



Real Property Committee

5:00 p.m., Thursday, February 13, 2020
City Hall Conference Room
1207 Palm Boulevard
Isle of Palms, South Carolina

Agenda

1. **Call to order** and acknowledgment that the press and the public have been duly notified of the meeting in accordance with the Freedom of Information Act.
2. **Approval of previous meeting's minutes** – January 15, 2020
3. **Citizens' Comments** – Comments shall be limited to 3 minutes
4. **Old Business**
 - a. Update on Public Safety Building rehabilitation project and consideration of approval of the third phase of the contract for construction
 - b. Update on marina restaurant lease proposal
 - c. Update on beach nourishment permit modification
 - d. Update on permitting for marina docks and dock currently leased to Tidal Wave Watersports
 - e. Discussion of future use of the dock currently leased by Tidal Wave Watersports
5. **New Business**
 - a. Discussion of landscaping and hardscaping improvements to Front Beach area and Leola Hanbury Memorial Park
 - b. Consideration of extension of The Palms Hotel parking agreement for use of the municipal parking lot
 - c. Discussion of tide gauge and water level monitoring system program
 - d. Review of the Front Beach, Beach Maintenance and Marina FY21 capital expenditures
 - e. Discussion of improvements to Waterway Boulevard sidewalk
6. **Miscellaneous Business**

Next meeting date: 5:00 p.m., Wednesday, March 4, 2020
7. **Executive Session** – If needed
8. **Adjournment**

REAL PROPERTY COMMITTEE
5:00pm, Wednesday, January 15, 2020
City Hall Conference Room
1207 Palm Boulevard, Isle of Palms, SC

MINUTES

1. Call to order

Present: Council members Bell, Buckhannon, and Popson

Staff Present: Administrator Fragoso, Asst. Administrator Hanna

2. Election of Chair and Vice Chair

Prior to nominations, Council Member Bell thanked everyone who chose to retain his place on this committee. He also lauded the work done by the Real Property Committee during the previous two years. Noting complaints received about an unnavigable website, he said the City and the Committee have been very transparent and all information can be found on the City's website.

Council Member Popson nominated Council Member Buckhannon for Chair of the Real Property Committee. Council Member Bell nominated himself for Chair. There being no other nominations, a vote for Council Member Bell as Chair was taken as follows:

Ayes: Popson, Buckhannon

Nays: Bell

Council Member Buckhannon nominated Council Member Popson as Vice Chair of the Real Property Committee. There being no other nominations, a vote was taken as follows:

Ayes: Buckhannon, Popson

Nays: Bell

3. Approval of previous meeting's minutes – November 6, 2019

Council Member Bell made a motion to approve the minutes of the November 6, 2019 meeting. Council Member Popson seconded the motion. The motion passed unanimously.

4. Citizens' Comments

Patsy Hindman, 7 Barnacle Row, said she believes there has not been enough transparency in the process regarding the plans for the Marina. She expressed concern and shock that there were only three responses to the RFP. She said there should be more information on the City's website.

Nancy Townsend, 254 Forest Trail, spoke in support of Tidal Wave Watersports. She said they are part of the community and act as good examples in the community. She also expressed concern about information not being made available ahead of time.

Susie Kopp, 2504 Waterway, also spoke in support of Tidal Wave Watersports. She also expressed concern about the lack of response to the RFP for the restaurant space at the Marina.

Debbie Faires, 3305 Cameron, agreed with the statements made by Susie Kopp.

Marina Townsend, 254 Forest Trail, spoke in support of Morgan Creek Grill, stating it was her first job. She said their closing is a devastating loss to the community. She also spoke in support of Tidal Wave Watersports.

Michael Fiem, 69 41st Avenue, thanked the committee for changing the meeting time to 5:00pm.

5. Old Business

A. Update on permitting for marina docks and dock currently leased to Tidal Wave Watersports

Administrator Fragoso said, “The City received the OCRM permit for the work at the marina docks this week. The next step will be obtaining the Corps permit, the US Army Corps of Engineers’ permit, and we expect that to be issued by the end of January if everything progresses as we expect. That means that by February we should have both permits, OCRM and the Corps, as well as the final design on the improvements to the Morgan Creek side docks and the geotechnical investigation. You will all recall City Council approving that expense late last year. The City should be in a position to be ready to go out for bid this summer with the expectation to be issuing a notice to proceed with the construction after Labor Day. We have been timing this whole process so that the construction would begin, would not sort of interrupt or disrupt the marina operations as much as possible. We are also in the process of investigating the permitting process for the dredging. You will see if you look at the FY20 10-year Capital Plan, dredging for that site is also scheduled for FY21. We have initiated some efforts to reach out to the other marinas, neighboring marinas, in an effort to coordinate that effort and potentially reduce the cost of both the permitting and the actual dredging.”

With regards to the permitting of the dock at Tidal Wave Watersports, she said, “The full permit application was submitted in November. It has gone through the public comment period. No comments were received, which is a really good thing. It tends to expedite the internal staff review process. It will go through the same process that the marina dock permit just went through. After OCRM looks at it, the Corps will give a final determination.” She then gave a brief review of the work the City has done in coordination with OCRM, ATM, and the Marina tenants since 2018.

She shared her concern about citizens’ comments about the unnavigable website and said that they have set up a meeting with the website coordinator to discuss changes.

Council Member Bell added that City Council, while advised on the permitting process, is not involved in driving the process, and also has been surprised by the delays.

B. Update of marina restaurant lease proposal

Administrator Fragoso reported, “December 2019 the Council voted to enter into exclusive negotiations with the IOP Families Group, which are represented by the Bushnell and the

Lorenzes families and began a 90-day due diligence period. In addition to evaluating new construction scenarios, the proposer has also been conducting due diligence by meeting with the Building and Planning and Zoning Director and Inspector about the options available for the rehabilitation of the building.”

Council Member Bell said he was also concerned about the lack of response to the Marina restaurant RFP, but noted it is a very complicated issue including a complex lease and extensive building rehabilitation. Council Member Bell other people expressed interest in the space but did not turn in proposals.

C. Update on Greenbelt project application – ADA-compliant beach walkover and observation deck at 42nd Avenue

Administrator Fragoso said the application for this project is in process and will be submitted prior to the January 31 deadline. She noted it is a long approval process, and if approved, the project will appear in the next budget year (FY22). Committee members briefly discussed the use of epoxy versus other building products for such a project.

D. Update on Public Safety Building rehabilitation project

Administrator Fragoso reported the contract for the 12-month mobile office for the Police Department has been executed and they are expected to arrive in early February. Staff has developed a relocation plan and will be mobilized prior to the start of construction in early March. She said the final drawings needed for permitting have been submitted. The contractor is out for final pricing with subcontractors, and staff expects final pricing for the whole project to be available by the end of the month. “The plan is to bring those numbers to Council for Council to then award the final phase of that contract which would be for the actual construction, which again, is slated to begin in March.”

She added the owner’s representative (Insight) has been retained and was present at the kickoff meeting in December. Staff has weekly meetings with the design build team to review plans for the project. She also noted there is a healthy contingency amount built into the project budget should be there any surprises during construction.

6. New Business

A. Discussion of timeline of Council’s action related to the existing Tidal Wave Watersports lease

Administrator Fragoso reviewed the timeline of the City’s lease with Tidal Wave Watersports. She said, “The City approved the assignment of the watersports lease for the current tenants in August, September 2006. That lease was amended in 2010, and as part of the terms that were included in that lease, included a 5-year extension until September 2015 with the option to be automatically be renewed for three additional 5-year terms. The first auto-renewal for that lease happened in 2015 for five years. That first automatic renewal was up this year. On April 23, 2019, City Council voted not to renew, to notify Tidal Wave that it did not have an intention to renew the existing lease. The deadline to notify, according to the lease, if the City was not going to renew the existing lease, then it has a year to notify the tenant that that was not going to

happen. So that is what happened back in April. The City had every right under its agreement with the tenant to exercise that right. It was a lease that was agreed to by the tenant that gave the City that opportunity to not renew. I cannot speak for all of the Council members about their decision about doing that. It has been something that has been talked about even before through the whole Marina referendum process that the majority of that site is under contract, under two leases that don't expire until 2045. So there had been questions and comments and discussions about the public wanting more public access, and I think you all have seen the comments we have received so far. For the past five years, since I have been on board, there has always been some talk about too many commercial businesses or we want a public park. I think that that may have been one of the reasons why City Council decided not to renew that lease to give themselves the opportunity to reevaluate the use of that site. There were also some discussions about wanting to change the language of that lease. Also determining what the fair market value was for that lease. I think even the tenant agrees that the lease is not the best lease and that it would rather have it have different language. Council also discussed changing or wanting to evaluate a different method for calculating additional rent, whether it is gross profit. Obviously, it should be gross sales not gross profit, and how difficult it is to sort of manage that. I think there were multiple reasons why Council took that action. It was my responsibility to make Council aware that there was an opportunity to make changes to that lease. Same thing with the restaurant. It was discussed by previous Councils, and it was also presented as an option to Council this time. If not, if Council had not been aware or Council did not take any action, then the lease would have been automatically renewed for five years, and it may have been difficult to envision doing something different if it was the will of Council. So we brought that up to the Real Property Committee. It had been discussed prior during the referendum process about the 2020 being an opportunity for Council with the lease of the restaurant and the watersports operations lease to do anything different, if Council chooses to do so. That is ultimately a Council decision."

Council Member Bell noted it was a difficult and complicated subject for Council to review, and the vote to not renew the lease was a close 5-4 vote. He added, "It was not renewed because it was proposed to sign the lease and then negotiate the lease terms. So to those that think this is a moneymaker for the City, it is approximately \$22,400 a year, on average, for the last ten years. That is \$53 a day. Excluding depreciation, we spend more money than that to maintain that dock. There was no financial incentive for the City. Having said that, and I will say it again here, four times, me personally, I have said if we are going to have a watersports company on our waterfront, it should be Tidal Wave Watersports. They are a responsible operator. The discussion was not had at that the time of that lease renewal as to should we have a public dock, should we have anything else? It was centered on the fact that we had a notification that was written into a lease that we knew was not financially in the best interests of the City to not renew that lease. There has never been a discussion that we couldn't have another lease with Tidal Wave. There has been significant discussion and counsel from our City Attorney and Desiree Fragoso that we should be following South Carolina State Procurement Guidelines. By the way, we don't have to, but following procurement guidelines to go to public bid. That is where the discussion has led." Council Member Buckhannon reminded everyone of the public meeting to discuss the vision for the Marina on Thursday, January 30.

When asked if there is an option to renegotiate the current lease, Administrator Fragoso said, “There is no legal or statutory requirement for the City to follow the Request for Proposals method for the lease. The City Code has a section on the books that guides real property, sale or lease of real property transactions from the City. It states that City Council may use the Request for Proposals method if it finds that it is in the City’s best interest to do so. I was asked for my opinion, and Council asked for a legal opinion about what to do with leases, and best practices indicate that people, municipalities should consider competitive procurement to have a fair, open, competitive process by which you determine fair market value. But there is no requirement, and I have always been clear with Council that that is an option available to City Council to make.”

B. Discussion of lease extension options for the dock leased by Tidal Wave Watersports

Council Member Buckhannon said this topic should be discussed following the meeting on January 30. A brief discussion ensued on how to determine the fair market value of the lease.

C. Review of the Front Beach, Beach Maintenance, and Marina 10-year Capital Plan and discussion of new initiatives and projects for consideration.

Administrator Fragoso distributed copies of the 10-year plan for the Front Beach, Beach Maintenance, and Marina areas of the budget. This document appears in the FY20 budget and has not yet been modified by staff in preparation for the FY21 budget discussions. She is seeking input from committee members regarding projects or initiatives in these areas. She highlighted the projects slated for FY21, noting that drainage is still a priority. Council Member Buckhannon added the need for a sinking fund to be prepared for repairs to roads owned by the City.

7. Miscellaneous Business

The next meeting of the Real Property Committee will be Wednesday, February 5, 2020 at 5:00pm.

8. Adjournment

Council Member Bell made a motion to adjourn, and Council Member Popson seconded the motion. The meeting was adjourned at 5:55pm.

Respectfully submitted,

Nicole DeNeane
City Clerk



Ms. Desiree Fragoso
City of Isle of Palms
1207 Palm Blvd
Isle of Palms, SC 29451

January 29, 2020

Re: **IOP PSB Repairs: Permit Set Pricing**
Isle of Palms, South Carolina

Dear Desirée,

We thank you for the opportunity to quote the above referenced project. We have compiled our proposal taking into account all of the other information that was provided and drawings prepared by Coast Architects dated December 27, 2019. Included with this proposal we have provided our price, our CSI Master Format pricing breakdown, our proposed schedule, and our clarifications and exclusions.

PRICE: \$5,417,162

BID ALTERNATES:

1. Delete currently designed Portico and install awning deduct \$176,503
2. Delete Apparatus Bay high performance painting deduct \$90,210
3. Delete Police Garage high performance painting deduct \$133,819
4. Add to replace three (3) GH LP Heaters at Apparatus Bay add \$11,700
5. Add to replace Apparatus Bay Exhaust Fan add \$5,250
6. Add new generator at ground level add \$253,779

SCHEDULE: 321 Calendar Days (+/- 11 Months)

CLARIFICATIONS:

Our proposal is based on the following:

1. Building Permit Fees for the City of Isle of Palms.
2. Construction Contingency of 10% of total cost has been included to address unknown conditions. All remaining contingency shall go back to the Owner.
3. We have included a full-time Superintendent to be present while the work is taking place.
4. Temporary Restrooms and Dumpsters as needed.
5. Temporary protective measures to protect existing finishes.
6. Our price is based on completing the work during normal work hours.
7. We have assumed the building will be vacated during construction.

Trident Construction, LLC

2245 Technical Parkway • North Charleston, SC 29406 | P.O. Box 60939 • North Charleston, SC 29419-0939
PHONE 843.572.7600 FAX 843.764.1704 EMAIL tcc@tridentconstruction.com

EXCLUSIONS:

1. Builders Risk Insurance. This is a special type of property insurance that the Owner is required to provide that covers materials, fixtures, and/or equipment used in a construction or renovation project should those items sustain a physical loss or damage from a covered cause.
2. Removal or disposal of hazardous materials.
3. Environmental Permits.
4. Third Party/IBC Chapter 17 Testing Fees.
5. Temporary power and water to be supplied by the Owner.
6. Removing existing items stored in the work area.
7. Any work other than what is listed.

Thank you once again for the opportunity to quote this project. Please don't hesitate to write or call with questions.

Respectfully,

TRIDENT CONSTRUCTION

A handwritten signature in blue ink, appearing to read "CB", with a long horizontal stroke extending to the right.

Chris Burrell
Senior Project Manager

Item	Description	Total		
		Amount		Variance
		IOP PSB Design Development Rev 12.02.19	IOP PSB Permit Set 01.22.20	
2000	SITEWORK			
2050	Demolition			
----	Demolition - Exterior	12,589	12,589	0
----	Demolition - Interior	32,229	32,229	0
----	Dumpsters	25,783	25,783	0
----	Clean Up	62,041	62,041	0
	Demolition	132,642	132,642	0
2101	Site Concrete			
----	Site Concrete	86,955	108,905	-21,950
	Site Concrete	86,955	108,905	-21,950
2351	Piling			
----	Auger Cast Piles @ Portico		23,463	-23,463
	Piling		23,463	-23,463
2632	Storm Concrete Reinforced			
----	Vacuum South Parking Storm Piping	8,561	8,561	0
	Storm Concrete Reinforced	8,561	8,561	0
2830	Fences & Gates			
----	Temporary Site Fence		4,582	-4,582
	Fences & Gates		4,582	-4,582
2900	Landscaping			
----	Remove and Replace Landscaping	19,136	19,136	0
	Landscaping	19,136	19,136	0
	SITEWORK	247,294	297,289	-49,995
3000	CONCRETE			
3001	CONC. FOUND/SLAB			
----	Sallyport Concrete Repairs	5,419	6,042	-624
	CONC. FOUND/SLAB	5,419	6,042	-624
	CONCRETE	5,419	6,042	-624
4000	MASONRY			
4001	MASONRY			
----	Masonry @ Portico	15,107		15,107
----	Masonry @ Sallyport Vestibule	5,036	5,548	-512
	MASONRY	20,143	5,548	14,595
	MASONRY	20,143	5,548	14,595
5000	STEEL			
5100	Structural Metal Framing			
----	Structural Steel	15,107	88,043	-72,936

	Structural Metal Framing	15,107	88,043	-72,936
5500	Miscellaneous Metals			
----	Misc Metals	4,532	4,532	0
	Miscellaneous Metals	4,532	4,532	0
	STEEL	19,639	92,575	-72,936
7000	THERMAL & MOISTURE PROTCT			
7100	Waterproofing			
----	Fluid Applied Air Barrier	171,217	85,316	85,901
	Waterproofing	171,217	85,316	85,901
7216	Foamed-in Insulation			
----	Spray Foam Insulation	13,276	11,581	1,696
----	Sallyport Garage Insulation	35,855	20,140	15,715
	Foamed-in Insulation	49,131	31,721	17,410
7305	Roofing/Metal Panel Sub			
----	Roofing	449,730	463,853	-14,122
	Roofing/Metal Panel Sub	449,730	463,853	-14,122
7460	Siding			
----	Fiber Cement Siding/Stucco	636,649	639,358	-2,709
	Siding	636,649	639,358	-2,709
7900	Joint Sealers			
----	Joint Sealants	10,072	9,768	304
	Joint Sealers	10,072	9,768	304
7910	Joint Filler/Gaskets			
----	Fire Caulking/Fire Sealants	5,036	4,582	454
	Joint Filler/Gaskets	5,036	4,582	454
	THERMAL & MOISTURE PROTCT	1,321,834	1,234,596	87,238
8000	DOORS & WINDOWS			
8100	Doors, Frames & Hardware			
----	Doors/Frames/Hardware - Exterior	34,344	34,344	0
----	Doors/Frames/Hardware - Sallyport	3,525	3,525	0
----	Flood Vents	1,511	1,511	0
----	Bifold Apparatus Doors	175,900	181,916	-6,016
----	Rollup Doors	67,115	69,522	-2,407
----	Doors/Frames/Hardware - Interior			
----	Louvers			
	Doors, Frames & Hardware	282,395	290,818	-8,423
	DOORS & WINDOWS	282,395	290,818	-8,423
9000	FINISHES			
9001	Interior Finishes			
	d500 Final Cleaning		20,451	-20,451

	Interior Finishes		20,451	-20,451
9100	Drywall			
	---- Drywall/ACT	112,951	216,386	-103,435
	Drywall	112,951	216,386	-103,435
9590	Resilient Flooring			
	---- Flooring	17,271	23,111	-5,840
	Resilient Flooring	17,271	23,111	-5,840
9910	Exterior Painting			
	---- Exterior Painting	70,369	70,359	11
	---- Interior Painting	12,271	34,770	-22,499
	---- High Performance Painting	143,016	180,954	-37,938
	Exterior Painting	225,657	286,083	-60,426
	FINISHES	355,878	546,030	-190,152
10000	SPECIALTIES			
10430	Exterior Signs			
	---- Address Numbers Sign Portico		1,913	-1,913
	Exterior Signs		1,913	-1,913
	SPECIALTIES	0	1,913	-1,913
13000	SPECIAL CONSTRUCTION			
13700	Canopy			
	---- Rear Canopy	22,963	8,459	14,504
	Canopy	22,963	8,459	14,504
	SPECIAL CONSTRUCTION	22,963	8,459	14,504
15000	MECHANICAL			
15300	Fire Protection			
	---- Fire Protection	55,394	74,785	-19,392
	Fire Protection	55,394	74,785	-19,392
15400	Plumbing			
	---- Plumbing	20,385	40,784	-20,399
	Plumbing	20,385	40,784	-20,399
15500	HVAC			
	---- HVAC	544,872	606,787	-61,915
	---- HVAC System Cleaning	50,358		50,358
	HVAC	595,230	606,787	-11,557
	MECHANICAL	671,009	722,356	-51,347
16000	ELECTRICAL			
16001	Electrical			
	---- Electrical/Fire Alarm	473,695	469,826	3,869
	Electrical	473,695	469,826	3,869
	ELECTRICAL	473,695	469,826	3,869
	Total	3,420,270	3,675,422	-255,152

VARIANCE REPORT
Design Development/Permit Set

Item	Description	Total		
		Amount		
		IOP PSB Design Development Rev 12.02.19	IOP PSB Permit Set 01.22.20	Variance
Labor				
Material		23500	23500	0
Subcontract		3308763	3543606	-234843
Equipment		0	0	0
Other		61,600	81,909	-20,309
		3,393,863	3,647,748	-255,152
Sales Tax		2,115	2,115	0
		3,395,978	3,649,863	-255,152
CGL Insurance		33,960	36,499	(2,539)
Architectural Design Fees		295,578	295,578	0
Envelope Consultant Design Fee		16,250	16,250	0
Construction Administration		77,917	77,917	0
Envelope Consultant CA		65,000	35,000	30,000
Precon GC's		37,851	37,851	0
General Conditions		215,067	218,128	(3,061)
IOP Building Permt		17,027	18,300	(1,273)
IOP Busin. Lic.		24,907	25,667	(760)
IOP Plan Review		13,179	13,581	(402)
Overhead & Profit		420,542	433,373	(12,831)
		4,637,548	4,883,565	-246,017
Trident Performance Bond		40,118	41,128	(1,010)
		4,677,666	4,924,693	-247,027
Constr/Estimating Contingency		579,113	492,469	86,644
		5,256,779	5,417,162	-160,383
Total		5,256,779	5,417,162	-160,383



ISLE OF PALMS PUBLIC SERVICES BUILDING
01.03.2020

BASE BID



ISLE OF PALMS PUBLIC SERVICES BUILDING
01.03.2020

BASE BID



ISLE OF PALMS PUBLIC SERVICES BUILDING
01.03.2020

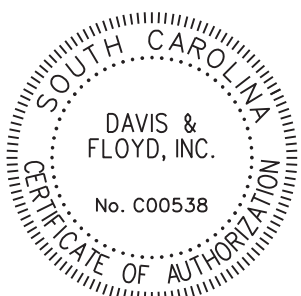
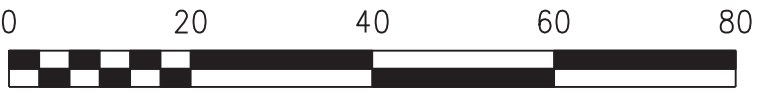
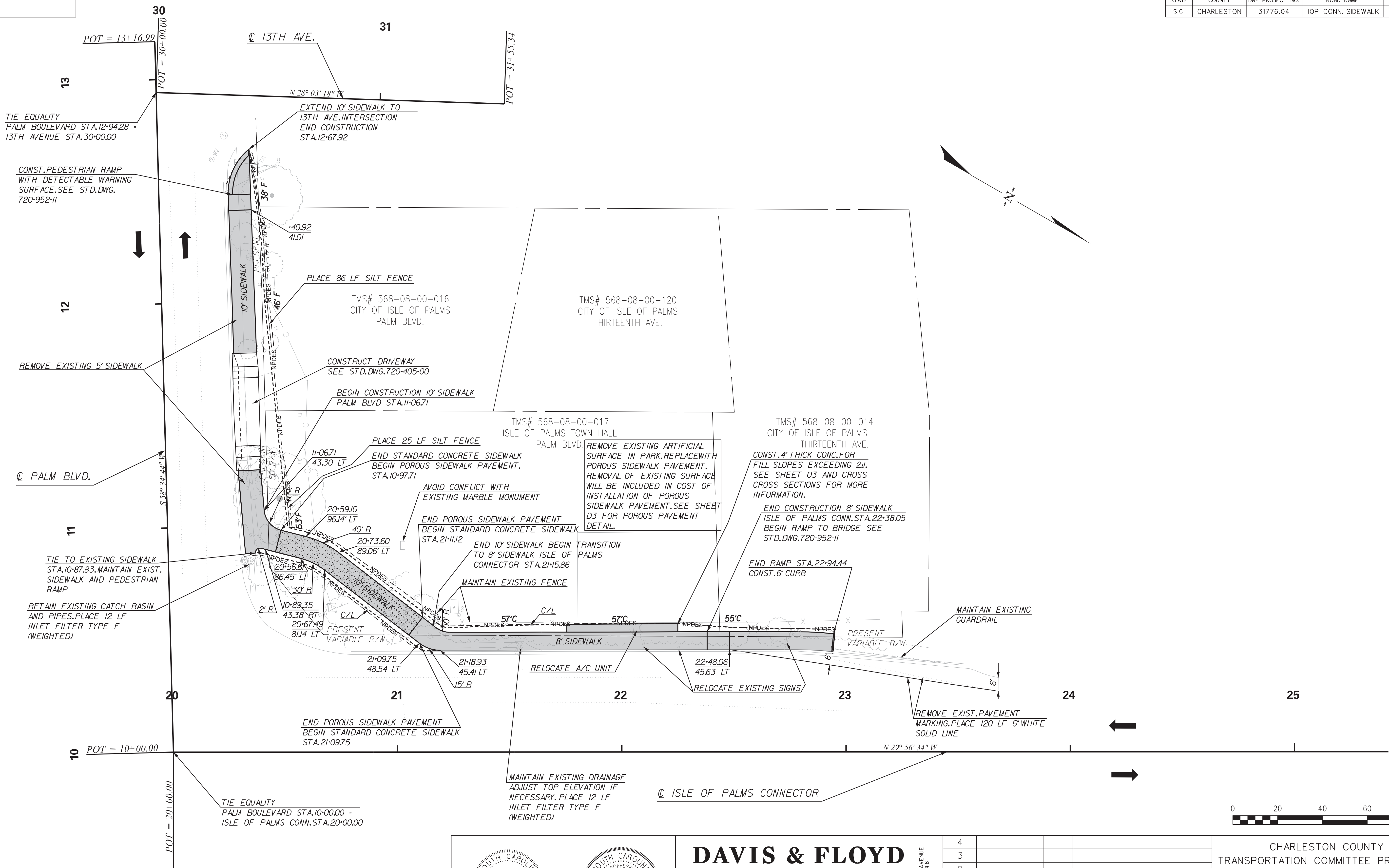
BID ALTERNATE NO. 1



ISLE OF PALMS PUBLIC SERVICES BUILDING
01.03.2020

BID ALTERNATE NO. 1

STATE	COUNTY	D&F PROJECT NO.	ROAD NAME	SHEET NO.	TOTAL SHEETS
S.C.	CHARLESTON	31776.04	IOP CONN. SIDEWALK	06	



DAVIS & FLOYD
SINCE 1954

WWW.DAVISFLOYD.COM

3220 W. MONTAGUE AVENUE
CHARLESTON, SC 29406
(843) 554-8602

4			
3			
2			
1			
REV. NO.	BY	DATE	DESCRIPTION OF REVISION
DCN.	AMS	DATE	
R/W	DATE		
CHK.	GTB	DATE	

CHARLESTON COUNTY TRANSPORTATION COMMITTEE PROJECTS
ISLE OF PALMS CONNECTOR SIDEWALK PLAN SHEET
SCALE 1" = 20'

STATE OF SOUTH CAROLINA)
)
COUNTY OF CHARLESTON)

AGREEMENT FOR USE
OF MUNICIPAL PARKING LOTS

THIS AGREEMENT FOR USE OF MUNICIPAL PARKING LOTS ("Agreement") is made and entered into this 9 day of March, 2018, by and between The City of Isle of Palms, South Carolina ("City") and The Palms Hotel Owners Association, Inc. d/b/a The Palms Oceanfront Hotel ("Hotel").

WHEREAS, City is the owner of the real property commonly known as the City of Isle of Palms Municipal Parking Lots, and shown as "Lot A, Block 36, Section A" and "New Lot A-2, Block 36, Section A" (together referred to as "Lot A") on the plat titled "Subdivision of Lot A Block 36 Section" dated March 21, 1991, a copy of which is attached hereto and incorporated herein by reference as Exhibit I, and identified as TMS# 568-12-00-008 and TMS# 568-12-00-302, and a portion of the City's property located at 30 J.C. Long Boulevard and identified as TMS# 568-11-00-200, which portion is outlined on the site plan for the City of Isle of Palms Public Safety Building that was prepared by Cole + Russell Architects (hereinafter "Lot B"), a copy of which is attached hereto and incorporated herein by reference as Exhibit II (Lot A and Lot B together referred to as the "Municipal Parking Lots"); and

WHEREAS, Hotel desires to use the Municipal Parking Lots for Hotel Guest and Employee parking; and

WHEREAS, City agrees to make the Municipal Parking Lots available for use by the Hotel, for parking of Hotel Guest and Employee vehicles only, subject to the terms and conditions set forth below.

THEREFORE, in consideration of the mutual covenants and agreements of the respective parties herein contained, which are expressly agreed to by City and Hotel, the parties hereto, for themselves and their successors, hereby agree as follows:

1. GRANT OF USE: City hereby grants to Hotel a non-exclusive right, privilege and permission, subject to the terms and conditions of this Agreement, to use the Municipal Parking Lots for Hotel Guest and Employee vehicle parking only and for no other purposes.
2. TERM OF AGREEMENT: The initial term of this Agreement shall commence on the date of execution of this Agreement and end on February 28, 2019, unless terminated sooner in accordance with Paragraph 4 of this Agreement.
3. RENEWAL OPTION: Upon the mutual written agreement of the parties, the Term may be renewed for one (1) additional one-year term from March 1, 2019 through February 29, 2020 under the same terms, covenants and conditions set forth in this Agreement. The initial term and any renewal thereof shall be collectively referred to hereinafter as the "Term."

4. EARLY TERMINATION: Either party shall have the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days written notice to the other party as provided in Paragraph 18 of this Agreement.
5. LIMITATIONS OF AGREEMENT: Hotel's use of the Municipal Parking Lots shall not be exclusive. City retains the right to use the Municipal Parking Lots for its own purposes and for public parking, which uses shall take priority over Hotel's right of use. Public parking at the Municipal Parking Lots is made available by the City to the public on a first-come, first-serve basis and the demand for public parking may exceed the total number of available parking spaces; therefore, the City makes no guarantee that parking will be available for Hotel Guests or Employees at any given time during the Term of this Agreement.
6. PARKING RATES:
 - a. Hotel agrees to pay to City parking fees for Hotel Guests in accordance with the public parking rates for the Municipal Parking Lots during the seasonal period from March ~~1st~~^{5th} through October 31st:
Monday through Friday – Eight (\$8.00) Dollars per vehicle per day
Saturdays, Sundays, and legal holidays – Ten (\$10.00) Dollars per vehicle per day
 - b. Overnight parking by Hotel Guests shall be permitted in the Municipal Parking Lots; however, any Hotel Guest vehicle that is parked in the Municipal Lots after 12:00 p.m. shall be charged the daily rate for that day.
 - c. Hotel agrees that the above referenced public parking rates and seasonal period may be changed by City at any time during the Term of this Agreement. Hotel agrees to pay to City parking fees in accordance with any such amended rates or seasonal period.
 - d. Parking rates shall not apply to lawfully marked vehicles parked in designated handicapped parking spaces at the Municipal Parking Lots.
7. PAYMENT OF PARKING FEES: Hotel shall pay to City all parking fees accrued from the use of the Municipal Parking Lots by Hotel Guests on a monthly basis during the seasonal period and in accordance with the rates set forth in Paragraph 6 of this Agreement. Parking fees shall be due and payable to City in arrears on the seventh (7th) day of the month.
8. REPORTING: Hotel agrees to provide City with a report on the seventh (7th) day of each month, along with the payment of parking fees, which includes the total number of Hotel Guest vehicles parked at the Municipal Parking Lots during the prior month, a breakdown of the usage on weekdays, weekends and holidays, and any other

information as required by the City. The form of the report shall be submitted to City for approval prior to the execution of this Agreement.

9. PARKING TAGS: Hotel shall provide parking hang tags approved by the City of Isle of Palms Police Department for Hotel Guest vehicles parking at the Municipal Parking Lots. The hang tags shall include the vehicle registration number, state of vehicle registration, expiration date, and any other information as may be required by the City of Isle of Palms Police Department. The form of the hang tag shall be submitted to City for approval prior to the execution of this Agreement. Hotel shall ensure proper use of parking hang tags by Hotel Guests; improper use of parking hang tags may result in ticketing of Hotel Guest vehicles by the Isle of Palms Police Department.
10. SEASONAL PARKING PASS: Hotel or Hotel Employees may purchase seasonal parking passes for the Municipal Parking Lots from the City at the existing rate of Sixty (\$60.00) Dollars for the seasonal period from March 1st through October 31st. Seasonal parking passes are issued for individual vehicles, are not transferrable, are subject to the daily hours of operation of 8:00 a.m. to 8:00 p.m., and are subject to the terms and conditions required by the City of Isle of Palms Police Department. Hotel agrees that the rate, hours of operation, and seasonal period for seasonal parking passes are subject to change at any time during the Term of this Agreement and that Hotel or Hotel Employees shall be required to abide by such changes or rate increases. Hotel shall ensure proper use of seasonal parking passes by Hotel Employees; improper use of seasonal parking passes may result in ticketing of Hotel Employee vehicles by the Isle of Palms Police Department.
11. PERMITS AND LICENSES: Hotel agrees to obtain and maintain, at Hotel's sole expense, any governmental permits or licenses as may be required for its use of the Municipal Parking Lots.
12. COMPLIANCE WITH LAWS: At all times during the Term of this Agreement, Hotel shall comply and shall cause its members, agents, employees, guests, licensees or invitees to comply, with all applicable federal, state, and local laws, rules and regulations. Specifically, the Hotel agrees that Hotel and Hotel's members, agents, employees, guests, licensees and invitees shall abide by the City's noise and parking ordinances at all times during the term of this Agreement.
13. INDEMNIFICATION AND INSURANCE: Hotel agrees to hold harmless and indemnify City against any loss or damage, including reasonable attorney's fees and expenses, incurred as a result of any and all claims, demands, causes of action, suits, judgments, fines or penalties (including but not limited to all fees and expenses incurred as a result of death or injury to persons or for loss of or damage to property) arising out of or in connection with the use of the Municipal Parking Lots by Hotel, its members, agents, employees, guests, licensees or invitees. Hotel agrees that at all times it will carry comprehensive general liability insurance coverage in an amount not less than \$1,000,000.00 per person, \$2,000,000.00 per claim, and \$250,000.00 per claim for

property damage, with City named as an additional insured through a company licensed in the State of South Carolina. Hotel agrees to furnish a Certificate of Insurance to the City on or before commencement of the Term of this Agreement and prior to any renewal of the Term.

14. ASSUMPTION OF RISK: Hotel acknowledges and agrees that by use of the Municipal Parking Lots for Hotel Guest and Employee parking, Hotel assumes all risk of loss or damage to property on behalf of its Guests and Employees, including, without limitation, property damage, and all risk of personal injury, including, but not limited to, death, attributable to any cause other than the gross negligence or unlawful conduct of City. Hotel further agrees that it is familiar with the condition of the Municipal Parking Lots and the suitability of the Municipal Parking Lots for its intended use and accepts the Municipal Parking Lots in their present condition on an "as-is" basis. City makes no representations or warranties to Hotel regarding the condition of the Municipal Parking Lots or their fitness for any particular purpose. City shall not be responsible or liable for loss or damages by reason of fire, flood, theft, collision, or any other cause that is not attributable to the gross negligence or unlawful conduct of City, to parked vehicles or their contents. Hotel shall be solely responsible and liable for the safety and security of its members, agents, employees, guests, licensees or invitees and their vehicles while using the Municipal Parking Lots. Hotel shall be solely responsible for ensuring proper use of parking hang tags and seasonal passes by its Guests and Employees. City shall not be liable for any misuse of parking hang tags or seasonal parking passes by Hotel Guests or Employees that results in ticketing of Hotel Guest and Employee vehicles by the Isle of Palms Police Department.
15. EFFECT OF WAIVER: No waiver of any default under this Agreement shall constitute or operate as a waiver of any subsequent default hereunder, and no delay, failure or omission in exercising or enforcing any right, privilege or option under this Agreement shall constitute a waiver, abandonment or relinquishment thereof.
16. SUBCONTRACTING AND ASSIGNMENT: Hotel agrees not to enter into any subcontracts, leases, agreements, or assignments pertaining to this Agreement or any interest or right herein, either voluntarily or by operation of law, without prior written approval of City.
17. NO THIRD PARTY BENEFICIARY: This Agreement is not intended and shall not be construed so as to grant, provide or confer any benefits, rights, privileges, claims, causes of action or remedies to any person or entity as a third party beneficiary under any statutes, laws, codes, ordinances or otherwise.
18. NOTICES: All notices, consents, and approvals required by any provision of this Agreement shall be in writing and shall be deemed to be properly given and received when personally delivered to the representatives of each party or when deposited in the United States mail, registered or certified, with return receipt requested, postage prepaid, and addressed to:

City of Isle of Palms:

Representative: Linda Lovvorn Tucker, City Administrator
Address: PO Box 508, Isle of Palms, SC 29451

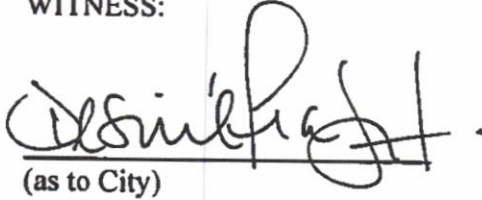
The Palms Hotel Owners Association, Inc.
d/b/a The Palms Oceanfront Hotel:

Representative: Aaron Rowland, Registered Agent
Address: c/o Charlestowne Hotels, Inc.
28 Bridgeside Blvd., Suite 201, Mt. Pleasant, SC 29464

19. BREACH: If any provision of this Agreement is violated in whole or in part by Hotel, the City may pursue any and all remedies at law or in equity, all of which shall be cumulative, and City shall be entitled to a court order restraining and enjoining Hotel from any such violation without prejudice to any other remedies City may have at law or in equity.
20. GOVERNING LAW; ENFORCEMENT: This Agreement shall be construed and enforced in accordance with the laws of the State of South Carolina. If any provision of this Agreement is held invalid or unenforceable to any extent by a court of competent jurisdiction, the remainder of this Agreement is not affected thereby and that provision shall be enforced to the greatest extent permitted by law. In the event that either party enforces the terms of this Agreement by legal proceedings, the prevailing party in such proceedings shall be entitled to reimbursement from the other party of all costs and expenses incurred by the prevailing party in connection therewith, including reasonable attorney's fees, at all trial and appellate levels.
21. SECTION HEADINGS: The headings of sections or paragraphs used in this Agreement have been inserted for convenience only and are not to be used in determining the contents contained herein.
22. BINDING AGREEMENT: This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.
23. ENTIRE AGREEMENT; AMENDMENT: This Agreement contains the entire understanding of the parties hereto. There are no oral understandings, terms or conditions and neither party has relied upon any representation, express or implied, not contained in this Agreement. All prior understandings, terms, or conditions are deemed merged into this Agreement. This Agreement may be amended only by a written agreement signed by both parties.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals, by and through the undersigned agents, as of the date stated above.

WITNESS:


(as to City)

The City of Isle of Palms, S.C.

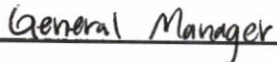
By: 

Title: 

The Palms Hotel Owners Association, Inc. d/b/a

The Palms Oceanfront Hotel

By: 

Title: 


(as to Hotel)

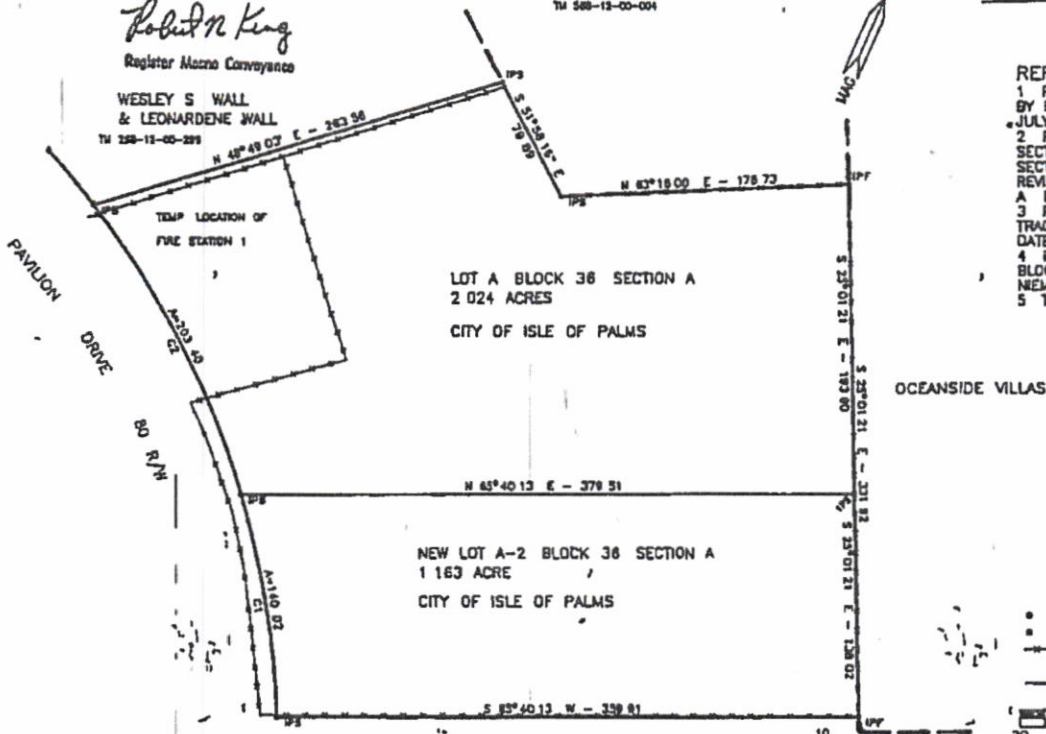
EXHIBIT I
(Attach Plat of Municipal Parking Lot "A")

Charleston South Carolina
Office of Register Mazon Conveyance

Plat recorded this 14 day of May 1991 at
5:46 o'clock in Plat Book CC Page 129 and tracing cloth
copy filed in File 2 Drawer 67 Folder 17 Drawing
No. 149 Original plat (white print) delivered
to Jack Mauldin

Robert N. King
Register Mazon Conveyance

WESLEY S WALL
& LEONARDENE WALL
TM 568-12-00-289



REFERENCES

1. PLAT OF LOT 04 BLOCK 37 DONE BY HERBERT A. NIEMER JR DATED 18 JULY 1988
2. PLAT OF LOT A BLOCK 36 SECTION A AND PARCEL 1 BLOCK 33 SECTION A DATED 6 APRIL 1987 AND REVISED 28 AUGUST 1987 BY HERBERT A. NIEMER
3. PLAT OF ISLE OF PALMS WATER CO TRACT BY E. M. SEABROOK JR INC DATED 16 JULY 1990
4. PLAT SHOWING CREATION OF LOT A-1 BLOCK 36 SECTION A BY HERBERT A. NIEMER JR DATED 18 AUGUST 1988
5. TM 568-12-00-08

- IPS=IRON PIPE SET
- IPF=IRON PIPE FOUND
- FENCE
- LOT LINE



Approved by City Council
of the City of Isle of Palms
this 15 day of April 1991

Michael B. McQuigg
Clerk

OCEAN BOULEVARD 100 R/W



CURVE TABLE

ARC	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
1	6-14° 35' 10"	R=350.00	A=140.02	CB-H 33° 05' 27" W	C=139.84
2	6-21° 11' 20"	R=350.00	A=203.40	CB-H 50° 38' 43" W	C=202.24

I, David Eugene Huff, a registered land surveyor of the State of South Carolina do hereby certify that I have surveyed the property shown herein and that this plat shows the true dimensions of the lots and that the provisions of the survey are 1:10,000.

David Eugene Huff
DAVID EUGENE HUFF R L S

DAVID EUGENE HUFF R L S

P O BOX 78 ISLE OF PALMS SOUTH CAROLINA 29431
PHONE 823-850-8911 SOUTH CAROLINA REG 8160

SUBMISSION OF LOT A BLOCK 36 SECTION

OWNER	DATE	A CITY OF ISLE OF PALMS CHARLESTON CO SOUTH CAROLINA CITY OF ISLE OF PALMS OWNER
D. HUFF	MAY 21/1991	
APPROVED BY	DATE	
SCALE	SHEET	SHEET
1 INCH = 80 FEET	1	1

UTM-180-12

EXHIBIT II
(Attach Plat of Municipal Parking Lot "B")

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ST. LOUIS, MISSOURI, ORDINANCES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ST. LOUIS, MISSOURI.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SAFETY OF ALL WORKERS AND THE PUBLIC.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE QUALITY OF ALL CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SCHEDULE OF ALL CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BUDGET OF ALL CONSTRUCTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE COMMUNITY RELATIONS OF ALL CONSTRUCTION.

KEY NOTES:

1. EXISTING BUILDING AND SITE.
2. EXISTING BUILDING AND SITE.
3. EXISTING BUILDING AND SITE.
4. EXISTING BUILDING AND SITE.
5. EXISTING BUILDING AND SITE.
6. EXISTING BUILDING AND SITE.
7. EXISTING BUILDING AND SITE.
8. EXISTING BUILDING AND SITE.
9. EXISTING BUILDING AND SITE.
10. EXISTING BUILDING AND SITE.

ONE LEGEND - SITE

REMARKS: ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ST. LOUIS, MISSOURI, ORDINANCES AND SPECIFICATIONS.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ST. LOUIS, MISSOURI.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING CONSTRUCTION.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SAFETY OF ALL WORKERS AND THE PUBLIC.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE QUALITY OF ALL CONSTRUCTION.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SCHEDULE OF ALL CONSTRUCTION.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BUDGET OF ALL CONSTRUCTION.

REMARKS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE COMMUNITY RELATIONS OF ALL CONSTRUCTION.

DATE: 10/1/88
BY: [Signature]
CHECKED: [Signature]
SCALE: 1" = 40'

END ALTERNATES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ST. LOUIS, MISSOURI, ORDINANCES AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ST. LOUIS, MISSOURI.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING CONSTRUCTION.

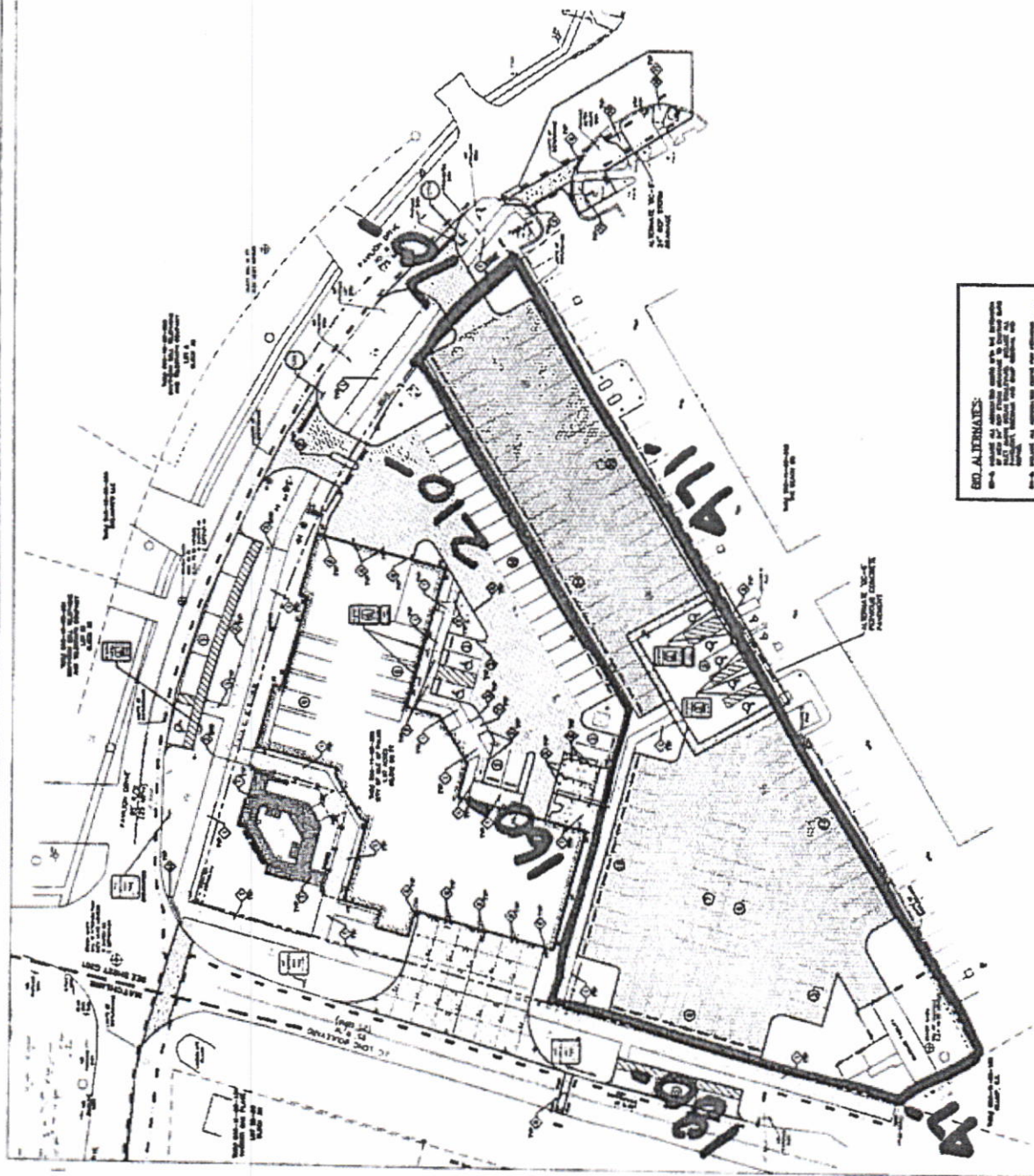
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SAFETY OF ALL WORKERS AND THE PUBLIC.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE QUALITY OF ALL CONSTRUCTION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SCHEDULE OF ALL CONSTRUCTION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BUDGET OF ALL CONSTRUCTION.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE COMMUNITY RELATIONS OF ALL CONSTRUCTION.



STATE OF SOUTH CAROLINA)
COUNTY OF CHARLESTON) SECOND AMENDMENT TO AGREEMENT
FOR USE OF MUNICIPAL PARKING LOTS

THIS SECOND AMENDMENT TO AGREEMENT ("Second Amendment") is made and entered into this 15th day of February, 2019, by and between the City of Isle of Palms, S.C. ("City") and The Palms Hotel Owners Association, Inc. d/b/a The Palms Oceanfront Hotel ("Hotel").

WHEREAS, City and Hotel entered into an Agreement for Use of Municipal Parking Lots dated March 6, 2018 ("Agreement") for Hotel's use of the City's Municipal Parking Lots for Hotel and Guest and Employee parking pursuant to certain terms and conditions; and

WHEREAS, the parties entered into a First Amendment to the Agreement on April 30, 2018;

WHEREAS, City and Hotel desire to amend the Agreement as hereinafter set forth.

THEREFORE, for and in consideration of the sum of Ten and no/100 (\$10.00) Dollars, and other good and valuable consideration in hand paid by each to the other, the parties hereto hereby agree as follows:

1. That Paragraph 2 of the Agreement, "Term of Agreement" is hereby deleted in its entirety and replaced with the following new Section 2 to state as follows:

"The term of this Agreement shall commence on the date of execution of this Agreement and end on February 28, 2020, unless terminated sooner in accordance with Paragraph 4 of this Agreement.
2. That Section (a) of Paragraph 6 of the Agreement, "Parking Rates" shall be amended to state as follows:

(a) Hotel agrees to pay to City parking fees for Hotel Guests during the seasonal period from March 5th through October 31st in accordance with the following rates:

Monday through Friday – Ten (\$10.00) Dollars per vehicle per day

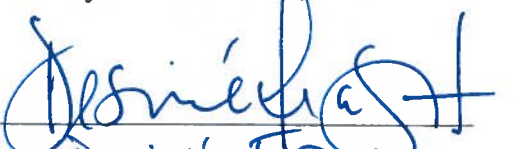
Saturdays, Sundays and legal holidays—Twelve (\$12.00) Dollars per vehicle per day.”

3. That all other terms and conditions of the Agreement which are not inconsistent herewith shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals,
by and through the undersigned officers, as of the date stated above.

WITNESS:

The City of Isle of Palms, S.C.



By: Desiree Fragoso

Title: Interim Administrator

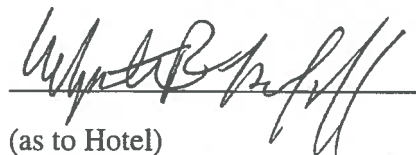


(as to City)

The Palms Hotel Owners Association, Inc.
d/b/a The Palms Oceanfront Hotel

By:  on behalf of
The Palms Hotel Owners Association, Inc.

Title: Corporate Operations Manager



(as to Hotel)

EXHIBIT I

(Attach Contract's Proposal, dated _____)



Developing a South Carolina Beachfront Community Water Level Monitoring Network

OVERVIEW

The South Carolina Beach Advocates are a non-profit organization formed by the mayors and administrators of the state's beach communities. Beach preservation and coastal community resilience in the state of South Carolina are important issues for this organization. More intense storm flooding and frequent nuisance (King tide) flooding have motivated our member communities to develop sea level rise adaptation plans. A key data gap in these studies are water level measurements along the South Carolina coast. Only two (2) NOAA tide gauges exist along our state's coast: one is inside Charleston Harbor and the other is at Springmaid Pier. This proposal seeks to address the paucity of water level data to help our communities appropriately plan for today's water level challenges and tomorrow's sea level changes.

Objective

This proposal aims to provide South Carolina's beachfront communities with high-temporal and -spatial resolution water level data at an affordable cost. The project will provide real-time water level measurements and improved local tide forecasts in the first pilot year.

Need #1: Increase the coverage of water level (tide) gauges along the S.C. coast to supplement the two NOAA gauges. Coastal managers require real-time water level data to manage their communities' flooding and drainage challenges.

Need #2: Improve coastal water level predictions, which are frequently inaccurate due to the lack of beachfront water level data.

Need #3: Provide telemetered data and tide predictions at a low cost

Need #4: Offer an easy-to-use and -understand platform for data delivery and visualization

Opportunity

Schmidt Marine Technology Partners, a program of the Schmidt Family (Google) Foundation, has provided the South Carolina Beach Advocates with a matching funds grant to cover half the cost of five (5) low-cost water level gauges to achieve the above objectives (see attached letter). The tide gauges have been developed by Dr. Brian Glazer's laboratory at the University of Hawaii (see attached flyer). Dr. Glazer is launching a new company called Hohonu, Inc. to provide these products to stakeholders like the South Carolina Beach Advocates.

Proposal

Five (5) tide gauges will be provided to the South Carolina Beach Advocates to fill the beachfront water level data gaps along our coast. The gauges will be strategically installed to service the South Carolina Beach Advocates' member communities not presently located near a NOAA tide gauge and to address the data gaps identified by Gill and Fisher (2008) (Figure 1). The beachfront communities without tide gauges at the present time will essentially "share" a Hohonu gauge that will be installed between two beachfront communities along the river/marsh system on a public dock structure. We propose to install water level sensors for most of our member beach communities not in close proximity to the existing NOAA gauges: Edisto Beach, Seabrook Island, Kiawah Island, Folly Beach, Sullivans Island, Isle of Palms, DeBordieu Colony Community Association, and Pawleys Island. The beachfront communities north of Pawley's Island in the Grand Strand are already serviced by the NOAA tide gauge at Springmaid Pier. The communities to the south of Edisto Beach are serviced by the NOAA tide gauge at Fort Pulaski, Georgia.

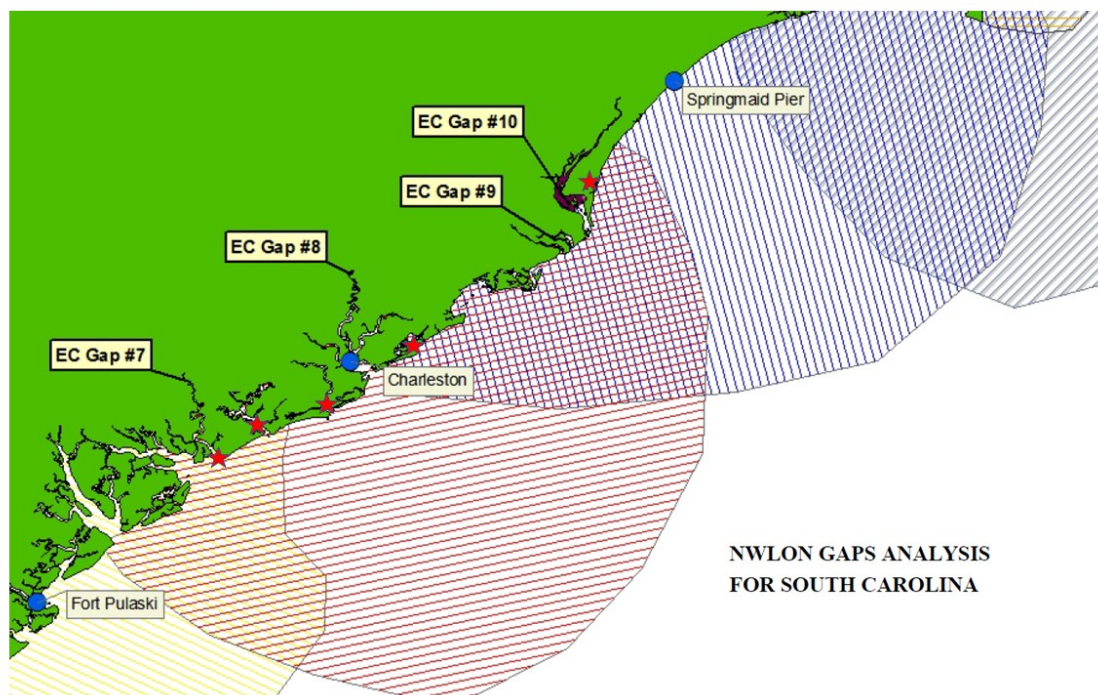


Figure 1. Map identifying gaps in the NOAA tide gauge system with red stars indicating the approximate location of the proposed Hohonu water level sensors. The existing NOAA tide gauges at Fort Pulaski (GA), Charleston Harbor, and Springmaid Pier are shown as blue dots. Modified from Gill and Fisher 2008.

In addition to the five gauges described above, the S.C. Sea Grant Consortium is interested in purchasing one gauge to install near the City of Beaufort to address EC Gap #7 (Figure 1). A draft letter is included as Appendix B describing Sea Grant's interest. Georgetown County is



also interested in purchasing four additional tide gauges to supplement water level data collected by USGS.

The cost of this one-year proposal is extremely low as compared to a typical NOAA tide gauge which costs on the order of \$125,000. NOAA gauges store the water level data within the gauge onsite; whereas, Hohonu gauges telemeter the data to the cloud via a cell phone connection. No data are stored within the units. Each Hohonu gauge costs \$2,600 (see Appendix A). With the support of the Schmidt Marine Technology Partners, the total cost to the South Carolina Beach Advocates is \$2,500 and the cost to each of the eight participating communities is \$500 (Table 1).

Installation costs are low. The gauges simply require a bracket and two bolts to attach to a stable dock structure. We will work with each community to identify an appropriate location and assist with installation. The South Carolina Beach Advocates' Executive Director, Dr. Nicole Elko, is donating survey services through her company Elko Coastal Consulting, Inc. to determine the elevation of each gauge (in NAVD88). This in-kind service amounts to roughly \$1,100 per gauge.

Table 1. Cost Breakdown

Description	Unit Cost	Quantity	Total
Total Cost for 5 Hohonu Water Level Sensors	\$2,600	5	\$13,000
Support from Schmidt Marine			\$ 6,500
Cost to South Carolina Beach Advocates			\$ 2,500
Cost to 8 Beachfront Communities	\$ 500	8	\$ 4,000

Hohonu will be transitioning the data delivery from the present platform at smartcoastlines.org (Figure 2) to a more user-friendly visualization app (Figure 3) in early 2020. Presently, distance to water measurements are sent to the internet-connected base station, which serves data through the smartcoastlines.org platform. Within the first several months of this one-year pilot, Hohonu engineers and data developers will customize the cell phone app shown in Figure 3 for this South Carolina effort.

The new product will include a map of the South Carolina coast with markers at each water level sensor (Figure 3, left). Users can click on a marker to access the real-time data and tide predictions for that location (Figure 3, right) on their cell phones. The product will be open access and available to any city staff or resident who has downloaded the app.

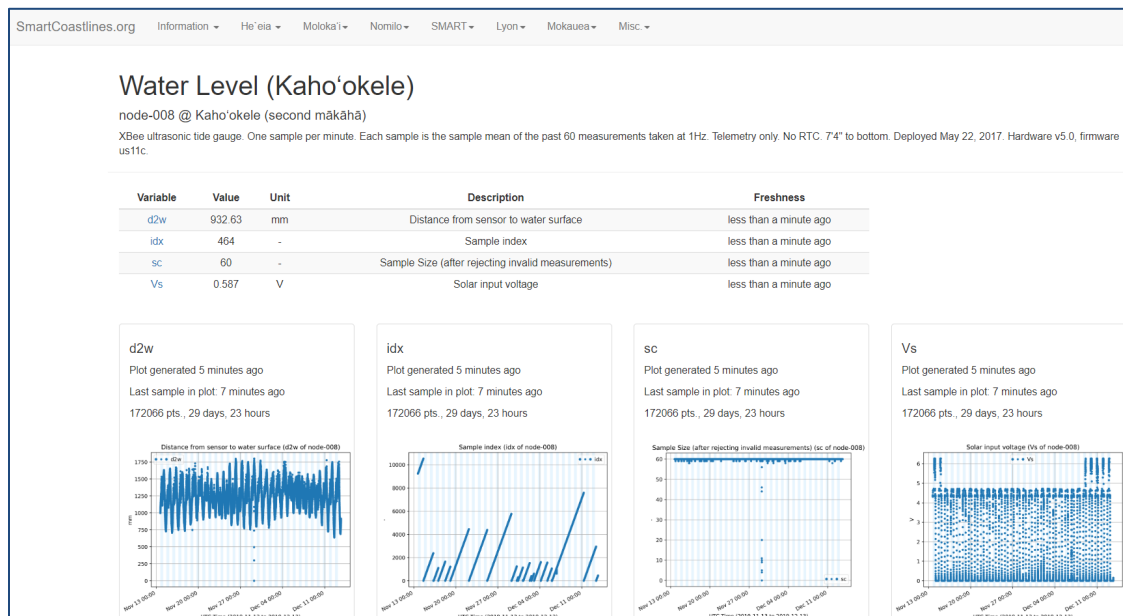


Figure 2. Present data delivery platform served at smartcoastlines.org which will be transitioned in early 2020.

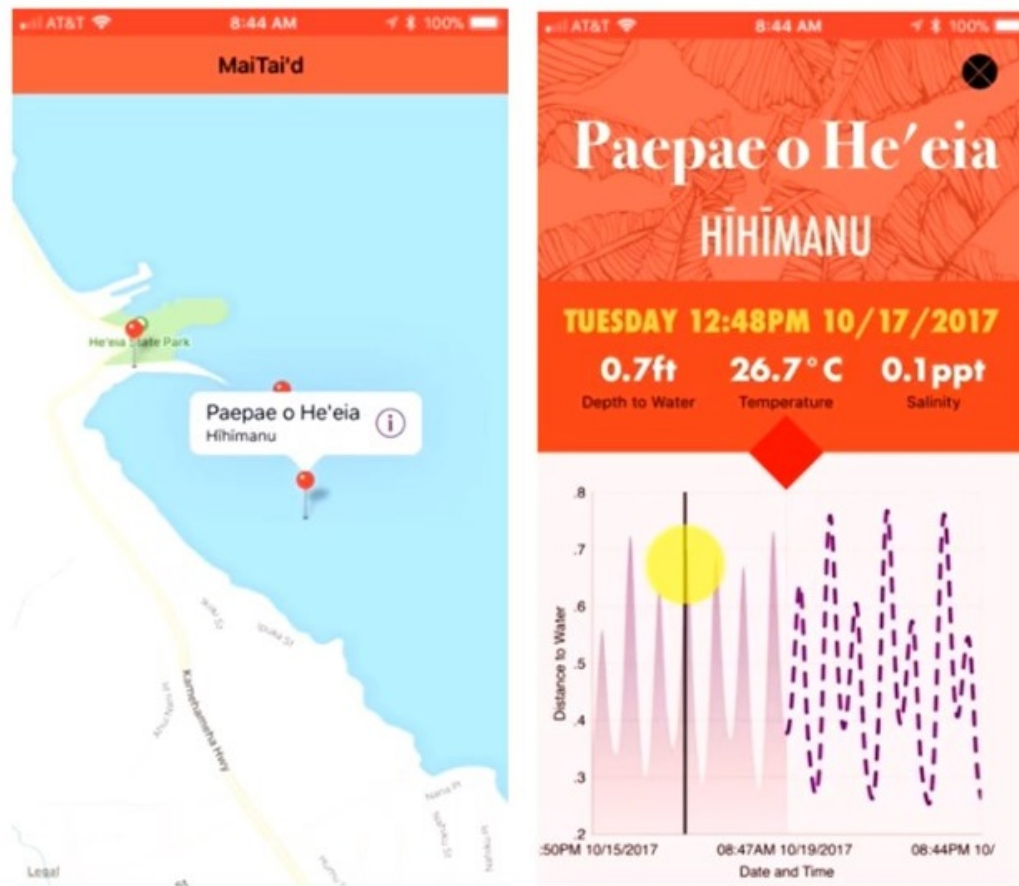


Figure 3. Open-access prototype visualization product to be viewed on users' cell phones.



Operations & Maintenance Plan

Each participating beachfront community will assign an Operations & Maintenance (O&M) point of contact (the data users) to serve on an O&M team. This team will meet monthly following installation by phone/webinar to discuss the prediction and visualization products that Hohonu sends to us (e.g., Figure 3). They will discuss user needs and desired data delivery/visualizations. We hope to collaborate with South Carolina Sea Grant to help beachfront communities understand the potential uses of the water level data beyond the real-time measurements and improved tidal predictions.

Future Costs

Hohonu is a start-up company. We are their first community clients and in exchange for low cost product and data exploration, we will serve as a pilot case to test their business model. As such, future costs are relatively unknown. Hohonu's business plan not to sell the physical gauges to future clients, rather to provide a data service package, similar to a cell phone plan, at a certain annual rate. We will be providing feedback along the way in terms of products, but also in the end, in terms of what communities might be willing to pay for such a service. After the one-year trial, we will meet to assess our interest in continuing to work with the company. There is no long-term commitment.

Reference

Gill, S.K. and Fisher, K.M., 2008. A Network Gap Analysis for the National Water Level Observation Network, NOAA Technical Memorandum NOS CO-OPS 0048, Center for Operational Oceanographic Products and Services, 59p.

Appendix A: Hohonu Tide Gauges:
A new era of low-cost water level sensors

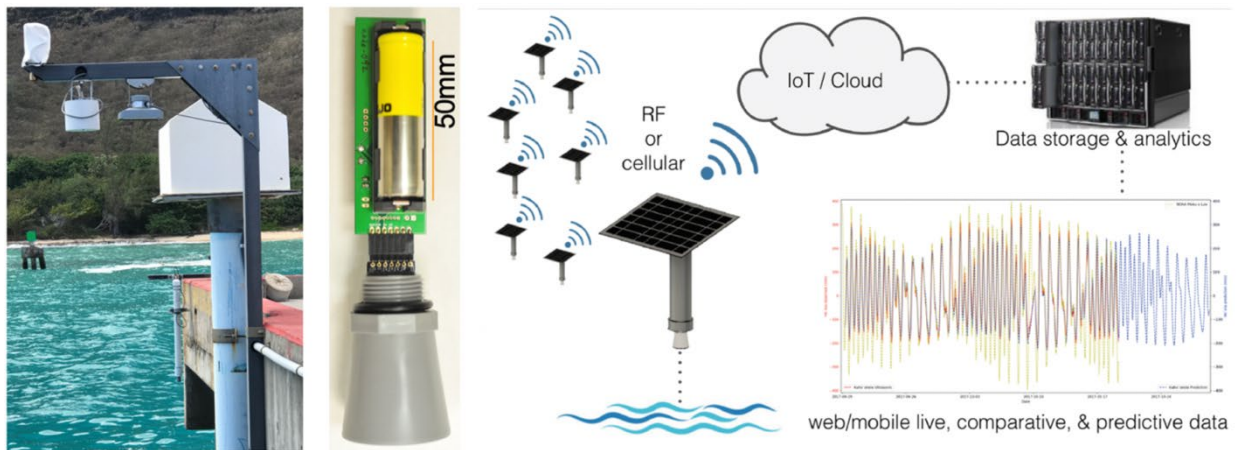
We build and deploy new technologies to help advance real-time coastal science by:

- collecting high-quality data to solve coastal science questions,
- bringing environmental science literacy to diverse audiences,
- inspiring a generation of tech-savvy marine, earth, and climate scientists,
- enabling hyper-local empirical data for hyper-local models and datums.

We achieve this by providing affordable access to hardware and cyberinfrastructure for real-time environmental observing on unprecedented spatial scales.

***Hohonu* water level:**

The *Hohonu* Tide Gauge reduces the cost and technical barriers that commonly inhibit establishing new monitoring stations in the coastal environment. It provides real-time, 1-minute average, water level measurements at $\pm 1.5\text{mm}$ accuracy.



Left panel: In the foreground is a typical NOAA Sea Level Center tide gauge installation, and in the background is a Hohonu tide gauge, during a long-term data corroboration deployment. Middle panel: Custom, low-cost, temperature-compensated, telemetered tide gauges are much easier to deploy at appropriate spatial scales to address episodic flooding, temporal lags in tides between federal gauges, etc. Right panel: Conceptual workflow of the smartcoastlines.org platform.

SMART cyberinfrastructure and analytics:

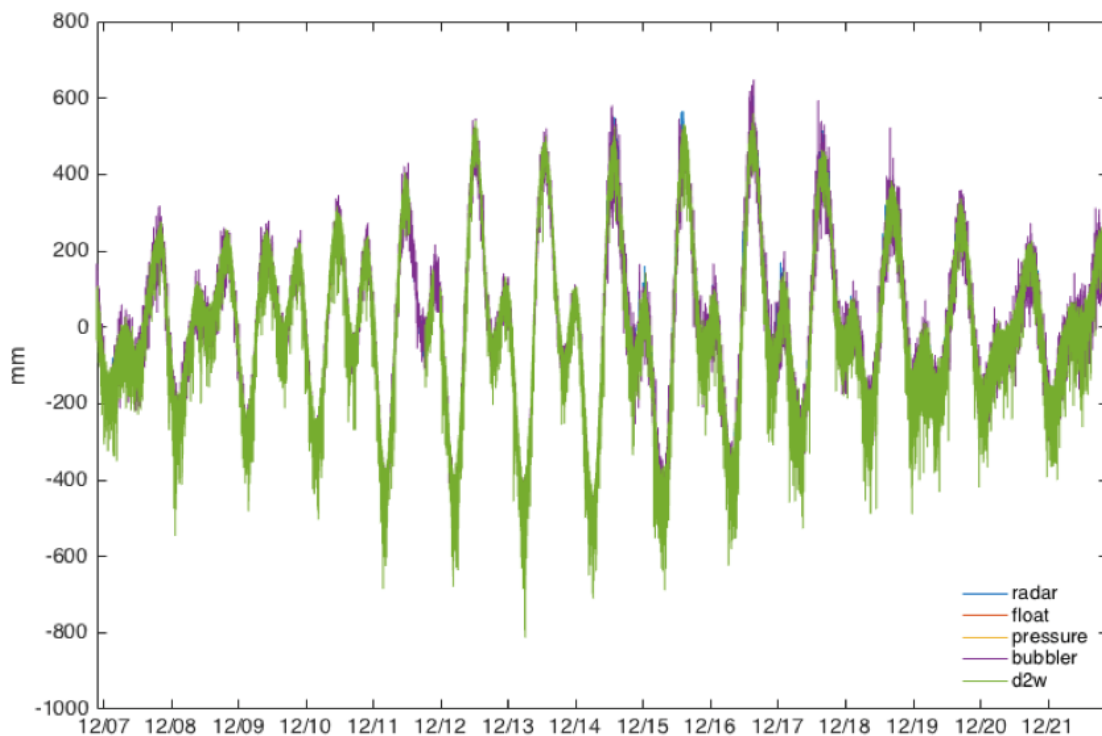
Hohonu's smartcoastlines.org has grown to support >200 sensors in five states streaming telemetered data to the web. New visualization and machine-learning predictive modeling tools, API, web, and mobile apps are all available, providing access to real-time and archived data.



Hohonu advantages:

Hohonu, Inc. is a public-private startup launched from an oceanographic research lab at the University of Hawaii. The water level sensor has been deployed in upland watershed stream locations, as well as coastal shorelines in Hawaii, California, Florida, South Carolina, and Massachusetts. It is a compact, low-cost temperature-compensated ultrasonic sensor that measures distance to water when mounted above a water surface. The solar powered sensor is fully integrated with custom data telemetry hardware and firmware, enabling real-time water level measurements streamed to a web-hosted database and mobile applications. Enabling affordable deployments of hyper-local tidal monitoring allows for unprecedented scales of tidal prediction, monitoring of episodic flooding events, and tsunami detection.

\$2,600 USD



Comparison between low-cost *Hohonu* tide gauge (green 'd2w' trace) with multiple water level sensing techniques at a NOAA UH Sea Level Center site, Makai Pier, Oahu, Hawaii. NOAA and *Hohonu* data are not significantly different.

Research and development of the smartcoastlines.org platform and custom sensors has benefitted from many funding sources and community partners.



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Appendix B

Draft letter from the South Carolina Sea Grant Consortium describing their interest in the proposal

Tide Station Seed Funding:

An opportunity has arisen to partner with the South Carolina Beach Advocates to obtain, deploy, and maintain a low-cost water level (tide) gauge in an area identified by S.C. Sea Grant Consortium (Consortium) initiatives as one of high need for this type of application in the state. SC Beach Advocates, led by Nicole Elko, has developed a project to purchase and deploy five tide gauges along the coast, each one located in a different coastal community. The project is a true multi-organizational collaboration where SC Beach Advocates will fund just under half of the \$2,600 per unit purchase cost of the five sensors, with a grant secured from Schmidt Marine Technology Partners to cover the other half of the sensor cost. With an additional contribution from Elko Coastal Consulting, Inc. to cover installation costs and surveying of each gauge, the total cost to each community is \$500 per unit. Sensors are anticipated to be deployed in Edisto Beach, Seabrook Island, Folly Beach, Isle of Palms, and Pawleys Island.

The southern portion of coastal South Carolina has a significant gap in knowledge of the flow and accumulation patterns driving coastal flooding and is completely lacking real-time data specific to the complex estuarine habitat found there. Staff members of the Consortium have been conducting concurrent projects in 2019 in Beaufort County and the City of Beaufort, SC to strengthen the resilience of those communities to climate-driven hazards and stressors. During those efforts, staff identified the need for tidal data collections in order to provide decision support to local administrators as well as to enhance data-driven modelling efforts ongoing in the area. Figure 11(f) from the National Oceanic and Atmospheric Administration's (NOAA's) report on the accuracy of their foundational VDatum product highlights the region as one where their model results in significant errors compared to other areas of the U.S. (Yang et al. 2012). VDatum is relied upon for tidal and sea level rise modeling across the coastal U.S. and these errors, especially in the estuarine reaches, result in uncertain modeling outputs and a subsequent inability to accurately project both current and future conditions.

The proposed grant would extend the sensor deployment planned by SC Beach Advocates by acquiring an additional tide gauge to be deployed in the City of Beaufort, SC. This would constitute the furthest estuarine and most southern deployment of the network of sensors. While this additional sensor would be located inland from the beachfront communities traditionally constituting the SC Beach Advocates, they have agreed to handle the purchase of and maintenance of the gauge alongside their current initiative. They have also secured an additional \$1,300 from Schmidt Marine Technology Partners to cover half the cost of the unit and Elko Coastal Consulting, Inc. will cover installation, surveying, and maintenance of the gauge. The final, one-time cost to the Consortium for the gauge will be \$1,300 and can be paid by invoice to the SC Beach Advocates.

Depending on timing of funding, installation of the gauge and data collection can begin as early as January, 2020. The data collected from the gauge will be available in real-time and SC Beach Advocates has agreed to share all data collected from the complete network of sensors with the Consortium. Data from these tide gauges will be used to strengthen forecast products produced by NOAA, improve foundational data sets necessary for high-resolution modeling, and serve as an example of the utility of these collections for coastal communities as these technologies

become more readily available. Ownership of these technologies and application of these data products at this stage will showcase the Consortium as a leader in this emerging area of expertise and allow it to demonstrate its utility in aiding communities as they adapt to changing conditions.

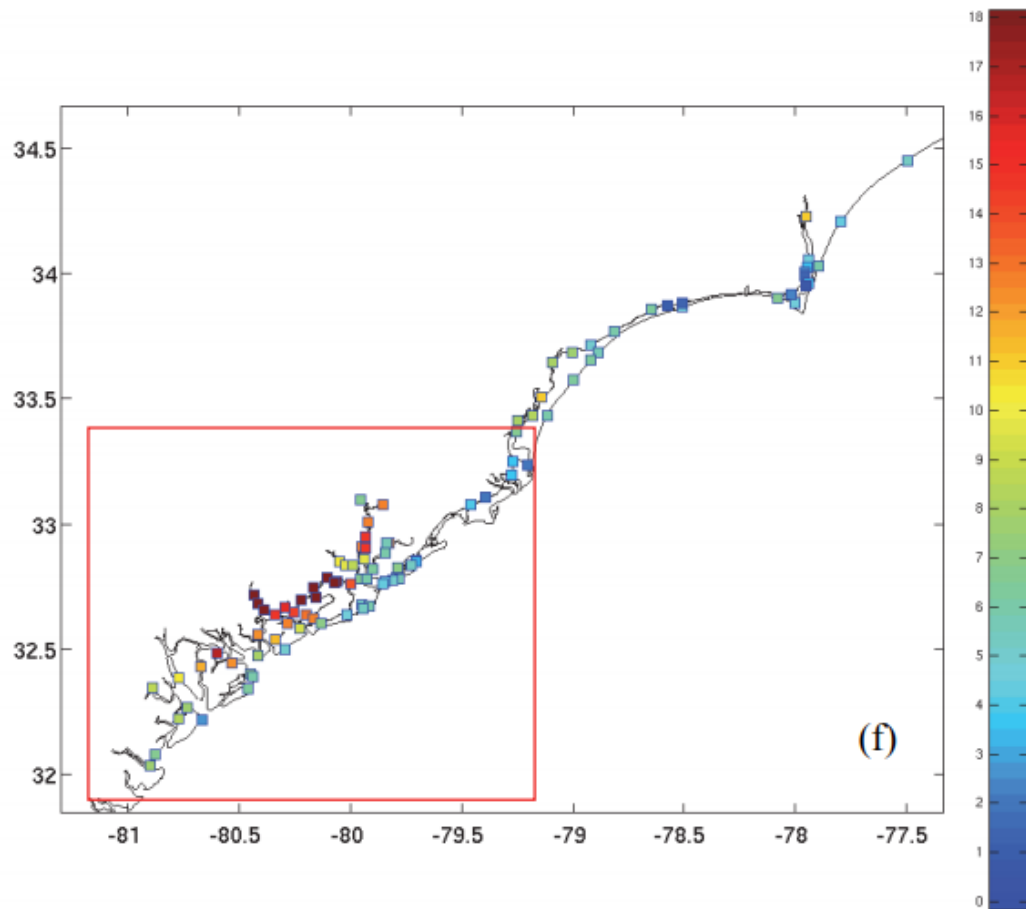


Figure 11(f). Color-scaled average model-data errors ($|\Delta_{md}|_{avg}$) for the costal South Carolina area. Color bar is in cm. Red lines delineate a region in which model-data discrepancy is abnormally large compared with the other regions.

References:

Yang, Z., Myers, E.P., Jeong, I., & White, S.A. (2012). VDatum for Coastal Waters from the Florida Shelf to the South Atlantic Bight: Tidal Datums, Marine Grids, and Sea Surface Topography. NOAA Technical Memorandum NOS CS 27. 97 pp.

[illegible]

	A	B	C	D	E	F	G	H	I	L	N	O
1	City of Isle of Palms											
2	FY21 Capital and Special Projects > \$5000 AND Debt Service Plan - Spread by Funding Source											
3												
4				Proposed Funding Source								
5		FY21		General	Capital	Muni Acc	Hospitality	State Acc	Beach Maint/	Aisle of	Marina	Total
6		Department		Fund	Projects	Tax	Tax	Tax	Restoration/	Palms	Fund	Budget
7		Requests							Preservation	Fund/Rec	Fund	All
8										Build Fund		Funds
151	Beach Restoration and Monitoring											
152												
153	<i>Special Projects & Ongoing Building Maintenance</i>											
154	Post project monitoring related to 2018 offshore project	24,142							24,142			24,142
155	Ongoing monitoring of entire island shoreline	35,000							35,000			35,000
156	Feasibility study - Breach Inlet project	35,000							35,000			35,000
157	Post storm sand scraping/emergency berm repair (only if needed)	250,000							250,000			250,000
158												
160	Grand Total Beach Restoration and Monitoring	344,142		-	-	-	-	-	344,142	-	-	344,142
161												
162	Isle of Palms Marina											
163												
164	<i>Capital Purchases</i>											
165	Engineering and permitting for Marina dock improvements according to ATM Concept 1.	147,000									147,000	147,000
166												
167												
168	<i>Special Projects & Ongoing Building Maintenance</i>											
169	<i>Marina maintenance contingency for common areas not covered by leases. Calculated as 1% of insured boat ramp, bulkhead and dock value.</i>	51,003									51,003	51,003
170												
171	subtotal Capital & Special Projects	198,003		-	-	-	-	-	-	-	198,003	198,003
172												
173	<i>Assign Fund Balance for Future Expenditures</i>											
174		-										
175												
176	Grand Total Marina	198,003		-	-	-	-	-	-	-	198,003	198,003

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