

MEMORANDUM

TO: Tom Harmer, Town Manager
FROM: Isaac Brownman, Public Works Director
DATE: June 11, 2018
SUBJECT: Canal Dredging Update

Recommended Action

None, informational only.

Background Canal Dredging

At the April 17, 2017, Regular Workshop Meeting the Town Commission held discussions regarding a canal dredging maintenance project. Dr. Cliff Truitt, P.E., and Ms. Jenna Phillips, MS, of Taylor Engineering presented the results of the Canal Dredging Feasibility Study and recommended actions for permitting and moving forward to construction in the later part of 2018.

Discussions centered on future optimal/desired navigation depth of canals that would trigger different types of permitting requirements from State and Federal regulatory agencies. Other salient issues discussed were protection of natural habitats and impacts to environmentally protected seagrasses.

Based on Town Manager recommendation, the Town Commission provided direction as follows:

- Focus on areas presented as “red” with their related “yellow” areas for 16 preliminary canals. Assume that the minimum ‘threshold’ navigable depth for purposes of defining red and yellow areas is three (3) feet below Mean Lower Low Water (MLLW) and dredge to depth of previous permits or exemptions.
- Develop cost estimates.
 - Develop permitting requirements, mitigation issues and costs, disposal, and beneficial use of materials.
- Use dredged material if beach compatible from Canal 1A, for beach front adjacent to Greer Island spit.

Canal Dredging Update

The following scheduled items of the program are:

- Comprehensive bathymetric survey of priority (red and related yellow) canals – completed Fall 2017.
- Verify limits of seagrass impacts – completed Fall 2017.
- Preliminary design and permitting – Spring / Summer 2018.
- FDEP Pre-Application held 4-5-18
 - Remove canals 31D and 33A from project due to seagrass impacts.
 - Need consent of use letters for Dredge Material Management sites.
 - FDOT and Bay Isles Association.

- Mitigate approximately 1.8 acres of seagrass impacts in 8 of 14 canals.
- Final design and permit applications and regulatory coordination – June 2018
 - Include USACE application (pending USACE response for pre-application meeting).
- Final design – Fall 2018
- Regulatory approval – Winter 2018 (agency review dependent)
- Construction timeframe – Spring 2019

Separate permit application for inclusion of the Greer Island (Canal 1A) eastern extension of the sand spit, design, permitting, and dredging / sand placement will be coordinated with the North End Stabilization project progression. Surveys of spit and conceptual design have been conducted.

Ms. Jenna Phillips, MS, and Dr. Cliff Truitt, P.E., Taylor Engineering, will be present for questions/ discussion.



CANAL DREDGING PROJECT UPDATE

REGULAR WORKSHOP

JUNE 18, 2018



- Review of Project Background
 - General Definition of scope
 - Red / Yellow areas = 3 feet below MLLW
 - Navigable Depth
- Update on overall project status to date

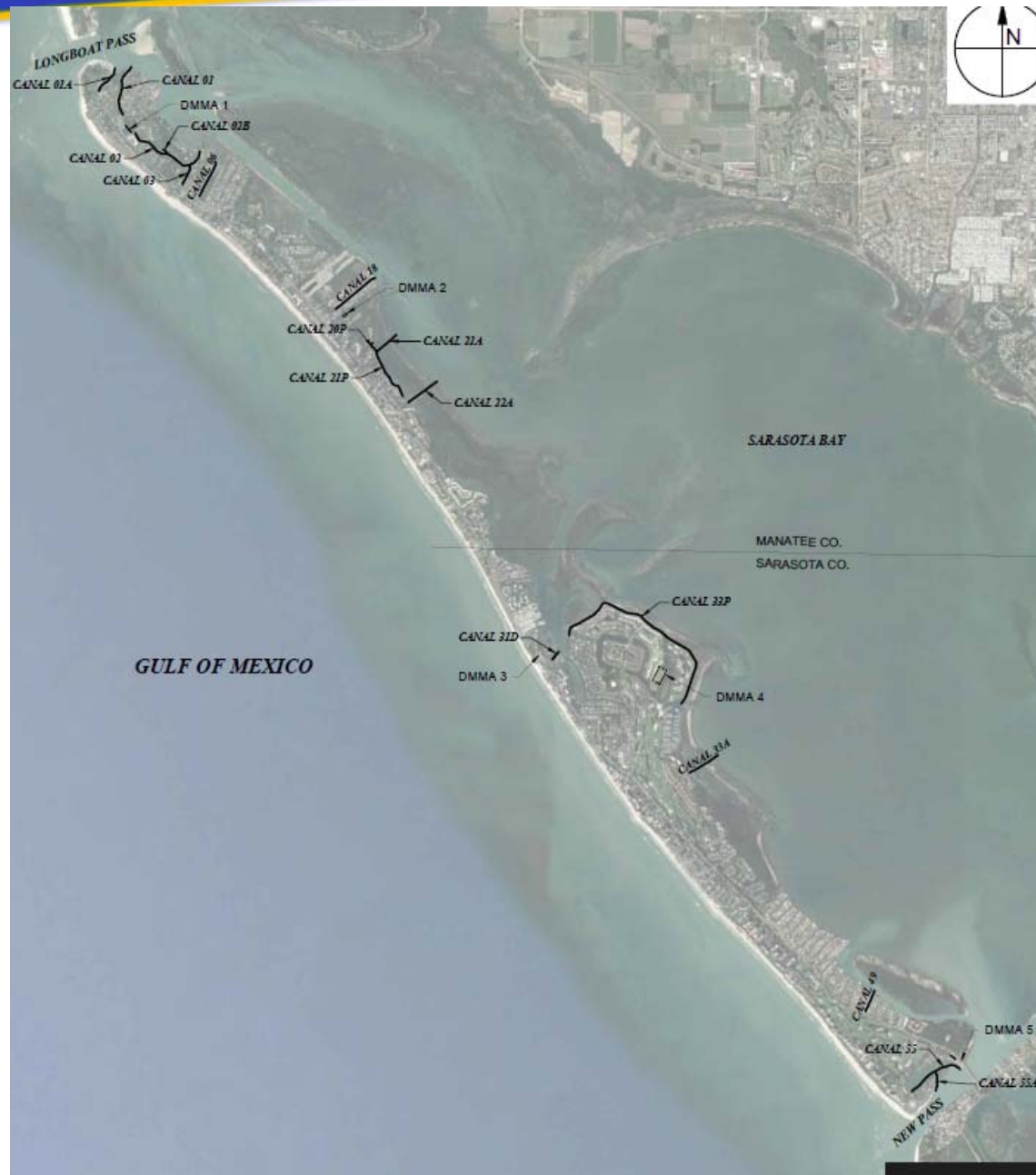


Conceptual Design – Estimating Restricted Limits





TOWN OF LONGBOAT KEY



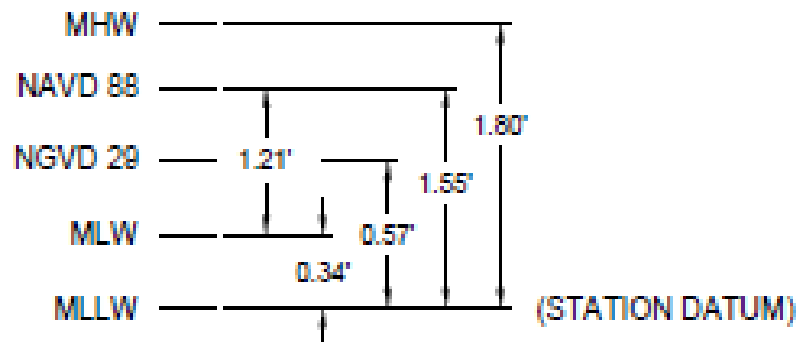


GENERAL NOTES:

1. ELEVATIONS REFERENCE MEAN LOW WATER (MLW).
2. SURVEY BY HYATT SURVEY INC, AUGUST 2017
3. ALL CUTS PROPOSED TO ELEVATION -5' MLW UNLESS OTHERWISE INDICATED
4. ALL DREDGED MATERIAL MANAGEMENT AREAS (DMMAS) WILL BE USED AS TEMPORARY TRANSFER SITES. DEWATERED MATERIAL WILL BE DISPOSED OF OFF SITE

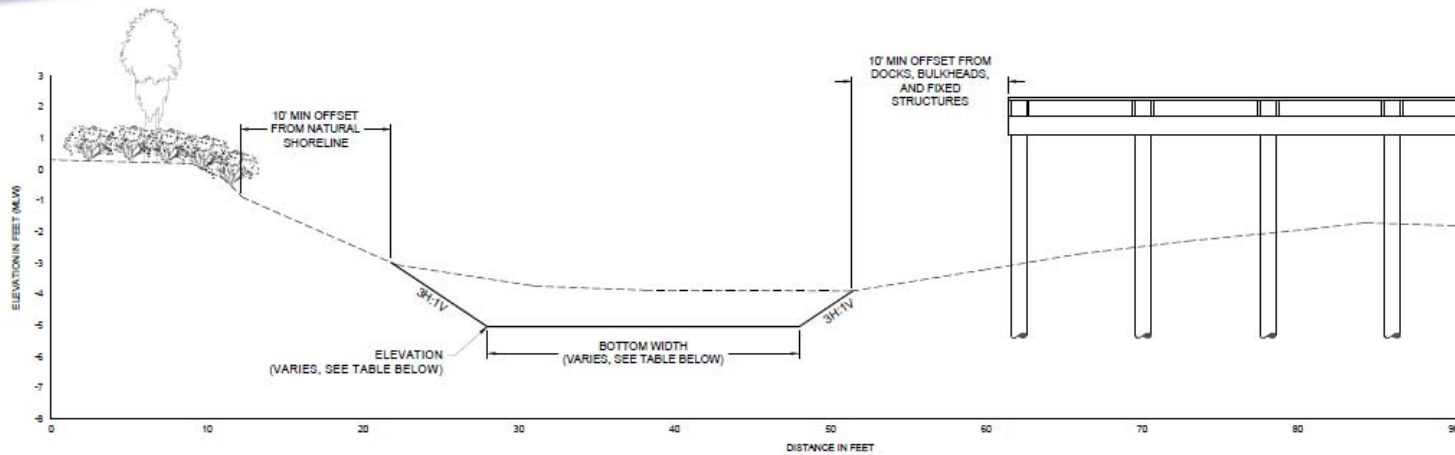
TIDAL DATUM REFERENCE (NOAA CORTEZ STATION 8726217):

NOTE: 0 NAVD-88 = +1.21 MLW





TOWN OF LONGBOAT KEY



TYPICAL CANAL DREDGING SECTION
NOT TO SCALE

REQUIRED DREDGING TABLE

CANAL	SEGMENT	STATION START	STATION END	BOTTOM WIDTH	ELEVATION (MLW)	CUT VOLUME (CY)	SEE SHEET
CANAL 01	1	1+15	1+84	20	-4.2	64	C-9
CANAL 01	2	2+50	5+90	20	-4.2	357	C-9
CANAL 01	3	6+78	8+59	20	-4.2	36	C-9
CANAL 01	4	9+29	11+44	20	-4.2	21	C-9
CANAL 01A	1	0+72	2+53	20	-5.0	611	C-8
CANAL 01A	2	5+44	10+99	10	-5.0	712	C-8
CANAL 02	1	27+44	28+32	30	-5.0	1324	C-10
CANAL 02B	1	0+48	1+79	30	-5.0	280	C-10
CANAL 03	1	1+23	8+50	0	-5.0	681	C-11
CANAL 06	1	6+41	15+37	6	-5.0	752	C-12
CANAL 18	1	0+00	3+00	4	-5.0	157	C-13
CANAL 18	2	3+00	20+01	6	-5.0	2175	C-13
CANAL 20P	1	1+61	2+21	15	-5.0	74	C-14
CANAL 20P	2	2+21	3+53	0	-3.5	33	C-14
CANAL 20P	3	3+53	4+51	15	-5.0	128	C-14
CANAL 21A	1	1+40	3+39	20	-5.0	325	C-14
CANAL 21A	2	7+40	9+88	20	-5.0	399	C-14
CANAL 21P	1	1+07	9+44	10	-5.0	325	C-15
CANAL 21P	2	10+84	13+28	10	-5.0	399	C-15
CANAL 21P	3	16+16	16+70	10	-5.0	1822	C-15
CANAL 21P	4	16+70	17+44	0	-5.0	344	C-15
CANAL 21P	5	17+44	18+72	10	-5.0	52	C-15
CANAL 22A	1	0+25	12+67	15	-5.0	70	C-16
CANAL 32P	1	45+15	51+56	20	-5.0	219	C-17
CANAL 32P	2	34+55	57+99	20	-5.0	2047	C-17
CANAL 49	1	6+00	8+94	20	-5.0	1153	C-17
CANAL 55	1	1+01	2+99	15	-5.0	508	C-18
CANAL 55A	1	1+99	6+52	2	-5.0	182	C-18
TOTAL						15249	



- Results of FDEP Permit Pre-Application Meeting
 - Seagrass impacts and mitigation requirements
 - Navigable Depths, permit requirements or exemptions
 - Removal of two canals



Dock on the Bay

Island Court

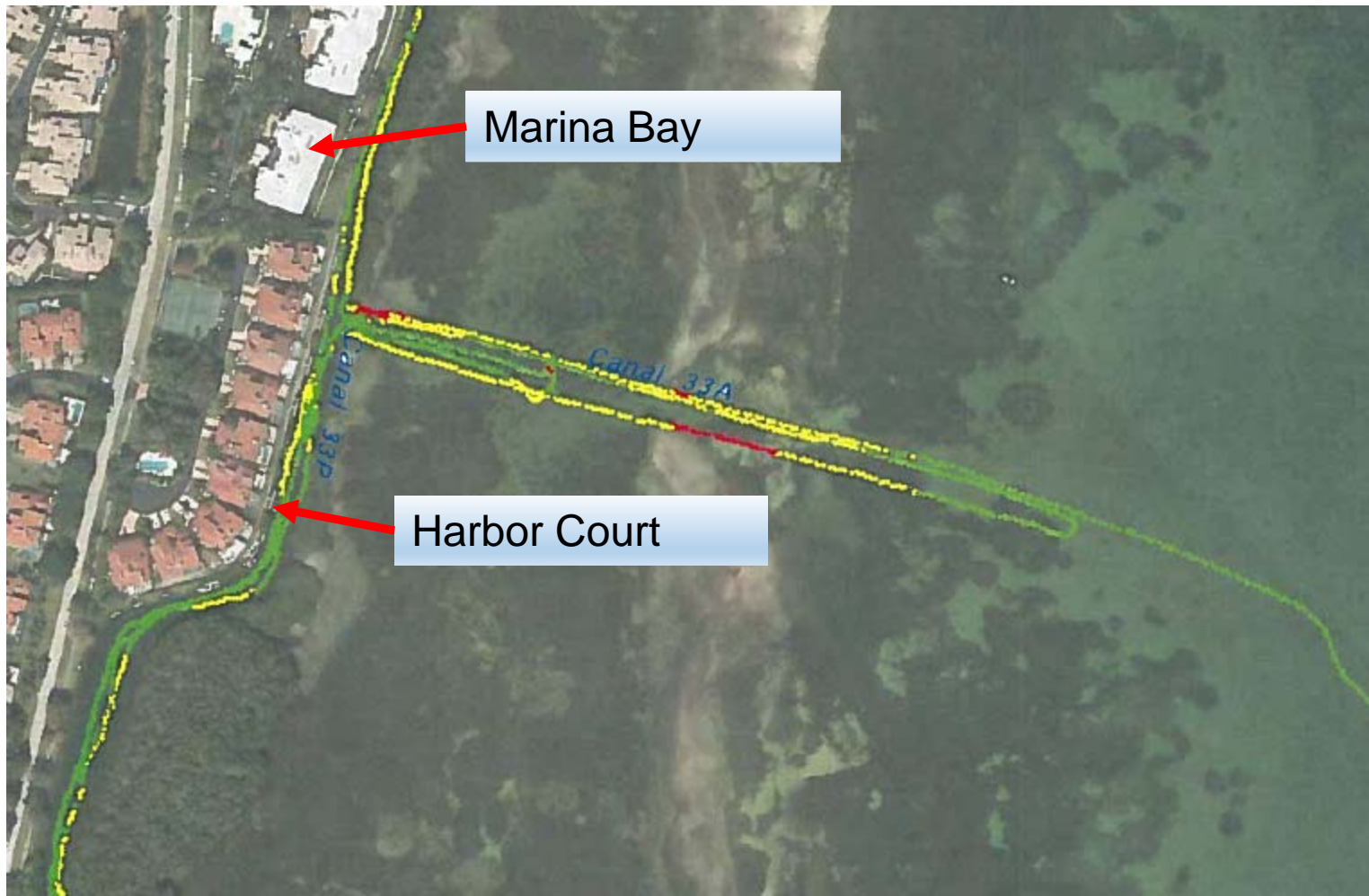
Longboat Arms







Canal 33A







CANAL DREDGING PROJECT UPDATE

Questions?



End of Agenda Item