



**Re-Engineering a Resort Shoreline:
Half Moon, Jamaica**

Kevin R. Bodge, PhD, PE

Olsen Associates, Inc.
Jacksonville, Florida





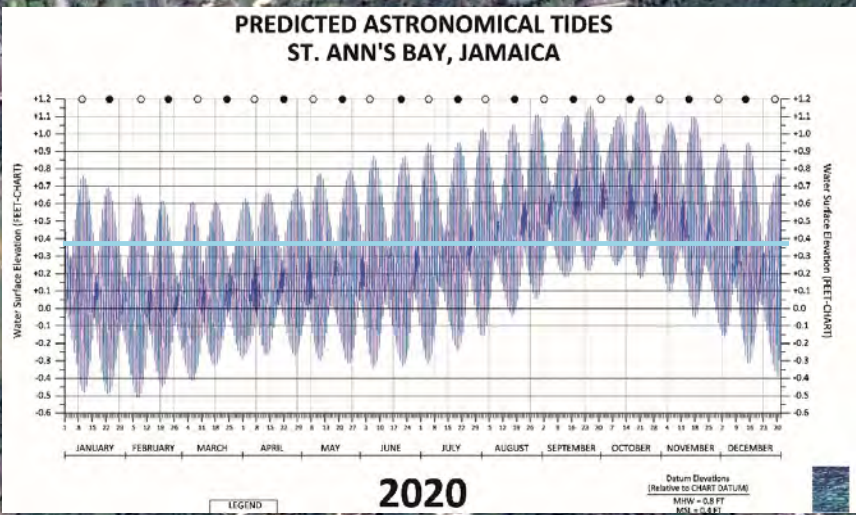
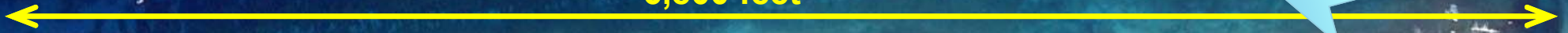
N-NW storm waves

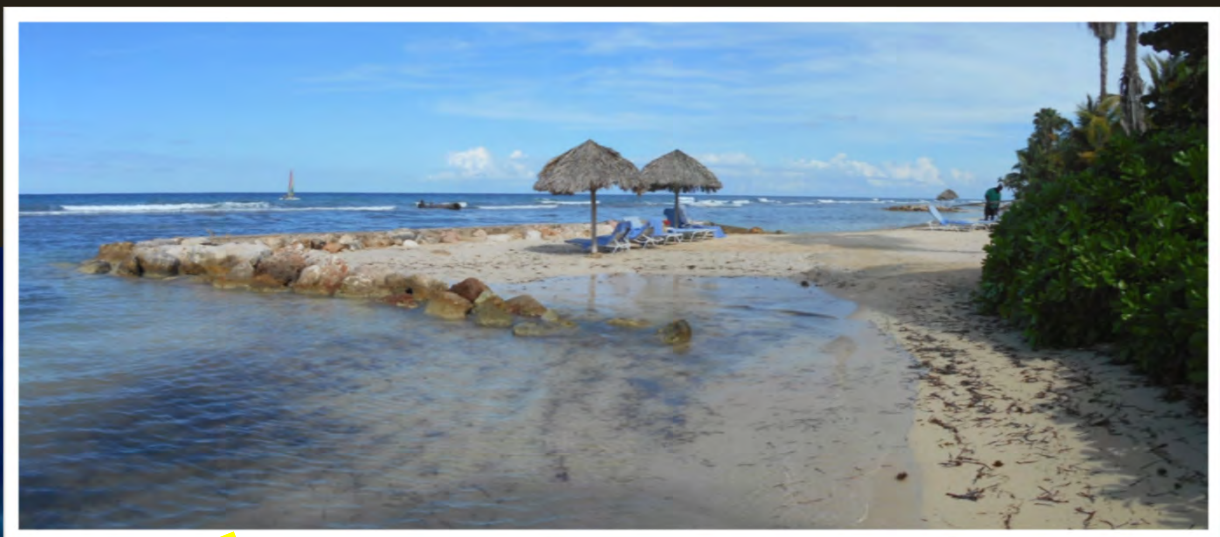


Prevailing Winds, Seas, and Current



6,800 feet

















2002



Low, man-built reef

Extreme
Low Tide

Google Earth



2014

- Eroded beach; no continuous shoreline.
- Non-functional groins & breakwaters; active seawalls.
- Degraded dolphin swim area.
- No connection (path) along the oceanfront.





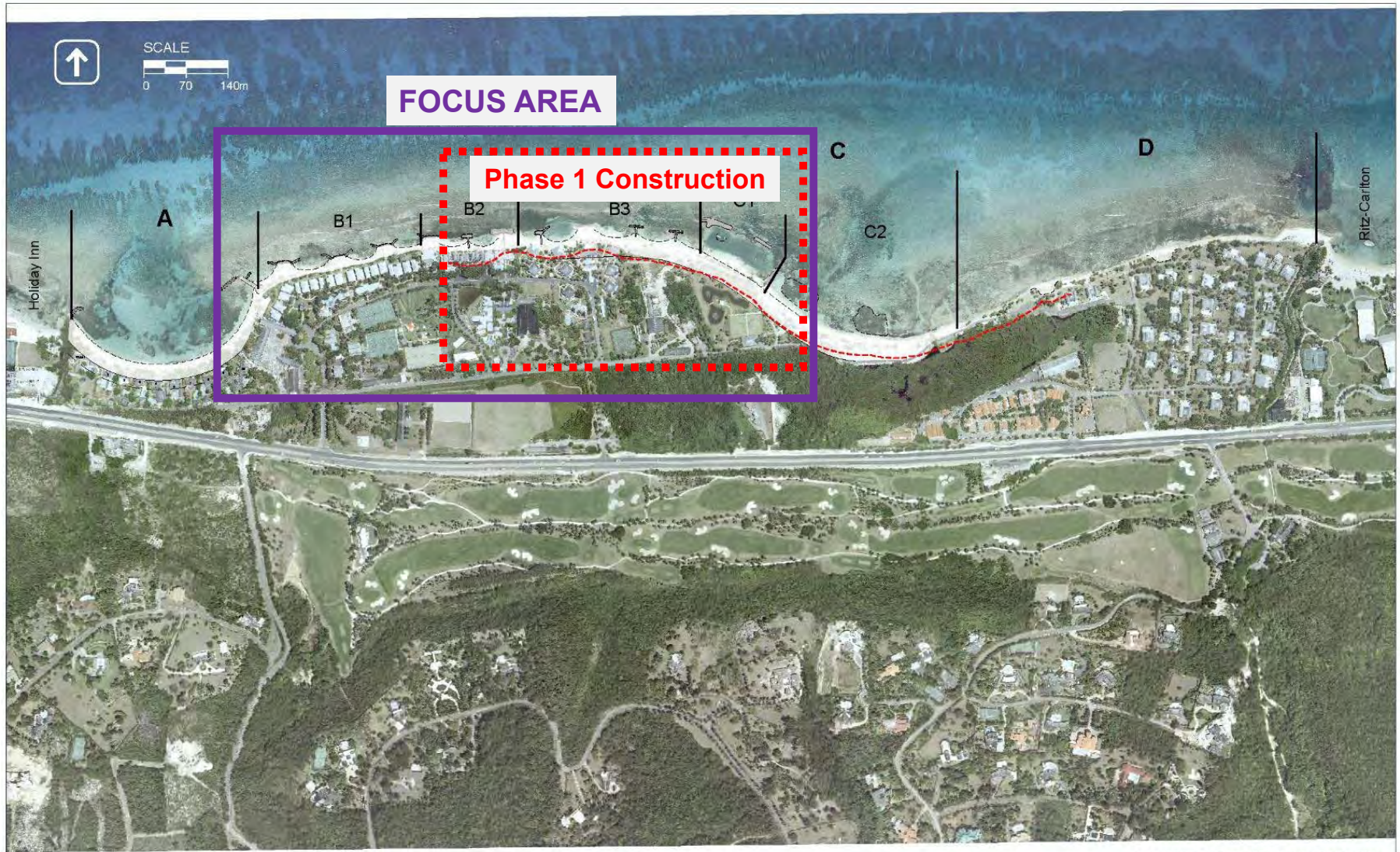
CONCEPT PLAN, HALF MOON, 29 DEC 2014



SCALE
0 70 140m

FOCUS AREA

Phase 1 Construction





SCALE
0 15 30m

PHOTOGRAPHY: 2013
GRID COORDINATES: UTM-METRIC-ZONE 18

PLACE ROCK RIP-RAP ALONG BOTH SIDES OF QUAY (120 ± FT x 2)
EXISTING PIER (QUAY) & GAZEBO
CONSTRUCT ROCK BREAKWATER/SPUR (100 ± FT)

REMOVE (50')



BEACH RENOURISHMENT, TYP.

DESIGN MLW SHORELINE, TYP.



CONSTRUCT ROCK SPUR GROIN, TYP. (35' TO 50', VARIES)



HIBISCUS



SCALE
0 15 30m

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GRID COORDINATES: UTM-METRIC-ZONE 18

PLACE ROCK RIP-RAP ALONG BOTH SIDES OF QUAY (120 ± FT x 2)
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REMOVE (50')

A1
A2
AE1
A

BEACH RENOURISHMENT, TYP.

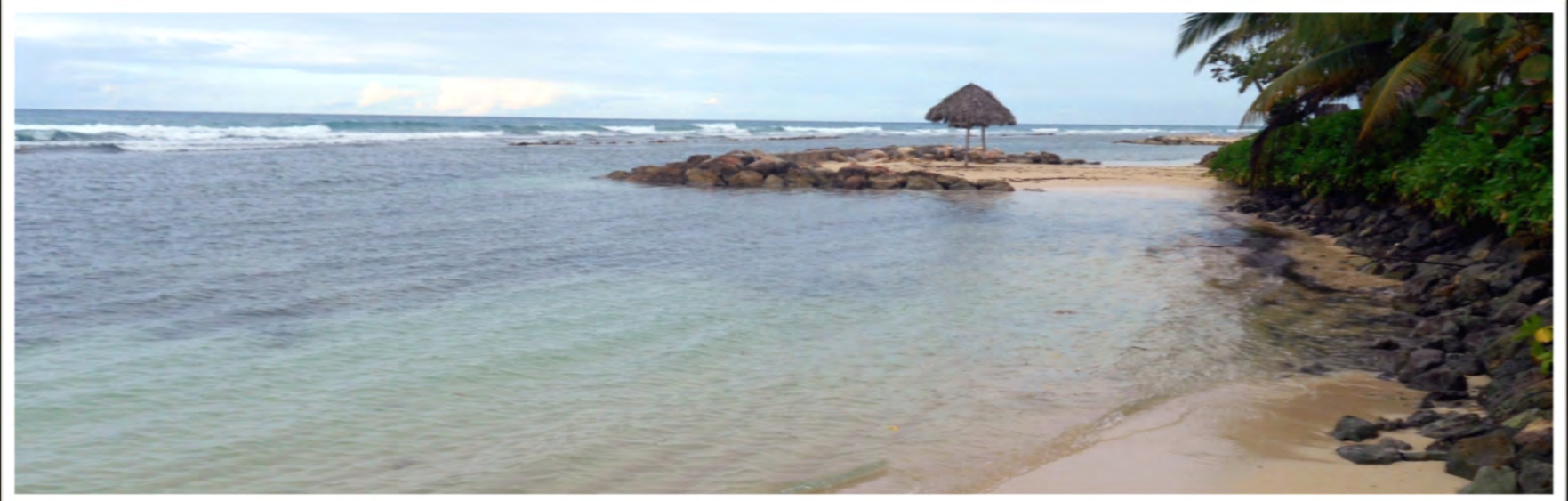
DESIGN MLW SHORELINE, TYP.

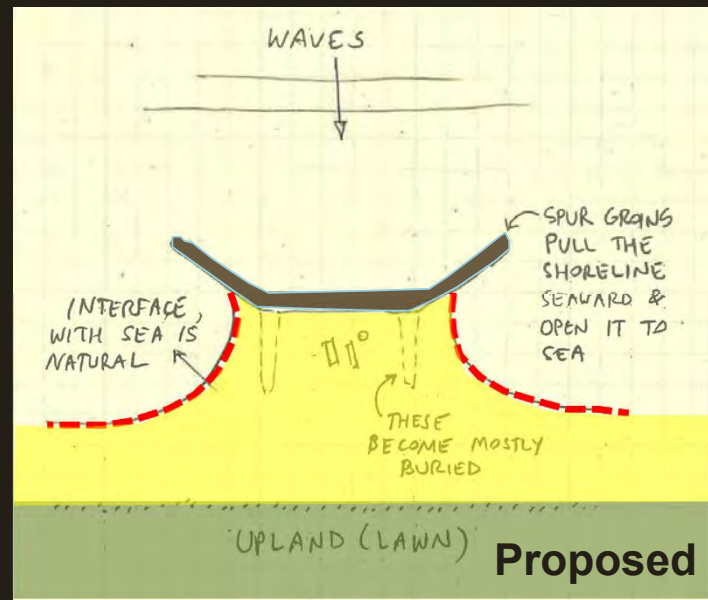
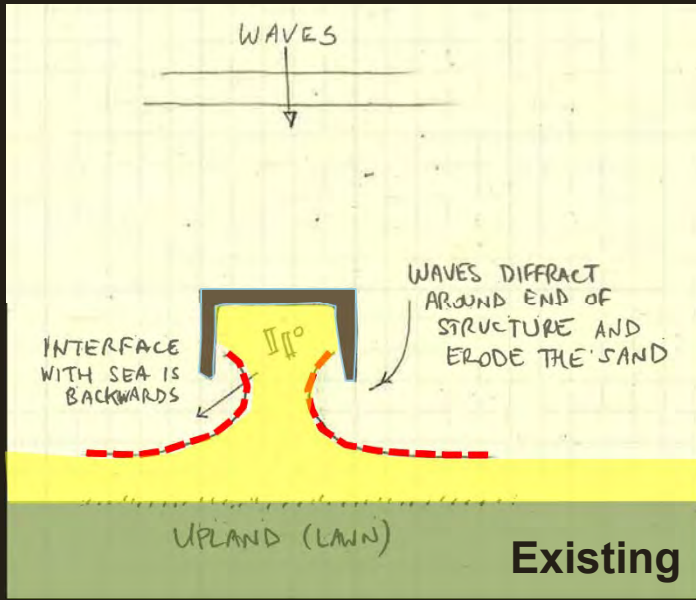
B1
B2
B

HIBISCUS

CONSTRUCT ROCK SPUR GROIN, TYP. (35' TO 50', VARIES)

C1
C2
C
D1
D2
D



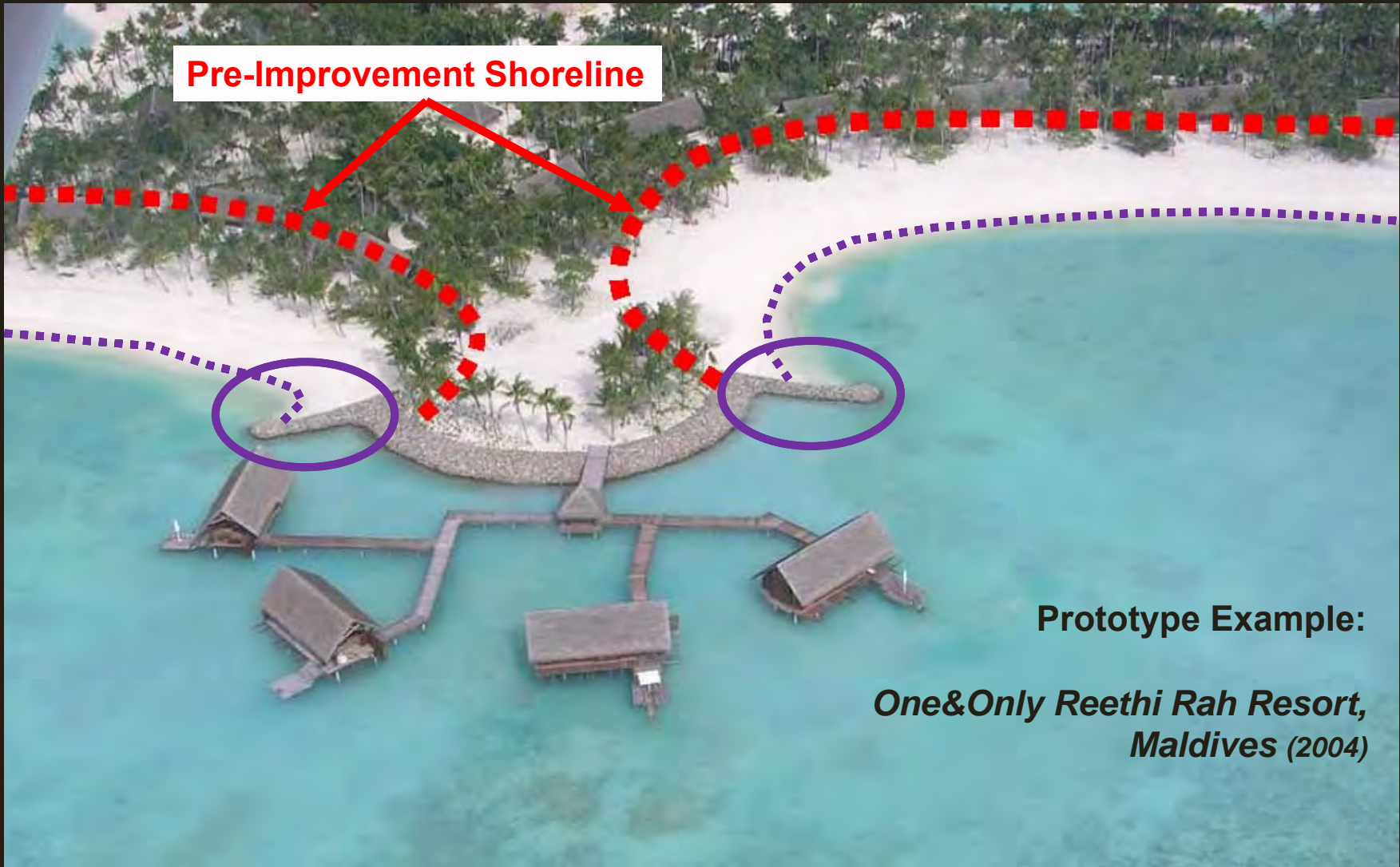




Pre-Improvement Shoreline

Prototype Example:

***One&Only Reethi Rah Resort,
Maldives (2004)***



Pre-Improvement Shoreline

Prototype Example:

***One&Only Reethi Rah Resort,
Maldives (2004)***



SCALE



PHOTOGRAPHY: 2013

GRID COORDINATES: UTM-METRIC-ZONE 18



CONSTRUCT
LOW-CRESTED
ROCK STEM
(55' ±)

EXISTING SPA
CABANAS (2)

ADD ROCK
SPUR
(35' ±)

CONSTRUCT
LOW-CRESTED
ROCK STEM
(55' ±)

CONSTRUCT
T-HEAD GROIN

REMOVE, TYP.
(6 STRUCTURES)

CONSTRUCT
T-HEAD GROIN

ROYAL COURT

OLEANDER

ROYAL COURT

CUT-IN LANDWARD
EDGE OF SAND BEACH

**Recommended max
limit of structures**



SCALE



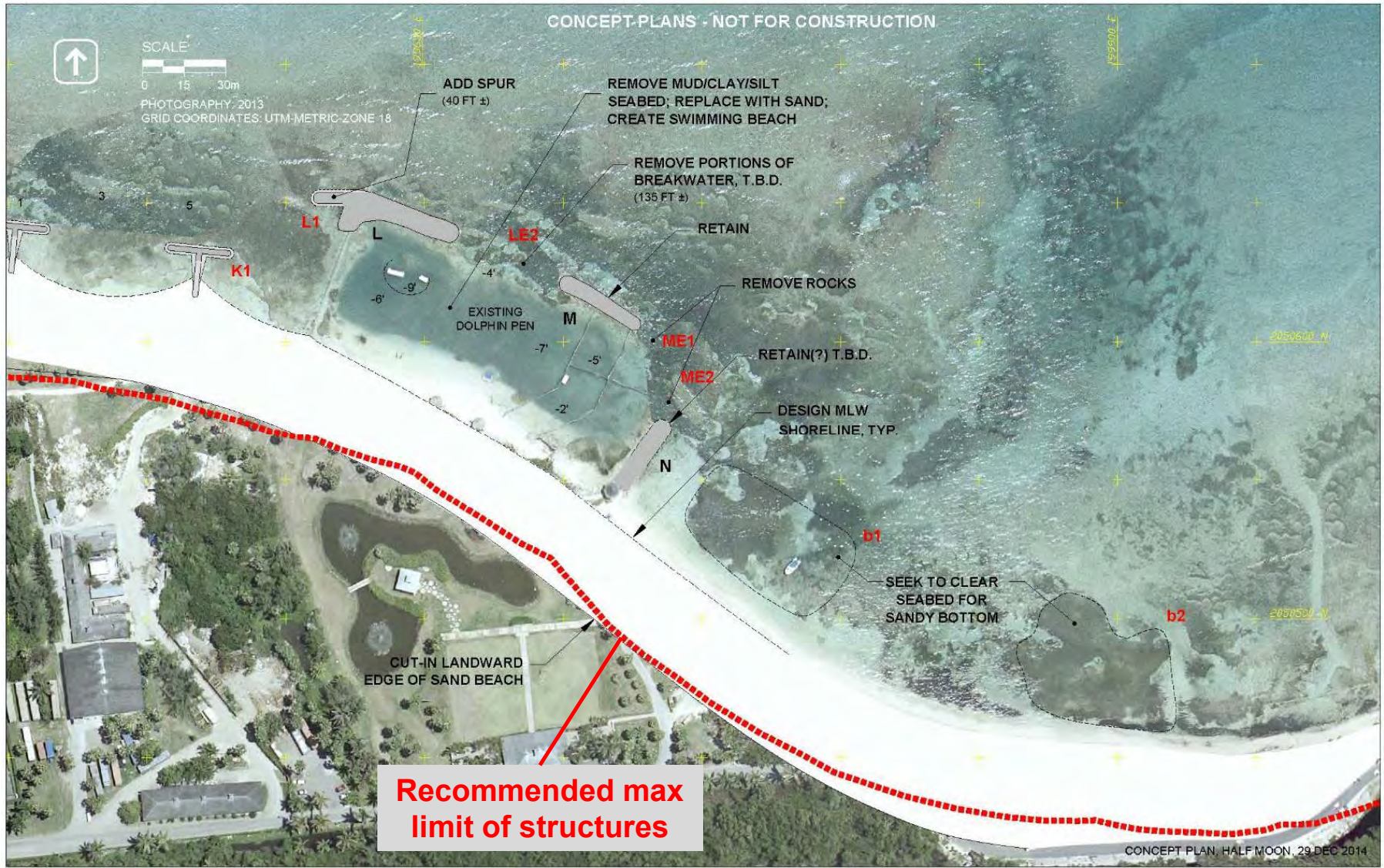
PHOTOGRAPHY: 2013

GRID COORDINATES: UTM-METRIC-ZONE 18



Recommended max limit of structures





Key Features:

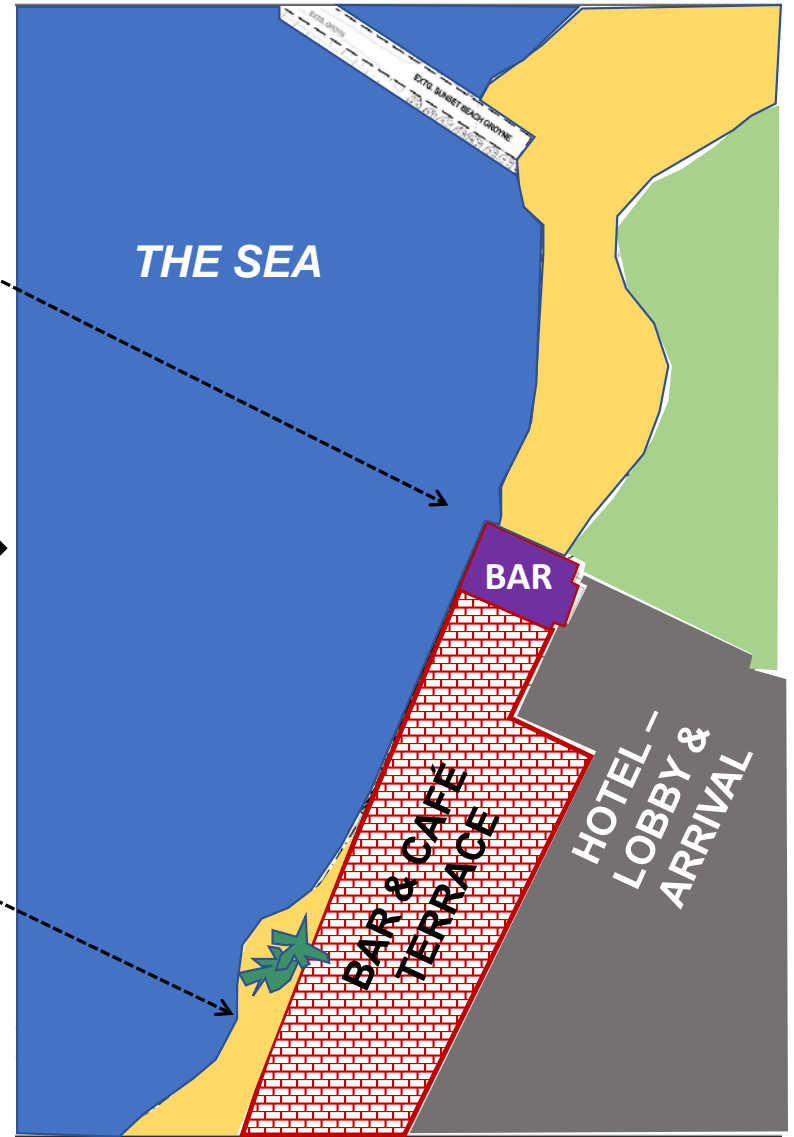
- Demolish oceanfront buildings & seawalls;
- Re-build landward.
- Re-configure coastal structures; add beach fill
- Keep existing shoreline location;
- Expand beach into upland.

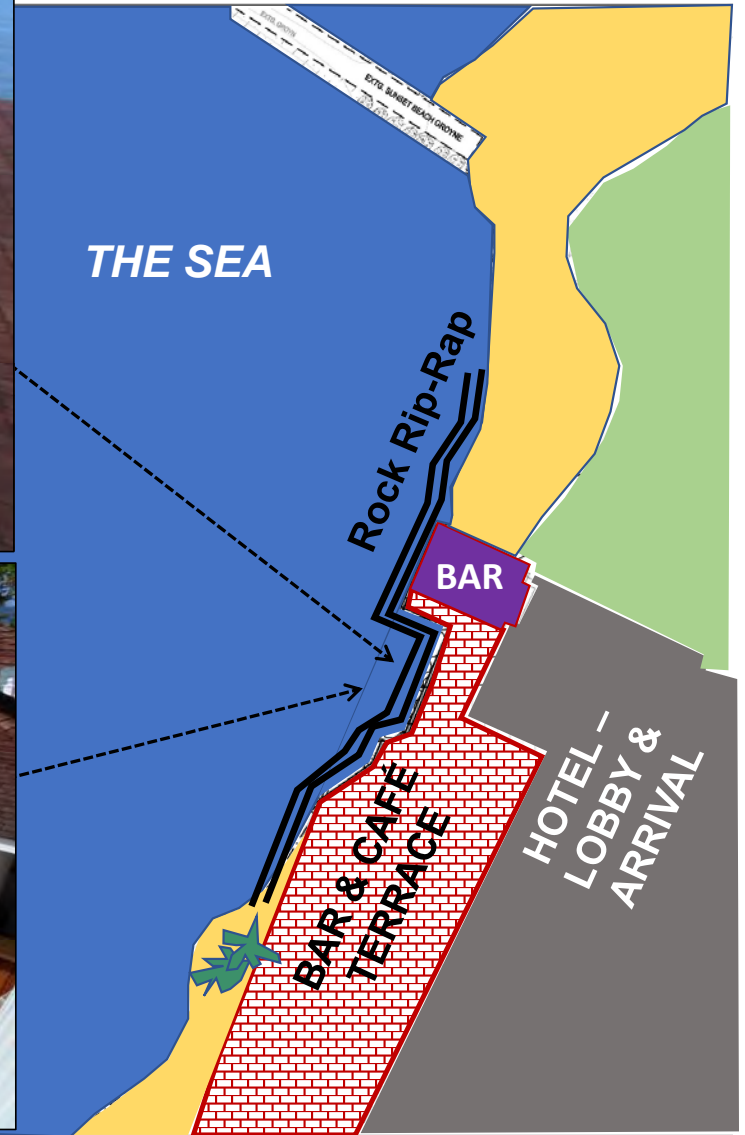
- Connect shorefront with a continuous promenade.

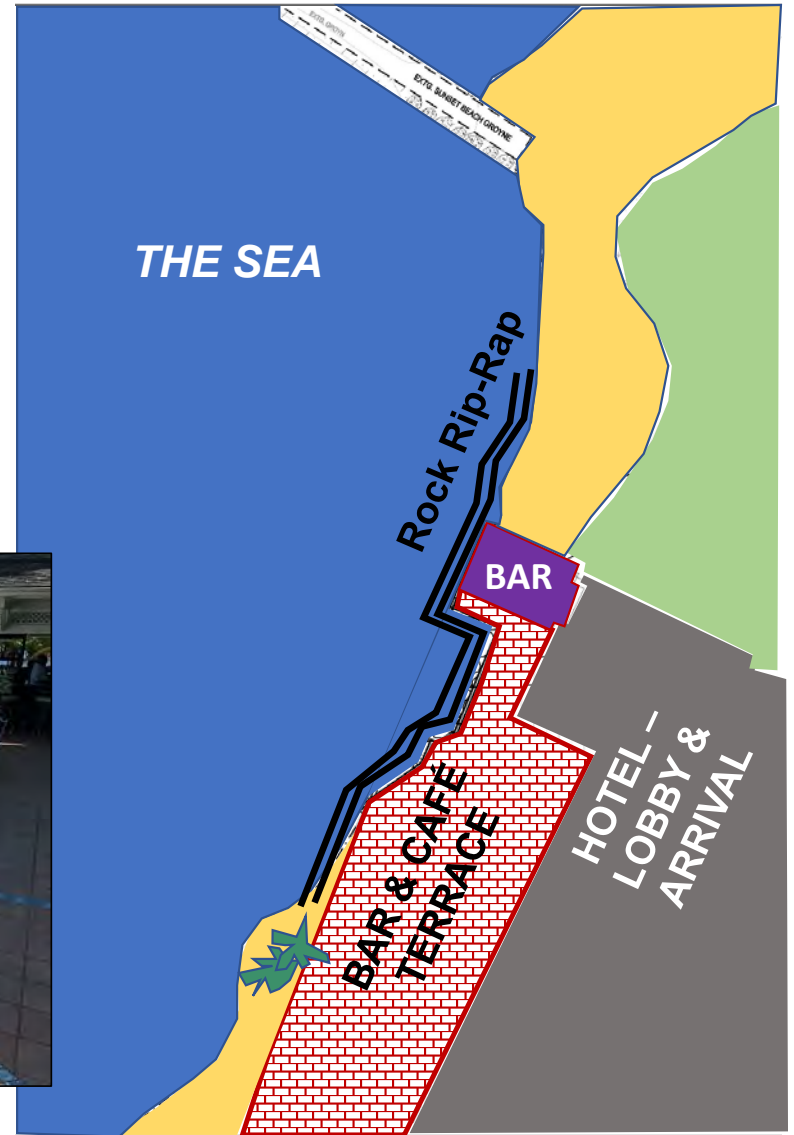
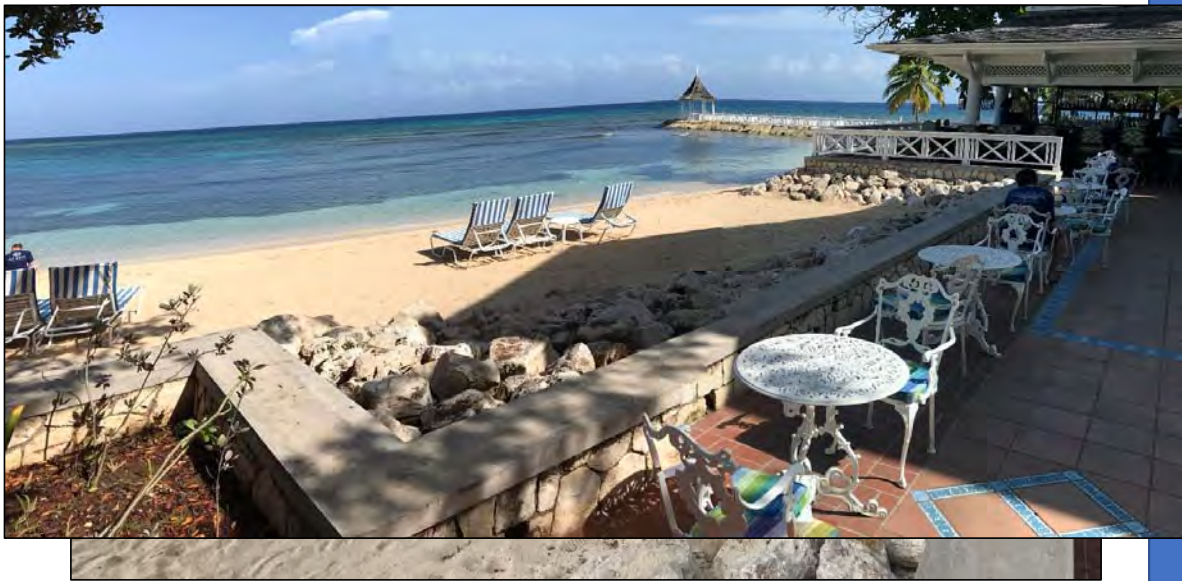
- Raise the upland site elevation by 4+ ft;
- Raise bottom floor elevations.

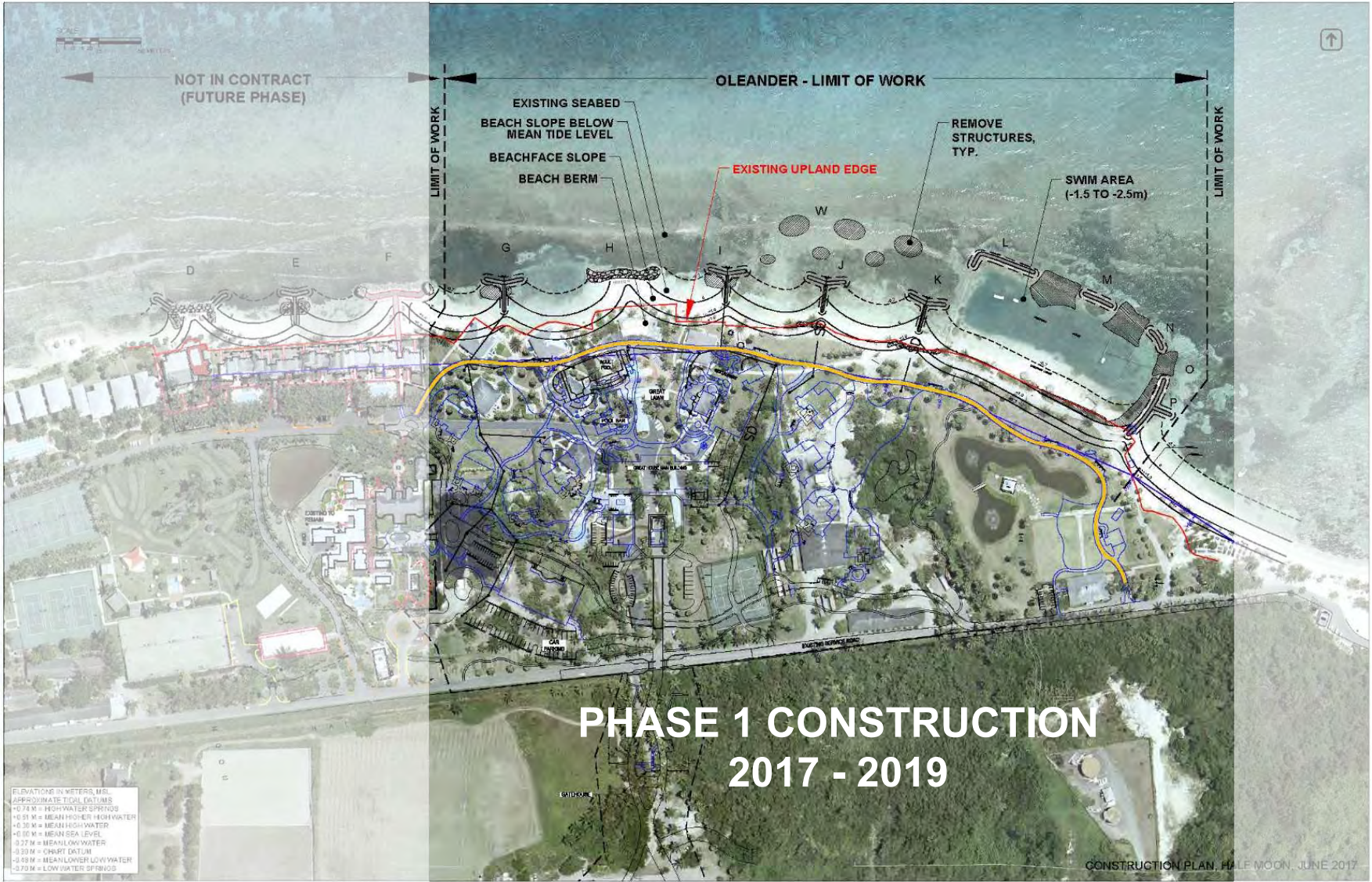
- Modify stormwater; route overflow pipes through groins.











NOT IN CONTRACT
(FUTURE PHASE)

OLEANDER - LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

EXISTING SEABED
BEACH SLOPE BELOW
MEAN TIDE LEVEL
BEACHFACE SLOPE
BEACH BERM

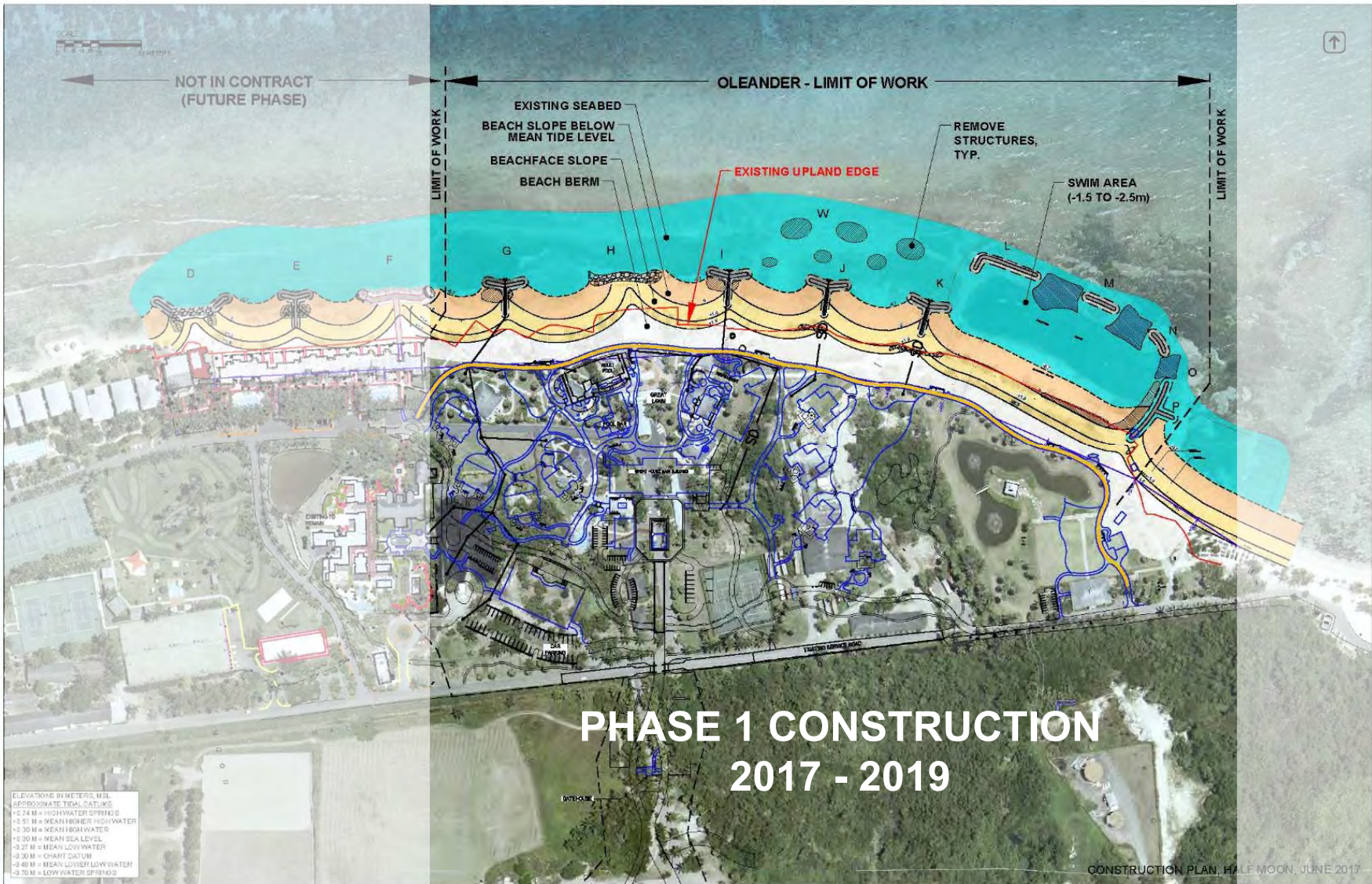
EXISTING UPLAND EDGE

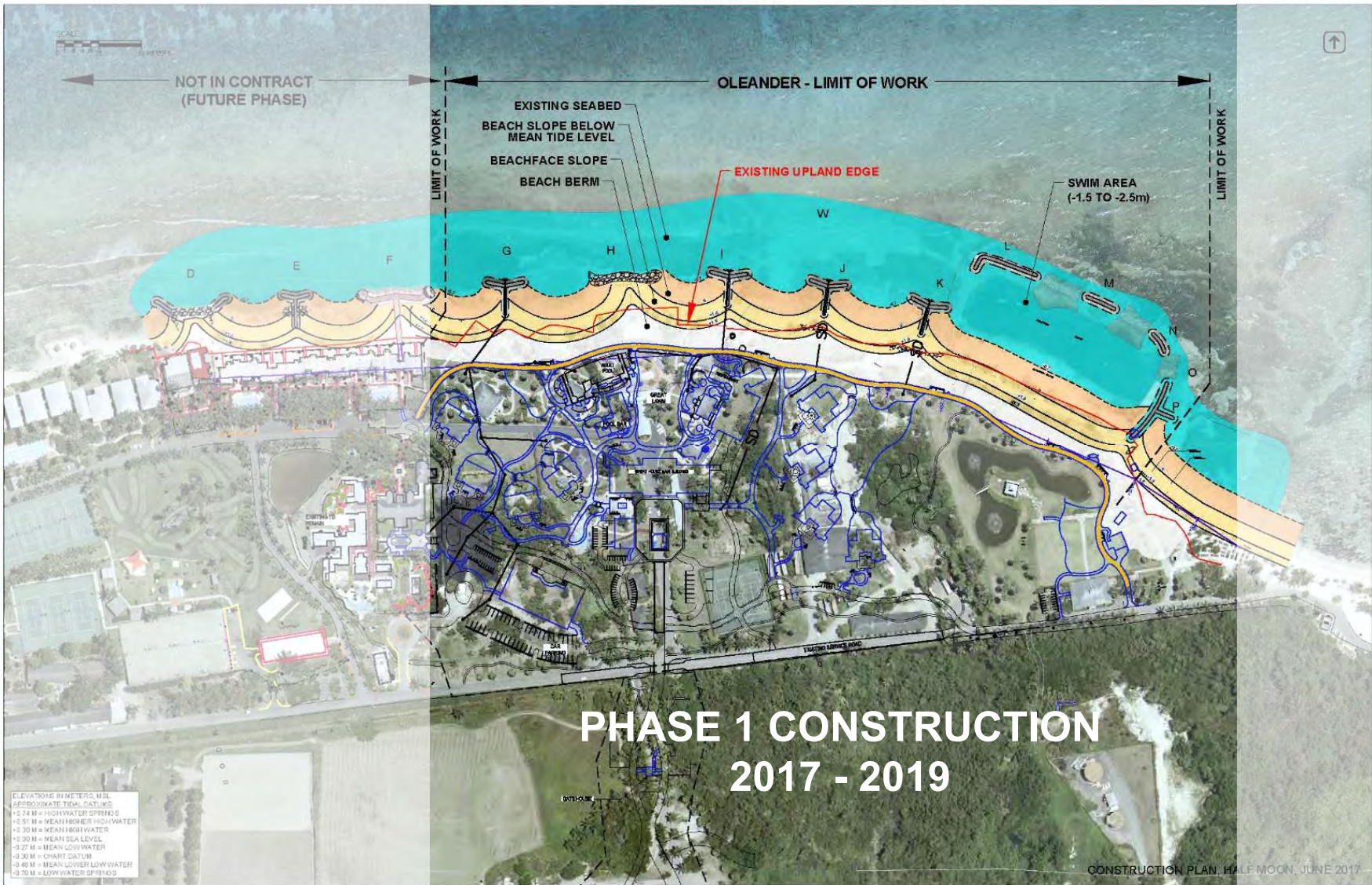
REMOVE
STRUCTURES,
TYP.

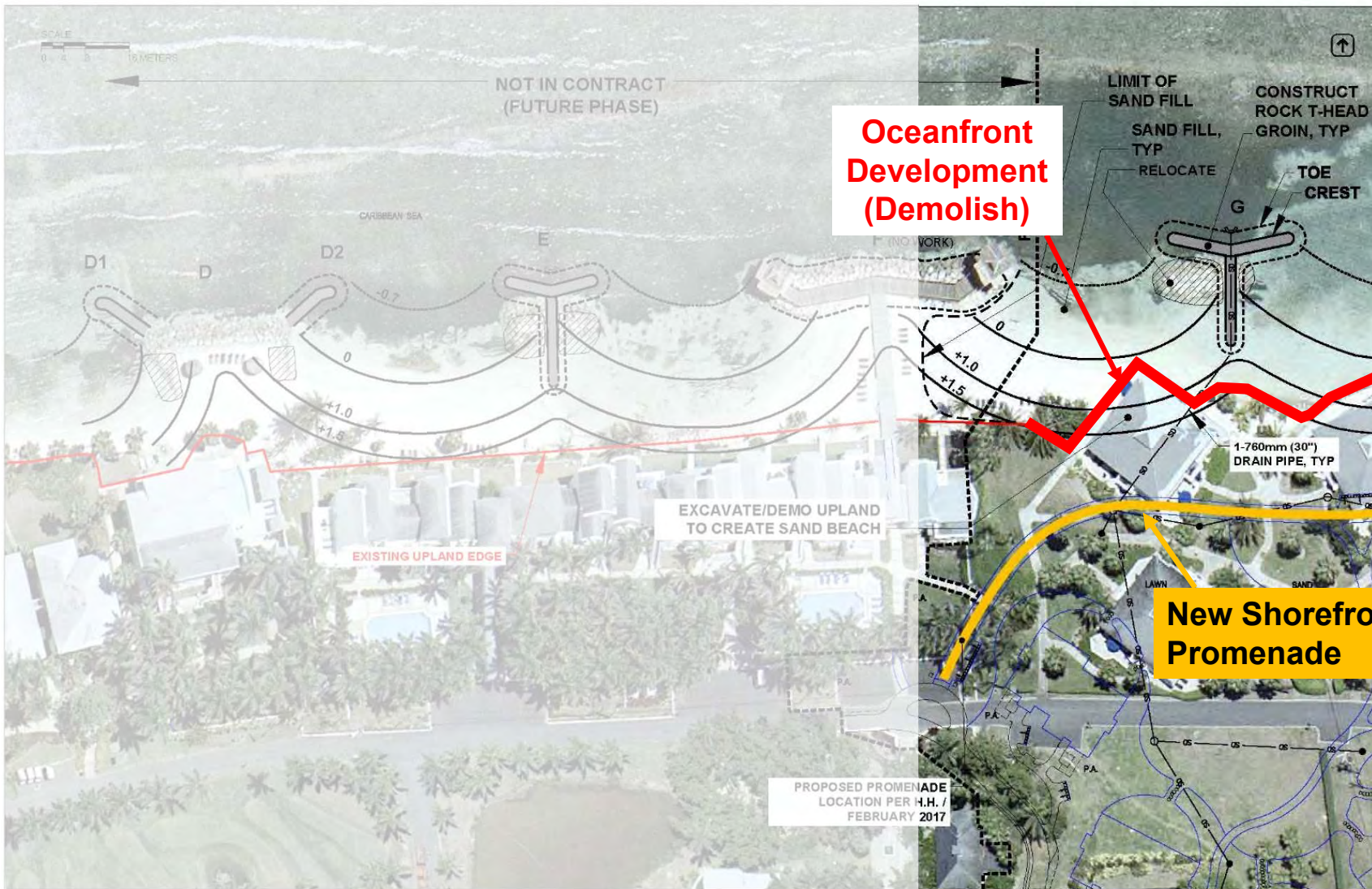
SWIM AREA
(-1.5 TO -2.5m)

PHASE 1 CONSTRUCTION 2017 - 2019

ELEVATIONS IN METERS, MSL
APPROXIMATE TIDAL DATUMS
+0.74 M = HIGH WATER SPRINGS
+0.51 M = MEAN HIGHER HIGH WATER
+0.30 M = MEAN HIGH WATER
+0.00 M = MEAN SEA LEVEL
-0.27 M = MEAN LOW WATER
-0.50 M = CHART DATUM
-0.59 M = MEAN LOWER LOW WATER
-0.70 M = LOW WATER SPRINGS



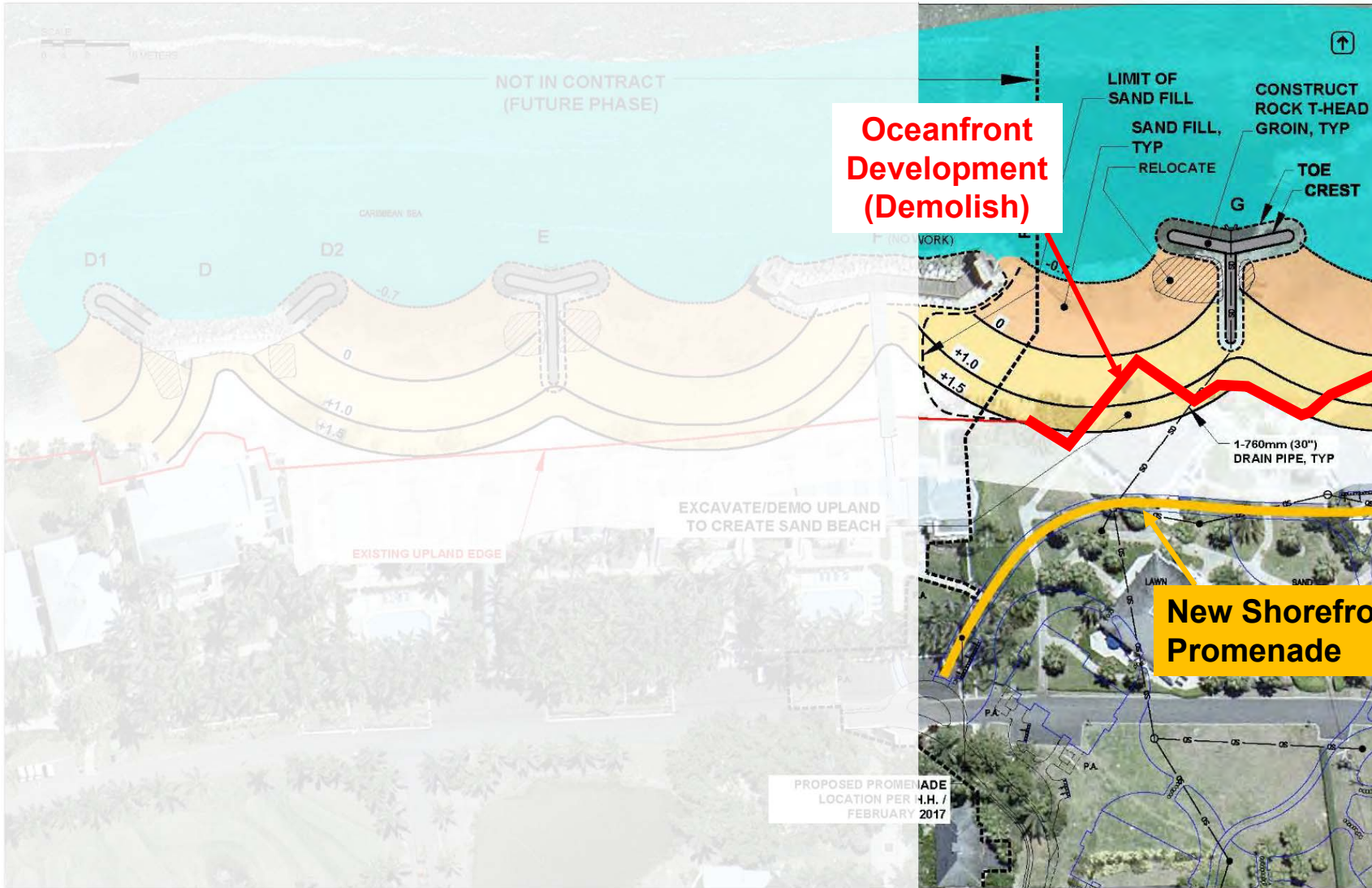




**Oceanfront
Development
(Demolish)**

**New Shorefront
Promenade**

**Phase 1
Construction:
West End**

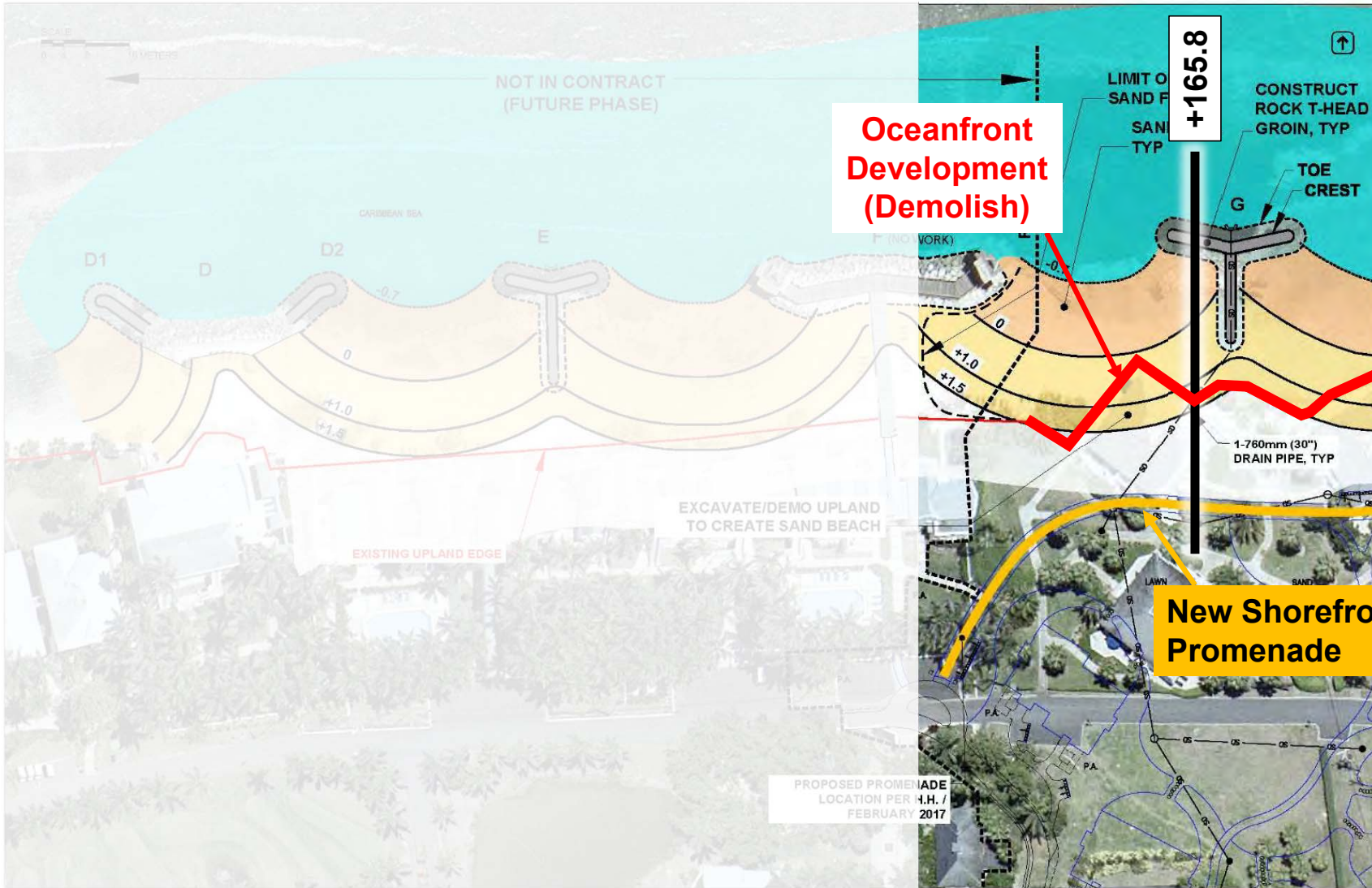


**Oceanfront
Development
(Demolish)**

**Phase 1
Construction:
West End**

**New Shorefront
Promenade**

PROPOSED PROMENADE
LOCATION PER H.H. /
FEBRUARY 2017



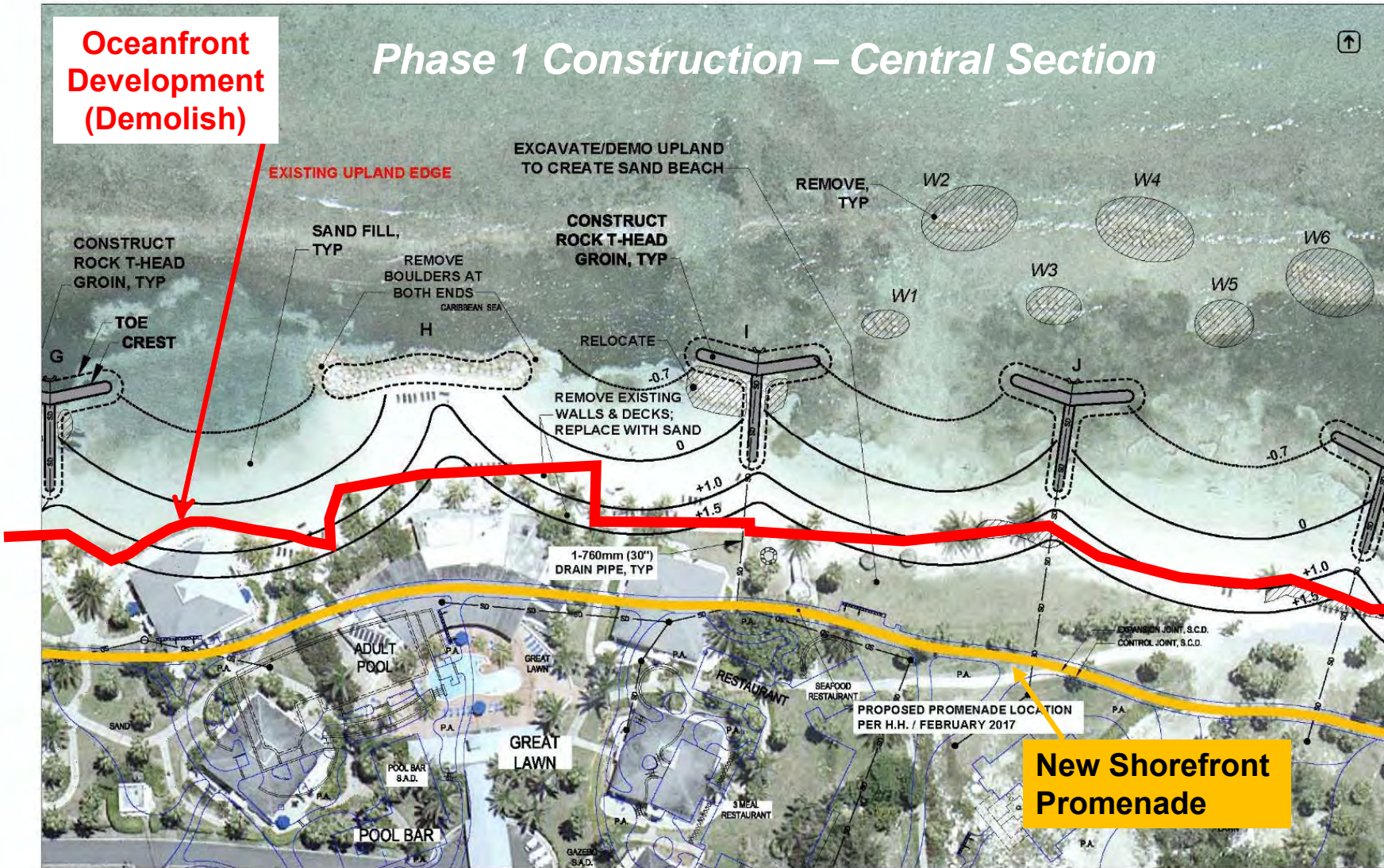
Oceanfront Development (Demolish)

New Shorefront Promenade

Phase 1 Construction: West End

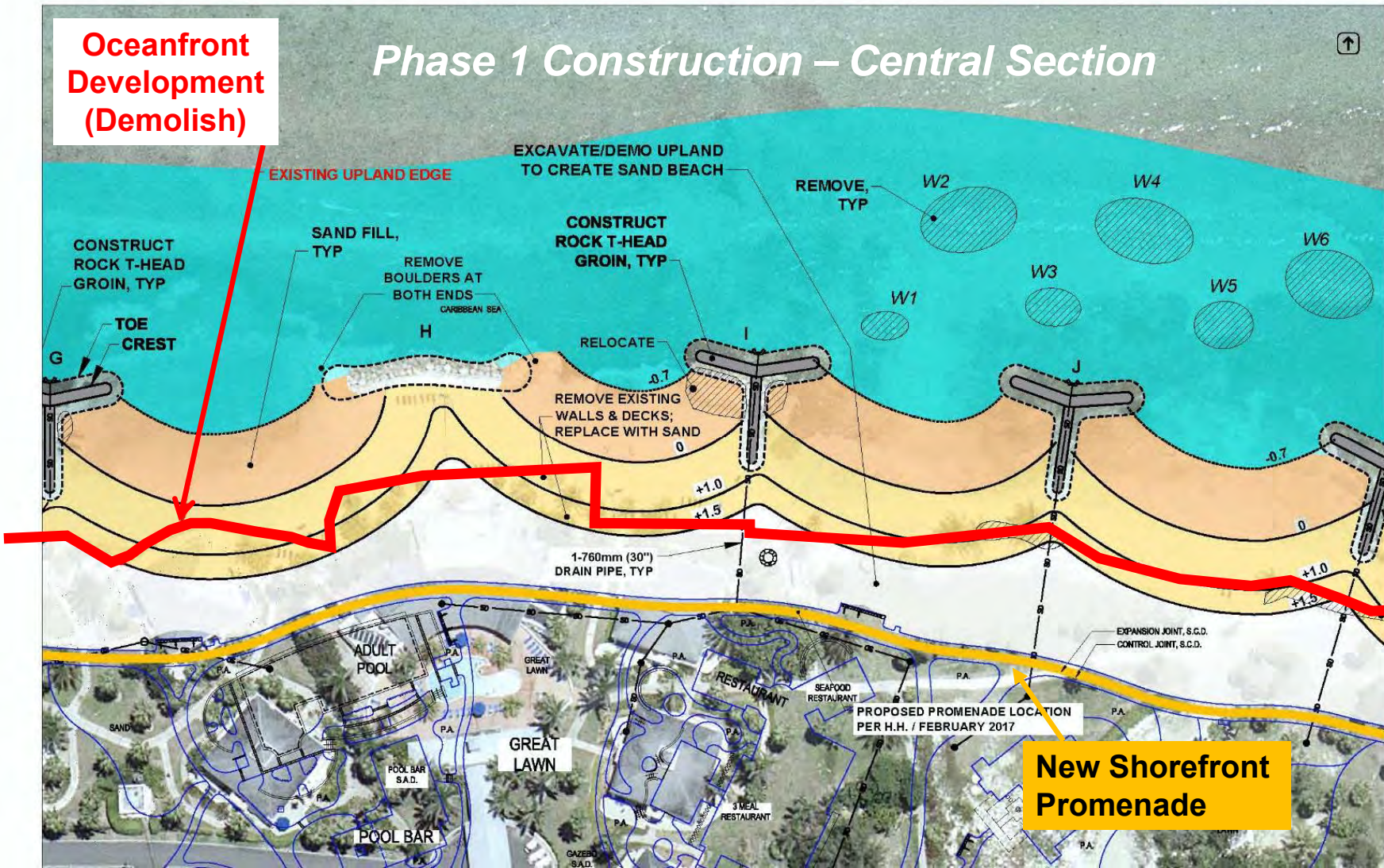
**Oceanfront
Development
(Demolish)**

Phase 1 Construction – Central Section



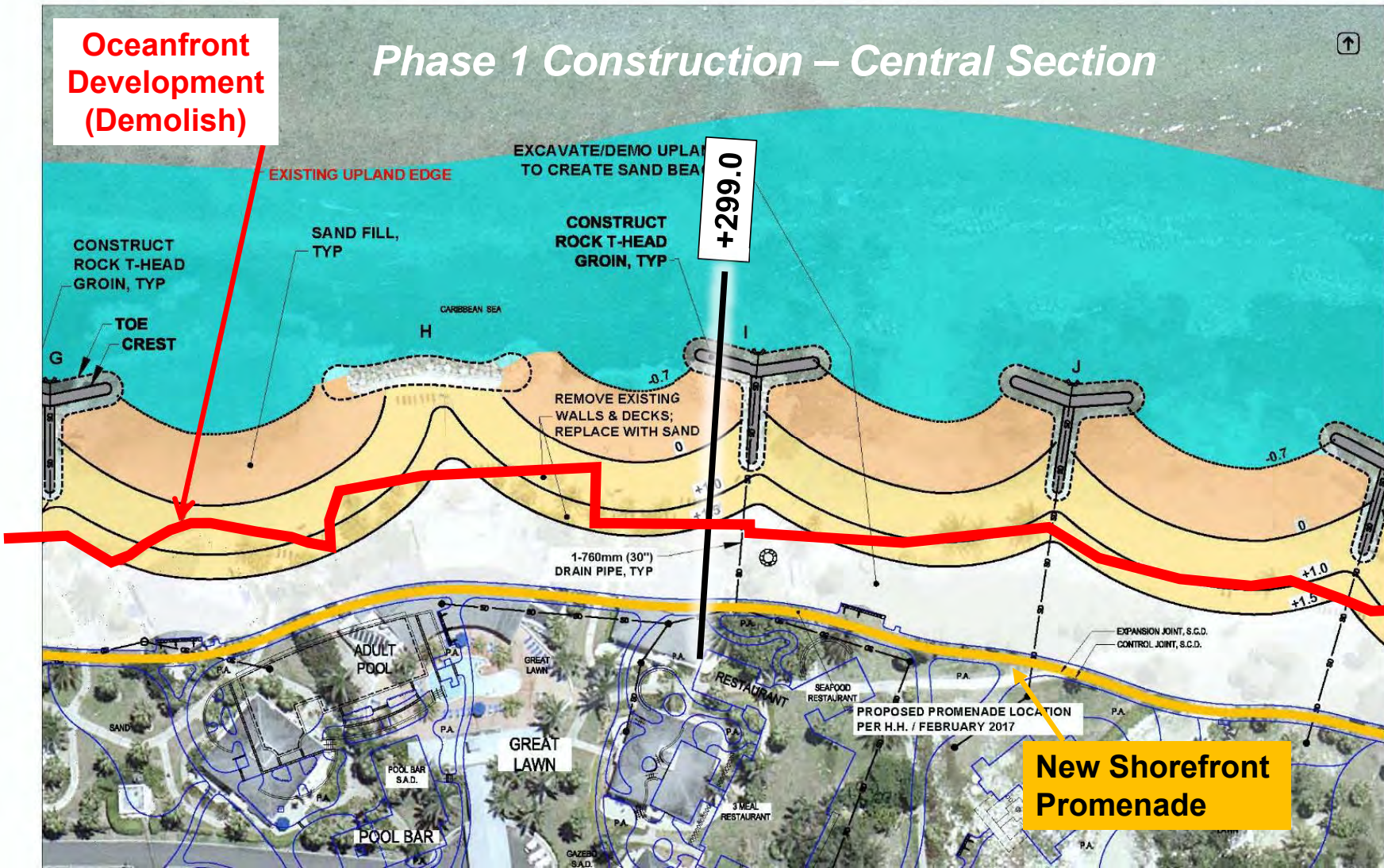
**Oceanfront
Development
(Demolish)**

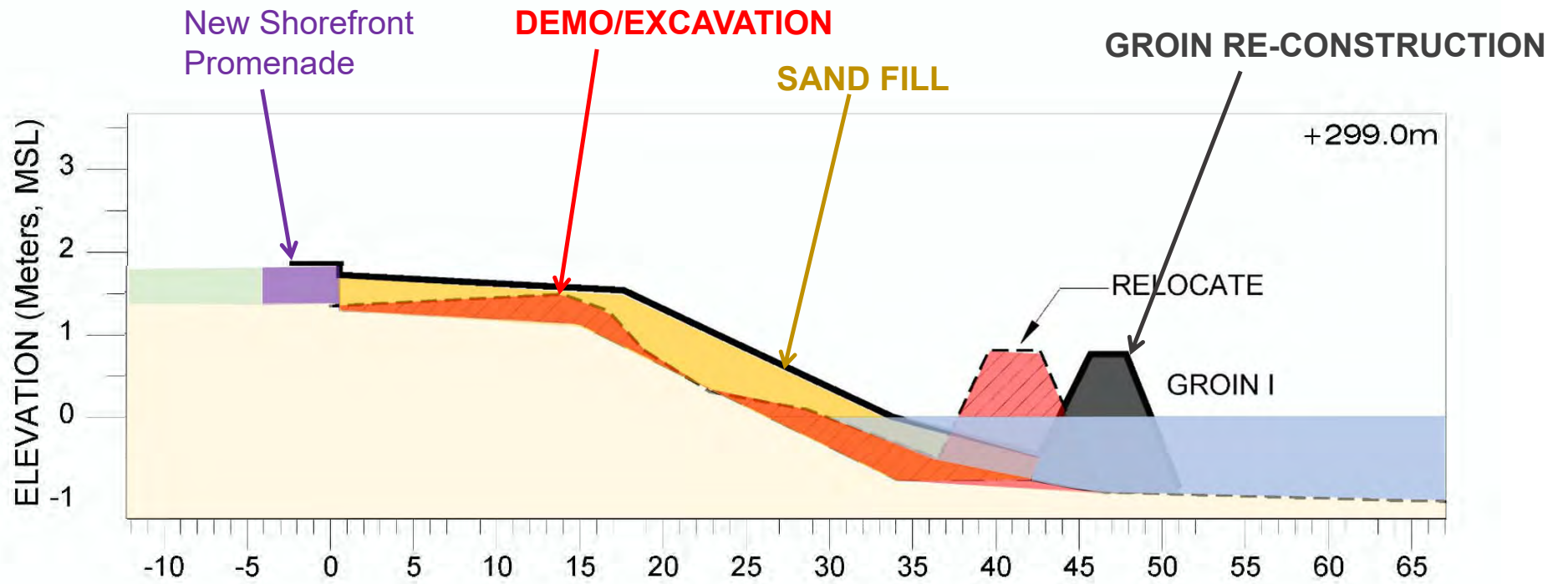
Phase 1 Construction – Central Section



Oceanfront Development (Demolish)

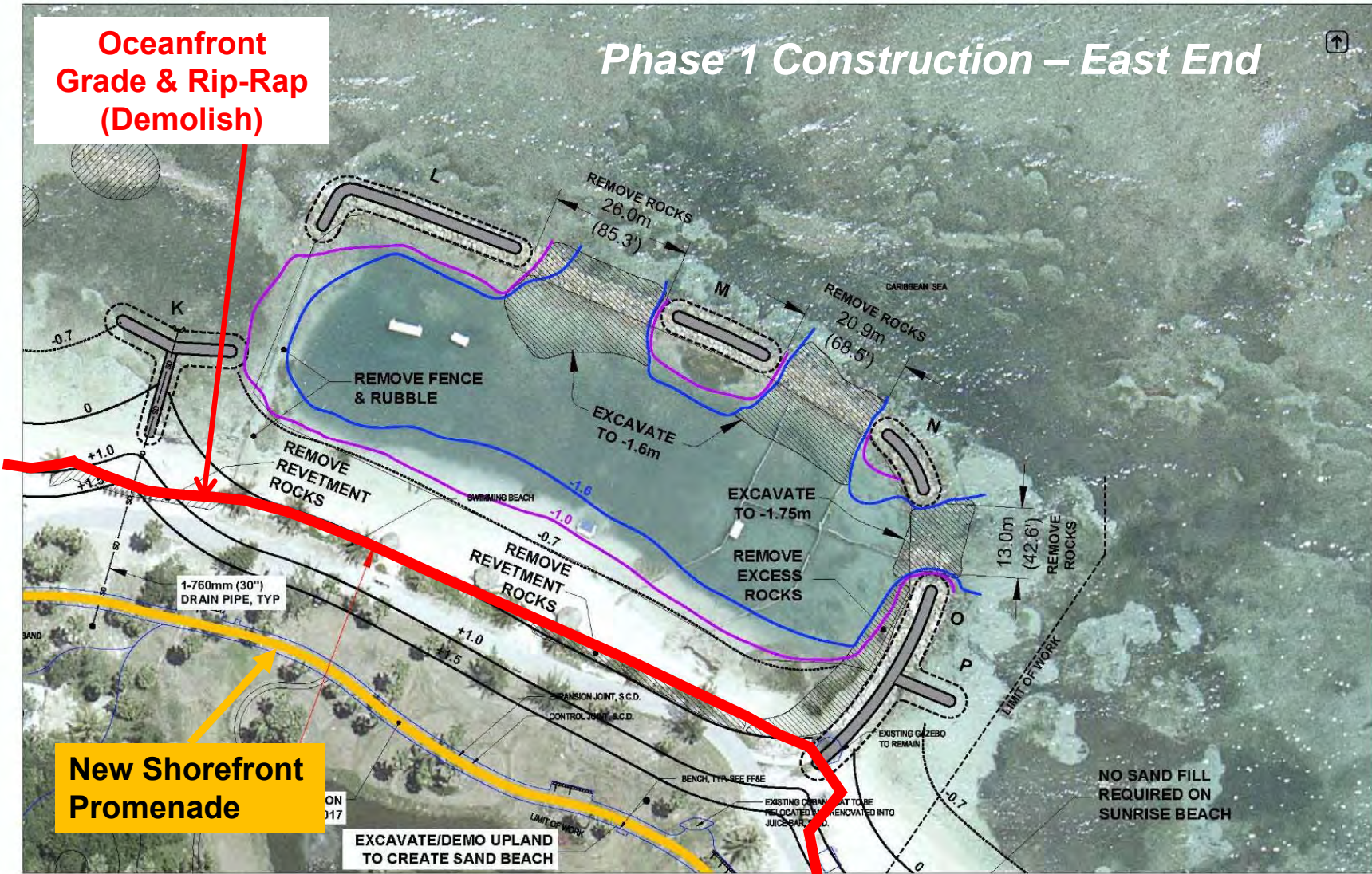
Phase 1 Construction – Central Section





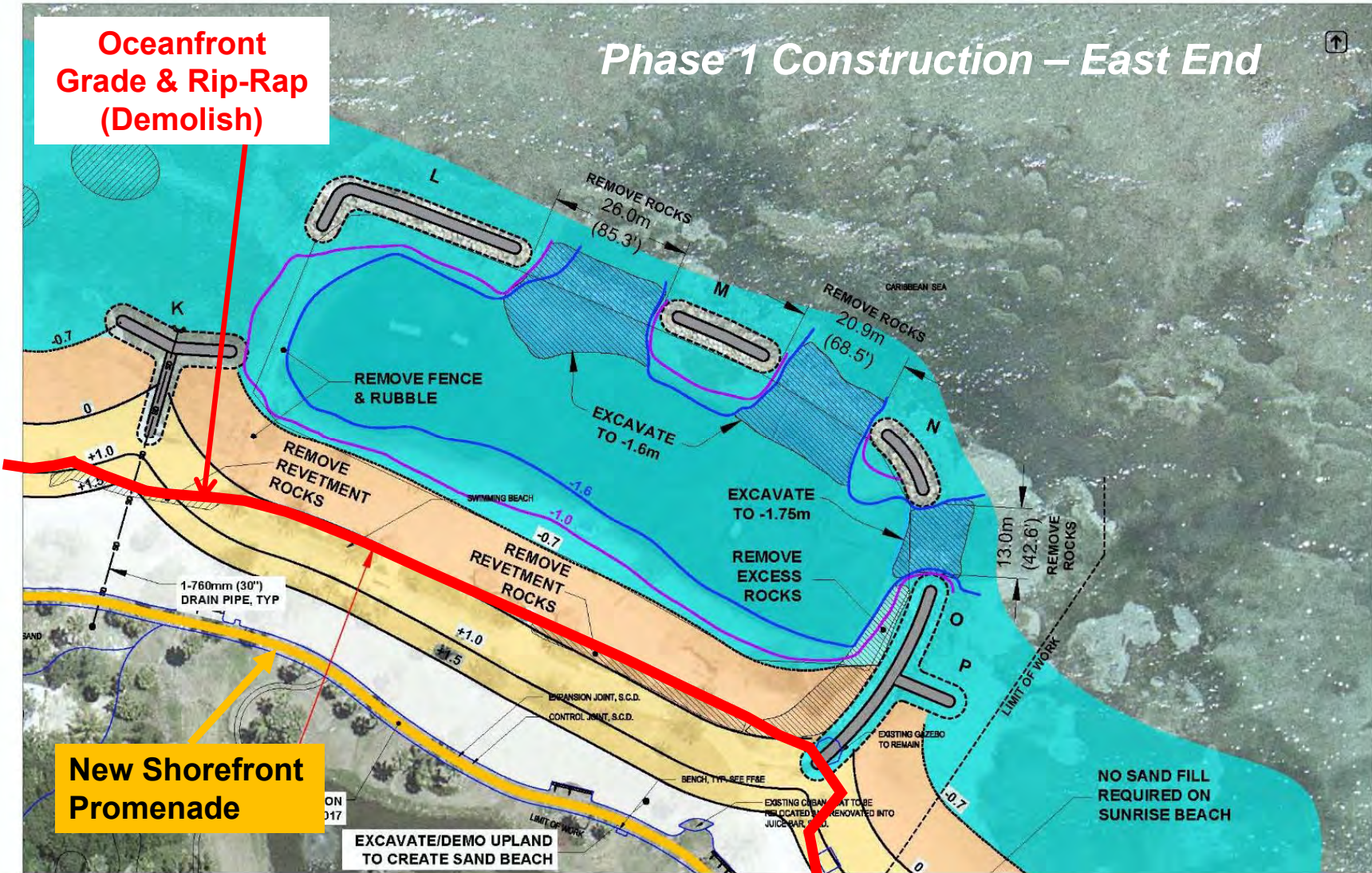
**Oceanfront
Grade & Rip-Rap
(Demolish)**

Phase 1 Construction – East End



**Oceanfront
Grade & Rip-Rap
(Demolish)**

Phase 1 Construction – East End

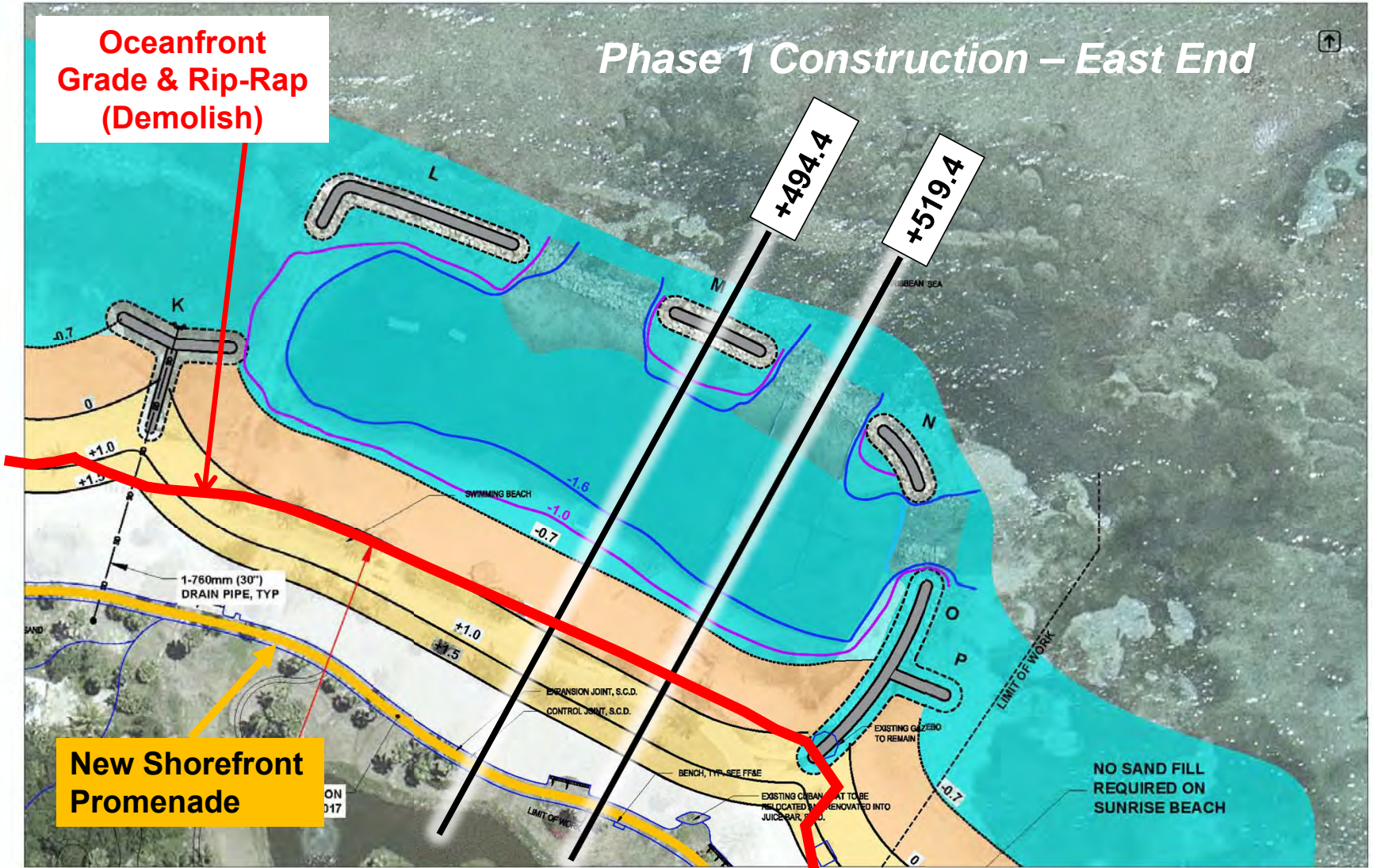


**New Shorefront
Promenade**

**EXCAVATE/DEMO UPLAND
TO CREATE SAND BEACH**

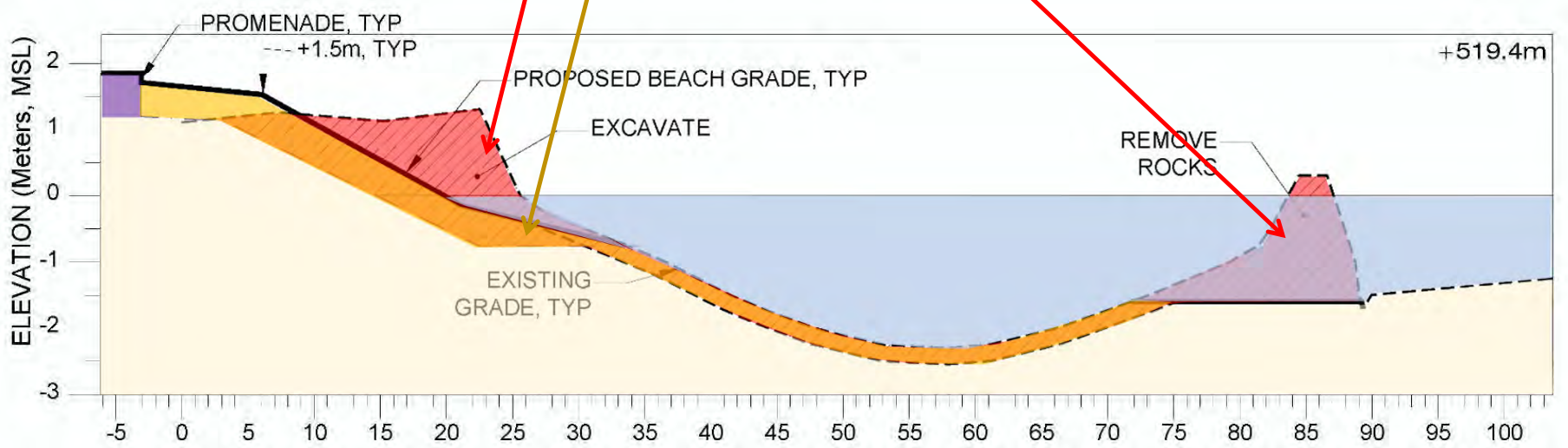
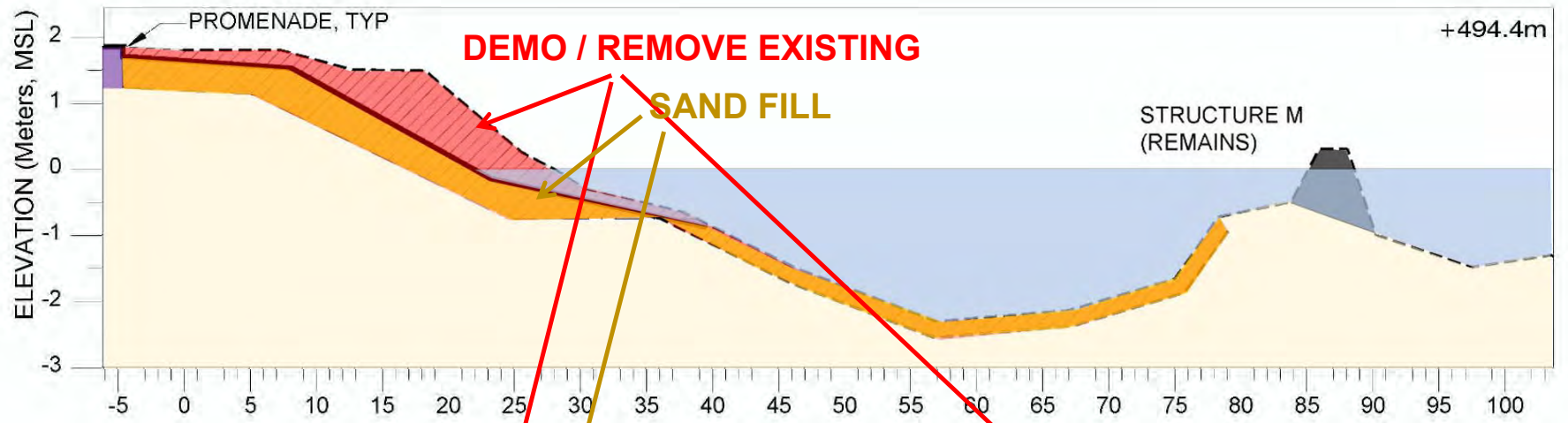
**Oceanfront
Grade & Rip-Rap
(Demolish)**

Phase 1 Construction – East End



**New Shorefront
Promenade**

**NO SAND FILL
REQUIRED ON
SUNRISE BEACH**

















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With special acknowledgement to
HALF MOON RESORT and
HART HOWERTON