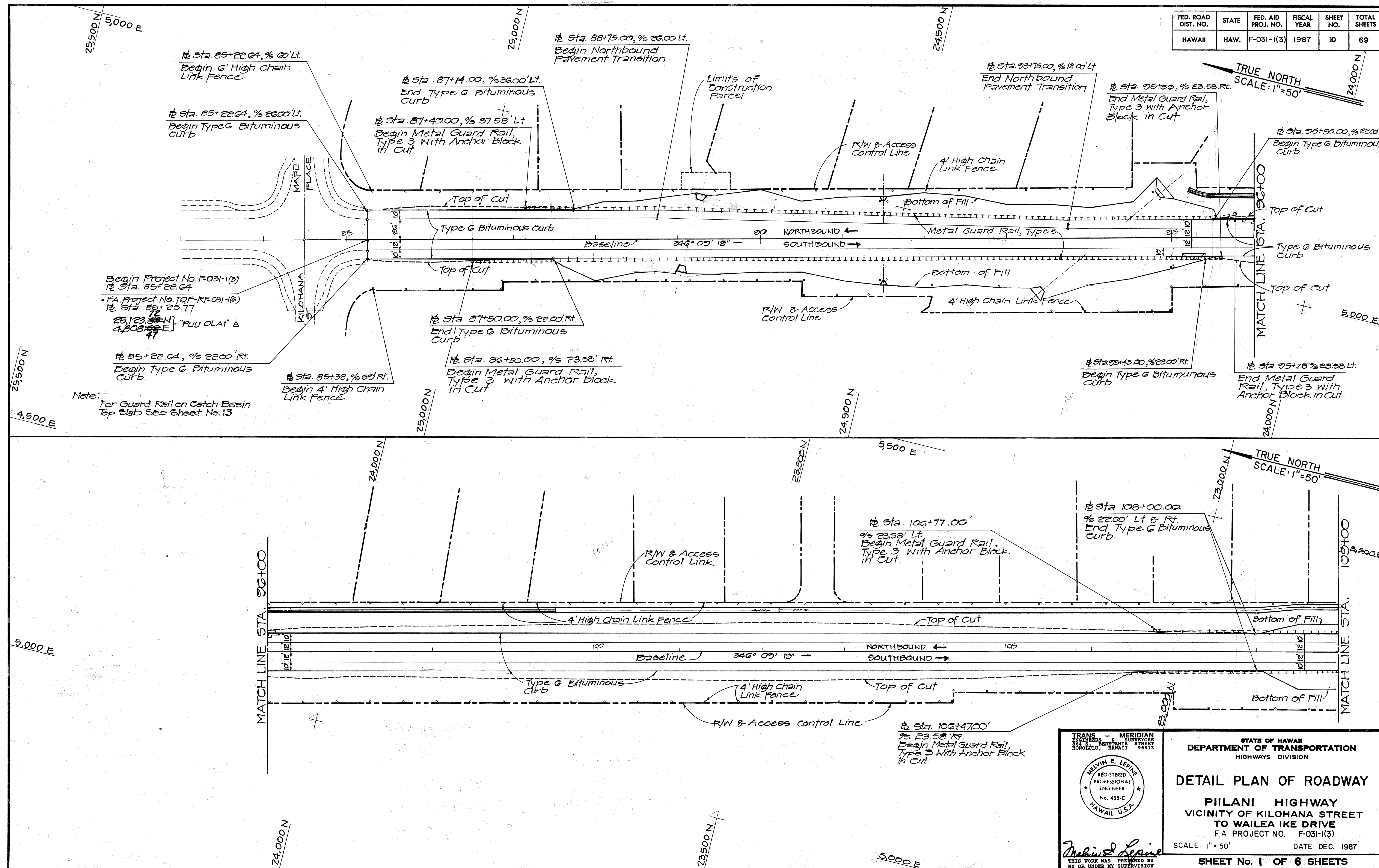


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-031-1(3)	1987	10	69

TRUE NORTH
SCALE: 1"=50'



Note: For Guard Rail on Catch Basin Top Slab See Sheet No. 13

ORIGINAL PLAN	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
REVISIONS BY	
QUANTITIES BY	
CHECKED BY	

TRANS - MERIDIAN
ENGINEERS SURVEYORS
864 BERKELEY STREET
HONOLULU, HAWAII 96813

REGISTERED
PROFESSIONAL
ENGINEER
No. 455-C
HAWAII, U.S.A.

Meridian

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

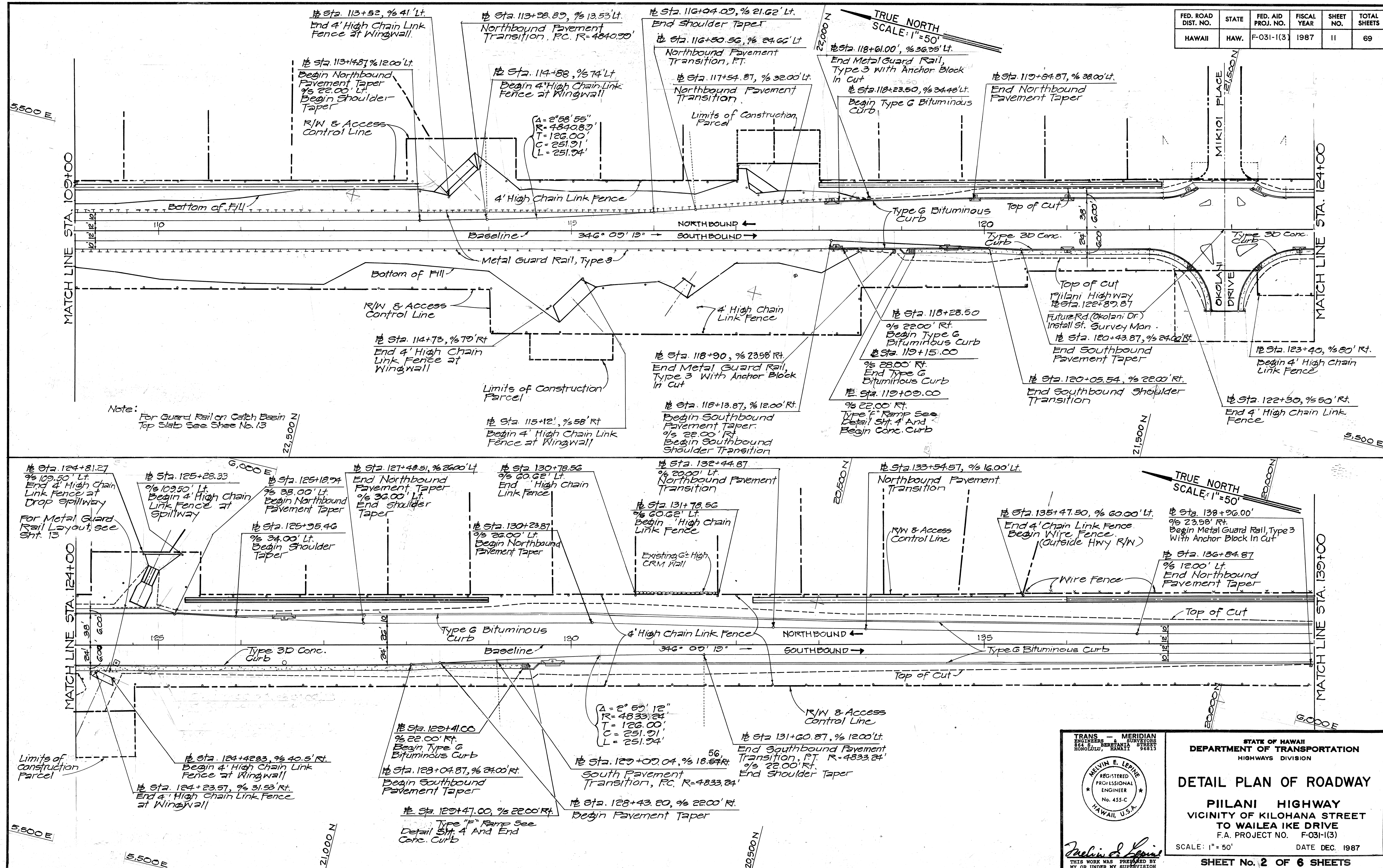
DETAIL PLAN OF ROADWAY

PIILANI HIGHWAY
VICINITY OF KILOHANA STREET
TO WAILEA IKE DRIVE
F.A. PROJECT NO. F-031-1(3)

SCALE: 1" = 50' DATE DEC. 1987

SHEET No. 1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-031-1(3)	1987	11	69



DATE	.....
SURVEY PLANNED BY	.....
DRAWN BY	.....
TRACED BY	.....
QUANTITIES BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....

TRANS - MERIDIAN
ENGINEERS & SURVEYORS
814 S. BERTLAND STREET
HONOLULU, HAWAII 96813

MELVIN E. LEVINE
REGISTERED PROFESSIONAL ENGINEER
No. 435-C
HAWAII, U.S.A.

Melvin E. Levine
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY

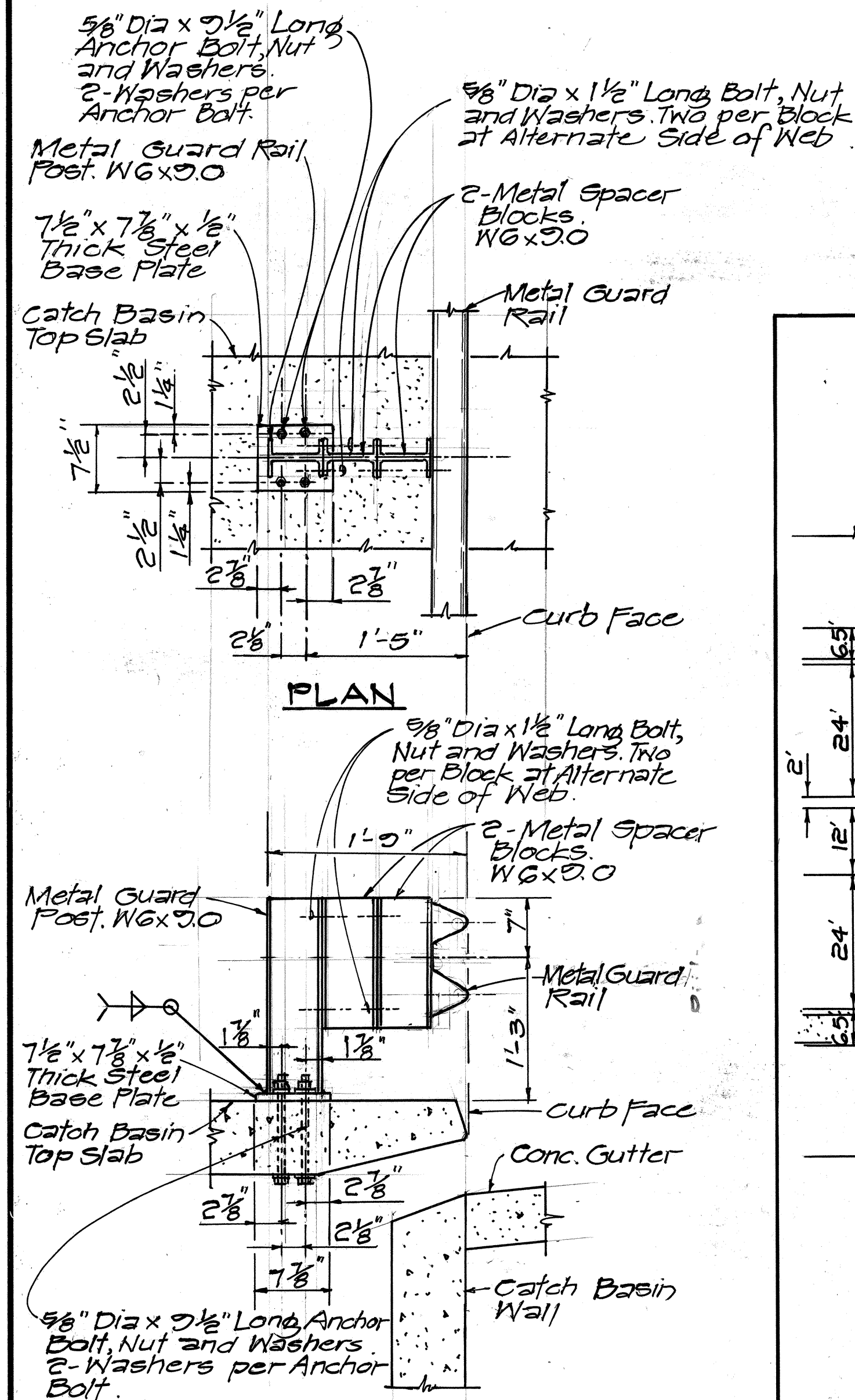
PILANI HIGHWAY
VICINITY OF KILOHANA STREET
TO WAILEA IKE DRIVE
F.A. PROJECT NO. F-031-1(3)

SCALE: 1"=50' DATE DEC. 1987

SHEET No. 2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-03-1(3)	1987	13	69

CURVE DATA		
Δ	32° 08' 57"	90° 00' 00"
R	75.00'	75.00'
T	21.61'	75.00'
L	42.08'	117.81'

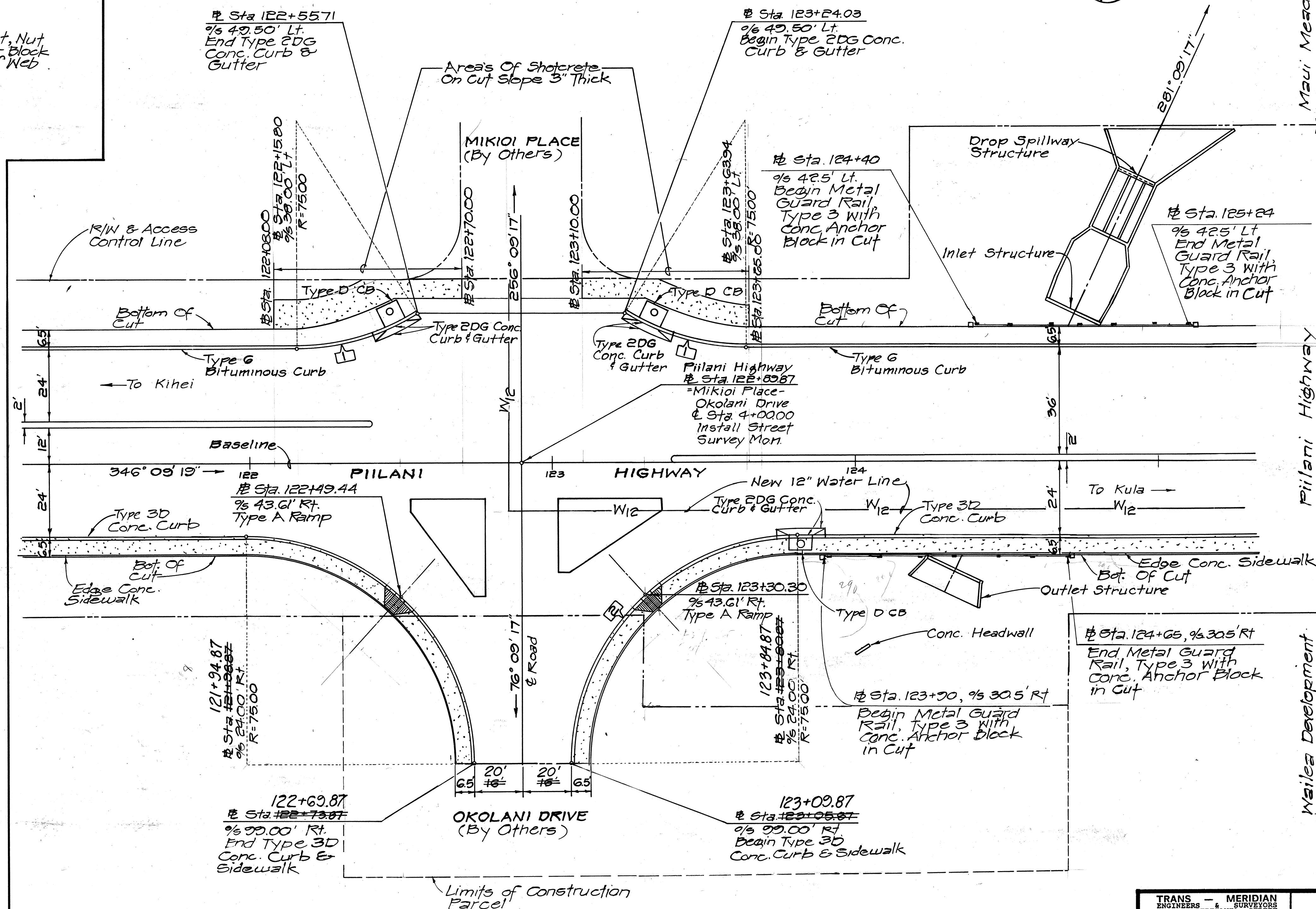


METAL GUARD POST ON CATCH BASIN TOP SLAB

SCALE: 1"=1'-0"

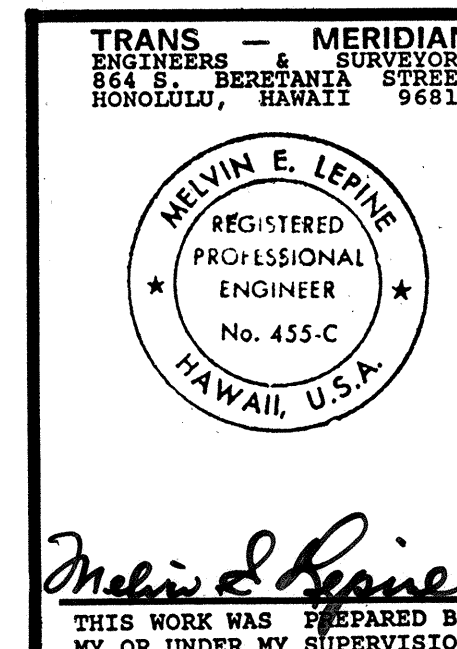
NOTES:

1. Payment incidental to Item 606.310 Metal Guard Rail
2. All Metal to be Galvanized before Fabrication.



MIKIOI PLACE - OKOLANI DRIVE INTERSECTION

SCALE: 1"=20'



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY

PIILANI HIGHWAY
VICINITY OF KILOHANA STREET
TO WALEA IKE DRIVE
F.A. PROJECT NO. F-031-1(3)

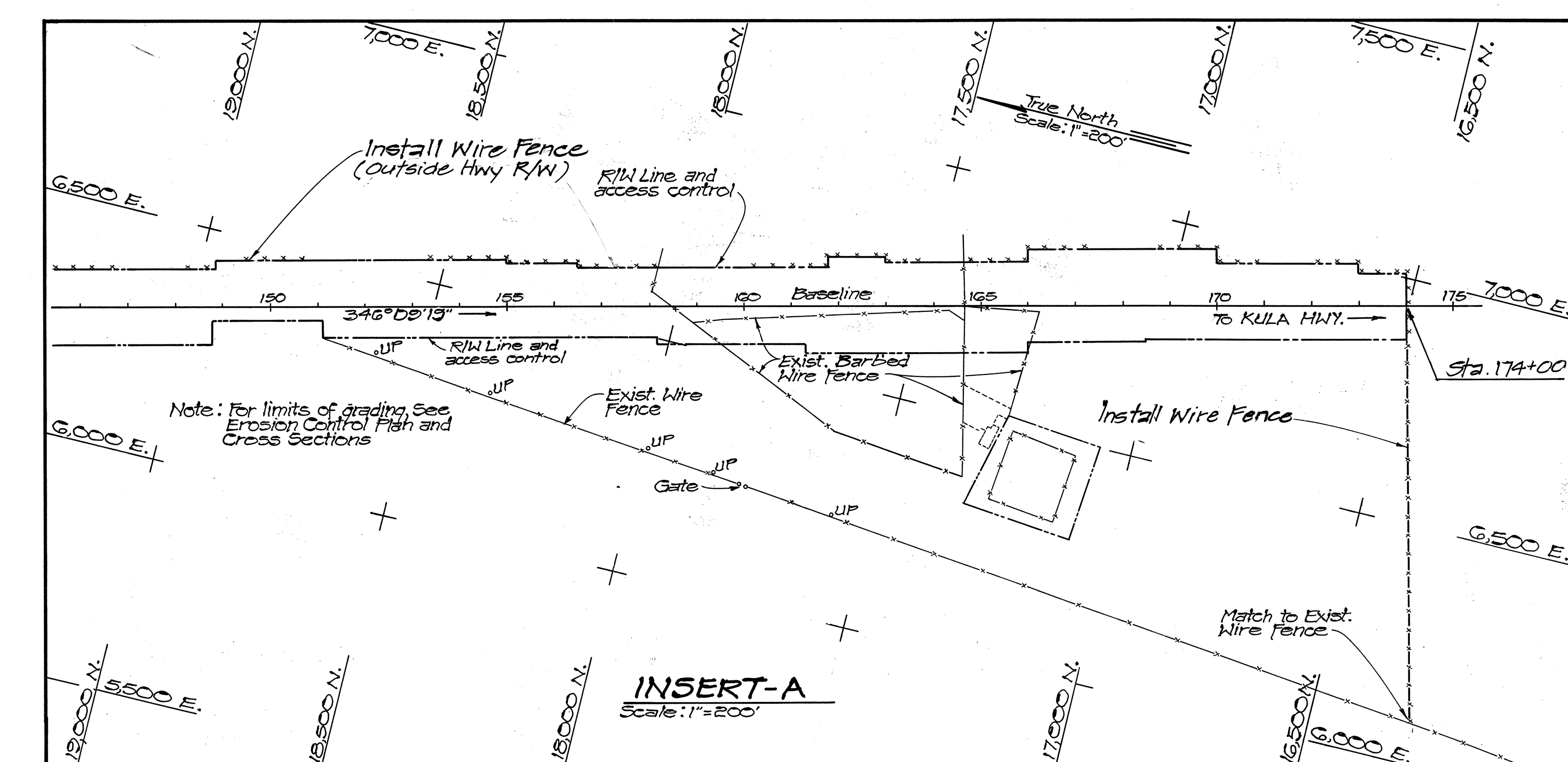
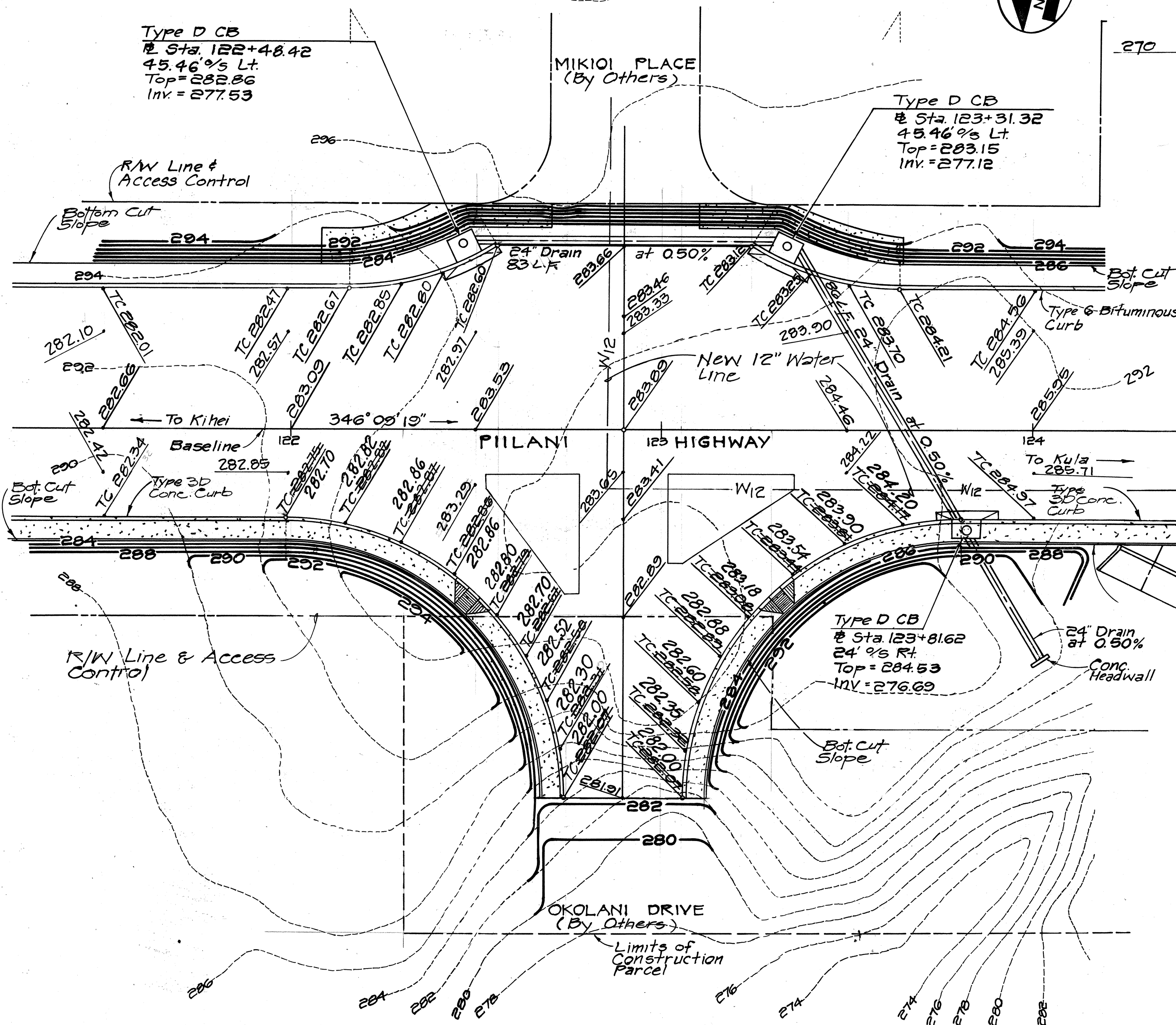
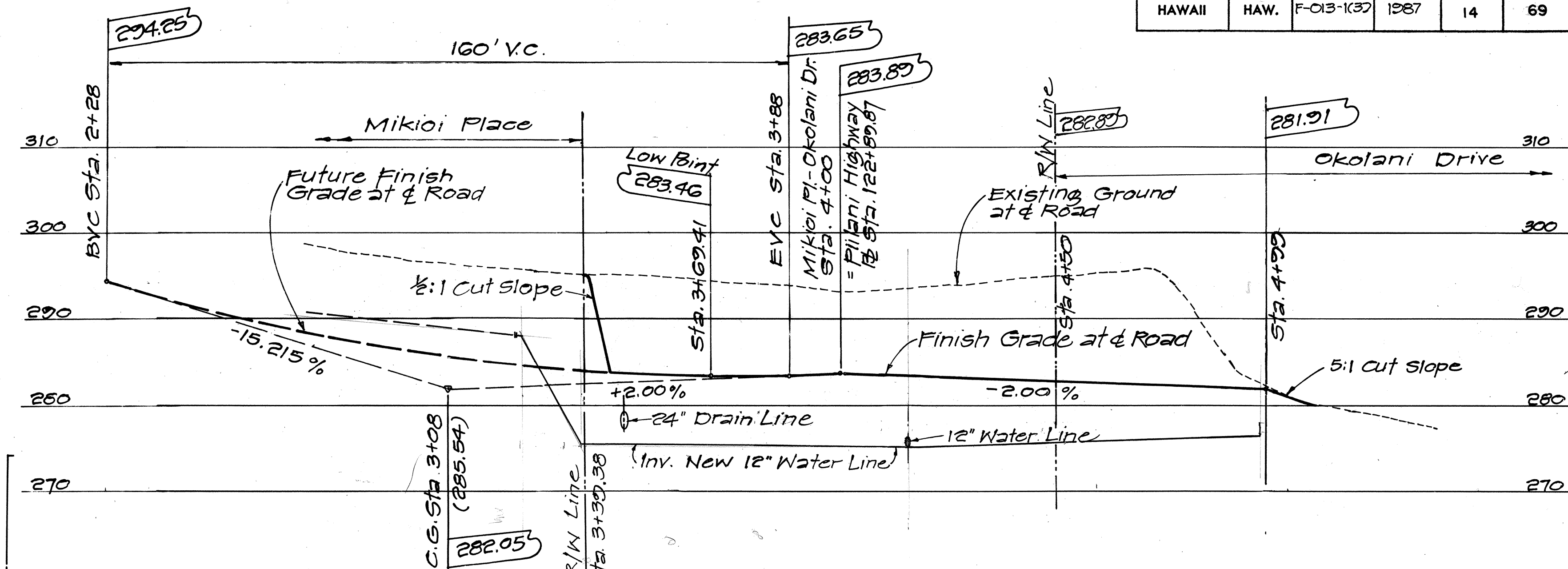
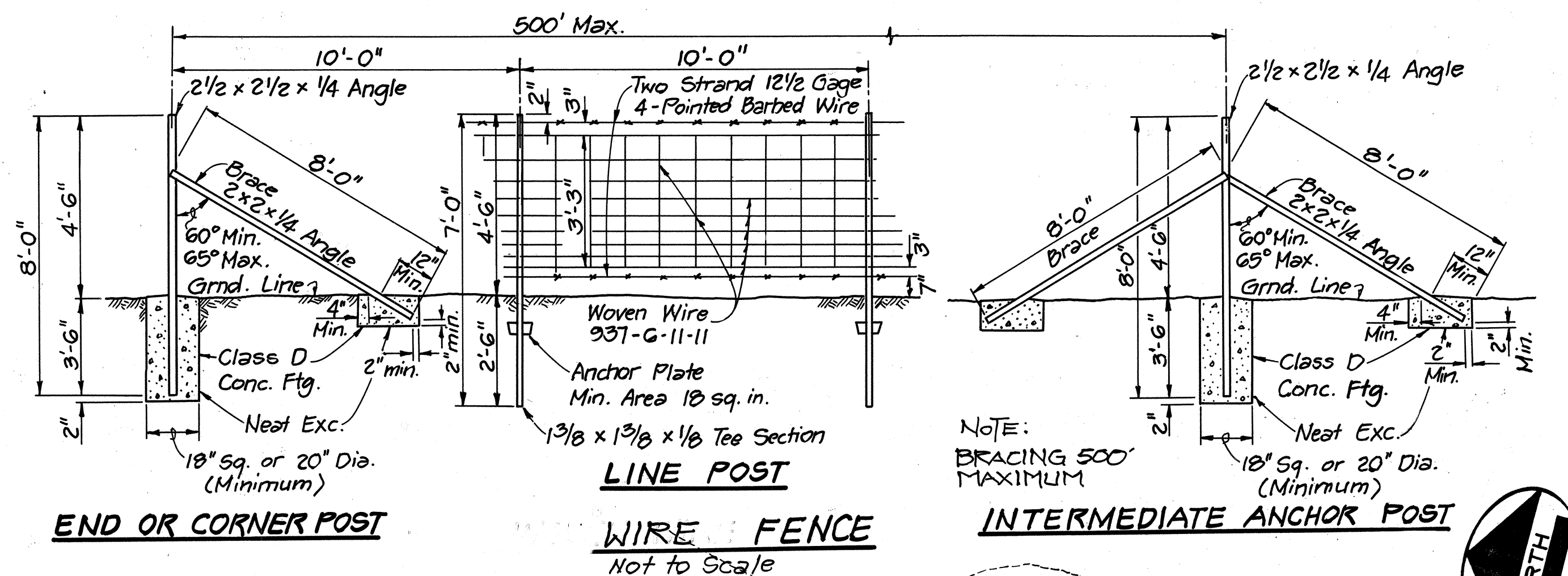
SCALE: 1"=20' DATE DEC. 1987

SHEET No. 4 OF 6 SHEETS

TRANS. — MERIDIAN
ENGINEERS SURVEYORS
864 S. BERKELEY AVE.
HONOLULU, HAWAII 96813

Melvin E. Levine
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ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-013-1(37)	1987	14	69



DATE	.....
SURVEY PLANNED BY	.....
DRAWN BY	.....
CHECKED BY	.....
NOTED BY	.....
QUANTITIES BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....

TRANS - MERIDIAN
ENGINEERS - SURVEYORS
814 S. BERKELEY STREET
HONOLULU, HAWAII 96813

MELVIN E. LEFINE
REGISTERED PROFESSIONAL ENGINEER
No. 455-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY

PIILANI HIGHWAY
VICINITY OF KILOHANA STREET
TO WALEA IKE DRIVE
F.A. PROJECT NO. F-031-1(3)

SCALE: 1" = 20' DATE: DEC. 1987

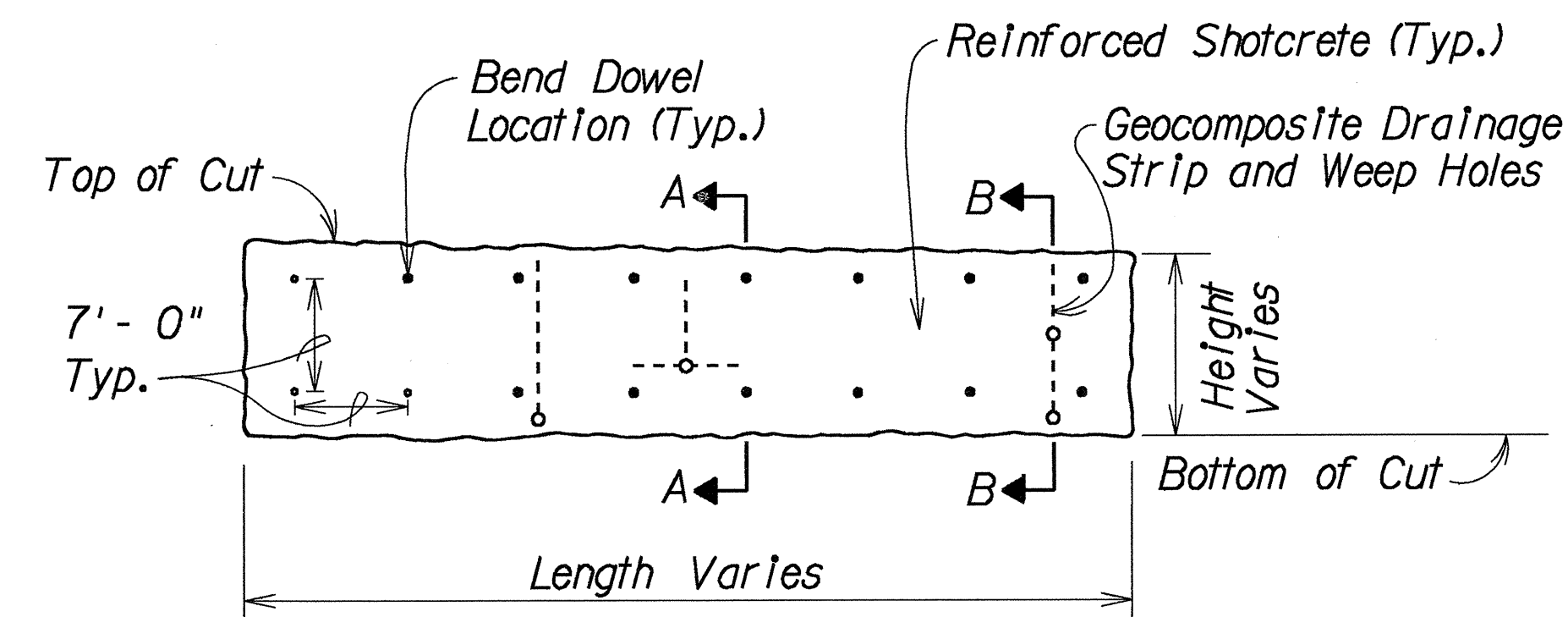
SHEET No. 5 OF 6 SHEETS

GENERAL NOTES

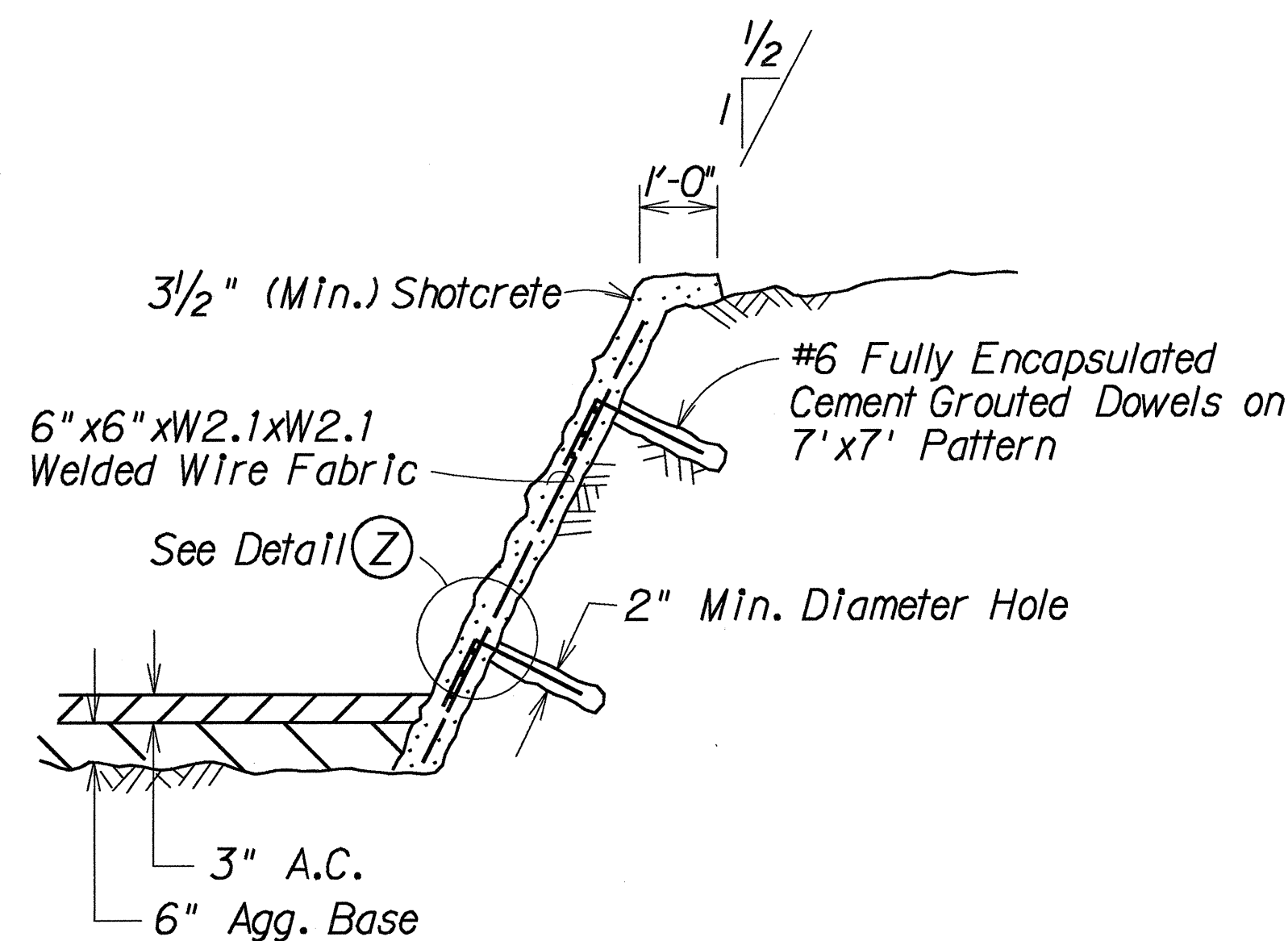
- The number of dowels and extent of reinforced shotcrete is based on an evaluation of available topographic data and is the basis of the Engineer's quantities. Actual quantities shall be determined on the basis of conditions encountered in the field.
- Dowels and reinforcing steel shall meet the requirements of Subsection 709.01 of the Standard Specifications for Road and Bridge Construction, 1985 Edition.
- Centralizers for pumped-cement grouted dowels shall be fabricated of plastic, shall support the dowel near the center of the hole, and shall be 1/2 inch smaller in outside dimension than the diameter of the hole.
- Non shrink grout shall meet the requirements of Subsection 712.04 of the Standard Specifications for Road and Bridge Construction, 1985 Edition. The Contractor shall submit product literature to the Engineer for approval. Admixtures shall be non-corrosive to dowels.
- Holes shall be drilled for installing dowels. Core, rotary, percussion or auger drilling shall be used to advance the hole. Water or other liquids shall not be used as a cutting or flushing medium, but air may be used for flushing.
- Each dowel, with centralizer, shall be placed in the hole within 15 minutes after the hole has been filled with grout. Secondary grouting shall be performed as necessary to completely fill the hole.
- Welded wire fabric shall be installed behind the dowel bend and shall be lapped at least 6 inches at the joints. Laps shall be made at points where the fabric is supported. The fabric shall be installed on the surface of the graded and cleaned slope. Auxiliary metal pins of sufficient length into the ground to support the fabric shall be provided such that there is a minimum of one support for each 10 square feet of fabric.
- PVC pipe weep holes shall be securely fixed to the Geocomposite Drainage Strip and shall be protected during shotcrete placement.
- Immediately before the shotcrete is placed, all ties, weep holes, drainage fabric and pins shall be checked and secured as necessary. Alignment control shall be checked and approved immediately before shotcrete is placed.

CONSTRUCTION SEQUENCE NOTES

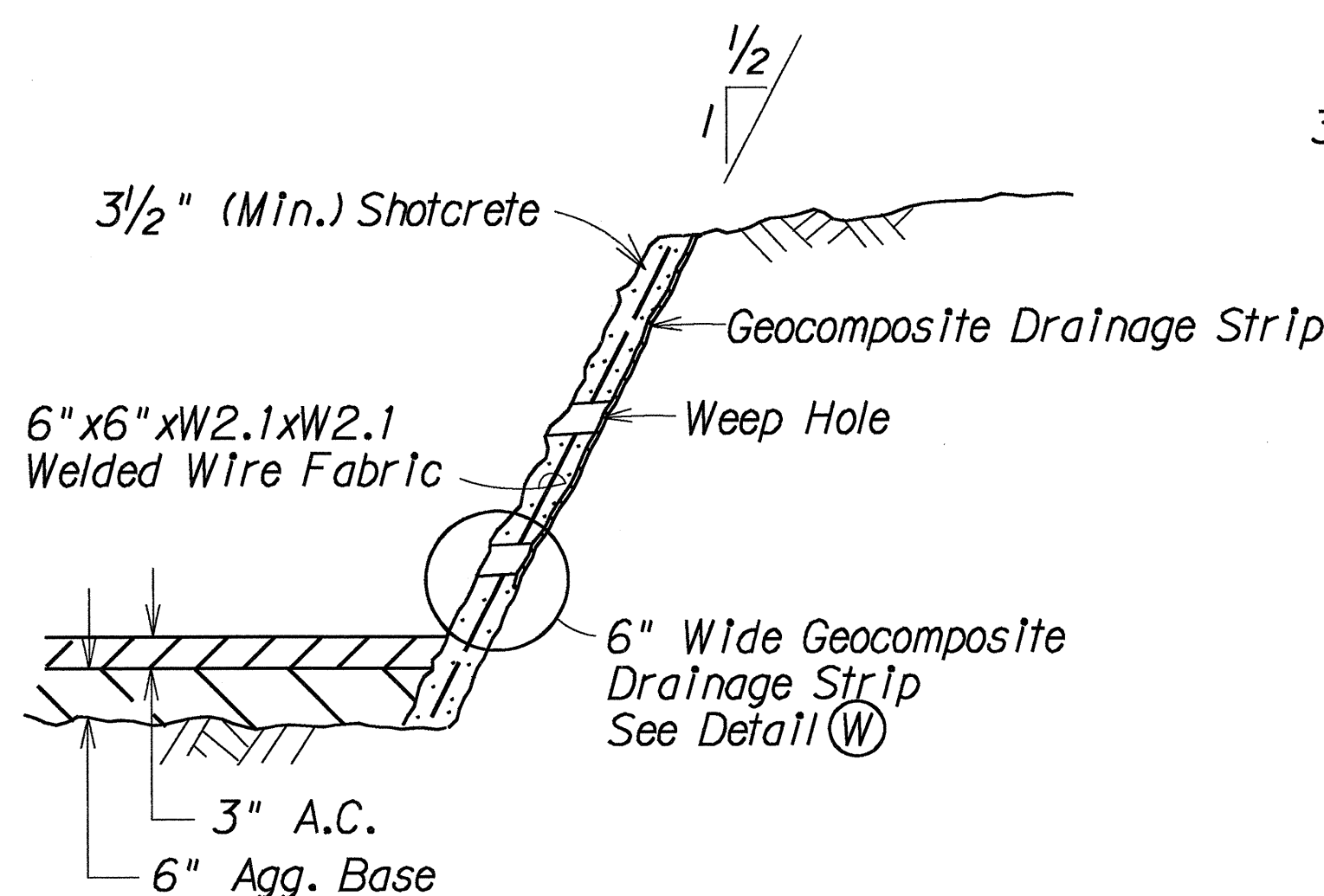
- Excavate cut slope to grade.
- Place Geocomposite Drainage Strips as directed by the Engineer.
- Drill and grout holes, install dowels with centralizers.
- Install welded wire fabric. Welded wire fabric may be cut to accommodate the bend dowel. However, cut area of wire fabric shall be patched with 1'x2' area patch.
- Install #4 bars, secure wire fabric, install metal pins.
- Embed weep holes as directed by the Engineer.
- Check alignment control.
- Shotcrete. Cover dowels and resteel.



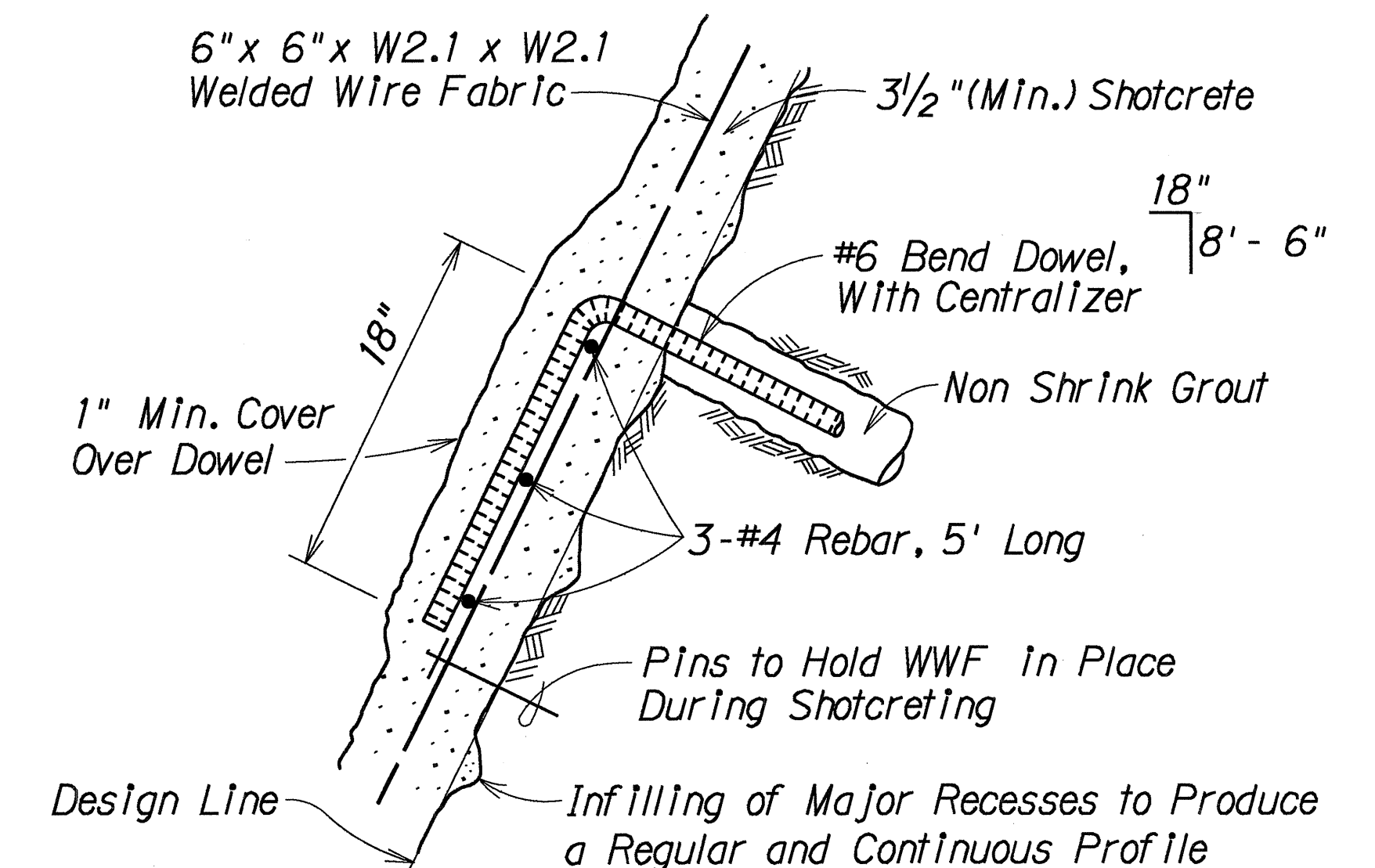
ELEVATION
Not to Scale



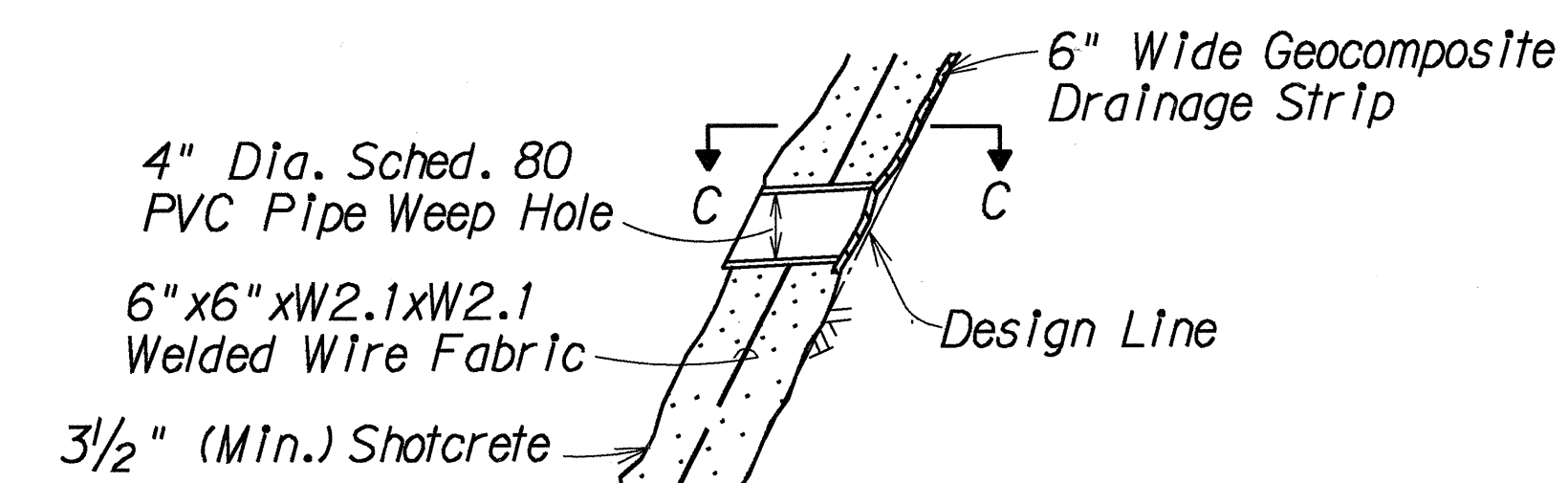
SECTION A-A
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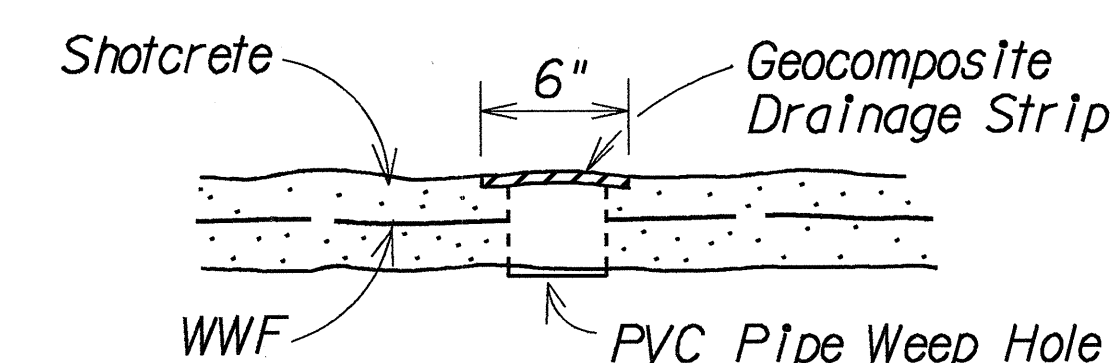
SECTION B-B
Not to Scale



DETAIL Z
Not to Scale



DETAIL W
Not to Scale



SECTION C-C
Not to Scale

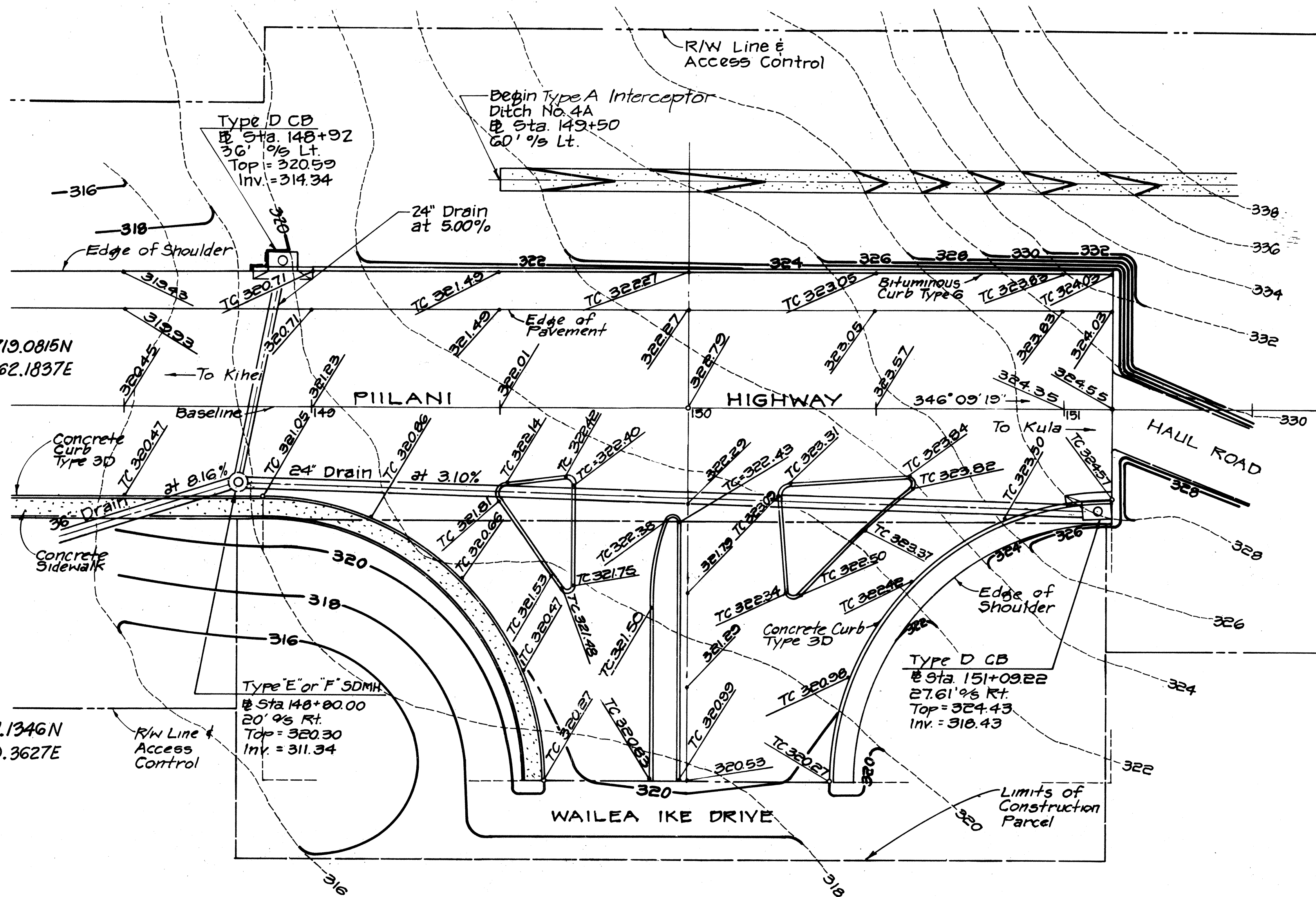
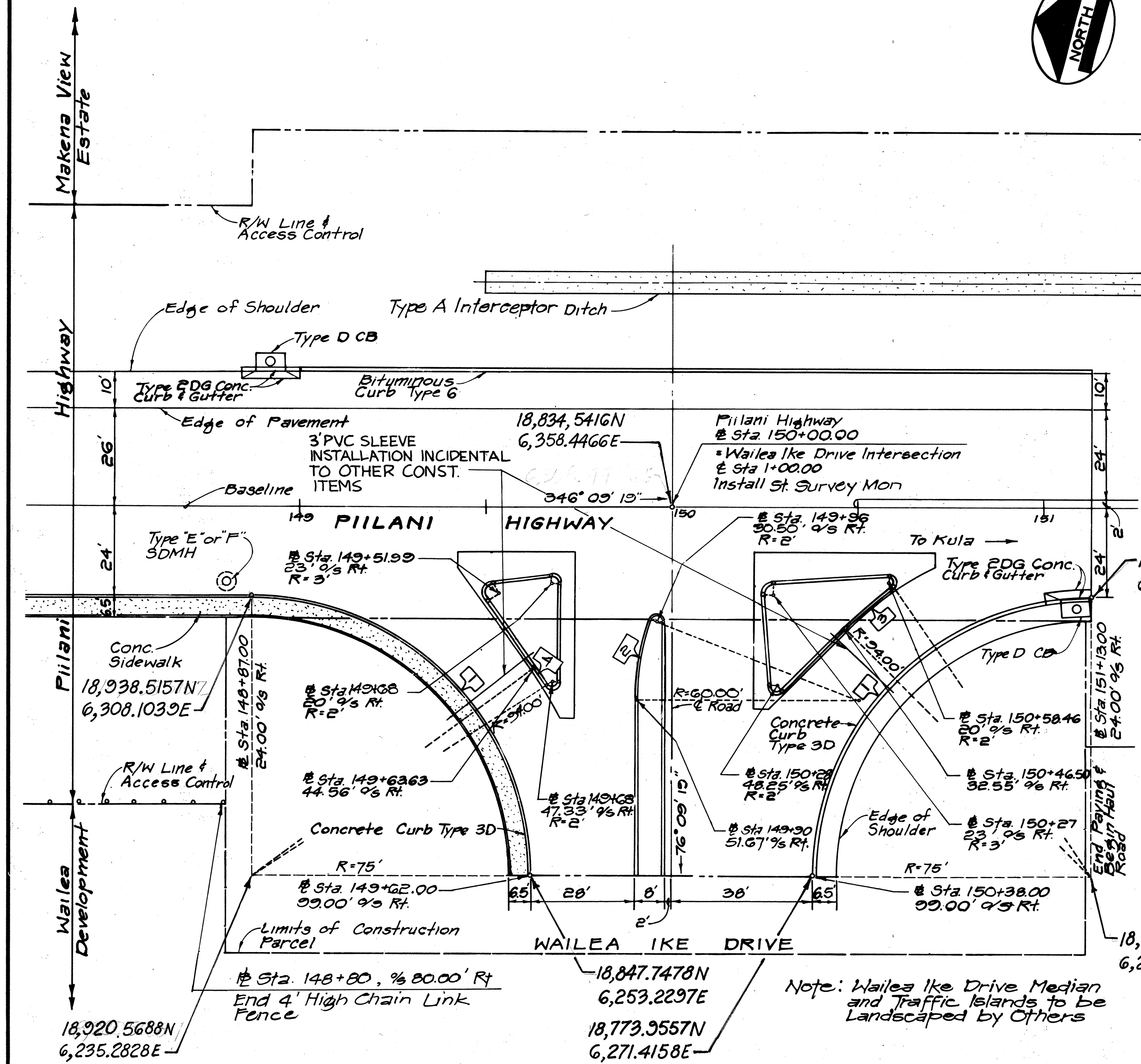
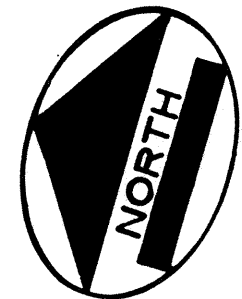
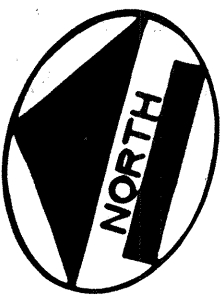
FED. ROAD DIST. NO.	STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-031-1(3)	1990	C014 S-2	69

12/13/89	Shotcrete various cut slopes.
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SHOTCRETE DETAILS	
PIILANI HIGHWAY Vicinity of Kiloahana Street to Wailea Ike Drive Project No. F-031-1(3)	
Scale: As Shown	Date: Dec., 1989
SHEET No. 5B OF 6 SHEETS	

C.O.14S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-031-1(3)	1987	15	69



CURVE DATA			
	1	2	3
Δ	90°00'00"	21°24'02"	10°23'40"
R	75.00'	60.00'	94.00'
T	75.00'	11.34'	8.55'
L	117.89'	22.41'	17.05'
Δ	2°24'22"		
R	94.00'		
T	2.41'		
L	4.81'		

WALEA IKE DRIVE INTERSECTION
SCALE: 1" = 20'

TRANS - MERIDIAN
ENGINEERS - SURVEYORS
864 S. BERETANIA STREET
HONOLULU, HAWAII 96813

MELVIN E. LEFINE
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No. 455-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY

PIILANI HIGHWAY
VICINITY OF KILOHANA STREET
TO WALEA IKE DRIVE
F.A. PROJECT NO. F-031-1(3)

SCALE: 1" = 20' DATE DEC. 1987

SHEET No. 6 OF 6 SHEETS