

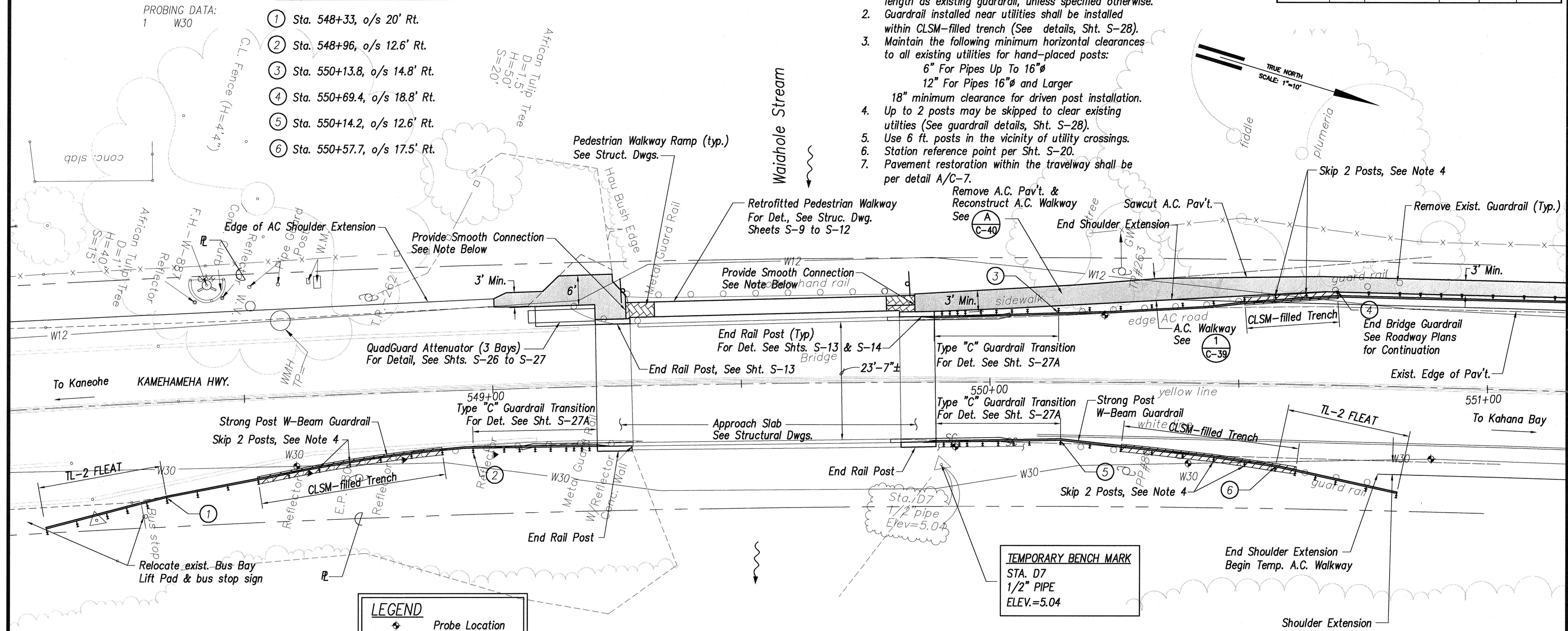
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(43)	2001	C.O. 41	118

Guardrail Reference Table:

- ① Sta. 548+33, o/s 20' Rt.
- ② Sta. 548+96, o/s 12.6' Rt.
- ③ Sta. 550+13.8, o/s 14.8' Rt.
- ④ Sta. 550+69.4, o/s 18.8' Rt.
- ⑤ Sta. 550+14.2, o/s 12.6' Rt.
- ⑥ Sta. 550+57.7, o/s 17.5' Rt.

BRIDGE GUARDRAIL NOTES:

1. Install new guardrail posts along same alignment and length as existing guardrail, unless specified otherwise.
2. Guardrail installed near utilities shall be installed within CLSM-filled trench (See details, Sht. S-28).
3. Maintain the following minimum horizontal clearances to all existing utilities for hand-placed posts:
6" For Pipes Up To 16"Ø
12" For Pipes 16"Ø and Larger
18" minimum clearance for driven post installation.
4. Up to 2 posts may be skipped to clear existing utilities (See guardrail details, Sht. S-28).
5. Use 6 ft. posts in the vicinity of utility crossings.
6. Station reference point per Sht. S-20.
7. Pavement restoration within the travelway shall be per detail A/C-7.



WAIAHOLE BRIDGE (NORTH) PLAN

Scale: 1" = 10'

Pedestrian Walkway Ramp Note:

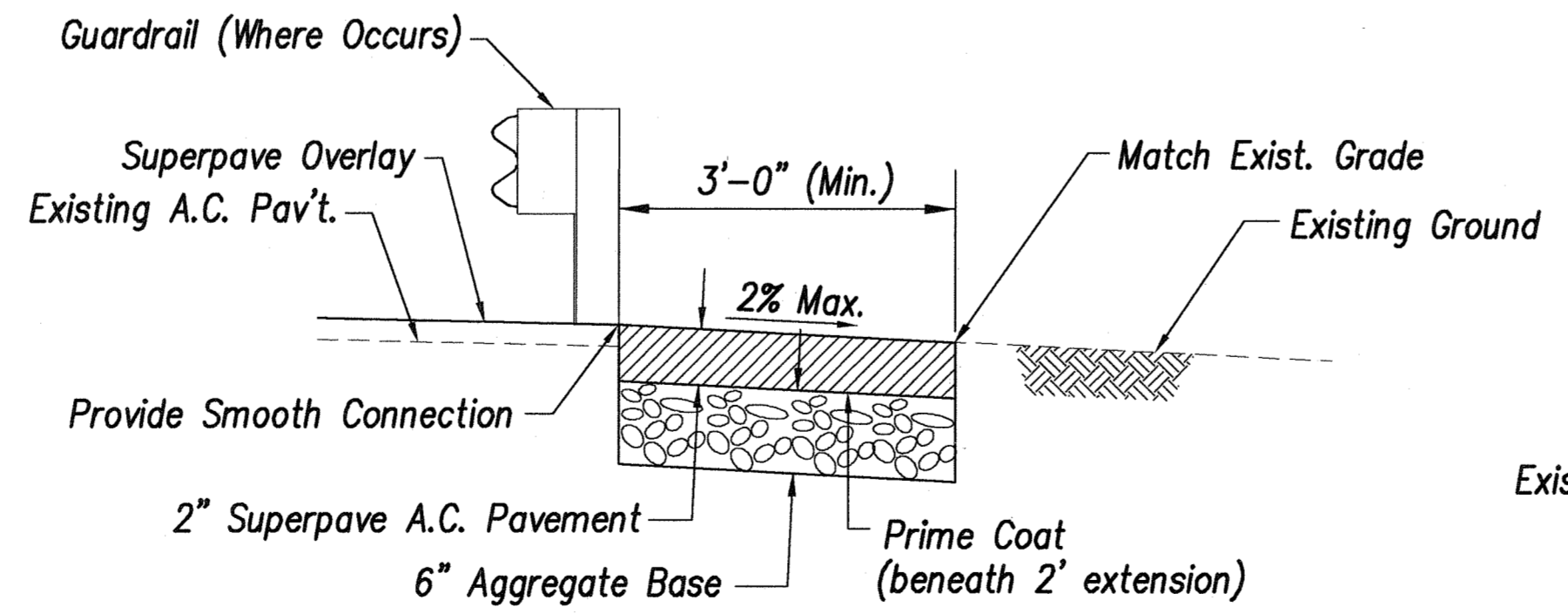
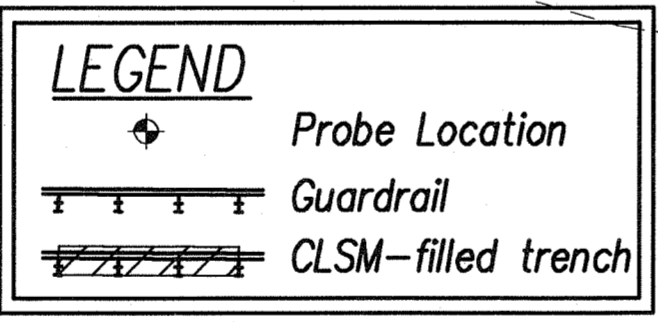
The Contractor shall construct walkway ramp as shown in the structural drawings. If the end ramp grade is higher than the existing pavement grade, the contractor shall build up the pavement by constructing an A.C. ramp from the end of the walkway ramp to the existing pavement grade at a max. longitudinal slope of 5% (See detail, this sheet). Cross slopes shall not exceed 2%.

Temporary Bridge Construction Note:

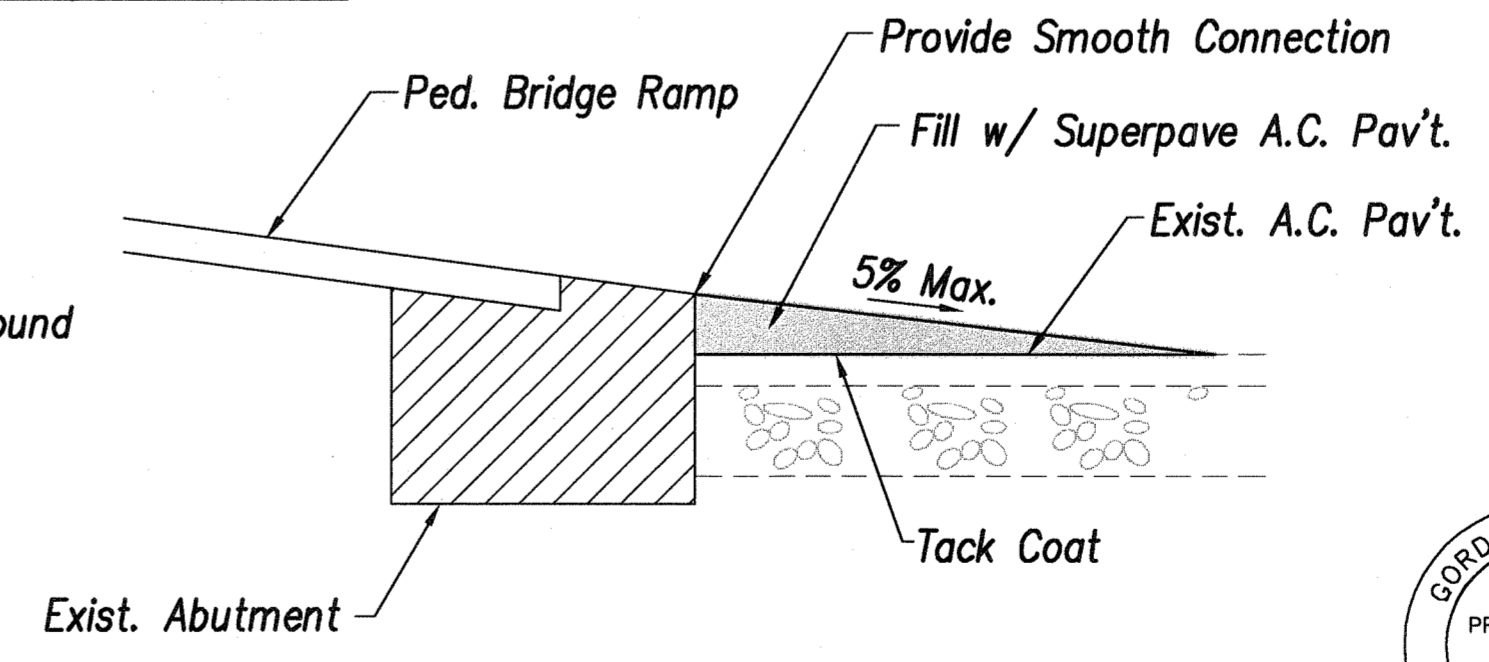
The stream bed shall remain undisturbed during the construction of bridge improvements. The use of heavy machinery or equipment for clearing of vegetation within the stream bed is prohibited. When installing the temporary pedestrian bridge, the Contractor shall not construct any piers within the stream bed.

Asphalt Concrete Walkway Note:

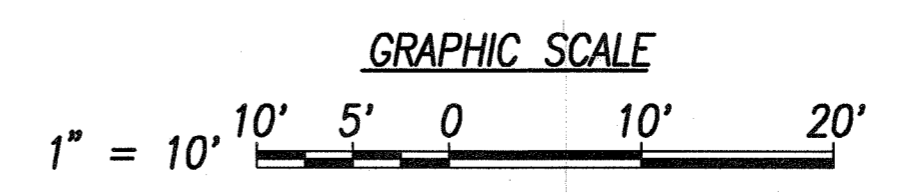
Longitudinal slopes shall not exceed 5% and cross slopes shall not exceed 2%.



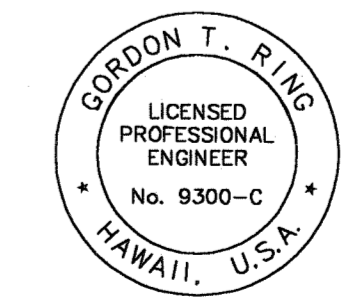
1 A.C. WALKWAY DETAIL
 C-39 Not To Scale



A. C. REPAIR AT PED. RAMP
 Not To Scale



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



DATE	REVISION
1/15/09	Revised Guardrail Connection to Bridges
2/4/02	Added Sheet Reference Per Addendum No. 1

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

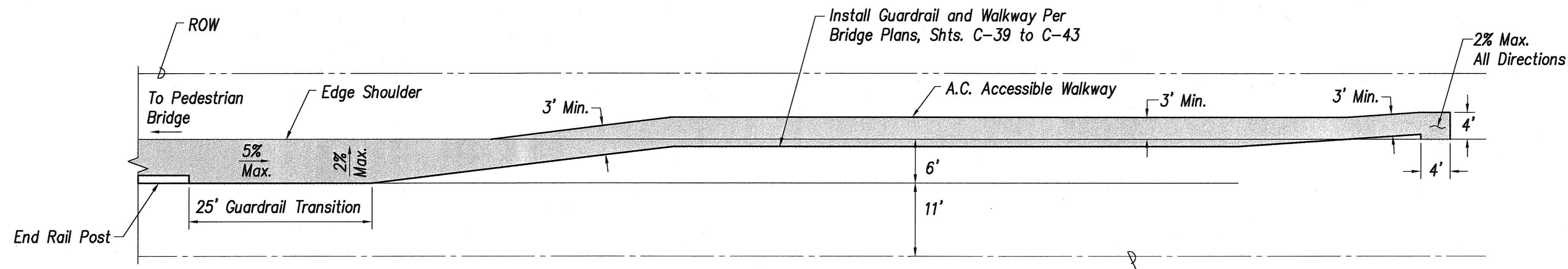
BRIDGE PLAN - 1

KAMEHAMEHA HIGHWAY RESURFACING
 Waiahole Valley Road to Crouching Lion Inn
 Federal Aid Project No. NH-083-1(43)

Scale: 1" = 10' Date: August 1, 2000

SHEET No. C-39 OF 69 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(43)	2001	C.O. 42	118



TYPICAL WALKWAY PLAN AT BRIDGE APPROACH
 Scale: 1" = 10'

- BRIDGE GUARDRAIL NOTES:**
1. Install new guardrail posts along same alignment and length as existing guardrail, unless specified otherwise.
 2. Guardrail installed near utilities shall be installed within CLSM-filled trench (See details, Sht. S-28).
 3. Maintain the following minimum horizontal clearances to all existing utilities for hand-placed posts:
 6" For Pipes Up To 16"Ø
 12" For Pipes 16"Ø and Larger
 18" minimum clearance for driven post installation.
 4. Up to 2 posts may be skipped to clear existing utilities (See guardrail details, Sht. S-28).
 5. Use 6 ft. posts in the vicinity of utility crossings.
 6. Station reference point per Sht. S-20.
 7. Pavement restoration within the travelway shall be per detail A/C-7.

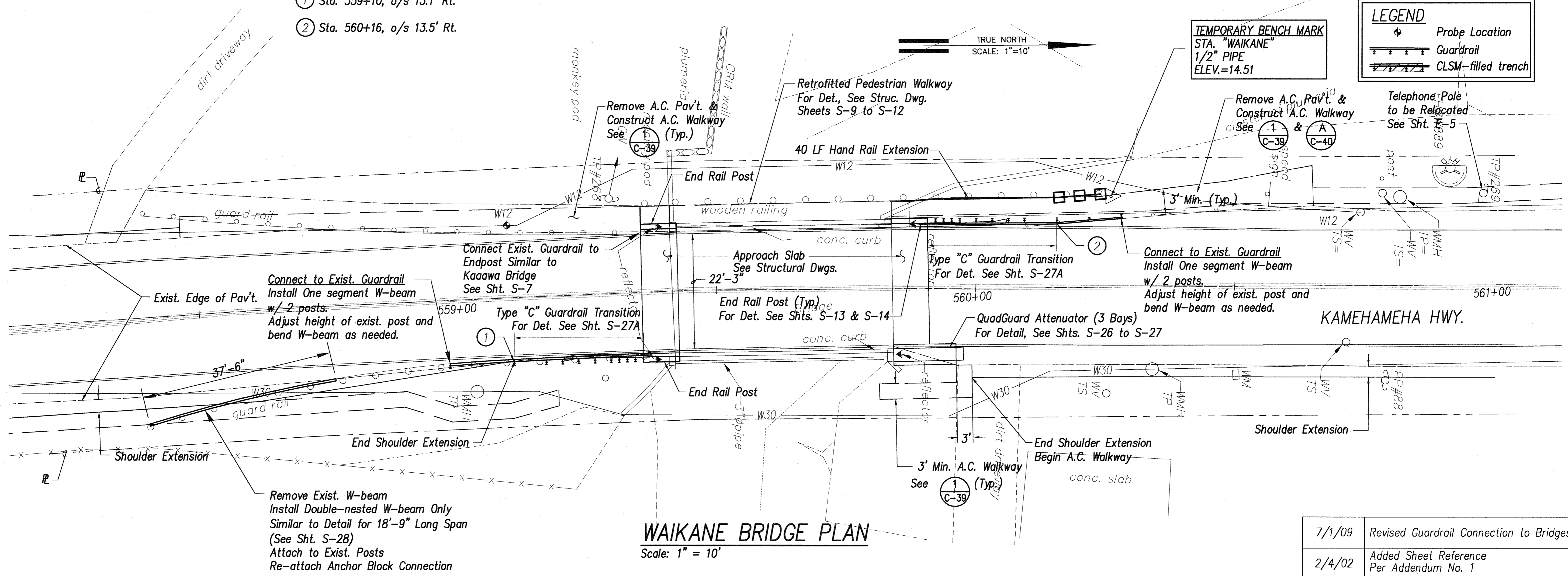
Guardrail Reference Table:

- 1 Sta. 559+10, o/s 13.1' Rt.
- 2 Sta. 560+16, o/s 13.5' Rt.

LEGEND

- ◆ Probe Location
- Guardrail
- ▨ CLSM-filled trench

TEMPORARY BENCH MARK
 STA. "WAIKANE"
 1/2" PIPE
 ELEV.=14.51



WAIKANE BRIDGE PLAN
 Scale: 1" = 10'

DATE	REVISION
7/1/09	Revised Guardrail Connection to Bridges
2/4/02	Added Sheet Reference Per Addendum No. 1

Pedestrian Walkway Ramp Note:

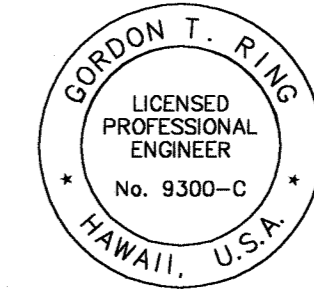
The Contractor shall construct walkway ramp as shown in the structural drawings. If the end ramp grade is higher than the existing pavement grade, the contractor shall build up the pavement by constructing an A.C. ramp from the end of the walkway ramp to the existing pavement grade at a max. longitudinal slope of 5% (See Detail on Sht. C-39). Cross slopes shall not exceed 2%.

Temporary Bridge Construction Note:

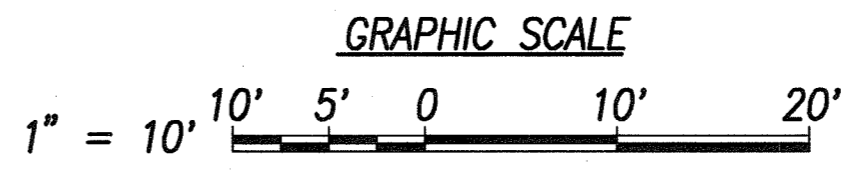
The stream bed shall remain undisturbed during the construction of bridge improvements. The use of heavy machinery or equipment for clearing of vegetation within the stream bed is prohibited. When installing the temporary pedestrian bridge, the Contractor shall not construct any piers within the stream bed.

Asphalt Concrete Walkway Note:

Longitudinal slopes shall not exceed 5% and cross slopes shall not exceed 2%.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 Signature: Gordon T. R. I. N. S.
 Date: 4/30/10
 LIC. EXP. DATE



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BRIDGE PLAN - 2

KAMEHAMEHA HIGHWAY RESURFACING
 Waiahole Valley Road to Crouching Lion Inn
 Federal Aid Project No. NH-083-1(43)

Scale: 1" = 10' Date: August 1, 2000

SHEET No. C-40 OF 69 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(43)	2001	C.O. 43	118

Water System Notes:

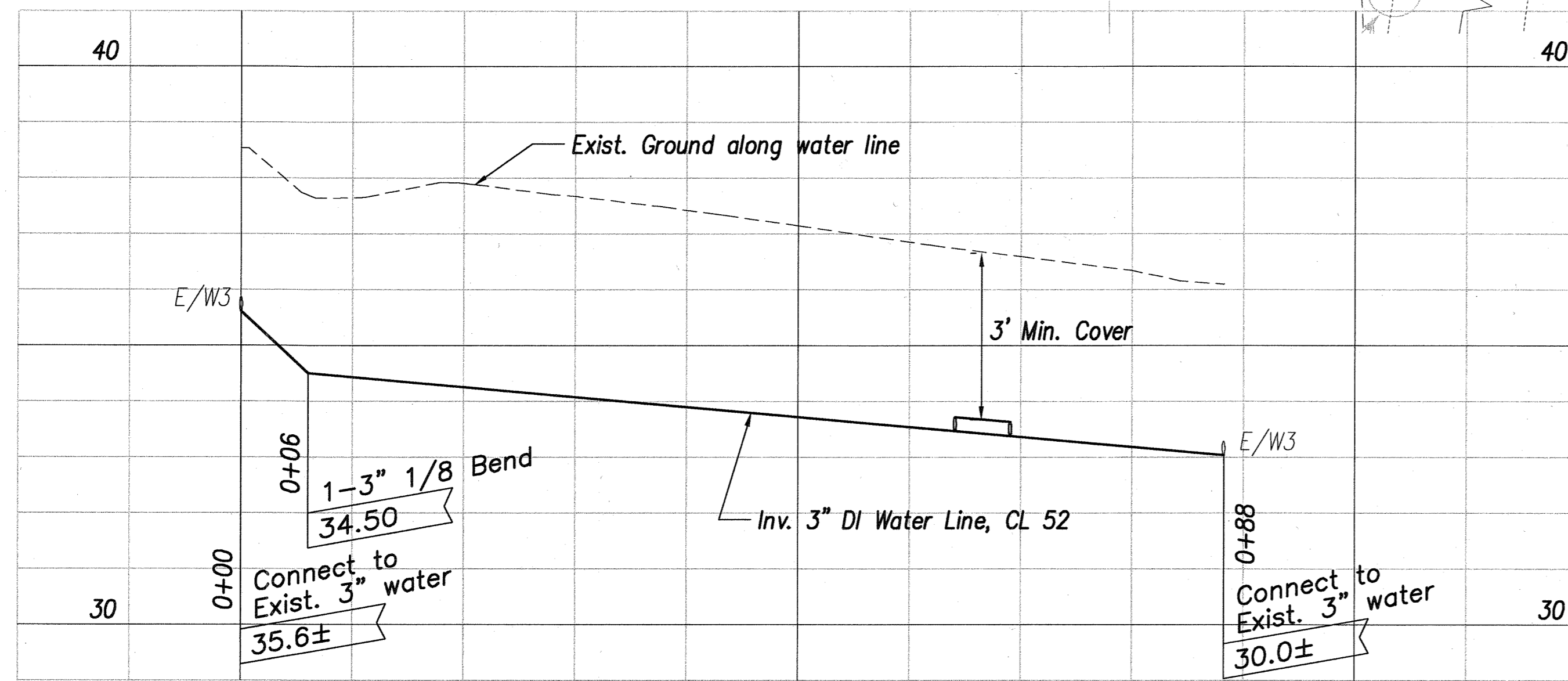
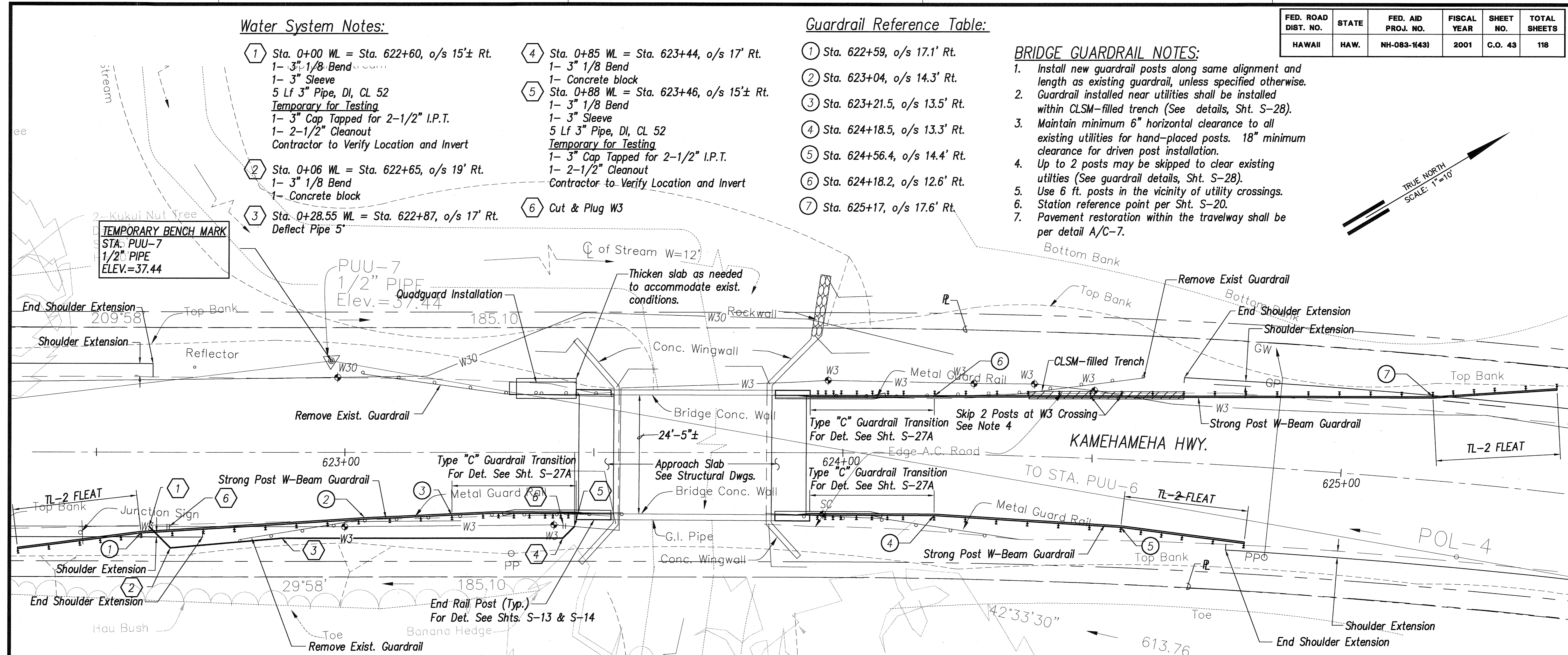
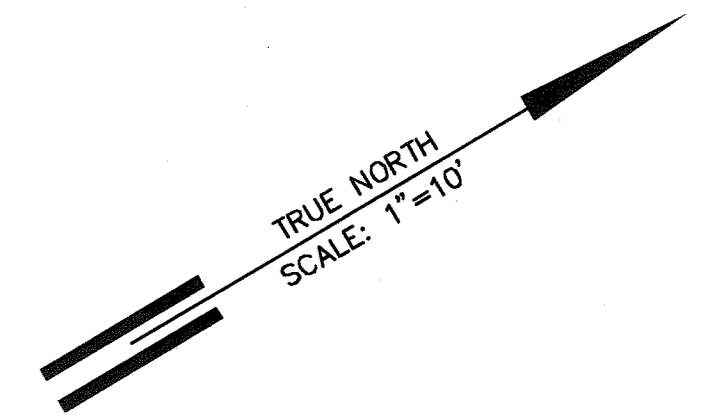
- ① Sta. 0+00 WL = Sta. 622+60, o/s 15'± Rt.
1- 3" 1/8 Bend
1- 3" Sleeve
5 Lf 3" Pipe, DI, CL 52
Temporary for Testing
1- 3" Cap Tapped for 2-1/2" I.P.T.
1- 2-1/2" Cleanout
Contractor to Verify Location and Invert
- ② Sta. 0+06 WL = Sta. 622+65, o/s 19' Rt.
1- 3" 1/8 Bend
1- Concrete block
- ③ Sta. 0+28.55 WL = Sta. 622+87, o/s 17' Rt.
Deflect Pipe 5"
- ④ Sta. 0+85 WL = Sta. 623+44, o/s 17' Rt.
1- 3" 1/8 Bend
1- Concrete block
- ⑤ Sta. 0+88 WL = Sta. 623+46, o/s 15'± Rt.
1- 3" 1/8 Bend
1- 3" Sleeve
5 Lf 3" Pipe, DI, CL 52
Temporary for Testing
1- 3" Cap Tapped for 2-1/2" I.P.T.
1- 2-1/2" Cleanout
Contractor to Verify Location and Invert
- ⑥ Cut & Plug W3

Guardrail Reference Table:

- ① Sta. 622+59, o/s 17.1' Rt.
- ② Sta. 623+04, o/s 14.3' Rt.
- ③ Sta. 623+21.5, o/s 13.5' Rt.
- ④ Sta. 624+18.5, o/s 13.3' Rt.
- ⑤ Sta. 624+56.4, o/s 14.4' Rt.
- ⑥ Sta. 624+18.2, o/s 12.6' Rt.
- ⑦ Sta. 625+17, o/s 17.6' Rt.

BRIDGE GUARDRAIL NOTES:

1. Install new guardrail posts along same alignment and length as existing guardrail, unless specified otherwise.
2. Guardrail installed near utilities shall be installed within CLSM-filled trench (See details, Sht. S-28).
3. Maintain minimum 6" horizontal clearance to all existing utilities for hand-placed posts. 18" minimum clearance for driven post installation.
4. Up to 2 posts may be skipped to clear existing utilities (See guardrail details, Sht. S-28).
5. Use 6 ft. posts in the vicinity of utility crossings.
6. Station reference point per Sht. S-20.
7. Pavement restoration within the travelway shall be per detail A/C-7.



PROFILE - RELOCATED 3" WATER LINE

Scale: Horizontal: 1" = 10'
Vertical: 1" = 2'

HAKIPUU BRIDGE PLAN

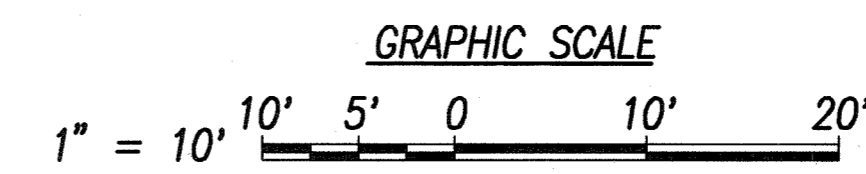
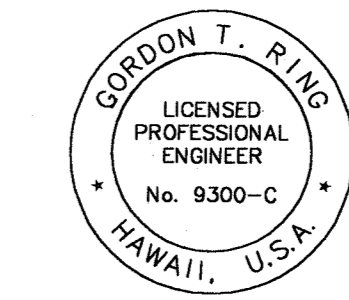
Scale: 1" = 10'

LEGEND	
	Probe Location
	Guardrail
	CLSM-filled trench

APPROVED:

Domini Z. Ota
Chief, Capital Projects Division, BWS

7/6/09
Date



DATE	REVISION
7/1/09	Revised Guardrail Connection to Bridges
2/4/02	Added Sheet Reference Per Addendum No. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRIDGE PLAN - 3

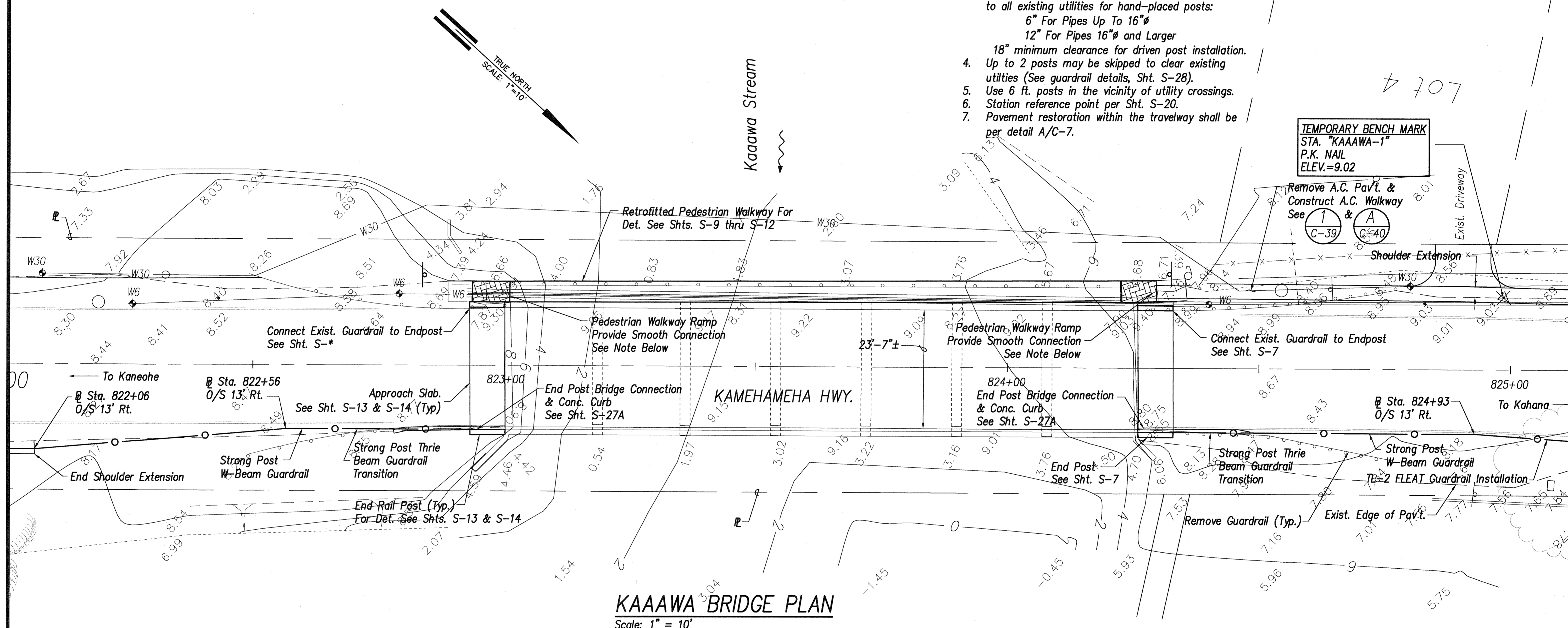
KAMEHAMEHA HIGHWAY RESURFACING
Waiahole Valley Road to Crouching Lion Inn
Federal Aid Project No. NH-083-1(43)

Scale: 1" = 10' Date: August 1, 2000

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(43)	2001	C.O. 44	118

- BRIDGE GUARDRAIL NOTES:**
1. Install new guardrail posts along same alignment and length as existing guardrail, unless specified otherwise.
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 5. Use 6 ft. posts in the vicinity of utility crossings.
 6. Station reference point per Sht. S-20.
 7. Pavement restoration within the travelway shall be per detail A/C-7.



TEMPORARY BENCH MARK
STA. "KAAWA-1"
P.K. NAIL
ELEV.=9.02

Remove A.C. Pavt. & Construct A.C. Walkway
See C-39 & A

707

KAAWA BRIDGE PLAN
Scale: 1" = 10'

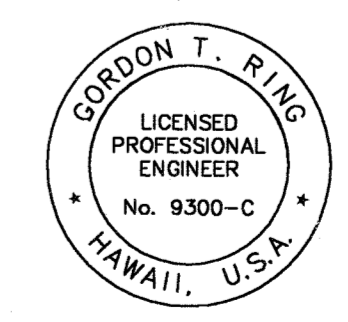
Pedestrian Walkway Ramp Note:
The Contractor shall construct walkway ramp as shown in the structural drawings. If the end ramp grade is higher than the existing pavement grade, the contractor shall build up the pavement by constructing an A.C. ramp from the end of the walkway ramp to the existing pavement grade at a max. longitudinal slope of 5% (See Detail on Sht. C-39). Cross slopes shall not exceed 2%.

Temporary Bridge Construction Note:
The stream bed shall remain undisturbed during the construction of bridge improvements. The use of heavy machinery or equipment for clearing of vegetation within the stream bed is prohibited. When installing the temporary pedestrian bridge, the Contractor shall not construct any piers within the stream bed.

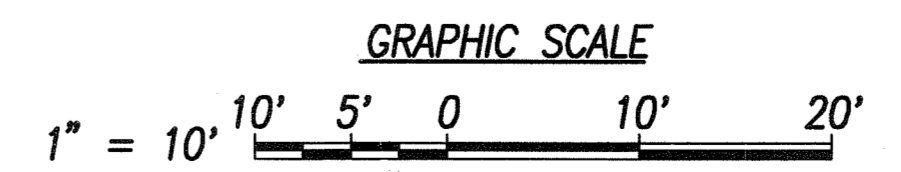
Asphalt Concrete Walkway Note:
Longitudinal slopes shall not exceed 5% and cross slopes shall not exceed 2%. See Sht. C-39.

LEGEND

	Probe Location
	Guardrail



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
SIGNATURE: *Gordon T. Ring* 4/30/00 LIC. EXP. DATE



DATE	REVISION
1/15/09	Revised Guardrail Connection to Bridges
2/4/02	Added Sheet Reference Per Addendum No. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRIDGE PLAN - 4

KAMEHAMEHA HIGHWAY RESURFACING
Waiahole Valley Road to Crouching Lion Inn
Federal Aid Project No. NH-083-1(43)

Scale: 1" = 10' Date: August 1, 2000

SHEET No. C-42 OF 69 SHEETS

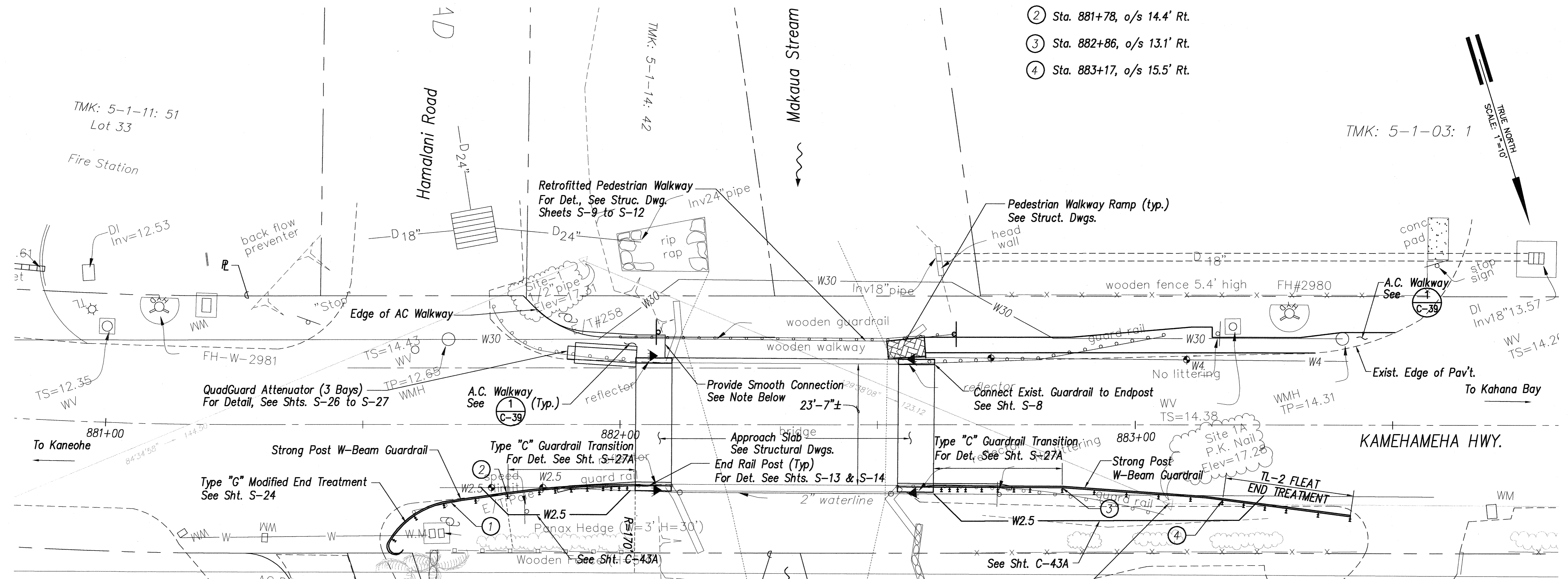
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

K:\civil\186541\DWG\GUARDRAIL\SUBMITTAL_4-17-09\KAAWA-FINAL.dwg, 4/16/2009 1:00:44 PM

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(43)	2001	C.O. 45	118

Guardrail Reference Table:

- ① Sta. 881+67, o/s 15.1' Rt.
- ② Sta. 881+78, o/s 14.4' Rt.
- ③ Sta. 882+86, o/s 13.1' Rt.
- ④ Sta. 883+17, o/s 15.5' Rt.



- BRIDGE GUARDRAIL NOTES:**
1. Install new guardrail posts along same alignment and length as existing guardrail, unless specified otherwise.
 2. Guardrail installed near utilities shall be installed within CLSM-filled trench (See details, Sht. S-28).
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 5. Use 6 ft. posts in the vicinity of utility crossings.
 6. Station reference point per Sht. S-20.
 7. Pavement restoration within the travelway shall be per detail A/C-7.

Pedestrian Walkway Ramp Note:
 The Contractor shall construct walkway ramp as shown in the structural drawings. If the end ramp grade is higher than the existing pavement grade, the contractor shall build up the pavement by constructing an A.C. ramp from the end of the walkway ramp to the existing pavement grade at a max. longitudinal slope of 5% (See Detail on Sht. C-39). Cross slopes shall not exceed 2%.

Temporary Bridge Construction Note:
 The stream bed shall remain undisturbed during the construction of bridge improvements. The use of heavy machinery or equipment for clearing of vegetation within the stream bed is prohibited. When installing the temporary pedestrian bridge, the Contractor shall not construct any piers within the stream bed.

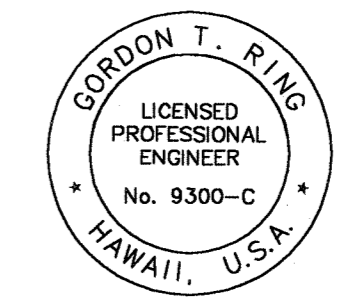
Asphalt Concrete Walkway Note:
 Longitudinal slopes shall not exceed 5% and cross slopes shall not exceed 2%.

TEMPORARY BENCH MARK
 STA. 1A
 P.K. NAIL
 ELEV.=17.28

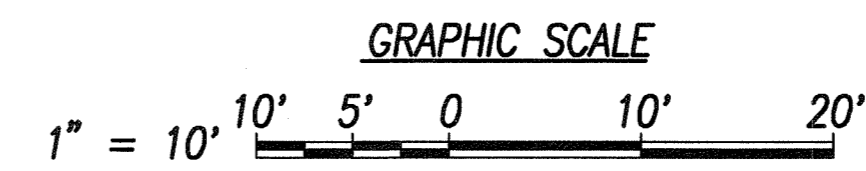
LEGEND

	Probe Location
	Guardrail

DATE	REVISION
1/15/09	Revised Guardrail Connection to Bridges
2/4/02	Added Sheet Reference Per Addendum No. 1



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 SIGNATURE: *Gordon T. Ring* 4/20/10 LIC. EXP. DATE



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BRIDGE PLAN - 5

KAMEHAMEHA HIGHWAY RESURFACING
 Waiahole Valley Road to Crouching Lion Inn
 Federal Aid Project No. NH-083-1(43)

Scale: 1" = 10' Date: August 1, 2000

SHEET No. C-43 OF 69 SHEETS

NO.	DATE	BY	DESCRIPTION