

City Manager Report

October 5, 2020



Park Improvements Coming Soon!



Stefen Wynn, M.P.A.
City Manager



Capital Improvement Projects

FY-2021 Begins Project Construction

Park Improvements:

Jarboe Park is about to receive substantial upgrades to nearly every aspect of the parks grounds. The City's Project Management Team: CM-Wynn; Colin Moore; Megan George (D-DPW); and Leon Smith (DPW) met with contractors on 9/28/2020 for a pre-construction meeting. The intent of the meeting was to coordinate for mobilization, and each piece of the improvements.

The City is awaiting permitting from: SJRWMD and the Army Corps of Engineers. Tom Gyorog, the Project Manager for Parsons Engineering, is working with both agencies to get the needed permits as soon as possible. Staff anticipates that permits will arrive in mid-late October.

Colin has done a phenomenal job at coordinating different facets of this project and ensuring that the City complies with the stipulations of the grant for the meandering asphalt pathway with ribbon curbing throughout the park. The granting agency is awaiting a boundary survey of the park in order to release the funds for the pathway.

During the coordination meeting with contractors, the ribbon curb was discussed. City Staff and the Contractor agreed that a landscape curb on both sides of the path will be installed, this will allow the Contractor to bring the grade on both sides of the path to the appropriate level and minimize the impact a curbing machine will have on the freshly laid asphalt.

01

Park Improvements:

Phase 1 Includes

*Former Phases: 1A; 1B;
and parts of 1C*

See [Attachment A](#) for
Color Renderings of
the Park Improvements



Typical Landscape Curb Machine



Typical Landscape Curb

TENTATIVE Construction Timeline:

02

TENTATIVE Construction Timeline:

*Court Demo;
Mobilization; Site Work;
Court Construction*

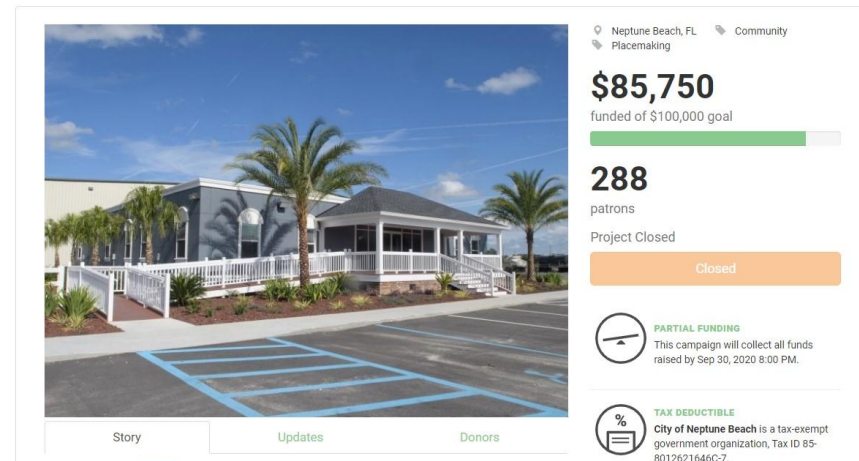
10/26/2020	Demo begins on ball courts by City Staff
11/2/2020	ACON begins mobilizing on site; fencing is erected throughout construction areas around the park
11/16/2020	Site Work Begins for Tennis, Pickleball and Basketball Courts
12/14/2020	Court construction begins with Coast to Coast Recreation
12/7/2020	Site Work Begins on Pathway and Bridge Placement, pathway lighting conduit also installed
1/4/2021	Pathway Construction Begins; Curb installation as path is completed
3/31/2021	Proposed Major Construction Completion
5/7/2021	Punchlist Complete and Final Completion

Capital Improvement Projects

FY-2021 Begins Project Construction Cont.

Senior Activity Center

A huge THANK YOU to the 288+ Individual donors that gave towards the fundraising effort for the Senior Activity Center. I'm very thankful for Leslie's incredible effort to reach our fundraising goal! The campaign ended on 9/30/2020, but we keep receiving checks and donation - we'll keep accepting donations and searching for donors until the doors are open at the new facility.



03

Senior Activity Center:

Successful Fundraising,
Building is in Production,
Permitting is in Process

Speaking of doors, the building is currently in production and the City anticipates delivery in early FY-2021. While awaiting permitting with SJRWMD, Staff is exploring a possible additional parking area currently within the confines of the City Yard wall.

Staff have also begun to prepare the site to construct and install the new building. Staff are scheduled to meet on 10/5/2020 at 10AM to discuss the porch (thanks to the Eckstein Charitable Trust for donating funds for the porch); parking; sidewalks and permitting.

Stormwater Design

Parsons Engineering gave updated cost estimates for completing Stormwater Improvements East of Third as it relates to the City's stormwater collection system; and culverts where drainage ditches/creeks flow underneath roadways to the outfall in Hopkins Creek. The updated cost estimates are robust and if each lateral under Third Street is completed and each culvert during the same time period, the City will need to debt-fund the project.

While putting together an RFP for a: Tax-Exempt; Bank-Qualified; Non-Revolving Line of Credit, it became apparent that the City will need to hire the services of a qualified financial advisor to help determine the best path forward.

Stormwater Design:

Additional Survey
Ordered, 30% Design
Construction Estimates,
CM Recommendation
for Funding

[See Attachments B - G](#)
for Detailed Cost
Estimates

System No.	Storm Sewer System Name	Total Construction Cost	Total Construction, Engineering and CEI Cost
1	Lemon St.	\$1,565,954	\$1,847,826
2	Walnut St.	\$1,547,225	\$1,887,614
3	Pine St.	\$865,366	\$1,055,747
4	Florida Blvd. N	\$1,954,477	\$2,384,462
5	Florida Blvd. S	\$677,949	\$827,098
6	Oleander St.	\$4,158,984	\$5,073,961
Total		\$10,769,956	\$13,076,709

Capital Improvement Projects

FY-2021 Begins Project Construction Cont.

Waste Water Treatment Plan & Collection Upgrades:

The Public Works Department has worked extensively with the City's Engineer to review and analyze information as its available from the study being completed by J. Collins Engineering. The City used information from the study to put together a Request for Inclusion (RFI) for funding from the Clean Water State Revolving Fund.



Waste Water Treatment Plant at The Yard

During the Finance Committee Meeting on 9/30/2020, Staff presented a completed application to Committee Members with a list of projects. During the meeting, staff were requested to include in the RFI a scope of work line item to harden the Waste Water Treatment Plant's facilities. The most updated document has the requested addition.

To review the list of projects and the RFI please see **Attachment H**.

To review the J.Collins Engineering Task Order, please see **Attachment I**.

DEP Consent Order:

Within a two-year period, the City violated the Nitrogen Limits for discharge of its effluent as required by the City's NPDES permit, a total of (14) times. Rather than pay a fine to FDEP for the violations, the City opted to do an in-kind project in lieu of fine.

The Oceanwood neighborhood experiences sanitary sewer backup due to infiltration of stormwater within the sanitary sewer system. Excess stormwater infiltration after heavy rain events causes lift stations throughout the City to work harder than normal. The lift station that services the Oceanwood neighborhood is forced into a manhole on Cedar Street, that manhole also receives sanitary sewer from another lift station.

A choke point is created by both lift stations pumping into a single manhole. Staff are rerouting the force main from the Oceanwood neighborhood to another manhole further down the line. This project has been approved by DEP and the work commenced to reroute the line after a permit was approved and received from DEP.

To review the Consent Order, please see **Attachment J**.

05

Waste Water Treatment Plant & Collection Upgrades:
Study, Design, and Funding Opportunity

06

DEP Consent Order:
Oceanwood Force Main Relocation

Finance Department

End of Year, New Budget, Budget Summary

Finance Department Update:

Carl and the rest of his Department have been very busy getting information around for the FY-2020 Audit, closing out 2020, and ensuring that the General Ledger is ready for the FY-2021 Budget that began on October 1st. The City has been diligently working to finish or prepare for many projects, and that is reflected in the information below.

Large Expenditures for FY-2020:

01

Finance Department Update: *End of Year Budget Summary*

- **Parsons Engineering - \$302,203.83**
 - Multiple public works projects have been designed, or are currently in-design (including the Park, Stormwater Improvements, etc.)
- **Dover, Kohl & Partners - \$248,734.08**
 - Phase 1, the Vision Plan, of the project is nearly completed
 - Phase 2, the Comprehensive Plan Update, is about to be started and is partially funded from a Department of Economic Opportunity Grant
 - Phase 3, the Code Rewrite, will be started as soon as the Comprehensive Plan Update is nearly final
- **Parking funds paid to Atlantic Beach - \$48,343.31**
 - CONB has kept 30% of the COAB earnings to help cover the cost of startup and the program, this amount needs to be readjusted based on actual data received from the parking program
- **Universal for building inspections - \$69,764.50**
 - Revenue is down overall for nearly every revenue stream, but the Building Inspector continued to work throughout the pandemic
- **Ansbacher Law - \$192,519.34**
 - This amount includes legal services for multiple items above and beyond normal legal services
 - I'm happy to report that nearly all lawsuits against the City have been resolved or settled, with two exceptions (both are related to zoning)

The Finance Department will resume preparing monthly Budget Summaries now that our Chief Financial Officer has settled into his office. The Preliminary Budget Summary (Unaudited) is available and will be sent as a separate attachment to this report from our CFO.

02

Water and Wastewater Rate Study

Water and Wastewater Rate Study

The Florida Rural Water Association has offered to provide, at no cost to the City, a Rate Study for the City's Water and Wastewater Rates. The Study will review current water and wastewater rates, expenses, and revenues and compare that to the long-term plan of the City for infrastructure improvements; and then provide recommendations.

Typically, this type of study can cost \$40,000+ for a City the size of Neptune Beach. Completing this study is especially important due to the RFI mentioned about the Clean Water State Revolving Loan Fund for improvements to the Wastewater Treatment Plant.

For More Information on the Offer from FRWA Please See **Attachment K**.

Personnel – Related

Staff Spotlight, Vacancies, Policy Changes



Staff Spotlight:

Sean Souza passed an exam to become a Certified Class “C” Wastewater Operator on 9/23/2020! Becoming a certified operator isn’t an easy feat, and requires extensive in-field training and classroom instruction, Leon, Alan and I are extremely proud of him!

01

Staff Spotlight:

Sean Souza



Sean Souza, Class “C,” Wastewater Operator

Biography

Sean started his career with the City of Neptune Beach Public Work on 6-18-18 as a mechanic working alongside Jeff Paul. When an opportunity opened in the Wastewater Department, Sean moved departments. On October 2, 2018 Sean began helping Alan Kelly with supply requisitions and project management.

His recent studies over the course of a year included Operation of Wastewater Treatment Volumes I & II which are required by FDEP and additional studies in Nitrogen Control in Wastewater Treatment Plants. Before sitting for his examination, Sean attended a Wastewater Class “C” review class in Gainesville, Florida taught by Ron Trygar. He also has received over 1000+ hours of One-on-One Training at the WWTP from Alan Kelly. These experiences combined have proven beneficial and enabled Sean to obtain his **CLASS “C”** license in Wastewater Treatment.

His current goal with the City of Neptune Beach is to continue being an asset to our organization through his strong work ethic & commitment to growth by obtaining a Class “C” water license. This dual license will prove invaluable to our current operations and future endeavors.

02

Vacancies

Vacancies:

The City has received two resignation letters and an intent to retire letter. The City Clerk posted two position internally on Wednesday, September 30, 2020. Per existing policy, these vacancies must be posted internally before external applicants may apply.

Currently, the Mobility Management Director position is posted internally as well as the Director of Public Works position. On Monday, these positions will be opened up to external candidates and Catherine has plans to saturate job boards with the listings.

Friday, October 2, will be the last day for one of the wastewater plant operators. That position will be posted internally for five days on Monday before external candidates are sought.

To view the Directors Job Descriptions Please see **Attachments L and M**.

Personnel – Related

Staff Spotlight, Vacancies, Policy Changes, Cont.



03

Policy Changes

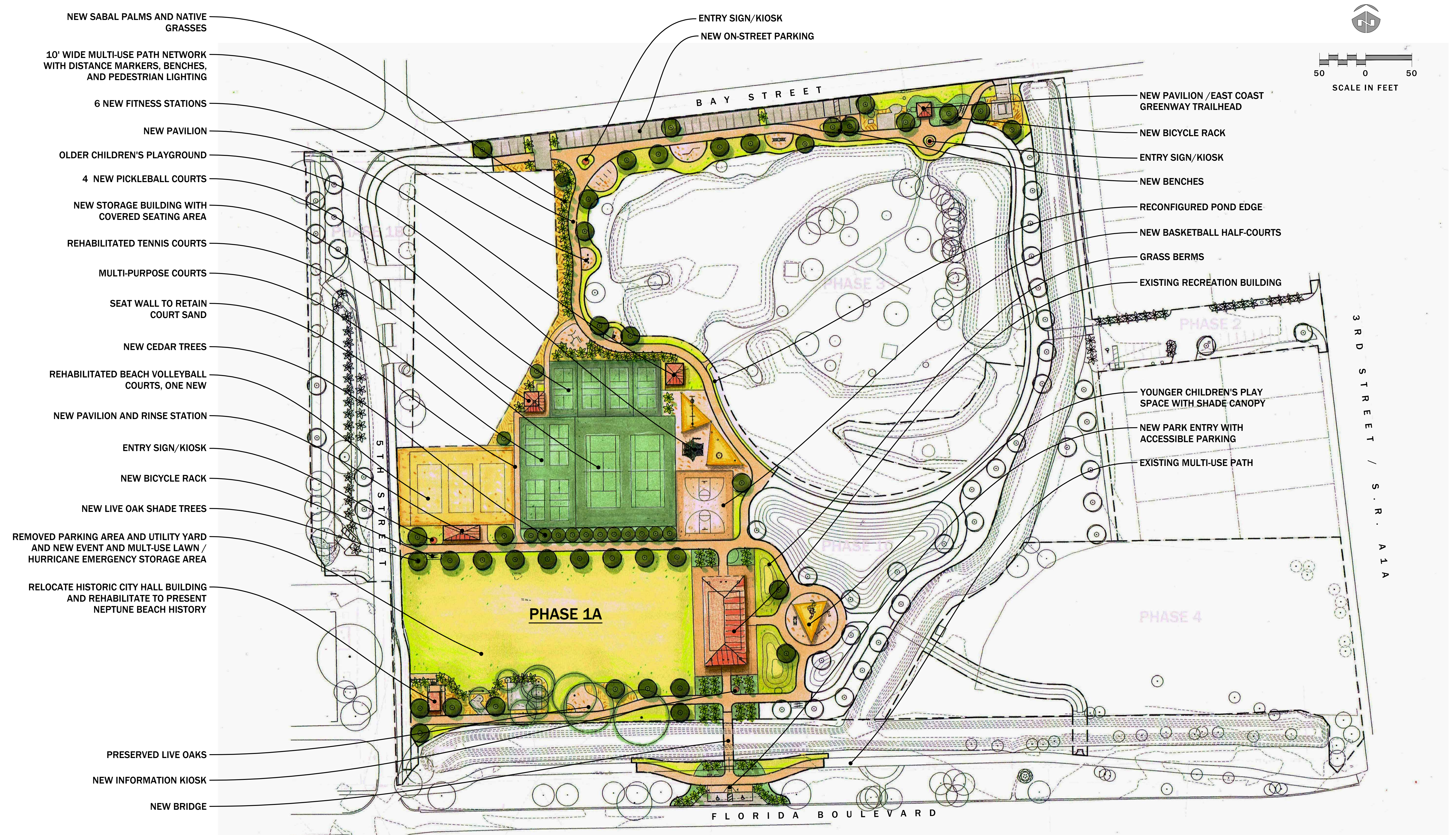
Policy Changes:

During Contract Negotiations, the following items were adjusted, have been submitted back to the Union and are awaiting Ratification:

- **Compensatory Time** is limited to accruing a maximum of 90 Hours at any one time; Compensatory Time must be used before the end of the fiscal year in which it was earned.
 - A one-time payout of compensatory time over (90) hours earned is authorized at FY-2020 Year End and all employees (except for the police department) that have over (90) hours will begin FY-2021 with a maximum of (90) hours and are not allowed to accrue any more compensatory time until the balance is brought below (90) hours.
- **Specialty Pay** is being phased out and any employee that receives specialty pay will have a \$0.25/hour increase in wage added to their regular salaries and the \$500/qualifying certification or license is no longer valid. Each year an employee must submit paperwork showing that the qualifying certification/license is active or will lose the \$0.25/hour.
- **Personal Time Accrual** - is limited to Regular Full-Time Employees only, the provision for Regular Part-Time Employees has been removed.
 - A one-time payout for all Regular Part-Time Employees that have a bank of personal time is authorized at FY-2020 Year End to bring those employees that are no longer in compliance with policy change to zero.
- A **Salary Study** has been requested by the Union, and can be completed by City Hall Staff instead of a consulting firm. This Salary Study will help to ensure that the City is paying competitive wages, and would be the impetus for adjusting wages.
- The **Boot Allowance** provision has been adjusted and cleaned up. Employees are eligible to receive a \$200/year boot allowance provided that they abide by the procurement policy and produce a receipt for the boots that were purchased.
- **Paid Stewardship Training**, I agreed to (1) paid day of training for shop stewards. As a tradeoff, I asked that the Union provide relevant safety training to our employees at least once a year.

Due to the anticipated ratification of the Local 630 Contract, we've already implemented the Compensatory Time payouts and the Personal Time payout for part time employees.

The Memo sent to the Public Works Department can be viewed as **Attachment N**.



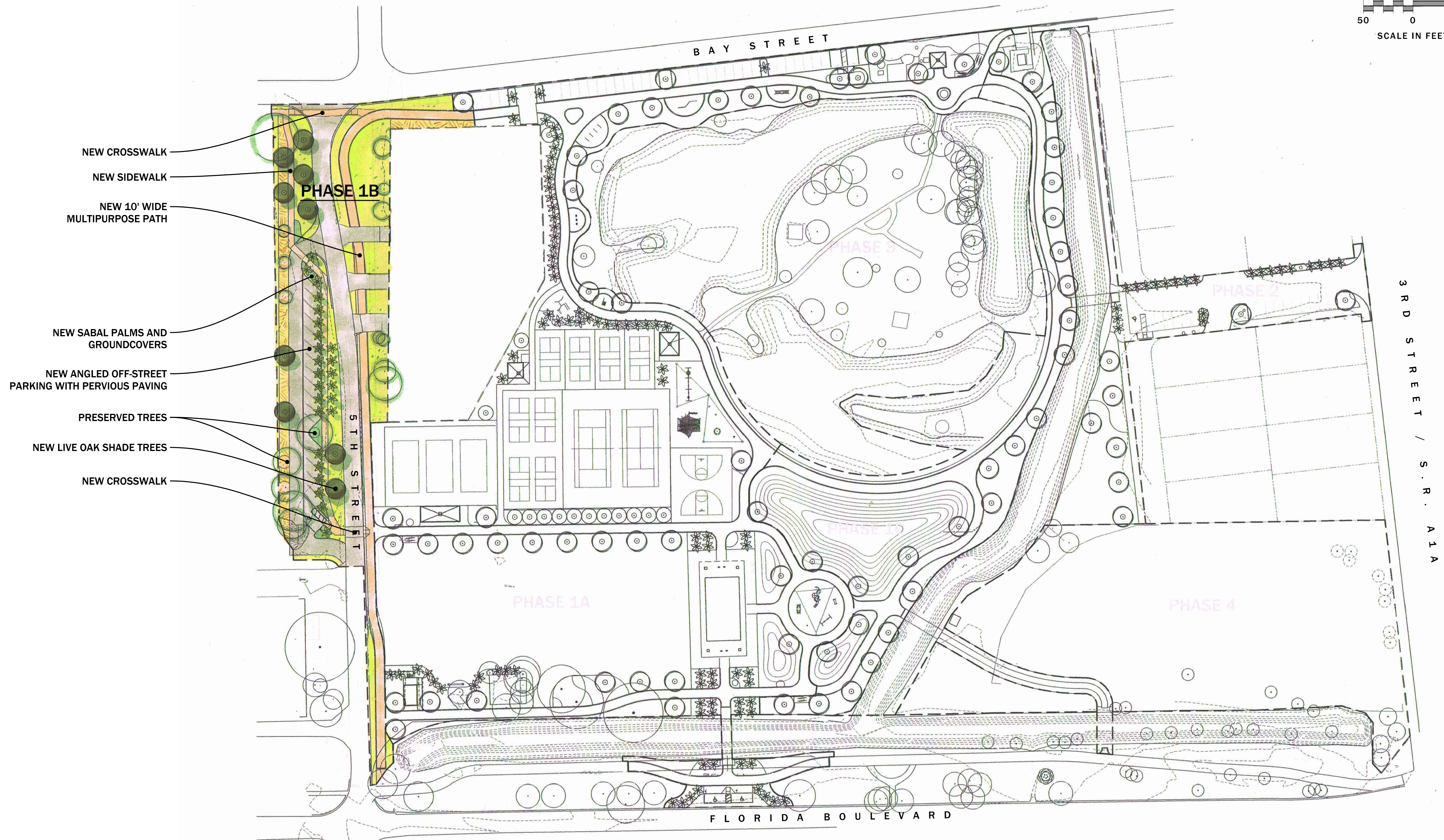
September 2020

JARBOE PARK IMPROVEMENT PLAN

PHASE 1A



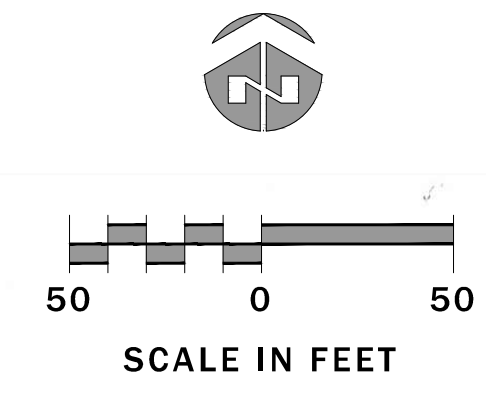
50 0 50
SCALE IN FEET



September 2020

JARBOE PARK IMPROVEMENT PLAN

PHASE 1B



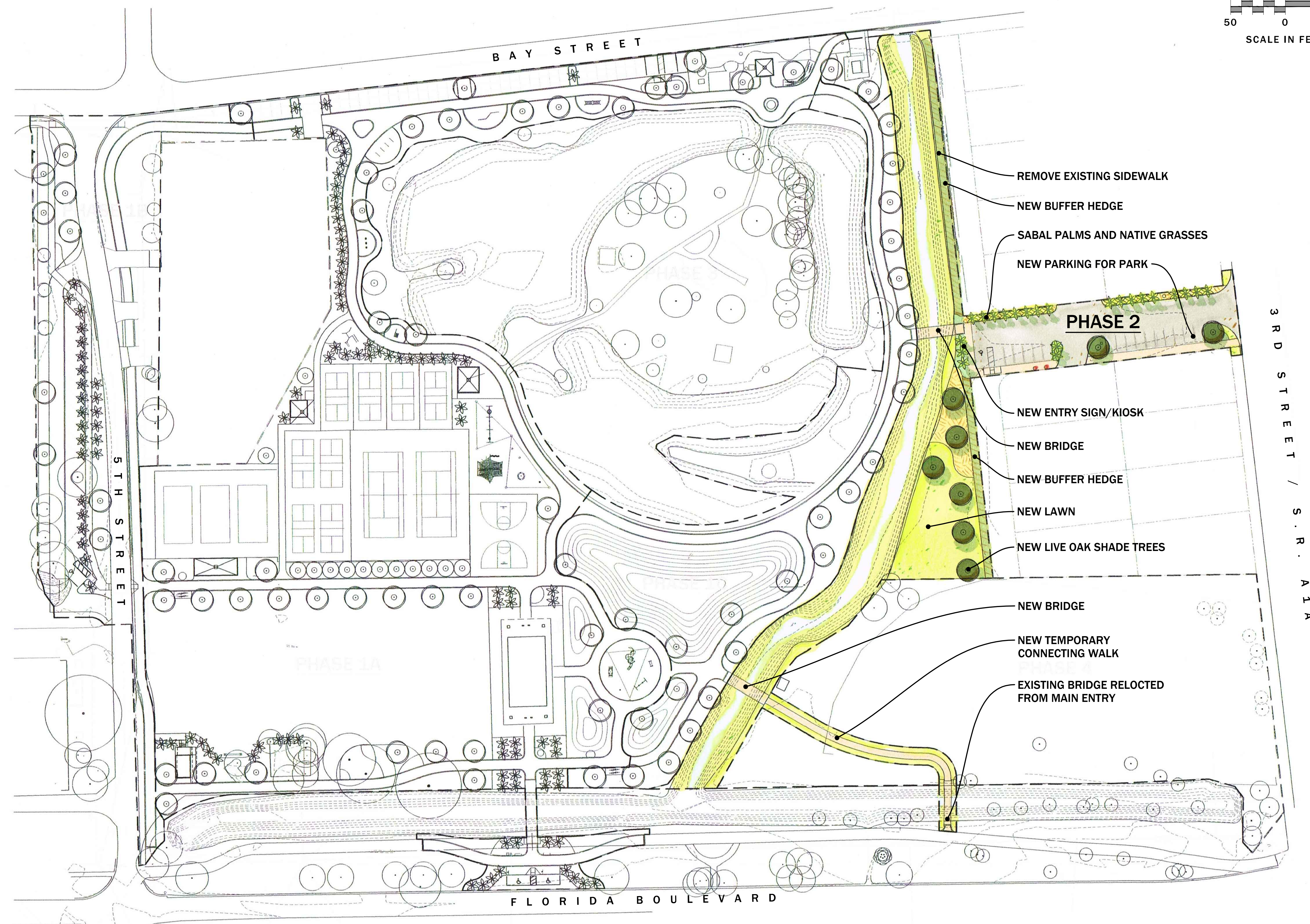
September 2020



JARBOE PARK IMPROVEMENT PLAN

PHASE 1C

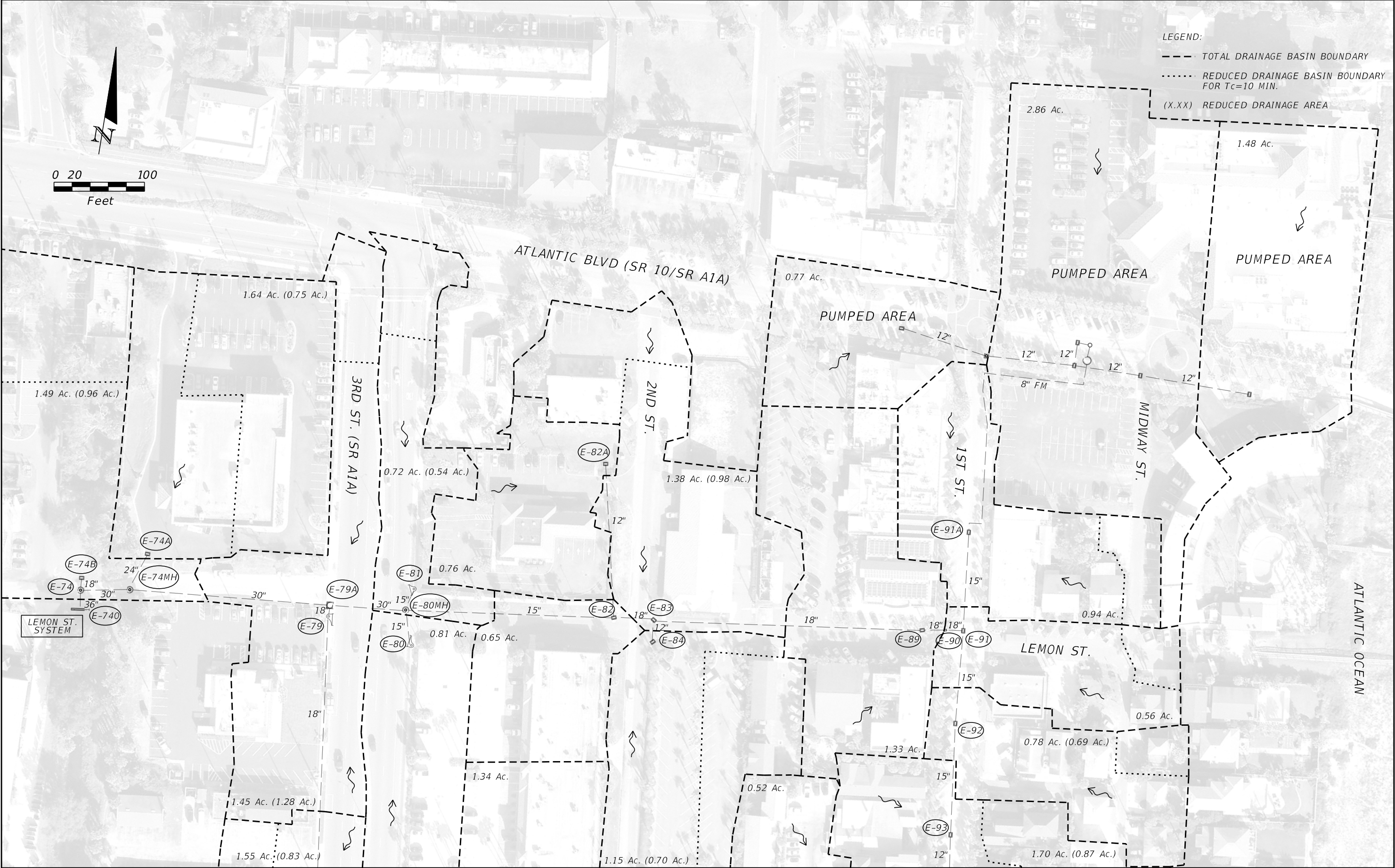




September 2020

JARBOE PARK IMPROVEMENT PLAN

PHASE II



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD, SUITE 200 JACKSONVILLE, FL 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 1
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	
				EXISTING DRAINAGE MAP				



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	

EXISTING DRAINAGE MAP

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Lemon (Existing)
State Road: A1A

Sheet: 1 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END				STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS							
ALIGNMENT NAME							INCREMENTAL	CUMULATIVE	COMPOSITE C VALUE										AREA	SUB-TOTAL (C/A)	CROWN						UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)	HYD. GRAD.	PHYSICAL VELOCITY (fps)	ZONE: Zone 4		
																					FLOWLINE ELEVATION											MIN. PHYSICAL	FREQUENCY (yrs): 3.00 Year	
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER																															
			E-74	Type 8 MH	21.32			0.000	11.96	0.04	5.75	11.164	0.000	66.65	0.00	7.70	2.06	5.63	5.45	0.18	1	36	0.735%	9.43	15.69	L-74: Upstream invert adjusted due to adverse slope								
13+23.11	-2522.73	Lt.	E-74O				0.000	4.36										4.35	0.01	4.36			4.35	0.01					0.05%	2.22				
BAY_PVMT_CL			E-80			0.760	0.807	0.613										30.30	30.03	0.27			2.542%	3.09										
13+23.11	-2477.65	Lt.	E-80MH	Type 1 Ci	40.67	0.760	0.807	0.613	10.00	0.22	6.18	0.613	0.000	3.79	0.15	9.51	-20.79	5.96	4.93	1.03	1	15	2.54%	9.11	11.18									
BAY_PVMT_CL			E-81			0.760	0.538	0.409										4.71	3.68	1.03			0.19%	3.09										
13+23.11	-2536.71	Lt.	E-80MH			Type 4 Ci	25.16	0.760										0.538	0.409	30.13			30.03	0.10					8.193%	2.06				
BAY_PVMT_CL			E-82	0.760	0.653			0.497	7.22	5.16	2.06	8.19%	16.36																					
13+23.11	-2517.06	Lt.	E-80MH	Type F DBI	234.41			0.760	8.955	6.806	5.97	3.91	2.06	0.19%	3.59																			
BAY_PVMT_CL			E-83			0.760	0.984	0.748	157.31	30.03	127.28	31.812%	34.60																					
13+23.11	-2516.45	Lt.	E-82			Type F DBI	51.79	0.760	7.543	5.733	6.87	5.95	0.92	0.39%	3.59																			
BAY_PVMT_CL			E-83	0.760	0.699			0.532	5.62	4.70	0.92	0.19%	20.49																					
13+23.11	-2492.32	Lt.	E-83	Type F DBI	24.54			0.760	0.699	0.532	178.20	157.31	20.89	8.749%	20.49																			
BAY_PVMT_CL			E-84			0.760	0.699	0.532	6.15	6.05	0.10	0.19%	2.84																					
13+23.11	-2492.32	Lt.	E-83			Type F DBI	24.54	0.760	0.699	0.532	4.65	4.55	0.10	0.15%	2.84																			
BAY_PVMT_CL			E-89	0.760	1.336			1.015	178.65	178.20	0.45	6.825%	4.18																					
13+23.11	-2518.99	Lt.	E-83	Type F DBI	304.61			0.760	5.860	4.454	7.72	6.04	1.68	6.83%	12.88																			
BAY_PVMT_CL			E-90			0.760	0.002	0.002	6.72	5.04	1.68	0.20%	16.40																					
13+23.11	-2519.43	Lt.	E-89			Type 9 Ci	29.49	0.760	4.524	3.438	199.64	198.28	1.36	5.603%	16.40																			
BAY_PVMT_CL			E-91	0.760	0.560			0.426	6.80	6.06	0.74	0.24%	3.18																					
13+23.11	-2520.52	Lt.	E-90	Type F DBI	19.86			0.760	4.522	3.437	5.30	4.56	0.74	0.15%	3.18																			
BAY_PVMT_CL			E-92			0.760	0.687	0.522	199.64	198.28	1.36	3.525%	13.01																					
13+23.11	-2417.63	Lt.	E-91			Type F DBI	110.97	0.760	3.024	2.298	7.49	6.94	0.55	1.86%	8.82																			
BAY_PVMT_CL			E-93	0.760	0.870			0.661	5.99	5.44	0.55	0.15%	13.00																					
13+23.11	-2294.44	Lt.	E-92	Type F DBI	131.19			0.760	2.337	1.776	207.33	199.64	7.70	3.523%	13.00																			
BAY_PVMT_CL			E-94			0.760	0.133	0.101	7.45	7.37	0.08	0.40%	4.08																					
13+23.11	-2204.50	Lt.	E-94MH			Type F DBI	54.10	0.760	1.467	1.115	5.95	5.87	0.08	0.15%	4.08																			
BAY_PVMT_CL			E-95	0.760	0.524			0.399	211.79	207.33	4.46	3.348%	11.22																					
13+23.11	-2203.79	Lt.	E-94	Type F DBI	89.98			0.760	1.334	1.014	7.47	7.28	0.19	0.17%	2.37																			
BAY_PVMT_CL			E-96			0.760	0.810	0.615	6.22	6.03	0.19	0.19%	4.38																					
13+23.11	-2178.62	Lt.	E-95			Type F DBI	143.64	0.760	1.338	1.017	214.95	211.79	3.15	2.036%	8.75																			
BAY_PVMT_CL			E-97	0.760	0.834			0.634	8.27	7.50	0.77	0.59%	4.38																					
13+23.11	-2182.67	Lt.	E-99	Type 4 Ci	307.63			0.760	1.338	1.017	7.02	6.25	0.77	0.19%	8.68																			
BAY_PVMT_CL			E-98			0.760	0.508	0.386	221.11	219.36	1.75	2.693%	8.68																					
13+23.11	-2196.25	Lt.	E-79			Type 4 Ci	97.91	0.760	2.680	2.037	8.51	8.44	0.07	0.13%	1.77																			
BAY_PVMT_CL			E-99	0.760	1.845			1.402	7.51	7.44	0.07	0.26%	2.62																					
13+23.11	-2165.33	Lt.	E-98	Type 8 MH	54.42					0.000	224.84	221.11	3.72	2.261%	7.95																			
BAY_PVMT_CL			E-74MH			0.760	0.749	0.569	8.65	8.39	0.25	0.28%	2.62																					
13+23.11	-2523.03	Lt.	E-74			Type F DBI	44.38	0.760	0.749	0.569	7.65	7.39	0.25	0.26%	4.84																			
BAY_PVMT_CL			E-74A	0.760	0.749			0.569	225.45	224.84	0.61	0.838%	4.84																					
13+23.11	-2506.17	Lt.	E-74MH	Type F DBI	13.58			0.760	0.962	0.731	8.61	8.60	0.01	0.04%	0.98																			
BAY_PVMT_CL			E-74B			0.760	0.962	0.731	7.61	7.60	0.01	0.26%	0.98																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	21.24	19.68	1.56	0.696%	5.12																			
BAY_PVMT_CL			E-74C	0.760	0.962			0.731	8.44	8.43	0.01	0.01%	0.43																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	7.19	7.18	0.01	0.19%	6.93																			
BAY_PVMT_CL			E-74D			0.760	0.962	0.731	18.08	13.86	4.22	1.002%	6.93																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	4.95	4.25	0.70	0.23%	3.08																			
BAY_PVMT_CL			E-74E	0.760	0.962			0.731	3.45	2.75	0.70	0.15%	2.55																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	19.68	18.08	1.60	1.278%	6.93																			
BAY_PVMT_CL			E-74F			0.760	0.962	0.731	4.94	4.75	0.19	0.20%	2.55																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	3.69	3.50	0.19	0.19%	2.55																			
BAY_PVMT_CL			E-74G	0.760	0.962			0.731	8.23	5.63	2.60	1.715%	12.75																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	4.61	3.90	0.71	1.30%	10.37																			
BAY_PVMT_CL			E-74H			0.760	0.962	0.731	2.11	1.40	0.71	0.08%	10.37																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	8.26	8.23	0.03	3.982%	1.12																			
BAY_PVMT_CL			E-74I	0.760	0.962			0.731	5.90	4.13	1.77	3.99%	15.62																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	3.90	2.13	1.77	0.10%	15.62																			
BAY_PVMT_CL			E-74J			0.760	0.962	0.731	5.75	5.63	0.12	5.227%	2.55																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	4.44	3.73	0.71	5.23%	14.76																			
BAY_PVMT_CL			E-74K	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74L			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74M	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74N			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74O	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74P			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74Q	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74R			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74S	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74T			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74U	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74V			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74W	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74X			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74Y	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-74Z			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74			Type F DBI	13.58	0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76																			
BAY_PVMT_CL			E-75	0.760	0.962			0.731	2.94	2.23	0.71	0.15%	14.76																					
13+23.11	-2506.17	Lt.	E-74	Type F DBI	13.58			0.760	0.962	0.731	2.94	2.23	0.71	0.15%	14.76</																			

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

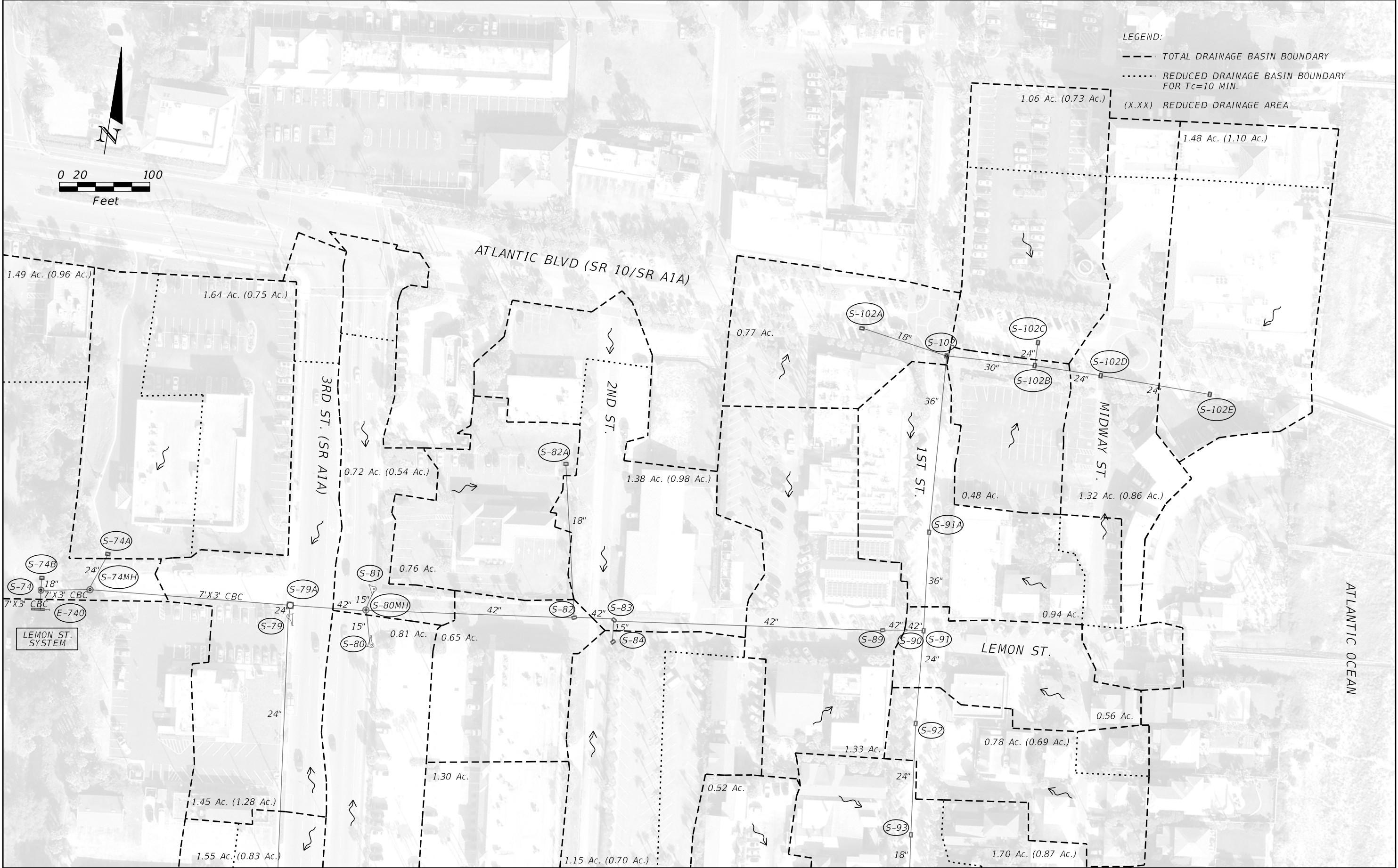
Network: Lemon (Existing)
State Road: A1A

Sheet: 2 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END				STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C'A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS			
ALIGNMENT NAME							COMPOSITE C VALUE	AREA	SUB-TOTAL (C'A)										CROWN								RISE	HYD. GRAD.	PHYSICAL	MIN. PHYSICAL
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER																FREQUENCY (yrs): 3.00 Year											
							UPPER END ELEVATION (ft)	FLOWLINE ELEVATION	LOWER END ELEVATION (ft)											FALL (ft)	MANNINGS n: 0.012									
BAY_PVMT_CL				E-79	Type 1 CI	12.25	0.760	1.278	0.971	11.41	0.03	5.86	2.037	0.000	11.93	0.05	9.64	-4.22	13.86	13.68	0.18	1	18	0.950%	6.75	6.68				
13+23.11	-2503.90	Lt.	E-79A				0.760	2.680	2.037										4.25	4.21	0.04			0.34%	3.78					
BAY_PVMT_CL				E-80MH					0.000										30.03	13.68	16.35			1.020%	9.83					
13+23.11	-2514.79	Lt.	E-79A	Type 8 MH	84.06				0.000	11.46	0.14	5.85	7.828	0.000	48.28	15.35	9.59	-20.44	5.38	5.20	0.18	1	30	0.21%	4.20	20.62				
BAY_PVMT_CL				E-79A					0.000										2.88	2.70	0.18			0.08%						
BAY_PVMT_CL				E-79A	Junction	221.98			0.000	11.60	0.30	5.82	9.864	0.000	59.90	1.42	9.64	-4.04	13.68	8.23	5.45	1	30	1.571%	12.20	25.20				
13+23.11	-2516.08	Lt.	E-74MH					0.000	5.20										4.49	0.71	0.32%			5.13						
BAY_PVMT_CL				E-82A			0.760	0.759	0.577										2.70	1.99	0.71			0.08%						
BAY_PVMT_CL				E-82A	Type F DBI	170.21	0.760	0.759	0.577	10.00	0.63	6.18	0.577	0.000	3.56	0.32	11.37	-147.71	159.08	157.31	1.77	1	12	1.265%	4.53	4.36				
13+23.11	-2686.40	Lt.	E-82				0.760	0.759	0.577										7.94	5.78	2.16			1.27%	5.55					
BAY_PVMT_CL				E-91A			0.760	0.938	0.713										6.94	4.78	2.16			0.26%						
BAY_PVMT_CL				E-91A	Type F DBI	116.85	0.760	0.938	0.713	10.00	0.35	6.18	0.712	2.500	6.90	0.49	9.65	-199.31	208.96	207.33	1.63	1	15	0.840%	5.62	3.04				
13+23.11	-2629.35	Lt.	E-91				0.760	0.937	0.712										8.28	8.06	0.22			0.19%	2.48					
BAY_PVMT_CL				E-94MH					0.000										7.03	6.81	0.22			0.19%						
BAY_PVMT_CL				E-94MH	Type 8 MH	92.14			0.000	10.27	0.18	6.11	1.115	0.000	6.81	1.54	10.51	-208.85	219.36	214.95	4.42	1	12	2.693%	8.68	0.40				
13+23.11	-2206.32	Lt.	E-93					0.000	8.55										8.54	0.01	0.01%			0.51						
BAY_PVMT_CL				E-93					0.000										7.55	7.54	0.01			0.26%			L-94A: Upstream invert adjusted due to adverse slope			

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		1
					N/A	DUVAL	N/A		

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Lemon
State Road: A1A

Sheet: 1 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
						INCREMENTAL	SUB-TOTAL (C/A)	CROWN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
ALIGNMENT NAME						PHYSICAL												HYD. GRAD.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
STATION	OFFSET DISTANCE (ft.)	SIDE																	UPPER LOWER	COMPOSITE C VALUE		AREA	RISE				SPAN	MIN. PHYSICAL	PHYSICAL VELOCITY (fps)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Lemon
State Road: A1A

Sheet: 2 of 2
Prepared by: MM
Checked by: TJJ

Date:
Date:

LOCATION OF UPPER END				STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C'A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS									
ALIGNMENT NAME							INCREMENTAL	COMPOSITE C VALUE	AREA										SUB-TOTAL (C'A)	CROWN								RISE	HYD. GRAD.							
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER				TIME OF CONCENTRATION (min)													TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)		TOTAL (C'A)	BASE FLOW (cfs)						TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)
																												FLOWLINE ELEVATION	VELOCITY (fps)							
13+23.11 -2492.32 Lt				S-74B	Type F DBI	13.57	0.760	0.962	0.731	10.00	0.09	6.18	0.731	0.000	4.51	0.10	9.54	3.79	5.74	5.62	0.12	1	18	5.227%	2.55	26.10	ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.45									
BAY_PVMT_CL				S-74			0.760	0.962	0.731										4.44	3.73	0.71			5.23%	14.77											
13+23.11 -2503.90 Lt				S-79	Type 1 CI	12.25	0.760	1.278	0.971	12.54	0.03	5.63	3.385	0.000	19.08	0.06	9.69	3.71	2.94	2.23	0.71			0.15%	6.07											
13+23.11 -2503.90 Lt				S-79A			0.760	4.454	3.385										5.98	5.85	0.14	1	24	0.851%	7.21											
No Chains				S-80MH					0.000										5.89	5.78	0.10			0.85%	7.21											
13+23.11 -2514.79 Lt				S-79A	Type 8 MH	84.06			0.000	14.80	0.24	5.25	10.595	0.000	55.62	0.12	9.59	3.41	3.89	3.78	0.10	1	42	0.10%	5.78											
BAY_PVMT_CL				S-79A					0.000										6.19	5.85	0.34			0.278%	5.78											
13+23.11 -2516.08 Lt				S-74MH	Junction	221.98			0.000	15.01	1.07	5.22	13.980	0.000	72.94	0.00	9.69	3.84	5.38	5.15	0.24	1	7x3 CBC	0.28%	6.01											
BAY_PVMT_CL				S-82A					0.000										1.88	1.65	0.24			0.05%	6.01											
13+23.11 -2516.08 Lt				S-82	Type F DBI	170.21	0.760	0.758	0.576	10.00	1.41	6.18	0.576	0.000	3.56	0.06	11.37	4.32	5.85	5.68	0.16	1	18	0.095%	3.47											
BAY_PVMT_CL				S-91A			0.760	0.758	0.576										4.65	4.43	0.22			0.10%	4.06											
13+23.11 -2629.35 Lt				S-91	Type F DBI	109.06	0.760	0.938	0.713	12.40	0.61	5.66	3.712	0.000	21.02	0.01	9.65	1.92	1.65	1.43	0.22			0.04%	4.06											
BAY_PVMT_CL				S-94MH					0.000										7.05	6.82	0.23	1	18	0.154%	2.01											
13+23.11 -2206.32 Lt				S-93	Type 8 MH	88.14	0.760	0.758	0.576	10.00	1.41	6.18	0.576	0.000	3.56	0.06	11.37	4.32	6.54	6.28	0.26	1	18	0.15%	2.50											
BAY_PVMT_CL				S-96A			0.760	0.938	0.713										5.04	4.78	0.26			0.15%	2.50											
13+23.11 -2177.52 Lt				S-97	Type F DBI	128.84	0.760	0.938	0.713	12.40	0.61	5.66	3.712	0.000	21.02	0.01	9.65	1.92	7.73	7.63	0.10	1	36	0.098%	2.97											
BAY_PVMT_CL				S-102A			0.760	4.884	3.712										6.13	6.02	0.11			0.10%	3.24											
13+23.11 -2851.44 Lt				S-102	Type F DBI	98.62	0.760	0.768	0.584	10.00	0.81	6.18	0.584	0.000	3.61	0.06	9.49	1.42	3.13	3.02	0.11	1	18	0.06%	3.24											
BAY_PVMT_CL				S-102B					0.000										8.36	8.06	0.29	1	18	0.235%	3.02											
13+23.11 -2819.14 Lt				S-102	Type F DBI	97.79	0.760	0.768	0.584	10.00	0.81	6.18	0.584	0.000	3.61	0.06	9.49	1.42	6.54	6.33	0.21	1	18	0.24%	3.16											
BAY_PVMT_CL				S-102C			0.760	0.531	0.403	10.00	1.52	6.18	0.403	0.000	2.49	0.03	10.09	1.75	5.04	4.83	0.21			0.15%	3.16											
13+23.11 -2844.65 Lt				S-102B	Type F DBI	25.64	0.760	0.531	0.403	10.00	1.52	6.18	0.403	0.000	2.49	0.03	10.09	1.75	8.34	8.25	0.09	1	18	0.160%	1.41											
BAY_PVMT_CL				S-102D			0.760	0.531	0.403										7.94	7.75	0.19	1	18	0.15%	2.50											
13+23.11 -2819.14 Lt				S-102	Type F DBI	97.79	0.760	0.768	0.584	10.00	0.81	6.18	0.584	0.000	3.61	0.06	9.49	1.42	6.44	6.25	0.19	1	18	0.15%	2.50											
BAY_PVMT_CL				S-102E			0.760	0.768	0.584										8.07	7.90	0.16			0.141%	2.04											
13+23.11 -2819.14 Lt				S-102B	Type F DBI	97.79	0.760	0.484	0.368	11.08	0.56	5.93	2.415	0.000	14.32	0.05	9.03	0.97	6.18	6.03	0.15	1	30	0.15%	2.50											
BAY_PVMT_CL				S-102C			0.760	0.484	0.368										4.68	4.53	0.15			0.15%	2.50											
13+23.11 -2819.14 Lt				S-102D	Type F DBI	73.87	0.760	3.178	2.415	11.08	0.56	5.93	2.415	0.000	14.32	0.05	9.03	0.97	8.06	7.90	0.16	1	30	0.146%	2.92											
BAY_PVMT_CL				S-102E			0.760	0.731	0.555	10.00	0.39	6.18	0.555	0.000	3.43	0.02	8.77	0.68	5.97	5.82	0.15			0.15%	3.53											
13+23.11 -2844.65 Lt				S-102B	Type F DBI	25.64	0.760	3.178	2.415	11.08	0.56	5.93	2.415	0.000	14.32	0.05	9.03	0.97	3.47	3.32	0.15	1	24	0.08%	1.09											
BAY_PVMT_CL				S-102D			0.760	0.731	0.555	10.00	0.39	6.18	0.555	0.000	3.43	0.02	8.77	0.68	8.09	8.06	0.02			0.221%	1.09											
13+23.11 -2811.44 Lt				S-102B	Type F DBI	73.87	0.760	0.731	0.555	10.00	0.39	6.18	0.555	0.000	3.43	0.02	8.77	0.68	6.23	6.18	0.06	1	24	0.22%	3.66											
BAY_PVMT_CL				S-102E			0.760	0.859	0.653	10.75	0.43	6.00	1.492	0.000	8.95	0.01	8.90	0.73	4.23	4.18	0.06			0.10%	3.66											
13+23.11 -2796.33 Lt				S-102D	Type F DBI	122.40	0.760	1.104	0.839	10.00	1.24	6.18	0.839	0.000	5.18	0.04	8.65	0.38	8.17	8.06	0.11	1	24	0.188%	2.85											
BAY_PVMT_CL				S-102E			0.760	1.963	1.492										5.60	5.47	0.13	1	24	0.18%	3.32											
13+23.11 -2796.33 Lt				S-102D	Type F DBI	122.40	0.760	1.104	0.839	10.00	1.24	6.18	0.839	0.000	5.18	0.04	8.65	0.38	3.60	3.47	0.13	1	24	0.10%	2.47											
BAY_PVMT_CL				S-102E			0.760	1.104	0.839										8.27	8.17	0.10			0.106%	1.65											
13+23.11 -2796.33 Lt				S-102D	Type F DBI	122.40	0.760	1.104	0.839	10.00	1.24	6.18	0.839	0.000	5.18	0.04	8.65	0.38	5.73	5.60	0.12	1	24	0.10%	2.47											
BAY_PVMT_CL				S-102E			0.760	1.104	0.839										3.73	3.60	0.12			0.10%	2.47											

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	

EXISTING DRAINAGE MAP

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
 Description: System 1

County: Duval
 Organization: PARSONS

Network: Walnut (Existing)
 State Road: A1A

Sheet: 1 of 2
 Prepared by: MM
 Checked by: T3G

Date:
 Date:

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
						INCREMENTAL	CUMULATIVE	SUB-TOTAL (C/A)										CROWN									
ALIGNMENT NAME			UPPER LOWER			COMPOSITE C VALUE	AREA												FLOWLINE ELEVATION				RISE	SPAN	HYD. GRAD.	PHYSICAL VELOCITY (fps)	MIN. PHYSICAL
STATION	OFFSET DISTANCE (ft)	SIDE																									
			S-101		342.41	0.760	1.185	0.901	10.00	0.20	6.18	0.901	0.000	5.56	12.48	9.27	-316.79	326.06	26.65	299.41	1	6	72.417%	28.34	0.03	L-101: Upstream invert adjusted due to adverse slope	
13+23.11	-1869.70	Lt.	S-105	Type F DBI	23.21	0.760	1.185	0.901	10.00	0.12	6.18	0.654	0.000	4.04	0.17	9.65	-17.25	7.47	7.46	0.01	1	15	0.00%	0.18			
	BAY_PVMT_CL		S-104	Type F DBI	23.21	0.760	0.861	0.654	10.00	0.12	6.18	0.654	0.000	4.04	0.17	9.65	-17.25	6.97	6.96	0.01	1	15	0.65%	0.18	7.38		
			S-105	Type F DBI	160.59	0.760	0.861	0.654	10.00	0.12	6.18	0.654	0.000	4.04	0.17	9.65	-17.25	7.57	7.31	0.26	1	15	0.19%	6.02			
	BAY_PVMT_CL		S-105	Type F DBI	160.59	0.760	0.804	0.611	10.20	0.36	6.13	2.166	0.000	13.27	3.11	9.65	-17.00	26.65	21.36	5.29	1	18	1.110%	3.29			
13+23.11	-1869.82	Lt.	S-106	Type F DBI	23.21	0.760	2.849	2.166	10.20	0.36	6.13	2.166	0.000	13.27	3.11	9.65	-17.00	8.82	8.56	0.26	1	18	1.11%	6.02	7.38		
			S-106	Type F DBI	160.59	0.760	0.861	0.654	10.00	0.12	6.18	0.654	0.000	4.04	0.17	9.65	-17.25	7.57	7.31	0.26	1	15	0.19%	6.02			
	BAY_PVMT_CL		S-106	Type F DBI	160.59	0.760	0.804	0.611	10.20	0.36	6.13	2.166	0.000	13.27	3.11	9.65	-17.00	26.65	21.36	5.29	1	18	1.176%	7.51			
13+23.11	-1847.85	Lt.	S-107	Type 2 CI	93.63	0.760	2.849	2.166	10.20	0.36	6.13	2.166	0.000	13.27	3.11	9.65	-17.00	9.04	9.04	0.00	1	18	0.00%	0.36	0.64	L-105: Upstream invert adjusted due to adverse slope	
			S-107	Type 2 CI	93.63	0.760	0.546	0.115	10.54	0.18	6.05	2.580	0.000	15.61	0.11	10.77	-10.59	7.54	7.54	0.00	1	18	0.15%	8.83	7.36		
	BAY_PVMT_CL		S-107	Type 2 CI	93.63	0.760	3.395	2.580	10.54	0.18	6.05	2.580	0.000	15.61	0.11	10.77	-10.59	9.04	8.65	0.39	1	18	0.42%	4.17	7.36		
13+23.11	-1855.47	Lt.	S-108MH	Type 1 CI	302.52	0.760	3.395	2.580	10.72	0.49	6.01	2.580	0.000	18.13	2.18	11.08	-8.41	7.54	7.54	0.00	1	18	0.15%	8.83	7.36		
			S-108MH	Type 1 CI	302.52	0.760	0.403	0.306	10.72	0.49	6.01	2.580	0.000	18.13	2.18	11.08	-8.41	9.04	8.65	0.39	1	18	0.42%	4.17	7.36		
	BAY_PVMT_CL		S-108MH	Type 1 CI	302.52	0.760	3.395	2.580	10.72	0.49	6.01	2.580	0.000	18.13	2.18	11.08	-8.41	19.48	9.62	9.86	1	18	2.195%	10.26	5.21		
13+23.11	-1553.01	Lt.	S-109A	Type 7 MH	235.02			0.000	11.70	0.48	5.80	6.480	0.000	40.21	1.95	11.36	1.74	8.42	7.79	0.63	1	30	0.21%	2.95	39.32		
			S-109A	Type 7 MH	235.02			0.000	11.70	0.48	5.80	6.480	0.000	40.21	1.95	11.36	1.74	6.92	6.29	0.63	1	30	0.15%	8.19	39.32		
	BAY_PVMT_CL		S-109MH1	Type 7 MH	14.91			0.000	10.00	0.17	6.18	0.286	0.000	1.77	0.01	11.53	1.11	9.62	5.75	3.87	1	30	0.770%	8.19	39.32		
13+23.11	-1540.57	Lt.	S-109MH	Type 7 MH	14.91			0.000	10.00	0.17	6.18	0.286	0.000	1.77	0.01	11.53	1.11	6.53	4.70	1.83	1	30	0.78%	8.01	39.32		
			S-109MH	Type 7 MH	14.91			0.000	10.00	0.17	6.18	0.286	0.000	1.77	0.01	11.53	1.11	4.03	2.20	1.83	1	30	0.08%	8.01	39.32		
	BAY_PVMT_CL		S-110	Type 9 CI	250.52	0.760	0.809	0.615	11.08	0.50	5.93	3.372	0.000	19.99	1.09	10.50	-4.38	10.42	10.40	0.02	1	15	10.002%	1.44	22.19		
13+23.11	-1557.08	Lt.	S-109MH	Type 9 CI	250.52	0.760	4.437	3.372	11.08	0.50	5.93	3.372	0.000	19.99	1.09	10.50	-4.38	8.24	6.75	1.49	1	15	10.00%	18.08	22.19		
			S-110	Type 9 CI	23.19	0.760	0.809	0.615	11.08	0.50	5.93	3.372	0.000	19.99	1.09	10.50	-4.38	6.99	5.50	1.49	1	15	0.19%	18.08	22.19		
	BAY_PVMT_CL		S-111	Type 9 CI	23.19	0.760	0.425	0.323	10.00	0.15	6.18	0.323	0.000	1.99	0.10	10.49	-4.55	14.88	10.40	4.49	1	21	1.172%	8.31	8.83		
13+23.11	-1578.14	Lt.	S-110	Type 9 CI	23.19	0.760	0.425	0.323	10.00	0.15	6.18	0.323	0.000	1.99	0.10	10.49	-4.55	7.41	6.75	0.66	1	21	0.26%	3.67	8.83		
			S-112	Type 9 CI	22.93	0.760	0.737	0.560	10.00	0.09	6.18	0.560	0.000	3.46	0.30	9.09	-10.26	5.66	5.00	0.66	1	12	0.12%	3.67	8.83		
13+23.11	-1579.03	Lt.	S-113	Type 9 CI	22.93	0.760	0.737	0.560	10.00	0.09	6.18	0.560	0.000	3.46	0.30	9.09	-10.26	15.04	14.88	0.16	1	12	7.889%	2.54	10.87		
			S-113	Type 9 CI	348.71	0.760	0.880	0.669	10.17	0.94	6.13	2.434	0.000	14.94	1.34	9.23	-9.63	9.11	7.28	1.83	1	12	7.89%	13.84	10.87		
13+23.11	-1558.02	Lt.	S-110	Type 9 CI	348.71	0.760	3.203	2.434	10.17	0.94	6.13	2.434	0.000	14.94	1.34	9.23	-9.63	8.11	6.28	1.83	1	12	0.26%	13.84	10.87		
			S-114	Type 9 CI	58.25	0.760	0.735	0.559	10.07	0.10	6.16	1.205	0.000	7.42	1.97	9.29	-13.70	19.35	18.86	0.49	1	12	0.694%	4.40			
13+23.11	-1558.77	Lt.	S-113	Type 9 CI	58.25	0.760	1.586	1.205	10.07	0.10	6.16	1.205	0.000	7.42	1.97	9.29	-13.70	7.79	7.69	0.10	1	12	0.44%	3.27	2.57		
			S-115	Type 9 CI	22.62	0.760	0.851	0.647	10.00	0.07	6.18	0.647	0.000	3.99	0.40	9.20	-14.43	6.79	6.69	0.10	1	12	0.26%	3.27	2.57		
13+23.11	-1579.38	Lt.	S-114	Type 9 CI	22.62	0.760	0.851	0.647	10.00	0.07	6.18	0.647	0.000	3.99	0.40	9.20	-14.43	18.86	14.88	3.98	1	12	0.654%	6.21	7.32		
			S-108	Type 1 CI	48.46	0.760	0.318	0.241	10.00	0.94	6.18	0.241	0.000	1.49	0.02	11.76	2.11	7.95	7.32	0.63	1	21	0.18%	3.04	7.32		
13+23.11	-1504.49	Lt.	S-108MH	Type 1 CI	48.46	0.760	0.318	0.241	10.00	0.94	6.18	0.241	0.000	1.49	0.02	11.76	2.11	6.20	5.57	0.63	1	21	0.12%	3.04	7.32		
			S-109	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	22.99	18.86	4.12	1	12	3.198%	9.45			
13+23.11	-1536.92	Lt.	S-109MH1	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	8.27	8.18	0.08	1	12	0.14%	1.86	1.46		
			S-109A	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	7.27	7.18	0.08	1	12	0.26%	1.86	1.46		
	No Chains		S-109A	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	23.63	22.99	0.64	1	12	0.926%	5.09			
13+23.11	-311.50	Lt.	S-108A	Type F DBI	31.36	0.760	0.851	0.647	10.00	0.07	6.18	0.647	0.000	3.99	0.40	9.20	-14.43	8.27	8.20	0.07	1	12	0.31%	2.76	2.17		
			S-109MH	Type 1 CI	48.46	0.760	0.318	0.241	10.00	0.94	6.18	0.241	0.000	1.49	0.02	11.76	2.11	7.27	7.20	0.07	1	12	0.26%	3.27	2.57		
	BAY_PVMT_CL		S-108MH	Type 1 CI	48.46	0.760	0.318	0.241	10.00	0.94	6.18	0.241	0.000	1.49	0.02	11.76	2.11	9.64	9.62	0.02	1	18	0.041%	0.86	8.52		
			S-109	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	9.96	9.69	0.27	1	18	0.56%	4.82	8.52		
13+23.11	-1536.92	Lt.	S-109MH1	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	8.46	8.19	0.27	1	18	0.15%	4.82	8.52		
			S-109A	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	10.46	10.42	0.04	1	15	1.071%	1.44			
13+23.11	-1536.92	Lt.	S-109MH1	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	9.34	9.20	0.14	1	15	1.07%	5.92	7.26		
			S-109A	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	8.09	7.95	0.14	1	15	0.19%	5.92	7.26		
	No Chains		S-109A	Type 1 CI	13.02	0.760	0.376	0.286	10.00	0.15	6.18	0.286	0.000	1.77	0.03	11.84	1.38	5.75	5.44	0.31	1	30	0.688%	8.08	32.81		
13+23.11	-311.50	Lt.	S-108A	Type F DBI	31.36	0.760	0.851	0.647	10.00	0.07	6.18	0.647	0.000	3.99	0.40	9.20	-14.43	4.68	4.51	0.17	1	30	0.54%	6.68	32.81		
			S-109MH	Type 1 CI	48.46	0.760	0.318	0.241	10.00	0.94	6.18	0.241	0.000	1.49	0.02	11.76	2.11	2.18	2.01	0.17	1	30	0.08%				
	BAY_PVMT_CL		S-10																								

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A		3

**FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM**

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Walnut
State Road: A1A

Sheet: 1 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C-A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT				NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			INCREMENTAL CUMULATIVE	SUB-TOTAL (C-A)	CROWN										RISE	HYD. GRAD.	PHYSICAL VELOCITY (fps)	ZONE: Zone 4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					FLOWLINE ELEVATION																			PHYSICAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
					UPPER END ELEVATION (ft)																				LOWER END ELEVATION (ft)	FALL (ft)	MIN. PHYSICAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Walnut
State Road: A1A

Sheet: 2 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C*A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			EXISTING DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A		3



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD, SUITE 200 JACKSONVILLE, FL, 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	

EXISTING DRAINAGE MAP

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Pine (Existing)
State Road: A1A

Sheet: 1 of 2
Prepared by: MM
Checked by: TJJ

Date:
Date:

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)		TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C°A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS				
						COMPOSITE C-VALUE	AREA										SUB-TOTAL (C°A)	CROWN											
FLOWLINE ELEVATION			UPPER END ELEVATION (ft)															LOWER END ELEVATION (ft)	FALL (ft)										
ALIGNMENT NAME			UPPER LOWER													RISE	PHYSICAL	HYD. GRAD.	MIN. PHYSICAL	PHYSICAL VELOCITY (fps)									
STATION	OFFSET DISTANCE (ft.)	SIDE																				SPAN							
BAY_PVMT_CL			S-116	Type 1 CI	93.72	0.760	0.420	0.320	10.00	0.97	6.18	0.320	0.000	1.97	0.04	12.09	-0.20	12.29	12.17	0.12	1						15	0.278%	1.61
13+23.11	-971.77	Lt.	S-118			0.760	0.420	0.320										9.74	9.48	0.26		0.28%	3.01	FREQUENCY (yrs): 3.00 Year					
BAY_PVMT_CL			S-117			0.760	0.689	0.524										8.49	8.23	0.26		0.19%							
13+23.11	-976.20	Lt.	S-118	0.760	0.689	0.524	12.35	12.17	0.18	0.955%	2.64																		
BAY_PVMT_CL			S-118	Type 8 MH	314.66			0.000	10.00	0.20	6.18	0.524	0.000	3.23	0.11	12.14	-0.21	9.85	9.55	0.30	1	15	0.96%	5.59	6.86	MANNINGS n: 0.012			
13+23.11	-945.05	Lt.	S-119					0.000										8.60	8.30	0.30			0.19%						
BAY_PVMT_CL			S-119					0.000										12.17	10.79	1.38			0.233%	2.89					
No Chains			S-119	Type F DBI	313.52	0.760	0.494	0.375	10.51	1.81	6.06	0.843	0.000	5.11	0.75	11.85	-0.32	9.49	8.78	0.71	1	18	0.23%	3.07	5.42	TAILWATER EL. (ft): 5.40			
13+23.11	-2522.73	Lt.	S-121					0.000										7.99	7.28	0.71			0.15%						
No Chains			S-120					0.000										10.79	7.25	3.54			1.128%	6.41					
13+23.11	-2522.73	Lt.	S-121	Type 1 CI	95.58	0.760	2.240	1.702	12.00	0.81	5.74	1.702	0.000	9.77	1.10	10.62	-0.17	8.83	7.54	1.29	1	18	0.41%	4.14	7.31				
No Chains			S-120					0.760										0.637	0.484	7.33			6.04	1.29			0.15%		
13+23.11	-2522.73	Lt.	S-119					0.760										0.637	0.484	11.05			10.79	0.27			0.373%	2.44	
BAY_PVMT_CL			S-121A	Type F DBI	201.29	0.760	0.044	0.033	10.00	0.65	6.18	0.484	0.000	2.99	0.09	11.49	0.44	9.04	8.68	0.36	1	15	0.38%	3.52	4.31				
13+23.11	-315.69	Lt.	S-122					0.760										0.637	0.484	7.79			7.43	0.36			0.19%		
BAY_PVMT_CL			S-121A					0.760										0.044	0.033	5.58			5.41	0.16			0.059%	2.55	
13+23.11	-315.69	Lt.	S-122	Type 8 MH	85.59	0.760	7.578	5.759	12.96	1.32	5.56	5.759	0.000	32.01	0.08	8.51	2.93	4.94	4.83	0.11	1	48	0.06%	2.95	37.13				
S-123			S-121					0.000										0.94	0.83	0.11			0.04%						
13+23.11	-325.85	Lt.	S-121					0.000										7.38	6.55	0.82			0.521%	4.49					
BAY_PVMT_CL			S-124	Type 1 CI	18.11	0.760	0.767	0.583	11.42	0.32	5.86	3.760	0.000	22.03	0.61	10.63	3.25	5.58	5.13	0.45	1	30	0.53%	6.58	32.31				
13+23.11	-342.49	Lt.	S-123					0.000										3.08	2.63	0.45			0.08%						
BAY_PVMT_CL			S-124					0.760										0.767	0.583	8.39			7.45	0.94			5.181%	6.48	
13+23.11	-342.49	Lt.	S-123	Type 9 CI	589.11	0.760	0.767	0.583	10.00	0.05	6.18	0.583	0.000	3.60	0.32	10.86	2.47	8.46	8.12	0.34	1	15	1.88%	7.83	9.61				
BAY_PVMT_CL			S-125					0.760										0.723	0.549	7.21			6.87	0.34			0.19%		
13+23.11	-327.00	Lt.	S-123					0.760										0.723	0.549	14.82			7.38	7.44			0.881%	7.42	
BAY_PVMT_CL			S-126	Type 9 CI	23.53	0.760	1.185	0.900	10.13	1.32	6.15	3.178	0.000	19.53	1.43	8.48	-6.34	7.17	5.79	1.38	1	22	0.23%	3.57	9.38				
13+23.11	-305.73	Lt.	S-125					0.760										1.185	0.900	5.34			3.96	1.38			0.11%		
BAY_PVMT_CL			S-126					0.760										1.185	0.900	16.09			14.82	1.27			1.794%	7.08	
BAY_PVMT_CL			S-127	Type 9 CI	22.76	0.760	1.037	0.788	10.00	0.06	6.18	0.788	0.000	4.87	0.60	8.38	-16.01	6.72	6.52	0.20	1	12	0.87%	4.59	3.60				
13+23.11	-306.04	Lt.	S-128					0.760										1.037	0.788	5.72			5.52	0.20			0.26%		
BAY_PVMT_CL			S-127					0.760										1.037	0.788	24.38			23.42	0.96			1.375%	6.20	
13+23.11	-306.04	Lt.	S-128	Type 9 CI	57.97	0.760	1.237	0.940	10.00	0.06	6.18	0.788	0.000	4.87	0.60	8.38	-16.01	7.40	7.33	0.07	1	12	0.31%	2.75	2.16	L-127: Upstream invert adjusted due to adverse slope			
BAY_PVMT_CL			S-125					0.760										1.237	0.940	6.40			6.33	0.07			0.26%		
13+23.11	-326.79	Lt.	S-125					0.760										1.237	0.940	23.42			14.82	8.61			6.579%	13.56	
BAY_PVMT_CL			S-121	Type 4 CI	16.41	0.760	0.346	0.263	12.92	0.04	5.56	5.726	0.000	31.87	0.89	10.63	4.07	7.31	7.04	0.27	1	12	0.47%	3.37	2.65				
13+23.11	-316.84	Lt.	S-121A					0.760										0.346	0.263	6.31			6.04	0.27			0.26%		
BAY_PVMT_CL			S-121					0.760										0.346	0.263	6.55			5.58	0.98			0.444%	6.49	
13+23.11	-316.84	Lt.	S-121A	Type F DBI	19.51	0.760	7.534	5.726	12.96	0.04	5.56	5.726	0.000	31.87	0.89	10.63	4.07	5.13	5.13	0.00	1	30	0.01%	0.67	3.30				
BAY_PVMT_CL			S-122					0.760										7.534	5.726	2.63			2.63	0.00			0.08%		
13+23.11	-312.32	Lt.	S-122A					0.760										0.232	0.176	5.41			5.40	0.01			0.039%	2.63	
BAY_PVMT_CL			S-122A			0.760	0.232	0.176	4.82	4.82	0.00	0.02%	1.78																
13+23.11	-312.32	Lt.	S-122A			0.760	0.232	0.176	0.82	0.82	0.00	0.04%																	

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD, SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			<i>PROPOSED DRAINAGE MAP</i>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		3
					N/A	DUVAL	N/A		

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Pine
State Road: A1A

Sheet: 1 of 2
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END				STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
ALIGNMENT NAME							INCREMENTAL		SUB-TOTAL (C/A)										CROWN									RISE
							COMPOSITE C VALUE	AREA											FLOWLINE ELEVATION				MIN. PHYSICAL					
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER				COMPOSITE C VALUE	AREA	COMPOSITE C VALUE										AREA	COMPOSITE C VALUE	AREA		COMPOSITE C VALUE	AREA				COMPOSITE C VALUE
BAY_PVMT_CL				S-116	Type 1 CI	93.72	0.760	0.420	0.320	10.00	0.97	6.18	0.320	0.000	1.97	0.04	12.09	1.20	10.89	10.77	0.12	1	15	0.265%	1.61	3.65	L-116: Existing 15" RCP	
13+23.11	-971.77	Lt.	S-118	0.760			0.420	0.320	9.74										9.48	0.25								
				S-119			0.760	0.420	0.320										8.49	8.23	0.25							
BAY_PVMT_CL				S-117	Type 4 CI	31.37	0.760	0.689	0.524	10.00	0.20	6.18	0.524	0.000	3.23	0.11	12.14	1.19	10.95	10.77	0.18	1	15	0.942%	2.64	6.82	L-117: Existing 15" RCP	
13+23.11	-976.20	Lt.	S-118	0.760			0.689	0.524	9.85										9.55	0.30								
				S-119			0.760	0.689	0.524										8.60	8.30	0.30							
BAY_PVMT_CL				S-118	Type 8 MH	314.69			0.000	10.52	1.82	6.05	0.843	0.000	5.10	0.06	11.85	1.08	10.77	10.08	0.69	1	18	0.233%	2.89	5.44	L-118: Existing 18" RCP	
13+23.11	-945.05	Lt.	S-119					0.000	9.49										8.78	0.71								
				S-120					0.000										7.99	7.28	0.71							
BAY_PVMT_CL				S-119	Type F DBI	313.44	0.760	0.494	0.376	12.01	0.81	5.74	1.703	0.000	9.77	0.40	10.62	0.54	10.08	7.25	2.83	1	18	0.903%	6.42	7.32	L-119: Existing 18" RCP	
13+23.11	-630.38	Lt.	S-121	0.760			2.240	1.703	8.83										7.54	1.29								
				S-122			0.760	2.240	1.703										7.33	6.04	1.29							
BAY_PVMT_CL				S-120	Type 1 CI	92.22	0.760	0.637	0.484	10.00	0.63	6.18	0.484	0.000	2.99	0.09	11.49	1.15	10.34	10.08	0.26	1	15	0.387%	2.44	4.38	L-120: Existing 15" RCP	
13+23.11	-657.67	Lt.	S-119	0.760			0.637	0.484	9.04										8.68	0.36								
				S-121			0.760	0.637	0.484										7.79	7.43	0.36							
No Chains				S-121A	Type F DBI	201.64	0.760	0.044	0.033	15.57	0.82	5.13	10.052	0.000	51.60	0.02	8.51	2.85	5.66	5.42	0.24	1	48	0.127%	4.11	54.06		
13+23.11	-315.69	Lt.	S-122	0.760			13.226	10.052	5.08										4.84	0.24								
				S-123			0.760	13.226	10.052										1.08	0.84	0.24							
BAY_PVMT_CL				S-124	Type 8 MH	85.69			0.000	15.25	0.33	5.18	8.053	0.000	41.72	0.06	10.63	4.77	5.86	5.68	0.18	1	42	0.170%	4.34	45.11		
13+23.11	-325.85	Lt.	S-121					0.000	4.75										4.60	0.15								
				S-122					0.000										1.25	1.10	0.15							
BAY_PVMT_CL				S-124	Type 1 CI	17.89	0.760	0.767	0.583	10.00	0.05	6.18	0.583	0.000	3.60	0.32	10.86	2.47	8.39	7.45	0.94	1	15	5.240%	6.48	9.66		
13+23.11	-342.49	Lt.	S-123	0.760			0.767	0.583	8.46										8.12	0.34								
				S-125			0.760	0.767	0.583										7.21	6.87	0.34							
BAY_PVMT_CL				S-126	Type 9 CI	299.23	0.760	0.514	0.391	13.18	1.27	5.52	6.867	0.000	37.89	0.00	8.40	1.78	6.62	6.26	0.36	1	42	0.120%	3.94	39.40		
13+23.11	-327.00	Lt.	S-116C	0.760			9.036	6.867	5.57										5.18	0.39								
				S-117			0.760	9.036	6.867										2.07	1.68	0.39							
BAY_PVMT_CL				S-126	Type 9 CI	23.37	0.760	0.906	0.689	10.00	0.16	6.18	0.689	0.000	4.25	0.09	8.45	1.71	6.74	6.62	0.12	1	18	0.149%	2.41	4.42		
13+23.11	-305.73	Lt.	S-125	0.760			0.906	0.689	5.61										5.57	0.04								
				S-127			0.760	0.906	0.689										4.11	4.07	0.04							
BAY_PVMT_CL				S-127	Type 9 CI	22.76	0.760	0.630	0.479	10.00	0.23	6.18	0.479	0.000	2.96	0.04	8.43	0.96	7.47	7.41	0.06	1	18	0.149%	1.67	4.41		
13+23.11	-306.04	Lt.	S-128	0.760			0.630	0.479	5.38										5.34	0.03								
				S-128			0.760	0.630	0.479										3.88	3.84	0.03							
BAY_PVMT_CL				S-128	Type 9 CI	38.15	0.760	1.237	0.940	10.14	0.13	6.14	1.419	0.000	8.71	0.35	8.51	1.10	7.41	6.84	0.57	1	18	0.604%	4.93	8.90		
13+23.11	-326.79	Lt.	S-117A	0.760			1.867	1.419	5.34										5.11	0.23								
				S-116A			0.760	1.867	1.419										3.84	3.61	0.23							
BAY_PVMT_CL				S-116A	Type F DBI	31.61	0.760	1.555	1.182	10.00	0.13	6.18	1.182	0.000	7.30	0.27	10.18	1.65	8.52	8.13	0.40	1	18	0.457%	4.13	7.73		
13+23.11	-951.15	Lt.	S-116B	0.760			1.555	1.182	5.88										5.74	0.15								
				S-116B			0.760	1.555	1.182										4.38	4.24	0.15							
BAY_PVMT_CL				S-116B	Type F DBI	327.57	0.760	0.726	0.552	10.11	1.61	6.15	1.734	0.000	10.66	0.01	10.13	2.01	8.13	7.49	0.63	1	24	0.219%	3.39	11.26		
13+23.11	-954.09	Lt.	S-117B	0.760			2.281	1.734	5.74										5.05	0.69								
				S-117B			0.760	2.281	1.734										3.74	3.05	0.69							
BAY_PVMT_CL				S-116C	Type F DBI	289.67	0.760	0.793	0.603	14.30	1.17	5.33	7.470	0.000	39.81	0.01	10.49	4.23	6.26	5.86	0.39	1	42	0.154%	4.14	42.30		
13+23.11	-956.75	Lt.	S-123	0.760			9.829	7.470	5.18										4.75	0.43								
				S-123			0.760	9.829	7.470										1.68	1.25	0.43							
BAY_PVMT_CL				S-117A	Type 8 MH	20.06			0.000	13.12	0.07	5.53	5.788	0.000	32.00	0.18	8.87	2.03	6.84	6.62	0.22	1	36	0.209%	4.53	33.15		
13+23.11	-929.23	Lt.	S-125					0.000	5.11										5.07	0.04								
				S-125					0.000										2.11	2.07	0.04							
BAY_PVMT_CL				S-117B	Type 8 MH	75.66			0.000	11.83	0.29	5.77	3.687	0.000	21.28	0.23	9.19	1.69	7.49	7.09	0.40	1	30	0.245%	4.34	22.15		
13+23.11	-910.94	Lt.	S-120E					0.000	5.05										4.86	0.19								
				S-120E					0.000										2.55	2.36	0.19							
BAY_PVMT_CL				S-117C	Type 9 CI	244.63	0.760	0.481	0.366	10.00	3.19	6.18	0.366	0.000	2.26	0.03	9.47	1.70	7.77	7.64	0.12	1	18	0.159%	1.28	4.42		
13+23.11	-916.83	Lt.	S-120MH	0.760			0.481	0.366	4.47										4.10	0.37								
				S-120MH			0.760	0.481	0.366										2.97	2.60	0.37							
BAY_PVMT_CL				S-120C	Type 9 CI	17.08	0.760	0.645	0.491	11.75	0.10	5.79	1.588	0.000	9.19	0.08	8.89	1.30	7.60	7.49	0.10	1	24	0.150%	2.93	9.59		
13+23.11	-647.39	Lt.	S-117B	0.760			2.089	1.588	4.58										4.55	0.03								
				S-117B			0.760	2.089	1.588										2.58	2.55	0.03							
BAY_PVMT_CL				S-120D	Type 9 CI	23.98	0.760	0.962	0.731	10.00	0.16	6.18	0.731	0.000	4.52	0.10	9.13	1.35	7.78	7.64	0.14	1	18	0.168%	2.56	4.72		
13+23.11	-671.68	Lt.	S-120MH	0.760			0.962	0.731	4.15										4.11	0.04								
				S-120MH			0.760	0.962	0.731										2.65	2.61	0.04							

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Pine
State Road: A1A

Sheet: 2 of 2
Prepared by: MM
Checked by: TJJ

Date:
Date:

LOCATION OF UPPER END			STRUCTURE NO.			DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C*A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS		
						INCREMENTAL CUMULATIVE		SUB-TOTAL (C*A)										CROWN FLOWLINE ELEVATION										
ALIGNMENT NAME			UPPER LOWER	TYPE OF STRUCTURE	LENGTH (ft)	COMPOSITE C VALUE	AREA											UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)		RISE	HYD. GRAD.	PHYSICAL	PHYSICAL VELOCITY (fps)		ZONE: Zone 4	
STATION	OFFSET DISTANCE (ft.)	SIDE						MIN. PHYSICAL																			FREQUENCY (yrs): 3.00 Year	
																									MANNINGS n: 0.012			
																										TAILWATER EL. (ft): 5.40		
			S-120E	Type 9 CI	230.31	0.760	0.432	0.328	12.08	1.18	5.72	4.015	0.000	22.98	0.01	8.80	1.71	7.09	6.84	0.25	1	36	0.101%	3.25	23.87			
13+23.11	-555.88	Lt.	S-117A			0.760	5.283	4.015										5.36	5.11	0.25			0.11%	3.38				
			S-120MH	Type 8 MH	26.39			0.000	11.59	0.22	5.82	1.097	0.000	6.39	0.03	9.20	1.55	7.64	7.60	0.05	1	24	0.095%	2.03	7.86			
13+23.11	-646.83	Lt.	S-120C					0.000										4.60	4.58	0.03			0.10%	2.50				
			S-121	Type 1 CI	16.41	0.760	0.346	0.263	15.52	0.07	5.14	10.019	0.000	51.51	0.00	10.63	4.94	5.68	5.66	0.02	1	48	0.127%	4.10	54.48			
13+23.11	-316.84	Lt.	S-121A			0.760	13.182	10.019										5.10	5.08	0.02			0.12%	4.34				
			S-122	Type F DBI	19.14	0.760	0.232	0.176	15.57	0.08	5.13	10.228	0.000	52.51	0.00	6.92	1.49	5.42	5.40	0.02	1	48	0.113%	4.18	54.09			
13+23.11	-311.86	Lt.	S-122A			0.760	13.458	10.228										4.84	4.82	0.02			0.12%	4.30				
																		0.84	0.82	0.02								

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	

EXISTING DRAINAGE MAP



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			EXISTING DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A		
							5		

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Florida North (Existing)
State Road: A1A

Sheet: _____ of _____
Prepared by: MM
Checked by: _____

Date: _____
Date: _____

LOCATION OF UPPER END				STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
ALIGNMENT NAME							COMPOSITE C VALUE	AREA	SUB-TOTAL (C/A)										CROWN									UPPER END ELEVATION (ft)
																			FLOWLINE ELEVATION				RISE	HYD. GRAD.				
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER				MIN. PHYSICAL	PHYSICAL VELOCITY (fps)																				
BAY_PVMT_CL				S-129	Type 4 CI	315.08	0.760	0.346	0.263	10.38	1.58	6.08	0.964	0.000	5.87	0.23	9.99	-14.42	24.41	23.34	1.06	1	18	0.395%	3.32	7.13	ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.10	
13+23.11	-37.33	Lt.	S-131	0.760			1.269	0.964	7.32										6.09	1.23	0.39%			4.03				
BAY_PVMT_CL				S-130			0.760	0.923	0.701										5.82	4.59	1.23			0.15%				
13+23.11 -36.20				Lt.	S-129	0.760	0.923	0.701	10.00	0.42	6.18	0.701	0.000	4.33	0.19	9.92	-15.02	24.95	24.41	0.54	1	15	0.361%	3.53	4.19			
13+23.11 -36.20				Lt.	S-129	0.760	0.923	0.701	7.58	7.26	0.32	0.36%	3.41															
BAY_PVMT_CL				S-131	0.760	0.317	0.241	6.33	6.01	0.32	0.19%																	
13+23.11 277.75				Rt.	S-133	0.760	0.317	0.241	11.55	0.54	5.83	2.171	0.000	12.65	1.47	9.17	-14.17	23.34	19.00	4.34	1	18	1.069%	7.16	3.74			
13+23.11 277.75				Rt.	S-133	0.760	2.856	2.171	5.03	4.78	0.25	0.11%	2.12															
BAY_PVMT_CL				S-132	0.760	1.270	0.965	3.53	3.28	0.25	0.15%																	
13+23.11 281.06				Rt.	S-131	0.760	1.270	0.965	10.00	0.45	6.18	0.965	0.000	5.96	0.18	9.38	-14.40	23.77	23.34	0.43	1	18	1.095%	3.37	11.94			
13+23.11 281.06				Rt.	S-131	0.760	1.270	0.965	7.04	6.04	1.00	1.09%	6.75															
BAY_PVMT_CL				S-133	0.760	0.398	0.303	5.54	4.54	1.00	0.15%																	
13+23.11 509.98				Rt.	S-134	0.760	0.398	0.303	12.07	0.07	5.72	2.473	0.000	14.16	0.09	8.66	-10.34	19.00	18.39	0.61	1	18	1.338%	8.01	10.40			
13+23.11 509.98				Rt.	S-134	0.760	3.254	2.473	4.81	4.53	0.28	0.83%	5.89															
BAY_PVMT_CL				S-134			0.000	3.31	3.03	0.28	0.15%																	
13+23.11 542.35				Rt.	S-145			0.000	18.39	13.01	5.38	0.863%	9.05	1	30	8.56	-9.83	6.15	4.56	1.59	1	30	0.74%	7.83	38.43			
13+23.11 542.35				Rt.	S-145			0.000	3.65	2.06	1.59	0.08%																
BAY_PVMT_CL				S-135			0.000	18.74	18.39	0.35	1.459%	6.47																
13+23.11 542.03				Rt.	S-134			0.000	6.50	5.50	1.00	1.46%	10.98	1	30	8.61	-10.13	4.00	3.00	1.00	1	30	0.08%	10.98	53.91			
13+23.11 542.03				Rt.	S-134			0.000	18.74	18.39	0.35	1.459%	6.47															
BAY_PVMT_CL				S-136			0.000	6.50	5.50	1.00	1.46%	10.98																
13+23.11 526.82				Rt.	S-135			0.000	4.00	3.00	1.00	0.08%	10.98	1	15	8.83	-10.11	18.94	18.74	0.20	1	15	4.578%	3.01	15.01			
13+23.11 526.82				Rt.	S-135			0.000	6.21	5.25	0.96	4.57%	12.23															
BAY_PVMT_CL				S-137			0.000	4.96	4.00	0.96	0.19%																	
13+23.11 564.91				Rt.	S-135			0.000	59.39	19.74	40.65	14.210%	23.12	1	15	9.09	-50.30	6.13	5.25	0.88	1	15	0.36%	3.44	4.22			
13+23.11 564.91				Rt.	S-135			0.000	4.88	4.00	0.88	0.19%																
BAY_PVMT_CL				S-138			0.000	64.11	59.39	4.72	9.258%	18.66																
13+23.11 567.02				Rt.	S-137			0.000	6.27	6.18	0.09	0.22%	2.69	1	15	9.07	-55.04	5.02	4.93	0.09	1	15	0.19%	2.69	3.30			
13+23.11 567.02				Rt.	S-137			0.000	6.27	6.18	0.09	0.22%	2.69															
BAY_PVMT_CL				S-139			0.000	103.04	99.67	3.37	1.861%	8.37																
13+23.11 513.27				Rt.	S-141			0.000	6.79	6.56	0.23	0.26%	2.91	1	15	7.57	-95.47	5.54	5.31	0.23	1	15	0.19%	2.91	3.57			
13+23.11 513.27				Rt.	S-141			0.000	104.33	103.04	1.29	1.649%	6.79															
BAY_PVMT_CL				S-140			0.000	6.55	6.54	0.01	0.02%	0.68																
13+23.11 513.33				Rt.	S-139			0.000	5.55	5.54	0.01	0.26%	0.79	1	12	7.77	-96.56	104.33	103.04	1.29	1	12	1.649%	6.79	0.53			
13+23.11 513.33				Rt.	S-139			0.000	6.55	6.54	0.01	0.02%	0.68															
BAY_PVMT_CL				S-141			0.000	5.55	5.54	0.01	0.26%	0.79																
13+23.11 601.44				Rt.	S-138			0.000	99.67	64.11	35.57	7.286%	16.56	1	15	8.14	-91.53	6.56	6.27	0.29	1	15	0.09%	1.67	2.05			
13+23.11 601.44				Rt.	S-138			0.000	6.56	6.27	0.29	0.09%	1.67															
BAY_PVMT_CL				S-142			0.000	5.31	5.02	0.29	0.19%																	
13+23.11 681.52				Rt.	S-141			0.000	102.82	99.67	3.15	1.829%	8.30	1	15	7.73	-95.10	6.80	6.53	0.27	1	15	0.34%	0.88	4.07			
13+23.11 681.52				Rt.	S-141			0.000	5.55	5.28	0.27	0.19%																
BAY_PVMT_CL				S-143			0.000	103.78	102.82	0.95	1.195%	5.78																
13+23.11 680.62				Rt.	S-142			0.000	6.64	6.63	0.01	0.03%	0.88	1	12	7.73	-96.04	5.64	5.63	0.01	1	12	0.26%	2.15	0.69	L-143: Upstream invert adjusted due to adverse slope		
13+23.11 680.62				Rt.	S-142			0.000	13.15	13.01	0.13	0.180%	2.15															
BAY_PVMT_CL				S-144			0.000	5.54	5.49	0.08	0.18%	2.45																
13+23.11 799.01				Rt.	S-145			0.000	4.32	4.24	0.08	0.19%	2.45	1	15	8.00	-5.15	4.32	4.24	0.08	1	15	0.19%	2.45	3.00			
13+23.11 799.01				Rt.	S-145			0.000	5.57	5.49	0.08	0.18%	2.45															
BAY_PVMT_CL				S-145			0.000	4.32	4.24	0.08	0.19%	2.45																
13+23.11 756.01				Rt.	S-145A			0.000	13.01	5.10	7.91	1.464%	11.78	1	30	7.92	-5.09	4.51	4.05	0.46	1	30	0.73%	7.73	37.94			
13+23.11 756.01				Rt.	S-145A			0.000	2.01	1.55	0.46	0.08%																
BAY_PVMT_CL				S-146			0.000	14.77	13.01	1.76	1.047%	7.09																
13+23.11 789.36				Rt.	S-145			0.000	4.65	4.64	0.01	0.01%	0.68	1	18	8.02	-6.75	3.15	3.14	0.01	1	18	0.15%	0.68	1.20	L-146: Upstream invert adjusted due to adverse slope		
13+23.11 789.36				Rt.	S-145			0.000	4.65	4.64	0.01	0.01%	0.68															
BAY_PVMT_CL				S-147			0.000	3.41	3.02	0.39	0.19%																	
13+23.11 850.70				Rt.	S-146			0.000	17.25	14.77	2.47	1.668%	7.92	1	15	7.85	-9.40	4.66	4.27	0.39	1	15	0.64%	4.56	5.59			
13+23.11 850.70				Rt.	S-146			0.000	4.66	4.27	0.39	0.64%	4.56															
BAY_PVMT_CL				S-149			0.000	3.41	3.02	0.39	0.19%																	
13+23.11 850.87				Rt.	S-147			0.000	17.87	17.25	0.62	0.975%	6.06	1	15	7.85	-10.01	5.79	5.78	0.01	1	15	0.03%	6.06	1.25	L-149: Upstream invert adjusted due to adverse slope		
13+23.11 850.87				Rt.	S-147			0.000	4.54	4.53	0.01	0.03%	6.06															
BAY_PVMT_CL				S-150			0.000	4.54	4.53	0.01	0.03%	6.06																

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Florida North (Existing)
State Road: A1A

Sheet: _____ of _____
Prepared by: MM
Checked by: _____
Date: _____
Date: _____

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C*A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
ALIGNMENT NAME						COMPOSITE C VALUE	AREA	SUB-TOTAL (C*A)										CROWN									
STATION	OFFSET DISTANCE (ft.)	SIDE																UPPER LOWER	FLOWLINE ELEVATION								
																			UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)							FALL (ft)
BAY_PVMT_CL			S-150	Type 5 CI	49.87	0.760	1.003	0.762	10.00	0.22	6.18	0.762	0.000	4.71	0.23	8.44	-9.88	18.32	17.87	0.45	1	15	0.502%	3.84	4.97		
13+23.11	820.61	Rt.	S-149			0.760	1.003	0.762										6.08	5.83	0.25			0.50%	4.05			
								4.83										4.58	0.25	0.19%							
BAY_PVMT_CL			S-148	Type 5 CI	24.05	0.760	0.498	0.379	10.00	0.21	6.18	0.379	0.000	2.34	0.06	7.60	-9.73	17.33	17.25	0.08	1	15	0.096%	1.91	1.43	L-147A: Upstream invert adjusted due to adverse slope	
13+23.11	874.57	Rt.	S-147			0.760	0.498	0.379										4.74	4.73	0.01			0.04%	1.17			
								3.49										3.48	0.01	0.19%							

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		5
					N/A	DUVAL	N/A		

FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Florida North
State Road: A1A

Sheet: 1 of 3
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)		ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
						INCREMENTAL	CUMULATIVE	SUB-TOTAL (C/A)										CROWN					RISE	PHYSICAL				
STATION	OFFSET DISTANCE (ft.)	SIDE	UPPER LOWER															COMPOSITE C VALUE	AREA	UPPER END ELEVATION (ft)		LOWER END ELEVATION (ft)					FALL (ft)	HYD. GRAD.
BAY_PVMT_CL			S-129	Type 4 CI	315.08	0.760	0.373	0.283	10.38	1.55	6.08	0.985	0.000	5.99	0.13	9.99	1.98	8.01	7.01	1.00	1	18	0.390%	3.39	7.13	L-129: Existing 18" RCP		
13+23.11	-37.33	Lt.	S-131			0.760	1.296	0.985										7.32	6.09	1.23			0.39%	4.03				
BAY_PVMT_CL			S-130			0.760	0.923	0.701										5.82	4.59	1.23			0.15%					
13+23.11			-36.20	Lt.	S-129	0.760	0.923	0.701	10.00	0.42	6.18	0.701	0.000	4.33	0.19	9.92	1.37	8.55	8.01	0.54	1	15	0.361%	3.53	4.19	L-130: Existing 15" RCP		
13+23.11			-36.20	Lt.	S-129	0.760	0.923	0.701	7.58	7.26	0.32	6.33	6.01	0.32	0.36%	3.41												
BAY_PVMT_CL			S-131	0.760	0.317	0.241	6.33	6.01	0.32	0.19%																		
13+23.11			277.75	Rt.	S-133	0.760	5.201	3.952	13.25	0.87	5.51	3.952	0.000	21.76	0.22	9.17	2.16	7.01	6.23	0.78	1	30	0.256%	4.43	22.72			
13+23.11			277.75	Rt.	S-133	0.760	5.201	3.952	4.61	4.01	0.60	2.11	1.51	0.60	0.26%	4.63												
BAY_PVMT_CL			S-132	0.760	1.270	0.965	2.11	1.51	0.60	0.08%																		
13+23.11			281.06	Rt.	S-131	0.760	3.588	2.727	12.85	0.49	5.58	2.727	0.000	15.21	0.11	9.38	2.15	7.23	7.01	0.22	1	30	0.136%	3.10	16.67			
13+23.11			281.06	Rt.	S-131	0.760	3.588	2.727	4.74	4.61	0.13	2.24	2.11	0.13	0.14%	3.40												
BAY_PVMT_CL			S-133	0.760	0.398	0.303	2.24	2.11	0.13	0.08%																		
13+23.11			509.98	Rt.	S-134	0.760	5.599	4.255	13.99	0.17	5.38	4.255	0.000	22.89	0.04	8.66	2.43	6.23	6.16	0.07	1	36	0.100%	3.24	24.01			
13+23.11			509.98	Rt.	S-134	0.760	5.599	4.255	4.01	3.97	0.04	1.01	0.97	0.04	0.11%	3.40												
BAY_PVMT_CL			S-134			0.000	1.01	0.97	0.04	0.06%																		
13+23.11			542.35	Rt.	S-145			0.000	15.95	0.80	5.08	13.116	0.000	66.61	0.22	8.56	2.40	6.16	5.64	0.52	1	5x3 CBC	0.151%	4.44	69.15			
13+23.11			542.35	Rt.	S-145			0.000	3.97	3.65	0.32	0.97	0.65	0.32	0.15%	4.61												
BAY_PVMT_CL			S-135			0.000	0.97	0.65	0.32	0.04%																		
13+23.11			542.03	Rt.	S-134			0.000	15.69	0.32	5.12	8.861	0.000	45.33	0.03	8.61	2.36	6.25	6.16	0.09	1	48	0.098%	3.61	49.50			
13+23.11			542.03	Rt.	S-134			0.000	5.04	4.97	0.07	1.04	0.97	0.07	0.10%	3.94												
BAY_PVMT_CL			S-136			0.000	1.04	0.97	0.07	0.04%																		
13+23.11			526.82	Rt.	S-135	0.760	0.786	0.598	10.00	0.17	6.18	0.598	0.000	3.69	0.07	8.83	2.49	6.34	6.25	0.09	1	18	0.146%	2.09	4.42			
13+23.11			526.82	Rt.	S-135	0.760	0.786	0.598	4.62	4.59	0.03	3.12	3.09	0.03	0.15%	2.50												
BAY_PVMT_CL			S-137			0.000	3.12	3.09	0.03	0.15%																		
13+23.11			564.91	Rt.	S-135	0.760	1.200	0.912	14.81	1.17	5.25	8.263	0.000	43.37	0.01	9.09	2.64	6.44	6.25	0.19	1	48	0.109%	3.45	49.35			
13+23.11			564.91	Rt.	S-135	0.760	10.873	8.263	5.28	5.04	0.24	1.28	1.04	0.24	0.10%	3.93												
BAY_PVMT_CL			S-138			0.000	6.48	6.44	0.03	0.04%																		
13+23.11			567.02	Rt.	S-137	0.760	0.619	0.471	14.65	0.22	5.27	7.351	0.000	38.76	0.00	9.07	2.60	5.32	5.28	0.04	1	48	0.098%	3.08	49.50			
13+23.11			567.02	Rt.	S-137	0.760	9.672	7.351	1.32	1.28	0.04	1.32	1.28	0.04	0.10%	3.94												
BAY_PVMT_CL			S-139			0.000	1.32	1.28	0.04	0.04%																		
13+23.11			513.27	Rt.	S-141	0.760	0.691	0.525	12.99	0.63	5.55	5.243	0.000	29.11	0.04	7.59	0.72	6.87	6.80	0.07	1	38" x 60"	0.100%	2.34	47.20			
13+23.11			513.27	Rt.	S-141	0.760	6.899	5.243	4.92	4.83	0.09	1.75	1.66	0.09	0.10%	3.79												
BAY_PVMT_CL			S-140			0.000	1.75	1.66	0.09	0.04%																		
13+23.11			513.33	Rt.	S-139	0.760	0.634	0.482	10.00	0.30	6.18	0.482	0.000	2.97	0.04	7.57	0.63	6.94	6.87	0.07	1	18	0.150%	1.68	4.43			
13+23.11			513.33	Rt.	S-139	0.760	0.634	0.482	3.21	3.16	0.05	1.71	1.66	0.05	0.15%	2.51												
BAY_PVMT_CL			S-141			0.000	1.71	1.66	0.05	0.15%																		
13+23.11			601.44	Rt.	S-138			0.000	13.35	1.87	5.49	6.880	0.000	37.76	0.11	7.97	1.17	6.80	6.48	0.33	1	38" x 60"	0.102%	3.03	47.14			
13+23.11			601.44	Rt.	S-138			0.000	4.83	4.49	0.34	1.66	1.32	0.34	0.10%	3.79												
BAY_PVMT_CL			S-142			0.000	1.66	1.32	0.34	0.04%																		
13+23.11			681.52	Rt.	S-141	0.760	1.189	0.904	10.21	0.42	6.13	1.637	0.000	10.03	0.13	7.68	0.61	7.07	6.80	0.27	1	24	0.194%	3.19	10.95			
13+23.11			681.52	Rt.	S-141	0.760	2.154	1.637	3.73	3.58	0.16	1.73	1.58	0.16	0.20%	3.49												
BAY_PVMT_CL			S-143			0.000	1.73	1.58	0.16	0.10%																		
13+23.11			680.62	Rt.	S-142	0.760	0.965	0.733	10.00	0.36	6.18	0.733	0.000	4.53	0.03	8.11	0.99	7.11	7.07	0.04	1	24	0.095%	1.44	7.71			
13+23.11			680.62	Rt.	S-142	0.760	0.965	0.733	3.77	3.73	0.03	1.77	1.73	0.03	0.10%	2.45												
BAY_PVMT_CL			S-144			0.000	1.77	1.73	0.03	0.10%																		
13+23.11			799.01	Rt.	S-145	0.760	0.561	0.426	10.00	0.34	6.18	0.426	0.000	2.63	0.07	8.00	2.23	5.77	5.64	0.13	1	15	0.180%	2.15	3.00	L-144: Existing 15" RCP		
13+23.11			799.01	Rt.	S-145	0.760	0.561	0.426	5.57	5.49	0.08	4.32	4.24	0.08	0.18%	2.45												
BAY_PVMT_CL			S-145			0.000	4.32	4.24	0.08	0.19%																		
13+23.11			756.01	Rt.	S-145A			0.000	16.60	0.17	4.99	17.254	0.000	86.09	0.40	7.92	2.28	5.64	5.10	0.54	1	5x3 CBC	0.252%	5.74	89.20			
13+23.11			756.01	Rt.	S-145A			0.000	3.65	3.50	0.15	0.65	0.50	0.15	0.25%	5.95												
BAY_PVMT_CL			S-146			0.000	0.65	0.50	0.15	0.04%																		
13+23.11			789.36	Rt.	S-145	0.760	0.617	0.469	14.83	0.38	5.24	3.711	0.000	19.46	0.15	8.02	2.06	5.96	5.64	0.32	1	30	0.191%	3.97	19.92			
13+23.11			789.36	Rt.	S-145	0.760	4.883	3.711	3.33	3.15	0.18	0.83	0.65	0.18	0.20%	4.06												
BAY_PVMT_CL			S-147			0.000	0.83	0.65	0.18	0.08%																		
13+23.11			850.70	Rt.	S-146			0.000	14.58	0.29	5.28	3.243	0.000	17.14	0.15	7.85	1.64	6.20	5.96	0.24	1	30	0.148%	3.49	17.28			
13+23.11			850.70	Rt.	S-146			0.000	3.42	3.33	0.09	0.92	0.83	0.09	0.15%	3.52												
BAY_PVMT_CL			S-149			0.000	0.92	0.83	0.09	0.08%																		
13+23.11			850.87	Rt.	S-147	0.760	0.591	0.449	14.44	0.17	5.31	2.858	0.000	15.16	0.09	7.85	1.52	6.33	6.20	0.13	1	30	0.135%	3.09	16.06			
13+23.11			850.87	Rt.	S-147	0.760	3.760	2.858	3.46	3.42	0.04	0.96	0.92	0.04	0.13%	3.27												
BAY_PVMT_CL			S-147			0.000	0.96	0.92	0.04	0.08%																		

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Florida North
State Road: A1A

Sheet: 2 of 3
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END				STRUCTURE NO.			DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C'A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
							INCREMENTAL	COMPOSITE C VALUE	AREA										SUB-TOTAL (C'A)	UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)							FALL (ft)
ALIGNMENT NAME				UPPER LOWER	TYPE OF STRUCTURE	LENGTH (ft)																		CROWN				
STATION	OFFSET DISTANCE (ft.)		SIDE																									
BAY_PVMT_CL				S-150	Type 5 CI	49.77		0.760	1.003	0.762	10.00	0.31	6.18	0.762	0.000	4.71	0.11	8.44	1.91	6.53	6.33	0.20	1	18	0.198%	2.66	5.11	ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.10
13+23.11	820.61		Rt.	S-149				0.760	1.003	0.762																		
BAY_PVMT_CL				S-126B	Type 9 CI	91.21		0.760	0.844	0.641	10.00	0.68	6.18	0.641	0.000	3.96	0.08	8.10	0.46	7.64	7.46	0.19	1	18	0.140%	2.24	4.42	
13+23.11	-81.26		Lt.	S-131C				0.760	0.844	0.641																		
				S-130B	Type 9 CI	114.07		0.760	0.438	0.333	11.26	0.90	5.89	1.794	0.000	10.57	0.00	7.80	0.63	7.17	7.10	0.07	1	24" x 38"	0.106%	2.12	13.87	
13+23.11	-16.15		Lt.	S-132B				0.760	2.360	1.794																		
				S-139A	Type 9 CI	175.34		0.760	0.777	0.590	12.23	1.51	5.69	4.237	0.000	24.12	0.04	7.57	0.61	2.13	2.01	0.11	1	38" x 60"	0.08%		47.08	
13+23.11	337.67		Rt.	S-139				0.760	5.575	4.237																		
				S-131C	Type 8 MH	156.94				0.000	10.56	0.93	6.04	1.461	0.000	8.83	0.08	8.27	0.81	5.10	4.92	0.18	1	38" x 60"	0.04%	3.78	10.71	
13+23.11	-18.34		Lt.	S-130B						0.000																		
				S-131A	Type 9 CI	37.27		0.760	0.528	0.401	10.00	0.79	6.18	0.401	0.000	2.48	0.01	7.87	0.35	4.42	4.13	0.30	1	24	0.19%	3.41	7.74	
13+23.11	-12.15		Lt.	S-131B				0.760	0.528	0.401																		
				S-131B	Type 9 CI	44.81		0.760	0.550	0.418	10.28	0.47	6.11	0.820	0.000	5.01	0.03	7.84	0.33	7.52	7.51	0.01	1	24	0.107%	0.79	7.79	
13+23.11	9.02		Rt.	S-131C				0.760	1.078	0.820																		
				S-132A	Type 9 CI	47.77		0.760	0.879	0.668	10.00	0.61	6.18	0.668	0.000	4.13	0.03	7.80	0.66	2.51	2.47	0.04	1	24	0.10%		9.54	
13+23.11	297.15		Rt.	S-132B				0.760	0.879	0.668																		
				S-132D	Type 8 MH	259.33				0.000	10.52	1.27	6.05	1.761	0.000	10.66	0.12	10.25	2.33	4.47	4.42	0.04	1	24	0.10%	2.48	11.27	
13+23.11	289.58		Rt.	S-132E						0.000																		
				S-132E	Type 8 MH	24.53				0.000	10.52	0.19	6.05	1.761	0.000	10.66	0.06	9.14	1.84	7.14	7.10	0.04	1	24	0.141%	1.31	14.23	
13+23.11	289.58		Rt.	S-132						0.000																		
				S-132D	Type 8 MH	259.33				0.000	10.52	1.27	6.05	1.761	0.000	10.66	0.12	10.25	2.33	3.05	2.98	0.07	1	24	0.10%		11.27	
13+23.11	289.58		Rt.	S-132E						0.000																		
				S-132E	Type 8 MH	24.53				0.000	10.52	0.19	6.05	1.761	0.000	10.66	0.06	9.14	1.84	5.31	4.77	0.55	1	30	0.10%		14.23	
13+23.11	289.58		Rt.	S-132						0.000																		
				S-132E	Type 8 MH	24.53				0.000	10.52	0.19	6.05	1.761	0.000	10.66	0.06	9.14	1.84	7.30	7.23	0.07	1	30	0.103%	2.17	14.23	
13+23.11	289.58		Rt.	S-132						0.000																		
				S-132E	Type 8 MH	24.53				0.000	10.52	0.19	6.05	1.761	0.000	10.66	0.06	9.14	1.84	2.27	2.24	0.02	1	30	0.08%		14.23	
13+23.11	289.58		Rt.	S-132						0.000																		
				S-133A	Type 9 CI	37.53		0.760	0.362	0.275	10.14	0.36	6.14	0.892	0.000	5.48	0.03	9.01	0.36	5.99	5.96	0.04	1	24	0.10%	2.49	7.82	
13+23.11	281.08		Rt.	S-133B				0.760	1.173	0.892																		
				S-133D	Type 9 CI	289.66		0.760	0.487	0.370	10.52	1.42	6.05	1.761	0.000	10.66	0.01	9.09	0.62	8.48	7.92	0.56	1	24	0.219%	3.39	11.26	
13+23.11	281.08		Rt.	S-132D				0.760	2.318	1.761																		
				S-133C	Type 9 CI	23.32		0.760	0.811	0.617	10.00	0.18	6.18	0.617	0.000	3.81	0.07	9.14	0.39	3.92	3.31	0.61	1	18	0.10%		4.42	
13+23.11	281.08		Rt.	S-133A				0.760	0.811	0.617																		
				S-133B	Type 9 CI	29.25		0.760	0.657	0.499	10.37	0.18	6.09	1.391	0.000	8.47	0.09	8.79	0.19	6.03	5.99	0.04	1	24	0.15%	2.50	8.86	
13+23.11	281.08		Rt.	S-133D				0.760	0.657	0.499																		
				S-132B	Type 9 CI	45.96		0.760	0.837	0.636	11.85	0.31	5.77	3.098	0.000	17.87	0.06	7.74	0.64	8.60	8.48	0.12	1	24	0.138%	2.70	22.47	
13+23.11	281.08		Rt.	S-133D				0.760	1.830	1.391																		
				S-140A	Type 9 CI	45.96		0.760	0.837	0.636	11.85	0.31	5.77	3.098	0.000	17.87	0.06	7.74	0.64	3.96	3.92	0.04	1	24	0.10%		8.86	
13+23.11	281.08		Rt.	S-140A				0.760	0.837	0.636																		
				S-140A	Type 9 CI	37.67		0.760	0.722	0.548	12.06	0.30	5.73	3.646	0.000	20.88	0.05	7.82	0.81	4.43	4.39	0.05	1	29" x 45"	0.10%	3.15	22.47	
13+23.11	333.61		Rt.	S-139A				0.760	4.076	3.098																		
				S-140A	Type 9 CI	37.67		0.760	0.722	0.548	12.06	0.30	5.73	3.646	0.000	20.88	0.05	7.82	0.81	7.02	6.96	0.06	1	34" x 53"	0.096%	2.13	34.56	
13+23.11	333.61		Rt.	S-139A				0.760	4.798	3.646																		
				S-140A	Type 9 CI	37.67		0.760	0.722	0.548	12.06	0.30	5.73	3.646	0.000	20.88	0.05	7.82	0.81	1.97	1.93	0.04	1	34" x 53"	0.05%		34.56	
13+23.11	333.61		Rt.	S-139A				0.760	4.798	3.646																		
BAY_PVMT_CL				S-148	Type 5 CI	24.05		0.760	0.507	0.385	10.00	0.30	6.18	0.385	0.000	2.38	0.03	7.60	1.36	6.24	6.20	0.04	1	18	0.104%	1.35	3.60	
13+23.11	874.57		Rt.	S-147				0.760	0.507	0.385																		
				S-149A	Type 9 CI	185.55		0.760	0.238	0.181	10.30	1.86	6.11	0.856	0.000	5.23	0.02	7.65	0.57	1.92	1.90	0.02	1	18	0.15%		3.60	
13+23.11	1086.19		Rt.	S-149MH				0.760	0.238	0.181																		
				S-149B	Type 9 CI	51.47		0.760	0.889	0.675	10.00	0.36	6.18	0.675	0.000	4.17	0.09	7.67	0.44	3.42	3.40	0.02	1	18	0.10%		3.60	
13+23.11	1126.68		Rt.	S-149A				0.760	0.889	0.675																		

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Florida North
State Road: A1A

Sheet: 3 of 3
Prepared by: MM
Checked by: TJG

Date:
Date:

LOCATION OF UPPER END			STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C*A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS		
						INCREMENTAL	SUB-TOTAL (C*A)	FLOWLINE ELEVATION																				
ALIGNMENT NAME						COMPOSITE C VALUE												AREA	UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)		FALL (ft)	RISE				HYD. GRAD.	PHYSICAL
STATION	OFFSET DISTANCE (ft.)	SIDE																										
13+23.11	850.70	Rt.	S-149	Type 8 MH	307.69			0.000	11.58	2.63	5.82	1.646	0.000	9.59	0.01	9.61	3.13	3.77	3.46	0.31	1	30	0.10%	2.87	14.10		ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.10	
																		1.27	0.96	0.31			0.08%					

Remarks: Computations performed using GEOPAK Drainage.



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			EXISTING DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		5
					N/A	DUVAL	N/A		

**FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM**

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: FloridaSouth (Existing)
State Road: A1A

Sheet: 1 of 1
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C*A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS			
			COMPOSITE C VALUE	AREA	SUB-TOTAL (C*A)										UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)									
																								INCREMENTAL	CROWN	FLOWLINE ELEVATION
																								CUMULATIVE		
UPPER LOWER																										
E-151	Type 5 CI	129.60	0.760	0.365	0.278	13.33	0.36	5.49	5.348	0.000	29.37	0.10	7.43	1.36	6.06	5.40	0.66	1	30	0.378%	5.98	21.93	ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.40			
E-145B			0.760	7.036	5.348										4.32	4.01	0.31			0.24%	4.47					
E-152MH	Type 7 MH	459.34			0.000	12.07	1.29	5.73	5.070	0.000	29.03	0.31	8.00	-0.34	1.82	1.51	0.31	1	30	0.08%	5.91	21.76				
E-151					0.000										8.34	6.06	2.27			0.369%	4.43					
E-153	Type 1 CI	85.40	0.760	1.220	0.927	11.93	0.25	5.75	4.768	0.000	27.43	0.34	8.38	-0.62	9.00	8.34	0.66	1	30	1.200%	5.59	48.76				
E-152MH			0.760	6.274	4.768										7.14	6.12	1.02			1.20%	9.93					
E-154	Type F DBI	49.47	0.760	0.352	0.268	11.81	0.12	5.78	3.841	0.000	22.18	0.56	7.62	-2.35	4.64	3.62	1.02	1	24	0.08%	7.06	3.66	L-154: Upstream invert adjusted due to adverse slope			
E-153			0.760	5.054	3.841										9.97	9.00	0.97			0.708%	1.17					
E-155	Type F DBI	342.39	0.760	0.854	0.649	10.89	0.95	5.97	3.573	0.000	21.33	0.04	8.71	-4.31	4.96	4.95	0.01	2	18	0.10%	6.04	5.74				
E-154			0.760	4.701	3.573										13.01	9.97	3.05			0.759%	3.25					
E-157	Type F DBI	34.49	0.760	1.052	0.799	10.00	0.03	6.18	0.799	0.000	4.94	4.74	6.93	-28.54	6.21	5.34	0.87	1	7.2	0.25%	17.46	1.41				
E-156			0.760	1.052	0.799										4.71	3.84	0.87			0.15%	5.00					
E-158	Type 9 CI	30.46	0.760	0.935	0.711	10.00	0.03	6.18	0.711	0.000	4.39	3.74	6.97	-78.77	35.47	22.12	13.34	1	7.2	21.558%	17.46	0.14	L-158: Upstream invert adjusted due to adverse slope			
E-159			0.760	0.935	0.711										6.93	5.81	1.12			2.04%	5.00					
E-159	Type 9 CI	46.40	0.760	0.868	0.660	10.03	0.03	6.17	1.370	0.000	8.45	19.94	7.00	-68.98	5.83	5.13	0.70	1	7.2	0.51%	15.52	0.17		L-159: Upstream invert adjusted due to adverse slope		
E-156			0.760	1.803	1.370										85.74	75.99	9.75			17.036%	29.89					
E-152	Type 4 CI	9.19	0.760	0.398	0.302	10.00	0.10	6.18	0.302	0.000	1.87	0.04	7.99	-0.39	6.06	6.05	0.01	1	15	0.03%	0.61	14.27				
E-152MH			0.760	0.398	0.302										5.46	5.45	0.01			0.51%	11.63					
E-156	Type 9 CI	262.01	0.760	0.992	0.754	10.06	0.86	6.16	2.924	0.000	18.02	7.47	7.78	-14.35	8.38	8.34	0.04	2	18	4.138%	1.52	2.69				
E-155			0.760	3.847	2.924										5.49	5.11	0.38			4.13%	11.63					
															4.24	3.86	0.38			0.19%	5.10					
															22.12	13.01	9.11			0.542%	5.10					
															6.63	6.48	0.15			0.06%						
															5.13	4.98	0.15			0.15%						



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A		5

**FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM**

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: FloridaSouth
State Road: A1A

Sheet: 1 of 1
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C°A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS			
			INCREMENTAL	CUMULATIVE	SUB-TOTAL (C°A)										CROWN								RISE	HYD. GRAD.	PHYSICAL	
															FLOWLINE ELEVATION											MIN. PHYSICAL
															UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)									
UPPER LOWER			COMPOSITE C VALUE	AREA																			ZONE: Zone 4 FREQUENCY (yrs): 3.00 Year MANNINGS n: 0.012 TAILWATER EL. (ft): 5.10			
S-151	Type 5 CI	125.44	0.760	0.365	0.278	15.02	0.86	5.22	5.871	0.000	30.63	0.03	7.43	2.25	5.18	5.10	0.08	1	48	0.092%	2.44	49.34				
S-145B			0.760	7.725	5.871										4.63	4.50	0.13			0.10%	3.93					
S-152MH	Type 8 MH	459.34			0.000	15.02	2.52	5.22	5.593	0.000	29.18	0.10	8.00	2.39	5.61	5.18	0.43	1	42	0.101%	3.03	34.55				
S-151					0.000										4.58	4.13	0.46			0.10%	3.59					
S-153	Type 1 CI	85.40	0.760	1.221	0.928	14.65	0.49	5.27	5.291	0.000	27.90	0.08	8.38	2.64	5.74	5.61	0.13	1	42	0.092%	2.90	34.48				
S-152MH			0.760	6.962	5.291										4.67	4.58	0.09			0.10%	3.58					
S-154	Type F DBI	49.47	0.760	0.352	0.268	14.44	0.34	5.31	4.363	0.000	23.15	0.06	8.64	2.82	1.17	1.08	0.09	1	42	0.05%	2.41	34.40				
S-153			0.760	5.740	4.363										4.72	4.67	0.05			0.10%	3.57					
S-155	Type F DBI	342.39	0.760	0.854	0.649	12.88	1.77	5.57	4.095	0.000	22.81	0.01	8.71	2.54	6.17	5.82	0.35	1	36	0.099%	3.23	22.91				
S-154			0.760	5.388	4.095										4.56	4.22	0.34			0.10%	3.24					
S-157	Type F DBI	34.49	0.760	1.052	0.799	10.00	0.21	6.18	0.799	0.000	4.94	0.12	6.93	0.29	1.56	1.22	0.34	1	18	0.06%	2.79	5.10				
S-156			0.760	1.052	0.799										6.64	6.45	0.19			0.20%	2.89					
S-158	Type 9 CI	30.46	0.760	0.935	0.711	10.00	0.20	6.18	0.711	0.000	4.39	0.10	6.97	0.28	4.90	4.83	0.07	1	18	0.15%	2.89	4.98				
S-159			0.760	0.935	0.711										3.40	3.33	0.07			0.189%	2.48					
S-159	Type 9 CI	46.40	0.760	0.868	0.660	11.47	0.34	5.85	1.892	0.000	11.06	0.06	7.00	0.46	6.64	6.45	0.09	1	30	0.098%	2.25	14.03				
S-156			0.760	2.489	1.892										4.38	4.33	0.05			0.10%	2.86					
S-160	Type 9 CI	110.86	0.760	0.687	0.522	10.00	1.01	6.18	0.522	0.000	3.22	0.05	7.43	0.72	6.71	6.57	0.14	1	18	0.143%	1.82	4.42				
S-159MH			0.760	0.687	0.522										3.66	3.49	0.17			0.15%	2.50					
S-152	Type 4 CI	9.19	0.760	0.398	0.302	10.00	0.14	6.18	0.302	0.000	1.87	0.02	7.99	2.36	2.16	1.99	0.17	1	18	0.15%	1.06	4.42				
S-152MH			0.760	0.398	0.302										5.63	5.61	0.02			0.150%	1.06					
S-156	Type 9 CI	262.01	0.760	0.992	0.754	11.72	1.55	5.79	3.445	0.000	19.97	0.08	7.78	1.32	2.51	2.50	0.01	1	36	0.15%	2.50	23.21				
S-155			0.760	4.534	3.445										6.45	6.17	0.28			0.107%	2.82					
S-159MH	Type 8 MH	113.75			0.000	10.00	1.85	6.18	0.522	0.000	3.22	0.00	7.38	0.81	4.83	4.56	0.27	1	24	0.10%	3.28	7.78				
S-159					0.000										1.83	1.56	0.27			0.06%	2.48					
															6.57	6.54	0.02			0.108%	1.03					
															3.99	3.88	0.11			0.10%	2.48					
															1.99	1.88	0.11			0.10%	2.48					



REVISIONS				THOMAS J GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			SHEET NO. 7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID	
					N/A	DUVAL	N/A	

EXISTING DRAINAGE MAP



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			EXISTING DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A	8	

Financial Project ID: TO 6						County: Duval Organization: PARSONS						Network: Oleander (Existing) State Road: A1A						Sheet: 1 of 3 Prepared by: MM Checked by: TJG						Date: Date:
STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL C'A	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS	
			INCREMENTAL CUMULATIVE												CROWN	FLOWLINE ELEVATION								
																	UPPER END ELEVATION (ft)							LOWER END ELEVATION (ft)
UPPER LOWER			COMPOSITE C VALUE	AREA	SUB-TOTAL C'A																			
E-160	Type 1 CI	63.35	0.760	1.811	1.376	10.00	0.15	6.18	1.376	0.000	8.50	0.75	7.52	-35.87	43.39	41.71	1.68	1	15	1.275%	6.93	5.50		
E-161			0.760	1.811	1.376										4.17	3.78	0.39			0.61%	4.48			
E-162			0.760	1.175	0.893										2.92	2.53	0.39			0.19%				
E-161	Type 4 CI	93.80	0.760	1.175	0.893	10.21	0.23	6.13	1.935	0.000	11.85	0.94	7.91	-35.76	43.67	41.71	1.96	1	18	2.322%	6.71	17.35		
E-163			0.760	2.546	1.935										5.22	3.05	2.17			2.31%	9.82			
E-162	Type 4 CI	67.70	0.760	1.371	1.042	10.00	0.22	6.18	1.042	0.000	6.43	0.43	7.92	-36.75	3.72	1.55	2.17	1	15	0.15%				
E-164			0.760	1.371	1.042										44.67	43.67	1.00			0.730%	5.24			
E-164MH	Type F DBI	37.27	0.760	1.406	1.069	10.00	0.09	6.18	1.069	0.000	8.31	1.17	7.30	-31.61	5.35	5.15	0.19	1	15	0.29%	3.05	3.75		
E-165			0.760	1.371	1.042										4.10	3.90	0.19			0.19%				
E-165A	Type F DBI	37.26	0.760	1.406	1.069	10.00	0.09	6.18	1.069	0.000	8.31	1.17	7.30	-31.61	38.91	37.22	1.69	1	15	1.219%	6.77	5.40		
E-166			0.760	1.406	1.069										4.26	4.04	0.22			0.59%	4.40			
E-166A	Type F DBI	294.32	0.760	0.633	0.481	10.00	0.37	6.18	0.481	0.000	2.97	0.04	7.82	-35.56	3.01	2.79	0.22	1	18	0.19%				
E-167			0.760	0.633	0.481										43.38	43.31	0.07			2.167%	1.68	16.76		
E-167	Type 9 CI	34.22	0.760	1.064	0.808	10.10	0.32	6.15	2.653	0.000	16.33	15.49	6.98	-113.32	6.00	5.20	0.80	1	14	2.16%	9.49	2.20		
E-168			0.760	0.633	0.481										4.50	3.70	0.80			0.15%				
E-168	Type F DBI	40.15	0.760	1.064	0.808	10.10	0.32	6.15	2.653	0.000	16.33	15.49	6.98	-113.32	120.31	80.96	39.35	1	14	7.006%	15.45	0.16	L-168: Upstream invert adjusted due to adverse slope	
E-167			0.760	3.491	2.653	10.10	0.32	6.15	2.653	0.000	16.33	15.49	6.98	-113.32	6.42	5.99	0.43	1	14	0.15%	2.08			
E-167	Type 9 CI	34.22	0.760	0.890	0.677	10.06	0.04	6.16	1.206	0.000	7.43	3.85	7.10	-120.42	5.26	4.83	0.43	1	10	0.21%				
E-166			0.760	0.890	0.677										127.52	120.31	7.21			8.492%	13.64	2.71		

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Oleander (Existing)
State Road: A1A

Sheet: 2 of 3
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C/A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS
			COMPOSITE C VALUE	AREA	SUB-TOTAL (C/A)										CROWN								
															FLOWLINE ELEVATION								
															UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)						
UPPER LOWER																							
E-181	Type F DBI	43.63	0.760	0.367	0.279	11.60	0.05	5.82	4.558	0.000	26.52	0.26	8.14	-38.37	46.51	43.89	2.63	1	18	4.695%	15.01	7.35	
E-181MH			0.760	5.998	4.558										4.41	4.23	0.18			0.41%	4.16		
E-182	Type 9 CI	553.66	0.760	0.150	0.114	10.98	0.64	5.95	4.280	0.000	25.47	1.75	9.46	-66.54	75.99	46.51	29.48	1	18	4.328%	14.41	5.29	
E-181			0.760	5.631	4.280										7.16	5.97	1.19			0.21%	2.99		
E-183	Type 9 CI	22.88	0.760	0.624	0.474	10.00	0.10	6.18	0.474	0.000	2.93	0.22	9.44	-66.90	76.34	75.99	0.35	1	12	3.755%	3.73	7.50	
E-182			0.760	0.624	0.474										7.58	6.72	0.86			3.76%	9.55		
E-184	Type 9 CI	40.44	0.760	0.823	0.626	10.00	0.14	6.18	0.626	0.000	3.86	0.38	9.56	-76.12	85.68	84.90	0.78	1	12	1.428%	4.92	4.63	
E-185MH			0.760	0.823	0.626										7.26	6.69	0.58			1.43%	5.90		
E-185	Type 9 CI	15.55	0.760	0.758	0.576	10.00	0.06	6.18	0.576	0.000	3.56	0.32	9.09	-76.26	85.35	84.90	0.45	1	12	7.591%	4.53	10.66	
E-185MH			0.760	0.758	0.576										7.74	6.56	1.18			7.59%	13.57		
E-186	Type 9 CI	17.02	0.760	0.496	0.377	10.10	0.04	6.15	0.813	0.000	5.00	0.42	10.34	-89.01	99.35	98.65	0.70	1	12	2.055%	6.37	5.54	
E-186MH			0.760	1.069	0.813										7.48	7.14	0.35			2.05%	7.06		
E-187	Type 9 CI	20.49	0.760	0.573	0.436	10.00	0.10	6.18	0.436	0.000	2.69	0.18	10.34	-89.29	99.63	99.35	0.28	1	12	0.420%	3.43	0.76	L-187: Upstream invert adjusted due to adverse slope
E-186			0.760	0.573	0.436										7.64	7.63	0.01			0.04%	0.97		
E-196	Type 9 CI	120.45	0.760	2.207	1.677	10.00	0.24	6.18	1.677	0.000	10.36	1.11	9.53	-96.96	106.48	102.74	3.75	1	15	1.894%	8.44	2.62	
E-197			0.760	2.207	1.677										7.69	7.52	0.17			0.14%	2.14		
E-197	Type 7 MH	182.31			0.000	10.00	0.36	6.18	1.677	0.000	10.36	0.09	10.37	-92.37	102.74	98.65	4.09	1	15	1.894%	8.44	2.55	
E-186MH					0.000										7.54	7.30	0.24			0.13%	2.07		
E-198	Type F DBI	32.43	0.760	1.165	0.885	10.00	0.08	6.18	0.885	0.000	5.47	0.75	7.68	-13.27	20.95	19.55	1.40	1	12	9.596%	6.96	11.99	
E-200MH			0.760	1.165	0.885										6.23	3.11	3.11			9.60%	15.27		
E-199	Type F DBI	33.34	0.760	0.707	0.538	10.00	0.13	6.18	0.538	0.000	3.32	0.28	7.57	-12.51	5.23	2.11	3.11	1	12	0.26%	14.33	11.26	
E-200MH			0.760	0.707	0.538										20.07	19.55	0.52			8.463%	4.23		
E-200	Type F DBI	16.95	0.760	0.167	0.127	10.00	0.28	6.18	0.127	0.000	0.79	0.02	7.70	-11.87	5.94	3.11	2.82	1	12	8.46%	14.33	17.12	
E-200MH			0.760	0.167	0.127										4.94	2.11	2.82			0.26%	21.80		
E-201	Type F DBI	13.29	0.760	0.960	0.729	10.00	0.04	6.18	0.729	0.000	4.50	0.51	7.77	-12.47	19.57	19.55	0.02	1	12	19.572%	1.00	20.21	
E-200MH			0.760	0.960	0.729										6.93	3.61	3.32			19.57%	21.80		
E-202	Type F DBI	15.43	0.760	1.016	0.772	10.00	0.03	6.18	0.772	0.000	4.77	0.41	8.60	0.25	5.93	2.61	3.32	1	15	0.26%	25.73	13.00	
E-201MH			0.760	1.016	0.772										6.24	2.61	3.62			0.26%	7.95		
E-201MH	Type 7 MH	38.25			0.000	14.76	0.06	5.26	25.895	0.000	141.25	2.98	9.41	1.67	8.34	6.98	1.36	1	48	8.822%	7.95	95.74	
E-203					0.000										8.15	7.62	0.53			3.43%	10.59		
E-204	Type F DBI	27.05			0.000	10.00	0.13	6.18	0.692	0.000	4.27	0.19	8.09	0.05	6.90	6.37	0.53	1	15	0.19%	7.62	12.21	
E-201MH					0.000										-1.71	-1.85	0.14			0.04%	7.62		
E-164A	Type F DBI	33.94	0.760	0.911	0.692	10.00	0.13	6.18	0.692	0.000	4.27	0.19	8.09	0.05	8.03	7.74	0.29	1	15	3.033%	3.48	8.36	
E-164			0.760	0.911	0.692										7.63	6.81	0.82			3.03%	9.95		
E-165A	Type F DBI	104.00	0.760	0.031	0.023	0.00	0.41	0.00	0.000	0.000	1.71	0.03	7.28	-31.69	6.38	5.56	0.82	1	15	0.19%	6.81	13.40	
E-164MH			0.000	0.000	0.000										4.31	3.72	6.09			3.953%	13.77		
E-166A	Type F DBI	308.31	0.760	0.663	0.504	10.67	0.13	6.02	3.759	0.000	24.34	1.33	7.56	-35.75	4.76	3.32	1.44	1	18	1.38%	7.58	2.85	
E-165A			0.760	4.947	3.759										3.26	1.82	1.44			0.15%	2.69		
E-168A	Type F DBI	35.05	0.760	0.823	0.625	10.41	0.27	6.08	3.278	0.000	19.93	0.39	8.65	-72.31	80.96	43.31	37.65	1	14	10.443%	18.86	0.37	
E-166			0.760	4.314	3.278										6.01	5.26	0.76			0.25%	2.69		
E-161	Type 4 CI	236.44	0.760	0.840	0.639	10.00	0.04	6.18	0.639	0.000	3.95	3.03	6.87	-122.05	4.85	4.10	0.76	1	7.2	0.21%	13.95	1.43	L-169A: Upstream invert adjusted due to adverse slope
E-164MH			0.760	0.840	0.639										128.92	120.31	8.61			13.766%	1.31		
E-169A	Type 4 CI	236.44	0.760	1.013	0.770	10.36	0.50	6.09	4.081	0.000	24.86	2.05	7.63	-34.08	6.07	6.02	0.05	1	24	0.14%	7.91		
E-169A			0.760	5.370	4.081										5.47	5.42	0.05			0.51%	7.91		
E-169A	Type 4 CI	236.44	0.760	1.013	0.770	10.36	0.50	6.09	4.081	0.000	24.86	2.05	7.63	-34.08	41.71	37.22	4.49	1	24	0.889%	7.91		
E-169A			0.760	5.370	4.081										3.61	3.60	0.01			0.00%	0.45		
E-169A	Type 4 CI	236.44	0.760	1.013	0.770	10.36	0.50	6.09	4.081	0.000	24.86	2.05	7.63	-34.08	1.61	1.60	0.01	1	24	0.10%	0.45		
E-169A			0.760	5.370	4.081										31.62	28.67	2.95			0.832%	8.85		

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Oleander (Existing)
State Road: A1A

Sheet: 3 of 3
Prepared by: MM
Checked by: T.JG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C'A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS						
			COMPOSITE C VALUE	AREA	SUB-TOTAL (C'A)										UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)						ZONE: Zone 4	FREQUENCY (yrs): 3.00 Year					
																									INCREMENTAL	CROWN	PHYSICAL	MIN. PHYSICAL	PHYSICAL VELOCITY (fps)
UPPER LOWER	RISE	SPAN	PHYSICAL VELOCITY (fps)	PHYSICAL VELOCITY (fps)	PHYSICAL VELOCITY (fps)																								
E-170MH	Junction	33.83			0.000	11.35	0.06	5.87	9.782	0.000	62.57	2.70	7.39	-24.23	4.25	3.97	0.28	1	36	0.83%	9.32	65.91							
E-170MH	Type 7 MH	518.77			0.000	12.91	0.85	5.57	22.152	0.000	128.46	5.29	6.96	-21.71	28.67	19.85	8.82	1	48	0.06%	10.22	46.46							
E-198MH					0.000										3.96	3.50	0.46			0.09%					3.70				
E-170A					0.000										-0.04	-0.50	0.46			0.04%									
E-170MH	Junction	27.41			0.000	12.85	0.06	5.58	9.250	0.000	51.60	1.17	6.78	-23.20	29.98	28.67	1.31	1	36	0.480%	7.30	49.89							
E-170	Type 4 CI	10.81	0.760	1.092	0.830	10.00	0.04	6.18	0.830	0.000	5.12	0.27	7.09	-23.22	4.00	3.87	0.13			2.125%	4.18				10.23				
E-170A			0.760	1.092	0.830										1.00	0.87	0.13			2.13%	8.34								
E-173MH					0.000										30.79	28.67	2.12	0.625%	3.56										
E-170MH	Type 7 MH	70.93			0.000	12.69	0.33	5.61	3.119	0.000	17.49	2.01	7.29	-23.50	2.88	2.44	0.44	1	30	0.62%	7.15	35.09							
E-174	Type F DBI	13.16	0.760	0.788	0.599	10.00	0.10	6.18	0.599	0.000	3.70	0.07	7.60	-26.88	0.38	-0.06	0.44			0.08%									
E-174MH			0.760	0.788	0.599										34.49	34.41	0.08			17.898%					2.09				
E-176MH			Type 7 MH	269.75												0.000	12.20	0.66	5.70	8.421	0.000	47.99	1.64	7.30	-25.51	6.76	4.41	2.36	17.90%
E-170A					0.000	12.20	0.66	5.70	8.421	0.000	47.99	1.64	7.30	-25.51	5.26	2.91	2.36	1	36	0.381%	6.79	33.39							
E-178A	Type F DBI	34.69	0.760	0.591	0.449	10.00	0.26	6.18	0.449	0.000	2.77	0.08	7.55	-32.81	4.57	4.00	0.57			0.21%	4.72				0.06%	4.72	2.97		
E-178			0.760	0.591	0.449										4.61	4.54	0.06			0.19%	2.26				2.42	0.19%			
E-178MH			Type 7 MH	208.75												0.000	11.78	0.44	5.78	6.745	0.000	39.01	5.00	7.69	-31.73	40.36	40.22	0.13	0.182%
E-176MH					0.000	11.78	0.44	5.78	6.745	0.000	39.01	5.00	7.69	-31.73	5.86	5.79	0.06	1	15	0.18%	2.42	2.97							
E-181MH	Type 7 MH	75.88			0.000	11.65	0.13	5.81	5.332	0.000	30.97	3.25	8.13	-35.76	4.61	4.54	0.06			0.19%	2.26				2.42	0.19%			
E-178MH					0.000										39.42	32.82	6.60			0.666%	7.95								
E-185MH			Type 7 MH	42.87												0.000	10.92	0.06	5.96	3.692	0.000	22.01	7.30	9.47	-75.43	4.88	4.45	0.43	0.20%
E-182					0.000	10.92	0.06	5.96	3.692	0.000	22.01	7.30	9.47	-75.43	2.38	1.95	0.43	1	24	1.380%	9.86	12.30							
E-186MH	Type 7 MH	257.57			0.000	10.58	0.35	6.04	2.490	0.000	15.04	1.86	10.57	-88.09	4.73	4.54	0.19			0.25%	3.91				0.10%				
E-185MH					0.000										43.89	39.42	4.47			1.380%	9.86				12.30				
E-200MH			Junction	655.74												0.000	13.78	1.00	5.41	24.431	0.000	137.40	6.69	8.14	-11.40	4.73	4.54	0.19	0.25%
E-201MH					0.000	13.78	1.00	5.41	24.431	0.000	137.40	6.69	8.14	-11.40	84.90	75.99	8.90	1	18	3.234%	12.46	1.91	L-185A: Upstream invert adjusted due to adverse slope						
E-198MH	Type 7 MH	33.09			0.000	10.58	0.35	6.04	2.490	0.000	15.04	1.86	10.57	-88.09	7.25	7.24	0.01			0.03%	1.08				0.15%				
E-200MH					0.000										5.75	5.74	0.01			0.15%									
E-198MH					0.000										98.65	84.90	13.75	3.990%	12.25										
E-200MH					0.000	13.73	0.06	5.42	22.152	0.000	125.26	0.09	8.48	-11.37	7.42	6.76	0.66	1	15	0.25%	2.88	3.54							
E-198MH	Type 7 MH	33.09			0.000	13.73	0.06	5.42	22.152	0.000	125.26	0.09	8.48	-11.37	6.17	5.51	0.66			0.19%									
E-200MH					0.000										19.55	7.74	11.80			0.674%	10.93								
E-200MH					0.000										3.61	2.73	0.88	0.13%	4.56										
E-200MH					0.000	13.73	0.06	5.42	22.152	0.000	125.26	0.09	8.48	-11.37	-0.39	-1.27	0.88	1	48	0.04%	4.56	57.29							
E-200MH	Type 7 MH	33.09			0.000	13.73	0.06	5.42	22.152	0.000	125.26	0.09	8.48	-11.37	19.85	19.55	0.30			0.560%	9.97				0.03%	2.16	27.12	L-199A: Upstream invert adjusted due to adverse slope	
E-200MH					0.000										3.50	3.49	0.01			0.04%									
E-200MH					0.000										-0.50	-0.51	0.01	0.04%											



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A	6	



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A	7	



REVISIONS				THOMAS J. GYOROG, P.E. P.E. NO.: 46612 PARSONS TRANSPORTATION GROUP 1300 RIVERPLACE BLVD. SUITE 200 JACKSONVILLE, FL. 32207 CERTIFICATE OF AUTHORIZATION: 1838	CITY OF NEPTUNE BEACH DEPARTMENT OF PUBLIC WORKS			PROPOSED DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY	FINANCIAL PROJECT ID		
					N/A	DUVAL	N/A		
							8		

**FLORIDA DEPARTMENT OF TRANSPORTATION
STORM SEWER TABULATION FORM**

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Oleander
State Road: A1A

Sheet: 1 of 4
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C°A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS			
			COMPOSITE C VALUE	AREA	SUB-TOTAL (C°A)										CROWN											
															FLOWLINE ELEVATION											
															UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)							SPAN	HYD. GRAD.	PHYSICAL VELOCITY (fps)
PHYSICAL	MIN. PHYSICAL																									
S-160	Type 1 CI	63.35	0.760	0.687	0.522	10.00	1.03	6.18	0.522	0.000	3.22	0.02	7.52	0.63	6.89	6.86	0.03	1	24	0.108%	1.03	7.77				
S-161			0.760	0.687	0.522										4.57	4.51	0.06							0.10%	2.47	
S-162			0.760	0.687	0.522										2.57	2.51	0.06									
S-162	Type 4 CI	93.80	0.760	1.163	0.884	10.41	0.42	6.08	1.926	0.000	11.70	0.17	7.91	0.66	7.25	6.86	0.39	1	24	0.244%	3.73	12.29		FREQUENCY (yrs): 3.00 Year		
S-161			0.760	2.534	1.926										4.24	4.01	0.23								0.25%	3.91
S-163			0.760	1.371	1.042										2.24	2.01	0.23									
S-162	Type 4 CI	67.70	0.760	1.371	1.042	10.00	0.55	6.18	1.042	0.000	6.43	0.07	7.92	0.56	7.36	7.25	0.11	1	24	0.097%	2.05	7.77				
S-164			0.760	1.371	1.042										4.31	4.24	0.07								0.10%	2.47
S-162			0.760	1.371	1.042										2.31	2.24	0.07									
S-164	Type F DBI	37.27	0.760	1.406	1.069	10.00	0.13	6.18	1.069	0.000	8.31	0.33	7.30	0.56	6.74	6.22	0.52	1	18	0.532%	4.70	8.38				
S-164MH			0.760	1.406	1.069										4.49	4.29	0.20								0.54%	4.74
E-165			0.760	0.633	0.481										2.99	2.79	0.20									
S-165A	Type F DBI	37.26	0.760	0.633	0.481	10.00	0.37	6.18	0.481	0.000	2.97	0.04	7.82	1.48	6.34	6.27	0.07	1	18	2.167%	1.68	16.76		L-165: Existing 18" RCP		
S-165A			0.760	0.633	0.481										6.00	5.20	0.80								2.16%	9.49
S-166A			0.760	0.633	0.481										4.50	3.70	0.80									
S-166A	Type F DBI	307.65	0.760	0.823	0.625	13.30	2.61	5.50	4.494	0.000	24.70	0.00	8.65	2.30	6.35	6.27	0.08	1	48	0.102%	1.97	49.34				
S-165A			0.760	5.913	4.494										4.26	3.95	0.31								0.10%	3.93
S-167			0.760	5.913	4.494										0.26	-0.05	0.31									
S-167	Type 9 CI	18.70	0.760	0.890	0.677	10.28	0.20	6.11	1.277	0.000	7.80	0.03	7.10	0.61	6.49	6.45	0.03	1	30	0.103%	1.59	14.20				
S-166MH			0.760	1.680	1.277										4.09	4.07	0.02								0.10%	2.89
S-168			0.760	0.789	0.600										1.59	1.57	0.02									
S-168	Type F DBI	40.15	0.760	0.789	0.600	10.00	0.57	6.18	0.600	0.000	3.71	0.02	6.88	0.36	6.52	6.49	0.03	1	24	0.092%	1.18	7.76				
S-167			0.760	0.789	0.600										4.13	4.09	0.04								0.10%	2.47
S-164MH					0.000										2.13	2.09	0.04									
S-169A	Type 8 MH	256.84			0.000	15.02	1.01	5.22	9.261	0.000	53.44	0.17	8.00	1.79	6.22	5.75	0.47	1	48	0.136%	4.25	57.35				
S-169A					0.000										3.84	3.50	0.35								0.14%	4.56
E-172					0.000										-0.16	-0.50	0.35									
E-172	Type 4 CI	24.71	0.760	0.607	0.461	10.22	0.09	6.12	1.285	0.000	7.87	0.22	7.37	1.23	6.14	5.81	0.34	1	18	0.731%	4.45	9.74		L-170: Existing 18" RCP		
S-173MH			0.760	1.691	1.285										2.82	2.64	0.18								0.73%	5.51
E-171			0.760	1.084	0.824										1.32	1.14	0.18									
E-171	Type 4 CI	64.80	0.760	1.084	0.824	10.00	0.26	6.18	0.824	0.000	5.09	0.27	7.09	0.34	6.75	6.14	0.61	1	15	0.564%	4.15	5.23		L-171: Existing 15" RCP		
E-172			0.760	1.084	0.824										5.42	5.06	0.36								0.56%	4.26
S-169			0.760	1.149	0.873										4.17	3.81	0.36									
S-169	Type 1 CI	9.06	0.760	1.149	0.873	10.00	0.05	6.18	0.873	0.000	5.39	0.14	7.17	1.26	5.91	5.75	0.17	1	18	0.240%	3.05	5.59		L-176: Existing 15" RCP		
S-169A			0.760	1.149	0.873										3.26	3.24	0.02								0.24%	3.16
S-173			0.760	0.672	0.510										1.76	1.74	0.02									
S-173MH	Type F DBI	63.34	0.760	0.672	0.510	14.72	0.35	5.26	4.014	0.000	21.12	0.00	7.60	1.74	5.86	5.81	0.06	1	36	0.099%	2.99	22.85				
S-173MH			0.760	5.281	4.014										2.62	2.56	0.06								0.10%	3.23
S-174MH					0.000										-0.38	-0.44	0.06									
S-173	Type 7 MH	570.40			0.000	12.19	3.36	5.70	3.503	0.000	19.97	0.00	8.02	1.72	6.30	5.86	0.44	1	36	0.107%	2.83	22.90				
S-173					0.000										3.19	2.62	0.57								0.10%	3.24
S-175			0.760	0.748	0.569										0.19	-0.38	0.57									
S-175	Type 9 CI	37.04	0.760	0.748	0.569	12.04	0.18	5.73	2.905	0.000	16.65	0.13	7.48	1.00	6.48	6.30	0.18	1	30	0.162%	3.39	17.63				
S-174MH			0.760	3.822	2.905										3.25	3.19	0.06								0.16%	3.59
E-176			0.760	1.154	0.877										0.75	0.69	0.06									
S-176MH	Type 1 CI	9.09	0.760	1.154	0.877	10.00	0.03	6.18	0.877	0.000	5.42	0.30	7.57	1.30	6.27	5.92	0.36	1	15	2.732%	4.41	11.59		L-176: Existing 15" RCP		
E-177			0.760	1.154	0.877										5.22	4.97	0.25								2.73%	9.44
S-176MH			0.760	1.154	0.877										3.97	3.72	0.25									
E-177	Type 1 CI	87.35	0.760	1.051	0.799	10.00	0.36	6.18	0.799	0.000	4.93	0.25	7.83	1.23	6.60	5.92	0.69	1	15	2.576%	4.02	11.28		L-177: Existing 15" RCP		
S-176MH			0.760	1.051	0.799										5.59	3.33	2.26								2.59%	9.19
E-178			0.760	0.714	0.542										4.34	2.08	2.26									
S-178MH	Type F DBI	32.18	0.760	0.714	0.542	10.21	0.11	6.13	0.991	0.000	6.07	0.32	7.75	0.95	6.80	6.24	0.57	1	15	0.891%	4.95	6.59		L-178: Existing 15" RCP		
E-179			0.760	1.304	0.991										5.71	5.43	0.28								0.88%	5.37
S-179MH			0.760	1.304	0.991										4.46	4.18	0.28									
E-179	Type 1 CI	53.68	0.760	0.554	0.421	10.00	0.42	6.18	0.421	0.000	2.60	0.07	7.90	1.52	6.38	6.24	0.14	1	15	0.863%	2.12	6.51		L-179: Existing 15" RCP		
S-179MH			0.760	0.554	0.421										5.05	4.59	0.46								0.86%	5.20
E-180			0.760	0.554	0.421										4.34	3.97	0.37									

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
Description: System 1

County: Duval
Organization: PARSONS

Network: Oleander
State Road: A1A

Sheet: 1 of 4
Prepared by: MM
Checked by: TJG

Date:
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL C*A	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS
			INCREMENTAL		SUB-TOTAL C*A										CROWN								
			CUMULATIVE												FLOWLINE ELEVATION								
			COMPOSITE C VALUE	AREA											UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)						
UPPER LOWER																							
E-180	Type 4 CI	49.36	0.760	1.018	0.774	10.00	0.21	6.18	0.774	0.000	4.78	0.24	8.22	1.32	3.80	3.34	0.46	1	15	0.19%	3.89	14.44	L-180: Existing 15" RCP
S-181MH			0.760	1.018	0.774										6.90	6.43	0.47			4.224%			
			0.760	1.018	0.774										6.07	3.98	2.09			4.23%			
S-181	Type F DBI	43.63	0.760	0.367	0.279	12.63	0.20	5.62	4.558	0.000	25.61	0.02	8.14	1.63	4.82	2.73	2.09	1	36	0.19%	3.77	26.64	
S-181MH			0.760	5.998	4.558										6.51	6.43	0.08			0.134%			
			0.760	5.998	4.558										3.91	3.85	0.06			0.14%			
S-182	Type 9 CI	553.66	0.760	0.150	0.114	12.63	2.71	5.62	4.280	0.000	24.05	0.00	9.46	2.33	0.91	0.85	0.06	1	36	0.06%	3.40	26.13	
S-181			0.760	0.150	0.114										7.13	6.51	0.61			0.128%			
			0.760	5.631	4.280										4.63	3.91	0.72			0.13%			
E-183	Type 9 CI	22.88	0.760	0.624	0.474	10.00	0.05	6.18	0.474	0.000	2.93	0.35	9.44	1.63	1.63	0.91	0.72	1	12	0.06%	3.70	7.51	L-183: Existing 12" RCP
S-182			0.760	0.624	0.474										7.81	6.19	1.61			7.057%			
			0.760	0.624	0.474										7.58	6.72	0.86			3.76%			
E-184	Type 9 CI	41.86	0.760	0.823	0.626	10.00	0.32	6.18	0.626	0.000	3.86	0.10	9.56	1.99	6.58	5.72	0.86	1	18	0.26%	9.56	13.37	
S-185MH			0.760	0.823	0.626										7.56	7.44	0.12			0.288%			
			0.760	0.823	0.626										7.76	7.19	0.58			1.37%			
E-185	Type 9 CI	15.85	0.760	0.758	0.576	10.00	0.03	6.18	0.576	0.000	3.56	0.43	9.09	0.87	6.26	5.69	0.58	1	12	0.15%	7.57	10.56	L-185: Existing 12" RCP
S-185MH			0.760	0.758	0.576										8.22	6.03	2.19			13.833%			
			0.760	0.758	0.576										7.74	6.56	1.18			7.45%			
S-186	Type 9 CI	18.27	0.760	0.496	0.377	10.13	0.11	6.14	0.813	0.000	4.99	0.07	10.34	2.50	6.74	5.56	1.18	1	18	0.26%	2.83	5.20	
S-186MH			0.760	1.069	0.813										7.84	7.73	0.11			0.206%			
			0.760	1.069	0.813										5.10	5.06	0.04			0.21%			
S-187	Type 9 CI	20.49	0.760	0.573	0.436	10.00	0.16	6.18	0.436	0.000	2.69	0.07	10.34	2.40	3.60	3.56	0.04	1	15	0.15%	2.94	2.82	
S-186			0.760	0.573	0.436										7.95	7.84	0.11			0.158%			
			0.760	0.573	0.436										5.13	5.10	0.03			0.16%			
S-196	Type 9 CI	120.32	0.760	2.207	1.677	10.00	0.61	6.18	1.677	0.000	10.36	0.17	9.53	1.06	3.88	3.85	0.03	1	24	0.19%	2.29	10.53	
S-197			0.760	2.207	1.677										8.47	8.09	0.38			0.178%			
			0.760	2.207	1.677										5.63	5.41	0.22			0.18%			
S-197	Type 7 MH	182.01			0.000	10.00	0.92	6.18	1.677	0.000	10.36	0.03	10.37	2.28	3.63	3.41	0.22	1	24	0.10%	3.35	10.71	
S-186MH					0.000										8.09	7.73	0.35			0.191%			
					0.000										5.41	5.06	0.35			0.19%			
S-198	Type F DBI	32.66	0.760	1.165	0.885	10.00	0.18	6.18	0.885	0.000	5.47	0.15	7.68	2.21	3.41	3.06	0.35	1	18	0.10%	3.41	5.59	
S-200MH			0.760	1.165	0.885										5.47	5.25	0.22			0.246%			
			0.760	1.165	0.885										2.70	2.62	0.08			0.24%			
S-199	Type F DBI	33.44	0.760	0.707	0.538	10.00	0.30	6.18	0.538	0.000	3.32	0.05	7.57	2.24	1.20	1.12	0.08	1	18	0.15%	3.16	4.42	
S-200MH			0.760	0.707	0.538										5.33	5.25	0.08			0.152%			
			0.760	0.707	0.538										2.65	2.60	0.05			0.15%			
S-200	Type F DBI	16.96	0.760	0.167	0.127	10.00	0.41	6.18	0.127	0.000	0.79	0.01	7.70	2.45	1.15	1.10	0.05	1	15	0.15%	2.50	3.06	
S-200MH			0.760	0.167	0.127										5.26	5.25	0.01			0.058%			
			0.760	0.167	0.127										5.42	5.39	0.03			0.19%			
S-201	Type F DBI	13.30	0.760	0.960	0.729	10.00	0.06	6.18	0.729	0.000	4.50	0.21	7.77	2.26	4.17	4.14	0.03	1	15	0.19%	2.49	4.71	
S-200MH			0.760	0.960	0.729										5.51	5.25	0.27			0.442%			
			0.760	0.960	0.729										2.92	2.86	0.06			0.45%			
E-202	Type F DBI	15.68	0.760	1.016	0.772	10.00	0.03	6.18	0.772	0.000	4.77	0.41	8.60	0.26	1.67	1.61	0.06	1	15	0.19%	3.84	12.89	L-202: Existing 15" RCP
S-201MH			0.760	1.016	0.772										8.34	6.98	1.36			8.670%			
			0.760	1.016	0.772										8.15	7.62	0.53			3.37%			
S-201MH	Type 8 MH	38.25			0.000	20.62	0.17	4.51	28.427	0.000	133.36	0.14	9.41	4.59	6.90	6.37	0.53	1	9x4 CBC	0.19%	10.50	175.60	
S-203					0.000										4.82	4.66	0.16			0.095%			
					0.000										2.24	2.20	0.04			0.10%			
E-204	Type F DBI	27.05	0.760	0.911	0.692	10.00	0.06	6.18	0.692	0.000	4.27	0.37	8.09	0.38	-1.76	-1.80	0.04	1	15	0.03%	4.88	12.21	L-204: Existing 15" RCP
S-201MH			0.760	0.911	0.692										7.71	6.12	1.59			5.881%			
			0.760	0.911	0.692										7.63	6.81	0.82			3.03%			
S-157C	Type 9 CI	86.07	0.760	0.331	0.252	10.55	1.02	6.05	1.145	0.000	6.92	0.00	7.28	0.78	6.38	5.56	0.82	1	30	0.19%	9.95	14.08	
S-167MH			0.760	0.331	0.252										6.50	6.47	0.03			0.098%			
			0.760	1.506	1.145										4.30	4.22	0.09			0.10%			
S-157B	Type 9 CI	23.77	0.760	0.373	0.283	10.20	0.13	6.13	0.893	0.000	5.47	0.11	7.36	0.66	1.80	1.72	0.09	1	18	0.08%	2.87	5.83	
S-157BH			0.760	0.373	0.283										6.70	6.54	0.17			0.268%			
			0.760	0.373	0.283										4.40	4.34	0.06			0.26%			
S-157MH					0.893										2.90	2.84	0.06			0.15%	3.30		
S-157MH					0.000										6.54	6.50	0.04			0.102%	1.74		

STORM SEWER TABULATION FORM

Financial Project ID: TO 6
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County: Duval
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Sheet: 1 of 4
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Date:
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STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL (C°A)	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS
			INCREMENTAL	CUMULATIVE	SUB-TOTAL (C°A)										CROWN								
															FLOWLINE ELEVATION								
															UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)	FALL (ft)						
UPPER LOWER			COMPOSITE C VALUE	AREA																			
S-157C	Type 8 MH	40.34			0.000	10.20	0.39	6.13	0.893	0.000	5.47	0.02	7.79	1.25	4.34	4.30	0.04	1	24	0.10%	2.49	7.83	
E-164A	Type F DBI	33.94	0.760	0.031	0.023	0.00	0.41	0.00	0.000	0.000	1.71	0.03	7.28	0.48	2.34	2.30	0.04	1	15	1.423%	1.39	8.36	L-164A: Existing 15" RCP
S-164			0.000	0.000	0.000	0.00	0.41	0.00	0.000	0.000	1.71	0.03	7.28	0.48	4.73	4.24	0.48	1.42%	6.81				
S-165A	Type F DBI	104.00	0.760	0.663	0.504	14.60	0.78	5.28	4.975	0.000	27.98	0.02	7.56	1.28	3.48	2.99	0.48	1	48	0.108%	2.23	49.34	
S-164MH			0.760	6.546	4.975	14.60	0.78	5.28	4.975	0.000	27.98	0.02	7.56	1.28	6.27	6.22	0.06	0.10%	3.93				
S-166	Type F DBI	294.98	0.760	1.063	0.808	12.02	2.78	5.73	3.869	0.000	22.19	0.03	6.98	0.54	3.95	3.84	0.10	1	48	0.101%	1.77	49.34	
S-166A			0.760	5.090	3.869	12.02	2.78	5.73	3.869	0.000	22.19	0.03	6.98	0.54	4.55	4.26	0.29	0.10%	3.93				
S-168A	Type F DBI	35.05	0.760	0.841	0.639	10.00	0.47	6.18	0.639	0.000	3.95	0.02	6.87	0.40	0.55	0.26	0.29	1	24	0.04%	1.26	7.77	
S-166			0.760	0.841	0.639	10.00	0.47	6.18	0.639	0.000	3.95	0.02	6.87	0.40	4.59	4.55	0.04	0.10%	2.47				
S-161	Type 4 CI	236.44	0.760	1.013	0.770	10.77	1.00	6.00	3.218	0.000	19.30	0.20	7.63	0.77	2.59	2.55	0.04	1	30	0.10%	2.47	23.58	
S-164MH			0.760	4.234	3.218	10.77	1.00	6.00	3.218	0.000	19.30	0.20	7.63	0.77	6.86	6.22	0.64	0.280%	3.93				
S-169A	Junction	33.83			0.000	15.84	0.12	5.09	10.134	0.000	56.76	0.08	7.39	1.65	4.51	3.84	0.66	1	48	0.28%	4.80	60.43	
S-170MH					0.000	15.84	0.12	5.09	10.134	0.000	56.76	0.08	7.39	1.65	2.01	1.34	0.66	0.08%	4.80				
S-170MH	Type 8 MH	518.77			0.000	16.92	2.45	4.95	24.683	0.000	127.23	0.07	6.96	1.34	5.75	5.62	0.13	1	9x4 CBC	0.154%	4.52	175.64	
S-198MH					0.000	16.92	2.45	4.95	24.683	0.000	127.23	0.07	6.96	1.34	3.50	3.45	0.05	0.04%	4.81				
S-170A	Junction	27.41			0.000	16.82	0.13	4.96	9.250	0.000	45.87	0.07	6.78	1.07	-0.50	-0.55	0.05	1	48	0.099%	3.53	54.14	
S-170MH					0.000	16.82	0.13	4.96	9.250	0.000	45.87	0.07	6.78	1.07	5.62	5.27	0.35	0.10%	4.88				
S-170	Type 4 CI	10.81	0.760	1.092	0.830	10.00	0.04	6.18	0.830	0.000	5.12	0.27	7.09	1.05	-0.52	-0.55	0.03	1	15	0.099%	3.65	54.14	
S-170A			0.760	1.092	0.830	10.00	0.04	6.18	0.830	0.000	5.12	0.27	7.09	1.05	6.04	5.71	0.33	0.12%	4.31				
S-173MH	Type 8 MH	70.98			0.000	15.01	0.30	5.22	5.299	0.000	27.64	0.09	7.29	1.48	2.34	2.28	0.06	1	36	0.552%	4.18	29.04	
S-170MH					0.000	15.01	0.30	5.22	5.299	0.000	27.64	0.09	7.29	1.48	1.09	1.03	0.06	0.04%	4.24				
E-174	Type F DBI	13.64	0.760	0.787	0.598	10.00	0.11	6.18	0.598	0.000	3.70	0.14	7.60	1.22	5.81	5.62	0.19	1	18	0.169%	3.91	47.42	L-174A: Existing 18" RCP
S-174MH			0.760	0.787	0.598	10.00	0.11	6.18	0.598	0.000	3.70	0.14	7.60	1.22	2.56	2.45	0.11	0.16%	4.11				
S-175A	Type 9 CI	63.92	0.760	0.716	0.544	11.73	0.39	5.79	2.336	0.000	13.54	0.08	7.62	1.01	-0.44	-0.55	0.11	1	30	0.06%	2.09	14.74	
S-175			0.760	3.074	2.336	11.73	0.39	5.79	2.336	0.000	13.54	0.08	7.62	1.01	6.38	6.30	0.08	0.606%	2.09				
S-175B	Type 9 CI	32.95	0.760	0.964	0.733	10.00	0.21	6.18	0.733	0.000	4.53	0.10	7.77	1.00	6.76	4.41	2.36	1	18	0.15%	26.83	47.42	
S-175A			0.760	0.964	0.733	10.00	0.21	6.18	0.733	0.000	4.53	0.10	7.77	1.00	6.62	6.48	0.14	0.107%	2.76				
S-175C	Type F DBI	250.44	0.760	0.699	0.531	10.21	2.02	6.13	1.059	0.000	6.49	0.05	8.35	1.51	3.32	3.25	0.07	1	24	0.11%	3.00	14.74	
S-175A			0.760	1.394	1.059	10.21	2.02	6.13	1.059	0.000	6.49	0.05	8.35	1.51	0.82	0.75	0.07	0.08%	2.56				
S-175D	Type 9 CI	33.50	0.760	0.695	0.528	10.00	0.30	6.18	0.528	0.000	3.26	0.05	8.62	1.70	6.77	6.62	0.15	1	18	0.169%	2.56	4.70	
S-175C			0.760	0.695	0.528	10.00	0.30	6.18	0.528	0.000	3.26	0.05	8.62	1.70	3.38	3.32	0.06	0.17%	2.66				
S-176MH	Type 8 MH	269.75			0.000	15.92	1.32	5.08	8.421	0.000	42.80	0.00	7.30	1.39	1.88	1.82	0.06	1	48	0.15%	2.66	4.70	
S-170A					0.000	15.92	1.32	5.08	8.421	0.000	42.80	0.00	7.30	1.39	6.84	6.62	0.22	0.099%	2.07				
E-178A	Type F DBI	34.69	0.760	0.591	0.449	10.00	0.26	6.18	0.449	0.000	2.77	0.08	7.55	0.61	3.57	3.32	0.25	1	15	0.10%	2.47	7.76	
E-178			0.760	0.591	0.449	10.00	0.26	6.18	0.449	0.000	2.77	0.08	7.55	0.61	1.57	1.32	0.25	0.10%	2.47				
S-178MH	Type 8 MH	208.75			0.000	15.27	0.96	5.18	6.745	0.000	34.93	0.11	7.69	1.45	6.92	6.84	0.08	1	42	0.147%	1.85	4.41	
S-176MH					0.000	15.27	0.96	5.18	6.745	0.000	34.93	0.11	7.69	1.45	3.62	3.57	0.05	0.15%	2.49				
S-181MH	Type 8 MH	75.88			0.000	15.02	0.32	5.22	5.332	0.000	27.82	0.08	8.13	1.70	2.12	2.07	0.05	1	18	0.15%	2.49	4.41	
S-178MH					0.000	15.02	0.32	5.22	5.332	0.000	27.82	0.08	8.13	1.70	5.92	5.71	0.20	0.135%	3.41				
															3.83	3.48	0.35	1	48	0.13%	4.48	56.28	
															-0.17	-0.52	0.35	1	48	0.04%	4.48	56.28	
															6.94	6.80	0.13	1	15	0.182%	2.26	2.97	L-178A: Existing 15" RCP
															5.86	5.79	0.06	1	15	0.18%	2.42	2.97	
															4.61	4.54	0.06	1	15	0.19%	2.42	2.97	
															6.24	5.92	0.32	1	42	0.183%	3.63	46.32	
															3.71	3.33	0.38	1	42	0.18%	4.81	46.32	
															0.21	-0.17	0.38	1	42	0.05%	4.81	46.32	
															6.43	6.24	0.20	1	36	0.188%	3.94	31.67	
															3.85	3.71	0.15	1	36	0.19%	4.48	31.67	
															0.85	0.71	0.15	1	36	0.06%	4.48	31.67	

STORM SEWER TABULATION FORM

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State Road: A1A

Sheet: 1 of 4
Prepared by: MM
Checked by: TJG

Date
Date:

STRUCTURE NO.	TYPE OF STRUCTURE	LENGTH (ft)	DRAINAGE AREA (ac. or ha.)			TIME OF CONCENTRATION (min)	TIME OF FLOW IN SECTION (min)	INTENSITY (in/hr)	TOTAL C*A	BASE FLOW (cfs)	TOTAL FLOW (cfs)	MINOR LOSSES (ft)	INLET ELEVATION (ft)	HGL CLEARANCE (ft)	HYDRAULIC GRADIENT			NUMBER OF BARRELS	PIPE SIZE (in)	SLOPE (%)	ACTUAL VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	NOTES AND REMARKS
			INCREMENTAL	SUB-TOTAL C*A	CROWN																		
															COMPOSITE C VALUE	AREA	FLOWLINE ELEVATION						
																				UPPER END ELEVATION (ft)	LOWER END ELEVATION (ft)		
UPPER LOWER																							FREQUENCY (yrs): 3.00 Year
																							MANNINGS n: 0.012
																							TAILWATER EL. (ft): 4.66
S-185MH	Type 8 MH	42.87			0.000	12.50	0.17	5.64	3.692	0.000	20.83	0.22	9.47	2.03	7.44	7.13	0.31	1	30	0.293%	4.24	23.96	ZONE: Zone 4
S-182					0.000										4.75	4.63	0.12			0.29%	4.88		
S-186MH					0.000										2.25	2.13	0.12			0.08%	2.98		
S-185MH	Type 8 MH	258.02			0.000	11.32	1.44	5.88	2.490	0.000	14.64	0.01	10.57	2.83	7.73	7.44	0.29	1	30	0.126%	2.98	15.44	
S-200MH					0.000										5.06	4.75	0.31			0.12%	3.15		
S-201MH					0.000										2.56	2.25	0.31			0.08%	3.40		
S-198MH	Type 8 MH	33.09			0.000	18.61	2.96	4.73	26.963	0.000	132.80	0.04	8.14	2.90	5.25	4.82	0.42	1	9x4 CBC	0.095%	3.69	175.64	MANNINGS n: 0.012
S-200MH					0.000										2.89	2.24	0.66			0.10%	4.88		
S-198MH					0.000										-1.11	-1.76	0.66			0.03%	4.87		
S-157A	Type 9 CI	33.85	0.760	0.802	0.610	10.00	0.26	6.18	0.610	0.000	3.77	0.07	7.51	0.70	5.27	5.25	0.02	1	9x4 CBC	0.105%	3.40	175.35	
S-157B			0.760	0.802	0.610										2.93	2.89	0.03			0.10%	4.87		
S-166MH					0.000										-1.07	-1.11	0.03			0.03%	2.13		
S-166MH	Type 8 MH	15.55			0.000	11.94	0.18	5.75	2.422	0.000	13.92	0.01	7.47	1.01	6.81	6.70	0.11	1	18	0.154%	2.13	4.56	
S-166					0.000										4.46	4.40	0.05			0.16%	2.58		
S-167MH					0.000										2.96	2.90	0.05			0.15%	1.45		
S-166MH	Type 8 MH	148.26			0.000	10.55	2.52	6.05	1.145	0.000	6.92	0.00	7.44	0.97	6.45	6.44	0.01	1	42	0.102%	1.45	35.06	
S-166MH					0.000										4.07	4.05	0.02			0.10%	3.64		
S-166MH					0.000										0.57	0.55	0.02			0.05%	0.98		
S-166MH	Type 8 MH	148.26			0.000	10.55	2.52	6.05	1.145	0.000	6.92	0.00	7.44	0.97	6.47	6.45	0.02	1	36	0.096%	0.98	22.89	
S-166MH					0.000										4.22	4.07	0.15			0.10%	3.24		
S-166MH					0.000										1.22	1.07	0.15			0.06%			

Construction Cost Estimate for CONB Storm Sewer Improvements

Prepared By: T. Gyorog
Date: 10/1/2020

			Lemon St.		
Item	Weighted Unit Average Meas	Description	Quantity	Cost	Remarks
0102 1	\$968.83 DA	MAINTENANCE OF TRAFFIC	See below		
0102 3	\$23.96 CY	COMMERCIAL MATERIAL FOR TEMPORARY DRIVEWAY MAINTENANCE	107.00	\$2,563.72	10 driveways x 12' wide x 12' long x 2' deep
0102 60	\$.25 ED	WORK ZONE SIGN	50.00	\$12.50	Road closure detours and SR A1A
0102 61	\$20.14 EA	BUSINESS SIGN	10.00	\$201.40	
0102 71 13	\$27.62 LF	TEMPORARY BARRIER, F&I, LOW PROFILE, CONCRETE	320.40	\$8,849.45	10% of culvert and pipe length
0102 71 23	\$6.39 LF	TEMPORARY BARRIER, RELOCATE, LOW PROFILE CONCRETE	2,883.60	\$18,426.20	90% of culvert and pipe length
0102 74 1	\$.12 ED	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	12,000.00	\$1,440.00	30 @ 400 days
0102 74 2	\$.32 ED	CHANNELIZING DEVICE, TYPE III, 6'	3,200.00	\$1,024.00	8 @ 400 days
0102 74 7	\$3.58 LF	CHANNELIZING DEVICE- PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	200.00	\$716.00	
0102 76	\$6.33 ED	ARROW BOARD / ADVANCE WARNING ARROW PANEL	400.00	\$2,532.00	2 on SR A1A @ 200 days
0102 99	\$10.71 ED	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	1,600.00	\$17,136.00	4 @ 400 days
0104 10 3	\$1.59 LF	SEDIMENT BARRIER	50.00	\$79.50	
0104 11	\$7.84 LF	FLOATING TURBIDITY BARRIER	20.00	\$156.80	
0104 18	\$93.12 EA	INLET PROTECTION SYSTEM	10.00	\$931.20	
0107 1	\$19.61 AC	LITTER REMOVAL	10.00	\$196.10	2 ac x 5 cycles
0107 2	\$34.48 AC	MOWING	10.00	\$344.80	2 ac x 5 cycles
0108 1	\$15,448.01 EA	MONITOR EXISTING STRUCTURES- INSPECTION AND SETTLEMENT MONITORING	2.00	\$30,896.02	For 7'x3' installation
0108 3	\$4,266.67 EA	MONITOR EXISTING STRUCTURES- GROUNDWATER MONITORING	2.00	\$8,533.34	For 7'x3' installation
0110 1 1	\$20,221.43 AC	CLEARING & GRUBBING	1.10	\$22,310.42	15' wide x culvert and pipe length
0110 4 10	\$19.47 SY	REMOVAL OF EXISTING CONCRETE		\$0.00	Use sidewalk, curb and driveway area
0120 1	\$6.68 CY	REGULAR EXCAVATION		\$0.00	Included in pipe and culvert
0160 4	\$3.23 SY	TYPE B STABILIZATION	4,094.00	\$13,223.62	10'+1.5' = 11.5' wide over culvert & pipe length
0285701	\$12.09 SY	OPTIONAL BASE, BASE GROUP 01	3,560.00	\$43,040.40	10' wide over culvert & pipe length
0334 1 11	\$121.53 TN	SUPERPAVE ASPHALTIC CONC, TRAFFIC A	587.40	\$71,386.72	Same area as base. 3" Type A SP at 110 lb/sy/linch
0400 4 1	\$1,013.10 CY	CONCRETE CLASS IV, CULVERTS	178.80	\$181,142.28	0.60 cy/lf for 298 lf of 7' x 3'
0415 1 1	\$.97 LB	REINFORCING STEEL- ROADWAY	39,336.00	\$38,155.92	220 lb/cy conc for culvert
0425 1201	\$4,567.04 EA	INLETS, CURB, TYPE 9, <10'		\$0.00	
0425 1202	\$7,659.33 EA	INLETS, CURB, TYPE 9, >10'		\$0.00	
0425 1203	\$7,321.00 EA	INLETS, CURB, TYPE 9, J BOT, <10'	1.00	\$7,321.00	See storm tab
0425 1311	\$5,025.37 EA	INLETS, CURB, TYPE P-1, <10'	2.00	\$10,050.74	See storm tab
0425 1312	\$7,569.29 EA	INLETS, CURB TYPE P-1, >10'		\$0.00	
0425 1315	\$3,909.26 EA	INLETS, CURB TYPE P-1, PARTIAL		\$0.00	
0425 1321	\$5,923.95 EA	INLETS, CURB, TYPE P-2, <10'		\$0.00	
0425 1341	\$6,829.64 EA	INLETS, CURB, TYPE P-4, <10'	3.00	\$20,488.92	See storm tab
0425 1345	\$4,800.00 EA	INLETS, CURB, TYPE P-4, PARTIAL		\$0.00	
0425 1351	\$5,067.61 EA	INLETS, CURB, TYPE P-5, <10'		\$0.00	
0425 1361	\$5,358.64 EA	INLETS, CURB, TYPE P-6, <10'		\$0.00	
0425 1369	\$3,569.19 EA	INLETS, CURB, TYPE P-6, MODIFY		\$0.00	
0425 1411	\$6,964.54 EA	INLETS, CURB TYPE J-1, <10'		\$0.00	
0425 1442	\$7,348.68 EA	INLETS, CURB, TYPE J-4, >10'		\$0.00	
0425 1451	\$7,269.63 EA	INLETS, CURB, TYPE J-5, <10'		\$0.00	
0425 1452	\$9,559.47 EA	INLETS, CURB, TYPE J-5, >10'		\$0.00	
0425 1561	\$5,023.51 EA	INLETS, DT BOT, TYPE F, <10'	16.00	\$80,376.16	See storm tab
0425 1563	\$7,381.40 EA	INLETS, DITCH BOTTOM, TYPE F, J BOT, <10'	5.00	\$36,907.00	See storm tab
0425 2 61	\$4,203.17 EA	MANHOLES, P-8, <10'	1.00	\$4,203.17	See storm tab
0425 2 62	\$5,446.96 EA	MANHOLES, P-8, >10'		\$0.00	
0425 2 63	\$3,029.98 EA	MANHOLES, P-8, PARTIAL		\$0.00	
0425 2 71	\$8,605.10 EA	MANHOLES, J-7, <10'		\$0.00	
0425 2 72	\$10,385.28 EA	MANHOLES, J-7, >10'		\$0.00	
0425 2 73	\$3,255.64 EA	MANHOLES, J-7, PARTIAL		\$0.00	
0425 2 91	\$6,893.71 EA	MANHOLES, J-8, <10'	4.00	\$27,574.84	See storm tab
0425 3 41	\$4,242.50 EA	JUNCTION BOX, DRAINAGE, P-7, <10'	1.00	\$4,242.50	See storm tab
5	\$125.99 LF	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 15"S/CD	90.00	\$11,339.10	See storm tab
8	\$67.01 LF	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18"S/CD	801.00	\$53,675.01	See storm tab

4	\$76.53	LF	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24"S/CD		910.00	\$69,642.30	See storm tab
0	\$109.71	LF	PIPE CULVERT, OPT MATERIAL, ROUND, 30"S/CD		98.00	\$10,751.58	See storm tab
6	\$127.95	LF	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD		305.00	\$39,024.75	See storm tab
2	\$164.02	LF	PIPE CULVERT, OPT MATERIAL, ROUND, 42"S/CD		702.00	\$115,142.04	See storm tab
8	\$217.73	LF	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD			\$0.00	
0	\$148.84	LF	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 30"S/CD			\$0.00	
6	\$150.27	LF	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 36"S/CD			\$0.00	
2	\$240.56	LF	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 42"S/CD			\$0.00	
8	\$242.25	LF	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 48"S/CD			\$0.00	
0520 1 10	\$23.24	LF	CONCRETE CURB & GUTTER, TYPE F		1,602.00	\$37,230.48	COJ curb and drop curb, assume 50% of culvert and pipe length
0522 1	\$39.89	SY	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK		427.20	\$17,041.01	Assume 6' wide over 20% of culvert and pipe length
0522 2	\$56.24	SY	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK		85.44	\$4,805.15	Assume 12' wide over 2% of culvert and pipe length
0526 1 1	\$45.67	SY	PAVERS, ARCHITECTURAL, ROADWAY		500.00	\$22,835.00	City center along Atlantic Blvd
0526 1 2	\$135.29	SY	PAVERS, ARCHITECTURAL, SIDEWALK			\$0.00	
0527 2	\$29.93	SF	DETECTABLE WARNINGS		100.00	\$2,993.00	Est 10 x 10sf each
0570 1 2	\$2.61	SY	PERFORMANCE TURF, SOD		500.00	\$1,305.00	
0711 11125	\$4.51	LF	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK		120.00	\$541.20	Est 10 lane crossings at 12' each
0711 14123	\$8.91	LF	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 12" FOR CROSSWALK		240.00	\$2,138.40	Est 10 lane crossings at 24' each
				Subtotal		\$1,042,926.74	
				MOT 5%		\$52,146.34	
				Subtotal		\$1,095,073.08	
				Mobilization 10%		\$109,507.31	
				Subtotal		\$1,204,580.38	
				Utility Coordination 10%		\$120,458.04	
				Unknowns 20%		\$240,916.08	
				Total Construction		\$1,565,954.50	
				CEI 8% of Const		\$125,276.36	
				Design 10% of Const		\$156,595.45	
				Subtotal		\$1,847,826.31	
				Right-of-way		\$0.00	
				Mitigation		\$0.00	
				Total Cost		\$1,847,826.31	

Walnut St.		
Quantity	Cost	Remarks
See below		
107.00	\$2,563.72	10 driveways x 12' wide x 12' long x 2' deep
50.00	\$12.50	Road closure detours and SR A1A
10.00	\$201.40	
363.50	\$10,039.87	10% of culvert and pipe length
3,271.50	\$20,904.89	90% of culvert and pipe length
12,000.00	\$1,440.00	30 @ 400 days
3,200.00	\$1,024.00	8 @ 400 days
200.00	\$716.00	
400.00	\$2,532.00	2 on SR A1A @ 200 days
1,600.00	\$17,136.00	4 @ 400 days
50.00	\$79.50	
20.00	\$156.80	
10.00	\$931.20	
10.00	\$196.10	2 ac x 5 cycles
10.00	\$344.80	2 ac x 5 cycles
2.00	\$30,896.02	For 5'x3' installation
2.00	\$8,533.34	For 5'x3' installation
1.25	\$25,311.60	15' wide x culvert and pipe length
	\$0.00	
	\$0.00	
4,644.72	\$15,002.45	10'+1.5' = 11.5' wide over culvert & pipe length
4,038.89	\$48,830.17	10' wide over culvert & pipe length
666.42	\$80,989.62	Same area as base. 3" Type A SP at 110 lb/sy/inch
106.40	\$107,793.84	0.40 cy/lf for 266 lf of 5' x 3'
23,408.00	\$22,705.76	220 lb/cy conc for culvert
12.00	\$54,804.48	See storm tab
	\$0.00	
1.00	\$7,321.00	See storm tab
2.00	\$10,050.74	See storm tab
	\$0.00	
	\$0.00	
1.00	\$5,923.95	See storm tab

	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
1.00	\$6,964.54	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
11.00	\$55,258.61	See storm tab
1.00	\$7,381.40	See storm tab
4.00	\$16,812.68	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
3.00	\$20,681.13	See storm tab
	\$0.00	
625.00	\$78,743.75	See storm tab
267.00	\$17,891.67	See storm tab
571.00	\$43,698.63	See storm tab
1,258.00	\$138,015.18	See storm tab
325.00	\$41,583.75	See storm tab
323.00	\$52,978.46	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
1,817.50	\$42,238.70	COJ curb and drop curb, assume 50% of culvert and pipe length
484.67	\$19,333.35	Assume 6' wide over 20% of culvert and pipe length
96.93	\$5,451.53	Assume 12' wide over 2% of culvert and pipe length
	\$0.00	
	\$0.00	
100.00	\$2,993.00	Est 10 x 10sf each
500.00	\$1,305.00	
120.00	\$541.20	Est 10 lane crossings at 12' each

240.00	\$2,138.40	Est 10 lane crossings at 24' each
	\$1,030,452.73	
	\$51,522.64	
	\$1,081,975.37	
	\$108,197.54	
	\$1,190,172.90	
	\$119,017.29	
	\$238,034.58	
	\$1,547,224.77	
	\$185,666.97	
	\$154,722.48	
	\$1,887,614.22	
	\$0.00	
	\$0.00	
	\$1,887,614.22	

Pine St.		
Quantity	Cost	Remarks
See below		
107.00	\$2,563.72	10 driveways x 12' wide x 12' long x 2' deep
50.00	\$12.50	Road closure detours and SR A1A
10.00	\$201.40	
201.20	\$5,557.14	10% of culvert and pipe length
1,810.80	\$11,571.01	90% of culvert and pipe length
12,000.00	\$1,440.00	30 @ 400 days
3,200.00	\$1,024.00	8 @ 400 days
200.00	\$716.00	
400.00	\$2,532.00	2 on SR A1A @ 200 days
1,600.00	\$17,136.00	4 @ 400 days
50.00	\$79.50	
20.00	\$156.80	
10.00	\$931.20	
10.00	\$196.10	2 ac x 5 cycles
10.00	\$344.80	2 ac x 5 cycles
0.00	\$0.00	
0.00	\$0.00	
0.69	\$14,010.16	15' wide x culvert and pipe length
	\$0.00	
	\$0.00	
2,570.89	\$8,303.97	10'+1.5' = 11.5' wide over culvert & pipe length
2,235.56	\$27,027.87	10' wide over culvert & pipe length
368.87	\$44,828.37	Same area as base. 3" Type A SP at 110 lb/sy/inch
	\$0.00	
	\$0.00	
6.00	\$27,402.24	See storm tab
	\$0.00	
2.00	\$14,642.00	See storm tab
3.00	\$15,076.11	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	

1.00	\$6,829.64	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
1.00	\$6,964.54	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
3.00	\$15,070.53	See storm tab
3.00	\$22,144.20	See storm tab
3.00	\$12,609.51	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
2.00	\$13,787.42	See storm tab
	\$0.00	
18.00	\$2,267.82	See storm tab
385.00	\$25,798.85	See storm tab
371.00	\$28,392.63	See storm tab
76.00	\$8,337.96	See storm tab
250.00	\$31,987.50	See storm tab
675.00	\$110,713.50	See storm tab
237.00	\$51,602.01	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
1,006.00	\$23,379.44	COJ curb and drop curb, assume 50% of culvert and pipe length
268.27	\$10,701.16	Assume 6' wide over 20% of culvert and pipe length
53.65	\$3,017.46	Assume 12' wide over 2% of culvert and pipe length
	\$0.00	
	\$0.00	
100.00	\$2,993.00	Est 10 x 10sf each
500.00	\$1,305.00	
120.00	\$541.20	Est 10 lane crossings at 12' each

240.00	\$2,138.40	Est 10 lane crossings at 24' each
	\$576,334.66	
	\$28,816.73	
	\$605,151.40	
	\$60,515.14	
	\$665,666.54	
	\$66,566.65	
	\$133,133.31	
	\$865,366.50	
	\$103,843.98	
	\$86,536.65	
	\$1,055,747.13	
	\$0.00	
	\$0.00	
	\$1,055,747.13	

Oleander St.		
Quantity	Cost	Remarks
See below		
214.00	\$5,127.44	20 driveways x 12' wide x 12' long x 2' deep
100.00	\$25.00	
20.00	\$402.80	
624.30	\$17,243.17	10% of culvert and pipe length
5,618.70	\$35,903.49	90% of culvert and pipe length
24,000.00	\$2,880.00	60 @ 400 days
6,400.00	\$2,048.00	16 @ 400 days
400.00	\$1,432.00	
400.00	\$2,532.00	2 on SR A1A @ 200 days
1,600.00	\$17,136.00	4 @ 400 days
100.00	\$159.00	
40.00	\$313.60	
20.00	\$1,862.40	
20.00	\$392.20	4 ac x 5 cycles
20.00	\$689.60	4 ac x 5 cycles
2.00	\$30,896.02	For 9'x4' installation
2.00	\$8,533.34	For 9'x4' installation
2.15	\$43,471.90	15' wide x culvert and pipe length
	\$0.00	
	\$0.00	
7,977.17	\$25,766.25	10'+1.5' = 11.5' wide over culvert & pipe length
6,936.67	\$83,864.30	10' wide over culvert & pipe length
1,144.55	\$139,097.16	Same area as base. 3" Type A SP at 110 lb/sy/inch
872.20	\$883,625.82	0.70 cy/lf for 1246 lf of 5' x 3'
191,884.00	\$186,127.48	220 lb/cy conc for culvert
14.00	\$63,938.56	See storm tab
	\$0.00	
1.00	\$7,321.00	See storm tab
5.00	\$25,126.85	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	

7.00	\$47,807.48	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
15.00	\$75,352.65	See storm tab
5.00	\$36,907.00	See storm tab
4.00	\$16,812.68	See storm tab
	\$0.00	
	\$0.00	
1.00	\$8,605.10	See storm tab
	\$0.00	
	\$0.00	
13.00	\$89,618.23	See storm tab
	\$0.00	
62.00	\$7,811.38	
255.00	\$17,087.55	See storm tab
893.00	\$68,341.29	See storm tab
743.00	\$81,514.53	See storm tab
1,526.00	\$195,251.70	See storm tab
224.00	\$36,740.48	See storm tab
1,294.00	\$281,742.62	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
3,121.50	\$72,543.66	COJ curb and drop curb, assume 50% of culvert and pipe length
3,121.50	\$124,516.64	Assume 6' wide over 20% of culvert and pipe length
166.48	\$9,362.84	
	\$0.00	
	\$0.00	
200.00	\$5,986.00	Est 20 x 10sf each
1,000.00	\$2,610.00	
240.00	\$1,082.40	Est 20 lane crossings at 12' each

480.00	\$4,276.80	Est 20 lane crossings at 24' each
	\$2,769,886.40	
	\$138,494.32	
	\$2,908,380.72	
	\$290,838.07	
	\$3,199,218.79	
	\$319,921.88	
	\$639,843.76	
	\$4,158,984.42	
	\$499,078.13	
	\$415,898.44	
	\$5,073,961.00	
	\$0.00	
	\$0.00	
	\$5,073,961.00	

Florida Blvd. N		
Quantity	Cost	Remarks
See below		
107.00	\$2,563.72	10 driveways x 12' wide x 12' long x 2' deep
50.00	\$12.50	Road closure detours and SR A1A
10.00	\$201.40	
412.02	\$11,379.91	10% of culvert and pipe length
3,708.15	\$23,695.10	90% of culvert and pipe length
12,000.00	\$1,440.00	30 @ 400 days
3,200.00	\$1,024.00	8 @ 400 days
200.00	\$716.00	
400.00	\$2,532.00	2 on SR A1A @ 200 days
1,600.00	\$17,136.00	4 @ 400 days
50.00	\$79.50	
20.00	\$156.80	
10.00	\$931.20	
10.00	\$196.10	2 ac x 5 cycles
10.00	\$344.80	2 ac x 5 cycles
2.00	\$30,896.02	For 5'x3' installation
2.00	\$8,533.34	For 5'x3' installation
1.42	\$28,689.99	15' wide x culvert and pipe length
	\$0.00	
	\$0.00	
5,264.66	\$17,004.86	10'+1.5' = 11.5' wide over culvert & pipe length
4,577.97	\$55,347.62	10' wide over culvert & pipe length
755.36	\$91,799.45	Same area as base. 3" Type A SP at 110 lb/sy/inch
109.60	\$111,035.76	0.40 cy/lf for 274 lf of 5' x 3'
24,112.00	\$23,388.64	220 lb/cy conc for culvert
13.00	\$59,371.52	See storm tab
	\$0.00	
5.00	\$36,605.00	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	

7.00	\$47,807.48	See storm tab
	\$0.00	
2.00	\$10,135.22	See storm tab
2.00	\$10,717.28	See storm tab
	\$0.00	
	\$0.00	
1.00	\$7,348.68	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
2.00	\$14,762.80	See storm tab
6.00	\$25,219.02	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
4.00	\$27,574.84	See storm tab
	\$0.00	
44.00	\$5,543.56	See storm tab
291.00	\$19,499.91	See storm tab
1,484.00	\$113,570.52	See storm tab
839.00	\$92,046.69	See storm tab
34.00	\$4,350.30	See storm tab
	\$0.00	
352.17	\$76,677.97	See storm tab
114.00	\$16,967.76	See storm tab
46.00	\$6,912.42	See storm tab
38.00	\$9,141.28	See storm tab
604.00	\$146,319.00	See storm tab
2,060.09	\$47,876.38	COJ curb and drop curb, assume 50% of culvert and pipe length
2,060.09	\$82,176.79	Assume 6' wide over 20% of culvert and pipe length
88.48	\$4,976.37	Assume 12' wide over 2% of culvert and pipe length
	\$0.00	
	\$0.00	
100.00	\$2,993.00	Est 10 x 10sf each
500.00	\$1,305.00	
120.00	\$541.20	Est 10 lane crossings at 12' each

240.00	\$2,138.40	Est 10 lane crossings at 24' each
	\$1,301,683.09	
	\$65,084.15	
	\$1,366,767.24	
	\$136,676.72	
	\$1,503,443.97	
	\$150,344.40	
	\$300,688.79	
	\$1,954,477.16	
	\$234,537.26	
	\$195,447.72	
	\$2,384,462.13	
	\$0.00	
	\$0.00	
	\$2,384,462.13	

Florida Blvd. S		
Quantity	Cost	Remarks
See below		
53.00	\$1,269.88	5 driveways x 12' wide x 12' long x 2' deep
50.00	\$12.50	Road closure detours and SR A1A
10.00	\$201.40	
166.80	\$4,607.02	10% of culvert and pipe length
1,501.20	\$9,592.67	90% of culvert and pipe length
6,000.00	\$720.00	15 @ 400 days
	\$0.00	
100.00	\$358.00	
400.00	\$2,532.00	2 on SR A1A @ 200 days
1,600.00	\$17,136.00	4 @ 400 days
50.00	\$79.50	
20.00	\$156.80	
10.00	\$931.20	
10.00	\$196.10	2 ac x 5 cycles
10.00	\$344.80	2 ac x 5 cycles
	\$0.00	
	\$0.00	
0.57	\$11,614.79	15' wide x culvert and pipe length
	\$0.00	
	\$0.00	
2,131.33	\$6,884.21	10'+1.5' = 11.5' wide over culvert & pipe length
1,853.33	\$22,406.80	10' wide over culvert & pipe length
305.80	\$37,163.87	Same area as base. 3" Type A SP at 110 lb/sy/inch
	\$0.00	
	\$0.00	
3.00	\$13,701.12	See storm tab
	\$0.00	
1.00	\$7,321.00	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	

1.00	\$6,829.64	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
1.00	\$6,964.54	See storm tab
	\$0.00	
1.00	\$7,269.63	See storm tab
	\$0.00	
1.00	\$5,023.51	See storm tab
2.00	\$14,762.80	See storm tab
1.00	\$4,203.17	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
	\$0.00	See storm tab
1.00	\$6,893.71	See storm tab
	\$0.00	
	\$0.00	
185.00	\$12,396.85	See storm tab
114.00	\$8,724.42	See storm tab
46.00	\$5,046.66	See storm tab
604.00	\$77,281.80	See storm tab
594.00	\$97,427.88	See storm tab
125.00	\$27,216.25	See storm tab
	\$0.00	
	\$0.00	
	\$0.00	
	\$0.00	
834.00	\$19,382.16	
222.40	\$8,871.54	
44.48	\$2,501.56	
	\$0.00	
	\$0.00	
50.00	\$1,496.50	Est 5 x 10sf each
250.00	\$652.50	
60.00	\$270.60	Est 5 lane crossings at 12' each

120.00	\$1,069.20	Est 5 lane crossings at 24' each
	\$451,514.56	
	\$22,575.73	
	\$474,090.29	
	\$47,409.03	
	\$521,499.32	
	\$52,149.93	
	\$104,299.86	
	\$677,949.12	
	\$81,353.89	
	\$67,794.91	
	\$827,097.92	
	\$0.00	
	\$0.00	
	\$827,097.92	

City of
Neptune Beach
Public Services

2010 Forest Ave • Neptune Beach, Florida 32266 (904) 270-2423 •
FAX (904) 270-2418



October 1, 2020

Tim Banks
Program Administrator
Clean Water State Revolving Fund
Florida Department of Environmental Regulation
Division of Water Restoration Assistance
3900 Commonwealth Boulevard – MS 3505
Tallahassee, FL 32399-3600

RE: Wastewater System Improvements, Planning and Design
City of Neptune Beach, Duval County
FL0020427

Dear Mr. Banks:

The City of Neptune Beach is submitting the enclosed CWSRF Request for Inclusion (RFI) for Planning and Design of necessary improvements to the City's Wastewater Treatment and Collection system. The City is currently under a Consent Order for exceedances of the Total Nitrogen TMDL effluent limitation and has hired a consulting engineer to assist the City in preparing a Wastewater Facilities Plan to address the long range wastewater system needs. In addition, the City has excessive I/I, resulting in more than doubling of plant flows during high rainfall periods.

The Wastewater Facilities Plan will be completed in December 2020. The proposed Planning and Design items submitted for the CWSRF Request for Inclusion are based on the preliminary findings of the Wastewater Facilities Plan.

Project Information with a background and description of the wastewater system needs is provided as an attachment to this letter. The Planning and Design work submitted in this RFI is for (1) WWTF design, (2) Sewer System Evaluation Survey, (3) initial mitigation measures (find and fix program), and (4) surveying for proposed collection system projects.

Thank you for your consideration of this CWSRF Request for Inclusion. Please feel free to contact me if you have any questions.

Sincerely,

Stefen Wynn
City Manager

SW/DB
Enclosures



Florida Department of Environmental Protection

REQUEST FOR INCLUSION ON THE CWSRF PRIORITY LIST

Clean Water State Revolving Fund Loan Program
3900 Commonwealth Blvd., MS 3505, Tallahassee, FL 32399-3000

Process to receive a State Revolving Fund (SRF) Loan. The Request for Inclusion (RFI) form, 62-503.900(1), lets us know that you are interested in obtaining a SRF loan. Each RFI will be assigned a project engineer to assist you throughout the SRF funding process. The information contained in the RFI is used to determine a priority score for your project; and the priority score is used to rank projects on the SRF priority list. Only projects ranked on the fundable portion of the priority list will receive consideration for a loan. Your project engineer will assist you in understanding all program requirements necessary before you are asked to submit a loan application, forms 62-503.900(2) or 62-503.900(3). Please note that project costs incurred before a SRF loan agreement is executed or an authorization to incur costs is provided are ineligible for reimbursement.

Project Number:

(Filled in by DEP)

Type of loan applying for: Planning ☒ Inflow/Infiltration Rehabilitation ☒ Design ☒ Construction ☐

1. Applicant's Name and Address Project

Sponsor: City of Neptune Beach

Contact Person: Stefen Wynn, City Manager

116 First Street

(street address)

Neptune Beach

(city)

Duval

(county)

FL

(state)

32266

(zip code)

904 270-2423

(telephone)

(ext.)

(FAX)

cm@nbfl.us

(email address)

Contact Person Address (if different):

(street address)

(city)

(state)

(zip code)

2. Name and Address of Applicant's Consultant (if any).

Firm: John Collins Engineering Associates LLC

Contact Person: John Collins

11516-3 San Jose Blvd.

(street address)

Jacksonville

(city)

FL

(state)

32223

(zip code)

904 262-4121

(telephone)

(ext.)

(FAX)

john@jcollinsengineering.com

(email address)

3. Certification by Authorized Representative: I certify that this form and attachments have been completed by me or at my direction and that the information presented herein is, to the best of my knowledge, accurate.

cm@nbfl.us

(email address)

(date)

Stefen Wynn

(name, typed)

City Manager

(title)

(signature)

4. Eligible Projects.

- a. Stormwater management facilities, such as detention/retention facilities, treatment facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).
- b. Wastewater management facilities, such as sewers, pump stations, treatment plants, reuse facilities, sludge facilities, etc. sponsored by a local government (eligible under Section 212 of the amended Clean Water Act).
- c. Nonpoint source pollution control best management practices for agriculture, silvaculture, on-site treatment and disposal, wetlands, mining, marinas, brownfields or groundwater protection sponsored by any entity (eligible under Section 319 or 320 of the amended Clean Water Act).

5. Project Information (Please attach).

Describe the project, its location, the scope, why it's needed and the environmental benefit.

Attach maps showing system boundaries, existing and proposed service area, and project area.

6. Estimated Costs (Clean Water Act Section 212, 319, and 320).

a. Planning and/or SSES	<u>\$ 822,200</u>
b. Design	<u>\$ 779,200</u>
c. Special Studies	<u> </u>
d. *Eligible Land	<u> </u>
e. Construction, Equipment, Materials, Demolition and Related Procurement	<u> </u>
f. Construction Contingency (10% of Item e)	<u> </u>
g. Technical Services during Construction	<u> </u>
h. Sum of Items a. through g.	<u>\$ 1,601,400</u>

*Funding shall be limited to the fair market value of the acreage of land necessary for and integral to the treatment process, including the zone of discharge. If additional land is purchased, the eligible amount shall be the acreage of land necessary for treatment divided by the total area purchased times the purchase price.

7. Project Schedule.

(Month and Year)

Submit the planning or SSES documentation	<u>12/01/20</u>
Submit the design documents, obtain permits, and acquire sites (as necessary)	<u>12/01/21</u>
Start activity (such as construction or non-structural best management practice)	<u> </u>
Complete activity (such as construction or non-structural best management practice)	<u> </u>

8. Population

Population served by the system	<u>7,213</u>
Population to be served by the project	<u>7,213</u>

9. Project Priority

- a. Baseline Priority Categorization.

Identify the category score(s) and construction costs(s) for which the project qualifies. The baseline priority score (BPS) shall be determined by prorating each component.

Project Component	Priority Points	Component Construction Cost
1. Eliminate a documented acute or chronic public health hazard. Examples: Elimination of failing septic tanks or failing package plants or elimination of sanitary sewer overflows.	500 points	_____
2. Implement a project included in, or to be implemented as a direct result of, an adopted Basin Management Action Plan or a Reasonable Assurance Plan approved pursuant to section 403.067, F.S.	450 points	_____
3. Protect surface or ground water by reducing a documented source of pollution, pollution reductions necessary to meet regulatory requirements, or repairs by local governments or on-site system management entities, under section 319 of the Act, that correct septic tank failures in springsheds of first-magnitude springs.	400 points	_____
4. Address a compliance problem documented in an enforcement action where the Department has issued a notice of violation or entered into a consent order with the project sponsor.	375 points	\$ 416,000
5. Meet the criteria for Innovative/Alternative; correct excessive inflow/infiltration, scheduled rehabilitation, replacement; repair described in an approved asset management plan; or reuse that replaces an existing or proposed demand on a water supply.	350 points	\$ 1,185,400
6. Planning and design loans and rehabilitation, replacement or repair not included in an approved asset management plan.	340 points	_____
7. Projects that construct other reclaimed water systems or residuals reuse that do not meet the criteria of component 5. above.	300 points	_____
8. Ensure compliance with other enforceable standards or requirements.	200 points	_____
9. Timely submitted projects that otherwise meet the requirements of the Act.	100 points	_____

b. Restoration and Protection of Special Water Bodies.

In order to qualify for a base score multiplier, identify which of the water bodies listed below that the project will assist in restoring or protecting and reference the location in existing documentation where substantiating information may be found or attach other such substantiating information. If none are selected, the multiplier equals 1.0. If one or more are selected, the multiplier is 1.2.

A priority water body identified in an adopted Surface Water Improvement and Management (SWIM) Plan.

A water body classified as Outstanding Florida Waters.

A water body classified as Wild and Scenic Rivers.

A water body located in a priority watershed established under the Unified Watershed Assessment Program.

☐
☐
☐
☐

c. Projects that document any of the following shall have bonus points added to the priority score after the adjustment under paragraph (a) above, as indicated.

- | | | |
|--|-----------|--------------------------|
| 1. Elimination of Ocean Outfalls | 15 points | ☐ |
| 2. Projects that demonstrate consistency with a Water Resource Management plan | 15 points | ☐ |

Return the completed form to the State Revolving Fund Program, 3900 Commonwealth Blvd., MS 3505, Tallahassee, Florida, 32399-3000. The form may be scanned and emailed to SRF_Reporting@dep.state.fl.us or may be sent by FAX to (850) 245-2857.

Project Information

City of Neptune Beach

The City of Neptune Beach wastewater collection system and treatment facility serves the citizens and businesses within the city limits, approximately 2.5 square miles. The treated effluent from the plant is disposed through an effluent force main (shared by the cities of Jacksonville Beach and Atlantic Beach) to the Lower St. Johns River, near the mouth of the river at Shermans Point. The receiving stream is classified as Class III Marine Waters, WBID 2213A-within the National Preserve.

The City has hired a consulting engineer through the RFP Process to assist with the long range planning of needed improvements for the wastewater system. The consultant is working with City staff to complete a Wastewater Facilities Plan that will meet the requirements of the State Revolving Fund (SRF) program guidelines. This plan along with the public participation process is expected to be complete by December 2020

Background

Currently, the WWTF is under a FDEP Consent Order for exceedances of the Total Nitrogen TMDL effluent limitation. The WWTF experienced problems meeting the TMDL limitations because of high flows and sand and grit build-up in the IFAS treatment basin. Essentially, the WWTF is comprised of two treatment plants with one treatment plant (Treatment Plant #1) providing advanced treatment with nitrogen removal through an Integrated Fixed-Film Activated Sludge (IFAS) MLE process and the other treatment plant (Treatment Plant #2) providing secondary treatment in a package plant using extended aeration. The IFAS plant has a rated capacity of 0.8 MGD and the extended aeration plant has a rated capacity of 0.235 MGD for a combined permitted capacity of 1.035 MGD.

The City Took the IFAS plant off-line in March 2020 and removed the sand and grit that was impacting the aeration transfer. The City had to wait until the dry season, when there was less likelihood of I/I causing flow spikes to the plant, and rapidly take the IFAS tank out of service and remove the grit that was impairing treatment and causing the nitrogen limits to exceed the TMDL. Subsequent to the grit removal, the permitted nitrogen limits are being achieved. However, additional redundancy and backup capacity is recommended for the advanced treatment Plant #1.

In addition, the WWTF has aging and limited infrastructure in terms of the electrical power available. The entire plant electrical system needs to be upgraded .

Infiltration and Inflow

Excessive I/I flow to the plant is intensifying the problems that led to the Consent Order conditions. During high rainfall periods the wastewater flow to the WWTF more than doubles, exceeding the permitted capacity of 1.035 MGD. These I/I incidents also create conditions that make the City vulnerable to sewer overflows.

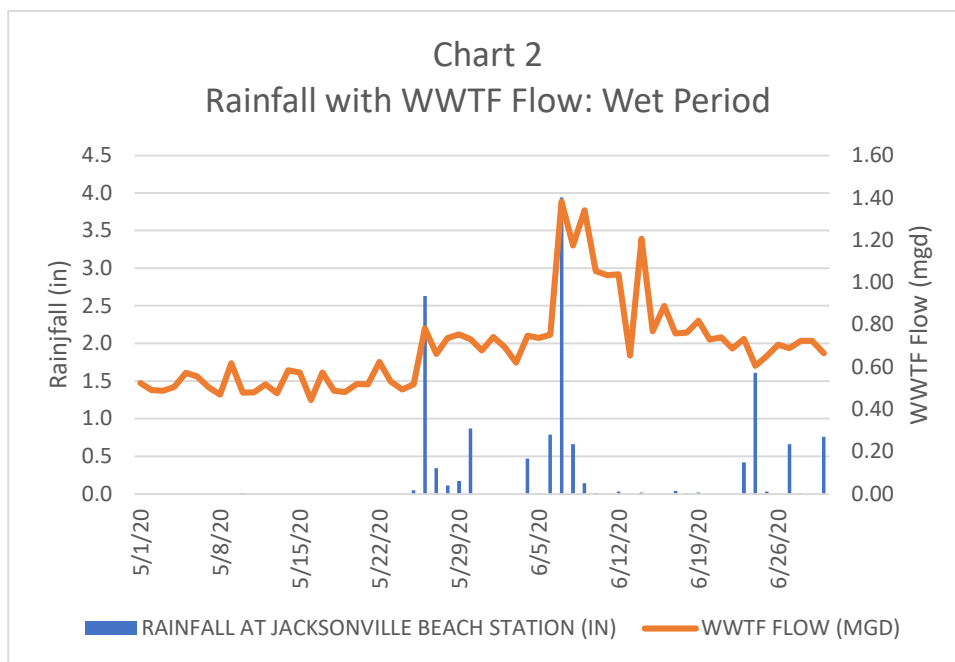
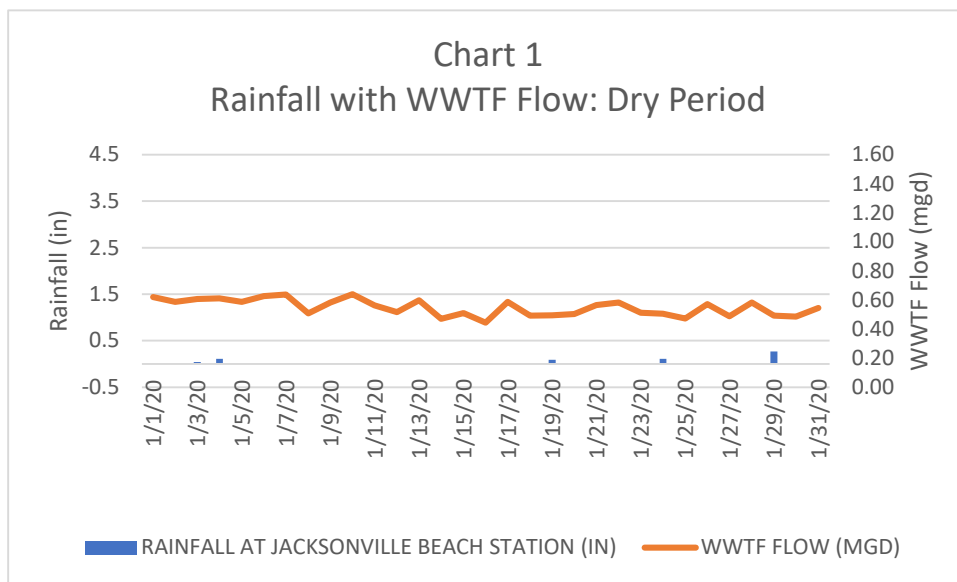
The overall extent of I/I was quantified in 3 ways:

- 1) Wastewater treatment facility flow variations during dry weather month vs. wet weather month
- 2) Wastewater treatment facility inflow per equivalent residential connection (ERC)
- 3) Pump station pumping rate variations during dry weather month vs. wet weather month

As shown in the following sections, each method of evaluation demonstrated a significantly high measure of I/I in the wastewater collection system.

Wastewater Treatment Facility Flow Variations

Charts 1 and 2 show the Neptune Beach WWTF flows with rainfall during the dry period of January 2020 and the wet period of June 2020. As shown on these charts, the flow is relatively constant during periods of no rainfall or very low rainfall. When the rainfall increases, the plant flows more than double. This is disruptive to WWTF operation, especially considering that the WWTF has a surface water discharge.



Wastewater Treatment Facility Inflow per ERC

Table 1 provides the current equivalent ERCs for the Neptune Beach wastewater customers. These equivalent ERCs represent active customers only, vacant customers were not included.

Table 1						
EQUIVALENT RESIDENTIAL CONNECTIONS FOR SEWER FROM BILLING DEPARTMENT METER COUNTS						
	3/4 inch	1 inch	1.5 inch	2 inch	4 inch	Total
EQUIVALENT ERCs FOR METER SIZE	1	2	5	8	25	
Residential Water	3271	114	17			3402
Residential Sewer	3052	92	1			3145
Commercial Water	168	62	24	30	5	289
Commercial Water no Sewer	2			1		3
Commercial Sewer	166	62	24	29	5	286
Total Residential and Commercial Sewer	3218	154	25	29	5	3431
Equivalent ERCs	3218	308	125	232	125	4008

At a WWTF Average Day Flow of 585,000 gpd for July 2019 through June 2020, the corresponding flow per equivalent ERC was 585,000 gpd / 4008 ERCs = 146 gpd/ERC. In contrast, the Maximum Month flow for the same period, which occurred during the high rainfall month of June 2020, was 827,000 gpd, resulting in a flow per equivalent ERC of 206 gpd/ERC. This represents a significant ERC flow occurring during a high rainfall month.

Lift Station Pumping Rate Variations During Wet Weather

Pumping rate variations to individual lift stations between dry months and wet months provide an indication of I/I for specific areas of the City. Table 2 shows the pumping rate to each lift station during January 2019, a dry month, and June 2020. In addition, the Maximum Day Flow for each pump station is shown. The Jacksonville Beach NOAA Weather Station recorded a 4-inch rainfall on June 7, 2020, which corresponds to the Maximum Day Flow on almost every lift station on June 8, 2020.

Table 2								
Dry Month and Wet Month Lift Station Pumping Rates								
Lift Station		Pumping Rate (gpd)				Max Day	Avg Flow % Increase	Max Flow % Increase
		Avg Jan 2020	Max Day Jan 2020	Avg June 2020	Max Day June 2020			
1	Fl Blvd	337,000	426,000	458,207	648,000	8-Jun	36.0%	52.1%
1a	1st St	9,380	13,200	13,117	19,200	14-Jun	39.8%	45.5%
2	Bay	13,240	18,000	33,393	75,600	8-Jun	152.2%	320.0%
3	Oceanwood	12,288	16,560	25,324	46,200	10-Jun	106.1%	179.0%
4	Lighty Lane	9,700	13,200	20,379	39,000	8-Jun	110.1%	195.5%
5	5th St	25,200	46,200	29,400	45,000	8-Jun	16.7%	-2.6%
6	Fletcher	11,980	15,000	13,634	27,600	8-Jun	13.8%	84.0%
7	Bal Harbour	4,876	6,463	13,177	51,702	8-Jun	170.2%	700.0%
8	Leeward Landing	15,060	18,901	23,548	46,948	8-Jun	56.4%	148.4%
9	Penman Terrace	12,240	17,400	18,579	27,600	8-Jun	51.8%	58.6%
10	Summer Sands	10,724	13,740	13,661	20,280	8-Jun	27.4%	47.6%
11	Emma	1,939	2,938	1,803	2,938	8-Jun	-7.0%	0.0%
12	Tara	2,845	4,878	3,175	4,878	17-Jun	11.6%	0.0%
TOTAL		463,627		664,224			43.3%	

As shown on Table 2, almost all lift station pumping rates increased significantly for both Average Day Flow conditions and Maximum Day Flow conditions.

Cost of Infiltration and Inflow

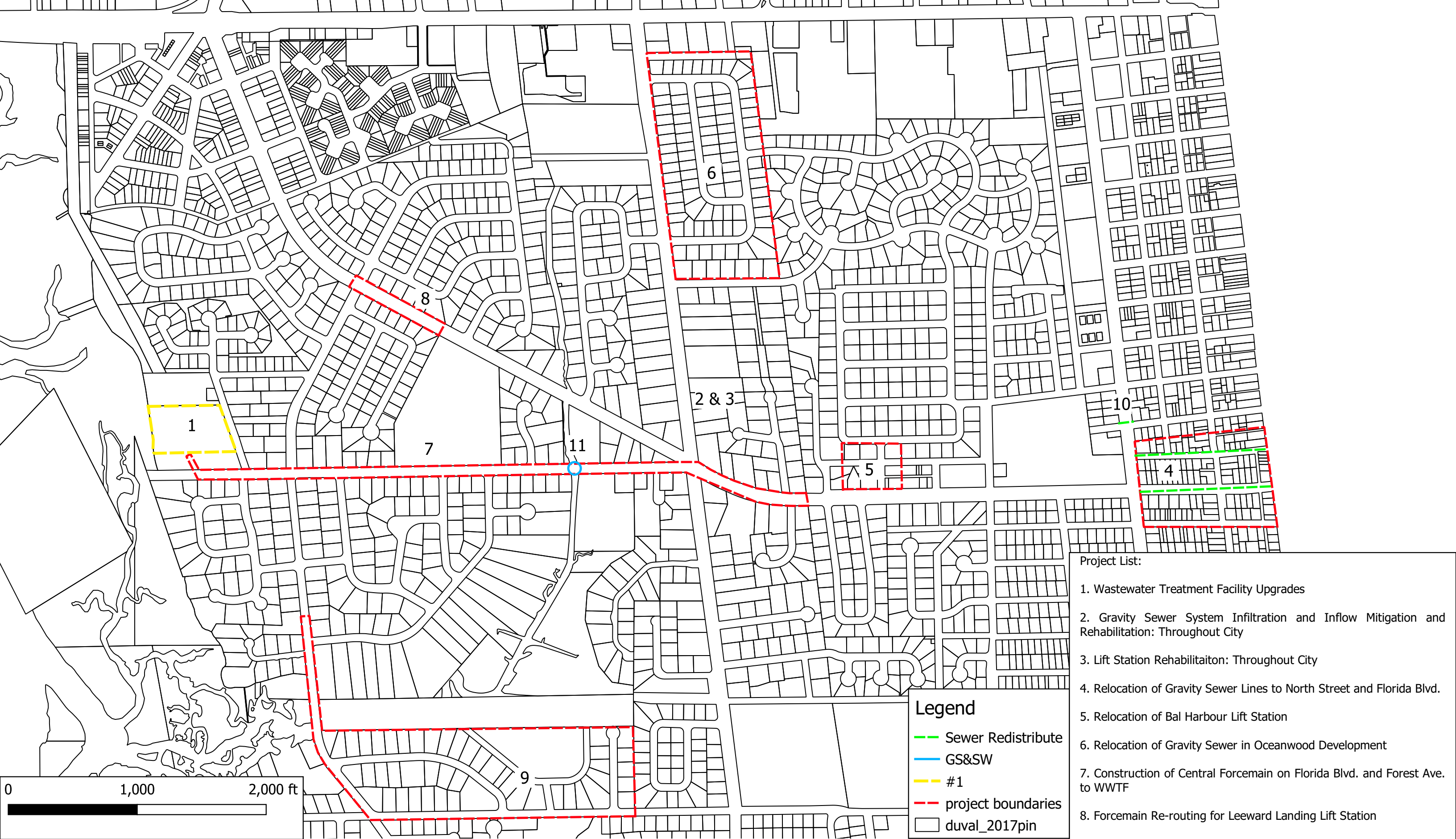
Cost for wastewater collection and treatment per thousand gallons for the City of Neptune Beach can be estimated by using the City's wastewater budget and quantity of wastewater collected and treated. The City of Neptune Beach budget for Sewer Services and Construction for Fiscal Year 2019 was \$2,380,099. The annual average day flow at the Wastewater Treatment Facility reported on July 2020 was 0.590 mgd. The equivalent cost per thousand gallons for the City of Neptune Beach is \$11.05 ($\$2,380,099 / (590 \text{ thousand gallons} \times 365 \text{ days})$).

The cost to the City of additional flow caused by I/I can be estimated by comparing the flows on a high rainfall month versus a dry month. In the past year the highest rainfall month was June 2020, resulting in a plant monthly ADF of 0.827 mgd, a total flow of 24.81 million gallons for the month. The lowest rainfall month was January 2020, resulting in a plant monthly ADF of 0.548 mgd, a total flow of 16.99 million gallons for the month. At a cost of \$11.05 / thousand gallons, this additional flow during the high rainfall month results in additional treatment cost to the City for one month of \$86,400.

Wastewater Facilities Plan

The City is completing a Wastewater Facilities Plan to meet the Wastewater Utility Service needs for the 20-yr planning period. This Facilities Plan is being funded by the City and includes the WWTF improvements as well as the collection system improvements. The Wastewater Facilities Plan will be completed in December 2020. Preliminary planning, design and construction projects and costs in the Facilities Plan are shown on Table 3. These projects are shown on Exhibit 1 and described in the following section.

Table 3 Proposed Planning, Design and Construction Projects and Costs		
Facilities Plan Project	Wastewater Treatment and Collection System Improvements	Budget Costs
<i>Planning and Design</i>		
	Wastewater Treatment Facility: Surveys, Soils/Geotechnical Reports, Biddable Engineering Drawings, Technical Specifications, FDEP Permit, Site Certification	\$416,000
	Sewer System Evaluation Survey: Smoke Testing, Cleaning and Televising, Midnight Investigation and Manhole Inspections	\$784,000
	Find and fix work to be completed during the smoke testing include Manhole inflow dishes and Cleanout Plugs Where Needed.	\$38,200
	Surveying for Collection System Projects 4,5,6,7,8,9,10 below	\$363,200
	Planning and Design Total	\$1,601,400
<i>Construction</i>		
1	Wastewater Treatment Facility Upgrades and Hardening for Storm Surge	\$5,660,400
2	Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation	\$2,871,800
3	Lift Station Rehabilitation	\$2,357,500
4	Relocation of Gravity Sewer Lines to North Street and Florida Blvd	\$602,100
5	Relocation of Bal Harbour Lift Station	\$391,800
6	Relocation of Gravity Sewer in Oceanwood Development	\$1,517,600
7	Construction of Central Force Main on Florida Blvd. and Forest Avenue to WWTF	\$877,500
8	Force Main Re-routing for Leeward Landing Lift Station	\$73,600
9	Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems	\$1,502,600
10	Gravity Sewer Line Across Third Street	\$34,000
11	Remediate Gravity Sewer Conflict with Storm Sewer on Forest Ave.	\$1,382,100
	Construction Subtotal	\$17,271,000
	10% Construction Contingencies (unknown / unforeseen events)	\$1,727,100
	Construction Bidding and Award	\$5,000
	Construction Technical Services during Construction for WWTF Construction	\$75,000
	Grant / Loan Administration	\$172,700
	Construction Total	\$19,250,00
<i>TOTAL PLANNING AND CONSTRUCTION</i>		\$20,852,200



Project List:

1. Wastewater Treatment Facility Upgrades
2. Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation: Throughout City
3. Lift Station Rehabilitaiton: Throughout City
4. Relocation of Gravity Sewer Lines to North Street and Florida Blvd.
5. Relocation of Bal Harbour Lift Station
6. Relocation of Gravity Sewer in Oceanwood Development
7. Construction of Central Forcemain on Florida Blvd. and Forest Ave. to WWTF
8. Forcemain Re-routing for Leeward Landing Lift Station
9. Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems
10. Gravity Sewer Line Across Third Street
11. Remediate Gravity Sewer Conflict With Storm Sewer on Forest Ave.

Legend

- Sewer Redistribute
- GS&SW
- #1
- project boundaries
- duval_2017pin

Exhibit 1
City of Neptune Beach Wastewater Project Map

1) Wastewater Treatment Facility Upgrades

Proposed WWTF improvements based on the work already completed for the Wastewater Facilities Plan include addition of a new IFAS Stabilization Tank and a new Clarifier, converting a tank to an Anoxic Tank, converting a Digester to a Contact Tank and converting another tank to a Digester with floating aerators. Design documents for these improvements now need to be completed including Surveys, Soils/Geotechnical Reports, Biddable Engineering Drawings, Technical Specifications, FDEP Permit, and Site Certification. Cost for preparation of these documents is being submitted as part of this RFI application.

2) Gravity Sewer System Infiltration and Inflow Mitigation and Rehabilitation

The City of Neptune Beach is experiencing very high Infiltration and Inflow (I/I), which is responsible for sewer overflows and disrupting the WWTF operation and treatment. Some remedial work on areas of the collection system has been completed. This work included pipe bursting as well as pipe and manhole replacement on approximately 24% of the system. In addition, wastewater flows in the City have been re-routed to reduce pressure on overtaxed areas. Even with these extensive improvements, I/I is still a major impact.

For this project, the SSES results will be used to do targeted rehabilitation for high I/I sources. It is initially assumed that this will require lining 30% of the sewers that have not already been pipe burst or replaced and that 50% of the manholes that have not already been rehabilitated or replaced will require cementitious lining and 5% will require fiberglass lining. The results of the SSES will provide more detailed information on the percentage of the system in need of rehabilitation and the costs of this project will be adjusted accordingly.

3) Lift Station Rehabilitation

The City has 13 Lift Stations that need repair and rehabilitation. In addition, the buildings housing the lift stations need to be rehabilitated and are an eye-sore for the City. These lift stations should be converted to submersible stations that would have less maintenance as well as less noise for the neighborhoods closely surrounding them. This project would provide for repair and rehabilitation of 12 Lift Stations and major repairs and rehabilitation of 1 Lift Station (Lighty Lane Lift Station).

4) Relocation of Gravity Sewer Lines to North Street and Florida Blvd

In the area of North Street and Florida Blvd., east of Third Street, there are 6-inch sewer lines behind homes without access for City Maintenance. There are no City easements for the lines leaving it almost impossible for the City to perform maintenance and repair to prevent potential sewer breaks and overflows. This project would replace the existing sewer lines with new 8-inch gravity sewers in the roadway.

5) Relocation of Bal Harbour Lift Station

The Bal Harbour Lift Station is currently located between residential properties with very limited access for City maintenance crews for repairs. This Lift Station is also experiencing very high I/I, with the average day flow increasing from 4,880 gpd Average Day Flow in a dry month to 13,180 gpd in a high rainfall month, almost tripling. Consequently, need for maintenance in this challenging location and opportunity for overflows at the pump station in resident's back yards is especially problematic. This project would relocate the Lift Station and provide a connection between the existing location and the proposed location by directionally drilling the new gravity sewer line.

6) Relocation of Gravity Sewer in Oceanwood Development

The Oceanwood neighborhood is experiencing especially high I/I. The lift station serving that neighborhood almost triples its flow during high rainfall periods, from a Maximum Day Flow of 16,560 gpd in a dry month to 46,200 gpd in a high rainfall month. In addition, the sewer lines in this neighborhood are in back yards, between houses, restricting access for maintenance and repairs. This project would replace the existing sewer lines and manholes with new 8-inch gravity sewers and manholes in the roadways.

7) Construction of Central Force Main on Florida Blvd and Forest Avenue to WWTF

The City's Master Lift Station (aka Florida Blvd) serves the beaches and downtown district and it discharges into a gravity interceptor main on Florida Blvd that flows to the WWTF. This gravity interceptor receives flow from most of the city residents and is at capacity. During severe storm events, the interceptor is surcharged and resulted in sewage overflows.

It is proposed to build a 12-inch forcemain along Florida Blvd and Forest Avenue to the WWTP and to manifold the three lift stations including Florida Blvd, Bal Harbor and Bay St. and to pump directly to the WWTF thereby by-passing the overloaded gravity interceptor.

8) Force Main Re-routing for Leeward Landing Lift Station

This project will re-route the flow from the Leeward Landing Lift station away from the overloaded gravity interceptor on Forrest Ave and to allow this sewage to flow to the City's other interceptor sewer that is not current

9) Wastewater Collection and Treatment for 2 Neighborhoods on Septic Systems

The City of Neptune Beach is essentially built out with utility service available to all the residents. There are two neighborhoods in the southern edge of the City that are still on septic systems. These are in the drainage area and close proximity to Hopkins Creek, which has had excessive fecal coliform problems. Providing sewer service to these neighborhoods would help alleviate a public health concern for Hopkins Creek and the Intracoastal Waterway in that area. This project would provide a gravity sewer system for these neighborhoods.

10) Gravity Sewer Line Across Third Street

A significant portion of the Service Area served by the Florida Blvd. Lift Station is from the area east of Third Street. The sewage flow from this station represented approximately 70% of the total flow from all the City's lift stations during both dry and wet months this past year. Third Street is a high traffic volume road, running north and south through the City. There is only one sewer line crossing under Third Street conveying the sewage from the eastern portion of the City to the Florida Blvd. Lift Station and this sewer is at over 80% capacity.

If there were any breaks or blockages in that gravity sewer line running under Third Street, sewage could not be conveyed away from a large portion of the City resulting in potentially, numerous sewer overflows. Consequently, an additional gravity sewer crossing under Third Street is recommended to provide redundancy and alleviate the flow on the existing sewer line crossing at Third Street.

11) Remediate Gravity Sewer Conflict with Storm Sewer on Forest Ave.

There is a conflict between a gravity sewer and stormwater drainage where Forest Ave. crosses Hopkins Creek. The gravity sewer conflict impedes the flow of water in Hopkins Creek with is the major drainage tributary for the City. The purpose of the project is to improve drainage through Hopkins Creek.

City of Neptune Beach Wastewater System Plant Facility Plan

Task Order No. 1 Prepare Wastewater Treatment Facility Plan

Engineer: J. Collins Engineering Associates., LLC
12412 San Jose Blvd.; Suite 204
Jacksonville, FL 32223
904-262-4121 (O)
904-716-6282 (C)

Owner: City of Neptune Beach
116 First Street
Neptune Beach, FL 3226

Date:

4/20/2020

ITEM	DESCRIPTION OF TASKS		CONTRACT PRICE
1	Prepare SRF Facility Planning Document for upgrading and expanding the wastewater treatment facility		\$67,500.00
2	Reimbursible Costs including mileage, postage, printing and copying.		\$1,200.00
TOTAL LUMP SUM AMOUNT FOR TASK ORDER 1			\$68,700.00
ORIGINAL CONTRACT BASE PRICE			\$0.00
CONTRACT PRICE PRIOR TO THIS TASK ORDER			\$0.00
NET INCREASE RESULTING FROM THIS TASK ORDER			\$68,700.00
CONTRACT PRICE INCLUDING THIS TASK ORDER			\$68,700.00

The date provided for completion of Task Order 1 is September 30, 2020.

The Scope of Work for this task order is attached as Exhibit A.

This document shall become an amendment to the Agreement dated 6/1, 2020 and all provisions of the contract will apply hereto.

Accepted by:


Engineer

Date:

5 28 20

Accepted by:


Owner

Date:

6/1/2020



Florida Department Of Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

August 11, 2020

Sent electronically To: CM@nbfl.us

Mr. Stefen Wynn, City Manager
City of Neptune Beach
116 First Street
Neptune Beach, Florida 32266

SUBJECT: Florida Department of Environmental Protection v. Neptune Beach
WWTF
Facility ID: FL0020427
OGC File No. 20-0773
Duval County - Wastewater Enforcement

Dear Mr. Wynn:

Enclosed is a copy of the executed Consent Order to resolve Case Number 20-0773.
The effective date of this Order is August 11, 2020, and all time frames will be referenced from this date.

As a reminder, a Consent Order is a binding legal document and was voluntarily entered into by both parties.

Should you have any questions concerning the Consent Order, please contact Hillary Saunders, at Hillary.Saunders@FloridaDEP.gov, or by phone at (904) 256-1549. Your continued cooperation in the matter is appreciated.

Sincerely,

A handwritten signature in blue ink that reads "James R. Maher".

James R. Maher, PE
Assistant Director

Enclosure: Executed Consent Order

ec: FDEP-OGC: Lea Crandall, Agency Clerk
FDEP-NED: Arlene Wilkinson, DEP_NED

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT	)	IN THE OFFICE OF THE
OF ENVIRONMENTAL PROTECTION	)	NORTHEAST DISTRICT
	)	
v.	)	OGC FILE NO. 20-0773
	)	
NEPTUNE BEACH WWTF	)	
_____	)	

CONSENT ORDER

This Consent Order ("Order") is entered into between the State of Florida Department of Environmental Protection ("Department") and Neptune Beach WWTF ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

The Department finds and Respondent admits the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's air and water resources and to administer and enforce the provisions of Chapter 403, Florida Statutes ("F.S."), and the rules promulgated and authorized in Title 62, Florida Administrative Code ("F.A.C."). The Department has jurisdiction over the matters addressed in this Order.
2. Respondent is a person within the meaning of Section 403.031(5), F.S.
3. Respondent is the owner and is responsible for the operation of Neptune Beach WWTF, which is a wastewater treatment facility ("Facility"). Respondent operates the Facility under Department Wastewater Permit No. FL0020427, which was issued on May 1, 2019 and will expire on April 30, 2024. The Facility is located at 2010 Forest Avenue, in Duval County, Florida ("Property"). Respondent owns the Property on which the Facility is located.
4. The Department finds that the following violation(s) occurred:
 - a) Between February 2018 and January 2020 permit limit exceedances occurred for Total Nitrogen as shown in Table 1, below:

Table 1: Total Nitrogen Exceedances of the Maximum

Monitoring Group	Date	Description	Result	Limit	Statistical Base
D-001	2/28/2018	Total Nitrogen	13940	13599	Annual Total
D-001	3/31/2018	Total Nitrogen	14091	13599	Annual Total
D-001	4/30/2018	Total Nitrogen	13798	13599	Annual Total
D-001	4/30/2019	Total Nitrogen	13653	13599	Annual Total
D-001	5/31/2019	Total Nitrogen	14704	13599	Annual Total
D-001	6/30/2019	Total Nitrogen	15707	13599	Annual Total
D-001	7/31/2019	Total Nitrogen	16231	13599	Annual Total
D-001	8/31/2019	Total Nitrogen	16710	13599	Annual Total
D-001	9/30/2019	Total Nitrogen	13599	13599	Annual Total
D-001	10/31/2019	Total Nitrogen	16922	13599	Annual Total
D-001	11/30/2019	Total Nitrogen	17776	13599	Annual Total
D-001	12/31/2019	Total Nitrogen	18541	13599	Annual Total
D-001	1/31/2020	Total Nitrogen	18672	13599	Annual Total
D-001	2/29/2020	Total Nitrogen	18719	13599	Annual Total

b) The Department finds that each of these exceedances listed are in violation of Fla. Admin. Code Rules 62-4.160 and 62-600.410(1). Fla. Admin. Code Rule 62-4.160, states that it is a violation to fail to comply with the terms, conditions, requirements, limitations, and restrictions set forth in the permit. Fla. Admin. Code Rule 62-600.410(1), states that it is a violation to fail to operate and maintain the domestic wastewater treatment plant in accordance with the applicable provisions of this chapter and to attain, at a minimum, the reclaimed water or effluent quality required by the operational criteria specified in this chapter.

Having reached a resolution of the matter Respondent and the Department mutually agree and it is

ORDERED:

5. Respondent shall comply with the following corrective actions within the stated time periods:

- a) **Within sixty (60) days of the effective date of this Order**, Respondent shall submit a compliance plan (Plan) to meet final effluent limits for Total Nitrogen and all other parameters as specified in the Permit.
- b) The Plan shall detail the steps necessary to achieve compliance. The Plan may involve modifications to the Facility, modifications to the treatment processes, or reductions in the amounts of contaminants entering the facility. The Plan shall be prepared and sealed by a professional engineer (Engineer) registered in the State of Florida and shall include a time schedule with well defined, critical intermediate milestone dates, by which compliance shall be achieved. The Respondent must receive written notification of review and acceptance of the Plan from the Department (Notification) prior to implementation. If the Plan is deemed incomplete by the Department, or if the Department Requests Further Information (RFI), the Respondent shall provide this information in a written response within thirty (30) days of the date of the RFI. Any revisions to the currently permitted Facility or collection system, including treatment and/or modification of the Facility necessary to return the Facility to compliance, are subject to Department approval, and may be accomplished only by the Department's reopening and modifying the permit pursuant to Part IX of the Permit.
- c) The Plan shall be implemented within thirty (30) days of the date of Notification or the timeframe included within the accepted Plan.
- d) No later than two (2) years after the effective date of this Order, the Respondent shall complete all steps required by the Plan.
- e) Respondent shall comply with the following discharge limitations, and other requirements set forth in the Facility's Permit:

i) **Table 2 – Interim Limit at D-001**

Parameter	Units	Maximum	Monitoring Frequency	Sample Type	Statistical Basis
Total Nitrogen	lb/yr	19,000	Monthly	Calculated	Annual Total

ii) Tests conducted pursuant to this monitoring program shall conform to 62-600, Fla. Admin. Code

iii) These monitoring requirements do not act as State of Florida Department of Environmental Protection Wastewater Permit effluent limitations, nor do they authorize or otherwise justify violation of the Florida Air and Water Pollution Control Act ("Act"), Part I, Chapter 403, F.S., during the pendency of this Order.

6. Every calendar quarter after the effective date of this Consent Order, and continuing until all corrective actions have been completed, Respondent shall submit in writing to the Department a report containing information concerning the status and progress of projects being completed under this Order, information as to compliance or noncompliance with the applicable requirements of this Order including construction requirements and effluent limitations, and any reasons for noncompliance. These reports shall also include a projection of the work to be performed pursuant to this Order during the 12-month period which will follow the report. Respondent shall submit the reports to the Department within 30 days of the end of each quarter.

7. Notwithstanding the time periods described in the paragraphs above, Respondent shall complete all corrective actions required by paragraphs 5 within two (2) years of the effective date of this Order and be in full compliance with Title 62, Fla. Admin. Code, regardless of any intervening events or alternative time frames imposed in this Order.

8. **Within 30 days of the effective date of this Order**, Respondent shall pay the Department \$ 2,500.00 in settlement of the regulatory matters addressed in this Order. This amount includes \$ 2,000.00 for civil penalties and \$ 500.00 for costs and expenses incurred by

the Department during the investigation of this matter and the preparation and tracking of this Order.

9. Respondent agrees to pay the Department stipulated penalties in the amount of \$100 per day for each and every day Respondent fails to timely comply with any of the requirements of paragraphs 5-7 of this Order. The Department may demand stipulated penalties at any time after violations occur. Respondent shall pay stipulated penalties owed within 30 days of the Department's issuance of written demand for payment, and shall do so as further described in paragraph 11. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce any terms of this Order. Any stipulated penalties assessed under this paragraph shall be in addition to the civil penalties agreed to in paragraph 9 of this Order.

10. Respondent shall make all payments required by this Order by cashier's check, money order or on-line payment. Cashier's check or money order shall be made payable to the "Department of Environmental Protection" and shall include both the OGC number assigned to this Order and the notation "Water Quality Assurance Trust Fund." Online payments by e-check can be made by going to the DEP Business Portal at: <http://www.fldepportal.com/go/pay/>. It will take a number of days after this order becomes final, effective and filed with the Clerk of the Department before ability to make online payment is available.

11. Except as otherwise provided, all submittals and payments required by this Order shall be sent to: Department of Environmental Protection, Northeast District office, located at 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida, 32256.

12. In lieu of making cash payment of \$ 2,000.00 in civil penalties as set forth in Paragraph 8 above, Respondent may elect to off-set this amount by implementing an in-kind penalty project, which must be approved by the Department. An in-kind project must be either an environmental enhancement, environmental restoration or a capital/facility improvement project. The Department may also consider the donation of environmentally sensitive land as an in-kind project. The value of the in-kind penalty project shall be one and a half times the civil penalty off-set amount, which in this case is the equivalent of at least

\$3,750.00. If Respondent chooses to implement an in-kind project, Respondent shall notify the Department of its election by certified mail within 15 days of the effective date of this Consent Order. Notwithstanding the election to implement an in-kind project, payment of the remaining \$500.00 in costs must be paid within 30 days of the effective date of the Consent Order.

a) If Respondent elects to implement an in-kind project as provided in paragraph 12, then Respondent shall comply with all of the requirements and time frames in **Exhibit A** entitled "In-Kind Projects."

13. Respondent shall allow all authorized representatives of the Department access to the Facility and the Property at reasonable times for the purpose of determining compliance with the terms of this Order and the rules and statutes administered by the Department.

14. In the event of a sale or conveyance of the Facility or of the Property upon which the Facility is located, if all of the requirements of this Order have not been fully satisfied, Respondent shall, at least 30 days prior to the sale or conveyance of the Facility or Property, (a) notify the Department of such sale or conveyance, (b) provide the name and address of the purchaser, operator, or person(s) in control of the Facility, and (c) provide a copy of this Order with all attachments to the purchaser, operator, or person(s) in control of the Facility. The sale or conveyance of the Facility or the Property does not relieve Respondent of the obligations imposed in this Order.

15. If any event, including administrative or judicial challenges by third parties unrelated to Respondent, occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Order, Respondent shall have the burden of proving the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or cannot be overcome by Respondent's due diligence. Neither economic circumstances nor the failure of a contractor, subcontractor, materialman, or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines shall be considered circumstances beyond the control of Respondent (unless the cause of the contractor's late performance was also beyond the contractor's control).

Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department by the next working day and shall, within seven calendar days notify the Department in writing of (a) the anticipated length and cause of the delay, (b) the measures taken or to be taken to prevent or minimize the delay, and (c) the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of Respondent, the time for performance hereunder shall be extended. The agreement to extend compliance must identify the provision or provisions extended, the new compliance date or dates, and the additional measures Respondent must take to avoid or minimize the delay, if any. Failure of Respondent to comply with the notice requirements of this paragraph in a timely manner constitutes a waiver of Respondent's right to request an extension of time for compliance for those circumstances.

16. The Department, for and in consideration of the complete and timely performance by Respondent of all the obligations agreed to in this Order, hereby conditionally waives its right to seek judicial imposition of damages or civil penalties for the violations described above up to the date of the filing of this Order. This waiver is conditioned upon Respondent's complete compliance with all of the terms of this Order.

17. This Order is a settlement of the Department's civil and administrative authority arising under Florida law to resolve the matters addressed herein. This Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law. Entry of this Order does not relieve Respondent of the need to comply with applicable federal, state, or local laws, rules, or ordinances.

18. The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department that are not specifically resolved by this Order.

19. Respondent is fully aware that a violation of the terms of this Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation, and criminal penalties.

20. Respondent acknowledges and waives its right to an administrative hearing pursuant to sections 120.569 and 120.57, F.S., on the terms of this Order. Respondent also acknowledges and waives its right to appeal the terms of this Order pursuant to section 120.68, F.S.

21. Electronic signatures or other versions of the parties' signatures, such as .pdf or facsimile, shall be valid and have the same force and effect as originals. No modifications of the terms of this Order will be effective until reduced to writing, executed by both Respondent and the Department, and filed with the clerk of the Department.

22. The terms and conditions set forth in this Order may be enforced in a court of competent jurisdiction pursuant to sections 120.69 and 403.121, F.S. Failure to comply with the terms of this Order constitutes a violation of section 403.161(1)(b), F.S.

23. This Consent Order is a final order of the Department pursuant to section 120.52(7), F.S., and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, F.S. Upon the timely filing of a petition, this Consent Order will not be effective until further order of the Department.

24. Respondent shall publish the following notice in a newspaper of daily circulation in Duval County, Florida. The notice shall be published one time only within 30 days of the effective date of the Order. Respondent shall provide a certified copy of the published notice to the Department within 10 days of publication.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF CONSENT ORDER

The Department of Environmental Protection ("Department") gives notice of agency action of entering into a Consent Order with NEPTUNE BEACH WWTF pursuant to section 120.57(4), Florida Statutes. The Consent Order addresses the permit effluent exceedances of total nitrogen at Neptune Beach WWTF. The Consent Order is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Northeast District office, located at 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida, 32256.

Persons who are not parties to this Consent Order, but whose substantial interests are affected by it, have a right to petition for an administrative hearing under sections 120.569 and 120.57, Florida Statutes. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition concerning this Consent Order means that the Department's final action may be different from the position it has taken in the Consent Order.

The petition for administrative hearing must contain all of the following information:

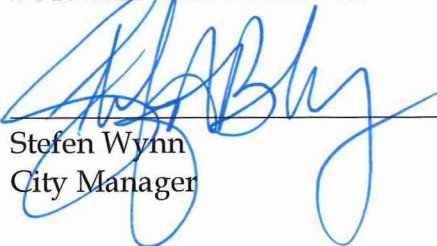
- a) The OGC Number assigned to this Consent Order;
- b) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding;
- c) An explanation of how the petitioner's substantial interests will be affected by the Consent Order;
- d) A statement of when and how the petitioner received notice of the Consent Order;
- e) Either a statement of all material facts disputed by the petitioner or a statement that the petitioner does not dispute any material facts;
- f) A statement of the specific facts the petitioner contends warrant reversal or modification of the Consent Order;

- g) A statement of the rules or statutes the petitioner contends require reversal or modification of the Consent Order; and
- h) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Consent Order.

The petition must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS# 35, Tallahassee, Florida, 32399-3000, within 21 days of receipt of this notice. A copy of the petition must also be mailed at the time of filing to the District Office at 8800 Baymeadows Way West, Suite 100 in Jacksonville, Florida, 32256. Failure to file a petition within the 21-day period constitutes a person's waiver of the right to request an administrative hearing and to participate as a party to this proceeding under sections 120.569 and 120.57, Florida Statutes. Before the deadline for filing a petition, a person whose substantial interests are affected by this Consent Order may choose to pursue mediation as an alternative remedy under section 120.573, Florida Statutes. Choosing mediation will not adversely affect such person's right to request an administrative hearing if mediation does not result in a settlement. Additional information about mediation is provided in section 120.573, Florida Statutes and Rule 62-110.106(12), Florida Administrative Code.

25. Rules 62-4, 62-620, 62-61 and 62-660, referenced in this Order are available at:
<http://www.dep.state.fl.us/legal/Rules/rulelist.htm>.

FOR THE RESPONDENT:


Stefan Wynn
City Manager

8/6/2020
Date

FOR DEPARTMENT USE ONLY

DONE AND ORDERED this 11TH day of AUGUST 2020, in Duval, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Gregory J. Strong
District Director
Northeast District

Filed, on this date, pursuant to section 120.52, F.S., with the designated Department Clerk,
receipt of which is hereby acknowledged.



Clerk

August 11, 2020

Date

Copies furnished to:

FDEP-OGC: Lea Crandall, Agency Clerk, Mail Station 35 (executed copy only)

FDEP-DWRM: Adrienne Pennington, Mike Tanski (executed copy only)

FDEP NED: Heather Webber, Herndon Sims, DEP_NED (executed copy only)

Leon Smith/dpw@nbfl.us

Alan Kelly/allankelly@nbfl.us

Exhibit A

In-Kind Projects

I. An in-kind project

1. **Within 30 days of the effective date of this Consent Order**, Respondent shall submit, by certified mail, a detailed in-kind project proposal to the Department for evaluation. The proposal shall include a summary of benefits, proposed schedule for implementation and documentation of the estimated costs which are expected to be incurred to complete the project. These costs shall not include those incurred in developing the proposal or obtaining approval from the Department for the in-kind project.

2. If the Department requests additional information or clarification due to a partially incomplete in-kind project proposal or requests modifications due to deficiencies with Department guidelines, Respondent shall submit, by certified mail, all requested additional information, clarification, and modifications within 15 days of receipt of written notice.

3. If upon review of the in-kind project proposal, the Department determines that the project cannot be accepted due to a substantially incomplete proposal or due to substantial deficiencies with minimum Department guidelines, the Department shall notify the Respondent in writing of the reason(s) for it not approving the proposal. Respondent shall correct and redress all of the matters or deficiencies identified by the Department and submit a new or revised proposal to the Department, by certified mail, within 30 days of receipt of the Department's notice. If the new or revised proposal is not approved by the Department, Respondent shall submit payment of the administrative penalties set out in Paragraph 8 of this Order, within 30 days of receipt of the Department's notice rejecting the proposal.

4. **Within 120 days of the effective date of this Consent Order**, Respondent shall obtain approval for an in-kind project from the Department. If the Department does not approve an in-kind project proposal submitted by Respondent within 120 days of the effective date of this Consent Order, then Respondent shall submit payment of the administrative penalties as set out in Paragraph 9 of this Order, within 30 days of receipt of the Department's notice rejecting the proposal.

5. Respondent shall complete the in-kind project, as approved by the Department, within 180 days of obtaining Department approval of Respondent's in-kind proposal or in accordance with the schedule submitted pursuant to Paragraph (1) of this Exhibit and approved by the Department.

6. During the implementation of the in-kind project, Respondent shall place appropriate sign(s) at the project site indicating Respondent's involvement with the project is the result of a Department enforcement action. Respondent may remove the sign(s) upon the completion of the in-kind project. At no time during the implementation of the project or following the completion of the project, shall Respondent post any sign(s) at the project site or otherwise disseminate information that may infer any other reason for the project other than resulting from a Department enforcement action.

7. In the event, Respondent fails to timely submit any requested information to the Department, fails to complete implementation of the in-kind project, or otherwise fails to comply with any provisions of the Department-approved proposal, this Consent Order, or Paragraphs 1 through 9 of this Exhibit, Respondent shall forfeit the in-kind penalty project option, and Respondent shall submit the entire amount of administrative penalties set out in Paragraph 8 of this Consent Order within 30 days of notice by the Department. Should the in-kind penalty project be terminated for any reason and Respondent timely remits the \$2,000.00 penalty, Respondent shall not be assessed the additional stipulated penalties set out in Paragraph 9 of this Consent Order.

8. Within 15 days of completing the approved in-kind project, Respondent shall notify the Department in writing, by certified mail, of the project's completion, and submit documentation, verifying

that the project was completed in accordance with the approved proposal and detailing the actual costs incurred to complete the project. Actual costs of the project shall not include costs incurred in developing the proposal or obtaining approval from the Department for the project.

9. If upon review of the notification of completion, the Department determines that the project cannot be accepted due to a substantially incomplete notification of completion or due to substantial deviations from the approved in-kind project, the Department shall notify Respondent, in writing, of the reason(s) which prevent the acceptance of the project. Respondent shall correct and redress all of the matters or deficiencies identified by the Department and submit a new or revised notification of completion to the Department at issue and submit, by certified mail, within 15 days of receipt of the Department's notice. If upon review of the new submittal, the Department determines that the in-kind project is still incomplete or not in accordance with the approved proposal, the in-kind penalty project option shall be forfeited, and Respondent shall submit the entire amount of the administrative penalties assessed in Paragraph 8 of the Consent Order within 30 days of notice from the Department. If the in-kind penalty project is terminated and Respondent timely remits the \$2,000.00, Respondent shall not be assessed the additional stipulated penalties set out in Paragraph 9 of this Consent Order.

FLORIDA RURAL WATER ASSOCIATION

2970 WELLINGTON CIRCLE • TALLAHASSEE, FL 32309-7813
(850) 668-2746

July 17, 2020

Megan George
Deputy Director of Public Works
City of Neptune Beach
2010 Forest Avenue
Neptune Beach, FL 32266

**RE: Offer to Perform a Water and Wastewater Rate Study; City of Neptune Beach;
Duval County; PWS: 2160206**

Dear Ms. George:

The Florida Rural Water Association (FRWA) is pleased to offer the City of Neptune Beach a Water and Wastewater Rate Study at no cost to the City as a FRWA membership benefit. The Rate Study will review water and wastewater rates, expenses, and revenues and will provide recommendations. The FRWA is dedicated to assisting water and wastewater systems to provide your city with an ample and affordable supply of high quality water, while protecting natural systems.

This type of study is valued at between \$25,000 and \$45,000 if you used a consultant, however since we provide this service as a free membership benefit we ask you to do some of the work to collect your utility's data. The information needed is contained at the end of this Offer Letter. Once the information is obtained, please contact me so I can arrange a date and time that is convenient for you to visit the System, as I prefer to conduct the rate study on-site since questions may arise that only you or City staff can answer.

After the rate study is completed, I will first review the findings with you. When you determine a time and date to present the findings to the City Council, I will be present to present the Rate Study Findings, Fiduciary Responsibilities, and Relevant Issues to the City Council, and answer any question that may arise. Please allow at least 30-minutes for this activity (60-minutes if this is a difficult issue).

FRWA will defend against Rate and Fee Study Challenges. We also will provide technical support (at cost) during any court challenge defense including being expert witnesses. FRWA personnel have extensive experience in conducting rate studies and financial planning for hundreds of water and wastewater utilities across the state. As a result of this experience, we are very familiar with local, regional, and statewide issues and challenges that utilities face and we are able to provide our members with a variety of solutions for fiscal planning and pricing needs. Our experience allows us to see utility issues from different perspectives and to ensure value-added solutions.

BOARD of DIRECTORS

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DIRECTOR

GARY WILLIAMS
Tallahassee



EMAIL
frwa@frwa.net

WEBSITE
www.frwa.net

1. FRWA rate and fee studies have never had a legal challenge!
2. FRWA rate and fee studies are performed using a sound rational and methodical procedures based on actual financial cost records provided by the utility.
3. FRWA rate and fee studies are performed using tested utility industry standards – American Water Works Association Manuals of Practice M1 - Water Rates, M26 - Water Rates & Related Charges, M34 - Alternative Rates, M35 - Revenue Requirements, Water Rates, Fees and the Legal Environment, US EPA Guidance Manuals, etc.
4. FRWA rate and fee studies are performed using a strong legal footing under Florida Statutes and case law.

We look forward to serving you and desire to provide your water and wastewater system with information that will ensure future financial sustainability. Please feel free to contact me at 386-292-1720 if you have any further questions.

Sincerely,

s/AG

Andrew Greene
FRWA RD Financial-Management Circuit Rider

Information Needed

1. I will use the latest financial audit, which is available on the Florida Auditor General's website, unless you have a more recent audit. **(Revenues & Expenses need to be broken out for each water and wastewater.)**
2. Current Rates for water and wastewater.
3. Number of water connections by meter size, if known.
4. Water pumped in gallons for the same period of time as the audit.
5. Water billed in gallons for the same period of time as the audit.
6. Number of wastewater connections.
7. Wastewater in gallons treated and for the same period of time as the audit.
8. Wastewater billed by for the same period of time as the audit.
9. Wastewater Inflow and Infiltration if known.
10. New Meter Connection Fees.
11. Any debt including interest for water and wastewater.
12. Any transfer amount to General Fund
13. Utility Capital Improvement Plan, if one exists.
14. Impact or capacity reservation fees if levied.
15. On/Off, Late Charge Schedule.

City of Neptune Beach Job Description

Job Title:	Mobility Management Director	New: ☒ Recl: ☐
Reports to (Title):	City Manager	
Department/Division:	Mobility Management Director	
		FLSA: Exempt

GENERAL SUMMARY:

Reporting to the City Manager, this position manages all administration and operations of the City's Parking and Mobility Management Program. The position is responsible for creating and implementing the appropriate plans and schedules for events and festivals, coordinating traffic control with the police department, and collaborating with other agency partners (e.g. the City of Atlantic Beach, local businesses, Beaches Town Center Agency; Beaches Town Center Merchants Association and Visit Jacksonville!).

Additional duties include management, verification, auditing, depositing of City revenue generated from the Parking and Mobility Management Program. Provides staff oversight, supervision and performs administrative duties. Ability to understand and manage parking program software and other city administrative software.

DUTIES AND RESPONSIBILITIES:

- Due to the complexities of sharing a downtown center with the City of Atlantic Beach, and the unique non-profit agencies that represent the various businesses within the Beaches Town Center Area, the most important responsibility is communicating and coordinating the management of the program with other third-party participants.
- Create and distribute content on activities and special events happening within the Beaches Town Center Area through collaboration with other relevant partnerships.
- Develop and implement policies and procedures for the Parking and Mobility Management Program.
- Interview, hire, train, supervise, discipline, and schedule work of staff performing parking control duties.
- Supervise assigned operations related to parking space/lot control, including provision of appropriate staff appearance and equipment; parking enforcement; public outreach and education; and handling special parking projects as required.
- Coordinate with legal staff the negotiation, implementation and administration of parking agreements with third parties.
- Advise supervisor regarding problems, unsafe lot conditions, maintenance deficiencies, signage requirements, etc.
- Devise and recommend ways to enhance the effectiveness of parking procedures to ensure maximum customer facilitation.
- Organize and implement resident parking registration program.
- Make recommendations regarding adjudication of parking tickets; issue temporary parking permits, applications and appeal forms; and accept payment for fees/fines.
- Supervise Tow and Hold program for vehicles illegally parked after expiration of time limit, as required.
- Be responsible for monitoring, procurement, and installation of all parking/traffic signs.
- Maintain necessary records, reports, and files.
- Assist in parking responsibilities during special programs and events.
- Responsible for daily reporting of parking for each area and submit reports as needed.
- Responsible for weekly collection and deposit monies.
- Respond to public inquiries and provide relevant information regarding parking protocols.
- Operate motor vehicles, radio transmitters, receivers, and/or other tools and equipment as required.

City of Neptune Beach Job Description

- Perform other related duties as assigned to include, but not be limited to the following items/issues to be studied, reviewed and addressed for the Beaches Town Center and surrounding Beach Communities;

KNOWLEDGE, SKILLS AND ABILITIES:

Specific knowledge of traffic and parking ordinances; ability to work for short periods of time in inclement weather; ability to handle routine clerical, administrative and computerized record keeping functions; ability to establish and maintain effective working relationships with associates and the public; ability to handle customer concerns timely; ability to work flexible hours and days.

EDUCATION AND EXPERIENCE:

- Bachelors' degree in business, public administration, or other related field, and (3) years of experience in municipal management, or related business management; or
- Equivalent experience and ten (10) years of related experience in Parking, Mobility Management, or business management may be substituted for the education requirement;
- Knowledge of or ability to learn parking and traffic control practices, methods and procedures, and experience developing and implementing same.
- Supervisory and organizational ability.
- Skill in the use and care of radio transmitters and receivers, computers and parking enforcement tools.
- Possession of, or ability to acquire a valid driver's license for the State of Florida.

PERFORMANCE APTITUDES:

Requires the ability to calculate and/or tabulate data. Includes performing subsequent actions in relation to these computational operations.

Requires the ability to provide guidance, assistance, and/or interpretation to others regarding the application of procedures and standards to specific situations.

Requires the ability to carry out instructions furnished in written or oral form. Involves semi-routine standardized work with some latitude for independent judgment concerning choices of action.

Requires the ability to operate equipment and advanced technology; to utilize a wide variety of reference, descriptive, and information.

Requires the ability to perform addition, subtraction, multiplication, and division.

Requires the ability to exercise judgment, decisiveness and creativity in situations involving the evaluation of information against measurable or verifiable criteria.

LICENSES AND/OR CERTIFICATES:

Preference given to candidates with a *Certified Parking Professional* designation.

ADA COMPLIANCE:

Physical Ability: Tasks require the ability to exert moderate, though not constant physical effort, typically involving some combination of climbing and balancing, stooping, kneeling, crouching, and crawling, and involve some lifting, carrying, pushing and/or pulling objects and material of moderate weight (12-20 pounds); may occasionally involve heavier objects and materials (up to 100 pounds).

Sensory Requirements: Some tasks require the ability to perceive and discriminate colors or shades of colors, sounds, odor, depth, texture and visual cues or signals. Some tasks require the ability to communicate orally.

City of Neptune Beach Job Description

Environmental Factors: Performance of essential functions may require exposure to adverse environmental conditions, such as dirt, dust, pollen, odors, wetness, humidity, rain, fumes, temperature and nose extremes, bright/dim light, machinery, traffic hazards, toxic agents, disease, pathogenic substances, violence, animal attacks, or animal bites.

WORKING CONDITIONS:

The physical conditions that apply to the Worker in this job are described as follows:

- ☐ None: The worker is **not substantially exposed to adverse environment conditions**: job likely consists Of typical office work or administrative work.
- ☐ The worker is subject to **inside environmental conditions**: protection from weather conditions but not necessarily from temperamental changes (i.e. warehouses, covered loading docks, garages, etc.)
- ☒ The worker is subject to **outside environmental conditions**: no effective protection from the weather.
- ☐ The worker is subject to **extreme cold**: temperatures below 32 degrees for periods of more than one hour.
- ☐ The worker is subject to **extreme heat**: temperatures above 100 degrees for periods of more than one hour.
- ☐ The worker is subject to **noise**: there is sufficient noise to cause the workers to shout in order to be heard above the surrounding noise level.
- ☐ The worker is subject to **vibration**: exposure to oscillating movements of the extremities or whole body.
- ☒ The worker is subject to **hazards**: includes a variety of physical conditions, such as proximity to moving vehicles on roadways, mechanical parts, electrical current, working on scaffolding and high places or chemicals.
- ☒ The worker is subject to **atmospheric conditions**: one or more of the following conditions that affect the respiratory system or the skin: fumes, odors, dust, mists, gases or poor ventilation.
- ☐ The worker is subject to **oils**: there is air and/or skin exposure to oils and other cutting fluids.
- ☒ The worker is required to wear a **respirator**.

PHYSICAL ACTIVITIES:

Essential physical activities:

- | | | | | | |
|---|---|--|--|---|---|
| ☐ Climbing | ☒ Balancing | ☒ Stooping | ☒ Kneeling | ☒ Crouching | ☐ Crawling |
| ☒ Reaching | ☒ Standing | ☒ Walking | ☒ Pushing | ☒ Pulling | ☐ Lifting |
| ☒ Fingering | ☒ Grasping | ☒ Feeling | ☒ Talking | ☒ Hearing | ☒ Driving |
| ☒ Repetitive Motion | | | | | |
| ☐ Other (list): | | | | | |

MATERIALS AND EQUIPMENT:

Machines, tools, equipment, electronic devices, software, etc. used by position:

- ☒ Camera/photographic equipment
- ☐ Cleaning supplies (for firearms)
- ☐ Commercial vehicle
- ☐ Data processing equipment
- ☐ Handcart

City of Neptune Beach Job Description

- ☐ Hand tools
- ☐ Headset
- ☒ Office equipment (desk, chair, phone, etc.)
- ☐ Office machines (copier, facsimile, calculator, cash register, etc.)
- ☒ Office supplies (pens, staplers, pencils, etc.)
- ☐ Packaging materials (boxes, shrink wrap, etc.)
- ☒ PC equipment (monitor, keyboard, printer, etc.)
- ☒ PC software
- ☒ Public safety equipment (firearms, radar, radio, mobile video systems, etc.)
- ☐ Other (list): OC spray, handcuffs, baton, gas mask, taser, police vehicle

DISCLAIMER: The above information on this description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties and qualifications required of employees assigned to this job.

For Office Use Only

Revision Date:

Previous Revision Date:

Previous Title:



City of Neptune Beach Job Description



		(Completed by HR)
Job Title:	Director of Public Works	New: ☐ Recl: ☒
Reports to (Title):	City Manager	
Department/Division:	Public Works	
		FLSA: Exempt

GENERAL SUMMARY:

This at-will position is a key member of the City's Administrative Executive Leadership Team and is responsible for the second largest department within the City of Neptune Beach. The Director of Public Works will be results-driven, with well-grounded ethical decision-making skills, superior interpersonal and communication skills, and a track record of, "big picture" strategic planning.

Of utmost importance to the City Manager is that the Public Works Director can lead the diverse team at the Public Works "Yard." The Director must be an innovative professional that is self-confident and able to speak with clarity on a variety of complex technical issues. The Director must be able to prioritize and execute a Capital Improvement Plan within the budget that's provided. The City is completing a vision plan that enumerates many public works projects, implementing that plan will be a collaboration between the City Manager, Chief Financial Officer, and the Director of Public Works.

The candidate must be capable of working effectively and communicating diplomatically with the City Council, Staff, Resident and Business Groups, the labor union, regulatory bodies, developers, contractors, and other governmental agencies.

DUTIES AND RESPONSIBILITIES:

Working closely with the City's Executive Team and staff, the Director of Public Works will have overall responsibility for all aspects of the Department's daily operations, including the following key duties and responsibilities:

- Leads and directs operations of the Public Works Department; prepares and/or approves briefings and recommendations for presentation to the City Council, and the public; coordinates Department efforts with other City Departments, and with comparable organizations in other public and private agencies.
- Represents the City of Neptune Beach and the Public Works Department at community, public and professional meetings.
- Reviews, Develops, and implements long-term departmental goals, objectives, plans and procedures; researches, reviews, and analyzes financial, engineering technology, cost/benefit, and other information to develop the most efficient and effective policy solutions for implementation and/or recommendation to the City Manager and the City Council.
- Furnishes the City Manager a monthly departmental report on the various activities each division of the Public Works Department has in action, has completed, or is planning to begin.
- Responsible for project delivery, including the timeliness and accuracy of the department's project management.
- Leads, supervises, mentors, and organizes others in the Public Works Department on issues regarding standard daily operations, innovative process modifications and progressive approaches to unique opportunities; trains staff and self in managerial and technical pursuits.
- Performs related works as assigned by the City Manager.

City of Neptune Beach Job Description

KNOWLEDGE, SKILLS AND ABILITIES OF THE IDEAL CANDIDATE:

The successful candidate will exhibit outstanding leadership qualities that will bring strength, stability and an instant credibility to the position with a strong focus on customer service and building solid relationships with all internal and external stakeholders. Top candidates for consideration will have had prior experience in an organization that is committed to working in partnership with other departments/agencies and promoting a collaborative team-work environment.

The ideal candidate will be able to demonstrate a proven track record of organizing, implementing and completing public works-related projects. The next Director of Public Works must also be able to work with a diverse group of people, typically by being pragmatic, flexible, and driven by results. Historically, the Public Works Department has enjoyed a Director that developed trust with superiors, peers, subordinates and residents; the ideal candidate will exhibit the same qualities.

Tactful, patient, approachable, knowledgeable, and self-confident are traits that describe the next Director of Public Works. The ideal candidate will provide leadership that builds on the existing skills of his/her team, as well as inspires, motivates, and empowers staff to achieve mutually established goals. Experience managing multiple projects while simultaneously leading a unionized workforce is essential to being successful in this position, and the top-candidate must be hands-on and committed to addressing an array of complex and technical issues impacting Neptune Beach.

The Public Works Department is preparing for significant improvements to its infrastructure systems and the pace of work will adjust to follow the demand of completing those projects in a timely manner. The successful candidate will create an open, collaborative, and successful relationship with the City's Executive Team, City Council, Community Groups, Developers, and Residents.

EDUCATION AND EXPERIENCE:

This position requires a Bachelor's Degree from an accredited college or university with major coursework in engineering, or a closely related field. An Advanced degree is highly desired.

This position requires at least six years of experience-based expertise in large and complex public works operations, construction management with multiple contractors, or closely related experience.

LICENSES AND/OR CERTIFICATES:

Valid Florida Driver's License, or ability to obtain one within thirty days of hire.

A valid Florida Professional Engineer license is highly desirable but not required, or an equivalent transferable license from another state, which must be converted to Florida Registration.

Water and Domestic Wastewater Operator Certification with the Florida Department of Environmental Protection are also highly desirable, but not required.

WORKING CONDITIONS:

The physical conditions that apply to the Worker in this job are described as follows:

☒ None: The worker is **not substantially exposed to adverse environment conditions**: job likely consists of typical office work or administrative work.

PHYSICAL ACTIVITIES: (Essential physical activities:)

☐ Reaching	☒ Standing	☒ Walking	☐ Pushing	☐ Pulling	☐ Lifting
☐ Fingering	☐ Grasping	☐ Feeling	☒ Talking	☒ Hearing	☒ Driving

City of Neptune Beach Job Description

MATERIALS AND EQUIPMENT:

Machines, tools, equipment, electronic devices, software, etc. used by position:

- ☒ Data processing equipment
- ☒ Office equipment (desk, chair, phone, etc.)
- ☒ Office machines (copier, facsimile, calculator, cash register, etc.)
- ☒ Office supplies (pens, staplers, pencils, etc.)
- ☒ PC equipment (monitor, keyboard, printer, etc.)
- ☒ PC software
- ☐ Public safety equipment (firearms, radar, radio, mobile video systems, etc.)
- ☒ Other (list): Two-way radio

DISCLAIMER: The above information on this description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties and qualifications required of employees assigned to this job.

For Office Use Only

Revision Date: September 2020
Previous Revision Date: February, 1996, July 2001, January 2004, June 2015
Previous Title: Public Works Director



MEMORANDUM

TO: Northeast Florida Public Employee's Local 630 Members

FROM: Catherine Ponson, CMC
City Clerk/HR Generalist

DATE: September 29, 2020

RE: Changes Effective October 1, 2020: Compensatory Time Hours
and Part-time Accrual Hours

.....

Attention:

Effective October 1, 2020, employees may accrue and bank up to 90 hours of compensatory time at any given time.

Compensatory time earned must be used within the same fiscal year, which generally begins October 1st and ends September 30th.

Also, regular part-time employees will no longer accrue personal leave.

Thank you,

Catherine Ponson, CMC
City Clerk, HR Generalist
(904) 270-2400 ext. 30
clerk@nbfl.us