

BENJAMIN J. CAYETANO
GOVERNOR



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

Kunia Interchange Imp.

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
JERRY M. MATSUDA
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IN REPLY REFER TO:

HWY-DD
2.4274

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April 21, 1997 '97 APR 23 P1:42

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Mr. Gary Gill, Director
Office of Environmental Quality Control
State Office Tower
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Finding of No Significant Impact for Interstate Route H-1,
Kunia Interchange Improvements, Federal-Aid Interstate Project
No. IM-H1-1(219), Ewa, Oahu, Hawaii, TMK: 9-1-18, 9-2-01
and 9-4-02

The Department of Transportation has reviewed the comments received during the 30-day comment period which began on November 8, 1996. The agency has determined that this project will not have a significant environmental effect and has issued a Finding of No Significant Impact. Please publish this notice in the May 8, 1997 OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the Final Environmental Assessment.

Please contact Mr. Julius B. Fronda at 587-2246 if you have any questions.

Very truly yours,

HUGH Y. ONO
Administrator
Highways Division

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

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Enc.

1997-05-08-OA-FEA-Kunia Interchange
Improvements

MAY - 8 1997

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KUNIA INTERCHANGE

**FINAL
ENVIRONMENTAL ASSESSMENT**

**INTERSTATE ROUTE H-1
KUNIA INTERCHANGE IMPROVEMENTS**

Prepared for

State of Hawaii
Department of Transportation
Highways Division

April, 1997

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Chapter 1

Project Overview

I. PROJECT OVERVIEW

A. PROJECT LOCATION

The State of Hawaii, Department of Transportation, Highways Division proposes to modify the Kunia Interchange (TMK 9-1-18, 9-2-01 and 9-4-02) on Interstate Route H-1 to relieve traffic congestion during peak hours. Figure 1 shows the project location.

The project is located in Leeward Oahu in the District of Ewa. The land use directly adjacent to Kunia Interchange is residential in the northeast and southeast quadrants and agricultural in the northwest and southwest quadrants.

B. EXISTING ROADWAY SYSTEM

Kunia Interchange is located in Leeward Oahu and provides access to H-1 for Fort Weaver Road (Route 76) and Kunia Road (Route 750). Fort Weaver Road is 6.6 miles in length and services the communities of Waipahu, Ewa, Ewa Beach, Kapolei, Iroquois Point, Honouliuli and West Loch. Kunia Road is 7.0 miles in length and services the Village Park community which lies just north of Interstate Route H-1. The posted speed limit on Interstate Route H-1 is 55 miles per hour and 35 to 45 miles per hour on Kunia Road/Fort Weaver Road.

Chapter II

**Project Need and
Proposed Action**

II. PROJECT NEED AND PROPOSED ACTION

A. DESCRIPTION OF PROJECT NEED

When Kunia Interchange was designed and constructed in the 1960's, the areas surrounding Kunia Road and Fort Weaver Road were mostly rural and agricultural in nature. Since then, major residential developments have changed the character of the area to suburban. The resultant traffic increase has made Kunia Interchange inadequate to accommodate current and future travel demand. It is anticipated that congestion will continue to increase, since the Oahu General Plan directs future growth to this Leeward Oahu area.

B. DESCRIPTION OF THE PROPOSED ACTION

The proposed interchange modifications will improve access from H-1 westbound to Fort Weaver Road southbound and Fort Weaver Road northbound to H-1 eastbound. Figure 2 shows the existing schematic movements and Figure 3 shows the proposed schematic movements. Figures 8A through 8K show the pavement striping for the proposed improvements. These improvements will consist of:

1. In the southeastern quadrant of the interchange, the H-1 eastbound on-ramp from Fort Weaver Road northbound (Ramp EH) will be widened to provide three (3) lanes from the present two (2) lanes. Figure 4 shows the proposed Ramp KE work.
2. One (1) lane of the H-1 eastbound lanes will be dropped at the off-ramp to Fort Weaver Road southbound (Ramp WE). This will provide an additional lane from the widened H-1 eastbound on-ramp from Fort Weaver Road northbound (Ramp EH).

3. In the northwest quadrant of the interchange, a new loop off-ramp will be constructed to replace the existing loop off-ramp from H-1 westbound to Fort Weaver Road southbound (Ramp HE). The new off-ramp will be longer, wider and will have a larger curve radius than the present configuration. In addition, the H-1 westbound on-ramp from Kunia Road southbound (Ramp EW) will be realigned north of the new loop off-ramp. Figure 5 shows the proposed Ramp HE and Ramp EW work.
4. Kunia Road/Fort Weaver Road under the H-1 overpass will be widened to provide an additional southbound lane. The H-1 eastbound off-ramp to Fort Weaver Road southbound (Ramp WE) will be realigned to accommodate this additional lane. Figure 6 and 7 show the proposed work on Kunia Road/Fort Weaver Road.

The construction of the new loop ramp (Ramp HE) and the widening of Kunia Road/Fort Weaver Road under the H-1 overpass will require the acquisition of additional right-of-way in the northwest and southwest quadrants of the interchange. This project will not displace any existing residences. This project will however affect approximately 13 acres occupied by the 84 acre Kunia Station, which conducts field research for the Hawaii Agricultural Research Center (formerly the Hawaiian Sugar Planters' Association).

The proposed modifications in the northwest quadrant will require the relocation of Hawaiian Electric power poles for their 138 Kv, 46 Kv and 12 Kv systems.

The widening of Kunia Road/Fort Weaver Road will also require the relocation of Hawaiian Telephone and Oceanic Cablevision facilities.

Chapter III

**Description of the
Existing Environment**

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The area bordering the project site contains a diverse range of commercial and public uses, as well as new and established older residential areas.

To the northwest and southwest side of the project site are agricultural fields formerly cultivated for sugar cane. To the northeast and southeast side of the project site are a mixture of residential developments and commercial buildings.

2. Climate

Like most areas of Hawaii, Oahu's climate is relatively uniform year-round. Characteristic of Hawaii's climate, the project site experiences mild and uniform temperatures year-round and moderate humidity.

The median annual rainfall averages approximately 25 inches, most of which occurs mostly in November through April. The months of May through September are normally dry. The design 25-year 1-hour rainfall is 3 inches. The predominant wind direction is from a northeast to east direction.

3. Topography and Soil Characteristics

The land surface of the project site is relatively flat to gently rolling. The surface soil for this project is Molokai Silty Clay Loam. This soil is part of the Molokai Series of soils which consists of well-drained soils on the islands of Oahu, Maui, Lanai and Molokai.

4. Flora and Fauna

The project site is located in the midst of the urbanized district of Ewa. The land in the northwest and southwest quadrants of Kunia Interchange consists of agricultural land formerly used for the cultivation of sugar cane.

Sugar cane lands can be classified as man-modified ecosystems, that is, the environment is modified and more or less controlled by man. Sugar cane is grown as a economic plant species, which also forms the dominant plant cover. A number of weedy (or ruderal) plant species, characteristic of agricultural lands, can also be found within the sugar cane fields. The majority of the weedy species are found alongside the roads and accompanying network of irrigation ditches that transect and border the fields. Most of these weedy species are annuals and are adapted to the frequent disturbances which accompany cultivation practices. These weedy species generally form a low-growing herbaceous cover which may grow from 1 to 3 feet high in places where there is more available moisture, such as along irrigation ditches.

Within the Kunia Interchange, ornamental trees consist of Gold trees commemorating the one hundred year anniversary of Japanese immigration to Hawaii, Coconut trees, Monkeypod trees and an African Tulip tree. The interchange modifications will require that the existing trees remain in place, be removed or be relocated.

Due to the former agricultural use of the project site, insects, avifauna, and mammals populating the site are largely exotic in nature, and not considered rare or endangered species. Various common bird species found in the area include the barred dove, lace-necked dove, common mynah, red-crested cardinals, and house sparrows.

Feral mammals typically found in the area include cats, rats, mice and Indian mongoose. Butterflies, of common variety, may also be abundant. According to U.S. Department of the Interior, Fish and Wildlife Services, there are no known rare, endangered or threatened species of fauna or avifauna found within the vicinity of the project site.

5. Historical and Archaeological Characteristics

Early consultation with State Historic Preservation Division (SHPD) was conducted as part of this project. The SHPD noted that the parcels in the northwest and southwest quadrants of the interchange were previously used for commercial agriculture, thus indicating that the land surface was disturbed, making the presence of historic sites unlikely. The SHPD has determined that there are "no effect" on historic sites.

6. Air Quality

Air quality in this Leeward Oahu area is considered good as point source (e.g. formerly sugar cane cultivation). The major non-point source of emission is from automobiles. The highest amount of automobile emission occur during peak traffic hours when congestion occurs. The region's constant exposure to winds quickly disperse concentrations of emissions, which creates a relatively high quality of air.

7. Noise Characteristics

Traffic noise and activities of the surrounding urban area are the primary sources of background noise in the project area. Traffic noise is more substantial during peak traffic hours.

8. Visual Resources

The property is currently utilized as an existing urban roadway. The existing roadway and the additional area needed for the interchange modifications are not part of any scenic corridor.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

The population of this Leeward Oahu area served by Kunia Interchange is approximately 90,000. Growth in this Leeward Oahu area is expected to continue.

2. Economy

This Leeward Oahu area is growing in governmental activities, as well as in professional and business services. The project site is surrounded by significant agricultural acreage, formerly cultivated for sugar cane. This vast expanse of agricultural land, managed by the Estate of James Campbell has been considered a key component of the local economy.

C. PUBLIC SERVICE

1. Police and Fire Protection

The present police facility is located at the substation in Waipahu, approximately 1.00 mile from the project site.

The project area receives fire protection from the City Fire Department located at the Waipahu station, approximately 1.00 mile from the project site.

2. Health Care

Health Care for the residents of this Leeward Oahu area is available at the Saint Francis Hospital to the south of Kunia Interchange, in the vicinity of West Loch. In addition, numerous privately operated medical/dental clinics and offices are located in the Waipahu area to serve the region's residents.

3. Solid Waste

Single-family residential solid waste collection service is provided by the Department of Public Works, Division of Refuse Collection and Disposal on a twice-a-week basis. Residential solid waste collected are being disposed at the Waipahu Incinerator.

4. Recreation Resources

There are recreational parks in every community in this Leeward Oahu area. Some of the parks in the adjacent area are Kaleiopuu Park in Village Park, Honowai Park in Harbor View, Waipahu District Park and Hans L'Orange Park in Waipahu and West Loch Shoreline Park in West Loch.

5. Schools

The communities in this Leeward Oahu area are served by the State Department of Education public school system. Some of the public schools in the immediate area are Kaleiopuu Elementary, Honowai Elementary, August Ahrens Elementary, Waipahu Intermediate and Waipahu High Schools.

D. INFRASTRUCTURE

1. Wastewater

Domestic wastewater generated in this Leeward Oahu area conveyed to the County's Honouliuli sewer treatment plant. The design capacity of the facility is 75 million gallons per day.

2. Water

The communities in this Leeward Oahu area are served by the Board of Water Supply's (BWS) domestic water system.

3. Drainage

Runoff from Interstate Route H-1, Kunia Road and Fort Weaver Road flows in a southerly direction into existing drainage systems consisting of a 36-inch and two 36-inch culverts crossing Interstate Route H-1 and a 54-inch culvert running parallel to Fort Weaver Road. Runoff water eventually flows into Honouliuli Stream.

4. Electrical and Telephone Services

Electrical service is currently provided to the adjacent properties via overhead power lines which are located along the east and west side of Kunia Road and Fort Weaver Road. The telephone service is through overhead telephone lines which are located along the east side of Kunia Road and Fort Weaver Road.

Chapter IV

**Potential Impacts and
Mitigation Measures**

IV. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The project site is located within the urbanized district of Ewa. As previously noted, this Leeward Oahu area contains a diverse range of commercial and public uses, as well as new and older established residential area in the midst of the town. Land uses surrounding the project site are characteristic of the region. The proposed project will be complementary to surrounding land uses.

The interchange modifications will require the acquisition of additional land from the Estate of James Campbell. The Hawaii Agricultural Research Center is currently leasing land from the Estate of James Campbell on a year-to-year basis and conducts field research on experimental crops. The State will provide relocation assistance to the Hawaii Agricultural Research Center for the relocation of their agricultural plots to other areas within the present 84 acre site.

2. Flora and Fauna

As stated earlier, there are no known significant habitats of rare, endangered or threatened species of flora and fauna within or surrounding the project site. The interchange modifications will require grading the existing ground and removal of the majority of the flora adjacent to the existing loop ramp and within the new right-of-way in the northwest quadrant of the interchange. The State is currently working with a Landscape Architect in developing professional landscaping plans which will utilize native drought tolerant trees, shrubs and groundcover. The method of creating a sustainable landscape of natives is referred to as renaturalization. The establishment of drought tolerant native grasses and other plants will

utilize temporary irrigation and fertilizer to accelerate plant growth then weaning irrigation in increments from the renaturalized landscape over a period of time after the landscaping is established. See Figure 9A. Grassing will be included for aesthetics and also to control erosion. Initially, there will be a visual effect due to the removal of the existing trees and ground cover. However, once the new landscaping is established, aesthetics along the highway should be enhanced.

The existing flora which are determined to be transplantable (by a Certified Arborist) will be transplanted within the interchange, if the existing flora fits within the new landscaping scheme. A Certified Arborist will be hired by the Contractor to advise and supervise in the transplanting and maintenance of the existing trees.

3. Air Quality and Noise

Air quality impacts attributed to the project will include dust generated by short-term construction related activities. Site work such as clearing, grubbing and excavation during the road widening, for example, will generate air-borne particulates. Dust control measures, such as dust screens and regular watering and sprinkling, will be implemented, as necessary, to minimize wind-blown emissions.

Current traffic conditions during peak hours are very congested. There is substantial amount of emissions from the idling cars. The proposed project plans to improve traffic flow. This will decrease the amount of idling traffic, thereby reducing automobile emission.

Ambient noise conditions will also be temporarily impacted by construction activities. Construction equipment would be the dominant source of noise during the construction period. All construction

activities will be limited to normal daylight working hours. The Contractor shall also be required to use properly muffled construction equipment.

The modifications to the Kunia Interchange will allow for more efficient traffic flow, and possibly higher traffic speeds (especially during peak traffic hours). These factors may contribute to the generation of noise. Therefore, a noise study incorporating the proposed modifications to the interchange was conducted in the southeast quadrant, where the Harbor View Subdivision is adjacent to Fort Weaver Road and Ramp EH. The study indicates noise in excess of the maximum allowable level and noise must be mitigated for impacted residences of the Harbor View Subdivision. An informational meeting was conducted on February 19, 1997 for the impacted residences to present the findings of the noise study and a proposed noise barrier, which varies in height from 8 feet to 12 feet. In addition, a survey was sent to the impacted residences asking if they were in favor of the construction of a noise barrier adjacent to their property. The results of the noise barrier survey indicated unanimous approval of the noise barrier. A rendition of the proposed noise barrier is shown on Figures 10A through 10C.

4. Archaeological Resources

As previously noted, an early consultation with State Historic Preservation Division indicates the parcel of lands adjacent to Kunia Interchange was used for commercial agriculture. There was no indication of archaeological or historical sites previously recorded on the property. Should any archaeological or historic remains be uncovered during construction, construction will stop and the State Historic Preservation Office will be notified immediately.

B. IMPACTS TO SOCIO-ECONOMIC ENVIRONMENT

1. Local Economy and Population

On a short-term basis, the project will support construction and construction-related employment. Accordingly, the project will have a beneficial impact on the local economy during the period of construction.

The proposed interchange modifications will address safety considerations. The proposed modifications will improve local traffic circulation and will relieve congestion associated with the on and off movements to Interstate Route H-1. The proposed project will support and enhance land uses along the project corridor and is not anticipated to have an adverse impact on the local economy or population.

2. Police, Fire and Medical Service

Medical, police, and fire protection services are not expected to be adversely impacted by the proposed project. The project will not extend existing service area limits for emergency services. The improvement in traffic flow would improve response time and reduce delays during emergency situations. Safety improvements would reduce demand for emergency services associated with traffic accidents.

3. Solid Waste

A solid waste management plan will be developed in coordination with the Solid Waste Division of the County Department of Public Works and Waste Management for the disposal of cleaning and grubbing material from the site during construction.

C. INFRASTRUCTURE

1. Roadways

In order to minimize construction impacts, no work will occur during peak traffic hours, between 6:30 A.M. to 8:30 A.M. and between 3:30 P.M. to 6:00 P.M., on weekdays. No night or weekend construction activities are planned. Access to businesses in the vicinity of the project will be maintained and only one lane of traffic will be allowed to be closed during construction. Public notices of construction activities will be required to be placed in a newspaper of general circulation to provide notice to neighboring businesses and residents. In addition, neighborhood boards, such as the Waipahu, Ewa and Makakilo Neighborhood Boards, will be informed of the upcoming construction activities.

Any surplus of excavated material shall become the property of the Contractor. The Contractor shall be required to dispose of the surplus material at an environmentally safe disposal site using environmentally correct procedure. No adverse impact to the environment is expected.

In the long-term, the proposed improvements should conform to area-wide roadway and traffic improvements either in the planning or implementation stage.

2. Wastewater

There will be no net increase in the average daily flow of wastewater to the Honouliuli sewer treatment plant as a result of the proposed project. As such, the project is not anticipated to have an adverse impact upon the region's wastewater system.

3. Water

The project will not increase in the net water usage to the County water system serving the area. The project's impact upon the water system is expected to be negligible.

4. Drainage and Erosion Control

The major modifications to the interchange will take place in the northwest quadrant and the modifications will involve grading the area to the finish elevations. The area will be graded in a manner that runoff will be used to irrigate the landscaping and any excess will be channeled to the existing drainage systems. The proposed project will increase the impermeable surface area, but this increase is not anticipated to have an adverse drainage impact upon the existing drainage systems.

Appropriate erosion control measures will be incorporated during the construction phase to minimize soil loss associated with construction activities.

5. Electrical, Telephone and Cable Television Services

The construction of the Kunia Interchange improvements will require the relocation of Hawaiian Electric Company's 138 Kv, 46 Kv and 12 Kv power poles. Presently, there are separate systems with each system requiring a separate system of poles. The relocation scheme will combine the 138 Kv and 46 Kv system on the same power pole, thus eliminating the poles required for the 46 Kv system. The alignment of these lines will be within the interchange in the basic alignment of the present 138 Kv system. The poles will be shifted laterally by approximately 60 feet. The 12 Kv system will experience a minor alignment change along Kunia Road on the north side of Interstate Route H-1. The new alignment

of Hawaiian Electric Company's power poles are shown on Figure 11A.

The construction of the widening of Fort Weaver Road and Ramp EH, along with the construction of the noise barrier adjacent to the Harbor View Subdivision will require the relocation of Hawaiian Telephone Company's poles. The relocation of the telephone poles will not vary considerably from its present alignment.

The undergrounding alternative was evaluated during both the EIS and design phases of the "HECO Waiiau - Campbell Industrial Park 138 Kv Lines #1 and #2 - Part 2 (Ewa Nui Substation to Waiiau Power Plant)" project. This undergrounding alternative was considered to be impractical and inappropriate for this project because of various physical and high cost factors.

Oceanic Cablevision will be relocating their system along Fort Weaver Road since they share poles with Hawaiian Telephone Company and Hawaiian Electric Company.

Chapter V

**Relationship to Governmental
Plans, Policies and Controls**

V. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes the four (4) major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural", and "Conservation". The subject parcel is within the "Urban" and "Agricultural" districts. The proposed action involves the continuation and expansion of roadway use which is compatible with the "Urban" designation.

B. HAWAII STATE GENERAL PLAN

The Hawaii State General Plan sets forth broad objectives and policies to help guide the long-range development of the State. The purpose of the General Plan is to recognize and state the major problems and opportunities concerning the needs and the development of the State and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development.

The proposed action is in keeping with the following General Plan objective and policy:

Objective: To develop a program for anticipating and enlarging the local street and highway systems in a timely response to planned growth.

Policy: Ensure that transportation facilities are anticipated and programmed for construction in order to support planned growth.

C. KUNIA INTERCHANGE IMPROVEMENTS

The proposed project supports the State's objectives for improving the statewide transportation system through modifying the interchange to accommodate present traffic demands of local communities. The proposed project will immediately improve traffic congestion associated with Kunia Interchange. This project is consistent with the State's General Plan.

The State is developing an Ewa Highway Master Plan in conjunction with the City and County of Honolulu to address the future needs of a rapidly changing and growing Ewa region. The master plan will identify the specific types of improvements needed at Kunia Interchange, including the possible need for bridged exit and on-ramps.

D. PERMITS NEEDED

Department of Health (NPDES) Permit is required for this project. A Notice of General Permit Coverage has been issued on November 29, 1997.

Chapter VI

Findings and Conclusion

VI. FINDINGS AND CONCLUSION

The proposed project will involve earthwork and construction activities. In the short-term, these activities may create temporary nuisances normally associated with construction activities. However, dust control measures, such as dust screens and regular watering and sprinkling, will be implemented to minimize wind-blown emissions. All construction activities are anticipated to be limited to normal daylight, non-peak traffic hours. Only one lane of traffic will be allowed to be closed during construction. Impacts generated from construction activities are only temporary and are not expected to have any significant long term impacts.

From a long-term perspective, the proposed project is not anticipated to result in adverse environmental impacts. There are no known significant habitats of rare, endangered or threatened species of flora or fauna located on the project site. With regard to archaeology, data recovery has been completed and the site is no longer significant for its information content. Archaeological monitoring will also be conducted during the construction phase of the project. Should any archaeological or historic remains be found, applicable procedures regarding discovery will be followed.

The proposed project conforms with area-wide roadway and traffic improvements either underway or in the planning stages. Appropriate erosion control measures are being incorporated during the construction phase to minimize soil loss associated with construction activities. With regard to other infrastructure systems and public services, the proposed project should have no adverse environmental impact.

In light of the foregoing findings, the State Department of Transportation has determined that the proposed project will not result in any significant environmental impacts and has issued a "Findings Of No Significant Impact".

Chapter VII

**Agencies Contacted in
the Preparation of the
Environmental Assessment
and Responses Received**

VII. AGENCIES CONTACTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT AND RESPONSES RECEIVED

The following agencies were contacted during the preparation of the Environmental Assessment:

1. Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814
2. Department of Health
Environmental Management Division
P.O. Box 3378
Honolulu, Hawaii 96801
3. Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813
4. City and County of Honolulu
Department of General Planning
650 South King Street
Honolulu, Hawaii 96813
5. U.S. Department of the Interior
Fish and Wildlife Service
P.O. Box 50167
300 Ala Moana Boulevard
Honolulu, Hawaii 96850
6. U.S. Army Corps of Engineers
Pacific Ocean Division, Building 230
Ft. Shafter, Hawaii 96858
7. U.S. Department of Agriculture
Soil Conservation Service
P.O. Box 50004
300 Ala Moana Boulevard
Honolulu, Hawaii 96850
8. Office of Planning
250 South King Street, 4th Floor
Honolulu, Hawaii 96813

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:

July 23, 1996

96-107/epo

Mr. Hugh Y. Ono, Administrator
Highways Division
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Ono:

Subject: Preliminary Draft Environmental Assessment
Interstate Route H-1, Kunia Interchange Improvement
Federal-Aid Interstate project No. IM-H1-1(219)
Ewa, Oahu
TMK: 9-1-18

DESIGN BRANCH
HIGHWAY DIVISION
DEPT. OF TRANSPORTATION

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RECEIVED

Thank you for allowing us to review and comment on the subject project. We would like to see the following areas addressed in the draft environmental assessment (DEA):

1. Fugitive dust during construction;
2. Soil erosion during construction;
3. Possible impacts on the nearest residents from excessive noise during construction; and
4. The need for applying for a National Pollutant Discharge Elimination System permit.

Sincerely,

BRUCE S. ANDERSON, Ph.D.
Deputy Director for
Environmental Health

BENJAMIN F. FULTON
GOVERNOR OF HAWAII

RECEIVED

96 JUL 15 P3:31

DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION

July 10, 1996

Hugh Y. Ono, Administrator
Highways Division
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Ono:

**SUBJECT: Chapter 6E-8 Historic Preservation Review -- Interstate Route H-1, Kunia Interchange Improvements [Federal-Aid Interstate Project NO. IM-H1-1(210)]
Kunia, 'Ewa, Oahu
TMK: 9-1; 9-2**

Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel. A review of our records shows that there are no known historic sites at the project location. These lands were commercially cultivated with sugar cane which altered the land for many years and these land alterations would have destroyed surface and subsurface historic sites. Therefore, it is unlikely that significant historic sites are present. Thus, we believe that this project will have "no effect" on historic sites.

Since federal funds are involved on this project (p. 3 of Prelim Draft EA), compliance with the National Historic Preservation Act will also be needed. The federal agency involved can refer to this document in their compliance submittal to our office.

Aloha,

Don Hibbard

for Don Hibbard, Administrator
Historic Preservation Division

EJ:jk



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT COLOMA-AGARAN

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

LOG NO: 17638
DOC NO: 9607EJ03

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



RECEIVED
JUL 23 AM 5:56
TRANSPORTATION
DIVISION

CHERYL D. SOON
CHIEF PLANNING OFFICER
CAROLL TAKAHASHI
DEPUTY CHIEF PLANNING OFFICER

LW 6/96-1390

July 12, 1996

Mr. Hugh Ono, Administrator
Highways Division
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Ono:

Preliminary Draft Environmental Assessment for
Interstate Route H-1 Kunia Interchange Improvements

We have reviewed the subject Draft Environmental Assessment and have no objections to the proposed project as it is generally consistent with the recommendations in the 2020 Oahu Regional Transportation Plan (ORTP) and supportive of City policies to direct growth to the Secondary Urban Center at Kapolei.

Thank you for the opportunity to comment on this matter. Should you have any questions, please contact Lin Wong of our staff at 527-6044.

Sincerely,

CHERYL D. SOON
Chief Planning Officer

CDS:ft

RECEIVED
96 JUL 22 AM 10:45
DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION



United States Department of the Interior

FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS ECOREGION
300 ALA MOANA BOULEVARD, ROOM 3108
BOX 50088
HONOLULU, HAWAII 96850
PHONE: (808) 541-3441 FAX: (808) 541-3470

RECEIVED
JUL 5 12 49 PM '96
DEPT. OF TRANSPORTATION

In Reply Refer To: CAR

Mr. Hugh Y. Ono
Administrator
Highways Division
State of Hawaii, Dept. of Transportation
869 Punchbowl St.
Honolulu, HI 96813-5097

JUL - 3 1996

Re: Interstate Route H-1, Kunia Interchange Improvements
Federal-Aid Interstate Project No. IM-H1-1(219)

DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION

96 JUL - 5 P 3:29

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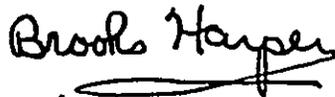
Dear Mr. Ono:

The U.S. Fish and Wildlife Service (Service) has reviewed the preliminary Draft Environmental Assessment for Interstate Route H-1, Kunia Interchange Improvements, Federal-Aid Interstate Project No. IM-H1-1(219). The project sponsor is the State Department of Transportation, Highways Division. The estimated construction costs for the proposed project will be \$4,500,000 for the State of Hawaii and \$25,500,000 for the Federal Government. This letter has been prepared under the authority of and in accordance with provisions of the National Environmental Policy Act of 1969 [42 U.S.C. 4321 *et seq.*; 83 Stat. 852], as amended, the Fish and Wildlife Coordination Act of 1934 [16 U.S.C. 661 *et seq.*; 48 Stat. 401], as amended, the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*; 87 Stat. 884], as amended, and other authorities mandating Service concern for environmental values. Based on these authorities, the Service offers the following comments for your consideration.

The Kunia Interchange is located in Leeward Oahu and provides access to H-1 for Fort Weaver Road and Kunia Road. The State of Hawaii proposes to modify the interchange on Interstate Route H-1 to relieve traffic congestion during peak hours. Based on a review of The Nature Conservancy's Hawaii Natural Heritage Program maps and the Service's National Wetland Inventory maps and the fact that the area has been previously disturbed, the Service does not anticipate any negative environmental impacts to fish and wildlife resources or wetlands to result from the proposed project.

The Service appreciates the opportunity to provide comments, and no further consultation with the Service is required. If you have questions regarding these comments, please contact Botanist Christa Russell at (808) 541-3441.

Sincerely,



Brooks Harper
Field Supervisor
Ecological Services

cc: DAR, Hawaii
CZMP, Hawaii
DLNR, Hawaii
CWB, Hawaii



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

June 28, 1996

RECEIVED
PLANNING AND OPERATIONS DIVISION
JUN 29 1996

Planning and Operations Division

Mr. Hugh Y. Ono, Administrator
State of Hawaii
Department of Transportation
Highways Division
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Ono:

Thank you for the opportunity to review and comment on the Preliminary Draft Environmental Assessment (PDEA) for the Interstate Route H-1, Kunia Interchange Improvements Project, Kunia, Oahu (Project No. IM-H1-1-219). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act:

a. Based on the information provided, no waters of the U.S. will be affected by the proposed project; therefore, a DA permit will not be required (file number 96000270).

b. According to the enclosed index map, the project site is located in Zone D (no panel printed; areas where flood hazards have not been determined).

-2-

As requested, we are returning one copy of the
PDEA.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda Hihara-Endo".

Dr. Linda Hihara-Endo, P.E.
Acting Chief, Planning
and Operations Division

Enclosures



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

P. O. Box 50004
Honolulu, HI
96850-0001

August 9, 1996

172 8/11/96
Mr. Julius B. Fronda
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Fronda:

Subject: Draft Environmental Assessment (DEA) - Interstate Route H-1, Kunia interchange
Improvements, Federal-Aid Interstate Project No. IM-H1-1(219),
Kunia, Oahu, Hawaii

We have reviewed the above-mentioned document and have no comments to offer at this time.
We apologize for the late response.

We thank you for the opportunity to review this document.

Sincerely,

KENNETH M. KANESHIRO
State Conservationist

The Natural Resources Conservation Service
formerly the Soil Conservation Service, works
hand-in-hand with the American people to
conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



OFFICE OF [REDACTED] PLANNING

Department of Business, Economic Development & Tourism

MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96811-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808) 587-2848, 587-2800

BENJAMIN J. CAYETANO, Governor

FAX: Director's Office 587-2848
Planning Division 587-2824

96 JUL 19 P3:07

Ref. No. P-6189

July 9, 1996
DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION

MEMORANDUM

TO: Mr. Hugh Y. Ono, Administrator
Highways Division
Department of Transportation

FROM: Seiji F. Naya
Acting Director

SUBJECT: Preliminary Draft Environmental Assessment for Interstate Route H-1, Kunia Interchange Improvements, Federal Aid Interstate Project No. IM-H1-1(219)

RECEIVED
JUL 19 2 35 PM '96
DEPARTMENT OF TRANSPORTATION
HONOLULU, HAWAII

The environmental assessment for the proposed Kunia Interchange modifications should factor in impacts from (1) the HFDC East Kapolei 500-acre residential project, (2) the 941-acre mauka site for the University of Hawaii West Oahu Campus and (3) the 754-acre Schuler Homes project.

Also, the proposal may need to be reviewed for consistency with Hawaii's Coastal Zone Management (CZM) Program for use of Federal funds. Certain Federal assistance programs require CZM Federal consistency approval. However, we were unable to determine whether CZM consistency is required for this project because the information provided did not identify the Federal funding source or agency. This should be coordinated with the Hawaii CZM Program.

If you have any questions, please call our CZM office at 587-2878.

cc: Department of Land Utilization
City & County of Honolulu

BENJAMIN J. CAYETANO
GOVERNOR



RECEIVED
NOV 13 4 11 PM '96
STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

1451
GARY GILL
DIRECTOR

220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4184

November 4, 1996

Kazu Hayashida, Director
Department of Transportation
869 Punchbowl St.
Honolulu, HI 96813

Attn: Julius Fronda

Dear Mr. Hayashida:

Subject: Draft Environmental Assessment (EA) for Kunia Interchange Improve-
ments, Ewa; TMK: 9-1-18, 9-2-1 and 9-4-1

Please include the following in the final EA:

1. Fully describe the relocation of HECO's power lines and what the visual impacts of the lines at the new location will be. Was underground placement considered as an alternative? Were the nearest neighbors notified of the potential change? Include a rendering of the resulting view of the new location, preferably a photo with the power lines superimposed.
2. If this project requires a National Pollutant Discharge Elimination System (NPDES) permit, list the status of the permit.
3. Notify the nearest neighbors or neighboring landowners and include documentation of your contacts.

If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,

GARY GILL
Director

DESIGN BRANCH
HIGHWAY DIVISION
DEPT. OF TRANSPORTATION

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RECEIVED

'97 JAN 31 P3:14

JAN 31 1997
DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION

HWY-DD
2.3217

Mr. Gary Gill, Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Attention: Ms. Nancy Heinrich

Dear Mr. Gill:

Subject: Draft Environmental Assessment (EA) for Interstate Route H-1
Kunia Interchange Improvements, Federal-Aid Interstate Project
No. IM-H1-1(219), Ewa, Oahu, Hawaii, TMK: 9-1-18, 9-2-01 and 9-4-02

Thank you for your letter of November 4, 1996 transmitting your comments to the Draft Environmental Assessment for the subject project. We will address your comments in the Final Environmental Assessment as follows:

1. Different alternatives for the relocation of HECO's facilities, including undergrounding, were considered. The reasons for the selection of overhead facilities will be addressed in the Final Environmental Assessment. The relocation of HECO's facilities will be discussed and shown on the Final Environmental Assessment attachments in the form of plans. The relocation of HECO's facilities will be confined within the northwest quadrant. The relocation will basically deviate slightly from its present alignment. HECO facilities in the northeast quadrant, where Village Park Subdivision is located, will remain in place. We believe that informing the nearest neighbors will not be necessary, since the relocation of the HECO facilities will not change appreciably from its present configuration. We will transmit the Final Environmental Assessment to the Neighborhood Boards surrounding the proposed project.

Mr. Gary Gill, Director
Page 2

HWY-DD
2.3217

JAN 31 1997

2. The status of the NPDES permit will be listed in the Final Environmental Assessment.
3. We will notify the adjacent landowners of this proposed project and will inform them of the tentative construction schedule. Further, the residents and motoring public will be informed through the news media in advance of any actual construction.

If there is any further question, please contact Julius B. Fronda at 587-2246.

Very truly yours,



JH
KAZU HAYASHIDA
Director of Transportation

JBF/RTU:ra

bc: HWY-DD(JBF)
HWY-P
STP

RS:ra
bc: HWY-D
HWY-DD
HWY-L

HWY-DD
2.3438

FEB 11 1997

See Attached List

Dear _____:

Subject: Kunia Interchange Improvements, Noise Barrier Survey

As part of the Kunia Interchange Improvements project, the State of Hawaii, Department of Transportation is planning to widen the H-1 eastbound on-ramp from Fort Weaver Road by one lane. In connection with this improvement, a traffic noise analysis has been conducted to determine the potential impact to the residents of Harbor View Subdivision. Based on the results of the analysis, the projected noise level will impact your residence. To reduce this impact, an 8 to 12-foot high noise barrier is proposed. This is the minimum height of noise barrier that can successfully reduce the traffic noise. The noise barrier would be built on the existing ground level along the property line in some areas and atop an earth berm in others. All construction would be on State land between the roadway and the highway right-of-way line.

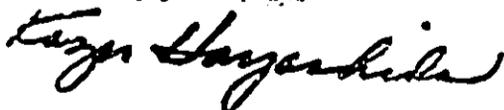
We are conducting an informational meeting at Honowai Elementary School Cafeteria on Wednesday, February 19, 1997 at 6:30 p.m. We will discuss the results of the traffic noise study and the proposed noise wall.

To help us determine whether or not we should construct a noise barrier, we ask that you participate in the attached survey. You may return your response at the meeting or mail it with the enclosed postage paid envelope by February 21, 1997.

Should you have any questions or need more information, please call Julius Fronda of the Highway Design Section at 587-2246.

Thank you very much for your assistance.

Very truly yours,



KAZU HAYASHIDA
Director of Transportation

Enc.



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813-5249
PHONE (808) 594-1888
FAX (808) 594-1885

November 20, 1996

Mr. Hugh Y. Ono, Administrator
Highways Division
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Ono:

Thank you for the opportunity to review the Draft Environmental Assessment (DEA) for the Interstate Route H-1 Kunia Interchange Improvements, District of Ewa, Island of Oahu. The Department of Transportation proposes to modify the Kunia interchange on Interstate Route H-1 to relieve traffic congestion during peak hours.

After a careful review of the DEA and supporting documentation, the Office of Hawaiian Affairs has no objections to the proposed development at this time. Based on information contained in the DEA, the road improvements apparently bear no significant long-term adverse impacts on either adjacent ecosystems or upon existing urban and rural settlements. There are no known rare, endangered, or threatened wildlife species and no known archaeological remains exist in the area. Furthermore, the proposed improvements will neither significantly affect scenic resources nor air quality or noise level. Please contact me or Luis A. Manrique (594-1755) should you have any questions on this matter.

Sincerely yours,

Martha Ross
Deputy Administrator

LM:lm

RECEIVED

'96 DEC -5 A9:28

DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION



O'AHU GROUP
SIERRA CLUB, HAWAII CHAPTER
P.O. Box 2577, Honolulu, Hawaii 96803
Phone: (808) 538-6616

November 14, 1996

Julius Fronda
Department of Transportation Highways Division
869 Punchbowl St.
Honolulu, HI 96813

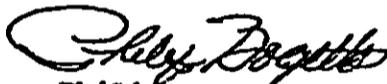
Dear Mr. Fronda,

RE: KUNIA INTERCHANGE

In the final environmental assessment for the Kunia Interchange project, please evaluate the opportunity cost of spending over \$25 million dollars on this project rather than other worthwhile projects. Projects eligible for ISTEA enhancement funds (such as the acquisition of scenic viewplanes along a highway) may not be funded if a project of this magnitude is constructed. This expenditure would reduce the amount of money available to acquire scenic sites, build a real network of bike paths and mitigate polluted runoff. We were told this year, for example, that DOT could not spend the \$17 million dollars in enhancement funds because to do so would require that \$17 million in budgeted construction projects be eliminated. Given this reality, DOT must evaluate the opportunity cost of building this viaduct.

DOT cannot continually proposed to spend money on highway improvements without developing ISTEA enhancement projects.

Sincerely,


Philip Bogetto
Chair

APR 14 1997

HWY-PS
2.4125

Mr. Philip Bogetto, Chair
Oahu Group
Sierra Club, Hawai'i Chapter
P. O. Box 2577
Honolulu, Hawaii 96803

RECEIVED

'97 APR 14 PM 2:46

RECEIVED

Dear Mr. Bogetto:

Subject: Draft Environmental Assessment (EA) for Interstate Route H-1,
Kunia Interchange Improvements

Thank you for your letter dated November 14, 1996, commenting on the Draft EA for the Kunia Interchange project. As requested, the Final EA will indicate that cancelling this project would allow project funds to be reprogrammed at other locations for bikeways, scenic preservation, and conventional highway projects. However, other uses of project funds would not accommodate increasing traffic at the Kunia Interchange.

While our primary mission is to build and maintain public highways, we can and do fund transportation enhancement projects. For your information, I am enclosing a January 1997 Status Report on our Transportation Enhancement Program. We are in the process of updating this Status Report to reflect projects added by recent amendments to the State Transportation Improvement Program (STIP). You may find it of interest that the amended STIP programs \$6 million in federal funds to acquire scenic open space at Queen's Beach, Oahu.

Very truly yours,

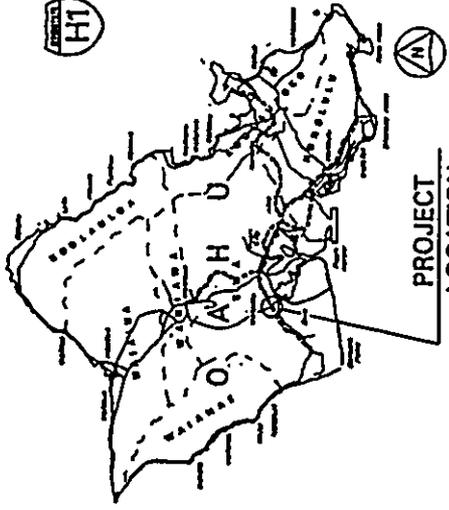

HUGH Y. ONO
Administrator
Highways Division

DM:gm

Attachment

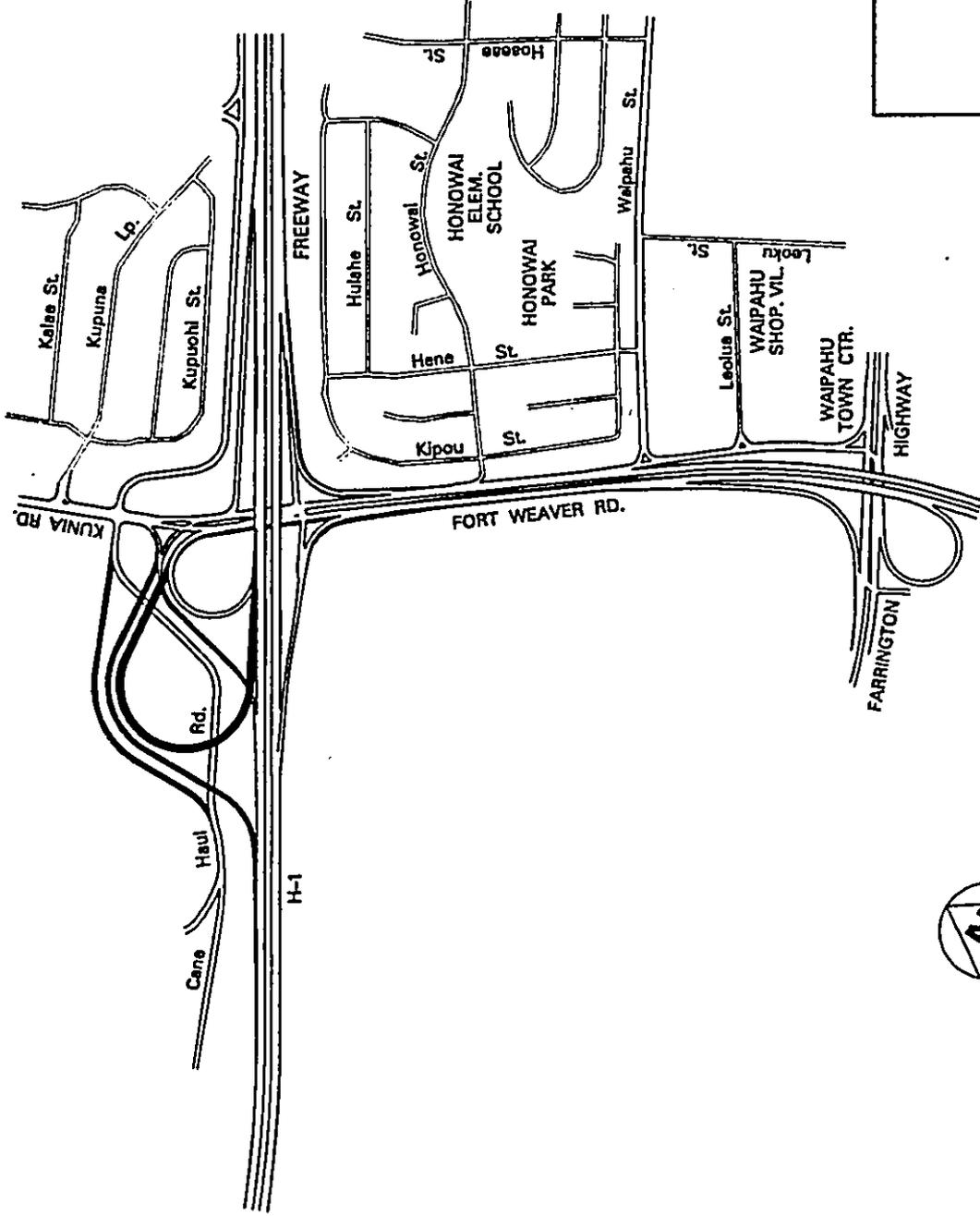
c: HWY-DD (Julius Fronda), -PS (Enh 96-261)

Attachments



PROJECT
LOCATION

LOCATION MAP



LAYOUT PLAN

Scale: 1" = 1000'

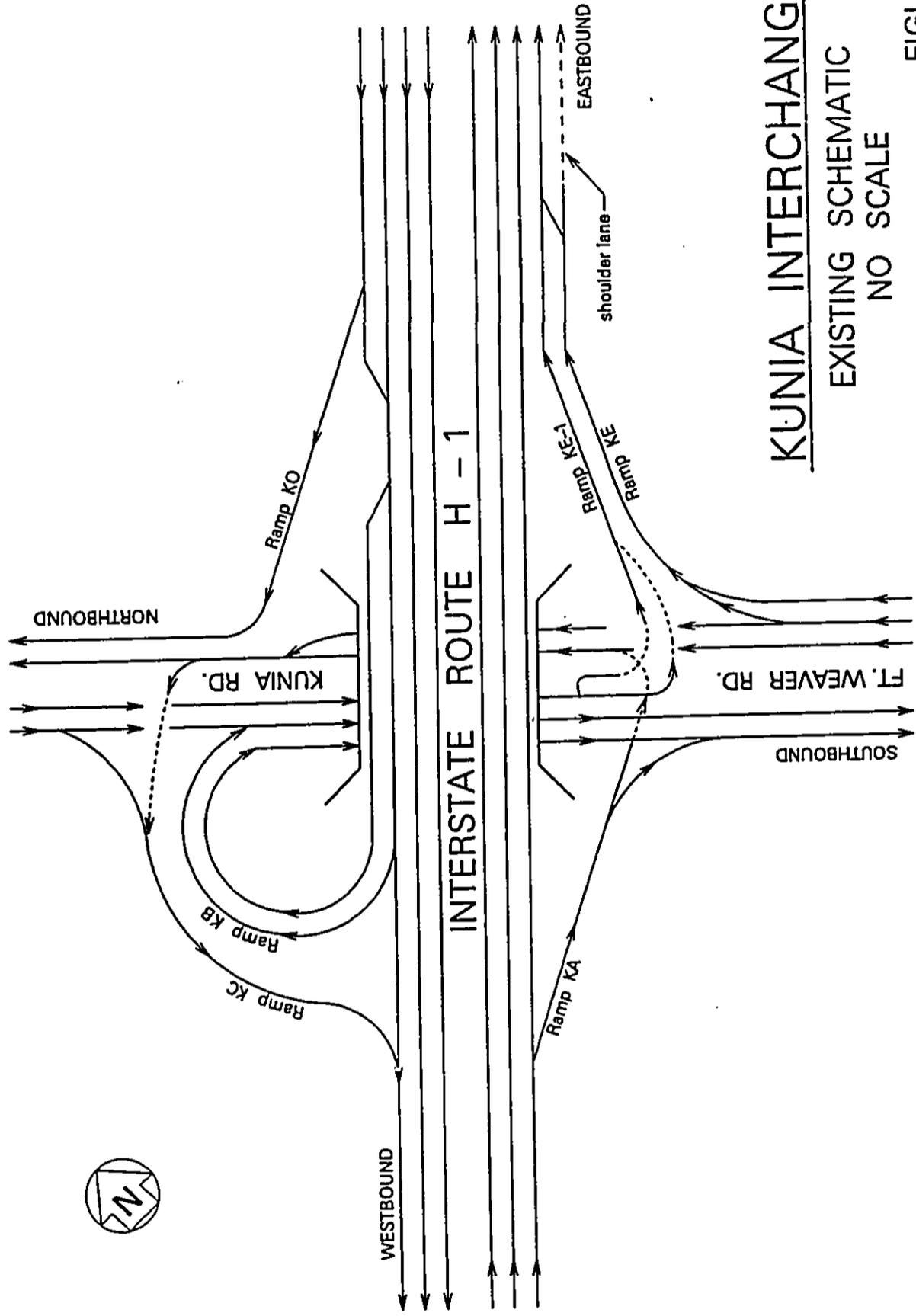
FIGURE 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**INTERSTATE ROUTE H-1
KUNIA INTERCHANGE IMPROVEMENTS**

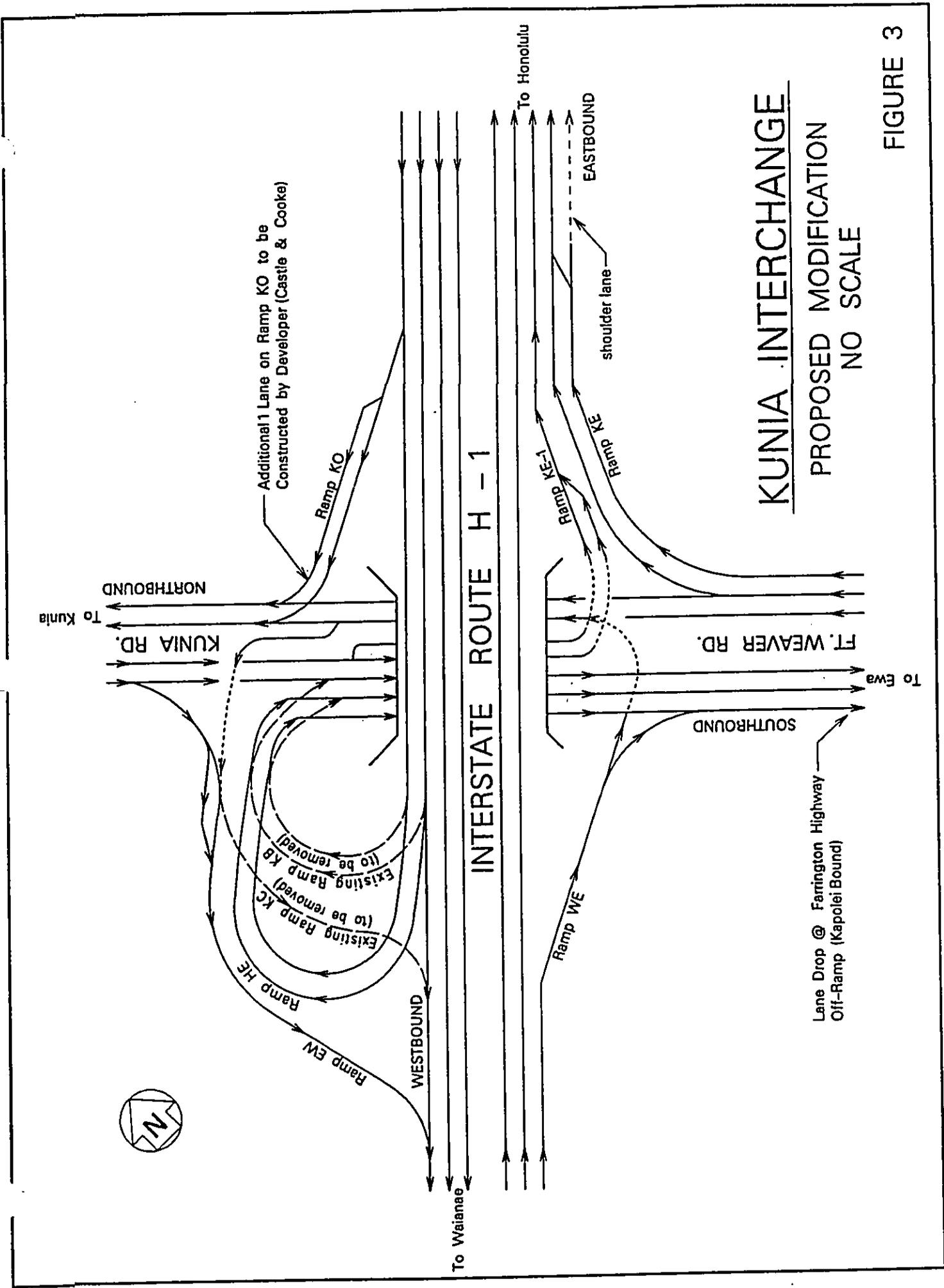
F. A. I. PROJECT NO. IM-H1-1(219)

ISLAND OF OAHU



KUNIA INTERCHANGE
 EXISTING SCHEMATIC
 NO SCALE

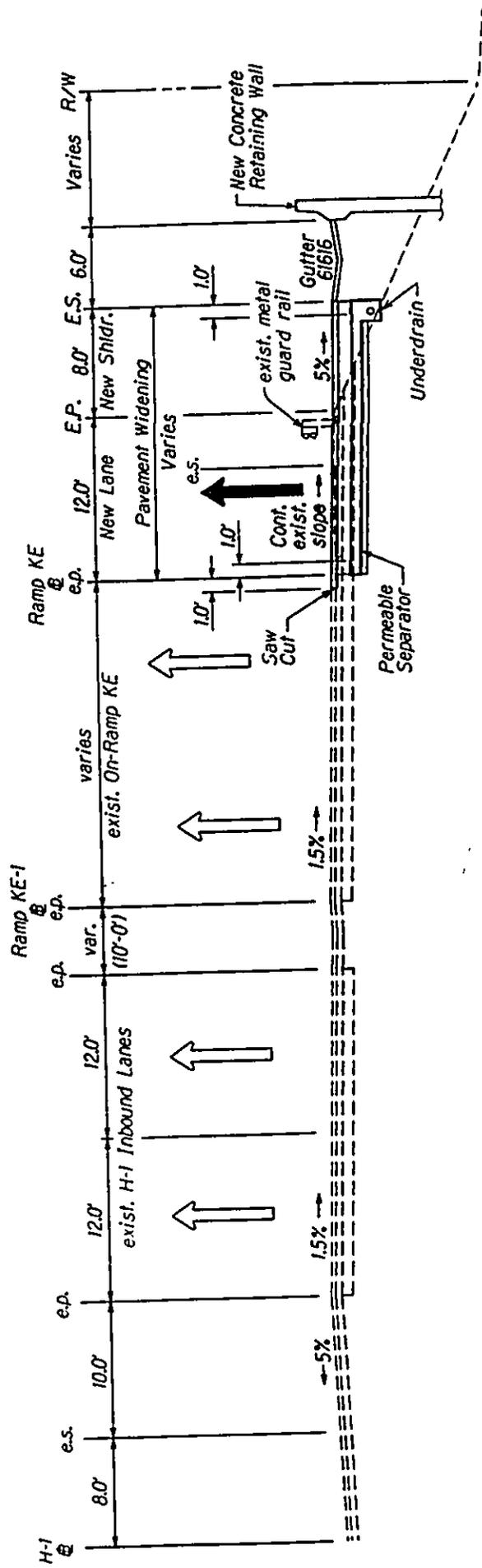
FIGURE 2



KUNIA INTERCHANGE

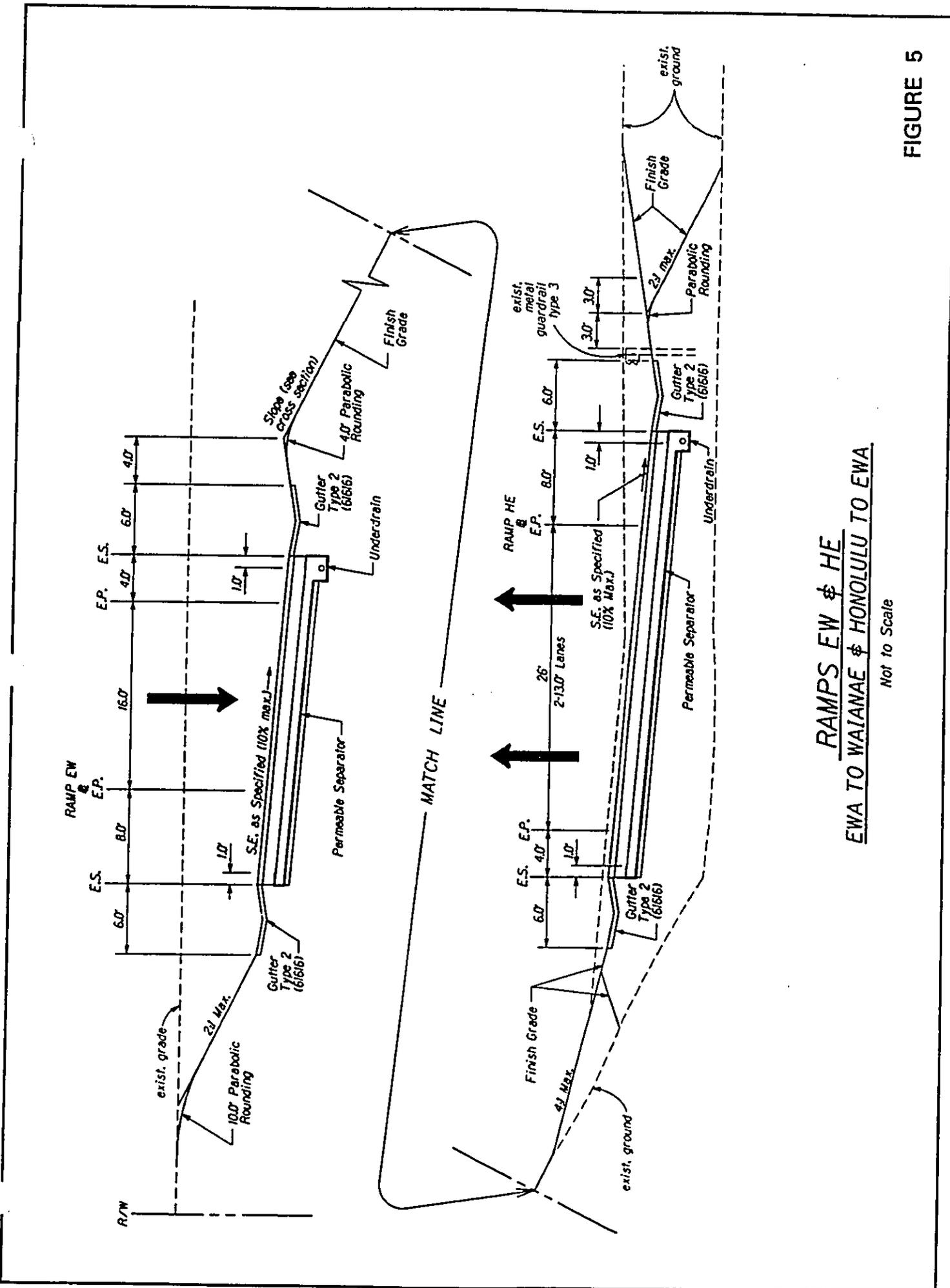
PROPOSED MODIFICATION
NO SCALE

FIGURE 3



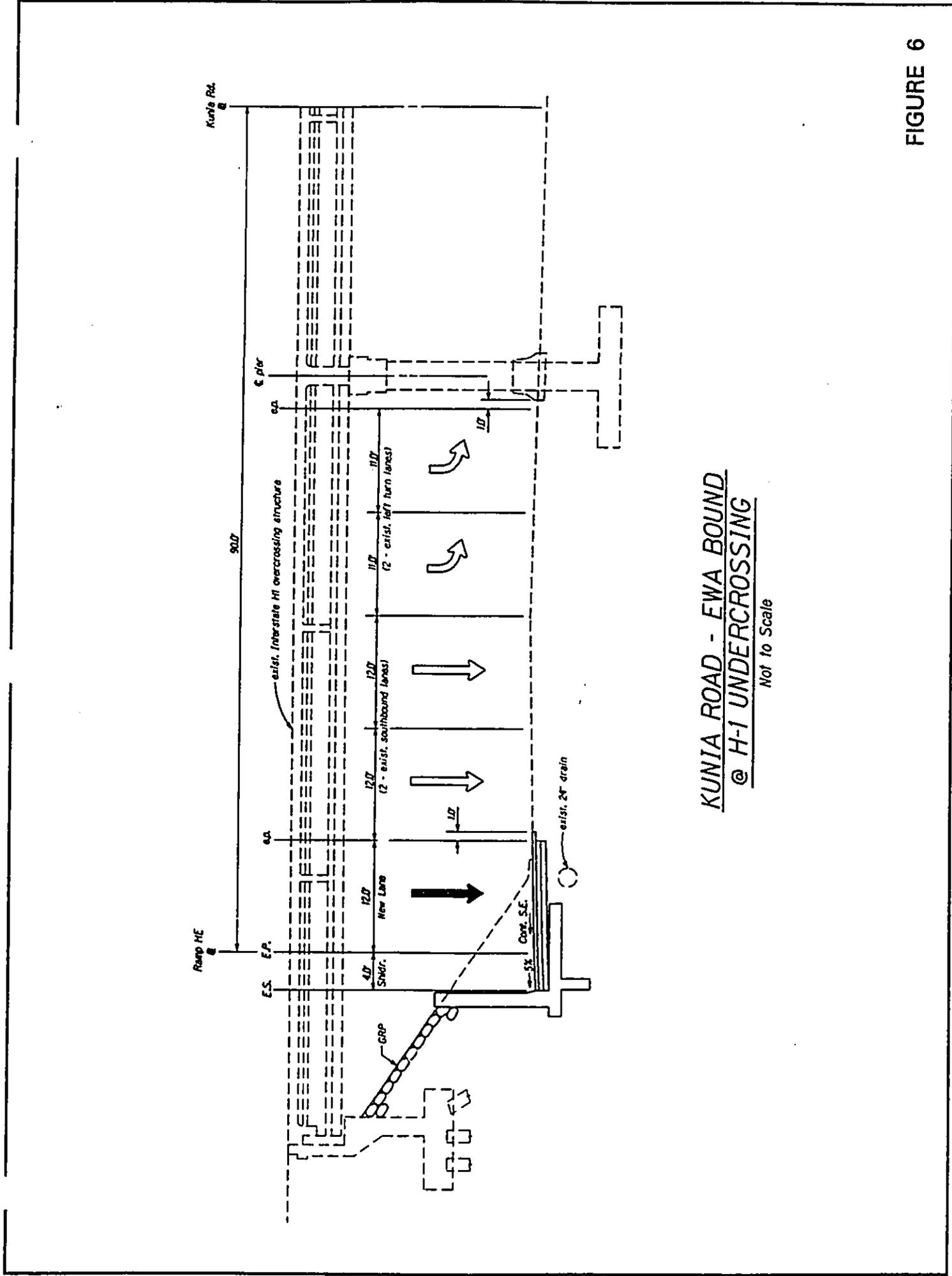
RAMP KE
EWA TO HONOLULU
 Not to Scale

FIGURE 4



RAMPS EW & HE
EWA TO WAIANA'E & HONOLULU TO EWA
 Not to Scale

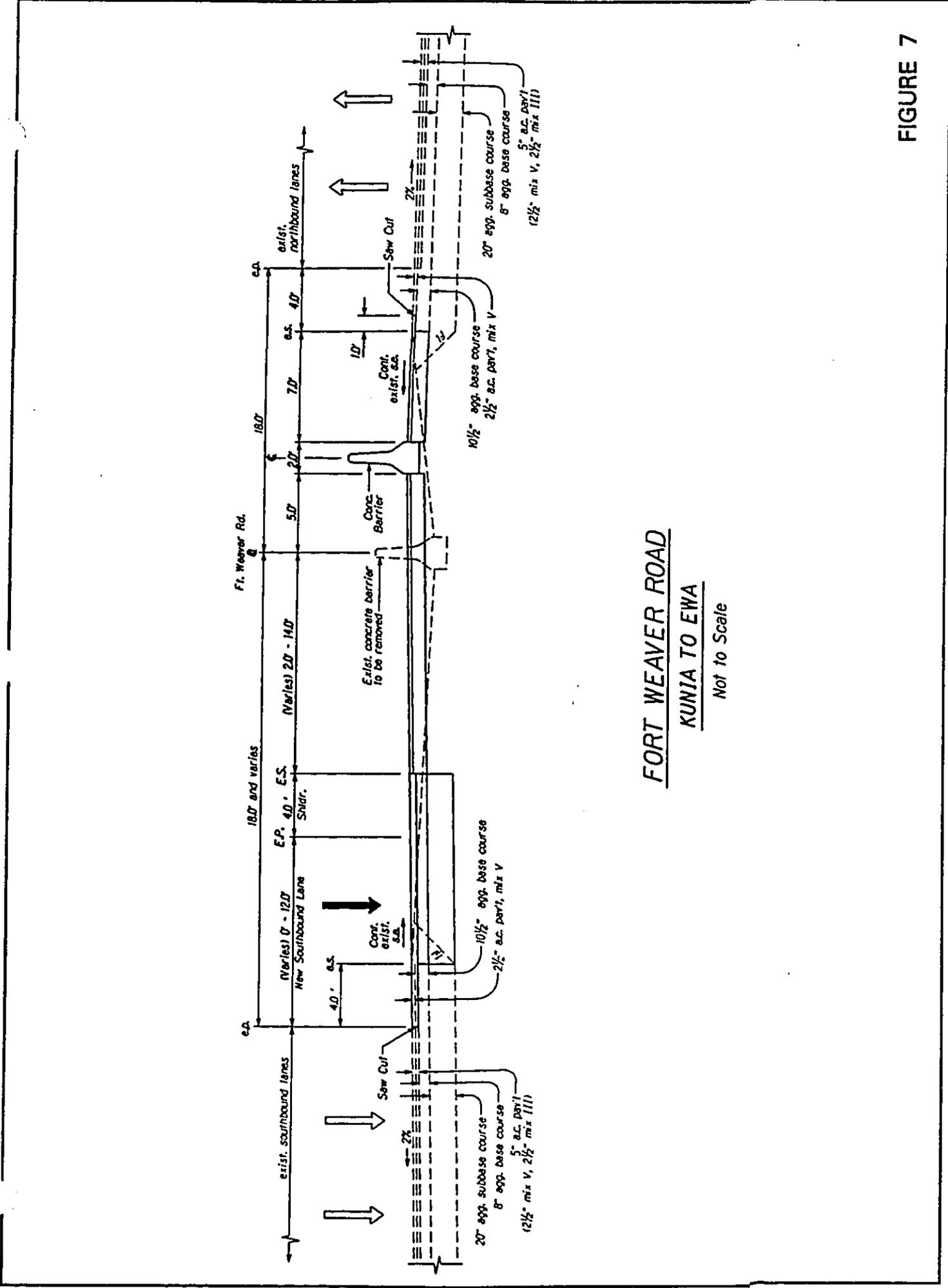
FIGURE 5



KUNIA ROAD - EWA BOUND
@ H-1 UNDERCROSSING

Not to Scale

FIGURE 6



FORT WEAVER ROAD
KUNIA TO EWA
 Not to Scale

FIGURE 7

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K219	1997		

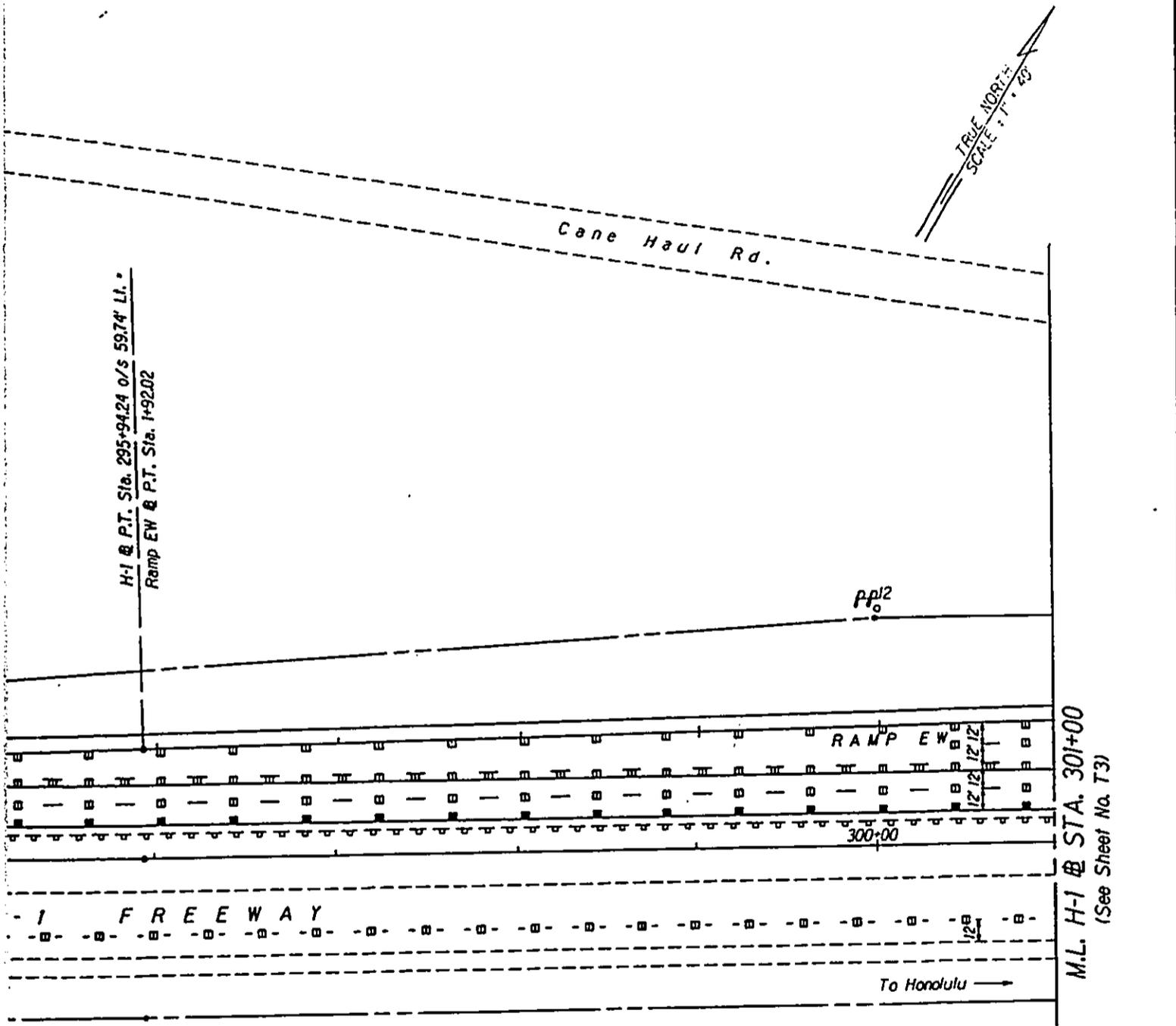


FIGURE 8A



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1

Kunia Interchange Improvements

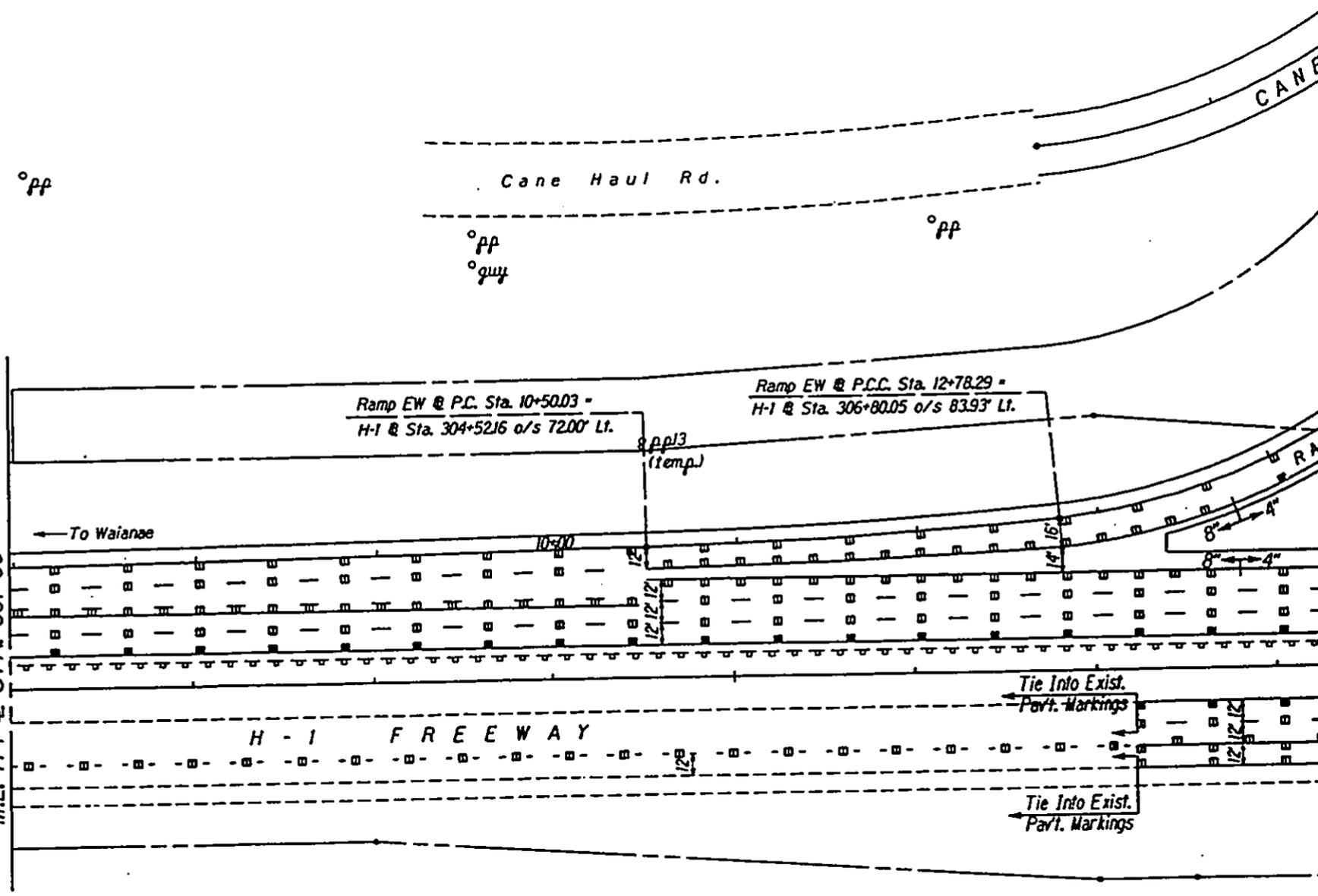
F. A. I. Project No. IM-HI-K(219)

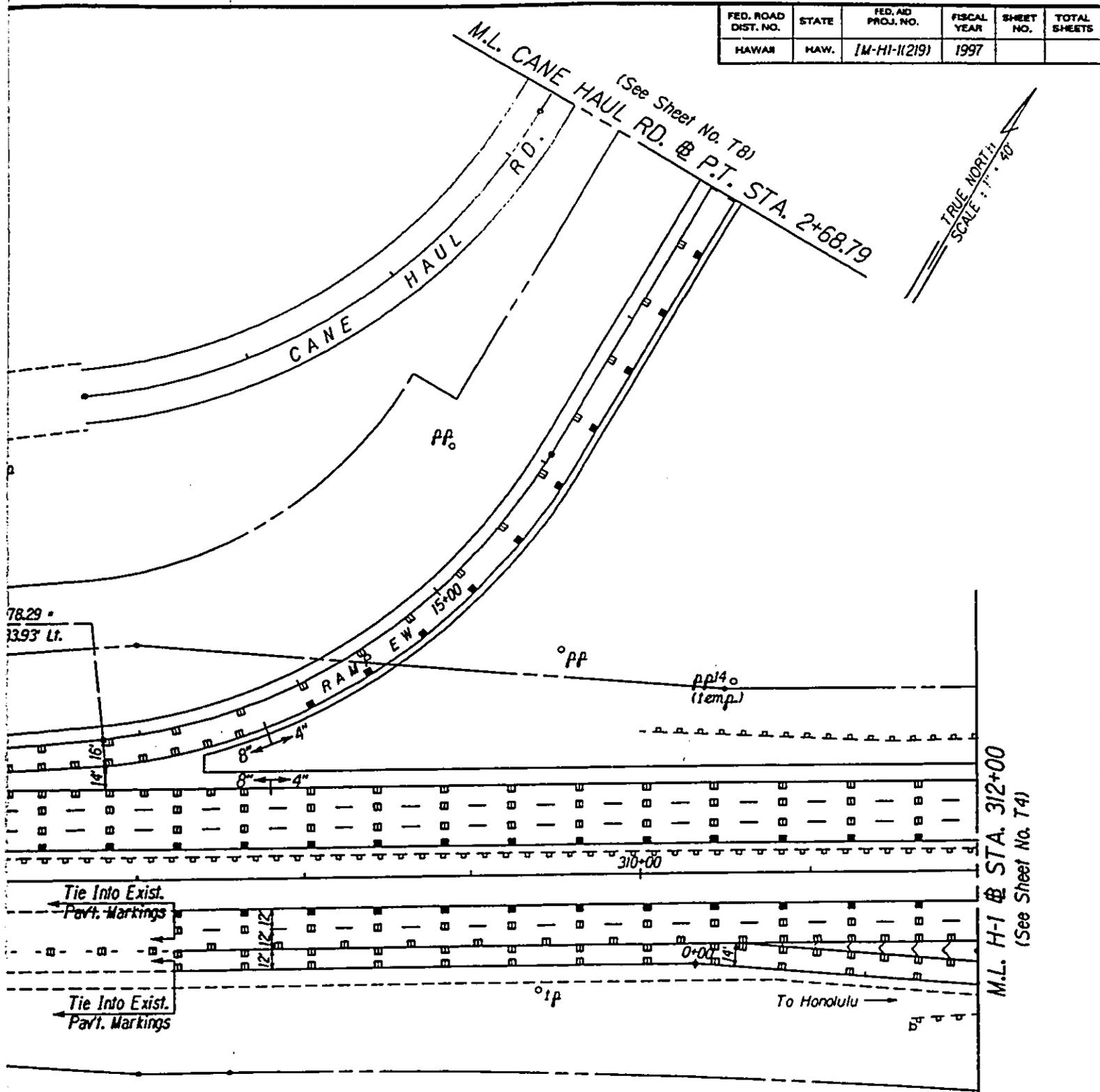
Scale: 1"=40' Date: Sept. 1996

SHEET No. T2 OF 12 SHEETS

DESIGNED BY	DATE
PLANNED BY	1/28/52
TRACED BY	
INCHES BY	
QUANTITIES BY	
CHECKED BY	

(See Sheet No. T2)
M.L. H-1 @ STA. 301+00





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

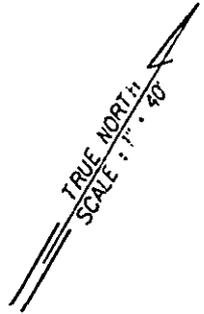
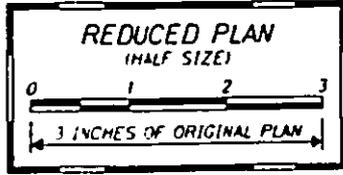


FIGURE 8B



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
INTERSTATE ROUTE H-1
 Kunia Interchange Improvements
 F. A. I. Project No. IM-HI-1(219)
 Scale: 1"=40' Date: Sept., 1996
 SHEET No. T3 OF 12 SHEETS

(See Sheet No. T8)
 M.L. @ P.O.C. STA. 21+00

(See Sheet No. T3)
 M.L. H-1 @ STA. 312+00

pp

pp
 guy

Ramp HE @ P.T. Sta. 26+07.71

pp15
 (temp)

Ramp HE @ Sta. 28+07.71

To Waiānae

315+00

H-1 F R F E A Y

EXIT
 25
 RPA

EXIT
 5

@ P.C. Sta. 4+56.04

@ P.T. Sta. 6+91.7

REDUCED PL
 (HALF SIZE)
 0 1 2
 3 INCHES OF ORIGINAL

DATE	7/27/58
SURVEY PLANNED BY	
DESIGNED BY	
CHECKED BY	
APPROVED BY	
PROJECT NO.	
CONTRACT NO.	
SCALE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

TRUE NORTH
SCALE: 1" = 40'

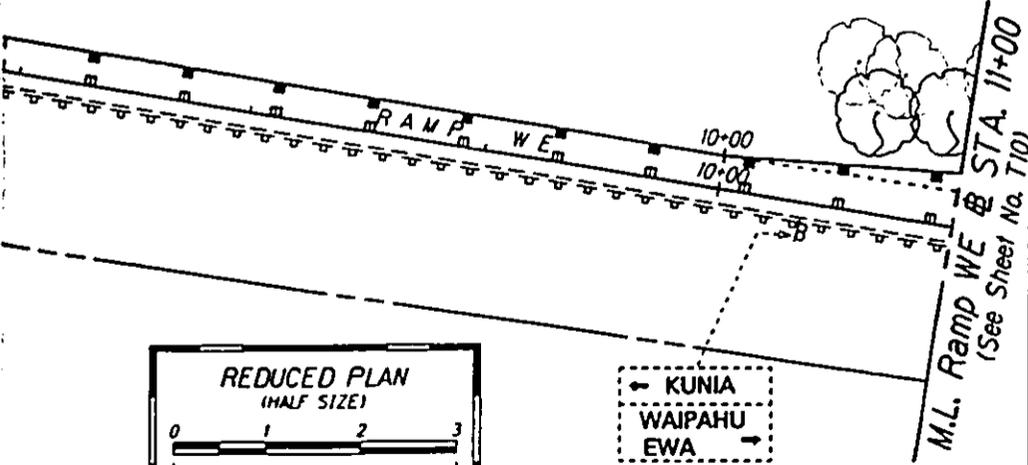
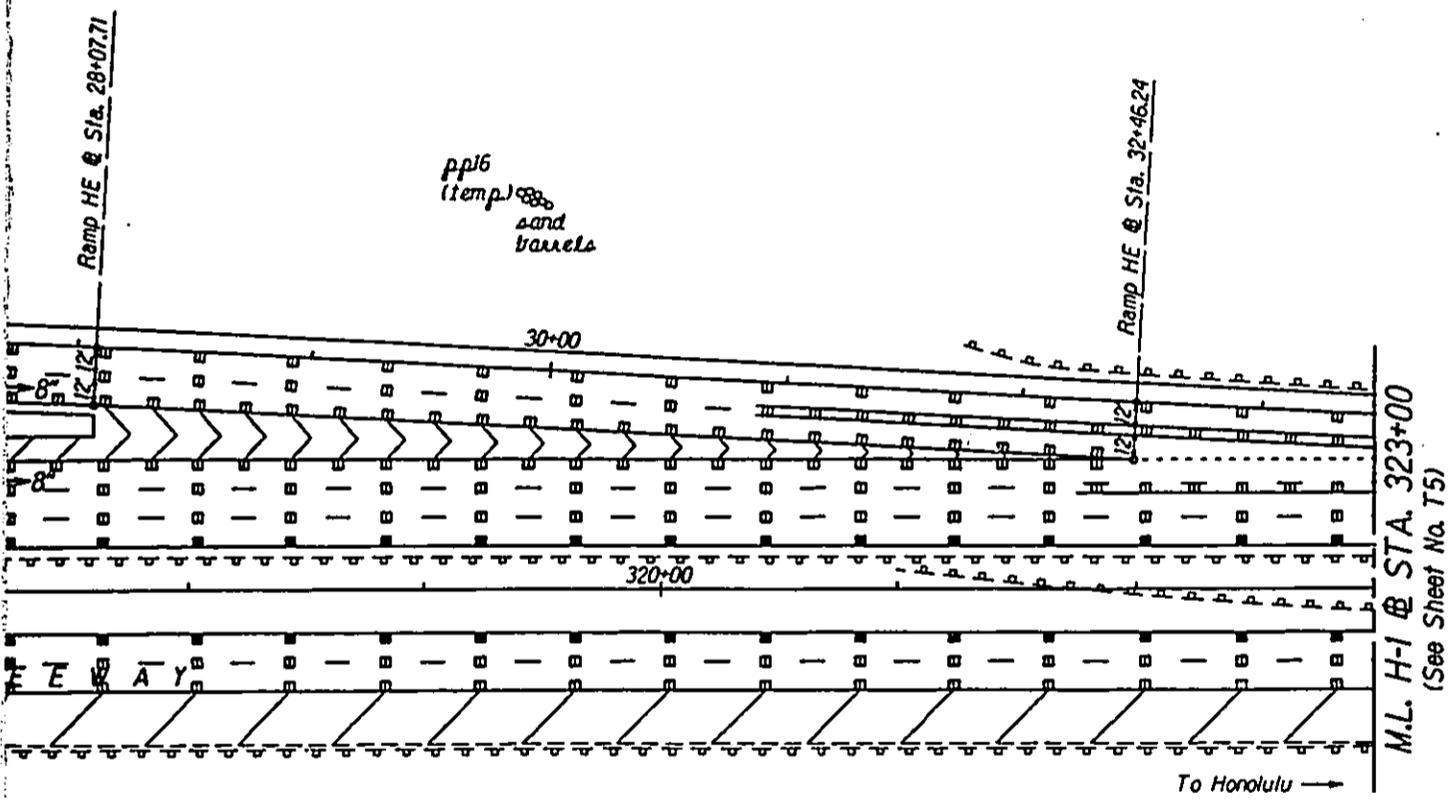


FIGURE 8C

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1

Kunia Interchange Improvements

F. A. I. Project No. IM-HI-1(219)

Scale: 1"=40' Date: Sept, 1996

SHEET No. T4 OF 12 SHEETS

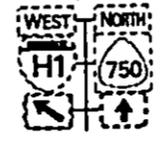
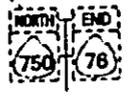
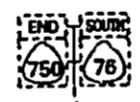
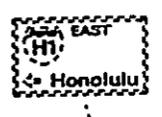
M.L. @ STA. 17+00
(See Sheet No. T9)

(See Sheet No. T9)
M.L. Kunia Rd. @ P.O.C. STA. 104+00

(See Sheet No. T4)
M.L. H-1 @ STA. 323+00

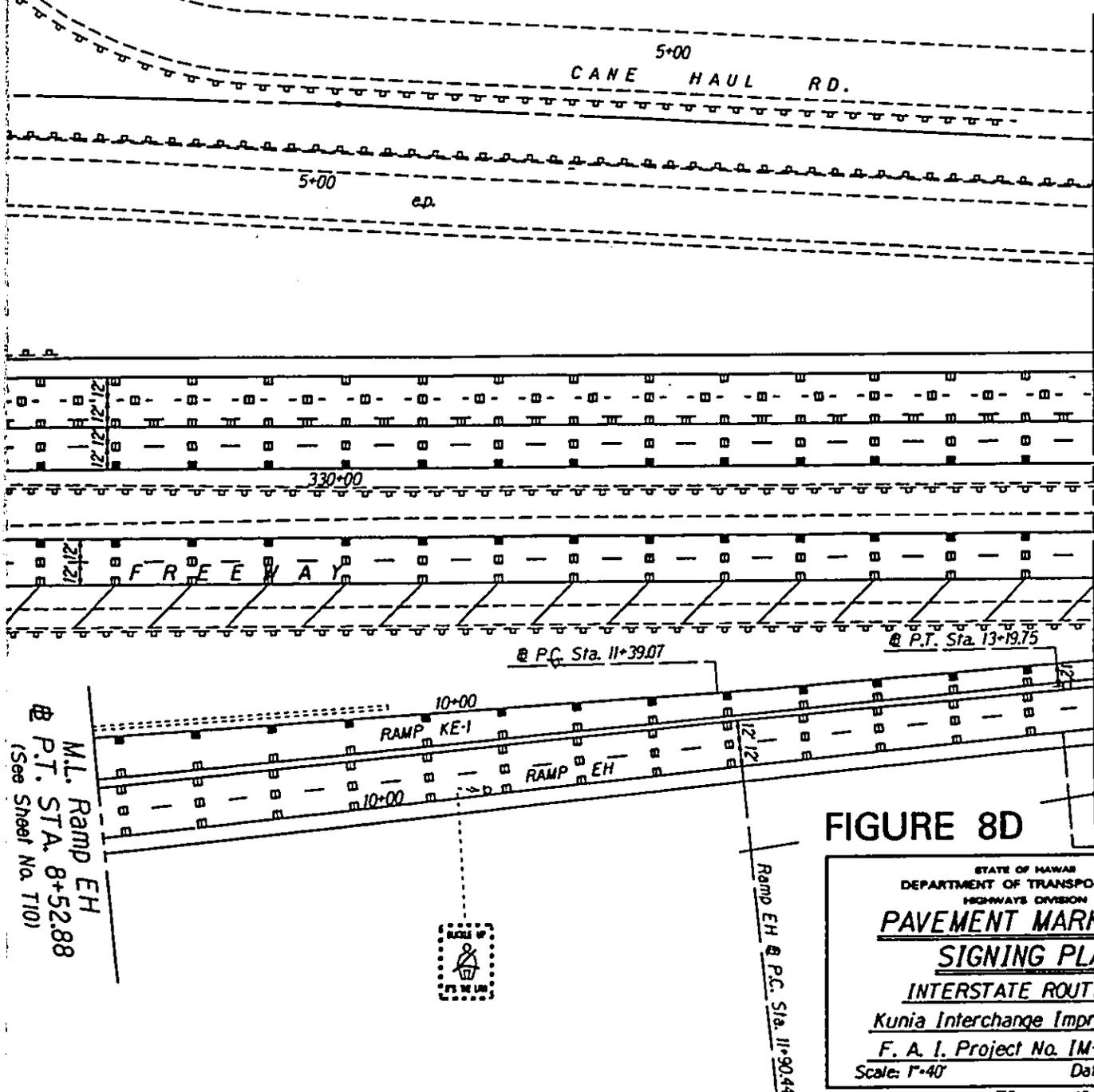
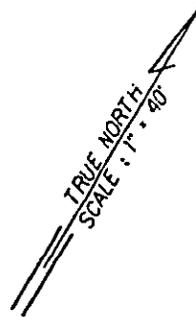
M.L. Kunia Rd. @ STA. 108+00
(See Sheet No. T10)

M.L. Ramp EH
@ P.T. STA. 8+52.88
(See Sheet No. T10)



DATE	7/21/58
BY	J.P.
CHECKED BY	
DESIGNED BY	
PLANNED BY	
IN CHARGE	
AS ESTABLISHED	
AS REVISED	
AS CORRECTED	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		



M.L. H-1 @ STA. 334+00
(See Sheet No. T6)

M.L. Ramp EH
@ P.T. STA. 8+52.88
(See Sheet No. T10)

Ramp EH @ P.C. Sta. 11+90.44

Ramp EH @ P.T. Sta. 13+61.25

FIGURE 8D

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

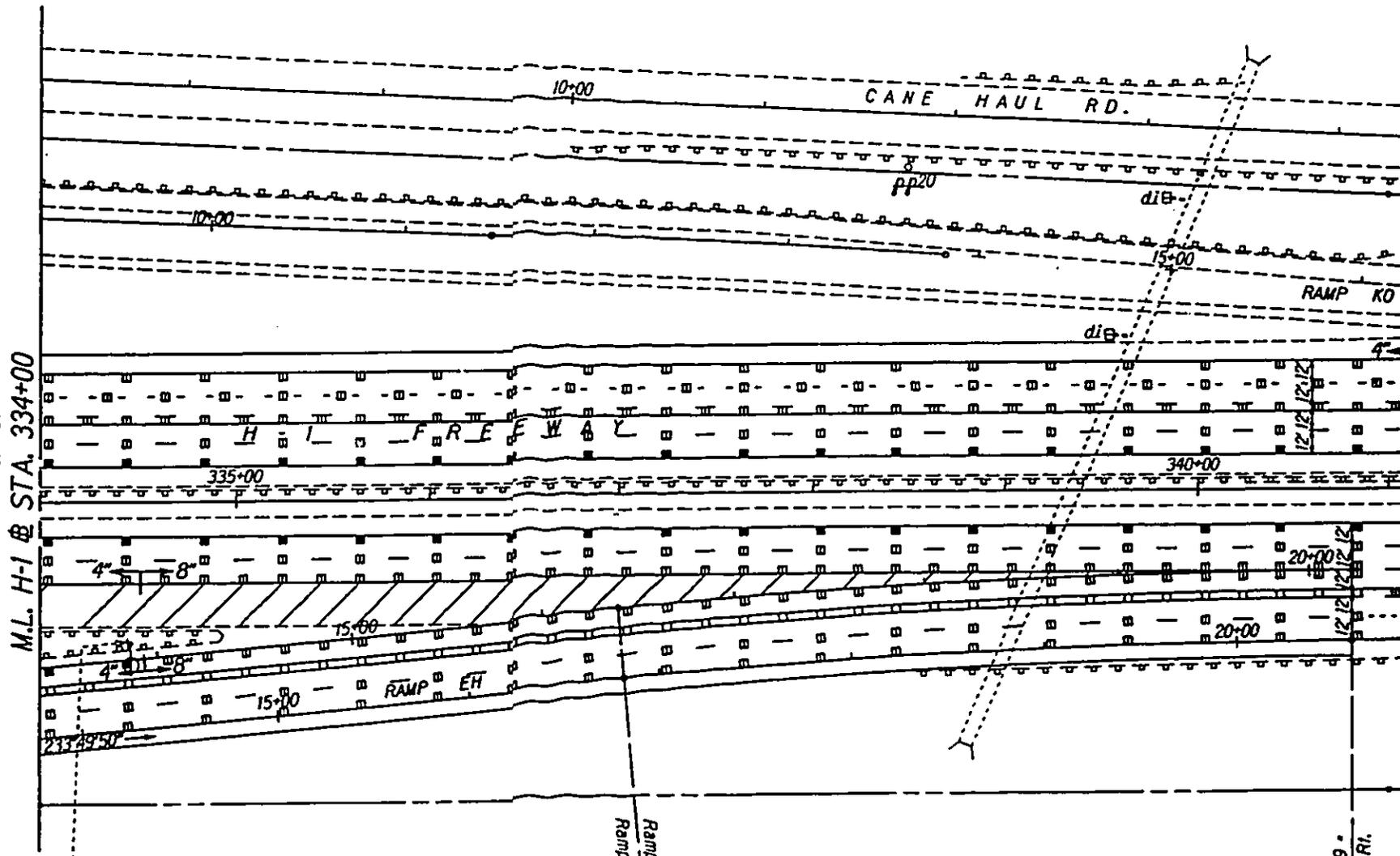
**PAVEMENT MARKING &
SIGNING PLAN**

INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. IM-HI-1(219)
Scale: 1"=40' Date: Sept., 1996

SHEET No. T5 OF 12 SHEETS

DESIGNED BY	DATE
DRAWN BY	1/2/58
CHECKED BY	
APPROVED BY	
CONTRACT NO.	
SHEET NO.	
TOTAL SHEETS	

(See Sheet No. T5)
M.L. H-1 @ STA. 334+00

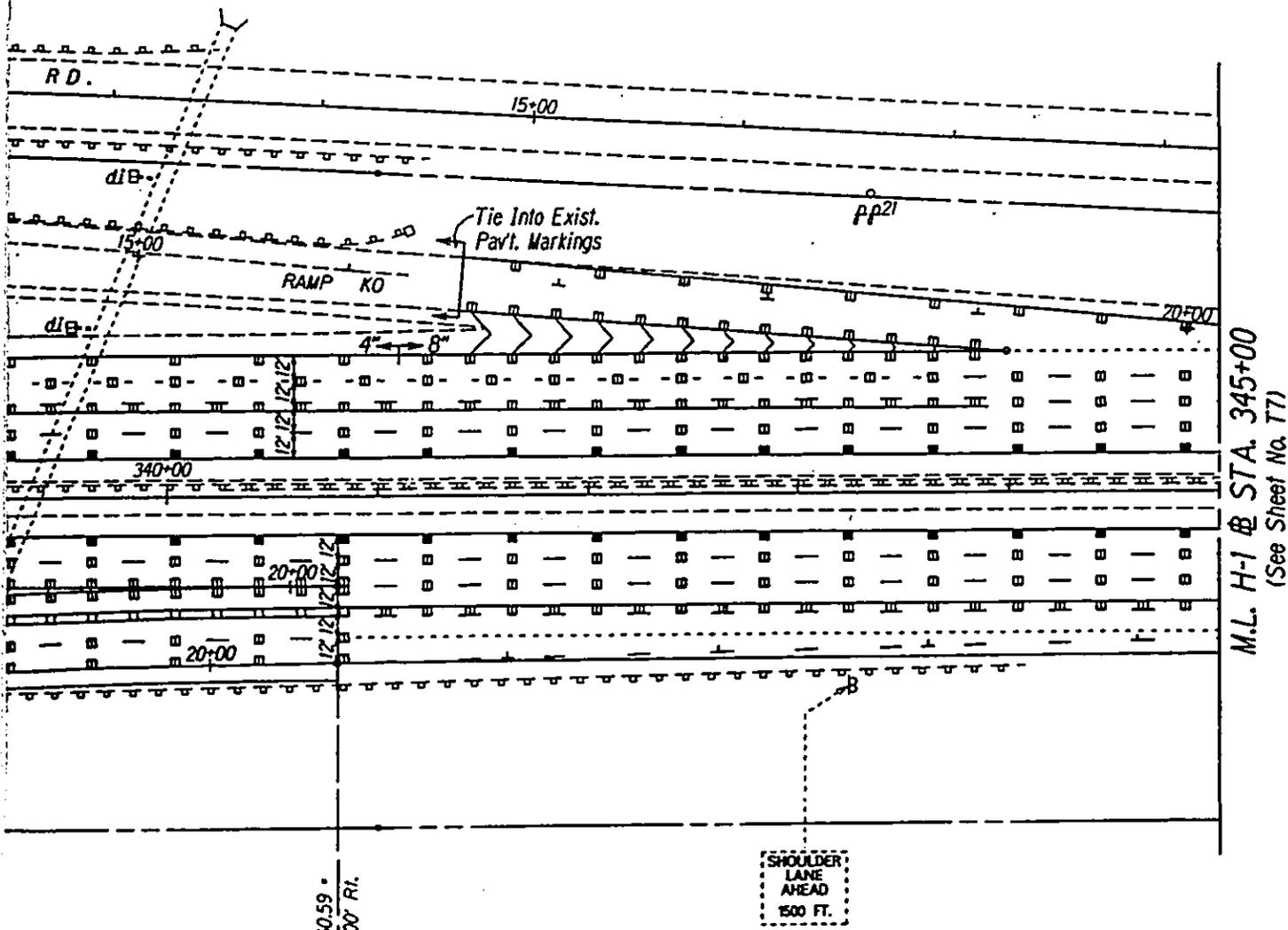


Ramp EH @ P.C. Sta. 16+81.89
Ramp KE-1 @ P.C. Sta. 16+40.39

End Ramp EH P.T. Sta. 20+60.59
H-1 @ Sta. 340+81.04 o/s 78.00' RI.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

TRUE NORTH
SCALE: 1" = 40'



M.L. H-1 @ STA. 345+00
(See Sheet No. T7)

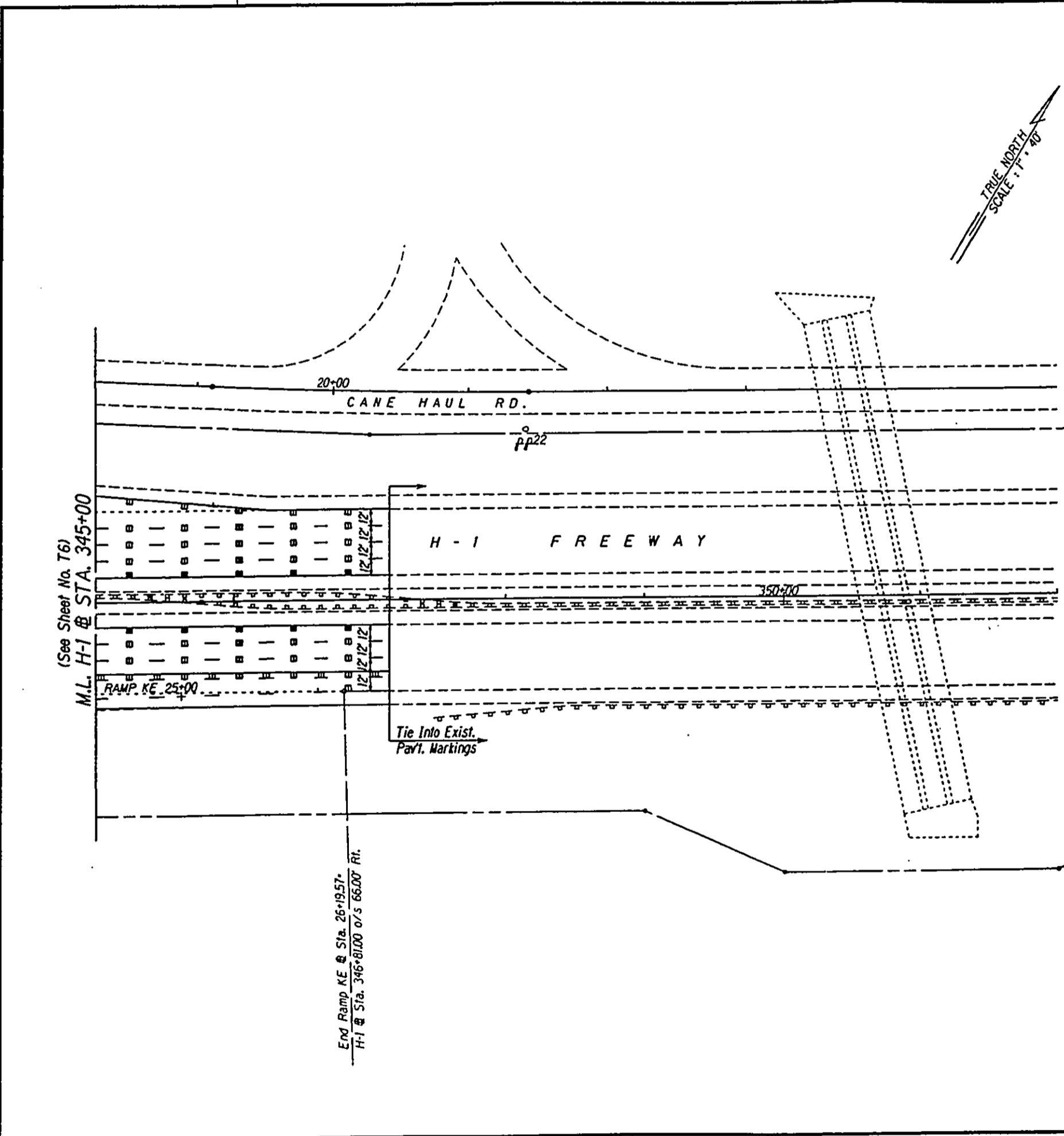
End Ramp EH P.T. Sta. 20+60.59
H-1 @ Sta. 340+81.04 o/s 7800' Rt.

FIGURE 8E



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. IM-HI-1(219)
Scale: 1"=40' Date: Sept., 1996

TRUE NORTH
SCALE: 1" = 40'



(See Sheet No. T6)
M.L. H-1 @ STA. 345+00

20+00

CANE HAUL RD.

PP22

H - 1 FREEWAY

RAMP KE. 25+00

Tie Into Exist.
Pavt. Markings

END Ramp KE @ Sta. 26+19.57+
H-1 @ Sta. 346+81.00 o/s 66.00' Rt.

DESIGNED BY	DATE
DRAWN BY R. J. L.	1/27/58
CHECKED BY	
IN CHARGE	
APPROVED BY	
REVISIONS	
NO.	DESCRIPTION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-II(219)	1997		

TRUE NORTH
SCALE: 1" = 40'

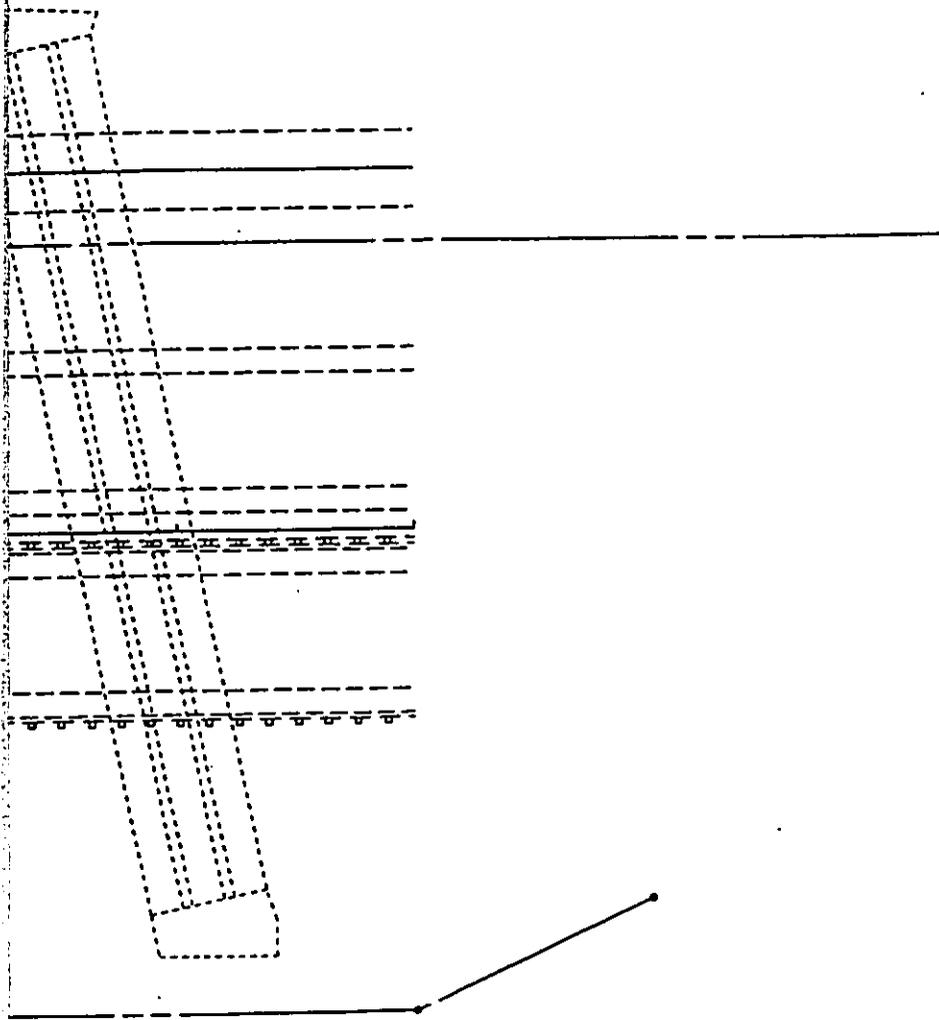


FIGURE 8F



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING &
SIGNING PLAN**

INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. IM-HI-II(219)
Scale: 1"=40' Date: Sept., 1996

SHEET No. 17 OF 12 SHEETS

DESIGNER	DATE
PROJECT NUMBER BY	7/20/28
DRAWN BY	
CHECKED BY	
APPROVED BY	
SCALE	
PROJECT NAME	
LOCATION	
CONTRACT NO.	
DATE	

M.L. Cane Haul Rd. @ P.T. STA. 2+68.79
 (See Sheet No. T3)

M.L. Ramp HE @ P.O.C. STA. 21+00
 (See Sheet No. T4)

CANE HAUL RD.
 5+00

RAMP EW
 21+00

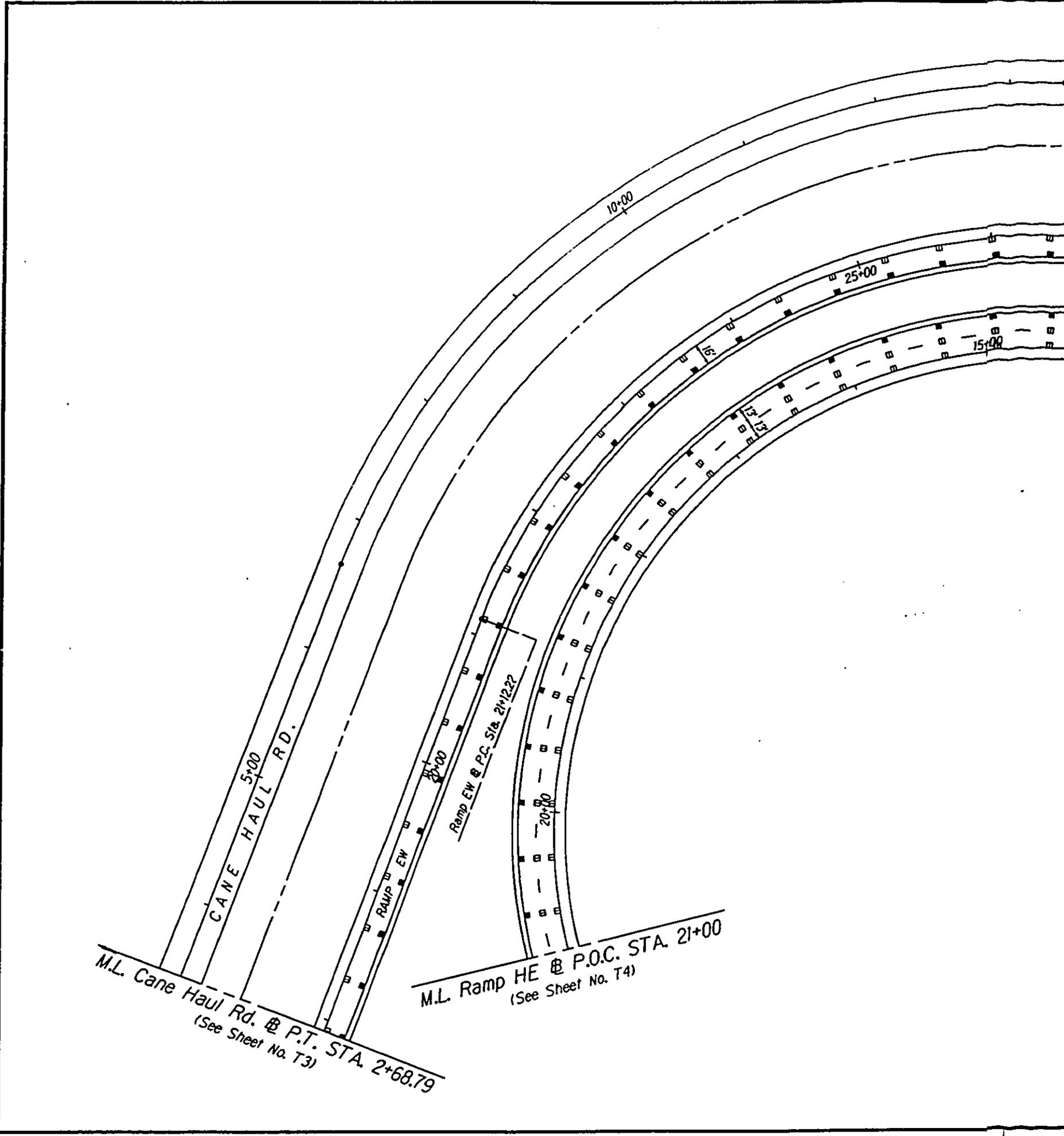
Ramp EW @ P.C. STA. 21+22.22

10+00

25+00

15+00

20+00



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

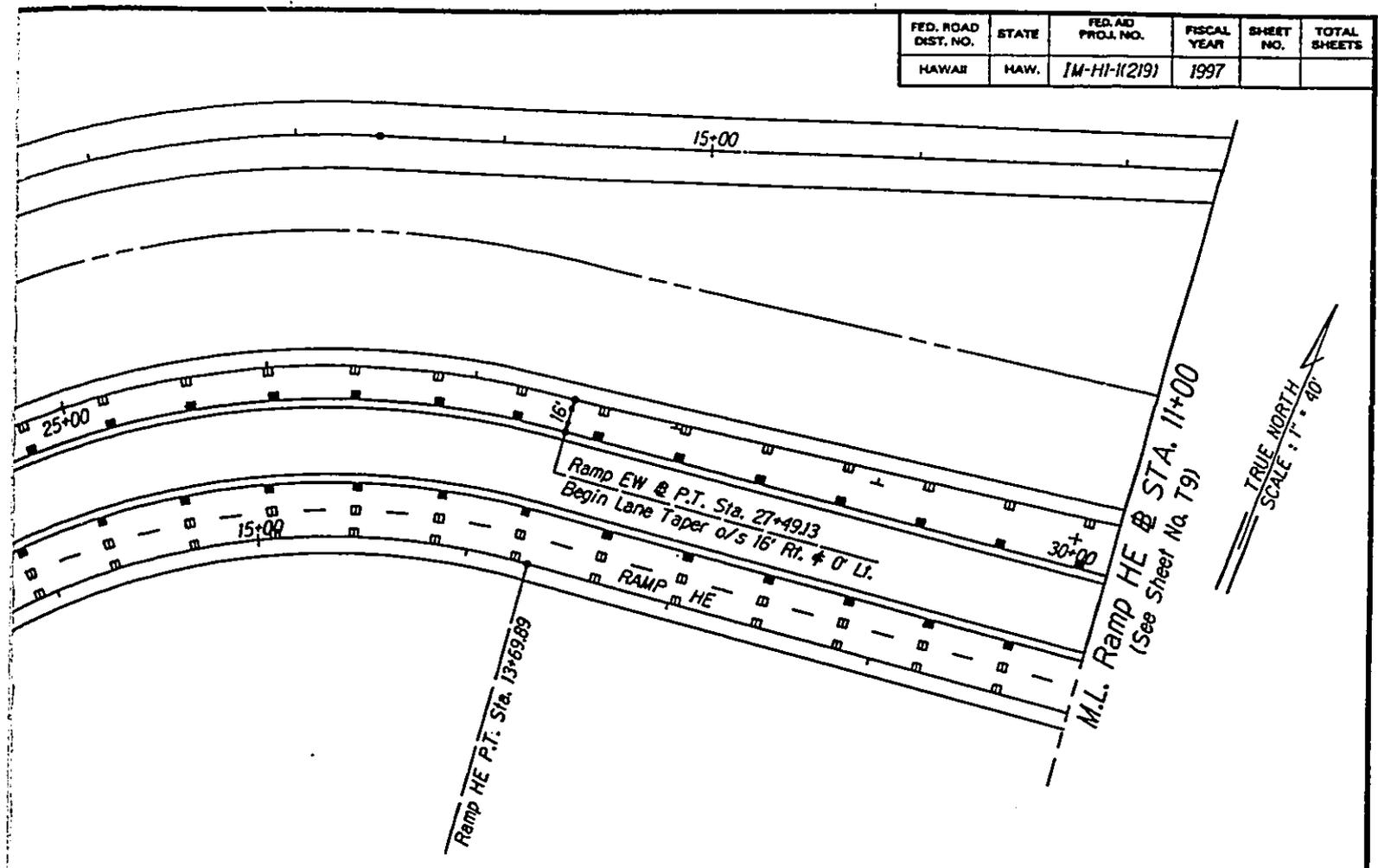


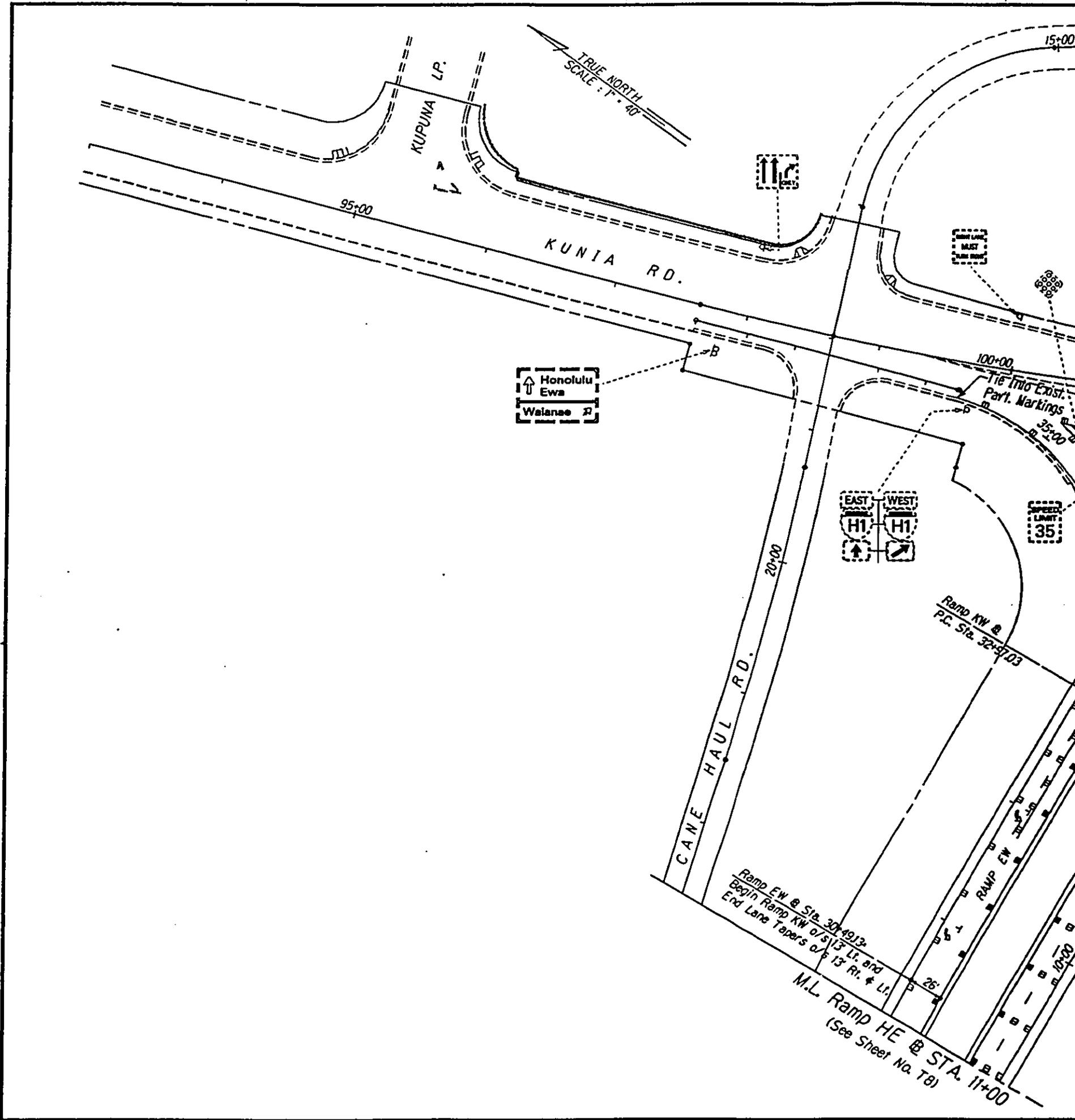
FIGURE 8G

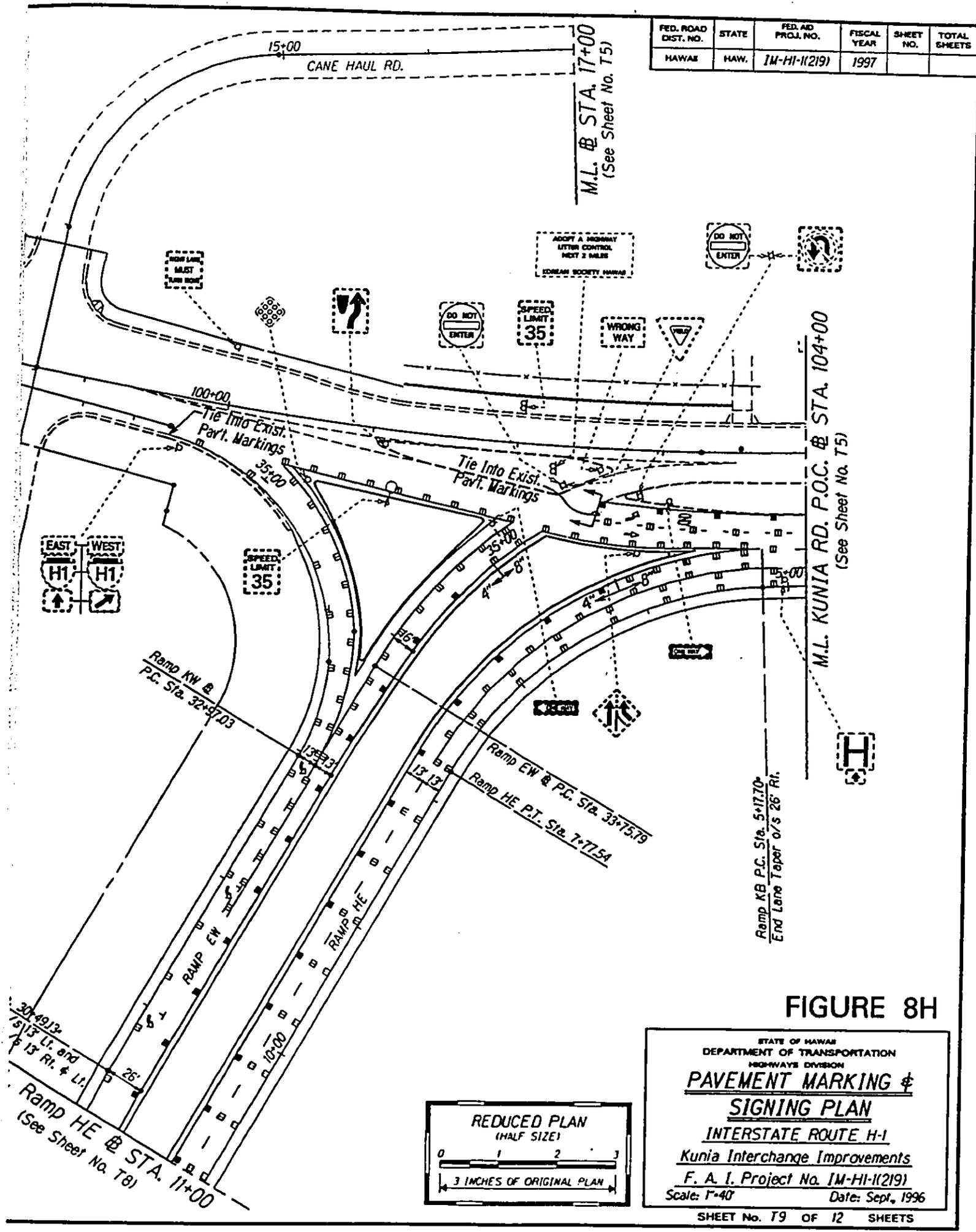


STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING &
SIGNING PLAN
INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. IM-HI-1(219)
 Scale: 1"=40' Date: Sept., 1996

SHEET No. T8 OF 12 SHEETS

DESIGNED BY	DATE
PLANNED BY	2/22/66
ENGINEERED BY	
CHECKED BY	
APPROVED BY	
PROJECT NO.	
DATE	
BY	
FOR	





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

FIGURE 8H

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1
 Kunia Interchange Improvements
 F. A. I. Project No. IM-HI-1(219)
 Scale: 1"=40' Date: Sept., 1996

SHEET No. 19 OF 12 SHEETS



30+49.13
 15' Li. and
 15' Ri. & Li.

Ramp HE @ STA. 11+00
 (See Sheet No. T8)

Ramp KW @
 P.C. Sta. 32+57.03

Ramp EW @ P.C. Sta. 33+75.79
 Ramp HE P.T. Sta. 7+77.5A

Ramp KB P.C. Sta. 5+17.70
 End Lane Taper o/s 26' Rt.

M.L. @ STA. 17+00
 (See Sheet No. T5)

M.L. KUNIA RD. P.O.C. @ STA. 104+00
 (See Sheet No. T5)

MUST
 NOT
 ENTER

ADOPT A HIGHWAY
 LETTER CONTROL
 NEXT 2 MILES
 KOREAN SOCIETY HAWAII

DO NOT
 ENTER

DO NOT
 ENTER

DO NOT
 ENTER

SPEED
 LIMIT
 35

WRONG
 WAY

SPEED
 LIMIT
 35

EAST
 WEST
 H-1
 H-1

Tie Into Exist.
 Pavt. Markings

Tie Into Exist.
 Pavt. Markings

15+00
 CANE HAUL RD.

100+00

35+00

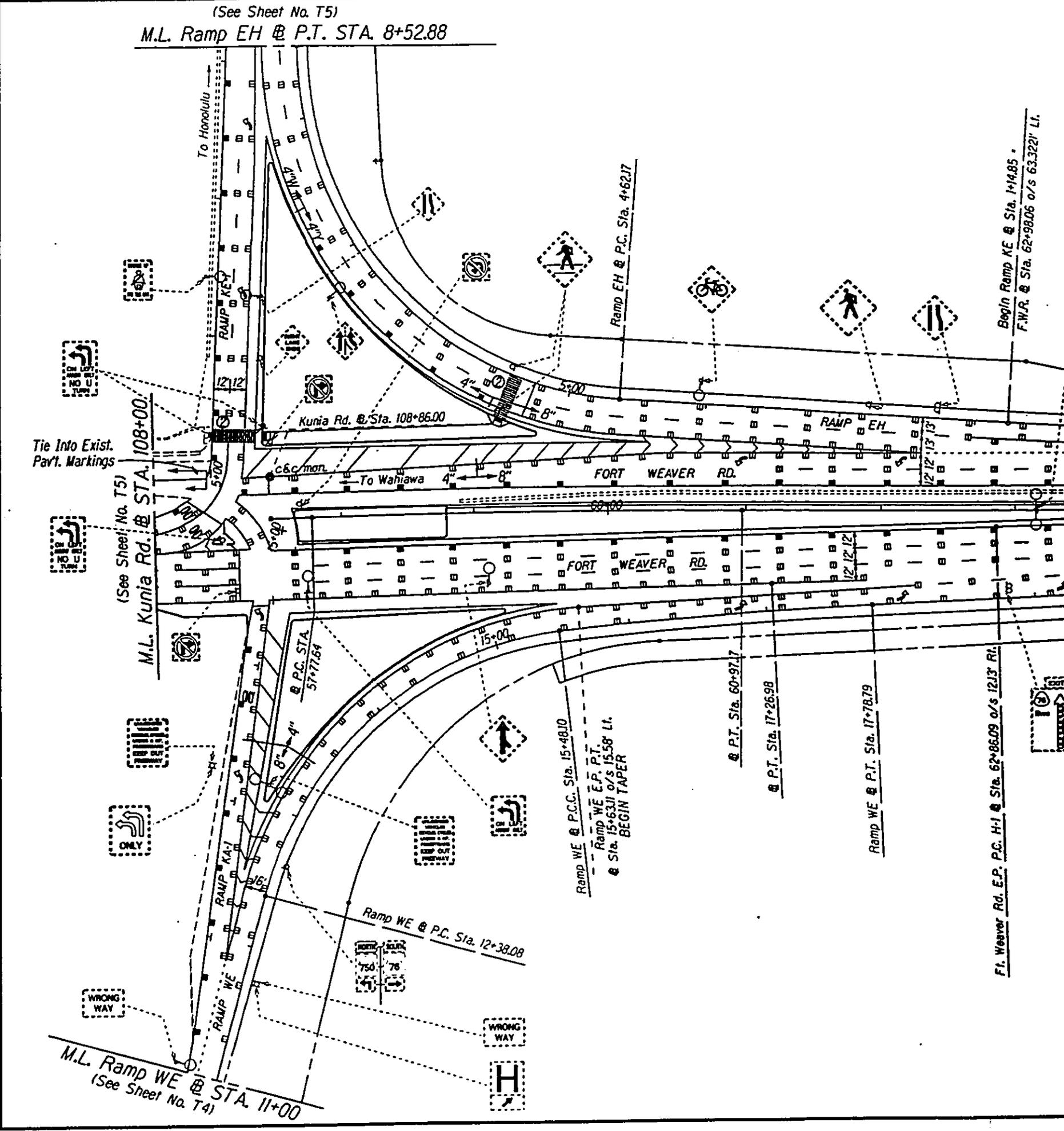
25+00

13+13

10+00

26'

(See Sheet No. T5)
M.L. Ramp EH @ P.T. STA. 8+52.88



ORIGINAL PLANNED BY	DATE
DESIGNED BY	1/22/58
CHECKED BY	
APPROVED BY	
PROJECT NO.	
DATE	
BY	
FOR	

Begin Ramp KE @ Sta. 1+14.85
F.W.R. @ Sta. 62+98.06 o/s 63.322' Lt.
Ft. Weaver Rd. E.P. P.C. H-1 @ Sta. 62+86.09 o/s 1213' Rt.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(219)	1997		

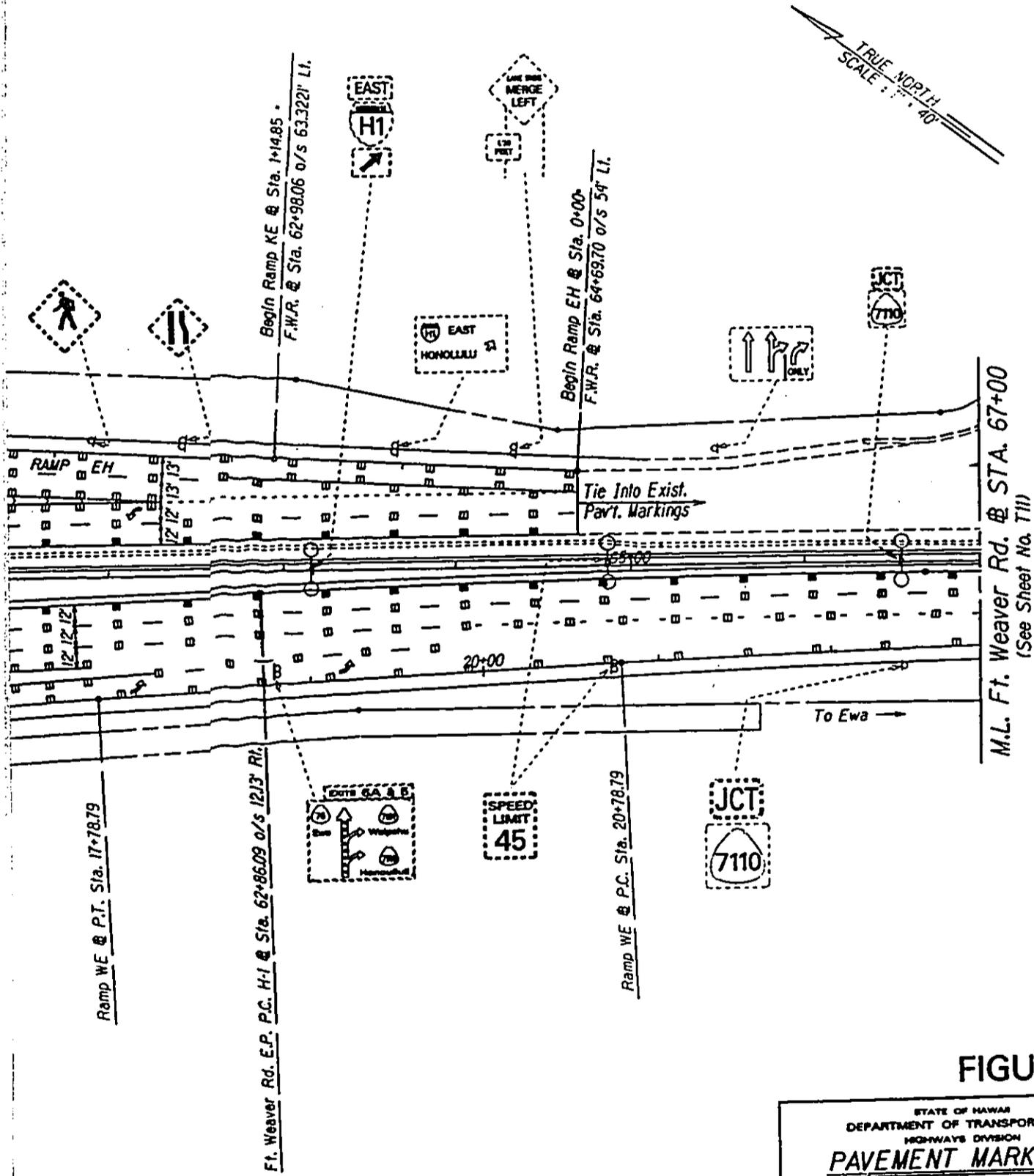
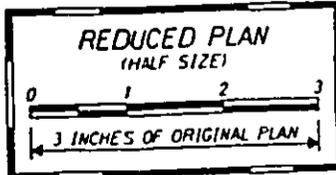
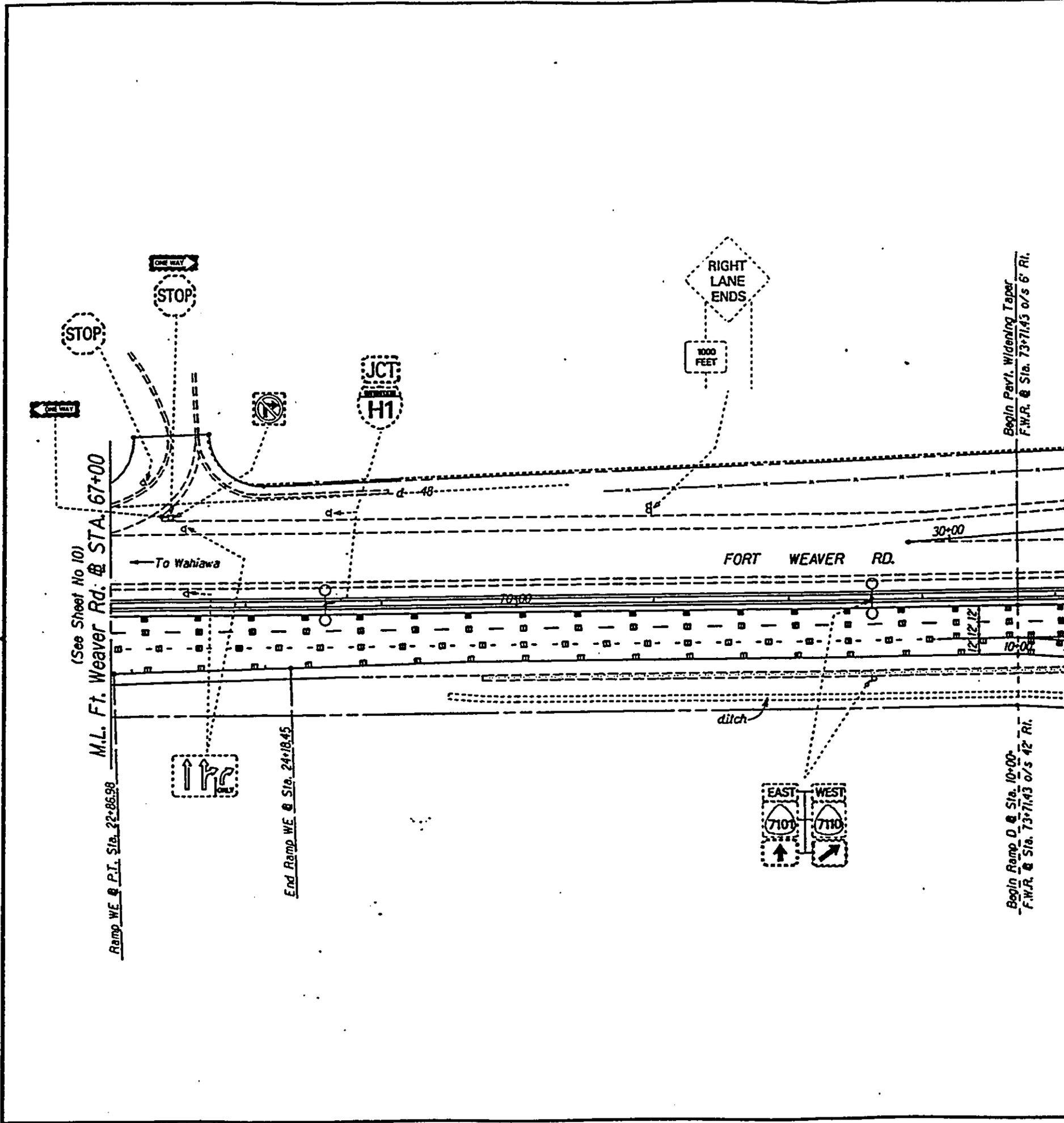


FIGURE 8I



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
 INTERSTATE ROUTE H-1
 Kunia Interchange Improvements
 F. A. I. Project No. IM-HI-1(219)
 Scale: 1"=40' Date: Sept., 1996
 SHEET No. 710 OF 12 SHEETS

DATE	7/27/56
SURVEY PLANNED BY	
DESIGNED BY	
CONSTRUCTED BY	
APPROVED BY	
DATE	
DESIGNED BY	
CONSTRUCTED BY	
APPROVED BY	

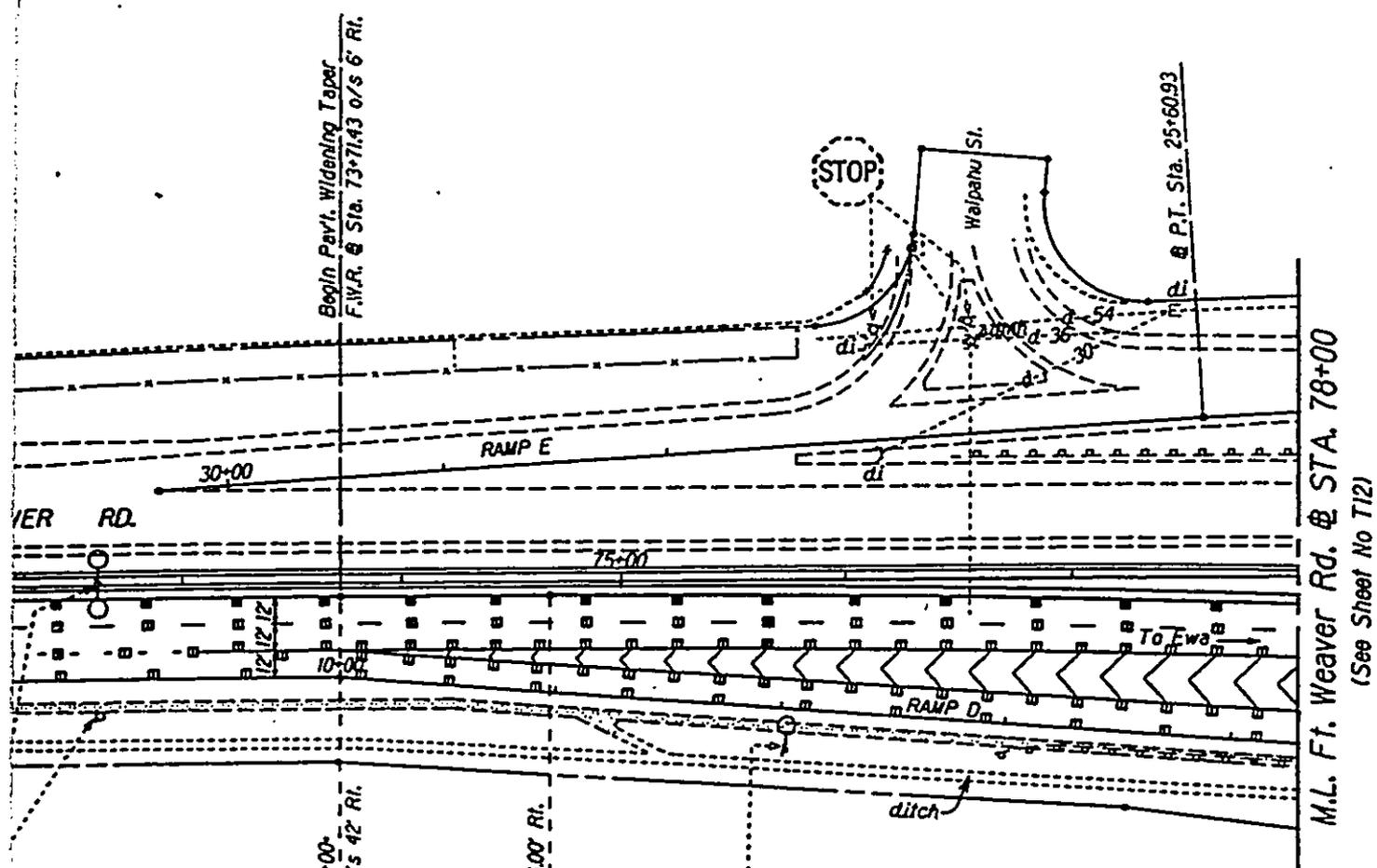
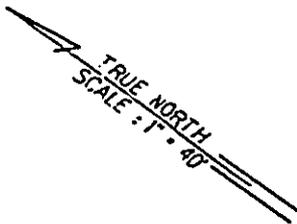


(See Sheet No 10)
M.L. Ft. Weaver Rd. @ STA. 67+00

FORT WEAVER RD.

EAST 7101
WEST 7110

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(219)	1997		



Begin Pavt. Widening Taper
F.W.R. @ Sta. 73+71.43 o/s 6' Rt.

Begin Ramp D @ Sta. 10+00
F.W.R. @ Sta. 73+71.43 o/s 42' Rt.

Ft. Weaver Rd. E.P. P.C. H-1 @ Sta. 74+68.94 o/s 60' Rt.

M.L. Ft. Weaver Rd. @ STA. 78+00
(See Sheet No T12)

EXIT
25
M.P.M.

FIGURE 8J



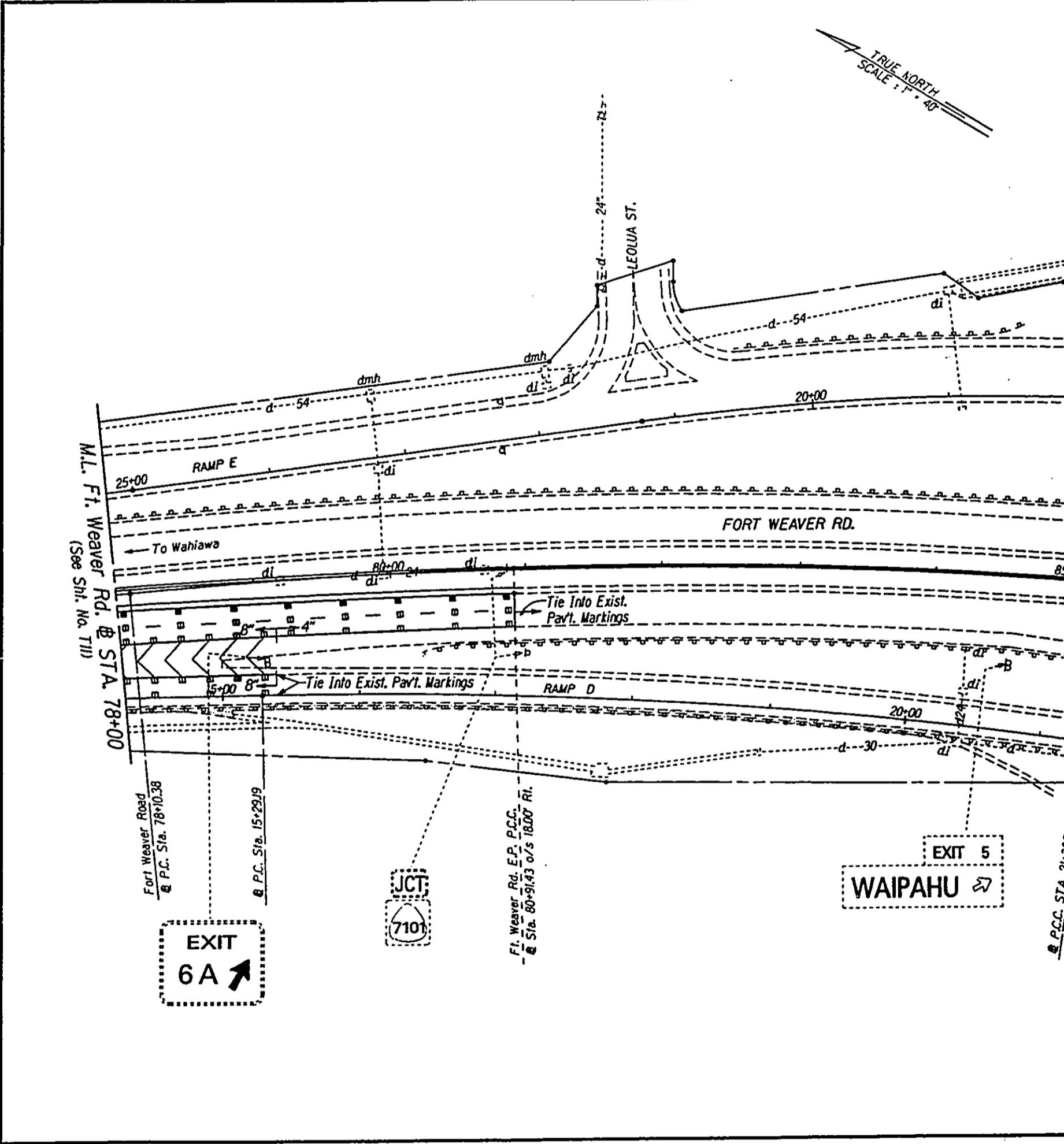
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING &
SIGNING PLAN**

INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. 1M-HI-1(219)
Scale: 1"=40' Date: Sept., 1996

SHEET No. T11 OF 12 SHEETS

TRUE NORTH
SCALE: 1" = 40'



M.L. Ft. Weaver Rd. @ STA. 78+00
(See Sh. No. 711)

Fort Weaver Road
@ P.C. Sta. 78+10.38

@ P.C. Sta. 15+29.19

Ft. Weaver Rd. E.P. P.C.C.
@ Sta. 80+91.43 o/s 18.00' R/L

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
PROJECT NO.	
DATE	
BY	
DATE	

EXIT 6A ↗

JCT
7101

EXIT 5
WAIPAHU ↗

P.C.C. STA. 21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(219)	1997		

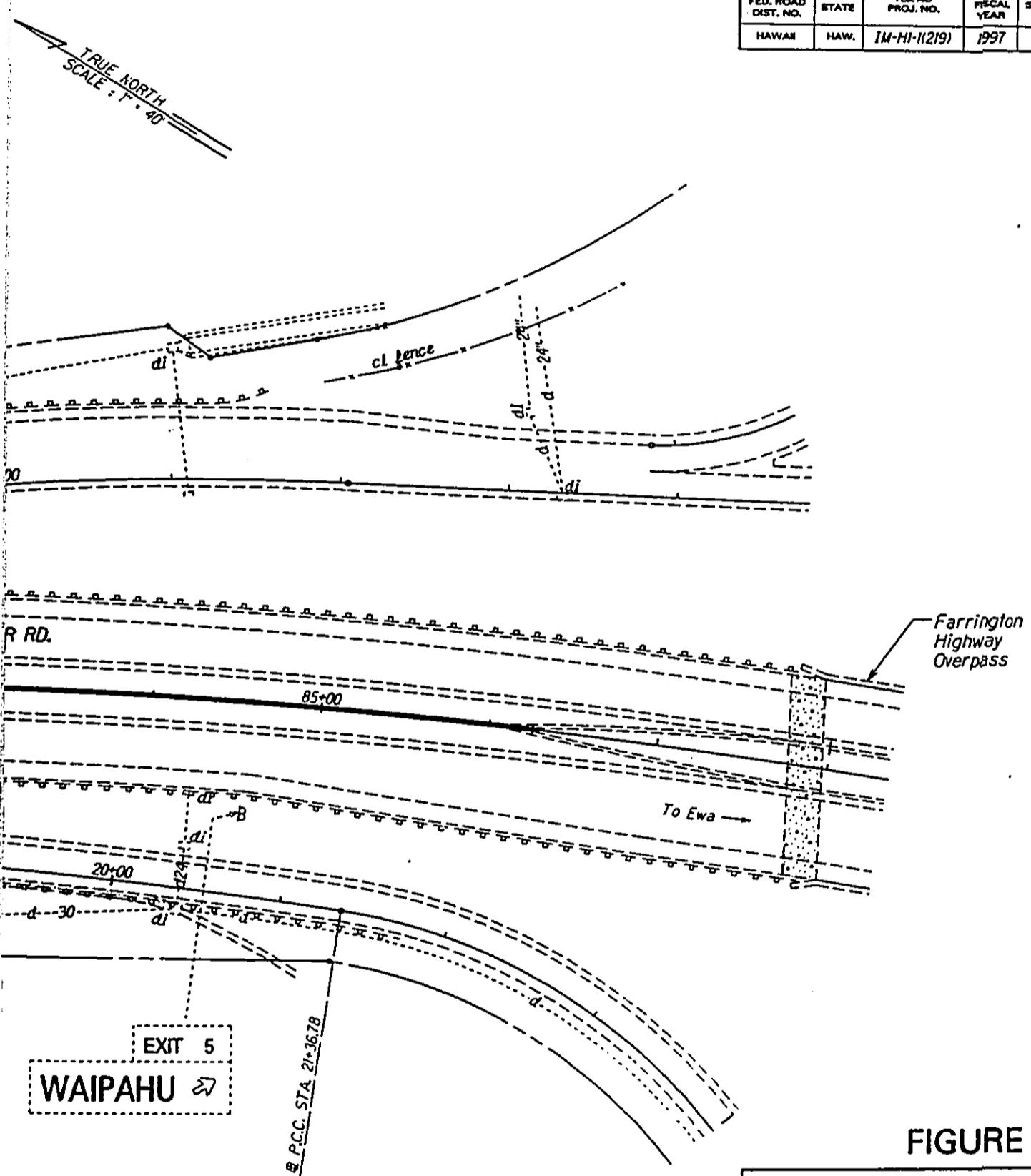
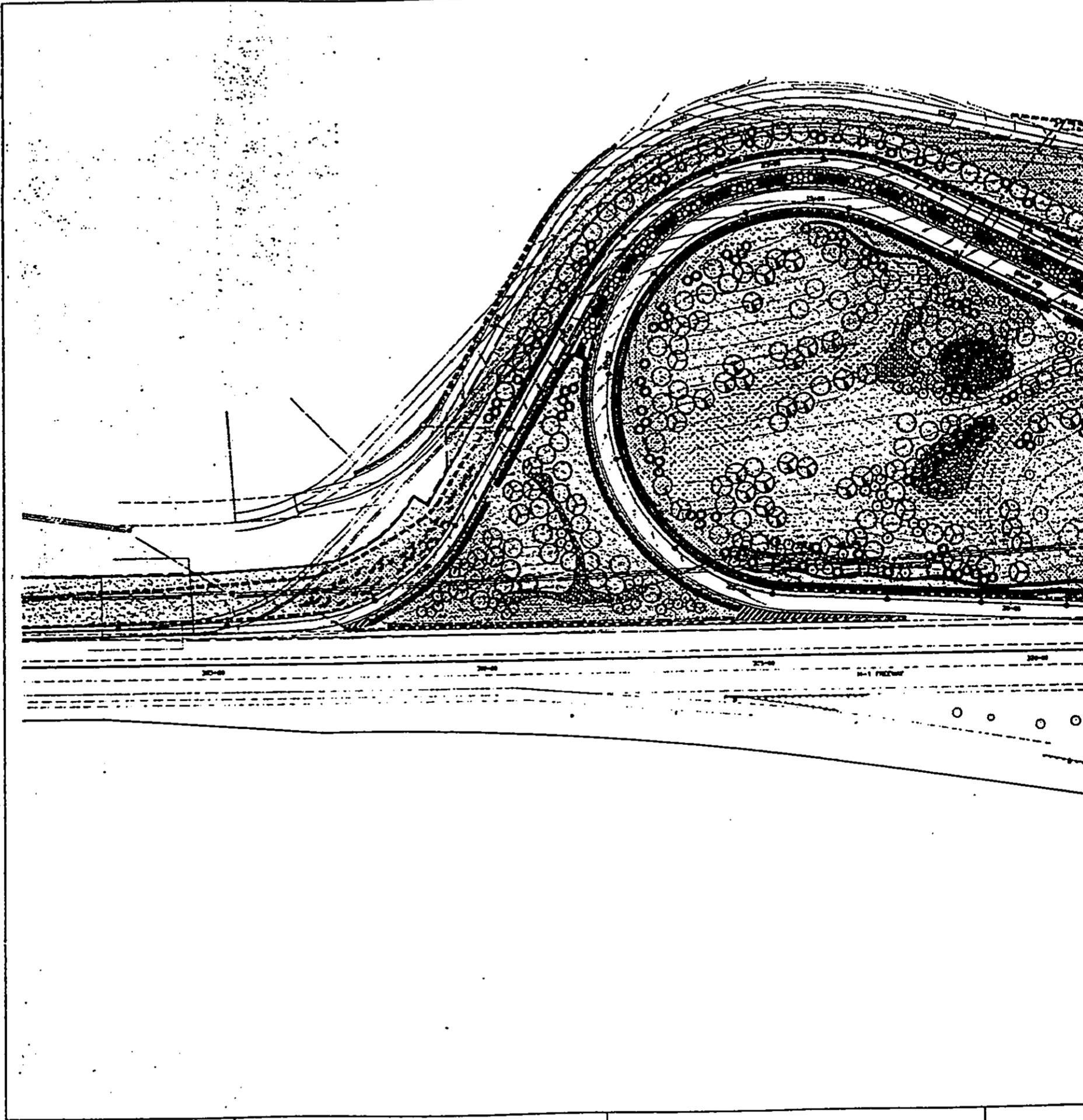


FIGURE 8K



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**PAVEMENT MARKING &
SIGNING PLAN**
INTERSTATE ROUTE H-1
Kunia Interchange Improvements
F. A. I. Project No. 1M-HI-1(219)
Scale: 1"=40' Date: Sept., 1996



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
PROJECT NO.	
DATE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(219)	1996		

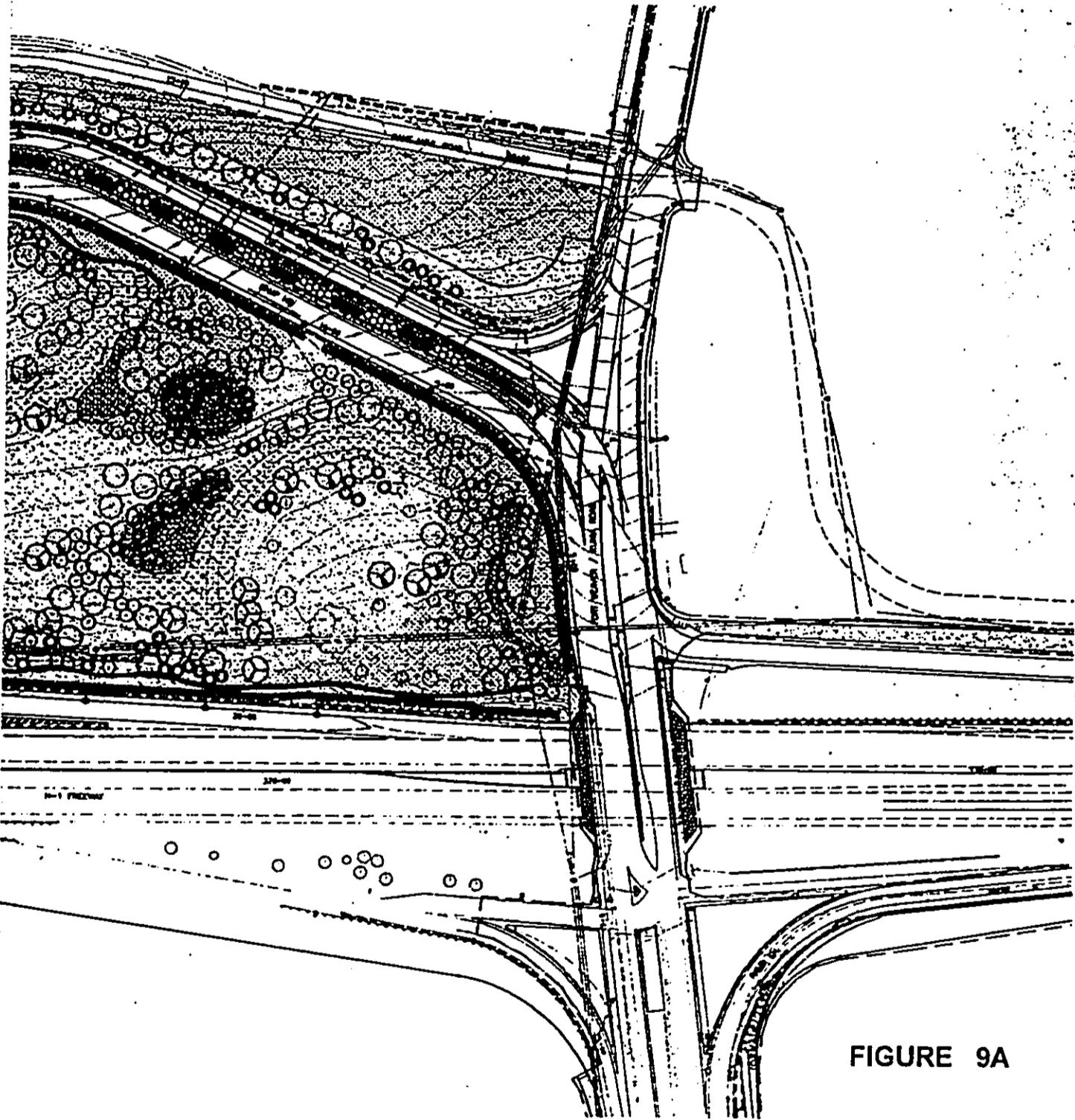


FIGURE 9A

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL SITE PLAN

INTERSTATE ROUTE H-1

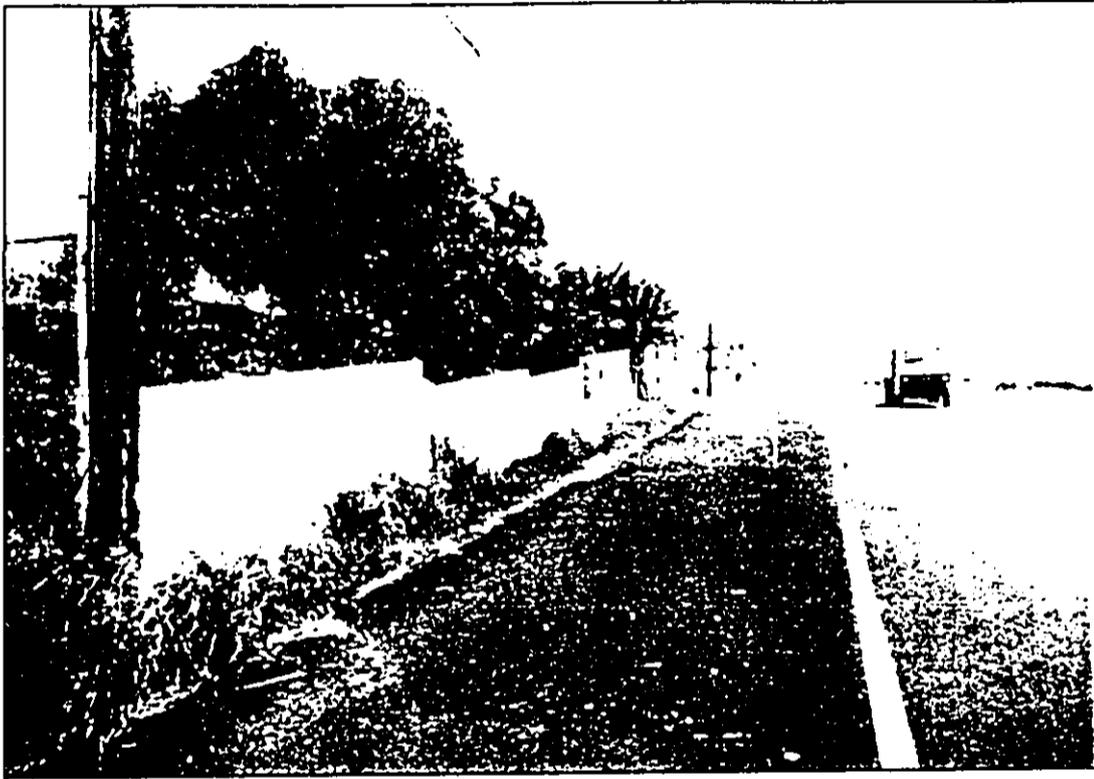
Kunia Interchange Improvements

F. A. I. Project No. IM-H1-1(219)

Scale: 1" = 100' Date:

SHEET No. 01 OF 40 SHEETS

TRUE NORTH
SCALE: 1" = 100'



Existing Conditions at Fort Weaver Road Looking Makai.



Existing Con



Proposed Noise Wall at Fort Weaver Road Looking Makai.



Proposed Noi



Existing Conditions at Honowai Street Looking Mauka.



Proposed Noise Wall at Honowai Street Looking Mauka.

FIGURE 10A



Existing Conditions at Ramp EH.



Proposed Noise Wall at Ramp EH.



s at Ramp EH.

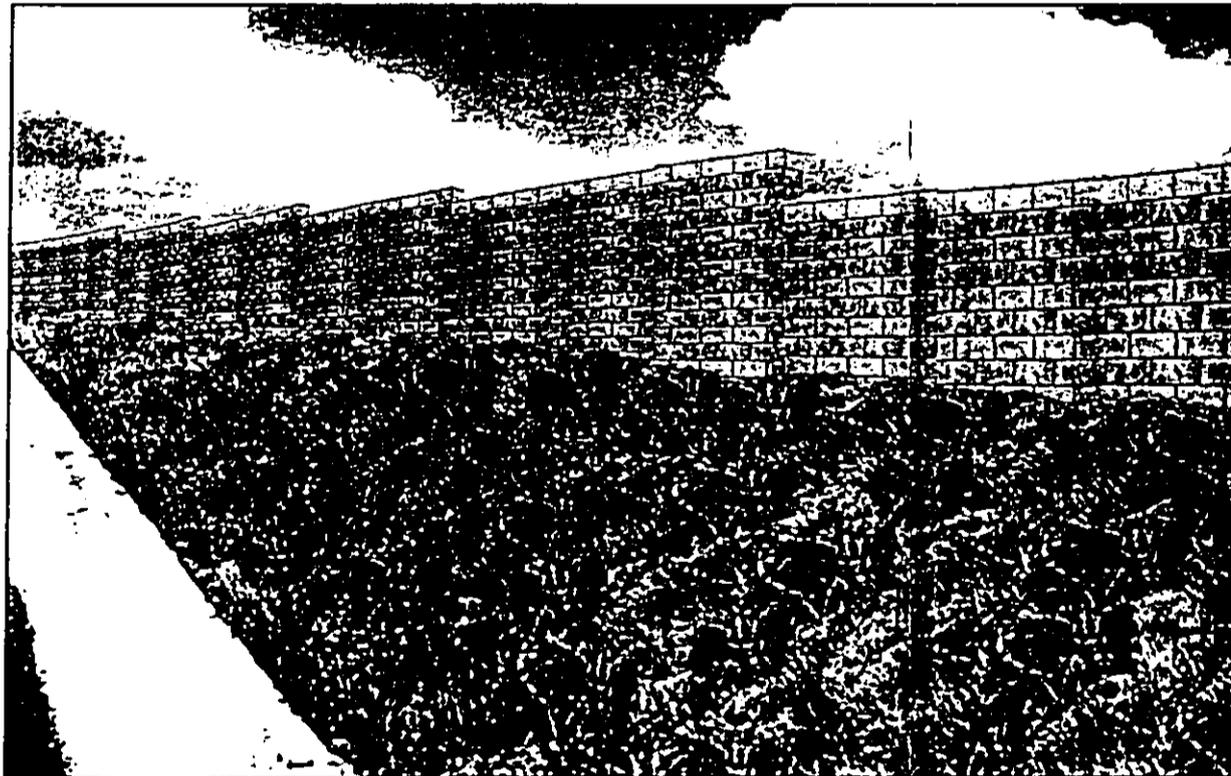


ll at Ramp EH.

FIGURE 10B



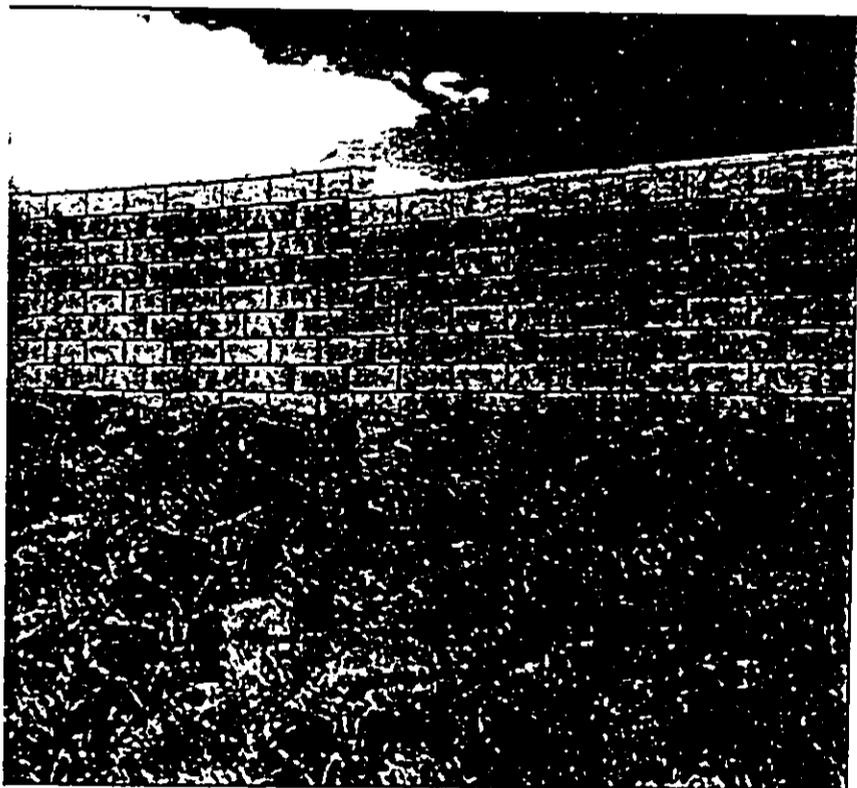
Existing Conditions at Ramp EH Looking Diamond



Proposed Noise Wall at Ramp EH Looking Diamond



H Looking Diamond Head.



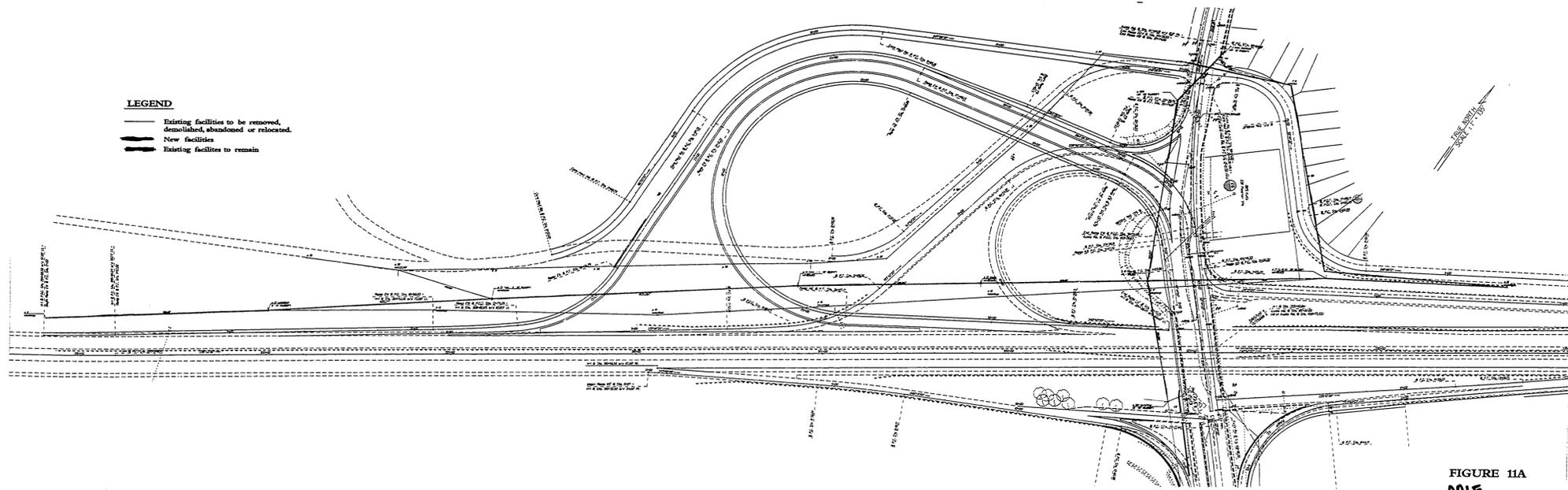
H Looking Diamond Head.

FIGURE 10C

**OVERSIZED
DRAWING/MAP**

**PLEASE SEE
35MM ROLL**

0015



LEGEND

- Existing facilities to be removed, demolished, abandoned or relocated.
- - - New facilities
- Existing facilities to remain

FIGURE 11A
0015