF	$368.76
Floor Area Ratio	0.18
Land to Building Ratio	5.52:1

Remarks

This property offers 6,124 square feet (27%) of office space. This property was originally listed for $8,950,000 or $388.29 per square foot and was on the market for 15 days. Fresh Air UV, the seller's business, occupied this owner/user property.

Improved Sale No. 4



Property Identification

Record ID	12811
Property Type	Industrial
Address	1160 S Rogers Circle, Boca Raton, Palm Beach County, Florida 33487
Tax ID	06424701210000010
MSA	Boca Raton
Market Type	Industrial

Sale Data

Grantor	1160 Rogers Investors, LLC
Grantee	1160 S Rogers Circle Warehouse, LLC
Sale Date	January 24, 2025
Deed Book/Page	35525/1315
Conditions of Sale	Arm's Length
Financing	Cash to Seller
Verification	Confirmed by Cathy Romaguera
Sale Price	$12,050,000
Cash Equivalent	$12,050,000

Land Data

Land Size	2.000 Acres or 87,120 SF

Improved Sale No. 4 (Cont.)

Zoning	M-3, Manufacturing Industrial
General Physical Data	
Building Type	Multi-Tenant
SF	40,225
Construction Type	Concrete
Roof Type	Concrete twin T
Foundation	Concrete
HVAC	100% air conditioned
Stories	1
Floor Height	22'
Year Built	1988
Condition	Good
Clear Span	22'
Dock Height	4
Indicators	
Sale Price/ SF	$299.56
Floor Area Ratio	0.46
Land to Building Ratio	2.17:1

Remarks

This is a 2-unit building. Unit 1 reflected an NOI of approximately $233,000. Unit 2 was owner occupied. The building was renovated in 2023.

Discussion of Adjustments

We analyzed the Subject Property and the comparables on price per square foot of rentable building area basis, as this is the most recognized unit of comparison in this market. The comparables were considered with regard to property rights conveyed, terms of financing (cash equivalency), conditions of sale, time or changes in market conditions, location, building quality, finished office space, building age & condition, building size and land-to-building ratio.

Property Rights Conveyed

All of the sales used in this analysis were transferred on a Fee Simple Estate or Leased Fee Interest basis with full rights of ownership. We are also unaware of any adverse deed restrictions or any other property rights limitations which would have affected the sales. Therefore, no adjustments were necessary for property rights conveyed.

Terms of Financing (Cash Equivalency)

The transaction price of one property may differ from that of a similar property due to atypical financing arrangements. In a case where favorable financing is established, a cash equivalency adjustment is often necessary. No adjustments were made, nor any cash equivalency performed.

Conditions of Sale

Adjustments for conditions of sale usually reflect the motivations of the buyer and seller at the time of conveyance. Within the confirmation process, detailed attention was paid to ensure the conditions of each sale. All of the comparables were arm's length transactions and no adjustments were necessary for conditions of sale.

Time or Changes in Market Conditions

Market conditions generally change over time and may be caused by inflation, deflation, fluctuations in supply and demand, or other factors. The sales occurred from January 2025 to August 2025 and were considered to be reasonably recent, no adjustments were made for time or changes in market conditions.

Location

The Subject is situated in the Jupiter Commerce Park. Sale 1 was considered to be inferior in location when compared to the Subject and adjusted upward for this factor. Sales 2 through 4 were considered to be reasonably similar to the Subject and did not warrant an adjustment for this factor.

Building Size

It is typical for a property with a small building to sell at a higher price per square foot than a property with a large building, when all other characteristics are equal and vice versa. The Subject building contains 30,377 square feet of rentable building area. Sales 1 and 3 were considered reasonably similar to the Subject in size and did not warrant an adjustment for this factor. Sale 2 was considered smaller than the Subject and adjusted downward for this factor. Sale 4 was considered larger than the Subject and adjusted upward for this factor.

Building Age & Condition

The Subject building was constructed in 2006, extensively renovated in 2025 and observed to be in good condition for its age. The Subject is fully air conditioned and has about 28% finished office space. Sale 1 consists of two buildings, one of which was originally constructed in 1989. While the second building was constructed in 2024, we considered the actual age of the buildings combined and have adjusted this sale upward for its overall inferior age and condition. Sales 2 and 3 were built in 2004 and 2002 respectively and had not been renovated. These sales were adjusted upward for their inferior overall conditions. Sale 4 was originally built in 1988 and was also adjusted upward for its inferior age and condition.

Quality, Build Out

The Subject is of concrete tilt wall construction, is fully air-conditioned and has 28% office area. Although one of the two buildings of Sale 1 has a twin T concrete roof, the second is of metal construction. Additionally, it does not offer as much air-conditioned nor office area. Overall, this comparable was considered inferior to the Subject in terms of quality and buildout and it was adjusted upward for these factors. In our opinion, Sales 2 does not offer as much finished office space and was adjusted upward for this factor. The remaining sales were generally similar in terms of quality and buildout.

Land-to-Building Ratio

The Subject Property has a land-to-building ratio of 2.76 while the comparables range from 2.17 to 5.52 to 1. Generally, there is a premium paid for higher land-to-building ratios because there is more space for on-site parking, open display and storage areas. All the comparables, with the exception of Sale 3 were generally similar in this respect. Sale 3 had a higher land to building ratio and was adjusted downward for this factor.

Conclusion

The comparables indicate an adjusted range from $344.50 to $368.76 per square foot of rentable building area, with an average of $356.41 per square foot. The Subject is currently listed at $378.41 per square foot and has been on the market approximately 6 months. Sale 3 was considered to be the most similar to the Subject and significant weight was given to this comparable. Overall, the sales were considered to provide reasonable indications of value for the Subject Property. Based on our analysis and discussion, it is our opinion that the Market Value of the Subject Property via the Sales Comparison Approach as of April 1, 2026, was $360 to $365 per square foot of rentable building area calculated as follows.

30,377	Sq. Ft.	X	$360	=	$10,935,720
30,377	Sq. Ft.	X	$365	=	$11,087,605

Say, $11,000,000

INCOME CAPITALIZATION APPROACH

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute defines Income Capitalization Approach on page 94 as follows:

> "Specific appraisal techniques applied to develop a value indication for a property based on its earning capability and calculated by the capitalization of property income."

Direct Capitalization

The value estimate by the Direct Capitalization is based upon the capitalization of the estimated net income that can be produced by the Subject improvements. The steps involved in this valuation procedure are as follows:

1. Estimate the potential gross income that can be generated by the Subject based upon market rent levels.

2. Estimate the applicable vacancy rate and operating expenses for the Subject Property and deduct them from the potential gross income to arrive at a net operating income.

3. Estimate an appropriate overall capitalization rate based upon the current market conditions for properties similar to the Subject.

4. Capitalize the net operating income into an indication of Market Value utilizing a market-oriented overall capitalization rate.

Estimate of Potential Income

The Subject Property is improved with a single user industrial office/warehouse building which was effectively owner occupied. While the Subject is currently encumbered by a non-arm's length lease between the owner and a related entity, it is currently essentially vacant. We have given no consideration to the existing lease. To determine a reasonable rental rate for the Subject, we have researched the rental rates for industrial space in the Jupiter market area. Due to the large size of the Subject, comparable rental properties were lacking, and we expanded our search into the Palm Beach County market area.

Discussion of Market Rental Rates

Shown below are the comparable rents for similar properties followed by a location map and photographs.

RENT COMPARABLES
3126 Jupiter Park Drive, Jupiter
Callaway & Price #26-87681

Comp No.	Name / Location	Rentable Sq.Ft.	Rental Rate Per Sq.Ft.	Landlord Expenses	Tenant Expenses
1	10455 Riverside Drive Palm Beach Gardens	19,950	$20.00	NNN	All
2	859 W 13th Court Riviera Beach	14,170	$18.00	None	All
3	3308 W 45th Street West Palm Beach	27,250	$24.00	All except Utilities	Utilities
4	1400 Northpoint Parkway West Palm Beach	15,775	$19.50	None	All
5	3900 Fiscal Court Riviera Beach	9,405	$16.00	None	All
Subject 87681	3126 Jupiter Park Drive Jupiter	30,377	$19.00	None	All

Minimum Net	$16.00
Maximum Net	$20.00
Average Net	$18.38

Rent Comparables Map





Rent Comparable 1



Rent Comparable 2



Rent Comparable 3



Rent Comparable 4



Rent Comparable 5

Market Rent Discussion

As shown on the survey chart, most of the lease types in the Subject's industrial market are on a net lease basis. A net lease is one in which the tenant pays for all operating expenses. A gross lease is one in which the tenant pays to the landlord a fixed rent and the landlord pays for all the operating expenses from this rent. Modifications between these types of leases exist and are primarily the result of negotiations. As net leases are most common in this market, we will analyze the Subject on a net lease basis.

As can be seen on the previous chart, the rent comparables indicated rental rates ranging from $16.00 to $20.00 per square foot on a net basis and average $18.38 per square foot. The Subject is being marketed at $19.00 per square foot on a net basis for over 6 months. In our opinion, a reasonable negotiated rental rate for the Subject would be $18.50 per square foot on a NNN basis and we will utilize this figure in our analysis.

Vacancy and Collection Loss

The Subject was owner occupied and vacated at the end of 2025. As reflected earlier in this report, the most recent CoStar information indicated that the average vacancy rate in the Palm Beach County industrial market is 7.3% while the Subject submarket is significantly lower at 3.4%.

Based on overall current industrial market conditions, as well as the size and characteristics of the Subject, it is our opinion that a vacancy and collection loss estimate of 5% of the total potential gross income is reasonable and appropriate on a stabilized basis for the duration of typical holding period. This considers those periods when the Subject will be vacant, as well as including interruption of payment due to natural causes, renovations, and collection losses.

Expense Analysis

We were not provided with any historic expenses for the Subject. Therefore, we have analyzed actual operating expenses for similar industrial office-warehouse projects located in South Florida, shown in the chart below.

Expense Comparables

Location	So Fla	So Fla	So Fla	So Fla	So Fla	So Fla	So Fla	So Fla	So Fla
Building Size (sqft)	24,002	10,220	17,534	15,305	14,150	16,256	27,563	14,600	12,407
Real Estate Tax	$3.81	$2.66	$3.61	$4.21	$2.23	$1.87	$2.07	$2.38	$3.71
Insurance	$1.33	$0.46	$1.06	$0.93	$1.05	$1.11	$0.65	$1.11	$1.01
CAM	$1.65	$2.63	$2.10	$3.24	$3.02	$1.95	$2.22	$2.41	$2.50
Gen & Admin (G&A)	$0.20	$0.00	$0.28	$0.58	$0.17	$0.17	$0.80	$0.00	$0.30
Management	$1.92	$1.18	$1.55	$1.48	$0.87	$0.87	$0.63	$0.55	$1.15
Total Before RE Tax	$5.10	$4.27	$4.99	$6.23	$5.11	$4.10	$4.30	$4.07	$4.96
Total Including RE Tax	$8.91	$6.93	$8.60	$10.44	$7.34	$5.97	$6.37	$6.45	$8.67

Real Estate Taxes

Our research has indicated that similar properties typically are assessed for 60% to 80% of the recorded purchase price the year following the sale. The Subject's current 2025 assessed value was $6,440,432, which equates to approximately 59% of our value conclusion in the Sales Comparison Approach of $11,000,000.

Given that the appraisal assumes a sale of the Subject and reassessment due to the sale, we have utilized the value estimated in the Sales Comparison Approach as the basis for the Subject's estimated real estate tax expense going forward. This appears generally reasonable and we will use this as our assessment basis. We will apply this

assessment, multiplied by the Subject's indicated millage rate for our tax expense estimate. For appraisal purposes we will also apply the 4% discount that is offered for early payment.

SCA value	Assessed Value 70%	Millage Rate		Taxes	Apply 4% Discount For Early Payment
$11,000,000	$7,700,000	X 0.018597	=	$143,195	$137,467

Insurance

This expense amount represents the annual premium for insurance coverage for the Subject Property. The expense comparables indicated insurance expenses ranging from $0.46 to $1.33 per square foot of building area, with an average of $0.97. We have utilized a figure of $1.00 per square foot in our analysis.

Repairs & Maintenance (CAM)

This expense includes the costs incurred in the upkeep of the buildings and grounds as well as utilities. This expense can vary widely from project to project depending on the amount of common area, the extent of landscaping, and the age/condition of the improvements. It is often the case where utilities are also included in CAM. The comparables indicated CAM expenses ranging from $1.65 to $3.24 per square foot and averaged $2.41. We were not provided with this expense for the Subject. Given the character of the Subject, we have applied an annual repairs and maintenance expense of approximately $1.50 per square foot of rentable building area.

General and Administrative

This expense category includes those costs associated with the day-to-day operations of the Subject including legal and accounting, licenses and permits, advertising and promotion, office supplies, and other administrative costs associated with investment in the Subject. The comparable G&A expenses ranged from $0.00 to $0.80 per square foot, with an average of $0.28 per square foot. Considering the character of the Subject, it is our opinion that a General and Administrative expense of $0.10 per square foot is reasonable for the Subject.

Management

Income producing properties require supervision in the collection of rents, tenant relations and making sure maintenance is performed adequately. These charges are proper expenses of operation, whether they are contracted to an outside management company or provided by the property owner. This expense is usually quoted on a percentage of effective gross income. Management fees for industrial properties in South Florida typically range from 3% to 5% of Effective Gross Income. Given the nature of the Subject, we have concluded that a management expense of 3% of EGI is reasonable for the Subject.

Conclusion - Expense Analysis

The expenses estimated for the Subject are shown below. At $7.88 per square foot, the Subject expenses are within the expense comparables range of $5.97 to $10.44 per square foot. It is our opinion that the estimated operating expenses for the Subject are market-oriented and they will be utilized in our analysis.

Expenses				
Real Estate Taxes		$137,467	$4.53	/SF
Insurance		$30,377	$1.00	/SF
Common Area Maintenance		$45,566	$1.50	/SF
General & Admistrative		$3,038	$0.10	/SF
Management	3%	$22,836	$0.75	/SF
Total Expenses		$239,283	$7.88	

Overall Capitalization Rate

The Dictionary of Real Estate Appraisal, Seventh Edition 2022, by the Appraisal Institute defines Overall Capitalization Rate on page 137 as follows:

> "The relationship between a single year's net operating income expectancy and the total property price or value (Ro = Io ÷ Vo)."

In estimating an overall capitalization rate appropriate for the Subject, we have considered overall rates abstracted from the market, as well as the current mortgage/equity requirements.

Abstraction of Overall Rate

The equation utilized to abstract overall rates directly from market sales is as follows:

$$Ro = I/V$$

Ro = overall rate
I = net income
V = value (purchase price)

Not all of the comparables used in the Sales Comparison Approach provided overall rate indications. As a result, we have considered overall rates from other similar type of industrial buildings that have recently sold that indicate investor requirements in the Subject's market area. The data is summarized below:

Overall Rate Support
Callaway & Price, Inc. 26-87681

OR Bk/Pg	Sale Date	Name/Location		Year Built	Building Size (SqFt)	OAR
36298/1564	Feb-26	6980 Wallis Road	West Palm Beach	1988	18,080	7.00%
36214/688	Dec-25	1205-1421 Hill Avenue	Mangonia Park	1967	64,316	6.12%
36081/1938	Oct-25	3151 SW 14th Place	Boynton Beach	1984	20,088	5.00%
36031/1245	Sep-25	4600 Georgia Avenue	West Palm Beach	2018	8,500	6.00%
35659/1977	Apr-25	4655 Southern Boulevard	West Palm Beach	1974	20,400	5.10%
35622/0089	Mar-25	6687 42nd Terrace	Riviera Beach	1997	14,093	7.14%
35101/754	Jun-24	6780 White Drive	Riviera Beach	1985	24,800	4.83%
		Average				**5.88%**

As shown, the overall rates obtained from the market ranged from 5.00% to 7.14%, with an average indication of 5.88%.

Another source of overall rates is the PWC Real Estate Investor Survey, 1st Quarter 2026, which indicated overall rates for the East Coast Region Warehouse Market ranging from 3.25% to 6.25%, with an average of 5.21%. Typically, in an active market such as South Florida, an overall rate abstracted from comparable sales is the best indicator of an appropriate capitalization rate.

Overall Rate Conclusion – Direct Capitalization Summary

These rates take into account a number of factors, including the location and income producing capabilities of the properties along with the buyer's perceptions as to risk and future market conditions. Given all factors relevant to the Subject, including the strong local demand, good location, condition and functionality of the Subject, it is our opinion that an overall rate toward the middle of the range, or 5.00% to 5.50% appears market oriented for the Subject as of the appraisal date.

The Subject's Fee Simple Estate Market Value via the Income Capitalization Approach (Direct Capitalization) is shown below.

Direct Capitalization Summary

3126 Jupiter Park Drive, Jupiter

Callaway & Price, Inc. # 26-87681

Gross Potential Rental Income:						
Total Potential Rental Income :						
	30,377	SF @	$18.50		$561,975	
Add: Pass Through Expenses @	30,377	@	$7.88		$239,283	
Total Gross Income			$26.38			$801,258
Vacancy & Collection Loss		5%				($40,063)
Effective Gross Income						$761,195
Expenses						
Real Estate Taxes			$137,467	$4.53 /SF		
Insurance			$30,377	$1.00 /SF		
Common Area Maintenance			$45,566	$1.50 /SF		
General & Admistrative			$3,038	$0.10 /SF		
Management		3%	$22,836	$0.75 /SF		
Total Expenses			$239,283	$7.88		($239,283)
Net Operating Income						$521,912
Capitalization						
Net Operating Income Divided by Overall Rate						
$521,912	/		5.00%			$10,438,233
$521,912	/		5.50%			$9,489,302
Value Via Direct Capitalization					**Say**	**$10,000,000**
						$329.20 /SF

RECONCILIATION

The value indications by the approaches to value for the Market Value of the Subject Property are as follows:

SALES COMPARISON APPROACH	$11,000,000
INCOME CAPITALIZATION APPROACH	$10,000,000

The Sales Comparison Approach is based upon the assumption that a potential and knowledgeable investor would pay no more for the property than the cost of acquiring an existing property with basically the same utility. The Sales Comparison Approach has been utilized in order to estimate the Market Value of the Subject by the comparison of similarly improved properties that have recently sold. The sales used were the best available data. In our opinion the quality of the data available was considered adequate and provided a good indication of value for the Subject Property.

The Income Capitalization Approach converts anticipated future benefits of property ownership into an estimate of present value. In this instance, we have reviewed the rental rates of Industrial space in the Subject's market area. We performed a Direct Capitalization based on a detailed analysis of comparable rental rates on properties considered to be similar to the Subject. Given the quantity and quality of the data available, this approach was also considered to give a good indication of value for the Subject Property.

Given that the Subject is a single user design and would most likely be occupied by an owner/user, it is our opinion that most weight should go to the Sales Comparison Approach. Therefore, it is our opinion that the Market Value of the Fee Simple Estate of the Subject Property as of April 1, 2026 was:

$10,800,000

ADDENDA

QUALIFICATIONS

Professional Designations\Licenses\Certifications
Member, Appraisal Institute, MAI Designation #10461
Member, Appraisal Institute, AI-GRS
State-certified general real estate appraiser RZ1192
Florida State Licensed Real Estate Salesman 0495422

Professional Experience
Principal, Callaway & Price, Inc., since January 1999
Senior Appraisal Consultant, Callaway & Price, Inc., since July 1997 – December 1998
Appraisal Consultant, Callaway & Price, Inc., since April 1994
Associate Appraiser, Pinel & Carpenter, Inc., Orlando, April 1992 - March 1994
Appraiser/Researcher, Callaway & Price, Inc., September 1987 - March 1992
Special Magistrate Palm Beach County 1996-2012
Special Magistrate, Martin County, 2009

Qualified as an Expert Witness
Palm Beach County, Florida
Martin County, Florida
Broward County, Florida
Sarasota County, Florida
Miami-Dade County, Florida

Education
Bachelor of Science Degree, Business Administration, Major in Real Estate and Finance, University of Florida
Appraisal Institute:
- Course 101 - An Introduction to Appraising Real Property, 1992
- Course 201 - Principles of Income Producing Properties, 1991
- Course 2-1 - Case Studies in Real Estate Valuation, 1992
- Course 540 - Report Writing and Valuation Analysis, 1993
- Course 2-3 - Standards of Professional Practice Parts A & B, 1991
- Review Theory - General

Numerous seminars sponsored by the Appraisal Institute

Appraising\Consulting Expertise
- Acreage
- ACLFs
- Apartment Complexes
- Automotive Service Facilities
- Bowling Alleys
- Commercial Buildings
- Condominium Projects
- Eminent Domain
- Golf Courses
- Hospitals
- Hotels
- Marinas
- Medical Office Buildings
- Medical Office Condominiums
- Medical Campus Sites
- Medical Office Sites
- Surgery Centers
- Self-Storage Facilities
- Office Buildings
- Office/Warehouses
- Retail Buildings
- Restaurants
- Special Purpose Properties
- Shopping Centers
- Vacant Commercial Land
- Vacant Industrial Land
- Vacant Multifamily Pods
- Vacant Residential Land
- Vacant Single-Family Subdivisions
- Warehouses

Organizations and Affiliations

Appraisal Institute:

- Experience Review Committee
- Ethics & Counseling Committee
- South Florida Chapter Board of Directors
- Business Development Board Palm Beach County, Member

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

FLORIDA REAL ESTATE APPRAISAL BD

THE CERTIFIED GENERAL APPRAISER HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 475, FLORIDA STATUTES

SHAW, STEPHEN DAY

1639 FORUM PLACE
SUITE 5
WEST PALM BEACH FL 33401

LICENSE NUMBER: RZ1192

EXPIRATION DATE: NOVEMBER 30, 2026

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ISSUED: 10/31/2024

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Professional Designations\Licenses\Certifications

State-certified general real estate appraiser RZ1638
Real Estate Sales Associate SL412912 – State of Florida

Professional Experience

Associate Appraiser, Callaway & Price, Inc., 2018 – present
Staff Appraiser and Researcher, Lawson Appraisal Service, LLC, Inc., 2010 to 2018
Associate Appraiser and researcher, Callaway & Price, Inc., 1987 to 2002

Geographic Experience

Throughout Florida, North Carolina, and Tennessee.

Education

Bachelor of Science Degree, University of Florida
Numerous Appraisal Institute Courses and Real Estate Seminars

American Institute of Real Estate Appraisers Courses:

Course 2-3	Standards of Professional Practice
Course 2-1	Case Studies in Real Estate Valuation
Course 2-2	Valuation Analysis and Report Writing
Course 1B-A	Capitalization Theory and Technique, Part A
Course 1B-B	Capitalization Theory and Technique, Part B
Course 8-2,	Residential Valuation

Appraisal Institute Courses:
Comprehensive Examination – Challenged and Passed 1992.
Standards of Professional Practice A & B
Standards of Professional Practice C
USPAP "Core" Law for Appraisers
Appraisal Guidelines
Standards and Ethics for Professionals

Other Education:

- Mortgage Fraud-Protect Yourself
- Florida Supervisor/Trainee Roles and Relationships
- The Dirty Dozen
- Florida Appraisal Laws and Regulations
- National USPAP Update
- Challenging Assignments for Residential Appraisers
- Appraisal of 2-4 Family and Multifamily Properties
- Foreclosure Basics for Appraisers
- Appraisal of Industrial and Flex Buildings
- Valuation of Residential Solar
- Divorce and Estate Appraisals
- Introduction to Expert Witness
- Market Disturbances – Appraisals in Atypical Markets and Cycles

Appraising\Consulting Expertise

Acreage
Adult Congregate Living Facilities (ALFs)
Apartment Complexes
Churches
Commercial Buildings
Condemnations
Country Clubs
Daycare Facilities
Duplexes
Easements
Foreclosures
Golf Courses
Hotels
Industrial Buildings
Life Care Facilities
Medical Buildings
Mobile Home Parks
Motels
Nursing Homes
Office Buildings
Planned Unit Developments
Ranches
Restaurants
Retail Properties
Service Stations
Shopping Centers
Single Family Residences
Special Purpose Properties
Subdivisions
Vacant Lots
Warehouses

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

FLORIDA REAL ESTATE APPRAISAL BD

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PROVISIONS OF CHAPTER 475, FLORIDA STATUTES

ROMAGUERA, CATHLEEN ANN

2414 BAY VILLAGE COURT
PALM BEACH GARDENS FL 33410

LICENSE NUMBER: RZ1638

EXPIRATION DATE: NOVEMBER 30, 2026

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ISSUED: 12/02/2024

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AN APPRAISAL REPORT

OF

A CONCRETE TILT-WALL
OFFICE/SHOWROOM/WAREHOUSE BUILDING
CONTAINING 30,065 SQUARE FEET,
LOCATED AT
3126 JUPITER PARK DRIVE, JUPITER,
PALM BEACH COUNTY, FLORIDA 33458

PREPARED FOR

TOWN OF JUPITER
C/O MR. SCOTT REYNOLDS
FINANCE DIRECTOR
210 MILITARY TRAIL
JUPITER, FL 33458

AS OF

APRIL 2, 2026

PREPARED BY

PARRISH & EDWARDS, INC.
EIN 59-2550770
BRIAN G. EDWARDS, MAI
STATE CERTIFIED GENERAL REAL ESTATE APPRAISER #RZ1303

PARRISH & EDWARDS, INC.

3450 Northlake Blvd., #285 – Northlake Corporate Park
Palm Beach Gardens, FL 33403

PH: (561) 622-9992

April 10, 2026

Town of Jupiter
c/o Mr. Scott Reynolds
Finance Director
210 Military Trail
Jupiter, FL 33458

RE: P&E File No.: B26-046

Dear Mr. Reynolds:

In accordance with your request, we have made an inspection, analysis, and an appraisal report of the following:

A concrete tilt-wall office/showroom/warehouse building containing 30,065 square feet constructed on a 1.92 acre site located at 3126 Jupiter Park Drive, Jupiter, Palm Beach County, Florida 33458.

As a result of our investigation and analysis of the information outlined in the report, we hereby submit that our opinion of the "As Is" market value of the fee simple estate of the Subject Property, as of the date of April 2, 2026 is as follows:

TEN MILLION FIVE HUNDRED TWENTY THOUSAND DOLLARS

$10,520,000

This report is intended to comply with Federal reporting standards and the standards and reporting requirements of the Uniform Standards of Professional Practice (USPAP) adopted by the Appraisal Standards Board of the Appraisal Foundation.

The appraiser has the ability to properly identify the problem to be addressed, the knowledge and experience to complete the assignment competently; and has recognition of, and compliance with, laws and regulations that apply to the appraiser or to the assignment.

This appraisal assignment was not made, nor was the appraisal rendered on the basis of a requested minimum valuation, specific valuation, or an amount, which would result in approval of a loan.

A description of the property being appraised, together with an explanation of the report type and valuation procedures utilized, is contained within the body of this report. This letter is made a part of and subject to the Limiting Conditions as set forth in the report herein.

Sincerely,



Brian G. Edwards, MAI
State Certified General Real Estate Appraiser #RZ1303

SPECIAL LIMITING CONDITIONS / EXTRAORDINARY ASSUMPTIONS

1. An older survey of the Subject Property prepared by Magellan Mapping and Survey, dated December 12, 2018 was provided to the appraiser. The site size of 1.924 acres of 83,809 square feet was taken from the provided survey. The site size was also similar to the site size indicated by the Palm Beach County Property Appraiser's website of 1.924 acres. The building size of 30,065 square feet was taken from plans submitted to the Town of Jupiter for the recent renovations completed on the property, prepared by John Duranko, dated August 4, 2024. This building size was relatively similar to the building size calculated from the survey dimensions, and the building size indicated on the Palm Beach County Property Appraiser's website (30,377 square feet). For purpose of this report, we have utilized a building size of 30,065 square feet and a site size of 1.92 acres (83,809 square feet). Should it be determined that the site or building sizes differ significantly in size than the information provided, we reserve the right to amend our appraisal accordingly.

2. The Subject Property has not been inspected for environmental contamination, such as underground storage tanks, drums of unknown contents, evidence of waste disposal such as sludge, paints chemical residues, oil spillage, asbestos, etc. The appraiser was not provided with an environmental survey of the Subject. No environmental contamination is known to exist by this appraiser. If such contaminants were found to be present, the values stated herein would be subject to review and modification if necessary.

3. The appraiser has inspected the Subject Site and the interior and exterior of the Subject building. The appraiser is not a qualified engineer or building inspector and has completed only a limited inspection. The appraiser has assumed that the building is structurally sound and no environmental concerns exist with the building or site such as toxic mold or subsurface contamination. Should any structural or environmental problems exist, our value conclusion would be subject to review and revision.

ASSUMPTIONS/CONDITIONS (CONT'D)

4. Over the past four years, there has been continued uncertainty in economic conditions as a result of the Coronavirus (COVID-19) which led to higher inflation, and the effects of the pandemic on the real estate market have yet to be determined. As of the effective date of this appraisal, the number of confirmed cases has dropped significantly since its high in early 2021. However, there is still uncertainty with future market conditions because of new variants in the COVID Virus and because only 70% of the population is fully vaccinated. If cases begin to rise again, this could slow or reverse the economic recovery and could impact businesses again, which would have a significant negative effect on the real estate market. While the number of cases has dropped significantly, the pandemic has had and continues to have a significant effect on supply chains, which has resulted in a significant increase in inflation. In an attempt to slow down the effects of inflation, the Federal Reserve began raising the Federal Funds rate in March 2022, and after 11 separate rate hikes in the range of 0.25% to 0.75%, the rate rose to a high of approximately 5.5% in July 2023 which was a 23-year high. This has had a direct effect on mortgage interest rates, which is affecting some segments of the real estate market with longer marketing times and fewer sale transactions. Only recently (September 2024) did the Federal Reserve lower the rate by 0.5% as a result of a slowing in economic conditions and a decline in inflationary factors which was the first rate cut since March of 2020. Additional rate cuts of 0.25% were made on November 7, 2024, December 18, 2024, September 17, 2025, October 29, 2025, and December 10, 2025. As of the effective date of this report, limited data was available to determine the direct and indirect effect of the pandemic on the real estate market, but the economy has been affected by the higher interest rate environment, and now there is additional uncertainty with the new trade tariffs, the effects of recent federal government shutdowns, and the conflict with Iran. The intended user of this report should be aware that as economic data becomes available over the coming months, the value contained within this report could be affected.

The Extraordinary Assumptions / Special Limiting Conditions listed above could affect our assignment results.

CERTIFICATION

We hereby certify that to the best of our knowledge and belief:

1. The statements of fact contained in this report are true and correct.

2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

3. I (We) have no present or prospective interest in the property that is the Subject of this report, and we have no personal interest or bias with respect to the parties involved.

4. I (We) have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.

5. My (Our) engagement in this assignment was not contingent upon developing or reporting predetermined results.

6. My (Our) compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

7. The reported analyses, opinions, and conclusions were developed and this review report has been prepared, in conformity with the requirements of the Code of Ethics & Standards of Professional Appraisal Practice of the Appraisal Institute, which include the Uniform Standards of Professional Appraisal Practice.

8. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

9. Brian G. Edwards has made an inspection of the property that is the subject of this report.

10. No one provided significant professional assistance other than the person(s) signing this report.

CERTIFICATION (CONT'D)

11. The Appraisal Institute conducts a program of continuing education for designated members who meet the minimum standards of this program and are awarded periodic educational certification. As of the date of this report, I, Brian G. Edwards have completed the requirements under the continuing education program of the Appraisal Institute.

12. My (Our) analyses, opinions, or conclusions that were developed in this report have been prepared in conformity with the requirements of the State of Florida for the State Certified Appraisers.

13. The use of this report is subject to the requirements of the State of Florida relating to review by the Real Estate Appraisal Subcommittee of the Florida Real Estate Commission.

14. I, Brian G. Edwards, have not performed services as an appraiser regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.



Brian G. Edwards, MAI
State Certified General Real Estate Appraiser #RZ1303

SUMMARY OF SALIENT FACTS

LOCATION:	3126 Jupiter Park Drive, Jupiter, Florida 33458
OWNER OF RECORD:	Fresh Aire Ventures LLC
IMPROVEMENTS:	A concrete tilt-wall office/ showroom/ warehouse building containing a total of 30,065 square feet constructed in 2006
PARKING:	52-spaces (Including 3-handicap spaces)
SITE SIZE:	83,809 SF or 1.92 Acres
ZONING:	"I-1", Light Industrial, by Town of Jupiter
LAND USE:	Industrial
FLOOD ZONE:	"X" Map Panel #12099C0167G, dated December 20, 2024
CENSUS TRACT:	0002.13
HIGHEST AND BEST USE (AS VACANT):	Office/warehouse development.
HIGHEST AND BEST USE (AS IMPROVED):	Continued use of the office/warehouse improvements.

FEE SIMPLE VALUE INDICATIONS:

COST APPROACH:	Not Applicable
SALES COMPARISON APPROACH:	$10,520,000
INCOME APPROACH:	Not Applicable

FEE SIMPLE VALUE CONCLUSION: $10,520,000

SUMMARY OF SALIENT FACTS (CONT'D)

INSPECTION DATE:	April 2, 2026
EFFECTIVE DATE OF VALUE:	April 2, 2026
EXPOSURE/MARKETING TIME	6-12 Months
APPRAISERS:	Parrish & Edwards, Inc. Brian G. Edwards, MAI



SUBJECT PROPERTY FACING NORTH FROM JUPITER PARK DRIVE



SUBJECT – FRONT VIEW FROM JUPITER PARK DRIVE



SUBJECT (FRONT - NORTH ELEVATION)



SUBJECT (WEST ELEVATION)



SUBJECT (REAR – SOUTH ELEVATION)



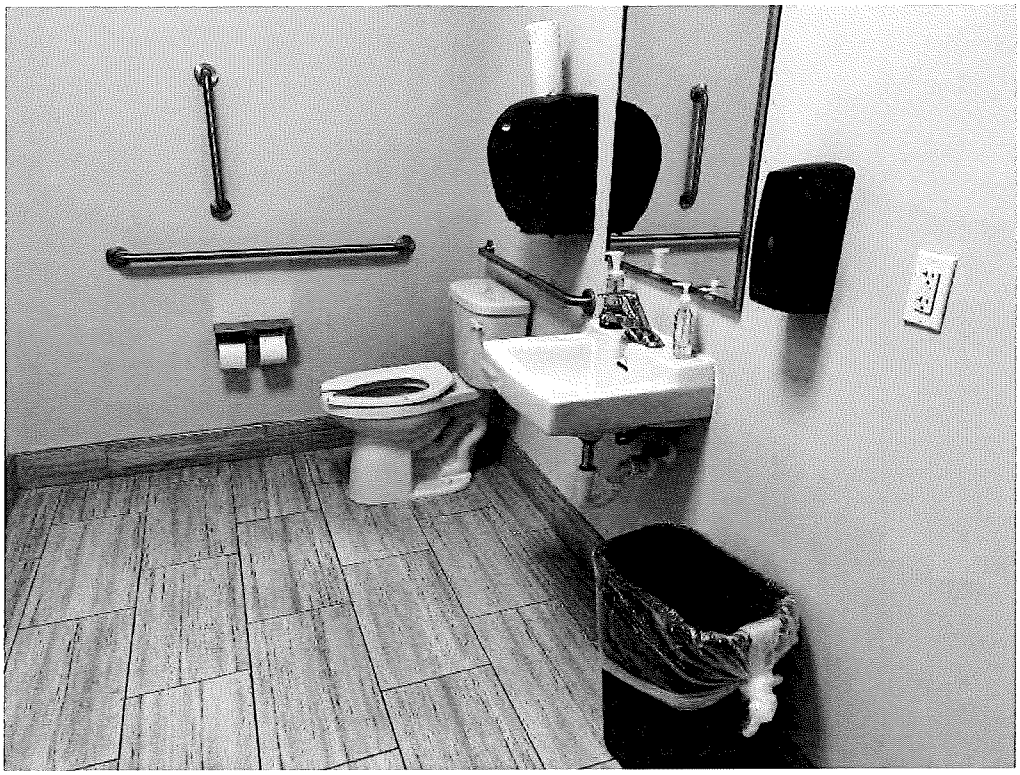
SUBJECT – EAST SIDE OF PROPERTY



SUBJECT – INTERIOR HALLWAY



SUBJECT – FIRST FLOOR BREAK ROOM



SUBJECT – TYPICAL BATHROOM



SUBJECT – FIRST FLOOR OPEN AREA



SUBJECT – SECOND FLOOR OPEN AREA



SUBJECT – SECOND FLOOR OFFICE



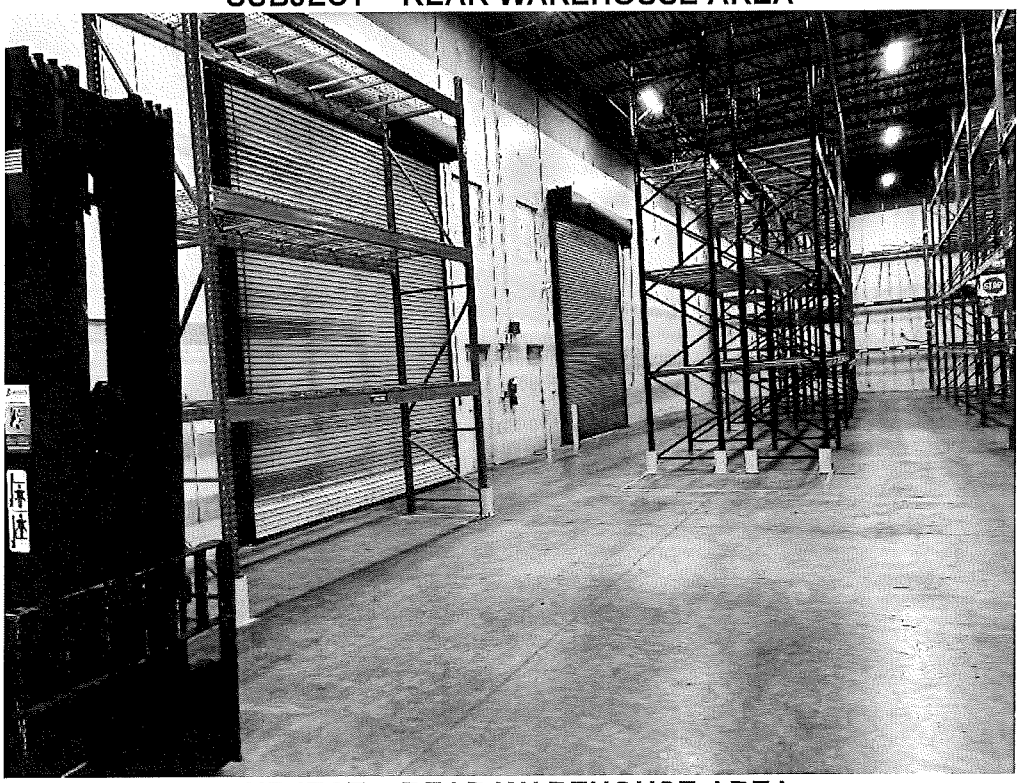
SUBJECT – SECOND FLOOR PARTIALLY FINISHED AREA



SUBJECT – NORTHERN WAREHOUSE / SHOWROOM AREA



SUBJECT – REAR WAREHOUSE AREA



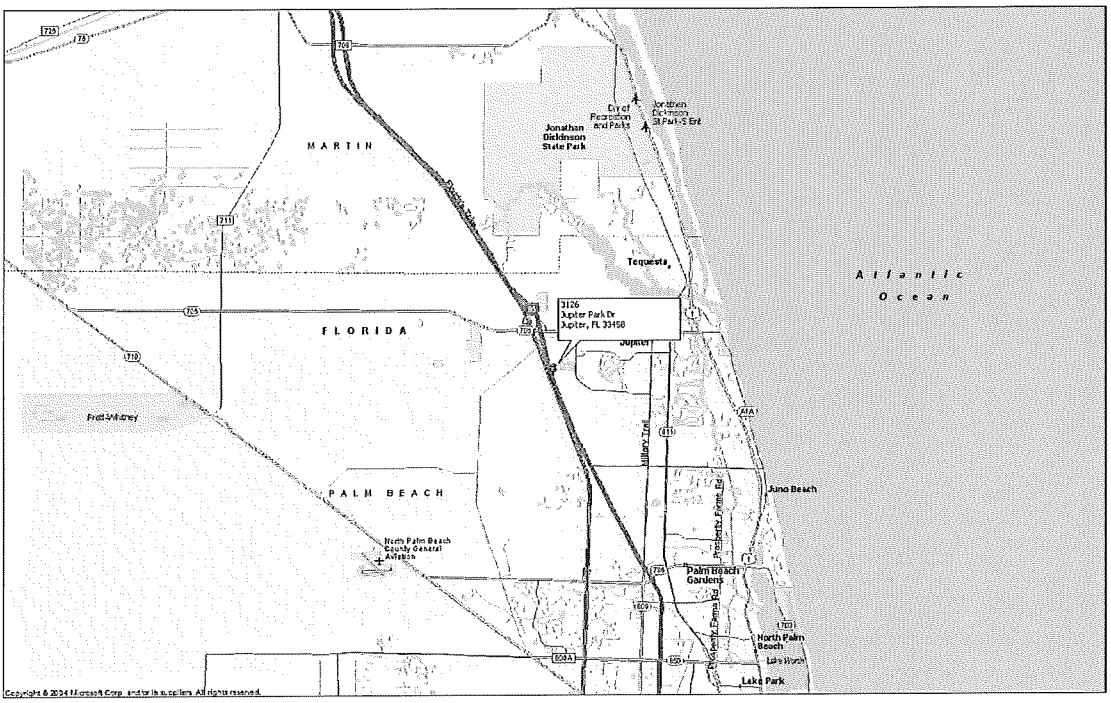
SUBJECT – REAR WAREHOUSE AREA



JUPITER PARK DRIVE LOOKING WEST



JUPITER PARK DRIVE LOOKING EAST



LOCATION MAP

APPRAISAL REPORT

This is an appraisal report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2 of the Uniform Standards of Professional Appraisal Practice. As such, it presents summary discussions of the data, reasoning and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analysis is summarized in this report and/or retained in the appraiser's file. The depth of discussion contained within this report is specific to the needs of the client and for the intended use stated within this report. The appraiser is not responsible for the unauthorized use of this report.

PARCEL REFERENCE: P&E File #B26-046

CLIENT:
Town of Jupiter
c/o Mr. Scott Reynolds
Finance Director
210 Military Trail
Jupiter, FL 33458

APPRAISER:
Brian G. Edwards, MAI
State Certified General
Real Estate Appraiser #RZ1303

Parrish & Edwards, Inc.
3450 Northlake Boulevard, Ste #285
Palm Beach Gardens, FL 33418

SUBJECT PROPERTY OWNER: Fresh Aire Ventures LLC

REAL ESTATE APPRAISED: Identification of the Property:

A 30,065 square foot concrete tilt-wall, office/showroom/warehouse building located along the south side of Jupiter Park Drive and along the east side of Interstate 95 within the Jupiter Industrial Park, at 3126 Jupiter Park Drive, Jupiter, Florida 33458.

Legal Description:
Folio #30-42-41-09-03-000-0330

Lot 33, Jupiter Park of Commerce Phase II B, as recorded in Plat Book 78, Page 28 & 29 of the Public Records of Palm Beach County.

Source: Palm Beach County Public Records and Survey.

PURPOSE OF THE APPRAISAL:

The purpose of this appraisal report is to provide an opinion of the "As Is" Market Value of the fee simple interest of the Subject Property as of April 2, 2026.

INTENDED USE AND USER OF THIS REPORT:

The intended use of this appraisal is to provide an opinion of the market value of the Subject Property for internal decision making purposes related to the potential purchase of the property. The intended user of this report is Town of Jupiter. The client has not advised us of any other intended subsequent user of this report. This report should not be relied upon by anyone other than the intended user and for any use other than the use stated above.

INTEREST APPRAISED:

The property rights appraised are the unencumbered Fee Simple estate of the Subject Property. The property is almost entirely vacant. The small portion currently occupied will be vacated upon the sale of the property.

Fee Simple: Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

Source: The dictionary of Real Estate Appraisal, Appraisal Institute.

ESTIMATED EXPOSURE / MARKETING TIME:

Per the Appraisal Institute, Exposure Time relates to the time preceding the appraisal date that the Subject hypothetically would have been offered on the market prior to a hypothetical sale on the effective date of the appraisal. Marketing Time is the time required to sell the property after the appraisal date.

In speaking with brokers and people knowledgeable within this market, an exposure / marketing time of approximately 6 to 12 months is estimated, assuming the property is marketed by an experienced broker at a reasonable price.

FIVE YEAR SALES HISTORY: A search of the sales history of the Subject Property within the past five-year period did not reveal a recorded sales involving the Subject Property. The Subject Property last sold in December 2020 for $5,000,000. The Subject is currently listed for sale. The list price is $11,495,000 ($382.33/SF). This listing will be considered later in our valuation analysis.

EFFECTIVE DATE OF VALUE: April 2, 2026

DATE OF INSPECTION: April 2, 2026

DEFINITION OF MARKET VALUE

The regulatory required market value definition is:

The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is consummation of a sale as of a specified date and passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;

2. Both parties are well informed or well advised and each acting in what they consider their own best interests;

3. A reasonable time is allowed for exposure in the open market;

4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and

5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Source:

*Uniform Standards of Professional Appraisal Practice, Page I-7
*Federal Reserve System, 12 CFR Parts 208 and 225, Sec. 225.62
*Office of the Comptroller of the Currency, 12 CFR Part 34, Sec. 34.42
*FDIC, 12 CFR Part 323, Sec. 323.2
*Office of Thrift Supervision, 12 CFR Part 564, Sec. 564.2
*NCUA, 12 CFR Part 722, Sec. 722.2
*RTC, 12 CFR Part 1608, Sec. 1608.2
*FIRREA, Title XI

SCOPE OF APPRAISAL

The Subject Property consists of a concrete tilt-wall office/showroom/warehouse building containing 30,065 square feet constructed on a 1.92 acre site located at 3126 Jupiter Park Drive, Jupiter, Palm Beach County, Florida 33458.

Our analysis is based upon a physical inspection of the site and improvements and information provided by the owner, the client, agents, and public records. In preparing this report, the appraiser personally inspected the Subject Property. If possible, all sales were verified with the grantor, grantee, or a third party familiar with the transaction such as a real estate broker, property manager, or attorney. The search for data was concentrated primarily in the Subject's immediate area and if limited data in this area was found, the search was expanded to other areas of Palm Beach County considered similar to the Subject.

In completing this assignment, the appraiser has engaged in original research of sales and general trends in the market. Data has been gathered from various sources, including public records, area brokers, appraisers, property owners, and published sources. Additionally, we have used original research performed in preparation of other appraisals by this office, which is considered to be appropriate for the Subject Property. The product of this research and analysis is the valuation conclusion contained herein.

Our opinion of the Market Value will be derived by considering the three standard appraisal approaches which are briefly summarized as follows:

COST APPROACH - A set of procedures through which a value indication is derived for the fee simple estate by estimating the cost new as of the effective date of the appraisal to construct a reproduction of (or replacement for) the existing structure, including an entrepreneurial incentive; deducting depreciation from the total cost; and adding the estimated land value. The contributory value of any site improvements that have not already been considered in the total cost can be added on a depreciated-cost basis. Adjustments may then be made to the indicated value of the fee simple estate in the subject property to reflect the value of the property rights being appraised.

The Subject building improvements were built in 2006 consisting of a concrete tilt-wall office/showroom/warehouse building. Given the age of the improvements, estimating the amount of depreciation would be difficult and make this approach a less reliable indicator of value. In addition, vacant industrial land sales in the immediate area are limited which would also make this approach a less reliable indicator of value.

SCOPE (CONT'D)

SALES COMPARISON APPROACH - The process of deriving a value indication for the Subject Property by comparing sales of similar properties to the property being appraised, identifying appropriate units of comparison, and making adjustments to the sale prices (or unit prices, as appropriate) of the comparable properties based on relevant, market-derived elements of comparison. The Sales Comparison Approach may be used to value improved properties, vacant land, or land being considered as though vacant when an adequate supply of comparable sales is available.

INCOME CAPITALIZATION APPROACH - Specific appraisal techniques applied to develop a value indication for a property based on its earning capability and calculated by the capitalization of property income.

The Subject improvements are currently occupied by an owner/user. The Income Approach was also not considered relevant since industrial buildings similar to the Subject are typically purchased for owner/user use and not based upon the income generated from leasing the property. With the exception of one, all of the sales comparables utilized for comparison were purchased by owner/users. The Income Approach was not utilized and is not considered necessary to achieve credible results.

Only the Sales Comparison Approach was considered to be relevant in valuing the Subject Property since the building was owner occupied, and this would be the most likely buyer of the Subject Property.

This report will provide the appraiser's opinion for the "As Is" market value of the Subject and will be in a summary format, with complete sales data maintained in our files. This report will contain charts summarizing the sales comparables.

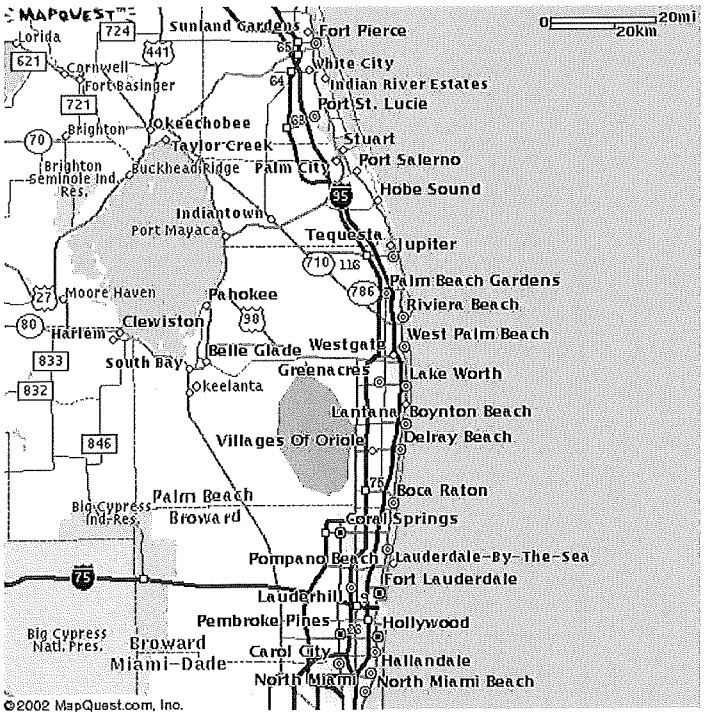
PALM BEACH COUNTY SUMMARY

The Subject Property is located in Palm Beach County, Florida.

Physical Characteristics

Palm Beach County is located along the southeast "Gold Coast" of Florida and is the second-largest county in the state and ninth in the nation east of the Mississippi River with a land area of 2,578 square miles, of which roughly 20% is within Lake Okeechobee and other wetland areas.

The county is rectangular-shaped and is bounded on the east by the Atlantic Ocean, on the west by Glades and Hendry Counties, on the south by Broward County, and on the north by Martin County. The geographic center of the county is +/-67 miles north of Miami and +/- 171 miles southeast of Orlando. Elevation averages 15' above sea-level. Natural habitat, moving from east to west, includes coastal beach dune ecosystems, pine flatlands, and freshwater wetland areas.



The county's renewable resources include 45 miles of coastline and an average year-round temperature of 75 degrees. Average temperature ranges from a low of 67 degrees to a high of 83 degrees. Winter temperatures are moderated by the Gulf Stream warm water current less than two miles offshore. These conditions have proven favorable for tourism, agriculture, and population in-migration.

Education

Palm Beach County School District is the tenth largest in the nation and the fifth largest in the State of Florida serving more than 191,000 students (this number includes students that attend non-District operated Charter Schools) who speak 150 languages and dialects. The School District is the largest employer in Palm Beach County. There are over 235 public schools including elementary schools, middle schools, high schools, ESE, alternative and charter schools available across the county. There are programs offered through virtual schools and adult education sites. There are also a variety of private schools serving the Palm Beach County from preschool through 12th grade.

Palm Beach County has several colleges, universities, and technical institutes. Palm Beach State College offers 4 year degrees and has five campuses having an estimated total enrollment of approximately 40,000 full (31%) and part-time (69%) students. Florida Atlantic University (FAU) is a 4-year college with six campuses with over 72% of students enrolled at the main campus in Boca Raton. FAU is a part of the state university system with approximately 31,000 students. Other higher-learning institutions include Lynn University with over 3,500 students and Palm Beach Atlantic University with over 4,200 students. Other schools have campuses located in Palm Beach County including Everglades University, Northwood University, South University, Keiser University, Nova Southeastern University and Barry University.

Transportation

Roads in the county essentially run east-west and north-south, forming a grid system over the eastern one-third of the county. Roadways that extend beyond the county's borders include State Road 80, State Road 710, Interstate 95, and Florida's Turnpike.

State Road 80 connects coastal Palm Beach County with the Glades and the west coast of Florida. This roadway was widened to four lanes from West Palm Beach to Belle Glade several years ago.

State Road 710 (Beeline Highway) runs from the West Palm Beach area of Palm Beach County and travels northwest into Martin County.

Interstate 95 is an interstate highway running from Florida to Maine. It serves as the main north/south artery in the county, transporting over 245,000 cars per day through Palm Beach County.

Florida's Turnpike is a toll road running from Wildwood to Miami. It serves a mix of tourist and local traffic. The Turnpike is generally parallel and to the west of Interstate 95. Several exits and all of the rest stops have recently undergone renovation.

Palm-Tran is a county-wide bus system serving all of the county and runs seven days a week.

Rail transport is via two carriers: Florida East Coast Railway and CSX Transportation. Both lines are primarily freight oriented with limited passenger service via Amtrak. The Tri-Rail commuter rail system services Dade, Broward, and Palm Beach counties for commuter travel between Miami, and West Palm Beach. Brightline is a high-speed rail system recently implemented between Miami and Orlando and an extension is planned to Tampa within the next few years.

There are five public, general aviation airports in Palm Beach County and eight private airfields which serve local commercial/executive needs. The largest, Palm Beach International Airport (PBI), is centrally located southwest of the city of West Palm Beach, and eighteen airlines currently serve destinations in the continental United States and direct international flights to the Caribbean and Canada.

The PBI airport had total passengers of 8,675,917 for the twelve-month period ending January 2026 which increased 2.6% from the total passengers from the previous twelve-month period. The largest passenger carriers were Jet Blue, Delta, American Airlines, United, and Southwest. Other larger carriers included Breeze Aviation, Frontier, Spirit, Allegiant, Avelo, and Air Canada.

The Port of Palm Beach is located due west of the Lake Worth inlet in Riviera Beach. The Port of Palm Beach is the fourth busiest container port of Florida's 14 deepwater ports, and is the 18th busiest container port in the United States. The Port handles a variety of incoming and outgoing cargo including agricultural products, general cargo, oil and cement, and cruise line passengers. The Port of Palm Beach and its tenants combine to become one of the largest employers in Palm Beach County with many exports supporting the Caribbean. A Foreign Trade Zone has been in operation since 1987.

Economic Drivers

Population growth through in-migration is one of the primary economic drivers in the county. The county's year-round population was 1,320,124 in 2010. Projected population estimates are expected to continue to increase. The estimated population for Palm Beach County in April 2025 was 1,556,161. The medium projected estimate for 2030 is 1,643,400. The following page provides a breakdown of population estimates by municipality.

Area	April 1, 2025 Population Estimate	August 1, 2024 Population Estimate
Palm Beach County	1,556,161	1,545,905
Atlantis	2,138	2,135
Belle Glade	17,542	17,468
Boca Raton	100,897	100,560
Boynton Beach	82,937	82,393
Briny Breezes	494	498
Cloud Lake	139	137
Delray Beach	69,038	68,096
Glen Ridge	216	214
Golf	284	287
Greenacres	45,403	45,439
Gulf Stream	957	956
Haverhill	2,274	2,188
Highland Beach	4,279	4,287
Hypoluxo	2,670	2,672
Juno Beach	3,895	3,871
Jupiter	61,246	61,215
Jupiter Inlet Colony	410	412
Lake Clarke Shores	3,547	3,545
Lake Park	9,174	9,014
Lake Worth Beach	43,596	43,472
Lantana	12,248	12,239
Loxahatchee Groves	3,384	3,374
Manalapan	412	416
Mangonia Park	2,530	2,511
North Palm Beach	13,111	13,101
Ocean Ridge	1,819	1,810
Pahokee	5,612	5,666
Palm Beach	9,191	9,212
Palm Beach Gardens	64,547	62,469
Palm Beach Shores	1,295	1,283
Palm Springs	27,928	27,312
Riviera Beach	39,644	39,390
Royal Palm Beach	41,165	40,430
South Bay	4,982	4,984
South Palm Beach	1,466	1,465
Tequesta	6,116	6,093
Wellington	61,836	61,794
Westlake	6,685	6,419
West Palm Beach	126,944	125,401
UNINCORPORATED	674,110	671,677

Sources: 2025, 2024 US Census and Office of Economic and Demographic Research

Construction

Net absorption of the Palm Beach Office market turned positive in Q3 2025 (59,300 SF) being driven to Class A space. Construction activity remains strong highlighted by Sundy Village (99,200 SF) and additional 1,109,700 square feet still under construction in the county. Class A properties led the way with 96,700 square feet of positive absorption in Q3 and 253,400 square feet year-to-date. In contrast, Class B properties posted 37,400 square feet of negative absorption in Q3, and a cumulative loss of 211,100 square feet year-to-date. Sublease availability in Palm Beach County declined to 2.3% in Q3 2025. Source: CBRE - OFFICE Q3 2025.

Palm Beach's industrial market is facing supply pressure at the end of 2025 and leasing activity has slowed due to softer retail spending and ongoing tariff uncertainty. Year-to-date leasing is down nearly 500,000 square feet from the same period last year. However, early indications suggest the market could be strengthening. Niagara Bottling has secured 183,029 square feet at Palm Beach Park of Commerce, Building 1 driving absorption in the submarket which recorded the highest quarterly and year-to-date totals across the market. There is nearly 1.5 million square feet of industrial space under construction primarily across two submarkets, Boynton Beach and Delray Beach. Notable projects underway include Logistics Center at Delray (200,000 SF) and The District (474,000 SF). Source: CBRE Industrial 3Q 2025.

Palm Beach County remained a tight retail market at Q2, 2025, with an overall vacancy rate of 4.0%. At the same time, an availability rate of just 4.7% underscores the ongoing shortage of quality retail space across the county. Construction activity remained limited in 2025, with just over 140,000 square feet of new projects breaking ground in 2025. North County continued to lead all new developments, accounting for 95.0% of upcoming inventory reflecting both the migration of companies and high-income residents and the scarcity of developable land in the South County. Leasing activity increased 29.2% compared to the same period last year. However, a wave of vacancies led to net occupancy losses of 276,871 square feet. This recent trend, combined with a limited pipeline of new supply, suggests that absorption could remain modest through the end of 2025. Source: Cushman & Wakefield Retail Q2 2025.

The 2024 single family residential building permit activity reflects the highest numbers in Westlake, West Palm Beach, Palm Beach Gardens, Boca Raton, Delray Beach and unincorporated areas of the county. Multi-family building activity is concentrated in West Palm Beach, Delray Beach, Royal Palm Beach, Pahokee, and unincorporated areas of the county. For 2024, there were 2,629 building permits for single family units and 1,373 building permits for multiple family dwelling units, with a total units' value of $1,466,570,085. The building permit value decreased 15% from the previous year. Other new public and private construction projects in all sectors are ongoing in the county. For 2Q 2025, there are 706 building permits for single family units and 488 building permits for multiple family dwelling units. Source: Palm Beach County Planning & Zoning.

Health Care

Health care is one of Florida's fastest growing service sectors, employing over 500,000 of the state's service workers and generating almost $1.3 billion dollars in payrolls. Approximately 35,000 health care practitioners and workers are employed in Palm Beach County.

Palm Beach County has several acute-care hospitals including the regional Veterans Administration Medical Center. Included are two trauma centers - one at Delray Medical Center in Delray Beach, and the other at St. Mary's Medical Center in West Palm Beach.

There are numerous nursing homes available in Palm Beach County. In addition, there are Urgent Care Centers, Hospices, Public Health Clinics, Treatment Centers, and Adult Living Facilities to serve the needs of the growing population.

Tourism

Palm Beach County is one of Florida's major destinations for business and leisure travelers, according to thePalmBeaches.com. The county visitor industry employs more than 90,000 people and contributes more than $10.5 billion annually to the economy. There were 10.6 million visitors during the county's recently completed fiscal year, which occurred from October 1, 2024, through September 30, 2025 up from the previous record of 9.6 million visitors in the last fiscal year and reflects an estimated economic impact of $11.3 billion, reinforcing the region's reputation as Florida's premier destination for leisure, wellness, sports, cultural, and business travel in the tri-county area. Thanksgiving kicked off the destination's "high season," with many travelers coming to The Palm Beaches.

Hotel room night revenue also surged, reaching $1.32 billion, an 11.6% increase year-over-year (2024 to 2025) making Palm Beach County ranked second in the state, behind only Tampa Bay/Hillsborough County, and reflects strong demand across leisure, group and wellness segments. Palm Beach County's revenue per available hotel room, or RevPAR, outpaced the state during the last fiscal year. The county's revenue was $188 per available room, compared to $134 for the state. The $188 RevPAR figure also is up nearly 11% from the prior year's $170 figure according to thePalmBeaches.com. Notably, Palm Beach County hotels saw a 17% surge in RevPAR in January 2025, nicknamed the "Trump bump," according to data from CoStar 1Q 2025.

Agriculture

Commercial agricultural production is one of Palm Beach County's major core industries and employer. Two major crops in Palm Beach County are sugar and citrus. Agricultural production is expected to remain a vital segment of the Palm Beach County economy however, coastal farmland acreage is gradually declining as urbanization spreads westward.

In addition, Palm Beach County's Equestrian community is one of the country's premier locations for polo, jumpers, and dressage. Additionally, there is an extensive private recreational horse population.

Employment

An analysis of workforce and demographic characteristics, including commuting patterns of Palm Beach County was conducted to provide economic data on the population and labor force living or working in the county. A detailed examination of commuting patterns for Palm Beach County shows that the county has a net inflow of 24,303 workers with approximately 32.0% of workers who reside in Palm Beach County employed outside the county. Palm Beach County was ranked 61 of 67 for the highest outflow rankings among Florida counties. Of the 173,031 Palm Beach County workers employed outside the county, the top destination counties are Broward County (76,116 workers) and Miami-Dade County (31,281 workers). Of the 197,334 Palm Beach County workers living outside the county, the top origin counties are Broward County (70,988 workers), Miami-Dade County (29,394 workers), and St. Lucie County (16,348 workers). Source: Florida Department of Economic Opportunity

Unemployment was 4.5% as of December 2025 up from 3.1% in December 2024 with a labor force of 781,245 in December 2025 up from 774,702 in December 2024.

According to the Business Development Board of Palm Beach County, the Top Employers for 2024-2025 are listed below.

GOODS PRODUCING

Palm Beach County boasts some of the finest manufacturers in the world. Their presence is a strong indication of the county's ability to support industry. Although the county has a variety of producers, there are distinct industry clusters. The most prevalent are: communications & information technology; aerospace & engineering; agriculture & food processing; business & financials services and life sciences, including medical & pharmaceutical products. Many of the country's industrial employers are competing on a worldwide basis with products sold in the international market. Below is a list of some of the largest quality companies that have chosen Palm Beach County as a business location.

COMPANY	APPROX. EMPLOYEES	PRODUCT	LOCATION
Florida Crystals Corporation (Headquarters)	2,000*	Agriculture	West Palm Beach
Pratt & Whitney, an RTX company	2,000	Aerospace Engineering	West Palm Beach
U.S. Sugar	1,300*	Agriculture	Belle Glade
Lockheed Martin and Sikorsky, a Lockheed Martin Company	1,052	Aerospace Engineering & Helicopters	Riviera Beach West Palm Beach
Cheney Brothers	1,050*	Food Distribution	Riviera Beach
TBC Corporation (Headquarters)	870*	Tire Distribution	Palm Beach Gardens
ZimVie Dental & Spine	854*	Dental Implants	Palm Beach Gardens
Johnson Controls	741*	Security System Manufacturing	Boca Raton/West Palm Beach
Walgreens Distribution	600*	Pharmaceutical Distribution	Jupiter
IBM Corp.	600*	Electronics R&D	Boca Raton
Sugar Cane Growers Cooperative	550	Agriculture	Belle Glade
Aerojet Rocketdyne, an L3Harris Technologies Company	510	Aerospace Engineering	West Palm Beach
ADT Security Services (Headquarters)	500*	Security System Manufacturing	Boca Raton/West Palm Beach
Belcan Engineering Group, LLC	396	Aerospace Engineering	Palm Beach Gardens
PSM a Hanwha Company	380	Turbine Parts Manufacturing	Jupiter
US Foods	374*	Food Distribution	Boca Raton
Newell Brands – Appliances and Cookware Division (Headquarters)	350*	Small Appliance Manufacturing	Boca Raton

SERVICE PROVIDING

Service companies, both public and private, large and small, support the area's residents and businesses. There are roughly 65,572 companies in Palm Beach County that supply products and services. In the services producing sector of the economy, a strong cluster of companies is found in business and financial services. This cluster represents more than 25,914 companies. Below is a list of just a few of the major service-oriented employers in Palm Beach County

COMPANY	APPROX. EMPLOYEES	PRODUCT	LOCATION
Palm Beach County School District	22,218	Education	County Wide
Florida Atlantic University	6,335	Higher Education	Boca Raton
Palm Beach County Board of County Commissioners	5,873	County Government	West Palm Beach
Tenet Coastal Division Palm Beach County	5,734*	Health Care	Countywide
NextEra Energy, Inc. - the parent company of FPL (Headquarters)	5,598	Utilities	Juno Beach
Baptist Health South Florida	3,135*	Health Care	Boynton Beach/Boca
Veterans Health Administration	2,948	Health Care	West Palm Beach
HCA Florida Healthcare	2,612	Health Care	Countywide
Jupiter Medical Center	2,540	Health Care	Jupiter
The Breakers Palm Beach	2,300	Hotel	Palm Beach
Office Depot (Headquarters)	2,000*	Office Supplies	Boca Raton
City of Boca Raton	1,810*	City Government	Boca Raton
City of West Palm Beach	1,725	City Government	West Palm Beach
Allied Universal Security Services (Headquarters)	1,451*	Security Services	Jupiter
South Florida Water Management District	1,371*	Regional Government	Countywide
Wellington Regional Medical Center	1,360	Health Care	Wellington
Palm Beach State College	1,157	Higher Education	Lake Worth
Bank of America	1,000	Banking	Countywide
Wells Fargo & Company	945*	Financial Services	Countywide
NCCI (Headquarters)	800*	Insurance Actuarial	Boca Raton

Residential

PALM BEACH COUNTY
MARKET SNAPSHOT

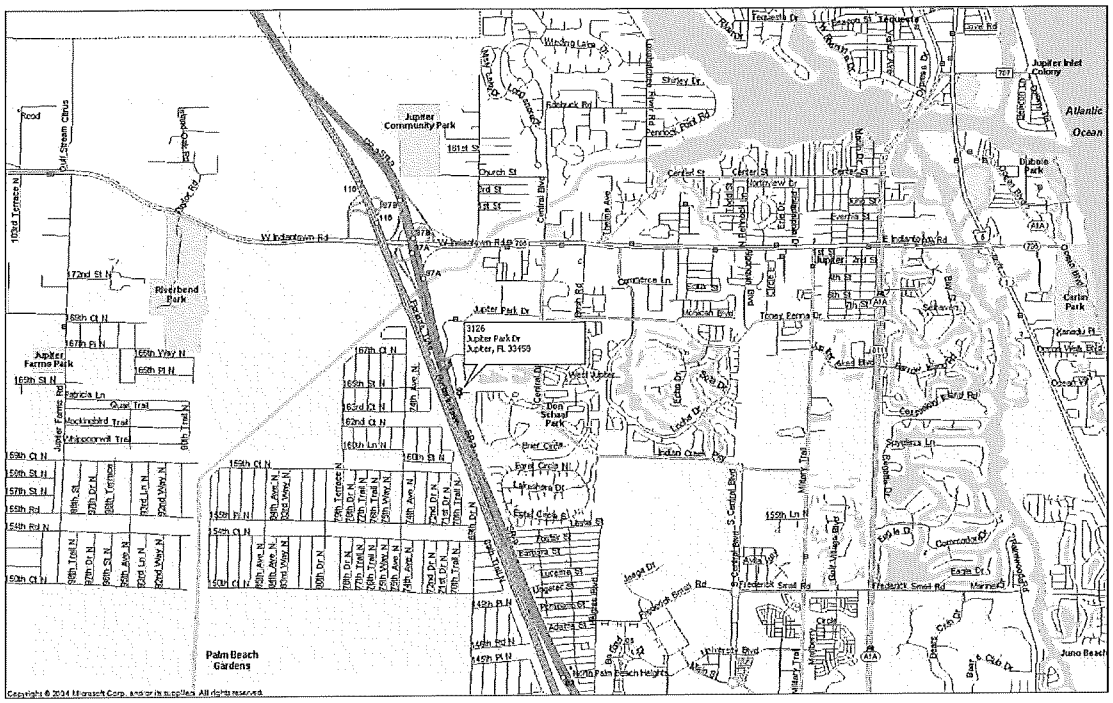
Single Family Homes	2026	2025	% Change
Closed Sales	937	850	10.2%
Paid In Cash	470	408	15.2%
Median Sale Price	$700,000	$650,000	7.7%
Original List Price Received	94.0%	93.6%	0.4%
Median Days to Contract	49	42	16.7%
Inventory (Active Listings)	6,073	6,136	-1.0%
Months Supply of Inventory	5.2	5.5	-5.5%

Townhouses/Condos	2026	2025	% Change
Closed Sales	697	641	8.7%
Paid In Cash	437	430	1.6%
Median Sale Price	$326,000	$330,000	-1.5%
Original List Price Received	91.6%	90.9%	0.7%
Median Days to Contract	69	62	11.3%
Inventory (Active Listings)	7,633	8,023	-4.9%
Months Supply of Inventory	9.3	9.7	-4.1%

BEACHESMLS

JANUARY

Over the past several years, the real estate market had been trending upward with sales prices and rental rates increasing and vacancy rates declining. However, certain market segments appear to have stabilized or softened as a result of higher interest rates, and there continues to be uncertainty in the economy as a result of covid variants, inflation pressures, higher interest rates, supply chain shortages, and additional uncertainty with the new trade tariffs, recent federal government shutdowns, and the conflict with Iran. The long-term effects on the Palm Beach County market have yet to be determined.


Jupiter Community Park
Riverbend Park
Jupiter Farms Park
3126
Jupiter Park Dr
Jupiter, FL 33458
Palm Beach Gardens
Atlantic
Ocean
Juno Beach
Curtis Park
Dubois Park
Jupiter Inlet Colony
W Indiantown Rd
Jupiter Park Dr
Central Blvd
Church St
Center St
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AREA MAP

AREA/NEIGHBORHOOD ANALYSIS

The Subject Property is located south of Indiantown Road and east of I-95 in Jupiter, Florida. The Town of Jupiter had an April 2025 estimated population of 61,246 according to the Palm Beach County profile. Relevant neighborhood boundaries are Indiantown Road to the north, Indian Creek Parkway to the south, Alternate A1A to the east, and I-95 to the west. This area allows convenient access to amenities and commercial related uses. There are several residential subdivisions within the area.

The major east-west roads consist of Indiantown Road and Donald Ross Road. Indiantown Road (State Road 706) extends from Ocean Boulevard to several miles west of I-95, providing main access to the large Jupiter Farms area as well as the Beeline Highway which connects with western Palm Beach, Martin, and Okeechobee Counties. Interchanges for I-95 and the Florida Turnpike are located on Indiantown Road. Donald Ross Road is a four-lane divided road located 3 ½ miles south of Indiantown Road, which also provides I-95 access, and has an Intracoastal Waterway Bridge.

The predominate land uses along Indiantown Road in proximity to the Subject and east of the Florida Turnpike and I-95 interchanges consist of commercial uses including anchored neighborhood shopping centers, retail strip centers, free standing banks, restaurants and low-rise office buildings. West of these interchanges is the Jupiter Farms area and land uses are more rural and residential in nature. An adequate number of consumer support facilities exist allowing convenient access to amenities and commercial related uses including houses of worship, schools, and hospitals/medical services. There are several residential subdivisions within the area.

One of the major features of the Subject area is the large Loxahatchee River frontage, which separates Jupiter from the Village of Tequesta on the north. This river is widely used for recreational boating as well as providing expensive residential waterfront properties. The river flows into the Intracoastal Waterway and the Atlantic Ocean at the Jupiter Inlet. Beaches are located to the east via Indiantown Road and Donald Ross Road. The larger area to the west is dominated by natural areas including the West Palm Beach's Water Catchment area including Grassy Waters Preserve, Loxahatchee Preserve, Loxahatchee Slough Natural area, Riverbend Park, Loxahatchee River Natural area, and the J.W. Corbett Wildlife Management area.

Also located in the larger area to the west is the North Palm Beach County Airport, an aviation facility accommodating business jets and small planes; Pratt and Whitney which is a testing research and development facility; and the Palm Beach International Raceway in Palm Beach Park of Commerce industrial park.

AREA/NEIGHBORHOOD ANALYSIS (CONT'D)

Office and Medical Uses

The Subject neighborhood does have professional office uses along Indiantown Road. Buildings are primarily one to two-story multi-tenant facilities that have been built within the past ten to thirty years. In the Abacoa area, the former Scripps Research Institute, was purchased by the University of Florida and is now known as Herbert Wertheim UF Scripps Institute for Bio-medical Innovation & Technology. The facility was built in the Abacoa area adjacent to Florida Atlantic University. The Max Planck Florida Institute for Neuroscience also opened a research facility at FAU's Jupiter campus. Abacoa, Scripps Phase I and other properties to the north of the project are located in the Town of Jupiter while Phase II and the new community of Alton is located south of Donald Ross Road in Palm Beach Gardens.

Retail Use

As previously mentioned, the most significant commercial uses are located along Indiantown Road and consist of anchored shopping centers with numerous out-parcels and free-standing retail buildings, restaurants, hotels, and banks. Similarly and more recently, new development is occurring on Donald Ross Road including the addition of the Alton residential community and the new Alton Town Center containing many new retail, anchored shopping, and restaurant stores serving the growing community as well as travelers from I-95 or students at FAU.

Industrial Use

Older industrial uses are located between Center Street and Indiantown Road just west of Old Dixie Highway. The uses within this area consist of auto service or light industrial uses dominated by local businesses that service the surrounding residential population base. The typical buildings are older and consist of a combination of small owner-user facilities or multi-tenant buildings with small bays. Some industrial uses are also located on some of the side streets near Indiantown Road. These include the following:

Jupiter Park of Commerce consists of two phases. Phase I has 21 lots, while Phase II has 33 with the typical lot ranging in size from 1 to 2 acres. The buildings in the park are a mix of single and multi-tenant structures with several of the lots having exposure along Interstate 95. The park is built out with no vacant lots remaining.

Southern Park of Commerce, which is located on the south side of Toney Penna Drive west of Old Dixie Highway, consists of approximately twenty industrial lots ranging in size from approximately .25 acres to 1.5 acres. This is an older business park and consists primarily of local business and light industrial users and is mostly developed.

AREA/NEIGHBORHOOD ANALYSIS (CONT'D)

Loxahatchee Business Park was developed in 1996/97. The site plan has a variety of commercial uses which include indoor self-storage, retail and office space, and warehouse flex space.

Residential Area Sales

Local Market Update – February 2026

REALTORS
BROWARD | PALM BEACHES | ST. LUCIE

Jupiter

Single Family	February			Year to Date		
Key Metrics	2025	2026	% Change	2-2025	2-2026	% Change
Closed Sales	65	77	+ 18.5%	118	137	+ 16.1%
Median Sales Price*	$970,000	$1,010,000	+ 4.1%	$1,030,000	$1,100,000	+ 6.8%
Average Sales Price*	$2,310,613	$2,079,506	- 10.0%	$2,024,803	$1,935,730	- 4.4%
Dollar Volume	$150,189,818	$160,121,999	+ 6.6%	$238,926,718	$265,194,956	+ 11.0%
Percent of Original List Price Received*	92.7%	92.3%	- 0.4%	93.1%	91.9%	- 1.3%
Median Time to Contract	66	67	+ 1.5%	58	66	+ 13.8%
Pending Sales	83	90	+ 8.4%	166	194	+ 16.9%
New Listings	132	140	+ 6.1%	296	265	- 10.5%
Inventory of Homes for Sale	398	315	- 20.9%	—	—	—
Months Supply of Inventory	5.7	4.0	- 29.8%	—	—	—

Townhouse/Condo	February			Year to Date		
Key Metrics	2025	2026	% Change	2-2025	2-2026	% Change
Closed Sales	48	52	+ 8.3%	89	97	+ 9.0%
Median Sales Price*	$482,500	$622,500	+ 29.0%	$500,000	$520,000	+ 4.0%
Average Sales Price*	$558,527	$1,216,192	+ 117.7%	$692,515	$928,200	+ 34.0%
Dollar Volume	$26,809,312	$63,242,000	+ 135.9%	$61,633,792	$90,035,400	+ 46.1%
Percent of Original List Price Received*	91.9%	92.4%	+ 0.5%	91.6%	92.1%	+ 0.5%
Median Time to Contract	78	85	+ 9.0%	77	85	+ 10.4%
Pending Sales	65	78	+ 20.0%	123	150	+ 22.0%
New Listings	121	139	+ 14.9%	254	270	+ 6.3%
Inventory of Homes for Sale	448	371	- 17.2%	—	—	—
Months Supply of Inventory	9.0	6.3	- 30.0%	—	—	—

* Does not account for sales concessions. Percent change may be volatile due to small sample size. Data pulled on or as of the report date for specified time period.

Some of the larger developments currently planned, under construction, or recently completed are as follows:

- Barcelona – a commercial site plan for a medical office building (31,700 SF), fast food outlet (4,008 SF), restaurant (4,500 SF), retail (1,725 SF), and 351 residential apartment units.

- Jupiter Medical and Technology Park – a two-story medical and office building (50,000 SF) and a two-story parking garage on a 15.9 acre property.

AREA/NEIGHBORHOOD ANALYSIS (CONT'D)

- Sonoma Isles (Lakewood) – 275 residential units, bio-science/high tech (150,000 SF), restaurant (5,000 SF), and drugstore (14,750 SF). (Under construction).

- The Love Street project - a Planned Unit Development (PUD) for a commercial development that will include retail (40,512 SF), a restaurant (17,051 SF), fast food outlet (1,000 SF), a club/catering hall (25,311 SF), office space, and vacation rental. The 4 acre site is located on the northwest corner of A1A and Love Street with frontage along the south side of the Jupiter Inlet.

- Water Pointe - Site plan application for the construction of 35 multi-family residential units on 4.2 acres located on the west side of U.S. Highway One, approximately 850 feet north of the intersection of U.S. Highway One and Ocean Way.

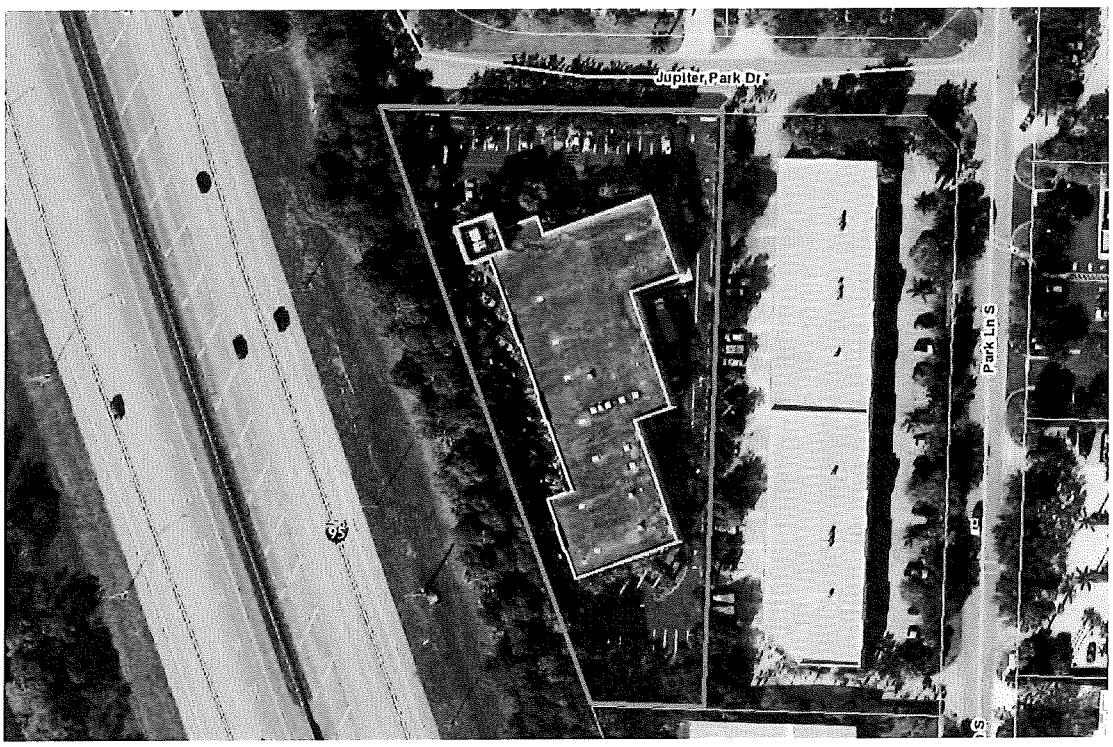
- Caretta - Northwest corner of US Highway One and Donald Ross Road, Jupiter. This project will have 95 condominiums in four buildings plus some commercial first floor space. The project does not have waterfrontage but will have beach access. Presales are underway.

- Santé Circle PUD – is a large scale Planned Unit Development (PUD) application being considered. The master plan proposes: eight lots for uses including, but not limited to: Hospital, Specialty Hospital, Medical/Dental Clinics, Hotel/Conference Center, Limited Access Self Storage, and Corporate/Business Offices. Property is located on a 57.7 ± acre property located on the north and south sides of Island Way.

- River Plaza - application to construct a five-story, 50,575 square foot office building with 41,063 square feet of business office, 7,000 square feet of medical, 6,151 square feet of restaurant space with 788 square feet of outdoor seating, 3,361 square feet of limited ancillary retail and a 130,740 square foot parking garage, modify an existing four story, 32,070 square foot office building to add an open air pavilion, on a 4.8+/- acre property located at 900 South U.S. Highway One.

CONCLUSION

In summary, the immediate neighborhood can be characterized as being an established area and is anticipated to remain relatively stable over the long term. The demographics for the Jupiter area are above the County averages.



AERIAL PHOTO

SITE DATA

Size and Shape:

The Subject Site is mostly triangular in shape measuring approximately 270.56' along the south side Jupiter Park Drive; 493.22' along the east side of Interstate 95; 463.50' along the eastern boundary; and 91.19' along the southern boundary. Accordingly, the Subject Site contains approximately 1.92 acres or 83,809 square feet.

Location and Accessibility:

The Subject has direct frontage along the south side of Jupiter Park Drive and along the east side of Interstate 95. Jupiter Park Drive is a two-lane, roadway that loops through the Jupiter Park Commerce. Access to the park is available from Central Boulevard, which intersects Indiantown Road approximately 1 mile north of the Subject neighborhood. Indiantown Road is the major east/west roadway that bi-sects the Town of Jupiter with both Interstate 95 and Florida Turnpike access.

Topography and Drainage:

The Subject Site appears level and at existing road grade. The site improvements include on-site drainage catch basins as well as a dry retention area located along southern boundary of the site.

Environmental Concerns:

We have not been provided with a copy of any soil survey assessment report associated with the Subject Site. Upon inspection of the site, no unusual soil conditions or other environmental concerns were noted. The Subject Property has been appraised assuming no contamination or environmental issues exist that would have a negative impact on the value of the property.

Easements and Encroachments:

An older survey of the Subject Property was provided to the appraiser and has been included in this report. Based on our physical inspection of the Subject Property, as well as the older survey, no easements or encroachments were noted that would adversely affect the development of the site. However, a current survey of the Subject Property is recommended to help determine the existence of any easements or encroachments that may negatively impact the Subject Property.

SITE DATA (CONT'D)

Utilities:

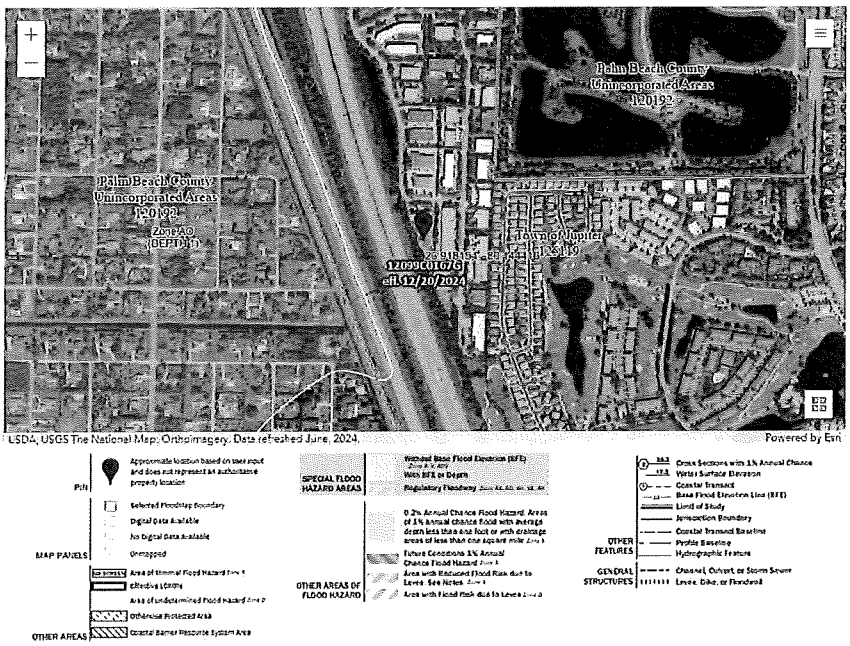
The Subject Site is serviced by public sewer and water. Electricity is provided by Florida Power and Light. Telephone service is provided by private contractors. All other services such as police, fire protection, and trash collection are also available.

Census Tract:

The Subject Property is located within Census Tract 0002.13 as indicated by the Bureau of the Census. The estimated 2025 tract population is 3,014 with an estimated tract Median Family Income of $86,980. There are 1,693 total housing units within this tract, with 860 owner occupied units, 499 renter occupied units, and 334 vacant units. Median Housing Age is 32 years.

Flood Zone:

The Subject Property is located within Flood Zone "X", according to map panel 12099C0167G, effective on 12/20/2024. The "X" flood zone classification typically does not require flood insurance.



FLOOD MAP

SITE DATA (CONT'D)

Zoning:

The Subject Site is zoned "I-1", Light Industrial by the Town of Jupiter. The purpose and intent of the Industrial, Park, Light Industry District (I-1) is to provide areas in appropriate locations for industrial uses consisting of light manufacturing, processing, assembly, distribution or warehousing involving the finishing of intermediate products; research and development; wholesale trade; repair; and building and construction services. The Subject is an approved project and does appear to conform to zoning requirements. For details on this zoning, refer to the addenda.

Concurrency:

In 1985, the Florida Legislature enacted the Local Government Comprehensive Planning and Land Development Regional Act (Chapter 163, Part II, Florida Statutes), commonly referred to as the "Growth Management Act". Pursuant to Section 163.3177 (10) (h), F.S., "it is the intent of the Legislature that public facilities and services needed to support development shall be available concurrent with the impacts of such development." From this statement, the term, the term "concurrency" was derived, and is commonly used to refer to the above legislation and its requirements. The basis of the concurrency concept is Rule 9J-5.0055 of the Florida Administrative Code.

In 2011 the "Community Planning Act" was passed as HB 7207. This legislation significantly limits the role of state agencies and giving greater autonomy to local municipalities in regards to concurrency issues. It revises or removes some of the key hurdles for many development projects, including demonstrated "need" and state-mandated concurrency for transportation, schools, and parks and recreation facilities. The Act also incorporates substantial changes to Chapter 380 that should result in fewer projects being required to go through the Development of Regional Impact (DRI) process.

Municipalities are encouraged to continue to follow professional guidelines on concurrency issues to ensure that facilities and services needed to support development are available concurrent with the impacts of such development. Many of the basic requirements and features of the current law will remain, but the changes will provide opportunities for existing, pending and new development projects and will allow local governments more flexibility and control at the local level.

The Subject Site is improved with a 30,065 square foot office building. Therefore, the site has been deemed concurrent with regard to concurrency elements for a use at least as intensive as the current use.

SITE DATA (CONT'D)

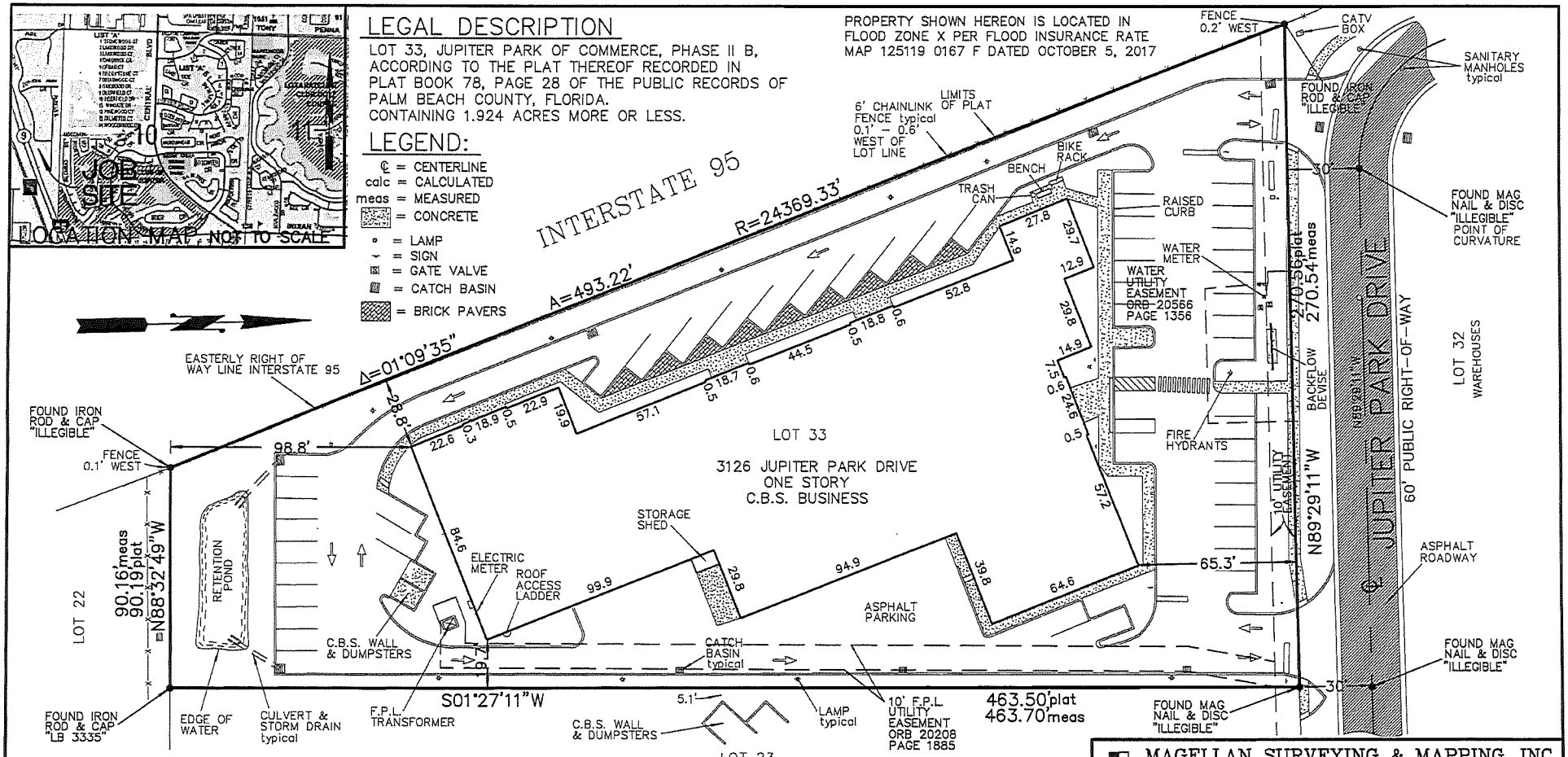
Real Estate Taxes:

The Subject Property 2025 taxable value and associated taxes are as follows:

Folio #30-42-41-09-03-000-0330

Appraised Market Value	
Land:	$4,900,941
Building:	$1,539,491
Total Appraised Value:	$6,440,432 ($214.22/SF)
Total Assessed Value:	$6,156,432 ($204.77/SF)
Total Taxable Value:	$6,156,432 ($204.77/SF)
Total Taxes:	$114,484 ($3.81/SF) of total building area

The taxes for 2025 have been paid. According to the Public Records of Palm Beach County, there are no prior year delinquent taxes noted. Based on the appraiser's market value conclusion, the 2025 assessment for the Subject appears to be low even considering the Taxable Value is often 10% to 30% less than actual market value. The County's Assessed Value is lagging behind the Market Value because of the cap on the annual increases in the Assessed Value. The annual increases in the Assessed Value are capped at 10% as long as ownership of the property remains the same. If ownership of the property changes, there would be no cap on the increase in the Assessed Value, and the Assessed Value would likely increase.



SURVEYORS NOTES:
1. THIS SURVEY COMPLIES WITH CHAPTER 5J-17, FLORIDA ADMINISTRATION CODE.
2. NO SEARCH OF THE PUBLIC RECORDS HAS BEEN MADE BY THIS OFFICE.
3. LEGAL DESCRIPTIONS SUPPLIED BY CLIENT OR CLIENT'S AGENT.
4. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS, SOME ITEMS SHOWN HEREIN ARE FOR GRAPHIC AND INFORMATIONAL PURPOSES ONLY.
5. VISIBLE ENCROACHMENTS, IF ANY ARE SHOWN HEREON.
6. THIS SURVEY FOR CONVEYANCE PURPOSES ONLY AND NOT INTENDED FOR CONSTRUCTION PURPOSES WITHOUT PERMISSION OF THIS SURVEYOR.
7. ELEVATIONS HEREON BASED ON NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988)
8. NO UNDERGROUND UTILITIES LOCATED EXCEPT WHERE SHOWN HEREON.
9. THIS IS NOT AN ENVIRONMENTAL SURVEY.
10. THIS SURVEY DOES NOT GUARANTY OWNERSHIP OR RIPARIAN RIGHTS BEYOND MEAN HIGH WATER LINE.
11. BEARINGS HEREON BASED ON THE PLAT BEARING OF N89°29'11"W ALONG THE CENTERLINE OF JUPITER PARK DRIVE AND ALL OTHER BEARINGS ARE RELATIVE THERETO.
12. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
13. FORM BOARD TIE-IN & UNDER CONSTRUCTION TIE-IN SURVEYS INTENT IS TO SHOW SETBACK COMPLIANCE; OWNER AND/OR CONTRACTOR ACCEPTS RESPONSIBILITY FOR PLACEMENT OF FORMBOARDS UPON RECIEPT OF THIS SURVEY. PLUMBING AND OTHER UTILITIES INSTALLED AT CONTRACTORS RISK.
14. THIS SURVEY IS NOT VALID WITHOUT SURVEYORS SIGNATURE & EMBOSSED SEAL.

NOTE:
I HAVE REVIEWED A TITLE COMMITMENT/SEARCH ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NUMBER 2018-181 EFFECTIVE DATE, NOVEMBER 15, 2018, AND ALL EASEMENTS AND RIGHT-OF-WAY OF RECORD NOTED THEREIN ARE REFLECTED ON THIS PROPERTY.

SCHEDULE B SECTION II TABLE
ITEMS 1 -4: STANDARD EXCEPTIONS
ITEM 5: COVENANTS, RESTRICTIONS EASEMENTS; ACCESS EASEMENT, BLANKET IN NATURE, MAINTENANCE OF OVERALL DRAINAGE SYSTEM
ITEM 6: LIEN RIGHTS, SANITARY SERVICE, BLANKET IN NATURE
ITEM 7: DRAINAGE MATTERS, BLANKET IN NATURE
ITEM 8: WATER AGREEMENT, BLANKET IN NATURE
ITEM 9: SANITARY AGREEMENT, BLANKET IN NATURE
ITEM 10: PLAT MATTERS, SHOWN HEREON
ITEM 11: UNITY OF TITLE: LOT CAN NOT BE DIVIDED
ITEM 12: F.P.L. EASEMENT, PLOTTED HEREON
ITEM 13: WATER EASEMENT, PLOTTED HEREON

"ALTA/NSPS LAND TITLE SURVEY"

CERTIFIED TO:
CAPOZZOLI REALTY PORT RICHEY, LLC
A FLORIDA LIMITED LIABILITY COMPANY
LEGACY BANK OF FLORIDA, ISAOA ATIMA
LEVINSON, GRITTER & DIGORE, LLP
FIDELITY NATIONAL TITLE INSURANCE COMPANY
LLOYD GRANET, P.A.

RONALD E. STOTLER
PROFESSIONAL SURVEYOR AND MAPPER
CERTIFICATE NO. 5026
STATE OF FLORIDA

MAGELLAN SURVEYING & MAPPING, INC.
M.S.&M. INC
PROFESSIONAL LAND SURVEYORS
LICENSED BUSINESS - 7571
450 S. OLD DIXIE HIGHWAY, SUITE 10
JUPITER, FLORIDA 33458
SINCE 2007 561-746-8745 FAX 561-746-9632 E-mail info@magellansurveying.com

Boundary Survey

Prepared For: CAPOZZOLI REALTY PORT RICHEY, LLC

Drawn by ACB	Date Of Survey	Scale
Field: TF F.B.154 Pg53	DECEMBER 12, 2018	1"= 40'
REVISIONS: ADD CERTS, 01-02-2019 KC		Drawing Number 18-371

PROPERTY DESCRIPTION

Site Improvements:

The site area not covered by the building improvements consists primarily of asphalt paved drives and parking areas, concrete curbing, concrete sidewalks, and green areas. There are a total of 52 striped parking spaces including three handicapped spaces. A dry retention area is located along the southern boundary of the site. Additional site improvements consist of a trash dumpster enclosure along the southern exposure of the improvements, perimeter landscaping with automatic sprinkler system, a building identification sign at the front, and parking lot lighting.

Building Improvements:

The Subject building is a 30,065 square foot concrete tilt-wall building consisting of 26,920 square feet of first floor office/warehouse space and 3,145 square feet of second floor finished and partially finished space. The building has a slightly pitched metal joist roof with clear heights ranging from approximately 23 feet to 26 feet. The building has impact windows and doors and is entirely spinklered for fire protection. Approximately 70% of the building is air conditioned warehouse space although the duct work in the rear warehouse area is limited. The remainder of the building is finished and partially finished office / administrative / work area.

The finished area is located at the northern end of the building, and this area was recently renovated. The finish consists of 2'x4' dropped acoustic tile ceiling with recessed lighting, carpet and vinyl plank flooring, painted drywall walls. This area has a break room, several offices, a conference room and two bathrooms. This area totals approximately 2,704 square feet (per the plans). The remaining finished and partially finished area is located in the two-story portion near the middle of the building with 3,145 square feet on each floor. This area has dropped acoustic tile ceilings and concrete, carpeted, and some vinyl plank flooring. This area has two bathrooms on the first floor and an additional bathroom on the second floor. Most of this space is open space with some built-in cabinets. The second floor has a concrete deck over structural steel with access available via metal stairs. The interior finish is considered average to good in quality and in good condition with most having recently been renovated.

DESCRIPTION (CONT'D)

The warehouse areas consist of a finished concrete floor, exposed concrete tilt up walls, metal joists ceilings, skylights, and hanging halogen lighting. The clear ceiling heights in the warehouse range from approximately 23' to 26'. There are five, 14' x 16' overhead doors located along the eastern exposure. There are pre-engineered knock out panels located on the southern and western exposures of the improvements that allow for additional roll up doors or glass store fronts and windows to be installed as needed. There are two bathrooms located within the warehouse portion of the building. The building has upgraded 3 phase, 1600 amp electrical service.

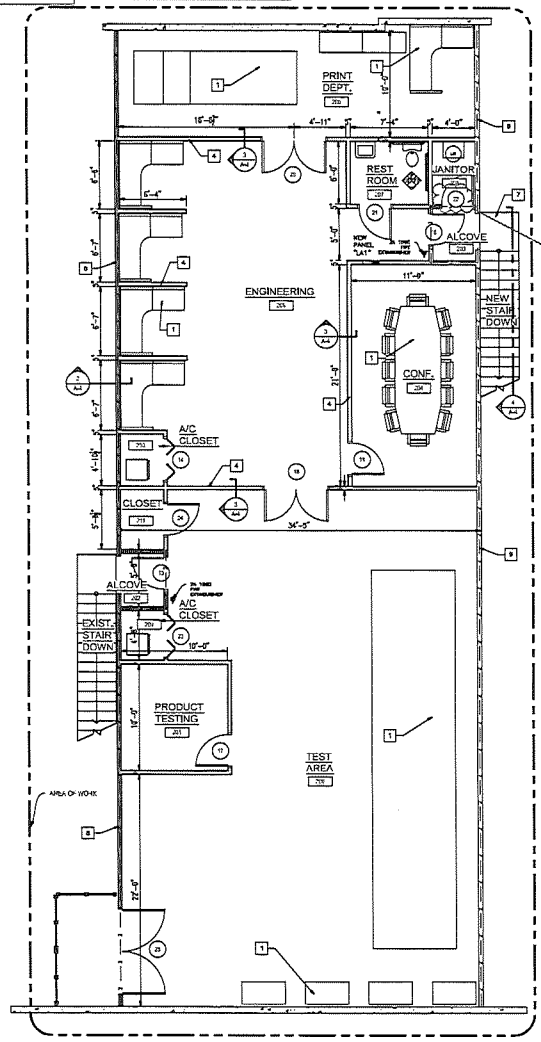
The overall layout of this Subject building is functional and well suited for a single tenant or owner/user. Construction features and quality are considered good and the overall property condition is good.

Submit Shop Drawings, complete with Device Spec's and/or equipment Specs

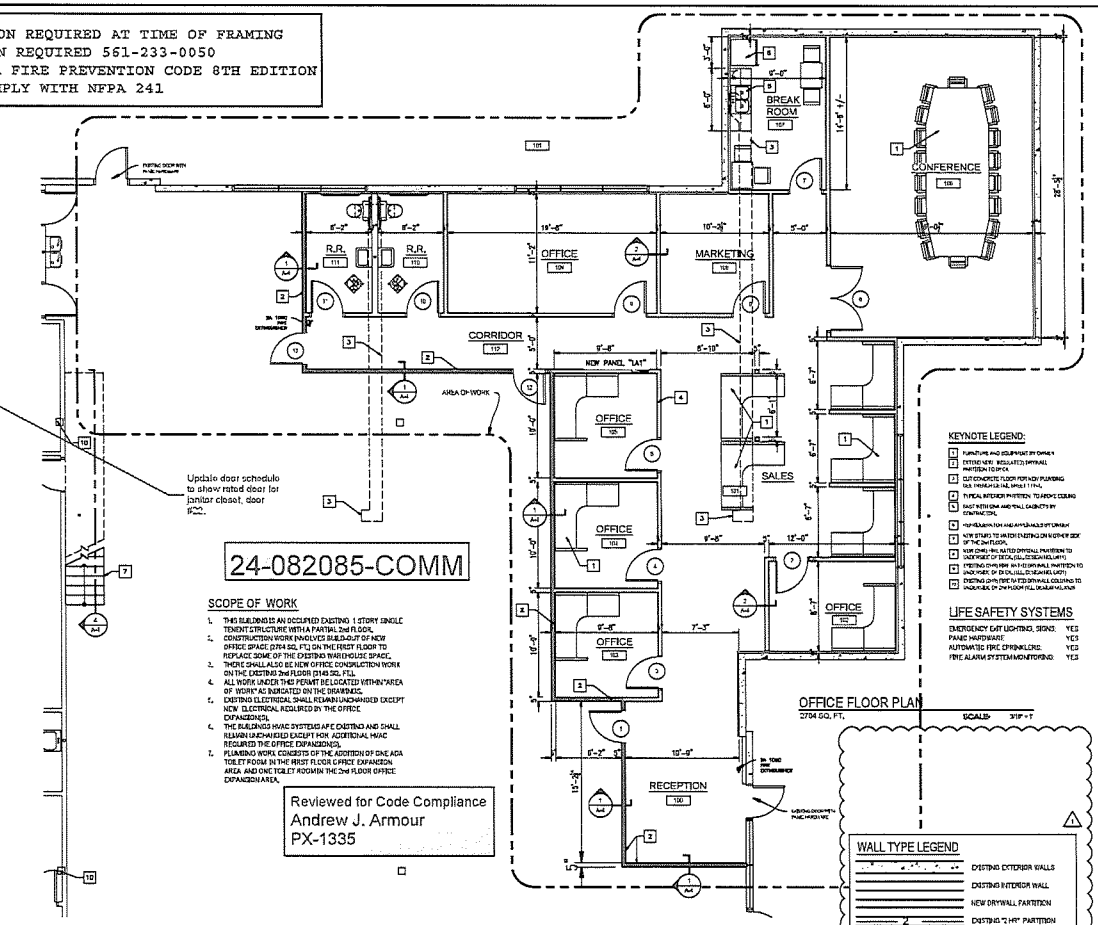
- X Fire Alarm System
- X Fire Sprinkler System
- ___ Standpipe System
- ___ Other

FIRE FRAMING INSPECTION REQUIRED AT TIME OF FRAMING
FIRE INSPECTION REQUIRED 561-233-0050
SHALL COMPLY WITH FLORIDA FIRE PREVENTION CODE 8TH EDITION
SHALL COMPLY WITH NFPA 241

Plan Review/Construction Info



EXIST 2nd FLOOR BUILD OUT
3149 SQ. FT. SCALE: 3/16" = 1'



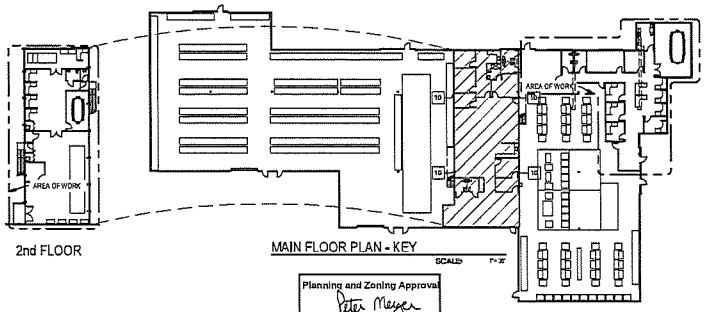
Update door schedule to show rated door for janitor closet, door #___.

24-082085-COMM

SCOPE OF WORK

1. THIS BUILDING IS AN OCCUPIED EXISTING 1 STORY SINGLE TENENT STRUCTURE WITH A PARTIAL 2nd FLOOR.
2. CONSTRUCTION WORK INVOLVES BUILD-OUT OF NEW OFFICE SPACE (2764 SQ. FT.) ON THE FIRST FLOOR TO REPLACE SOME OF THE EXISTING WAREHOUSE SPACE.
3. THERE SHALL ALSO BE NEW OFFICE CONSTRUCTION WORK ON THE EXISTING 2nd FLOOR (3149 SQ. FT.).
4. ALL WORK UNDER THIS PERMIT BE LOCATED WITHIN "AREA OF WORK" AS INDICATED ON THE DRAWINGS.
5. EXISTING ELECTRICAL SHALL REMAIN UNCHANGED EXCEPT NEW ELECTRICAL REQUIRED BY THE OFFICE EXPANSION(S).
6. THE BUILDINGS HVAC SYSTEMS ARE EXISTING AND SHALL REMAIN UNCHANGED EXCEPT FOR ADDITIONAL HVAC REQUIRED THE OFFICE EXPANSION(S).
7. PLUMBING WORK CONSISTS OF THE ADDITION OF ONE ADA TOILET ROOM IN THE FIRST FLOOR OFFICE EXPANSION AREA AND ONE TOILET ROOM IN THE 2nd FLOOR OFFICE EXPANSION AREA.

Reviewed for Code Compliance
Andrew J. Armour
PX-1335



2nd FLOOR

MAIN FLOOR PLAN - KEY
SCALE: 1/16" = 1'

Planning and Zoning Approval
Peter Meyer
10/01/2024

OFFICE FLOOR PLAN
2764 SQ. FT. SCALE: 3/16" = 1'

WALL TYPE LEGEND

- EXISTING EXTERIOR WALLS
- EXISTING INTERIOR WALL
- NEW DRYWALL PARTITION
- EXISTING 2 HR PARTITION
- NEW 2 HR DRYWALL PARTITION

KEYNOTE LEGEND:

1. FURNITURE AND EQUIPMENT BY OWNER
2. EXTEND NEW RESILIENT DRYWALL PARTITION TO DECK
3. CUT CONCRETE FLOOR FOR NEW PLUMBING AS REQUIRED. INSTALL PIPING
4. TYPICAL INTERIOR PARTITION TO APPLY CEILING
5. CASE WITH SINK AND WALL CABINETS BY CONTRACTOR
6. NOT USED
7. NOT USED
8. NEW STUDS TO MATCH EXISTING ON NORTH SIDE OF THE 2nd FLOOR.
9. NEW (ONE) HR. RATED DRYWALL PARTITION TO UNDERSIDE OF DECK (U.L. DESIGN U419)
10. EXISTING DWELLING WITH DRYWALL PARTITION TO REMAIN. WORK ON (E) SIDE (U.L. DESIGN U419)
11. EXISTING DWELLING TO BE DRYWALL CEILING TO UNDERSIDE OF 2nd FLOOR (U.L. DESIGN U419)

LIFE SAFETY SYSTEMS

EMERGENCY EXIT LIGHTING, SIGNS:	YES
PANIC HARDWARE:	YES
AUTOMATIC FIRE SPRINKLERS:	YES
FIRE ALARM SYSTEM MONITORING:	YES

GENERAL CONDITION NOTES

1. ALL WORK SHALL COMPLY WITH THE FLORIDA BUILDING CODE (FBC) 2023.
2. ALL WORK SHALL ALSO CONFORM TO THE LIFE SAFETY CODE 101 AND OTHER APPLICABLE CODES (WHERE APPLICABLE).
3. OWNER/ CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING, PLUMBING ELECTRICAL, A/C, AND OTHER PERMITS REQUIRED BY CITY, COUNTY AND STATE GOVERNMENT AGENCIES
4. DIMENSIONS TAKE PRECEDENCE OVER SCALE. BUILDER SHALL VERIFY ALL DIMENSIONS AT SITE BEFORE CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE BRACING OF ALL STRUCTURAL MEMBERS, WALLS AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION.
6. OWNER/ CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT THE EXISTING FACILITIES AND ADJACENT PROPERTIES FROM DUST AND DEBRIS AND CONSTRUCTION ACTIVITY.
7. PROPER NOTICES, SIGNS AND SAFETY BARRICADES SHALL BE INSTALLED AND POSTED.
8. ALL WOOD IN CONTACT WITH MASONRY OR AS NOTED SHALL BE TREATED.
9. PROTECT AGAINST TERMITE AND VERMIN INTRUSION.
10. PROVIDE SAFETY GLASS IN ALL HAZARDOUS LOCATIONS PER FBC (6TH EDITION)

APPLICABLE CODES

FLORIDA BUILDING CODE (2023, 8TH EDITION)
FLORIDA ACCESSIBILITY CODE (2023, 6TH EDITION)
FLORIDA ENERGY CONSERVATION CODE (2023, 8TH EDITION)
FLORIDA FUEL GAS CODE (2023, 8TH EDITION)
FLORIDA MECHANICAL CODE (2023, 8TH EDITION)
FLORIDA PLUMBING CODE (2023, 8TH EDITION)
NATIONAL ELECTRIC CODE (NEC) 2020 EDITION
FLORIDA FIRE PREVENTION CODE - 2023, 8TH EDITION NFPA 101 LIFE SAFETY CODE

BUILDING BASICS

1st FLOOR AREA = 2,692 sq. ft.
2nd FLOOR AREA = 3,149 sq. ft.
TOTAL BUILDING AREA = 5,841 sq. ft.

CLASSIFICATION OF BUILDING OCCUPANCY ACCORDING TO FLORIDA BUILDING CODE (2023, 8TH EDITION) IS GROUP MODERATE-HAZARD FACTORY INDUSTRIAL, GROUP F-1

TYPE OF CONSTRUCTION FOR THIS BUILDING IS TYPE II B

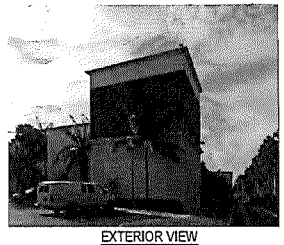
FIRE RATING OF EXISTING BUILDING SECOND FLOOR ASSEMBLY IS 2HRS (U.L. NO. G601)
STEEL COLUMNS SUPPORTING THE SECOND FLOOR HAS A FIRE RATING OF 2HRS (U.L. NO. X525)

LEVEL OF ALTERATION AS SET FORTH IN THE FLORIDA EXISTING BUILDING CODE (2023, 8TH EDITION) ALTERATION LEVEL 2

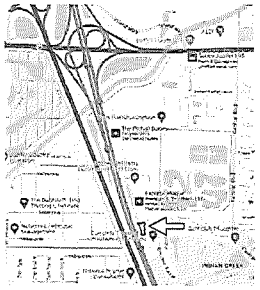
NUMBER OF STORIES = 2
BUILDING HEIGHT = 24'-0"

INDEX OF DRAWINGS

A-1	FLOOR PLANS
A-2	CEILING PLANS
A-3	LIFE SAFTY PLANS
A-4	SCHEDULES/ DETAILS
E-1	ELECTRICAL PLANS
E-2	REFLECTED CEILINGS
E-3	ELECT. RISER/ PANELS
M-1	MECHANICAL PLANS
P-1	PLUMBING PLANS
P-2	PLUMB RISERS/ NOTES



EXTERIOR VIEW



LOCATION MAP

Date	No.	Revisions	By
9/10/2024	1	BUILDING DEPARTMENT COMMENTS	J.A.D.

DRAWING: REFLECTED CEILING PLANS
Project: FRESH-AIR UV
Location: 3126 Jupiter Park Drive Jupiter, Florida 33458
Contractor: R Builders Inc. 1508 S. Cypress Dr.,Tequesta, FL

MASTER PLAN DESIGN
JOHN DURANKO - ARCHITECT
105 WILSON RD., WEST PALM BEACH, FLORIDA
PHONE 561-655-7972 MASTERPLANDESIGN@BELLSOUTH.NET

Drawn by: J.A.D.
Scale: AS SHOWN
Date: 8/14/2024
File no. FA LV 2
SHEET NO: A-1
of 10 sheets

STATE OF FLORIDA — AR0011640 — 9/16/2024 — REGISTERED ARCHITECT
John Duranko
Digitally signed by John Duranko
Date: 2024.09.17 14:25:50 -04'00'

HIGHEST AND BEST USE

Highest and Best Use is defined by the Appraisal Institute in the publication Real Estate Appraisal Terminology as follows (abbreviated):

> **Highest and Best Use -** That reasonable and Probable use that will support the present value as the effective date of the appraisal. alternatively, that use, from among the reasonable, probable, and legal alternative uses, bound to be physically possible, appropriately supported, financially feasible, and which, results in the highest land value.

A proper analysis of the Highest and Best Use of a site is to examine each segment of the definition.

AS VACANT

Reasonable and Probable/Legally Permissible:

The Subject Site is zoned "I-1", Light Industrial, by the Town of Jupiter with a land use designation of Industrial. The purpose and intent of the Industrial, Park, Light Industry District (I-1) is to provide areas in appropriate locations for industrial uses consisting of light manufacturing, processing, assembly, distribution or warehousing involving the finishing of intermediate products; research and development; wholesale trade; repair; and building and construction services.

The Subject Site is located within the Jupiter Park of Commerce a planned industrial park with primarily industrial related businesses including office/warehouses, storage warehouse and manufacturing warehouses. The Subject Site is generally triangular in shape and contains 1.92 acres. The Subject Site has adequate width and depth for development. There are no apparent or unusual physical characteristics to hinder development of the Subject Site.

The Subject use as an office/showroom/warehouse is considered an approved use, and the Subject building appears to meet the current set back requirements for this zoning district. From among the reasonable and probable uses, a light industrial use would be considered to be best suited for the Subject Site and is consistent with the surrounding development in the Subject area. A light industrial use would be a permitted use under the "I-1" zoning district and therefore, is considered to be a legally permissible use.

HIGHEST AND BEST USE (CONT'D)

As vacant, the Subject Property would have to meet concurrency requirements. Water and sewer and other necessary services are available to the site, and the site would be vested for traffic trips based on the existing improvements on the site for at least a use as intensive as the existing use. A more intensive use would require additional traffic studies.

Physically Possible:

The next step in the process of determining Highest and Best Use for the site is to determine if the reasonable, probable, and legally permissible uses are considered physically possible. The Subject Site contains 1.92 acres and has adequate width and depth to be developed with a variety of uses. Considering the Subject Property is a lot of record, it could be developed but would be subject to restrictions based on the current zoning. We are not aware of any unusual soil conditions or any other factors, which would prevent maximizing the development of the site. However, it should be noted that we were not provided with a copy of a soil survey assessment report. The appraiser has assumed the site is not contaminated and no unusual soil condition exists. In consideration of the Subject's existing use and surrounding land uses, it appears that the Subject Property is physically capable of supporting development with a variety of light industrial improvements permitted under the current zoning district. The Subject is best suited for an owner/user use.

Appropriately Supported/Financially Feasible

From an investment standpoint, new development at this time would likely be appropriately supported considering the residential base and the limited amount of available vacant land within the area, but the higher interest rates have slowed down new development.

The last and possibly most important segment of the definition is that the use be financially feasible. Financial feasibility deals directly with the supply and demand in the current marketplace.

Given the existing rental rates in the Subject's surrounding area, developing the site with a light industrial use at this time, may be financially feasible, but the financial feasibility for any new development would have to be evaluated on a case by case basis considering the specifics of the proposed development and the cost of construction. An owner/user use may also be feasible based on the utility of the building for the owner's business and not necessarily based on the income potential or resale potential from the real estate only. This would be the most likely use.

HIGHEST AND BEST USE (CONT'D)

CONCLUSION AS VACANT

Taking into consideration all of the above mentioned factors, which include location of the Subject Site, size of the site, and general supply and demand within the market area, the highest and best use of the Subject Site, as vacant, is considered to be to for light industrial development most likely for an owner/user.

AS IMPROVED

The reasonable, probable, and legal alternative uses for the site, as well as the physically possible uses on the site, as improved, are the same as those previously discussed in the As Vacant section of the Highest and Best Use analysis. The current improvements have a functional layout and demonstrate that the use is physically possible and appropriately supported.

CONCLUSION AS IMPROVED

After considering potential uses for the Subject Site, we conclude that the Subject's continued use as an office/warehouse building is the Highest and Best Use for the site "as improved". The building improvements, as outlined in the "Building Description" section of this report, contribute to the property over and above the underlying land value.

VALUATION METHODS

In estimating the market value of the Subject Property, three Approaches to Value - Cost, Sales Comparison, and Income - were considered but as discussed in the Scope of the Appraisal only the Sales Comparison Approach was considered to be relevant. The applicable approaches are defined as follows:

SALES COMPARISON APPROACH - The process of deriving a value indication for the Subject Property by comparing sales of similar properties to the property being appraised, identifying appropriate units of comparison, and making adjustments to the sale prices (or unit prices, as appropriate) of the comparable properties based on relevant, market-derived elements of comparison. The Sales Comparison Approach may be used to value improved properties, vacant land, or land being considered as though vacant when an adequate supply of comparable sales is available.

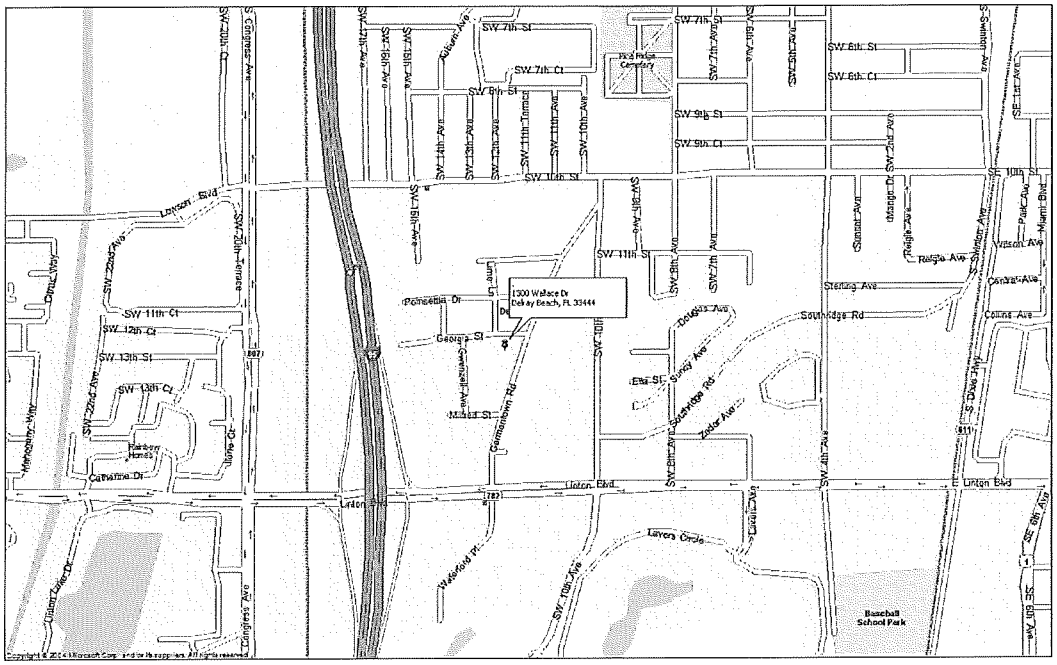
(FROM: Real Estate Appraisal Terminology, The Appraisal Institute)

SALES COMPARISON APPROACH TO VALUE

To estimate the market value of the Subject Property via the Sales Comparison Approach, a sales search was conducted to locate and analyze sales data and compare it to the Subject via appropriate units of comparison. These sales were analyzed on a price per square foot of building area.

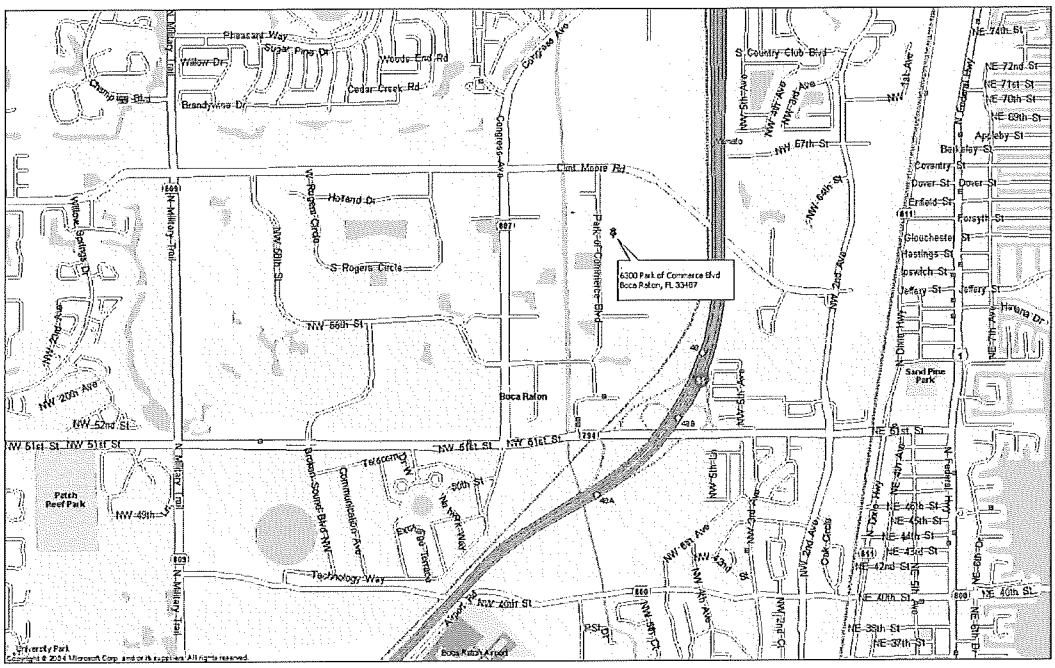
The Sales Comparison Approach is based upon the principle of substitution, which states that a prudent purchaser would pay no more for a property than the cost of acquiring a substitute property on the open market. Substitution may assume purchase of an existing property, with equal utility, or of acquiring an investment which will produce an income stream of similar size with similar risk, as the Subject Property.

An analysis of the market is made in an effort to find a reliable unit of comparison to the Subject Property. Adjustments are made to the sales to account for physical or economic differences as compared to the Subject Property. An adjusted sales price indication is derived from each comparable sale analyzed. These are then weighted according to their relative comparability and then applied to the Subject Property to indicate a value.


1300 Wallace Dr
Delray Beach, FL 33444
SW 7th St
SW 8th St
SW 9th St
SW 10th St
SW 11th St
SW 11th Ct
SW 12th Ct
SW 13th St
SW 13th Ct
Lawson Blvd
Poinciana Dr
George St
Mabel St
Elsa St
Sterling Ave
Southridge Rd
Union Blvd
Layers Circle
Baseball
School Park

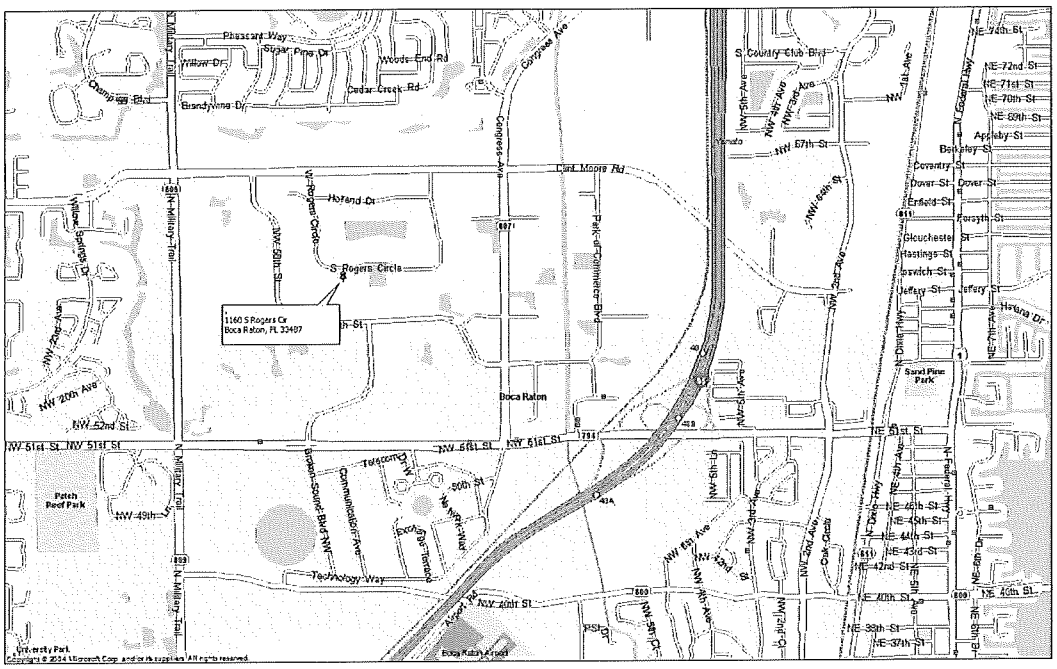

PROSPERI CO.

SALE #1


6300 Park of Commerce Blvd
Boca Raton, FL 33487
Clint Moore Rd
Boca Raton
NW 51st St
NW 61st St
NW 20th Ave
NW 52nd St
NW 49th
Technology Way
NW 20th St
S Country Club Blvd
NW 67th St
NW 66th St
S Rogers Circle
Holland Dr
Pleasant Way
Sugar Pine Dr
Willow Dr
Brandywine Dr
Cedar Creek Rd
Woods End Rd
Congress Ave
Park of Commerce Blvd
NW 2nd Ave
NW 5th Ave
NW 3rd Ave
NW 1st Ave
NW 64th St
NW 50th St
Yamato Rd
Glades Rd
Palmetto Park Rd
Sand Pine Park
Patch Reef Park
Boca Raton Airport
NE 74th St
NE 72nd St
NE 71st St
NE 70th St
NE 69th St
NE 51st St
NE 40th St
NE 35th St
NE 37th St
NE 42nd St
NE 43rd St
NE 44th St
NE 46th St

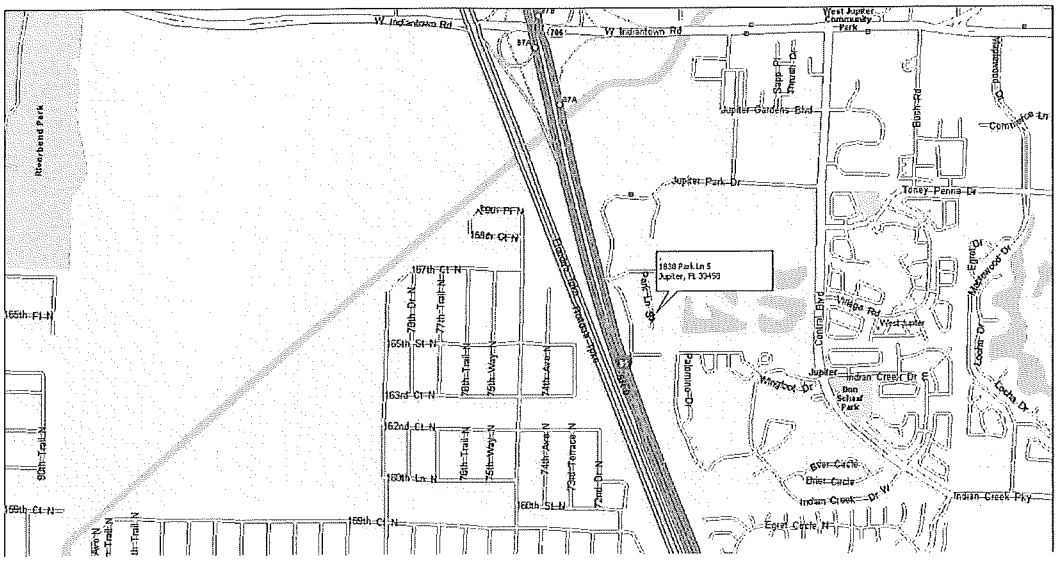


SALE #2


1160 S Rogers Cir
Boca Raton, FL 33487
S Rogers Circle
Horland Ct
Yamato Rd
Glades Rd
Boca Raton
Congress Ave
Military Trail
Powerline Rd
Technology Way
Spanish River Blvd
Federal Hwy
Dixie Hwy
Sand Pine Park
Patch Reef Park
University Park
Boca Raton Airport

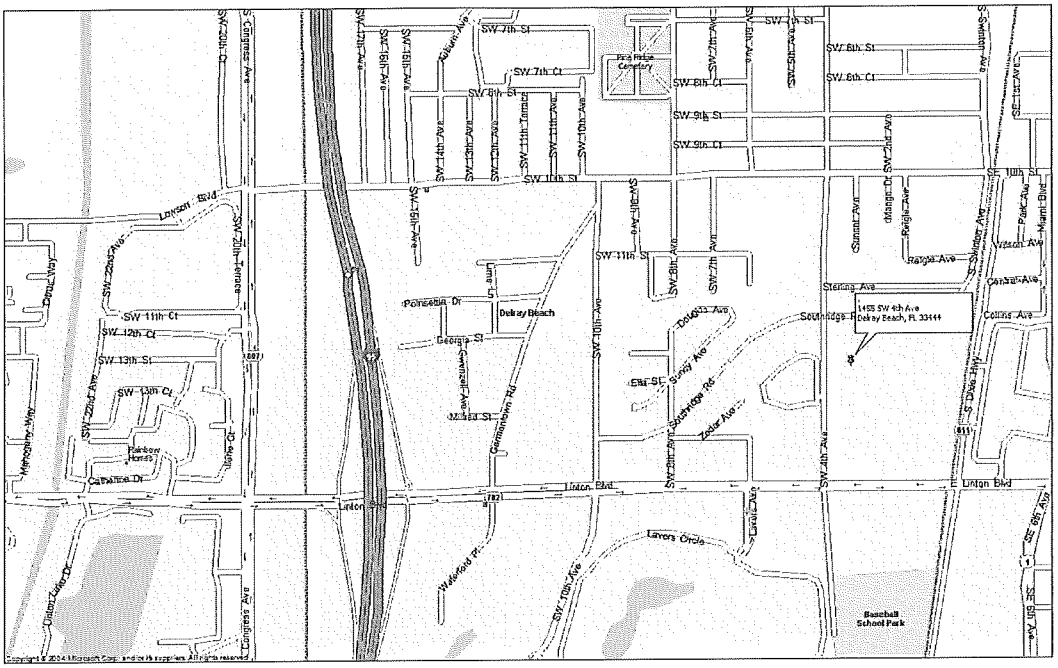


SALE #3


W Indiantown Rd
W Indiantown Rd
West Jupiter Community Park
Jupiter Gardens Blvd
Jupiter Park Dr
Toney Penna Dr
Riverbend Park
Florida Turnpike
1830 Park Ln S
Jupiter, FL 33458
Indian Creek Dr E
Indian Creek Dr W
Indian Creek Pky
Egret Circle N
Egret Circle E
Egret Circle S
Bon Schaar Park
Kingfoot Dr
Ridge Rd
West Jupiter
Commerce Dr
Commerce Ln
Blvd Rd
Egret Dr
Lookout Dr
Lookout Dr
Jupiter
Indian Creek Dr E
155th Pl N
156th Ct N
157th Ct N
79th Dr N
77th Trail N
165th St N
163rd Ct N
162nd Ct N
80th Trail N
76th Trail N
76th Way N
74th Ave N
73rd Terrace N
72nd Dr N
160th Ln N
160th St N
159th Ct N
159th Ct N

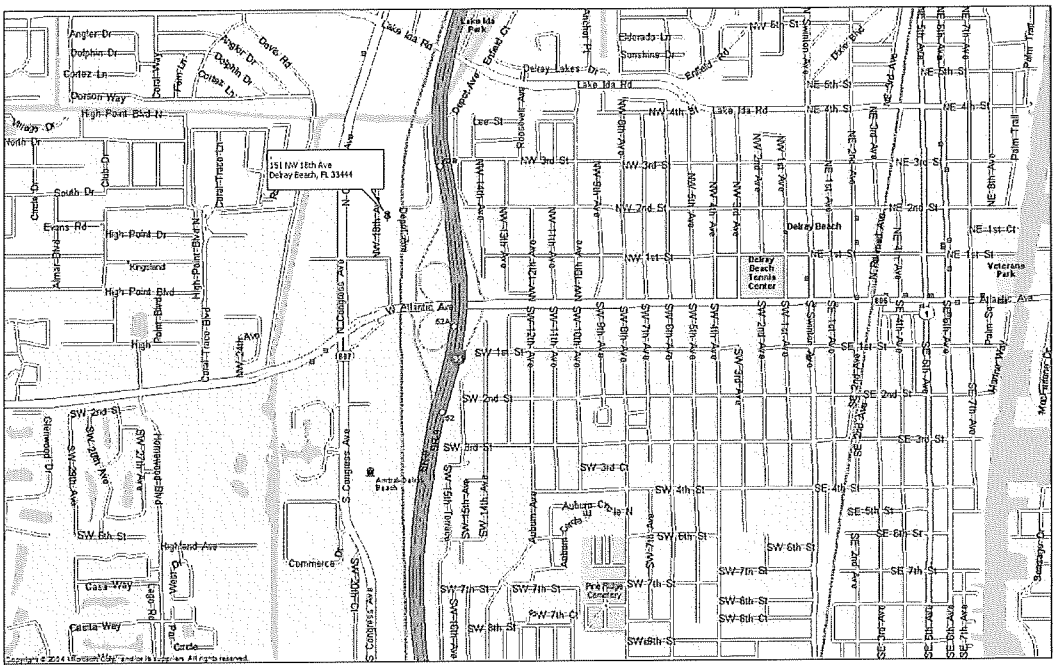


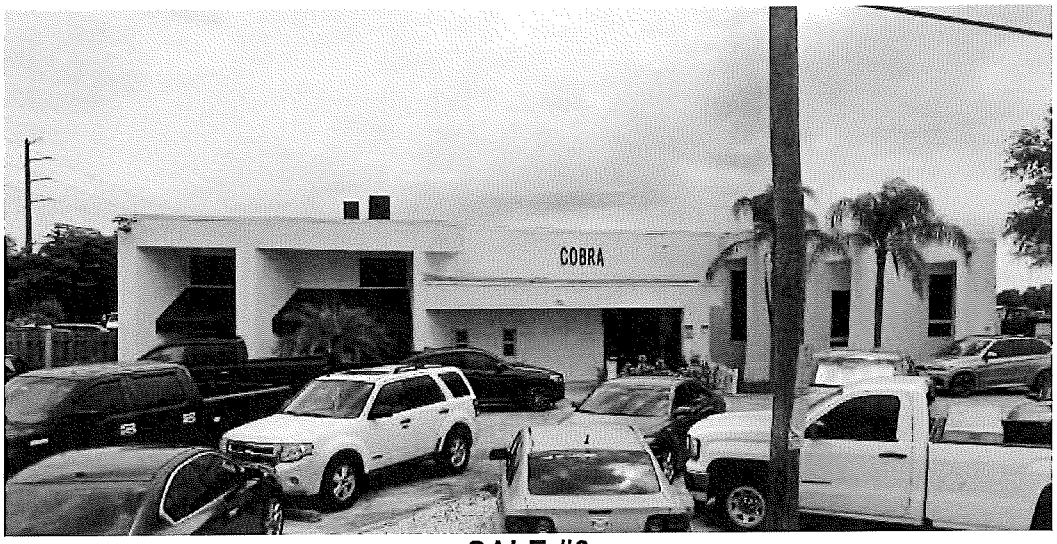
SALE #4


SW 7th St
SW 8th St
SW 9th St
SW 10th St
SW 11th St
SW 6th St
SW 6th Ct
SW 8th Ct
SW 9th Ct
SW 11th Ct
SW 12th Ct
SW 13th St
SW 13th Ct
Larson Blvd
Pompeano Dr
Delray Beach
George St
Germantown Rd
Union Blvd
Lavers Circle
Waterford Pl
Baseball School Park
Sterling Ave
Collins Ave
Raleigh Ave
Venice Ave
Miami Blvd
Park Ave
Sunset Ave
Orange Dr
Sunny Ave
Southridge Rd
Zodiac Ave
Dixie Hwy
Congress Ave
1455 SW 4th Ave
Delray Beach, FL 33444



SALE #5


151 NW 18th Ave
Delray Beach, FL 33444
Delray Beach
Delray Beach Tennis Center
Veterans Park
Commerce
Pine Ridge Cemetery


COBRA

SALE #6

SALES COMPARISON ANALYSIS

Improved Sales Chart Summary

Sale #	Sale Date O.R. Bk	Location	Sale Price	Building Area SF	Price Per SF	Year Built	Land Area SF & Acre	Land to Bldg Ratio & Parking Ratio	Approx. % Finished Area	On-site Parking	Comments
1	May-25 35765 1983 26-046	1300 Wallace Drive Delray Beach	$3,898,500	11,404	$341.85	2004	29,961 0.69	2.63 : 1 713 : 1	10%	16	This property is located on the west side of Wallace Drive in Delray Beach. The warehouse area has 24' clear ceiling heights with one ramp and loading dock available and the building was recently painted. Property is 100% air conditioned, with 3 private offices and a lobby. Approximately 10% of the area is finished office area. The building is not sprinklered for fire protection. There area 16 dedicated parking spaces to the site. According to the selling broker, the building was in above average condition, and no major repairs were required at the time of sale. The building was purchased by a user. The property was on the market for almost 2 years.
2	Jun-25 35883 907 26-046	6300 Park of Commerce Blvd. Boca Raton	$12,350,000	38,195	$323.34	1995	217,804 5.00	5.70 : 1 215 : 1	66%	178	This property is a concrete office/warehouse building located in Park at Broken Sound in Boca Raton. The building consists of approximately 25,204 SF (66%) of first and second floor office space with the remainder warehouse space. The warehouse area has an approximately 26' clear height, 3 grade level doors, and 1 dock well door and is spinklered for fire protection. The property's site size has the availability for overflow parking, outside storage of vehicles or a potential building expansion. There are currently 178 parking spaces.
3	Jan-25 35525 1315 26-046	1160 S. Rogers Circle Boca Raton	$12,050,000	39,538	$304.77	1998	87,512 2.01	2.21 : 1 482 : 1	29%	82	This property is a concrete office/warehouse building located in the South Congress Industrial Center in Boca Raton. The warehouse area is approximately 28,280 SF and is 100% air-conditioned with 22' clear height and two dock-high loading doors. The remaining space is finished first and second floor office area totaling 11,258 SF (28.5%). Renovations were completed in 2023 and the building has a newer roof. The selling broker indicated the building was in above average condition for its age. This property was purchased by a user (Statewide Windows and Doors).
4	May-25 35743 989 26-046	1838 Park Lane S. Jupiter	$8,500,000	23,050	$368.76	2002	127,308 2.92	5.52 : 1 349 : 1	27%	66	This property is located on the south side of Park Lane S. in Jupiter. This is a concrete office/warehouse building with approximately 6,124 square feet (26.5%) of office space and 16,926 square feet of warehouse space. The warehouse area has an 18' clear height, one dock high door and three drive-in doors. The building is entirely air conditioned and is sprinklered for fire protection. The roof was replaced in 2018. The rear of the property has some vacant land (27,400 SF), but according to the broker this is a dry retention area and cannot be developed. Excluding this area the effective land to building ratio is 4.33 to 1. This property was purchased by a user. The property was in good condition at the time of sale with no major repairs required.
5	Feb-26 36360 891 26-046	1455 S.W. 4th Avenue Delray Beach	$7,985,000	21,240	$375.94	1982	124,799 2.86	5.88 : 1	30%	Open	This property is located on the east side of S.W. 4th Avenue in Delray Beach. This property consists of a metal office/warehouse building with approximately 6,304 square feet of office space and 14,936 square feet of warehouse space. the warehouse has approximately 18 foot clear ceiling heights. The building was being occupied by the seller who operated a precast concrete business and his construction business out of the site. According to the selling agent, this was a sale leaseback for 7 years with the lease rate at approximately $44,000/month NNN which equated to about a 6.6% cap rate. The lease rate was at the higher end of the market range, but the deal made sense to the seller who needed to free up some capital.
6	Sep-25 36058 1758 26-046	151 N.W. 18th Avenue Delray Beach	$5,500,000	14,700	$374.15	1952	75,250 1.73	5.12 : 1	31%	Open	This property is located on the east side of N.W. 18th Avenue in Delray Beach. This property consists of a concrete office/warehouse building that has approximately 4,600 square feet of office space and 10,100 square feet of warehouse space. The warehouse space has approximately 16' clear height, four loading doors. Some renovatons were completed on the building in 2024. The rear of the building has a 13,800 SF open canopy for outside storage not included in the building size. Confirmation was Public Records and published data sources only.
SUBJECT		3126 Jupiter Park Drive Jupiter	$11,495,000 (List Price)	30,065	$382.34	2006	83,809 1.92	2.79 : 1 578 : 1	30%	52	The Subject site is triangular in shape located on the south side of Jupiter Park Drive. The building layout is designed for an owner/user and consists of approximately 26,920 square feet of first floor office/warehouse space of which approximately 20,662 square feet is warehouse space and the remainder finished and partially finished space. There is also an additional 3,145 square feet of finished second floor space for a total of 30,065 square feet of space. There are a total of 52 striped parking spaces including three handicapped spaces. The building is 100% air conditioned with upgraded electric (3 phase, 1,200 amp service). The building is also sprinklered for fire protection. The clear height in the warehouse area is approximately 23 to 26 feet. The building is in good condition. The Subject has been on the market for approximately 5 months.

26-046

SALES COMPARISON SUMMARY AND CONCLUSION

The Subject Property consists of a 30,065 square foot, concrete tilt-wall office/showroom/warehouse building built in 2006. Approximately 70% of the building is air conditioned warehouse space with the remainder, finished and partially finished office / administrative / work area. Overall, the building is good quality and is in good condition. The property is located at 3126 Jupiter Park Drive, Jupiter, Florida and does have some exposure from I-95.

To provide an opinion of value using the Sales Comparison Approach, several comparable sales as summarized on the chart on the facing page were analyzed and compared to the Subject Property. The best method of value comparison for this analysis is the sale price per square foot of gross building area, as is commonly used in the market for this type property. An analysis of the sales is as follows:

FINANCING/CONDITIONS OF SALE/PROPERTY RIGHTS APPRAISED

All of the sales were cash to the seller or conventional financing at market rates. No concessions were given on the part of the seller and financing had no effect on the sale prices. All of the sales were arm's length transactions, and there were no unusual conditions associated with any of the sales. No adjustments were considered necessary. Comparable #5 was a sale/leaseback with the seller negotiating a seven year lease back of the property. The property was purchased by an investor based upon this lease which the selling agent indicated was at the higher end of the market. While no adjustment was made, this comparable was at the higher end of the adjusted range which was likely due to the higher lease rate. This will be considered in our conclusion.

DATE OF SALE/MARKET CONDITIONS

This adjustment is generally required when a significant increase or decrease in value due to changing market conditions has occurred during the time period of the comparable sale dates to the prevailing market conditions affecting the Subject's effective date of valuation. The sale dates of the comparables ranged from January 2025 to February 2026. Comparables #1 through #4 closed in early to mid-2025 and were considered inferior with upward adjustments made for the difference. The remaining comparables were considered similar in overall market conditions with no adjustments considered necessary.

SALES ANALYSIS (CONT'D)

LOCATION/EXPOSURE

This adjustment will consider demographics, exposure, and the quality and condition of the surrounding developments. The Subject has frontage along the south side of Jupiter Park Drive and the east side of I-95 in Jupiter, although the I-95 exposure is limited. Comparables #1, #2, #3, #5 and #6 were all located in the Delray and Boca Raton area in areas considered to be relatively similar overall. No adjustments were considered necessary. Comparable #4 is a sale located in close proximity to the Subject and is also considered similar in location. No adjustment was required.

SIZE

The Subject Property contains a total of 30,065 square feet of building area. The comparables ranged in size from 11,404 to 39,538 square feet. When analyzed on a price per square foot of building area basis, larger buildings often sell for less on a price per square foot basis than smaller buildings based on the economic principle of economies of scale. Conversely, smaller buildings typically sell for more on a price per square foot basis than larger buildings, other factors being similar. When analyzed on a price per square foot basis and based upon a pairing of the sales, downward adjustments were considered necessary to Comparables #1 and #6. No other adjustments were considered necessary.

AGE/CONDITION

The Subject building was built in 2006, but most of the office area was recently renovated in 2025. Overall, the building is in good condition. Comparables #2, #3, #5 and #6 were inferior in age/condition with upward adjustments required to these comparables. The remaining comparables were similar in age/condition with no adjustments considered necessary.

QUALITY/FINISH/UTILITY

The Subject Property consists of a good quality concrete tilt-wall building with average to good quality interior finishes. While the comparables did have varying percentages of finished area, the higher percentage of office finish was actually a sale at the lower end of the adjusted range. This is primarily due to the high demand for owner/user type warehouses. The additional finished area does not appear to bring a premium even though it costs more to build it out. No adjustments were considered necessary for the varying percentages of office finish.

An adjustment was considered necessary to Comparable #5 which was an inferior quality metal building. Comparable #6 was a concrete building but also considered slightly inferior in quality and was adjusted upward. Comparables #5 and #6 were not 100% air conditioned and had lower clear heights also.

Improved Sales Adjustment Grid

SALE #	Price/SF	Property Rights / Financing	Conditions of Sale	Market Conditions	Time Adj. Price/SF	Location/ Exposure	Size	Age/ Condition	Quality/ Finishes/ Design	Parking/ Land to Bld. Ratio	Occupancy	Net Adj.	Adjusted Price/SF
1	$341.85	0%	0%	5%	$358.95	0%	-5%	0%	0%	0%	0%	-5%	$341.00
2	$323.34	0%	0%	5%	$339.51	0%	0%	5%	0%	-15%	0%	-10%	$305.56
3	$304.77	0%	0%	10%	$335.25	0%	0%	5%	0%	0%	0%	5%	$352.01
4	$368.76	0%	0%	5%	$387.20	0%	0%	0%	0%	-10%	0%	-10%	$348.48
5	$375.94	0%	0%	0%	$375.94	0%	0%	5%	10%	-15%	0%	0%	$375.94
6	$374.15	0%	0%	0%	$374.15	0%	-5%	10%	5%	-15%	0%	-5%	$355.44

$348.14	Unadjusted Mean	Overall Adjusted Mean :	$346.41
		Overall Adjusted Mean (Excluding Comp #5) :	$340.50
		Overall Median:	$350.25

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SALES ANALYSIS (CONT'D)

PARKING RATIO / LAND TO BUILDING RATIO

The Subject Property has 52 on-site parking spaces (1 space / 578 SF of building area) with a land to building ratio of 2.79 to 1. Comparables #2, #4, #5 and #6 have superior land to building ratios and/or parking ratios, and downward adjustments were required to these sales. Comparables #1 and #3 were considered relatively similar, and no adjustments were required.

OCCUPANCY

All of the comparables were sold by owner/users, and most were purchased by purchased by owner/users with the exception of Comparable #5. The seller for this comparable was an owner/user, but he sold the real estate and leased it back for seven years. Because of the high demand for single user industrial buildings, no adjustments for occupancy were considered necessary since most buyers want the building vacant so that they can occupy it.

CONCLUSION

After adjustments for significant differences, the comparables ranged from $305.56 to $375.94 per square foot with a mean of $346.41 per square foot. Comparable #5 at the high end of the range was the sale/leaseback, excluding this sale, the mean was $340.50 per square foot. The Subject is listed for sale at a price of $11,495,000 ($382.34/SF of building area) and has been on the market for approximately five months. Giving greatest weight to Comparable #4 which is located in the immediate area and less weight to Comparable #5 which is was a sale/leaseback, and considering the adjusted mean and median, an overall conclusion of $350.00 per square foot is considered reasonable and supportable. Therefore, the Subject's estimated value by the Sales Comparison Approach is as follows:

30,065 SF x $350.00/SF = $10,522,750 or $10,520,000 (rounded)

VALUE INDICATED BY THE SALES COMPARISON APPROACH

TEN MILLION FIVE HUNDRED TWENTY THOUSAND DOLLARS

$10,520,000

ADDENDA

DIVISION 10. INDUSTRIAL, PARK, LIGHT INDUSTRY DISTRICT (I-1)

Sec. 27-769. Intent.

The purpose and intent of the Industrial, Park, Light Industry District (I-1) is to provide areas in appropriate locations for industrial uses consisting of light manufacturing, processing, assembly, distribution or warehousing involving the finishing of intermediate products; research and development; wholesale trade; repair; and building and construction services.

(Code 1992, § 27-646; Ord. No. 10-88, § 510.1, 3-1-1988; Ord. No. 19-10, § 3, 12-21-2010)

Sec. 27-770. Use regulations.

(a) *Uses by right.* In the Industrial, Park, Light Industry District (I-1), land, buildings or premises may be used by right only for one or more of the following:

(1) High tech, laboratory, and office research.

(2) Processing, assembly, distribution, repair or warehousing involving the finishing of intermediate products.

(3) Light manufacturing.

(4) Research and development uses, including theoretical and applied research in all of the sciences, product development and testing, engineering development and marketing development.

(5) Business offices less than or equal to 2,500 square feet.

(6) Contractor office.

(7) Automotive paint and body shop.

(8) Lumber and building material supply.

(9) Warehouses less than or equal to 10,000 square feet.

(10) Self-service storage facilities (See division 39 of article XI of this chapter) less than or equal to 10,000 square feet.

(11) Printing and publishing.

(12) Wholesale or retail sale of products made, processed or assembled on-site.

(13) Wholesale bakery and food processing less than or equal to 10,000 square feet.

(14) Automotive repair station.

(15) Kennel (See division 23 of article XI of this chapter).

(16) Public uses (See division 35 of article XI of this chapter).

(17) Adult entertainment establishment.

(18) Veterinary clinic.

(19) Dairy processing or bottling plant less than or equal to 10,000 square feet.

(20) Indoor recreation less than or equal to 2,500 square feet.

(b) *Special exceptions.* The following uses may be permitted or denied in the Industrial, Park, Light Industry District (I-1), after review by the planning and zoning commission, and provided the town council determines that the application meets the criteria contained in section 27-177, all other applicable provisions of law, and does not otherwise adversely affect the public:

(1) Wholesale bakery and food processing greater than 10,000 square feet.

(2) Dairy processing or bottling plant greater than 10,000 square feet.

(3) Machinery shop.

(4) Utility service facilities (See division 43 of article XI of this chapter).

(5) Club.

(6) Day care and preschool facilities (See division 8 of article XI of this chapter), as an accessory use to a permitted use.

(7) Churches and other places of worship.

(8) Indoor recreation greater than 2,500 square feet.

(9) Auction.

(10) Outdoor storage yard, principal (See division 31 of article XI of this chapter).

(11) Business office greater than 2,500 square feet.

(12) Warehouse greater than 10,000 square feet.

(13) Self-service storage facilities (See division 39 of article XI of this chapter) greater than 10,000 square feet.

(14) Restaurant.

(15) Truck rental and leases.

(16) Heliport (See division 4 of article XI of this chapter).

(17) Accessory residential (See section 27-1913), except those properties in the bioscience overlay, where accessory residential shall be prohibited.

(c) As of the effective date of Ordinance Number 19-10, any legally established use by right which becomes classified as a special exception use as of the date of Ordinance Number 19-10 shall continue to be regarded as a use by right for the purposes of expansion, alteration, renovation or similar improvement.

(Code 1992, § 27-647; Ord. No. 10-88, § 510.2, 3-1-1988; Ord. No. 38-98, § 6, 11-17-1998; Ord. No. 46-98, § 3, 9-8-1998; Ord. No. 16-99, § 2, 6-1-1999; Ord. No. 27-99, § 2, 10-19-1999; Ord. No. 37-99, § 15, 10-19-1999; Ord. No. 45-07, § 3, 3-18-2008; Ord. No. 15-10, § 9, 9-21-2010; Ord. No. 19-10, § 4, 12-21-2010; Ord. No. 22-16, § 2, 11-15-2016)

Sec. 27-771. Area and dimension regulations.

In the Industrial, Park, Light Industry District (I-1), on each lot or parcel of land that is used hereafter, and on each lot or parcel upon which a building or structure hereafter is erected or enlarged and maintained, the following regulations shall be observed:

	Dimension	*Measurement*
(1)	Site area (minimum)	5 acres
(2)	Individual lot area for each use	15,000 square feet
(3)	Lot width (minimum)	90 feet
(4)	Lot depth (minimum)	130 feet
(5)	Front setback (minimum)	35 feet
(6)	Rear setback (minimum)	25 feet
	Note: Front and rear setback must total 75 feet minimum.	
(7)	Side setback (minimum)	
	a. Interior, total of 40 feet with a minimum of 10 feet on one side.	
	b. Corner	35 feet
(8)	Setbacks from district boundaries abutting residential	35 feet
(9)	Building height (maximum) In industrial parks in this zoning category, the height may be increased to a maximum of 50 feet, except for the lots contiguous to a residential zone.	35 feet
(10)	Lot coverage (maximum)	50 percent
(11)	Refer to division 15 of article XI, exceptions to development regulations.	
(12)	Green space (minimum)	20 percent (See chapter 23, landscaping, for more information on green space requirements.)

(Code 1992, § 27-648; Ord. No. 10-88, § 510.3, 3-1-1988; Ord. No. 27-00, § 8, 6-6-2000; Ord. No. 11-01, § 2, 4-17-2001; Ord. No. 01-04, § 2, 11-23-2004)

Sec. 27-772. Artificial lighting.

Artificial lighting used to illuminate the premises in an Industrial, Park, Light Industry District (I-1) shall be directed away from the adjacent properties.

(Code 1992, § 27-649; Ord. No. 10-88, § 510.4.A, 3-1-1988)

Sec. 27-773. Access.

(a) *Intent.* The regulations and requirements set forth in this division are intended to provide private and/or public access to all parcels of land or development within the town and to control vehicular movements thereto to facilitate safe and uncongested traffic patterns.

(b) *Regulations.*

(1) Prior to issuance of a building permit, all parcels of land subdivided or development of land within the town after March 1, 1988, shall have access to a dedicated public road or street, or to a private road or street developed to the town standards for a public road or street as set forth in chapter 25.

(2) Where double fronted lots are created adjacent to collector or arterial streets, they shall front on a local street and the rear of the lot shall be the side which abuts the collector or arterial street. In such cases, the lot shall be screened from the abutting collector or arterial street with landscaping and/or a decorative wall.

(Code 1992, § 27-650; Ord. No. 10-88, § 510.4.B, 3-1-1988; Ord. No. 32-91, § 4, 1-7-1992)

Sec. 27-774. Fences, walls and hedges.

(a) *Intent.* It is the intent of this section to provide regulations and requirements for the location of fences, walls and hedges within the town.

(b) *Regulations.* Fences and walls enclosing any permitted use, except primary agricultural uses, shall comply with the building permit procedures of the town. Hedges shall comply with the requirements of chapter 23 as regards sight visibility.

(1) Within the area formed by the right-of-way lines of intersecting streets, a straight line connecting points on such right-of-way lines at a distance 25 feet in length along such right-of-way lines, such connecting lines extending beyond the points to the edge of the pavement, there shall be a clear space with no obstruction to vision. Fences, walls, hedges and vision obstructing plantings shall be restricted to a height of 2½ feet or less above the average grade of each street as measured at the centerlines thereof.

(2) No fence, wall or hedge in a commercial or industrial district shall exceed a height of eight feet.

(Code 1992, § 27-651; Ord. No. 10-88, § 510.4.C, 3-1-1988)

Sec. 27-775. Outdoor storage yard, primary.

Refer to division 31 of article XI of this chapter, for regulations concerning outdoor storage yards that are primary uses on a site.

(Code 1992, § 27-652; Ord. No. 45-07, § 4, 3-18-2008)

Sec. 27-776. Outdoor storage yard, accessory.

(a) Outdoor storage and display may be permitted in an Industrial, Park, Light Industry District (I-1) where such use is customarily incidental thereto. Such outdoor display and sale of merchandise shall be limited to the operation of the principal business located at the premises in question and conducted by employees of said principal business. There shall be no outdoor display and sale of merchandise by any person operating or conducting a business which is different or distinct from the principal business conducted at such location.

Charitable organizations desiring a permit for their sale activities may apply for same from the town manager, which, if granted, will exempt them from the provisions hereof.

(b) Outdoor storage may be permitted adjacent to a structure provided it is located in an area other than a parking area or front yard area and screened from a street or abutting property by a masonry wall, ornamental fence or dense hedge planting no less than six inches higher than the materials stored. Screening density must be such that items within the screened area will not be visible through such screening. When the outside storage is on or abutting a residential district, the height of the stored materials shall not exceed 7½ feet from the grade level.

(c) No screening will be required when abutting property is in the same zoning classification. All existing outdoor storage within a period of three years of March 1, 1988, shall meet the above screening requirements.

(d) No loose materials such as sand, lumber, cardboard boxes and the like which are subject to being scattered or blown about the premises by normal weather conditions shall be allowed.

(e) Outdoor display of merchandise may be permitted within the front, side or rear yard areas, provided the display is set back no less than ten feet from the front right-of-way line and five feet from the side property line.

(f) No outdoor display areas shall be permitted within required parking areas, nor shall they be permitted on public sidewalks or pedestrian access areas.

(Code 1992, § 27-653; Ord. No. 10-88, § 510.4.E, 3-1-1988; Ord. No. 45-07, § 5, 3-18-2008)

Sec. 27-777. Buffer areas.

Where any commercial or industrial use abuts a residential use or zoning district, a ten-foot-wide vegetated buffer shall be provided. Screening requirements within this buffer area are delineated in chapter 23.

(Code 1992, § 27-654; Ord. No. 10-88, § 510.4.F, 3-1-1988)

Sec. 27-778. Landscaping.

For landscaping and tree protection provisions and their application to the Industrial, Park, Light Industry District (I-1), see the provisions of chapters 23 and 26.

(Code 1992, § 27-655; Ord. No. 10-88, § 510.4.G, 3-1-1988)

Sec. 27-779. Performance standards.

For the application of performance standards on the Industrial, Park, Light Industry District (I-1), see the provisions of article XII of this chapter.

(Code 1992, § 27-656; Ord. No. 10-88, § 510.4.H, 3-1-1988)

Sec. 27-780. Signs.

For provisions regulating signs and their application to the Industrial, Park, Light Industry District (I-1), article XIII of this chapter.

(Code 1992, § 27-657; Ord. No. 10-88, § 510.4.I, 3-1-1988)

Sec. 27-781. Off-street loading.

For provisions regarding off-street loading in the Industrial, Park, Light Industry District (I-1), see division 32 of article XI of this chapter.

(Code 1992, § 27-658; Ord. No. 10-88, § 510.4.J, 3-1-1988)

Sec. 27-782. Flood hazard regulations.

For provisions regulating flood hazard conditions and their application to the Industrial, Park, Light Industry District (I-1), see chapter 22.

(Code 1992, § 27-659; Ord. No. 10-88, § 510.4.K, 3-1-1988)

Sec. 27-783. Special regulations.

When applicable zoning districts are contiguous and/or adjoin a residential zoning district, it shall be prohibited to install garage/bay doors which front or face the residential zoning district. This shall include dissimilar zoning districts with intervening public/private right-of-way, easements, etc., of any size.

(Code 1992, § 27-660; Ord. No. 30-92, § 2, 11-17-1992)

Secs. 27-784—27-804. Reserved.

ASSUMPTIONS AND LIMITING CONDITIONS

1. This is an appraisal report, which is intended to comply with the reporting requirements set forth under Standard Rule 2-2 of the Uniform Standards of Professional Appraisal Practice. As such, it presents summary discussions of the data, reasoning and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analyses is summarized in this report and/or retained in the appraiser's file. The depth of discussion contained in this report is specific to the needs of the client and for the intended use stated within this report. The appraiser is not responsible for unauthorized use if this report.

2. Unless otherwise stated, the value appearing in this appraisal represents our opinion of the Market Value of the value defined AS OF THE DATE SPECIFIED. Values of real estate are affected by national and local conditions and, consequently, will vary with future changes in such conditions.

3. Possession of this report or any copy thereof does not carry with it the right of publication, nor may it be used for other than its intended use. The physical report(s) remain the property of the Appraiser for the use of the client, the fee being for the analytical services only. The report may not be used for any purpose by any person or corporation other than the client or the party to whom it is addressed, or copied without the written consent of an officer of the appraisal firm of Parrish & Edwards, Inc., and then only in its entirety.

4. Neither all, nor any part of, the contents of this report shall be conveyed to the public through advertising, public relations efforts, news sales, or other media without written consent and approval of an officer of Parrish & Edwards, Inc.; nor may any reference be made in such public communications to the Appraisal Institute or the MAI/SRA/SRPA designations.

5. The Appraiser may not divulge the material contents of the report, analytical findings, or conclusions, or give a copy of the report to anyone other than the client or his designee, as specified in writing, except as may be required by the Appraisal Institute or as they may request in confidence for ethics enforcement or by a court of law or body with the power of subpoena.

ASSUMPTIONS AND LIMITING CONDITIONS (CONT'D)

6. Analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Practice of the Appraisal Institute.

7. This appraisal is to be used only in its entirety and no part is to be used without the whole report. All conclusions and opinions concerning the analysis which are set forth were prepared by the Appraiser(s) whose signature(s) appear on the appraisal report, unless indicated as Review Appraiser. No change of any item in the report shall be made by anyone other than the Appraiser, and the Appraiser and the firm shall have no responsibility if any such unauthorized change is made.

8. No responsibility is assumed for matters legal in character or nature, nor matters of survey, nor of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title which is presumed to be good and merchantable. The property is appraised as if free and clear, unless otherwise stated in particular parts of the report.

9. No responsibility is assumed for accuracy of information furnished by or from others, the clients, his designee, or public records. We are not liable for such information or the work of possible subcontractors. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit. All are considered appropriate for inclusion to the best of our factual judgment and knowledge.

10. The contract for appraisal, consultation, or analytical service is fulfilled and the total fee payable upon completion of the report. The Appraiser or those assisting the preparation of the report will not be asked or required to give testimony in court or hearing because of having made the appraisal in full or in part nor engage in post-appraisal consultation with client or third parties, except under separate and special arrangement and at an additional fee.

ASSUMPTIONS AND LIMITING CONDITIONS (CONT'D)

11. The sketches and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photos, if any, are included for the same purpose and are not intended to represent the property in other than actual status, as of the date of the photos.

12. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures which made it more or less valuable. The Appraiser assumes no responsibility for such conditions or the engineering which might be required to discover these facts. No topographical survey was provided.

13. The distribution of the total valuation of this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in the conjunction with any other appraisal, no matter how similar, and are invalid if so used.

14. No environmental or impact studies, special market studies or analyses, highest and best use analysis study, or feasibility study has been requested or made unless otherwise specified in an agreement for services or in the report. The Appraiser reserves the unlimited right to alter, amend, revise, or rescind any of the statements, findings, opinions, values, estimates, or conclusions upon any subsequent such study or analysis of previous study or analysis, subsequently becoming known to him.

15. The market value estimated and the cost used are as of the date of the estimate of value. All dollar amounts are based on the purchasing power and price of the dollar as of the date of the value estimate.

16. This appraisal expresses our opinion and employment to make this appraisal was in no way contingent upon the reporting of a predetermined value or conclusion. The fee for this appraisal or study is for the service rendered and not for the time spent on the physical report.

ASSUMPTIONS AND LIMITING CONDITIONS (CONT'D)

17. The value estimate in this appraisal report is gross without consideration given to any encumbrance, restriction, or questions of title unless specifically defined. The estimate of value in the appraisal report is not based in whole or in part upon the race, color, national origin of the present owners, or occupants of the properties in the vicinity of the property appraised.

18. In this appraisal assignment, the existence of potentially hazardous material used in the construction or maintenance of the building, such as the presence of urea formaldehyde foam insulation, and/or the existence of toxic waste, which may or may not be present on the property, has not been considered. The Appraiser is not qualified to detect such substances. We urge the client to retain an expert in this field, if desired.

    Unless otherwise stated in this report, the existence of hazardous substances, including without limitation asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the Appraiser become aware of such during the Appraiser's inspection. The Appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The Appraiser, however, is not qualified to test such substances or conditions. The presence of such substances such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions may affect the value of the property. The value estimate is predicated on the assumption that there is no such condition on or in the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in the field of environmental impacts upon real estate, if so desired.

ASSUMPTIONS AND LIMITING CONDITIONS (CONT'D)

19. The Americans with Disabilities Act (ADA) became effective January 26, 1992. The appraiser has not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the act. If so, this fact could have a negative effect upon the value of the property. Since the appraiser has no direct evidence relating to this issue, possible noncompliance with the requirements of ADA was not considered in estimating the value of the property.

20. ACCEPTANCE OF, AND/OR USE OF, THIS APPRAISAL REPORT CONSTITUTES ACCEPTANCE OF THE PRECEDING CONDITIONS.

QUALIFICATIONS

BRIAN G. "BRIG" EDWARDS, MAI
STATE CERTIFIED GENERAL REAL ESTATE APPRAISER #RZ1303

PERSONAL
Born in Rome, GA. Resident of Palm Beach County, Florida for over 40 years.

EDUCATION
University of Florida - 1980-1985
B.S. Degree in Chemical Engineering

University of Texas at Austin - 1987-1989
Master's in Business Administration (MBA) with a concentration in real estate.

PROFESSIONAL AFFILIATIONS
Member - The Appraisal Institute, MAI Member No. 10,815 (1995)

PROFESSIONAL SERVICE
Served as a Special Master to oversee Tax Appeals for Palm Beach County.
Qualified as an Expert Witness in Palm Beach County Circuit Court.

GEOGRAPHIC LOCATIONS FOR ASSIGNMENTS COMPLETED

Florida	Virginia	Pennsylvania
Wisconsin	Texas	Connecticut

WORK EXPERIENCE
Parrish & Edwards, Inc. - Partner, January, 1997 to Present
Commercial Appraiser, August 1989 to January, 1997

Golf Investment Advisors, Inc. - Principal, October 1998 to June 2001

Bailey Controls Company, Houston, TX - Acting District Service Manager 1986-1987
Service Engineer 1985-1986

TYPES OF PROPERTY APPRAISED

Adult Congregate Living Facilities (ACLF)
Apartment Complexes
Community Shopping Centers
Distribution Warehouses
Golf Courses
Hotels/Motels
Manufacturing Plants
Marina
Mini-Storage Facilities
Multi-Family Up to 4 Units
Neighborhood Shopping Centers
Office Buildings
Permanent Easements
Residential Projects
Restaurants
R/W Acquisitions
Service Stations
Single Family Residences
Special Purpose Properties
Vacant Acreage: Commercial & Residential
Vacant Lots
Wetlands

TYPES OF VALUATION/CONSULTATION SERVICES PERFORMED

Appraisals
Condemnations
Feasibility
Highest & Best Use Studies
Leasehold & Lease Fee Valuations
Market Studies
Reproduction/Replacement Cost Estimates

PROFESSIONAL COURSES / SEMINARS (MOST RECENT)

Valuation Bias: The Invisible Fence of Racial Discrimination, October 2025
Online Business Practices and Ethics, June 2025
Performing Estate Appraisals, May 2025
FL Appraisal Laws and Regulations, May 2025
FL National USPAP, May 2025
Appraisal of Industrial & Flex Buildings, May 2025
Real Estate CE with Ethics and Core Law, March 2025
FL Appraisal Laws and Regulations, December 2023
FL National USPAP, December 2023
Supporting Your Adjustments – Methods for Residential Appraisers, December 2023
Market Disturbances – Appraisals in Atypical Markets and Cycles, December 2023
The Income Approach: An Overview, December 2023
The Sales Comparison Approach, December 2023
Appraisal of Owner Occupied Commercial Properties, January 2021
Appraising Small Apartment Buildings, January 2021
Online Business Practices and Ethics, January 2021
The Cost Approach, January 2021
Commercial Land Valuation, January 2021
Intro to Expert Witness Testimony, December 2020
Uniform Appraisal Standards-Federal Land Acquisitions (Yellow Book), Dec., 2020
Commercial Land Valuation, November 2020
Online Business Practices and Ethics, February 2020
FL National USPAP, February 2020
Real Estate for Sales Associate, January 2020
Managing Appraiser Liability, December 2019
The Income Approach: An Overview, November 2019
The Cost Approach, November 2019
Florida Appraisal Law, June 2018
FL National USPAP, June 2018
Appraisal of Owner Occupied Commercial Properties, December 2017
Appraising Small Apartment Properties, December 2017
Appraisal of Land Subject to Ground Leases, January 2017
FL National USPAP, October 2015
Appraisal Law and Regulations, September 2015
Appraisal of self Storage Facilities, May 2015
Essential Elements/Disclosures/Disclaimers, May 2015
Appraisal of Assisted Living Facilities, May 2015
Online Business Practices and Ethics, May 2015
Online Analyzing Operating Expense, January, 2014
The Cost Approach, January, 2014
The Dirty Dozen, January 2014
Appraisal Application of Regression Analysis, October, 2013
FL Appraisal Laws and Regulations, September 2013
FL National USPAP, September 2013
Using your HP12C Financial Calculator, October 2012
Florida Appraisal Laws and Rules October 2012
FL National USPAP, January 2012
Appraisal/Analysis Income Properties, December 2011
Ad Valorem Tax Consultation, December 2010
Appraisal/Analysis Office Buildings for Mtg. Underwriting, December 2010
FL National USPAP, November 2010
Florida Appraisal Laws and Regulations February 2010
Feasibility, Market Value, Investment Timing: Option Value January 2010
Cost Approach January 2010
Florida Supervisor/Trainee Roles and Relationships January 2010
Income Capitalization January 2010
Online Analyzing Operating Expenses January 2010

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

FLORIDA REAL ESTATE APPRAISAL BD

THE CERTIFIED GENERAL APPRAISER HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 475, FLORIDA STATUTES

EDWARDS, BRIAN G

3418 WEST MALLORY BOULEVARD
JUPITER FL 33458

LICENSE NUMBER: RZ1303

EXPIRATION DATE: NOVEMBER 30, 2026

Always verify licenses online at MyFloridaLicense.com

ISSUED: 09/05/2024

Do not alter this document in any form.

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TOWN OF JUPITER

Building Fund Facility Purchase Proposal

TOWN OF JUPITER

Resolution 60-26

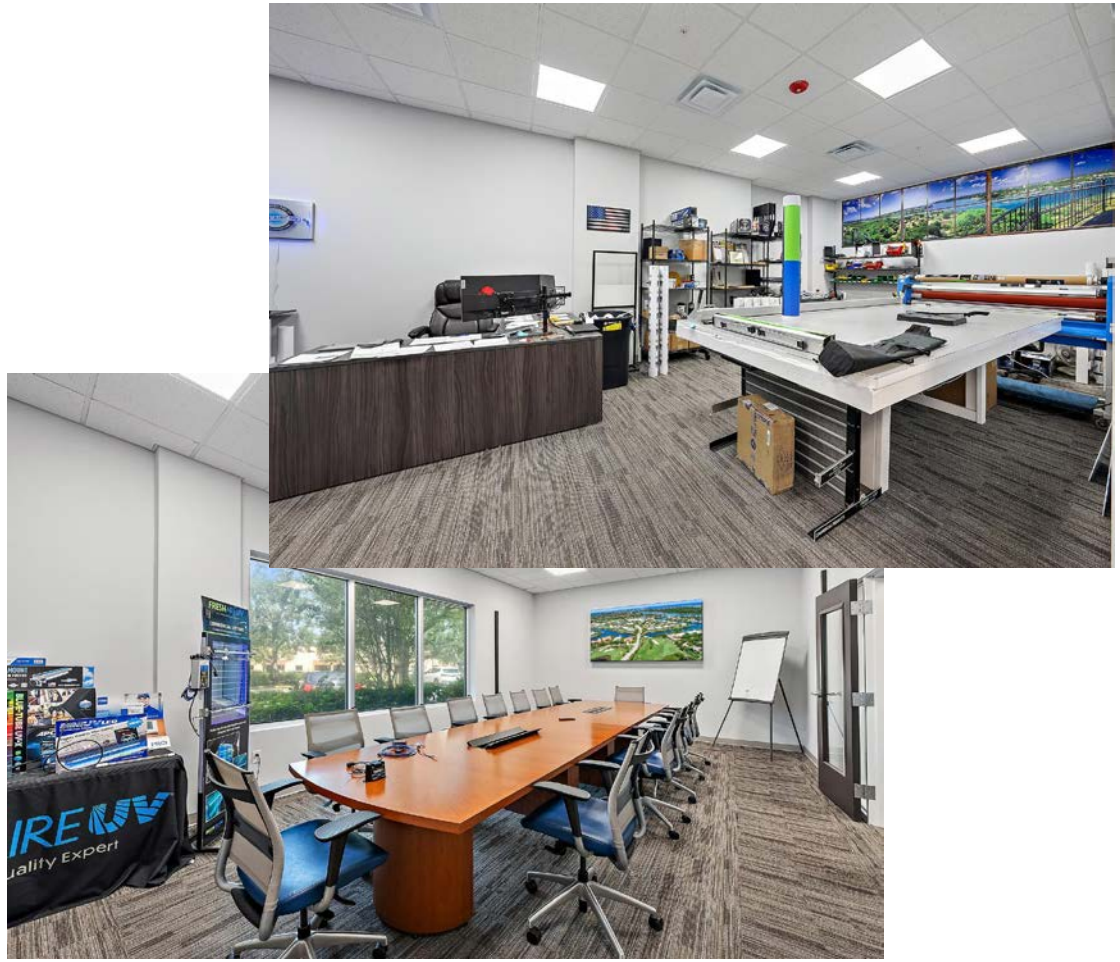
- **Requests authorization to:**
  - Approve a Purchase Agreement for a commercial office facility located at 3126 Jupiter Park Drive.
  - Authorize the use of reserves to fund the purchase.
  - Authorize the Town Manager to execute the agreement.



TOWN OF JUPITER

Operational Use of Building

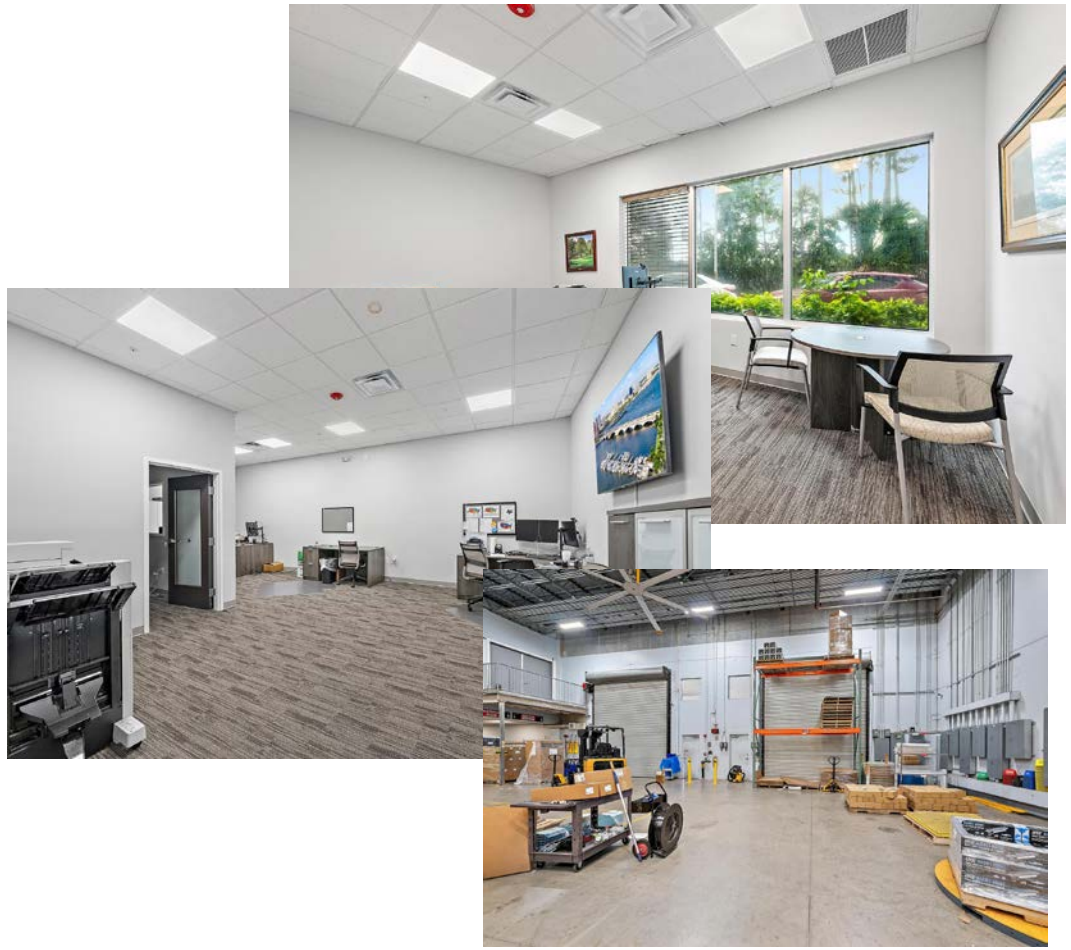
- Building inspectors
- Plans examiners
- Code compliance
- Fire inspectors
- Training activities
- No public-facing services; public services will remain at Town Hall.



TOWN OF JUPITER

Benefits of Purchase

- Integrates plan review and inspection services (building and fire).
- Provides dedicated training space.
- Cost-effective alternative to new construction.
- Existing use aligned with Town's intended use.



TOWN OF JUPITER

Facility Cost and Funding

- Negotiated purchase price of **$10,660,000** based on two independent appraisals to determine fair market value:
  - Appraisal 1: **$10,800,000**
  - Appraisal 2: **$10,520,000**
  - **Average Appraised Value: $10,660,000**
- Reflects a reduction from the original asking price of $11.4 million.
- The purchase will be funded through a combination of reserves:
  - **$9,000,000** – Building Fund Reserves
  - **$1,660,000** – General Fund Reserves
- Costs will be allocated proportionately based on the intended use of the facility.

Impact on Reserves

- **Building Fund:**
  - Available reserves as of September 30 are $19.0 million.
  - After building purchase and other obligations $5.4 million will remain.
- **General Fund:**
  - Available reserves as of September 30 are $62.4 million.
  - After obligations $43.4 million will remain.
  - Capacity to support the purchase through the $1,660,000 of funding.

RESERVE REVIEW	
BUINDING FUND	
ACFR Balance - 09/30/2025	19,050,306
New Facility Reserves	(9,000,000)
Replacement of Software/Hardware/GIS	(3,955,070)
Virtual Inspection Tech	(500,000)
Training and room andmulti-discipline license	(211,025)
Remaining Operational Reserves	5,384,211

GENERAL FUND	
ACFR Balance - 09/30/2025	62,496,637
FY26 Surtax Bridge Loan Payment	2,000,000
FY 2026 Fire Rescue Operating/Debt	(17,026,348)
FY2025 Operating Carryforward	(1,318,336)
FY 2026 Capital Funding	(2,723,000)
Remaining Operational Reserves	43,428,953

TOWN OF JUPITER

Statutory Requirements & Next Steps

- **If Resolution 60-26 and purchase agreement authorized tonight:**
  - The 30-day public notice and inspection period begins.
  - Due diligence period will commence, including facility inspection, phase one environmental, and property survey.
  - Closing will take place on or before June 30.



GOVERNED BY FLORIDA STATUTE 166.045

REQUIRES 30-DAY PUBLIC NOTICE

REQUIRES TWO APPRAISALS AND DISCLOSURE DOCUMENTATION

TOWN OF JUPITER

MEMORANDUM FROM THE FINANCE DEPARTMENT

To: Scott Reynolds, Finance Director

From: Billie Hancock, Procurement Manager *Billie S. Hancock*

Date: April 27, 2026

Re: Procurement Review Memo – Resolution No. 60-26 Purchase Agreement for 3126 Jupiter Park Drive, Jupiter, FL 33458

Upon review of Resolution No. 60-26 to approve the Purchase Agreement for the property located at 3126 Jupiter Park Drive, Jupiter, FL 33458 from Fresh Aire Ventures, LLC in the amount of $10,660,000, I have found the following:

The Town of Jupiter chose to procure the property under Section 166.45, F.S which allows municipalities confidentiality and solicitation exemptions provided that two separate appraisals are obtained from approved appraisers for real property valued over $500,000. The following appraisals were received:

• Appraisal 1 (April 1, 2026): $10,800,000

• Appraisal 2 (April 2, 2026): $10,520,000

The purchase price of $10,660,000 does not exceed the average of the two appraisals.

Resolution No.60-26 for the Purchase Agreement of 3126 Jupiter Park Drive complies with all Federal, State, County, and Local procurement requirements, including Town of Jupiter Procurement Polices and Florida State Statutes.