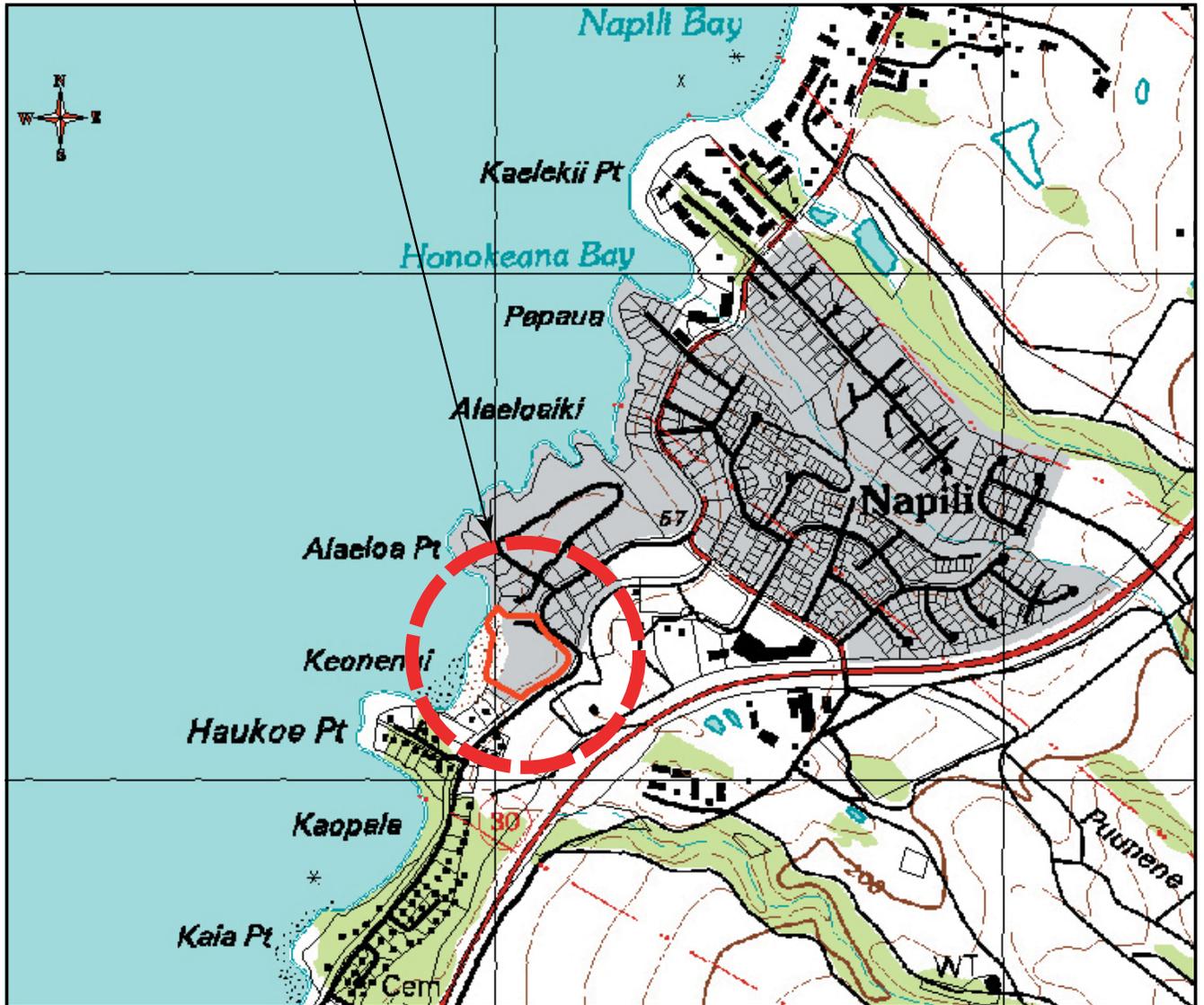
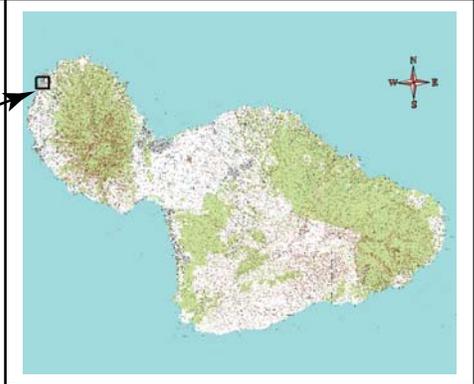


PROJECT  
LOCATION



**FIGURE 1**

Not to Scale

JANUARY  
2014

REGIONAL LOCATION

KAHANA SUNSET





**FIGURE 2**

JANUARY 2014
AERIAL MAP KAHANA SUNSET



Source: Google Earth, February 2012



STATE LAND USE DISTRICTS

-  Agricultural
-  Conservation
-  Rural
-  Urban

PROJECT  
SITE

0 450 900  
feet



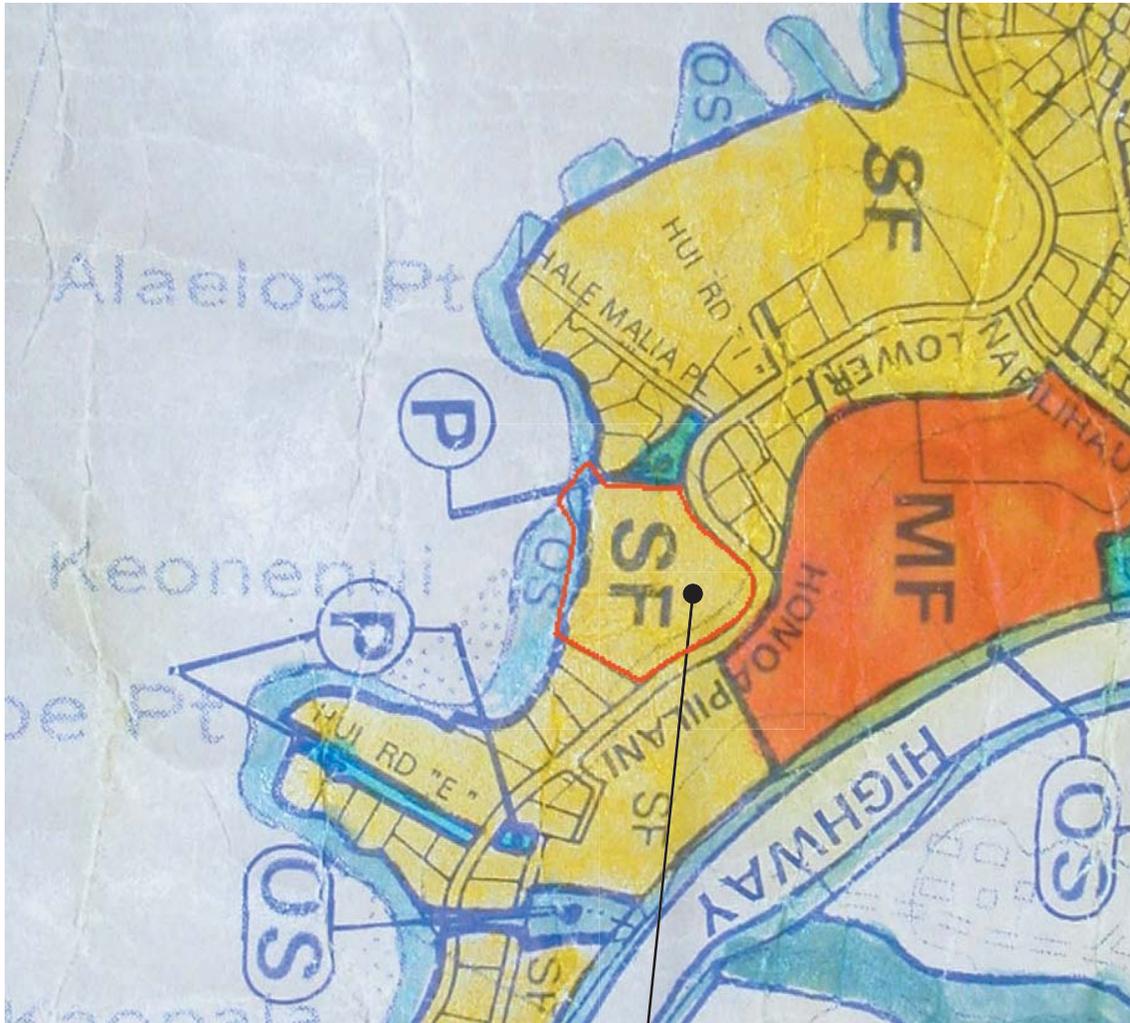
**FIGURE 4**

Not to Scale

JANUARY  
2014

STATE LAND USE  
BOUNDARY MAP  
KAHANA SUNSET





PROJECT SITE

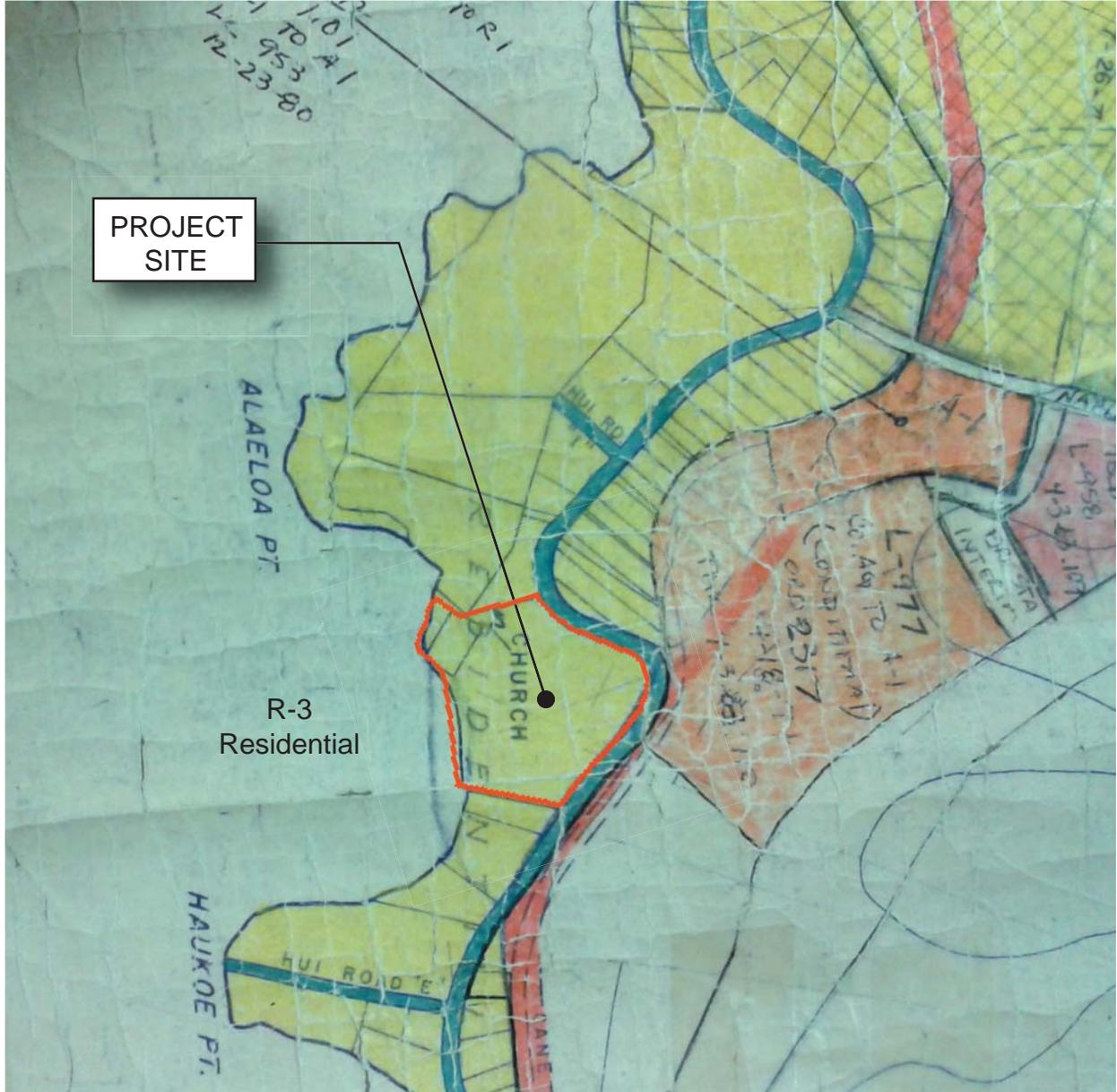
LEGEND	
[SF]	Single Family Residential
[MF]	Multi-Family Residential
[B]	Business/Commercial
[SBR]	Service Business/Residential
[BMF]	Business/Multi-Family
[HI]	Heavy Industrial
[LI]	Light Industrial
[H]	Hotel
[P]	Public/Quasi-Public
[PK]	Park (GC) Golf Course
[OS]	Open Space
[PD]	Project District
[AP]	Airport
[AG]	Agricultural
[R]	Rural
[C]	Conservation
—60—	Airport Special Control District

NOTE: Rural minimum lot size - see site for parcels. 4.3.4 11.17.19.20.21.27.16 per Ordinance 2476 of 2/27/95

**FIGURE 5**

Not to Scale	JANUARY 2014
WEST MAUI COMMUNITY PLAN KAHANA SUNSET	





**FIGURE 6**

Not to Scale	JANUARY 2014	
<p>COUNTY ZONING MAP</p> <p><b>KAHANA SUNSET</b></p>		



# State of Hawaii FLOOD HAZARD ASSESSMENT REPORT



PROJECT SITE

## NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS		PROPERTY INFORMATION	
<p><b>SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD</b> – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:</p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> <b>Zone A:</b> No BFE determined.</li> <li><span style="color: blue;">■</span> <b>Zone AE:</b> BFE determined.</li> <li><span style="color: darkblue;">■</span> <b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.</li> <li><span style="color: pink;">■</span> <b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.</li> <li><span style="color: orange;">■</span> <b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.</li> <li><span style="color: red;">■</span> <b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.</li> <li><span style="color: darkblue;">■</span> <b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.</li> </ul> <p><b>NON-SPECIAL FLOOD HAZARD AREA</b> – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.</p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> <b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.</li> <li><span style="color: lightgreen;">■</span> <b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.</li> </ul> <p><b>OTHER FLOOD AREAS</b></p> <ul style="list-style-type: none"> <li><span style="color: brown;">■</span> <b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.</li> </ul>		<p><b>COUNTY:</b> MAUI  <b>TMK NO:</b> (2) 4-3-003-015  <b>PARCEL ADDRESS:</b> 4909 LOWER HONOAPIILANI RD LAHAINA, HI 96761  <b>FIRM INDEX DATE:</b> SEPTEMBER 25, 2009  <b>LETTER OF MAP CHANGE(S):</b> NONE  <b>FEMA FIRM PANEL(S):</b> 1500030264E  <b>PANEL EFFECTIVE DATE:</b> SEPTEMBER 25, 2009</p>	
		<p><b>PARCEL DATA FROM:</b> MAY 2012  <b>IMAGERY DATA FROM:</b> MAY 2005</p>	
		<p><b>IMPORTANT PHONE NUMBERS</b></p> <p><u>County NFIP Coordinator</u>            County of Maui            Francis Cerizo, CFM (808) 270-7771  <u>Slate NFIP Coordinator</u>            Carol Tyau-Beam, P.E., CFM (808) 587-0267</p>	
		<p><i>Disclaimer: The Department of Land and Natural Resources assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the Department of Land and Natural Resources from any liability, which may arise from its use.</i></p> <p><i>Preliminary DFIRM Disclaimer: If this map has been identified as "PRELIMINARY", please note that it is being provided for commenting purposes only and is not to be used for official/legal decisions or regulatory compliance.</i></p>	

**FIGURE 7**

Not to Scale      JANUARY  
FEMA Flood Insurance Map      2014

**FLOOD INSURANCE  
RATE MAP  
KAHANA SUNSET**



Special Management Area  
Special Management Area

PROJECT  
SITE

0 450 900  
feet



**FIGURE 8**

Not to Scale

JANUARY  
2014

SPECIAL MANAGEMENT  
AREA (SMA) MAP  
KAHANA SUNSET





Photo 1: View from Lower Honoapiilani Road looking makai across the Kahana Sunset property..



PHOTO KEY



Photo 2 Approach to Kahana Sunset traveling north along Lower Honoapiilani Road.



Photo 3: South entrance to Kahana Sunset..



Photo 4: Lower Honoapiilani Road with Kahana Sunset on the left and Kahana Villas structures in the distance.



Photo 5: Approach to the north entrance of Kahana Sunset along Lower Honoapiilani Road.



Photo 6: North entrance to Kahana Sunset.



Photo 7: Kahana Sunset north parking lot, looking makai.

**FIGURE 9.1**

Taken on June 27, 2012  
unless otherwise noted

JANUARY  
2014

SITE PHOTOGRAPHS

KAHANA SUNSET





Photo 8: Office, resident manager's unit, and laundry room.



Photo 9: Building A, 10 units.



Photo 10: Building B, 16 units.



PHOTO KEY



Photo 11: Building C, 11 units.



Photo 12: Building D, 14 units.



Photo 13: Building E, 16 units.



Photo 14: Building F, 12 units.



Photo 15: Pool and pool cabana.



Photo 16: Pool, spa, and barbeque gazebo.



Photo 17: Gazebo (left) and covered barbeque area (right). Gazebo will be relocated.

**FIGURE 9.2**

Taken on June 27, 2012  
unless otherwise noted

JANUARY  
2014

SITE PHOTOGRAPHS

KAHANA SUNSET

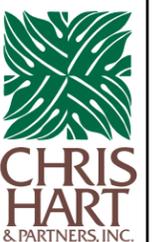




Photo 18: Looking north along sandy beach from lanai of Building F (12/21/2011).



Photo 19: Looking north at area where the existing seawall will be removed and reconstructed further inland. The sandy beach will be widened in this area.



PHOTO KEY



Photo 20: Looking south along sandy beach fronting Building F.



Photo 21: Looking north along seawall at the drainage outfall and the Keonenui Room adjacent to Building A.



Photo 22: Existing stairway to beach that is proposed to be demolished and rebuilt approximately 30 feet inland.



Photo 23: Looking north along concrete stairway leading to lanai area of Building A (12/21/2011).



Photo 24: Looking down same stairway leading to Keonenui Room. Sandy beach visible in the distance.

**FIGURE 9.3**

Taken on June 27, 2012  
unless otherwise noted

JANUARY  
2014

SITE PHOTOGRAPHS

KAHANA SUNSET

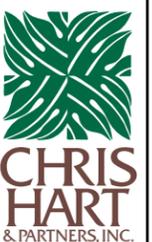




Photo 25: Looking north along 20-foot high bank fronting Building A (2/16/2013).



Photo 26: Looking south along 20-foot high bank fronting Building A.



Photo 27: Looking south from property corner along rock & concrete wall makai of Building A.



PHOTO KEY



Photo 28: Existing seawall at 36-inch drainage outfall. Outfall will be relocated approximately 3-feet inland. Green plywood covers sink holes behind seawall.



Photo 29: Sink holes behind seawall (10/10/2011).



Photo 30: Typical sink hole behind seawall (1/10/2011).



Photo 31: Top of 15-foot deep drywell (12/21/2011). 36-inch drain line from drywell to outfall at seawall will be replaced.



Photo 32: View of central courtyard looking makai from Building D. Hedge at left foreground screens the existing 15-foot deep drywell.

**FIGURE 9.4**

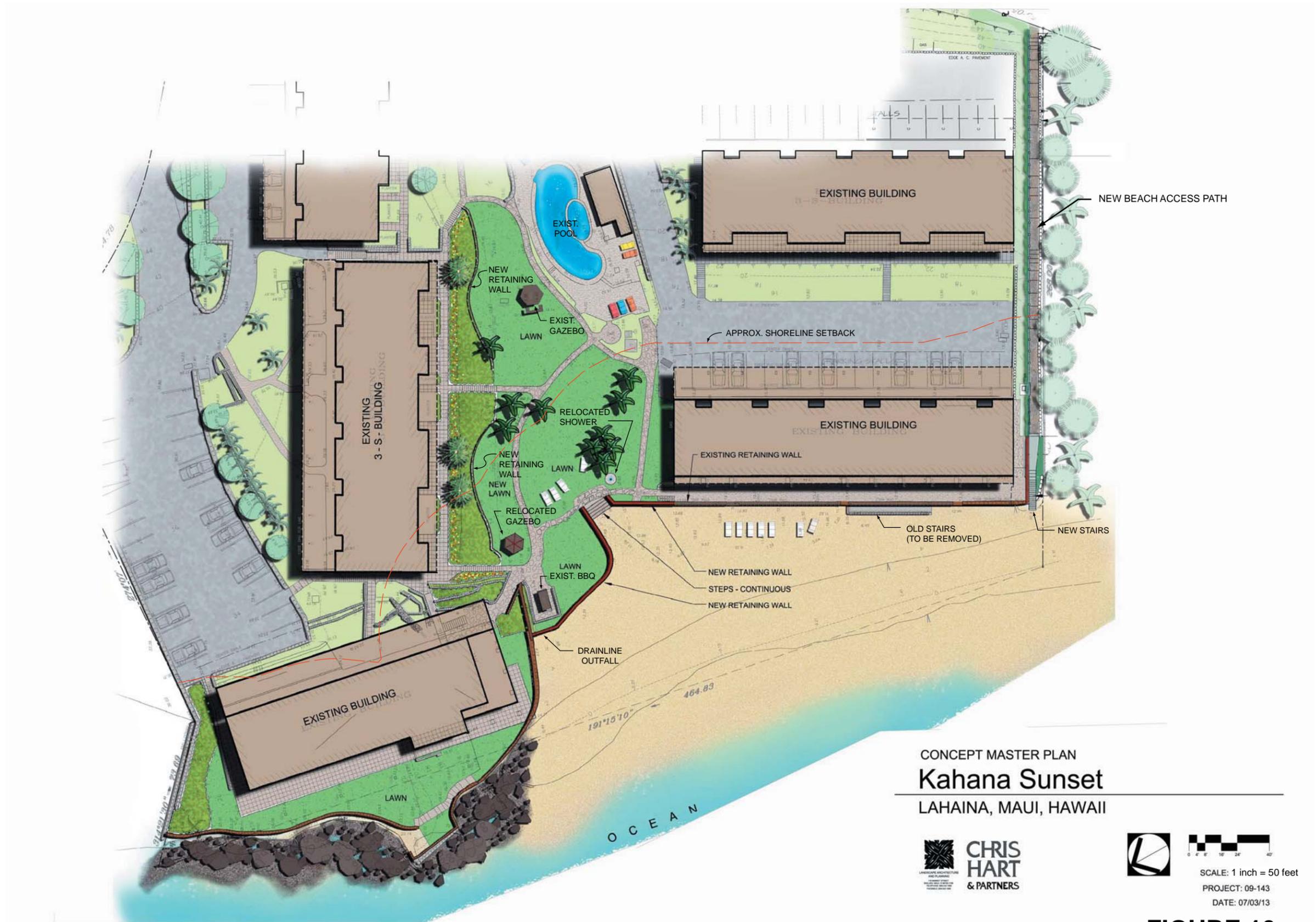
Taken on June 27, 2012  
unless otherwise noted

JANUARY  
2014

SITE PHOTOGRAPHS

KAHANA SUNSET



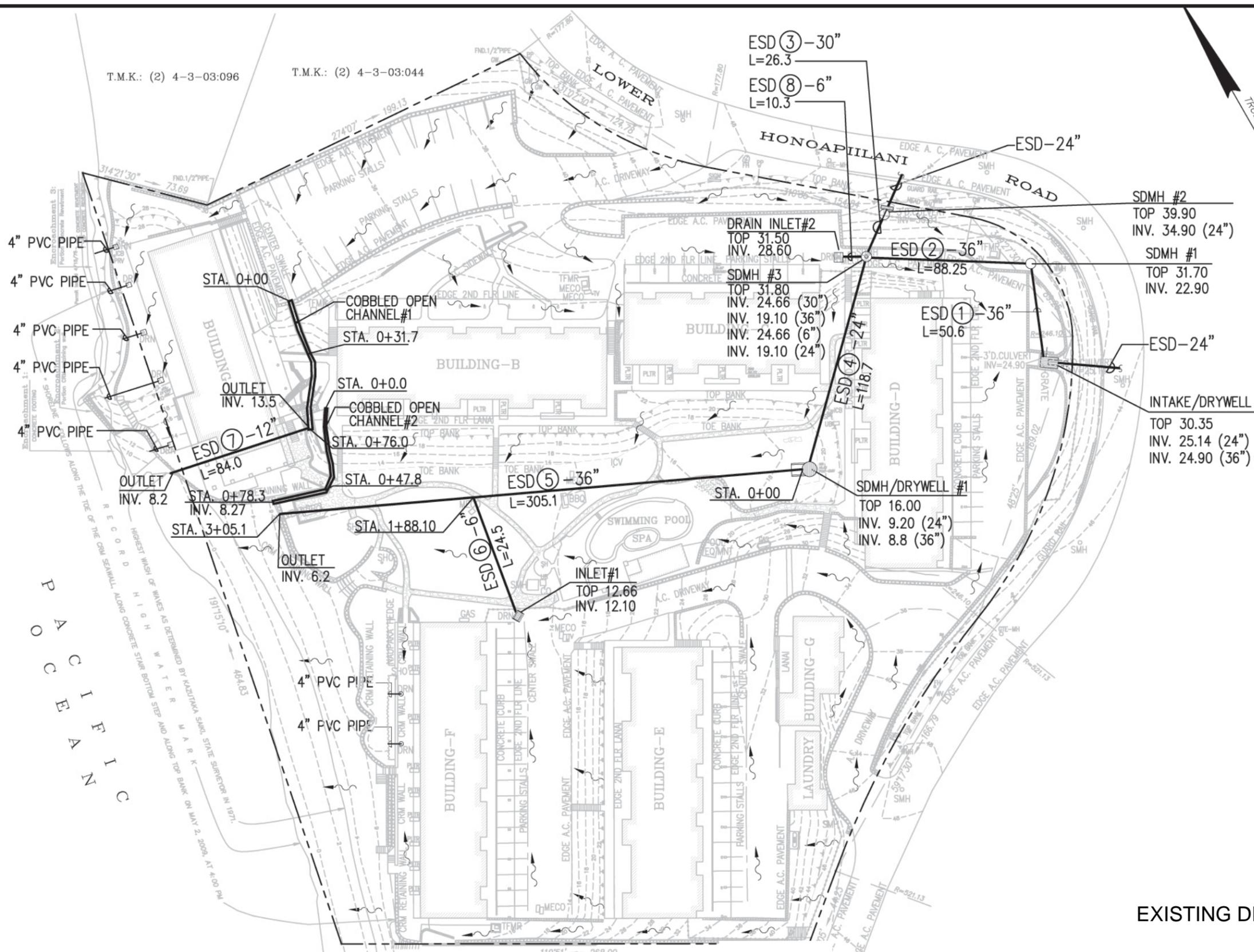


CONCEPT MASTER PLAN  
**Kahana Sunset**  
 LAHAINA, MAUI, HAWAII



SCALE: 1 inch = 50 feet  
 PROJECT: 09-143  
 DATE: 07/03/13

**FIGURE 10**  
 CONCEPT MASTER PLAN



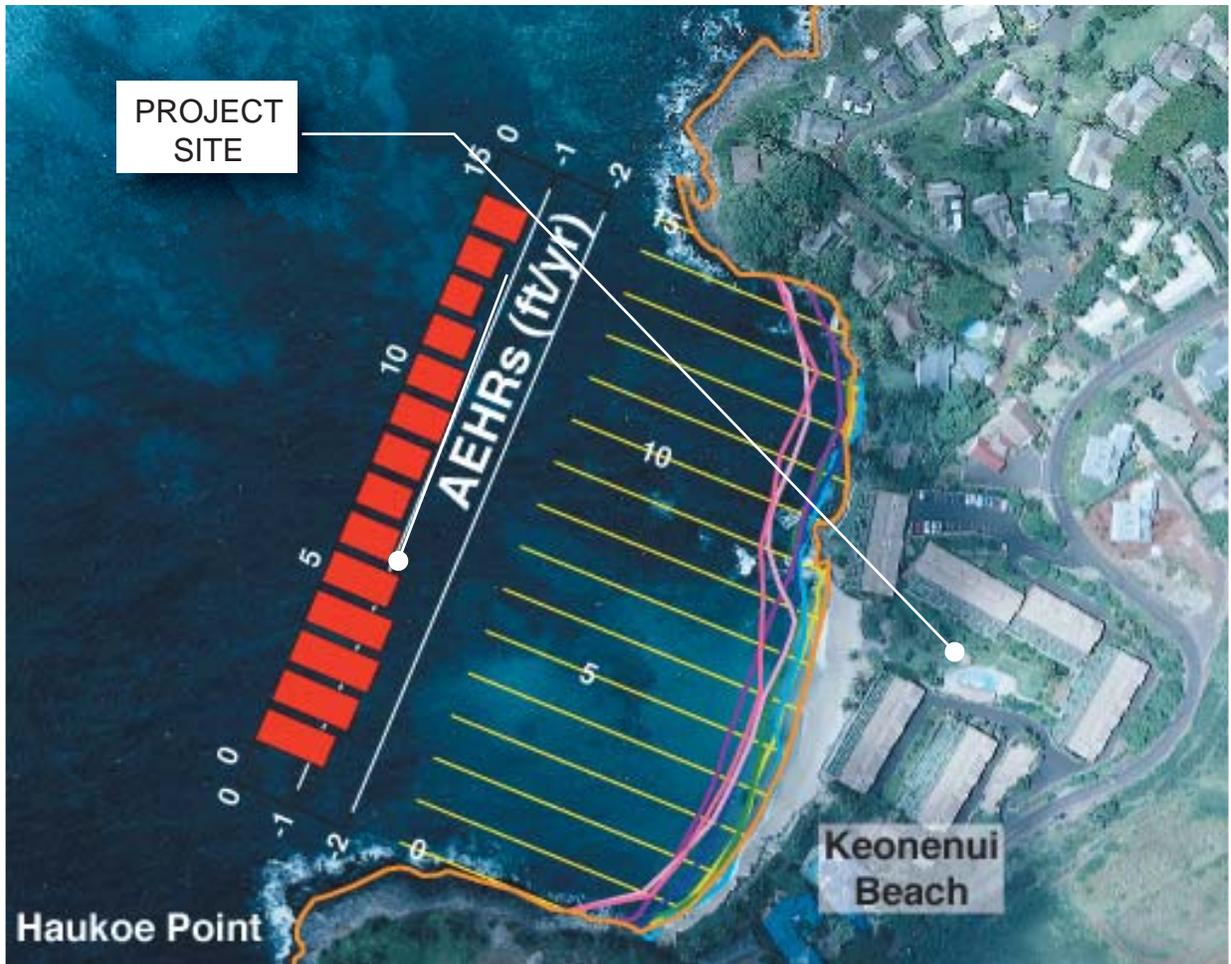
- LEGEND**
- SDMH/DRYWELL
  - INTAKE/DRYWELL
  - DRAIN INLET
  - COBBLED OPEN CHANNEL
  - (DS) DOWNSPOUT
  - EXISTING STORM DRAIN



JANUARY  
2014

**FIGURE 11**  
**EXISTING DRAINAGE SYSTEM**  
**KAHANA SUNSET**





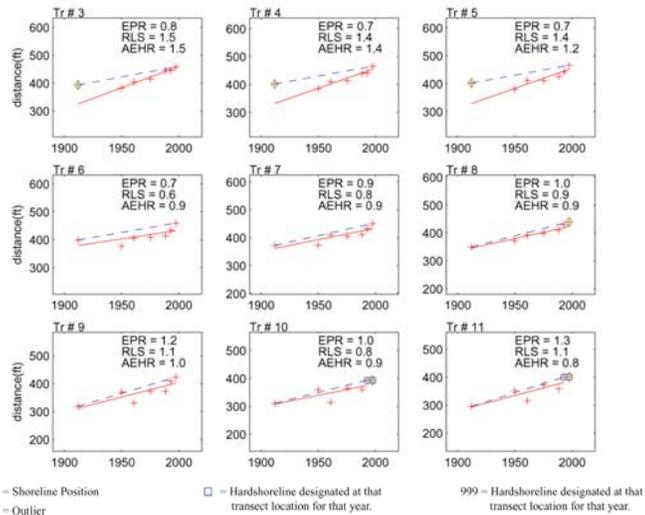
**HISTORICAL SHORELINES**

- 1912
- Nov 1949
- 1960
- Mar 1975
- Aug 1987
- Mar 1988
- Nov 1992
- May 1997
- Erosion rate measurement locations (shore normal transects)

Historical beach positions, color coded by year, are determined using ortho-rectified and georeferenced aerial photographs and National Ocean Survey (NOS) topographic survey charts. The low water mark is used as the historical shoreline, or shoreline change reference feature (SCRF).

For situations in which there is coastal armoring or rocky shoreline seaward of any vegetation, the vegetation line is drawn along the seaward side of the rock or armoring. If there is no sandy beach in these areas, both the vegetation line and the SCRF are delineated along the mean high water line.

Movement of the SCRF is used to calculate erosion rates along shore-normal transects spaced every 20 m (66 ft) along the shoreline. The 1987 SCRF is not used in the calculation of the AEHR, however it provides a gauge of seasonal uncertainty.



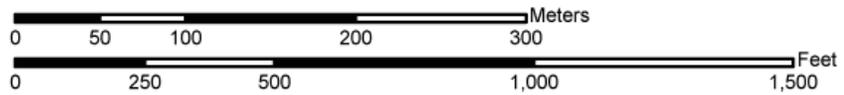
**FIGURE 12**

Not to Scale

JANUARY  
2014

ANNUAL EROSION  
HAZARD RATE MAP  
KAHANA SUNSET





Map Unit Symbol	Map Unit Name
BS	Beaches
KbB	Kahana silty clay, 3 to 7 percent slopes
KbC	Kahana silty clay, 7 to 15 percent slopes
rRS	Rough broken and stony land



Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: UTM Zone 4N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Maui, Hawaii  
 Survey Area Data: Version 7, Dec 31, 2006

**FIGURE 13**

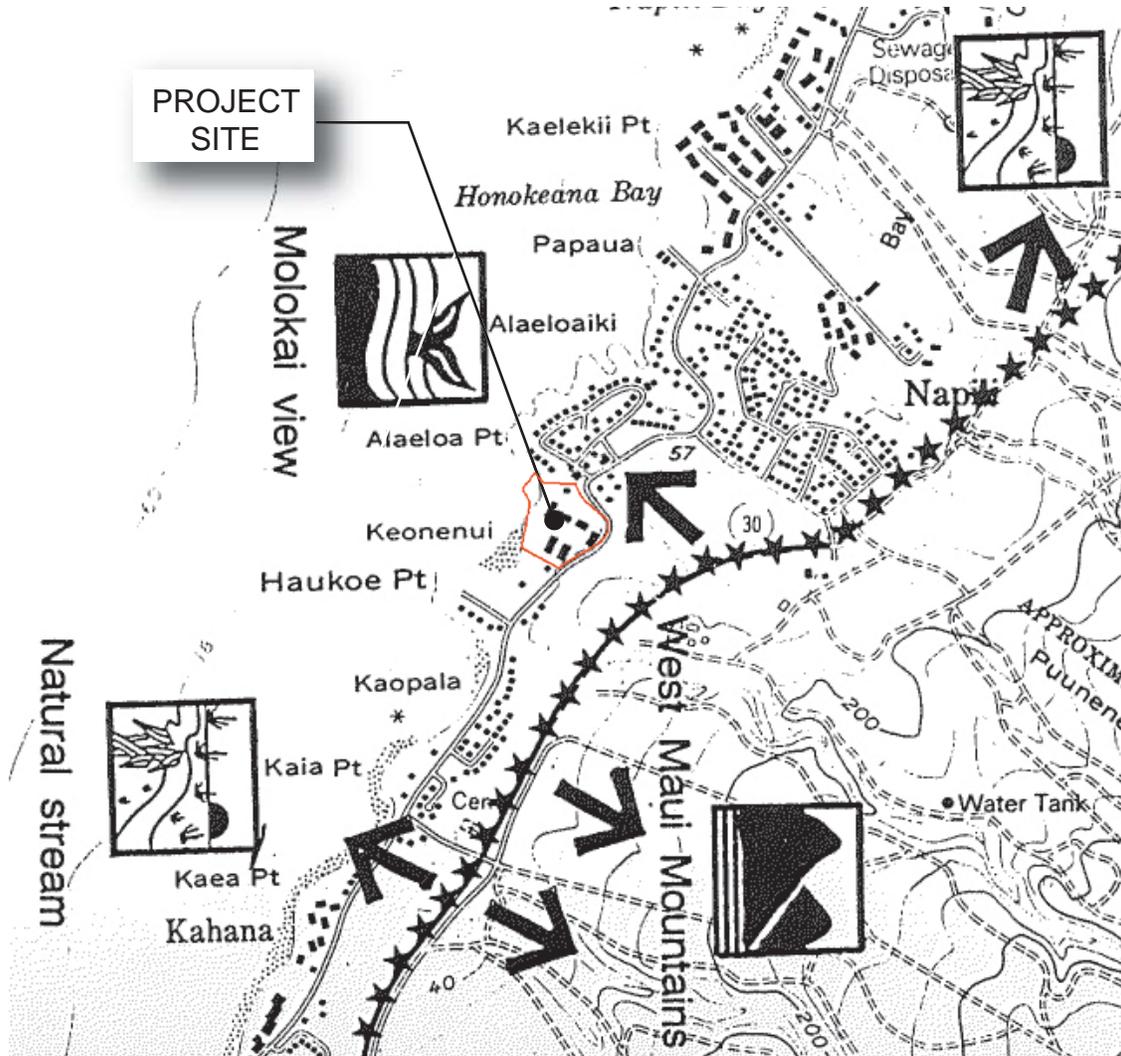
Scale as shown

JANUARY  
2014

SOILS MAP

KAHANA SUNSET





MAP LEGEND  
8.1.7 KAA NAPALI — KAPALUA

-  OPEN SPACES
-  MAUKA VIEWS
-  AREA OF SCENIC BEAUTY
-  COASTAL VIEW
-  COASTAL LAND FORM

**FIGURE 14**

Not to Scale

JANUARY  
2014

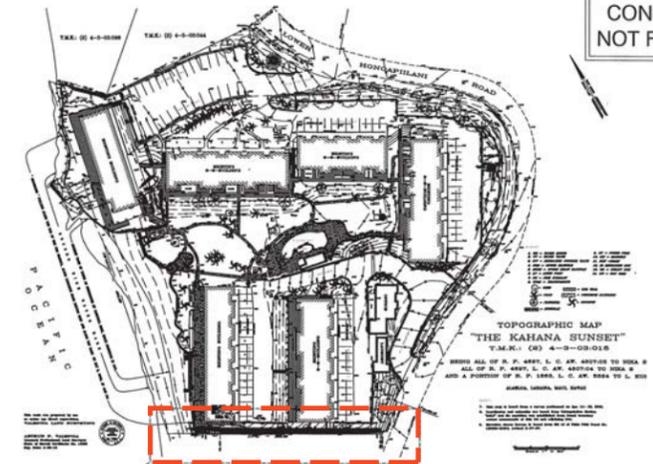
SCENIC STUDY MAP

KAHANA SUNSET



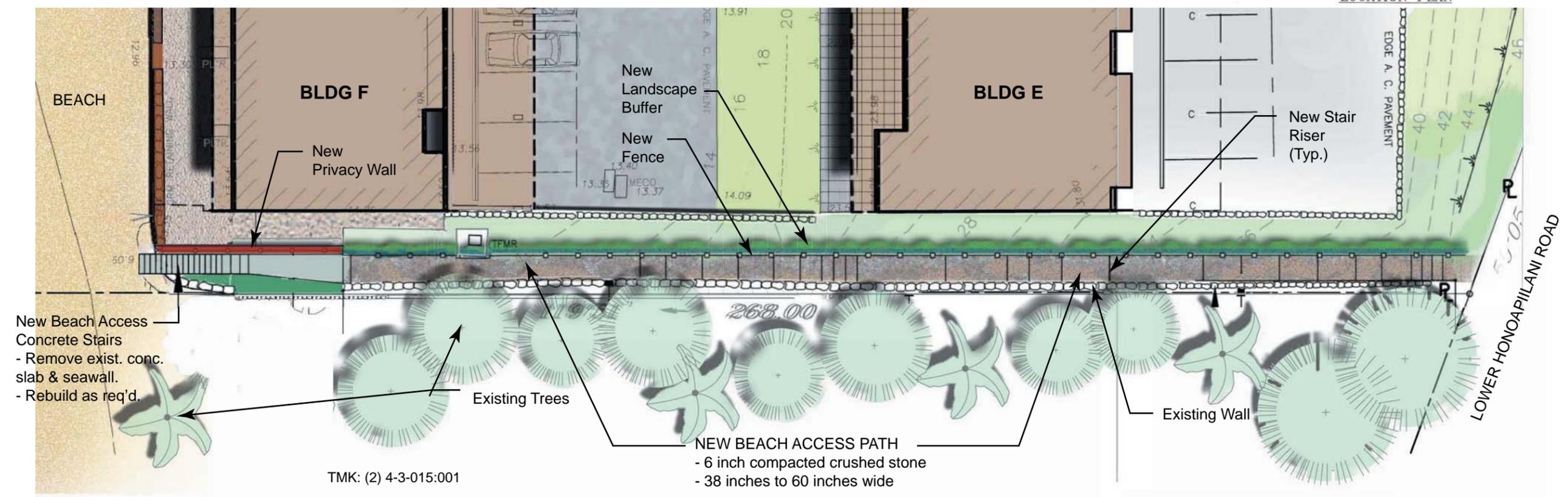
Environmental Planning Associates. *Maui Scenic Coastal Resources Study*, August 1990.

CONCEPTUAL DRAWING  
NOT FOR CONSTRUCTION



PUBLIC BEACH ACCESS TRAIL - SEE BELOW FOR ENLARGED PLAN  
REFER TO SHEETS S-2 & S-3 FOR PROFILE OF THE TRAIL

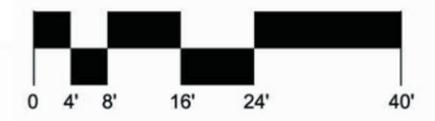
LOCATION PLAN



New Beach Access  
Concrete Stairs  
- Remove exist. conc.  
slab & seawall.  
- Rebuild as req'd.

TMK: (2) 4-3-015:001

NEW BEACH ACCESS PATH  
- 6 inch compacted crushed stone  
- 38 inches to 60 inches wide



SCALE: 1 inch = 20 feet  
PROJECT: 09-143  
DATE: 07/03/13

JANUARY  
2014  
  
**CHRIS  
HART**  
& PARTNERS, INC.

**FIGURE 15**  
SHORELINE ACCESS PATH  
KAHANA SUNSET