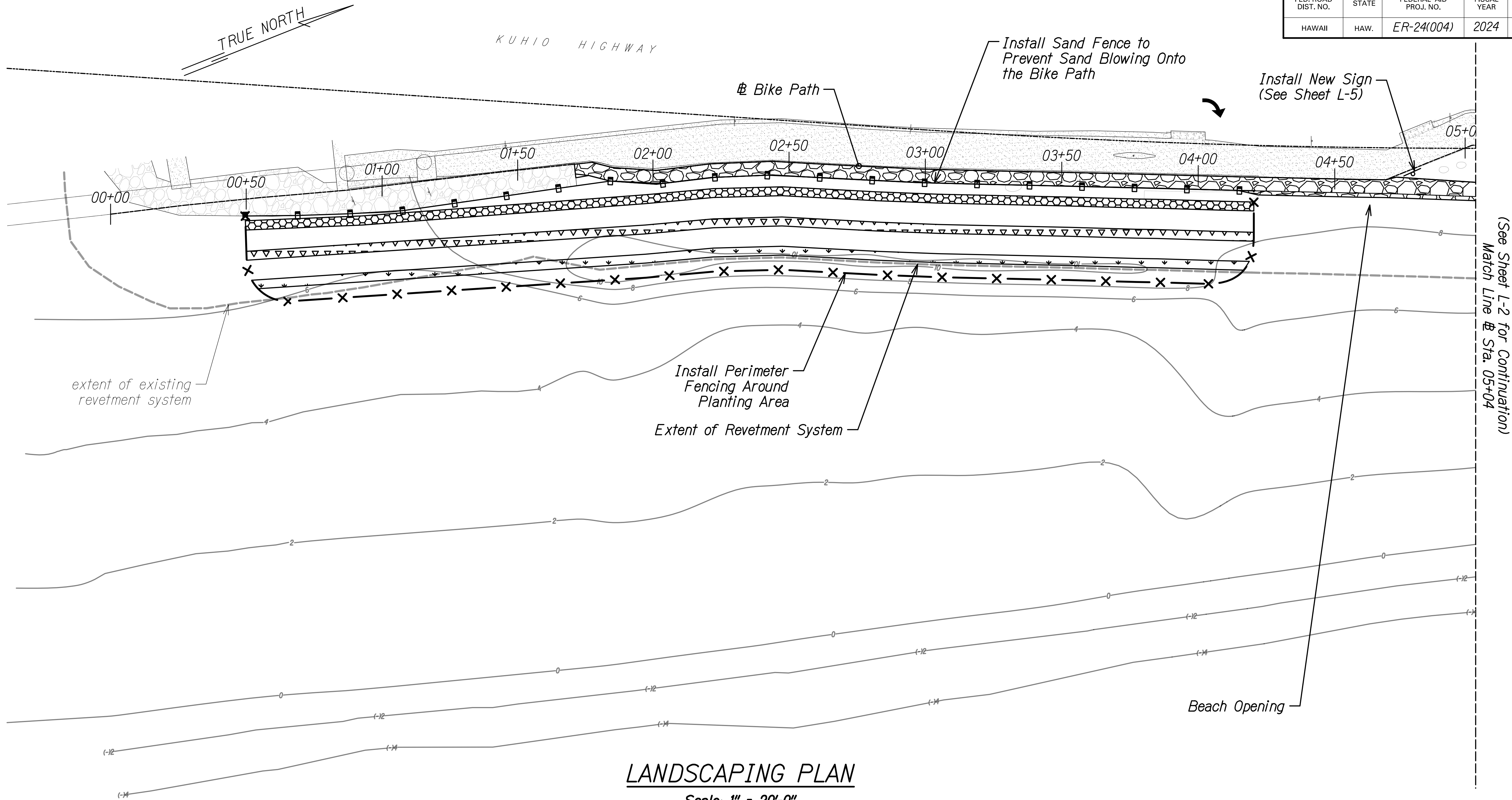


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-24(004)	2024	39	49



## LANDSCAPING PLAN

Scale: 1" = 20'-0"

### NOTE:

- Contractor to Plant Pohuehue, Aki Aki, and Akulikuli at the Top of the Sand Dune Along the Beach as Shown. Naupaka Shall be Planted Behind the Revetment in the Grass Area to Form a Continuous Naupaka "Hedge" throughout the Revetment, with Breaks at the Openings. See Sheet L-5 for Cross Section and Details.
- Contractor to Design Irrigation System and Submit Design for Engineer's Approval Before Construction. Irrigation System to be Incidental to Pay Item 619 - Planting.
- Contractor Can Tie into the Water Box at Station 17+15.

### Beach Planting Locations:

-Sta. 00+50 to 04+20  
-Sta. 05+80 to 08+75  
-Sta. 09+75 to 12+35  
-Sta. 13+07 to 17+07

### Naupaka Locations:

-Sta. 08+25 to 08+75  
-Sta. 11+50 to 12+35  
-Sta. 13+14 to 15+29

	Sand Fence
	Perimeter Fencing
	Pohinahina
	Pohuehue
	Aki aki/Akulikuli
	Naupaka

ORIGINAL PLAN	SURVEY PLOTTED BY		DATE
	DRAWN BY	_____	_____
	TRACED BY	_____	_____
	DESIGNED BY	_____	_____
NOTE BOOK	QUANTITIES BY		DATE
	CHECKED BY	_____	_____
	_____		_____
	_____		_____
N <sub>o</sub>	_____		_____
	_____		_____
	_____		_____
	_____		_____

PACIFIC OCEAN

THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION.

SIGNATURE: *James I. Kincaid* EXPIRATION DATE OF THE LICENSE: 12/31/25

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

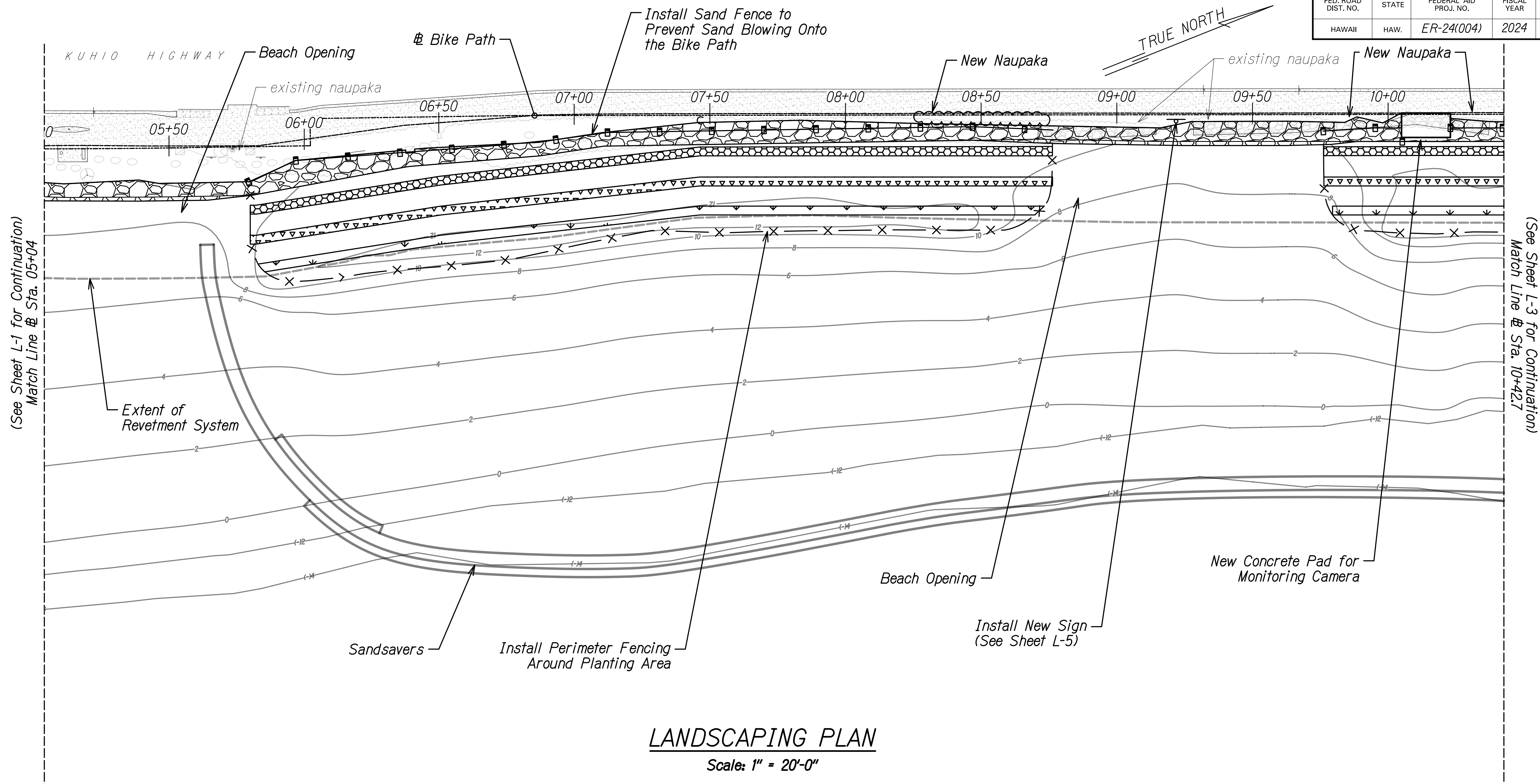
**LANDSCAPING PLAN**

KUHIO HIGHWAY  
Emergency Shoreline Mitigation  
Fed. Aid Project No. ER-24(004)

Scale: As Noted Date: Dec. 2023

SHEET No. L-1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-24(004)	2024	40	49



## LANDSCAPING PLAN

Scale: 1" = 20'-0"

	Sand Fence
	Perimeter Fencing
	Pohinahina
	Pohuehue
	Aki aki/Akulikuli
	Naupaka

### Beach Planting Locations:

- Sta. 00+50 to 04+20
- Sta. 05+80 to 08+75
- Sta. 09+75 to 12+35
- Sta. 13+07 to 17+07

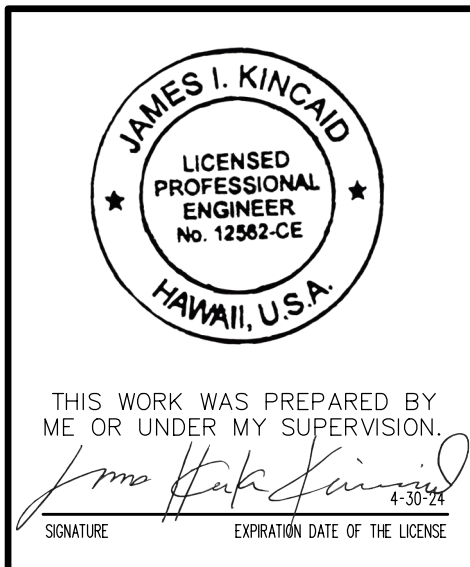
### Naupaka Locations:

- Sta. 08+25 to 08+75
- Sta. 11+50 to 12+35
- Sta. 13+14 to 15+29

### NOTE:

- Contractor to Plant Pohuehue, Aki Aki, and Akulikuli at the Top of the Sand Dune Along the Beach as Shown. Naupaka Shall be Planted Behind the Revetment in the Grass Area to Form a Continuous Naupaka "Hedge" throughout the Revetment, with Breaks at the Openings. See Sheet L-5 for Cross Section and Details.
- Contractor to Design Irrigation System and Submit Design for Engineer's Approval Before Construction. Irrigation System to be Incidental to Pay Item 619 - Planting.
- Contractor Can Tie into the Water Box at Station 17+15.

PACIFIC OCEAN

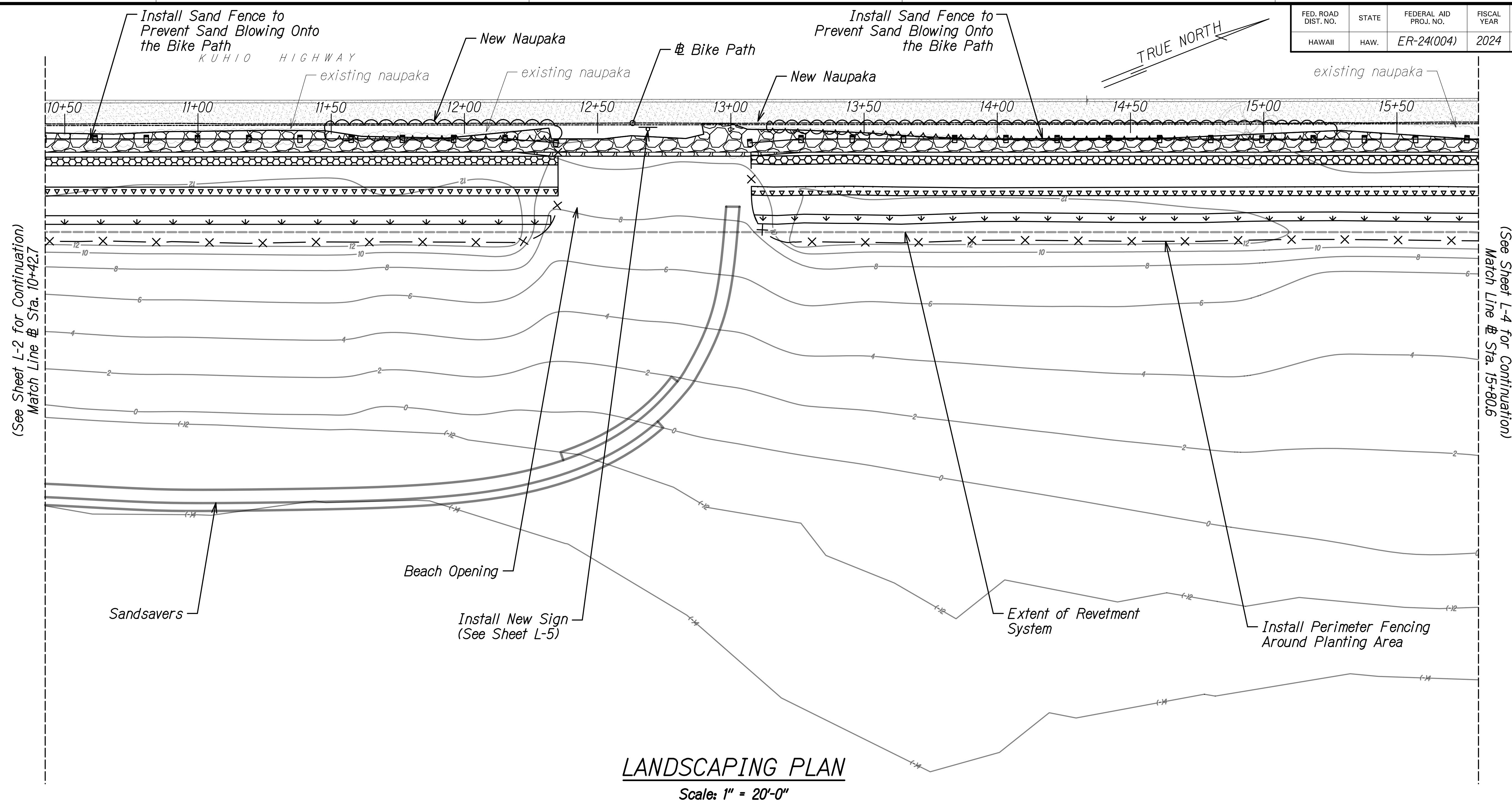


STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LANDSCAPING PLAN**  
KUHIO HIGHWAY  
Emergency Shoreline Mitigation  
Fed. Aid Project No. ER-24(004)

Scale: As Noted Date: Dec. 2023

SHEET No. L-2 OF 5 SHEETS

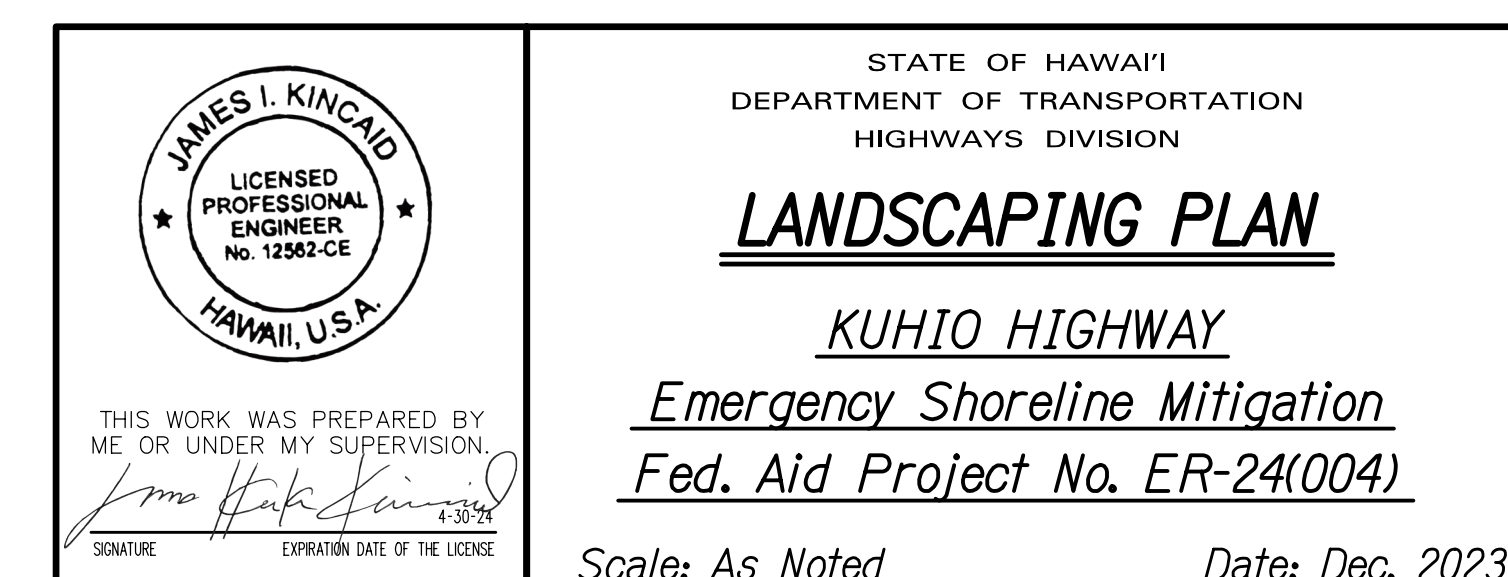
	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	HAWAII	HAW.	ER-24(004)	2024	41	49



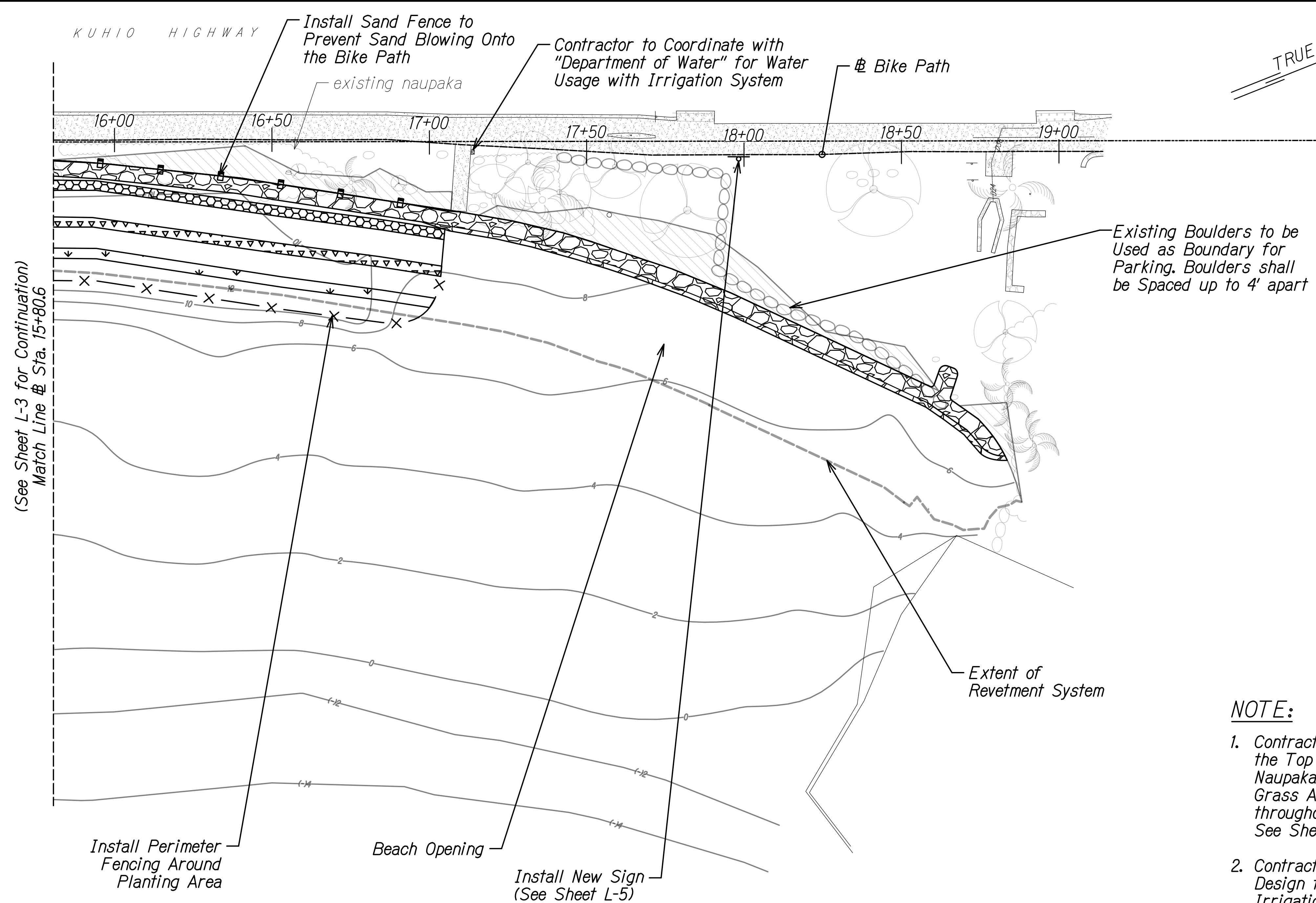
- NOTE:*

1. *Contractor to Plant Pohuehue, Aki Aki, and Akulikuli at the Top of the Sand Dune Along the Beach as Shown. Naupaka Shall be Planted Behind the Revetment in the Grass Area to Form a Continuous Naupaka "Hedge" throughout the Revetment, with Breaks at the Openings. See Sheet L-5 for Cross Section and Details.*
2. *Contractor to Design Irrigation System and Submit Design for Engineer's Approval Before Construction. Irrigation System to be Incidental to Pay Item 619 - Planting.*
3. *Contractor Can Tie into the Water Box at Station 17+15.*

PACIFIC OCEAN



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-24(004)	2024	42	49



NOTE:

- Contractor to Plant Pohuehue, Aki Aki, and Akulikuli at the Top of the Sand Dune Along the Beach as Shown. Naupaka Shall be Planted Behind the Revetment in the Grass Area to Form a Continuous Naupaka "Hedge" throughout the Revetment, with Breaks at the Openings. See Sheet L-5 for Cross Section and Details.
- Contractor to Design Irrigation System and Submit Design for Engineer's Approval Before Construction. Irrigation System to be Incidental to Pay Item 619 - Planting.
- Contractor Can Tie into the Water Box at Station 17+15.

LANDSCAPING PLAN  
Scale: 1" = 20'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

Legend:

- Sand Fence
- Perimeter Fencing
- Pohinahina
- Pohuehue
- Aki aki/Akulikuli
- Naupaka

- Beach Planting Locations:
- Sta. 00+50 to 04+20
  - Sta. 05+80 to 08+75
  - Sta. 09+75 to 12+35
  - Sta. 13+07 to 17+07
- Naupaka Locations:
- Sta. 08+25 to 08+75
  - Sta. 11+50 to 12+35
  - Sta. 13+14 to 15+29

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LANDSCAPING PLAN**

KUHIO HIGHWAY  
Emergency Shoreline Mitigation  
Fed. Aid Project No. ER-24(004)

Scale: As Noted Date: Dec. 2023

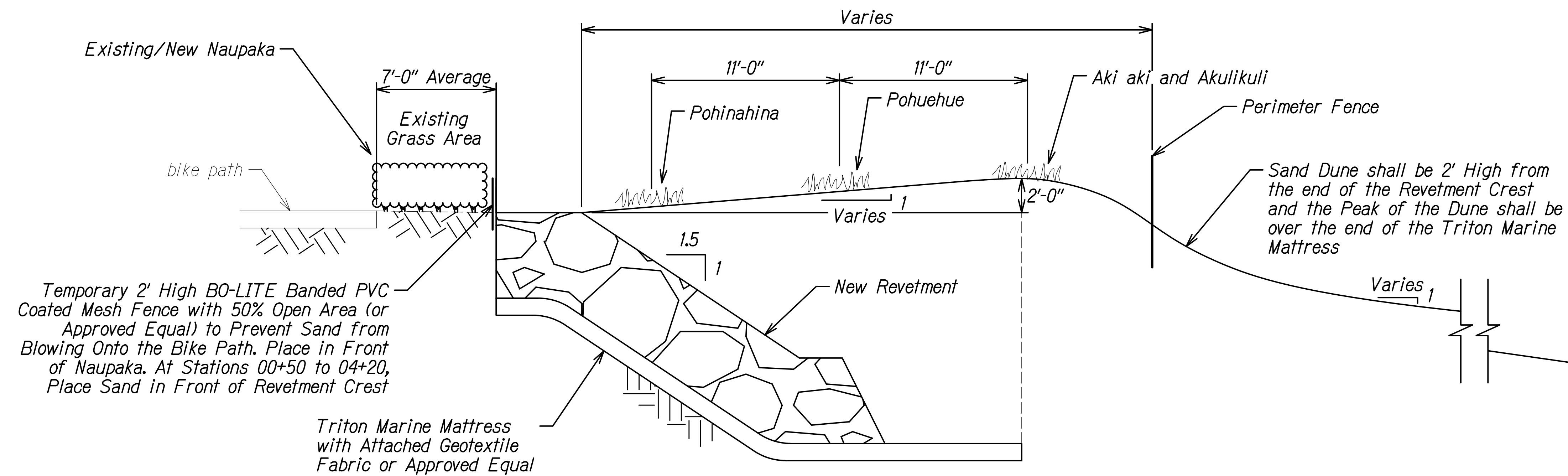
SHEET No. L-4 OF 5 SHEETS

JAMES I. KINCAID  
LICENSED PROFESSIONAL ENGINEER  
No. 12562-CE  
HAWAII, U.S.A.

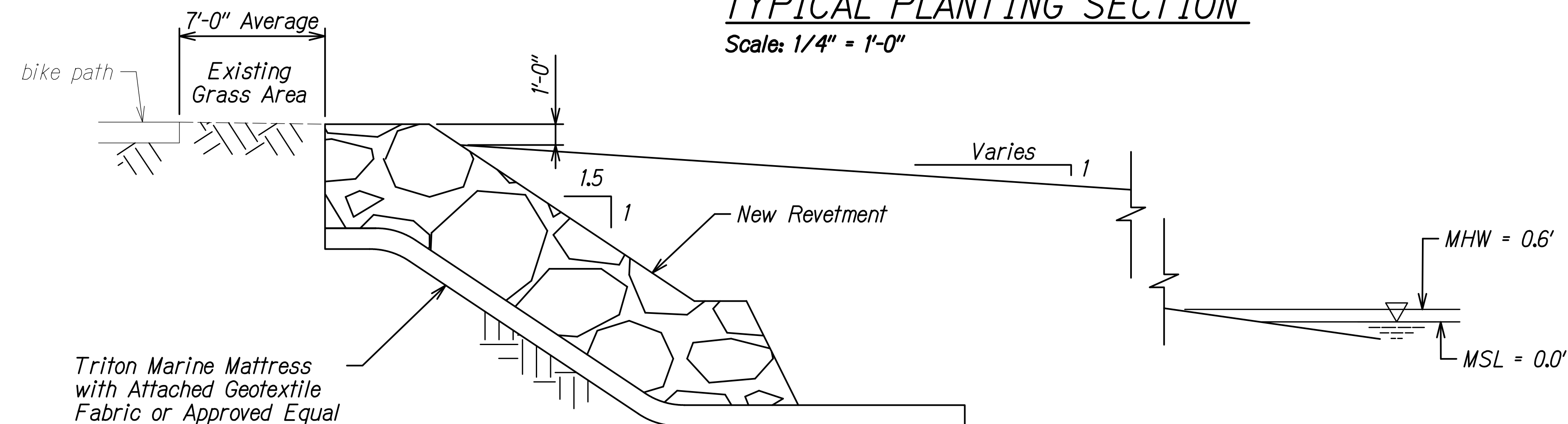
THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION.

Signature: [Signature]  
EXPIRATION DATE OF THE LICENSE: [Blank]

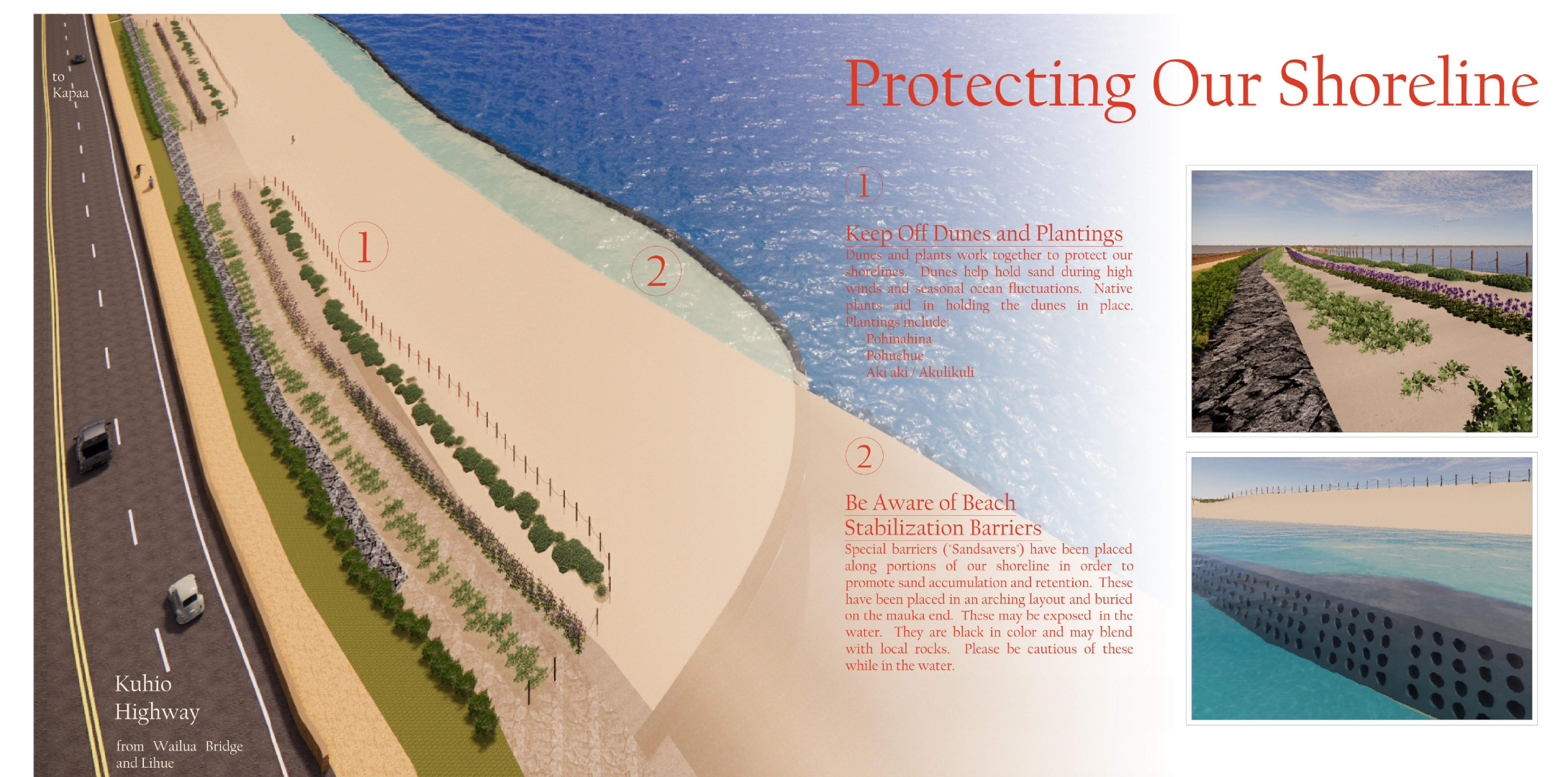
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-24(004)	2024	43	49



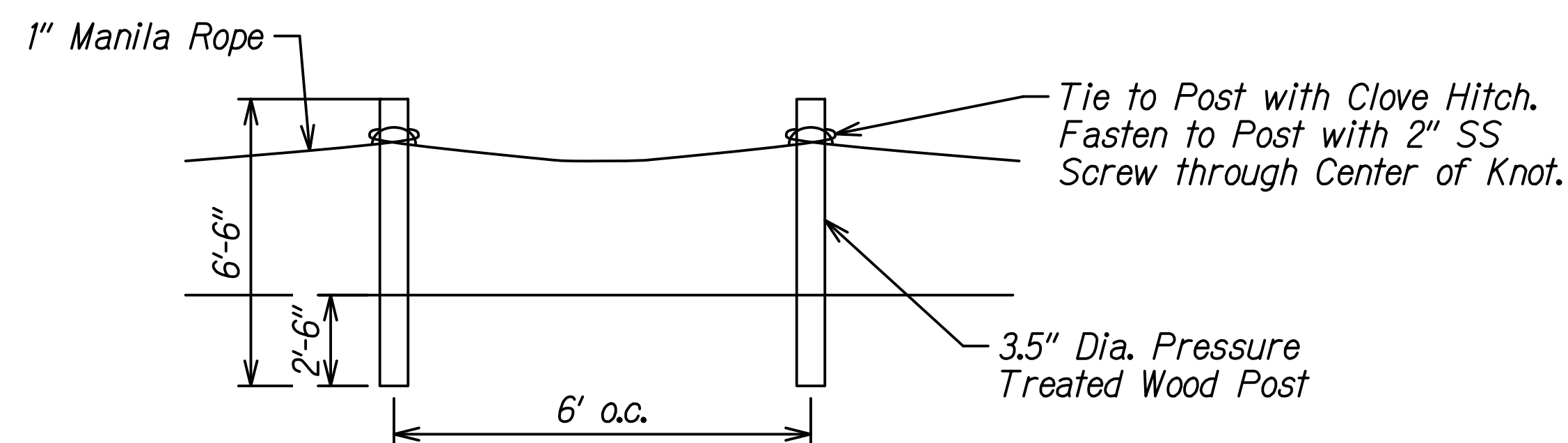
**TYPICAL PLANTING SECTION**  
Scale: 1/4" = 1'-0"



**TYPICAL OPENING SECTION**  
Scale: 1/4" = 1'-0"



**ENTRANCE AREA SIGN**  
Not to Scale

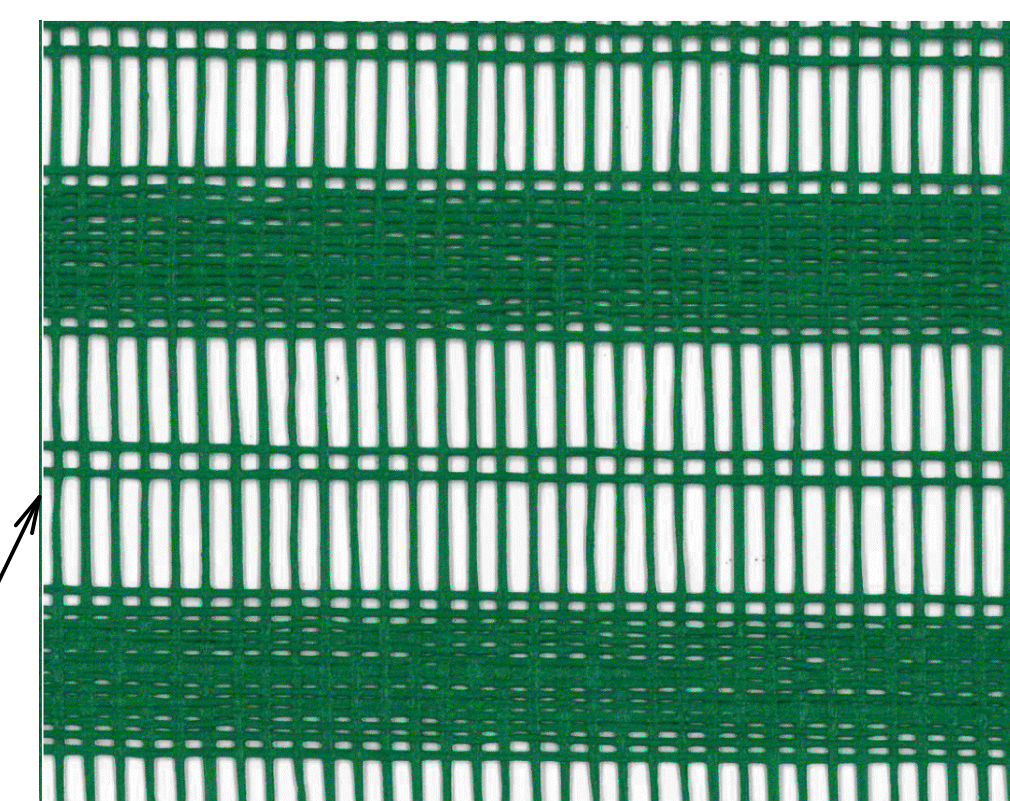


**FENCE NOTES:**

1. Can use 1" Post and Smaller Gauge Rope Where Appropriate.
2. Explore Opportunities for Biomimicry Trial using Stick Arrangements.

**PERIMETER FENCE DETAIL**  
Not to Scale

BO-LITE Mesh Fabric by BO-TEX or Approved Equal. Submit Manufacturer's certificate of compliance and Product Documentation Prior to Installing for Approval.



**TEMPORARY NET/FENCE**  
Not to Scale

**JAMES I. KINCAID**  
LICENSED PROFESSIONAL ENGINEER  
No. 12562-CE  
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION

*James I. Kincaid*  
SIGNATURE

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL SECTION & DETAILS**

**KUHIO HIGHWAY**  
**Emergency Shoreline Mitigation**  
**Fed. Aid Project No. ER-24(004)**

Scale: As Noted Date: Dec. 2023

SHEET No. L-5 OF 5 SHEETS