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July 15, 2020

Mr. Adam Teitzman, Clerk
Florida Public Service Commissioner
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: First Coast Regional Utilities, Inc.; Docket No. 20190168-WS

Dear Mr. Teitzman,

Please find attached the prefiled direct testimony and exhibits of Bevin A. Beaudet as filed on May 15, your document #02612 and 02613. This document and its exhibits are identical to #02612 and 02613 except the exhibits attached hereto have been bate stamped.

Should you have any questions or comments concerning the above, please do not hesitate to contact me.

Sincerely,

SUNDSTROM & MINDLIN, LLP

Robert Brannan
For the Firm

RCB/brf
Enclosure

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for original Certificate of Authorization and initial Rates and Charges for Water and Wastewater Service in Duval, Baker, and Nassau Counties, by First Coast Regional Utilities, Inc.

Docket No.: 20190168-WS

_____/

DIRECT TESTIMONY

OF

BEVIN A. BEAUDET

on behalf of

First Coast Regional Utilities, Inc.

Q. Please state your, name profession and address.

A. My name is Bevin Beaudet. I am the sole proprietor of Bevin A. Beaudet, P.E., LLC. My business address is 1543 Maple Street, Bethlehem, PA 18017.

Q. State briefly your educational background and experience.

A. I have a Bachelor of Science degree in Chemical Engineering from the University Massachusetts, a Master of Science degree in Environmental Engineering from the University of Florida, and an Executive Certificate in Public Management from Florida Atlantic University. I have been a licensed engineer in Florida since 1976. I have approximately 40 years of experience in the management, engineering, process design and development of water and wastewater systems. I am the former President of the American Waterworks Association. I served 13 years as the Director of Palm Beach, Florida Water Utilities Department and 5 years as Deputy County Administrator for Palm Beach County, Florida. A more thorough description of my experience is attached as Exhibit BAB-1.

Q. Have you previously appeared and presented testimony before any regulatory bodies?

I have prepared and presented expert testimony in the areas of regulatory accounting, rate regulation and utilities in general, before various federal, state, county, courts and regulatory agencies, including the US Senate and House of Representatives, the Florida Public Service Commission, the Florida Department of Environmental Protection, the South Florida Water Management District, Indian River County, the Circuit Courts of Palm Beach and Indian River Counties, the Town of Riviera Beach, the Town of Palm Springs and Burrillville, Rhode Island and the US Bankruptcy Court.

Q. On whose behalf are you presenting this testimony?

A. I am presenting this testimony and appearing on behalf of First Coast Regional Utilities, Inc. ("First Coast"), the applicant for original certificate of authorization and initial rates and charges for water and wastewater service in the present docket.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to present information supporting the water and wastewater system information, including siting, design, and evaluation of alternatives for First Coast's request for an original certificate as presented in the Application, and to provide supporting testimony to show the basis for the Feasibility Assessment included as Exhibit "E" to the Application.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring two exhibits. Exhibit BAB-2 contains the Feasibility Assessment of First Coast Regional Utilities, Inc. originally dated April 2019, revised and finalized in June 2019 (Exhibit E to the Application). Composite Exhibit BAB-3 are maps of the proposed initial lines and facilities (Exhibit L to the Application).

Q. Were these Exhibits prepared by you and your staff?

A. The Feasibility Assessment was prepared by me. The maps were prepared by me in conjunction with ETM. The Exhibits were prepared from information provided to me and ETM by First Coast.

Q. Does that conclude your direct testimony?

A. Yes, it does.

Bevin A. Beaudet, P.E., LLC

President/Owner
1543 Maple Street • Bethlehem • PA 18107
(561-373-4442) • babeaudet@gmail.com

Education

M.S., Environmental Engineering, University of Florida, 1974
B.S., Chemical Engineering, University of Massachusetts, 1969
Executive Certificate in Public Management, Florida Atlantic University 1988

Professional Registrations

Professional Engineer: Florida #23484, since 1976

Distinguishing Qualifications

- Donald R. Boyd Award for service to the drinking water community, Association of Metropolitan Water Agencies, 1998 and 2014
- President of the American Water Works Association, an international technical and scientific organization with 65,000 members, 1997-98
- Honorary membership for distinguished service to the American Water Works Association, 1996
- Fuller Award for engineering skill and diplomatic talent in water supply field, Florida Section of the American Water Works Association, 1995
- National Environmental Achievement Public Service Award, National Association of Clean Water Agencies, 2014.

Experience Summary

Mr. Beaudet offers more than 49 years of broad-based, progressively responsible technical and management experience in both the private and public sector. Earlier career experience involved applied research, and the planning and implementation of water and wastewater infrastructure projects. Recent experience includes utility management practice, treatment process design and program management of numerous public construction projects with aggregate value of over $1.5 billion. Mr. Beaudet recently retired as Director of Palm Beach County, Florida's Water Utilities Department (PBCWUD), Florida's third largest water and wastewater utility. Under his direction, PBCWUD has developed into one of the most efficient and forward thinking utilities in the nation; recently receiving the Association of Metropolitan Water Agencies Platinum Award for Sustained Competiveness Achievement. He currently provides utility engineering and management consulting services as Sole Proprietor of Bevin A. Beaudet, P.E., LLC.

Experience

2014- Present **Sole Proprietor, Bevin A. Beaudet, P.E., LLC**

Mr. Beaudet has shared his experience in water quality and utility engineering and management for several public and private clients. He served as Interim Director of Public Works for the Village of Palm Springs while they were undergoing an administrative investigation by the Palm Beach County Inspector General. He served as a Senior Consultant to the City of West Palm Beach for their East Central Regional Water Reclamation Facility. He has performed condition assessment and served as Engineer-of-Record for Royal Utility Company, a private water/wastewater utility in Coral Springs, FL. Mr. Beaudet assisted the City of Riviera Beach Utility District in their negotiations and compliance with consent orders from the Florida Department of Environmental Protection and the Palm Beach County Health Department. In this assignment he developed several immediate conveyance and treatment improvements to improve public health and safety. Mr. Beaudet performed a detailed wastewater treatment plant condition assessment for Rolling Oaks Utilities in Beverly Hills, Florida which included conceptual design and cost estimate for a new advanced wastewater treatment plant. He performed a Master Plan for First Coast Utilities, which included conceptual design and cost estimate for new water and wastewater facilities, which included reuse of reclaimed water as well as the basic underground infrastructure for new development. He has served as an expert witness for the Municipal Infrastructure Team of the law firm Pannone, Lopes, Devereaux & O'Gara on projects in the water/wastewater infrastructure space. Mr. Beaudet also performs technical and strategic marketing for LMK Technologies, LLC, a leader in CIPP trenchless technology.

2004-2014 **Director, Palm Beach County, Florida Water Utilities Department.**

Mr. Beaudet Served as Director of the third largest water/wastewater utility in Florida. The utility, which serves over 500,000 population, is one of the most progressive in the nation, achieving several national awards. PBCWUD has an AAA bond rating and operates many modern, green and state-of-the art facilities. During Mr. Beaudet's tenure, a number of municipal utilities were integrated into the County system, the utility survived the most severe and sustained drought in modern South Florida history as well as three damaging hurricanes. Mr. Beaudet initiated a Comprehensive Master Plan, a 5-year Strategic Plan and a long-term Integrated Water Resources Plan. The Drought Management Plan adopted by PBCWUD included the implementation of strict conservation measures, public education, and special financial considerations including a drought rate surcharge and weighty inverted block rates. During Mr. Beaudet's tenure, he directed the issuance of two major bond issues, as well as the acquisition/consolidation of several municipal utilities into the County utility. Each of these required successfully dealing with significant technical, political and socio-economic issues. Continuous improvement and organizational development programs, including succession planning, marked his tenure as well, and upon his retirement in September 2014 the organization is well poised to continue its reputation for excellence.

2003-2004 Scripps Program Manager for Palm Beach County, Florida.

Mr. Beaudet served as the Program Manager for Palm Beach County's efforts to plan and build an east coast campus for The Scripps Research Institute and an adjacent 2,000 acre bioscience research and development park. The site is planned to accommodate eight million square feet of laboratory and research space.

1999-2003 Regional Business Group Manager for CH2M Hill.

Mr. Beaudet was responsible for the water and wastewater activities for CH2M Hill's Southwestern Region, a nine-state region with 21 offices and over a thousand employees. Mr. Beaudet was also a member of the firm's utility management consulting group, and worked closely with a number of large western utilities including Los Angeles Water and Power, Albuquerque, El Paso, and East Bay Municipal Utility District to assist them with infrastructure, security planning and organizational development programs.

1991-1996 Deputy County Administrator for Palm Beach County.

Mr. Beaudet was responsible for internal direction and coordination of all County departments, troubleshooting issues of importance to the County Administrator and the Board of County than 1000 employees in 4 major departments: Facilities Planning and Construction; Water Utilities; Planning, Building and Zoning; and Environmental Resources Management. He oversaw the entire County building program except for roads. In Mr. Beaudet's tenure as Deputy Administrator, he was directly responsible for over $700 million in public construction, including water/wastewater utilities, criminal justice facilities, parks and library construction. He was also responsible for coordinating all environmental, water resources, and utility-related issues.

1988-1991 Director of Palm Beach County Water Utilities Department (PBCWUD).

Mr. Beaudet was responsible for the water and wastewater facilities with more than 400 employees serving 350,000 people in the rapidly growing unincorporated area of the County. In this position, he directed master planning and served as program manager for successful construction of a $285 million, 6-year capital expansion and improvements program that included construction of a regional wastewater treatment plant (WWTP) with water reclamation, ozone improvements to existing water treatment plants (WTPs), and a new membrane softening WTP. Mr. Beaudet also instituted an automated maintenance management system at PBCWUD, and developed and implemented a system-wide SCADA system which tied together operational control of each of the utility's water and wastewater plants. He instituted automated project tracking and management systems; conducted financial planning, bond financings, and rate and connection fee reviews and revisions; and negotiated bulk users agreements and consulting engineering contracts.

1986-1988 Assistant Director, Palm Beach County Water Utilities Department.

As Assistant Director Mr. Beaudet's primary responsibility was to finalize and plan for the implementation of the utility's first comprehensive Master Plan, which he authored as a consultant in 1985. He was responsible for the Engineering and the Operations and

Maintenance divisions. A major accomplishment was the training and regionalization of a work force to meet the needs of a modern utility.

1984-1986 Office Manager and Principal Engineer for James M. Montgomery Consulting Engineers.

Mr. Beaudet established a successful office for the firm in a new geographical area. He also served as project manager for Water and Wastewater Master Plan for Palm Beach County utility system, which included an evaluation of the vulnerability of the County's groundwater supply, and the traditional analysis of the water distribution, wastewater collection systems and facility expansion alternatives. This Master Plan was the first comprehensive plan for Palm Beach County Water Utilities Department and served as the framework for the reorganization, regionalization and modernization of it facilities.

1976-1984 Vice President for Water and Wastewater Treatment Engineering, at an environmental science and engineering firm ESE, Inc.

Mr. Beaudet conducted numerous studies and implementation projects for upgrading and expanding water treatment and wastewater treatment plants throughout Florida and the Southeastern U.S., as well as several federally-funded applied research projects. These research projects and studies included: an EPA research project on radium removal from potable water supplies; an EPA research project on minimizing total Trihalomethanes (TTHM) production in a water-softening plant in Daytona Beach, Florida; and a study on cooling water intake design requirements for Gulf Power Corporation. He also participated in WTP upgrading studies in North Port, Port Malabar, Port St. Lucie, Florida, and Chesapeake, Virginia. Mr. Beaudet was also responsible for developing the firm's emerging hazardous waste engineering market.

1969-1974 Commissioned Officer in the US Army Corps of Engineers (ACOE).

Mr. Beaudet served as the Battalion Adjutant for 237th Engineer Battalion (C), and commanded Company C/237th, a combat engineer company of 130 men and 27 pieces of construction equipment. As Facilities Manager, Mr. Beaudet conducted a $1.5 million facilities renovation at Wharton Barracks, Heilbronn, Germany, including new and upgraded security equipment.

Membership in Professional Organizations

American Water Works Association (Past President, Honorary Member and Life Member)
Florida Engineering Society and National Association of Professional Engineers
American Society of Civil Engineers (Life Member)
Water Environment Federation
North American Society of Trenchless Technology
ASTM F-17 Trenchless Technology Committee

Professional and Educational Honors

Phi Eta Sigma, National Honor Society for Freshman Students, Univ. of Massachusetts, 1966

Honor Graduate, US Army Engineer Officer Advanced Course, Fort Belvoir, VA 1974

Tau Beta Pi, National Honor Society for Engineering, University of Florida, 1975

Professional and Educational Honors (cont.)

FL Engineering Society, Palm Beach County Chapter, Government Engineer of the Year, 1994

Florida Section AWWA Fuller Awardee, 1995

American Society for Public Admin. , Treasure Coast Chapter, Person of the Year, 1995

Palm Beach County Administrator's Golden Palm Award, 1996

AWWA Honorary Membership, 1996

Award for Professional Responsibility and Outstanding Exemplary Practices, Society of Public Administration, Treasure Coast Chapter, 1996

President, National AWWA, 1997-98

Donald R. Boyd Award for leadership and service to the drinking water community, Association of Metropolitan Water Agencies, 1998 and 2014

South Florida Water Management District Water Resources Advisory Committee, 2007-2011

Florida Public Service Commission Nominating Council, 2010-2012

Chair, AWWA Water Reuse Committee Florida 2030, 2008

Palm Beach Chapter, FL Engineering Society's Distinguished Career Achievement Award, 2014

NACWA National Environmental Achievement Public Service Award, National Association of Clean Water Agencies, 2014.

Partial List of Publications

Beaudet, B.A., Tobey, B., Harder, S.E., Life Cycle Cost Analysis for Decision Making in Collection System Rehabilitation, North American Society for Trenchless Technology (NASTT), 2019

Beaudet, Bevin A.; Kampbell, Norman E. "Ed"; Muenchmeyer, Gerhard; Back, Tim; Best Value Engineered Design for a Sealed CIPP Collection System, North American Society of Trenchless Society (NASTT), 2018

Beaudet, Bevin A.; Inspection and QA/QC for Trenchless Projects, Panel Discussion at the Underground Contractor's Association Conference, New Orleans, LA, 2018

Beaudet, Bevin A.; Why Standards Matter - The Importance of Adhering to ASTM 2561, Presented to the Southeast Society of Trenchless Technology, New Orleans, LA, 2017

Beaudet, Bevin A.; The Nexus Between Water and Energy, EWRE Spring Graduate Seminar, University of Massachusetts, Amherst, 2011

Beaudet, Bevin A.; Engineering to Out Poverty, EWRE Spring Graduate Seminar, University of Massachusetts, Amherst, 2010

Beaudet, Bevin A.; Current Economic Conditions Affecting Infrastructure Spending, Presented at the 101st Annual Meeting of the Water and Wastewater Equipment Manufacturers Association (WWEMA), Palm Beach Gardens, FL, November 2009

Beaudet, Bevin A.; Disraneli, Benjamin; Making a Case for Young Professionals, the Early Years, Journal of the American Waterworks Association, Vol 94, 2002

Beaudet, Bevin A.; Viewpoint: A Perspective on the Global Water Marketplace, Journal of the American Waterworks Association, Vol 95, 2000

Beaudet, Bevin A.; Privatization and the Future, Journal of the American Waterworks Association, Vol 92, 2000

Bailey, Robert; Beaudet, Bevin A.; Rothstein, Eric; Spencer, John; Balanced Evaluation of Public/Private Partnerships, AWWA Research Foundation Project 455, 1999

Marlowe, H.A., Jr.; Beaudet, Bevin A.; Creating a High-Performance Utility: the Link Between Culture and Organizational Health, Journal of the American Waterworks Association, Vol 84, 1992

Marlowe, H.A., Jr.; Beaudet, Bevin A.; Workforce Literacy in the Water Utility Industry, Journal of the American Waterworks Association, Vol 84, 1992

Marlowe, H.A., Jr.; Beaudet, Bevin A.; Developing a Career Path for Utilities Maintenance Personnel, a Case Study. Presented at the Annual Conference of the National Environmental Training Association. Charleston, South Carolina. 1989.

Marlowe, H.A., Jr.; Beaudet Bevin A.; Actual and Ideal Cultures in a Water Utility. Presented at the Joint Technical Conferences, FSAWWA/FPCA/FWPCOA. Sarasota, Florida, 1989.

Singley, J.E.; Beaudet, Bevin A.; Treatment Processes for Removal of Inorganic Contaminants--A Chapter for Water Treatment Plant Design. Second Edition published by AWWA, ASCE, and CSSE. 1989.

Beaudet, Bevin A., et al.; Use of Advanced Oxidation Processes for Control of Color in Groundwater. Proceedings of the 1989 International Ozone Association Conference. Berlin, Germany. 1988.

Beaudet, Bevin A.; Guidance for Wellfield Protection and Sole Source Aquifer Programs: Hydraulic Criteria, EPA Publication 813/1987.2, 1987

Singley, J.E. and Beaudet, Bevin A.; Corrosion Prevention and Control in Water Treatment and Supply Systems, Noyes Publications, Park Ridge, New Jersey, 1985

Singley, J.E.; Beaudet, Bevin A.; Corrosion Manual for Internal Corrosion of Water Distribution Systems. U.S. Environmental Protection Agency, 570/9-84-001. April 1984.

Singley, J.E.; Beaudet, Bevin A.; Radionuclide Removal for Small Public Water Systems. U.S. Environmental Protection Agency, 570/0-83-010. June 1983.

Bilello, L.J.; Beaudet, Bevin A.; Evaluation of Activated Carbon by the Dynamic Minicolumn Absorption Technique. Treatment of Water by Granular Activated Carbon, American Chemical Society Advances in Chemistry Series, No. 202. Edited by McGuire and Suffet. 1982.

Singley, J.E.; Beaudet, Bevin A.; et al. Wastewater Reclamation at Jeddah and Mecca, Saudi Arabia. Proceedings of 9th Annual Conference of National Water Supply Improvement Association. Washington, DC. 1981.

Beaudet, Bevin A., et al.; Evaluation of a Rapid Method of Determining Carbon Usage Rates. Proceedings of the 35th Annual Industrial Waste Conference, Purdue University, Lafayette, Indiana. 1980.

Beaudet, Bevin A., et al.; Removal of Specific Organic Contaminants from Industrial Wastewater by Granular Activated Carbon Absorption: Proceedings of the 8th Annual Water and Wastewater Equipment Manufacturers Association (WWEMA) Conference. Houston, Texas. 1980.

Singley, J.E., Ervin, A.L. and Beaudet, Bevin A.; Use of Powdered Activated Carbon for Removal of Specific Organic Compounds. Proceedings American Water Works Association Seminar. Denver, CO. 1979.

Beaudet, Bevin A.; Singley, J.E.; Costs of Radium Removal from Potable Water Supplies. U.S. Environmental Protection Agency, 600/2-77-073. April 1977.

FEASIBILITY ASSESSMENT OF FIRST COAST REGIONAL UTILITIES, INC. DUVAL COUNTY, FLORIDA

APRIL 2019

Prepared By
Bevin A. Beaudet, P.E., LLC
In Conjunction with
Globaltech Design Builders

Prepared For
301 Capital Partners, LLC

FEASIBILITY ASSESSMENT OF

FIRST COAST REGIONAL UTILITIES, INC.

DUVAL COUNTY, FLORIDA

June 2019

Prepared By

Bevin A. Beaudet, P.E., LLC

In Conjunction with Globaltech Design Builders

Prepared For

301 Capital Partners, LLC

Electronically Signed and Sealed June 3, 2019 by:
Bevin A. Beaudet, P.E., Florida #23484

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Section 1 – Executive Summary

The land which is the subject of this report, the Villages, is a +/- 5,000-acre parcel located Southwest of Jacksonville in Duval County Florida (Property). 301 Capital Partners, LLC is the current landowner, and successor to ICI Villages, LLC, which was granted zoning approval for a Planned Unit Development, Satellite Community, under Duval County Ordinance 2010-874-E, as amended. This parcel is part of the approximately 10,000 acres of contiguous property located in Duval, Nassau and Baker Counties, which 301 Capital Partners either owns or has exclusive repurchase rights to, intended to be developed in the future, and which portions have also have been granted appropriate zoning for development. An additional +/- 1,800-acre property, owned by The Chemours Company FC, LLC, located in Baker County and contiguous to the 301 Capital Partners land holdings, is also planned for future development. These properties are adjacent to major transportation corridors and close to major job centers. In conformance with the zoning conditions, 301 Capital Partners is planning on developing Phase 1 of the Villages which will consist of 2500 Residential connections and 300 low intensity commercial connections. This development will require water/wastewater/reclaimed water utility service

This Feasibility Assessment identifies two possible alternatives to provide this utility service: JEA Interconnection, and construction of On-Site Utilities. This Feasibility Assessment was conducted to provide an engineering basis for comparing the alternatives and selecting the most feasible alternative. Data used for the assessment included on-the ground inspection of the proposed development and the +/- 50-acre proposed utility site, review of previous studies including soil, environmental and engineering reports, review of JEA's proposed interconnection plans and costs as well as JEA construction standards for on-site water/wastewater/reclaimed water utilities.

Based on the absorption schedule provided by 301 Capital Partners, the flow demands for water and wastewater service to Phase 1 were estimated based on standard engineering practice. Preliminary (budget level) design and cost estimates were performed for On-Site Utilities for Phase 1 of the Villages, keeping in mind expansion needs to meet future development phases. Both alternatives were compared based on total cost and other important factors such as time required for implementation, impact to the public and environmental impact during construction and long-term operation.

The results of the evaluation determine that the On-Site Utilities alternative is much more economically feasible, over $11 million less than the JEA Interconnection Alternative, and can be constructed in approximately two years, versus a five year estimated time for JEA Interconnection. The On-Site Utilities alternative, is constructed only on the development property, thus causing less disruption to major transportation corridors during construction. The JEA Interconnection alternative also requires significant long-term energy costs for pumping with a correspondingly higher carbon footprint.

Given the significant difference in cost and practicality of the two alternatives, the On-Site Utilities alternative is the best choice to provide utility service to the Villages.

Section 2 – Purpose and Scope

The purpose of this report is to present an engineering evaluation to:

- Determine the water, wastewater and reclaimed water requirements to support the proposed the Villages development Southwest of Jacksonville, in Duval County, Florida.

- Identify the alternatives available to provide the utility requirements for the development. The only two practical alternatives capable of meeting the water, wastewater and reclaimed water demands of the proposed approved the Villages development are the JEA Interconnection and construction of On-Site Utilities.

- Perform a preliminary design, layout and preliminary cost estimate of the On-Site Utilities alternative.

- Compare each alternative based on cost, environmental impact and timing.

- Recommend the most practical, feasible and cost effective alternative.

In order to conduct this evaluation the undersigned engineer reviewed the following information provided by the client:

- Duval County Zoning Ordinance 2010-874-E, amended and enacted on 2.11.11.

- Arial photographs and site maps

- Phase 1 Environmental Site Assessment, Ellis & Associates, Inc., December 2005

- Soil Condition Report, North American Reserve, LLC for ICI Villages, LLC April 2010.

- Water and Wastewater System Assessment Technical Memorandum, Jones Edwards & Associates for ICI Villages, LLC, March 2007.

- April 9, 2019 Meeting Notes, containing the JEA Interconnection proposal, along with JEA's proposed cost, which is appended to this Report as Appendix-A. The engineer also visited the site to personally inspect the area proposed for development, site conditions, and suitability of land preliminary assigned for construction of on-site utilities. Following data collection, review and site visit, the engineer conducted a preliminary design and cost estimate for the On-Site Utilities alternative.

The results of this evaluation and the comparison of alternatives are discussed in the following sections of the report.

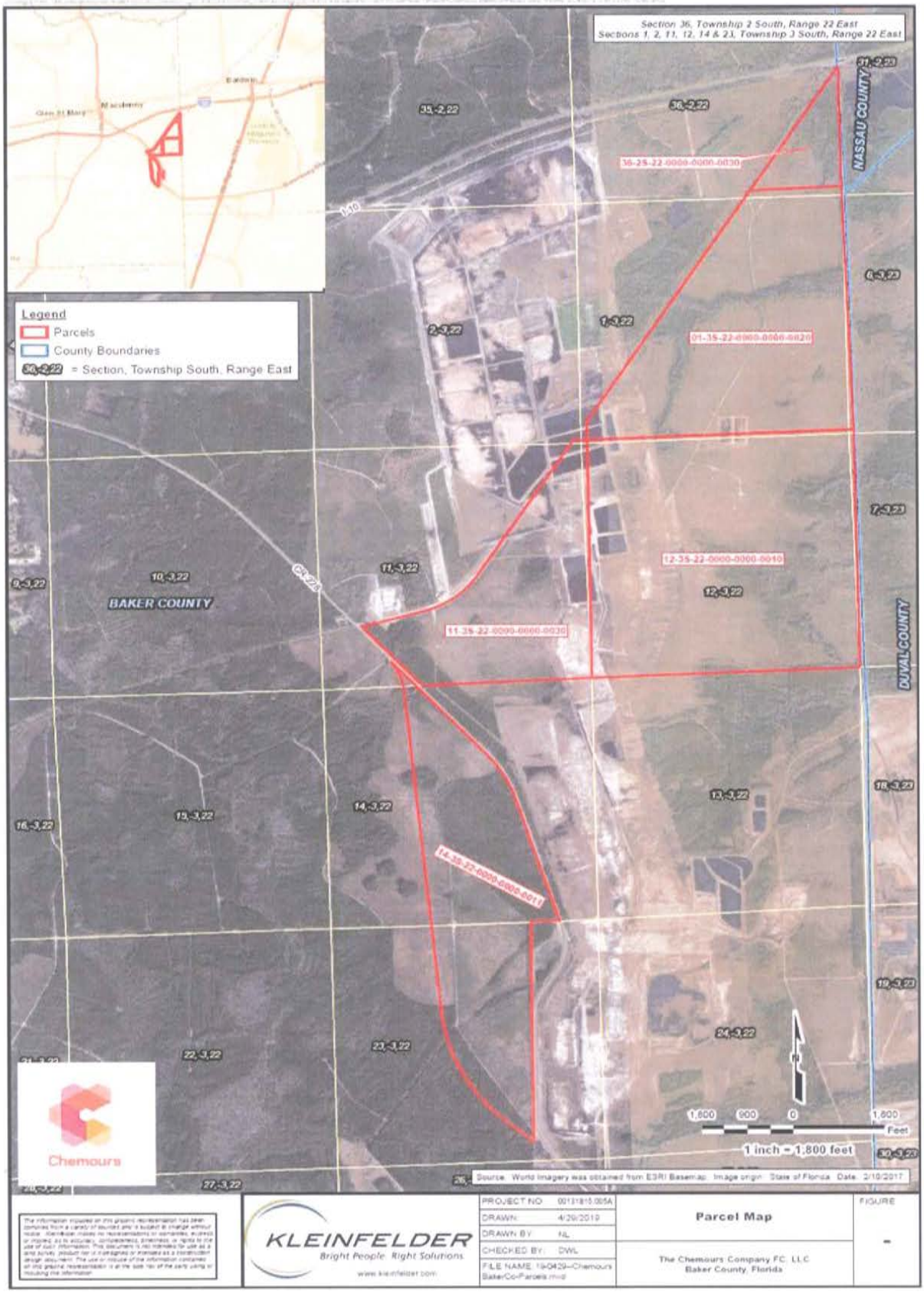
Section 3 – Description of Property

301 Capital Partners property holdings are located in Northeast Florida at the intersection of U.S. Interstate 10 and U.S. Highway 301. The land consists of 8741-acres located in Duval and Nassau Counties. 301 Capital Partners also has repurchase rights to a 1320-acre parcel owned by the Chemours Company in Baker County. Figure-1 is an aerial photograph showing the location and boundaries of the properties which are included in the 301 Capital Partners land holdings. A 1,849-acre outparcel in Duval County, located just south of I-10 and North of the Duval County lands was recently sold in late 2017 to JEA for future use as a solar farm.

An additional large land holding of +/-1800-acres in Baker County, owned by the Chemours Company, is contiguous to the 301 Capital Partners land. The Chemours land, shown in Figure-2, will also be developed in the future. This parcel contains a Titanium mine, which is nearing the end of its mining life and is estimated to be only four or five years from now. The Chemours land, following restoration of the mining area, is a prime parcel for lakefront development like the Streamsong development in Polk County Florida which was developed on restored phosphate mine land.

Figure-1
301 Capital Partners Land Holding

Figure-2
Chemours Land Holdings



The Property, known as the Villages, is the subject of this report. It is a +/-5,000-acre parcel located entirely in Duval County, for which Duval County zoning has been approved for residential and commercial development. The Property is currently used for silviculture, pasture and sod cultivation. The Property's location adjacent to I-10 and U.S. 301 provides excellent access to major job centers in the region as well as access to the entire Southeastern U.S.

301 Capital Partners has been granted zoning approval for a Planned Unit Development, Satellite Community, under Duval County Ordinance 2010-874-E, as amended and executed on 2/18/11. Figure-3 shows the Conceptual Master Plan.

The PUD approval is for a Rural Villages concept, containing a mix of residential, low intensity commercial, office, civic and recreational uses. Development is to be constructed in mixed use pods, with an adjacent Commercial Village. The Development is authorized to proceed in phases. Under the zoning ordinance, the Villages is allowed to develop any portion of the Property at any time. 301 Capital Partners has indicated that the first phase of the Villages to be built, through 2030, will include only that portion of Figure-3 designated as the Central Villages with very limited portions of the Commercial Village. The exact mix of residential/commercial sizes and types is not known at this time, however, 2800 Equivalent Residential Connections (ERC) are planned for Phase 1.

Figure-3
Conceptual Master Plan

Section 4 – Projected Water, Wastewater and Reclaimed Water Demand

The demands and thus the treatment plant design flows for Phase 1 of the Villages were identified using standard engineering calculations in conformance with JEA standards published in:

- Water, Sewer and Reuse Design Guideline for New Developments
- Standards Manual for Water Treatment Plants
- Recommended Standards for Sewage Works, Latest Edition, Ten State Standards
- Water Environment Federation MOP

4.1 PROJECTED WATER DEMAND

301 Capital Partners has decided upon an absorption rate of 2500 Equivalent Residential Connections (ERC's) through 2030 within Central Villages, and 300 ERC's within the Commercial Village (2800 ERC's total). The size and type of each dwelling unit in Phase 1 is not yet determined, preventing a flow estimate using per bedroom data as recommended by JEA. At a commonly accepted, and conservative, engineering value of 270 gallons per day (GPD) Average Daily Flow (ADF) per ERC, the water demand is 756,000 GPD ADF. The Villages water treatment plant will be designed using a 1.0 MGD ADF design basis, as this is the minimum size on-site plant recommended by JEA for new development. This design standard will allow for approximately 900 additional ERC's available for future phases.

4.2 PROJECTED WASTEWATER/RECLAIMED WATER DEMAND

Absent historical flow data, commonly accepted engineering practice is to use 80 percent of the ADF Water Demand to calculate ADF Wastewater Demand. This calculation renders the Villages Phase I Wastewater Demand at 604,800 GPD ADF. Again, JEA standards for an on-site wastewater treatment plant recommend a minimum design value of 1.0 MGD ADF. The available amount of treated wastewater for irrigation (reclaimed water) will be that amount processed by the new wastewater treatment plant once the plant is in operation. The plant is designed to reclaim or store 100% of tertiary treated wastewater effluent.

Section 5 – Alternatives for Provision of Utility Service

There are only two realistic alternatives for the provision of water/wastewater/reclaimed water service to the Villages:

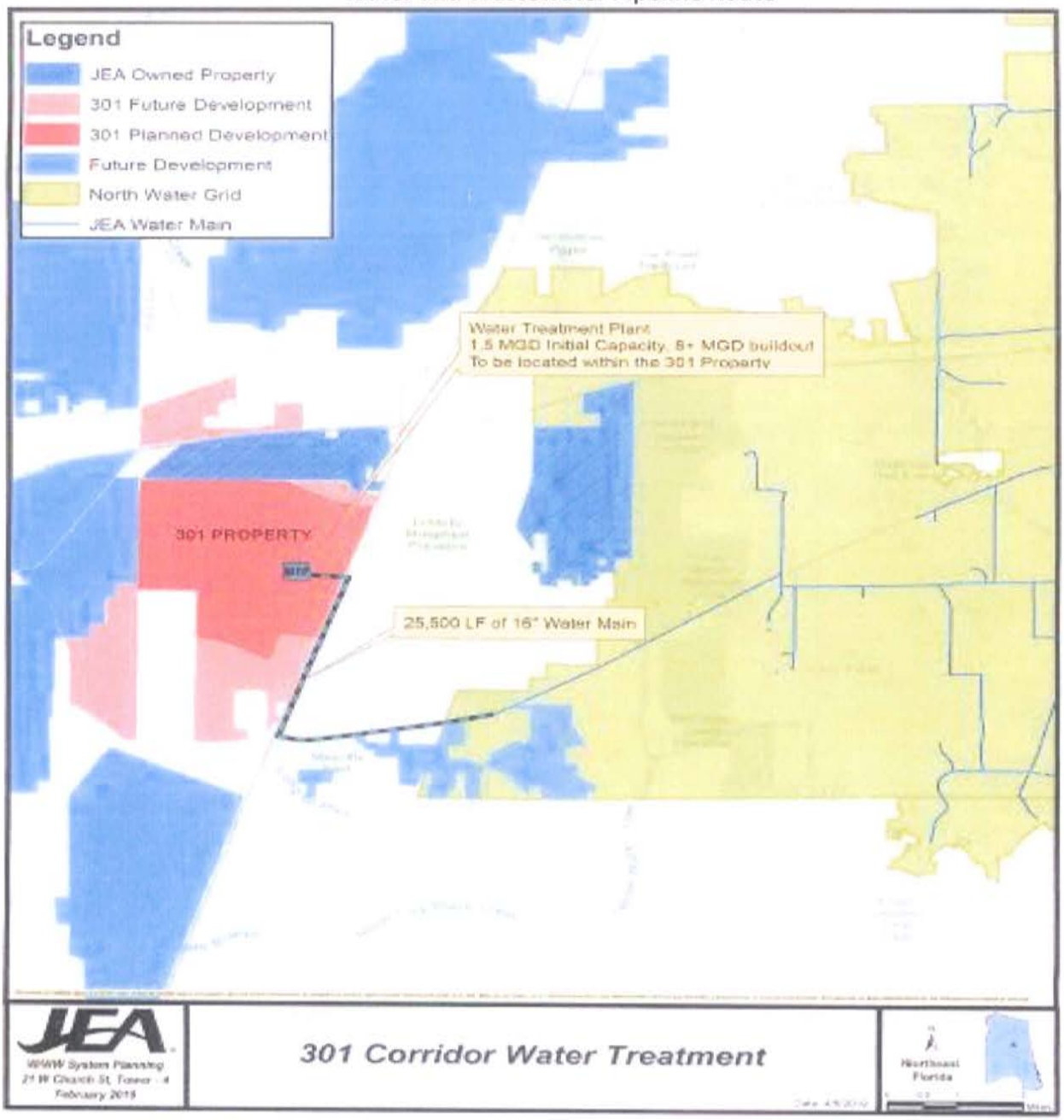
- Interconnection to the existing JEA utility system (JEA Interconnection), and
- Construction of new, on-site water/wastewater/reclaimed treatment facilities (On-Site Utilities)

5.1 JEA Interconnection

301 Capital Partners has met several times with JEA staff to discuss the development plans and schedule for the Villages. The most recent meeting was held on April 9, 2019. During this meeting (JEA's meeting notes are attached as Appendix-A), JEA proposed the following basis for the JEA Interconnection alternative:

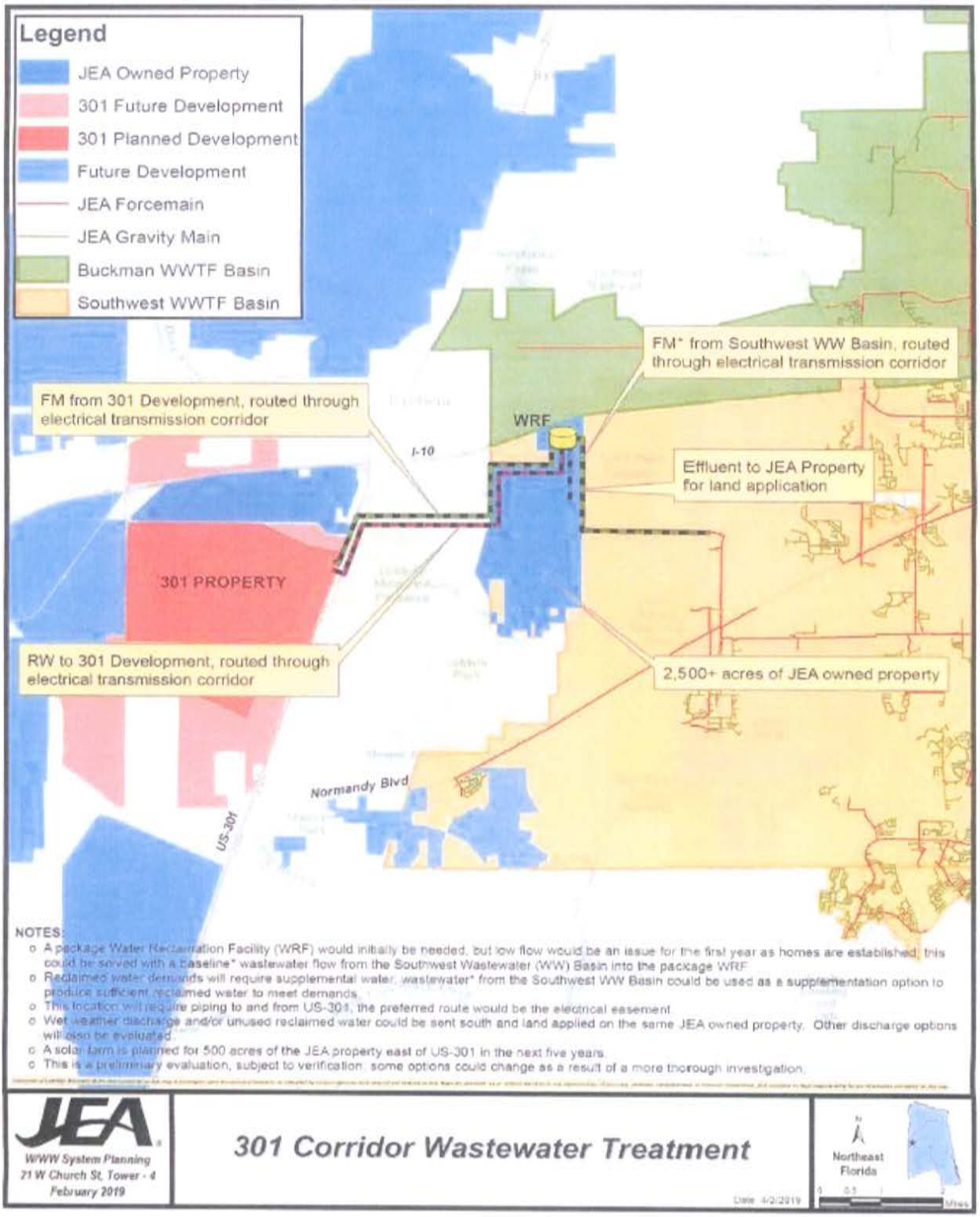
- Water Service – a 1.5 MGD ADF water treatment plant to be constructed on Villages property with a future connection to the JEA system for redundancy. An alternative would be a connection to the existing JEA lines requiring approximately 25,500 feet of 16" water main (including crossings of US 301 and two tracks of the CSX Railway). JEA's recommended water service is shown in Figure-4.

Figure-4
Water and Wastewater Pipeline Route



- Wastewater/Reclaimed Water Service – JEA to construct an off-site regional water reclamation facility approximately 4 miles from the Villages Phase 1, interconnected to the Villages by appropriately sized wastewater and reclaimed water mains (again including crossings of US 301 and the CSX Railway tracks). JEA's proposed wastewater/reclaimed water system is shown in Figure-5.

Figure-5
Water and Wastewater Treatment Plant Site

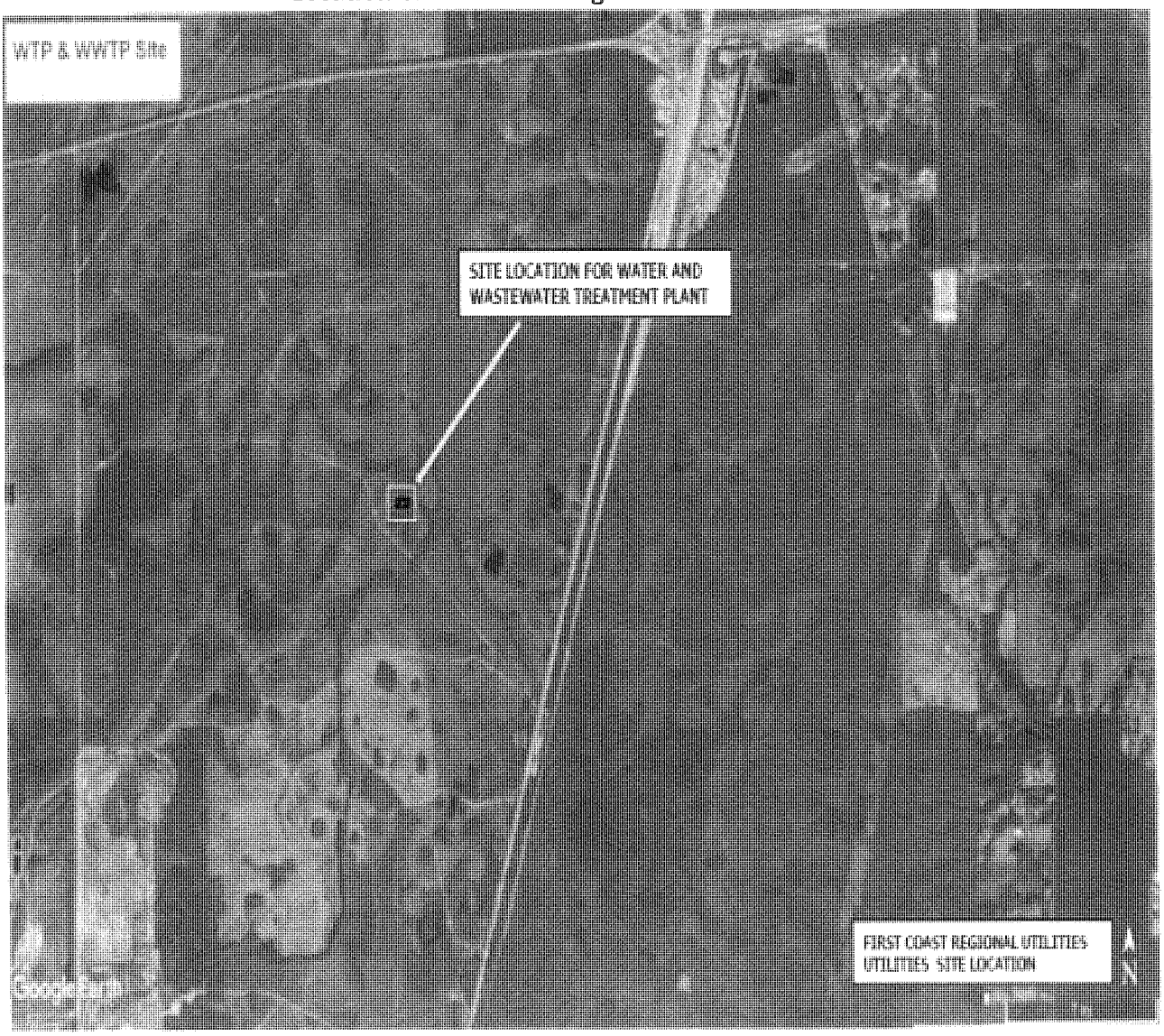


- Cost of the JEA Interconnection alternative to 301 Capital Partners as presented by JEA staff are $39,000,000. This amounts to a connection charge of $13,000 per unit compared to the $3,300 connection fee shown in JEA's Water and Sewer Rate Document.
- Timing of completion of the JEA Interconnection alternative, as presented by JEA staff, is 5-years from initiation of design and permitting.

5.2 Construction of On-Site Utilities

The on-site water and wastewater treatment facilities are to be located on a +/-50-acre site just North of the Central Villages, as shown on Figure-6. This is a particularly well suited site with good drainage and soil conditions. The initial phase of the new utility will require 10-acres, including setbacks from isolated wetlands. The details and preliminary cost estimate for the on-site facilities are described in Subsections 5.2 a-c.

Figure-6
Location of First Coast Regional Utilities Site



5.2 a. Water Treatment Plant and Raw Water Wells

A conceptual water treatment plant (WTP) and raw water supply wells were developed based on the estimated flows, the expected raw water quality and the anticipated water treatment requirements. The design flow for the WTP will be 1 MGD ADF, to meet JEA standards, expandable to 2 MGD in the future. The treatment process and materials of construction are designed in conformance with JEA standards.

The treatment process will consist of water storage and chlorination. Raw water will be supplied by two (2) raw-water supply-wells drilled and developed to approximately 1,000 feet below land surface. The target well capacity is 1,400 GPM. A 16-inch raw water trunk main sized for the future design flow of 2 MGD will discharge into a 1million gallon (MG) prestressed concrete storage tank equipped with a mixing device to promote disinfection and sulfide oxidation.

High service pumping will be provided to meet maximum day flow (MDF) conditions at firm capacity (one pump out of service) and ultimately Peak Hour Flows (PHF). Three (3) Pumps will initially be sized for 1 MGD each with a system pressure of 70-75 psi at best efficiency.

Disinfection will be accomplished with the application of commercial-grade liquid sodium hypochlorite pumped neat for injection ahead of the ground storage tank and ahead of the high service pumps.

The high service pumps, chemical feed facilities, electrical switchgear and controls, and storage will be housed in a dedicated WTP structure approximately 20' x 60'. The WTP facilities will be co-located on the site with the wastewater treatment plant facilities.

5.2 b. Wastewater Treatment Plant

A conceptual wastewater treatment plant (WWTP) design was developed based on the estimated flows, typical wastewater strengths, planned effluent and sludge disposal methods, and FDEP standards, in particular Florida Statutes (F.S.) 62-600 (Domestic Wastewater Facilities) and 62-610 (Reuse of Reclaimed Water and Land Application). A preliminary process flow diagram of the proposed wastewater facilities is shown in Figure-7. The WWTP conceptual design was based on a current average daily flow (ADF) of 1 MGD. The design included provisions to accommodate a future ADF of 2 MGD. The influent pump station and the headworks facilities were designed to accommodate the peak hour flow, while the facilities downstream of the headworks were designed to hydraulically accommodate the peak day flow.

Figure-7
Wastewater Treatment Process Flow Diagram

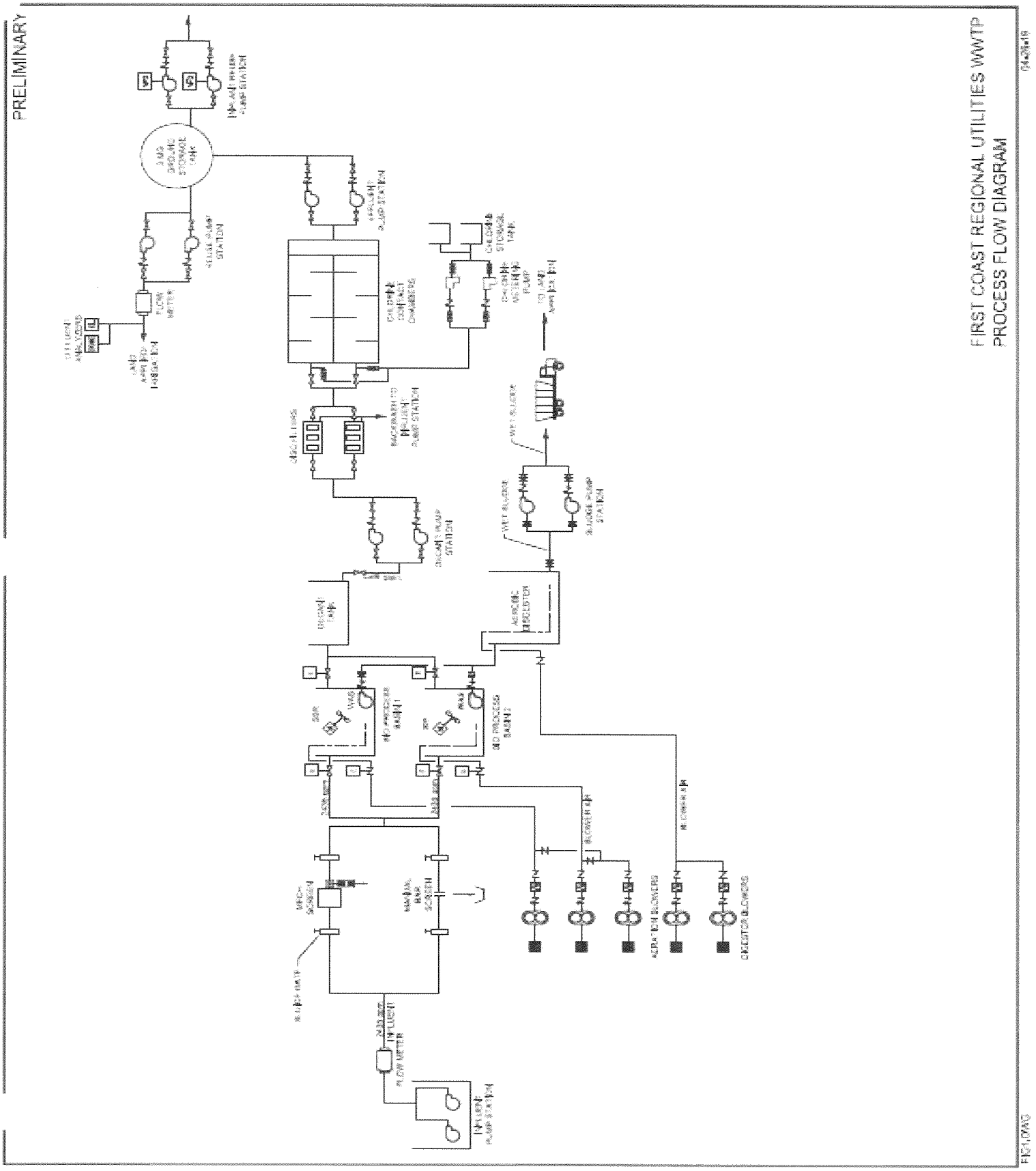


Table-1 shows the various design parameters for the WWTP. Also shown in Table -1 are the tertiary nutrient standards of 3.0 ppm Total Nitrogen (TN) and 1.0 ppm Total Phosphorous (TP) to which the final effluent is designed. These nutrient standards are in compliance with other wastewater treatment plants permitted by the Northeast Region of Florida Department of Environmental Protection (FDEP) in Duval County. Biosolids from the plant will be aerobically digested to FDEP Class B standards and land spread by permit on vacant, agricultural property. Treated effluent disposal will be by irrigation using reclaimed water on developed common areas and on the timber and sod farms adjacent to the Villages, until sufficient green space is developed within the Villages.

Raw wastewater is pumped through a flow meter and up to an elevated headworks. The headworks would be sized to meet future flows. Removable blocks would be placed in the headworks channels to maintain acceptable velocities at the lower current flow rates. A mechanical bar screen, sized for current flows would be installed in the headworks. The screen would need to be replaced with a larger one in the future, when flows increase. A backup manual bar screen would also be installed in the headworks. In the future, the manual bar screen would be replaced with a mechanical bar screen. After screening, the wastewater would then be directed to the biological treatment process.

The biological treatment system is based on sequencing batch reactor (SBR) technology. The SBR design was based on typical wastewater strengths and the 3-month maximum ADF. The assumed influent and effluent wastewater parameters are shown in Table - 3. Because the treated effluent will be disposed via irrigation of nearby fields and public areas, effluent reuse standards of 5/5/3/1 were used as the treatment goals. Advanced treatment for additional reduction of nitrogen or phosphorus was not included, nor needed. Two SBRs would be used for the current flows. Potentially, up to two additional SBRs may be required to meet the future flows, although the initial two SBRs may be up-ratable to meet the future flows by adding a granular media to the process. Future testing would be required to determine if this a feasible option.

Table -1
First Coast Regional Utilities
WWTP Design Parameters

Parameter	Influent	Effluent
CBOD (ppm)	200	5
Total Suspended Solids (ppm)	240	5
Total Kjeldahl Nitrogen (ppm)	40	1.5
Total Nitrogen (ppm)	80	3
Total Phosphorus (ppm)	8	1
pH	6-8	---
Wastewater Temperature (°F)	59-77	---

After biological treatment, the effluent is filtered through cloth media filters. The filter housings will be sized to meet additional future flows, but they will only be fitted with enough filter discs to accommodate the current flows. When the plant is fully expanded, up to two additional sets of disk filters will be required. After filtration, the effluent is disinfected with chlorine (sodium hypochlorite) and pumped to a 3-million-gallon ground storage tank. This storage volume meets the FDEP minimum 3-day storage requirement (F.S. 62-610.414) for current flows. In the future, additional storage tanks, storage ponds or other alternative

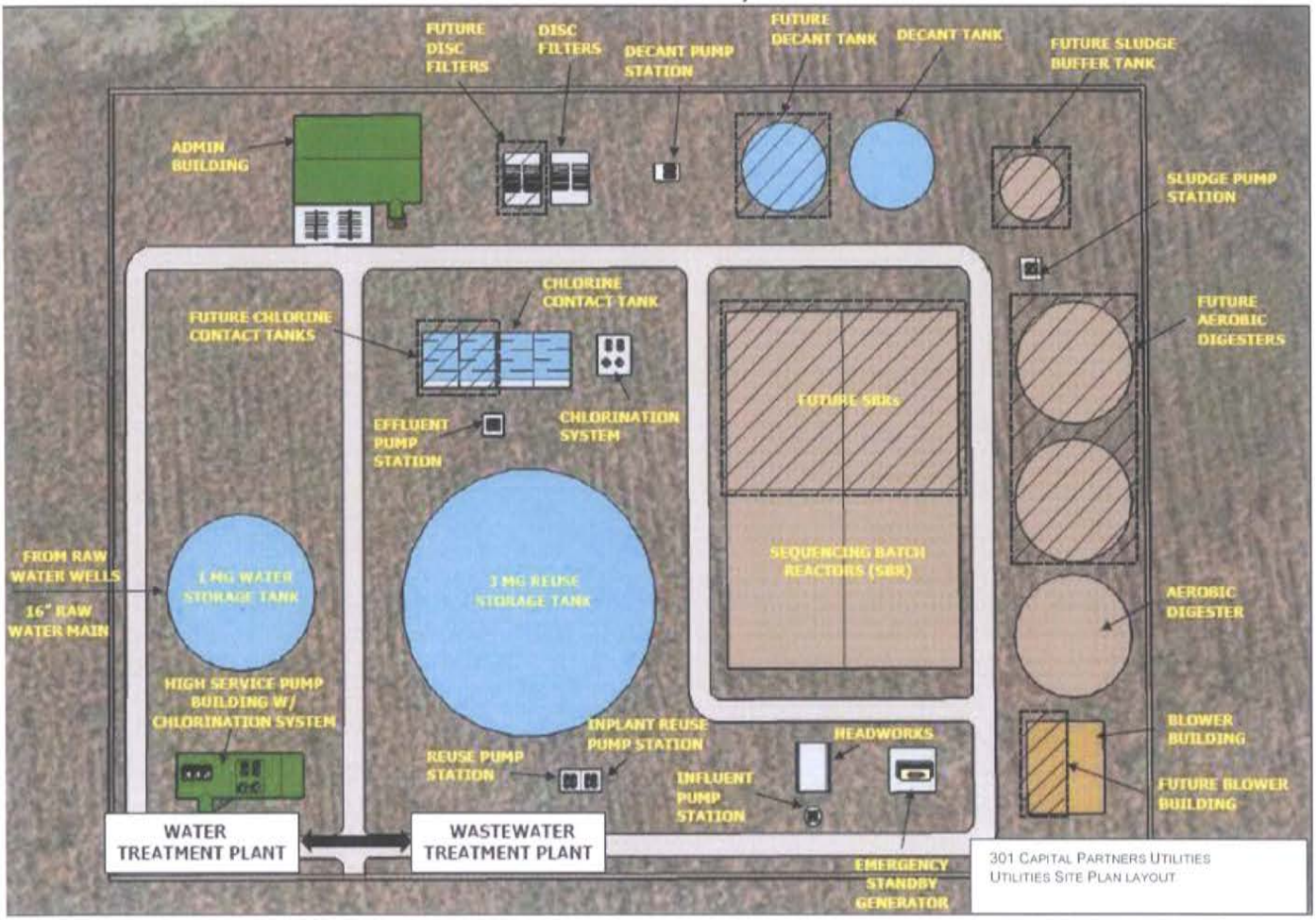
disposal methods will be required. The treated effluent will be pumped from the storage tank to reuse services at the WWTP plant site or irrigation of nearby public access areas.

Under FDEP regulations, F.S. 62-610.462, when treated effluent is used in unrestricted public access areas, the WWTP shall meet Class I reliability standards. The reliability standards require multiple process units with the ability to accommodate 75% of the design flow for that unit process. In addition, multiple pumps are required for each service, with the ability to handle to design flow with the largest pump out of service. The reliability standards also specify minimum staffing requirements.

Sludge will be aerobically digested and trucked off-site for land application. Since sludge disposal is not part of the effluent treatment process, only one digester is proposed for the current flows. Up to two additional digesters and a sludge buffer tank would be required in the future. While not required for current flows, it is likely that sludge dewatering facilities would be cost effective in the future, and should be evaluated at that time.

Figure-8 shows a proposed layout of the WWTP on the subject site. The site layout includes a utility administration building, a backup electric generator and the potable water treatment plant (WTP) facilities. The layout does not include any setbacks that may be required.

Figure-8
Utilities Site Plan Layout



5.2 c. - WTP and WWTP Preliminary Cost Estimate

Based upon the preliminary design presented in this report, a budget level cost estimate was developed for the water and wastewater treatment facilities based upon current flows. Future facilities required to meet the future flows were not included in the cost estimate. This cost estimate is a preliminary, planning level estimate based on generalized projections for equipment need, experience with similar project and manufacturer prices for recommended equipment. Estimates prepared in this manner are normally within + 50 percent to -30 percent.

Final construction costs will depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule and project delivery methods.

The WWTP estimate assumed reinforced-concrete structures for the influent pump station, elevated headworks, SBR basins and the chlorine contact chambers. Glass-fused steels tanks were assumed for the decant tank and the aerobic digester. Blowers were placed inside concrete-masonry-unit buildings. The chlorine system was placed on an exterior slab with a steel canopy. The 3-million gallon treated effluent storage tank was assumed to be pre-stressed concrete construction. The mechanical bar screen was assumed to be 316 stainless steel, while the disc filters were 304 stainless steel. Piping was ductile iron above grade and C-900 below grade.

The WTP estimate assumed a 1 MG pre-stressed concrete tank with the high service pumps placed in a concrete-masonry-unit (CMU) building. The WTP chlorine facilities were also placed in the high service pump building.

The overall site includes a generator sufficient to power the WTP and WWTP facilities, an asphalt two-lane driveway throughout the plants, a fence around the entire site, and an CMU administrative building with a joint control room, maintenance facilities and separate WTP and WWTP laboratories.

Based on FEMA flood maps, it appears that the WTP and WWTP facilities can be placed on a site that is above the current flood elevation, so no site raising was included. Slab-on-grade construction (no piles or soil amending) was assumed. No dewatering would be required for pipe installation and no well-pointing would be required for installation of structures. No significant tree removal or landscaping is needed.

Table -2
First Coast Regional Utilities
WTP & WWTP Budget Level Cost Estimate

Facility/Item	Cost
Wastewater Treatment Plant	
Headworks and Influent Pump Station	$1,000,000
SBR/Tanks/Blowers & Building/Mixers/Pumps	$2,400,000
Decant Tank/Pumps	$400,000
Disc Filters	$700,000
Chlorination System/Contact Chambers	$450,000
Reuse Ground Storage Tank	$1,600,000
Reuse Pump Stations (2)	$200,000
Aerobic Digester Tank/Pumps	$800,000
Site Work	$700,000
Administration Building	$850,000
Electrical/Generator/Instrumentation & Controls	$4,000,000
Piping and Valves	$2,200,000
General Conditions	$1,800,000
Total WWTP	**$17,100,000**
Water Treatment Plant	
Raw Water Wells	$2,000,000
Ground Storage Tank and Mixer	$1,400,000
Chemical Storage and Feed	$200,000
High Service Pumps/Building	$600,000
Piping and Valves	$300,000
Electrical/Instrumentation & Controls	$400,000
Total WTP	**$4,900,000**
Total WTP and WWTP	**$22,000,000**
Engineering/Engineering SDC/Permitting	**$3,300,000**
Contingency (10%)	**$2,200,000**
Grand Total	**$27,500,000**

5.2 d Preliminary Schedule for Design, Permitting and Construction

A preliminary schedule for design, permitting and construction of the On-Site Utilities alternative is shown in Table-3. This schedule is based on a design/build delivery method, which saves both time and money compared to the more traditional design/bid/build delivery method. In the design/build delivery model, design, permitting and construction can run on parallel paths. Construction can begin, for instance, on portions of the project (such as site development) prior to final design of treatment facilities. The permits required to build the facility, which are to be applied for, are also shown in Table-3, along with anticipated review and approval times. The total estimated time for completion of the On-Site Utilities alternative is 28 months from decision to proceed.

Table-3
Preliminary Schedule for Design, Permitting and Construction

	Start Month ↓	End Month ↓
Notice to Proceed 30% Design/Surveying	1	3
SJRWMD Consumptive Use Permit	1	9
SJRWMD Environmental Resource Permit	1	6
Notice to Proceed Design/Build	3	24-27
FDEP Construction Permit	6	9
FDEP Land Application Permit	12	15

Section 6 – Preliminary Cost Estimates

a) Internal Infrastructure Lines and Lift Stations

JEA's line extension policy requires that a developer build the internal infrastructure on the Property, and then deed it to JEA as a contribution in aid of construction. Internal infrastructure includes neighborhood water and sewer pipes including water and wastewater services, manholes, lift stations, valves, fire hydrants, as well as backbone water and sewer pipes that connect the community to the water transmission mains. Internal infrastructure is the same cost to the developer regardless of which service provision alternative is selected. Thus this cost is not included in the Cost Comparison of Alternatives, Section 7. Figure-9 shows a sketch of the Central Village, with internal water and sewer pipes, lift stations and other required appurtenances shown, along with trunk line sizes. Table–4 gives a budget level cost estimate for the internal infrastructure. Total estimated cost for Phase 1 is $18,572,000. This cost includes the facilities necessary to serve the entire Commercial Village. The cost will be incrementally lower if only a portion of the Commercial Village is built in Phase 1. All costs are compliant with JEA Water and Wastewater Standards Manual. The cost of internal infrastructure per dwelling unit of approximately $6000 is consistent with other local developments of similar size.

Figure-9
Central Villages Internal Infrastructure Layout

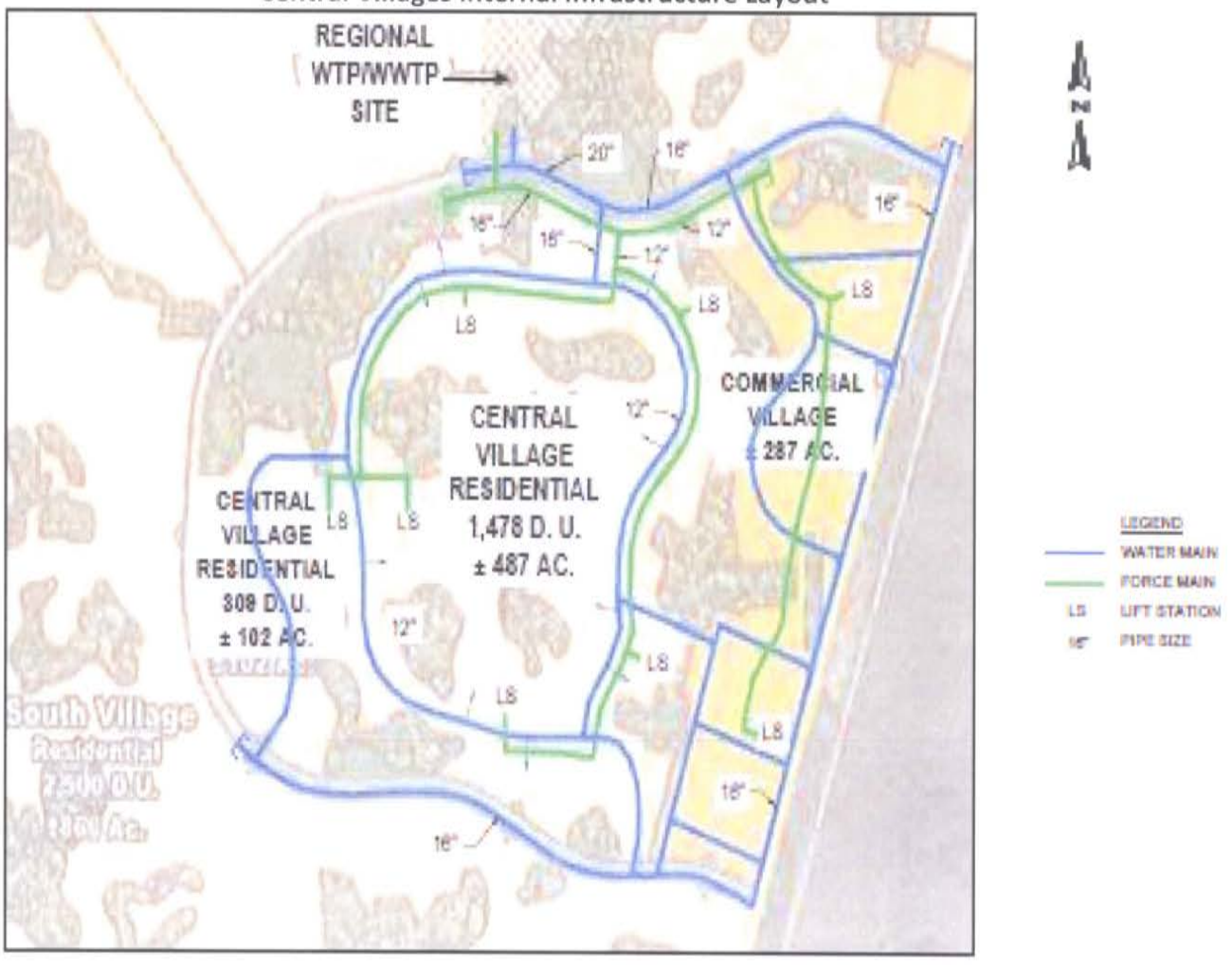


Table-3
Preliminary Estimate for Internal Infrastructure Central Villages Residential and Commercial Village (full 287 Acres)

ITEM	QUANTITY AND UNIT COSTS	TOTAL COST
Sewer Lift Stations	8 at $200,000 EA	$1,600,000
Gravity Sewer Mains	76,000 LF at $70/LF	$5,320,000
Sewer Manholes	190 at $8,000 EA	$1,520,000
Sewer Laterals	1,900 at $1,000 EA	$1,900,000
Sewer Force Main	<16" - 20,000 LF at $40/LF	$800,000
Sewer Force Main	16" – 2000 LF at $60/LF	$120,000
Water Main	<16" - 102,000 LF at $40/LF	$4,080,000
Water Main	16" - 17,000 LF at $70	$1,190,000
Water Main	20" - 2,000 LF at $100	$200,000
Fire Hydrants	170 at $3,500 EA	$595,000
Water Services	1040 at $850 EA	$884,000
Valves	<16" - 200 at $1,500 EA	$300,000
Valves	16" - 25 at $4,000 EA	$100,000
Valves	20" - 2 at $5,000 EA	$10,000
	Total Internal Infrastructure Cost:	**$18,619,000**

Notes:
1. Engineering and Contingencies at 25% would add $4,654,750 to the total cost shown in the table.

b) Operation and Maintenance Costs

Preliminary cost estimates for Operation and Maintenance (O&M) are shown in Figures 5 through 8. O&M Costs are estimated separately for water supply, treatment and distribution; and for wastewater collection, treatment, reclaimed water irrigation and sludge disposal. Costs are presented for 80% and 100% build-out of the Villages Phase 1, based on the absorption schedule of 500 residential ERC's and 60 commercial ERC's per year with a 5-year build-out (total of 2800 ERC's).

Staffing is compliant with FAC 62-699-310. Given the co-location of the water and wastewater systems, is reasonably assumed that costs such as tools, some spare parts, vehicles and labor can be shared between the systems. Labor sharing is applicable to mechanics, electricians and line technicians, but excludes operators. Power costs are based on installed horsepower of equipment in preliminary design. Chemical costs are based on comparably sized systems with similar treatment processes.

Table-5

Estimated Water Treatment Distribution Expenses
Water Utility Expense Accounts
80% Buildout

ACCT. NO.	ACCOUNT NAME		ESTIMATED ANNUAL EXPENSE
601	Salaries and Wages - Employees	$	124,250.00
603	Salaries and Wages - Officers Directors and Majority Stockholders		
604	Employee Pensions and Benefits	$	12,400.00
610	Purchased Water		
615	Purchased Power	$	28,000.00
616	Fuel for Power Production		
618	Chemicals	$	24,500.00
620	Materials and Supplies	$	12,350.00
631	Contractual Services - Engineering	$	6,250.00
632	Contractual Services - Accounting	$	10,000.00
633	Contractual Services - Legal	$	3,000.00
634	Contractual Services - Mgmt. Fees		
635	Contractual Services - Testing	$	12,750.00
636	Contractual Services - Other	$	5,000.00
641	Rental of Building/Real Property		
642	Rental of Equipment		
650	Transportation Exspense	$	4,500.00
656	Insurance - Vehicle	$	2,500.00
657	Insurance - General Liability	$	10,000.00
658	Insurance - Workers Comp	$	3,100.00
659	Insurance - Other	$	5,000.00
660	Advertising Expense	$	1,000.00
666	Regulatory Commission Expense Amortization of Rate Case Expense		
667	Regulatory Commission Expense-Other		
670	Bad Dept Expense		
675	Miscellaneous Expense	$	30,000.00
	Total Water Utility Expenses	$	294,600.00

Table-6

Estimated Water Treatment Distribution Expenses

Water Utility Expense Accounts

100% Buildout

ACCT. NO.	ACCOUNT NAME		ESTIMATED ANNUAL EXPENSE
601	Salaries and Wages - Employees	$	124,250.00
603	Salaries and Wages - Officers Directors and Majority Stockholders		
604	Employee Pensions and Benefits	$	12,400.00
610	Purchased Water		
615	Purchased Power	$	35,000.00
616	Fuel for Power Production		
618	Chemicals	$	30,600.00
620	Materials and Supplies	$	15,000.00
631	Contractual Services - Engineering	$	8,000.00
632	Contractual Services - Accounting	$	10,000.00
633	Contractual Services - Legal	$	3,000.00
634	Contractual Services - Mgmt. Fees		
635	Contractual Services - Testing	$	12,750.00
636	Contractual Services - Other	$	5,000.00
641	Rental of Building/Real Property		
642	Rental of Equipment		
650	Transportation Exspense	$	4,500.00
656	Insurance - Vehicle	$	2,500.00
657	Insurance - General Liability	$	10,000.00
658	Insurance - Workers Comp	$	3,100.00
659	Insurance - Other	$	5,000.00
660	Advertising Expense	$	1,000.00
666	Regulatory Commission Expense Amortization of Rate Case Expense		
667	Regulatory Commission Expense-Other		
670	Bad Dept Expense		
675	Miscellaneous Expense	$	40,000.00
	Total Water Utility Expenses	$	322,100.00

Table-7

Estimated Wastewater Treatment, Disposal and Collection Expenses

Wastewater Utility Expense Accounts

80% Buildout

ACCT. NO.	ACCOUNT NAME	ESTIMATED ANNUAL EXPENSE
701	Salaries and Wages - Employees	$ 252,750.00
703	Salaries and Wages - Officers Directors and Majority Stockholders	
704	Employee Pensions and Benefits	
710	Purchased Sewage Treatment	$ 25,280.00
711	Sludge Removal Expense	$ 11,000.00
715	Purchased Power	$ 81,000.00
716	Fuel for Power Production	
718	Chemicals	$ 45,000.00
720	Materials and Supplies	$ 78,500.00
731	Contractual Services - Engineering	$ 10,000.00
732	Contractual Services - Accounting	$ 10,000.00
733	Contractual Services - Legal	$ 3,000.00
734	Contractual Services - Mgmt. Fees	
735	Contractual Services - Testing	$ 12,750.00
736	Contractual Services - Other	$ 5,000.00
741	Rental of Building/Real Property	
742	Rental of Equipment	
750	Transportation Exspense	$ 4,500.00
756	Insurance - Vehicle	$ 2,500.00
757	Insurance - General Liability	$ 12,000.00
758	Insurance - Workers Comp	$ 6,300.00
759	Insurance - Other	$ 5,000.00
760	Advertising Expense	
766	Regulatory Commission Expense Amortization of Rate Case Expense	
767	Regulatory Commission Expense-Other	
770	Bad Dept Expense	
775	Miscellaneous Expense	$ 35,000.00
	Total Wastewater Utility Expenses	$ 599,580.00

Table-8

Estimated Wastewater Treatment, Disposal and Collection Expenses

Wastewater Utility Expense Accounts

100% Buildout

ACCT. NO.	ACCOUNT NAME		ESTIMATED ANNUAL EXPENSE
701	Salaries and Wages - Employees	$	252,750.00
703	Salaries and Wages - Officers Directors and Majority Stockholders		
704	Employee Pensions and Benefits	$	25,280.00
710	Purchased Sewage Treatment		
711	Sludge Removal Expense	$	13,750.00
715	Purchased Power	$	93,150.00
716	Fuel for Power Production		
718	Chemicals	$	56,250.00
720	Materials and Supplies	$	80,000.00
731	Contractual Services - Engineering	$	10,000.00
732	Contractual Services - Accounting	$	10,000.00
733	Contractual Services - Legal	$	3,000.00
734	Contractual Services - Mgmt. Fees		
735	Contractual Services - Testing	$	12,750.00
736	Contractual Services - Other	$	5,000.00
741	Rental of Building/Real Property		
742	Rental of Equipment		
750	Transportation Exspense	$	4,500.00
756	Insurance - Vehicle	$	2,500.00
757	Insurance - General Liability	$	12,000.00
758	Insurance - Workers Comp	$	6,300.00
759	Insurance - Other	$	5,000.00
760	Advertising Expense		
766	Regulatory Commission Expense Amortization of Rate Case Expense		
767	Regulatory Commission Expense-Other		
770	Bad Dept Expense		
775	Miscellaneous Expense	$	40,000.00
	Total Wastewater Utility Expenses	$	632,230.00

SECTION 7 – Comparison of Alternatives

Table-9 is a matrix comparing the two alternatives for provision of utility service to Villages. The On-Site Utilities alternative is $11,500,000 less than the JEA Connection Alternative. The On-Site Alternative will provide utility service for the development in approximately two years from initiation of design and permitting. As all construction for the On-Site Utilities alternative will be conducted on private land within Villages, it will involve significantly less disruption of major roadways and rail lines during construction. Finally, the On-Site Alternative, by avoiding unnecessary pumping of water and wastewater long distances, will cause less environmental impact, minimizing electrical costs and the carbon footprint of the project, not only during construction, but during the entire life of the project. From a timing perspective, the JEA Interconnection alternative would not be available to the Villages for at least 5 years, while the On-Site Utilities alternative can be designed, permitted and constructed within 2 1/3 years. Figure-9 compares the implementation schedules for each alternative.

Table -9
Comparison of Alternatives

Alternative	Capital Costs	Timing	Disruption During Construction	Environmental Impact
JEA Interconnection	$39,000,000	5-years	Extensive	High
On-Site Utility Facilities	$27,500,000	2 1/3-years	Minimal	Low

SECTION 8 – Conclusions

The following conclusions, well supported through this feasibility evaluation are:

- The Villages, with its approved zoning ordinance and located in a rapidly developing area, will require full water and wastewater service in order to be developed. Additionally, Duval County rules and the policies of the St. John's Water Management District will require that wastewater effluent be reclaimed and returned to the regional water system through on-site irrigation.
- The only two practical alternatives, as described in detail above, are:
  - JEA Interconnection, and
  - On-Site Utilities
- Given the formidable obstacle of crossing major roadway and rail corridors in order to connect to the Villages, JEA Interconnection alternative is significantly more expensive, disruptive, and environmentally impactful than the On-Site Utilities alternative. Additionally, there are significant permitting and construction challenges in crossing US 301 and CSX Railway tracks twice in order to connect the JEA WWTP to the Villages and the WTP located on the Villages Property to existing JEA lines.
- Given the significant difference in cost and practicality of the two alternatives, the On-Site Utilities alternative is clearly the most feasible choice to provide utility service to the Villages.

Appendix A
April 9, 2019
JEA Meeting Notes

Meeting Notes: 301 Property

Date: April 9, 2019

Meeting Attendees:

JEA		301 Property
Steve McInall	Gabor Acs	Avery Roberts
Raynetta Marshall	John Coarsey	James Hissam
Juli Crawford	Russ Durham	Robert Kennelly
Susan West	Robert Fowler	Zach Miller
Michael Dvoroznak		Doug Miller
George Porter		

Proposed development will consist of 15-20,000 ERCs in 3 counties (Duval, Nassau and Baker) and is being planned as a Regional Activity Center.

Energy Service

Connection to the JEA electric system will require the following:

- A 150' transmission corridor adjacent to US 301 and west of the existing FPL corridor to create a 230kV loop between existing substations;
- Future substation (~8 upland acres), ideally located at the center of the future demand/development and adjacent to the transmission corridor.

First phases of proposed development can be served from the existing system. The substation needed ~2030 based off proposed schedule.

Doug Miller (301 Property) requested that JEA consider alternate sites for the substation location; Deep Creek property (adjacent JEA solar site) and adjacent property owned by 301 group.

JEA will investigate feasibility of southern location; Deep Creek is not ideal due to onsite wetlands and site utilization for solar.

Doug Miller (301 Property) requested that JEA consider alternate route for transmission corridor.

JEA will investigate alternate routes for transmission corridor.

Water Service

JEA recommends an on-site Water Treatment Plant to be designed, permitted and constructed by 301 Property. A future connection to the existing JEA system will be needed for redundancy.

Alternatively, a connection to the existing system will require approximately 25,500 LF of 16" water main and will be limited to approximately 3,000 units before needing a storage and re-pump facility.

Wastewater Service

The proposed site within the 301 Property boundary (30 acres, roughly 13-15 acres within 100-yr floodplain) is not sufficiently sized for the facility.

JEA recommends an off-site Water Reclamation Facility to be built on the northern section of JEA owned property (Peterson Tract). A regional facility would allow for flow to be diverted from adjacent wastewater basins to provide needed flow to seed the new facility.

301 Property suggested a temporary package plant to be built on-site and phased into master pumping station when WRF is complete

> **JEA to investigate feasibility of temporary package plant on 301 Property. Primary issues will be reject disposal site and available flow to properly seed the plant.**

Reclaimed Water

Augmentation proposal from 301 Property to be from storm/ground water with proposed pond system:

- By groundwater harvesting at PS to increase available flow to treatment facility
- By point source at treatment facility with additional filtration and chlorination

The regional facility would allow for flow to be diverted from adjacent wastewater basins to provide needed reclaimed water for proposed development(s).

Schedule

301 Property is holding 2,500 units on a Letter of Intent contingent on Utility Services. Planning on vertical construction in 2021 (30 months total; 6 months of discussions, 12 months design and 12 months construction).

JEA schedule for WRF completion is roughly 5 years; siting, permitting, design and construction.

Financing

Prorated infrastructure costs will be used to calculate capacity fees in lieu of the traditional calculation per unit. Preliminary estimates of the capacity fees for the 301 Property is $39M for the first 3,000 units ($13,000/unit) Traditional capacity fees are ~$3,300/unit for water/sewer service.

JEA has recently completed a Rate Study, but the results are still in a DRAFT state with no action plan in place to move forward with recommendations. Capacity fees will likely be increased, but no decision has been made as to what they will be or when they will be implemented

Next Meeting

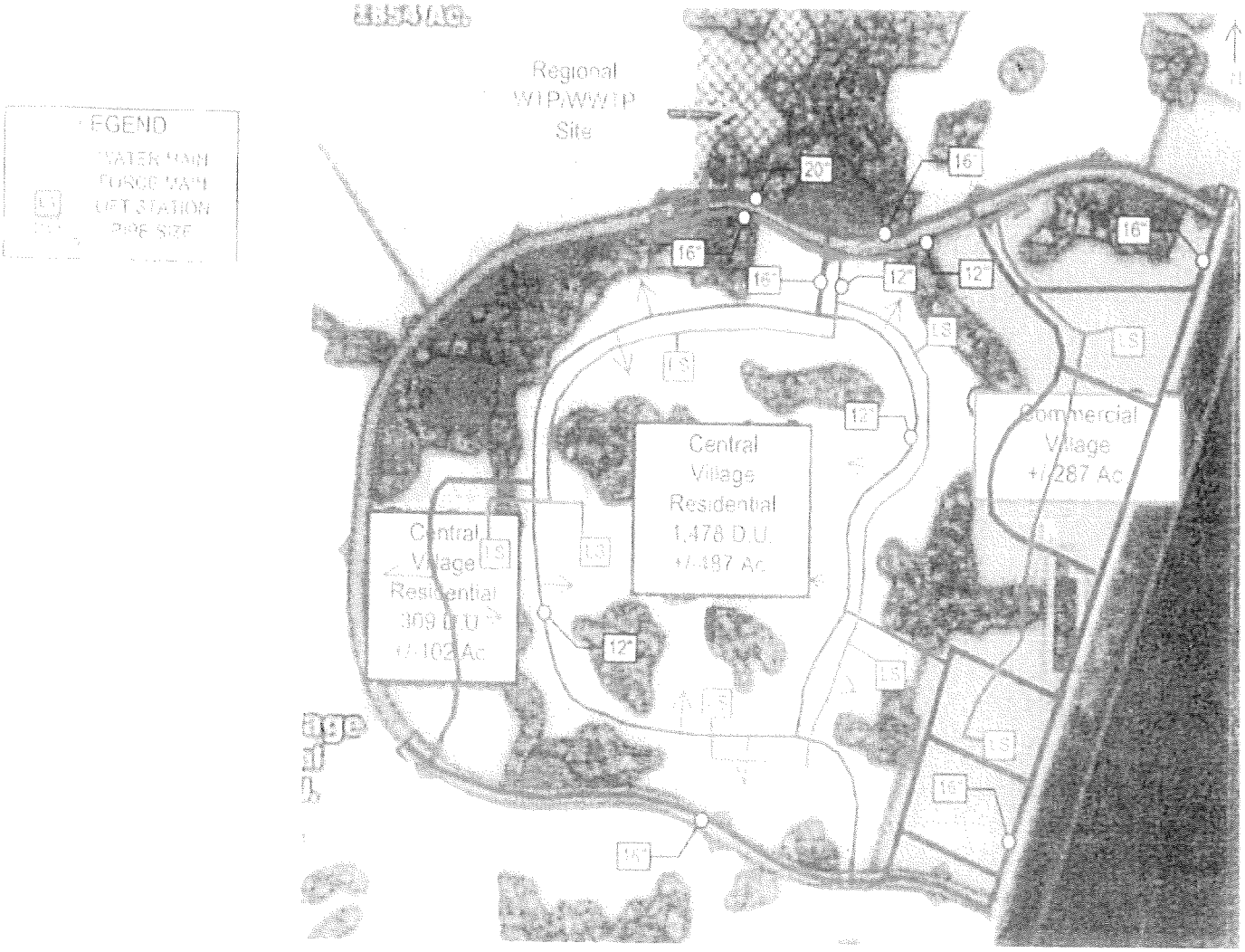
The next meeting was discussed to occur in 2-3 weeks, but no specific date was discussed. J. Hissam to provide available dates/times

EXHIBIT BAB-3

Maps

COMPOSITE EXHIBIT "L"

MAP SHOWING LOCATIONS OF PROPOSED INITIAL LINES AND FACILITIES


LEGEND
WATER MAIN
FORCE MAIN
LIFT STATION
PIPE SIZE
Regional
WTP/WWTP
Site
20"
16"
16"
16"
16"
12"
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LS
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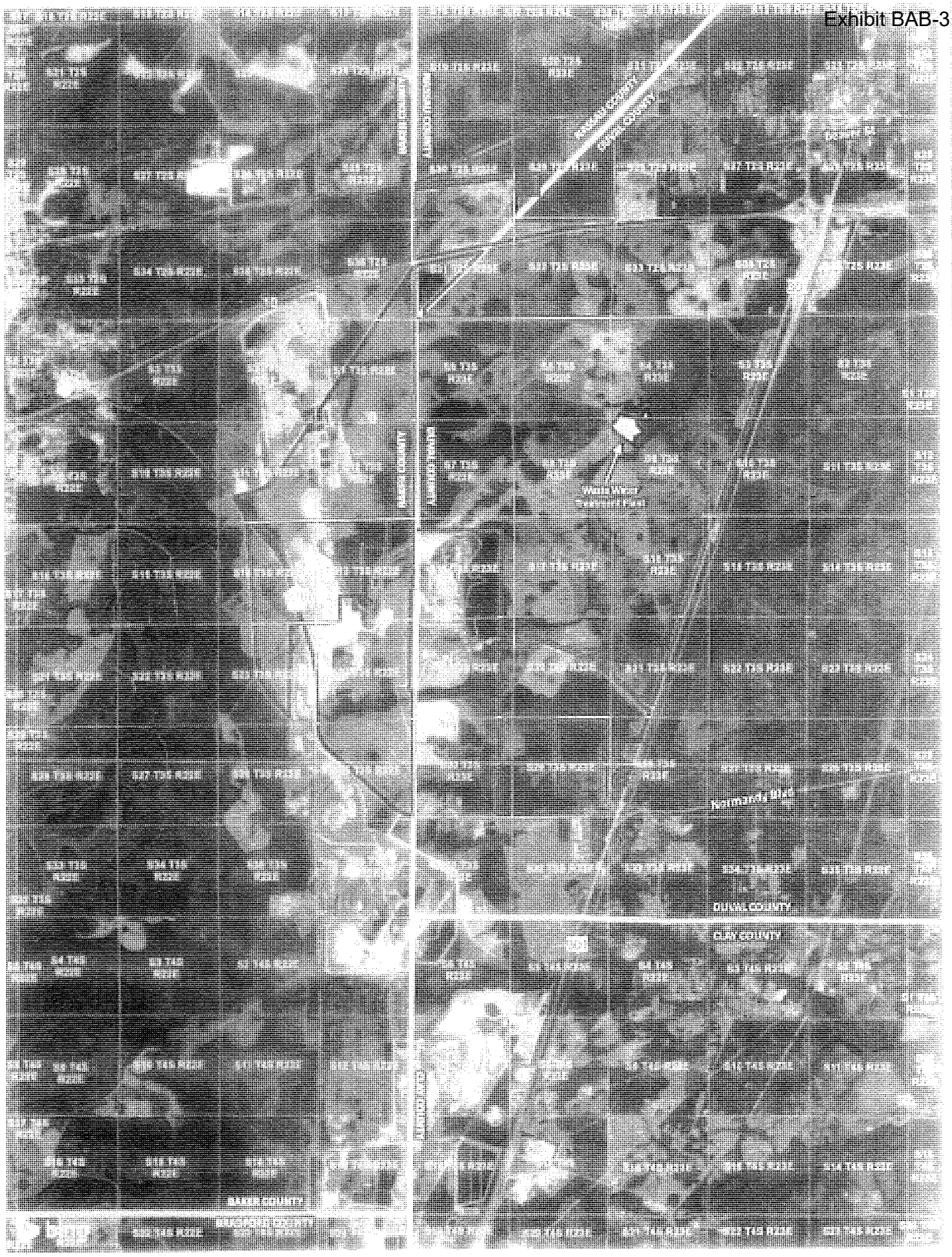
LS
LS
12"
12"
16"
16"
Central
Village
Residential
1,478 D.U.
+/-497 Ac.
Central
Village
Residential
309 D.U.
+/-102 Ac.
Commercial
Village
+/-287 Ac.


CLAY COUNTY