Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Friday, March 22, 2019 at 8:30 AM
Commission Meeting Room

FACILITIES COMMITTEE MEETING AGENDA

COMMITTEE MEMBERS: **Chairman Ben Turnipseed**
Commissioner Bob Duncan
Commissioner Steve Copeland
Executive Director Jimmy Junkin

PUBLIC COMMENT PERIOD

Public Comments will be limited to 3 minutes per speaker. Comments are to be limited to relevant information regarding your position and should avoid being repetitious. Individuals should sign in stating your name, address and the subject matter on which you wish to speak. Your cooperation in this process will be greatly appreciated.

APPROVAL

1. **Minutes from March 8, 2019 Facilities Committee Meeting** ***(subject to any necessary changes)***
2. **Purchase Meters for Water Flow Testing Sea Palms**

DISCUSSION

1. **Update, Cost Estimate for Magnolia Park Water Line Replacement**
2. **Report Presentation on North Mainland SPLOST Projects**
3. **Update on Hydraulic Model of Sea Palms East – ADF, PDF, Fire Flows & ADF**
4. **Map Presentation/Discussion/Photographs of Manholes Scheduled for Rehabilitation and Manholes Rehabilitation**
5. **Southeast Pipe CCTV Studies, Videos (I&I, Sewer Rehabilitation in Academy Creek Basin)**
6. **Update RFP for Providing Service to Unserved Areas**
7. **WPCF Plant Flows Report**
8. **Project Report**
9. **Ridgewood Water Production Facility**
10. **Private Asset Policy for Smoke Testing Results**

MEETING ADJOURNED

All citizens are invited to attend.
There is a possibility of a quorum of Commissioners being present.

Brunswick-Glynn County Joint Water & Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Commission Meeting Room
Friday, March 22, 2019 at 8:30 AM

FACILITIES COMMITTEE MINUTES

PRESENT:	**Ben Turnipseed, Chairman** **Steve Copeland, Commissioner** **Bob Duncan, Commissioner** **Jimmy Junkin, Executive Director**
ALSO PRESENT:	**Donald Elliott, Commissioner** **Janice Meridith, Exec. Commission Administrator**
MEDIA PRESENT:	**Taylor Cooper, The Brunswick News**

Chairman Turnipseed called the meeting to order at 8:35 AM.

Chairman Turnipseed provided the invocation.

PUBLIC COMMENT PERIOD
There being no citizens that wished to address the Committee, Commissioner Turnipseed closed the Public Comment Period.

APPROVAL

1. Minutes from Facilities Committee Meeting March 8, 2019

Commissioner Copeland made a motion seconded by Chairman Turnipseed to approve the minutes from the Facilities Committee Meeting held on March 8, 2019. Motion carried 2-0-1. (Commissioner Duncan abstained; he was not present at the March 8, 2019 meeting.)

2. Purchase Meters for Water Flow Testing Sea Palms

There is a proposed project to replace the water lines in Sea Palms East. Due to the aged condition of the pipes and fire flow protection requirements, it is necessary to test the pipes for potential leaks. This will be done by metering the two feed lines into the neighborhood and comparing those reads to the water meter readings for customers in the neighborhood. Mr. Junkin advised that staff has researched this and it is expected that the two meters would cost up to $20,000 at the most to analyze the leakage in the system. Mr. Junkin will provide the actual costs of the two meters at the next Facilities meeting, but will move ahead and start the procurement process.

DISCUSSION

1. Update, Cost Estimate for Magnolia Park Water Line Replacement

Mr. Junkin provided that the engineer for the City's Magnolia Park Water Line Replacement Project design is making the final JWSC and City revisions and has updated the project cost estimate as well. The original budget was $1,150,000. Using the unit prices from the "L" Street Project, the engineer's cost estimate for this project came in much higher than budget on the two proposed alternatives. The full scope alternative, which includes the 12" main up Habersham, was estimated at $2,019,962; and the reduced scope alternative, removing the 12" main up Habersham, was estimated at $1,911,612. The high cost estimates can be attributed to the "L" Street project using larger diameter lines that will be used in the Magnolia Park project along with several other differing details. Final numbers will be obtained when bids are received for the construction.

2. Report Presentation on North Mainland SPLOST Projects

Mr. Junkin reported on the North Mainland SPLOST Project and provided a map as requested with notations on the flows from the three phases of the project. He also reviewed a chart as provided that indicated the Total Gallons/Day Capacities (before and after the corresponding phases) in dry weather and wet weather for each of the lift stations LS4006, LS4028, LS 4048, LS4110, LS4036 and LS4035. Additional details were discussed by the committee.

3. Update on Hydraulic Model of Sea Palms East – ADF, PDF, Fire Flows & ADF

Mr. Junkin reviewed the hydraulic model of the current and projected water and fire flows in the Sea Palm East neighborhood. Three fire hydrants will incur increased pressure with the proposed alternative upgrades to the water mains. The minimum requirement for pressure at hydrants is 20psi, and in their current state, none of the three hydrants are reaching the minimum requirement. After the proposed upsizing to an 8 inch connection from Frederica, as well as a 6 inch upsizing to eliminate a 4 inch section on Palm the pressures at all three hydrants should far exceed the minimum required pressure. The discussion continued to include the smoke testing in the area. For the next Facilities Committee meeting Mr. Junkin will provide information as to if this area is to be included in the smoke testing, as well as confirmation of how many of the water and sewer lines have already been videoed in Sea Palms. He noted that he has maps highlighting the lines identified as being in need of repair as well as pictures from the videos and will also provide those.

4. Map Presentation/Discussion/Photographs of Manholes Scheduled for Rehabilitation and Manholes Rehabilitation

Mr. Junkin provided a map indicating the 116 manholes that have already been rehabilitated as well as the next 63 that are planned for rehabilitation in FY 2018-2019. He included a spreadsheet with notations as to the issues with the remaining manholes planned for rehabilitation in the current fiscal year. It is expected that these 63 should be completed by the end of June 2019. Mr. Junkin will confirm if this portion of manhole rehabilitation is to be put out for bid.

5. Southeast Pipe CCTV Studies, Videos (I&I, Sewer Rehabilitation in Academy Creek Basin)

Mr. Junkin provided a map and pictures of the preliminary CCTV work currently in progress for the 2016 SPLOST North Mainland Phase II and III Project. It has been found that many of the line are in good condition and will not require as much rehabilitation as previously expected. There are manholes requiring rehabilitation in the area. Chairman Turnipseed inquired as to when I&I should be studied on the Mainland for the Academy Creek Basin. Mr. Junkin commented that this is a high priority and staff is hoping to release an RFP sometime in mid-April for the Mainland I&I study. Chairman Turnipseed suggested that if the pump run times were analyzed for those pump stations it could be determined which stations have higher I&I and perhaps use the JWSC camera crew to do the video of those areas. Mr. Junkin will get with Andrew Burroughs to discuss this possibility and make a presentation or recommendation to the Facilities Committee.

6. Update RFP for Providing Service to Unserved Areas

Mr. Junkin noted that this RFP has been released with the responses due next week. He provided a copy of the RFP and also a map of the areas intended to be served. Mr. Junkin also advised that the Arco community has reached out to him for information as to when their neighborhood could receive sewer services. With the RFP responses due on March 27, Chairman Turnipseed asked if the recommendation could be ready for presentation at the next Facilities Committee meeting on April 3.

7. WPCF Plant Flows Report

Mr. Junkin commented that there were no abnormal flows recorded for the past month at the treatment plants. It was a relatively dry month and flows have gone down. Commissioner Elliott questioned why the phosphorous content was so high in the month of February at Academy Creek. Chairman Turnipseed noted it was high in December also, and including the influent. Mr. Junkin will research the cause and report back to the Commissioners via e-mail with that information. Mr. Junkin will discuss any out-of-range flows or issues in more detail with Superintendent Mark Ryals prior to future meetings.

8. Project Report

Mr. Junkin provided and discussed the project report update with the committee. Unsolicited proposal projects were also discussed, and the possibility of including a deadline for project dates. Mr. Junkin will work on this with Todd Kline and come back to the committee with a recommendation.

9. Ridgewood Water Production Facility

Mr. Junkin noted that the plans are complete for this project, and it is a 1,000 gpm Floridian Aquifer well. The proposal is to add a ground storage tank and treatment systems to the existing Ridgewood Well. The Miocene wells currently serving the North Mainland have been pushed and are very limited due to the expansion and growth in the NM area. The project has a budget of $1,000,000. Commissioner Duncan commented that he believes this project should be moved ahead on and brought to the full Commission for approval.

10. Private Asset Policy for Smoke Testing Results

Mr. Junkin provided that this was intended to be more of a protocol that a formal policy. There will be some homes that have defects causing I&I due to their asset condition. The repairs could cost the homeowners up to thousands of dollars, depending on the issues. This protocol will give the homeowners a better understanding of the issues and importance of the repairs. Commissioner Duncan suggested that Mr. Junkin get with the County to discuss code enforcement, especially in the sense that it affects the County also, and they may incur more incoming calls from homeowners. Mr. Junkin will get with Commissioner Neal and Alan Ours, Glynn County Manager to see if there is interest in working together on resources to assist with enforcing repairs on private assets.

There being no further committee business, Chairman Turnipseed adjourned the meeting at 9:52 a.m.

G. Ben Turnipseed, Chairman

Attest:

Janice Meridith,
Executive Commission Administrator

PURCHASE METERS FOR WATER FLOW TESTING SEA PALMS 3-22-19

There is a proposed project to replace the water lines in Sea Palms East. Estimated cost from the Master Plan were approximately $4.5M. JWSC received a model from 4Waters Engineering outlining the proposed changes to meet current Glynn County standards for fire flow protection, which requires hydrants to be on 8" water lines. At the request of the Commission, staff has been looking at alternatives for providing desired fire flows to the area.

Sea Palms has a mixture of transite, PVC, and galvanized lines throughout the neighborhood. These lines are aged and have been conversationally mentioned as needed replacement for condition based need on top of the need for improved fire flow. There are currently two existing feed lines into the neighborhood, both 6". Recently, an 8" crossing was made from the west side of Frederica, but this has not been tied into the system. To test the condition of the pipes for potential leaks, these lines need to be metered and compared to the water meter readings for the customers in the neighborhood. To facilitate this metering, new clamp-on meters will need to be purchased for the task. It is preferable to have a portable clamp-on setup for this work because it enables the JWSC to test other neighborhoods upon conclusion of the Sea Palms testing. Inline metering would be more expensive and have to be done for each neighborhood.

For an ultrasonic, clamp-on meter set up with transit time transducers, the cost ranges from $7,500 to $10,000 per meter depending on the brand. Given the need for two meters, total expenses would be $15,000-$20,000. These meters can be purchased out of the operating budget.

MAGNOLIA PARK WATER LINE DESIGN UPDATE

UPDATE 03.22.19

Magnolia Park:

- Revised plans reviewed with EMC/City on 03.12.19.
- EMC making final JWSC and City revisions.
- Proposed 12" waterline now shown in western R/W of Habersham; to be bid as alternate.
- Interior watermains, now located out of pavement, where possible.
- New hydrants placed to provide min. 500 l.f. spacing; relocation/reuse of existing hydrants where possible.
- Interior mains reduced to 6", except for 8" on Tara Lane; JWSC model shows 1000 gpm available flow.
- JWSC Design cost (EMC Engineering; MOU with City):
    - $138,050.00
    - $5,925.00; additional survey & design for 12" main on Habersham.
- Engineer's (EMC) Opinion of Probable Cost completed and updated utilizing unit costs from L-Street Project bid.

The estimated cost of this project has risen substantially since the original conception budget was estimated. The original budget estimate with contingency built in was under the current capital budget of $1,150,000. This did not include the 12" main down Habersham and does not include meter replacements at every service – only at three.

With the bids received on the L Street Project, unit prices in the Magnolia Park Project estimate were revised to correspond with the pricing received. This results in an all-in estimate of $2,019,962 which includes the 12" main up Habersham, engineering costs and a ten percent contingency. Currently, the design work for this project is 80% complete. Therefore, the estimate is still preliminary.

By removing the 12" main from the project, the estimated all-in cost drops to $1,911,612. This cost differential appears to be associated mostly with the pipe installations. Options to consider may include installing the line in the street. This would eliminate buried utilities in conflict, curbing and concrete replacement, silt fence and landscape repairs from the project. This also assumes the City is not looking to JWSC for roadway replacement based on early conversations with the City. This was a consideration early on when the design was to install water lines in the roadways. Further analysis can be done with feedback from contractors and the design engineer. EMC Is running a separate estimate to determine what placing the line in the street would cost. No changes to the budget are recommended at this time. Final numbers will be obtained when bids are received for the construction.

Item No.	Item Description	Est. Qty.	Unit	Unit Price	Total Price
Miscellaneous					
1	Mobilization	JOB	LS		$ 50,000
2	Clearing	JOB	LS		$ 15,000
3	Traffic Control	JOB	LS		$ 10,000
4	Landscaping	JOB	LS		$ 36,400
	Subtotal				**$111,400**
Erosion and Sedimentation Control					
1	Temporary Construction Exit	4	EA	$2,200	$8,800
2	Construct and Remove Inlet Sediment Trap	14	EA	$200	$2,800
3	Maintenance of Inlet Sediment Trap	14	EA	$100	$1,400
4	Temporary Silt Fence - NS	10045	LF	$3	$30,134
5	Maintenance of Temp Silt Fence - NS	10045	LF	$2	$15,067
6	Temporary Grassing	22322	SY	$0.30	$6,697
7	Permanent Grassing	22322	SY	$1	$11,161
	Subtotal				**$76,059**
Water System					
1	2" PVC Watermain	828	LF	$40	$33,120
2	4" PVC Watermain	0	LF	$42	$0
3	6" PVC Watermain	9,493	LF	$45	$427,185
4	8" PVC Watermain	2,000	LF	$50	$100,000
5	10" PVC Watermain	0	LF	$50	$0
6	12" PVC Watermain	1,900	LF	$50	$95,000
7	2" Valve in Box	1	EA	$2,500	$2,500
8	4" Valve in Box	0	EA	$4,350	$0
9	6" Valve in Box	18	EA	$4,500	$81,000
10	8" Valve in Box	3	EA	$5,000	$15,000
11	10" Valve in Box	0	EA	$5,800	$0
12	12" Valve in Box	1	EA	$3,500	$3,500
13	6" Fire Hydrant Assembly	14	EA	$5,500	$77,000
14	6" Fire Hydrant Assembly (RELOCATE EXISTING)	6	EA	$3,000	$18,000
15	1 1/2" Service Lateral - Long side	135	EA	$1,250	$168,750
16	1 1/2" Service Lateral - short side	135	EA	$750	$101,250
17	1" Meter Assembly	0	EA	$1,800	$0
18	Flowable Fill for Watermains	800	LF	$12	$9,600
	Subtotal				**$1,131,905**
Roadway					
1	Graded Aggr Base Crs, 8 Inch	178	SY	$18	$3,271
2	Asphalt Conc 19 MM Superpave (3 Inch)	178	SY	$16	$2,844
3	Asphalt Conc 9.5 MM Superpave (1 1/2 Inch)	178	SY	$8	$1,422
4	Bituminous Tack Coat	18	GAL	$3	$53
5	24" Curb and Gutter	13,393	LF	$12	$160,716
6	24" C &G base material 8" GAB	2,946	SY	$18	$53,036
7	Concrete Pavement, 8 Inch	0	SY	$72	$0
8	Concrete Driveways and Sidewalks (6")	3,048	SY	$54	$164,592
9	Concrete Sidewalk (4")	4	SY	$36	$144
		19,943			$386,079
	Subtotal				**$1,705,443**

THIS COST ESTIMATE IS PRELIMINARY AND BASED ON 80% COMPLETION OF CONSTRUCTION PLANS AND IS INTENDED TO BE USED FOR BUDGETING PURPOSES ONLY. THE JWSC WILL REPLACE METERS WITH OPERATIONAL FUNDS IF REPLACEMENTS ARE REQUIRED

Item No.	Item Description	Est. Qty.	Unit	Unit Price	Total Price
Miscellaneous					
1	Mobilization	JOB	LS		$ 50,000
2	Clearing	JOB	LS		$ 15,000
3	Traffic Control	JOB	LS		$ 10,000
4	Landscaping	JOB	LS		$ 36,400
	Subtotal				**$111,400**
Erosion and Sedimentation Control					
1	Temporary Construction Exit	4	EA	$2,200	$8,800
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5	10" PVC Watermain	0	LF	$50	$0
6	12" PVC Watermain	0	LF	$50	$0
7	2" Valve in Box	1	EA	$2,500	$2,500
8	4" Valve in Box	0	EA	$4,350	$0
9	6" Valve in Box	18	EA	$4,500	$81,000
10	8" Valve in Box	3	EA	$5,000	$15,000
11	10" Valve in Box	0	EA	$5,800	$0
12	12" Valve in Box	0	EA	$3,500	$0
13	6" Fire Hydrant Assembly	14	EA	$5,500	$77,000
14	6" Fire Hydrant Assembly (RELOCATE EXISTING)	6	EA	$3,000	$18,000
15	1 1/2" Service Lateral - Long side	135	EA	$1,250	$168,750
16	1 1/2" Service Lateral - short side	135	EA	$750	$101,250
17	1" Meter Assembly	0	EA	$1,800	$0
18	Flowable Fill for Watermains	800	LF	$12	$9,600
	Subtotal				**$1,033,405**
Roadway					
1	Graded Aggr Base Crs, 8 Inch	178	SY	$18	$3,271
2	Asphalt Conc 19 MM Superpave (3 Inch)	178	SY	$16	$2,844
3	Asphalt Conc 9.5 MM Superpave (1 1/2 Inch)	178	SY	$8	$1,422
4	Bituminous Tack Coat	18	GAL	$3	$53
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6	24" C &G base material 8" GAB	2,946	SY	$18	$53,036
7	Concrete Pavement, 8 Inch	0	SY	$72	$0
8	Concrete Driveways and Sidewalks (6")	3,048	SY	$54	$164,592
9	Concrete Sidewalk (4")	4	SY	$36	$144
		19,943			$386,079
	Subtotal				**$1,606,943**

THIS COST ESTIMATE IS PRELIMINARY AND BASED ON 80% COMPLETION OF CONSTRUCTION PLANS AND IS INTENDED TO BE USED FOR BUDGETING PURPOSES ONLY. THE 12" ITEMS WILL BE BID AS ADDITIVE ALTERNATES. THE JWSC WILL PAY HALF MOB COSTS. THE JWSC WILL REPLACE METERS WITH OPERATIONAL FUNDS IF REPLACEMENTS ARE REQUIRED

Original Budget	$1,150,000
Engineering	$138,050
Estimated Water System work	$794,475
Total	$932,525

Curent budget needs with 12" Main on Habersham

Engineering	$143,975
Estimated Water System work	$1,875,987
Total	$2,019,962

Updated Budget w/o 12" main

Engineering	$143,975
Estimated Water System work	$1,767,637
Total	$1,911,612

Brunswick-Glynn County Joint Water & Sewer Commission

Magnolia Park Water Improvements

Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the user's own risk. Created by D. Read 21 MAR 19

Report on North Mainland District SPLOST Projects

The North Mainland District (NMD) Sewer Improvement Project Phase 1 was completed and added various levels of added capacity to the sewer pump stations serving the NMD and the downstream basins. The uppermost pump station is LS4110. For LS4110, Phase I added approximately 190,000 gallons per day during dry weather and over 600,000 gallons per day for wet weather or peaking. See the table below.

Pump stations LS4048, LS4028, LS4006 also benefited significantly and these improvements will provide capacity for the areas up Highway 17 in need of sewer service from the JWSC. The upstream flows from LS4048 which had been flowing through LS4005 were rerouted to LS4028 and then directly to Academy Creek WPCP. This eliminated certain significant rehabilitation requirements targeted for LS4005 as well as a new LS 4005 force main to facilitate continued work at LS4005 under the loadings experienced prior to Phase 1 work. The larger pumps in LS4005 were moved to LS 4006. The original pumps at LS4006 were moved to LS4005 to provide capacity for the direct gravity customers served in the immediate LS4005 basin.

Under NMD Phase 2/3, LS4110 is to improve dry weather capacity by another 460,000 gallons per day to a total of approximately 892,000 gallons per day and wet weather capacity by another 1,480,000 to a total of approximately 2,880,000 gallons per day.

Also under NMD Phase 2/3, LS4035 and LS4036 will see increases in capacity. LS4035 and LS4036 will undergo rehab and upgrades to handle the upstream flows being introduced from LS 4110. The gravity trunk lines downstream of LS4035 are being inspected with CCTV by Southeast Pipe. The results from the Southeast Pipe video has been received while additional manhole pictures are forthcoming.

Phase 1 total costs not including avoided costs relating to LS4005 was approximately $3,560,000. Phase 2/3 costs are estimated to be $11,100,000 with $7,900,000 coming from SPLOST funding and the balance coming from the Capital Improvements Fee Reserve. Phase 2/3 costs may vary depending on line rehab needs for the gravity trunk lines downstream of LS 4035 and on construction bid cost considerations for LS4110 force main reroute.

An engineering RFP recently went out and staff selected Thomas & Hutton to be recommended to the JWSC commission pending Commission vote. They will manage the design and construction inspection of Phases 2/3. Exact phasing of the project will require completion of whatever rehab indicated as needed by the assessment work done on the LS4035 downstream gravity lines. This can go simultaneously with the LS4110 force main reroute and the rehab of LS4035 and LS4036. Currently, the portion of the force main where it crosses the Canal Road – Glynnco Parkway intersection is on hold until the County can obtain easements to finalize the traffic circle planned for this intersection.

Total Gallons/Day Capacities						
Station	Dry Weather			Wet Weather		
	Pre	Ph 1	Ph 2/3	Pre	Ph 1	Ph 2/3
LS4006	2,061,697	2,356,073	2,356,073	5,587,200	6,384,960	6,384,960
LS4028	774,585	2,083,581	2,083,581	2,145,600	5,771,520	5,771,520
LS4048	1,008,502	1,420,934	1,420,934	2,894,400	4,078,080	4,078,080
LS4110	242,972	431,554	891,641	784,800	1,393,920	2,880,000
LS4036	1,111,341	1,111,341	2,145,695	3,778,560	3,778,560	6,480,000
LS4035	1,184,096	1,184,096	2,408,026	3,931,200	3,931,200	7,200,000

Brunswick-Glynn County
Joint Water and Sewer Commission

Request For Proposals

Engineering Design
2016 SPLOST North Mainland Phase II and III
for the
Brunswick-Glynn County Joint Water and Sewer Commission

Friday, January 4, 2019

MANDATORY Pre-Proposal meeting will be held on Tuesday, January 29, 2019, at 11:00 a.m.
JWSC Commission Chambers – 1703 Gloucester St, Brunswick, GA 31520

Deadline for questions is Friday, February 1, 2019, no later than 5:00 p.m. EST.
Questions must be directed in writing (via e-mail) to the
Purchasing Director, Pamela Drury-Crosby, email- pcrosby@bgjwsc.org

Responses Due by:

12:00 NOON, EST Wednesday, February 13, 2019 to:

Purchasing Division
Joint Water and Sewer Commission
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7127

Submit responses in hard copy only; electronic or fax responses will not be accepted.
Responses received after the deadline or at any other locations will not be accepted.

FOR COMPLETE DETAILS OF THIS SOLICITATION, please visit the BGJWSC website, utilizing the following link:

http://www.bgjwsc.org/departments/procurement/

BRUNSWICK-GLYNN COUNTY
JOINT WATER AND SEWER COMMISSION

REQUEST FOR PROPOSAL

ENGINEERING AND DESIGN PROPSALS FOR
2016 SPLOST N Mainland Phase II and III

1.0 INTRODUCTION

The Brunswick-Glynn Joint Water & Sewer Commission (JWSC) wishes to receive Requests for Proposals ("RFP") for engineering design, permitting and construction management services proposals from qualified engineering firms for system improvements related to 2016 SPLOST North Mainland Phase II and III to include force main and pump station improvements. This will include the following:

- Development of bidding documents for CIPP lining of existing force main section to be determined by CCTV inspection to include the following considerations:
  - structural condition suitable for CIPP lining vs. full replacement
  - I/I reduction
  - sealing of any lateral penetrations (top hat/grout)

- The installation of approximately 18,000 linear feet of 18" wastewater force main from PS4110 Harry Driggers to Old Jesup/Canal Road to 20" Ogden to PS4036 (terminated to manhole #SSMH 40360010) See Exhibit A for details on routing.
  - Facilitate connection to the pump stations along the route.
  - All piping, fittings, casing, appurtenances and other materials as required.
  - All road paving/replacement as required.
- Pump station upgrades to the following stations with the following requirements
  - PS4035 – 5,000 gpm, 6 of starts per hour.
  - PS4036 – 4,500 gpm, 6 of starts per hour.
  - Bypass pumping plan for each station as needed to ensure full operation of stations throughout the construction process.
  - Evaluation and recommendations that address and improve odor control.
  - Evaluation and determination of operating cost impacts associated with the proposed modifications.
  - Evaluation of wet wells
  - Inclusion of SCADA
  - Concrete pad and piping for future staging of a bypass pump

The firms must comply with all applicable state, local and federal regulations related to the services provided to the BGJWSC. The BGJWSC reserves the right, subject to negotiation and agreement, in writing, with the selected firm, to either expand or limit the scope of services as needed. The selected firm will be required to have sufficient personnel to complete the tasks required by this scope of services. The selected firm will complete the required tasks in a timely and efficient manner. The selected firm would be expected to enter into a contract for services based upon the firm's hourly rates and an agreed-upon not to exceed amount.

A site location map (Exhibit A) is attached for reference. Any information shown is for reference use only, final design is to be determined by the Engineer. All design shall be in accordance with applicable BGJWSC Standards and State EPD regulations. Firms expressing interest should be fully capable of providing the end results requested.

2.0 SPECIAL CONDITIONS

The JWSC has a CCTV project underway for inspection of sewer pipeline and manholes in the North Mainland basin. The purpose is to gain information for the first design deliverable of this project. CCTV footage of the subject area should be completed by March 1, 2019 and will be available to selected engineer at that time. The findings of this report will be critical to the JWSC and the selected engineer for the determination of what options are available for pipe repair via CIPP (Cured-In-Place-Piping) rehabilitation versus full replacement. Pending finalization of the amount of linear feet of that will viable versus for lining rehabilitation is the first priority of the design work.

Design and construction of the wastewater force main and pump station rehabilitation at pump stations 4035 and 4036 is the final priority. All design and construction activities shall facilitate this priority. The Engineering Consultant shall not depend solely on the survey provided, shall establish a comprehensive knowledge of existing route conditions (trees, sidewalks, utilities, driveways, etc.) and design accordingly to facilitate construction. The design shall incorporate the most cost effective, expeditious and least intrusive construction methods where appropriate. Priority shall be placed on minimizing impacts to traffic and maintaining access for the public. Existing pump stations shall remain in full operation throughout construction with minimal interruptions to allow connection to the new force main. Wastewater bypassing plans, if applicable, are to be provided by the Engineering Consultant.

A variable that exists in the final force main design in the potential road widening project by Glynn County for portions of Harry Driggers Road. For our JWSC project, a preliminary route survey has been completed (Exhibit B). Relevant information as to the proposed route and any changes should be taken into consideration as these plans by Glynn County are not finalized. Based on information available at this time, there may be a portion of the project that a final decision will not be available prior to final design deadline. For this, the plan would be to install all force main possible for the "known" route sections and provide stub out for future connection once a final route and decision on the widening project has been determined by Glynn County for the Harry Driggers Road section. Please refer to the Exhibit for the undetermined route section of the project.

Consultant shall be responsible for obtaining any additional information needed for their evaluation and design. The Engineering Consultant will be provided access to any pertinent system information in the possession of the JWSC, if available (drawdown/flow meter data, Master Plan, GIS mapping, etc.). Additional spot surveying that may be required (ex. wetland flagging) will be the responsibility of the design firm. Any costs involved with additional information are the responsibility of the Engineering Consultant.

The Consultant is to complete all design and permitting within ***180 days*** of receiving a signed notice to proceed. The JWSC requires that deliverables in two installments: (1) the first deliverable of CIPP Repair Specifications and Bid package shall be completed at the **60 day** mark with the (2) full design of both the pump station rehab and force main by the end of the **180 day** period. Each firm's experience and qualifications will be evaluated primarily as they relate to the firm's ability to provide **Engineering and Design Services for 2016 SPLOST North Mainland Phase II and III Improvements**.

The BGJWSC will make an award only to a responsible firm possessing the ability to perform successfully under the terms and conditions of the procurement. Consideration will be given to such matters as firm integrity, compliance with public policy, record of past performance, and financial and technical resources. This is a qualifications-based procurement of professional engineering services whereby competitors' qualifications will be evaluated and the most qualified firm will be selected, subject to negotiation of fair and reasonable compensation.

Written proposals will be reviewed and rated by a panel of qualified BGJWSC staff members. The rating system will consist of a numerical grading system, as set forth in Section 6. The BGJWSC may or may not elect to interview any of the responding firms.

The BGJWSC has exclusive and sole discretion to determine the firm whose services will be most advantageous to the BGJWSC, and reserves the right to reject all firms. The purpose of this inquiry is to determine the interest or non-interest and the qualifications of firms in providing the professional services required. A number of firms may be asked to express their interest in regard to these services in the form of a Proposal. Following the receipt of Proposals, a certain firm or firms may be selected for further consideration.

This project is funded through 2016 SPLOST proceeds. BGJWSC desires to complete this project in a timely and cost effective manner and communicate those results to the general public accordingly. The overall project milestone target schedule is listed below:

Project Milestone	**Date**
MANDATORY Pre-proposal Meeting	**Tuesday, 1/29/2019**
Deadline for Questions	**Friday, 2/1/2019**
Engineering Proposals Due Date	**Wednesday, 2/13/2019**
Evaluation and Award of Engineering Services	February - March 2019
Engineering Contract Execution	March 2019
Deliverable #1 – CIPP Bid Spec & Package Due	May 2019
Construction Bids Received – CIPP Work Only	June 2019
Award of Construction Services – CIPP Work Only	June 2019
Pre-Con / Notice To Proceed – CIPP Work Only	June - July 2019
Construction Begins – CIPP Work Only	July - August 2019
Deliverable #2 – Pumps Station Rehab Design – Bid Package Due	September 2019
Construction Bids Received – Pump Station Rehab Work	October 2019
Award of Construction Services – Pump Station Rehab Work	October - November 2019
Pre-Con / Notice To Proceed – Pump Station Rehab Work	October - November 2019
Construction Begins – Pump Station Rehab Work	November - December 2019
Deliverable #3 – Force Main Design – Bid Package Due	September 2019
Construction Bids Received – Force Main Installation (for route portion not affected by Glynn Co Harry Driggers road widening project)	October – November 2019
Pre-Con / Notice To Proceed – Force Main Installation (for route portion not affected by Glynn Co Road Harry Driggers road widening project)	October – November 2019
Construction Begins – Force Main Installation	November – December 2019
Construction Begins Route Portion affected by Glynn Co Harry Driggers road widening project	TBD

3.0 INFORMATION REQUESTS AND INSTRUCTIONS FOR PROPOSAL SUBMITTAL

Additional information and clarifications desired by a Proposer shall be requested from the BGJWSC in writing and if explanations are necessary, a reply shall be made in the form of an Addendum, a copy of which will be forwarded to each Proposer. Every request for such clarification shall be in writing (email) addressed to Pamela Crosby at pcrosby@bgjwsc.org. Any verbal statements regarding same by any person prior to the award shall be considered not authoritative and not binding.

Addenda issued to Proposers prior to the date of receipt of Proposals shall become a part of the RFP and Proposals shall include the work described in the Addenda. No inquiry received within five days of the date fixed for the submission of Proposals will be given consideration. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda, which, if issued, shall be emailed to all prospective Proposers, not later than five days prior to the date fixed for the submission of Proposals **(no later than 12:00 noon EST on Tuesday, February 5, 2019)**.

Proposals are to be submitted with:

- A detailed description of the services provided for each phase of engineering & design
- A not-to-exceed budget for each phase of engineering & design
- Proposal total
- Time period for each phase of engineering
- A detailed list and fee schedule for work not included in the proposal
- Three (3) similar project references

All proposals shall include a completed 5.0 Proposal Summary Sheet (see attached). Please submit an original plus (4) copies and (1) electronic version of the proposal. Each proposal should be prepared simply and economically, providing straightforward, concise delineation of the firm's capabilities to satisfy the requirements of this RFP. Fancy binding and color displays other than those necessary are highly discouraged.

Proposals are due by 12:00 noon (EST) on Wednesday, February 13, 2019. Mandatory label required on outside of envelope: "Request for Proposals for Engineering and Design Services for 2016 SPLOST North Mainland Phase II and III Improvements." Proposals are due by the time and on the date listed above. **ALL LATE PROPOSALS FOR WHATEVER REASON WILL BE RETURNED UNOPENED.**

4.0 SCOPE OF SERVICES

This project consists of the surveying, gravity main design, permitting and construction services required for the completion of the infrastructure improvements described in section 1.0.

A. DESIGN PHASE

1. CIPP (Cured-In-Place-Pipe) lining specifications for section of existing gravity main that requires rehabilitation.
    - Review CCTV footage - project due to be completed no later than March 1, 2019
    - Develop bid specs for advertisement no later than June 1, 2019

2. Pump Station Rehab Design
    - Survey and elevation analysis.
    - Preparation of drawings necessary for construction to include a plan and profile that indicates pipe route, size, and valve & appurtenance locations in relation to adjacent existing property lines, right-of-ways, structures and utilities in compliance with all applicable state, local and JWSC Standards.
    - Details of any road/wetland/stream crossings.

- Details of any conflicts with other utilities.
- Details of any system connections.
- Construction details.
- Erosion Control plans & specifications required for construction.
- Quantity takeoff and Opinion of Probable Cost
- Technical Specifications
- Design calculations as necessary to verify pipe and pump sizing, elevations, electrical upgrades, wet well requirements & specifications.
- Thorough wet well condition assessment.
- Evaluation and recommendation regarding measures to improve odor control.
- Secure and coordinate with Geotechnical

3. Force Main Design
    - Preparation of drawings necessary for construction to include a plan and profile that indicates pipe route, size, and valve & appurtenance locations in relation to adjacent existing property lines, right-of-ways, structures and utilities in compliance with all applicable state, local and JWSC Standards.
    - Verify that supplied survey data is sufficient with regard to route, existing features or relevance, sufficient location of existing utilities prior to design; coordinated additional with surveyor as needed/approved.
    - Design for necessary air/vacuum release provisions.
    - Details of any road/wetland/stream crossings.
    - Details of any conflicts with other utilities.
    - Details of any system connections.
    - Construction details
    - Erosion Control plans & specifications required for construction.
    - Quantity takeoff and Opinion of Probable Cost
    - Technical Specifications
    - Design calculations as necessary to verify pipe sizing & specifications.
    - Secure and coordinate with Geotechnical Consultant if necessary.
    - Design for reconnection of existing customers and show provisions to connect new customers, if applicable.

4. Erosion Sedimentation & Pollution Control
    - Preparation of drawings and specifications required for construction.

5. Project Meetings and Communications
    - Attendance at key project milestone meetings will be required. 30/60/90 day design meeting reviews.
    - Engineer to coordinate and conduct public awareness and information meetings as required, ensuring all Glynn County requirements for public notification are met.

B. PERMIT PHASE

1. Design Permits
    - The Consultant shall prepare and submit all permitting packages as required for approval of the project design for construction (EPD Wastewater System Extension, Land Disturbance, wetland, etc.)
    - All application fees will be paid by the JWSC at the time of submittal.
    - The Consultant shall submit final plans and specifications for construction to all applicable federal, state and local authorities for review and approval.
    - Review agencies may include but are not limited to:

- Brunswick-Glynn Joint Water & Sewer Commission
- Glynn County Board of Commissioners
- GA Environmental Protection Division
- US Army Corp of Engineers
- GA DOT
- US Soil and Water Conservation Service
- Norfolk Southern Railroad
- CSX Railroad
- Georgia DNR

- The Consultant shall obtain necessary permits during the construction phase of the project.
- Plan and specification revisions necessary to obtain permit approval are the responsibility of the Consultant.
- The Consultant may be required to attend meetings with regulatory agencies.
- Work with contractor to ensure traffic control plan and coordination is sufficient and meets all Glynn County needs/requirements.

2. Erosion Sedimentation & Pollution Control Permits
   - The Consultant shall assist the Owner in meeting the requirements of the permit to Discharge Storm Water Associated with a Construction Activity.
   - Submission of a Notice of Intent (NOI) to the State on behalf of the JWSC (Primary Permittee).
   - Preparation of the Erosion Sedimentation & Pollution Control Plan in accordance with the General Permit.
   - Amending the ES&PC Plan as necessary to maintain the design intent.
   - Development of a Comprehensive Monitoring Plan (CMP) with monitoring locations as required.
   - Provide an initial observation of the measures installed under the ES&PC plan within one week of the commencement of construction activities, with additional observations as warranted.
   - Notice Of Termination at project completion.
3. Communications
   - Coordinate/facilitate public notifications to affected residents prior to construction per JWSC needs.
   - Participate as needed in any public meetings to JWSC commission, other agencies and general public.

C. CONSTRUCTION PHASE

1. Bid Process
   - The Consultant shall provide assistance to the JWSC during the bidding process.
   - This project will include multiple construction elements with separate contractors and bid specifications required for the CIPP work and Force Main and Pump Station improvement
   - Development of pre-qualification standards for construction of each project.
   - Preparation of Contract Documents per JWSC Standards Format.
   - Bid package assembly.
   - Pre-bid meeting attendance.
   - Provide responses to plan holder questions.

2. Construction Services
   - The Consultant shall review materials submittals and shop drawings.

- Construction schedule review.
- Provide construction observations on behalf of the JWSC sufficient to ensure substantial conformance of the work to the contract documents and design intent. Fulltime observation is desired for CIPP rehabilitation oversight, major pump station rehab milestones and all force main installations.
- Perform final field inspections to ensure Project completion.
- Review as-built drawings and notes as provided by the Contractor.
- Review/recommend action on change order requests.
- Review/recommend action on pay requests.
- Obtain Project acceptance from applicable agencies.

3. Communications
    - Coordinate and conduct public awareness and information meetings as required preconstruction, ensuring all Glynn County requirements for public notification are met, including traffic control plans in conjunction with contractor.
    - Conduct bi-weekly project update meetings with written agenda during construction.

4. Record Drawings
    - The Consultant shall prepare water and wastewater record drawings of the completed project for submittal to the JWSC (paper and digital copies).
    - Record drawings will be based on survey provided by the Contractor, but are to be verified by the Consultant
    - Record Drawings shall meet the requirements of the JWSC record drawing specifications.
    - Features to be included but not limited to:
        - All pipe locations in relation to adjacent R/W, property lines, roads, etc.
        - Sewer inverts and frame elevations.
        - Relevant bench marks and points of elevation.

5.0 PROPOSAL SUMMARY SHEET

ENGINEERING & DESIGN PHASE	DAYS FOR COMPLETION	BUDGET
Design Phase		
Engineering Evaluation	_____	_____
Force Main	_____	_____
ES&PC	_____	_____
Road Replacement/Paving	_____	_____
Permitting Phase		
Design Permits	_____	_____
ES&PC	_____	_____
Construction Phase		
Bid Process	_____	_____
Construction Services (provide timeline and estimated days for each phase of construction on separate sheet)	_____	_____
Record Drawings	_____	_____
TOTALS	_____	_____

Prepared by _____

Company _____

Date _____

6.0 EVALUATION CRITERIA

The selected firm or firms must be experienced and qualified to provide the required scope of services. The firm or firms selected must have expertise related to the general Scope of Services set forth in Section 4. The following information must be submitted with the proposal on the date indicated above and in the order indicated below:

a. **Recently Completed Projects.** Evidence of satisfactory performance of no less than three (3) and no more than five (5) recently completed projects of the type and nature indicated above. The projects should be within the past five (5) years and include email and phone contacts. Include email and phone contacts **(25 points possible)**

b. **Experience and Qualifications**. A statement of the firm's qualifications to perform the work and years in business. Please include a very specific statement as to the firm's experience with design of lift station repairs and gravity system upgrades to include the following:

   1. The general experience of the firm. **(10 points possible)**
   2. The specific experience of the proposed personnel in the fields that the proposed services are requested, their qualifications, years of experience, professional certifications and availability to perform the work and services to be provided. This should also include a list of qualified persons required for the proposed services, including subcontractors, and coincide with the recently completed project references provided under Section 4. **(30 points possible)**

c. **Project Approach and Timeline.** Discuss the proposed approach to completing the needed services in the required timeline. Please detail how your firm will coordinate the project, the production of contract documents, and construction administration to include coordination of and final delivery of as-built drawings and contractor warranties. **(35 points possible)**

d. Pricing. Fees required for all design, permitting, easement procurement support (if any), and services during construction will be considered. **(20 points possible)**

e. **Local Preference.** Engineering firms with qualified staff in a local office will be given an additional The definition of "Local Office/Business" is one that can certify it has an office within 60 miles from the BGJWSC offices at 1703 Gloucester Street, Brunswick, GA. The firm shall possess a current local Glynn County business license and commercial certificate of occupancy for the local office. This office location must be certified by the Georgia Secretary of State as a location for the said engineering firm's business. In summary, this would be a firm with a "storefront" with greater than one staff person that works from the location; ideally the representative that would provide construction oversight services. **(5 points possible**)

f. **Required Licensure**. Firm must be licensed and approved for work in the State of Georgia; please include a copy of engineering license. **(Pass/Fail)**

   Professional standing. A statement as to professional standing including any pending controversies outstanding. If none exists, such a statement should be made. (Pass/Fail)

7.0 RESERVED RIGHTS

The BGJWSC reserves the right to accept or reject any and/or all proposals, to waive irregularities, technicalities or informalities in any proposal or in the proposal procedures, and to accept or reject any item or combination of items, and to re-advertise for submissions. There is no obligation on the part of the JWSC to award the contract to the lowest proposer.

The BGJWSC reserves the right to award the contract to the responsible proposers submitting responsive proposals with resulting contracts most advantageous and in the best interests of the BGJWSC. The BGJWSC shall be the sole judge of the proposals and the resulting contract and its decision shall be final.

8.0 INDEMNIFICATION

The successful proposer agrees to indemnify and hold harmless the BGJWSC, its employees, officers, and agents for any claim or liability arising under a contract with the BGJWSC due to any act or omission of the said proposer.

9.0 GOVERNING LAW

The contract shall be construed and governed in accordance with the laws of the State of Georgia. Any controversy or claim arising out of or in relation to this contract, or the breach thereof, shall be settled by binding arbitration in accordance with the rules of the American Arbitration Association at a hearing in Glynn County, Georgia.

10.0 ADDITIONAL FORMS FOR SUBMISSION

In addition to the submission requirements from Section 5.0 and 6.0, the following mandatory forms must be provided as a part of the bid package submission:

- Affidavit
- Oath
- Representation of EEO Practice
- Certificate of Insurance
- Certificate of Drug Free Workplace
- E-Verify Contractor Affidavit and Agreement

AFFIDAVIT

This Bid is submitted to Brunswick-Glynn County Joint Water and Sewer Commission (JWSC) by the undersigned who is an authorized officer of the company and said company is licensed to do business in Georgia. Further, the undersigned is authorized to make these representations and certifies these representations are valid. The Bidder recognizes that all representations herein are binding on the Company and failure to adhere to any of these commitments, at the JWSC's option, may result in a revocation of the granted contract.

Consent is hereby given to the JWSC to contact any person or organization in order to make inquiries into legal, character, technical, financial, and other qualifications of the Bidder.

The Bidder understands that, at such time as the JWSC decides to review this Bid, additional information may be requested. Failure to supply any requested information within a reasonable time may result in the rejection of the Bid with no re-submittal rights.

The successful Bidder understands that the JWSC, after considering the legal, financial, technical, and character qualifications of the Bidder, as well as what in the JWSC's judgment may best serve the interest of its rate payers and employees, may grant a contract.

The successful Bidder understands that this bid is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a bid for the same, and is in all respects fair and without collusion or fraud. I understand that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.

Any contract issued will be on the basis of the Bidder's service, financial plans and arrangements being feasible and adequate to fulfill the conditions set forth in this project and the successful Bidder's response.

Company Name: _____

Authorized Person: _____ Signature: _____
(Print/Type)

Title: _____ Date: _____

Address: _____

_____

Telephone: _____ Fax: _____ Email: _____

OATH

State of Georgia
City of Brunswick
County of Glynn

I, _____ (name of individual), solemnly swear that in the procurement of the contract for

ENGINEERING AND DESIGN PROPOSALS FOR
2016 SPLOST NORTH MAINLAND PHASE II AND III MPROVEMENTS

that I, nor any other person associated with me or my business, corporation or partnership, has prevented or attempted to prevent competition in the bidding or Bids of said project or from submitting a bid for this project by any means whatever.

Lastly, I swear that neither I, nor any other person associated with me or my business, Corporation or partnership has caused or induced any other bidder to withdraw his/her bid from consideration for this project. Said oath is filed in accordance with the requirements set forth in O.C.G.A. § 36-91-21 (e).

This the_____day of_____2019.

Name of Party: _____

Corporate or Partnership Name: _____

Sworn to and subscribed before me this the_____day of_____2019.

NOTARY PUBLIC:

Name: _____

My Commission Expires: _____

(SEAL)

REPRESENTATION

EQUAL EMPLOYMENT OPPORTUNITY (EEO) PRACTICE:

EEO Plan: The successful Bidder will develop and implement an EEO policy that, as a minimum, will recruit, hire, train, and promote, at all levels, without regard to race, color, religion, national origin, sex, or age, except where sex or age is a bona fide occupational qualification.

EEO For Veterans/Handicapped: The successful Bidder will also provide equal employment opportunities for qualified disabled veterans, handicapped persons and veterans of the Vietnam Era.

EEO For Successful Bidder Programs: The successful Bidder, will ensure equal employment opportunity applies to all terms and conditions of employment, personnel actions, and successful Bidder-sponsored programs. Every effort shall be made to ensure that employment decisions, programs and personnel actions are non-discriminatory. That these decisions are administered on the basis of an evaluation of an employee's eligibility, performance, ability, skill and experience.

EEO Acquisitions: The successful Bidder will develop and implement a policy that will give equal opportunity to the purchase of various goods and services from small businesses and minority-owned businesses.

a. Does the Bidder have the above EEO policy in place?

[ ] Yes [ ] No

b. If the answer to a. above is no, will the Bidder have such a policy in place for the project?

[ ] Yes [ ] No

Statement of Assurance: The Bidder herein assures the JWSC that it is in compliance with Title VI & VII of the 1964 Civil Rights Act, as amended, in that it does not on the grounds of race, color, national origin, sex, age, disability, or veteran status, discriminate in any form or manner against employees or employers or applicants for employment and is in full compliance with A.D.A.

_____
(*Firm's Name*)

_____
(*Authorized Signature*)

_____/_____
(*Title*) (*Date*)

Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street

Brunswick, Georgia 31520
(912) 261-7100

INSURANCE REQUIREMENTS

The description section of your insurance certificate must read:

BGJWSC is named as an additional insured on all coverage except Workers' Compensation as per written contract. A wavier of Subrogation applies to all policies shown above as per written contract.

Insurance Requirements

Before starting and until acceptance of the Work by BGJWSC, and without further limiting its liability under the Contract, Company shall procure and maintain at its sole expense, insurance of the types and in the minimum amounts stated below:

SCHEDULE	AMOUNT
Workers' **Compensation**	
Georgia Statutory coverage and Employer's Liability (including appropriate Federal Acts)	Statutory Limits (Workers' Compensation) $500,000 Bodily Injury each accident $500,000 Bodily Injury by Disease each Employee $1,000,000 Bodily Injury policy limit
Commercial General Liability	
Premises-Operations Products-Completed Operations Contractual Liability Independent Contractors Broad Form Property Damage Explosion, Collapse and Underground Hazards (XCU Coverage) as appropriate Primary and Non Contributory	$1,000,000 each occurrence $2,000,000 annual aggregate for bodily injury and property damage, combined single limit
Automobile Liability	
All autos-owned, hired, or non-owned	$1,000,000 each occurrence, combined single limit
Excess or Umbrella Liability **(This is additional coverage and limits above the following primary insurance: Employer's Liability, Commercial General Liability and Automobile Liability)**	$2,000,000 each occurrence and annual aggregate

Company's Commercial General Liability and Excess or Umbrella Liability policies shall be effective for two years after Work is complete. The above Indemnification provision is separate and is not limited by the type of insurance or insurance amounts stated above. The General liability shall contain a "Per Project Aggregate".

Company shall specify BGJWSC as an additional insured for all coverage except Workers' Compensation and Employer's Liability. Such insurance shall be primary and non-contributory as to any and all other insurance or self-insurance maintained by BGJWSC. Company shall include a Waiver of Subrogation on all required insurance in favor of BGJWSC, its commission members, employees, agents, successors and assigns.

Such insurance shall be written by a company or companies authorized to do business in the State of Georgia, rated at least A- VII by A M Best and satisfactory to BGJWSC. Prior to commencing any Work under this Contract, certificates evidencing the maintenance of the insurance shall be furnished to BGJWSC for approval.

CERTIFICATE OF INSURANCE

This is to certify that _____
(Insurance Company)

of _____
(Insurance Company Address)

has issued policies of insurance, as identified by a policy number to the insured name below, and that such policies are in full force and effect at this time. Furthermore, this is to certify that these policies meet the requirements described in the General Conditions of this project; and it's agreed that none of these policies will be canceled or changed so as to affect this Certificate until thirty (30) days after written notice of such cancellation or change has been delivered to:

BRUNSWICK-GLYNN COUNTY JOINT WATER AND SEWER COMMISSION
1703 GLOUCESTER STREET, BRUNSWICK, GEORGIA 31520

It is further agreed that Brunswick-Glynn County Joint Water and Sewer Commission shall be named as an additional insured on the Contractor's policy.

1. **Insured:** _____

2. **Project Name:** **ENGINEERING AND DESIGN SERVICES2016 SPLOST NORTH MAINLAND PHASE II AND III**

3. **Policy Number(s):** _____

4. **Insurance Company:** _____

Address: _____

_____

(Name) Authorized Representative: _____

Signature Authorized Representative: _____

Date: _____

CERTIFICATE OF DRUG FREE WORKPLACE

In order to have a drug- free workplace, a business shall:

Publish a statement notifying employees that the unlawful, manufacture, distribution, dispensing, possession, or use of controlled substances is prohibited in the workplace and specifying the actions that shall be taken against employees for violation of such prohibition.

Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

As a condition of working on the commodities or contractual services then under bid, the employee shall notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of any controlled substance law of the United States or any State, for a violation occurring in the workplace no later than five (5) days after such conviction.

Impose a sanction on, or require satisfactory participation in a drug abuse assistance or rehabilitation program if such in available in the employee's community, by any employee who is so convicted.

Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

Company Name: _____

Authorized Signature: _____

Title: _____

Date: _____

E-VERIFY CONTRACTOR AFFIDAVIT AND AGREEMENT

Georgia Security Immigration and Compliance (GSIC) Act

The Brunswick-Glynn County Joint Water and Sewer Commission and Contractor agree that compliance with the requirements of O.C.G.A. § 13-10-91 and Rule 300-10-1-.02 of the Rules of the Georgia Department of Labor are conditions of this Agreement for the physical performance of services.

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, *stating affirmatively that the individual, firm, or corporation which is contracting with the Brunswick-Glynn County Joint Water and Sewer Commission has registered with and is participating in the federal work authorization program known as: "E-Verify", web address https://e-verify.uscis.gov/enroll/* operated by the United States Citizenship and Immigration Services Bureau of the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], *in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.* The undersigned Contractor also verifies that he/she/it is using and will continue to use the federal work authorization program throughout the contract period.

The undersigned Contractor agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to the contract with the Brunswick-Glynn County Joint Water and Sewer Commission, Contractor will secure from each subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees the Contractor will advise the Brunswick-Glynn County Joint Water and Sewer Commission of the hiring of a new subcontractor and will provide the Brunswick-Glynn County Joint Water and Sewer Commission with a Subcontractor Affidavit attesting to the Subcontractor's name, address, user identification number, and date of authorization to use the Federal Work Authorization Program within five (5) days of the hiring before the Subcontractor begins working on the Project. Contractor also agrees to maintain all records of such compliance for inspection by the Brunswick-Glynn County Joint Water and Sewer Commission at any time and to provide a copy of each such verification to the Brunswick-Glynn County Joint Water and Sewer Commission at the time the subcontractor(s) is retained to perform such services.

(Continued on Next Page)

_____

E-Verify Employment Eligibility Verification User I.D. Number

_____

Date of Authorization to Use Federal Work Authorization Program

_____

Name of Contractor

_____

Title of Authorized Officer or Agent of Contractor

_____

Signature and Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this the_____day of_____, 2019.

NOTARY PUBLIC:

Name: _____

My Commission Expires: _____

(NOTARY SEAL)

As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

Sea Palms 8 in Water Main Connection

N

Upgrading this 4in section to a 6in section will increase the fire flow pressure to 38 psi.

Pressure Node: Diurnal
Current: 63 psi
8in Extension: 64 psi

Pressure Node: Diurnal
Current: 58 psi
8in Extension: 59 psi

Hydrant Pressure
Current:4 psi, 650 gpm
8in Extension: 41 psi

Hydrant Pressure
Current: Failure at 1 hour at 650 gpm
8in Extension: 2 psi at 650 gpm

Pressure Node: Diurnal
Current: 59 psi
8in Extension: 60

Hydrant Pressure
Current: 11 psi, 650 gpm
8in Extension: 49 psi

8in Main Extension

0 0.0375 0.075 0.15 0.225 0.3 Miles

Summary:

Hydrant Tests conducted to NFPA standards.
Current test see all hydrants tested underperforming and not meeting minumum requriments.
After the 8in connection from Frederica Rd. hydrants pressures and static pressures improve. But, one hydrant at the rear of the neighborhood could not meet minimum requirment of 20psi. The other two hydrants exceed minumum requriments at 40+ psi.

Upgrading the 4in section along Palm that is inbetween two 6in section will grately alleviate the bottle neck along Palm providing acceptable pressure for Fire Flow

Undersized 4in Mains in Sea Palms

N

Proposed replacement of 4 in main to a 6 in main to alleviate flow constraints

Hydrant Pressure
Current: Failure at 1 hour at 650 gpm
8in Extension: 2 psi at 650 gpm
Upgrading 4in bottleneck areas: 43 psi 1000 gpm

8 in Extension

Proposed replacement of 4 in main to a 6 in main to alleviate flow constraints

Summary: Ellis Zettler - Systems Analyst
While analysing the current water, and fire flow conditions in the Sea Palms neighborhood there was concern over some existing 4 in mains. These two mains, and there locations largely inhibit water supply to the area and its hydrants. Upgrading these two sections show an increase in the fire flow results to the following:

Current: Failure at 1 hour at 650 gpm
8in Extension: 2 psi at 650 gpm
Upgrading 4 in mains to 6 in mains: 43 psi 1000gpm

This is a potential option for helping mitigate the water flow concerns that currently exist and could be integrated into a phased plan for replacing the mains within the neighborhood.

0 250 500 Feet

FOUR WATERS ENGINEERING

324 6th Avenue North
Jacksonville Beach, Florida 32250
(904) 414-2400

DATE: November 29, 2017

TO: Derrick Simmons, Water Distribution Superintendent, JWSC
Todd Kline, PE, Senior Engineer, JWSC
Ellis Zettler, Engineering Systems Analyst, JWSC

FROM: Laura Constantino, MSE
Angela Bryan, PE, LEED AP

RE: Galvanized Watermain Piping Evaluation –
Sea Palms East, St. Simons Island

Introduction

In October 2017, Four Waters Engineering, Inc. (4Waters) was requested by Brunswick-Glynn Joint Water & Sewer Commission (JWSC) to utilize the existing St. Simons Island water model developed in the 2015 Master Plan Update for a conceptual evaluation of the water distribution system within the Sea Palms East Subdivision. JWSC is planning to replace the existing 2-, 4- and 6-inch galvanized and transite watermain within the Sea Palms East Subdivision and requires an analysis to determine recommended watermain sizes, hydrant locations and verify adequate fire protection is provided for the subdivision.

Water Model Methodology, Analysis and Results

Hydrant testing was preformed to ensure proper calibration of the water model. Figure 1 below shows the locations of the hydrant testing and Table 1 displays the field results.

Table 1 Hydrant Testing Field Results

Sea Palms East Subdivision Water Model Hydrant Flow Test Data

Pair No.	Hydrant Id	Flowed or Static Hydrant?	Date	Flow Time Start	Flow Time Units	Field Static (psi)	Field Static (feet)	Field Dynamic Residual (psi)	Field Dynamic Residual (feet)	Field Flow Pressure (psi)	Field Flow (gpm)	Pump Running	Pump Running	Pump Running	Pump Running	Oglethrope Tank Level (psi)	Oglethrope Tank Level (feet)
1	4349	Flowed	Nov 11, 2017	2:40	pm					40	1060	Harrington 1 HSP	Airport 3 HSP	Mallory 2 HSP	Hampton 2 HSP	55.6	128.44
	4350	Static				55	127	55	127								
2	4313	Flowed	Nov 11, 2017	2:04	pm					18	700	Airport 3 HSP	Mallory 2 HSP	Hampton 2 HSP		55.6	128.44
	4308	Static				52	120	52	120								
3	4304	Flowed	Oct 31, 2017	9:53	am					30	860	Harrington 2 HSP	Airport 1 HSP	Mallory 2 HSP	Hampton 2 HSP	56.1	129.59
	4321	Static				56	129	45	104								
4	4393	Flowed	Oct 31, 2017	2:41	pm					17	675	Harrington 1 HSP	Airport 1 HSP	Mallory 2 HSP	Hampton 1 HSP	56.4	130.28
	4394	Static				60	139	24	55								

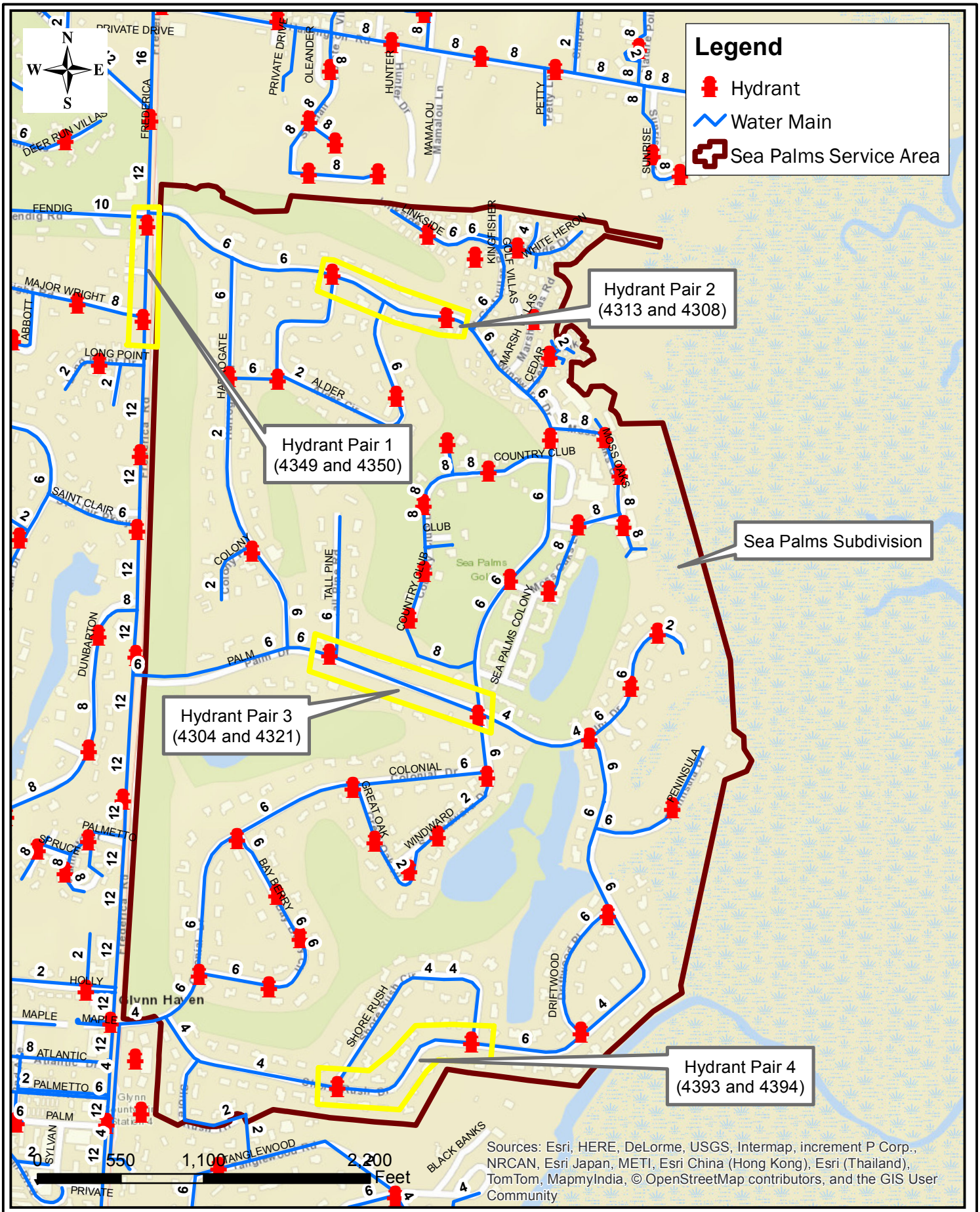

Figure 1 -
Sea Palms East Subdivision
Hydrant Testing Locations
BGJWSC

DISCLAIMER: This map is for reference and discussion purposes only. Data provided are derived from multiple sources with varying levels of accuracy. The information shown hereon is not intended for site specific use or design.

FOUR WATERS ENGINEERING

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The following scenarios were used to model the existing and proposed conditions:

- Average Daily Flow (ADF) for 168 hours (7 days)
- Maximum Daily Demand (MDD) for 168 hours
- 1,000 gpm hydrant flow with MDD for three (3) hours on:
    1. North Windward Drive near Golf Villas Road
    2. Palm Drive near Tall Pine Road
    3. North Windward Drive near Sea Palms Colony
    4. Colonial Drive near Bay Berry Circle
    5. Shore Rush Drive near Driftwood Place
    6. Shore Rush Drive near Shore Rush Circle
- Peak Hourly Flow (PHF) for 24 hours

Table 2 displays the results of the existing conditions within the Sea Palms East subdivision based on the scenarios outlined above:

Table 2 Existing Conditions

Existing Conditions - Average System Pressures (psi)

ADF (min/max)		MDD (min/max)		PHF (min/max)		MDD + 3 Hour FF @ 1,000 on North Windward Drive near Golf Villas Road (min)	MDD + 3 Hour FF @ 1,000 on Palm Drive near Tall Pine Road (min)	MDD + 3 Hour FF @ 1,000 on North Windward Drive near Sea Palms Colony (min)	MDD + 3 Hour FF @ 1,000 on Colonial Drive near Bay Berry Circle (min)	MDD + 3 Hour FF @ 1,000 on Shore Rush Drive near Driftwood Place (min)	MDD + 3 Hour FF @ 1,000 on Shore Rush Drive near Shore Rush Circle (min)
47	53	45	54	41	52	-27	-14	-31	-105	-180	-195

While the ADF, MDD and PHF scenario results for the existing conditions model are well above the preferred minimum standard for low pressure of 30 psi, the fire flow scenarios resulted in a major deficit. The fire flow scenarios were evaluated by running a 3 hour – 1,000 gpm fire flow under MDD conditions with a minimum allowable pressure of 20 psi. As seen in the above table, proper fire flow conditions with the existing water main sizes and hydrant layout cannot be achieved. Fire flow conditions are of extreme importance as they ensure the customer base has adequate pressure and flow rate to service the area in the event of an emergency.

In order to achieve proper fire flow conditions and ensure continued satisfactory ADF, MDD and PHF conditions, modifications were made in the model to the water main piping throughout the Sea Palms East development. Figure 2 below shows the recommended water main sizing and hydrant locations. The sizes were determined through an iterative water modeling process that allowed for the identification of the most effective location for an increase in water main size. The minimum spacing used for hydrant placement was 500 ft.

The following assumptions and design information were taken into consideration during the analysis:

- Fire hydrants were connected by water mains 8" in diameter, per *JWSC Standards for Water and Sewer Design and Construction*, where appropriate. There were a few instances where fire hydrants were connected by watermains 6" in diameter, due to the nature of the existing layout. These were dead end or unlooped watermains. Use of a smaller diameter watermain should increase the turnover of water in the dead end pipe

and decrease the opportunity for stagnant water with a reduced chlorine residual to develop.

- Drawings prepared by EMC Engineering Services, Inc. dated February 02, 2016 were used to size the watermain along Alder Circle and for the proposed placement of fire hydrants. These watermains and hydrants were not included in the cost estimate.
- Per JWSC, the intended goal of the project is to replace galvanized and transite watermains in the Sea Palm East subdivision, therefore the existing PVC watermains and hydrants along Country Club Drive, Mossy Oaks Lane and Mossy Oaks Circle were not recommended for replacement and are not included in the cost estimate.
- The exiting 4" watermain that runs parallel to Frederica Road in front of the fire station and connects at Colonial Drive, is outside of the Sea Palm East subdivision, however as directed by JWSC it was included in the analysis. Currently the watermain does not connect to the existing 12" watermain on the west side of Frederica Road. Due to the high cost of crossing Frederica Road, the system was modeled to see if the connection was necessary and would provide a benefit that would outweigh the cost. Ultimately an adequate level of service was achieved without the connection and it was not proposed in the analysis or included in the cost estimate.
- There are currently two 6" connections from the Sea Palms East subdivision water system to the existing 12" watermain on the west side of Frederica Road, at Palm Drive and North Windward Drive. These two watermain connections are direct feeds into the Sea Palms East development and, per the model, require an increase in watermain size. It is proposed that the watermain at North Windward increase to an 8", and that the watermain at Palm Drive increase to a 12". In the model, both connections provided significant increase in fire flow capacity to areas of the subdivision. From past experience, drilling and staging operations in this area will be very difficult, therefore, this analysis and the cost estimate assume that these connections could be installed via open cut. Discussion and negotiations with the County will be required, however open cutting at night could be a feasible option with the proper maintenance of traffic and milling and resurfacing of Frederica Road.
- Per JWSC, one section of 6" watermain runs west to east from Harrogate Road towards Alder Circle is not required. It has been called to be removed or abandoned.

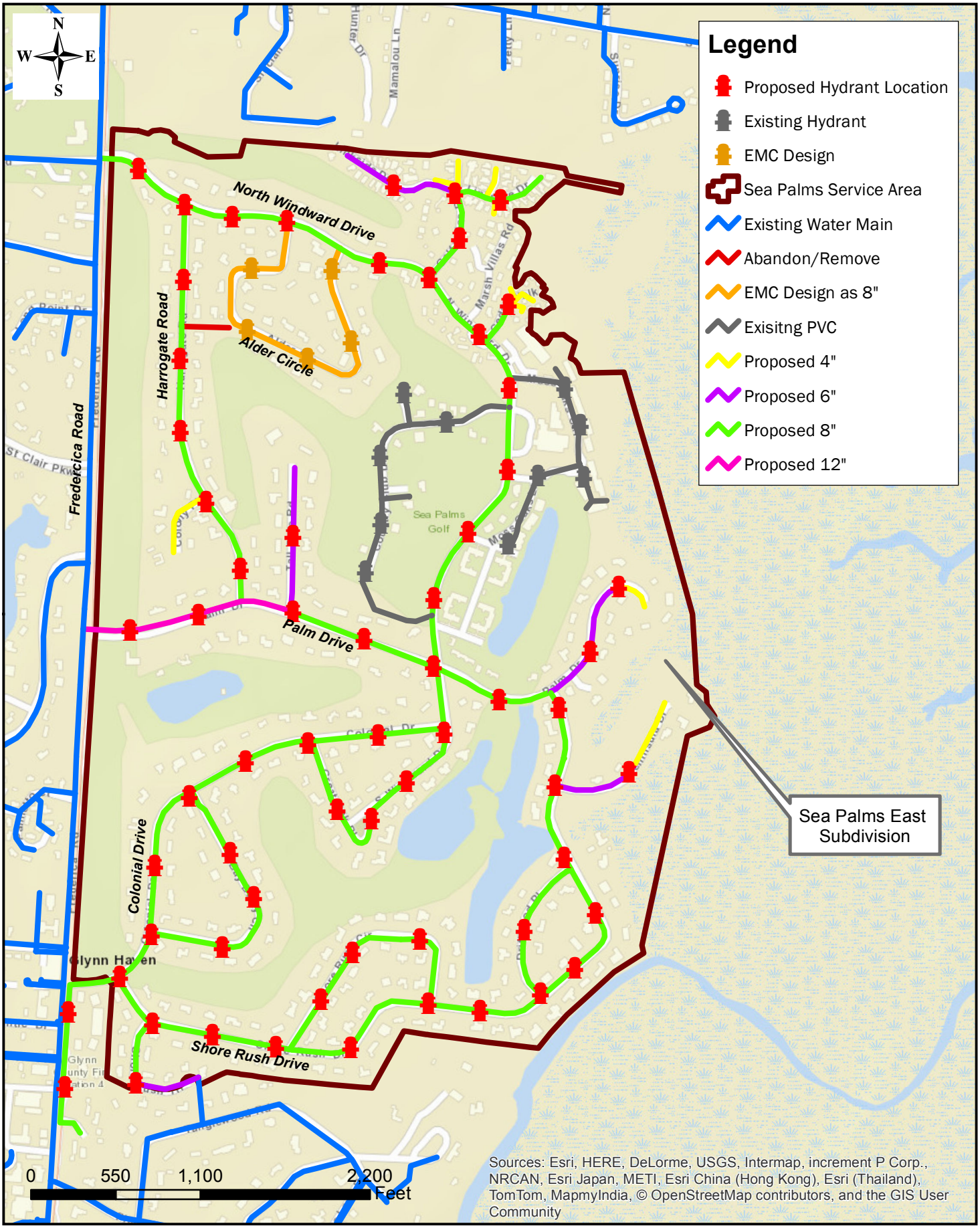

Figure 2 -
Sea Palms East Subdivision
Proposed Watermain Sizing and Hydrant Location

BGJWSC

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Table 3 displays the results of the various scenarios based on the settings and watermain improvements outlined above:

Table 3 Proposed Conditions

Proposed Conditions - Average System Pressures (psi)

ADF (min/max)		MDD (min/max)		PHF (min/max)		MDD + 3 Hour FF @ 1,000 on North Windward Drive near Golf Villas Road (min)	MDD + 3 Hour FF @ 1,000 on Palm Drive near Tall Pine Road (min)	MDD + 3 Hour FF @ 1,000 on North Windward Drive near Sea Palms Colony (min)	MDD + 3 Hour FF @ 1,000 on Colonial Drive near Bay Berry Circle (min)	MDD + 3 Hour FF @ 1,000 on Shore Rush Drive near Driftwood Place (min)	MDD + 3 Hour FF @ 1,000 on Shore Rush Drive near Shore Rush Circle (min)
48	54	46	55	45	54	38	39	38	32	35	33

Cost Estimate

Sea Palms East Watermain Improvements

Total Rehabilitation Construction Cost		Quantity	Unit	Unit Cost	Engineer's Opinion of Construction Costs
Water System	Install new 12-inch PVC watermain by means of open cut	1,943	LF	95	$184,585
	Install new 8-inch PVC watermain by means of open cut	28,164	LF	75	$2,112,300
	Install new 6-inch PVC watermain by means of open cut	3,288	LF	60	$197,280
	Install new 4-inch PVC watermain by means of open cut	2,105	LF	45	$94,725
	Remove existing 8-inch galvanized/transite watermain	1,117	LF	10	$11,170
	Remove existing 6-inch galvanized/transite watermain	23,020	LF	10	$230,200
	Remove existing 4-inch galvanized/transite watermain	6,766	LF	10	$67,660
	Remove existing 2-inch galvanized/transite watermain	5,055	LF	10	$50,550
	Fire Hydrants	64	EA	3,450	$220,800
	1" Residential Standard - Short Water Service	236	EA	850	$200,600
	1" Residential Standard - Long Water Service	236	EA	1,250	$295,000
Water System - Open Cut Frederica Road	Install new 12-inch PVC watermain by means of open cut across Frederica Road	75	LF	125	$9,375
	Install new 8-inch PVC watermain by means of open cut across Frederica Road	75	LF	105	$7,875
	Tapping Sleeve and Valve (12"x12")	1	EA	8,500	$8,500
	Tapping Sleeve and Valve (12"x8")	1	EA	6,500	$6,500
	Mill and Resurface	533	SY	32	$17,067
General and Pavement	Testing, Disinfection and As-builts	1	LS	15,000	$15,000
	Pavement	1,972	SY	35	$69,028
	Driveways	1,399	SY	50	$69,926
	Erosion Control	1	LS	15,000	$15,000
	General	1	LS	232,988	$232,988
Total					**$4,116,129**
15% Contingency					$617,419
10% Engineering, Permitting, Survey, Admin Fees					$411,613
7.5% Construction Administration and Inspection					$355,016
Total Construction Cost					**$5,500,177**

NEW MASTER LIST 2019
MANHOLE REHABILITATION PROJECTS

LOCATION	BASIN	DESCRIPTION OF DEFECT/REPAIR	COMMENTS
MANHOLE REHAB			
6 Plantation Way, Black Banks	2WTP	SSMH 2WTP0360 - Lining recommended (48" Brick manhole 3.8' depth).	I&I issue.
Intersection of Butler St & Florence St	2001	SSMH 20010340 -Lining recommended (48" Precast manhole 7.5' depth).	Significant corrosion.
Intersection of Lord & Mallory	2001	SSMH 20010060- Lining recommended (48" Precast manhole 12' depth).	I&I issue.
101 Peachtree Street	2003	SSMH 20031560 - Lining recommended (48" Brick manhole 9.22' depth).	Significant corrosion.
Behind 11828 Old Demere Road	2003	SSMH 20031570 - Lining recommended (48" Brick manhole 10.5' depth).	Significant corrosion.
117 Worthing Road	2005	SSMH 20050010 - Lining recommended (48" Brick Manhole 11.0' depth).	Significant Infiltration.
123 Worthing Road	2005	SSMH 20050020 - Lining recommended (48" Brick manhole 9' depth).	Significant Infiltration.
127 Worthing Road	2005	SSMH 20050030 - Lining recommended (48" Brick Manhole 8' depth).	Significant corrosion.
120 Jacobs Road	2005	SSMH 20050060 - Lining recommended (48" Precast manhole 7' depth).	Significant Corrosion.
Intersection of Windward and Palm	2011	SSMH 20110210 - Lining recommended (48" Brick manhole 10' depth).	Significant corrosion.
306 Palm Drive	2011	SSMH 20110300 - Lining recommended (48" Brick manhole 7' depth).	Significant corrosion.
408 Palm Drive	2014	SSMH 20140070 - Lining recommended (48" Precast manhole 4' depth).	Significant Corrosion.
189 Merion	2023	SSMH 20230050 - Lining recommended (48" Precast manhole 12.7 depth).	Significant corrosion.
Saint Andrews & Merion	2023	SSMH 20230080 - Lining recommended (Plastic manhole 13' depth).	T-Lock
605 Rose Cottage	2030	SSMH 20300060 - Lining recommended. (48" Precast manhole 16' deep)	Severe H2S damage
1005 Lewis Lane	2030	SSMH 20300160 - Lining recommended (48" Precast manhole 13.28' depth).	Significant corrosion.
1311 Mansfield Street	4002	SSMH 40020090 - Lining recommended (48" Brick manhole 14.60' depth).	Significant Infiltration.
Behind 1904 Oak Avenue	4002	SSMH 40020910 - Lining recommended (48" Brick manhole 10.22' depth).	Significant corrosion.
G Street & MLK Blvd	4002	SSMH 40020170 - Lining recommended (48" Brick manhole 14' depth).	Significant Infiltration.
G Street & MLK Blvd	4002	SSMH 40020230- Lining recommended (48" Brick manhole 12' depth).	Significant corrosion.
O St and Wolfe Street	4003	SSMH 40031840 -Lining recommended (48" Brick manhole 3.78' depth).	Significant corrosion.
J St & Harvey St	4003	SSMH-7,- 48" Precast manhole 12' depth.	FM receiving mh.
At New Baseball Field at BHS	4006	SSMH 40060372 - Lining recommended. (48" Precast Manhole 8' deep)	FM Discharge
4621 Altama Avenue	4006	SSMH 40060200 - Lining recommended. (48" Brick manhole 6' depth).	Significant corrosion.
4501 Habersham Street	4007	SSMH 40070010 - Lining recommended (48" Brick manhole 10' depth).	Significant I&I
4501 Habersham Street	4007	SSMH 40070020 - Lining recommended (48" Brick manhole 10' depth).	Significant I&I
Int. of Habersham & Peachtree Street	4007	SSMH 40070250 - Lining recommended (48" Brick manhole 9' depth).	Significant corrosion.
4115 Riverside Drive	4015	SSMH 40150050 - Lining recommended (48" Brick manhole 7' depth).	Significant Corrosion.
5715 Altama Avenue	4023	SSMH 40230050 - Lining recommended. (48" Precast manhole 6' deep)	FM discharge
178 Oscar Lane	4028	SSMH 40280120 - Lining recommended (48" Precastmanhole 7.5ft depth).	Significant corrosion.
1161 B&W Grade Road	4035	SSMH 40350440 - Lining recommended. (48" Precast manhole 6' deep)	FM discharge
100 Ogden Drive	4036	SSMH 40361000 - Lining recommended (48" Brick manhole).	Significant corrosion.
105 Spaulding Court	4039	SSMH 40390360 - Lining Recommended. (48" Precast manhole 4' deep)	FM discharge
295 Aviation	4039	SSMH 40390142 - Lining recommended. (48" Brick manhole 6' deep)	FM discharge
134 Indigo Drive	4039	SSMH 40390250 - Lining recommended. (48" Precast manhole 8' deep)	FM discharge
105 Cotton Court	4051	SSMH 40510110 - Lining recommended (48" Precast manhole 7' depth).	Significant corrosion.
110 Winstead Drive	4105	SSMH 41050010 - Lining recommended (48" Precast manhole 13' depth).	Significant Infiltration.
1316 Cate Road	4105	SSMH 41050132 - Lining recommended (48" Precast manhole 9' depth).	Significant Infiltration.
1310 Cate Road	4105	SSMH 41050131 - Lining recommended (48" Precast manhole 9' depth).	Significant Infiltration.
1308 Cate Road	4105	SSMH 41050130 - Lining recommended (48" Precast manhole 10.5' depth).	Significant Infiltration.
1338 Cate Road	4105	SSMH 41050180 - Lining recommended (48" Lined Manhole 10' Depth).	Liner Failure & Infiltration.
1363 Cate Road	4105	SSMH 41050210 - Lining recommended (48" Precast manhole 6.5' depth).	Significant corrosion.
1392 Cate Road	4105	SSMH 41050240 - Lining recommended (48" Precast manhole 8' depth).	FM receiving mh.
1676 Cate Road	4107	SSMH 41070120 - Lining recommended. (48" Precast manhole 13' deep)	FM discharge
1730 Cate Road	4107	SSMH 41070140 - Lining recommended. (48" Precast manhole 10' deep)	FM discharge
581 Harry Driggers Bvld	4110	SSMH 41101000 - Lining recommended (48" Precast manhole 17' depth).	Significant Infiltration.
3524 Reynolds Street	4WTP	SSMH 4WTP0260 - Lining recommended (48" Lined manhole 11' depth).	Old Liner failing.
703 Fifth Street	4WTP	SSMH 4WTP1950 - Lining recommended (48" Brick manhole 4.5' depth).	Significant corrosion.
3112 Peninsula	4WTP	SSMH 4WTP0160 - Lining recommended (60" Precast manhole 14' depth).	Significant Infiltration & Corrosion.
First & Peninsula	4WTP	SSMH 4WTP0150 - Lining recommended (60" Precast manhole 13.5' depth).	Significant corrosion.
Int Peninsula Av & Second St	4WTP	SSMH 4WTP0170 - Lining recommended. (72" Precast manhole 14' deep)	H2S damage; leaking
609 Second St	4WTP	SSMH 4WTP0310 - Lining recommended. (48" Brick manhole 10' deep)	Severe H2S damage

Rehabilitated Manholes (116)

Manholes To Be Rehabilitated In 2019 (63)

N

Mainland

St. Simons Island

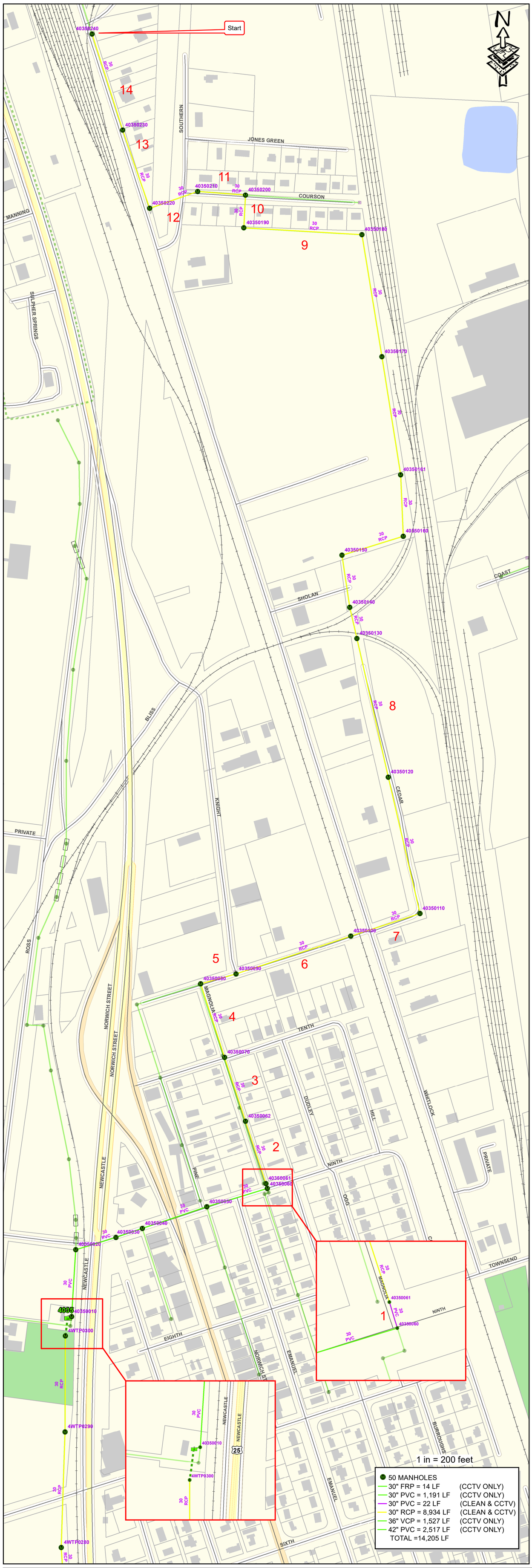
South Mainland

Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the user's own risk. Created by D. Read 15 MAR 19

Brunswick-Glynn County Joint Water & Sewer Commission

JWSC Manhole Rehabilitation Map

1.2 Mile



14

13

12

11

10

9

8

7

6

5

4

3

2

1

Brunswick-Glynn County Joint Water & Sewer Commission

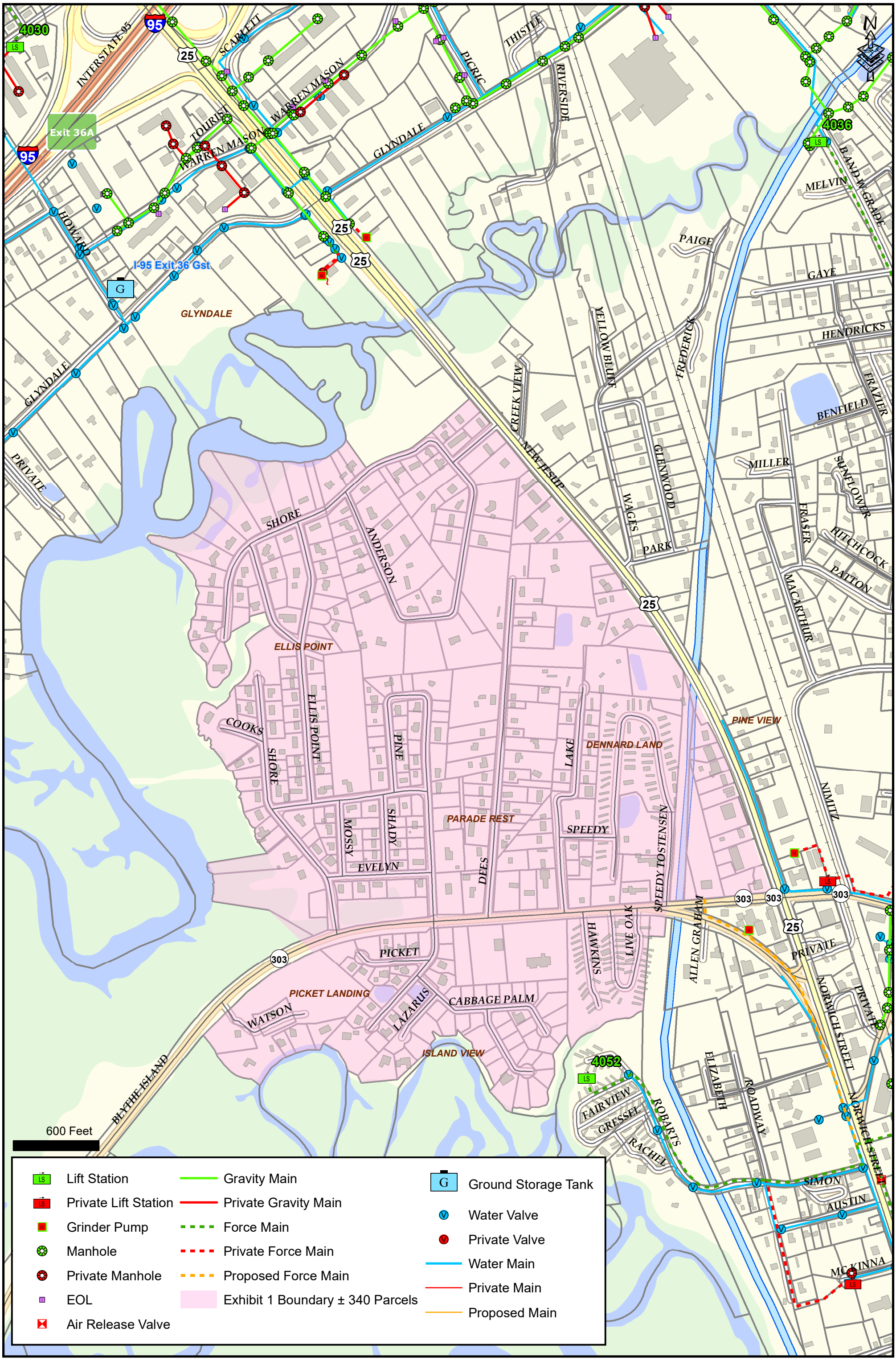
2016 SPLOST N. MAINLAND PH II

Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the user's own risk. Created by D. Read 14 FEB 19

3-22-19

RFP for Engineer to Study Providing Sewer Service to Certain Unserved Areas

Responses are due March 27, for the RFP to select an engineer to study the costs and requirements to provide service to certain currently unserved areas. The study results are proposed in the RFP to be delivered by July, 2019. The three main areas to be studied are located at the back of the attached engineering study RFP. This will look at both JWSC sewer service options as well as water service options for these areas.



Brunswick-Glynn County Joint Water & Sewer Commission

Exhibit A
W of Hwy 341 & N of Hwy 303

Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the user's own risk. Created by D. Read 14 FEB 19

N

300
Feet

- Lift Station
- Grinder Pump
- Manhole
- Private Manhole
- EOL
- Air Release Valve
- Gravity Main
- Private Gravity Main
- Force Main
- Private Force Main
- Bypass Force Main
- Exhibit C ± 268 Parcels
- Ground Storage Tank
- Water Valve
- Private Valve
- Water Main
- Private Main

KNIGHT INDUSTRIAL PARK
CALVARY
JANIE HILL
ARCO
MODEL FARMS
NORWICH COMMONS
Brunswick-Villa Gst
4035
4005
BLISS
KNIGHT
CEDAR
NORWICH STREET
TENTH
DUDLEY
HILL
MAGNOLIA
PINE
NINTH
EIGHTH
SEVENTH
SIXTH
FIFTH
FOURTH
PRIVATE
WHITLOCK
COCHRAN
OGG
TOWNSEND
CATE
WYLLY
STONEWALL
MARTIN LUTHER KING JR
BRAILSFORD AVENUE
BRAILSFORD
BURROUGHS
FRANKLIN
EMANUEL
NORWICH
HARDEE STREET
HARDEE
TREVILLE
REYNOLDS
NEWCASTLE
LOSS
SYCAMORE

Brunswick-Glynn County Joint Water & Sewer Commission

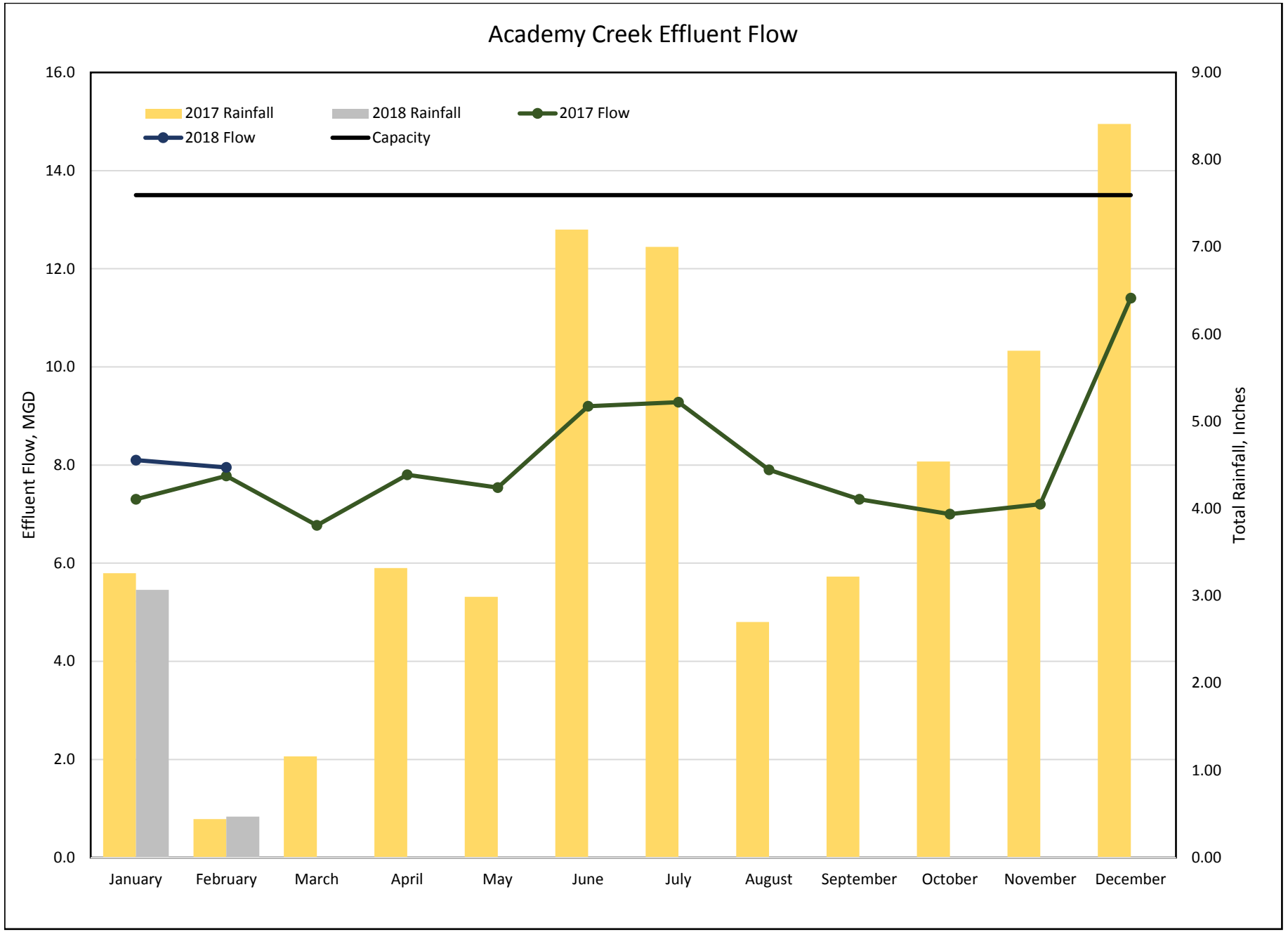
Exhibit C
Arco Community

Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the user's own risk. Created by D. Read 14 FEB 19

Academy Creek
03/21/2019

ACADEMY CREEK WWTP	FLOW (MGD)				Influent Concentrations					Effluent Concentrations								Removal Efficiency		Rainfall		Water Meter	Sludge
Month	INF	PINOVA	EFF	% Cap.	pH s.u.	BOD mg/L	TSS mg/L	NH3 mg/L	Phos mg/L	pH s.u.	D.O. mg/L	BOD mg/L	TSS mg/L	NH3 mg/L	TRC mg/L	Fecal #/100 mL	Phos. mg/L	BOD %	TSS %	Maximum Inches	Total Inches	Monthly MGal	Tons to Landfill
January 2018	6.5	0.7	7.3	54%	7.3	173	175			6.5	7.1	7	12	3.9	0.03	9	3.4	95.95%	96.00%	1.62	3.26		
February 2018	6.9	0.7	7.8	58%	7.2	192	203			6.6	6.8	8	12	6.8	0.03	1	4.3	95.83%	96.06%	0.30	0.44		
March 2018	5.8	0.7	6.8	50%	7.4	198	190			6.6	6.6	11	11	5.8	0.04	1	3.7	94.44%	94.21%	0.51	1.16		
April 2018	6.7	0.6	7.8	58%	7.3	165	149			6.7	6.7	8	12	7.4	0.04	11	3.2	95.15%	94.63%	1.57	3.32		
May 2018	6.4	0.7	7.5	56%	7.3	158	161			6.6	6.2	6	10	8.3	0.04	13	3.2	96.20%	96.27%	0.73	2.99		
June 2018	8.9	1.0	9.2	68%	7.2	125	132	13.4	3.4	6.5	5.5	6	10	2.7	0.04	13	3.4	95.20%	95.45%	1.75	7.20		
July 2018	9.0	0.8	9.3	69%	7.5	126	140	16.0	5.9	6.7	5.8	6	11	4.2	0.02	13	3.5	95.24%	95.71%	2.60	7.00		
August 2018	7.6	0.7	7.9	59%	7.8	127	168	20.8	4.7	6.8	5.7	8	13	5.3	0.08	11	3.1	93.70%	95.24%	1.20	2.70	0.219	67.32
September 2018	6.3	0.8	7.3	54%	7.7	153	155	17.6	4.4	6.6	5.8	7	13	2.7	0.05	9	4.3	95.42%	95.48%	0.95	3.22	0.163	71.23
October 2018	6.1	0.5	7.0	52%	7.4	172	172	31.8	5.2	6.6	6.0	7	9	9.4	0.02	41	2.6	95.93%	95.93%	1.72	4.54	0.164	65.55
November 2018	6.1	0.7	7.2	53%	7.6	212	335	23.4	5.3	6.6	6.2	8	12	4.8	0.04	44	3.5	96.23%	97.61%	3.00	5.81	0.165	88.25
December 2018	10.0	0.8	11.4	84%	7.9	121	130	17.4	11.0	6.7	6.6	9	15	8.0	0.02	182	4.3	92.56%	93.08%	2.67	8.41	0.149	73.21
January 2019	7.4	0.7	8.1	60%	7.6	169	193	13.1	8.4	6.8	6.5	11	13	11.6	0.03	24	2.9	93.49%	94.30%	0.90	3.07	0.589	114.16
February 2019	6.8	0.7	8.0	59%	7.6	190	213	18.4	15.2	6.7	6.8	9	12	10.8	0.06	16	8.4	95.26%	95.77%	0.30	0.47	0.653	85.01
March 2019																							
April 2019																							
May 2019																							
June 2019																							
July 2019																							
August 2019																							
September 2019																							
October 2019																							
November 2019																							
December 2019																							
Average	7.2	0.7	8.0	60%	7.5	162.9	180	19.1	7.06	6.6	6.3	7.9	11.8	6.5	0.04	28	3.8	95.13%	93.44%	1.42	3.83	0.300	80.68
Max	10.0	1.0	11.4	84%	7.9	212.0	335	31.8	15.2	6.8	7.1	11.0	15.0	11.6	0.08	182	8.4	94.81%	95.52%	3.00	8.41	0.653	114.16
Min	5.8	0.5	6.8	50%	7.2	121.0	130	13.1	3.40	6.5	5.5	6.0	9.0	2.7	0.02	1	2.6	95.04%	93.08%	0.30	0.44	0.149	65.55
Permit Limits	**N/A**	**N/A**	**13.5**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**6.0-9.0**	**2.0**	**20.0**	**30.0**	**17.4**	**0.14**	**200**	**Report**	**85.00%**	**85.00%**				

BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Fecal - Fecal Coliform Bacteria


Academy Creek Effluent Flow
2017 Rainfall
2018 Rainfall
2017 Flow
2018 Flow
Capacity
Effluent Flow, MGD
Total Rainfall, Inches
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
January
February
March
April
May
June
July
August
September
October
November
December

Dunbar Creek
03/21/2019

DUNBAR CREEK WWTP	FLOW (MGD)			Influent Concentrations					Effluent Concentrations							Removal Efficiency		Rainfall		Water Meter Monthly M/Gal	Sludge Tons to Landfill
	INF	EFF	% Cap.	pH s.u.	BOD mg/L	TSS mg/L	NH3 mg/L	Phos mg/L	pH s.u.	D.O. mg/L	BOD mg/L	TSS mg/L	NH3 mg/L	Entero. #/100 mL	Phos. mg/L	BOD %	TSS %	Maximum Inches	Total Inches		
January 2018	3.4	2.9	74%	7.1	135	133			7.1	8.2	3.0	2.0	0.4	9	1.7	97.78%	98.50%	2.03	3.47		
February 2018	3.5	3.1	77%	7.0	149	129			7.0	7.3	6.0	3.0	1.6	48	1.6	95.97%	97.67%	0.79	1.32		
March 2018	3.3	2.8	71%	7.3	169	147			7.3	9.0	5.0	1.0	0.3	15	3.0	97.04%	99.32%	0.60	1.80		
April 2018	3.5	3.1	77%	7.2	162	163			7.6	8.4	2.0	1.0	0.1	6	2.7	98.77%	99.39%	1.18	4.16		
May 2018	3.3	2.9	72%	7.2	165	158			7.7	8.3	2.0	2.0	0.6	24	2.9	98.79%	98.73%	0.75	2.99		
June 2018	3.5	2.9	73%	7.1	161	139	22.0	3.20	7.7	7.7	2.1	1.0	1.3	17	2.8	98.70%	99.28%	1.30	3.52		
July 2018	3.6	3.3	83%	7.2	157	153	26.7	4.10	7.5	6.6	2.2	1.0	0.2	3	2.7	98.60%	99.35%	1.52	4.74		
August 2018	2.7	2.8	70%	7.5	139	114	28.6	3.45	7.7	7.5	1.0	1.0	0.9	8	3.1	99.28%	99.12%	0.68	2.03	0.070	22.86
September 2018	2.6	2.6	64%	7.5	134	137	21.9	3.95	7.7	7.9	2.0	1.0	0.6	30	2.9	98.51%	99.27%	0.87	3.57	0.030	22.06
October 2018	2.8	2.4	61%	7.4	131	123	20.9	3.25	7.8	7.7	2.0	2.5	0.4	29	2.3	98.47%	97.99%	1.27	2.87	0.033	18.36
November 2018	3.6	2.6	65%	7.5	143	131	20.6	3.85	7.8	8.2	1.0	3.0	0.8	8	3.8	99.30%	97.71%	2.79	4.99	0.041	21.84
December 2018	4.4	3.6	90%	7.1	98	116	14.5	2.35	7.7	8.8	2.0	2.3	0.9	46	1.4	97.96%	98.02%	2.05	8.62	0.058	17.20
January 2019	3.8	2.9	72%	7.3	132	142	16.3	2.85	7.6	8.9	2.0	2.0	0.7	22	2.2	98.48%	98.59%	1.50	2.90	0.044	19.62
February 2019	3.5	2.9	72%	7.5	148	161	20.9	2.65	7.5	8.7	2.0	1.8	0.5	11	2.0	98.65%	98.86%	0.92	2.14	0.015	7.41
March 2019																					
April 2019																					
May 2019																					
June 2019																					
July 2019																					
August 2019																					
September 2019																					
October 2019																					
November 2019																					
December 2019																					
Average	3.4	2.9	73%	7.3	144.5	139.0	21.4	3.29	7.5	8.1	2.5	1.8	0.7	20	2.5	94.78%	98.74%	1.3	3.5	0.042	18.48
Max	4.4	3.6	90%	7.5	169.0	163.0	28.6	4.10	7.8	9.0	6.0	3.0	1.6	48	3.8	95.38%	98.16%	2.8	8.6	0.070	22.86
Min	2.6	2.4	61%	7.0	98.0	114.0	14.5	2.35	7.0	6.6	1.0	1.0	0.1	3	1.4	92.86%	99.12%	0.6	1.3	0.015	7.41
Permit Limits	**N/A**	**4.0**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**6.0-9.0**	**6.0**	**5.0**	**20.0**	**2.0**	**35**	**Report**	**85.00%**	**85.00%**				

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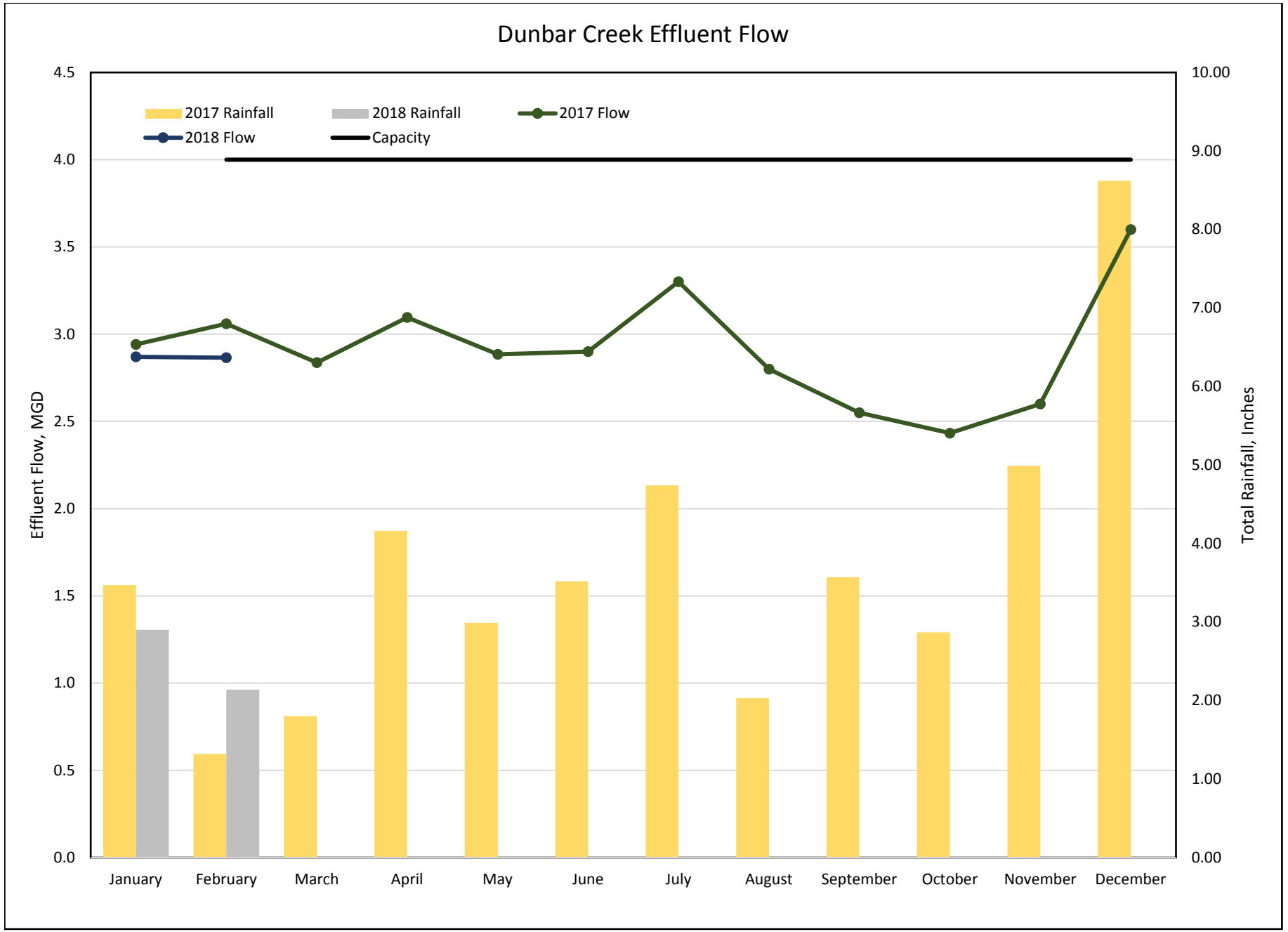
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Entero. - Enterococci Bacteria

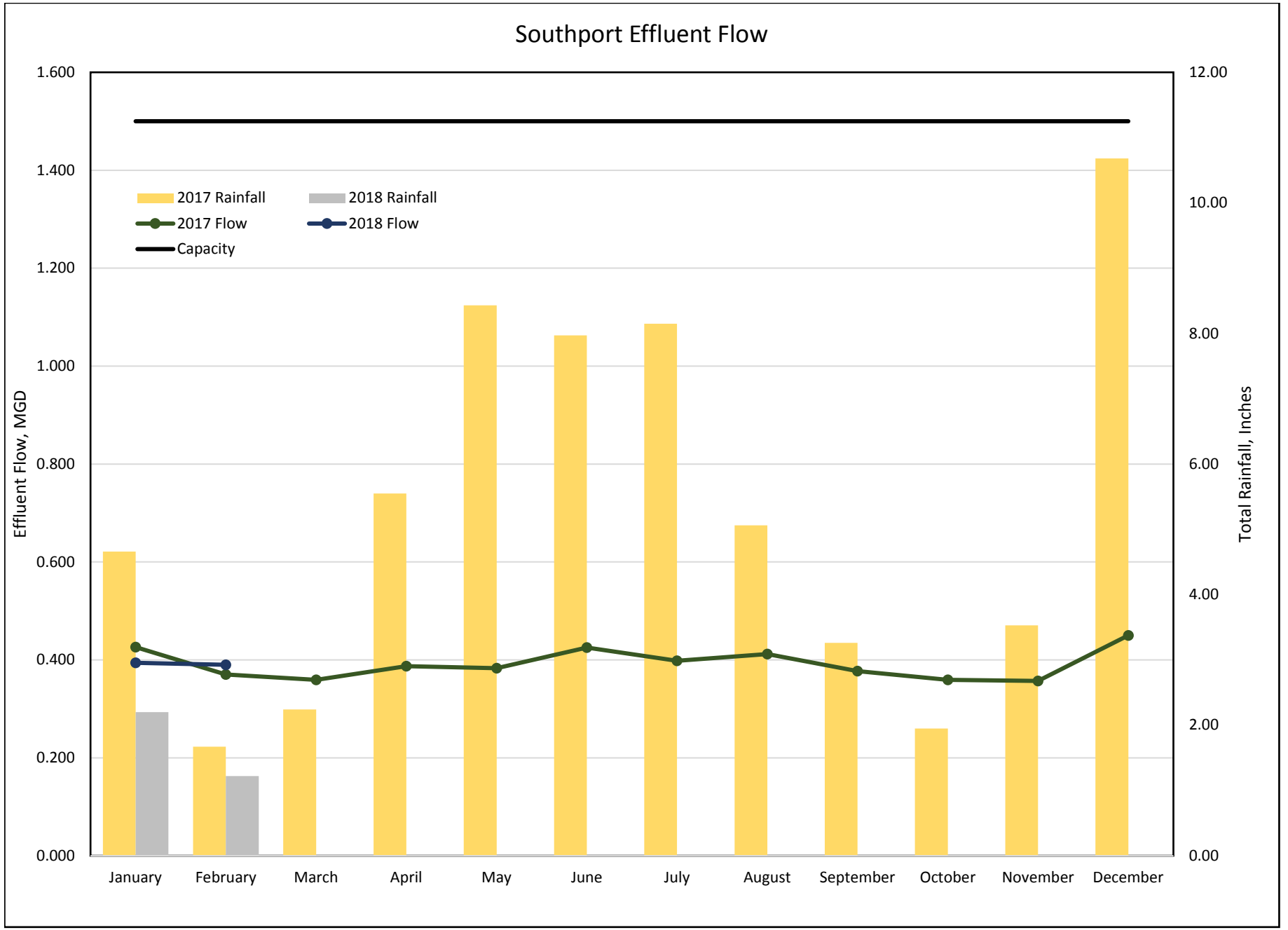

Dunbar Creek Effluent Flow
2017 Rainfall
2018 Rainfall
2017 Flow
2018 Flow
Capacity
Effluent Flow, MGD
Total Rainfall, Inches
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
January
February
March
April
May
June
July
August
September
October
November
December

Southport
03/21/2019

SOUTHPORT WWTP	FLOW (MGD)			Influent Concentrations					Effluent Concentrations							Removal Efficiency		Rainfall		Water Meter	Sludge
				pH	BOD	TSS	NH3	Phos	pH	D.O.	BOD	TSS	NH3	Fecal	Phos.	BOD	TSS	Maximum	Total	Monthly	Tons to
Month	INF	EFF	% Cap.	s.u.	mg/L	mg/L	mg/L	mg/L	s.u.	mg/L	mg/L	mg/L	mg/L	#/100 mL	mg/L	%	%	Inches	Inches	M/Gal	Landfill
January 2018	0.446	0.426	28%	6.81	121	131			6.8	8.5	4.1	8.5	5.3	12	0.3	96.61%	93.51%	2.51	4.66		
February 2018	0.376	0.370	25%	6.90	143	129			7.1	8.2	6.0	8.0	6.0	6	1.1	95.80%	93.80%	0.86	1.67		
March 2018	0.363	0.359	24%	7.19	157	174			7.2	8.7	4.0	4.0	0.1	15	0.4	97.45%	97.70%	0.96	2.24		
April 2018	0.382	0.387	26%	6.82	138	114			6.8	8.9	3.3	4.9	0.1	65	0.6	97.61%	95.70%	1.51	5.55		
May 2018	0.384	0.383	26%	6.83	120	103			7.3	8.0	3.9	3.2	0.6	9	0.7	96.75%	96.89%	2.14	8.43		
June 2018	0.399	0.425	28%	7.00	121	109	23.0	4.4	7.0	7.0	4.0	3.0	0.5	9	0.4	96.69%	97.25%	2.61	7.97		
July 2018	0.382	0.398	27%	6.78	132	119	25.9	3.2	7.3	7.3	4.0	2.4	0.1	3	0.6	96.97%	97.98%	2.65	8.15		
August 2018	0.393	0.412	27%	6.59	128	138	31.1	5.0	6.8	8.0	4.4	4.5	0.7	8	0.3	96.56%	96.74%	1.36	5.06	0.009	3.57
September 2018	0.353	0.377	25%	6.60	142	131	26.6	3.8	7.2	8.0	4.8	5.2	0.6	6	0.7	96.65%	96.03%	1.18	3.26	0.006	9.06
October 2018	0.354	0.359	24%	6.73	143	124	25.6	4.1	7.5	8.8	5.0	5.0	0.3	10	1.5	96.50%	95.97%	0.88	1.95	0.005	7.52
November 2018	0.356	0.357	24%	7.03	166	149	35.1	4.5	7.9	9.0	4.0	7.0	1.4	3	1.1	97.59%	95.30%	1.64	3.53	0.004	2.16
December 2018	0.384	0.450	30%	7.01	115	94	25.0	1.6	7.5	8.6	3.0	3.0	0.7	6	0.4	97.39%	96.81%	3.48	10.68	0.004	4.64
January 2019	0.376	0.394	26%	6.90	128	376	23.3	3.7	7.3	9.0	3.0	3.0	0.6	6	0.1	97.65%	99.20%	1.00	2.20	0.006	3.37
February 2019	0.377	0.390	26%	7.50	111	93	29.8	1.20	7.5	8.9	3.0	4.0	0.5	8	0.5	97.31%	95.70%	0.52	1.22	0.007	6.79
March 2019																					
April 2019																					
May 2019																					
June 2019																					
July 2019																					
August 2019																					
September 2019																					
October 2019																					
November 2019																					
December 2019																					
Average	0.380	0.392	26%	6.9	133.2	141.7	27.3	3.49	7.2	8.4	4.0	4.7	1.2	12	0.6	94.57%	96.69%	1.7	4.8	0.006	5.30
Max	0.446	0.450	30%	7.5	166.0	375.7	35.1	5.00	7.9	9.0	6.0	8.5	6.0	65	1.5	95.25%	97.74%	3.5	10.7	0.009	9.06
Min	0.353	0.357	24%	6.6	111.3	93.0	23.0	1.20	6.8	7.0	3.0	2.4	0.1	3	0.1	93.89%	97.42%	0.5	1.2	0.004	2.16
Permit Limits	**N/A**	**1.500**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**6.0-9.0**	**5.0**	**30.0**	**30.0**	**13.0**	**200**	**Report**	**85.00%**	**85.00%**				

BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Fecal - Fecal Coliform Bacteria

Southport
03/21/2019



PROJECT REPORT

Financial Data as of 02-28-2019

Project Status as of 03-15-2019

							BOC APPROVED FUNDING & SOURCE[1]				BUDGET VS. EXPENDITURES: COMMITTED			BUDGET VS. EXPENDITURES: EXPENDITURES			BUDGET VS. EXPENDITURES: BALANCE		PROJECT STATUS			
Proj #	Project Name	Original Project Estimate	Proj Mgr.	Concept Design	Detail Design	Construction	R&R Reserve	CIF Reserve	SPLOST 2015/2016	Total Approved Funds	Purchase Orders Issued	BOC Approved Change Orders	Total PO+CO	Expenditures Paid to PO's	Remaining Encumbrances	Expenditures Misc.	Uncommitted $$$ (App Fund - Exp)	% Approved Budget Available	Current Phase Completion	Next Phase Length of Time	Total Project Anticipated Completion	Status
232	**SR-99 Water Main Extension**	**2,200,000**	T. Kline	EMC	RGA / EMC	Seaboard		2,200,000		**2,200,000**	1,263,167	287,693	**1,550,860**	1,538,289	177,373	223,254	**261,084**	11.87%	TBD	TBD	TBD	Reviewed Ph.1 rev. w/ Seaboard. Easement docs to Seaboard for execution. Change Order necessary to complete Ph.1. Retainage reduced to 10%. JWSC potholing existing utilities for onsite GDOT mtg to move forward.
417	**Ridgewood Water Production Facility**	**1,000,000**	T. Kline	JWSC	RGA	TBD	1,000,000			**1,000,000**	0	0	**0**	0	0	65,943	**934,057**	93.41%	TBD	TBD	TBD	Awaiting prioritization for plan update/construction.
501	**Alder Circle**	**300,000**	T. Kline	JWSC	EMC	TBD	35,300		178,599	**213,899**	20,750	14,550	**35,300**	18,440	0	2,560	**192,899**	90.18%	TBD	TBD	TBD	SPLOST V funded. Reallocated to other Sea Palms East water improvements. WM crossing @ Frederica/Colonial - COMPLETE
602	**Holly Street**	**650,000**	T. Kline	JWSC	HHNT	TBD	46,000		561,795	**607,795**	46,700	0	**46,700**	41,963	0	0	**565,832**	93.10%	TBD	TBD	TBD	Reallocating to collection system rehab; possibly Sea Palms East & West.
702	**North Mainland Sewer Improvements - Phase 2 & 3 Engr. Design (PS4114/Harry Driggers/Canal Rd FM)**	**5,400,000**	T. Kline	JWSC/ EMC	TBD	TBD		1,600,000	3,800,000	**5,400,000**	97,625	1,995	**99,620**	84,575	13,752	0	**5,301,673**	98.18%	Winter 2019	180 days	Fall 2020	Staff recommendation for design approved by Facilities. BOC review 03.21.19.
702	**North Mainland Sewer Improvements - Phase 2 & 3 CCTV work**	**5,400,000**	T. Kline/ J.Humphrey	JWSC	JWSC	SE Pipe		1,600,000	3,800,000	**5,400,000**	48,675	3,650	**52,325**	52,325	55,449	11,476	**5,280,750**	97.79%	Winter 2019	30 days	Fall 2020	CCTV work complete. Awaiting final MH pics/report.
703	**PS 4003 Decommission and Gravity Sewer**	**3,300,000**	T. Kline	JWSC	HGB	TBD			3,300,000	**3,300,000**	3,615	0	**3,615**	3,615	0	3,589	**3,292,796**	99.78%	Winter 2019	120 days	Fall 2020	Engineering contract awarded to HGB. Kick-off meeting held on 02/19/19. Surveying in progress.
704	**Canal Road to Glynco 12" Watermain Loop**	**1,200,000**	T. Kline	JWSC	JWSC	TBD		1,200,000		**1,200,000**	48,000	0	**48,000**	48,000	0	0	**1,152,000**	96.00%	TBD	TBD	TBD	Design at concept stage. Utilize surplus 12" C900 PVC material. Connect Glynco Pkwy. to Canal Rd. loop; JWSC engr. & const. Installation under Altamaha Canal complete.
801	**FEMA Hazard Mitigation-Academy Creek**	**3,188,000**	A. Burroughs	Haggerty	TBD	TBD	3,188,000			**3,188,000**	33,908		**33,908**	28,083	0	66,930	**3,092,987**	97.02%	TBD	TBD	TBD	Final applications submitted. All state approvals have been received for transfer switch application. Awaiting FEMA decision.
804	**Magnolia Water Improvements**	**1,150,000**	T. Kline	JWSC	City of BWK / EMC	TBD	1,150,000			**1,150,000**	117,050	0	**117,050**	25,571	91,479	0	**1,032,950**	89.82%	Winter 2019	270 days	Winter 2019	City Project/contract. Bid alternate for new 12" WM along Habersham. Final revisions provided to EOR. Wetland impact permitting in progress. Tentative advertising set for mid-spring.
805	**L Street Water Improvements**	**650,000**	T. Kline	JWSC	City of BWK / EMC	Georgia Asphalt Producers	650,000			**650,000**	40,700	0	**40,700**	29,200	11,500	0	**609,300**	93.74%	Winter 2019	180 days	Fall 2019	Pre-construction meeting held 3/15/2019. NTP, April 1st.
806	**Academy Creek Oxygen System Rehab**	**650,000**	A. Burroughs	HGB	HGB	TBD	1,040,000			**1,040,000**	989,060	15,865	**1,004,925**	47,099	942,113	0	**50,788**	4.88%	120 days	N/A	120 days	A&G work ongoing. Concrete slabs poured for new tank, manifolds, and blower. Matheson scheduling delivery of tank.
807	**SSI Phase II Smoke & Dye Testing**	**150,000**	E. Zettler	TBD	TBD	McKim & Creed	150,000			**150,000**	0	0	**0**	0	0	0	**150,000**	100.00%	TBD	TBD	TBD	Contract awarded to McKim & Creed. Pre-construction meeting scheduled for 03/25/2019.
901	**Lift Station 3114 Upgrades Phase 1**	**60,000**	K. Young	JWSC	JWSC	JWSC		60,000		**60,000**	53,600	0	**53,600**	26,856	26,744	0	**6,400**	10.67%	TBD	TBD	Spring 2019	SP&M In-house Project. Awaiting materials delivery.
902	**Friendly Express #71 W & Fmain Ext/Coop Agreement**	**200,000**	T. Kline	JWSC	CES Eng	Developer		220,000		**220,000**	217,915	0	**217,915**	0	217,915	0	**2,085**	0.95%	Winter 2019	N/A	Winter 2019	Water/Fmain install COMPLETE. Meeting held with proposed commercial customer north side of Hwy 303 to discuss W&S extension. EOR/Developer obtaining pricing from contractors for proposed extension. Possible W&S easement extension to US341.
903	**SR 27 Resurfacing from Yellow Bluff Creek to US 25**	**77,000**	T. Kline	JWSC/GDOT	GDOT	GDOT	77,000			**77,000**	0	0	**0**	0	0	0	**77,000**	100.00%	TBD	TBD	TBD	No update from GDOT.
904	**Lift Station 4021 Improvements**	**275,000**	T. Kline	JWSC	JWSC	TBD		275,000		**275,000**	0	0	**0**	0	0	0	**275,000**	100.00%	TBD	TBD	Summer 2019	In-House Engineering in progress.
905	**Glynn County Village Storm Improvements Phase 1**	**60,000**	T. Kline	JWSC	GWES/ GlynnCo	Hiers/Griffin Utility	60,000			**60,000**	0	0	**0**	0	0	0	**60,000**	100.00%	Winter 2019	60 days	Winter 2019	Glynn Co project. Contractor installing storm. 250LF of 8-inch WM replacement proposed by JWSC along Mallery St.
906	**Water Pollution Rehab-Academy & Dunbar**	**15,000,000**	A. Burroughs							**0**												RFP out for submission. Due date 4/16/19
907	**Sewer Expansion Study - Brunswick**	**60,000**	A. Burroughs				60,000			**60,000**												RFP out for submission. Due date 3/28/2019
909	**CCTV Pump Station**	**48,000**	R. Julano				48,000			**48,000**												
	TOTALS						**7,504,300**	**7,155,000**	**11,640,394**	**26,299,694**	**2,980,765**	**323,753**	**3,304,518**	**1,944,016**	**1,536,325**	**373,752**	**22,445,601**					

1 - Funding Source and Uncommitted comes from Monthly Cash Report

			BOC APPROVED FUNDING & SOURCE[1]			COMMITTED			EXPENDITURES			BALANCE		PROJECT STATUS			

	UNSOLICTED PROPOSALS		DESCRIPTION	Concept	Application	Preliminary Engineering Report (PER)	Comprehensive Agreement	Project Value	Capital Fees Generated	STATUS
	Sinclair S/D residential development (SSI)		121 Lot S/D; proposed improvements to PS2056 and force main.	Complete	Complete	Complete	Complete	*	*	Development still in planning review with Glynn County.
	Bergen Woods Apartments		Proposed 252 apartment development; PS4105 and force main improvements.	Complete	Complete	Complete	Complete	*	*	Waiting on offiste forcemain & PS improvement plans for approval.
	Frederica Township		Downstream upgrades to accommodate 200 additional lots; cooperative w/ Sinclair U.P.	Complete	Complete	Complete	Complete	*	*	Waiting on offiste forcemain & PS improvement plans for approval.
	Oak Grove/Carolina Partners		Force main improvements to serve proposed development on Oak Grove Island.	Complete	Complete	Complete	Under review	*	*	Pending BOC approval.
	PS 4107/4105 and FM Upgrade (CONCEPT)		PS and forcemain upgrades to serve multiple proposed developments/growing area.	Under eval.				*	*	JWSC defining solution; in discussion with several projects within basins.
	Saddlebrook Subdivision / Wade Jurney Homes		Improve PS4105 sewer capacity for the addition of 41 new homes	Complete	Complete	In Progress				Awaiting draft PER.
	Boomers Bakery (fmr. Pumpkin Patch) W& FM extension		Extend W&S from Friendly Express #71 extension to 341; gain easement.	In discussions						

BULL PEN (Proposed)

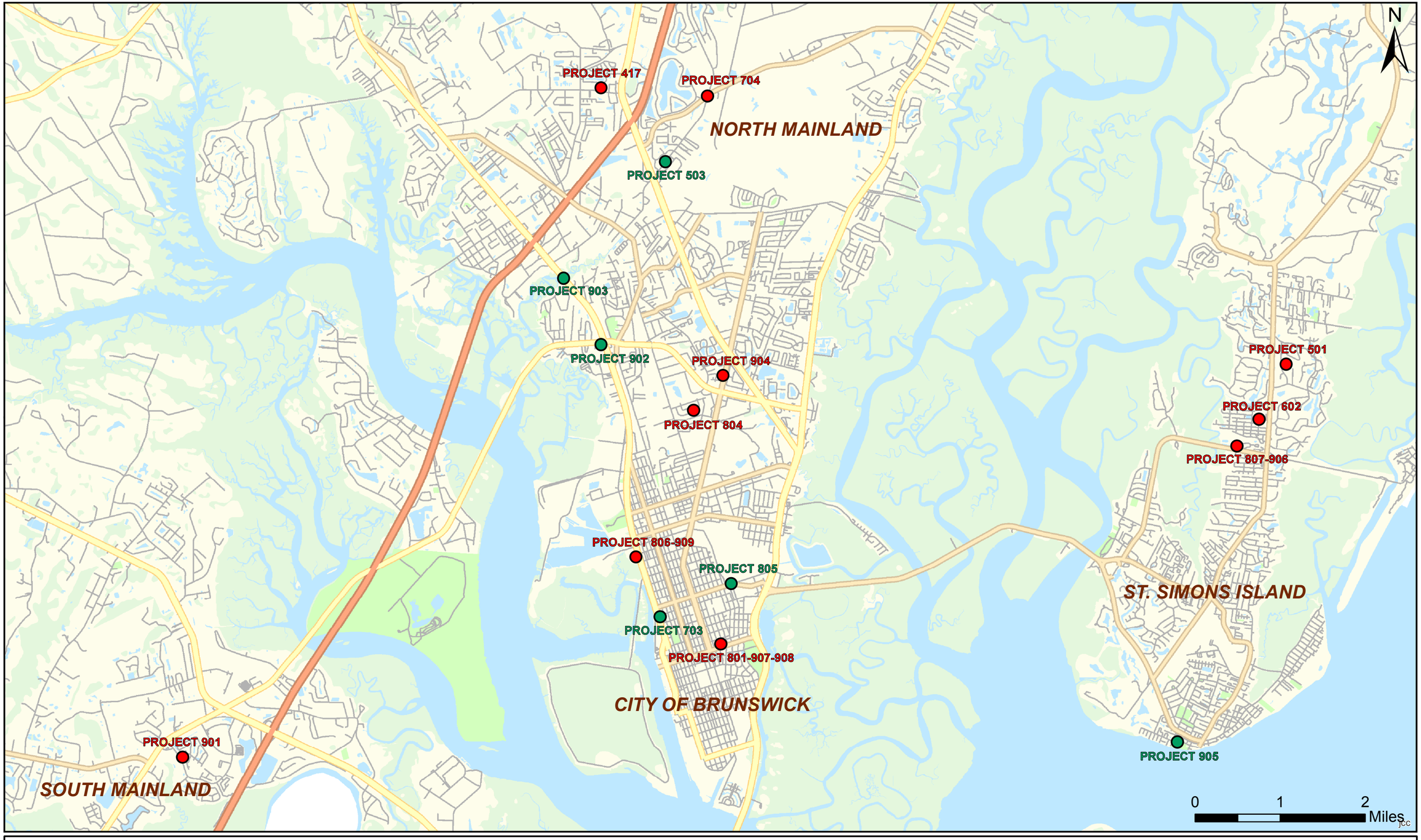
Glynn County Village Storm Improvements- Phase II	to replace/upgrade sections of W&S in common with areas of storm improvements.
5-Year Plan List of Projects Currently Under Review	Pending JWSC BOC Approval

Uncommitted Funds (Available)	R&R	CIF	SPLOST

COMPLETED/REMOVED FROM LIST

213	**NM WTP NPDES Permit**	**418**	**Southport Water Production Facility**	**705**	**Hautala to Old Jesup Watermain Loop**
225	**CMMS System Upgrade**	**419**	**Canal Rd to Old Jesup W/S Improvements**	**706**	**Dunbar Creek WWTP Project Evaluation**
301	**SCADA Upgrade Project**	**424**	**Low Pressure Sewer Design-Community Rd**	**707**	**Academy Creek WWTP Project Evaluation**
304	**SSI Village Area Water Improvements**	**425**	**Low Pressure Sewer Design-Epworth Acres**	**708**	**Academy Creek WWTP Odor Control**
319	**Urbana**	**503**	**Canal Crossing W/S Improvements**	**709**	**Mainland Sewer Transmission Sys Cap**
421	**Mansfield**	**504**	**Canal Rd Pump Station**	**710**	**LF 2002 Upgrades**
403	**SCADA Upgrade**	**505**	**Lift Station 2032 and Forcemain**	**802**	**VT SCADA**
409	**LS 2030 and FM Rehab**	**701**	**PS 4048 Force Main Improvements**	**803**	**SSI Sanitary Sewer Flow Monitoring**
413	**Frederica/Atlantic Sewer & FM Rehab**	**702**	**North Mainland Sewer Improvements Ph 1**		
416	**Hampton Water Production Facility**				

1 - Funding Source and Uncommitted comes from Monthly Cash Report



Any information provided by the JWSC relating to the size and location of existing utilities (i.e. GIS maps, records, drawings, etc.) are offered to assist the designers and others in identifying available points of connection. Such information is offered for the user's information only and is not guaranteed. Use of such information for detailed design purposes without proper field verification shall be at the users own risk.
Created by H. Patel

BRUNSWICK-GLYNN JOINT WATER & SEWER COMMISSION

1703 GLOUCESTER STREET, BRUNSWICK, GA 31520

JWSC R&R/CAPITAL PROJECTS - 03/22/2019

CONSTRUCTION IN PROGRESS

DESIGN IN PROGRESS

PROPOSED RIDGEWOOD TANK-WELL

History bullets:

- Site is located on Perry Lane Road, just west of Exit 38.
- Currently funded Capital Improvement Project #417
- Envisioned/designated in 2014.
- Construction plans and bid specifications created by Elmo A. Richardson, Jr. P.E., LLC Consulting Engineers (2015).
- Existing 12" well (Upper Floridan; 1,000 gpm) to be re-utilized; modification to existing well motor/pump.
- Proposed 250,000 gallon pre-stressed concrete ground storage tank with tray aeration.
- Proposed high service pumps (x2) with block building; chlorine building.
- Benefit would be supplementation of North Mainland water production system, currently the existing two Miocene (350-500 ft. depth; ~500 gpm) well sites (Golden Isles #1 & #2) are over-producing.
- Application of pressure control valves is being evaluated to limit Miocene well contribution to west side of I-95.

The proposal is to add a ground storage tank and treatment systems to the existing Ridgewood Well. This will provide water for the NMD area currently being served by two Miocene wells. These wells have been pushed since the connection between at Canal Crossing was made which links the old City water system to the North Mainland water system. The draw seemed to take much of the flow from the NMD system and pull it into the City system. The ability to pull from the Miocene Aquifer is much more limited than pulling from the Floridan Aquifer as the Ridgewood Well does. Staff believes the future expansion and growth in this area would be better served by the Ridgewood Well. Design drawings and documents are complete. This project has a budget of $1,000,000.

Storage Tanks & Wells

Golden Isles II Well
Golden Isles 2 with Lab
Ground Golden Isles I Well
Cate Road EST
Ridgewood Well
Dixon Swamp
Canal Road Well
FLETC GST
FLETC EST
FLETC Main Well
FLETC Standby Well
I-95 Exit 36 EST
I-95 Exit 36 Well
I-95 Exit 36 GST
I-95 Exit 36 Standby Well
Glynn Place Mall EST
Brunswick Villa GST
Brunswick Villa
Goodyear Park Well
First Street EST
Perry Park EST
Perry Park GST
Howard Coffin Park Well
Howard Coffin Park GST
Prince Street EST
Marshes of Glynn
East River
Morrison Slough
Brunswick River
Cowpen Creek
Burnett Creek
Gibson Creek
Yellow Bluff Creek
Hog Crowl Creek
Belle Point Creek
Cedar Point Creek
Cypress Mill Creek
Back River
Dupree Creek
Terry Creek
Academy Creek
Clubbs Creek

BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7100

PRIVATE ASSET POLICY FOR SMOKE TESTING RESULTS

The JWSC has experienced significant inflow and infiltration (I&I) issues within the SSI sewer collection system. The impact is consuming capacity in the collection system as well as the Dunbar Creek Water Pollution Control Facility (the treatment plant). To address this, the JWSC previously conducted a flow monitoring study on SSI to determine which sewer basins (Sewer Pump Station service areas) are in the most critical needs for reducing I&I. A smoke testing RFP was released to select a firm to conduct smoke testing in these more critical sewer basins. The firm of McKim & Creed was selected and contracted to perform the study. They will be commencing the study work no later than May 1. However, efforts are being made to move this up.

Typically, smoke testing identifies pathways from the grounds surface into the collection system. This can be from a variety of sources from rotted roots which penetrated the collection line to defective private laterals allowing surface drainage to enter the system. The latter is a significant problem in many system. Sometimes the defects are as simple as a missing cleanout cap. Many times there are more significant issues such as direct connections to gutters, open year drains connected to the lateral, or just a worn out lateral with cracks and holes allowing rain water to get in.

For the more complicated defects in private laterals, plumbing contractors are generally required to make the repairs or modifications required to eliminate the inflow of surface water or rain water. Glynn County Code, Article I, Chapter 2-16, Section 2-16-8,Subsection (v), Parts (1)-(4) states:

(v) If any (property) owner allows the entrance of infiltration or inflow, the Utility, upon written notice, may take one or more of the following actions:

(1) Require the owner to repair or replace the sewer lateral within thirty (30) days of notice;

(2) Charge the owner a sewer rate that reflects the costs of the additional expense of sewage treatment from the owner's property; and/or

(3) Require the owner to disconnect his sewer lateral from the utility sewer system or be charged for Utility disconnection.

(4) The Utility shall have the right to enter the premises to periodically insect sewer service laterals and systems of individual users to determine the existence of ground water infiltration.

With this in mind, the big questions to be concerned with are how will repairs to private laterals be managed once the defective private laterals and/or private sewers are identified? The County Code allows for the Utility to require almost immediate repairs – within thirty (30) days. This time requirement can be extended to a more reasonable sixty (60) or more days.

The cost of significant sewer lateral work required for repairs by the owner may present a problem. There may be some public concerns over the cost. This may be an area where we need to provide a payment plan for some to cover these costs. This would need to be approved as a policy by the JWSC.

It may be desirable that plumbing contractors be pre-qualified and approved to do the lateral repair. A list of approved contractors can be kept on hand and provided to any owners whose sewer lateral needs repair.