

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	12	470

Construct Metal Guardrail, Type 3
Single with Steel Posts (111.11) 214 L.F.

Sta. 416+50 Lt. to Sta. 417+20 Lt. (37 l.f.)
Sta. 415+00 Rt. to Sta. 417+10 Rt. (17 l.f.)

BY OTHERS
(N.I.C.)

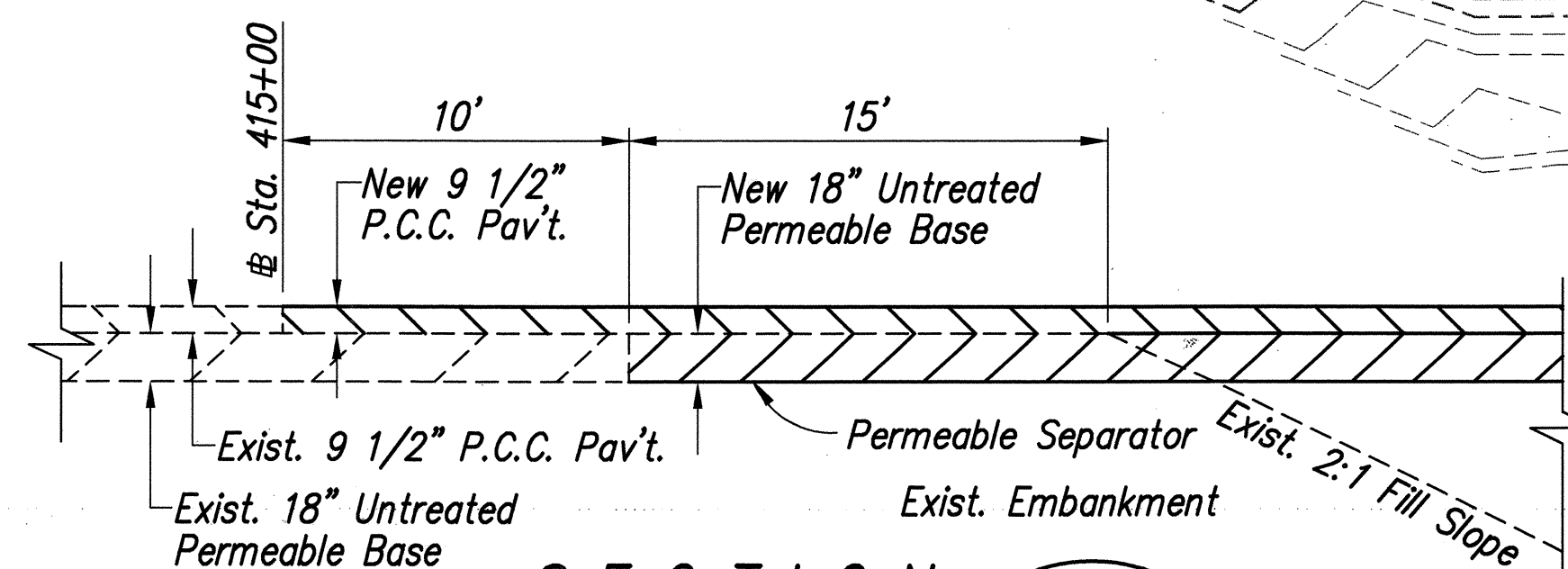
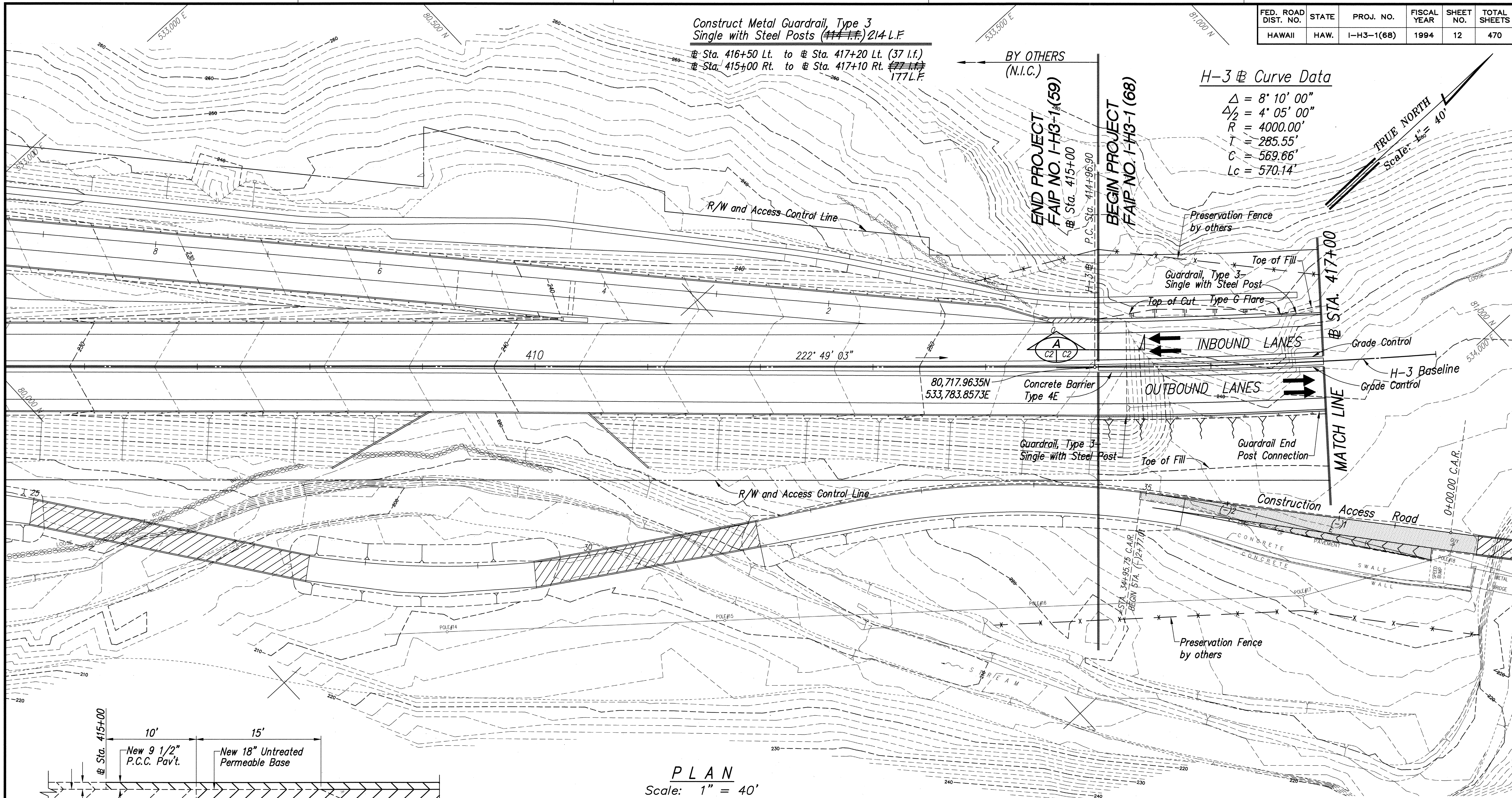
END PROJECT
FAIP NO. I-H3-1(59)

BEGIN PROJECT
FAIP NO. I-H3-1(68)

H-3 Curve Data

$\Delta = 8^{\circ} 10' 00''$
 $\Delta/2 = 4^{\circ} 05' 00''$
 $R = 4000.00'$
 $T = 285.55'$
 $C = 569.66'$
 $L_c = 570.14'$

TRUE NORTH
Scale: 1" = 40'



SECTION A
Scale: 1" = 5'

NOTE:
1. Exist. Embankment and Pavement Structure
to be Constructed under FAIP No. I-H3-1(59)

PLAN
Scale: 1" = 40'

NOTE:
See Sheet No. C10 For Project Interface
Transition Between FAIP Nos. I-H3-1(59)
And I-H3-1(68)

Hatched area indicates Construction Access
Road Widening. See Type I Typical Section
on Sheet T3.

[] INDICATES ADDENDUM NO. 3 REVISIONS.

Construct Type 4E Concrete Barrier
Sta. 415+00 to Sta. 417+97 (297 l.f.)



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PerEn, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
Sta. 415+00 TO Sta. 417+00

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. C2 OF 44 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	13	470

H-3 Curve Data

$\Delta = 8^{\circ} 10' 00''$
 $\Delta/2 = 4^{\circ} 05' 00''$
 $R = 4000.00'$
 $T = 285.55'$
 $C = 569.66'$
 $Lc = 570.14'$

TRUE NORTH
Scale: 1" = 40'

Construct Standard Wire Fence with Steel Posts (1905 l.f.)

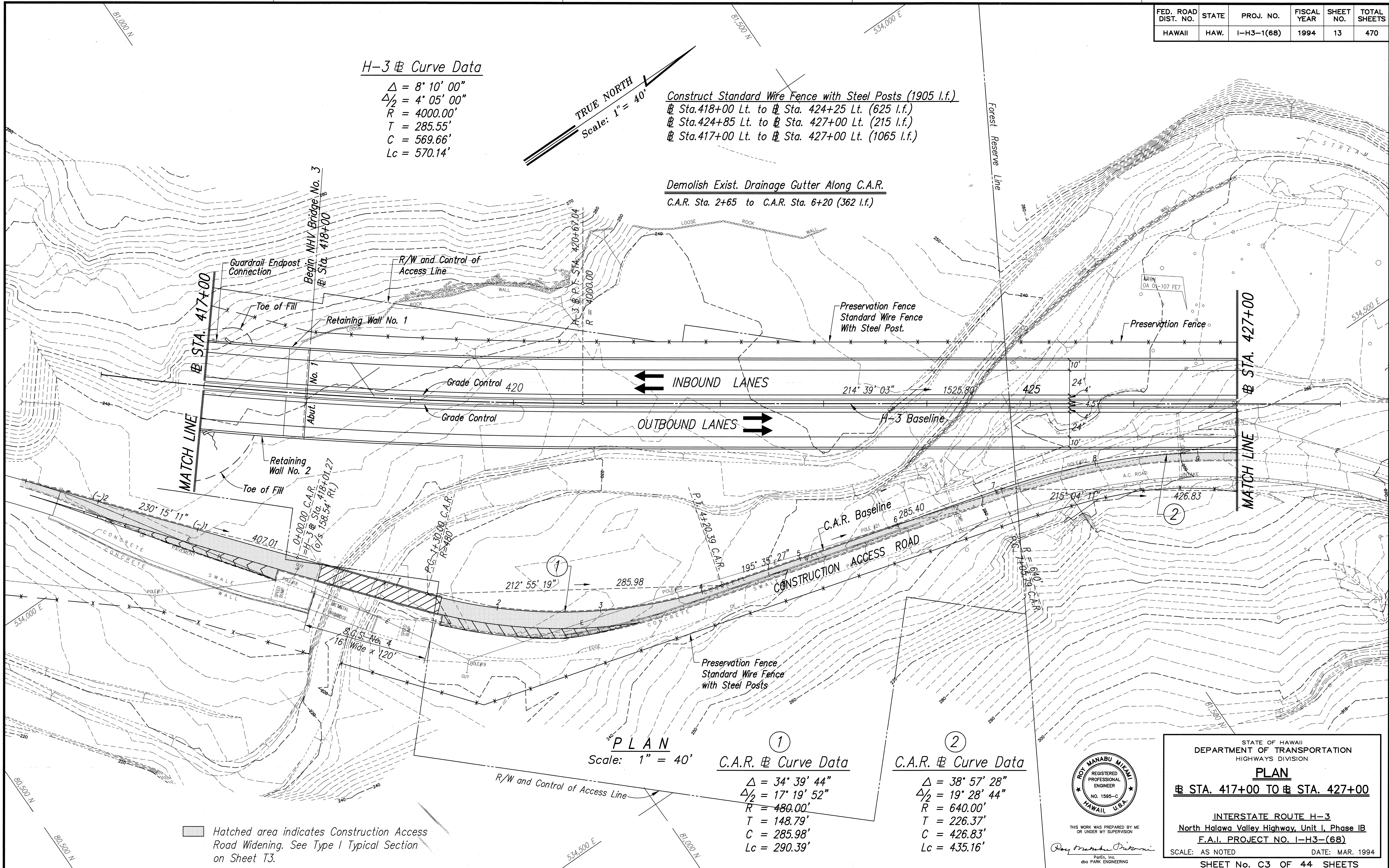
Sta. 418+00 Lt. to Sta. 424+25 Lt. (625 l.f.)

Sta. 424+85 Lt. to Sta. 427+00 Lt. (215 l.f.)

Sta. 417+00 Lt. to Sta. 427+00 Lt. (1065 l.f.)

Demolish Exist. Drainage Gutter Along C.A.R.

C.A.R. Sta. 2+65 to C.A.R. Sta. 6+20 (362 l.f.)

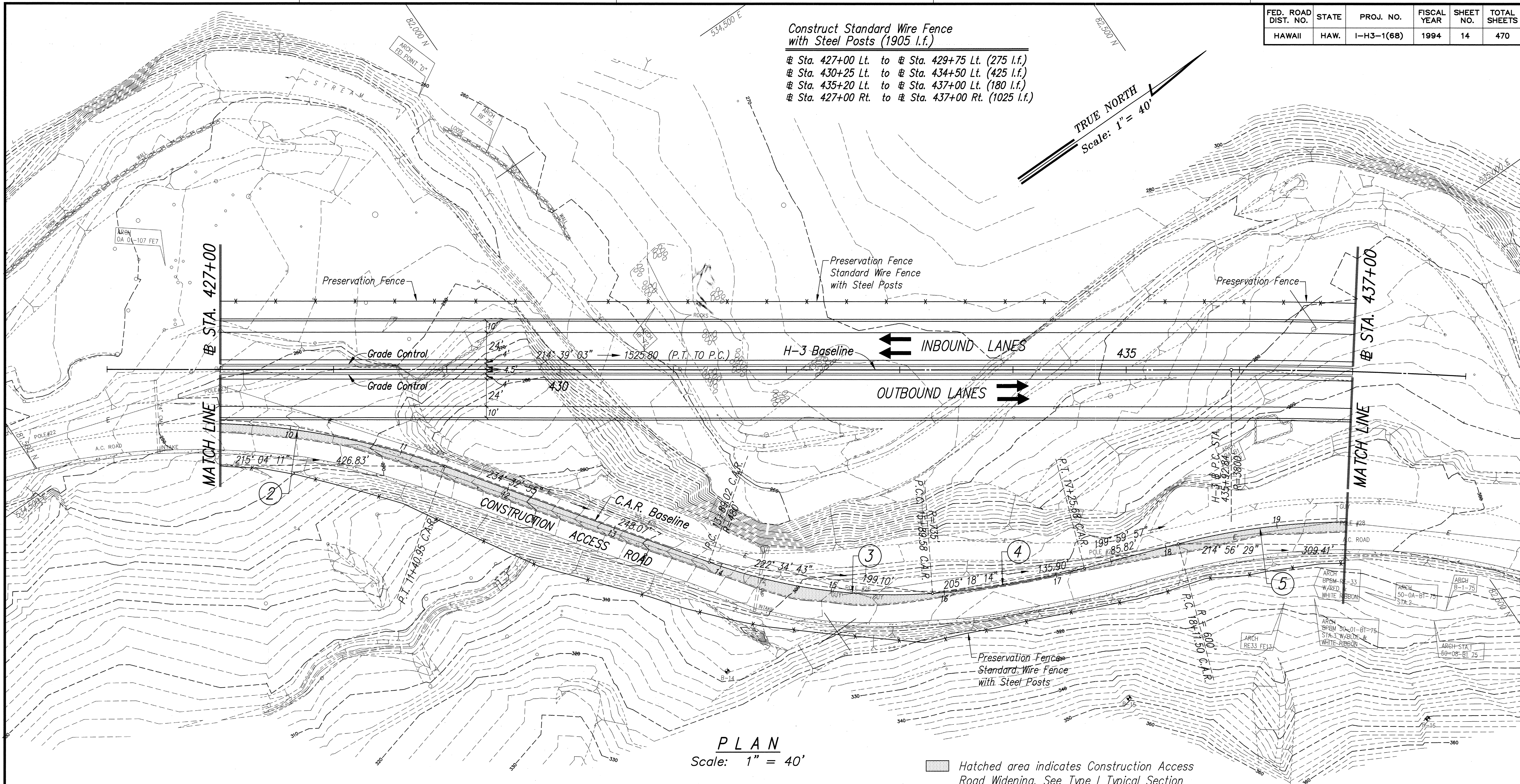


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	14	470

Construct Standard Wire Fence
with Steel Posts (1905 l.f.)

Sta. 427+00 Lt. to Sta. 429+75 Lt. (275 l.f.)
Sta. 430+25 Lt. to Sta. 434+50 Lt. (425 l.f.)
Sta. 435+20 Lt. to Sta. 437+00 Lt. (180 l.f.)
Sta. 427+00 Rt. to Sta. 437+00 Rt. (1025 l.f.)

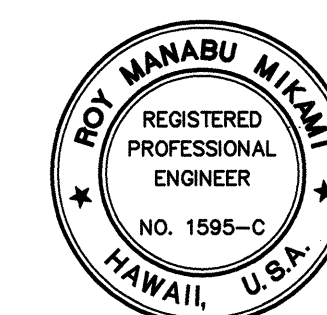
TRUE NORTH
Scale: 1" = 40'



PLAN
Scale: 1" = 40'

Hatched area indicates Construction Access Road Widening. See Type I Typical Section on Sheet T3.

②	③	④	⑤	H-3
C.A.R. Curve Data	C.A.R. Curve Data	C.A.R. Curve Data	C.A.R. Curve Data	C.A.R. Curve Data
$\Delta = 38^\circ 57' 28''$	$\Delta = 23^\circ 56' 25''$	$\Delta = 10^\circ 36' 33''$	$\Delta = 29^\circ 53' 04''$	$\Delta = 27^\circ 02' 20''$
$\Delta/2 = 19^\circ 28' 44''$	$\Delta/2 = 11^\circ 58' 12.5''$	$\Delta/2 = 5^\circ 18' 16.5''$	$\Delta/2 = 14^\circ 56' 32''$	$\Delta/2 = 13^\circ 31' 10''$
$R = 640.00'$	$R = 480.00'$	$R = 735.00'$	$R = 600.00'$	$R = 3800.00'$
$T = 226.37'$	$T = 101.77'$	$T = 68.24'$	$T = 160.12'$	$T = 913.66'$
$C = 426.83'$	$C = 199.10'$	$C = 135.90'$	$C = 309.41'$	$C = 1776.69'$
$Lc = 435.16'$	$Lc = 200.56'$	$Lc = 136.10'$	$Lc = 312.95'$	$Lc = 1793.29'$



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Roy Manabu Miki
Parks, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
Sta. 427+00 TO Sta. 437+00

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994
SHEET No. C4 OF 44 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	15	470

C.A.R. @ Sta. 29+50

Remove, Transport and Store Existing Stream Crossing Structure

Construct Standard Wire Fence with Steel Posts (1825 l.f.)

Sta. 437+00 Lt. to Sta. 437+95 Lt. (97 l.f.)
Sta. 438+85 Lt. to Sta. 440+20 Lt. (543 l.f.)
Sta. 446+00 Lt. to Sta. 447+50 Lt. (150 l.f.)
Sta. 437+00 Rt. to Sta. 447+50 Rt. (1045 l.f.)

Change Order #3 revised
See Sht. C24 for Ditch Sections

Preservation Fence
Standard Wire Fence
with Steel Posts

INBOUND LANES
OUTBOUND LANES

H-3 Baseline

Grade Control
445

Grade Control

C.A.R. Baseline

CONSTRUCTION ACCESS ROAD

Preservation Fence

Standard Wire Fence with Steel Post

H-3 @ Curve Data

$\Delta = 27^{\circ} 02' 20''$
 $\Delta/2 = 13^{\circ} 31' 10''$
 $R = 3800.00'$
 $T = 913.66'$
 $C = 1776.69'$
 $Lc = 1793.29'$

⑤

C.A.R. @ Curve Data

$\Delta = 29^{\circ} 53' 04''$
 $\Delta/2 = 14^{\circ} 56' 32''$
 $R = 600.00'$
 $T = 160.12'$
 $C = 309.41'$
 $Lc = 312.95'$

⑥

C.A.R. @ Curve Data

$\Delta = 25^{\circ} 10' 00''$
 $\Delta/2 = 12^{\circ} 35' 00''$
 $R = 450.00'$
 $T = 100.45'$
 $C = 196.07'$
 $Lc = 197.66'$

⑦A

C.A.R. @ Curve Data

$\Delta = 24^{\circ} 00' 00''$
 $\Delta/2 = 12^{\circ} 00' 00''$
 $R = 700.00'$
 $T = 148.79'$
 $C = 291.08'$
 $Lc = 293.22'$

⑧

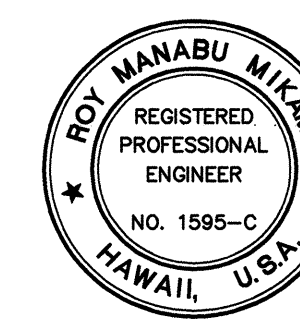
C.A.R. @ Curve Data

$\Delta = 5^{\circ} 40' 00''$
 $\Delta/2 = 2^{\circ} 50' 00''$
 $R = 2500.00'$
 $T = 123.73'$
 $C = 247.15'$
 $Lc = 247.26'$

PLAN

Scale: 1" = 40'

Hatched area indicates Construction Access Road Widening. See Type I Typical Section on Sheet T3.



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dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

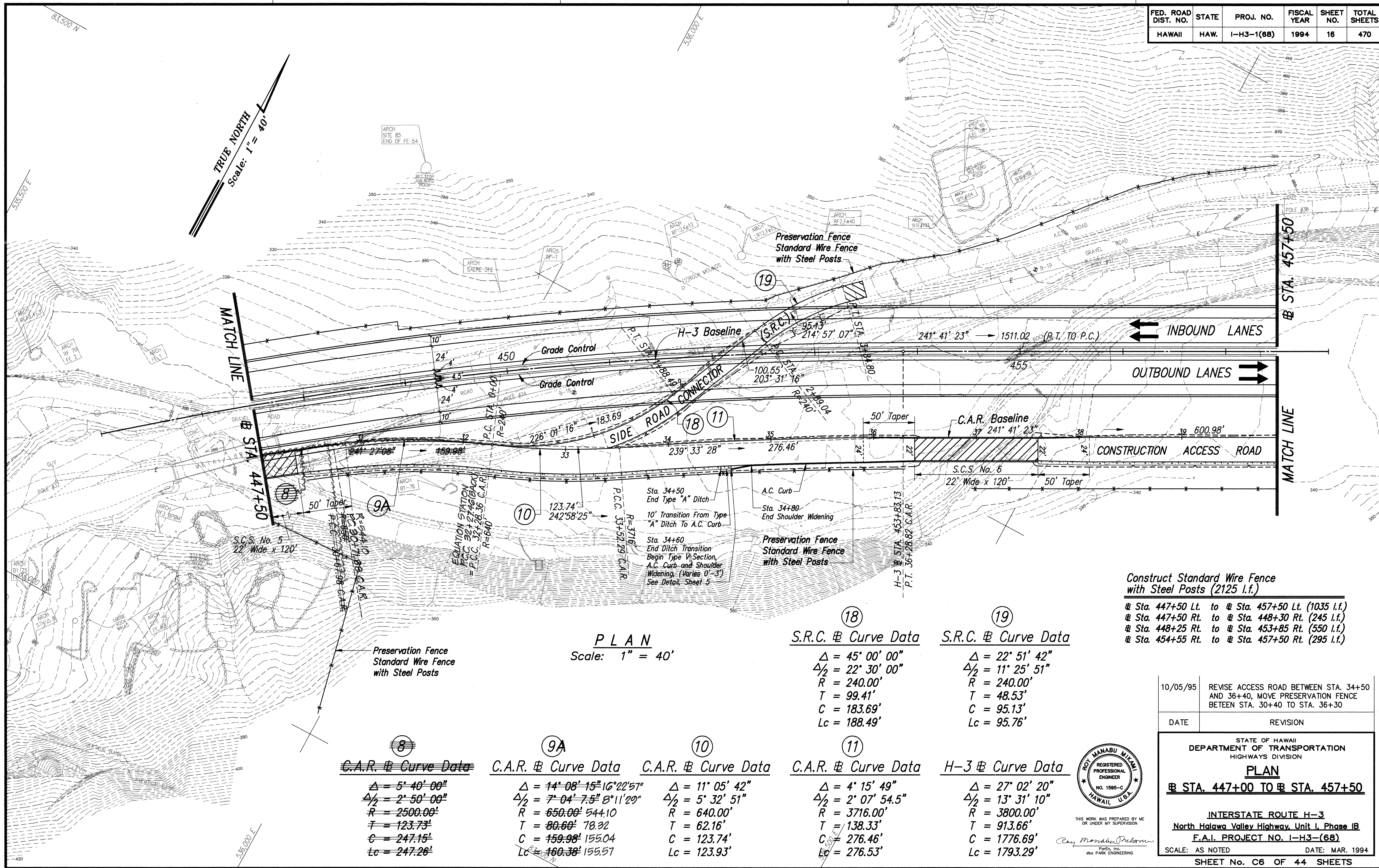
Sta. 437+00 TO Sta. 447+50

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. C5 OF 44 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	16	470



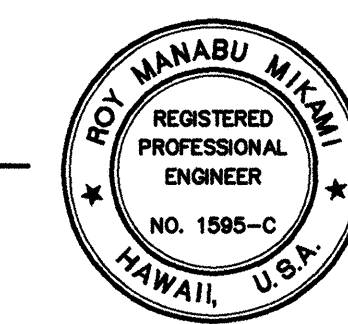
PLAN
Scale: 1" = 40'

8	9A	10	11	18	19
C.A.R. Curve Data	C.A.R. Curve Data	C.A.R. Curve Data	C.A.R. Curve Data	S.R.C. Curve Data	S.R.C. Curve Data
$\Delta = 5^{\circ} 40' 00''$	$\Delta = 14^{\circ} 08' 15''$	$\Delta = 11^{\circ} 05' 42''$	$\Delta = 4^{\circ} 15' 49''$	$\Delta = 45^{\circ} 00' 00''$	$\Delta = 22^{\circ} 51' 42''$
$\Delta/2 = 2^{\circ} 50' 00''$	$\Delta/2 = 7^{\circ} 04' 07.5''$	$\Delta/2 = 5^{\circ} 32' 51''$	$\Delta/2 = 2^{\circ} 07' 54.5''$	$\Delta/2 = 22^{\circ} 30' 00''$	$\Delta/2 = 11^{\circ} 25' 51''$
$R = 2500.00'$	$R = 650.00'$	$R = 640.00'$	$R = 3716.00'$	$R = 240.00'$	$R = 240.00'$
$T = 123.73'$	$T = 80.60'$	$T = 62.16'$	$T = 138.33'$	$T = 99.41'$	$T = 48.53'$
$C = 247.15'$	$C = 159.98'$	$C = 123.74'$	$C = 276.46'$	$C = 183.69'$	$C = 95.13'$
$Lc = 247.26'$	$Lc = 160.38'$	$Lc = 123.93'$	$Lc = 276.53'$	$Lc = 188.49'$	$Lc = 95.76'$

Construct Standard Wire Fence with Steel Posts (2125 l.f.)

@ Sta. 447+50 Lt. to @ Sta. 457+50 Lt. (1035 l.f.)
 @ Sta. 447+50 Rt. to @ Sta. 448+30 Rt. (245 l.f.)
 @ Sta. 448+25 Rt. to @ Sta. 453+85 Rt. (550 l.f.)
 @ Sta. 454+55 Rt. to @ Sta. 457+50 Rt. (295 l.f.)

10/05/95	REVISE ACCESS ROAD BETWEEN STA. 34+50 AND 36+40, MOVE PRESERVATION FENCE BETWEEN STA. 30+40 TO STA. 36+30
DATE	REVISION



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

@ STA. 447+00 TO @ STA. 457+50

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

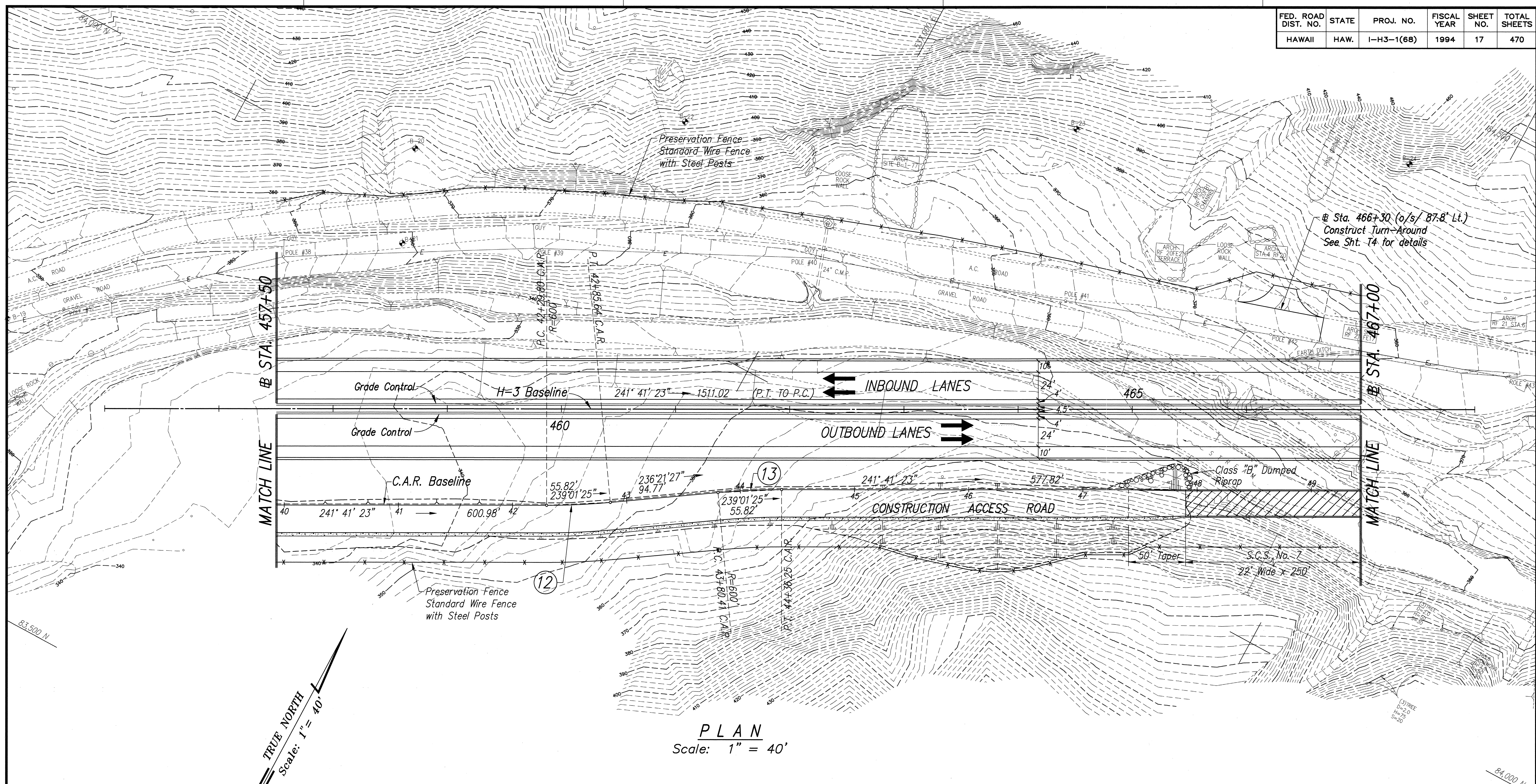
SCALE: AS NOTED DATE: MAR. 1994

SHEET No. C6 OF 44 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

ROTATED 28° 18' 37"
BASE PT. 0.0

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	17	470



TRUE NORTH
Scale: 1" = 40'

PLAN
Scale: 1" = 40'

⑫
C.A.R. Curve Data

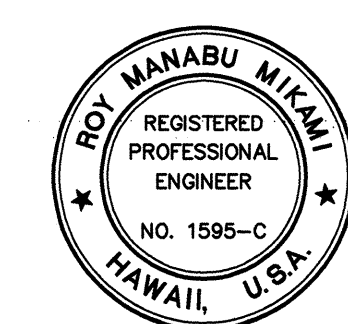
Δ = 5° 19' 56"
Δ/2 = 2° 39' 58"
R = 600.00'
T = 27.94'
C = 55.82'
Lc = 55.84'

⑬
C.A.R. Curve Data

Δ = 5° 19' 56"
Δ/2 = 2° 39' 58"
R = 600.00'
T = 27.94'
C = 55.82'
Lc = 55.84'

Construct Standard Wire Fence with Steel Posts (1900 l.f.)

Sta. 457+50 Lt. to Sta. 467+00 Lt. (965 l.f.)
Sta. 457+50 Rt. to Sta. 466+80 Rt. (935 l.f.)



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
Sta. 457+50 TO Sta. 467+00

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994
SHEET No. C7 OF 44 SHEETS

DATE	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

ROTATED 28° 16' 37"
BASE PT. 0.0

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	18	470

1 Sta. 470+00 Lt. & Rt.
Construct (Two each) Reference Monuments
Offset 6.50' left and right of Baseline
(See Standard Plan D-07 for Details)

Construct Standard Wire Fence
with Steel Posts (1100 l.f.)

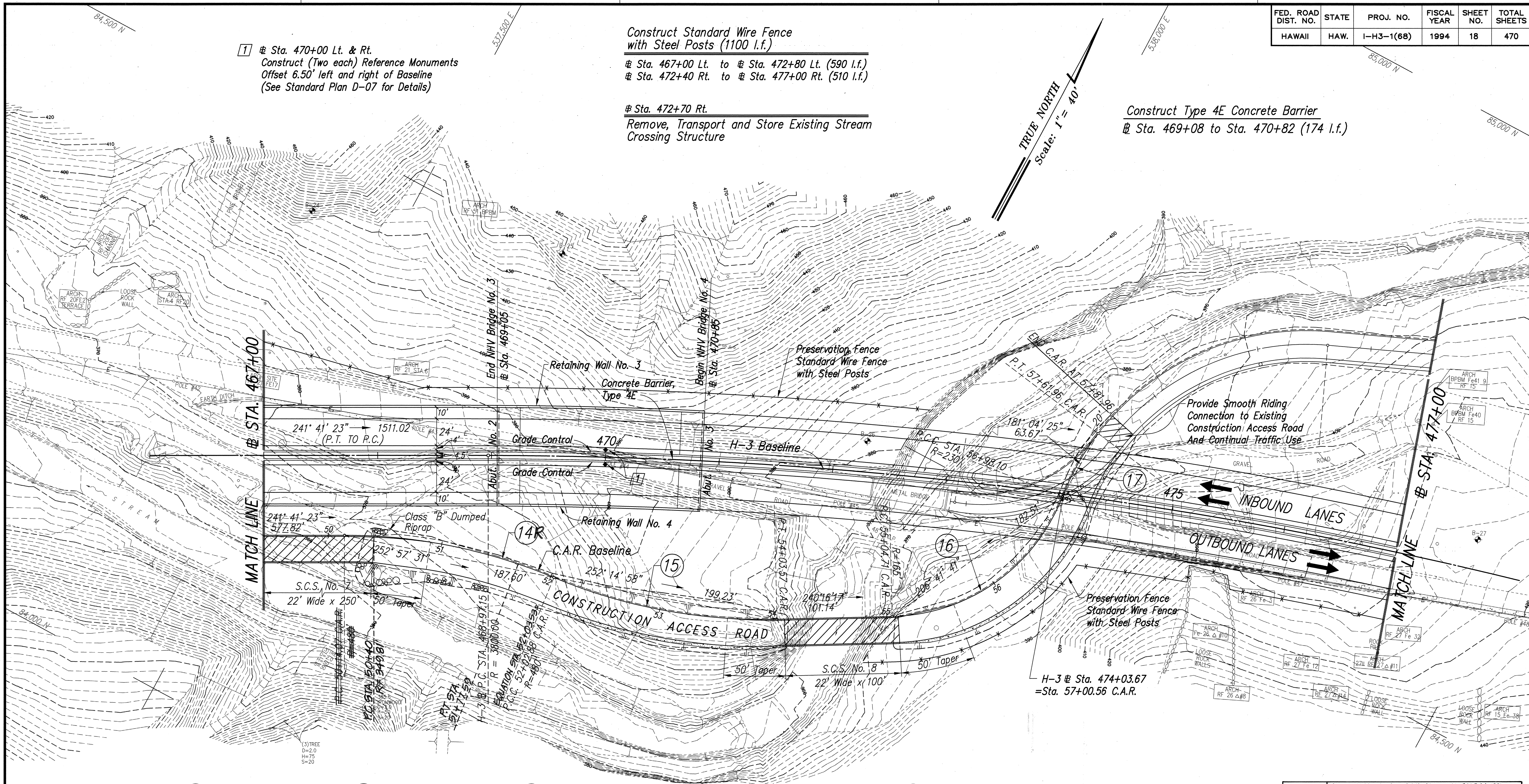
Sta. 467+00 Lt. to Sta. 472+80 Lt. (590 l.f.)
Sta. 472+40 Rt. to Sta. 477+00 Rt. (510 l.f.)

Sta. 472+70 Rt.

Remove, Transport and Store Existing Stream
Crossing Structure

Construct Type 4E Concrete Barrier
Sta. 469+08 to Sta. 470+82 (174 l.f.)

TRUE NORTH
Scale: 1" = 40'



14R
C.A.R. Curve Data
 $\Delta = 22^\circ 32' 15''$
 $\Delta/2 = 11^\circ 16' 07.5''$
 $R = 480.00'$
 $T = 95.64'$
 $C = 187.60'$
 $Lc = 188.81'$

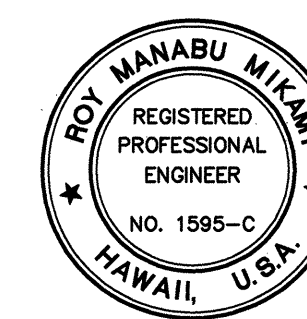
15
C.A.R. Curve Data
 $\Delta = 23^\circ 57' 21''$
 $\Delta/2 = 11^\circ 58' 40.5''$
 $R = 480.00'$
 $T = 101.83'$
 $C = 199.23'$
 $Lc = 200.69'$

16
C.A.R. Curve Data
 $\Delta = 67^\circ 09' 12''$
 $\Delta/2 = 33^\circ 34' 36''$
 $R = 165.00'$
 $T = 109.53'$
 $C = 182.51'$
 $Lc = 193.39'$

PLAN
Scale: 1" = 40'

17
C.A.R. Curve Data
 $\Delta = 15^\circ 54' 41''$
 $\Delta/2 = 7^\circ 57' 20.5''$
 $R = 230.00'$
 $T = 32.14'$
 $C = 63.67'$
 $Lc = 63.87'$

H-3 Curve Data
 $\Delta = 15^\circ 36' 40''$
 $\Delta/2 = 7^\circ 48' 20''$
 $R = 3800.00'$
 $T = 520.91'$
 $C = 1032.17'$
 $Lc = 1035.37'$



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Roy M. Mabu, Inc.
P.O. Box 100
Honolulu, Hawaii 96801

DATE	REVISION
10/30/95	FIELD CHANGE NO. 2. C.A.R. ALIGNMENT REVISION FROM STA. 50+14.01 TO STA. 52+03.93
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PLAN	
Sta. 467+00 TO Sta. 477+00	
INTERSTATE ROUTE H-3 North Halawa Valley Highway, Unit I, Phase IB	
F.A.I. PROJECT NO. I-H3-(68)	
SCALE: AS NOTED	DATE: MAR. 1994
SHEET No. C8 OF 44 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	19	470

NOTE:

See Sheet No. C11 For Project Interface
Transition Between FAIP No. I-H3-1 (68)
And FAIP Nos. I-H3-1 (69) & (70)

Construct Metal Guardrail, Type 3
Single with Steel Posts (287 l.f.)

Sta. 477+63 Lt. to Sta. 479+58 Lt. (162 l.f.)
Sta. 478+00 Rt. to Sta. 479+58 Rt. (125 l.f.)

P.T. Sta. 479+32.52 Lt. & Rt.

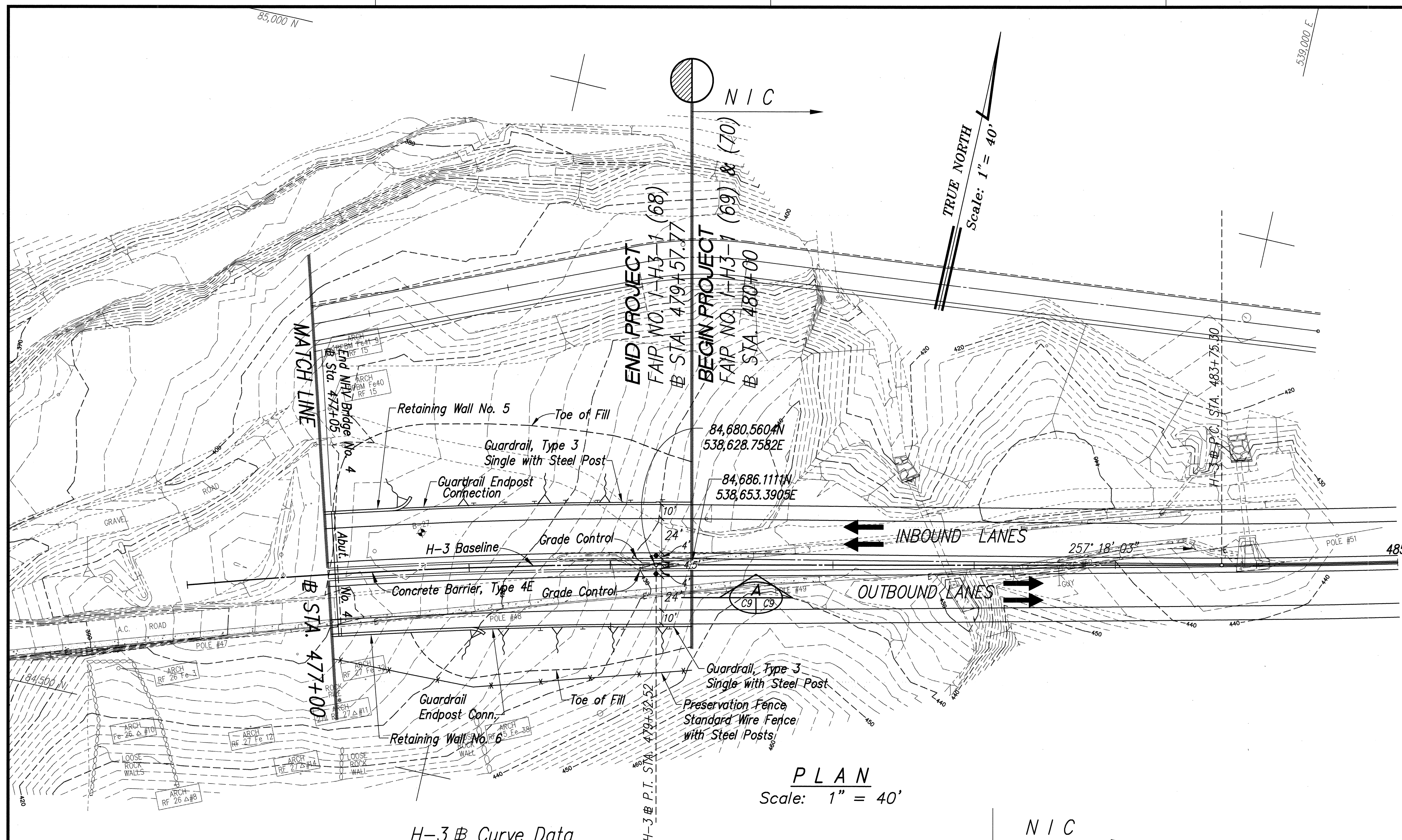
Construct (Two each) Reference Monuments
Offset 6.50' Left and Right of Baseline
(See Standard Plan D-07 for Details)

Construct Standard Wire Fence
with Steel Posts (260 l.f.)

Sta. 477+00 Rt. to Sta. 479+58 Rt. (260 l.f.)

Construct Type 4E Concrete Barrier

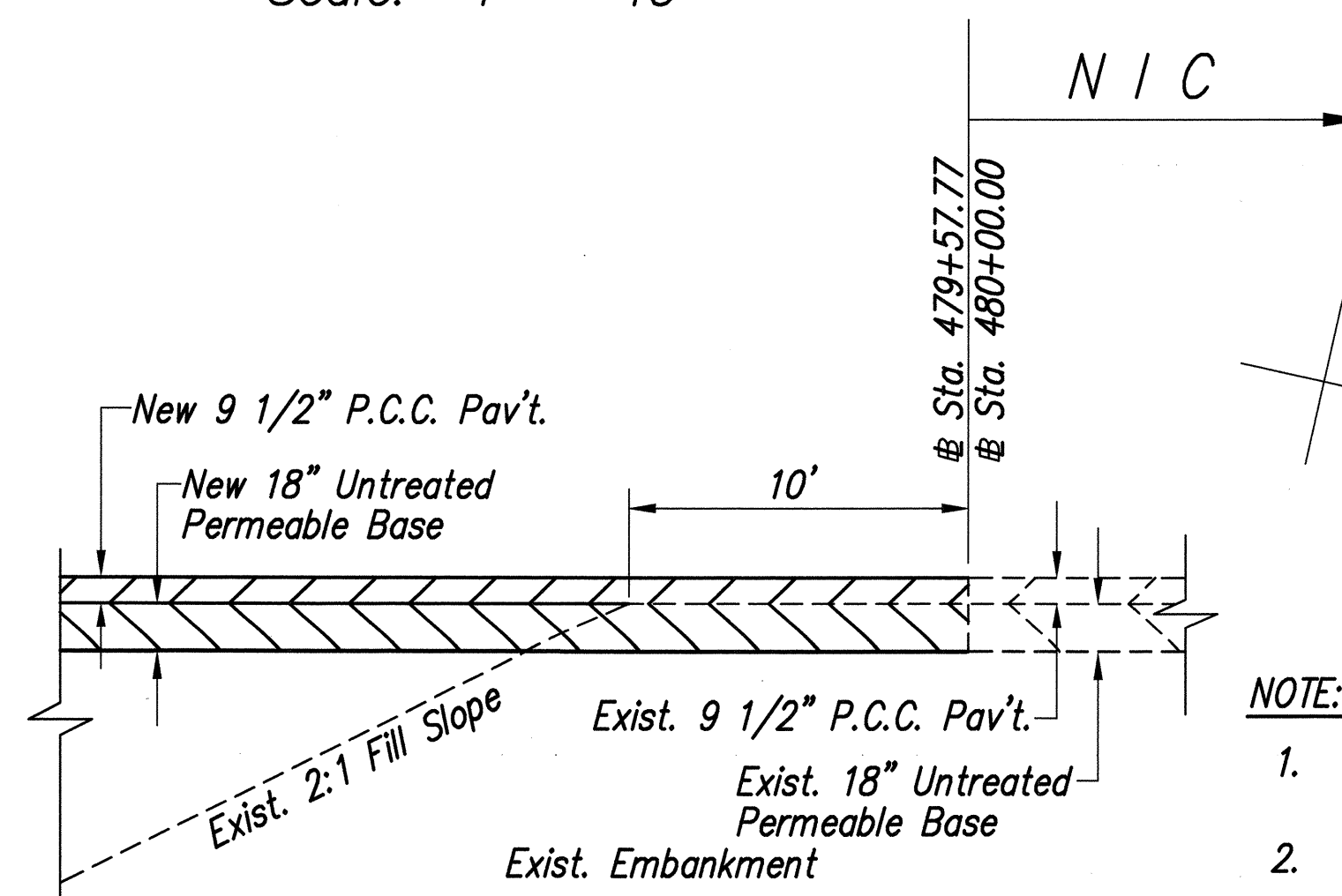
Sta. 477+08 to Sta. 479+57.77 (000 l.f.)



H-3 Curve Data

$\Delta = 15^\circ 36' 40''$
 $\Delta/2 = 7^\circ 48' 20''$
 $R = 3800.00'$
 $T = 520.91'$
 $C = 1032.17'$
 $L_c = 1035.37'$

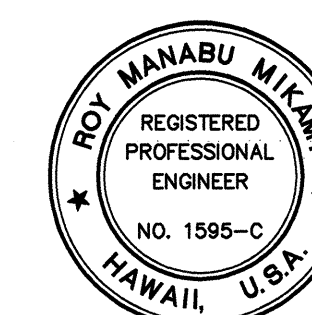
PLAN
Scale: 1" = 40'



SECTION A
Scale: 1" = 5'

NOTE:

- Exist. Embankment to be Constructed under FAIP No. I-H3-1(69) & (70).
- Remove Embankment and Recompect Subgrade.



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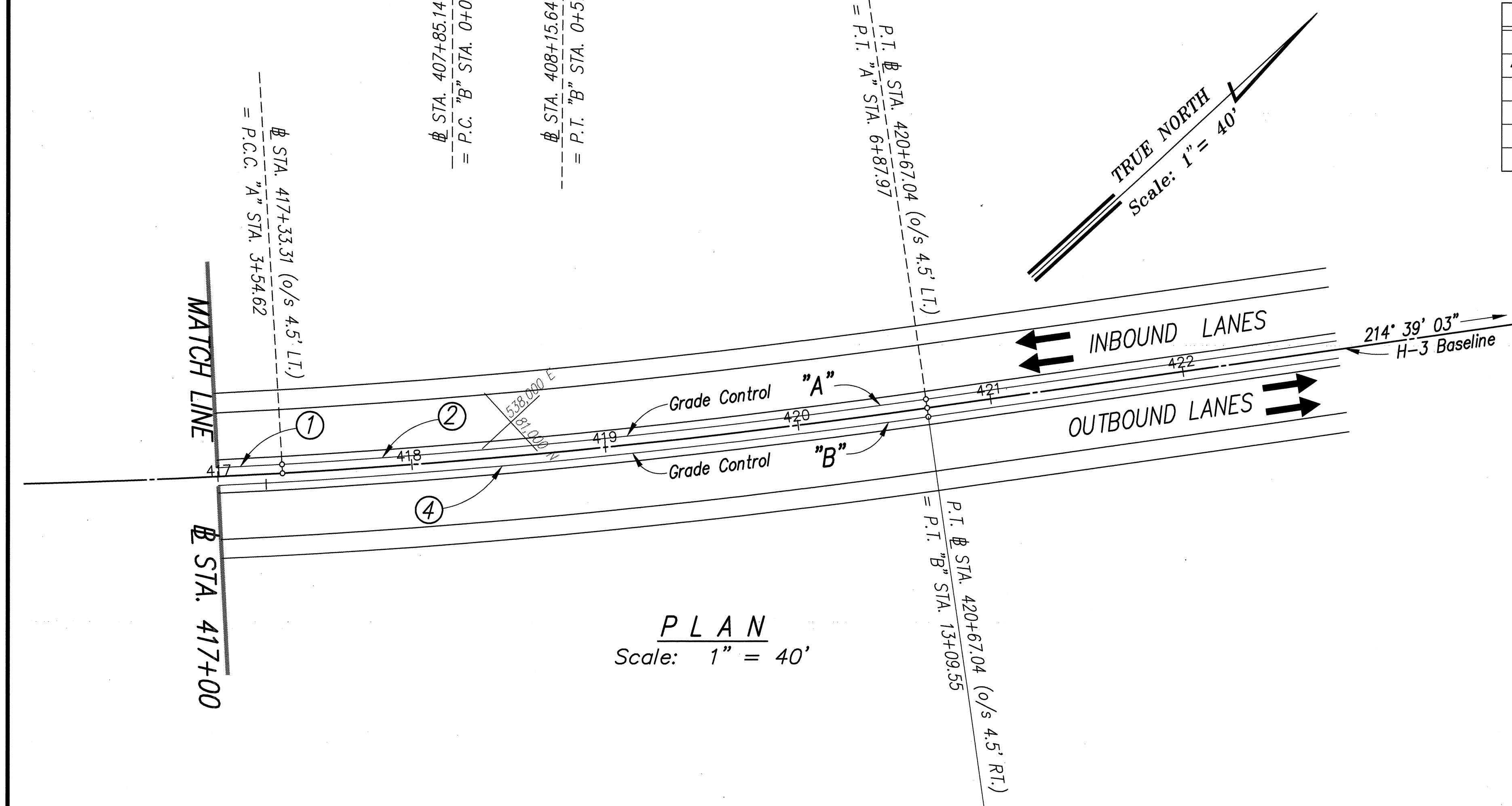
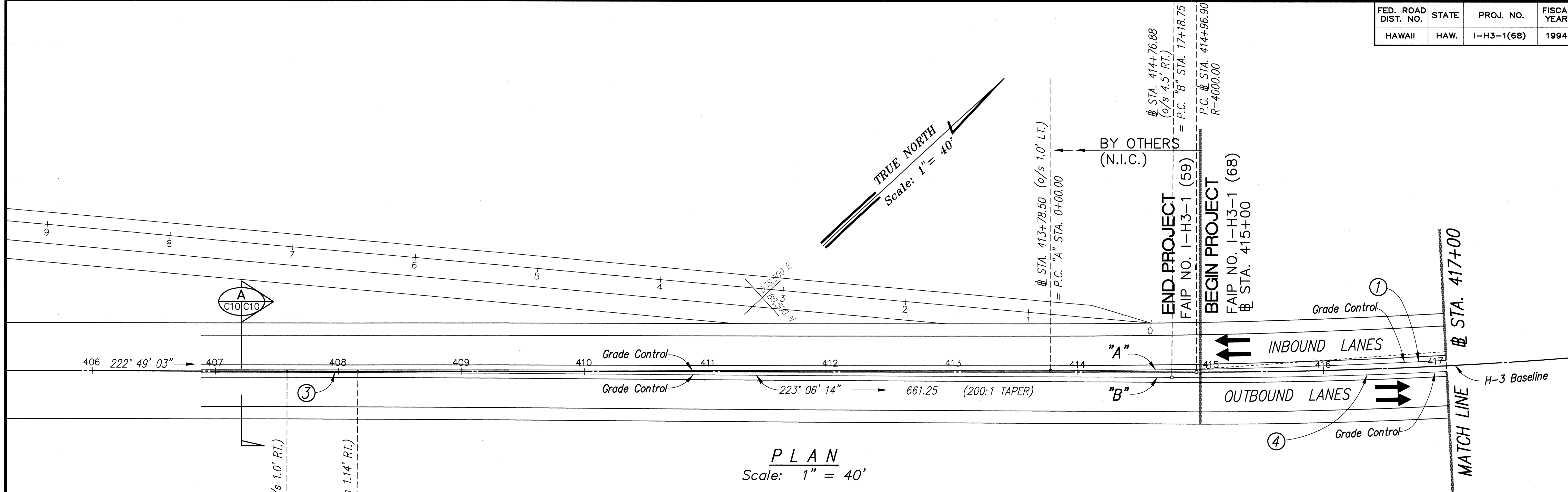
Roy Monahan
Roy Monahan, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
Sta. 477+00 TO END
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994
SHEET No. C9 OF 44 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	20	470



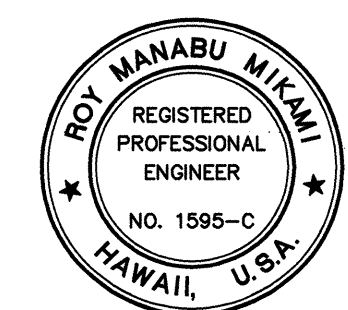
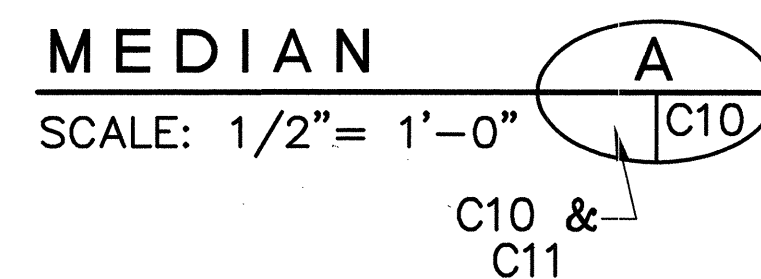
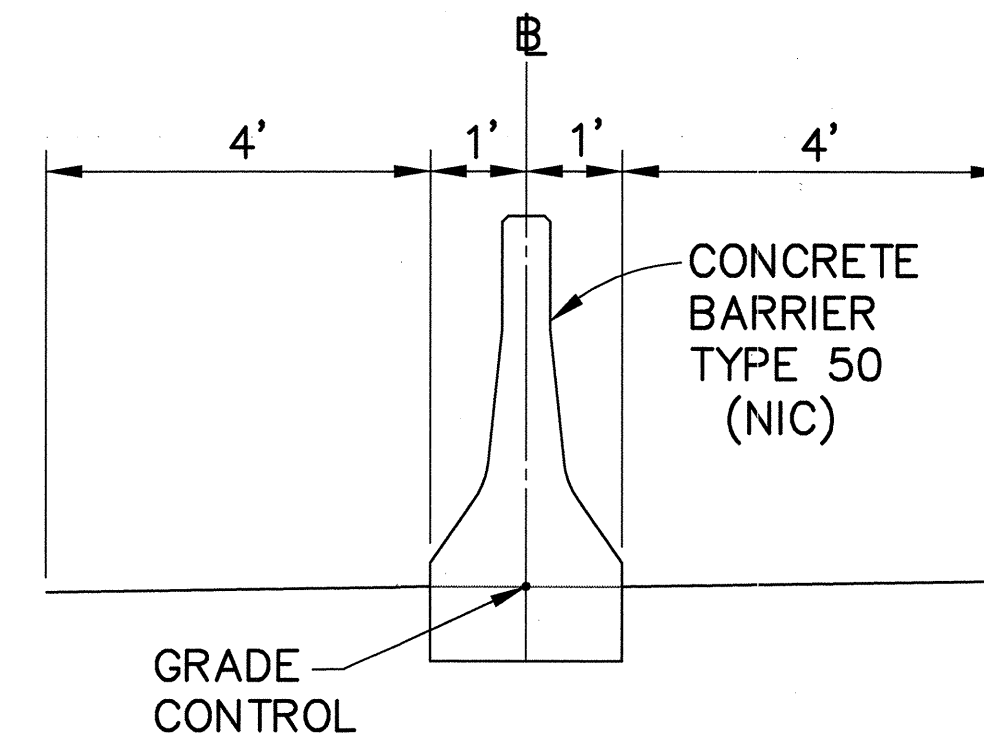
CURVE DATA
$\Delta = 8^{\circ} 10' 00''$
$\Delta/2 = 4^{\circ} 05' 00''$
$R = 4000.00$
$T = 285.55$
$C = 569.66$
$L_c = 570.14$

CURVE DATA ①
$\Delta = 3^{\circ} 23' 11''$
$\Delta/2 = 1^{\circ} 41' 35.5''$
$R = 6000.00$
$T = 177.36$
$C = 354.57$
$L_c = 354.62$

CURVE DATA ②
$\Delta = 4^{\circ} 46' 49''$
$\Delta/2 = 2^{\circ} 23' 24.5''$
$R = 3995.50$
$T = 166.77$
$C = 333.26$
$L_c = 333.35$

CURVE DATA ③
$\Delta = 0^{\circ} 17' 11''$
$\Delta/2 = 0^{\circ} 08' 35.5''$
$R = 11500.00$
$T = 28.75$
$C = 57.50$
$L_c = 57.50$

CURVE DATA ④
$\Delta = 8^{\circ} 27' 11''$
$\Delta/2 = 4^{\circ} 13' 35.5''$
$R = 4004.50$
$T = 295.94$
$C = 590.27$
$L_c = 590.80$



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Roy Manabu Mikami
P.E., Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PROJECT INTERFACE TRANSITION
PLAN
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)
SCALE: AS NOTED
DATE: MAR. 1994
SHEET No. C10 OF 44 SHEETS

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	21	470

# CURVE DATA	
Δ=	15° 36' 40"
Δ/2=	7° 48' 20"
R=	3800.00
T=	520.91
C=	1032.17
Lc=	1035.37

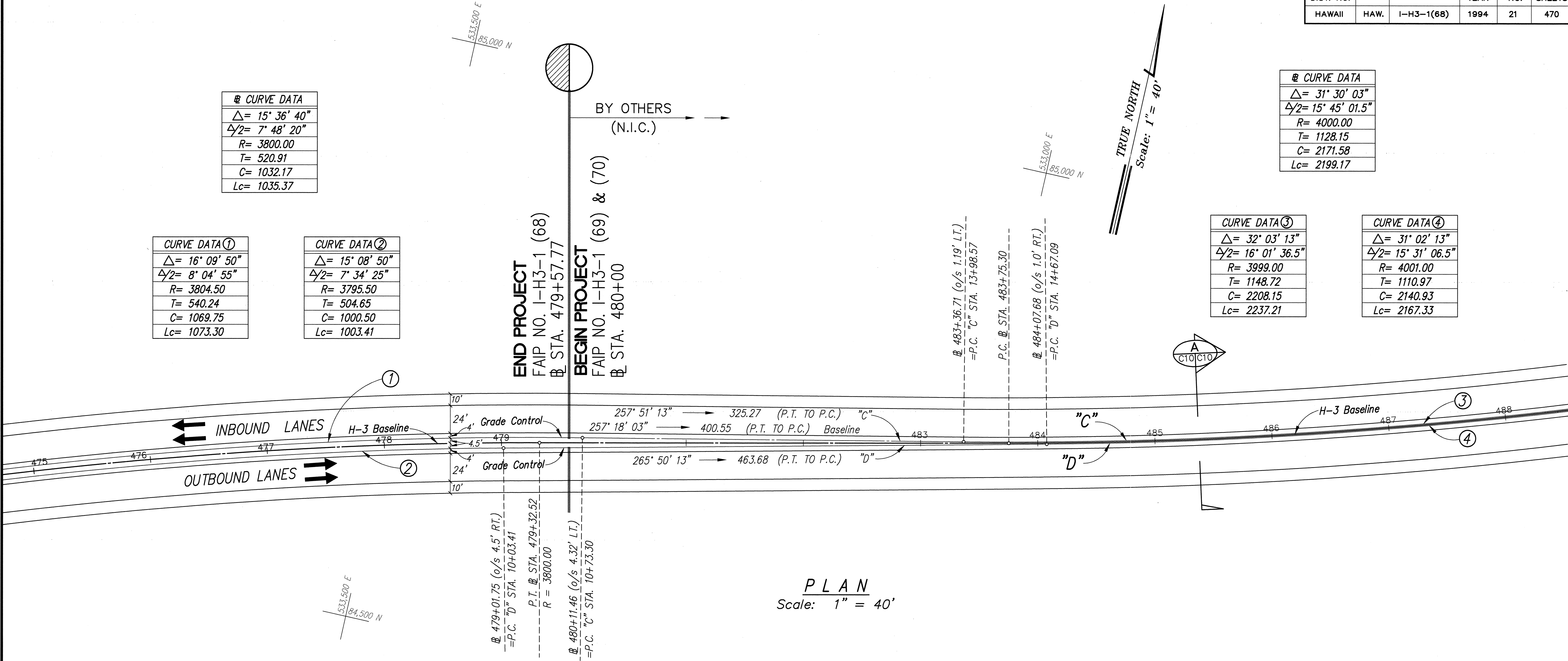
# CURVE DATA	
Δ=	31° 30' 03"
Δ/2=	15° 45' 01.5"
R=	4000.00
T=	1128.15
C=	2171.58
Lc=	2199.17

CURVE DATA①	
Δ=	16° 09' 50"
Δ/2=	8° 04' 55"
R=	3804.50
T=	540.24
C=	1069.75
Lc=	1073.30

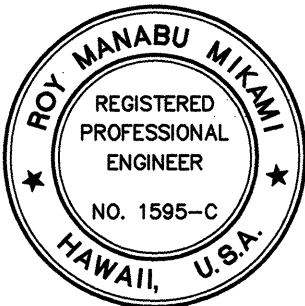
CURVE DATA②	
Δ=	15° 08' 50"
Δ/2=	7° 34' 25"
R=	3795.50
T=	504.65
C=	1000.50
Lc=	1003.41

CURVE DATA③	
Δ=	32° 03' 13"
Δ/2=	16° 01' 36.5"
R=	3999.00
T=	1148.72
C=	2208.15
Lc=	2237.21

CURVE DATA④	
Δ=	31° 02' 13"
Δ/2=	15° 31' 06.5"
R=	4001.00
T=	1110.97
C=	2140.93
Lc=	2167.33



PLAN
Scale: 1" = 40'



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Roy Manabu Mikami
RPM, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PROJECT INTERFACE TRANSITION
PLAN

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. C11 OF 44 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY	
NOTE BOOK	
CHECKED BY	
No.	

U.S. STATE DOT V-303-30301
TRANS 3/19/94 P30