



TOWN OF PALM BEACH

Town Manager's Office

**TENTATIVE-
SUBJECT TO
REVISION**

SHORE PROTECTION BOARD MEETING

AGENDA

THURSDAY, APRIL 25, 2019

9:00 AM

**TOWN COUNCIL CHAMBERS
360 SOUTH COUNTY ROAD**

WELCOME!

The progress of this meeting may be monitored by visiting the Town's website (www.townofpalmbeach.com) and selecting "Live Meeting Audio" under the "Your Government" tab. If you have questions regarding that feature, please contact the Office of Information Systems (561) 227-6315. The audio recording of the meeting will appear within 24 hours after the conclusion of the meeting under "Agendas, Minutes, and Audio."

I. CALL TO ORDER

II. ROLL CALL

E. Llwyd Ecclestone, Chair
Lewis Katz, Vice-Chair
Kane Baker, Shore Protection Board Member
Melissa Cerialle, Shore Protection Board Member
James C. Gavigan, Shore Protection Board Member
Reuben B. Johnson, III, Shore Protection Board Member
Harvey Kinzelberg, Shore Protection Board Member
Stephen Jacoby, Shore Protection Board Alternate Member
Warren Belmar, Shore Protection Board Alternate Member

III. PLEDGE OF ALLEGIANCE

IV. APPROVAL OF AGENDA

V. APPROVAL OF THE MINUTES OF THE JANUARY 24, 2019 MEETING

VI. APPROVAL OF THE MINUTES OF THE MARCH 21, 2019 WORKSHOP

VII. COMMUNICATIONS FROM SHORE PROTECTION BOARD MEMBERS

VIII. COMMUNICATIONS FROM CITIZENS - 3 MINUTE LIMIT PLEASE

IX. RECOMMENDATION TO TOWN COUNCIL REGARDING THE PROPOSED FY 2020
COASTAL MANAGEMENT PROGRAM BUDGET
[Robert Weber, Coastal Program Manager]

X. GOALS AND OBJECTIVES CONTINUED DISCUSSION
[Patricia Strayer, P.E., Town Engineer, and Robert Weber, Coastal Program Manager]

XI. CURRENT SHORELINE CONDITIONS
[Robert Weber, Coastal Program Manager]

XII. COASTAL PROJECTS UPDATE
[Robert Weber, Coastal Program Manager]

- Lake Worth Inlet Maintenance Dredging and Sand Forepassing
- The Breakers/Clarke Avenue/Mid-Town Technical Advisory Committee Update
- 2019/2020 Mid-Town Beach Nourishment
- 2019/2020 Phipps Ocean Park Beach Nourishment
- Reach 8

XIII. SCHEDULING OF NEXT SPB MEETINGS
[Patricia Strayer, P.E., Town Engineer]

- Discussion to reformat future SPB meeting agendas
- Thursday, November 21, 2019
 - o Annual Shore Protection Board Report to Town Council

XIV. ANY OTHER MATTERS

XV. ADJOURNMENT

Note: Disabled persons who need an accommodation in order to participate in the Town Council Meeting are requested to contact the Town Manager's Office at 838-5410 or through the Florida Relay Service by dialing 1-800-955-8770 for voice callers or 1-800-955-8771 for TDD callers, at least two (2) working days before this meeting.



TOWN OF PALM BEACH

Town Manager's Office

MINUTES OF THE SHORE PROTECTION BOARD MEETING HELD ON THURSDAY, JANUARY 24, 2019

I. **CALL TO ORDER**

The Shore Protection Board meeting was called to order on Thursday, January 24, 2019, at 9:03 a.m. in the Town Council Chambers.

II. **ROLL CALL**

On roll call, all of the board members and alternate board members were present with the exception of Lewis Katz, Vice-Chair, who had an excused absence.

III. **PLEDGE OF ALLEGIANCE**

Chair Ecclestone led the Pledge of Allegiance.

IV. **APPROVAL OF AGENDA**

Communications from Citizens, Item No. X., was moved to the end of the agenda so that presentations from consultants could be heard as soon as possible.

Motion was made by Board Member Baker to approve agenda, and was seconded by Board Member Kinzelberg. The motion carried unanimously.

V. **SWEARING IN OF APPOINTED MEMBERS**

Swearing in of appointed members was conducted prior to meeting by Pat Gayle-Gordon, Deputy Town Clerk.

VI. **ELECTION OF CHAIR FOR 2019 SHORE PROTECTION BOARD**

Chair Ecclestone was nominated by Board Member Kinzelberg as Chair for 2019, seconded by Board Member Jacoby. No other nominations were seconded. Chair Ecclestone was re-elected as Shore Protection Board Chair for 2019.

VII. **ELECTION OF VICE-CHAIR FOR 2019 SHORE PROTECTION BOARD**

Chair Ecclestone passed the gavel to Board Member Johnson, in Vice-Chair Katz' absence, and nominated Board Member Kinzelberg for Vice-Chair. The motion was not seconded.

Board Member Johnson returned the gavel to Chair Ecclestone and nominated Vice-Chair Katz as Vice-

Chair for 2019, seconded by Board Member Gavigan. Vice-Chair Katz was re-elected as Shore Protection Board Vice-Chair for 2019.

VIII. APPROVAL OF THE MINUTES OF THE NOVEMBER 29, 2018 MEETING

Chair Ecclestone called a vote to approve the November 29, 2018 minutes with one noted change to remove “alternate” in front of a reference to Board Member Baker. The vote carried unanimously.

IX. COMMUNICATIONS FROM SHORE PROTECTION BOARD MEMBERS

Alternate Board Member Lorentzen thanked Applied Technology Management (ATM) and Woods Hole Group (WHG) for great presentations. Lorentzen read in ATM’s study that there is 131 cubic yards per year that would be placed on an average annual basis to maintain the current volume of sand from the Town’s boundaries. Mr. Lorentzen would like to know what that cost currently is and what it might be in the future and maybe staff could present to the Shore Protection Board. Director of Public Works Brazil replied that staff does not have a cost, as the program has elements in it, but the average is \$10 million a year. Director Brazil added that there is a lot more in there than just sand.

Alternate Board Member Jacoby and Board Member Kinzelberg thanked ATM and WHG for their presentations.

Board Member Johnson indicated that he is looking forward to the workshop and would like the Board to know more about the groins. Board Member Ceriale added she is also looking forward to the workshop.

Board Member Baker thanked WHG for their research. The Shore Protection Board needs to identify what to do as a solution, what’s next.

Alternate Board Member Jacoby asked that the Shore Protection Board have a copy WHG study when finalized.

X. COMMUNICATIONS FROM CITIZENS - 3 MINUTE LIMIT PLEASE

Tom Warnke, Surfrider Foundation, indicated he was happy to be a part of the process as a volunteer and has perspective and impressions to share with the Shore Protection Board and comments to The Breakers and Clarke Beach Project. Mr. Warnke shared that 22 years ago he was the Florida founder of the 1st chapter of the Surf Rider Foundation in Palm Beach County, now there are 12 chapters in the State. In 1996 when breakwaters at Ocean Reef Park were proposed, after the Foundation’s input, the State decided not to construct the offshore breakwaters. About 10 years ago, the Reach 8 challenge resulted in the Foundation preventing the use of very poor quality of material throughout the Reach 8 area, but it cost the Town \$3 million in court costs. Since then, all parties are at the table in advance, including the Foundation’s participation in the Beach Management Agreement adoption. Recently, a few years ago, Palm Beach County proposed breakwaters at the north end of Singer Island. The Foundation challenged the plan and Palm Beach County decided to say “no” to large offshore breakwaters. The Foundation has not changed their opposition to large offshore breakwaters. As far as The Breakers/Clarke Beach is concerned, the Foundation is participating at each step as significant stake holders. The process is an open process with direct input and involvement in person, including DEP decision maker, Bob Bradley. The Foundation was expecting by now that the modeling would have been completed. Mike Jenkins at ATM is not to be blamed for the length of time this has taken. The DEP Technical Advisory Committee are all very high quality engineers, include Bob Bradley, and they have introduced alternatives that were already taken off the table including large expensive breakwaters. The Foundation opposes those. The most effective permissible alternatives for The Breakers/Clarke

1 Beach area include moving The Breakers rock piles over 50 feet to the east and adding groins at Estee
2 Lauder and 600 feet south, which connects up to Mid-Town and that is one of the primary plans and
3 makes sense. Whether a project gets permitted is challenged in court. Large offshore breakwaters should
4 be off the table.

5
6 Diane Buhler, Friends of Palm Beach, shared that over 30,000 pounds of trash was removed in 2018,
7 washing in mostly foreign household waste and mostly plastic. As of today they are out there collecting
8 40-150 pounds per day.
9

10 **XI. CURRENT SHORELINE CONDITIONS**

11 [Robert Weber, Coastal Program Manager]
12

13 Coastal Program Manager Weber provided a presentation of the shoreline from two (2) days prior to the
14 Shore Protection Board meeting.
15

16 **XII. 2018 TOWNWIDE SEDIMENT BUDGET REVIEW AND EROSION RATES DISCUSSION**

17 **[Item heard following Item No. XIV.]**

18 [Robert Weber, Coastal Program Manager, and Michael Jenkins, Ph.D., P.E., Coastal Engineering
19 Principal, Applied Technology & Management, Inc.]
20

21 Coastal Program Manager Weber explained that the Town has produced a Sediment Budget Report
22 since 2007 as a planning tool. Applied Technology & Management's (ATM) presentation is a look at
23 where the sand is moving through the system during the past year. The Sediment Budget is now a
24 requirement with the Beach Management Agreement.
25

26 Michael Jenkins of ATM presented a summary of the 2018 Sediment Budget.
27

28 Board Member Johnson asked that last year 2 million cubic yards were lost, does it come back into the
29 system or is it gone. Dr. Jenkins replied some of it does return but some of it gets transported to the
30 south and it is not to be seen again in the original placed location. Alternate Board Member Lorentzen
31 asked about the limits of the surveys. Dr. Jenkins replied that they survey out to the engineering Depth
32 of Closure of approximately -26 feet.
33

34 **XIII. THE BREAKERS/CLARKE AVENUE/MID-TOWN TECHNICAL ADVISORY**
35 **COMMITTEE RESULTS**

36 [Michael Jenkins, Ph.D., P.E., Coastal Engineering Principal, Applied Technology & Management,
37 Inc.]
38

39 Michael Jenkins of ATM presented an update of the work performed by the Technical Advisory
40 Committee (TAC).
41

42 Board Member Kinzelberg inquired that The Breakers seems to have a huge beach, and seems to have
43 renourished itself, how does that happen and what conditions created that, and how can we trap those
44 conditions in a new system. Director of Public Works Brazil replied that when the Mid-Town sand first
45 eroded, it went offshore and south as the storm pushed it. The sand came right back up on the beach.
46 Director Brazil said that the Town had hoped to be able to build the solution when the next round of
47 sand is placed. However, the next round of sand got accelerated because of federal participation and
48 there is a deadline. Director Brazil continued that, this time next year, they will be placing sand and the
49 Town may not have a permit to get the structures constructed at the same time as getting the sand.
50

51 Board Member Ceriale shared when the last time there was a sand nourishment, the sand was gone
52 within 9 months, placing the sand and then doing groins afterwards, indicating the beach might not be
53 lucky enough to hold the sand. Director Brazil replied that things were working against us the last time,

1 it was very long since last nourishment and there was nothing to hold it there, there was bad weather
2 after placing the sand and it may not work out well unless the Town has a normal year.
3

4 Alternate Board Member Jacoby asked was a discussion of existing groins at The Breakers being
5 modified, is that still the plan. Director Brazil said there is no definitive answer, it is being worked on.
6 Dr. Jenkins said that there are alternatives being considered that includes both modifying existing
7 structures and adding new structures.
8

9 Board Member Gavigan asked what the best time to add sand again is and what date is being aimed to
10 get the sand in at Mid-Town. Director Brazil replied that the schedule for Mid-Town sand placement is
11 fixed because the U.S. Army Corps of Engineers has a deadline.
12

13 Board Member Ceriale asked if it were to stop right now, can something be implemented through
14 permitting to get things in a position before placing sand. Director Brazil replied that giving the fact that
15 the FDEP is the permitting agency, if a permit application is submitted, the engineers at FDEP would
16 probably make the Town go through the TAC. Ceriale inquired as to what is the next step going through
17 the TAC, at least enough to get FDEP buy-in, and is it possible to discuss scope creep. Director Brazil
18 said that Town staff is trying to get a handle of the scope and trying to do things concurrently so that
19 once the validation and the buy-in occurs, the Town is best prepared to implement.
20

21 Board Member Baker asked what is the current situation between The Breakers and Clarke Avenue.
22 Dr. Jenkins responded that there is a beach there and it looks good but it is not a permit situation. Long
23 term, the dune has been expanding on Clarke Avenue. Dr. Jenkins shared that the dune is in good shape.
24 Baker said that sand pumping is the most important thing, whether the structures are removed or to add
25 them, it is important to placing. Dr. Jenkins responded that the Town's program starts with sand,
26 structures do not make sand, they redistribute sand. The sand needs to balance first and then structures
27 are strategic tools to redistribute the sand as necessary.
28

29 Alternate Board Member Lorentzen asked if the deadline is April 2020 for federal funding for
30 renourishment. Coastal Program Manager Weber responded that the U.S. Army Corps of Engineers has
31 a mandate to have all their construction projects included within the U.S. Congress Supplemental Bill
32 completed by August 2020. Therefore, the Town needs to be completed by May 1, 2020 as that is when
33 turtle nesting begins statewide.
34

35 Lorentzen also inquired if the Corps wants the sand to stay where they plan to place it, would they work
36 with the Town and grant an extension. Coastal Manager Weber replied that the design features are being
37 worked on now as well as a long term agreement. No such extension will be granted.
38

39 **XIV. PRESENTATION OF COASTAL VULNERABILITY STUDY [9:15 a.m. TIME CERTAIN]**
40 [Robert P. Hamilton, President, Woods Hall Group, Inc.]
41

42 Coastal Program Manager Weber shared that Woods Hall Group (WHG) has been performing work for
43 the Town of Palm Beach since the 1990's. Recently, WHG performed the long-term planning peer
44 review for this current Town Council adopted 10-year plan. An item included in the 10-year plan is to
45 conduct a Coastal Vulnerability Assessment which was recommended by the Shore Protection Board
46 and approved by Town Council. WHG will present their results and solicit input from both the public
47 and the Shore Protection Board. WHG will compile their report in the month of February and provide
48 that information to the Town.
49

50 Coastal Manager Weber introduced Robert Hamilton and Kirk Bosma of WHG who then presented to
51 the Shore Protection Board.
52
53

1 Chair Ecclestone inquired if the work is based on potential hurricanes. WHG responded, not necessarily,
2 but based on things that have happened, the work included a suite of storms including tropical cyclones.
3 Ecclestone asked how far back does WHG go with storms that hit Palm Beach and what is the history.
4 WHG replied that they go back to 1920's when data is available and include any weather maps that
5 exist. Ecclestone asked how important rain is. WHG responded that rain is important but is not based in
6 this model, it's a coastal based model looking at surface water, which does not include rain.
7

8 Board Member Melissa Ceriale thanked WHG for a detailed and comprehensive report for the Town.
9 Ceriale thanked staff for enabling and pushing forward and indicated the Shore Protection Board now
10 has a roadmap to look at and to project forward to make some conversation as an advisory board for
11 Town Council for possible steps to take to secure the Town in the future. Ceriale indicated that there
12 was a lot of information and a lot to discuss.
13

14 Board Member Kinzelberg inquired, since the flooding models show most of the flooding coming from
15 the Lake Worth Lagoon on the west side of the island, have there been models to block the inlet if storms
16 are coming from the east. WHG replied not in Palm Beach. They are looking at existing conditions but
17 it can be added to the model. Kinzelberg continued that since the Town is renovating the Town docks,
18 does the model suggest to the Town how to construct new docks in the area and structures around the
19 docks and along the park to reduce potential flooding. WHG indicated not at this point, it is information
20 that can be brought in for an implementation plan. Director Brazil replied what is going to be presented
21 to Town Council is a floating docks system which will adjust itself, confined budget gets docks in place
22 first in order to get some revenue and to replace the seawall at a later date.
23

24 Board Member Johnson complimented WHG on their analysis. Johnson asked, within the list of assets,
25 if WHG is going to consider what effects the storms will have on the undergrounding electrical system
26 once it is completed. Director Brazil replied that undergrounding is not in assets provided to WHG, it
27 is still in the building phase so there was not much undergrounding information two (2) years ago when
28 WHG was designing the model. Director Brazil added that if the island was to flood, FPL would shut
29 down their system. When water recedes, FPL would turn the system back on. Transformers are being
30 put in at proper elevations. Engineers are looking at the vulnerability of the electrical systems as they
31 are being put in. The above grade transformers and switches are the structures that would be vulnerable
32 due to flooding. Johnson asked if WHG had experience with insurance companies using similar model
33 results for flooding. WHG has had conversations with insurance companies, but they have not shown
34 much interest as they can only do insurance on what has happened.
35

36 Alternate Board Member Lorentzen had a question regarding drainage, is it an issue to drain the island
37 after an event, does the report have any suggestions for drainage locations and places for filling in spots,
38 and does it block some of the drainage. WHG replied that drainage is something to consider as keeping
39 water out also may cause water to stay in. The model has the capability to stop water coming in and also
40 where it may go out and recede. The models do not have a drainage network. The model does not have
41 pumps in it. Lorentzen indicated it would be a good idea to identify places with pump stations with
42 alternative energy source that can be stationed as it is important to keep the water out. Director Brazil
43 indicated that does exist, and there is an extensive drainage system.
44

45 Alternate Board Member Belmar thanked WHG for their presentation. Belmar indicated that Town
46 Council can make their decisions based on the information provided by WHG. Belmar added that the
47 greatest vulnerability from the probability table presented is the sewer system dangers, does the
48 vulnerability assessment include drinking water, as there was no reference to drinking water. WHG
49 explained that example assets were included in the presentation but there are thousands of assets that
50 were included in the assessment. Director Brazil informed that the City of West Palm Beach owns the
51 drinking water system and there are only two (2) re-pump facilities on the island, the vulnerability would
52 be at the City's water plant and there hasn't been a problem during storm events. Belmar thought there
53 was a concern for aging of the underground drinking water system, does that need to be looked at.

1 Director Brazil replied that it is a closed system. Belmar questioned what input would WHG have to
2 finalize the long term program. Director Brazil suggested that staff put together a long term program to
3 put in the Shore Protection Board budget.
4

5 Board Member Ceriale inquired if there are any impacts on West Palm Beach's side of the bridges
6 within the study. WHG replied that bridges are in the model.
7

8 **XV. COASTAL PROJECTS UPDATE**

9 [Robert Weber, Coastal Program Manager]
10

11 Coastal Program Manager Robert Weber shared that the presentation today from Michael Jenkins,
12 Applied Technology & Management, Inc., will also be presented for the Annual Beach Management
13 Agreement Meeting to be held in Town Council Chambers on February 28, 2019 at 10:00 a.m.
14

15 Weber shared that the project has been deferred until the end of the calendar year due to surveys
16 conducted by the U.S. Army Corps of Engineers indicating that navigation is not a present concern.
17 Sand Forepassing will also be deferred.
18

19 Weber said that both the Mid-Town and Phipps projects area on schedule for a November 1, 2019
20 through May 1, 2020 construction window.
21

22 Weber relayed that a dune planting effort was to be considered by Town Council at the February 14,
23 2019 meeting. The plantings, if approved, would be in place prior to March 1, 2019.
24

25 Weber shared that before the holidays, the U.S. Army Corps of Engineers (Corps) received comments
26 from the U.S. Fish and Wildlife Service. The only comments the Corps has left to receive is from the
27 National Marine and Fisheries Service (NMFS). The NMFS is currently shut down, once they are back
28 up and running, the Town expects action to be taken. An expectation of the Record of Decision is likely
29 sometime in April.
30

31 Weber said that the federal permit was received by the Town on December 6, 2018 and is waiting for
32 additional community input.
33

34 Board Member Ceriale asked that with the permit in hand and in anticipation what the TAC will be
35 proposing to the Shore Protection Board, is there rehabilitation work that can start so when the sand is
36 placed, there is not a reduced potential for loss. Coastal Manager Weber indicated yes, however a lot of
37 coordination needs to occur with the private properties.
38

39 Board Member Ceriale said the Town has the permit for groin rehabilitation, now there is a need to fund
40 it and decide the timing. Ceriale said the groin rehabilitation is a key element in holding the sand once
41 the Town puts sand on the beach. Director Brazil replied that the new groins are not designed to do
42 anything more than the exiting groins today. The Shore Protection Board can make recommendation to
43 the Town Council to make the decision now about funding and proceed with groin program. Staff is to
44 reintroduce the groin program with Town Council during the budget process. Director Brazil added that
45 money in the program today is not sufficient to start the work.
46

47 Board Member Ceriale continued that if we were able to move forward with groin rehabilitation, will
48 this in fact assist the maintenance of the new sand placed. Director Brazil responded that the result is
49 relatively small and that the Town can rehabilitate the existing Mid-Town groins as sand moves north
50 to south. Ceriale asked what the cost/benefit ratio is. Director Brazil replied that it is hard to give an
51 accurate cost. Ceriale said she would hate to see the Town go through the cost, expense, and interruption
52 of doing the sand project and not have in place what is needed to go forward.
53

1 Board Member Baker said that at Reach 2 and 6 there is no point removing or adding groins as the need
2 is to focus on a closer view of which groins are needed and which aren't. If the Town is spending money
3 on groins, they need to be in places where they are needed. Director Brazil said that the groins cannot
4 do anything more than what they do now. If nothing is done, they are going to continue to deteriorate
5 and will not do what they are supposed to be doing.
6

7 Board Member Gavigan asked does the permit define which groins that have to be rehabilitated. Director
8 Brazil replied yes.
9

10 Alternate Board Member Belmar said it is in the budget process, we were authorized to seek a permit,
11 what was full scope of the authorization that Town Council gave to start this whole process. Is it whether
12 or when to go forward or new approval to start process all over again now that we have permit. Director
13 Brazil replied that the direction from Town Council was for staff to get the permit. This was done.
14 Belmar continued that the Town never approved the groin project as principle as an adopted resolution
15 and appropriated money for it anyway.
16

17 Board Member Baker said he is not in favor of pulling out groins.
18

19 Board Member Gavigan said there is a study that was done defined which groins will be modified and
20 which will not be touched. Director Brazil replied that engineering has been done and have permits to
21 do it, are we going to do work on private properties. If so, what is the funding, the total cost, and does
22 the Town want to pay the bill. The engineering is done and paid for. We are down to whether or not the
23 Town is going to do it.
24

25 Board Member Ceriale asked we have groins that were permitted, now the question is to recommend to
26 Town Council to move forward, are we recommending that we are doing every single one of the groins
27 or what is important for the system to work, not every groin in Town.
28

29 Board Member Kinzelberg said they are dangerous. Board Member Baker said it is private property it
30 is not the Town's job.
31

32 Alternate Board Member Belmar asked, the question is if the Town is liable if on private property. Board
33 Member Baker responded that he believes homeowners should be liable. Belmar said Town Council has
34 to take into consideration these issues.
35

36 Chair Ecclestone replied to send it to the Town Council and the Shore Protection Board would like to
37 proceed with it, and have a conversation with the Town Council and tell Shore Protection Board what
38 they want.
39

40 Belmar said the Town Council should have a legal opinion on the scope of the permit.
41

42 Board Member Kinzelberg asked Coastal Manager Weber, do you have a plan that shows the
43 optimization on the king pile groins that are going in that are significantly less than the current number
44 of eroded groins that are out there now, which ones get removed. Weber responded that there was an
45 implementation plan put together by CB&I, 75 of the groins needed action to some degree, 34 would
46 be removed, and 41 of those groins would be removed and replaced. Prioritization was changed to be
47 reflective of the Mid-Town area first to address concerns for how long the nourishment project lasts.
48

49 **Motion was made by Board Member Johnson for the Shore Protection Board to urge Town**
50 **Council to take action to implement and fund the Groin Rehabilitation Program. The motion was**
51 **seconded by Board Member Baker. The motion carried unanimously.**
52
53

Coastal Program Manager Weber explained the GANTT chart that was provided in the backup and asked if there was any input on the periodic delivery of this document to Board Members between Shore Protection Board meetings. No comments from the Shore Protection Board were provided. No discussion occurred.

XVI. SCHEDULING OF NEXT SHORE PROTECTION BOARD MEETINGS [Item heard prior to Item No. XIV.]

[H. Paul Brazil, P.E., Director of Public Works]

- SHORE PROTECTION BOARD Workshop, March 21, 2019 will be an open conversation with staff providing some historical information.
- Regular SHORE PROTECTION BOARD Meeting, April 25, 2019
 - o FY 2020 Coastal Management Program Budget

Chair Eccelstone inquired if Bob Hamilton will attend the workshop. Director Brazil indicated that could be done if necessary.

Alternate Board Member Belmar suggested scheduling a meeting on the day of the workshop, March 21, 2019, and not wait until April as presentation to Town Council will be before April. Chair Eccelstone indicated that the board would adhere to the schedule as planned.

XVII. ANY OTHER MATTERS

XVIII. ADJOURNMENT

There being no further business, the Shore Protection Board of January 24, 2019, was adjourned at 12:35 p.m.

APPROVED:

E. Llwyd Ecclestone
Chairman

*Meeting audio is located at:
<https://www.townofpalmbeach.com/853/Meeting-Audio>*



TOWN OF PALM BEACH

Town Manager's Office

MINUTES OF THE SHORE PROTECTION BOARD WORKSHOP HELD ON THURSDAY, MARCH 21, 2019

I. CALL TO ORDER

The Shore Protection Board meeting was called to order on Thursday, March 21, 2019, at 9:05 a.m. in the Town Council Chambers.

II. ROLL CALL

On roll call, all of the board members and alternate board members were present with the exception of E. Llwyd Ecclestone, Chair, who arrived at 9:10 a.m.

III. PLEDGE OF ALLEGIANCE

Vice Chair Katz led the Pledge of Allegiance.

IV. COMMUNICATIONS FROM SHORE PROTECTION BOARD MEMBERS

Board Member Ceriale shared that she is excited for the workshop. Board Member Baker expressed that he is happy to be at the workshop. Vice Chair Katz wanted to thank everyone for their support over the last 10 years for the position of Vice Chair. He shared that his trust is with the staff and they deserve respect for their hard work.

Chair Ecclestone acknowledged that he has received Alternate Board Member Lorentzen's letter of resignation as he will be leaving the Board to attend graduate school. Chair Ecclestone thanked Lorentzen for his service on the Board.

Alternate Board Member Lorentzen shared that he enjoyed his service on the Board, and thanked Town staff. Lorentzen also wanted to share that the current conditions on rougher days south of the Gulf Stream groin attention is still needed, on rough days water reaches the seawall.

Alternate Board Member Jacoby is looking forward to getting into the issues and moving forward. Alternate Board Member Belmar shared that he is disappointed at the turn out of Town residents at the workshop. Board Member Kinzelberg stated that there has been a lot of erosion due to the weather.

1 **V. COMMUNICATIONS FROM CITIZENS - 3 MINUTE LIMIT PLEASE**

2
3 No communication from Citizens.
4

5 **VI. REVIEW OF THE SUNSHINE LAW AND PUBLIC RECORDS LAW**

6 [John Randolph, Town Attorney]
7

8 John Randolph, Town Attorney, conducted an annual briefing on the Sunshine Law and
9 Public Records Law.
10

11 **VII. BOARD DISCUSSION – EXECUTIVE SESSION**

12 [Patricia Strayer, P.E., Town Engineer]
13

14 Coastal Program Manager Robert Weber provided an update of the Reach 8 EIS and
15 suggested that a motion from the Shore Protection Board be considered to get Board's
16 recommendation to go to Town Council to resume the State permitting process and hire a
17 consultant.
18

19 **Motion was made by Vice Chair Katz and seconded by Board Member Kinzelberg.**
20 **The motion carried unanimously.**
21

22 Town Engineer Patricia Strayer began the discussion indicating a time certain to conclude
23 the workshop at 1:00pm as a meeting is following. Town Engineer Strayer relayed that her
24 role is to help the meeting stay on schedule. Town Engineer Strayer continued that each
25 member will identify their top four (4) topics for discussion. At the end, there will be a
26 consensus of the top four (4) topics to discuss. Each member will be given five minutes for
27 conversation of their topic. Motions and recommendations are not to be made at the
28 workshop. Motions are to be held for regular Board meetings. If an item gets stagnate, the
29 conversation will be moved to another workshop or meeting. Town Engineer Strayer
30 informed that members of the public would have an opportunity to speak at the conclusion
31 of the workshop to allow the board members enough time to discuss topics.
32

33 Board Member Ceriale would like to see the workshop be more open to the public and not
34 have the public wait until the end to speak. Town Engineer Strayer replied if there is a
35 citizen that would like to speak, they can be provided three minutes to speak.
36

37 Chair Ecclestone's 4 topics: (1) Groins timeline and funding (2) Removal of existing groins
38 (3) Easements for installation and removal of groins (4) Permit requirements and flexibility
39

40 Board Member Baker's 4 topics: (1) Expediting sand mining and deposition in permitting
41 (2) Environmental husbandry issues associated with beach maintenance (3) Stakeholder
42 coordination
43

44 Board Member Ceriale's 4 topics: (1) Support staff (2) Macro issues - Woods Hole Group
45 look at the information they provided (3) How the board assists with current issues (4)
46 Town education

Board Member Gavigan's 4 topics: (1) Groins (2) breakers (3) Coastal Vulnerability Study (4) Sand Transfer Plant

Board Member Johnson's 4 topics: (1) groins (2) sand supply sources for the future (3) Reach 8 - understanding history, the EIS, and what is being proposed (4) understanding funding process

Board Member Kinzelberg's 4 topics: (1) Groin replacement process (2) Mid-Town beach and Breakers implementation (3) Goals and objectives (4) Shore Protection Board's action with regard to the Woods Hole Group report on island flood protection

Alternate Board Member Jacoby's 4 topics: (1) Goals and objectives on how Shore Protection Board can be effective (2) Public education (3) Future protection on lagoon side where there are flooding issues (4) Groins

Alternate Board Member Belmar's 4 topics: (1) Groins (2) Interrelationship with Council (3) Clarification of role on Woods Hole report (4) Lake Worth lagoon shoreline issues

Alternate Board Member Lorentzen's 4 topics (1) Goals and objectives (2) Involvement of Town in working with other municipalities and stakeholders with environmental concerns such as blue-green algae (3) Community involvement (4) Vulnerability from the lagoon

Vice Chair Katz's 4 topics: (1) Define staff engagement and establish goals (2) Next 10-year plan (3) Climate change and vulnerability (4) Hurricane response

Town Council Member Margaret Zeidman expressed that she wants to learn what the Shore Protection Board priorities are going forward as Town Council will vote on priorities and their expenditures. Council Member Zeidman added that she cannot give an opinion publically unless publically noticed and her colleagues are present as matters have to be brought to Town Council in a more formal manner. Council Member Zeidman said that she respects the Shore Protection Board and the time the board puts in as these matters are a priority to both the Town and to the Town Council. Council Member Zeidman concluded that a method of coming together to have a discussion with the board and Town Council is needed.

Town staff, including Paul Brazil, Patricia Strayer, and Robert Weber compiled the topics as follows: (1) Goals and objectives (2) Groins (3) Vulnerability (4) Public education and communication with stakeholder coordination.

Coastal Program Manager Robert Weber conducted a review of the 2009 report of the 10 year plan of the Shore Protection Board.

1
2 1. Discussion of Goals and Objectives:
3

4 Board Member Ceriale, with assistance from both Coastal Program Manager Weber and
5 Director of Public Works Paul Brazil, discussed implementation of SPB goals and
6 objectives.
7

8 Alternate Board Member Lorentzen added that innovative technologies sand placement is
9 successful but not perfect due to cost and that there is room for improvement. Investigation
10 into new technologies should be considered.
11

12 Alternate Board Member Jacoby added that public education and communication as an
13 objective.
14

15 Vice Chair Katz said there should be education to residents, especially for dune planting.
16

17 Board Member Johnson said he would like to continue to implement and monitor the feeder
18 beach strategy, nourishing portions of shore as necessary, continue to participate and
19 support BMA adding new projects if possible, continue to study new technologies as they
20 become available, coordinate with the U.S. Army Corps Of Engineers, and update and re-
21 examine the 10-year plan.
22

23 Board Member Kinzelberg said there should be a new format of the agenda to indicate
24 current list of priorities. Have at each meeting an updated document where the Town notes
25 this is where we are currently at each one of them. Director Brazil replied that staff would
26 submit a GANTT chart with milestones with the backup for the next meeting.
27

28 Town Engineer Strayer summarized that she was hearing that the board would rather talk
29 about project issues than goals and objectives.
30

31 Alternate Board Member Belmar read aloud how goals and objectives were determined in
32 2009 and questioned staff's involvement in the current goals and objectives discussion.
33

34 Director Brazil noted that the purpose of the workshop was educational and for the board
35 members to provide feedback to staff during the workshop. Director Brazil added that staff
36 could summarize the goals and objectives mentioned by the board and add provide input
37 after the board had the discussion. Town staff was not to steer the topic for the board.
38 Director Brazil concluded that staff could provide input on the goals and objectives for the
39 board to consider with approval of the FY 2020 budget at the next meeting.
40

41 Johnson expressed implementation by the board needs some consideration by staff.
42

43 Town Engineer Strayer concluded the Goals and Objectives discussion by indicating that
44 staff would summarize where we are with goals and make suggestions for the board to
45 consider at the next meeting.
46

1 2. Discussion of Groins:
2

3 Chair Ecclestone wants guidance from Town Council on groins.
4

5 Board Member Kinzelberg inquired why groins couldn't be added as protection to the south
6 end of Reach 6, 7 & 8 to keep sand that was put there.
7

8 Director Brazil explained that groins in the south end are unlikely to be permitted.
9

10 Vice Chair Katz said that Taylor Engineering did a study and came with 7 options, one of
11 which were to add more sand, when the board wanted structures. In the end, the added
12 sand works.
13

14 Coastal Program Manager Weber provided a history of groins in the Town.
15

16 Chair Ecclestone reminded that removal of old groins and putting in new ones is the plan
17 and that the plan was given to Town Council as a multi-year program.
18

19 Alternate Board Member Belmar said Town Council has to be aware of the safety issues
20 of the deteriorated groins.
21

22 Board Member Gavigan suggested to save what's there and replace the dangerous groins.
23

24 Coastal Program Manager Robert Weber said that the current implementation plan includes
25 removing some groins and then replacing the groins with one new groin. Not necessarily
26 one for one. Any new groins will continue to function as they are now.
27

28 Board Member Gavigan asked for a time line of when it can be done.
29

30 Board Member Ceriale asked if there is an appropriate action plan for the groins.
31

32 Coastal Program Manager Weber replied that the plan has been permitted by both the U.S.
33 Army Corps of Engineers and FDEP.
34

35 Board Member Ceriale asked Town staff if the plan is appropriate. Coastal Program
36 Manager Weber replied that the engineering is sound. Board Member Ceriale asked does
37 Town Council have enough information to proceed with an appropriate decision or does
38 the Shore Protection Board need to provide additional information.
39

40 Director Paul Brazil responded that staff can ask Town Council if they need anything else
41 from the Board.
42

43 Board Member Baker said that he is opposed to the groins and indicated that the Town
44 should not consider groins. Groins are ineffective.
45

1 Board Member Johnson reiterated that groins are in the BMA and they can be done now
2 that the plan is in place.

3
4 Board Member Kinzelberg asked at the end of the groin rehabilitation project, will all the
5 groins along the Town be cement king pile groins as opposed to steel.

6
7 Director Brazil responded that many of the existing groins will remain as they are currently
8 functional and will not be replaced.

9
10 Vice Chair Katz shared that Taylor Engineering's report looked specifically at Reach 7 and
11 not the whole Town. Taylor came with 7 options and they recommended to put more sand
12 at Reach 7.

13
14 Board Member Cerialle asked if staff thinks the groin program requested is good and
15 appropriate for the Town to pursue.

16
17 Director Brazil replied that the engineering is good. Director Brazil added that the vast
18 majority of the groins are on private property and the Town would pick up a liability that
19 the Town doesn't have today.

20
21 Alternate Board Member Jacoby questioned if there are permits, doesn't that imply there
22 is an approved plan, and asked what is stopping implementation of the plan.

23
24 Director Brazil responded that it is Town Council's direction to proceed.

25
26 Alternate Board Member Jacoby asked what the board can do to expedite implementation
27 of the plan.

28
29 Director Brazil replied that the board already has voted unanimously to direct staff to
30 advise Town Council to expedite the program but Council did not expedite the program.

31
32 Alternate Board Member Belmar said that Town Council has to make a decision and the
33 Shore Protection Board can help Council identify the issues to help Council make that
34 decision.

35
36 Director Brazil said that staff will include goals and objectives of the groin project with the
37 pros and cons and provide to Town Council again.

38
39 Board Member Kinzelberg asked for a map where all the new groins will be placed and
40 old ones taken out.

41
42 Town Engineer Patricia Strayer responded that electronic maps will be sent out to the board
43 members.

1 Alternate Board Member Belmar suggested that if Town Council is not going to fix the
2 groins, code enforcement should require that the private properties address the safety of
3 the groins.

4
5 Brazil shared that for the first phase, north of the Mid-Town project, flyers were sent out
6 to all the affected home owners and invited them to Town Hall for a public meeting. There
7 was no turn out to the meetings. Flyers were sent out a second time and again no one
8 showed up to the meeting. Easements are needed from these residents as the groins are
9 largely on private property.

10
11 Board Member Johnson said that he has heard that there have been only a few injuries on
12 the old groins.

13
14 Director Brazil explained that liability could be the issue why Town Council has not moved
15 forward with the plan.

16
17 Chair Ecclestone requested that the groins again be added into the budget for the board to
18 recommend to Town Council.

19
20 Director Brazil agreed and said, if recommended, staff would take the topic back to Town
21 Council.

22
23 Diane Buehler, Friends of Palm Beach, addressed the Board stating there are residents that
24 have done work on their own property when there are steel casings sticking out, they
25 understand the potential liability for them. The assumption may be that the Town is
26 handling it. The home owners may not realize they have a liability. Brazil replied that
27 residents were given information in writing and no one showed up to the meeting.

28 29 3. Discussion of Vulnerability / Woods Hole Group:

30
31 Coastal Program Manager Weber gave an overview.

32
33 Board Member Belmar asked if there is an update on the report status. Coastal Manager
34 Weber replied that Woods Hole Group presented to Council in February. The report will
35 be uploaded to the Town's website once received. Coastal Program Manager Weber shared
36 that there is a presentation that he will be giving after the workshop to the Citizens'
37 Association.

38
39 Coastal Program Manager Weber explained that Woods Hole Group's report will include
40 recommendations, but will not be an implementation plan. Director Brazil said a challenge
41 with implementation is the actions that need to be taken on private property.

42
43 Alternate Board Member Lorentzen stated he hasn't heard much on what was done
44 previously on the lagoon and what is permitting and costs.

1 Coastal Program Manager Weber responded that it is a different permitting process in the
2 lagoon in comparison to the beaches. Some projects done in the past were in performed in
3 coordination with Palm Beach County.

4
5 Town Engineer Strayer shared that the seawall issues on the lagoon side are a mixture of
6 public and private properties. Director Brazil added that the last 10-year plan focused on
7 the ocean and the next 10-year plan will include the lagoon.

8
9 Board Member Kinzelberg shared that there are drainage and pumping issues on the lake
10 side. Board Member Baker mentioned that there is a lot that can be learned by other towns
11 where money is being spent.

12
13 Director Brazil said Woods Hole Group has helped those communities as well. There is a
14 lot of work to do.

15
16 Vice Chair Katz said it is a good idea to look at consultants who worked with other cities
17 and addressed the same situation as the Town, have them come to Palm Beach, so they we
18 do not to reinvent the wheel.

19
20 Alternate Board Member Jacoby asked if Woods Hole Group is the go-to group to have
21 conversations with pertaining to innovation.

22
23 Director Brazil replied Woods Hole Group is a good choice as they spent a lot of time
24 understand the island and the modeling is better than anyone else's.

25
26 Alternate Board Member Jacoby asked if is possible to have individual conversation or
27 does it have to be done in a forum. Director Brazil shared that it is ok to have a one-on-one
28 conversation, it just costs the Town money.

29
30 Alternate Board Member Lorentzen said the short-term goals are the lake side storm related
31 flooding. If projections are right, it's going to be more difficult.

32
33 Director Brazil replied the Lakeside Park seawall project goes out 50 years or more, that
34 wall is not going to be built 50 years from now but will make the wall now to add-on to it
35 over the years.

36
37 Town Engineer Patricia Strayer recapped that vulnerability should be a goal and include
38 the board recommendation of working with other communities looking both near term and
39 long term. Vulnerability should be captured in a summary document to go from the board
40 to Town Council.

41 42 4. Discussion of Public Education and Communication:

43
44 Alternate Board Member Jacoby offered to help get the message out to raise awareness.
45 When money is being brought to Town Council there is support.

1 Public Works Director, Paul Brazil share that the Shore Protection Board has previously
2 said communication is important, talk about it as a vulnerability. The Town becomes more
3 vulnerable over time.

4
5 Alternate Board Member Jacoby said it is best to make a statement about flooding. Public
6 Works Director Paul Brazil replied to bring the document back in April to the Shore
7 Protection Board that will be educational and it will with the budget. Staff will make sure
8 it addresses what the Board is trying to convey to the Town Council, the pros and cons.

9
10 Board Member Gavigan said the beaches are in better shape now then they have been, goals
11 are being accomplished. Town Engineer Patricia Strayer responded that communicating
12 the success of the program is what the public education topic is.

13
14 Alternate Board Member Lorentzen said that Palm Beach protection is something the entire
15 region is interested in, everyone comes to enjoy the beach.

16
17 Alternate Board Member Belmar said that the board should first start communication to
18 the public by focusing on 1 or 2 of the successes of the program.

19
20 Town Engineer Strayer reiterated that the Town should be publicizing the condition of the
21 beaches and the success of the BMA program beyond the Town.

22
23 Brazil said that the Town has a successful beach nourishment program and it should be
24 talked about.

25
26 Town Engineer Strayer summarized that communication should be considered a goal by
27 the board.

28 29 5. Stakeholder Coordination:

30
31 Alternate Board Member Lorentzen asked if significant funding support was received from
32 the county and state for beach nourishment.

33
34 Director Brazil replied that the Town recently received funding from the County through
35 the Bed Tax Dollars for the Phipps project in 2016. The state has historically been a great
36 financial partner. The federal money is from two (2) different places, FEMA and the U.S.
37 Army Corps of Engineers. The federal money would address the lion share of cost and the
38 Town will be the local sponsor and pay a fraction of the cost.

39
40 Alternate Board Member Belmar read the charter of the board and expressed the topic to
41 discuss should be more of agency coordination then stakeholder coordination.

42
43 Director Brazil said that if areas of concern are identified by the board, the board can make
44 a recommendation to Town Council and Town Council would assign the task to the Mayor.

1 Board Member Kinzelberg addressed Diane Buhler asking if there is anything as a board
2 or Town could do to help stem the repository of dangerous material to our beaches. Diane
3 prefers no groins as the trash is where the seaweed is and that is by the groins. Groins bring
4 in some sand, but with it is seaweed and trash. The trash is a huge problem.

5
6 Board Member Johnson said staff should prepare copies of ordinances pertaining to
7 liability and explain who would paying for the groins and what did homeowners need to
8 sign up for. Residents need to be informed.

9
10 Chair Eccelstone said that goals are to be discussed again at the next meeting.

11
12 **VIII. COMMUNICATION FROM CITIZENS – 3 MINUTE LIMIT PLEASE**

13
14 **IX. SCHEDULING OF NEXT SPB MEETINGS**

15 [H. Paul Brazil, P.E., Director of Public Works]

- 16 • Regular SPB Meeting, April 25, 2019
- 17 o FY 2020 Coastal Management Program Budget

18
19 **X. ANY OTHER MATTERS**

20
21 **XVI. ADJOURNMENT**

22
23 **There being no further business, the Shore Protection Board Workshop of March 21,**
24 **2019, was adjourned at 12:43 p.m.**

25
26
27
28
29 APPROVED:

30
31
32
33
34 _____
35 E. Llwyd Ecclestone
36 Chairman

37 *Meeting audio is located at:*
38 *<https://www.townofpalmbeach.com/853/Meeting-Audio>*
39

TOWN OF PALM BEACH

Information for Shore Protection Board Meeting on: April 25, 2019

TO: Shore Protection Board

FROM: Kirk W. Blouin, Town Manager

VIA: Robert Weber, Coastal Program Manager

RE: Recommendation to Town Council Regarding the Proposed FY 2020 Coastal Management Program Budget
Item IX.

DATE: April 18, 2018

STAFF RECOMMENDATION

Town staff requests the Shore Protection Board (SPB) provide a recommendation to Town Council regarding the proposed FY 2020 Coastal Management Program Budget.

GENERAL INFORMATION

The SPB recommended FY 2019 Coastal Management Program budget included estimated annual costs through FY 2023 for the remaining years of the Town Council adopted 10-year plan and also included an outlook of anticipated annual costs through FY 2028. Due to the now planned recovery projects for both hurricanes Matthew and Irma and other construction projects, the proposed FY 2020 budget is not to be consistent with FY 2020 in the adopted 10-year plan as it includes a large amount of expenditures in the estimated amount of \$34,087,698.

Through review of the FY 2020 budget forecast and development of the proposed FY 2020 budget, Town staff worked with FDEP to identify additional potential cost-sharing opportunities. Due to the Beach Management Agreement (BMA), FDEP suggested that the Town combine the five physical monitoring tasks into one “BMA Physical Monitoring” task, the three beach tilling tasks into one “BMA Beach Tilling” task, and the three escarpment removal tasks into one “BMA Escarpment Removal” task. Grouping these tasks into comprehensive BMA tasks should improve the eligibility for higher state cost-sharing participation. The grouping effort has reduced the overall number of expenditures in the spreadsheet. The overall cost of the respective monitoring, tilling, and escarpment removal tasks are consistent with the actual expenditures during the current fiscal year. In each of the three cases, this resulted in budget reductions.

The anticipated expenditures for the Hurricane Matthew and Hurricane Irma recovery project in Mid-Town, and for Phipps/Reach 7, have been combined. These projects will be constructed as one comprehensive Mid-Town Beach Nourishment dredging project and one comprehensive Phipps Ocean Park Beach Nourishment dredging project. This will eliminate the higher unit

rates for trucking sand as initially expected to address the sand losses attributed from Hurricane Matthew. The savings will be less funds expended by the Town and less funds for FEMA to reimburse. Overall, the project will cost less and will financially benefit both the Town and FEMA. The Mid-Town project has an estimated cost of approximately \$19.1 million and the Phipps project has an estimated cost of approximately \$10 million. By using the method of stockpiling the dredged sand at Phipps to truck to Reach 8 will also result in a financial benefit to both the Town and FEMA.

The largest change between the FY 2020 budget forecast in the Town Council approved FY 2019 budget and the proposed FY 2020 budget is the groin rehabilitation project. The SPB has requested that the \$500,000 annual expenditures, adopted by Town Council in 2013 for FY 2014 through FY 2023, be increased to \$5,000,000 for FY 2020 and continue annually until the estimated project cost of \$25 million is appropriated. Attached are copies of the permit sketches for the USACE permit which detail the groins to be removed and/or removed and replaced. The draft FY 2020 budget being presented anticipates SPB continuing to request the \$5 million annual appropriation for groins.

FUNDING/FISCAL IMPACTS

The overall Coastal Management Program expenditures for FY 2020 total \$38,264,523. Expected State (FDEP) and Federal (both FEMA and USACE) reimbursement is on the order of more than \$24.6 million.

An expected new cost-sharing partnership with the USACE for Mid-Town, continued state cost-sharing partnerships for both Mid-Town and Phipps, and continued county cost-sharing partnerships allow the Town to continue implementing projects within the Coastal Management Program without any annual financial shortfalls in the foreseeable future.

Attachments

cc: Jay Boodheshwar, Deputy Town Manager
H. Paul Brazil, P.E., Director of Public Works
Patricia Strayer, P.E., Town Engineer
Jane Le Chainche, Director of Finance

Town of Palm Beach 10-Year Coastal Management Program												
REVENUES		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Item #	Source	Approved	Proposed	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated
51	General Fund Transfer	\$ 7,410,300	\$ 7,349,124	\$ 7,569,598	\$ 7,796,686	\$ 8,030,586	\$ 8,271,504	\$ 8,519,649	\$ 8,775,238	\$ 9,038,496	\$ 9,309,650	\$ 9,588,940
52	Coastal Fund Transfer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53	County	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,244,800	\$ -	\$ -	\$ -	\$ -
54	State portion of FEMA projects	\$ -	\$ 662,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55	State (18PB3, 19PB13, 19PB12, 19PB6)	\$ 6,400,000	\$ 8,280,324	\$ 1,988,506	\$ -	\$ -	\$ -	\$ 8,502,000	\$ -	\$ -	\$ -	\$ 10,120,000
56	Federal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
57	Federal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
58	FEMA	\$ -	\$ 3,975,000	\$ 13,912,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60	Bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61	Interest	\$ 270,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Total		\$ 14,080,300	\$ 20,566,948	\$ 23,770,604	\$ 8,096,686	\$ 8,330,586	\$ 8,571,504	\$ 20,566,449	\$ 9,075,238	\$ 9,338,496	\$ 9,609,650	\$ 20,008,940

EXPENDITURES												
Remaining Years of 2013 Adopted Coastal Management Program Budget, Updated August 2015							Outlook					
Item #	Project Name	FY 2018 Adjusted	FY 2019 Proposed	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	APPLY AND UPDATE ISLANDWIDE SEDIMENT TRANSPORT ANALYSIS	\$ 22,000	\$ 22,000	\$ 23,000	\$ 24,000	\$ 24,000	\$ 25,000	\$ 26,000	\$ 27,000	\$ 28,000	\$ 29,000	\$ 30,000
2	ANNUAL SEDIMENT REPORT (BMA REQUIRED)	\$ 48,000	\$ 50,000	\$ 51,000	\$ 53,000	\$ 54,000	\$ 56,000	\$ 58,000	\$ 59,000	\$ 60,000	\$ 63,000	\$ 65,000
3	SEAWALL/LLOD FUNCTION/NON-STRUCTURAL INVENTORY ASSESSMENT & ANALYSIS	\$ -	\$ 116,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 143,000	\$ -	\$ -
4	SEAWALL/LLOD REHABILITATION/REPLACEMENT	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
5	GROIN ASSESSMENT	\$ -	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 86,000	\$ -	\$ -
6	GROIN REHABILITATION	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
7	FLOODING AND CLIMATE CHANGE/SLR ASSESSMENT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	LOBBYING	\$ -	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
9	DUNE VEGETATION MAINTENANCE	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 13,000	\$ 13,000	\$ 13,000
10	REGIONAL SAND NEEDS/SAND SEARCH	\$ -	\$ -	\$ -	\$ -	\$ 725,000	\$ 725,000	\$ -	\$ -	\$ -	\$ -	\$ -
11	GENERAL COASTAL ENGINEERING	\$ 54,000	\$ 55,000	\$ 57,000	\$ 58,000	\$ 60,000	\$ 62,000	\$ 64,000	\$ 66,000	\$ 69,000	\$ 70,000	\$ 72,000
12	PHYSICAL MONITORING (NON-PROJECT AREAS)	\$ 77,000	\$ 79,000	\$ 82,000	\$ 84,000	\$ 86,000	\$ 89,000	\$ 92,000	\$ 94,000	\$ 97,000	\$ 100,000	\$ 103,000
13	BMA SEA TURTLE NESTING MONITORING	\$ 220,000	\$ 220,000	\$ 220,000	\$ 220,000	\$ 220,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 280,000
14	BMA BIOLOGICAL MONITORING	\$ 213,000	\$ 219,000	\$ 226,000	\$ 232,000	\$ 239,000	\$ 246,000	\$ 254,000	\$ 261,000	\$ 269,000	\$ 277,000	\$ 285,000
15	COASTAL MANAGEMENT PROGRAM OPERATING EXPENSES	\$ 258,326	\$ 181,725	\$ 183,591	\$ 189,188	\$ 197,654	\$ 200,893	\$ 207,009	\$ 213,310	\$ 219,799	\$ 226,483	\$ 233,367
16	ANNUAL DEBT SERVICE PAYMENT	\$ 736,038	\$ 542,606	\$ 544,107	\$ 542,232	\$ 540,982	\$ 546,107	\$ 540,732	\$ 539,982	\$ 543,607	\$ 546,481	\$ 543,731
17	SAND TRANSFER OPERATING	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	MAINTENANCE DREDGING, SAND PLACEMENT EXTENSION (EIS)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	LWI IMP PHYSICAL MONITORING	\$ 21,000	\$ 21,000	\$ 22,000	\$ 23,000	\$ 23,000	\$ 24,000	\$ 25,000	\$ 25,000	\$ 26,000	\$ 27,000	\$ 28,000
20	BEACH TILLING (REACHES 1 AND 2)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
21	ESCARPMENT REMOVAL (REACHES 1 AND 2)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
22	N. OCEAN BLVD. SEAWALL REPLACEMENT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	SAND FOREPASSING	\$ 600,000	\$ 600,000	\$ 620,000	\$ -	\$ 660,000	\$ -	\$ 700,000	\$ -	\$ 742,000	\$ -	\$ 787,000
24	MID-TOWN BEACH RENOURISHMENT ENGINEERING/PERMITTING	\$ -	\$ 100,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 126,000	\$ -
25a	MID-TOWN BEACH RENOURISHMENT CONSTRUCTION	\$ -	\$ -	\$ 8,950,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,000,000
25b	FEMA - HURRICANE MATTHEW	\$ -	\$ 3,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25c	FEMA - HURRICANE IRMA	\$ -	\$ -	\$ 8,750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26	MID-TOWN BEACH GROIN PROJECT AT GULFSTREAM ROAD	\$ 2,832,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	MID-TOWN DETAILED DESIGN AND PERMITTING (BREAKERS/CLARKE AVENUE)	\$ 209,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	OBTAIN FEDERAL COST-SHARE FOR MID-TOWN	\$ 500,000	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29	MID-TOWN PHYSICAL MONITORING	\$ 41,000	\$ 42,000	\$ 43,000	\$ 45,000	\$ 46,000	\$ 47,000	\$ 49,000	\$ 50,000	\$ 51,500	\$ 53,000	\$ 55,000
30	MID-TOWN MITIGATION - CORAL NURSERY/TRANSPLANTATION	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
31	MID-TOWN MITIGATION - ARTIFICIAL REEF CONSTRUCTION [*CARRYOVER FROM FY 16]	\$ -	\$ 3,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32	BEACH TILLING (MID-TOWN)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
33	ESCARPMENT REMOVAL (MID-TOWN)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
34	PHIPPS NOURISHMENT ENGINEERING/PERMITTING	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 387,000	\$ -	\$ -	\$ -	\$ -
35a	PHIPPS OCEAN PARK/BEACH 7 BEACH NOURISHMENT CONSTRUCTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,800,000	\$ -	\$ -	\$ -	\$ -
35b	FEMA - HURRICANE MATTHEW	\$ -	\$ 1,900,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35c	FEMA - HURRICANE IRMA	\$ -	\$ -	\$ 9,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	PHIPPS PHYSICAL MONITORING	\$ 30,000	\$ 31,000	\$ 32,000	\$ 33,000	\$ 34,000	\$ 35,000	\$ 36,000	\$ 37,000	\$ 38,000	\$ 39,000	\$ 40,000
37	BEACH TILLING (REACH 7)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
38	ESCARPMENT REMOVAL (REACH 7)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
39	REACH 8 - EIS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40	REACH 8 - SOUTH END PALM BEACH RESTORATION PERMITTING	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	REACH 8 - SOUTH END PALM BEACH RESTORATION (INITIAL CONSTRUCTION)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42a	REACH 8 - DUNE RESTORATION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42b	FEMA - HURRICANE IRMA	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43	REACH 8 - CONSTRUCTION ACCESS EASEMENT AND SITE RESTORATION	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000
44	REACH 8 - DUNE/BEACH CONSTRUCT CONCURRENTLY WITH MID-TOWN OR PHIPPS	\$ -	\$ -	\$ 1,700,000	\$ -	\$ -	\$ -	\$ 2,750,000	\$ -	\$ -	\$ -	\$ 3,100,000
45	REACH 8 - BIOLOGICAL MONITORING	\$ 54,000	\$ 55,000	\$ 57,000	\$ 58,000	\$ 60,000	\$ 62,000	\$ 64,000	\$ 66,000	\$ 68,000	\$ 70,000	\$ 72,000
46	REACH 8 - PHYSICAL MONITORING	\$ 30,000	\$ 31,000	\$ 32,000	\$ 33,000	\$ 34,000	\$ 35,000	\$ 36,000	\$ 37,000	\$ 38,000	\$ 39,000	\$ 40,000
47	REACH 8 - PROJECT ENGINEERING REPORT	\$ 11,000	\$ 11,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 13,000	\$ 13,000	\$ 14,000	\$ 14,000	\$ 15,000	\$ 16,000
48	BEACH TILLING (REACH 8)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
49	ESCARPMENT REMOVAL (REACH 8)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 6,500	\$ 6,500	\$ 6,500
50	SAND TRANSFER PLANT FEASIBILITY STUDY	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total		\$ 6,206,364	\$ 10,179,331	\$ 34,087,698	\$ 3,359,420	\$ 4,768,636	\$ 4,161,000	\$ 28,976,741	\$ 3,284,292	\$ 4,302,906	\$ 3,490,964	\$ 29,398,098

6/4/2018

NET ANNUAL COST												
Item #		Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)
53	Surplus/Deficit	\$ 7,873,936	\$ 10,387,617	\$ (10,317,094)	\$ 4,737,266	\$ 3,561,950	\$ 4,410,504	\$ (8,410,292)	\$ 5,790,946	\$ 5,035,590	\$ 6,118,686	\$ (9,389,158)
FUND BALANCE												
	Fund Balance 10/1	\$ 19,661,966	\$ 23,420,399	\$ 24,093,949	\$ 13,776,855	\$ 18,514,121	\$ 22,076,071	\$ 26,486,575	\$ 18,076,283	\$ 23,867,229	\$ 28,902,819	\$ 35,021,505
	Carryover Balances	\$ -	\$ (9,714,067)									
	Fund Balance 9/30	\$ 19,661,966	\$ 24,093,949	\$ 13,776,855	\$ 18,514,121	\$ 22,076,071	\$ 26,486,575	\$ 18,076,283	\$ 23,867,229	\$ 28,902,819	\$ 35,021,505	\$ 25,632,347

COASTAL MANAGEMENT PROGRAM PROPOSED FY20 BUDGET AND 10 YEAR PLAN													
EXPENDITURES													
Project Name	Remaining Years of 2013 Adopted Coastal Management Program Budget, Updated August 2015						Outlook						
	FY 2019 Approved	FY 2019 Anticipated	FY 2020 Proposed	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
1 APPLY AND UPDATE ISLANDWIDE SEDIMENT TRANSPORT ANALYSIS	\$ 22,000	\$ 22,000	\$ 23,000	\$ 24,000	\$ 24,000	\$ 25,000	\$ 26,000	\$ 27,000	\$ 28,000	\$ 29,000	\$ 30,000	\$ 30,000	
2 ANNUAL SEDIMENT REPORT (BMA REQUIRED)	\$ 50,000	\$ 50,000	\$ 51,000	\$ 53,000	\$ 54,000	\$ 56,000	\$ 58,000	\$ 59,000	\$ 60,000	\$ 63,000	\$ 65,000	\$ 67,000	
3 SEAWALL/LOD FUNCTION/NON-STRUCTURAL INVENTORY ASSESSMENT & ANALYSIS	\$ 116,000	\$ 116,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 143,000	\$ -	\$ -	\$ -	
4 SEAWALL/LOD REHABILITATION/REPLACEMENT	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	
5 GROIN ASSESSMENT	\$ 70,000	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 86,000	\$ -	\$ -	\$ -	
6 GROIN REHABILITATION	\$ 500,000	\$ 500,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	
7 FLOODING AND CLIMATE CHANGE	\$ -	\$ -	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8 LOBBYING	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	
9 DUNE VEGETATION MAINTENANCE	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 13,000	\$ 13,000	\$ 13,000	\$ 13,000	
10 REGIONAL SAND NEEDS/SAND SEARCH	\$ -	\$ -	\$ -	\$ -	\$ 725,000	\$ 725,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
11 GENERAL COASTAL ENGINEERING	\$ 55,000	\$ 55,000	\$ 57,000	\$ 58,000	\$ 60,000	\$ 62,000	\$ 64,000	\$ 66,000	\$ 69,000	\$ 70,000	\$ 72,000	\$ 74,000	
12 BMA PHYSICAL MONITORING	\$ 204,000	\$ 143,000	\$ 173,000	\$ 177,000	\$ 180,000	\$ 184,000	\$ 187,000	\$ 191,000	\$ 195,000	\$ 199,000	\$ 203,000	\$ 209,000	
13 BMA SEA TURTLE NESTING MONITORING	\$ 220,000	\$ 200,000	\$ 200,000	\$ 220,000	\$ 220,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 242,000	\$ 280,000	\$ 280,000	
14 BMA BIOLOGICAL MONITORING	\$ 219,000	\$ 219,000	\$ 226,000	\$ 232,000	\$ 239,000	\$ 246,000	\$ 254,000	\$ 261,000	\$ 269,000	\$ 277,000	\$ 285,000	\$ 291,000	
15 COASTAL MANAGEMENT PROGRAM OPERATING EXPENSES	\$ 181,156	\$ 181,156	\$ 182,416	\$ 187,888	\$ 193,525	\$ 199,331	\$ 205,311	\$ 211,470	\$ 217,814	\$ 224,349	\$ 231,079	\$ 238,012	
16 ANNUAL DEBT SERVICE PAYMENT	\$ 542,607	\$ 542,607	\$ 544,107	\$ 542,232	\$ 540,982	\$ 546,107	\$ 540,732	\$ 539,982	\$ 543,607	\$ 546,481	\$ 543,731	\$ 541,831	
17 SAND TRANSFER PLANT MAINTENANCE	\$ -	\$ -	\$ 15,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	
18 BMA BEACH TILLING (REACHES 1, 2, 3, 4, AND 7)	\$ 5,000	\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	
19 BMA ESCARPMENT REMOVAL (REACHES 1, 2, 3, 4, AND 7)	\$ 5,000	\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	
20 MID-TOWN SEAWALL REPLACEMENT	\$ -	\$ 600,000	\$ -	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ -	\$ -	\$ -	
21 SAND FOREPASSING	\$ 600,000	\$ -	\$ -	\$ -	\$ 660,000	\$ -	\$ 700,000	\$ -	\$ 742,000	\$ -	\$ 787,000	\$ -	
22 MID-TOWN BEACH RENOURISHMENT ENGINEERING/PERMITTING	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 126,000	\$ -	\$ -	
23 MID-TOWN BEACH RENOURISHMENT CONSTRUCTION	\$ -	\$ -	\$ 8,950,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,000,000	\$ -	
HURRICANE MATTHEW	\$ 3,400,000	\$ -	\$ 1,600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
HURRICANE IRMA	\$ -	\$ -	\$ 8,750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
24 MID-TOWN DETAILED DESIGN AND PERMITTING (BREAKERS/CLARKE AVENUE)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
25 OBTAIN FEDERAL COST-SHARE FOR MID-TOWN	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
26 MID-TOWN MITIGATION - CORAL NURSERY/TRANSPLANTATION	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
27 MID-TOWN MITIGATION - ARTIFICIAL REEF CONSTRUCTION [*CARRYOVER FROM FY 16]	\$ 3,000,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
28 PHIPPS NOURISHMENT ENGINEERING/PERMITTING	\$ 75,000	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 387,000	\$ -	\$ -	\$ -	\$ -	\$ -	
29 PHIPPS OCEAN PARK/REACH 7 BEACH NOURISHMENT CONSTRUCTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,800,000	\$ -	\$ -	\$ -	\$ -	\$ -	
HURRICANE MATTHEW	\$ 1,900,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
HURRICANE IRMA	\$ -	\$ -	\$ 9,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
30 REACH 8 - EIS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
31 REACH 8 - SOUTH END PALM BEACH RESTORATION PERMITTING	\$ 75,000	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
32 REACH 8 - SOUTH END PALM BEACH RESTORATION (INITIAL CONSTRUCTION)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
HURRICANE IRMA	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
33 REACH 8 - CONSTRUCTION ACCESS EASEMENT AND SITE RESTORATION	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000	\$ -	
34 REACH 8 - DUNE/BEACH CONSTRUCT CONCURRENTLY WITH MID-TOWN OR PHIPPS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,750,000	\$ -	\$ -	\$ -	\$ 3,100,000	\$ -	
35 REACH 8 - BIOLOGICAL MONITORING	\$ 55,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 64,000	\$ 66,000	\$ 68,000	\$ 70,000	\$ 72,000	\$ 74,000	
36 REACH 8 - PROJECT ENGINEERING REPORT	\$ 11,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,000	\$ 14,000	\$ 14,000	\$ 15,000	\$ 16,000	\$ 16,000	
37 BEACH TILLING (REACH 8)	\$ 5,000	\$ -	\$ 5,000	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	
38 ESCARPMENT REMOVAL (REACH 8)	\$ 5,000	\$ -	\$ 5,000	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	
39 BEACH CLEANING (PUBLIC BEACHES)	\$ -	\$ 49,260	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	
TOTALS	\$ 13,128,763	\$ 7,221,023	\$ 38,264,523	\$ 9,802,120	\$ 11,204,507	\$ 10,593,438	\$ 35,484,043	\$ 4,790,452	\$ 5,793,421	\$ 2,977,830	\$ 28,880,810	\$ 2,936,843	
REVENUES													
Source	FY 2019 Approved	FY 2019 Anticipated	FY 2020 Proposed	FY 2021 Estimated	FY 2022 Estimated	FY 2023 Estimated	FY 2024 Estimated	FY 2025 Estimated	FY 2026 Estimated	FY 2027 Estimated	FY 2028 Estimated	FY 2029 Estimated	
General Fund Transfer	\$ 7,349,124	\$ 7,349,124	\$ 7,569,598	\$ 7,796,686	\$ 8,030,586	\$ 8,271,504	\$ 8,519,649	\$ 8,775,239	\$ 9,038,496	\$ 9,309,651	\$ 9,588,940	\$ 9,876,608	
Coastal Fund Transfer	\$ 3,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
County	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -	\$ 3,400,800	\$ -	\$ -	\$ -	\$ -	\$ -	
State portion of FEMA projects	\$ -	\$ -	\$ 2,543,750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
State	\$ -	\$ 7,177,314	\$ 2,875,407	\$ -	\$ -	\$ -	\$ 8,502,000	\$ -	\$ -	\$ -	\$ 5,765,760	\$ -	
Federal	\$ -	\$ -	\$ 3,222,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,920,000	\$ -	
Federal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
FEMA (including Mid-Town, Phipps, and Reach 8)	\$ -	\$ -	\$ 16,012,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Bonds	\$ 2,832,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Interest	\$ -	\$ 750,000	\$ 899,301	\$ 777,001	\$ 746,291	\$ 685,600	\$ 644,691	\$ 284,269	\$ 390,995	\$ 481,897	\$ 652,240	\$ 528,393	
TOTALS	\$ 13,181,124	\$ 15,276,438	\$ 33,372,556	\$ 8,573,687	\$ 8,776,877	\$ 8,957,104	\$ 21,067,140	\$ 9,059,508	\$ 9,429,491	\$ 9,791,548	\$ 23,926,940	\$ 10,405,001	
NET ANNUAL COST													
	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	Surplus/ (Deficit)	
Surplus/Deficit	\$ 52,361	\$ 8,055,415	\$ (4,891,967)	\$ (1,228,433)	\$ (2,427,630)	\$ (1,636,334)	\$ (14,416,903)	\$ 4,269,055	\$ 3,636,070	\$ 6,813,718	\$ (4,953,870)	\$ 7,468,159	
FUND BALANCE													
Fund Balance 10/1	\$ 27,916,610	\$ 27,916,610	\$ 35,972,025	\$ 31,080,058	\$ 29,851,625	\$ 27,423,994	\$ 25,787,660	\$ 11,370,758	\$ 15,639,813	\$ 19,275,883	\$ 26,089,601	\$ 21,135,731	
Fund Balance 9/30	\$ 27,968,971	\$ 35,972,025	\$ 31,080,058	\$ 29,851,625	\$ 27,423,994	\$ 25,787,660	\$ 11,370,758	\$ 15,639,813	\$ 19,275,883	\$ 26,089,601	\$ 21,135,731	\$ 28,603,890	

4/19/19

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PALM BEACH COUNTY, FLORIDA



SHEET INDEX

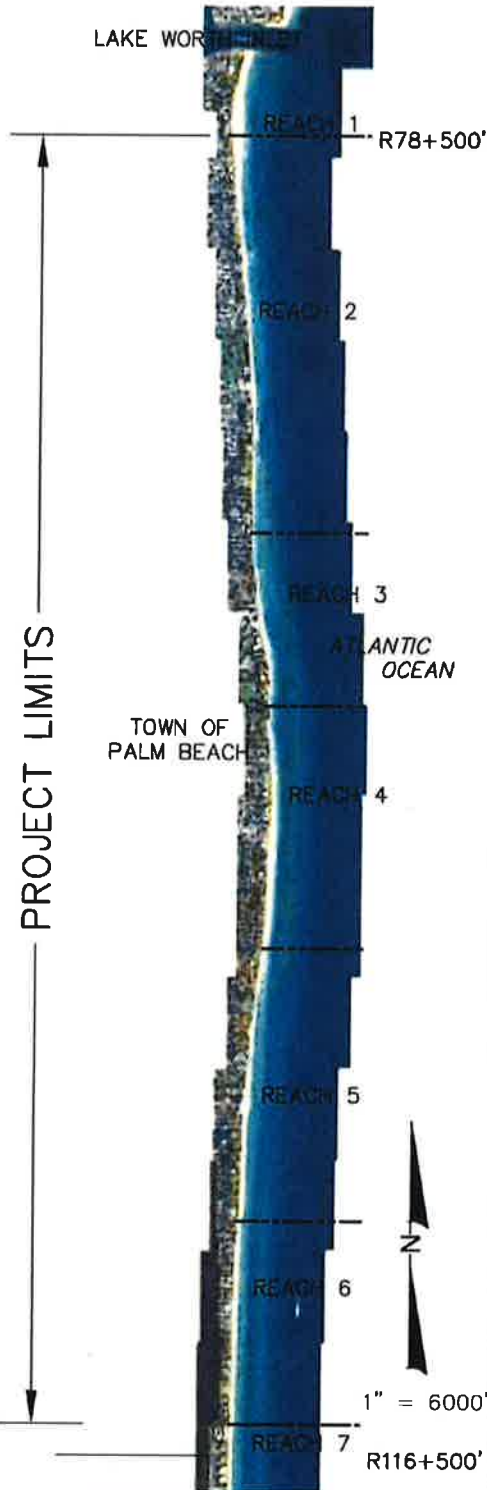
- 1 COVER SHEET
- 2-28 PLAN VIEWS
- 29 TYPICAL GROIN SECTION
- 30-31 TYPICAL GROIN DETAILS



NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE



TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
COVER SHEET

CB&I COASTAL PLANNING & ENGINEERING, INC.
P.O. BOX 1001
BOCA RATON, FLORIDA 33431
C.O.A. FL. 64028

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 1

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPA Groin Rehabilitation\CADD\Permits\152870P_PVA\WORKING.dwg - Dec 17, 2015 @ 9:49am - Howard.rjejb



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
2. STRUCTURE LENGTHS ARE APPROXIMATED IN FEET BASED ON AVAILABLE INFORMATION. ACTUAL LENGTHS MAY VARY.
3. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.

LEGEND:

- △ R-186 FDEP MONUMENTS
- ⊙ GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**



CB&I COASTAL PLANNING & ENGINEERING, INC.
2401 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
P.O. BOX 1000
TEL (561) 391-4182
FAX (561) 391-4116
C.O.A. #14029

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER P.E. No. 75548
PROFESSIONAL ENGINEER
STATE OF FLORIDA

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 2

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permit\152870P_PV.dwg - Nov 06, 2018 @ 10:04am - gary.kryszyniak



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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3. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.

LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

2481 N.W. 90th AVE. BOCA RATON, FLORIDA 33431
TEL: (561) 396-4793 FAX: (561) 396-4715
www.cbci.com

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

3

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

STATE OF

FLORIDA

PROFESSIONAL ENGINEER

DAVID T. SWIGLER P.E. No. 75548

DATE

REVISIONS		
DATE	BY	DESCRIPTION
11/6/18	DS	LAND BASED CONSTRUCTION ACCESS AT OCEAN TERRACE REVISED PER TOWN'S REQUEST

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAO\Permits\152870P_PV-WORKING.dwg - Dec 17, 2015 @ 9:50am - howard.hojib



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
2. STRUCTURE LENGTHS ARE APPROXIMATED IN FEET BASED ON AVAILABLE INFORMATION. ACTUAL LENGTHS MAY VARY.
3. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.

LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PM (561) 341-5412
FAX (561) 341-8116
C.D.A. FL 54321

2481 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
WWW.CBI-CORP.COM

DATE: 3/5/15
BY: GK

COMM NO.: 152870

SHEET: 4

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DAVID T. SWIGLER P.E. No. 73318

1/2/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permits\152870P PV-WORKING.dwg - Dec 17, 2015 @ 9:51am - howard.nego



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
2. DATE OF AERIAL PHOTOGRAPH: 2014.
3. STRUCTURE LENGTHS ARE APPROXIMATED IN FEET BASED ON AVAILABLE INFORMATION. ACTUAL LENGTHS MAY VARY.
4. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.

LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH: (561) 394-4102
FAX: (561) 394-1116
C.O.A. FL 04021

2425 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.cbci.com

DATE: 3/5/15
BY: GK

COMM NO.: 152870
SHEET: 5

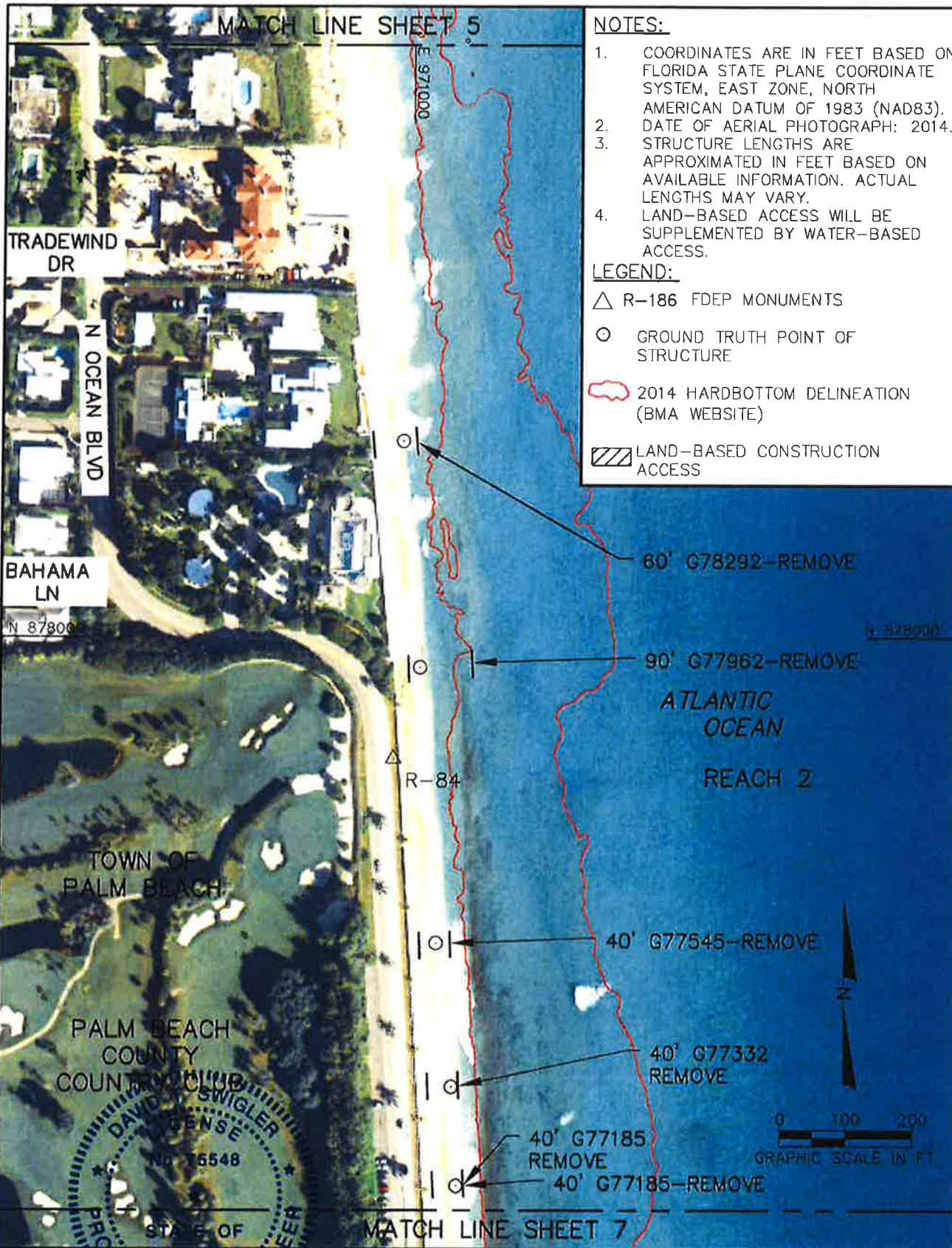
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DAVID T. SWIGLER P.E. No. 75548

1/2/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

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- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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 3. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.
- LEGEND:**
- △ R-186 FDEP MONUMENTS
 - GROUND TRUTH POINT OF STRUCTURE
 - 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
 - LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.
P.O. BOX 1000
200 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.cbci.com

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 6

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DAVID T. SWIGLER P.E. No. 75548

DATE: 4/7/2016

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permits\152870P_PV-WORKING.dwg - Dec 17, 2015 @ 9:50am - howard.rojib



NOTES:

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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH 561.394.4193
FAX 561.391.9116
C.D.A. FL 84229

2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.cbci.com

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

7

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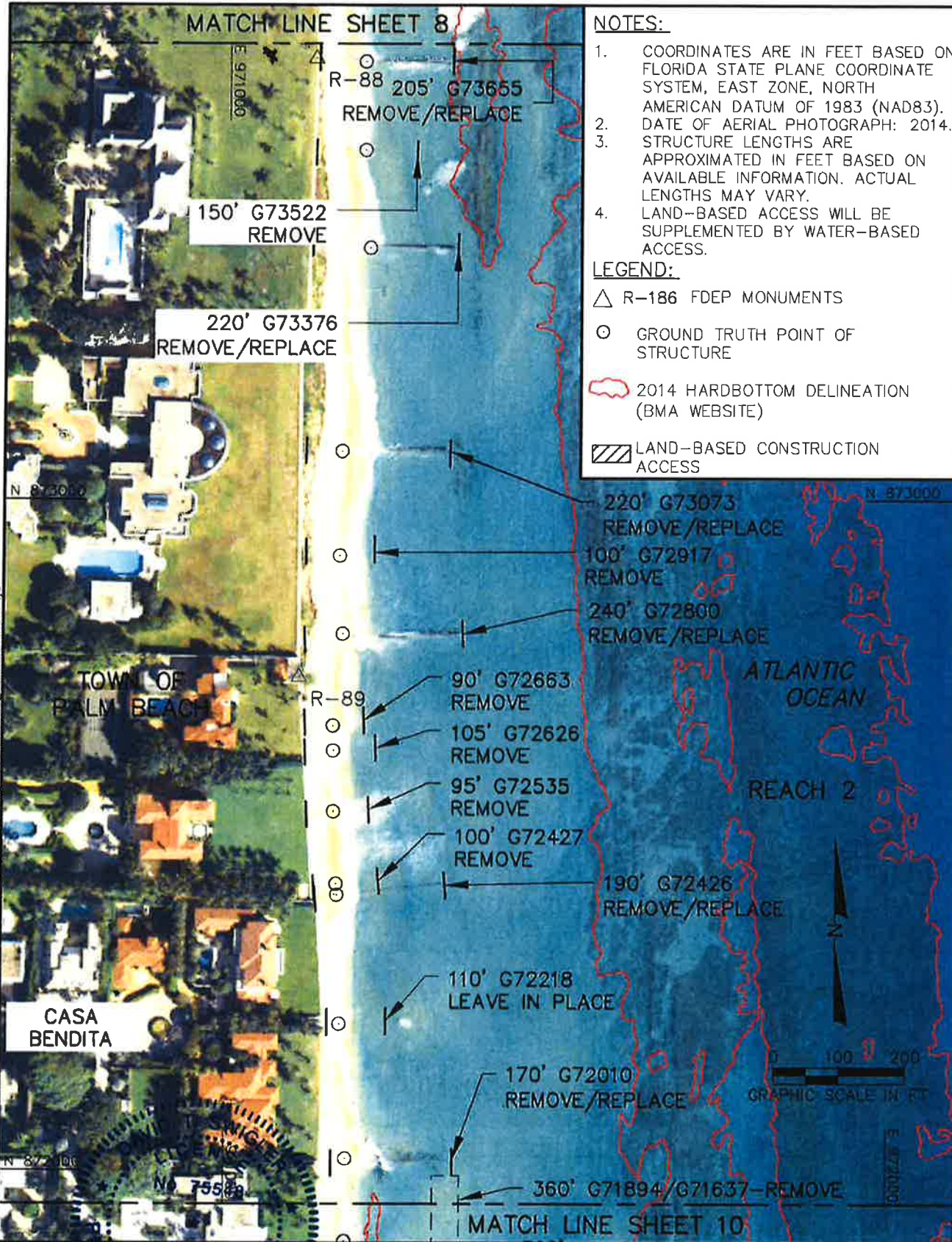
PROFESSIONAL ENGINEER

DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

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NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH (561) 391-4102
FAX (561) 391-0716
C.O.A. #14-002

2481 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.cbci.com

DATE: 3/5/15
BY: GK

COMM NO.: 152870
SHEET: 9

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DAVID T. SWIGLER P.E. No. 75548

DATE

REVISIONS

DATE	BY	DESCRIPTION

MATCH LINE SHEET 9

NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH: (561) 391-8102
FAX: (561) 391-8116
C.D.A. #12-0023

3815 NW 56TH AVENUE
BOCA RATON, FLORIDA 33431
www.cbci.com

DATE:
3/5/15
BY:

GK
COMM NO.:
152870
SHEET:
10

VIA LOS INCAS

190' G71633
REMOVE/REPLACE

REACH 2
REACH 3

120' G71208
REMOVE/REPLACE

110' G71020
REMOVE

230' G70910
REMOVE/REPLACE

120' G70845
REMOVE

60' G70724
REMOVE

110' G70657
REMOVE

230' G70651
REMOVE/REPLACE

40' G70620
REMOVE

230' G70451
REMOVE/REPLACE

110' G70324 REMOVE

60' G70239-REMOVE

50' G70221-REMOVE

MATCH LINE SHEET 11

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DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permittals\152870_PV.dwg - Dec 23, 2015 @ 10:42am - Howard.nejo



- NOTES:**
- COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
 - STRUCTURE LENGTHS ARE APPROXIMATED IN FEET BASED ON AVAILABLE INFORMATION. ACTUAL LENGTHS MAY VARY.
 - LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.
- LEGEND:**
- △ R-186 FDEP MONUMENTS
 - GROUND TRUTH POINT OF STRUCTURE
 - 2014 HARD BOTTOM DELINEATION (BMA WEBSITE)
 - LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CS&I COASTAL PLANNING & ENGINEERING, INC.
2481 N.W. BOCCARATON BOULEVARD
BOCCARATON, FLORIDA 33431
PH: (561) 391-4302
FAX: (561) 391-9116
WWW.CS&I.COM

DATE: 3/5/15
BY: CK
COMM NO.: 152870
SHEET: 11

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

MATCH LINE SHEET 11

NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

SUNSET AVE

240' G68412
REMOVE/REPLACE

250' G68194
REMOVE

175' G67812-REMOVE

ATLANTIC OCEAN

REACH 3

270' G67472-LEAVE IN PLACE

150' G66975
LEAVE IN PLACE

GRAPHIC SCALE IN FT
0 100 200

MATCH LINE SHEET 13

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

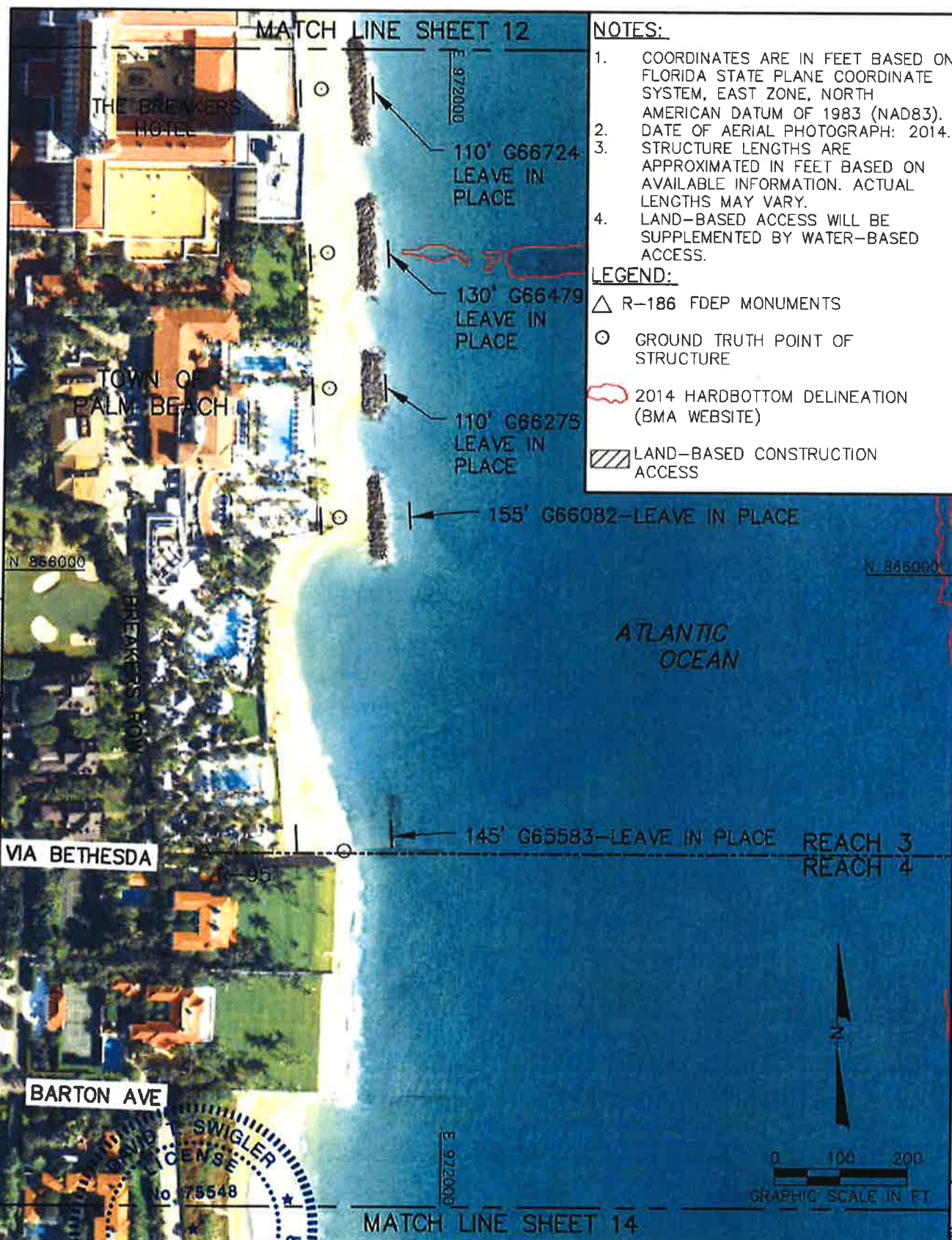
TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

2601 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH: (561) 391-4402
FAX: (561) 391-4416
C.D.A. FL 04228
www.cbci.com

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 12

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CA\Permits\152870P_Plan\WORKING.dwg - Dec 17, 2015 @ 9:56am - Howard.Ngib



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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- LEGEND:**
- △ R-186 FDEP MONUMENTS
 - GROUND TRUTH POINT OF STRUCTURE
 - 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
 - LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.
2401 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH (561) 391-4000
FAX (561) 391-9116
WWW.CB&I.COM

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DAVID T. SWIGLER P.E. No. 75548

1/2/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 13

MATCH LINE SHEET 13

NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH (561) 394-0702
FAX (561) 394-0716
C.O.A. FL 84028

2481 N.W. BOCCA RATON BOULEVARD
BOCCA RATON, FLORIDA 33431
WWW.CB&I.COM

DATE:

3/5/15

BY:

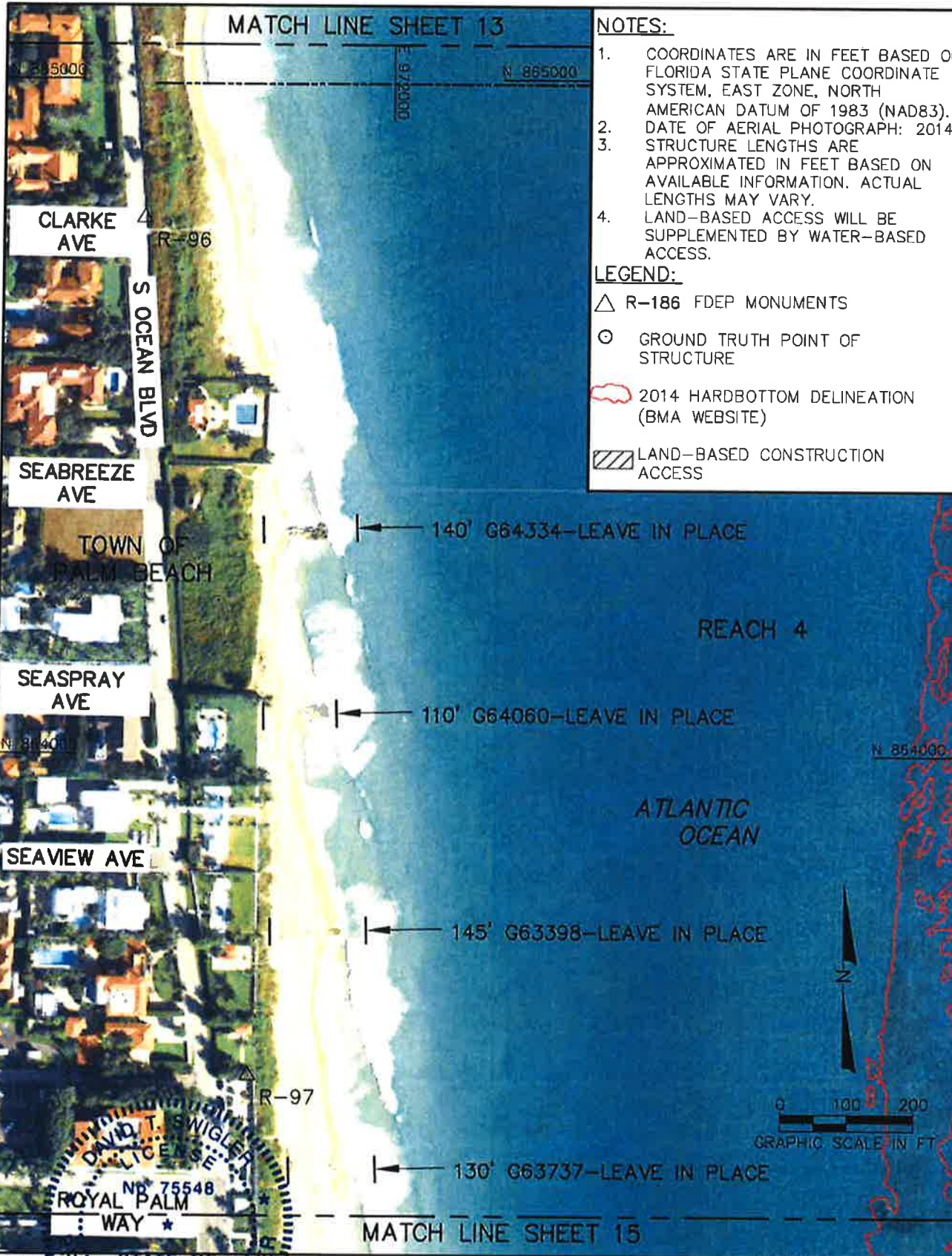
GK

COMM NO.:

152870

SHEET:

14



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DAVID T. SWIGLER P.E. No. 75548

DATE

1/7/2016

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permits\152870P_PV-WORKING.dwg - Dec 17, 2015 @ 10:25am - howard.neib



- NOTES:**
1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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- LEGEND:**
- △ R-186 FDEP MONUMENTS
 - GROUND TRUTH POINT OF STRUCTURE
 - 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
 - LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.
1441 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PM (561) 319-6105
FAX (561) 319-6116
C.D.A. FL 84028
WWW.CBI.COM

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DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 15

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAO\Permits\1528700P_PV-WORKING.dwg - Dec 17, 2015 @ 9:55am - howard.nejib



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH: (561) 394-4000
FAX: (561) 394-9116
C.O.A. FL #4528

2485 N.W. BOCCA RATON BOULEVARD
BOCCA RATON, FLORIDA 33431
www.cbci.com

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

16

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DAVID T. SWIGLER P.E. No. 75548

DATE

4/7/2016

REVISIONS

DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permits\152870P_PV-WORKING.dwg - Dec 17, 2015 @ 9:58am - howard.nejlo



- NOTES:**
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- LEGEND:**
- △ R-186 FDEP MONUMENTS
 - GROUND TRUTH POINT OF STRUCTURE
 - 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
 - LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.
P.L. (561) 391-8102
P.L. (561) 391-8116
C.D.A. P.L. 84208
200 NW 8000 KATON BOULEVARD
BOCA RATON, FLORIDA 33433
www.cb-i.com

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 17

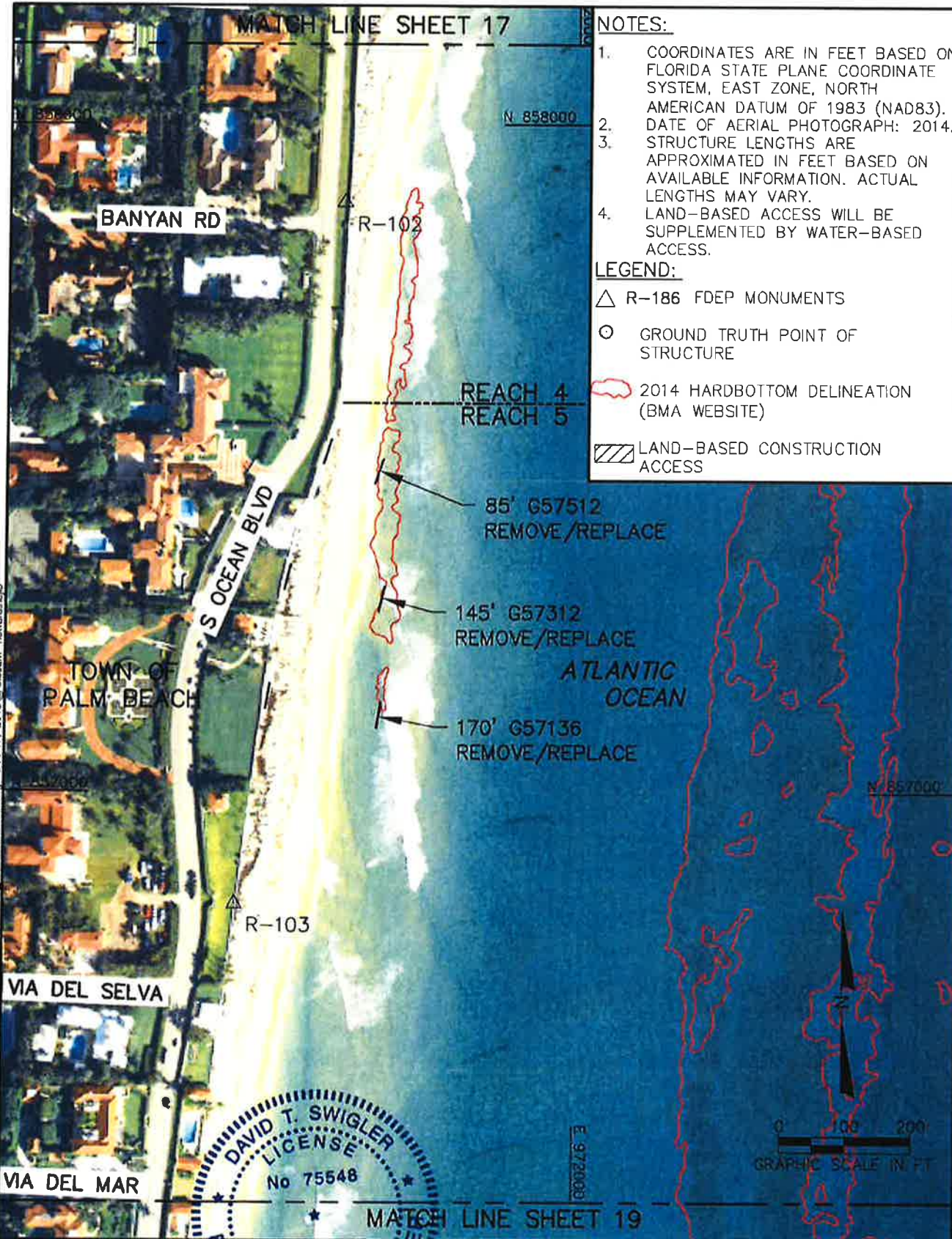
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DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

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NOTES:

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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.
2401 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH (561) 391-4102
FAX (561) 391-1116
WWW.CBI.COM

DATE:
3/5/15
BY:
GK

COMM NO.:
152870
SHEET:
18

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DAVID T. SWIGLER P.E. No. 75548

MATCH LINE SHEET 19

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

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NOTES:

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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.

PM (561) 391-4400
FAX (561) 391-4416
C.O.D. FL 0423

2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
WWW.CBI-ENG.COM

DATE: 3/5/15

BY: GK

COMM NO.: 152870

SHEET: 19

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FOR REGULATORY REVIEW ONLY



DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

MATCH LINE SHEET 19

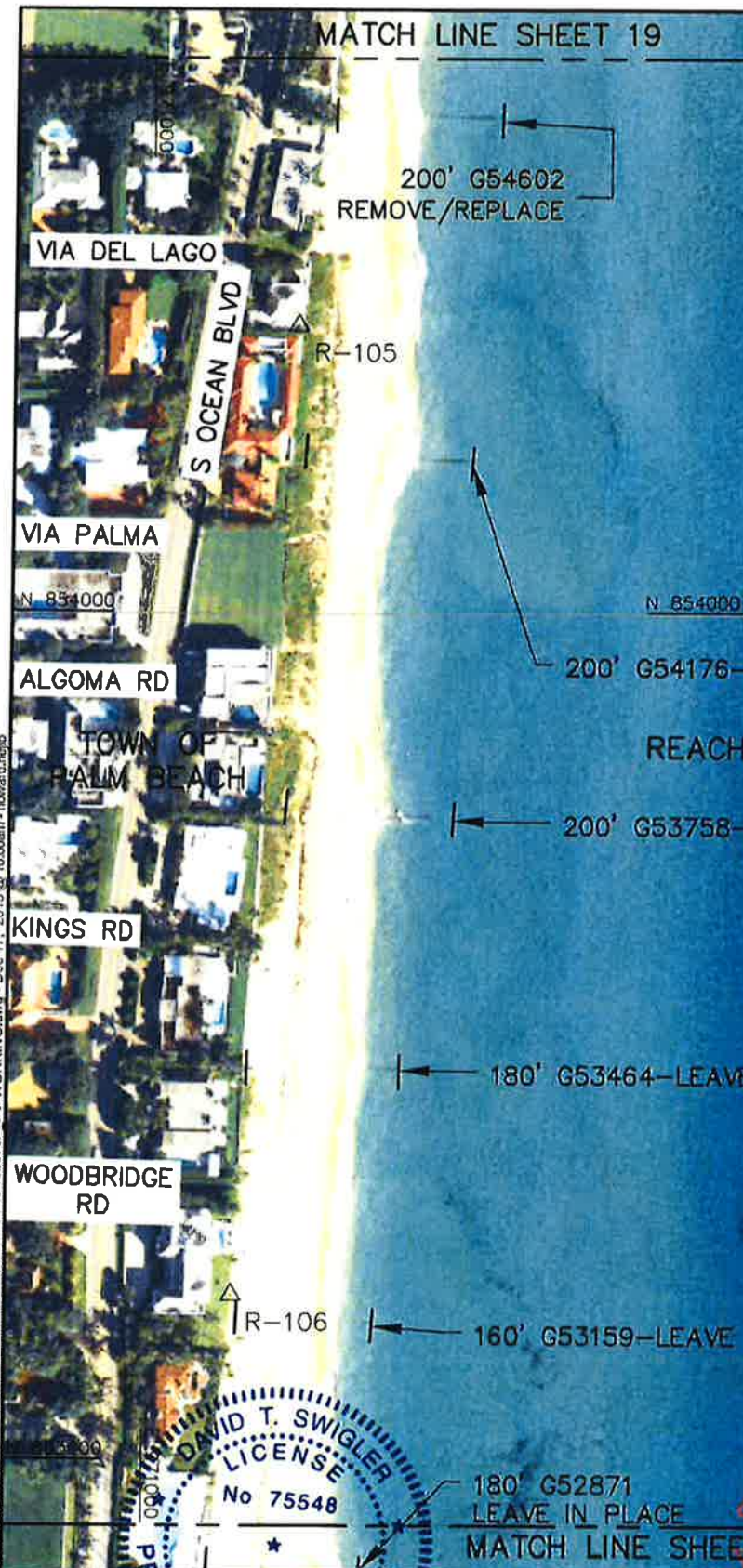
NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**



MATCH LINE SHEET 21

CB&I COASTAL PLANNING & ENGINEERING, INC.

P.O. BOX 1000
BOCA RATON, FLORIDA 33431
TEL (561) 391-9102
FAX (561) 391-9116
WWW.CBI-INC.COM

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

20

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FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER P.E. No. 75548

DATE

1/7/2016

REVISIONS		
DATE	BY	DESCRIPTION

P:\Palm Beach\Town of Palm Beach\152370 TPB Groin Rehabilitation\CAD\Permit\152370_PV-WORKING.dwg - Dec 17, 2015 @ 10:01am - howard.neib



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.
2481 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH (561) 394-4100
FAX (561) 391-9116
C.O.A. #140228
WWW.CBI.COM



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DAVID T. SWIGLER P.E. No. 75548

4/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 21

P:\Palm Beach\Town of Palm Beach\152870 TPB Groin Rehabilitation\CAD\Permits\152870P_PV\WORKING.dwg - Dec 17, 2015 @ 10:04am - howard.nelb



NOTES:

1. COORDINATES ARE IN FEET BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). DATE OF AERIAL PHOTOGRAPH: 2014.
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3. LAND-BASED ACCESS WILL BE SUPPLEMENTED BY WATER-BASED ACCESS.

LEGEND:

- △ R-186 FDEP MONUMENTS
- GROUND TRUTH POINT OF STRUCTURE
- 2014 HARDBOTTOM DELINEATION (BMA WEBSITE)
- LAND-BASED CONSTRUCTION ACCESS

**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.

PALM BEACH, FL 33480
P.O. BOX 1000
PALM BEACH, FL 33480
TEL: (561) 391-8100
FAX: (561) 391-8115
WWW.CBI.COM

2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
WWW.CBI.COM

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

22

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FOR REGULATORY REVIEW ONLY

DAVID T. SWIGLER No. 75548

DATE

1/7/2016

REVISIONS

DATE	BY	DESCRIPTION

MATCH LINE SHEET 22

NOTES:

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210' G49351
REMOVE/REPLACE

200' G49088
REMOVE/REPLACE

195' G48818-REMOVE/REPLACE

260' G48688-REMOVE

REACH 5
REACH 6

35' G48338-LEAVE IN PLACE

70' G48015-REMOVE/REPLACE

ATLANTIC OCEAN



0 100 200
GRAPHIC SCALE IN FT

MATCH LINE SHEET 24

TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

PH (561) 351-4102
FAX (561) 351-0716
C.D.A. FL. REG.

2451 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.CBI-ENG.com

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 23

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DAVID T. SWIGLER P.E. No. 75548

DATE

1/7/2016

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DATE	BY	DESCRIPTION

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TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW

CB&I COASTAL PLANNING & ENGINEERING, INC.

2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH: (561) 374-6402
FAX: (561) 374-6116
C.O.# A-14227
www.cb-i.com

DATE:

3/5/15

BY:

GK

COMM NO.:

152870

SHEET:

24

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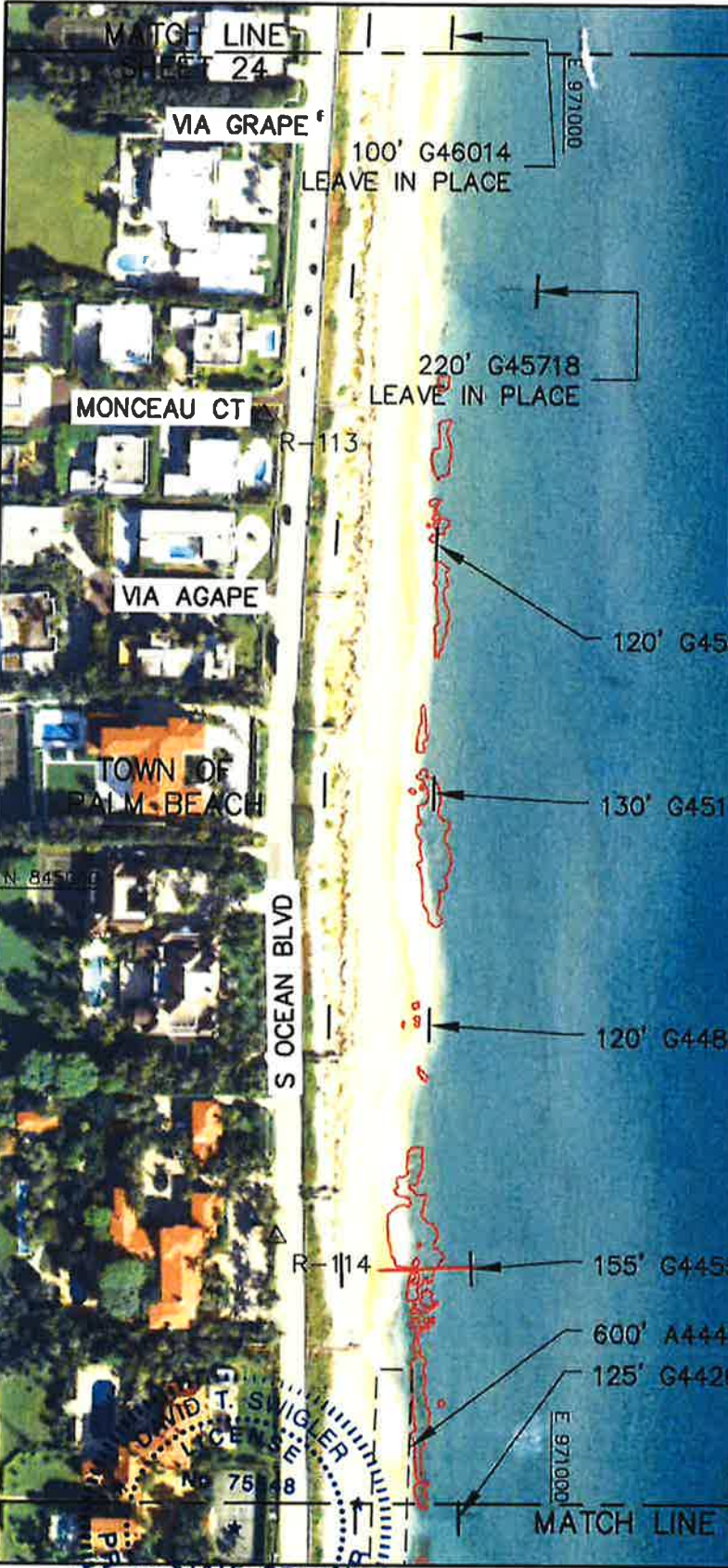
DAVID T. SWIGLER
PROFESSIONAL ENGINEER
No. 75548

DATE

4/7/2016

REVISIONS		
DATE	BY	DESCRIPTION

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**TOWN OF PALM BEACH
GROIN REHABILITATION PROJECT
PLAN VIEW**

CB&I COASTAL PLANNING & ENGINEERING, INC.

200 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
www.cbci.com
PH: (561) 391-5902
FAX: (561) 391-0116
C.D.A. FL. #1228

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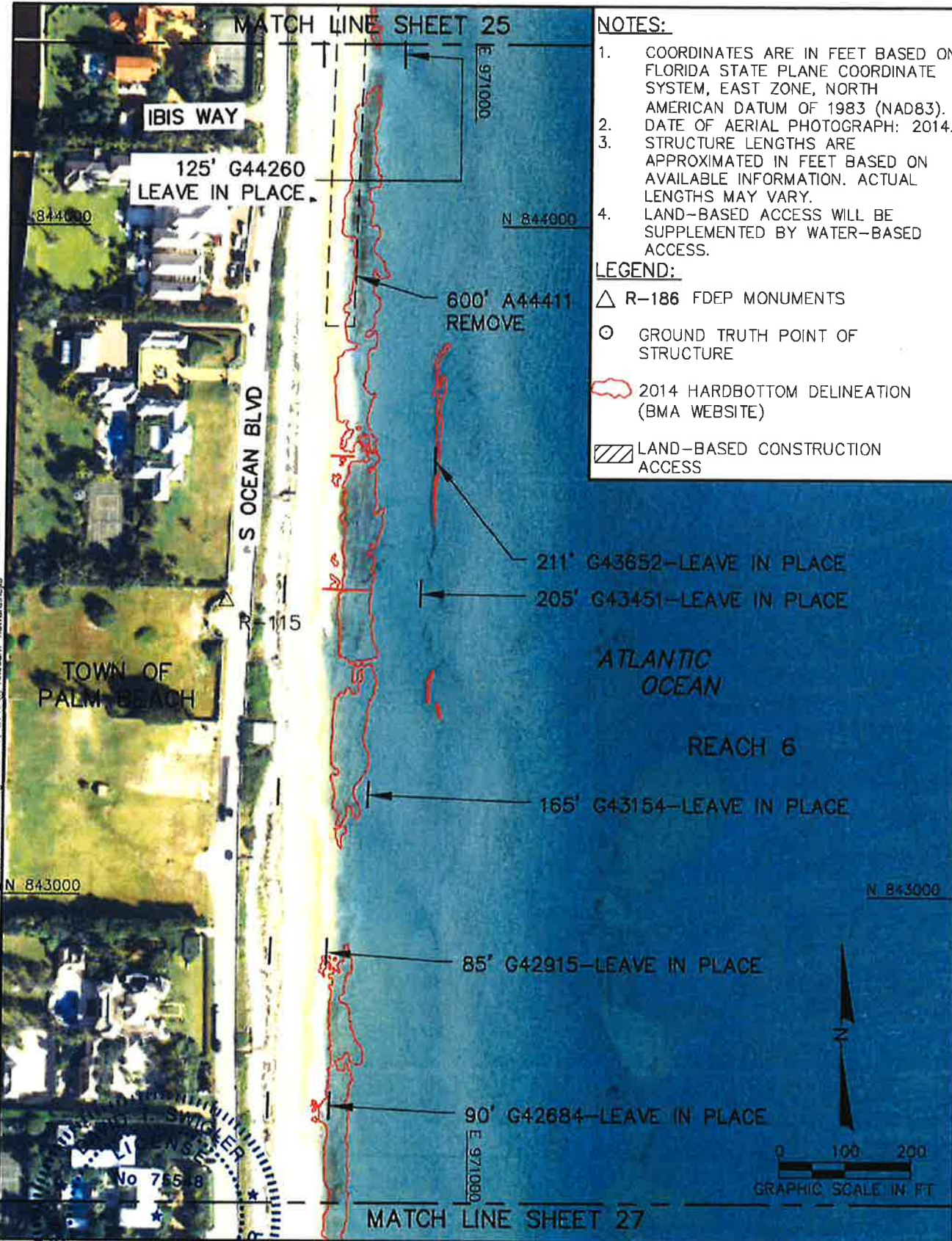
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1/7/2016
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DATE	BY	DESCRIPTION

DATE: 3/5/15
BY: GK
COMM NO.: 152870
SHEET: 25

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TOWN OF PALM BEACH GROIN REHABILITATION PROJECT PLAN VIEW

CBS&I COASTAL PLANNING & ENGINEERING, INC.

PH. (561) 394-9102
FAX. (561) 394-9116
C.D.A. FL. #0021

2401 N.W. BOCA RATON BLVD., SUITE 100
BOCA RATON, FLORIDA 33431
www.CBSI.com

DATE: 3/5/15
BY: GK

COMM NO.: 152870
SHEET: 26

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DAVID T. SWIGLER P.E. No. 75548

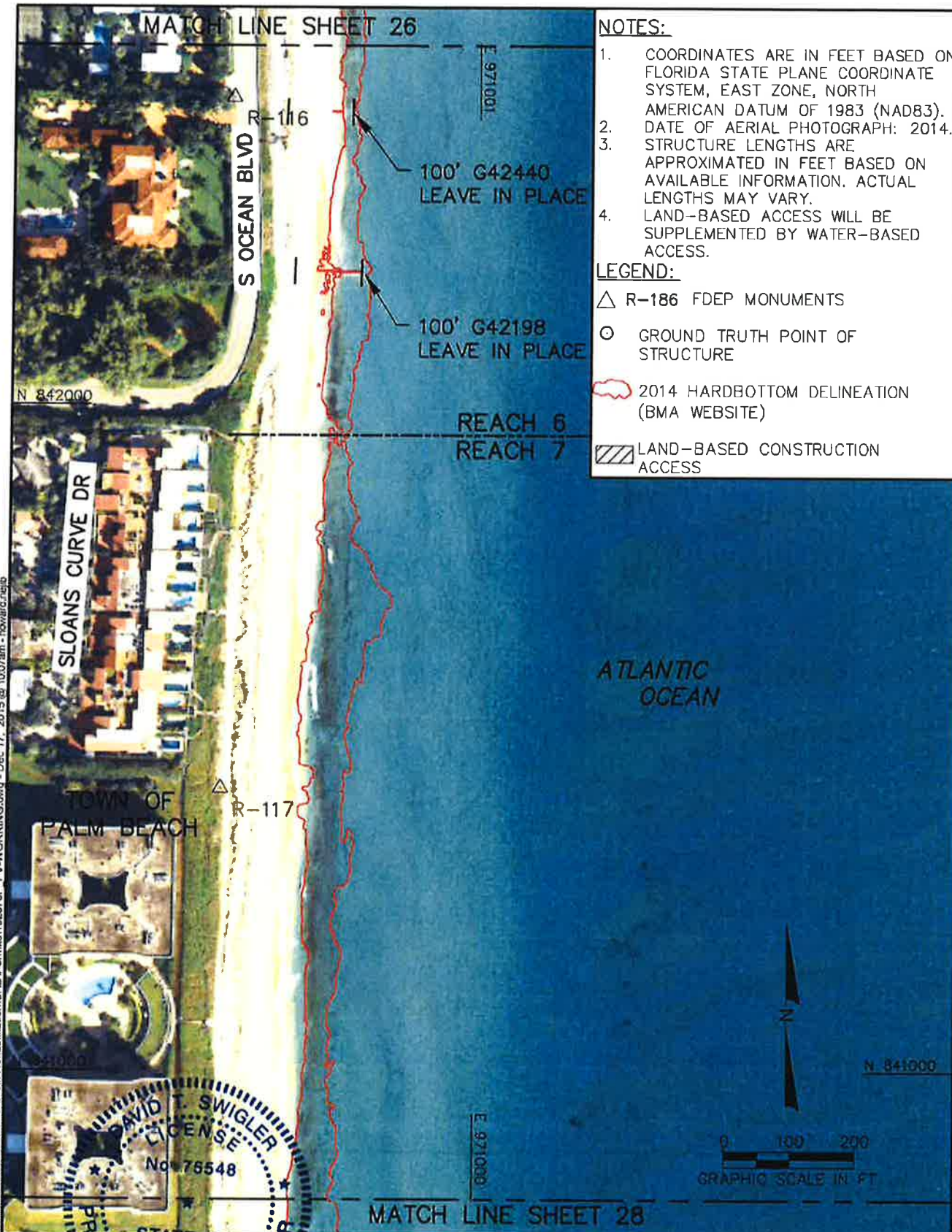
DATE

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REVISIONS

DATE	BY	DESCRIPTION

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**TOWN OF PALM BEACH
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CB&I COASTAL PLANNING & ENGINEERING, INC.

PH (561) 391-8902
FAX (561) 391-8916
C.D.A. FL #0028

1401 NW BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
WWW.CBI-COPI

DATE: 3/5/15
BY: GK

COMM NO.: 152870
SHEET: 27

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DAVID T. SWIGLER P.E. No. 75548

1/7/2016
DATE

REVISIONS		
DATE	BY	DESCRIPTION

TOWN OF PALM BEACH

Information for Shore Protection Board Meeting on: April 25, 2019

TO: Shore Protection Board

FROM: Kirk W. Blouin, Town Manager

VIA: Robert Weber, Coastal Program Manager

RE: Goals and Objectives Continued Discussion
Item X.

DATE: April 18, 2019

STAFF RECOMMENDATION

Town staff requests that the Shore Protection Board (SPB) review the attached information and provides direction deemed necessary.

GENERAL INFORMATION

During the March 21, 2019 SPB workshop, one of the main topics that was discussed among the SPB members was a review of the SPB goals and objectives that were developed and recommended to Town Council in 2009. The SPB requested that Town staff go through each of the eight (8) goals and provide an update of where we are on each of them and suggest any revision to them. Below is a list that includes the *italicized* goals. An update has been drafted following each goal and a suggested revision to the goal, if necessary, is **emboldened**.

Town staff recognizes that the SPB requested this information in advance of the SPB meeting with an opportunity for each SPB member to work individually with Town staff. Scheduling and workload have prevented this action from taking place which recognizes the challenges should the SPB hold monthly or more frequent meetings at this time.

2009 SPB Goals

1. *Restore 100% of sediment trapped by the inlet to the littoral drift or beach south of the inlet by a combination of:*
 - a. *Sand Transfer Plant upgrade*
 - b. *Dredging the inlet and placement on or near the beach.*
 - c. *Study Phase II location of pipe and its impact and permitting requirements with the goal of placing more sand into the littoral drift south of Reach 1.*
 - d. *Work with U.S. Army Corps of Engineers (USACE) and the State of Florida Department of Environmental Protection (FDEP) to determine feasibility of placing sand further down the beach, and shortening timeframe of permitting.*

- e. *Explore potential working with Port to acquire or lease a dredge. Before the Town “finalizes an agreement”, we need to learn whether a small dredge can move enough sand far enough south to get into the southerly drift and whether it makes economic sense. The Town of Palm Beach should only be cost sharing in the placement of sand.*
- f. *Involve the County in achieving this objective.*

The Sand Transfer Plant was rehabilitated in 2010. As a result of a dismissed lawsuit by the Town, the USACE committed to placing sand on the dry beach with large scale inlet maintenance dredging efforts. Extended discharges for the Sand Transfer Plant were included as an approved project in the Beach Management Agreement (BMA). The Town worked with both the USACE and FDEP and the permitted disposal site was extended south further down the beach. Neither the Port nor the County were interested in acquiring or leasing a dredge. Updated language for this goal could include: **Continue bypassing 100% of the littoral drift across the inlet through a combination of sand bypassing and inlet dredging and placement of dredged sand on or near the dry beach extending south of Reach 1.**

- 2. *Pursue placing dry sand on hot spots (north part of Reach 7, south part of Reach 8) from inlet borrow areas to protect threatened property.*

With construction of Mid-Town in 2015 and Phipps in 2016, stockpiled sand from borrow areas was pumped onto the beach to truck haul to hot spots. This method is considered with every beach nourishment project moving forward. This goal has been achieved.

- 3. *Examine coastal hard structure technology, costs, impacts, and permitting issues.*
 - a. *New structures*
 - b. *Existing structures*
 - c. *Observe the Singer Island permitting process*
 - d. *Explore interlocal agreement with County to add the south end of Reach 8 to its South Palm Beach permit for breakwaters*

New structures and existing structures were considered in development of the groin rehabilitation plan. New structures and existing structures are currently being examined by a Technical Advisory Committee to find a solution for shoreline stabilization in The Breakers/Clarke Avenue/Mid-Town area. The County’s Singer Island and South Palm Beach breakwater projects were discontinued. Updated language for this goal could include: **Implement permitted coastal hard structure technology where appropriate.**

- 4. *Review previous Shore Protection Board’s recommendations and conclusions for lessons learned.*

The twelve (12) conclusions, recommendations, and comments provided from the previous SPB in 1996 were reviewed by the current SPB in 2009. This goal has been achieved.

- 5. *Initiate discussion, dialogue and problem solving through a series of guest speakers from government officials, industry experts, environmentalists and other municipalities to obtain real solutions to shore protection that include other municipalities and county. Make recommendations accordingly.*

Through the first 11 SPB meetings in 2009, the SPB heard presentations from 23 guest speakers. This goal has been achieved.

6. *Work with state and Federal agencies and governments to revise laws and regulations so that the Town has realistic options for protecting its shoreline.*

The BMA was signed in September 2013 between the Town, the County, FDEP, and the Florida Fish and Wildlife Conservation Commission. The BMA provides a list of pre-approved projects that can be constructed by the Town to protect its shoreline. Since the BMA was signed, the USACE has committed to work with the Town to more promptly permit projects in the BMA. Although this goal has been achieved, updated language for this goal could include: **Continue to work with state and Federal agencies and governments to implement projects to protect its shoreline.**

7. *Where applicable, cause regulatory agencies to re-designate certain reaches as “Engineered Beach” and “Critically Eroded”, e.g. Reach 1 should be an Engineered Beach, etc.*

FDEP has recognized that the Town’s entire 12.2-mile shoreline is “Critically Eroded”. FEMA cannot accept Reach 1 as an “Engineered Beach” because the sand source is from a Federal navigation project. This goal has been achieved.

8. *Investigate whether seawalls should be replaced in erosion prone areas not currently protected by such as “last resort” property protection.*

The Town has replaced the seawall along North Ocean Boulevard across from the Palm Beach Country Club. The Town is moving forward with the design and engineering to replace the seawall in Mid-Town. This goal has been achieved.

New goals to consider, following input from the SPB at the March 21, 2019 workshop, include:

- **Coastal Vulnerability and Resiliency**
- **Communication**

Please note that once the SPB established their goals, the SPB developed an objectives plan with short-term and long-term solution in order to achieve the goals. Further, the SPB developed a list of project priorities to implement the solutions to their objectives plan. Finally, the SPB summarized goals, objectives, and priorities into nine (9) specific program conclusions and recommendations.

The current SPB members may choose to consider a similar path taken to produce the November 10, 2009 report to Town Council when developing the next 10-year plan.

cc: Jay Boodheshwar, Deputy Town Manager
H. Paul Brazil, P.E., Director of Public Works
Patricia Strayer, P.E., Town Engineer

TOWN OF PALM BEACH

Information for Shore Protection Board Meeting on: April 25, 2019

TO: Shore Protection Board

FROM: Kirk W. Blouin, Town Manager

VIA: Robert Weber, Coastal Program Manager

RE: Coastal Projects Update
Item XII.

DATE: April 18, 2019

STAFF RECOMMENDATION

Town staff requests the Shore Protection Board (SPB) review the attached information and provide any additional input deemed necessary.

GENERAL INFORMATION

Listed below is a brief update of the ongoing activities for the Coastal Management Program. Town staff will provide more details of each item during the SPB meeting. Attached is a GANTT chart that provides milestones for the coastal projects.

Lake Worth Inlet Maintenance Dredging and Sand Forepassing

- The U.S. Army Corps of Engineers (USACE) has informed the Town, as of April 2, that the project is on schedule for a November 1, 2019 construction start.
- Construction is expected to occur in the months of November and December 2019.
- Town staff has obtained the needed easements from adjacent property owners for the USACE to perform the work.
- Sand Forepassing will occur immediately following completion of the inlet maintenance dredging project.
- The Town plans to move approximately 25,000 cubic yards of the USACE-dredged sand further south into Reach 2 between January 2020 and March 1, 2020.

2019 Mid-Town Beach Nourishment

- In order for the project to officially become a Federal project, an agreement must be executed.
- The USACE is expected to provide the Town with a draft project agreement on May 1, 2019.
- Per U.S. Congress, all projects listed within the 2018 Supplemental Bill must be completed by August 2020. The Mid-Town project is listed within the supplemental bill.
- In order for the project to meet the deadline, construction must occur between November 1, 2019 and April 30, 2020.
- According to USACE staff, the project is on schedule for a bid solicitation to occur in the summer once the Town has obtained all necessary perpetual construction easements.

- The project is expected to include a volume on the order of 1 million cubic yards, of which approximately 535,000 cubic yards should also be eligible for FEMA cost-sharing due to hurricanes Matthew and Irma.

2019 Phipps Ocean Park Beach Nourishment

- The project is expected to utilize FEMA funding associated with both hurricanes Matthew and Irma.
- The project will include a volume of approximately 450,000 cubic yards, all of which is eligible for FEMA cost-sharing due to hurricanes Matthew and Irma.
- Reach 8 Dune Restoration is to be constructed concurrently with the Phipps nourishment. Reach 8 Dune Restoration includes a volume on the order of approximately 20,000 cubic yards of sand.
- Federal cost-sharing is expected consistent with Reach 8 dune losses from Hurricane Irma.
- The dunes are to be restored to their condition prior to hurricanes Matthew and Irma.
- The project is to be constructed during the construction window of November 1, 2019 and May 1, 2020.
- Town staff continues to work with the U.S. Army Corps of Engineers so that the bid solicitation for the next Mid-Town project can include language about the Phipps project so that the dredging can be performed by one contractor with the intent to reduce overall mobilization costs.

Reach 8

- On February 28, 2019, the Town was informed by the USACE that they are near completion of their review in order to issue both the Record of Decision and the Federal permit for the Town's preferred project.
- The main outstanding item for the USACE is the State water quality certification (FDEP permit).
- Town Council approved the scope of work on April 9 for a consultant to complete the state permitting process.
- Completion of the state permitting process will include development of a mitigation and monitoring plan, topographic and bathymetric surveys, establishment of an Erosion Control Line, seismic survey for artificial reef siting, artificial reef engineering and design, and other agency coordination efforts.
- Construction funds are not included in the current Town Council-adopted 10-year plan.

Attachments

cc: Jay Boodheshwar, Deputy Town Manager
H. Paul Brazil, P.E., Director of Public Works
Patricia Strayer, P.E., Town Engineer

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors	3, 2017 Aug	Qtr 4, 2017 Sep Oct Nov Dec	Qtr 1, 2018 Jan Feb Mar	Qtr 2, 2018 Apr May Jun	Qtr 3, 2018 Jul Aug Sep	Qtr 4, 2018 Oct Nov Dec	Qtr 1, 2019 Jan Feb Mar	Qtr 2, 2019 Apr May Jun	Qtr 3, 2019 Jul Aug Sep	Qtr 4, 2019 Oct Nov Dec	Qtr 1, 2020 Jan Feb Mar	Qtr 2, 2020 Apr May Jun	Qtr 3, 2020 Jul Aug Sep
1			19-20 Mid-Town Beach Nourishment	131 days	Fri 11/1/19	Fri 5/1/20														
2			FEMA	406 days	Mon 9/11/17	Mon 4/1/19														
3			USACE Agreement / Design Bidding	196 days	Wed 10/31/18	Wed 7/31/19														
4			Construction	131 days	Fri 11/1/19	Fri 5/1/20														
5			19-20 Phipps Ocean Park Beach Nourishment	131 days	Fri 11/1/19	Fri 5/1/20														
6			FEMA	406 days	Mon 9/11/17	Mon 4/1/19														
7			Permitting/Design/Bidding	76 days	Wed 4/17/19	Wed 7/31/19														
8			Construction	131 days	Fri 11/1/19	Fri 5/1/20														
9			2019 USACE Inlet Maintenance Dredging	43 days	Fri 11/1/19	Tue 12/31/19														
10			Construction	43 days	Fri 11/1/19	Tue 12/31/19														
11			2019 Sand Forepassing	110 days	Tue 10/1/19	Sat 2/29/20														
12			Bidding	45 days	Tue 10/1/19	Sat 11/30/19														
13			Construction	44 days	Wed 1/1/20	Sat 2/29/20														
14			Reach 8	285 days	Mon 4/1/19	Fri 5/1/20														
15			Permitting/Design	175 days	Wed 5/1/19	Tue 12/31/19														
16			Construction (Not TC Approved)	131 days	Fri 11/1/19	Fri 5/1/20														
17			Breakers/Clarke/Mid-Town Stabilization	586 days	Fri 2/2/18	Fri 5/1/20														
18			TAC	215 days	Fri 2/2/18	Thu 11/29/18														
19			Permitting/Bidding	154 days	Mon 4/1/19	Thu 10/31/19														
20			Construction (Not TC Approved)	131 days	Fri 11/1/19	Fri 5/1/20														
21			2019 Physical Monitoring	155 days	Mon 7/1/19	Fri 1/31/20														
22			Field Surveys	46 days	Mon 7/1/19	Sat 8/31/19														
23			Reporting	109 days	Tue 9/3/19	Fri 1/31/20														
24			2019 Biological Monitoring	155 days	Mon 7/1/19	Fri 1/31/20														
25			Field Surveys	46 days	Mon 7/1/19	Sat 8/31/19														
26			Reporting	109 days	Tue 9/3/19	Fri 1/31/20														
27			2019 Sea Turtle Monitoring	218 days	Fri 3/1/19	Tue 12/31/19														
28			Monitoring	175 days	Fri 3/1/19	Thu 10/31/19														
29			Reporting	43 days	Fri 11/1/19	Tue 12/31/19														
30			2019 Beach Tilling/Escarpment Removal	179 days	Mon 2/25/19	Thu 10/31/19														
31			Beach Tilling	4 days	Mon 2/25/19	Thu 2/28/19														
32			Escarpment Removal	175 days	Fri 3/1/19	Thu 10/31/19														

Project: Coastal Project Update Date: Thu 4/18/19	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			

Page 1

TOWN OF PALM BEACH

Information for Shore Protection Board Meeting on: April 25, 2019

TO: Shore Protection Board

FROM: Kirk W. Blouin, Town Manager

VIA: Robert Weber, Coastal Program Manager

RE: Scheduling of Next SPB Meetings
Item XIII.

DATE: April 18, 2019

STAFF RECOMMENDATION

Town staff requests that the Shore Protection Board (SPB) review the attached information and provides direction deemed necessary.

GENERAL INFORMATION

During the November 29, 2018 meeting, the SPB agreed to reduce the number of SPB meetings to allow staff more time to work on project implementation. Regular SPB meetings were to be held in the months of January, April, and November to review the annual sediment budget, recommend an annual budget, and develop an annual report to Town Council, respectively. The last scheduled meeting for 2019 is to be held on November 21. Should Town staff determine that another meeting be necessary to implement elements of the approved program, staff will work with the SPB chairperson for scheduling and agenda preparation.

During the March 21, 2019 workshop, a SPB member expressed that some reformatting of the SPB meeting agendas should be considered to perhaps make the meetings more efficient and effective. Due to time constraints, the item was tabled for discussion at a future SPB meeting. Any suggested changes in the agenda will be considered for the November 21, 2019 meeting and beyond.

cc: Jay Boodheshwar, Deputy Town Manager
H. Paul Brazil, P.E., Director of Public Works
Patricia Strayer, P.E., Town Engineer