

JOHN WAIHEE  
GOVERNOR



REX D. JOHNSON  
DIRECTOR

DEPUTY DIRECTORS  
KANANI HOLT  
JOYCE T. OMINE  
AL PANG  
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

HWY-DD  
2.9816

RECEIVED  
JAN 19 11:12  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

January 13, 1994

MEMORANDUM:

TO: Director  
Office of Environmental Quality Control

FROM: Chief, Highways Division

SUBJECT: NEGATIVE DECLARATION FOR KAHULUI BEACH ROAD  
IMPROVEMENTS, WAIIEHU BEACH ROAD TO KAAHUMANU AVENUE,  
PROJECT NO. 3400A-02-91, WAILUKU, MAUI  
TMK: 3-7-01,02,03; 3-8-07 & 3-4-27

The Department of Transportation has reviewed the comments received during the 30-day public comment period which began on November 8, 1993. The Department has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the February 8, 1994 OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final EA. Please contact Mr. Albert Yamaguchi at 587-2235 if you have any questions.

*missing 3  
called Mr. Yamaguchi  
1/19/94 He will forward  
those 3 to OEQC*

*T. Harano*  
T. HARANO

1994-02-08-NA-FEA-Kahului Beach Road  
Improvements

FEB 8 1994

FINAL ENVIRONMENTAL ASSESSMENT  
for  
KAHULUI BEACH ROAD IMPROVEMENTS  
WAIEHU BEACH ROAD TO KAAHUMANU AVENUE  
PROJECT NO. 3400A-02-91  
Wailuku, Maui  
TMK: 3-7-01,02,03; 3-8-07; and 3-4-27

January 10, 1994

Proposing Agency: Department of Transportation, Highways  
Division

Agencies consulted:

Federal: Department of the Army  
U.S. Army Engineer District, Honolulu  
U.S. Department of Commerce  
National Marine Fisheries Service  
U.S. Department of the Interior  
Fish and Wildlife Services

State: Department of Business, Economic Development  
and Tourism - Land Use Commission  
Department of Health  
- Environmental Planning Division  
Department of Land and Natural Resources  
- State Historic Preservation Division  
- Conservation and Environmental Affairs  
- Conservation and Wildlife  
Office of State Planning

Maui County: Planning Department  
Department of Parks and Recreation  
Department of Public Works  
Department of Water Supply  
Economic Development Agency

Utilities:  
Maui Electric Company, Ltd  
Hawaiian Telephone Company  
Gasco, Inc  
Chronicle Cablevision

Other Groups:  
Kahului Town Association  
Life of the Land  
Sierra Club Hawaii Chapter  
The Ocean Recreation Council for Hawaii  
American Fisheries Society Hawaii Chapter  
Native Hawaiian Plant Society

Wildlife Society Hawaii Chapter  
Blue Ocean Preservation Society  
Community Work Day Program

**Project Characteristics:**

**General:**

The State of Hawaii, Department of Transportation, Highways Division proposes to widen Kahului Beach Road, an arterial between Wailuku and Kahului in Central Maui, to alleviate traffic congestion.

Figure 1 shows the project location. The project length is approximately one (1) mile.

The Central Maui isthmus connects East, South and West Maui. Traffic from East Maui, South Maui and West Maui usually pass through Central Maui. The areas of Kahului and Wailuku in Central Maui form the urban hub of the island.

Kahului has the only commercial deep-draft harbor on Maui as well as that island's major airport. Kahului is the more industrialized area whereas, Wailuku, the County seat of Maui, is the more historical of the two towns.

Properties bordering Kahului Beach Road include:

Kahului Harbor, Kahului Harbor Park and the West Breakwater is to the north of Kahului Beach Road.

Also, along the harbor beginning at the corner of Kahului Beach Road and Kaahumanu Avenue, are several hotels fronting the beach.

Two beach accesses, 800 feet apart in the vicinity of the West Breakwater and Kahului Harbor Park will be retained.

Approximately 500 feet from the intersection of Waiehu Beach Road, Lower Main Street and Kahului Beach Road on Kahului Beach Road is a "T" intersection to a warehouse area.

A driveway access is near the south corner of this project.

Kaihee Place, approximately 1400 feet north from Kaahumanu Avenue, provides vehicular access for a condominium complex.

The County of Maui proposes a Community Arts &

Cultural Center behind Maui Community College with access to Kahului Beach Road by way of a new roadway (Maui Central Park Parkway). See Figure 3c.

Kanaloa Avenue accesses to Kahului Beach Road at approximately 1300 feet south of the intersection with Lower Main Street and Waiehu Beach Road.

**Technical:**

Kahului Beach Road is proposed to be widened to four (4) 12-foot wide travel lanes, with two lanes in each direction of travel. In addition, a 12-foot wide median is proposed, which is to also serve as a turning lane at selected intersections. The proposed widening will occur from the intersection of Waiehu Beach Road, Kahului Beach Road and Lower Main Street to approximately 700 feet before the intersection of Kaahumanu Avenue and Kahului Beach Road. The balance of the existing road to Kaahumanu Avenue is at least 4 lanes wide.

Much of the widening work will be constructed on the northern side of the existing roadway pavement. At the Waiehu Beach Road and Lower Main Street intersection, the widening will be on the southern and/or northern side for a length of approximately 700 feet.

*from 900 ft in Draft*

Six (6) foot wide paved shoulders are existing along the roadway. Where the roadway is widened, a "new" 6 foot paved shoulder will be constructed. Earthen shoulder width on the harbor side varies within the project.

Figures 2a and 2b show preliminary typical roadway sections.

Utilities requiring relocation and/or adjustment to accommodate the roadway widening include three (3) each fire hydrants with appurtenances. Two (2) utility poles (i.e. roadway lighting, telephone, electric and/or cable TV) will also require relocation. The existing traffic signal system at Kanaloa Avenue will require modification and relocation. Existing pipe culvert crossings will require lengthening to provide adequate clearance.

Roadway widening improvements will be constructed within the existing State highway right-of-way.

The County of Maui proposes a Maui Central Park Parkway intersection approximately 870 feet north of Kaihee Place. A traffic signal system may be warranted.

*New*

Maui County proposes a concrete box culvert within the State highway right-of-way from Lower Main Street/Waiehu Beach Road intersection toward Kanaloa Avenue along Kahului Beach Road. The County's proposed concrete box outlet may require modification of an existing drainage easement (Easement A opposite Kanaloa Avenue on TMK: 3-7-01). See Figures 3a and 3b.

The proposed project is located in a flood zone as determined by the Federal Emergency Management Agency's Flood Insurance Rate Map. The project is also located in a Special Management Area. The State is working with Maui County regarding these matters and permits will be secured, if necessary.

The roadway widening project will not displace any existing residential or business structures.

**Economic:**

The estimated construction cost to the State of Hawaii for the proposed project will be \$1.7 million.

**Social:**

The additional travel lanes will benefit motorists traveling through the area. Motorists will likely reach their destinations quicker with the added vehicle capacity. Fuel consumption and travel time should be lessened.

Traffic safety will be enhanced for motorists, pedestrians and bicyclists with the additional through lanes which should better disperse and provide smooth flowing motor vehicle traffic. Driver discomfort, fatigue and frustration should be lessened; thereby enhancing safe driving habits.

Visitors and tourists, from the motels/hotels which are located just around the corner on Kaahumanu Avenue, add to the traffic demand on that stretch of roadway. With the proposed widening, traffic slow downs will less likely occur, as slow moving vehicles in the right lane may safely be passed on the left.

**Environmental:**

Construction of the proposed project will not adversely affect any endemic flora or fauna. No rare or unusual flora or fauna is known to

inhabit the project site.

Roadway run-off discharge will occur during periods of inclement weather and will not cause turbidity to the harbor.

#### Summary of the Affected Environment:

The roadway widening will enhance vehicular traffic flow within the area concerned, while having practically no long-term adverse impacts. There are no endangered flora, fauna, critical habitats, historical/archaeological or cultural sites at the proposed project site.

#### Summary of Major Impacts

##### Short Term

During construction, the following minor adverse impacts may occur:

Dust  
Noise  
Traffic slow down

##### Long Term

No significant adverse impact is anticipated to the following due to construction of the proposed project.

Air Quality  
Noise  
Traffic  
Archaeological  
Flora  
Fauna  
Visual

#### Proposed Mitigation Measures During Construction:

1. Appropriate pollution control measures will be utilized for dust and noise.
2. Appropriate temporary and construction traffic control measures will be utilized.
3. Appropriate sediment control measures will be utilized to avoid causing turbidity in the harbor.

Determination

*New page*

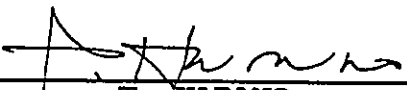
The proposed project is not expected to cause significant adverse environmental impacts.

Findings and Reasons Supporting Determination

1. The proposed project will not involve an irrevocable commitment to loss or destruction of any natural or cultural resource.
2. The proposed project will not curtail the range of beneficial uses of the environment.
3. The proposed project will not conflict with the State's long-term environmental policies.
4. The proposed project will not substantially affect the economic or social welfare of the community or State.
5. The proposed project will not substantially affect the public health.
6. The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.
7. The proposed project will not involve a substantial degradation of environmental quality.
8. The proposed project will not substantially affect any rare, threatened, or endangered species of flora and fauna or habitat. No endangered species of flora or fauna are known to exist in the project site.
9. The proposed project will not detrimentally affect air or water quality or ambient noise levels.
10. The proposed project will not detrimentally affect environmentally sensitive areas such as flood plain, tsunami zone, erosion-prone flood area, geologically hazardous land, estuary, fresh water or coastal water.

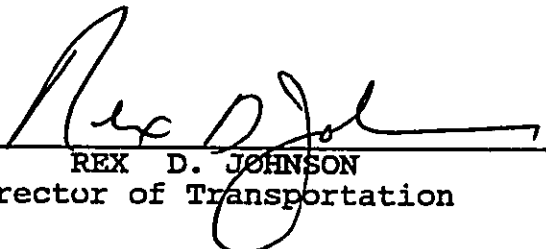
For the reasons above, the proposed project will not have any significant effect in the context of Chapter 343, Hawaii Revised Statutes and Section 11-200-12 of the State Administrative Rules.

RECEIVED AND ACCEPTANCE RECOMMENDED:

  
\_\_\_\_\_  
T. HARANO  
Chief  
Highways Division

1/13/94  
Date

CONCURRENCE:

  
\_\_\_\_\_  
REX D. JOHNSON  
Director of Transportation

1/14/94  
Date



JOHN WAHNEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621  
HONOLULU, HAWAII 96809

*Hwy 6417*  
KEITH W. AHUE, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES  
JOHN P. KEPPELER, II  
DONA L. HANAIKE

AQUACULTURE DEVELOPMENT PROGRAM  
AQUATIC RESOURCES BOATING AND OCEAN RECREATION  
CONSERVATION AND ENVIRONMENTAL AFFAIRS  
CONSERVATION AND RESOURCES ENFORCEMENT  
CONVEYANCES FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION LAND MANAGEMENT  
STATE PARKS WATER AND LAND DEVELOPMENT

REF:OCEA:KCK

File No.: 94-166  
DOC. NO.: 3563

OCT 11 1993

MEMORANDUM

TO: The Honorable Rex. D. Johnson, Director  
Department of Transportation (DOT)

ATTN: T. Harano, Chief  
Highways Division, DOT

FROM: Keith W. Ahue, Chairperson *Out*  
Board of Land and Natural Resources

SUBJECT: Draft Environmental Assessment (DEA): Kahului Beach Road  
Improvements, Wailuku, Maui, TMKs: 3-4-27; 3-7-01, 02, 03;  
3-8-07

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RECEIVED  
DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION

We have received the DEA information for the subject project transmitted by your letter dated August 24, 1993, and request additional time to adequately review and comment on this matter.

We thank you for your understanding on this matter, and appreciate the opportunity to comment in this process.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

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*Atch 1*

JOHN WAIHEE  
GOVERNOR OF HAWAII

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DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

*HWY 6355*  
KIRITI AIUE, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

JOHN P. KEPPELER II  
DONA L. HANAKE

AQUACULTURE DEVELOPMENT  
PROGRAM

AQUATIC RESOURCES  
CONSERVATION AND

ENVIRONMENTAL AFFAIRS  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
DIVISION

LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

September 23, 1993

Mr. Tetsuo Harano, Chief  
Highways Division  
State of Hawaii  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

LOG NO: 9451  
DOC NO: 9309AG33

Dear Mr. Hirano:

SUBJECT: Compliance with Chapter 6E, Historic Preservation  
Review of the Kahului Beach Road Improvements, Waiehu  
Beach Road to Kaahumanu Avenue, Project No. 3400A-02-91  
Wailuku, Maui  
TMK: 3-7-01, 02, 03; 3-8-07; 3-4-27

Thank you for the opportunity to comment on the draft Environmental Assessment of the proposed widening of Kahului Beach Road to four 12-ft. wide travel lanes. According to the plans, widening will take place on the northern side of Kahului Beach Road with the exception of about 900 ft. length from the intersection of Waiehu Beach Road and Lower Main Street where the widening will be on the south side. All improvements appear to be within the existing road right-of-way.

We concur with the Draft EA that historic sites are not present within the project area. Both northern and southern sides of Kahului Beach Road have been extensively disturbed by either filling or cutting. Construction of Kahului Beach Road has greatly modified this portion of the coastline. In addition, the right-of-way on the southern side has been disturbed by an existing earth swale and installation of two waterlines.

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HIGHWAYS DIVISION  
DEPT. OF TRANSPORTATION

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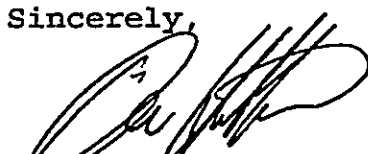
Mr. Tetsuo Harano  
Page 2

In an archaeological inventory survey of a privately-owned parcel (TMK 3-8-07:123) near the intersection of Waiehu Beach Road, Lower Main Street, and Kahului Beach Road, two significant historic sites were identified. These sites consist of two subsurface deposits with prehistoric and historic period components. Our examination of the findings of the survey indicates that the base of the deposits is about 4 ft. below surface. This depth is approximately 10 ft. higher than the existing elevation at the proposed road widening. Because of this difference in elevation and extensive ground disturbance, it appears highly unlikely that these sites extend into the road right-of-way.

Given this information, it appears that the proposed improvements will have "no effect" on significant historic sites.

Should you have any questions about these comments, please contact Ms. Annie Griffin at 587-0013.

Sincerely,



DON HIBBARD, Administrator  
State Historic Preservation Division

AG:111

*Atch 2b*

HWY 647, 635  
HWY-DD  
2.9490

December 23, 1993

MEMORANDUM:

TO: Office of Conservation and Environmental Affairs  
Department of Land and Natural Resources

FROM: Chief, Highways Division

SUBJECT: RESPONSE TO YOUR COMMENT ON DRAFT ENVIRONMENTAL  
ASSESSMENT FOR KAHULUI BEACH ROAD IMPROVEMENTS,  
WAIEHU BEACH ROAD TO KAAHUMANU AVENUE, PROJECT  
NO. 3400A-02-91, TMK: 3-7-01, 02, 03, 3-08-07  
& 3-4-27, WAILUKU, MAUI

Thank you for your review of the proposed project. We provide the following response to your comments.

Division of Aquatic Resources comment - The Contractor for the project shall be instructed to implement appropriate erosion and siltation mitigation measures. Also, for the benefit of the public, including fishermen, existing paved beach accesses to the Kahului Harbor Park and West Breakwater areas will be retained.

Historic Preservation Division comment - We anticipate no disturbance of the area beyond the existing highway right-of-way.

*T. Harano*

T. HARANO

JS:lq

c: HWY-DD (RH)

*Atch A*

JOHN WAMHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621  
HONOLULU, HAWAII 96809

KEITH W. AHUE, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

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AQUACULTURE DEVELOPMENT  
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CONSERVATION AND  
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CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

REF: OCEA:RMB

NOV 10 1993

File No.: 94-166a  
Doc. NO.: 3689

MEMORANDUM

TO: The Honorable Rex D. Johnson, Director  
Department of Transportation (DOT)

ATTN: T. Harano, Chief  
Highways Division, DOT

FROM: Keith W. Ahue, Chairperson *KAH*  
Board of Land and Natural Resources

SUBJECT: Draft Environmental Assessment (DEA): Kahului Beach Road  
Improvements, Wailuku, Maui, TMKs: 3-4-27; 3-7-01, 02, 03;  
3-8-07

DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION

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Thank you for the additional time to review this information. The following are our comments on the subject project first transmitted by your memorandum dated August 24, 1993:

Division of Aquatic Resources

The Division of Aquatic Resources (DAR) comments that appropriate mitigative measures should be implemented to minimize erosion and siltation of Kahului Bay to the extent possible. Much of the Kahului Harbor Park shoreline is used by recreational fishermen to access the Kahului Harbor, Maui Marine Fisheries Management Area.

Department of Land Management

The Department of Land Management (DLM) has no objections to this project.

Historic Preservation Division

The Historic Preservation Division's (HPD) qualified "no effect" comments were forwarded to you directly in their letter dated September 23, 1993 (Enclosed).

Atch 3a

Mr. Rex D. Johnson

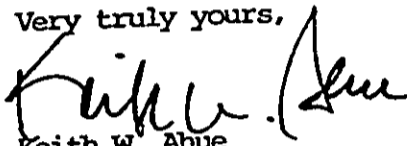
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File No.:94-166a

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,



Keith W. Ahue

Enclosure

Atch 36

WAHIEE  
GOVERNOR



ESTHER UEDA  
EXECUTIVE OFFICER

STATE OF HAWAII  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
LAND USE COMMISSION  
Room 104, Old Federal Building  
335 Merchant Street  
Honolulu, Hawaii 96813  
Telephone: 587-3822

September 13, 1993

RECEIVED  
SEP 15 10 34 AM '93  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

Mr. Tetsuo Harano, Chief  
Highways Division  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Dear Mr. Harano:

Subject: Kahului Beach Road Improvements, Project No. 3400A-02-91, District of Wailuku, Island of Maui

We have reviewed the draft Environmental Assessment transmitted with your letter dated August 24, 1993 and confirm that the proposed road improvements, from Waiehu Beach Road to Kaahumanu Avenue and identified as TMK Nos.: 3-7-01, 02, 03; 3-08-07; and 3-4-27, are within the State Land Use Urban District.

We have no further comments to offer at this time.

As requested, we are returning one set of the draft Environmental Assessment with this letter.

If you should have any questions in regards to this matter, please feel free to contact me or Leo Asuncion of my staff at 587-3825.

Sincerely,

A handwritten signature in cursive script, appearing to read "Esther Ueda".

ESTHER UEDA  
Executive Officer

EU:th

Enc.

Atch 4

JOHN WAIHEE  
GOVERNOR OF HAWAII



*HW 6360*

JOHN C. LEWIN, M.D.  
DIRECTOR OF HEALTH

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DEPT. OF TRANSPORTATION HIGHWAYS DIVISION  
STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HAWAII 96801

In reply, please refer to:

September 27, 1993

93-265/epo

To: T. Harano, Chief  
Highways Division  
Department of Transportation

From: Thomas E. Arizumi, P.E. *Thomas Arizumi*  
chief, Environmental Management Division

Subject: Request for Comments  
Draft Environmental Assessment  
Kahului Beach Road Improvements, Project No. 3400A-02-91  
Wailuku, Maui  
TMK: 3-7-01, 02, 03,  
3-8-07, 3-4-27

Thank you for allowing us to review and comment on the subject project.  
We do not have comments to offer at this time.

c: Maui District Health Office

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December 23, 1993

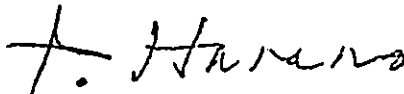
MEMORANDUM:

TO: Ms. Esther Ueda.  
Executive Officer  
Land Use Commission  
Department of Business, Economic  
Development & Tourism

FROM: Chief, Highways Division

SUBJECT: RESPONSE TO YOUR COMMENT ON DRAFT ENVIRONMENTAL  
ASSESSMENT FOR KAHULUI BEACH ROAD IMPROVEMENTS,  
WAIIEHU BEACH ROAD TO KAAHUMANU AVENUE, PROJECT  
NO. 3400A-02-91, TMK: 3-7-01, 02, 03, 3-08-07  
& 3-4-27, WAILUKU, MAUI

Thank you for your review of the proposed project and  
confirmation that Kahului Beach Road is within the State Land  
Use Urban District. We believe no further action is necessary.



T. HARANO

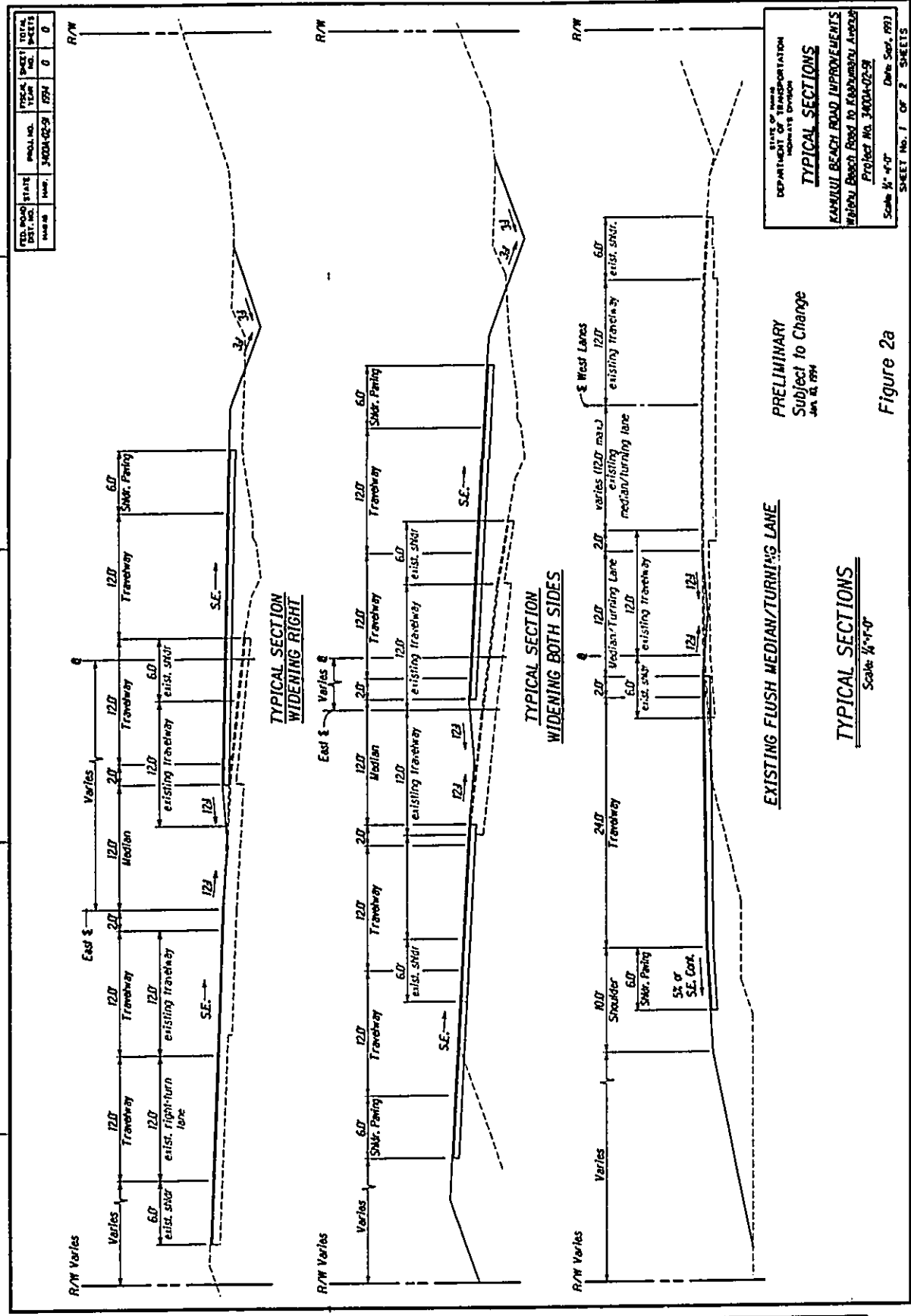
JS:lq

c: HWY-DD (RH)

Atch B



DESIGN STATE	PROJ. NO.	YEAR	SHEET NO.	TOTAL SHEETS
IND. NO.	3400A-02-01	1974	0	0
DATE				



1. 12.0	2. 6.0	3. 2.0	4. 12.0	5. 6.0	6. 2.0	7. 12.0	8. 6.0	9. 2.0	10. 12.0	11. 6.0	12. 2.0
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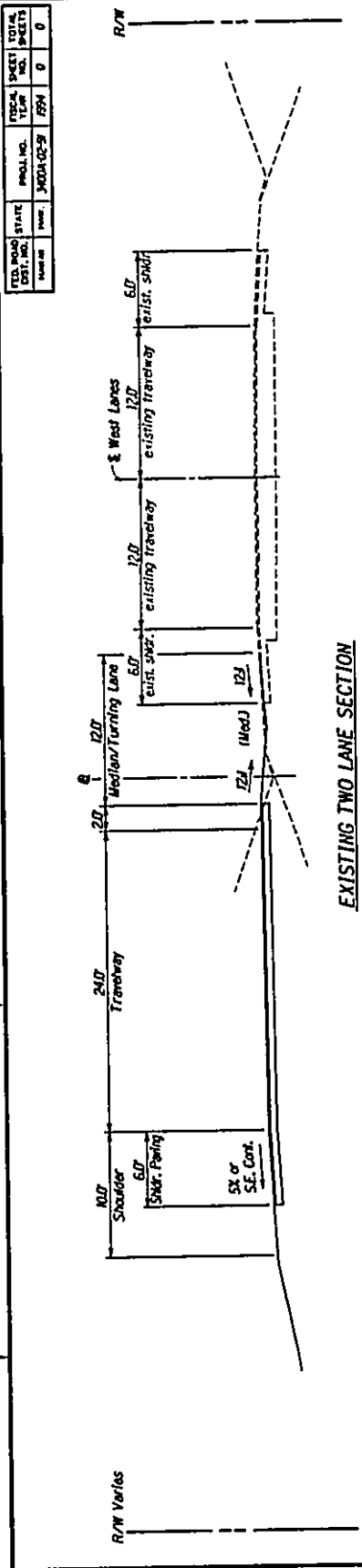
DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**TYPICAL SECTIONS**  
 KANAKUL BEACH ROAD IMPROVEMENTS  
 KANAKUL BEACH ROAD TO KANAKUL AVENUE  
 Project No. 3400A-02-01  
 Scale 1/4" = 1'-0" Date Set, 1974  
 SHEET NO. 1 OF 2 SHEETS

PRELIMINARY  
 Subject to Change  
 JAN. 15, 1974

**TYPICAL SECTIONS**  
 Scale 1/4" = 1'-0"

Figure 2a

FED. ROAD DIST. NO.	STATE	PROJ. NO.	YEAR	TOTAL SHEETS
		3400A-02-29	1994	0
				0



EXISTING TWO LANE SECTION

TYPICAL SECTIONS  
Scale: 1/4"=1'-0"

DATE	BY	CHKD.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
ROADS & HIGHWAYS DIVISION

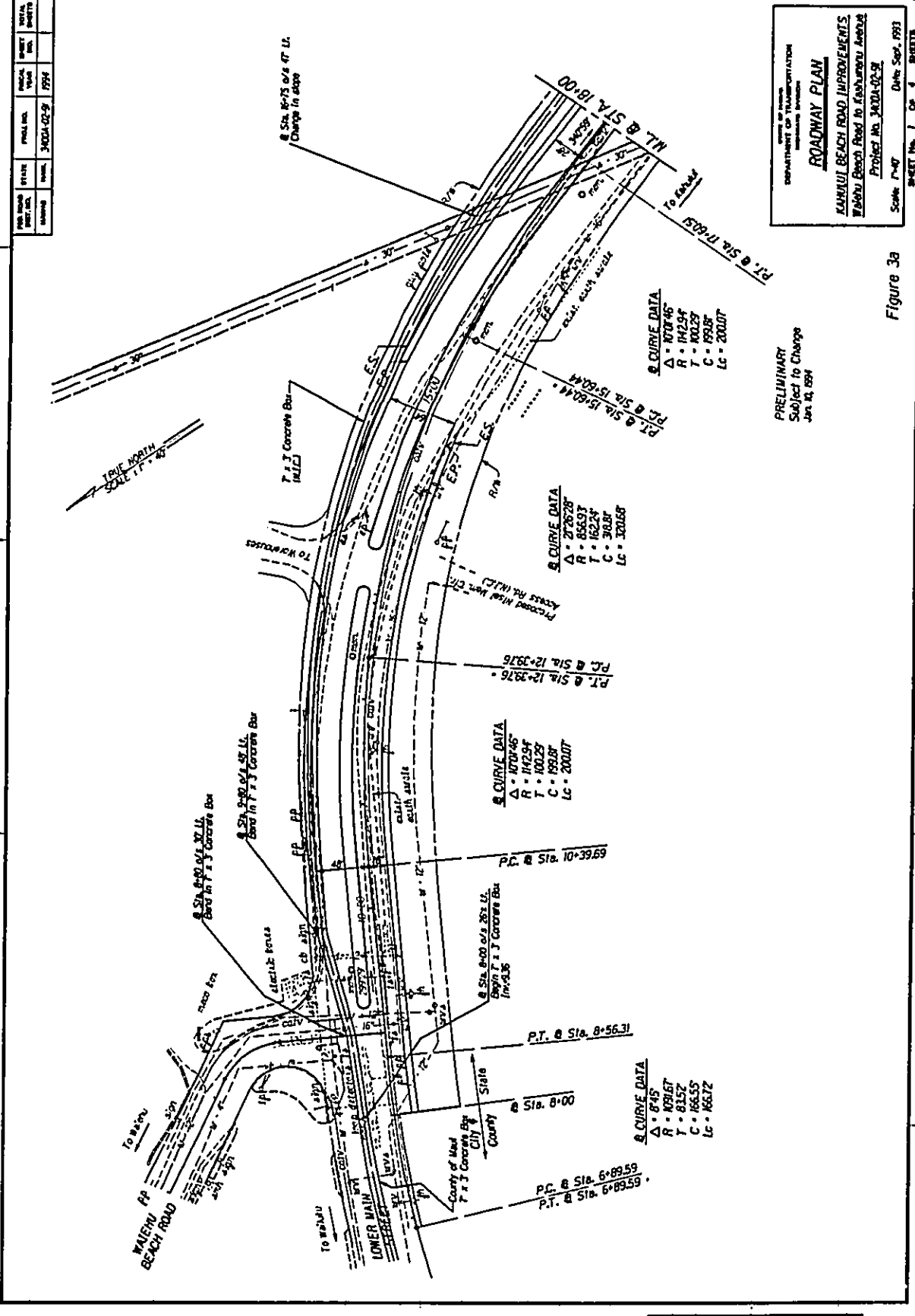
**TYPICAL SECTIONS**

KAHULUI BEACH ROAD IMPROVEMENTS  
Wahalu Beach Road to Kahaunohou Avenue  
Project No. 3400A-02-29  
Scale: 1/4"=1'-0" Date: Sep, 1993

PRELIMINARY  
Subject to Change  
Jan. 10, 1994

Figure 2b

PROJECT NO.	3400A-02-9	DATE	1994
PROJ. YEAR	1994	SHEET NO.	1
STATE	HI	TOTAL SHEETS	4



PRELIMINARY  
 Subject to Change  
 Jan. 10, 1994

**ROADWAY PLAN**  
 KAHALU BEACH ROAD IMPROVEMENTS  
 Waiolu Beach Road to Kahala Road  
 Project No. 3400A-02-9  
 Scale: 1"=40'

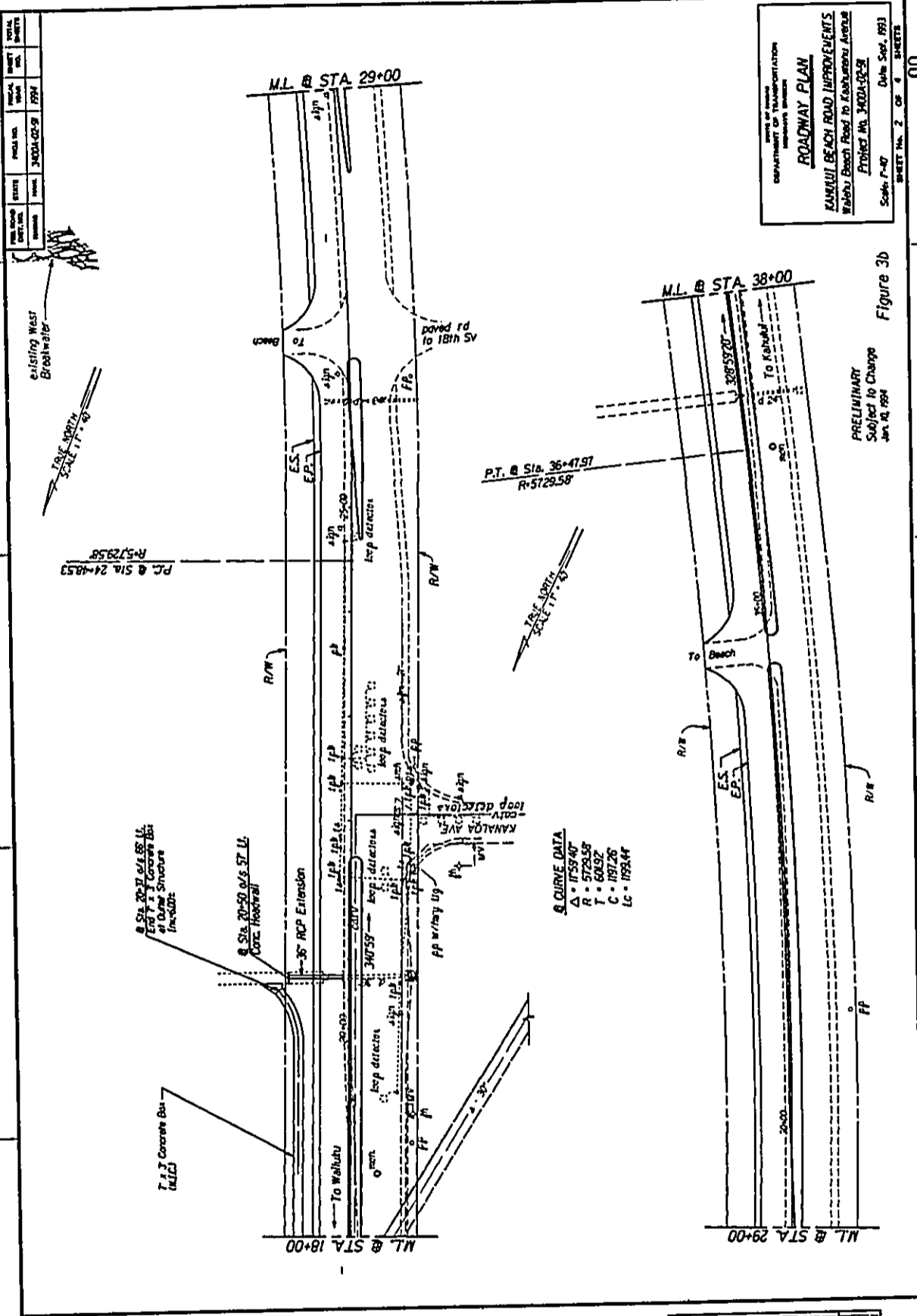
Figure 3a

11127	As shown	11128	As shown
11129	As shown	11130	As shown
11131	As shown	11132	As shown
11133	As shown	11134	As shown
11135	As shown	11136	As shown
11137	As shown	11138	As shown
11139	As shown	11140	As shown
11141	As shown	11142	As shown
11143	As shown	11144	As shown
11145	As shown	11146	As shown
11147	As shown	11148	As shown
11149	As shown	11150	As shown
11151	As shown	11152	As shown
11153	As shown	11154	As shown
11155	As shown	11156	As shown
11157	As shown	11158	As shown
11159	As shown	11160	As shown
11161	As shown	11162	As shown
11163	As shown	11164	As shown
11165	As shown	11166	As shown
11167	As shown	11168	As shown
11169	As shown	11170	As shown
11171	As shown	11172	As shown
11173	As shown	11174	As shown
11175	As shown	11176	As shown
11177	As shown	11178	As shown
11179	As shown	11180	As shown
11181	As shown	11182	As shown
11183	As shown	11184	As shown
11185	As shown	11186	As shown
11187	As shown	11188	As shown
11189	As shown	11190	As shown
11191	As shown	11192	As shown
11193	As shown	11194	As shown
11195	As shown	11196	As shown
11197	As shown	11198	As shown
11199	As shown	11200	As shown

PROJECT NO.	3400A-02-9	DATE	1994
DESIGNER		CHECKED	
SCALE		DATE	

NO.	DATE	BY	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
ROADWAY PLAN  
KANIKULI BEACH ROAD IMPROVEMENTS  
Waikolu Beach Road to Kapaemahu Avenue  
Project No. 3400A-02-9  
Scale 1"=40'  
Date Sep. 1993  
SHEET No. 2 OF 6 SHEETS



**CURVE DATA**

Δ	157.947
R	5729.58
T	60.927
C	197.26
Lc	193.844

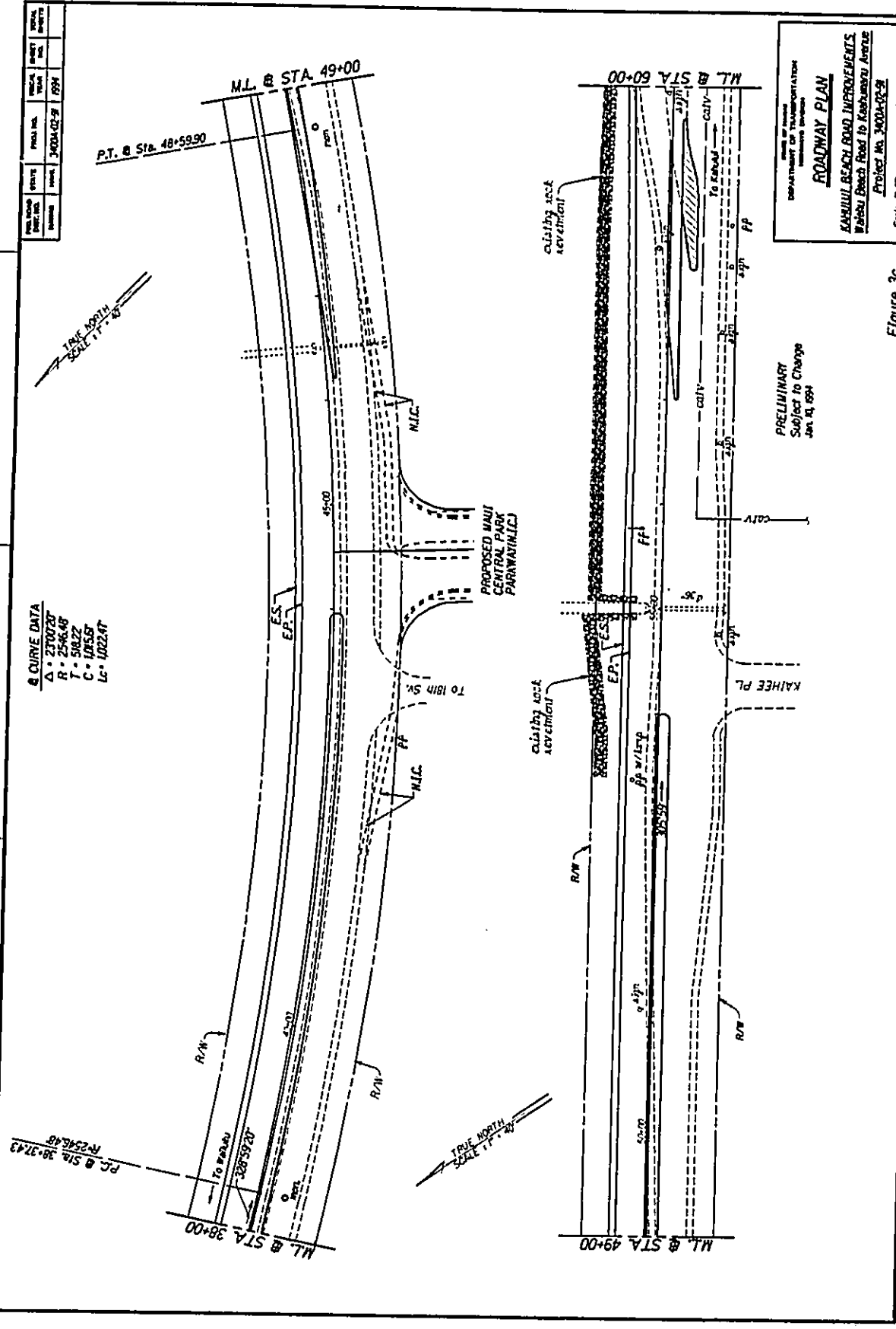
PRELIMINARY  
Subject to Change  
Jan. 10, 1994

Figure 3b

DATE		BY	

PROJECT NO.	3400A-02-59
DATE	09/84
DESIGNER	W&A
CHECKED	
APPROVED	

**CURVE DATA**  
 $\Delta = 23.0073^\circ$   
 $R = 2546.48'$   
 $T = 518.22'$   
 $C = 1015.57'$   
 $Lc = 1022.47'$



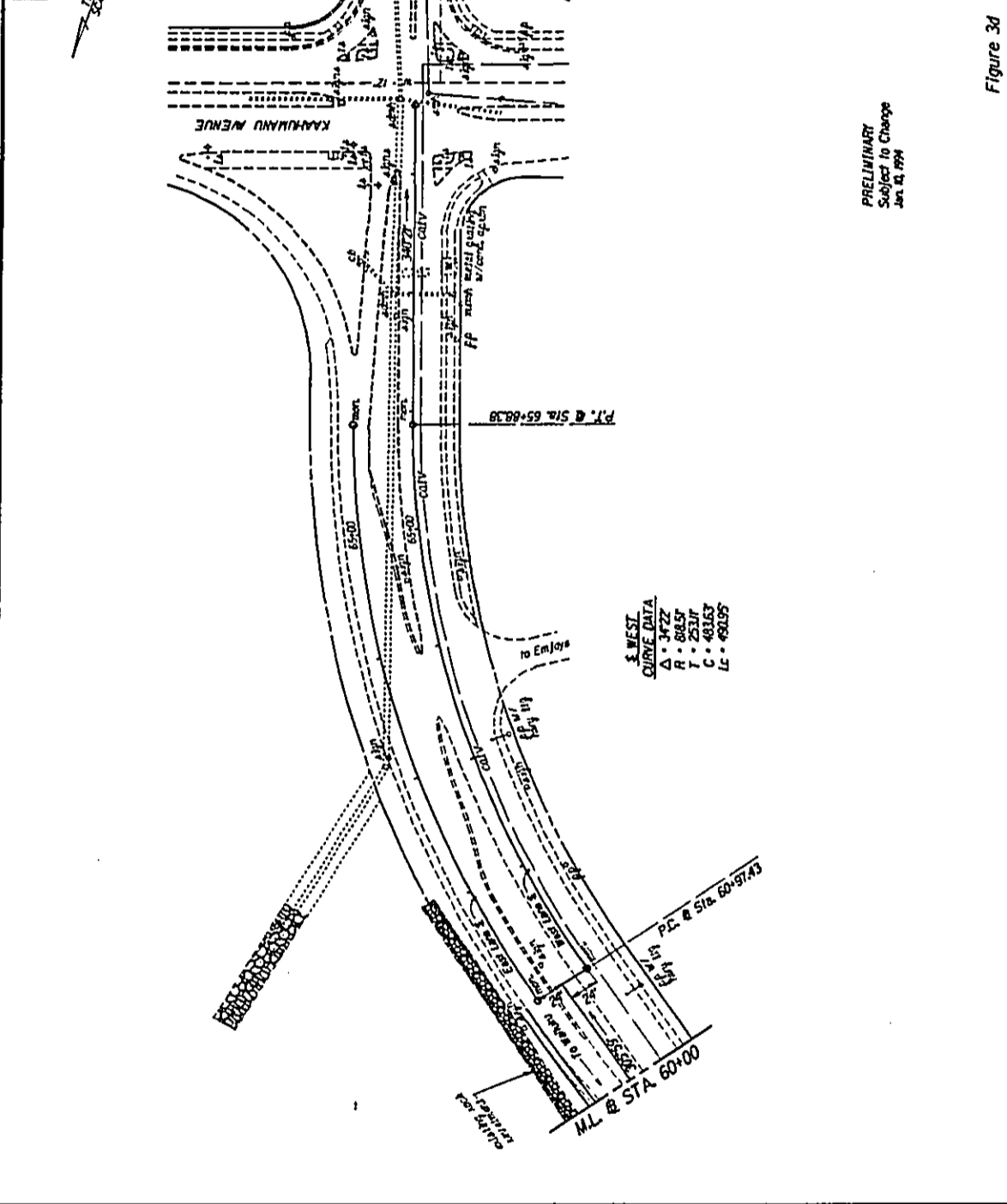
DEPARTMENT OF TRANSPORTATION  
**ROADWAY PLAN**  
 KAHAE BEACH ROAD IMPROVEMENTS  
 Kahae Beach Road to Kahae Avenue  
 Project No. 3400A-02-59  
 Scale 1"=40' Date Set, 1994  
 SHEET No. 3 OF 4 SHEETS

PRELIMINARY  
 Subject to Change  
 Jan. 14, 1994

Figure 3c

DATE	DESCRIPTION

DATE	BY	REVISION
1994	ES-D/NOG	
1994	ES-D/NOG	
1994	ES-D/NOG	
1994	ES-D/NOG	



WEST  
CURVE DATA  
 $\Delta = 34^{\circ}22'$   
 $R = 88.5'$   
 $T = 25.31'$   
 $C = 43.163'$   
 $L_c = 69.05'$

PRELIMINARY  
 Subject to Change  
 Jan. 10, 1994

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 ROADWAY PLAN  
 KAHUNA BEACH ROAD IMPROVEMENTS  
 Kahuna Beach Road to Kahuna Avenue  
 Project No. 3402A-02-91  
 Scale 1"=40' Date: Sept. 1993  
 SHEET No. 4 OF 4 SHEETS

Figure 3d