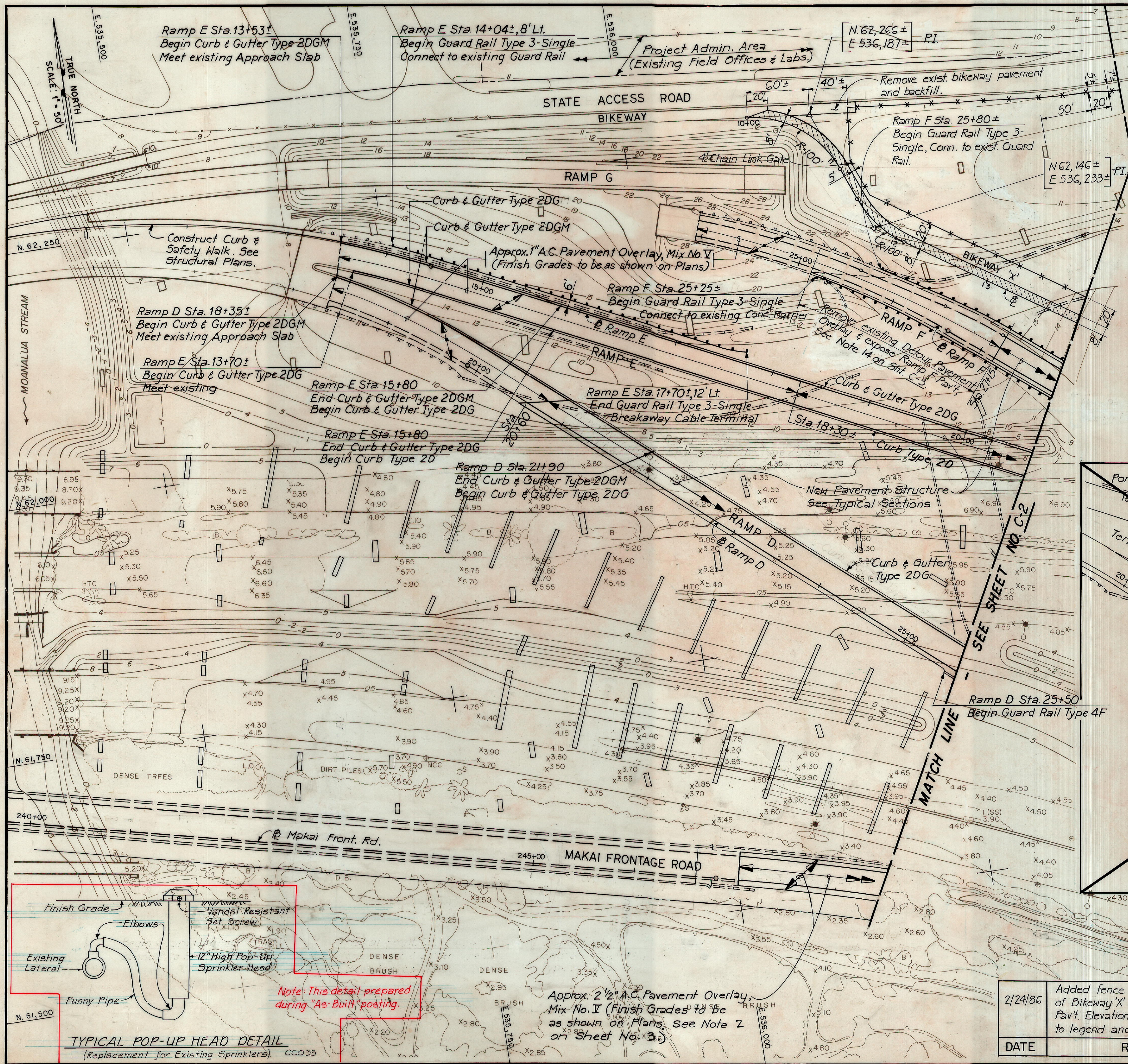




LEGEND:

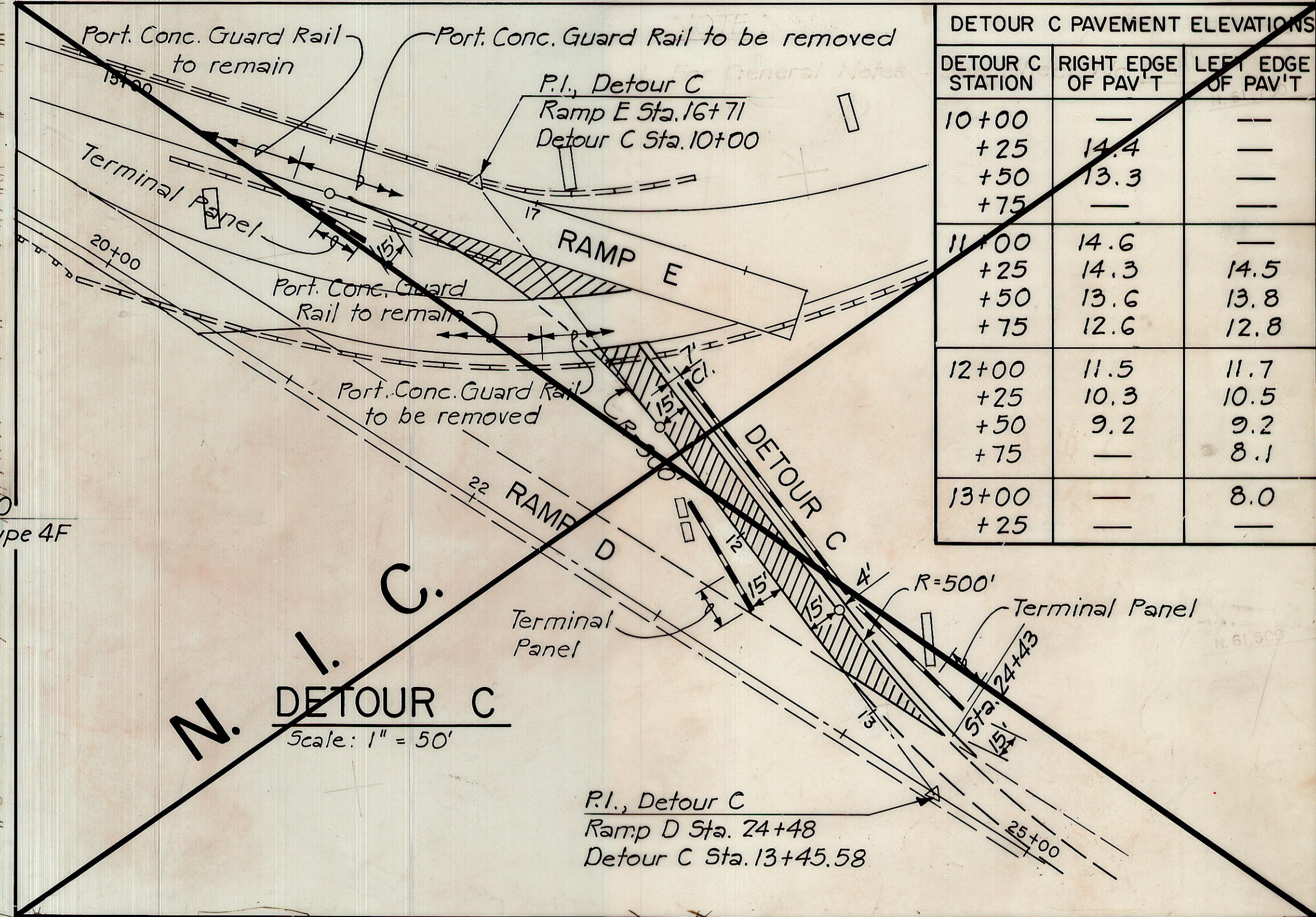
- 4"-Plain Concrete Sidewalk
- 6"-Bedcourse Material
- Bikeway (to be paid in accord. with Section 608-Sidewalks)
- 2"-Asphalt Concrete Pavement, Mix No.V
- 6"-Bedcourse Material
- Provide Smooth Riding Connection with Asphalt Concrete Pavement, Mix No.V
- Wheel Chair Ramp (4" Plain Concrete)
- Separation Line for Different Pavement Structures
- Guard Rail Type 3
- Existing Guard Rail Type 3
- Portable Concrete Guard Rail
- Existing Portable Conc. Guard Rail
- Right-of-Way Line
- 2 1/2"-Asphalt Conc. Pavement, Mix No.V
- 6"-Aggregate Base
- 6"-Aggregate Subbase
- Edge of Traveled Way
- Conc. Gutter or A.C. Pavement
- Concrete Curb
- Bus Stop Slab
- A.C. Asphalt Concrete
- Utility Facility to be adjusted (Manhole Cover, Handhole, etc.)
- 6" High Chain Link Fence

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(169):17	1983	28	280

BIKEWAY 'X' PAVT ELEVATIONS			
BIKEWAY 'X' STATION	RT. EDGE OF PAVT & BASELINE	LEFT EDGE OF PAVT	EDGE OF PAVT
10+00	Meet Exist	Meet Exist	
+50	12.20	12.36	
11+00	12.70	12.86	
+50	13.20	13.04	
12+00	13.50	13.34	
+50	12.81	12.65	
13+00	11.92	11.76	
+50	11.03	10.87	
14+00	10.14	9.98	

NOTES:

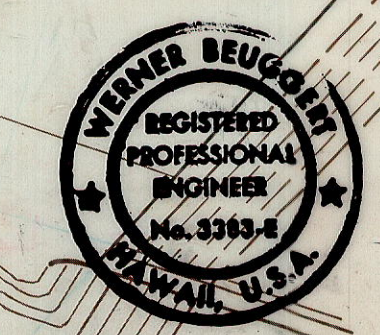
- For General Notes see Sheet C-3.
- Existing sprinkler heads within 5 feet of proposed bikeway shall be removed & replaced with 12-inch high pop-up sprinkler heads with vandal resistant set screw. Trees within 5 feet of proposed bikeway shall be transplanted, as directed by the Engineer. Shrubberies within 5 feet of proposed bikeway shall be removed. Shrubberies may be trimmed and location of proposed fence may be adjusted to facilitate construction of fence.



DETOUR C PAVEMENT ELEVATIONS			
DETOUR C STATION	RIGHT EDGE OF PAVT	LEFT EDGE OF PAVT	EDGE OF PAVT
10+00			
+25	14.4		
+50	13.3		
+75			
11+00	14.6		
+25	14.3	14.5	
+50	13.6	13.8	
+75	12.6	12.8	
12+00	11.5	11.7	
+25	10.3	10.5	
+50	9.2	9.2	
+75		8.1	
13+00		8.0	
+25			

DATE	.....
DESIGNED BY	.....
TRACED BY	.....
NOTE BOOK	.....
QUANTITIES BY	.....
CHECKED BY	.....

2/24/86	Added fence and changed location of Bikeway 'X'. Revised table "Bikeway 'X' Pavt. Elevations". Added fence symbol to legend and Note 2.
DATE	REVISION



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

ROADWAY CONSTRUCTION

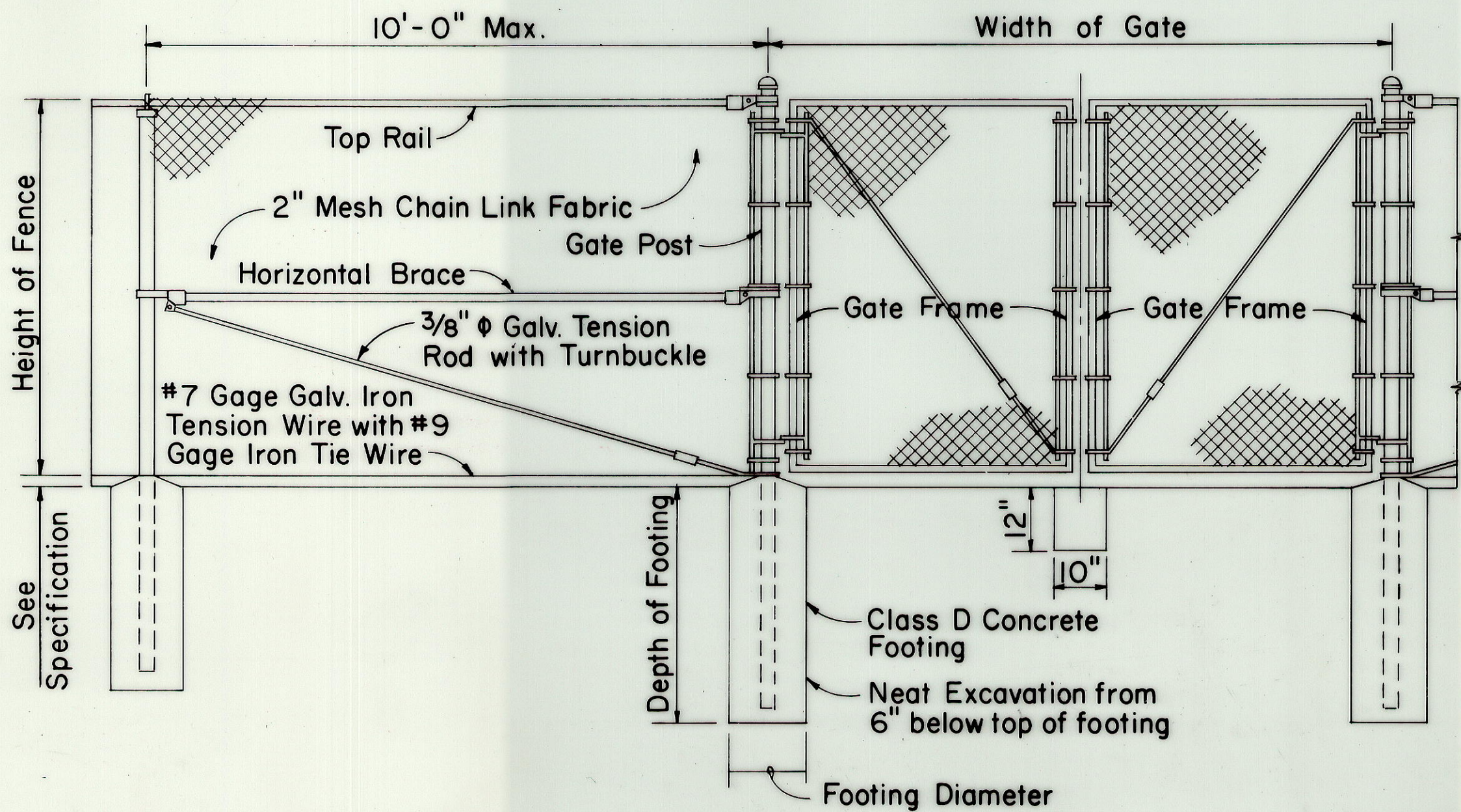
INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169):17

SCALE: 1" = 50' DATE: 3/15/82
SHEET No. C-1 OF 17 SHEETS

"AS-BUILT"

C.028

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-IR-HI-1(169)17	1983	C.O.285-1	280



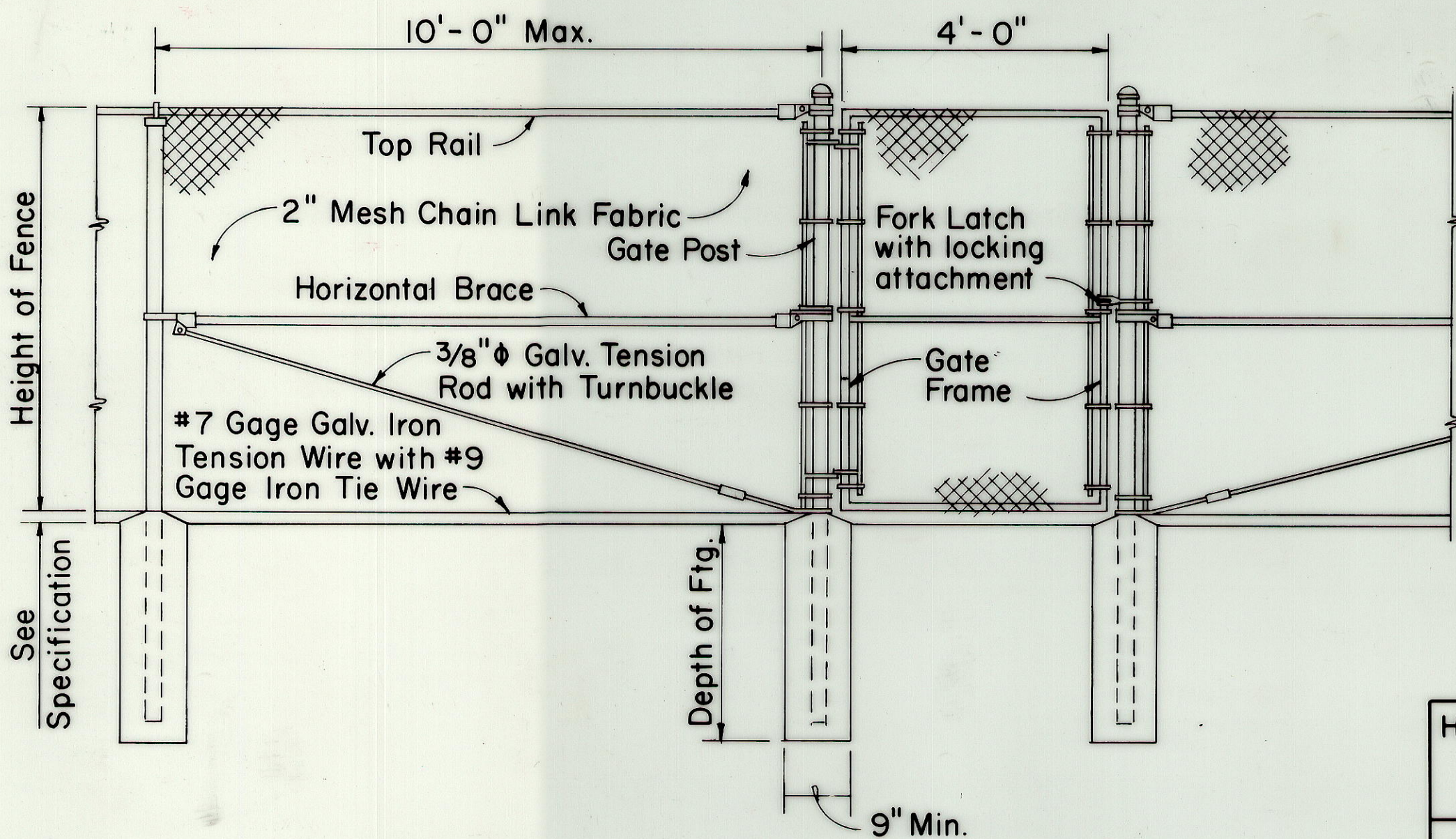
LINE POST

GATE POST

GATE POST

DETAIL OF CHAIN LINK GATE

- NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.
2. Gate frames shall be mitered and welded at corners.
3. Fence detail not shown shall be in accordance with the Standard Specifications.

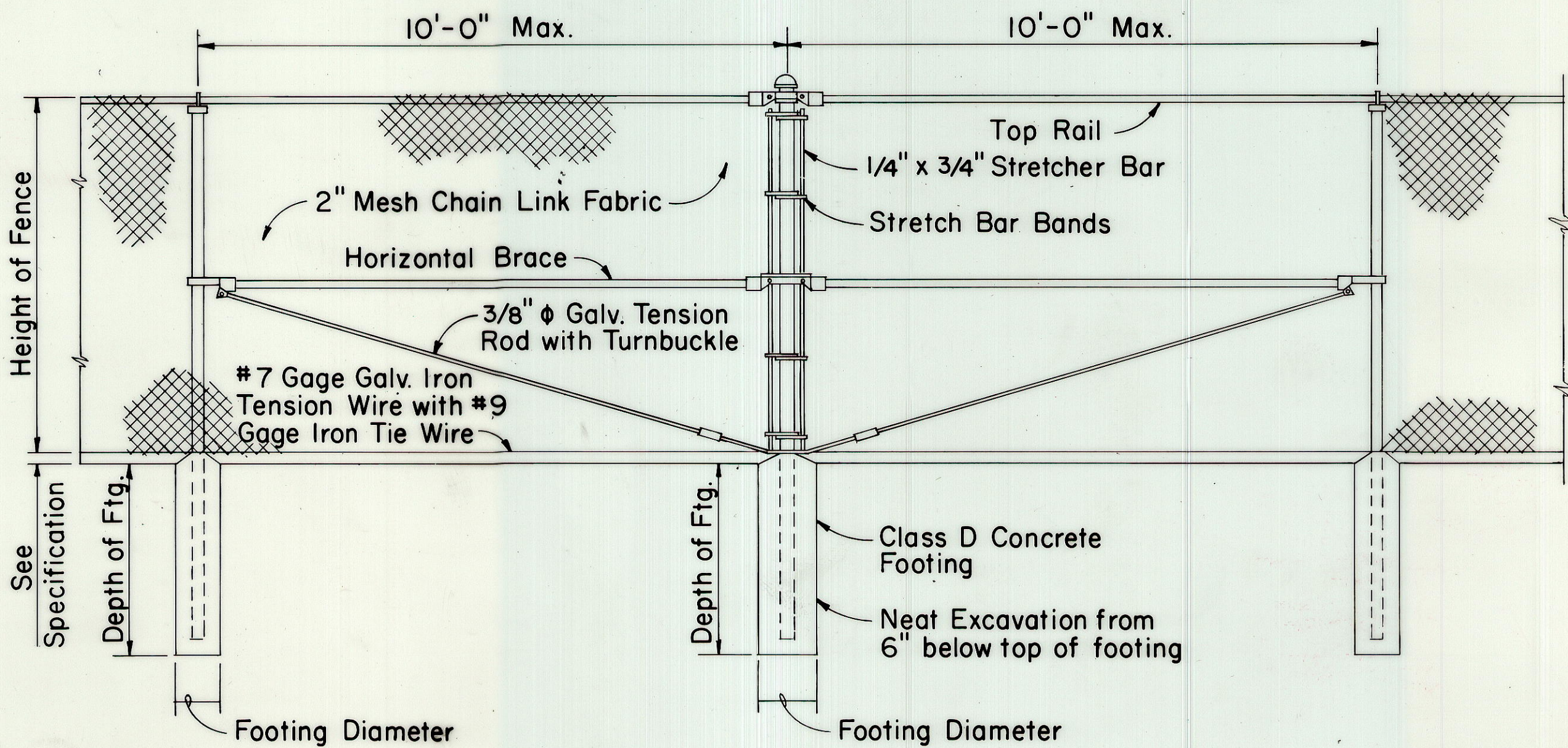


LINE POST

GATE POST

GATE POST

DETAIL OF 4 FT. CHAIN LINK GATE

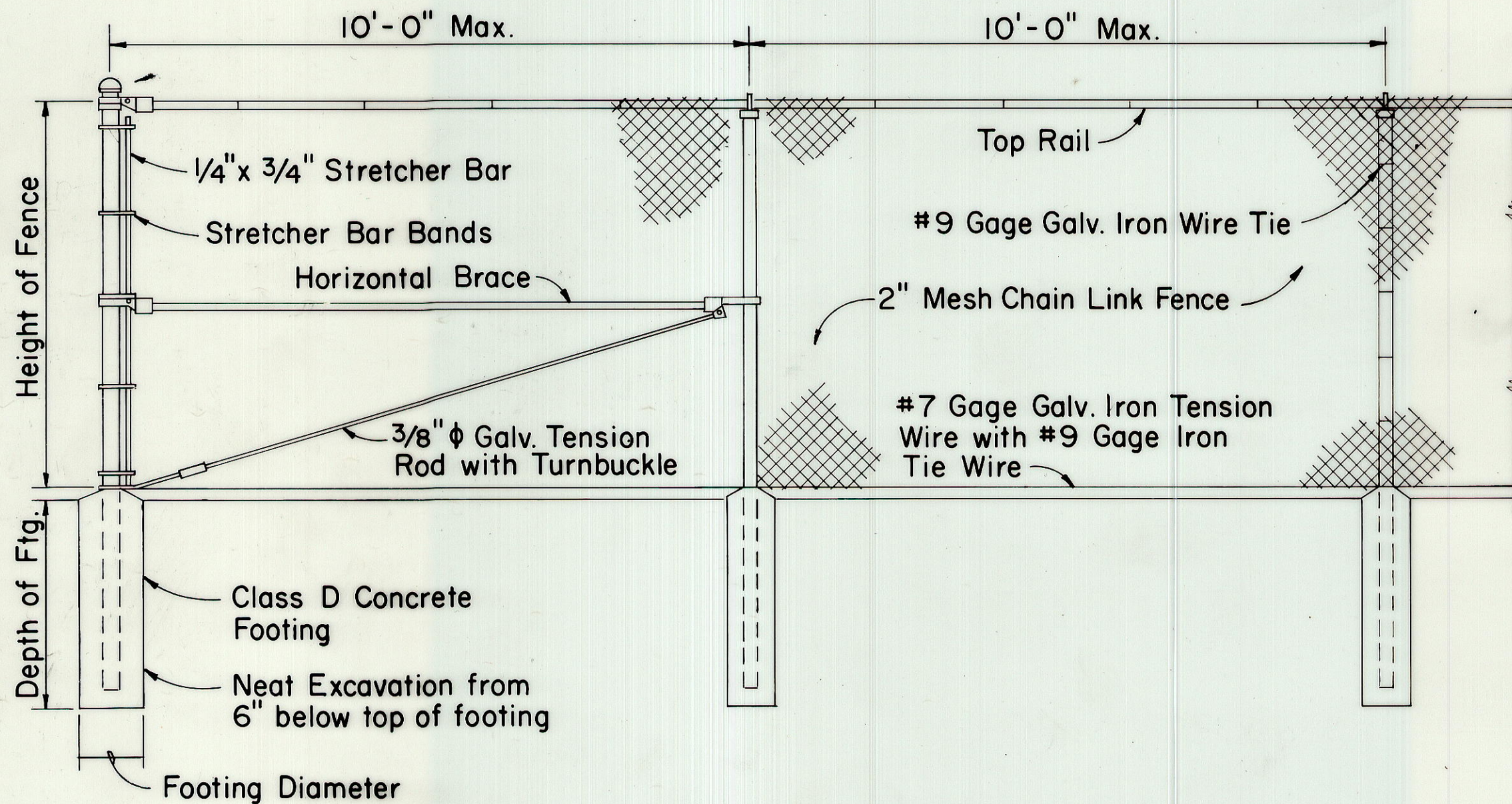


LINE POST

PULL POST

LINE POST

TYPICAL SECTION
(WITH CONCRETE FOOTING)



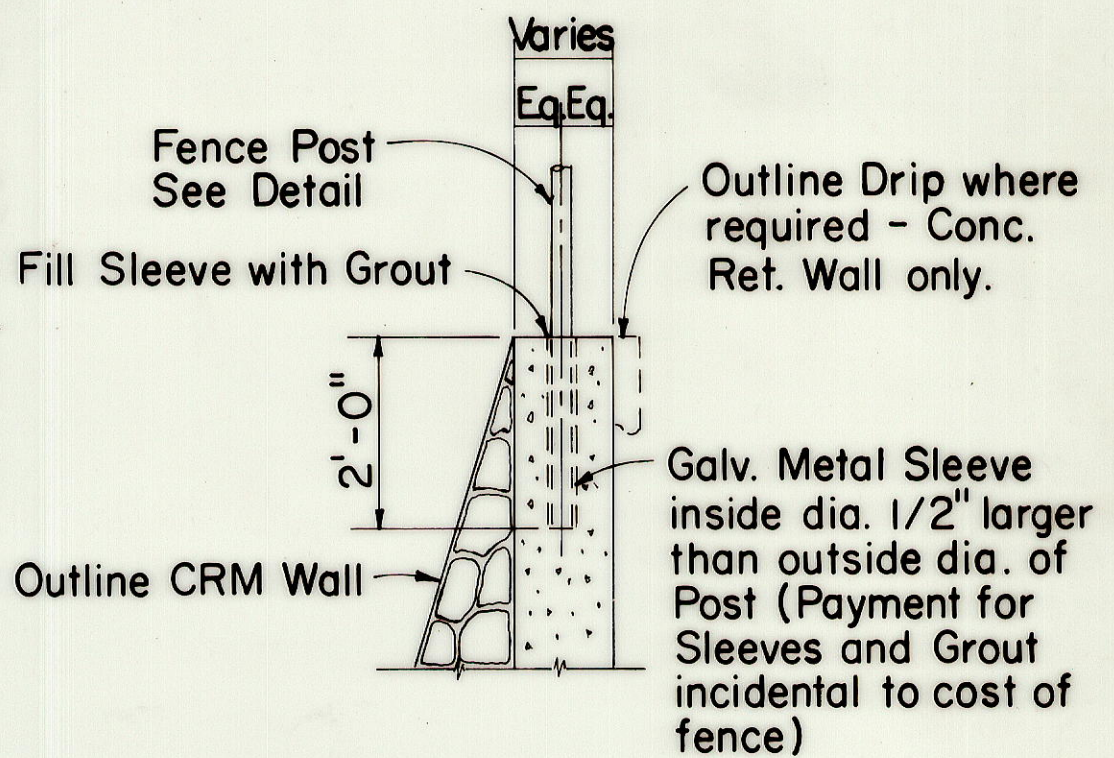
END POST

LINE POST

LINE POST

CHAIN LINK FENCE DETAILS

Height of Fence	Minimum Depth of Footing		Minimum Footing Diameter	
	Line Post	Corner, Pull, End and Gate Posts	Line Post	Corner, Pull and End Posts
3'	2'-0"	2'-6"	8"	8"
4'	2'-6"	2'-6"	8"	8"
5'	3'-0"	3'-0"	8"	8"
6'	3'-0"	3'-0"	8"	9"



TYPICAL SECTION
(ON CRM & CONC. RET. WALL)

APPROVAL RECOMMENDED:
HIGHWAY DESIGN ENGINEER 12-4-69 DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

NO	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CHAIN LINK FENCE
(WITH TOPRAIL)
PROJ. NO. 1-IR-HI-1(169)17 C.C.O. 33
Scale: 1/2" = 1'-0" Date: March, 1982

SHEET No. 1 OF 1 SHEETS DD 607.1

"AS-BUILT"

C.O.285-1

BIKEWAY 'X' PAV'T ELEVATIONS		
BIKEWAY 'X' STATION	RT. EDGE OF PAVT & BASELINE	LEFT EDGE OF PAVEMENT
14+00	10.14	9.98
+50	9.25	9.09
15+00	8.36	8.52
+50	7.47	7.63

BIKEWAY 'Y' PAV'T ELEVATIONS		
MIDDLE ST. (SB) STATION	SOUTH EDGE OF PAVEMENT	NORTH EDGE OF PAVEMENT
12+27	10.88	11.04
+50	11.17	11.33
13+00	10.54	10.70
+50	9.63	9.79
14+00	9.17	9.01
+50	8.69	8.53
15+00	8.21	8.05
+50	7.72	7.56
16+00	7.24	7.08

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	11R-HI-1(169)-17	1983	29	280

NOTES:

- For General Notes see Sheet No. C-3.
- For Legend see Sheet No. C-1.
- Existing sprinkler heads in conflict with proposed driveway at State Access Road shall be removed & replaced as directed by the Engineer with 12-inch high pop-up sprinkler heads with vandal resistant set screw. Shrubberies in conflict with proposed driveway shall be removed. Shrubberies may be trimmed and location of proposed fence may be adjusted to facilitate construction of fence.

Guard Rail Type 3-Single

Approx. 2 1/2" A.C. Pavement Overlay, Mix No. I (Finish Grade to be as shown on Plans. See Note 2 on Sheet 3.)

MAKAI FRONTAGE RD.

Approx. 2 1/4" A.C. Pav't Overlay, Mix. No. I (Finish Grades to be as shown on Plans. See Note 2 on Sht. 3.)

N.C. (EB) Sta. 38+55+

End Guard Rail Type 3-Single

Begin Guard Rail Type 3-Single with Rubrail

MAKAI Front. Rd. Sta. 25+40.12 Rt.

Begin Guard Rail Type 3-Single

Breakaway Cable Terminal

Curb & Sidewalk Transition See Sheet No. C-6

N.C. (EB) Sta. 40+00+

End Guard Rails Type 3-Single with Rubrail

Begin Guard Rail Type 3-Double with Rubrails

For Metal Guard Rail on Bridge, see sheet C-4

4" Plain Concrete Sidewalk with 6" Bedcourse Material

Ramp F Sta. 29+06.18' Rt.

End Guard Rail Type 3-Single

Breakaway Cable Terminal

Ramp F Sta. 29+35

End Curb Type 2D

Provide 5' long Curb transition (from 6" to 0" height)

Approx. 2 1/2" A.C. Pavement Overlay, Mix No. I (Finish Grade to be as shown on Plans)

Begin Guard Rail Type 4F

Meet Parapet on Approach Slab

New Pavement Structure See Typical Section

SEE SHEET NO. C-1

Guard Rail Type 4F

Cushion Barrier (See Sheet No. C-7)

Curb & Gutter Type 2DGM

Curb & Gutter Type 2DGM

Ramp D Sta. 27+35

3/2' Lt. Begin Guard Rail Type 3-Single

Type G Flare

Guard Rail Type 3-Single with Rubrail

Overhead Sign E-36

Nimitz Conn. (WB) Sta. 41+55

Guard Rail Type 3-Single

End Curb & Gutter Type 2DGM

Meet Existing

Guard Rail Type 3-Single with Rubrail (Field Change)

SEE SHEET NO. C-3

Ramp F Sta. 28+58.36' Lt.

End Guard Rail Type 3-Single

Breakaway Cable Terminal

Ramp E Sta. 22+40.11' Rt.

Extend Settlement Platform, Provide Frame and Cover (C.C.O. 20)

STATE ACCESS ROAD

Middle St. (SB) Sta. 11+75

End Curb & Gutter Type 2DGM

Begin Curb & Gutter Type 2DGM

Double 20' Chain Link Gate

Curb & Gutter Type 2DGM

Place fence along walls of inlet structure of box culvert

Sta. 12+27

Curb & Gutter Type 2DGM

Curb Type 2D

Middle Street (SB) Sta. 13+63

Curb & Gutter Type 2DGM

Curb Type 2D

Overhead Sign E-38

Sta. 15+44

Curb & Gutter Type 2DGM

Curb Type 2D

Remove exist. Curb (sawcut along face of curb). Reconstruct curb as shown on Std. Det. Sheet DD&IO.1 for 'Driveway Curb' and 'Drop Curb'.

End Curb & Gutter Type 2DGM

Meet Existing

For Guard Rails at Sign E-38 see Sheet No. C-5

Relocate Cable Fence to outside of Right-of-Way Line. (Payment considered incidental to various contract items)

Relocate Flood Light to outside of Right-of-Way Line.

End Curb & Gutter Type 2DGM

Meet Existing

Remove exist. Curb (sawcut along face of curb). Reconstruct curb as shown on Std. Det. Sheet DD&IO.1 for 'Driveway Curb' and 'Drop Curb'.

End Curb & Gutter Type 2DGM

Meet Existing

For Guard Rails at Sign E-38 see Sheet No. C-5

Overhead Sign E-38

Sta. 14+10

Curb & Gutter Type 2DGM

Curb Type 2D

End Gutter Type 2G

Meet Existing

End Gutter Type 2G

Meet Existing

Curb transition from 6" to 0" height

Top of Curb to be flush with A.C. Pavement

Middle St. (NB) Sta. 14+40.24' Rt.

End Curb Type 2D

Middle St. (NB) Sta. 14+27

End Curb & Gutter Type 2DGM

Begin Gutter Type 2G

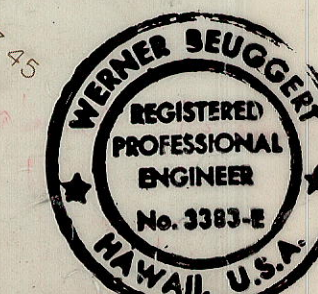
Begin Curb Type 2D

For Guard Rails at Sign E-38 see Sheet No. C-5

Relocate Cable Fence to outside of Right-of-Way Line. (Payment considered incidental to various contract items)

Relocate Flood Light to outside of Right-of-Way Line.

Relocate Flood Light to outside of Right-of-Way Line.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Werner Beugger

Added fence and changed location of Bikeway 'X'. Revised table "Bikeway 'X' Pav't Elevations". Added driveway at State Access Road. Added Note 3.

DATE REVISION

2/24/86

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

ROADWAY CONSTRUCTION

INTERSTATE ROUTE H-1

PROJECT NO. I-IR-HI-1(169)-17

SCALE: 1" = 50'

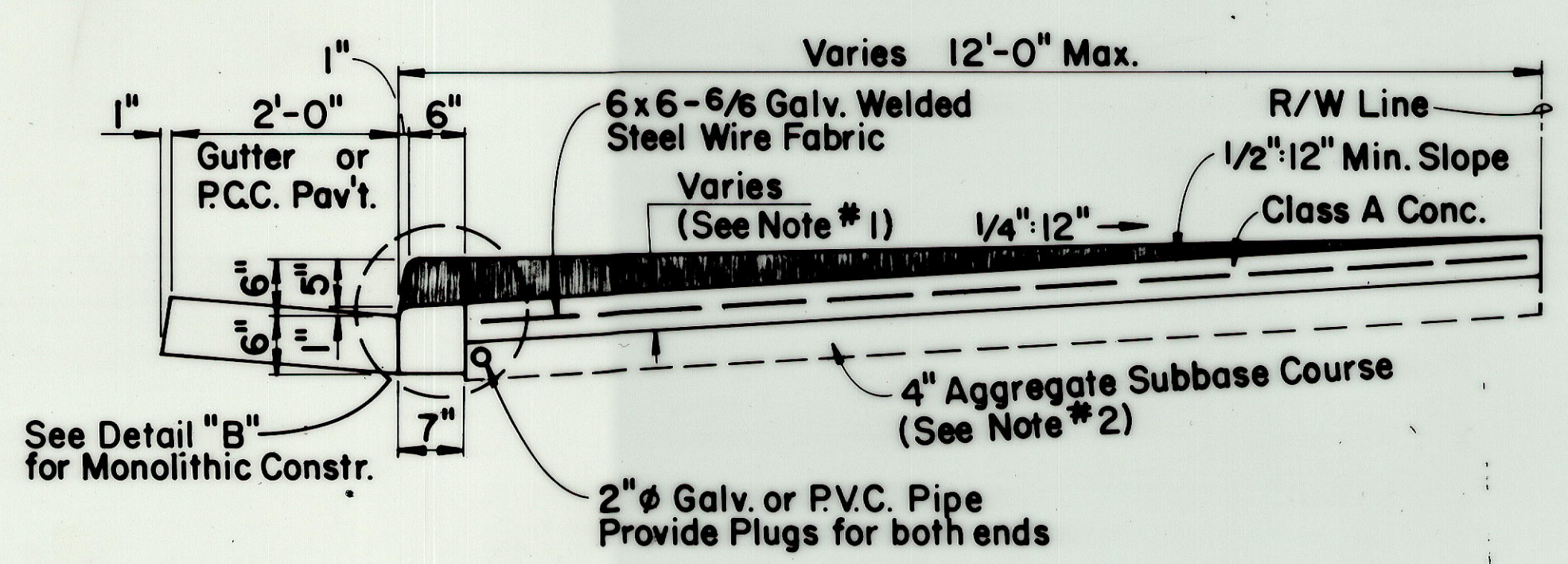
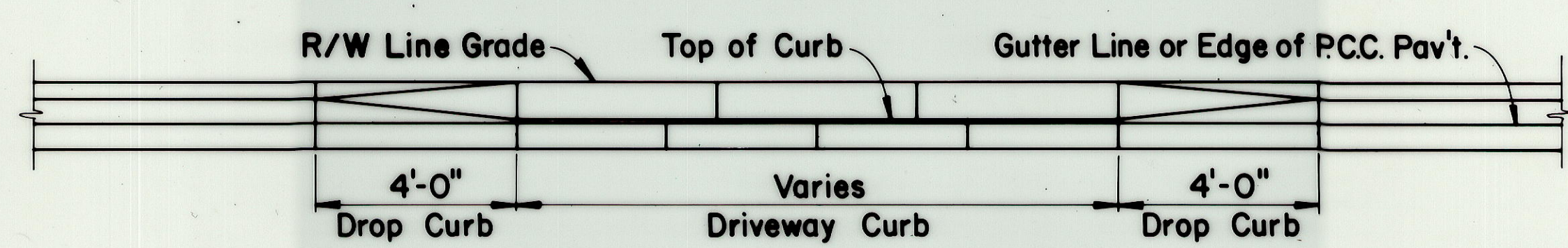
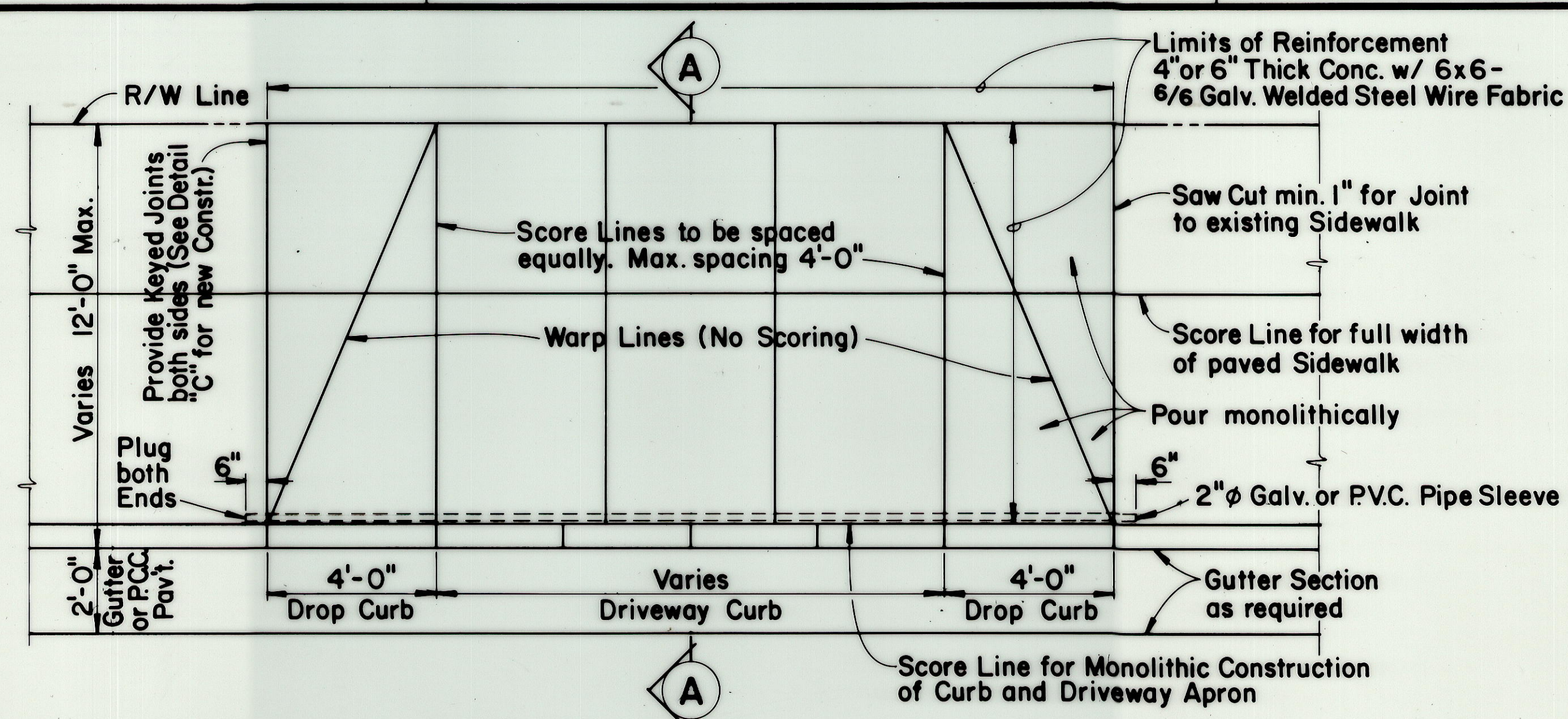
DATE: 3/15/82

SHEET No. C-2 OF 17 SHEETS

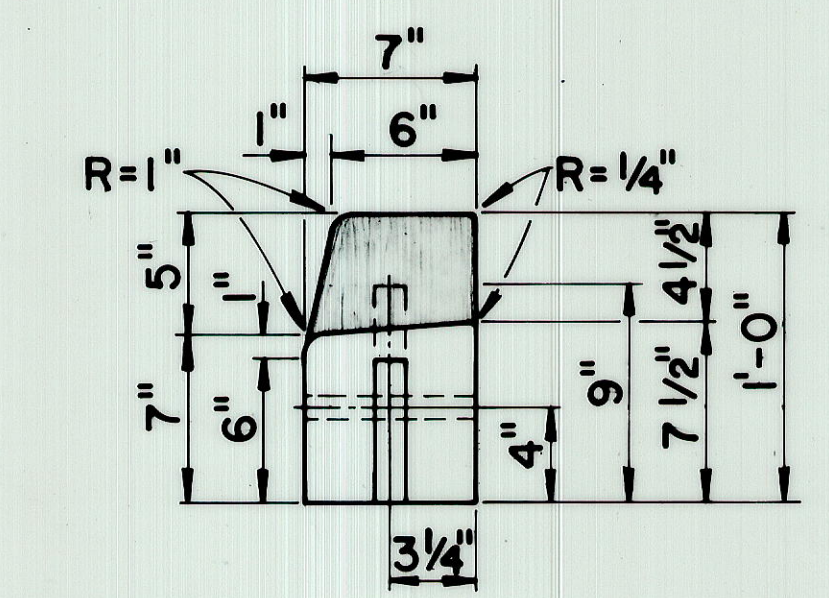
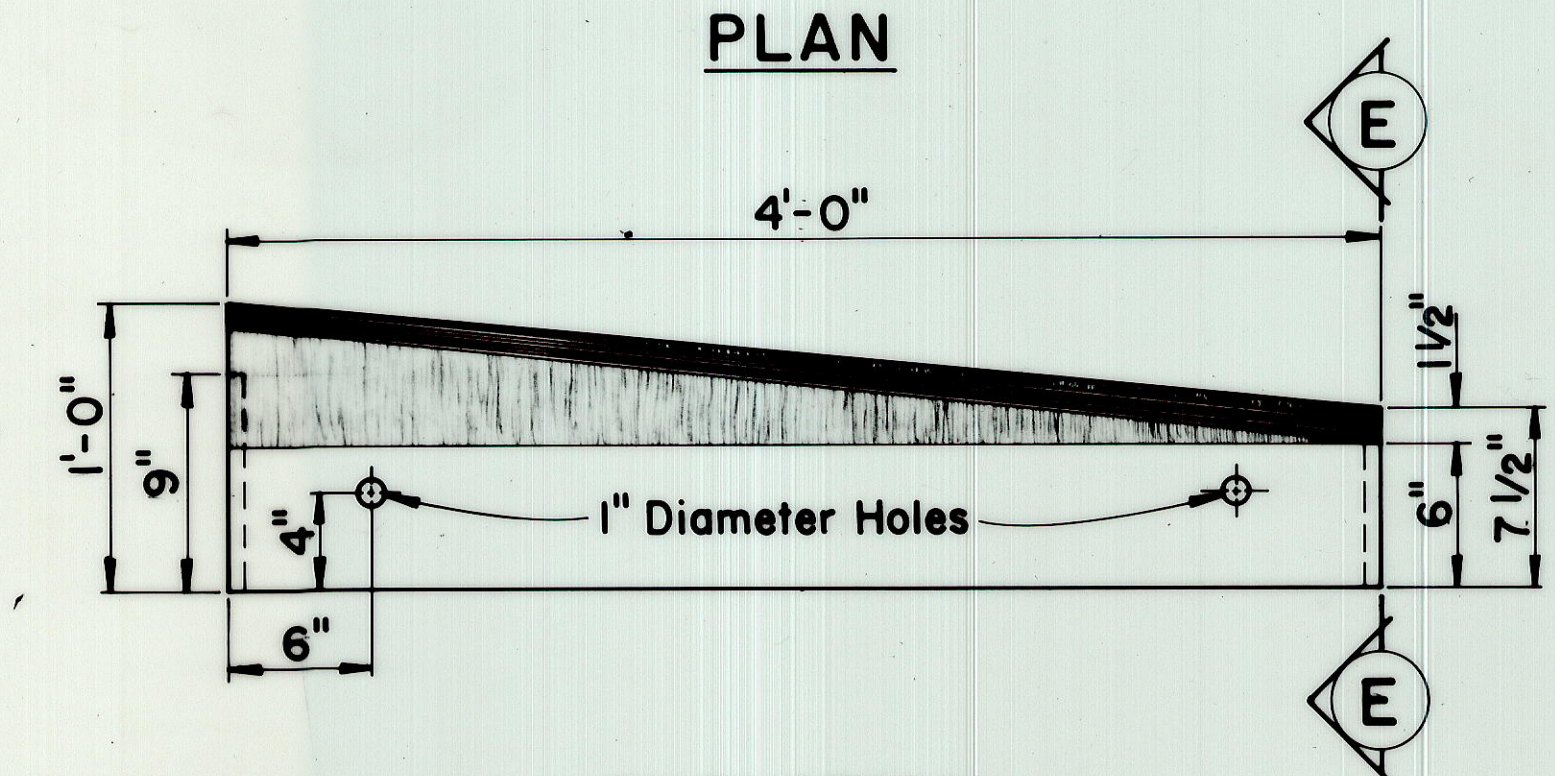
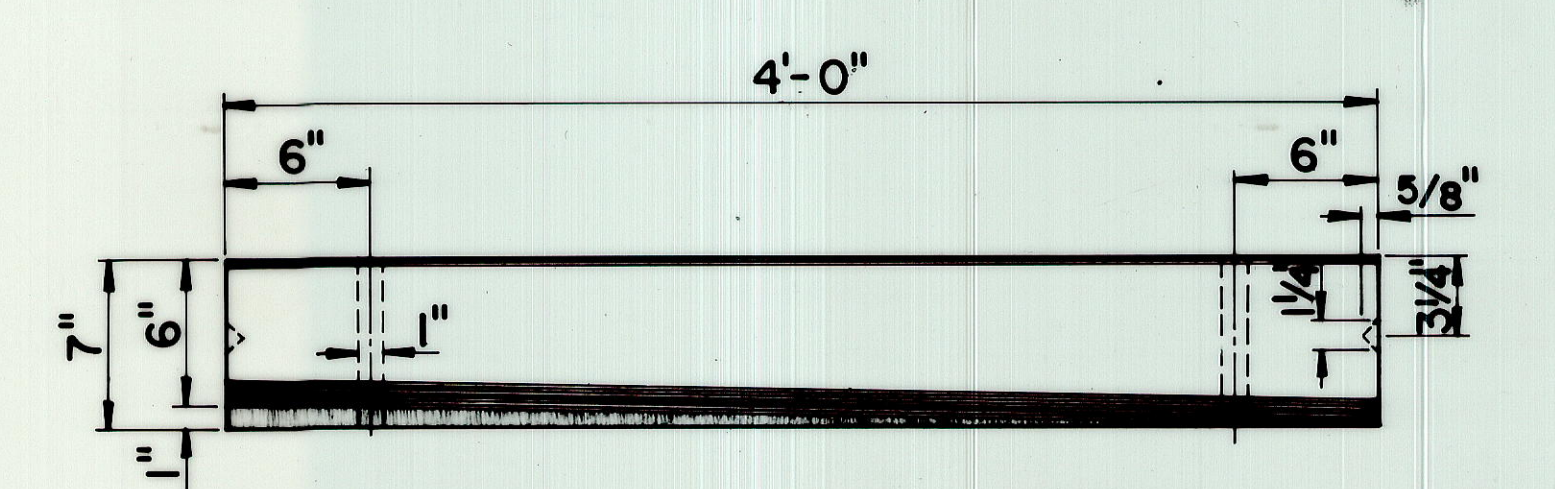
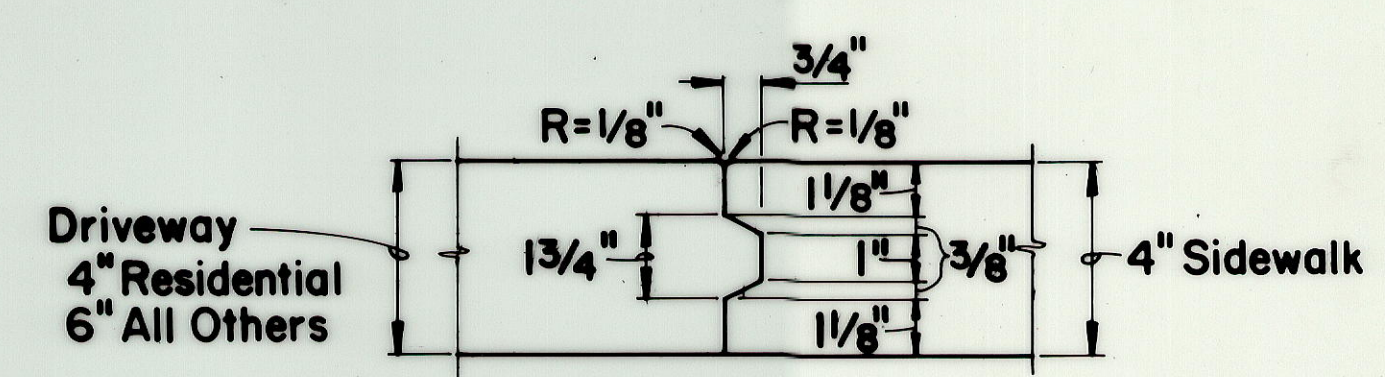
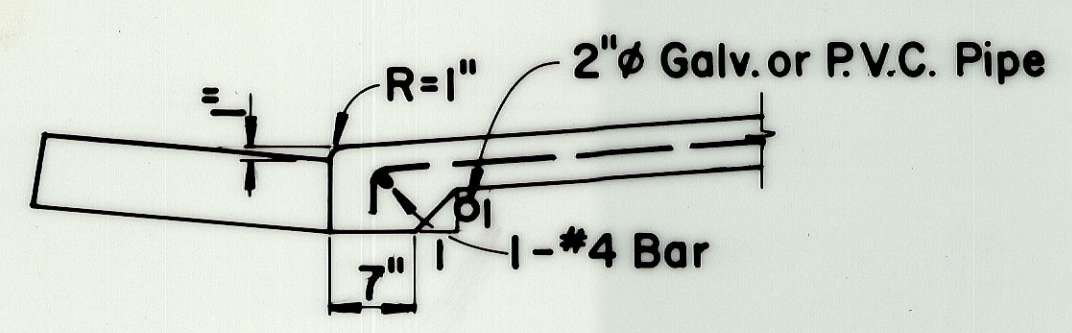
"AS-BUILT"

C.O. 29

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-IR-HI-1(169)	1983	C.0295-1	280

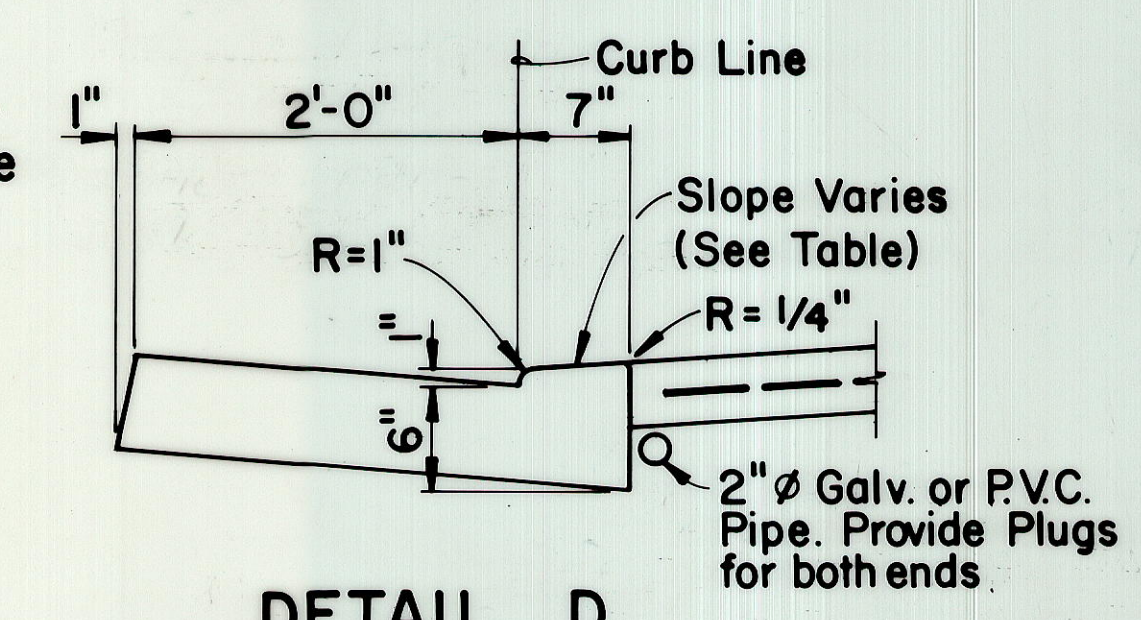


- NOTES**
- Minimum Concrete Approach thickness
 - Residential = 4 inches
 - Commercial = 6 inches
 - Thickness of Aggregate Subbase Course beneath Concrete Pavement may be revised if deemed necessary by the Engineer.
 - P.C.C. Gutters shall be longitudinally broom finished.
 - The top of all types of concrete curbs, including driveway curbs shall be longitudinally broom finished.

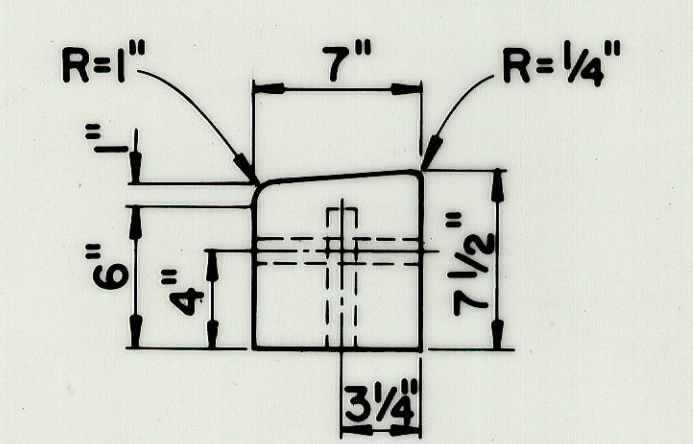
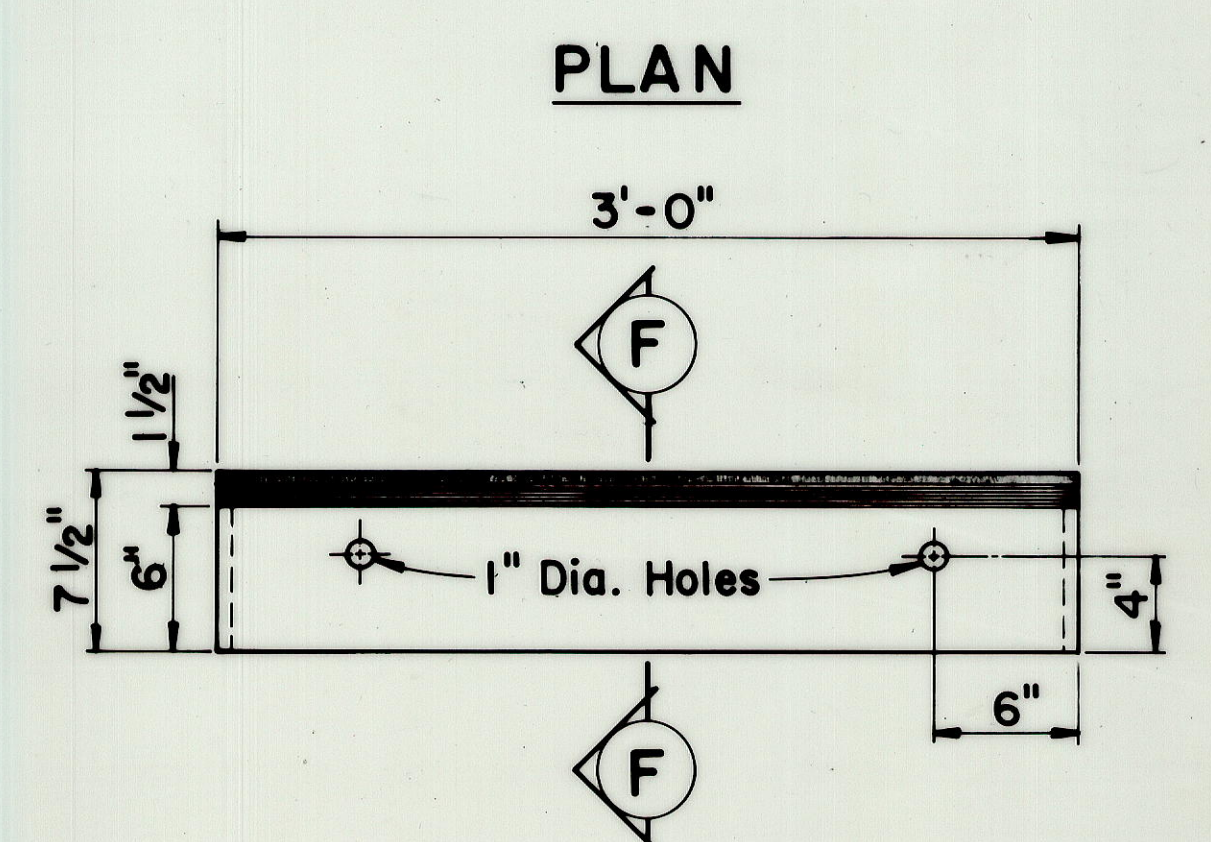
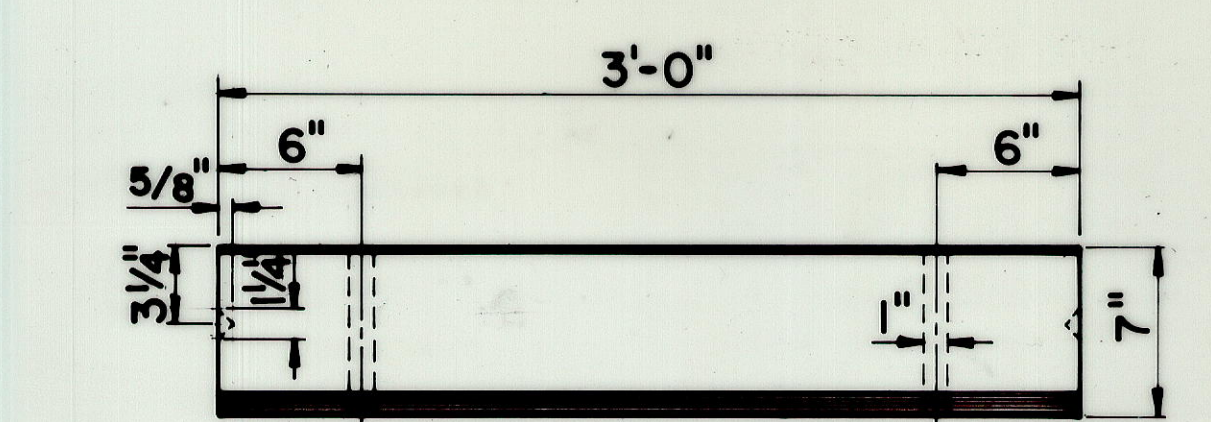


PRE-CAST CONC. DROP CURB BLOCK

Scale: 1/2" = 1'-0"



CAST-IN-PLACE INTEGRAL DRIVEWAY CURB AND GUTTER



PRE-CAST CONC. DRIVEWAY CURB

Scale: 1/2" = 1'-0"

DIST.-CURB LINE TO R/W	SLOPE
12'	1 1/16" to 12"
10'	3/4" to 12"
8'	7/8" to 12"
7'	15/16" to 12"
6'	1 1/16" to 12"
3'	1 15/16" to 12"

APPROVAL RECOMMENDED: *Mike Y. Mima* 5-5-82
HIGHWAY DESIGN ENGINEER DATE

APPROVED: *Harold Zaleishi* 5/19/82
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DD 610.1 Approved 12-10-69	<i>HC</i>	5-19-82
2	Add Note 3 and 4.	<i>HC</i>	11-26-84

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

TYPICAL DETAILS OF REINF. CONC. DROP DRIVEWAY

PROJECT NO. I-IR-HI-1(169):17
C.C.O. 33
Scale: As Shown Date: March, 1982
SHEET NO. 1 OF 2 SHEETS DD 610.1

"AS-BUILT"

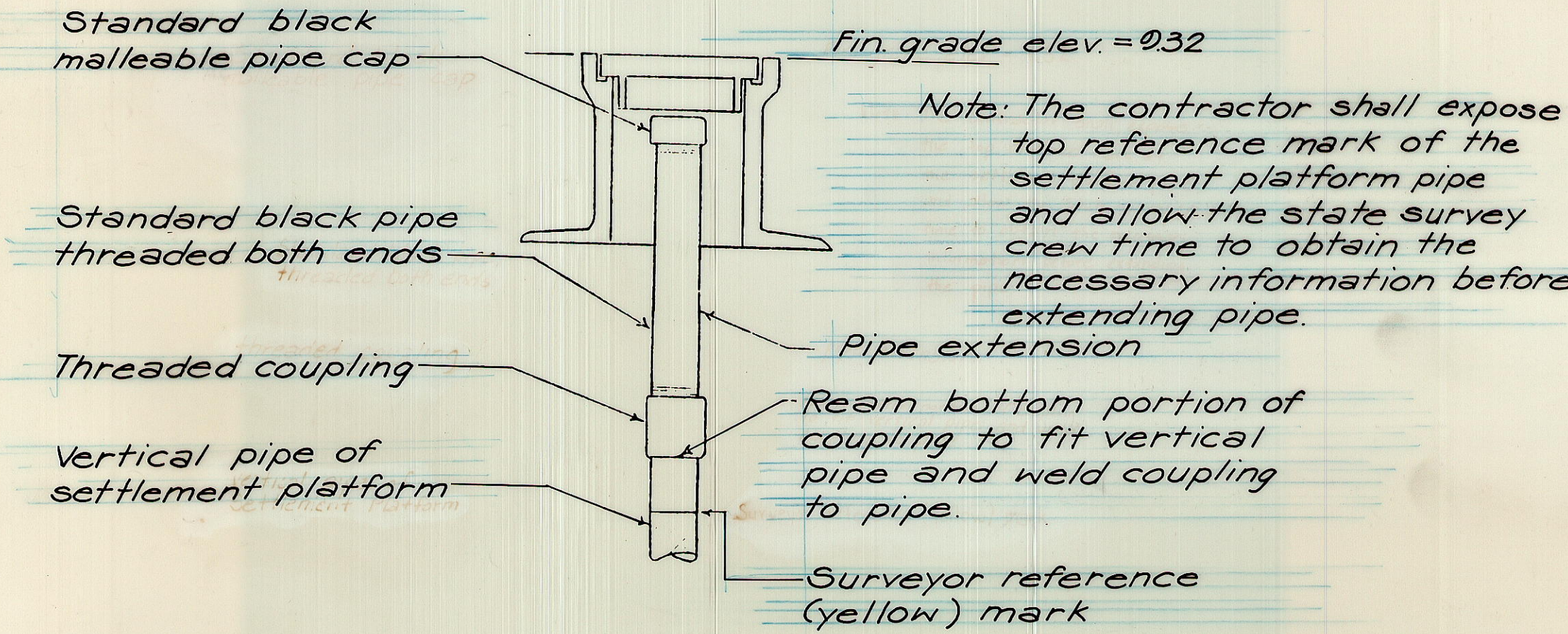
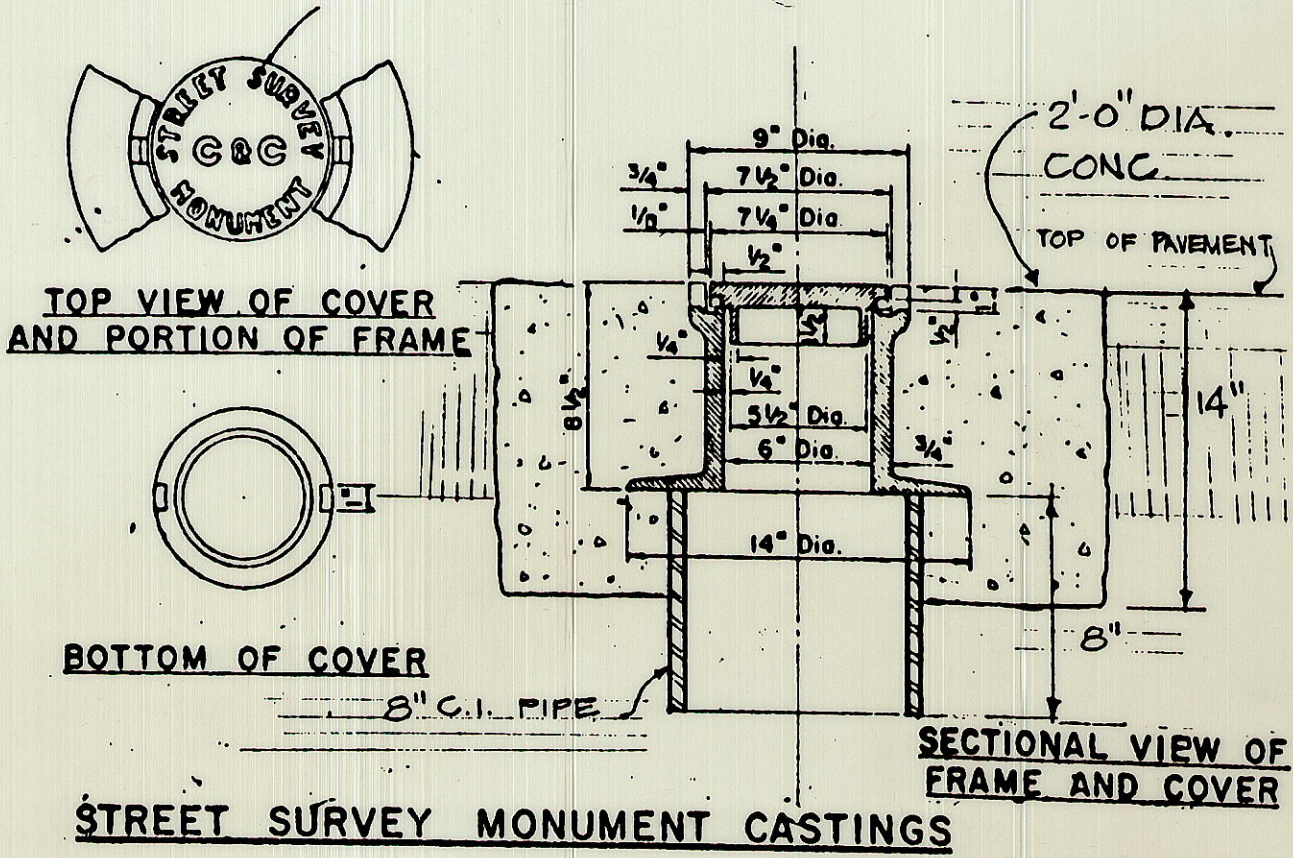
C.0295-1

ORIGINAL PLAN
NO. 1

SURVEY PLOTTED BY
DATE

DRAWN BY
DESIGNED BY
NOTED BY
CHECKED BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-IR-HI-1(160):17	1983	295-2	280



PIPE EXTENSION OF
SETTLEMENT PLATFORM

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PIPE EXTENSION OF
SETTLEMENT PLATFORM,
FRAME AND COVER

INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(160):17

No SCALE
DATE: DEC. 1988

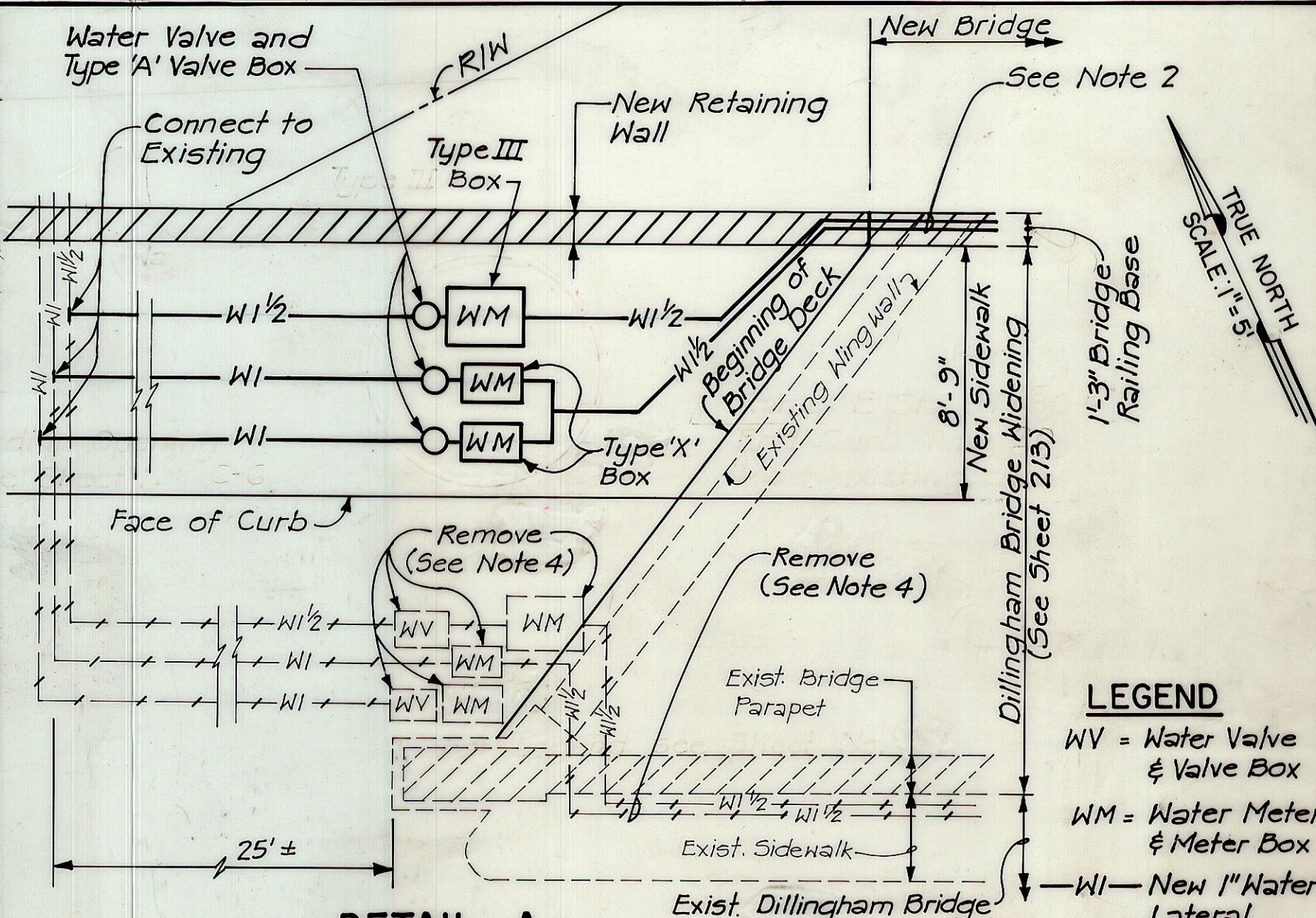
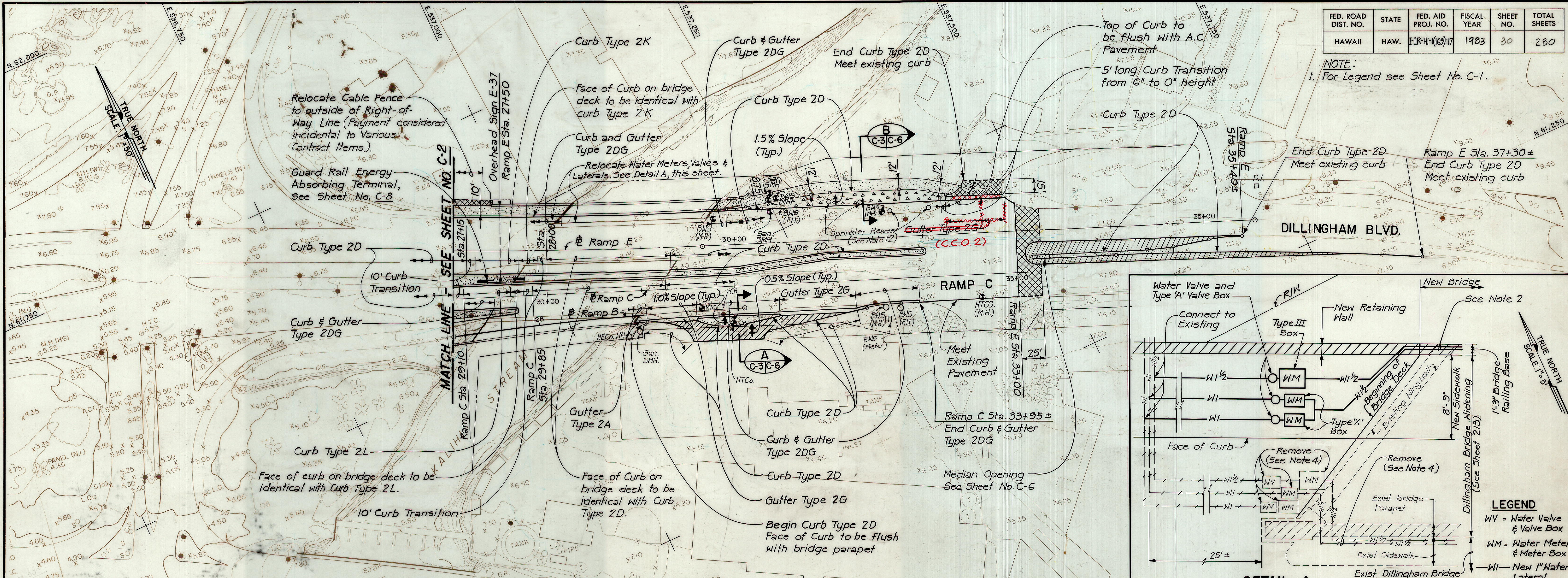
SHEET No. C-2 OF 17 SHEETS

"AS-BUILT"

C.029S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-IR-HI-11(169)17	1983	30	280

NOTE:
1. For Legend see Sheet No. C-1.



LEGEND

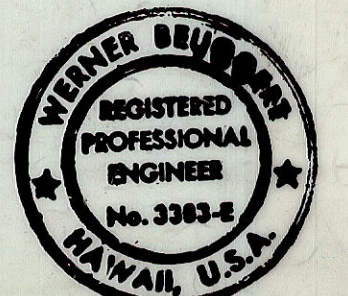
- WV = Water Valve & Valve Box
- WM = Water Meter & Meter Box
- WL = New 1" Water Lateral
- WL = Exist. 1" Water Lateral
- Remove Exist. Water Lateral

- The Contractor shall notify the BWS in writing at least one week prior to commencing relocation.
- Mount two 1/2" laterals on underside of Bridge Railing Base with galvanized steel U-straps (Gage 10) at 6'-0" on center. Provide galvanized compression couplings at midpoint of bridge. Connect laterals to existing pipes at east end of bridge.
- Water pipes shall be of galvanized steel pipe, Schedule 40.
- Remove existing water meter boxes, water valve boxes and existing laterals when new facilities are in service. Existing water meters may be salvaged for relocation, subject to approval by the Engineer.
- Contractor shall furnish & install all materials, including pipes, appurtenances, meter & valve boxes, valves meters, etc., and shall perform all work required to complete the relocation, in accordance with BWS Standards. Payment will not be made separately, but shall be considered incidental to various contract items.

GENERAL NOTES (ROADWAY CONSTRUCTION):

- Unless noted or directed otherwise, existing pavement below proposed roadways, and pavement within 6" below of the finish grade in areas to be graded shall be removed. All other existing pavement shall be rooted, plowed, pulverized or scarified to a min. depth of 6". Payment for removal of existing pavement will be made under "Roadway Excavation". Payment for scarifying, etc. of existing pavement shall be considered incidental to various Contract Items.
- Payment for removal & disposal of existing structures, concrete slabs, manholes, trees and bushes etc. shall be considered incidental to various contract items, unless indicated otherwise. (See Special Provisions, Subsection 202.06, for payment for removal of man-made structures not shown on the plans.)
- The shown rehabilitation work for Ramps C & E east of Kalihi Stream is for bidding purposes only. Actual rehabilitation work relating to removal of existing pavement, excavation, aggregate subbase, asphalt concrete base and asphalt concrete pavement for traveled ways will be determined by the State's Material Testing and Research Laboratory during construction.
- Existing pavement which is damaged through excavation or other work shall be restored to its original condition if necessary for the maintenance of traffic, or directed by the Engineer. Portable Concrete Guard Rails which have been removed for construction purposes shall be reset at the original location. Payment for the above work items shall be considered incidental to various contract items.
- Covers of utility structures which are in service shall be adjusted to finish grade whether or not they are shown on Plans. Abandoned utility manholes, boxes, etc. within area of work shall be demolished and ducts, pipes, etc. shall be plugged; payment shall be considered incidental to various contract items.
- Construction of roadway facilities, such as curbs, pavement, etc., which are in conflict with detour traffic patterns shall be delayed until they can be constructed with minimum obstruction to the traffic.
- Installation of top layer of A.C. Pavement shall be delayed until final pavement markings can be placed.
- All metal guard rails including end shoes shall be lapped in the direction of the traffic.
- Transition from one type to another type of Curb & Gutter shall be 10' long.
- Except as otherwise indicated on Plans, superfluous portable concrete guard rails shall be removed & stockpiled as directed by the Engineer at the State's Baseyard, Lehua Ave, Pearl City upon conclusion of construction.
- See Drainage & Grading Plans for updated existing ground condition.
- Irrigation sprinkler heads in conflict with construction work shall be removed and pipes cut and plugged as directed by the Engineer. Payment will be considered incidental to various contract items.
- Existing Guard Rails Type 3 to be removed shall become the property of Contractor. Suitable material may be re-used for new guard rails subject to the approval by the Engineer.
- Payment for removal of pavement overlay over Ramp F will be made under "Roadway Excavation". A bondbreaker was placed between the Ramp F Pavement and Detour Pavement Overlay for ease of removal. See Ramp E cross sections Sta. 19+00 thru 20+00 for overlay thickness. Overlay consists of A.C. Pavement (thickness varies from 2 1/2" to 3") and Aggregate Subbase Material. Removal of subject overlay shall be done as directed by the Engineer on the Sunday when Traffic Pattern (D) is implemented.

2/5/86	Install Left Turn Median Lane Ramp E Sta. 30+00 to 32+00
5/19/89	Detail A added.
DATE	REVISIONS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Werner Delmonico

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION

INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-11(169)17

SCALE: 1" = 50' DATE: 3/15/82

SHEET No. C-3 OF 17 SHEETS

"AS-BUILT"

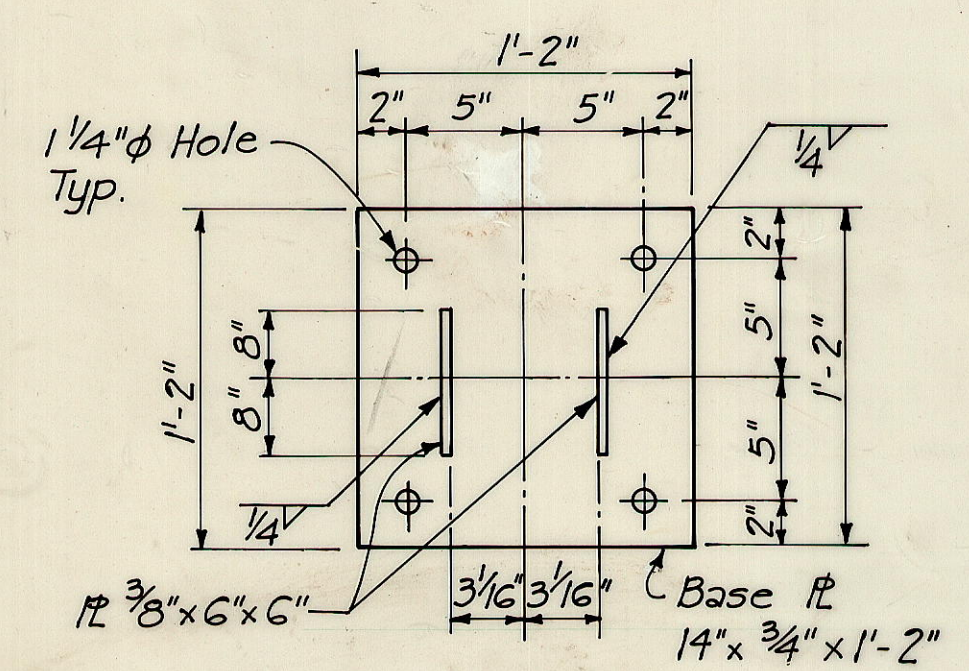
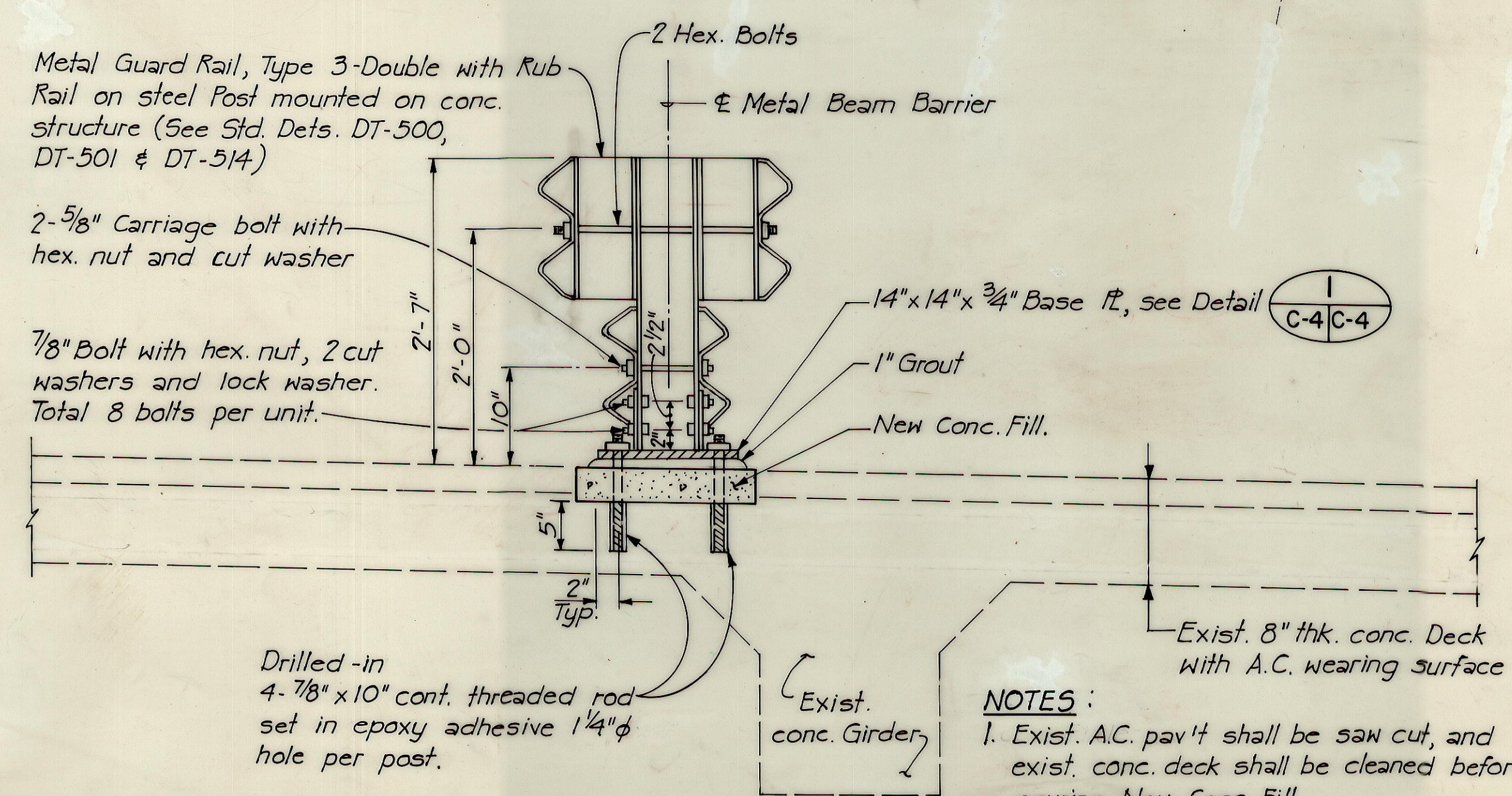
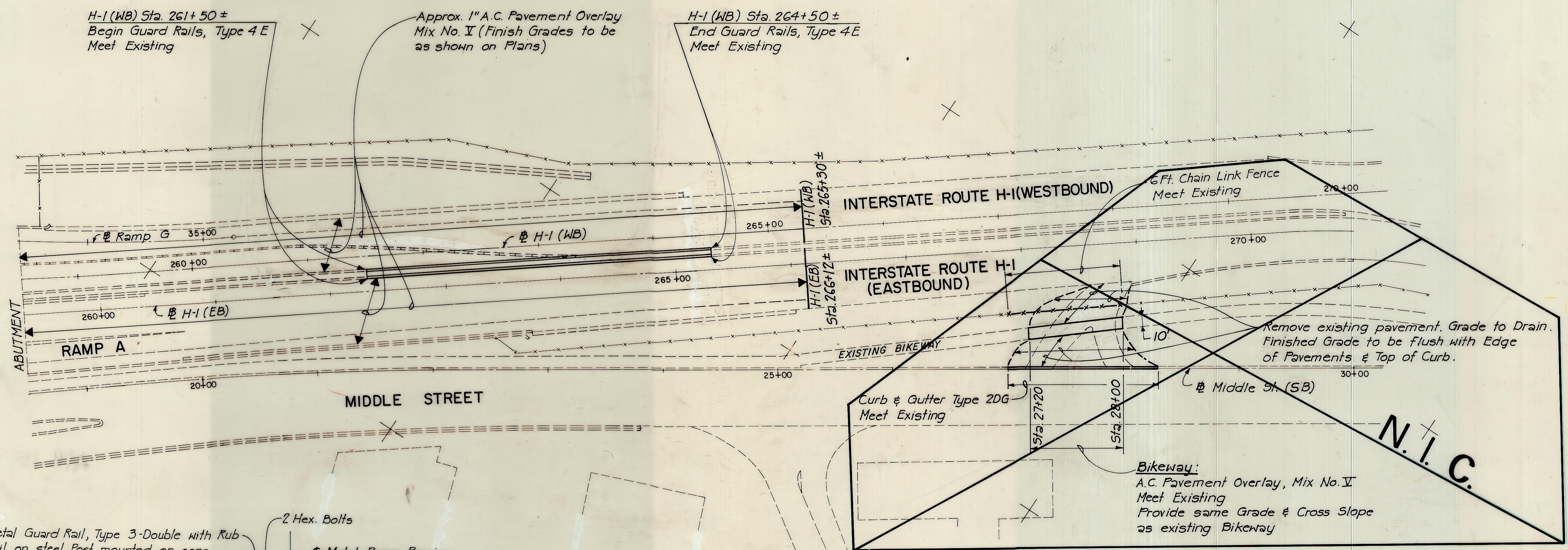
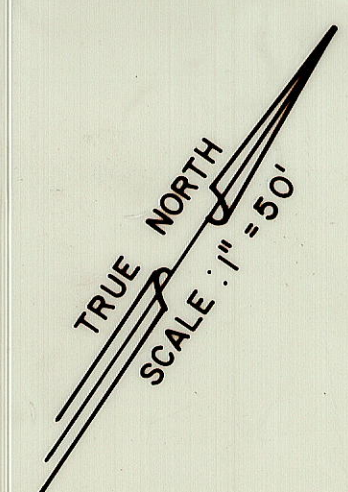
C.O. ADD.30

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(169)/17	1983	31	280

NOTES:

1. For Legend See Sheet No. C-1
2. For General Notes See Sheet No. C-3.



NOTES:

1. Exist. A.C. pav't shall be saw cut, and exist. conc. deck shall be cleaned before pouring New Conc. Fill.
2. Payment for Metal Guard Rail on conc. structure will be made under Item No. 606.3331.

(And On Existing Drainage Structures)

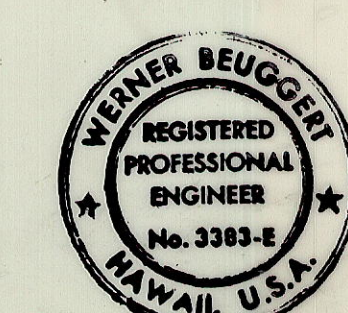
METAL GUARD RAIL ON BRIDGE

Nimitz Conn. (EB) Sta. 40+75 to 41+06, Makai Frontage Rd. Sta. 252+50± Rt. Nimitz Conn. (WB) Sta. 42+50± Lt. (C.C.O. 43#43, 1st Suppl.)

Scale: 1" = 1'-0"

DETAIL - BASE PLATE PLAN

Scale: 1 1/2" = 1'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION

INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169)/17

SCALE: 1" = 50' DATE: 3/15/82

SHEET NO. C-4 OF 17 SHEETS

"AS-BUILT"