



# SMCHD - West Trail Repairs

Board of Harbor Commissioners Meeting  
April 18, 2018



# Presentation Agenda

Project Overview

Work To Date

Challenges

Soil Nail Wall





# Project Overview

- West Trail Condition Assessment (2012)
- Temporary Emergency Culvert Repair Design – Scope limited to wash-out and culvert vicinity (2014-2015)
- Emergency Coastal Development Permit issued with Conditions, including a requirement to obtain a regular CDP for work to be considered permanent
- Temporary Emergency Culvert Repairs Completed (early 2016)
- Regular CDP application submitted (late 2016)
- CDP application supplemental materials and additional requested studies submitted (2017)
- Final design (100%) and permit submittals currently underway



## Work To Date

- Emergency repair design and ECDP completed
- Regular CDP application completed with studies (Sea Level Rise and Erosion; Drainage; and Conceptual Alternatives Analysis)
- Slope failure evaluation and re-evaluation completed
- ECDP submitted for the trail closure due to 2017 slides
- Commission coordination regarding how to proceed with permits at West Trail following 2017 slides
- Assistance provided with cost estimate and scope of possible slope stabilization in support of FEMA/CalOES funding applications
- Supplemental CDP application materials completed (Geotechnical Study, Sand Impact Calculations; Biology Addendum; additional Visual Simulations, etc.)
- Design, 100% completed with landscape plans
- Contractor meeting on-site



# Challenges

- Scope limits (i.e. wash-out damage in the vicinity of the existing culvert at the trail)
- Winter storms in 2017 causing slides, trail closure, and additional permit submittal and coordination
- Beach nourishment considerations
- Alternatives
  - Discussed during the June 7, 2016 Charrette
  - Sculpted Concrete – Soil Nail Wall Alternative selected during Commissioner’s meeting on September 7, 2016





# Sculpted Shotcrete Soil Nail Wall Facing

- A pattern is carved into the shotcrete as it is being placed. The shotcrete is then allowed to cure and a stain is applied.
- A 'mock-up' or test section will be completed to allow the District to comment on the overall aesthetics before the entire wall is completed.



# Sculpted Shotcrete Soil Nail Wall Facing (examples)





# Soil Nail Wall Visual Simulations







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