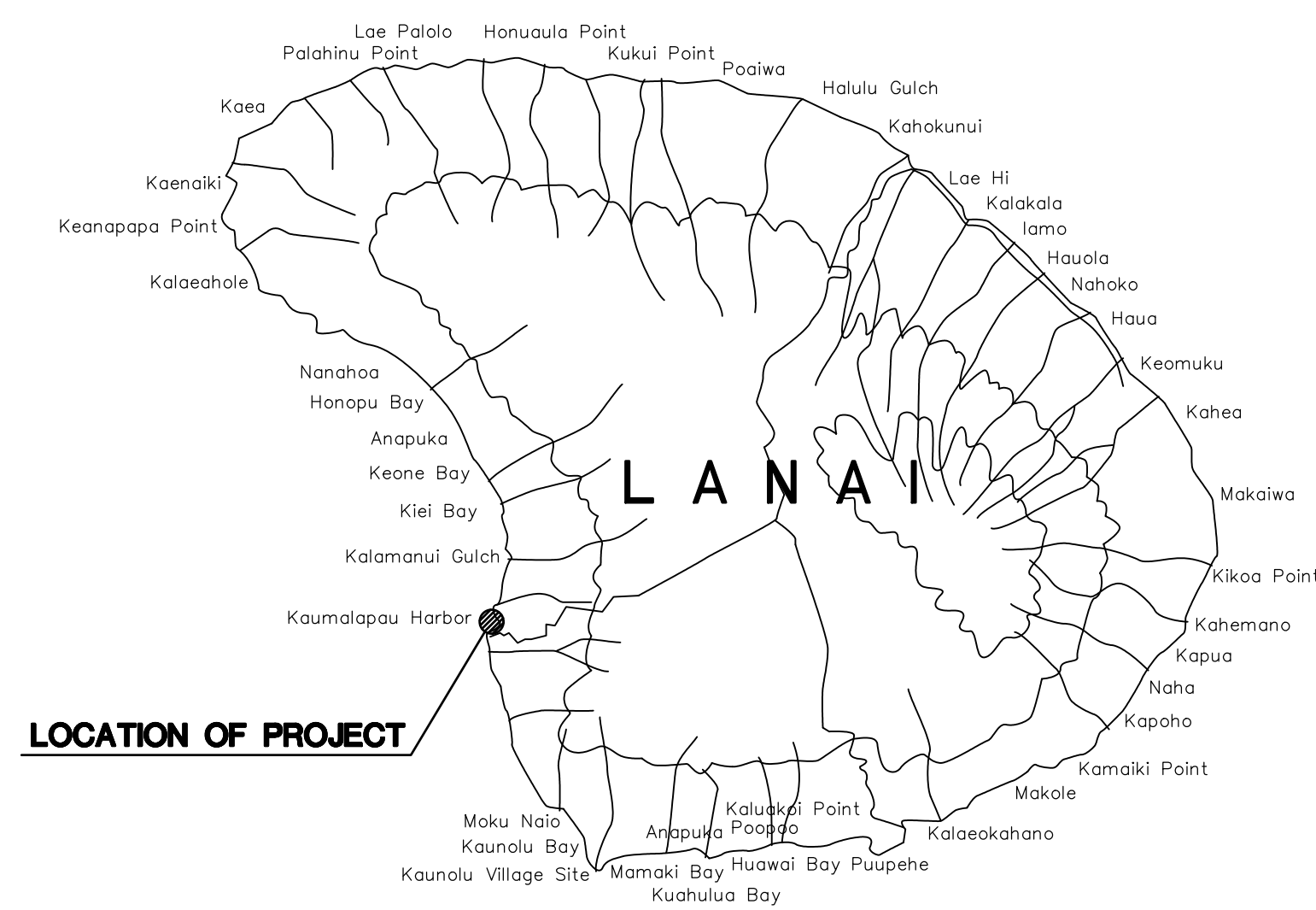


REMOVE RAIL FOOTING ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII

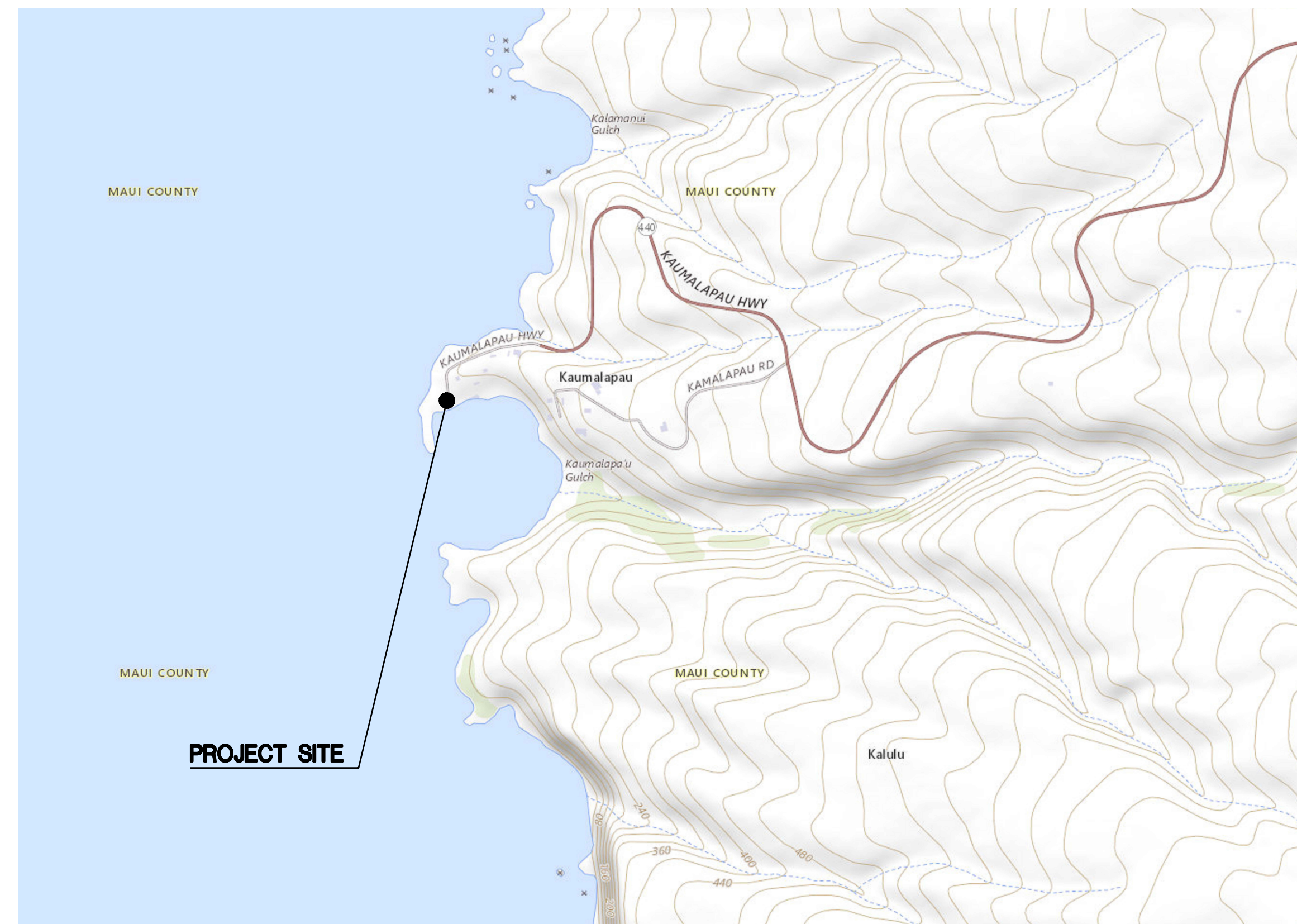
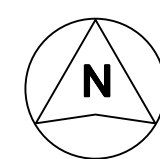
FOR THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS
S30229



ISLAND OF LANAI

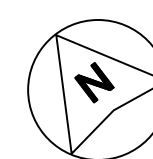
LOCATION MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



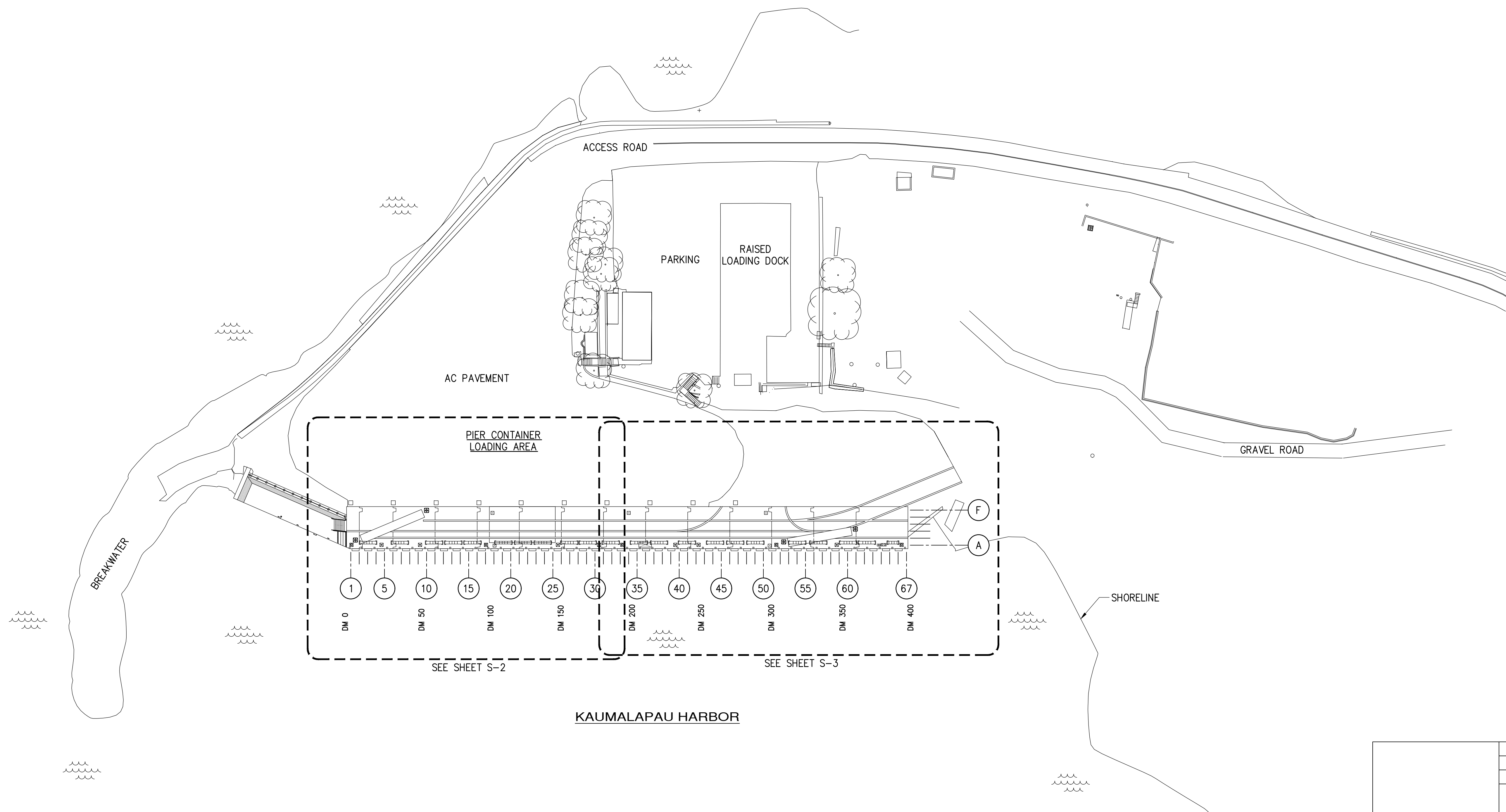
CONSULTANT:

MKE ASSOCIATES LLC
STRUCTURAL ENGINEER

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII		SHEET T-1
APPROVED BY:		Apr 22, 2024
FOR DIRECTOR OF TRANSPORTATION		DATE 1 OF 7 SHEETS

INDEX TO DRAWINGS

SHEET NO.	TITLE
T-1	TITLE SHEET, LOCATION AND VICINITY MAPS
T-2	INDEX TO DRAWINGS AND GENERAL PLAN
S-1	STRUCTURAL NOTES
S-2	PARTIAL PIER TOPSIDE PLAN
S-3	PARTIAL PIER TOPSIDE PLAN
S-4	TYPICAL PIER SECTION
S-5	REPAIR DETAILS



GENERAL PLAN
SCALE: 1" = 40'-0"



REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII				
SHEET TITLE INDEX TO DRAWINGS AND GENERAL PLAN				
DESIGNED BY: GO		DRAWN BY: DL		SHEET T-2
CHECKED BY: GM		DATE: 03/2024		
MKE ASSOCIATES LLC		JOB NUMBER S30229		2 OF 7 SHEETS

STRUCTURAL NOTES:

GENERAL:

1. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE HAWAII STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2005, FOR THE STATE OF HAWAII, UNLESS OTHERWISE INDICATED. HOWEVER, SHOULD THERE BE CONFLICTS, OR WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.
2. THE CONTRACTOR SHALL COMPARE PLANS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE HARBORS CONSTRUCTION ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
3. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE HARBORS CONSTRUCTION ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
4. CONTRACTOR SHALL RESOLVE ANY DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY THE CONTRACTORS FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
5. THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND STRUCTURES IN AND ADJACENT TO THE PROJECT SITE. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE HARBORS CONSTRUCTION ENGINEER AND PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
7. THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH OTHER CONTRACTORS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE HARBORS MAUI DISTRICT MANAGER AND CONSTRUCTION ENGINEER FOR AN APPROVED STAGING AND STORAGE AREA AND FOR RESTRICTIONS OF HARBORS OPERATIONS OVER REPAIR AREAS.
8. THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM HIS/HER WORK AS REQUIRED FOR PUBLIC HEALTH AND SAFETY AND TO THE SATISFACTION OF THE HARBORS CONSTRUCTION ENGINEER. SHOULD THE STATE PERFORM ANY OF THE ABOVE WORK DUE TO NON-PERFORMANCE BY THE CONTRACTOR, THE CONTRACTOR AGREES TO REIMBURSE THE STATE FOR ALL COSTS INCURRED.
9. HARBOR OPERATIONS TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITY. THE CONTRACTOR MUST WORK AROUND HARBOR OPERATIONS SO THAT THE PIER WILL REMAIN OPERATIONAL. WEEKEND WORK MAY BE REQUIRED AND SHALL BE COORDINATED WITH THE HARBORS CONSTRUCTION ENGINEER AND TENANTS IN ADVANCE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.
11. ALL WORK SPECIFIED IN THE CONTRACT BUT NOT LISTED SEPARATELY SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE PAID FOR SEPARATELY.
12. NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. SHOULD THERE BE CONFLICTS BETWEEN THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
13. THE CONTRACTOR SHALL COMPLY WITH THE CLEAN WATER ACT AND THE STATE HARBORS STORMWATER MANAGEMENT PROGRAM. NO POLLUTANT IS ALLOWED TO BE DISCHARGED DIRECTLY OR INDIRECTLY THROUGH THE HARBORS SMALL MS4 OR OTHER POTENTIAL PATHWAY INTO HARBOR WATERS.
14. THE CONTRACTOR WILL BE RESPONSIBLE FOR REGULATORY FINES OR PENALTIES THAT MAY BE IMPOSED BY ENVIRONMENTAL REGULATORY AGENCIES (EPA AND/OR STATE DOH) IN THE EVENT OF VIOLATIONS.
15. THE CONTRACTOR SHALL SUBMIT A SITE-SPECIFIC BEST MANAGEMENT PRACTICE PLAN AND HEALTH AND SAFETY PLAN TO THE HARBORS CONSTRUCTION ENGINEER PRIOR TO THE START OF ANY CONSTRUCTION WORK.
16. IN CASE OF RELEASE OF HAZARDOUS SUBSTANCE, OIL OR ENCOUNTER OF CONTAMINATED SOIL, THE CONTRACTOR SHALL NOTIFY APPROPRIATE FACILITY PERSONNEL, EMERGENCY RESPONSE AGENCIES, AND REGULATORY AGENCIES FOLLOWING NOTIFICATION PROCEDURES, AND SHALL NOTIFY THE HARBORS CONSTRUCTION ENGINEER IMMEDIATELY (I.E., WITHIN 24-HOURS). CONTACT INFORMATION MUST BE IN LOCATIONS THAT ARE READILY ACCESSIBLE AND AVAILABLE.

DEMOLITION:

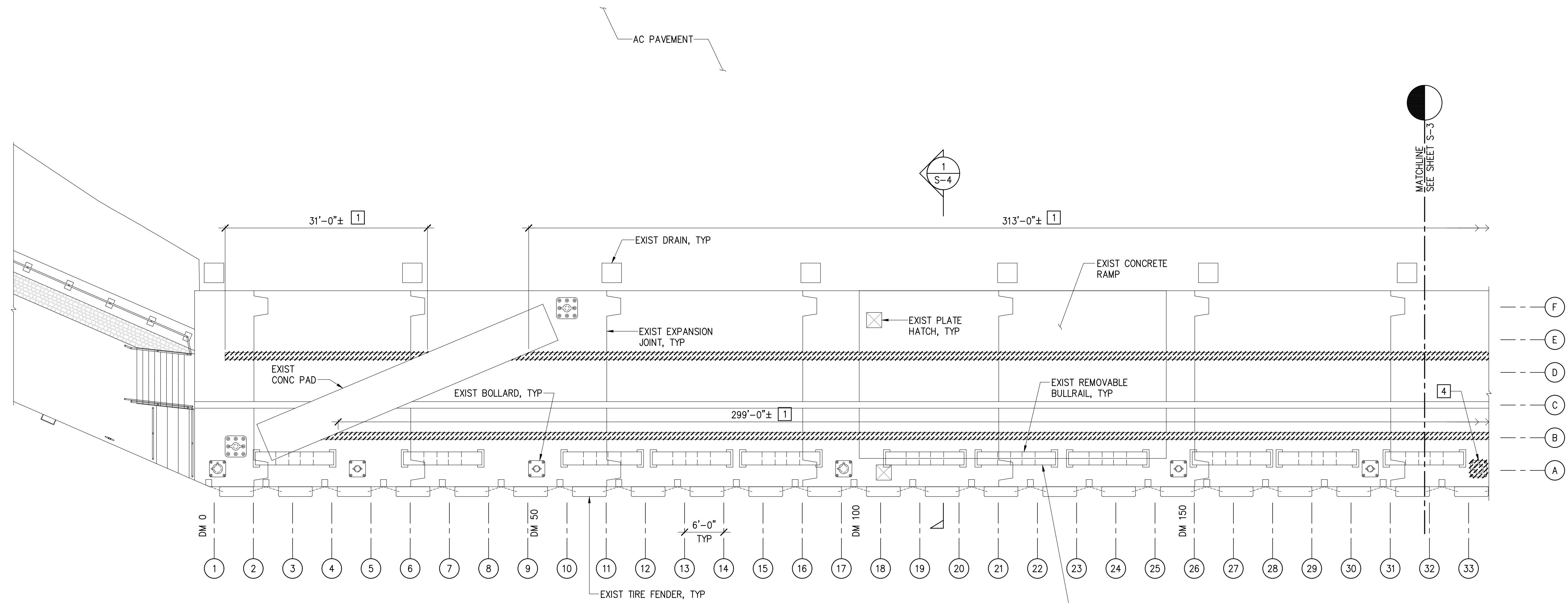
1. THE CONTRACTOR SHALL PLACE SEDIMENT CONTROL DEVICES, BOOMS, TARPULINS, STAGING, SCREENS AND OTHER DEVICES AS NECESSARY TO PREVENT AIR BORNE MATERIALS FROM LEAVING THE IMMEDIATE VICINITY OF THE SITE. THE CONTRACTOR SHALL CAPTURE AND DISPOSE OF ALL NEW GENERATED WASTES.
2. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE AND LOCAL ENVIRONMENTAL PROTECTION STANDARDS, LAWS AND REGULATIONS. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INCLUDING NOISE PERMIT, AS REQUIRED.
3. THE CONTRACTOR SHALL ENSURE THAT DEMOLITION DEBRIS MEETS LANDFILL REQUIREMENTS. FOR EXAMPLE, LONGER ITEMS SHALL BE CUT INTO MANAGEABLE LENGTHS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING, HANDLING, TRANSPORTING AND DISPOSAL OF ALL DEMOLITION DEBRIS FROM THE SUBJECT PROPERTY AT NO ADDITIONAL COST TO THE STATE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR SHALL SUBMIT A BEST MANAGEMENT PLAN (BMP) FOR REVIEW AND APPROVAL BY THE HARBORS CONSTRUCTION ENGINEER. THE BMP PROCEDURES SHALL INCLUDE A DESCRIPTION OF METHODS AND PROCEDURES THAT WILL BE FOLLOWED FOR ENVIRONMENTAL PROTECTION AND SOLID WASTE MANAGEMENT. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REPAIR MATERIALS:

1. PATCHING COMPOUND FOR TOPSIDE CONCRETE PAVEMENT REPAIRS SHALL BE SIKACRETE 211 SCC PLUS BY SIKA, OR APPROVED EQUAL.
2. ASPHALT COLD PATCH FOR TOPSIDE ASPHALT PATCHING SHALL BE SEABOARD BOND-X HIGH PERFORMANCE COLD PATCH, OR APPROVED EQUAL.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII				
SHEET TITLE STRUCTURAL NOTES				
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26			SHEET S-1	
DESIGNED BY: GO		JOB NUMBER S30229		
DRAWN BY: DL				
CHECKED BY: GM				
DATE: 03/2024				
SCALE: AS SHOWN			3 OF 7 SHEETS	

Printed: Apr 18, 2024, 2:45pm
 MKE ASSOCIATES LLC



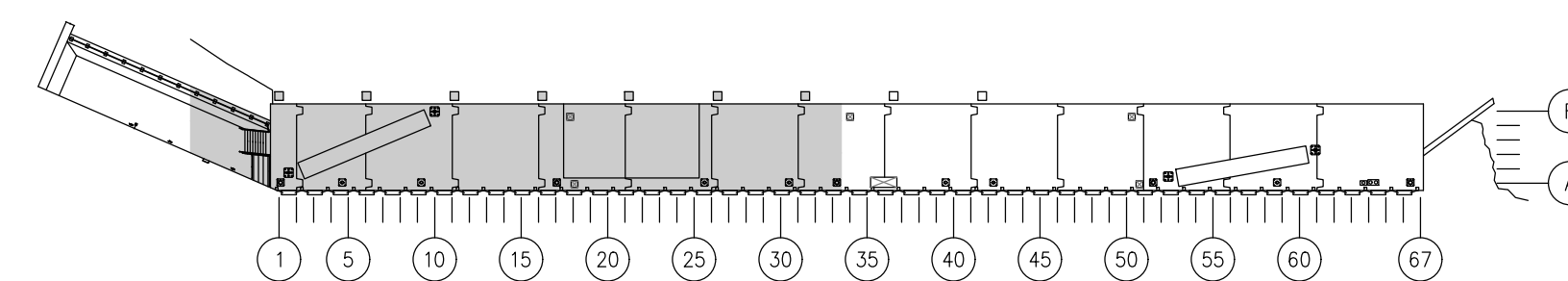
KAUMALAPAU HARBOR

LEGEND:

- 1 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND PATCH WITH CONCRETE REPAIR MATERIAL, SEE DETAIL 1/S-5
- 2 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND PATCH WITH COLD PATCH, SEE DETAIL 1/S-5
- 3 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND CONC GRADE BEAM, SEE DETAIL 1/S-5
- 4 DEMOLISH AND DISPOSE OF EXIST MOORING BOLLARD, SEE DETAIL 2/S-5

NOTES:

- 1. CONTRACTOR SHALL PROVIDE AN EMPTY 20 CUBIC YARD DUMPSTER FOR MISCELLANEOUS METAL AND CONCRETE DEBRIS BEHIND THE PILE BUTTS TO BE REMOVED AND DISPOSED OFF SITE BY THE CONTRACTOR. HARBORS MAY ADD ADDITIONAL NON-HAZARDOUS DEBRIS TO FILL THE DUMPSTER.
- 2. CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING REMOVABLE BULLRAILS AS NECESSARY TO PERFORM THE WORK.

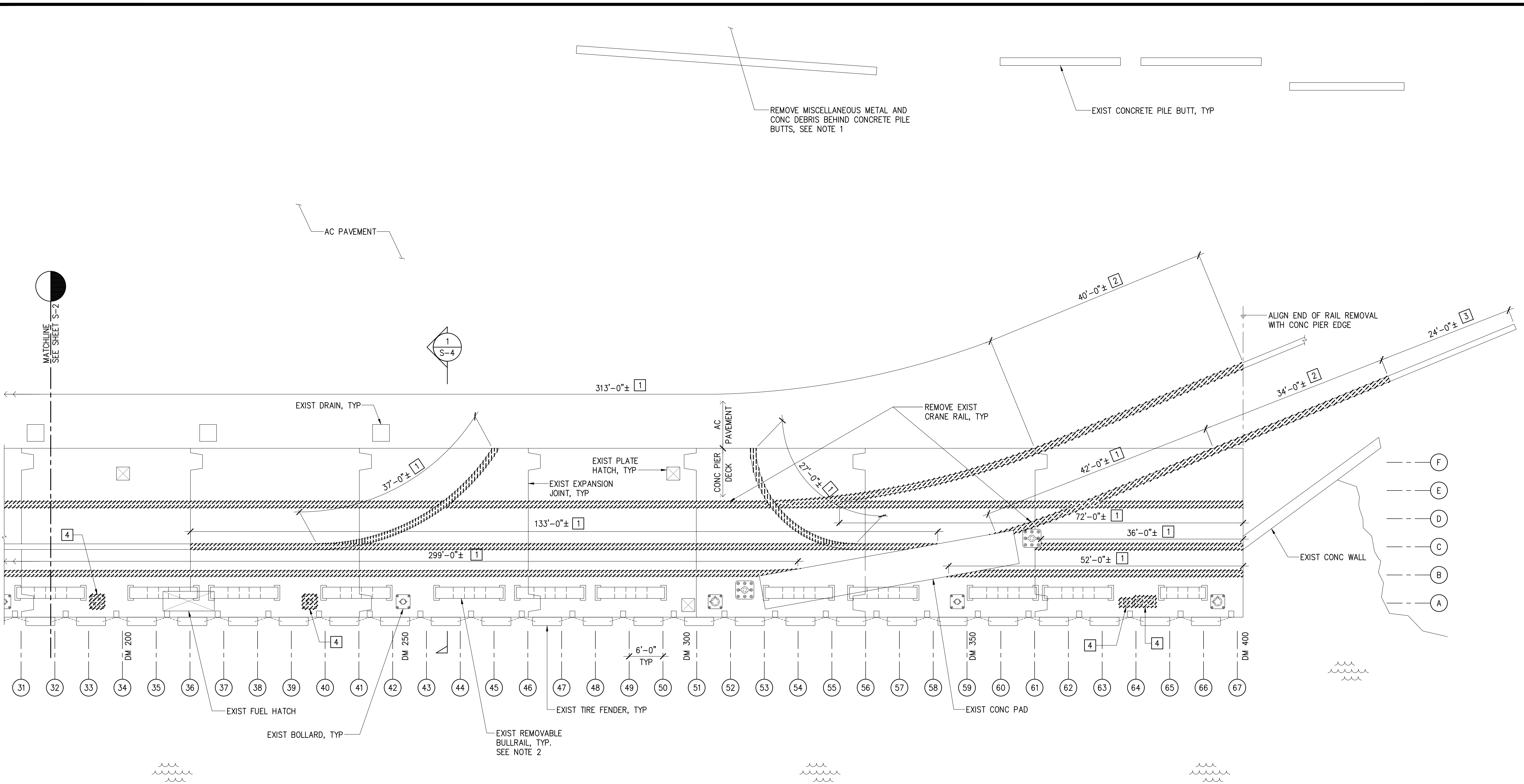


PARTIAL PIER TOPSIDE PLAN

SCALE: 1/8" = 1'-0"



REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII				
SHEET TITLE PARTIAL PIER TOPSIDE PLAN				
DESIGNED BY: GO		DRAWN BY: DL		SHEET S-2
CHECKED BY: GM		DATE: 03/2024		
MKE ASSOCIATES LLC		JOB NUMBER S30229		4 OF 7 SHEETS
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26		SCALE: AS SHOWN		



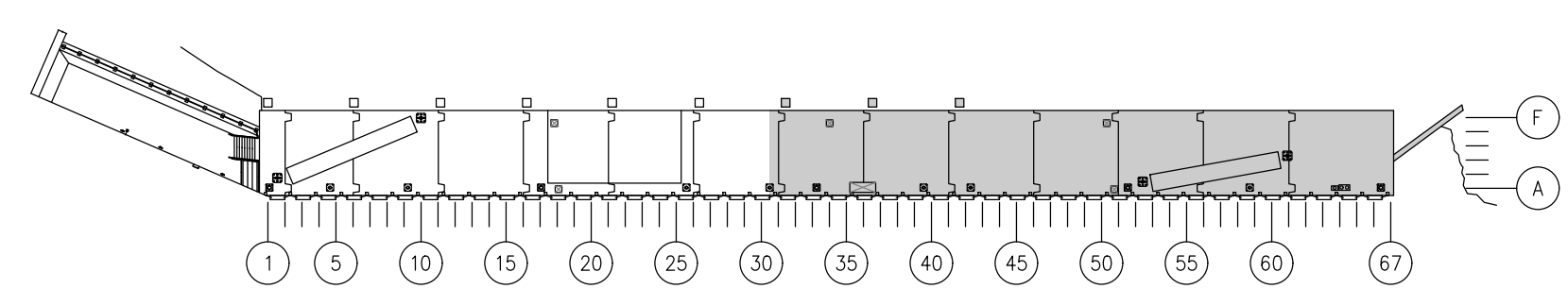
KAUMALAPAU HARBOR

LEGEND:

- 1 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND PATCH WITH CONCRETE REPAIR MATERIAL, SEE DETAIL 1/S-5
- 2 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND PATCH WITH COLD PATCH, SEE DETAIL 1/S-5
- 3 DEMOLISH AND DISPOSE OF EXIST RAIL FOOTING AND CONC GRADE BEAM, SEE DETAIL 1/S-5
- 4 DEMOLISH AND DISPOSE OF EXIST MOORING BOLLARD, SEE DETAIL 2/S-5

NOTES:

1. CONTRACTOR SHALL PROVIDE AN EMPTY 20 CUBIC YARD DUMPSTER FOR MISCELLANEOUS METAL AND CONCRETE DEBRIS BEHIND THE PILE BUTTS TO BE REMOVED AND DISPOSED OFF SITE BY THE CONTRACTOR. HARBORS MAY ADD ADDITIONAL NON-HAZARDOUS DEBRIS TO FILL THE DUMPSTER.
2. CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING REMOVABLE BULLRAILS AS NECESSARY TO PERFORM THE WORK.

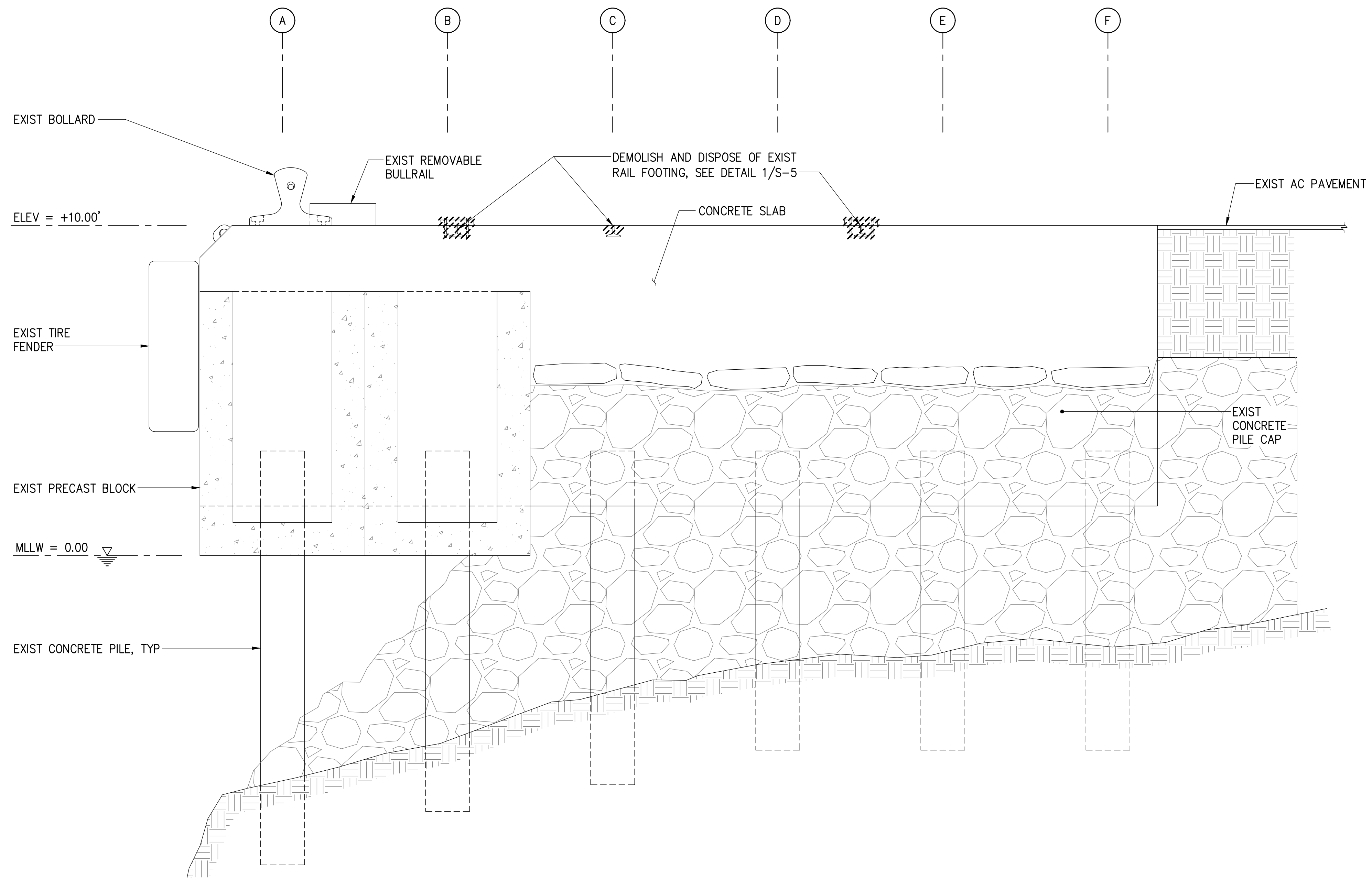


PARTIAL PIER TOPSIDE PLAN
SCALE: 1/8" = 1'-0"



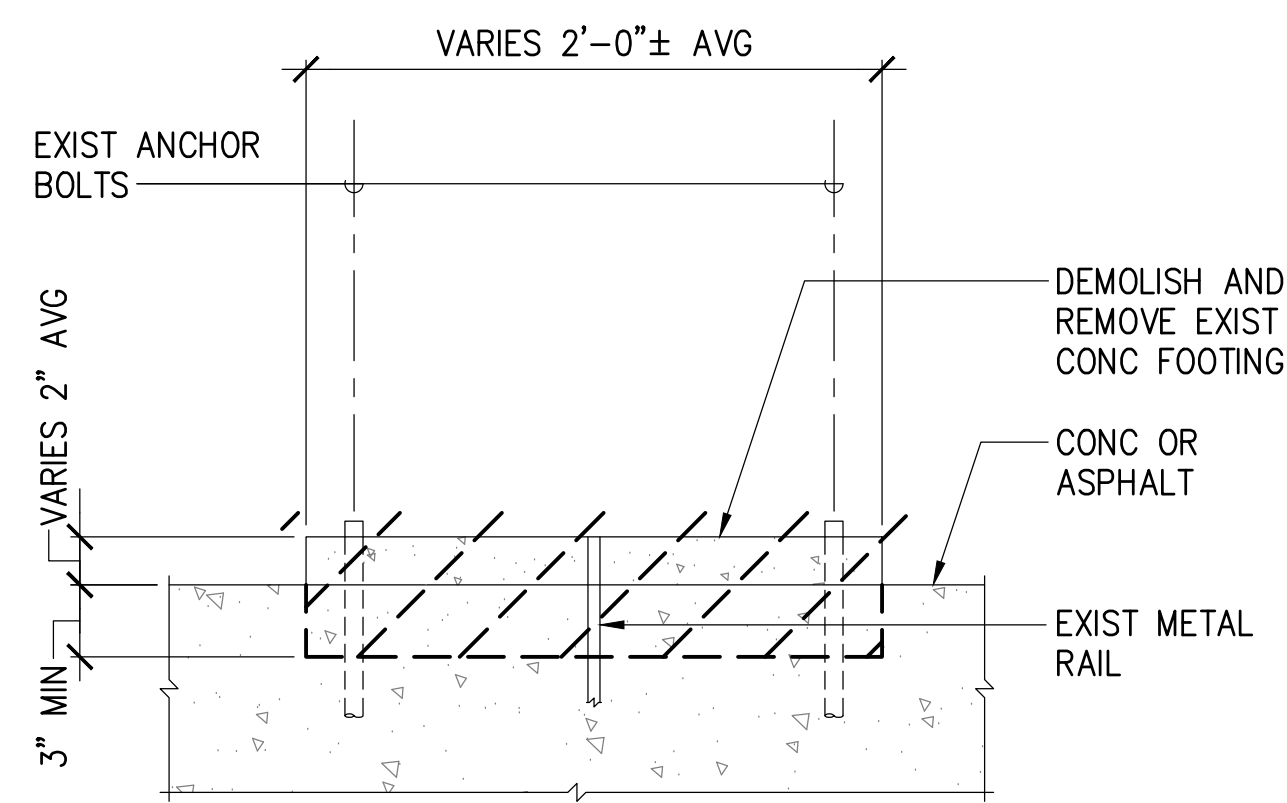
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII				
SHEET TITLE PARTIAL PIER TOPSIDE PLAN				
DESIGNED BY: GO		DRAWN BY: DL		SHEET S-3
CHECKED BY: GM		DATE: 03/2024		
MKE ASSOCIATES LLC		JOB NUMBER S30229		5 OF 7 SHEETS

DRAWN: JUNE 21, 2024 4:40:23PM



1
S-4
TYPICAL PIER SECTION
SCALE: 1/2" = 1'-0"

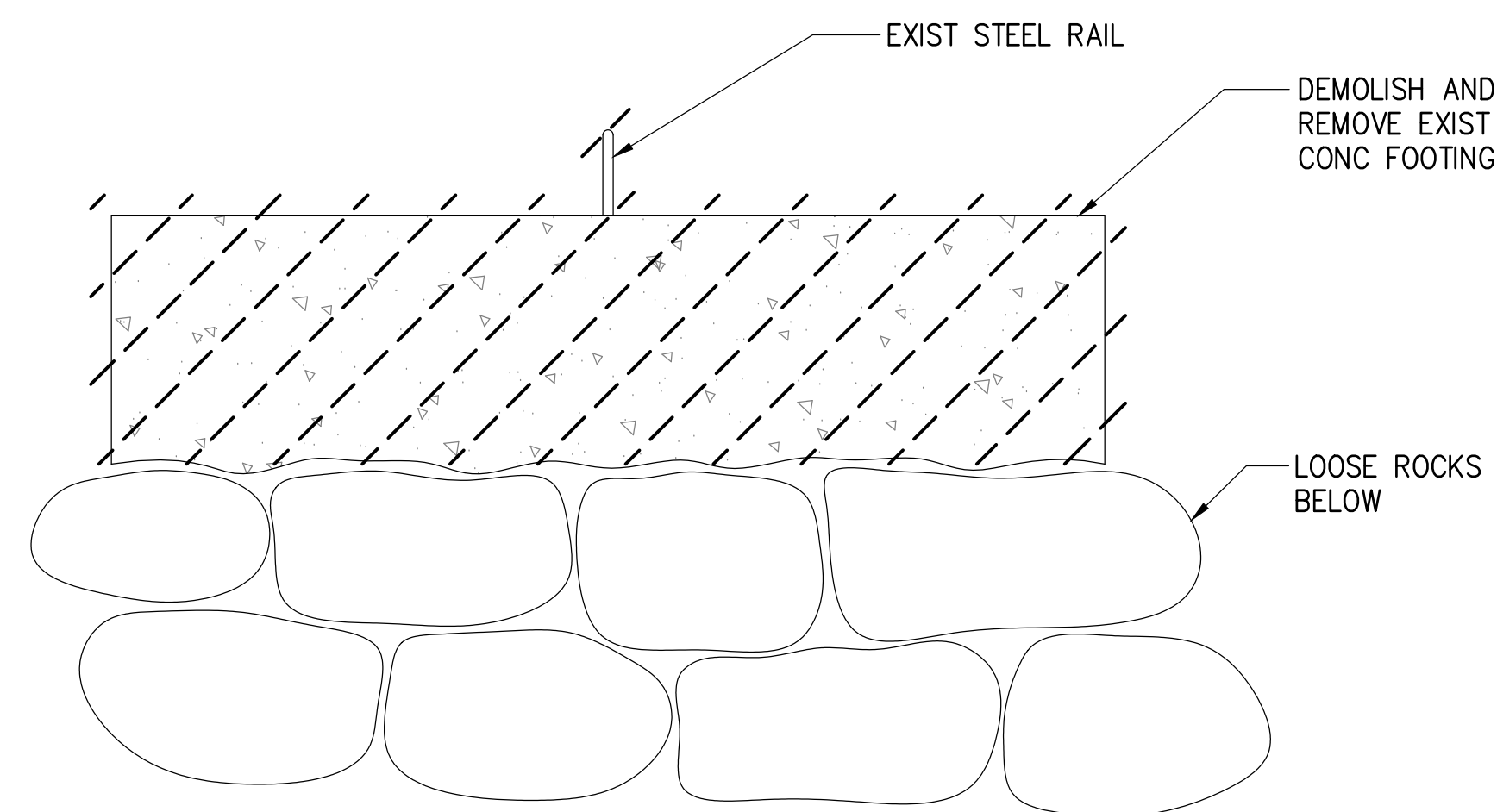
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26 MKE ASSOCIATES LLC	REVISION	DATE	DESCRIPTION	BY	APPROVED	
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS					
	JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII					
	SHEET TITLE TYPICAL PIER SECTION					
	DESIGNED BY: GO				SHEET S-4	
	DRAWN BY: DL				JOB NUMBER S30229 6 OF 7 SHEETS	
CHECKED BY: GM						
DATE: 03/2024						
SCALE: AS SHOWN						



AT CONC OR AC PAVEMENT

NOTE:

AT EXIST PATCHED RAILS, IF NO EXIST RAIL OR ANCHORS ARE NEAR THE SURFACE AND CONCRETE IS SOUND, NO REPAIRS ARE REQUIRED.

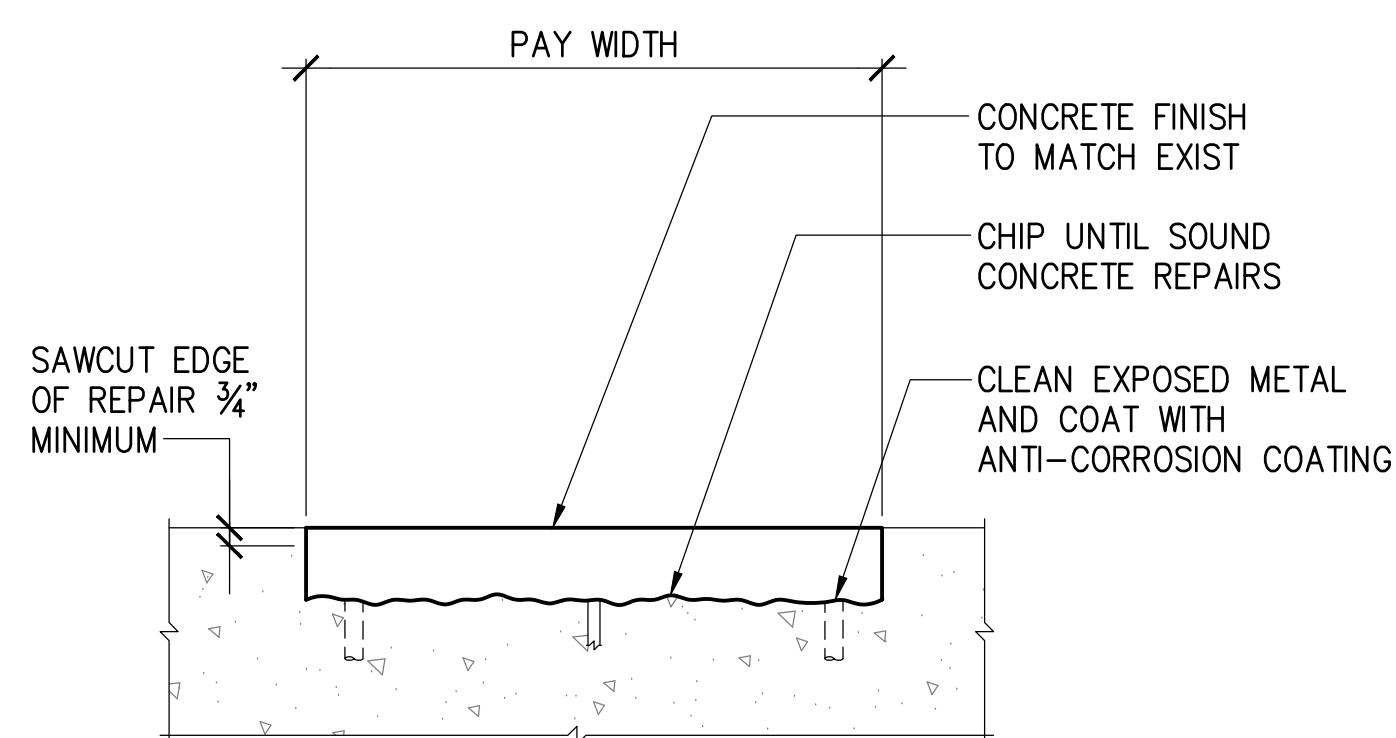


AT GRADE

NOTE:

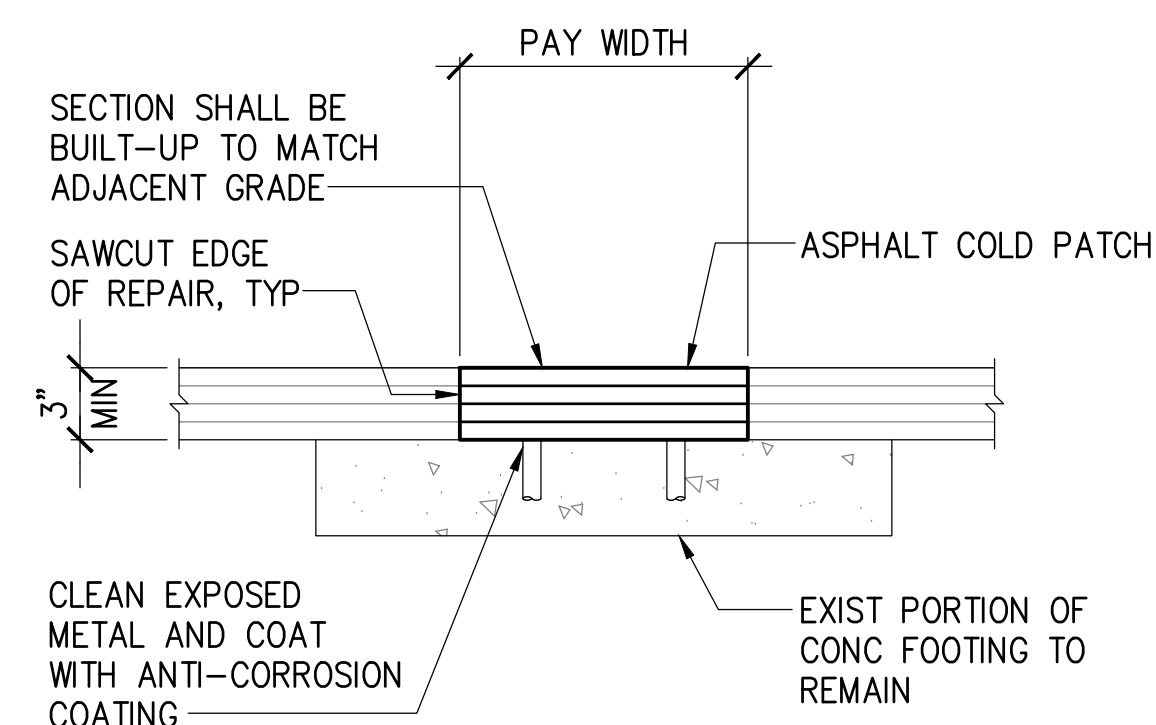
NO ADDITIONAL CONCRETE OR ASPHALT PATCHING REQUIRED FOR "AT GRADE" CONDITION.

EXIST CONDITION



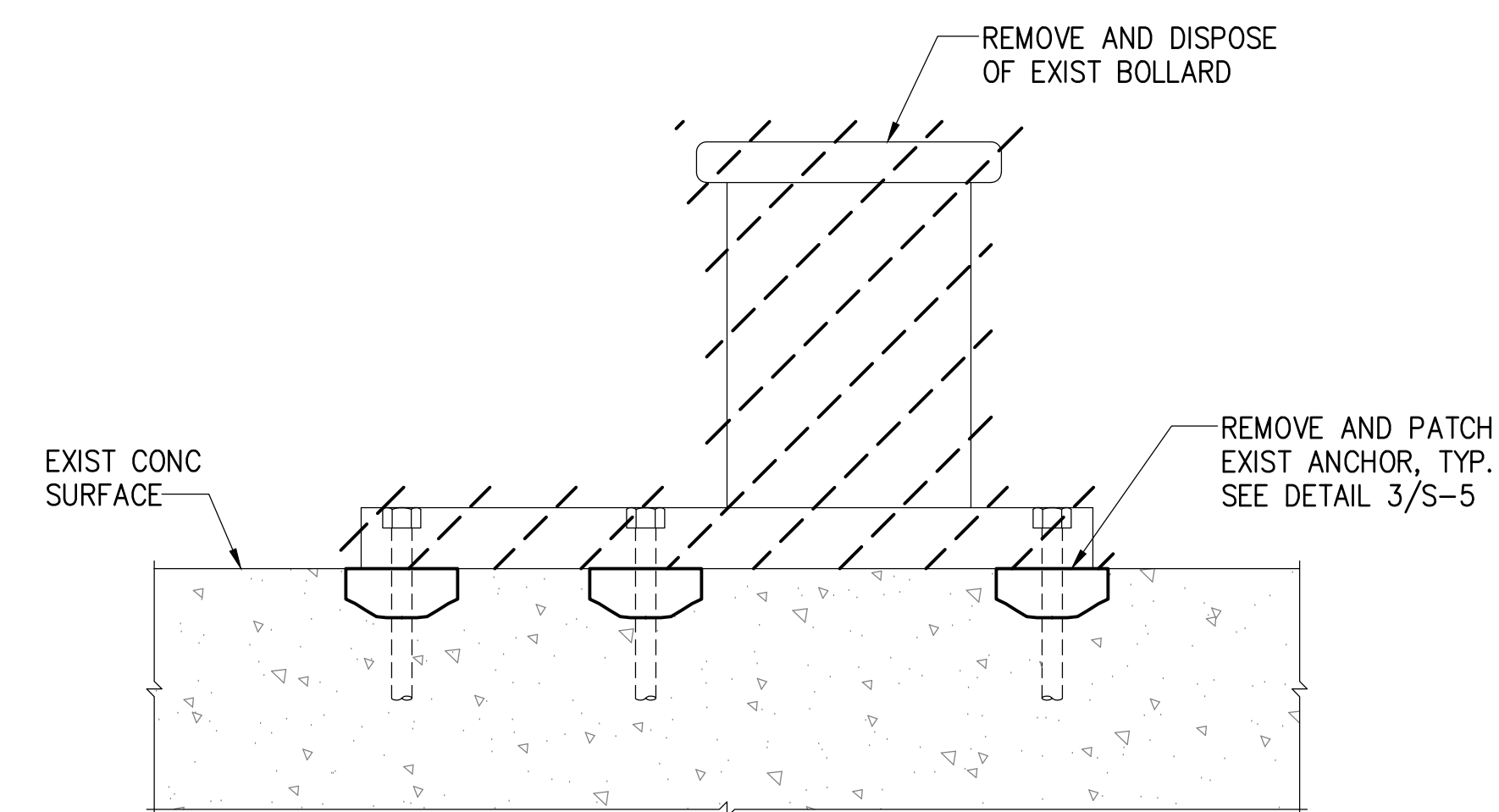
AT CONC

PAY AREA = PAY WIDTH x LENGTH



AT AC PAVEMENT

REPAIRED CONDITION



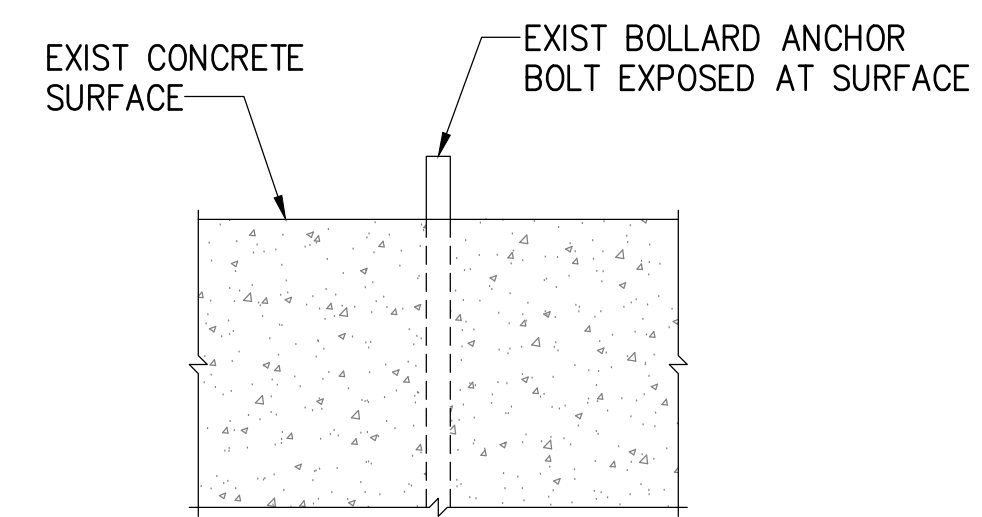
NOTE:

BOLLARD SIZES VARY. SEE SPECIFICATIONS FOR PROJECT PHOTOGRAPHS.

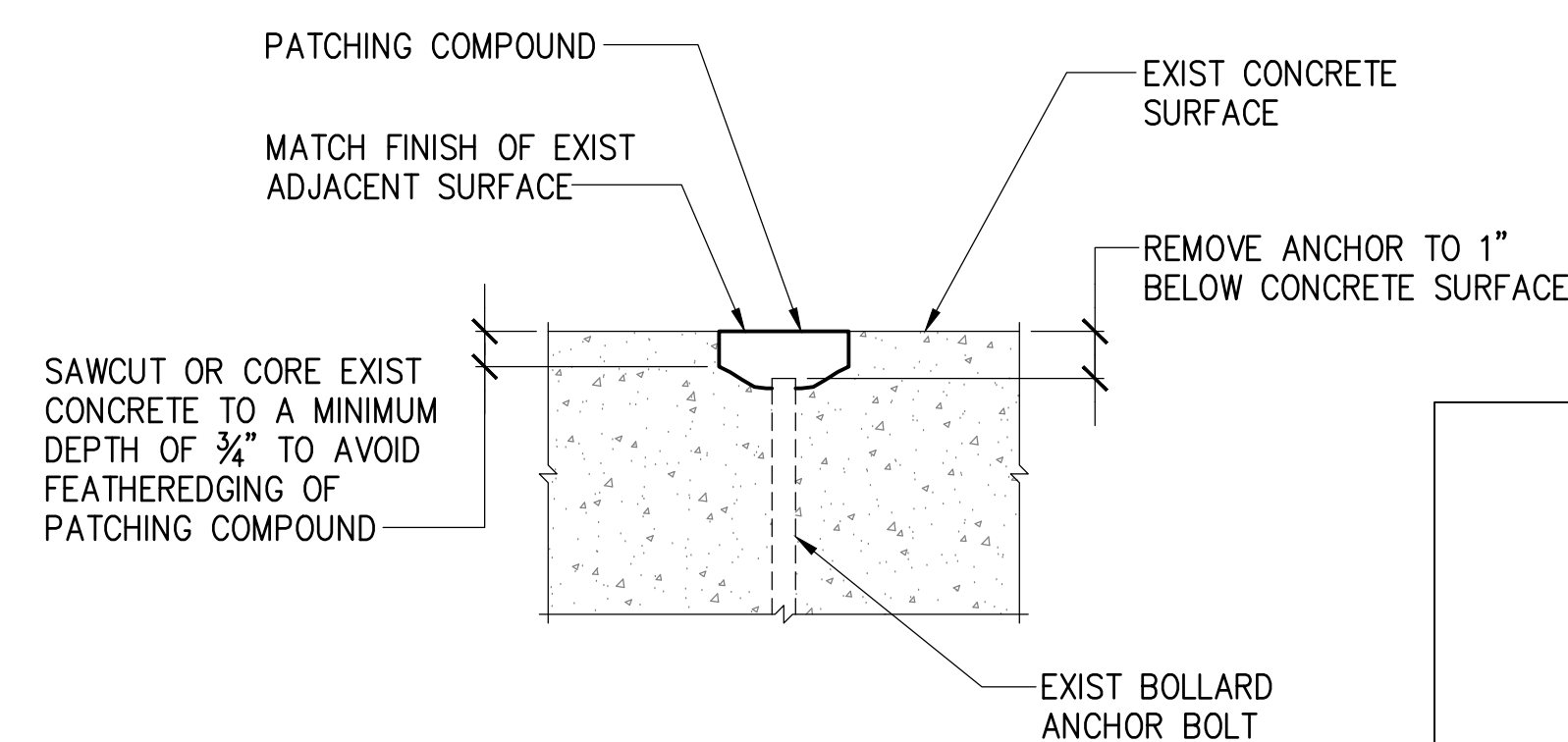
2 BOLLARD REMOVAL DETAIL
S-5 NOT TO SCALE

1 RAIL FOOTING REMOVAL DETAILS
S-5 NOT TO SCALE

3 EXPOSED ANCHOR BOLT REPAIR
S-5 NOT TO SCALE



EXIST CONDITION



REPAIRED CONDITION

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MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REMOVE RAIL FOOTINGS ON CONCRETE APRON KAUMALAPAU HARBOR, LANAI, HAWAII				
SHEET TITLE REPAIR DETAILS				
DESIGNED BY: GO				SHEET S-5
DRAWN BY: DL				
CHECKED BY: GM				
DATE: 03/2024	JOB NUMBER S30229			
SCALE: AS SHOWN				7 OF 7 SHTS.