



CONCEPT PLAN C1.2 SUMMARY:

IN CONCEPT PLAN C1.2, AN EARTHEN BERM IS PROPOSED AROUND THE VULNERABLE EDGE OF CYPRESS PARK'S NORTHERN HALF. THE BERM IS PROPOSED AT ELEVATION 2', WHICH IS APPROXIMATELY SLIGHTLY OVER 1 FOOT HIGHER THAN THE EXISTING ELEVATION AT THE BERM'S EMBANKMENT TOE. THE HIGHEST ELEVATION IN CYPRESS PARK FOR A BERM TO TIE INTO IS ELEVATION 3'.

A BERM PROVIDES A MINIMAL IMPACT COMPARED TO OTHER CONCEPTS. WETLAND DISTURBANCE IS APPROXIMATELY ESTIMATED AT 9,011 SQ-FT THAT HAS TO BE MITIGATED AT A 1:1 BARE MINIMUM RATIO (I.E ONE FOOT OF DISTURBANCE = ONE FOOT OF MITIGATION THROUGH WETLAND CREATION). WITH A BERM ADDED TO THE EDGE OF THE NORTHERN HALF OF THE PARK, POCOMOKE CITY HAS THE OPPORTUNITY TO MAINTAIN EXISTING INFRASTRUCTURE AS IT IS NOW WITH MINIMAL MODIFICATION. THE EXISTING ASPHALT WALKING TRAIL COULD BE REBUILT ON TOP OF THE BERM IN NEARLY THE SAME FOOTPRINT OF THE CURRENT TRAIL FOOTPRINT. THE SOUTHERN HALF OF CYPRESS PARK IS THE LEAST USED SPACE IN THE PARK AND IS MORE OPEN AND NATURAL, MAKING THE SOUTHERN HALF AN IDEAL LOCATION FOR ANY PROPOSED ON-SITE WETLAND MITIGATION REQUIREMENTS AND IS THEREFORE LEFT ALONE FOR THAT PURPOSE.

A BERM WOULD BE THE LEAST COSTLY OF OPTIONS IN TERMS OF ORDER OF MAGNITUDE. A BERM ELEVATED TO ELEVATION 2' WOULD PROTECT THE PARK FROM THE MAJORITY OF HIGH TIDE EVENTS CURRENTLY, BASED ON THE SNOW HILL TIDE GAUGE. THE BERM WOULD ALSO PROTECT THE PARK FROM SEA LEVEL RISE PROJECTIONS UP TO THE YEAR 2040, IN THE MEDIUM RISK TOLERANCE CATEGORY.

THE MAIN DISADVANTAGE OF A BERM, WHETHER BROUGHT TO ELEVATION 2' OR 3', WITH ELEVATION 3' BEING THE MAX RECOMMENDED HEIGHT TO TIE INTO, IS THAT THE BERM COULD KEEP OUT MOST TIDES BUT WOULD TRAP RAIN WATER ON THE BACKSIDE OF THE BERM OR STORM SURGE. A BERM COULD ONLY WORK IF EITHER TIDE GATES ARE INCORPORATED AND/OR A STORMWATER MANAGEMENT FACILITY IS BUILT ON SITE ON THE BACKSIDE OF THE BERM. THE CITY WOULD LOSE VALUABLE OPEN SPACE AND WOULD HAVE TO MAINTAIN A STORMWATER FACILITY. A TIDE GATE COULD ALLOW THE WATER TO BE DRAINED FROM EITHER HIGH WATER EVENTS OR RAIN WATER AFTER THE TIDE LEVEL RECEDES, HOWEVER, THE PARK WOULD LIKELY REMAIN WET AND SATURATED AFTER THE WATER WAS DRAINED; MAKING THE PARK UNUSABLE UNTIL THE WATER WAS DRAINED.

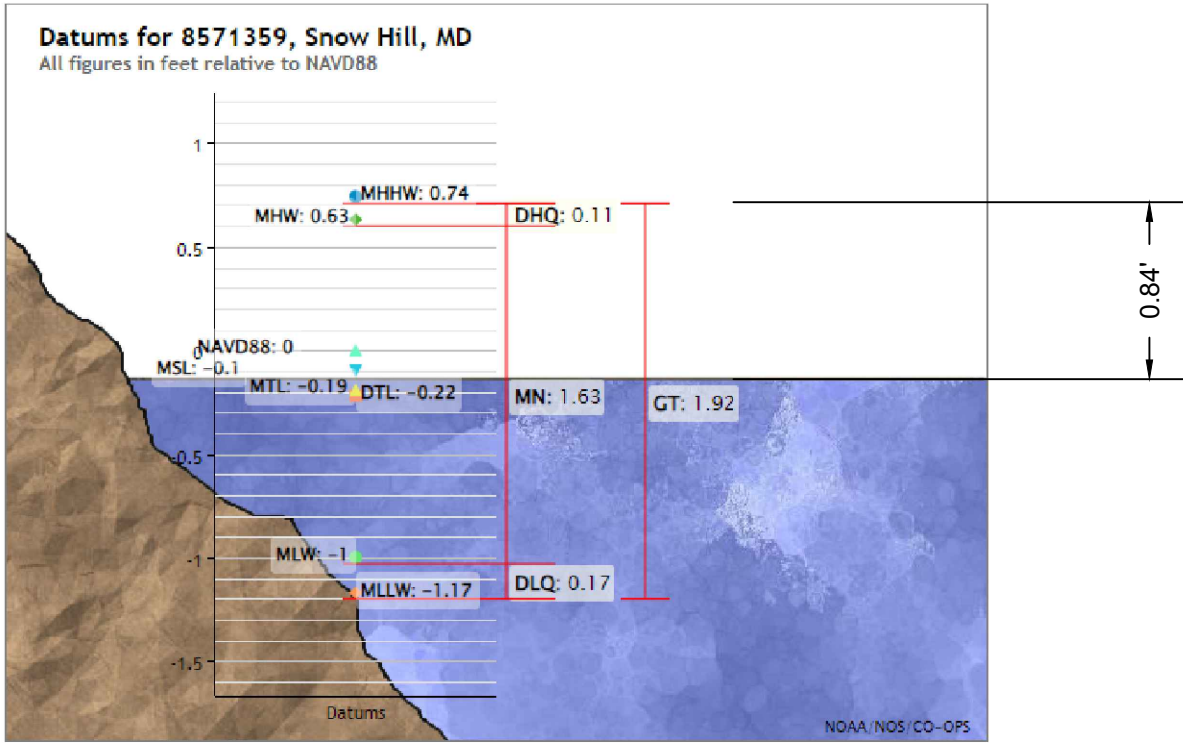
ESTIMATED BASE HARD COSTS: \$142,073

Item	QTY	Unit	Unit Price	Extended	Subtotal
<strong>CONSTRUCTED WETLAND</strong>					
Capital Costs	9,011.00	SF	\$ 12.06	\$ 108,672.66	
<strong>EARTHWORK</strong>					
Import Premium Fill (Supply and Install)	334	CY	\$ 100.00	\$ 33,400.00	
<strong>TOTAL</strong>					<strong>\$ 142,072.66</strong>

NOTE:  
COSTS ARE NOT FINAL COST ESTIMATES NOR ARE THEY ALL INCLUSIVE OF ALL COSTS. THEY ARE BASED ON AN ORDER OF MAGNITUDE AND COMMON DENOMINATORS REQUIRED FOR EACH CONCEPT PLAN APPROACH.

TIDE DATA - SNOW HILL TIDE GAUGE - DATUM IS NAVD88:

AVERAGE HIGH TIDE IS ELEVATION 0.63'. AVERAGE MEAN HIGHER HIGH WATER (MHHW) IS 0.74'. TIDE RANGE POTENTIAL IS 0.84' BETWEEN MEAN SEA LEVEL AND MHHW ELEVATION.

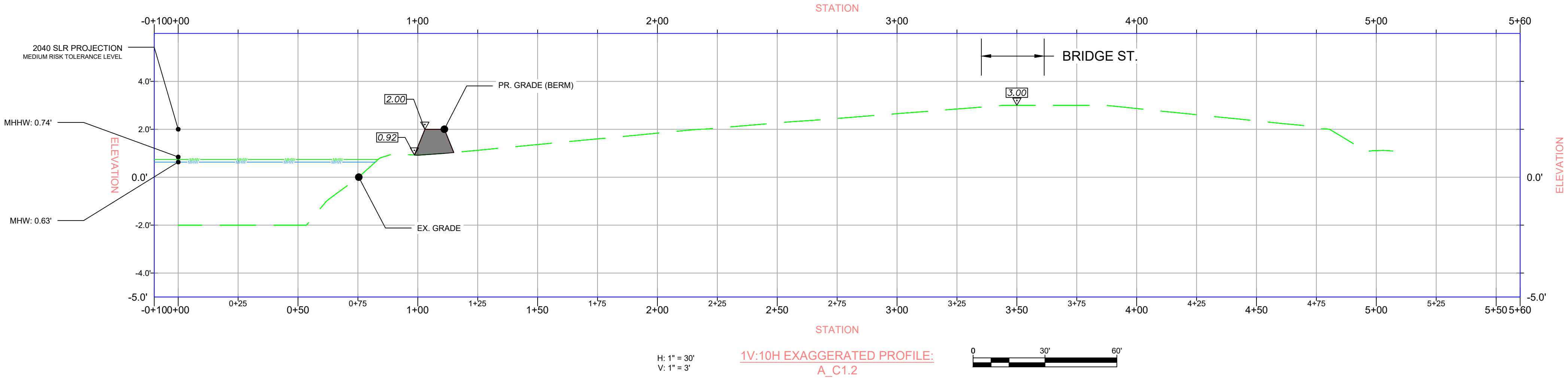


SEA LEVEL RISE (SLR) PROJECTIONS:  
BASED ON UMCES SLR PROJECTIONS 2023 - CAMBRIDGE TIDE STATION

Tide Gauge: Cambridge MD Emissions Pathway: SSP2-4.5 (ft)				
Year	5th percentile	50th percentile (High tolerance for flood risk)	83rd percentile (Medium tolerance for flood risk)	83rd-95th percentile with additional ice loss (Low tolerance for flood risk)
2040	0.50	0.92	1.20	1.3
2050	0.76	1.23	1.57	1.6
2060	1.02	1.53	1.92	2.3
2070	1.26	1.85	2.33	3.0
2080	1.49	2.16	2.74	3.6
2090	1.68	2.45	3.15	4.3
2100	1.78	2.79	3.65	4.9
2110	1.82	3.07	4.13	5.9
2120	2.01	3.41	4.60	6.9

EQUATION: TIDE RANGE POTENTIAL + SLR PROJECTION BASED ON COMMUNITY'S RISK TOLERANCE AND/OR SITE CONSTRAINTS = NEW TIDE WATER SURFACE ELEVATION

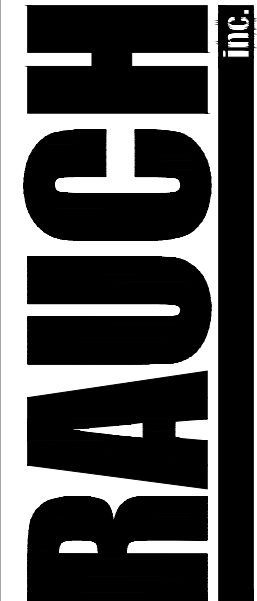
C1.2 SCENARIO EXAMPLE: 0.84' (TIDE RANGE POTENTIAL) + 1.20' (SLR PROJECTION) = 2.04



CYPRESS PARK - CONCEPT PLAN C1.2

OF THE LANDS OF

POCOMOKE CITY



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REVISIONS

REV. #	DATE	DESCRIPTION
1		

DATE: 9/9/2024

SCALE: AS SHOWN

DRAWN BY: WCS

DESIGNED BY: WCS

APPROVED BY:

SHEET NO.: C-1.2

FOR REVIEW