

# **‘ĪAO VALLEY STATE MONUMENT FLOOD REPAIRS**

Public Informational Meeting  
Wailuku Community Center  
Tuesday, September 12, 2017  
5:00 pm to 7:00 pm



# HISTORICAL PHOTOS OF ʻĪAO VALLEY STATE MONUMENT

1920's



1950's



1967



1981



2013





# STREAM CHANNEL PRE- AND POST-FLOOD





## POST-FLOOD SLOPE DAMAGE



Photos taken 1/16/17



## PHASE 1: EMERGENCY SLOPE STABILIZATION



10/19/16



3/3/17



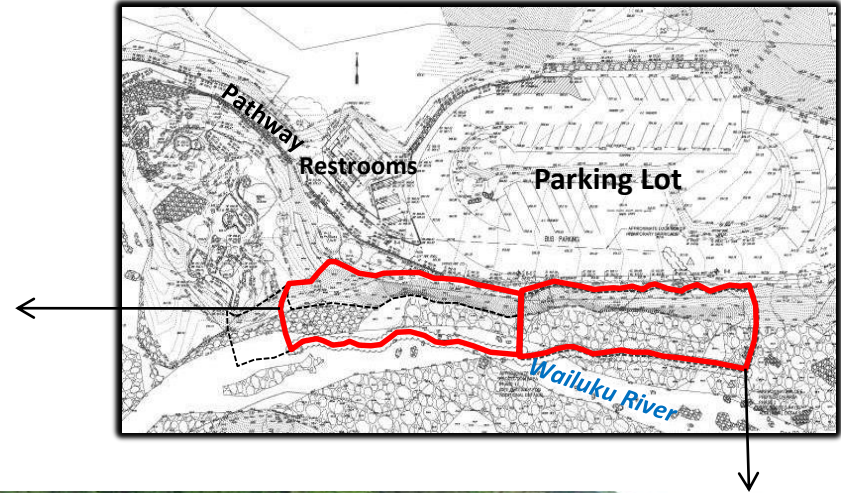
4/25/17



3/15/17



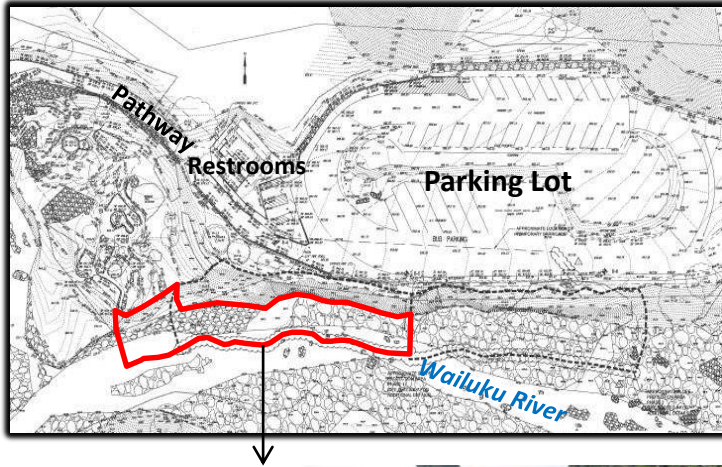
# PHASE 1: EMERGENCY SLOPE STABILIZATION



- Approximately 410 feet of shotcrete
- 200 feet of grouted boulder revetment with concrete key
- 210 feet of placed boulder revetment

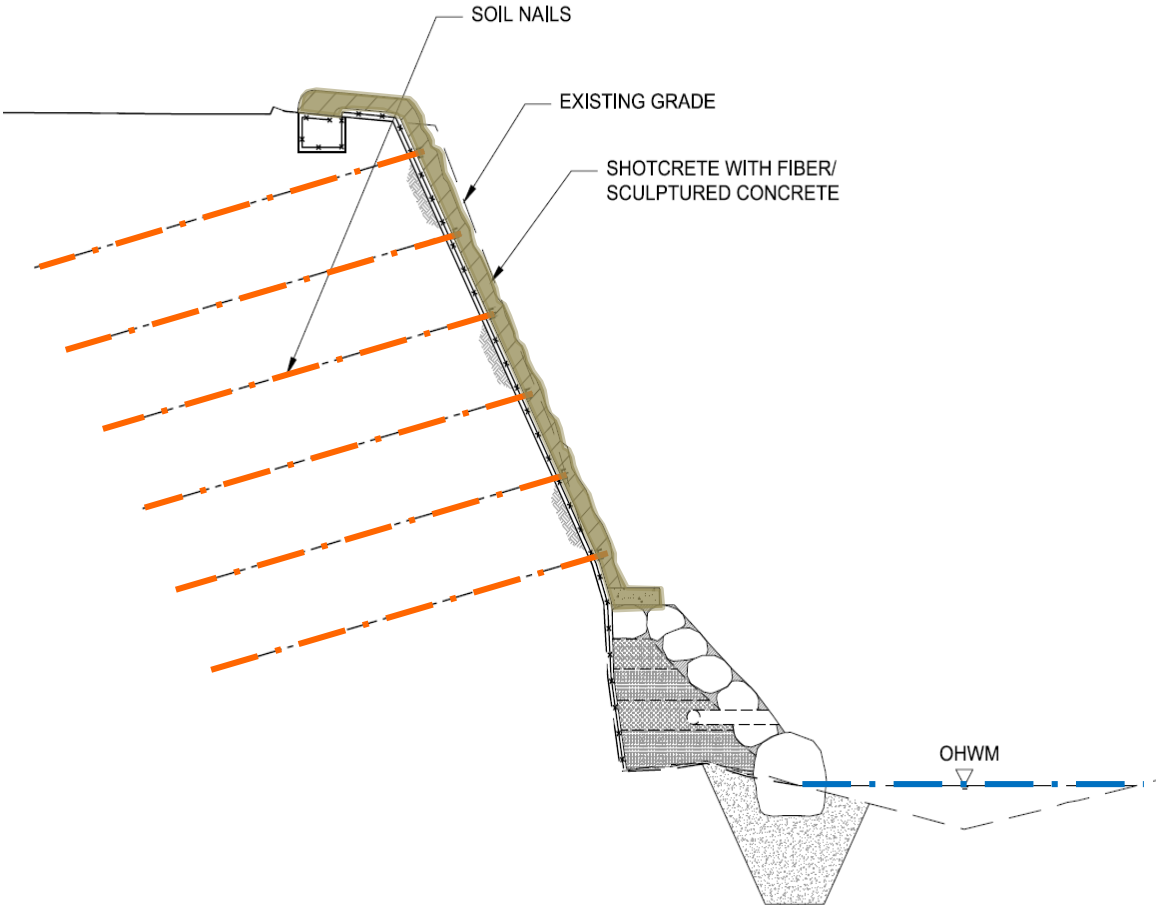


## PHASE 2: EMERGENCY SLOPE STABILIZATION



- Remaining work to complete emergency repairs
- Installation of concrete key and grouted boulders (yellow)
- Additional 50 feet of shotcrete and grouted boulder revetment (pink)
- Park will close to begin work in October 2017

# PLANNED WORK FOR LONG-TERM SLOPE STABILIZATION



- **Widely used to stabilize unstable soil slopes**
- **Series of 30-ft reinforcing bars (soil nails) grouted into drilled holes**
- **Shotcrete can be colored and sculptured to look more natural**
- **Park can remain open during construction**
- **Approx. 14 months and \$4.6 million to construct**



# PLANNED WORK FOR LONG-TERM SLOPE STABILIZATION

Example of slope face with sculptured shotcrete treatment:



Kapolei Interchange, O'ahu, Hawai'i



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Example of slope face with sculptured shotcrete treatment:



(Geolabs)

Kapolei Interchange, O'ahu, Hawai'i



# INFRASTRUCTURE AND OTHER PARK IMPROVEMENTS COMPLETED





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**MAHALO**