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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	T-H-1 (84) 16	1978	340	466

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N36	DECK STEEL PLACEMENT DIAGRAM ~ SPAN 13C THRU 15C
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N38	GIRDER STIRRUP PLACEMENT DIAGRAM ~ SPAN 7C THRU 10C

[illegible]

ESTIMATED QUANTITIES

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITIES</u>
206.6000	STRUCTURAL EXCAVATION FOR BRIDGES	CU. YD.	180 C.Y.
503.1800	CONCRETE IN RAMP STRUCTURE	LUMP SUM	3,900 C.Y.
503.1810	CONCRETE IN FTGS. FOR RAMP STRUCT.	LUMP SUM	170 C.Y.
507.5000	CONCRETE RAILING	LIN. FT.	2,130 L.F.
602.0800	REINF. STEEL IN RAMP STRUCTURE	LUMP SUM	1,421,000 LBS.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INDEX TO DRAWINGS AND
ESTIMATED QUANTITIES

RAMP "AE"
AIRPORT INTERCHANGE
FAL PROJ. NO. I-HI-1 (84) TO

No scale: Date: Aug. 1977

SHEET No. 111 OF 40 SHEETS

GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2H1-1(84)16	1978	341	400

DESIGN SPECIFICATION AASHTO

Standard specification for Highway bridges (11th Edition)
1974 and 1975 interim specifications.

DESIGN LOADS: HS-20-44 or Interstate loading

DESIGN STRESSES:

Reinforced concrete beams and slabs. See AASHTO specs. and special provisions unless otherwise noted

Class A, BD	Other concrete
$f'_c = 3,000$ psi	$f'_c = 4,000$ psi
$f'_c = 4,000$ psi	$f'_c = 5,000$ psi
$n = 10$	$n = 8$
	$n = 6.6$

$f_s =$ ASTM A615 - See standard specification

MATERIALS:

- Except as otherwise noted on plans.
 - 5,000 psi concrete - see plans.
 - 4,000 psi concrete - column & pier cap (58E) & (59E).
 - Class BD concrete - All concrete deck.
 - Class A concrete - All other concrete.
- Concrete clear cover for reinforcing bars shall be as follows, unless otherwise noted.
 - 1 1/2" for stirrups on side of beams
 - 2 1/2" to main reinforcing of pier caps
 - For column main reinforcing - see column sections
 - 2" for formed walls
 - 3" for footings.
 - For deck slabs of box girders: 1 1/4" for top bars, 1 1/4" for bottom bars, 1 1/4" for bottom slabs of box girders.
- All reinforcing steel to be ASTM designation A615 grade 40 & grade 60. See plans for location of grade 60 steel
- All elastomeric bearing pad shall be 60 hardness pads
- All structural steel shall be ASTM A36 steel and galvanized unless noted otherwise

CONSTRUCTION METHODS:

- See Standard Specification and Special Provisions
- Column footings shall be excavated & poured neat against undisturbed ground. In case of over excavation, space between footing and ground shall be filled with concrete at the contractors expense and as directed by the Engineer. The minimum quality of the fill concrete shall be class D
- In general, top of concrete deck of structure shall be constructed to follow the finish roadway vertical and horizontal curves & grades.
- Obtain camber by forming and shoring concrete surfaces above profile grades amount shown in camber diagram and as indicated on detailed drawings.
- Except as otherwise noted, all vertical dimensions are measured plumb.
- For concrete finish - See Standard Specification
- For location of rail lighting - see highway lighting drawings. Rail light mounting shall be as per manufacturer's recommendation. Exact method shall be approved by the Engineer.

GENERAL:

- All items noted incidental will not be paid for separately
- The contractor shall verify the locations of all existing utility lines and notify the respective owners before commencing with work.
- The following items shall be considered as incidental to concrete.
 - Anchor bolts, nuts & flts for rail lighting
 - Expansion Hinged Bearing assembly
 - 2-angle rolled sections deck expansion joint protective nosing
 - Deck drain grate & frame assemblage
- Exact location of bars shall be arranged so that no interference will occur between vertical column reinforcement and bottom pier cap horizontal reinforcement.
- Refer to utility plans for various additional conduits in deck and pier caps.
- The contractor shall furnish shop placement and detail drawings for all structural steel work including frame & grating assemblage of each drain

REFERENCE:

- Refer to Standard Detailed Drawing for additional box girder details not covered by drawings.

SYMBOLS AND ABBREVIATION

(A) Detail or section designation
(189) Sht. no. detail as draw.

(1A) Pier number

F-1 Footing type

G-1 Girder numbers

⊕ Boring location & designation

Deck drain

○ Box girder drain & vents

pd" Proof drill

A.

Approx. Approximate
Adj. Adjacent
Alt. Alternate
Az. Azimuth

C.

Cont. Continuous
Cant. Cantilever
C.J. Construction Joint
Col. Column
Cl. Clear
C.L. Center line

E.

Exist. Existing
El. Elev. Elevation
Exp. Expansion
Ext. Exterior
Eq. Equal
E.F. Each Face
Ea. Each

G.

I.

Int. Interior

K.

W.

W.P. Working point

B.

Bott. Bot. Bottom
Bal. Balance
Brg. Bearing
Bm. Beam
B. Baseline

D.

d, dia. Diameter
Dwg. Drawing
Det. Detail

F.

Ftg. Footing

H.

Horiz. Horizontal
Hwy. Highway

J.

Jt. Joint

L.

Lt. Left
Longit. Longitudinal

M.

Min. Minimum
Max. Maximum

N.

Nos, No., * Number

Q.

T.

Typ. Typical
T & B Top and bot.

X.

O.

O.C., % On center
Opn'g Opening

R.

Reinf. Reinforcing
Ref. Reference
Req. Required
R. Ramp, Radius
Rt. Right
Symm. Symmetrical
Sect. Section
Stirr. Stirrup
Sht. Sheet
Std. Standard
Spac. Spacing
Sta. Station

U.

Y.

P.

P.I. Point of intersection
Pt. Point
Part. Partial

S.

V.

Vert. Vertical

Z.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES, SYMBOLS
& ABBREVIATIONS

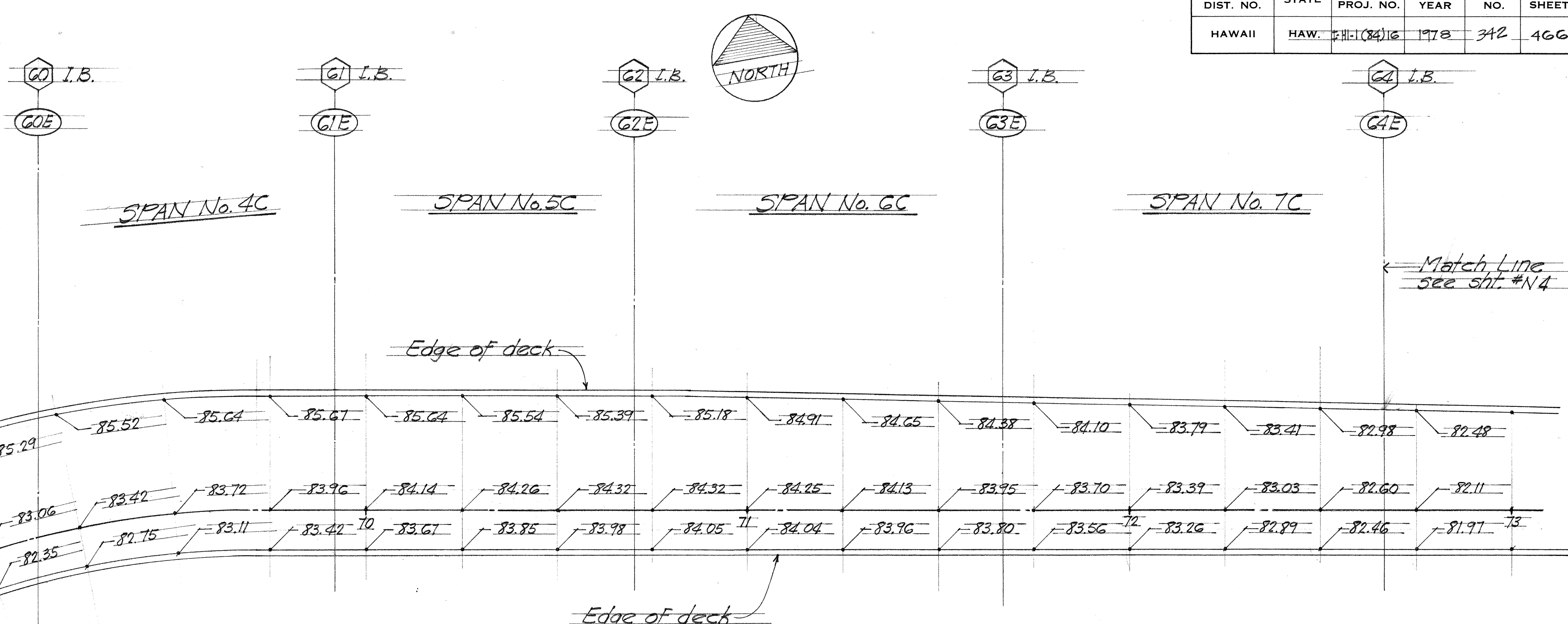
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F.A.I. PROJ. NO. I-HI-1 (84) 16

SCALE: AS NOTED DATE Aug. 1978

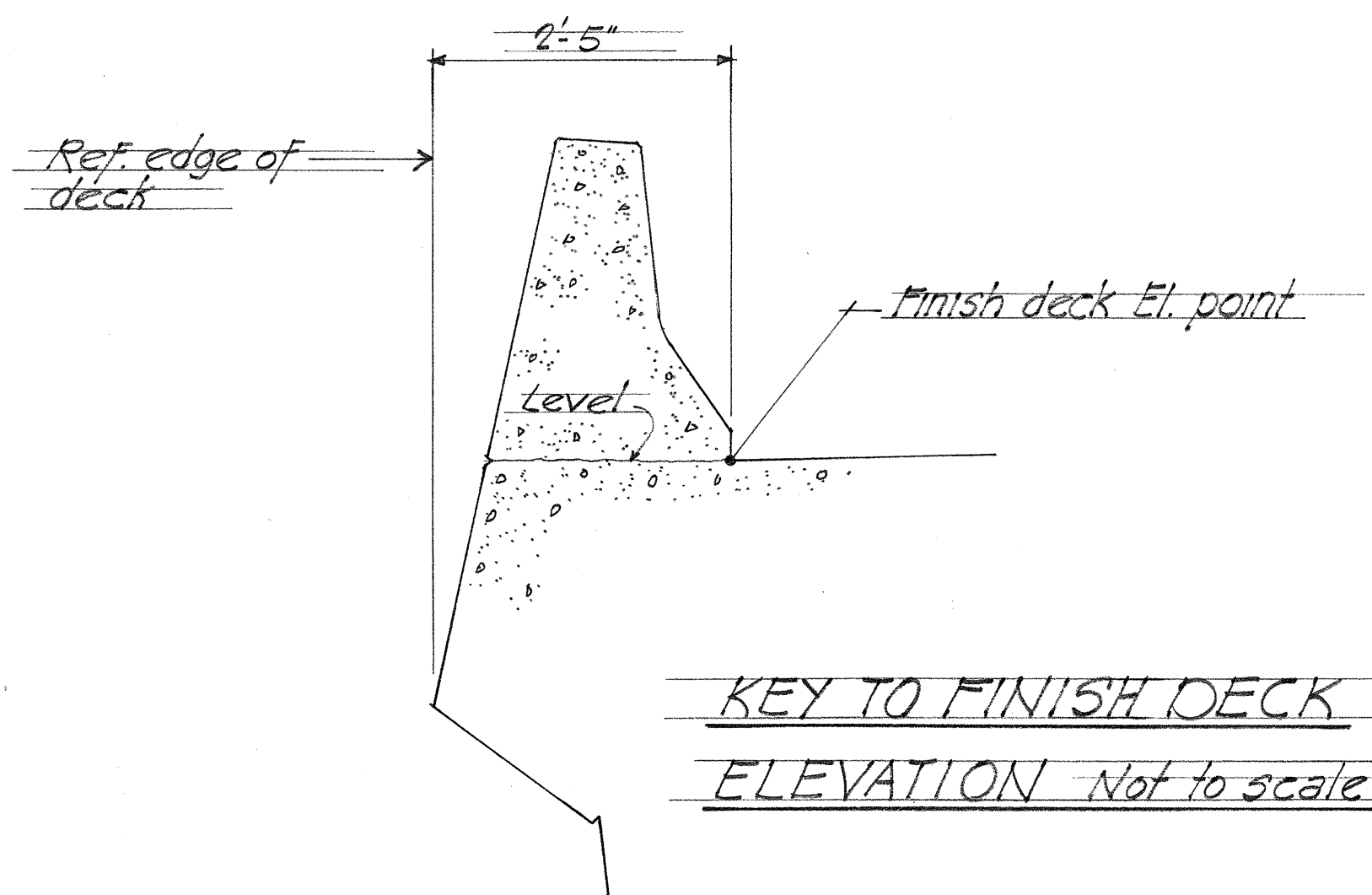
SHEET NO. 2 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-10416	1978	342	466



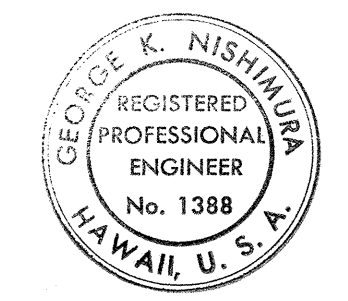
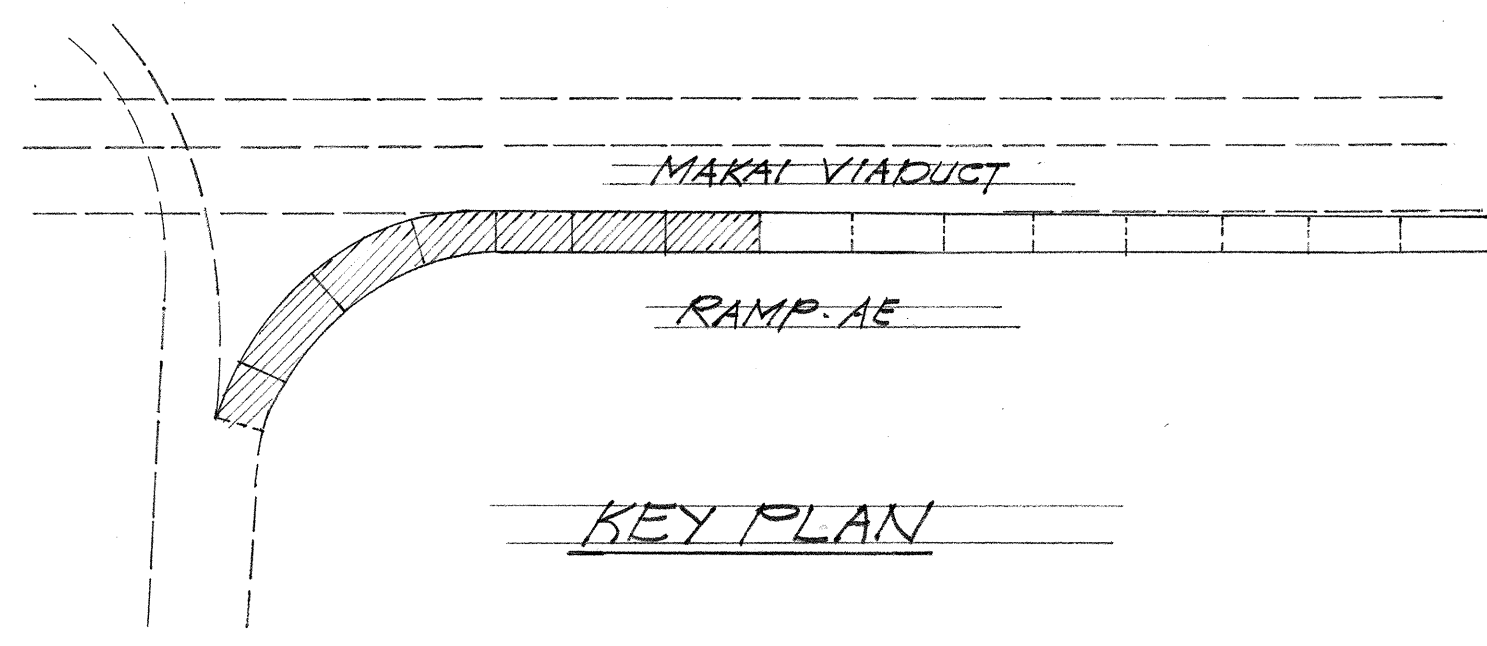
NOTE:
 Finish deck grades are given at 25'-0" increments
 and are normal to Baseline

PART DECK FINISH GRID GRADE PLAN
 Scale 1"=20'-0"



KEY TO FINISH DECK
 ELEVATION Not to scale

SURVEY PLOTTED BY	DATE
ORIGINAL PLAN	
DESIGNED BY	
CHECKED BY	
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PART DECK GRADE PLAN

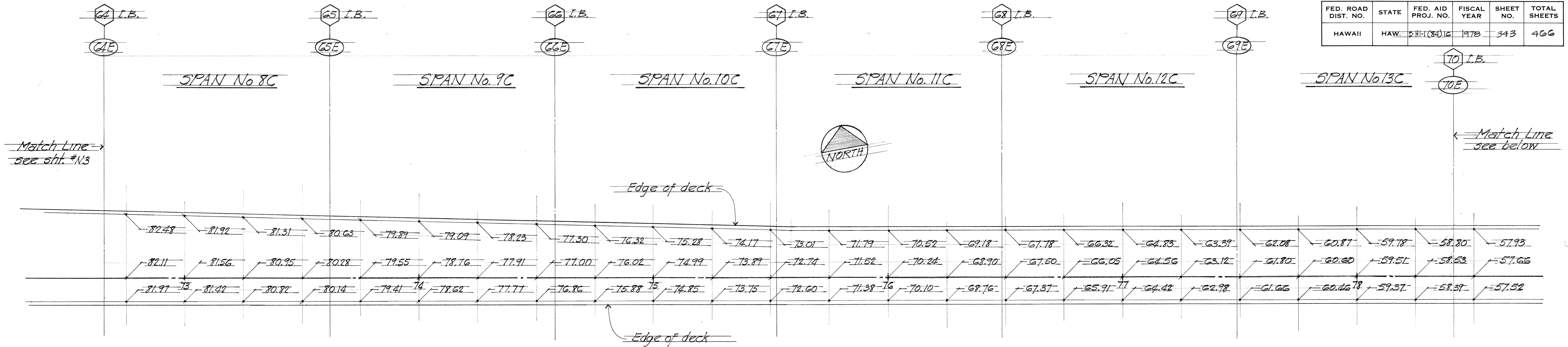
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AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-HI-1 (84)16

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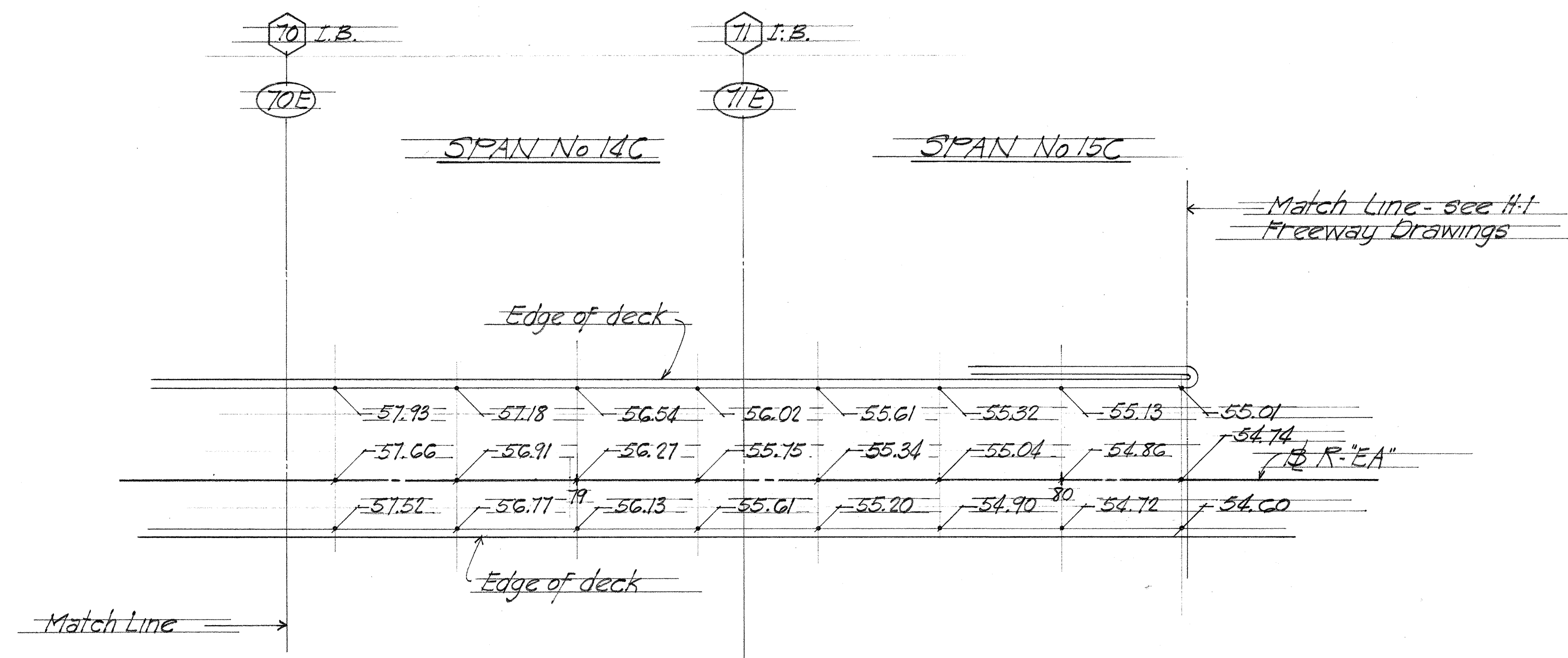
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(84)16	1978	343	406



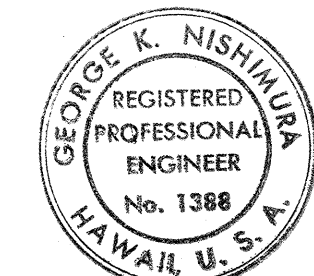
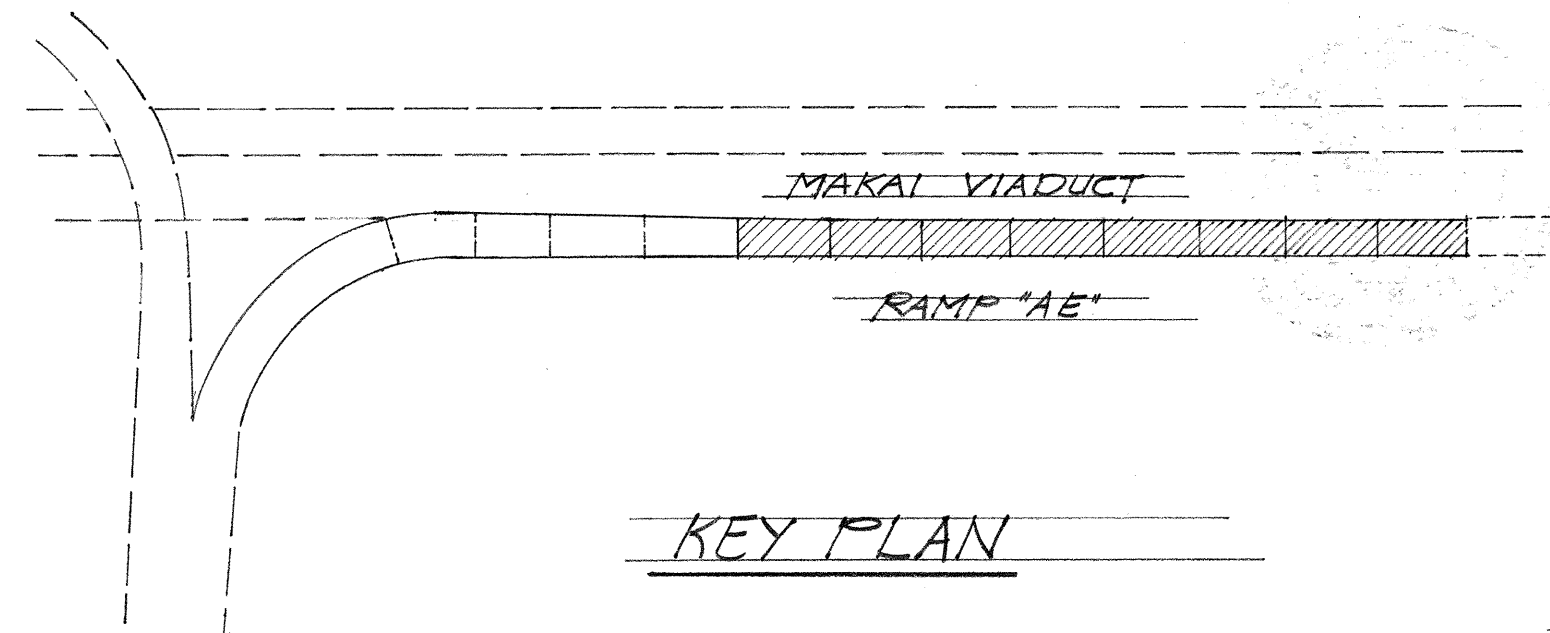
NOTE:

Finish deck grades are given at 25'-0" increments and are normal to baseline



PART DECK FINISH GRID GRADE PLAN

Scale 1" = 20'-0"



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PART DECK GRADE PLAN

RAMP "AE"

AIRPORT INTERCHANGE

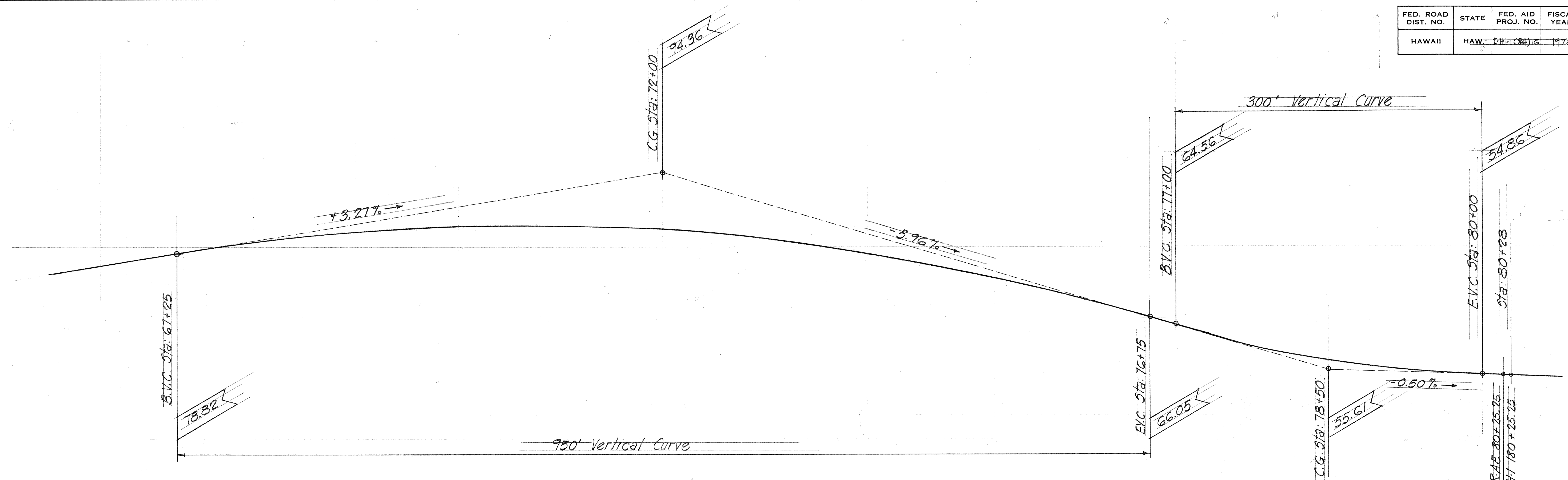
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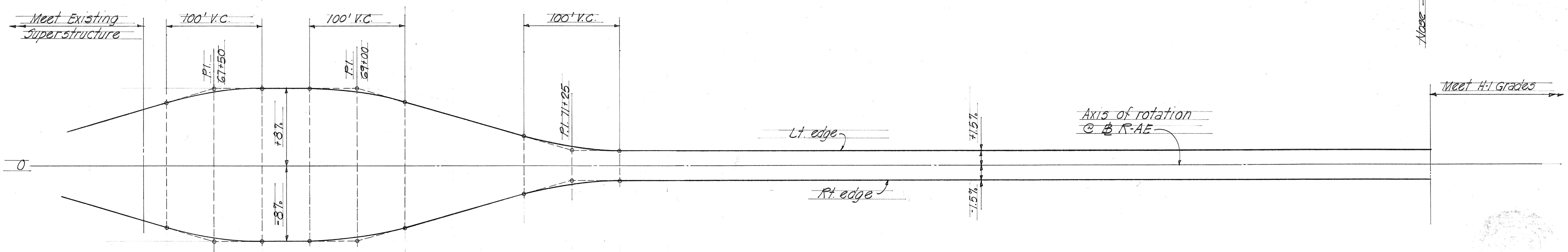
SHEET NO. 14 OF 40 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2-HI-1 (84) 16	1978	344	466

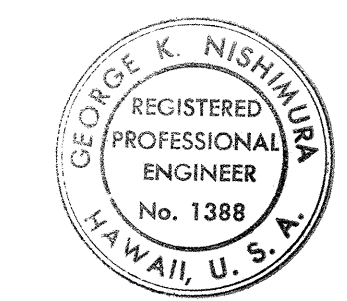


PROFILE ALONG R-AE Not to scale



SUPER ELEVATION ALONG R-AE Not to scale

SURVEY PLOTTED BY	DATE
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ORIGINAL PLAN	
NOTE BOOK	
NO.	



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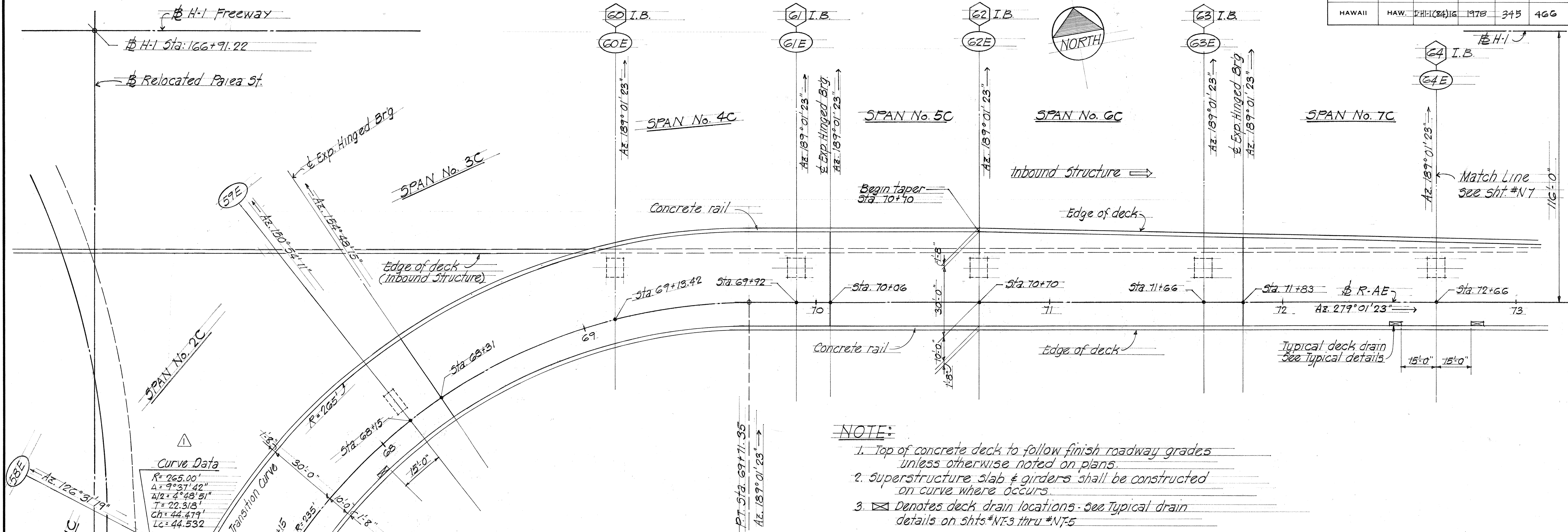
PROFILE & SUPERELEVATION

RAMP "AE"

AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1 (84) 16
Scale as noted Date: Aug. 1978

SHEET NO. 15 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FH-1(84)16	1978	345	466



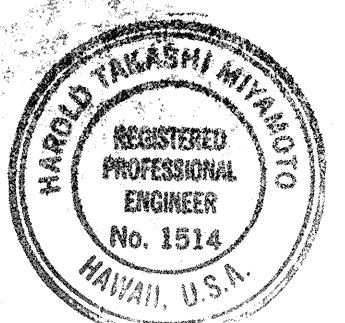
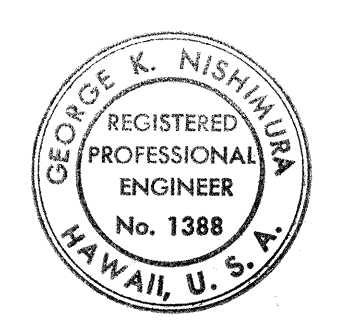
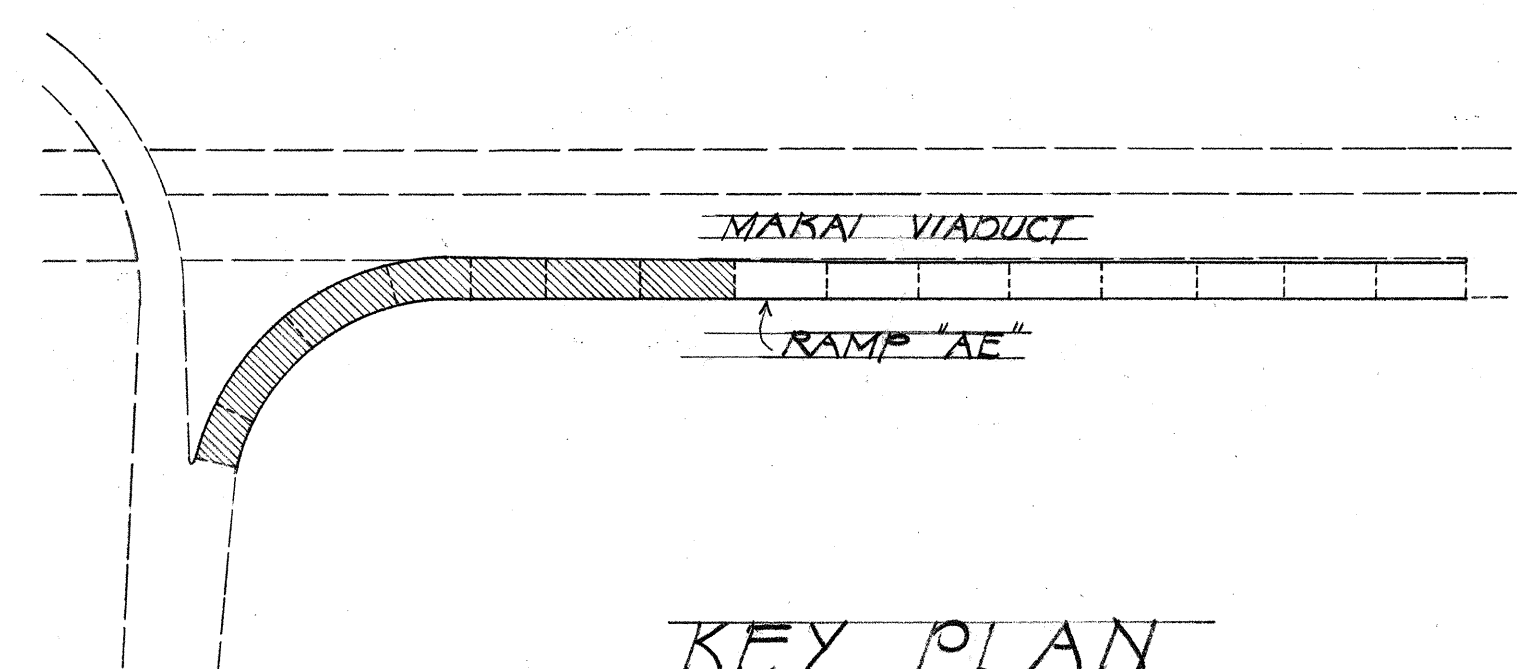
PART DECK LAYOUT PLAN

Scale: 1" = 20'-0"

Note: Ref: See field change no. 5, Sht. #351.

DATE	2/26/79
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
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No.	Date	Revision
1	2/26/79	Clarify curve transition @ R-AW & R-AE nosing area.



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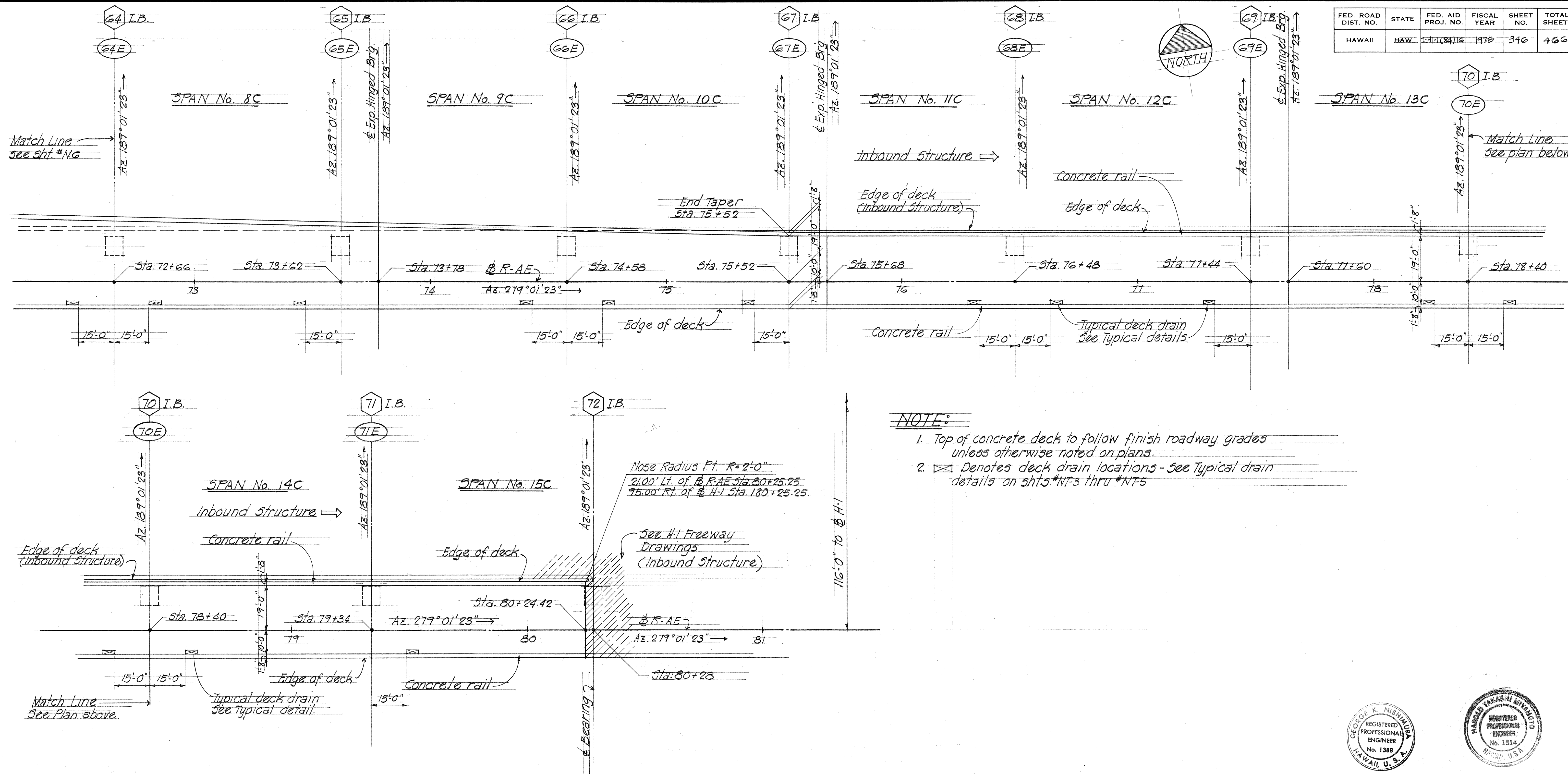
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PART DECK LAYOUT PLAN
 Sta: 66+77 to Sta: 72+66
 RAMP "AE"

AIRPORT INTERCHANGE
 P.A.I. PROJ. NO. I-HI-1(84)16

Scale: 1" = 20'-0" Date: Aug. 1978
 SHEET NO. 1/6 OF 40 SHEETS

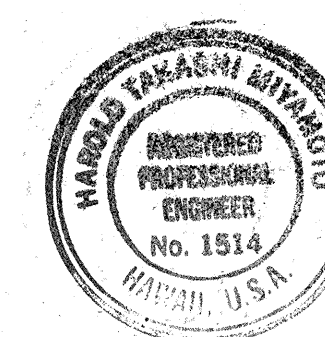
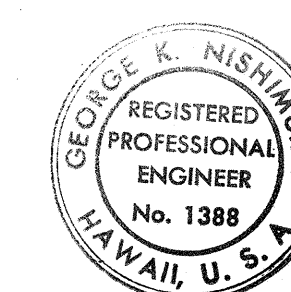
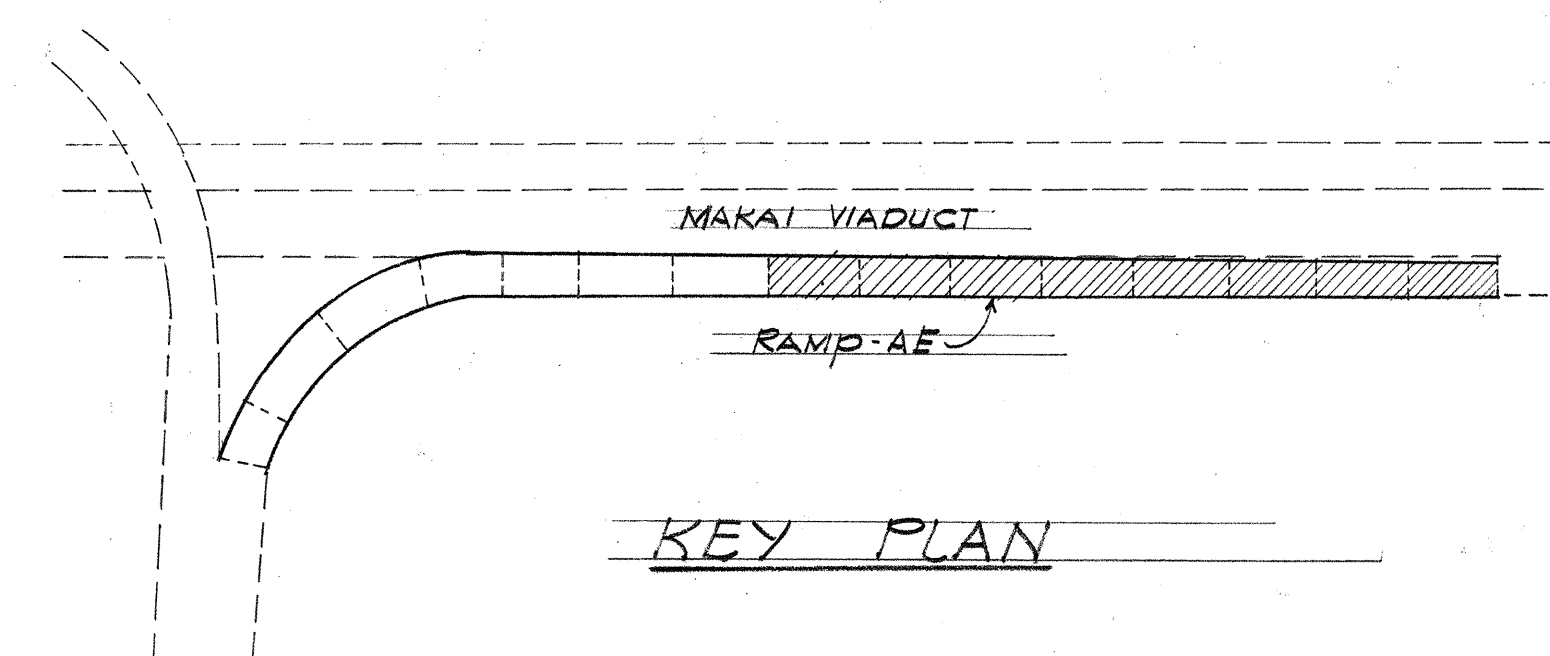
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(84)16	1978	346	466



NOTE:

1. Top of concrete deck to follow finish roadway grades unless otherwise noted on plans.
2. ∇ Denotes deck drain locations - See Typical drain details on sheets NF3 thru NF5

PART DECK LAYOUT PLAN Scale: 1"=20'-0"



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PART DECK LAYOUT PLAN
Sta. 72+66 to Sta. 80+24.42

RAMP "AE"

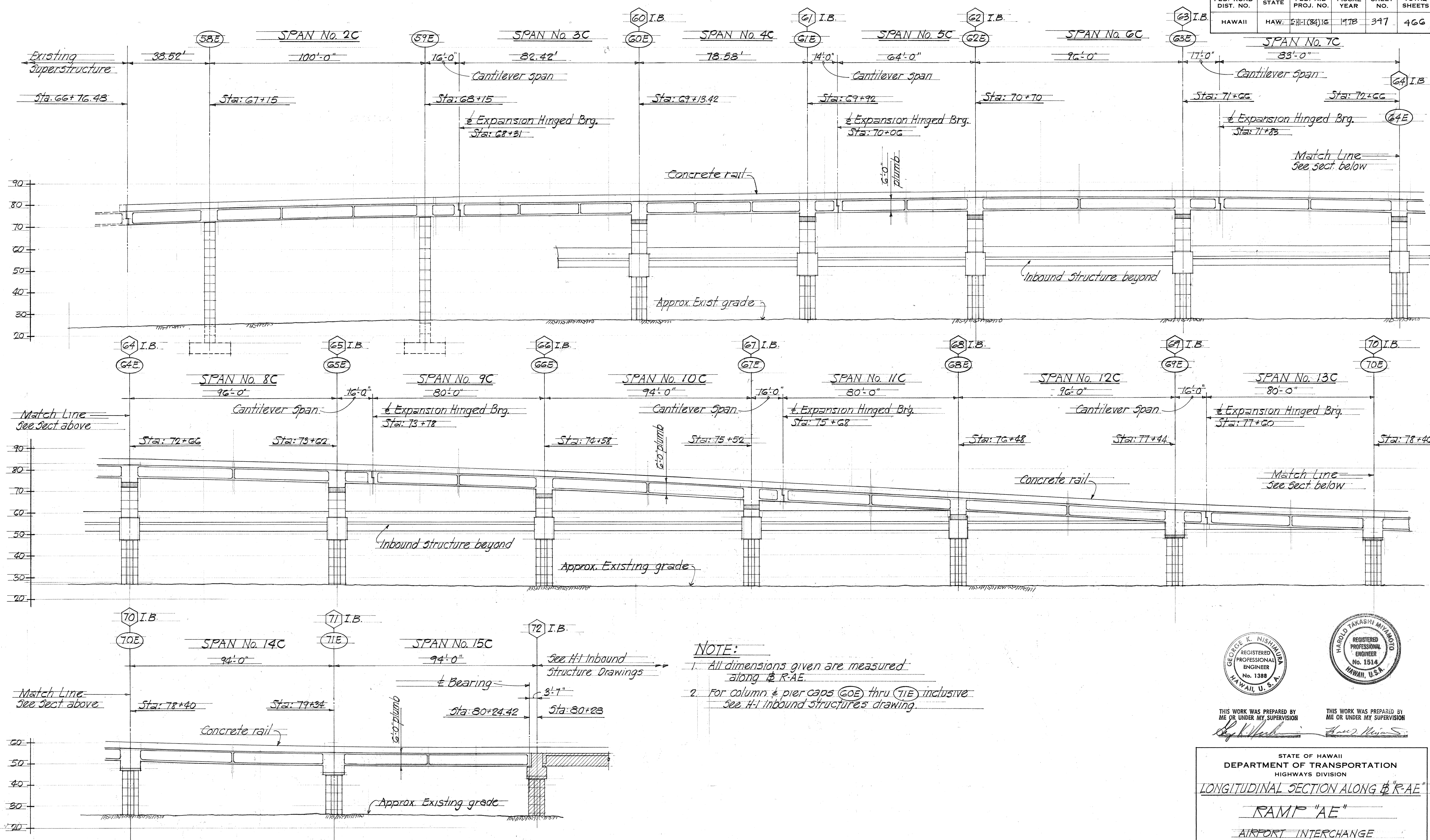
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F.A.T. PROJ. NO. I-HI-1 (84) 16

Scale: 1"=20'-0" Date: Aug 1978

SHEET NO. 17 OF 40 SHEETS

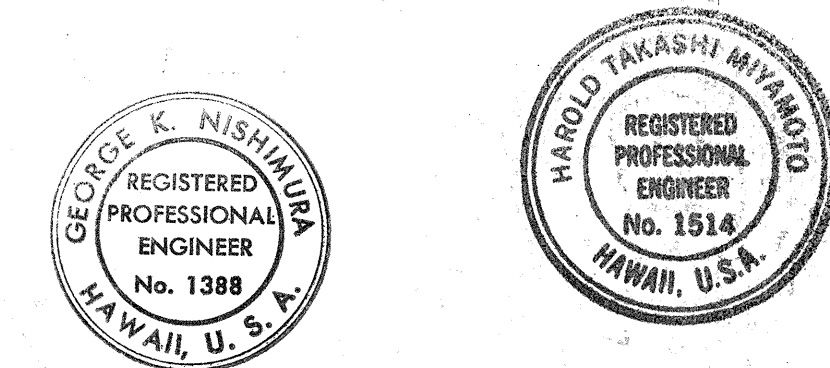
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1 (84) 16	1978	317	466



NOTE:

1. All dimensions given are measured along R-AE.
2. For column & pier caps (60E) thru (71E) inclusive See H-I Inbound Structures drawing.



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STATE OF HAWAII
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LONGITUDINAL SECTION ALONG R-AE

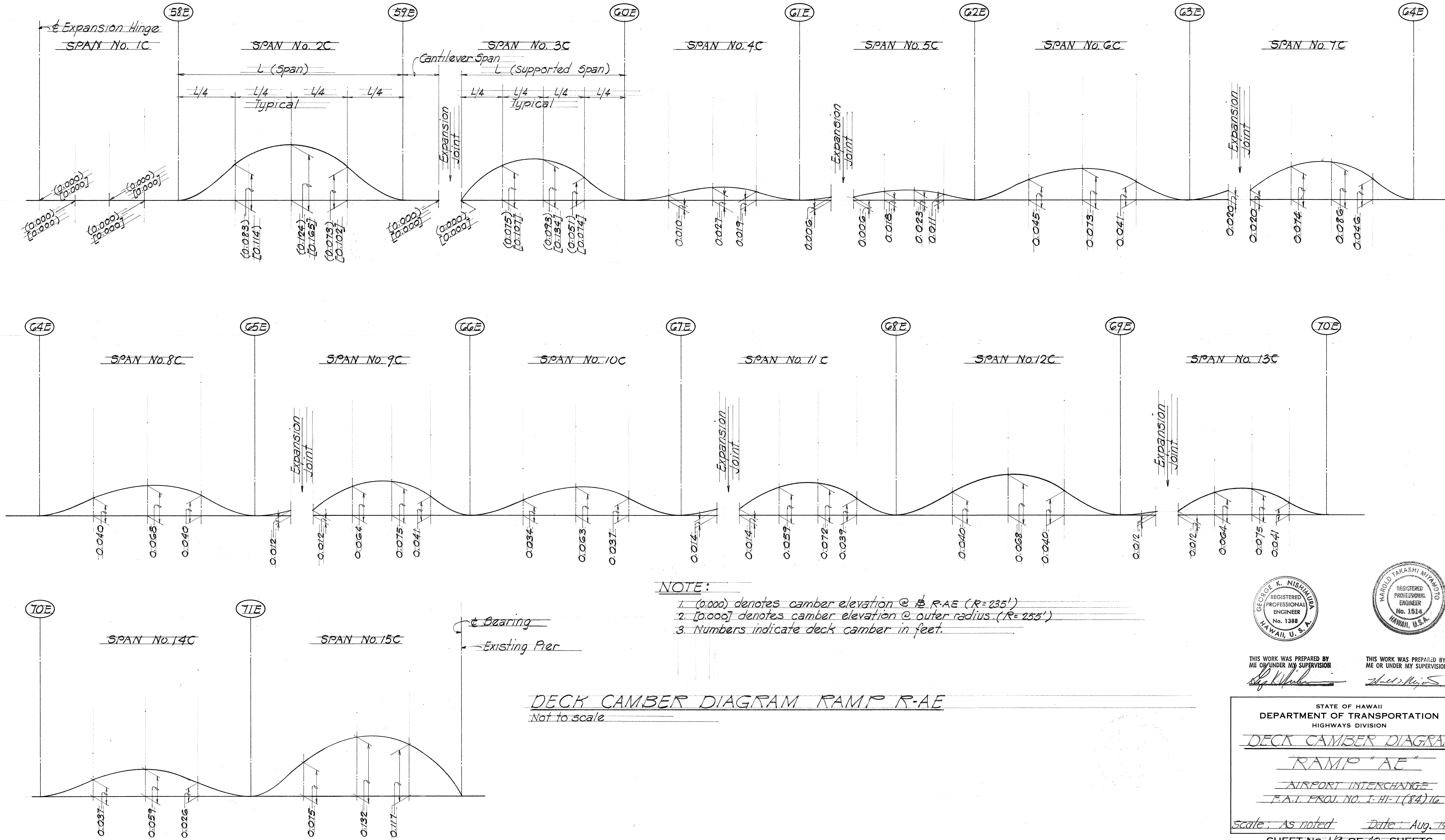
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AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-H-1 (84) 16

Scale 1"=20'-0" Date: Aug. 1978

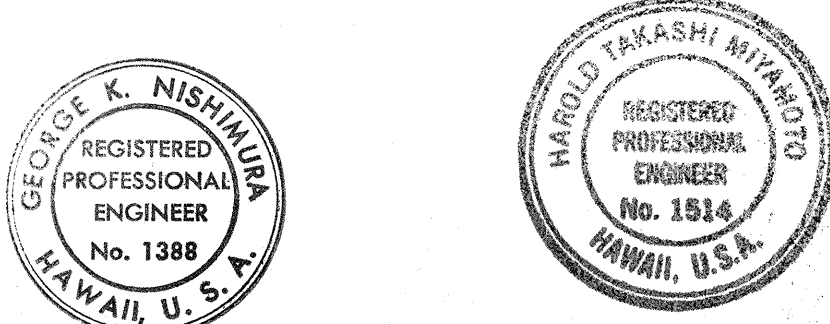
SHEET NO. 13 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FH-1(84)16	1978	348	466



NOTE:
 1. (0.000) denotes camber elevation @ R.A.E. (R=235')
 2. [0.000] denotes camber elevation @ outer radius. (R=255')
 3. Numbers indicate deck camber in feet.

DECK CAMBER DIAGRAM RAMP R-AE
 Not to scale



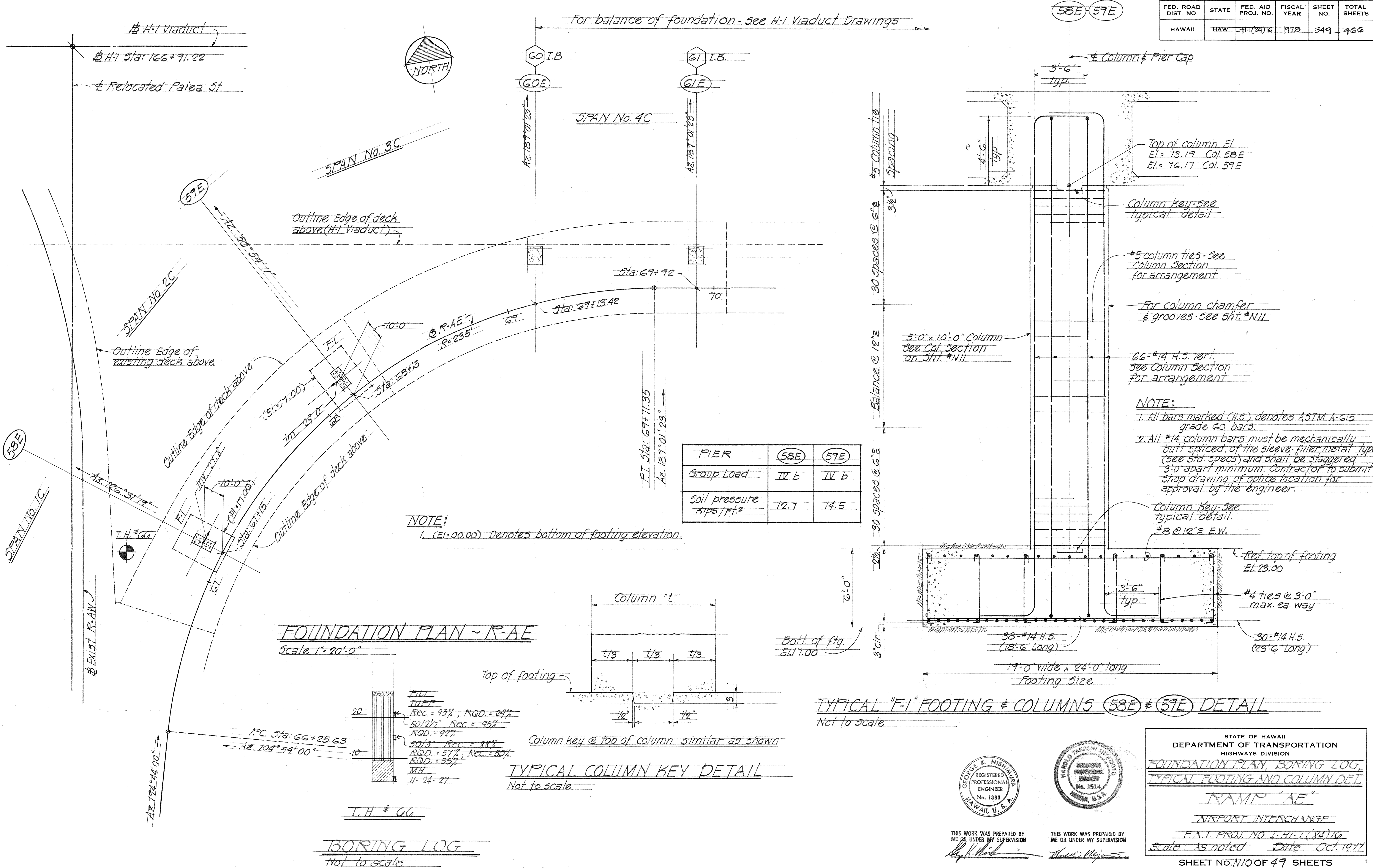
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STATE OF HAWAII
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HIGHWAYS DIVISION
DECK CAMBER DIAGRAM
RAMP "AE"
AIRPORT INTERCHANGE
F.A.T. PROJ. NO. FH-1(84)16
Scale: As noted Date: Aug. 1978
SHEET NO. 19 OF 40 SHEETS

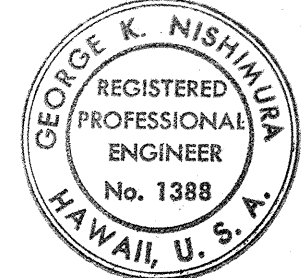
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SURVEY PLOTTED BY	DATE
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QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111(84)16	1978	349	466



SURVEY PLOTTED BY: _____
 DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____

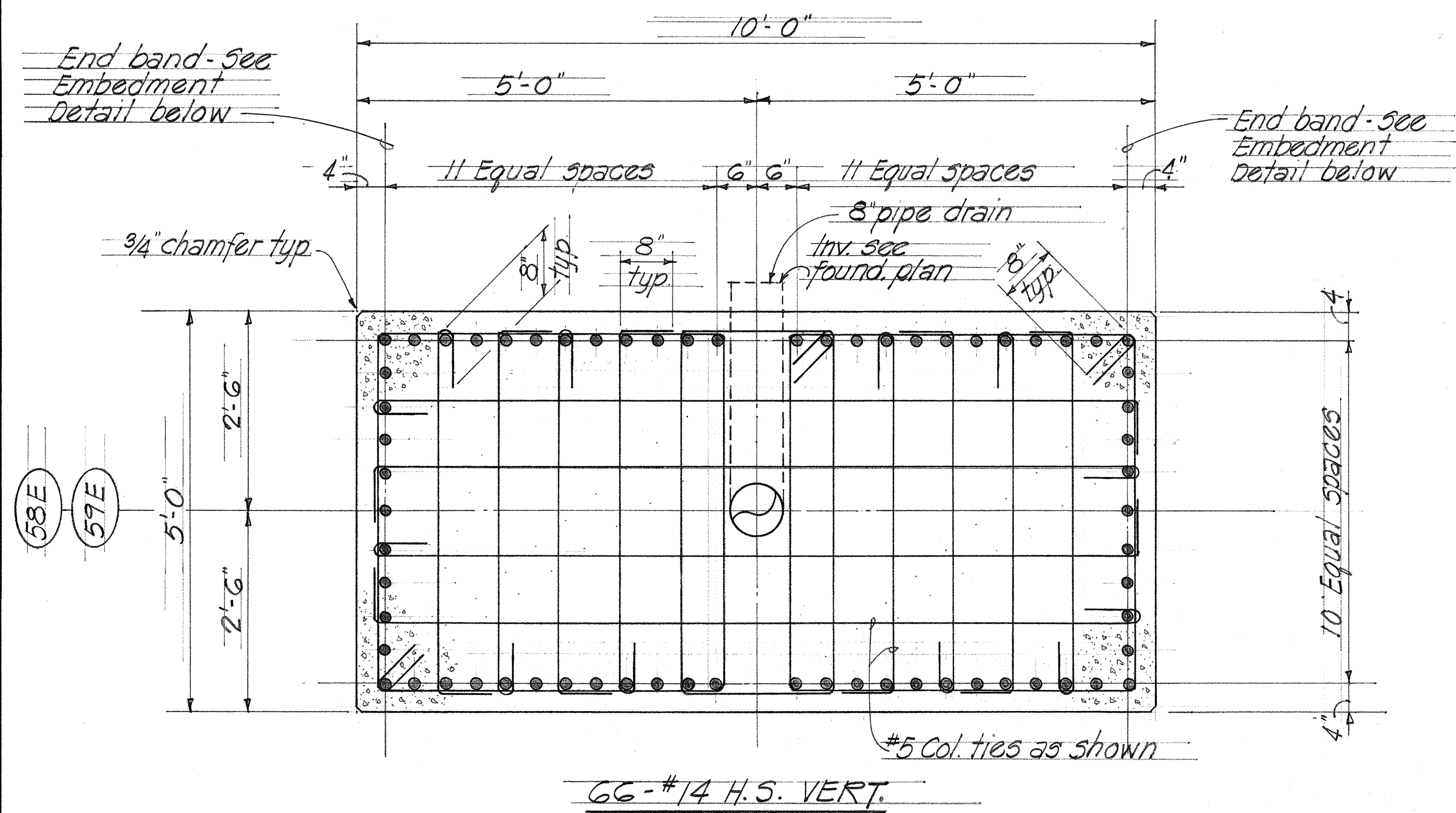


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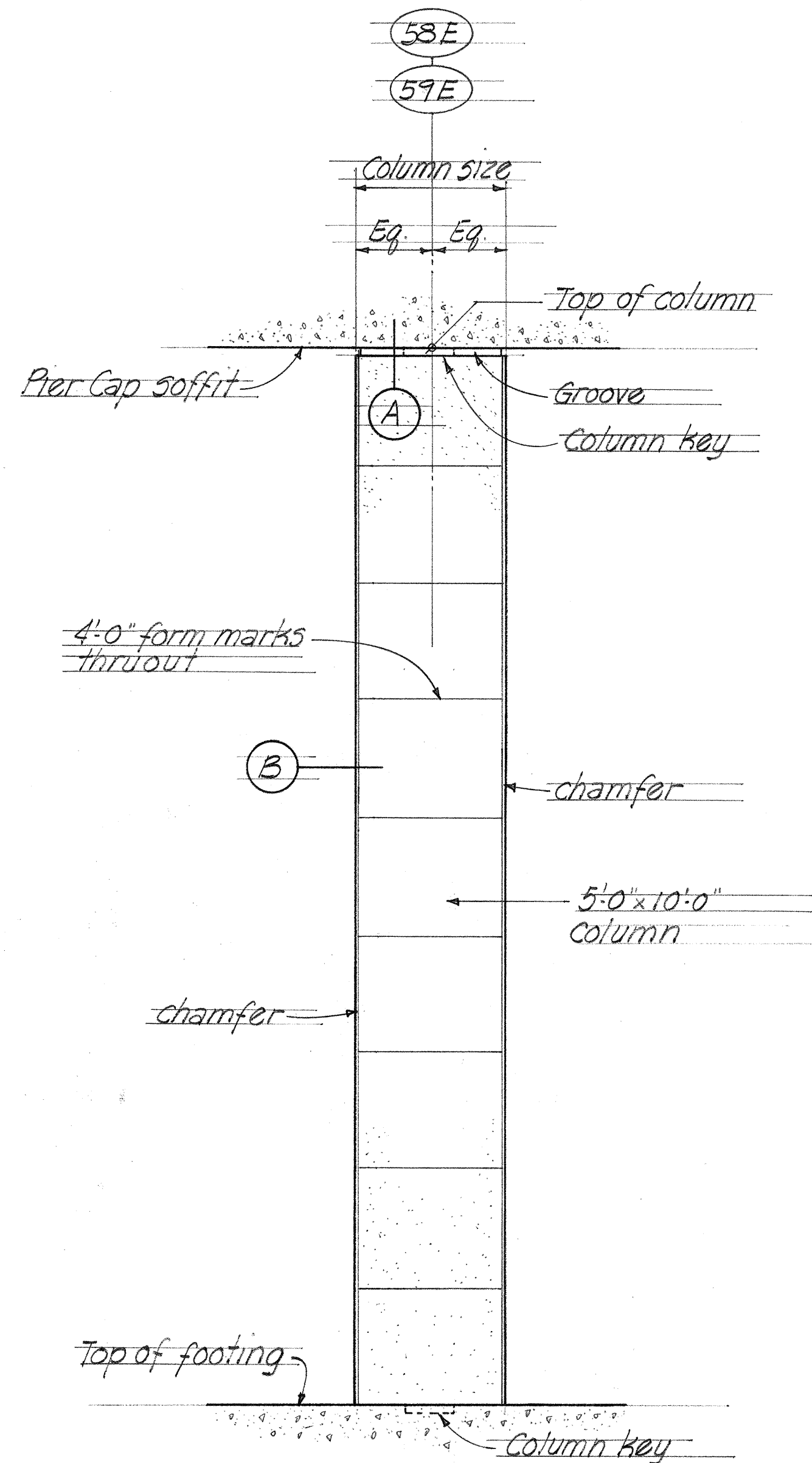
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 [Signature]

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**FOUNDATION PLAN, BORING LOG,
 TYPICAL FOOTING AND COLUMN DET.**
RAMP "AE"
AIRPORT INTERCHANGE
 F.A.T. PROJ. NO. I-H-1(84)16
 Scale: As noted Date: Oct. 1977
 SHEET NO. 110 OF 49 SHEETS

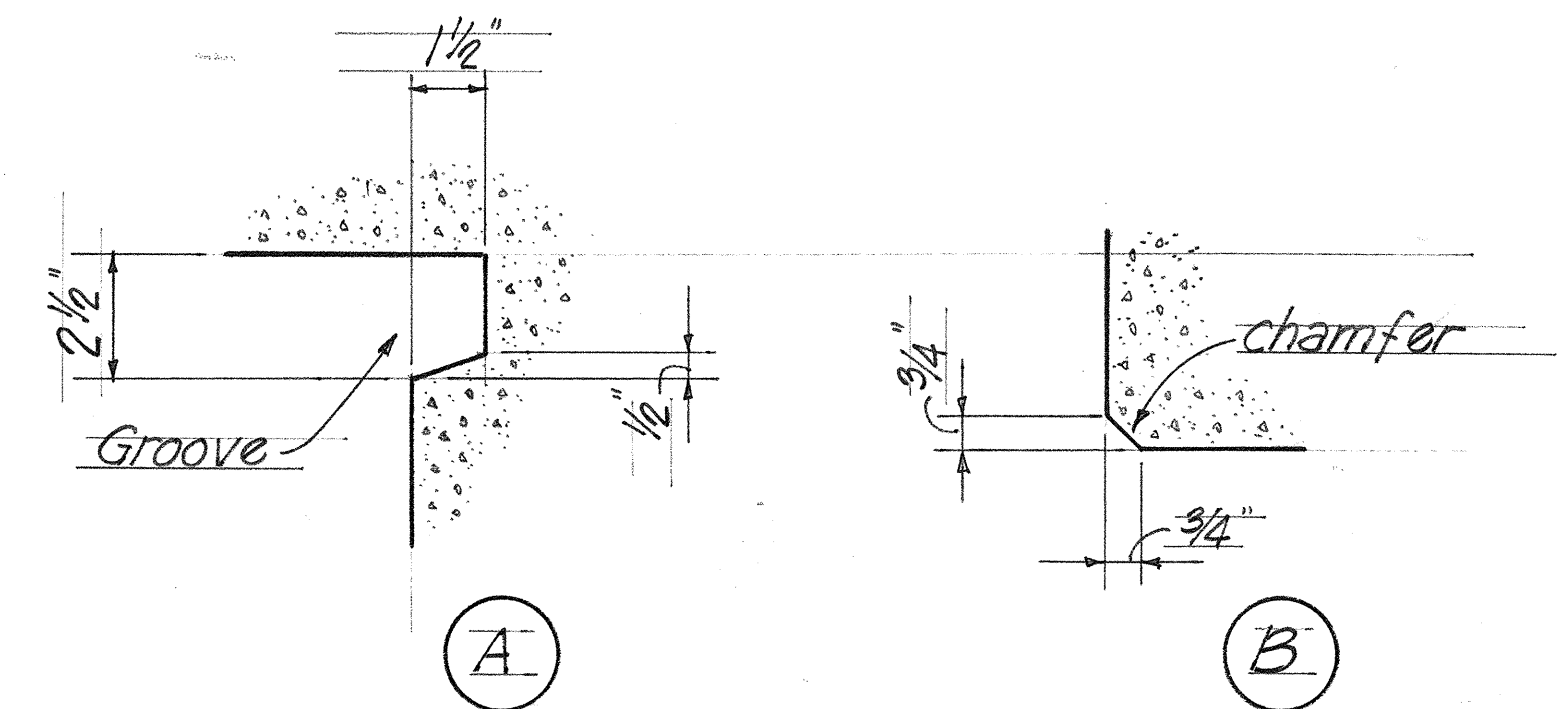
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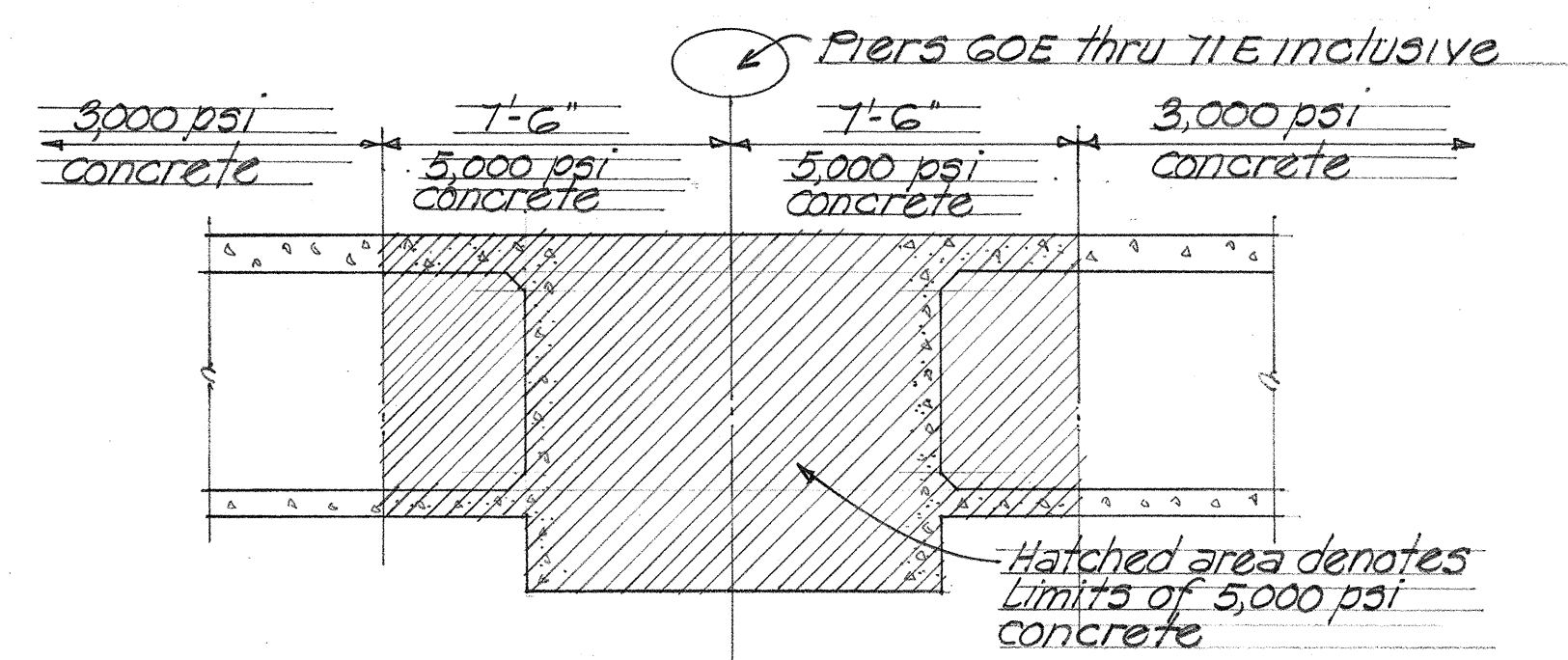
TYPICAL COLUMNS 58E & 59E SECTION
Scale 3/4"=1'-0"



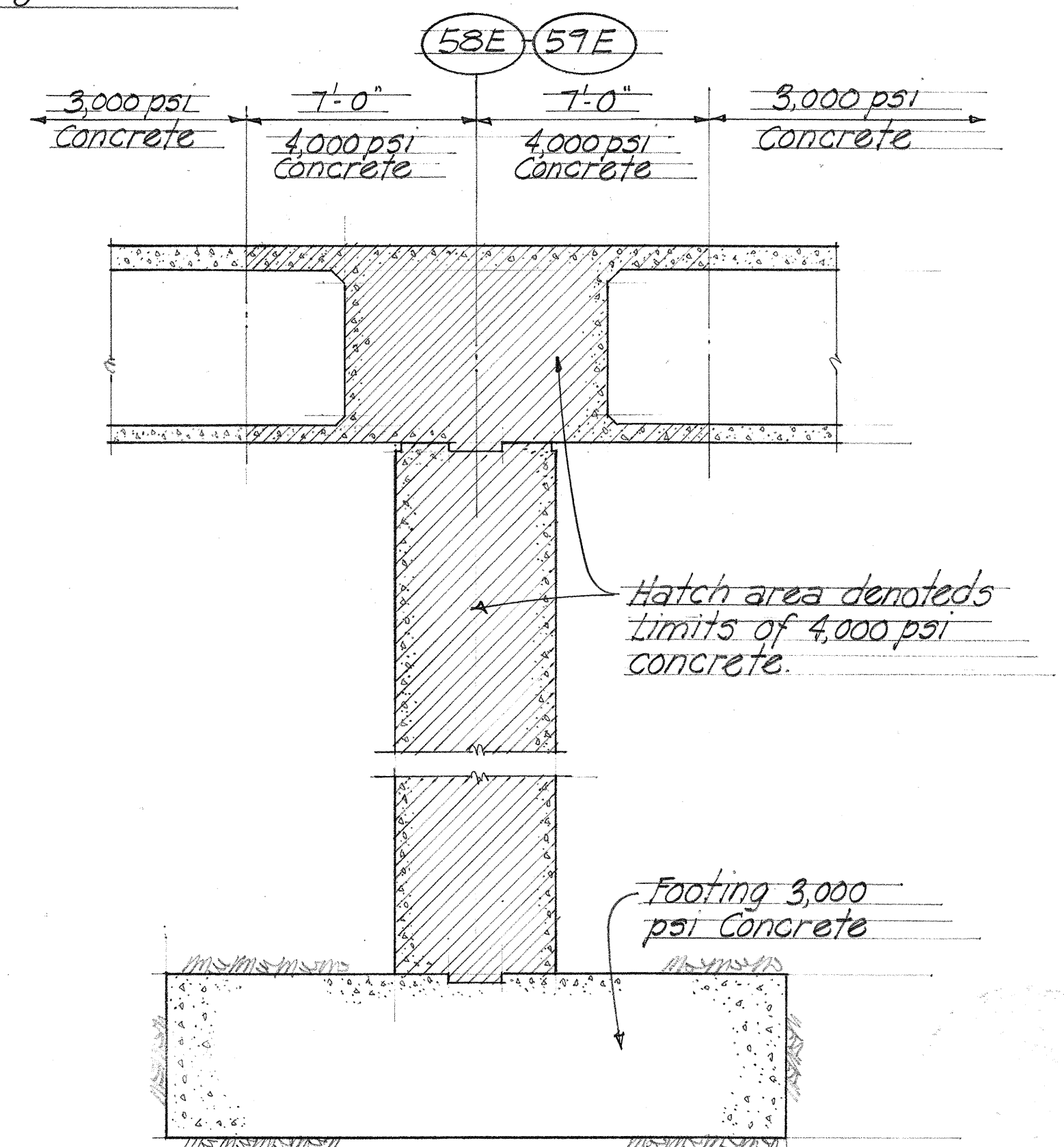
TYPICAL COLUMN 58E & 59E ELEVATION
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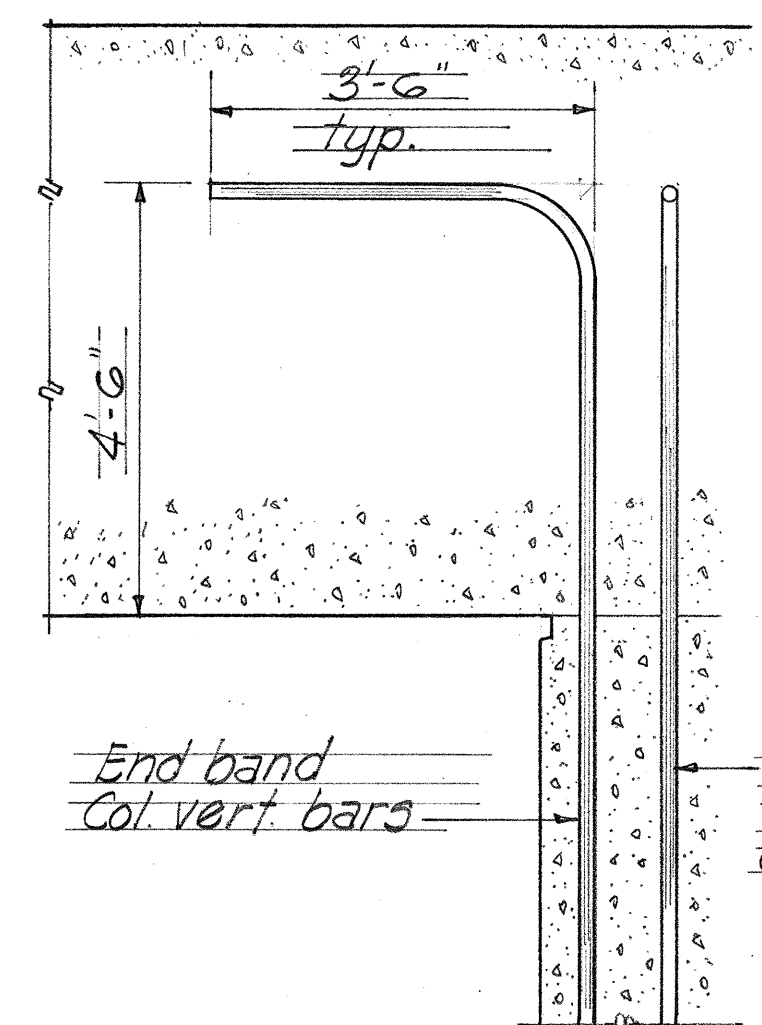
GROOVE & CHAMFER DETAILS
Scale 3"=1'-0"



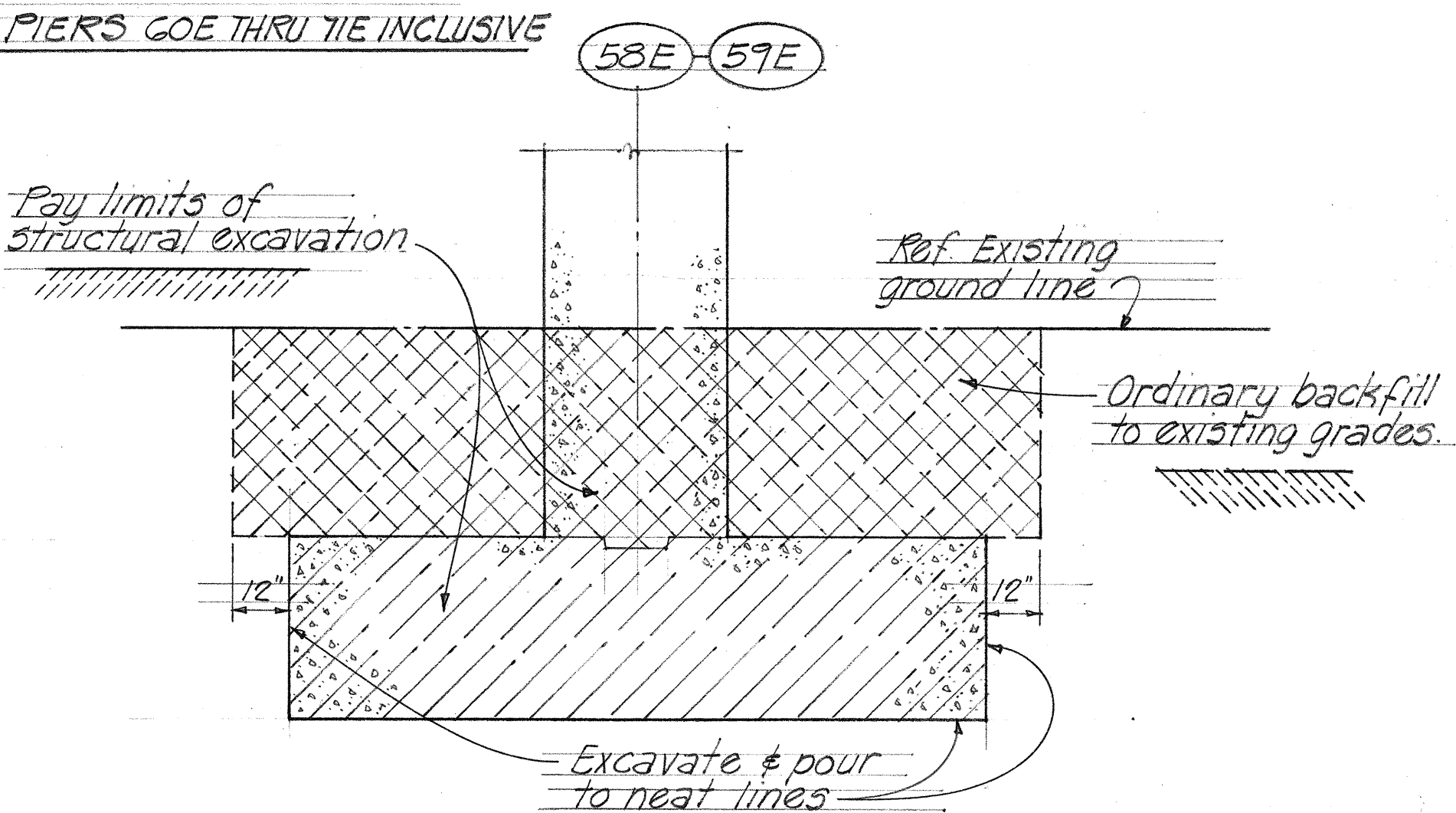
TYPICAL DETAIL SHOWING LIMITS OF 5,000 PSI CONCRETE @ PIERS GOE THRU TIE INCLUSIVE
Not to scale



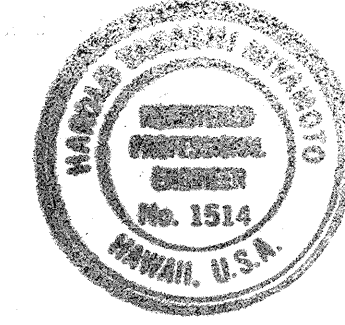
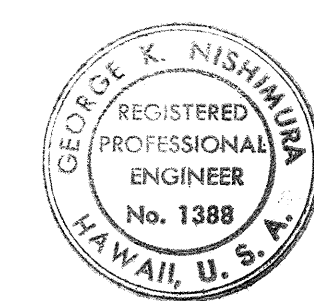
TYPICAL DETAIL SHOWING LIMITS OF 4,000 PSI CONCRETE @ PIERS 58E & 59E
Not to scale



TYPICAL END BAND VERT. BAR EMBEDMENT DETAIL
Not to scale



TYPICAL LIMITS OF STRUCTURAL EXCAVATION PAYLINE
Not to scale

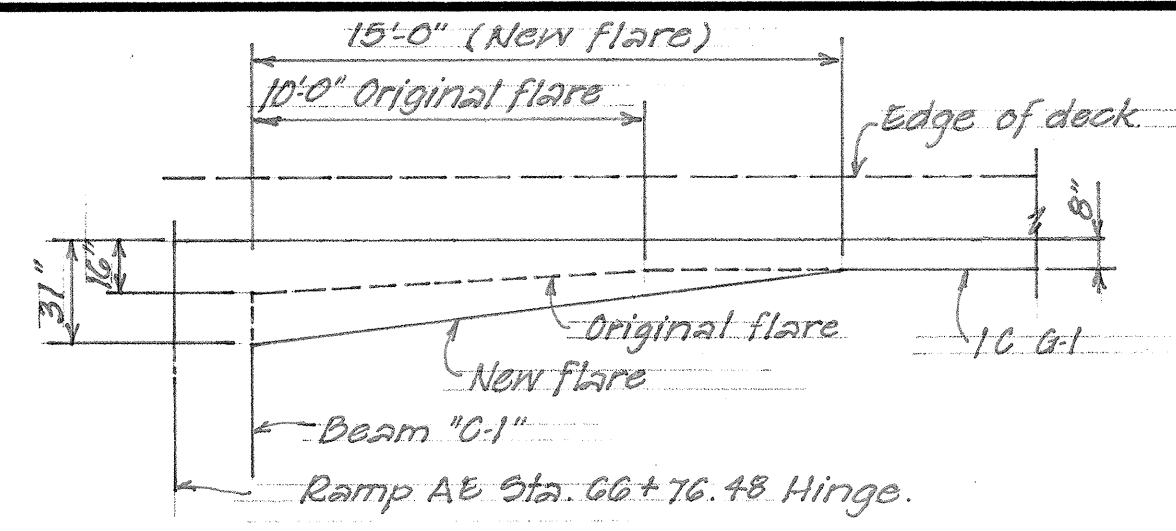


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George K. Nishiwaki

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Mark S. Smith

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
COLUMN ELEV., SECT., DET. AND TYP.
LIMITS OF STRUCT. EXCAV. PAYLINE
RAMP "A"
AIRPORT INTERCHANGE
F.A.T. PROJ. NO. I-H-1(84)16
Scale: As noted Date: Oct. 1977
SHEET NO. 350 OF 49 SHEETS

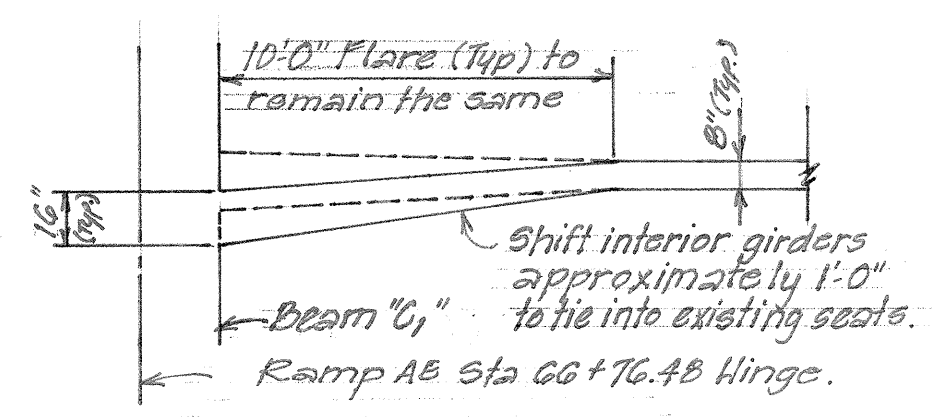
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(84)16	1978	351	466



Field Change No. 5:
 * Interior girders 10 G-2, 10 G-3, 10 G-4 & 10 G-5
 Shift the interior girders approximately 1'-0" to tie into the existing seats. Except for the shift, all reinforcing steel and girder flare dimensions remain the same as the original plans.

Additional reinforcing steel:
 1) Add 2 #11 ϕ (Total 4 #11s)
 2) Increase stirrup widths thruout new flare length and within Beam "C". The number, size, and spacing of the stirrups shall remain the same as the original.

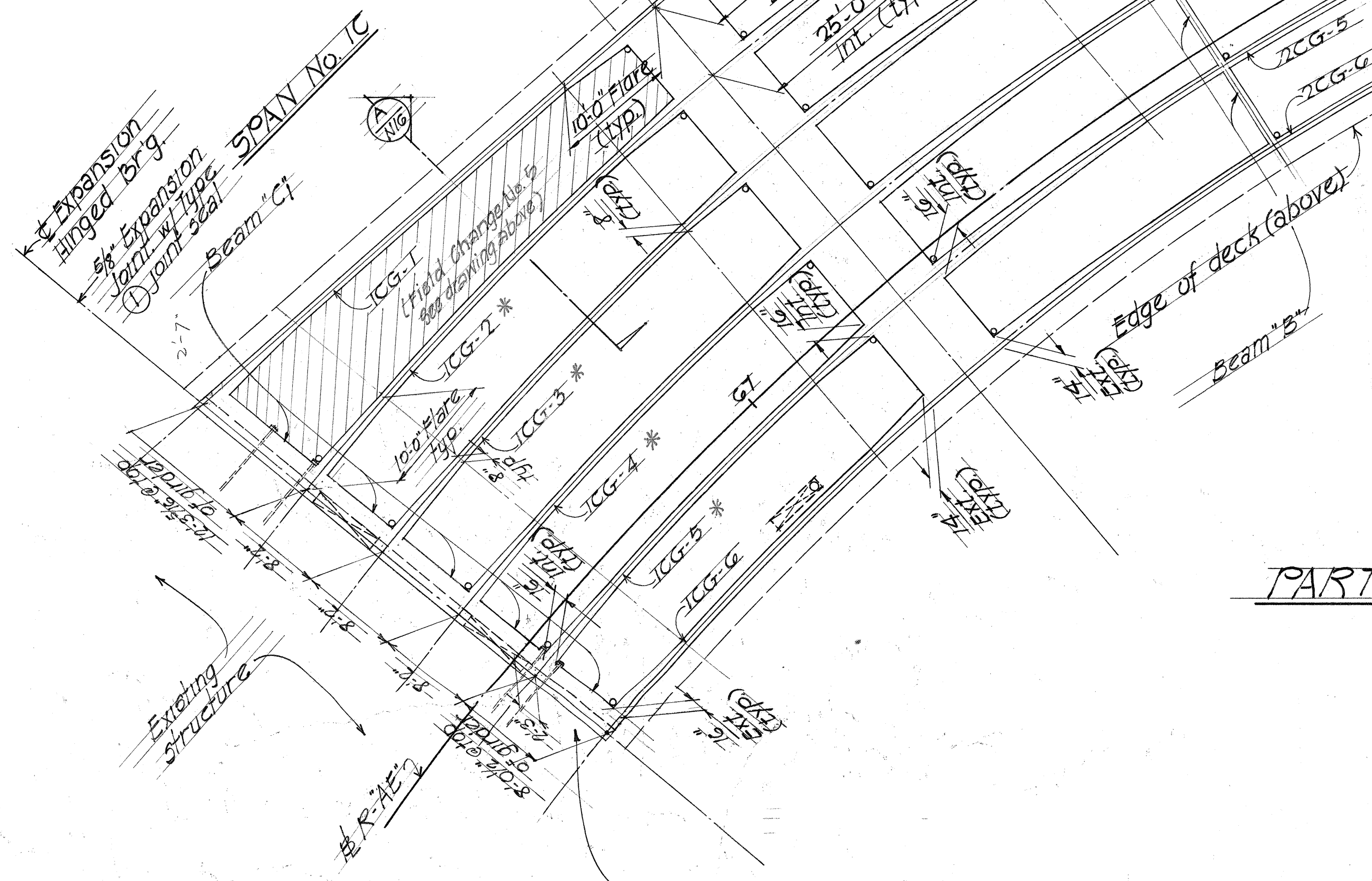
REVISION TO EXTERIOR GIRDER 10 G-1



Note:
 1) All reinforcing steel to remain the same.
 2) Add 2 #11 ϕ (Total 4 #11s)

REVISION TO INTERIOR GIRDERS 10 G-2, 10 G-3, 10 G-4 & 10 G-5

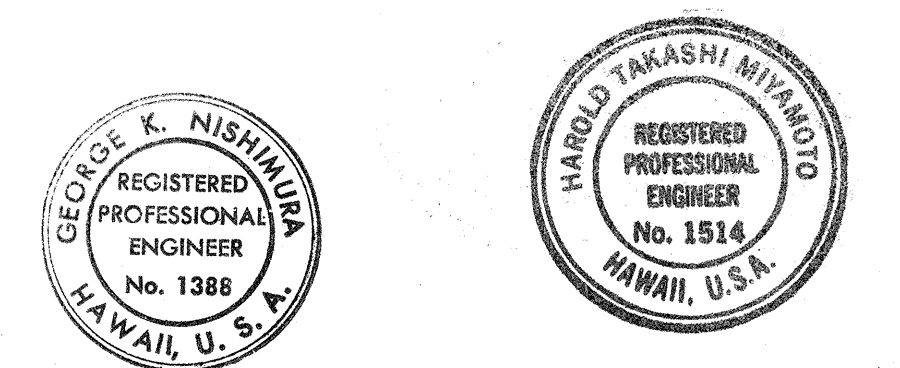
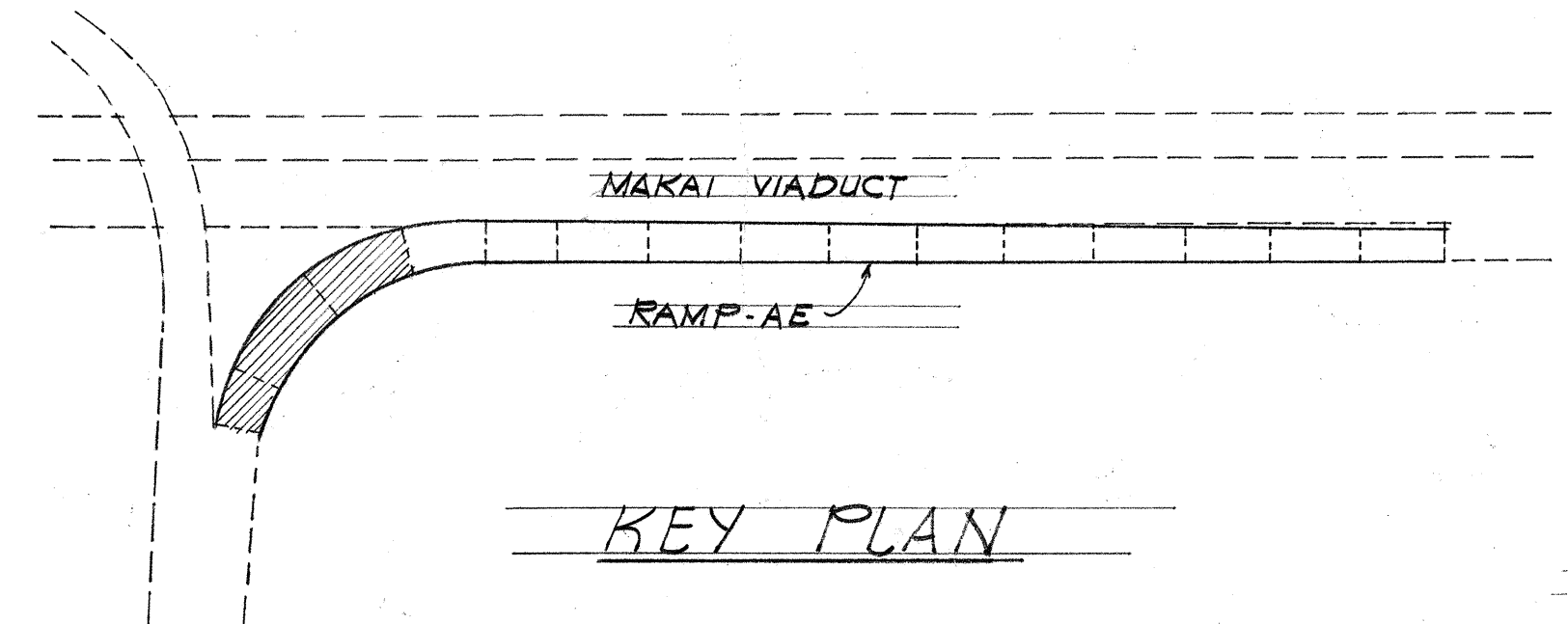
Ref.: Field Change No. 5
 # see sh. nos. 345, 358, 360.



NOTE:

1. Hatched area denotes limits of 8 1/2" th top slab.
2. All deck transverse reinforcing shall be placed normal or radial to Φ . See Normal Section on Sh. #17.
3. For girder stirrup spacing see sh. #N31 thru #N39.
4. Beam "B" location shall be measured along Φ and placed normal or radial to Φ .
5. ---○--- Denotes number of cable units required per set of longitudinal restrainer.
6. For pier caps (58E) & (57E) details - See Sh. #N40.
7. For limits of 4,000 & 5,000 psi concrete @ piers see details on sh. #N11.

PART DECK FRAMING PLAN scale 1/8"=1'-0"



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[Signature]
 REGISTERED PROFESSIONAL ENGINEER No. 1388 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DECK FRAMING PLAN

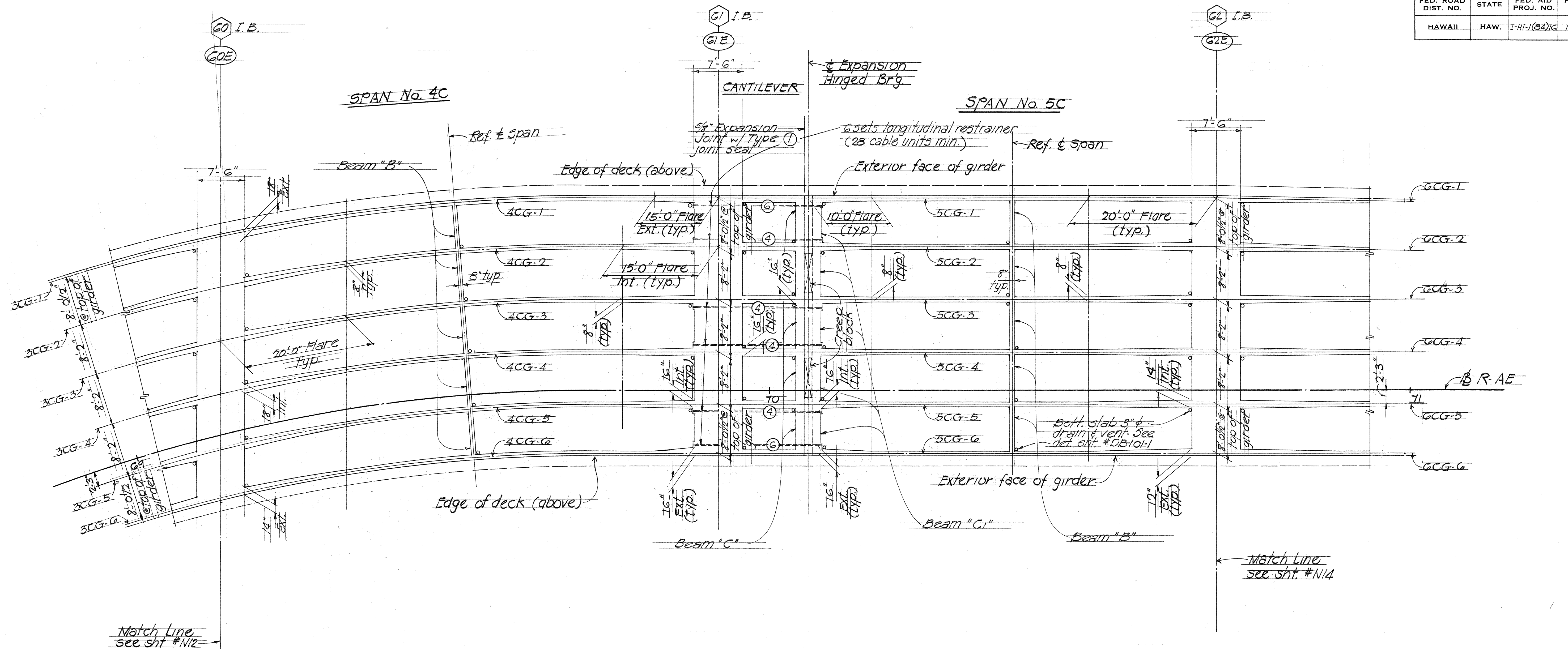
RAMP "AE"

AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-H-1(84)16

Scale: 1/8"=1'-0" Date: Aug. 1978

SHEET NO. N/2 OF 40 SHEETS

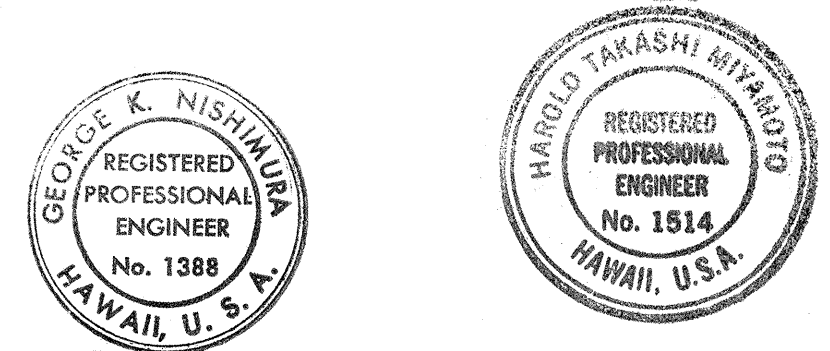
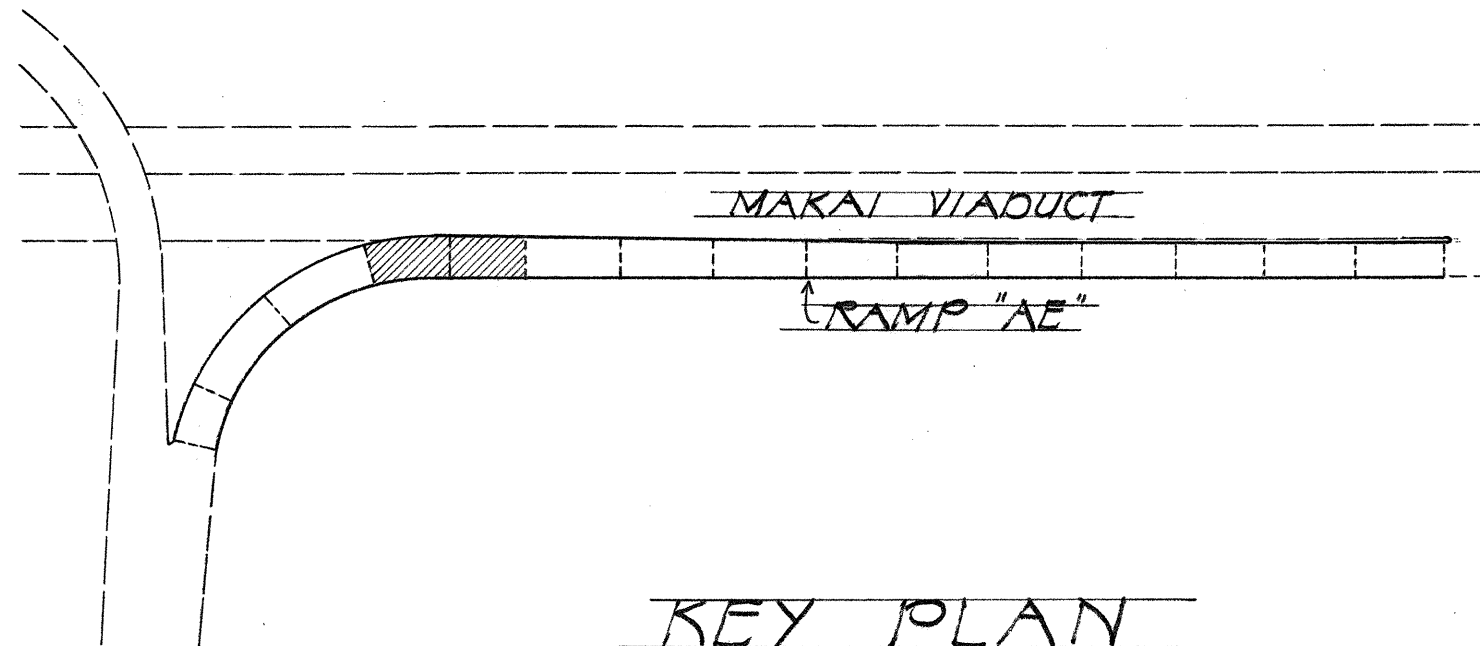
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(84)16	1978	352	466



PART DECK FRAMING PLAN scale 1/8"=1'-0"

NOTE:

1. All deck transverse reinforcing shall be placed normal or radial to $\bar{B}$ - See Normal Section on sht. #N17
2. For girder stirrup spacing - see shts #N31 thru #N39
3. Beam "B" location shall be measured along $\bar{B}$ and placed normal or radial to $\bar{B}$
4. $\bigcirc$ Denotes number of cable units required per set of longitudinal restrainer
5. For pier cap (G1) (G2) & (G3) details - see 4-1 Inbound Structure drawings.
6. For limits of 4,000 & 5,000 psi concrete @ piers, see details on sht. #N11



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK FRAMING PLAN
RAMP "AE"

AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1(84)16
Scale 1/8"=1'-0" Date: Aug. 1978

SHEET No. N/3 OF 40 SHEETS

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

[illegible]

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK FRAMING PLAN

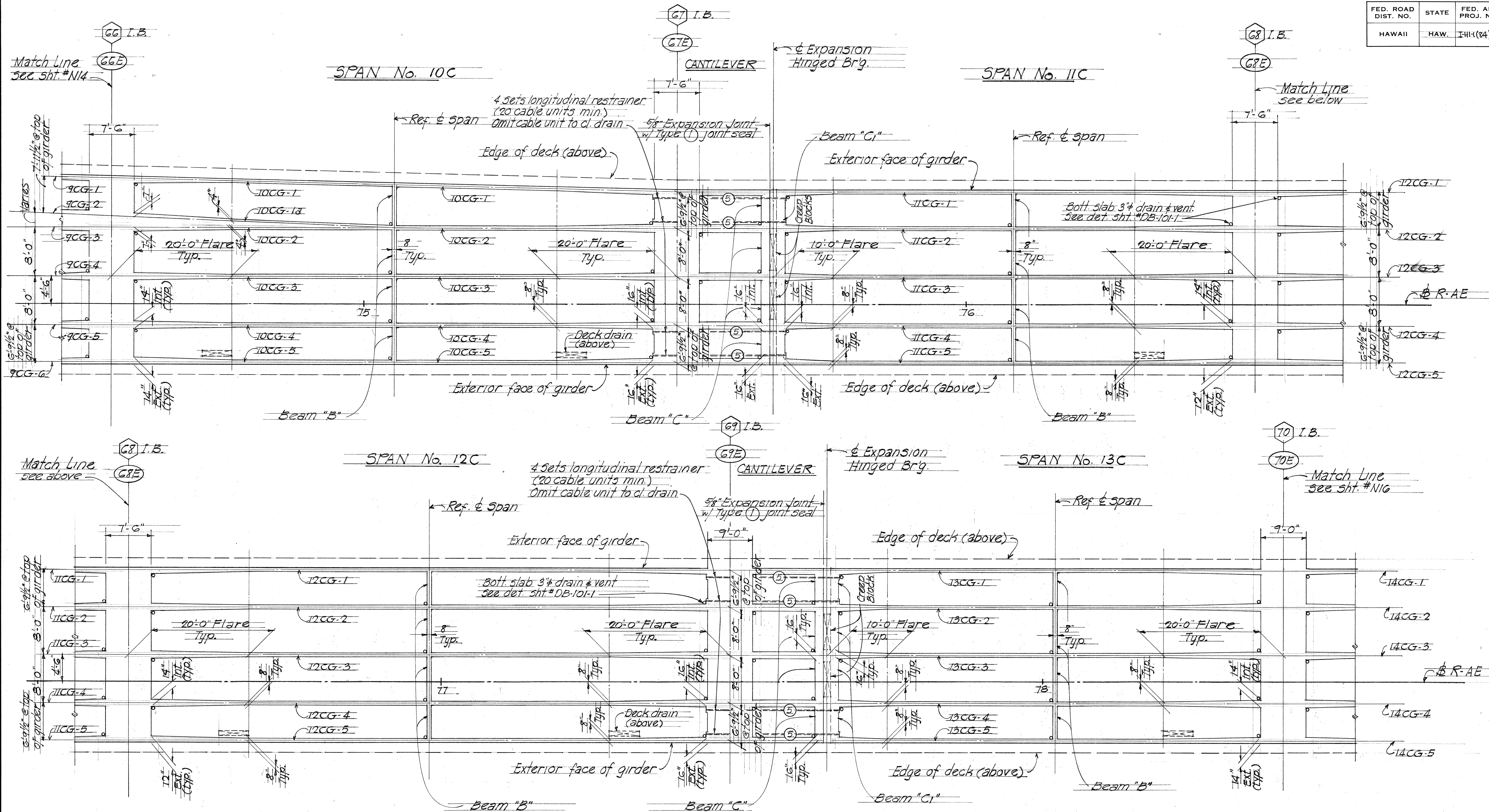
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AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-H-1 (84) 16

Scale 1/8"=1'-0" Date: Aug. 1978

SHEET NO. 114 OF 40 SHEETS

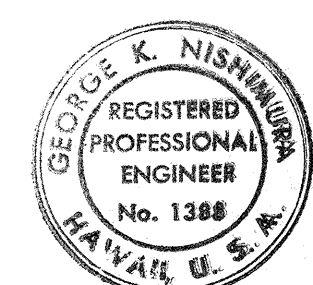
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IHH(84)16	1978	354	400



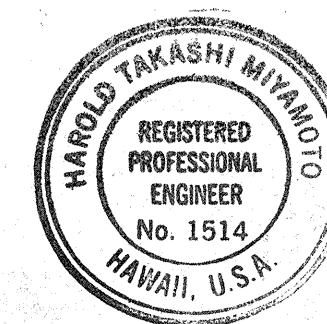
PART DECK FRAMING PLAN Scale 1/8"=1'-0"

NOTE:

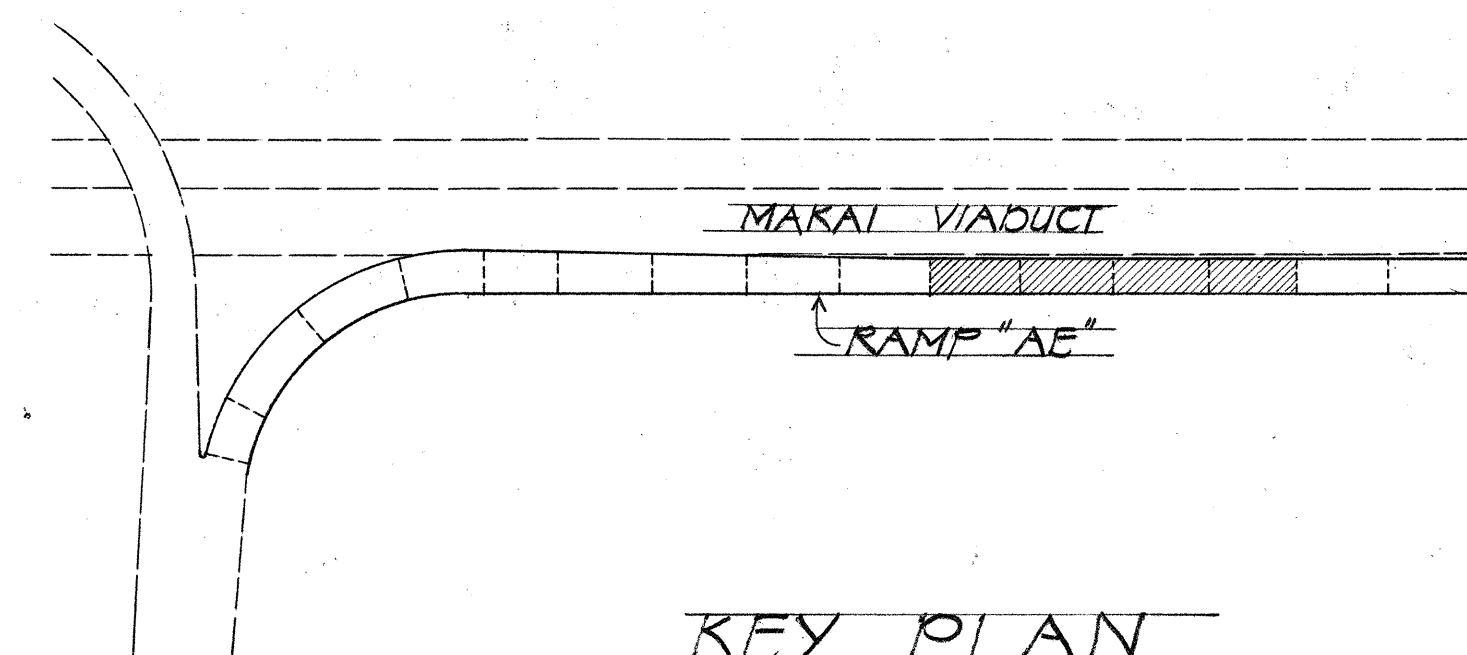
- All deck transverse reinforcing shall be placed normal to $\perp$. See Normal Section on Sht. #N17
- For girder stirrup spacing - See Shts. #N31 thru #N37
- Beam "B" location shall be measured along $\perp$ & placed normal to $\perp$.
- denotes number of cable units required per set of longitudinal restrainer.
- For pier caps (66) thru (70) details - See H-1 Inbound Structure drawings.
- For limits of 4,000 & 5,000 psi concrete & piers, see details on Sht. #N11



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KEY PLAN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK FRAMING PLAN
RAMP "AE"

AIRPORT INTERCHANGE

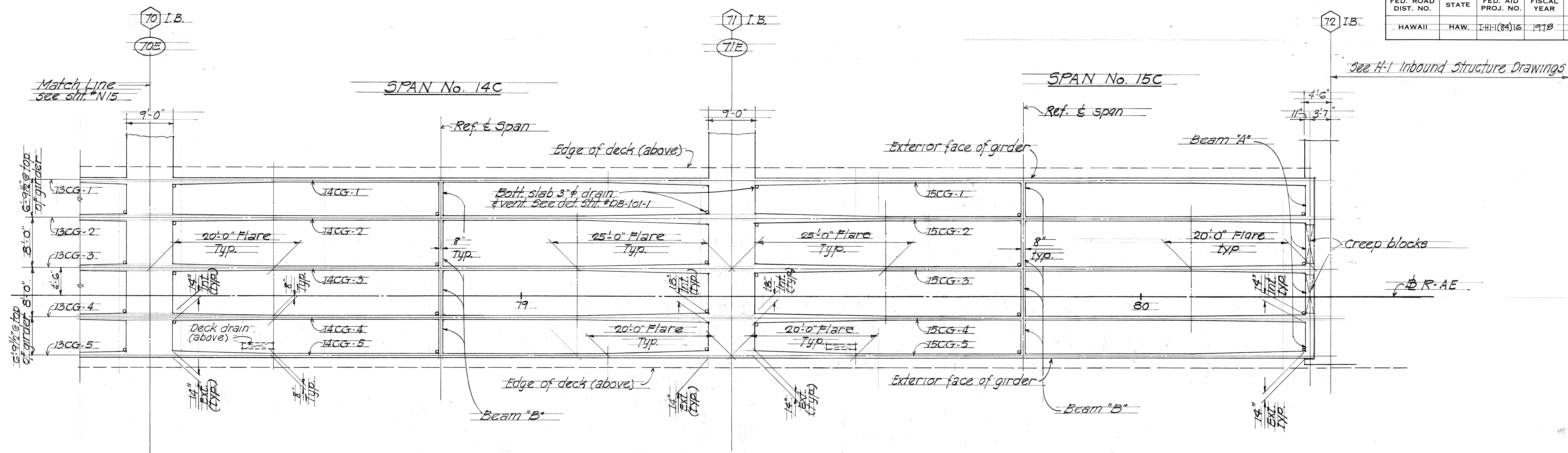
F.A.I. PROJ. NO. I-H-1 (84) 16

Scale: 1/8"=1'-0"

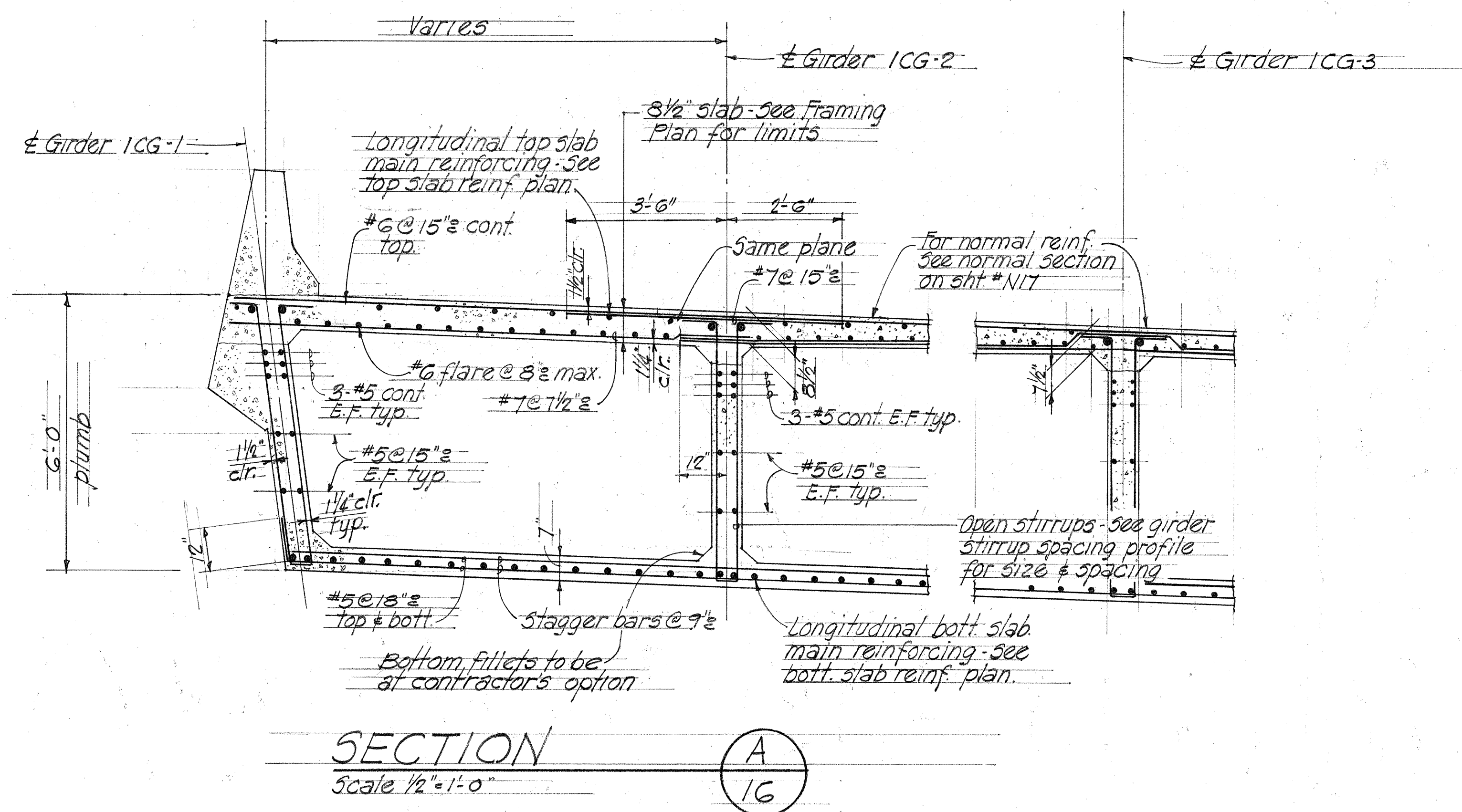
Date: Aug. 1978

SHEET No. 15 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-4-I(84)16	1978	355	400

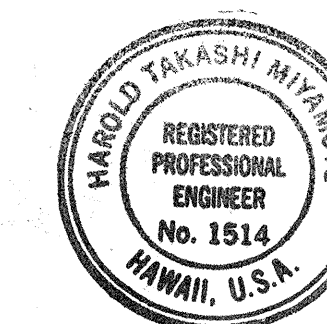
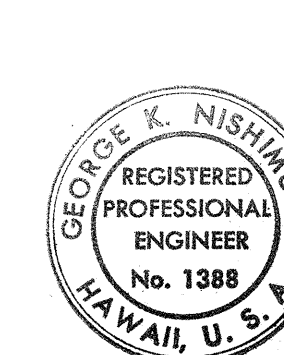


PART DECK FRAMING PLAN - scale 1/8"=1'-0"



NOTE:

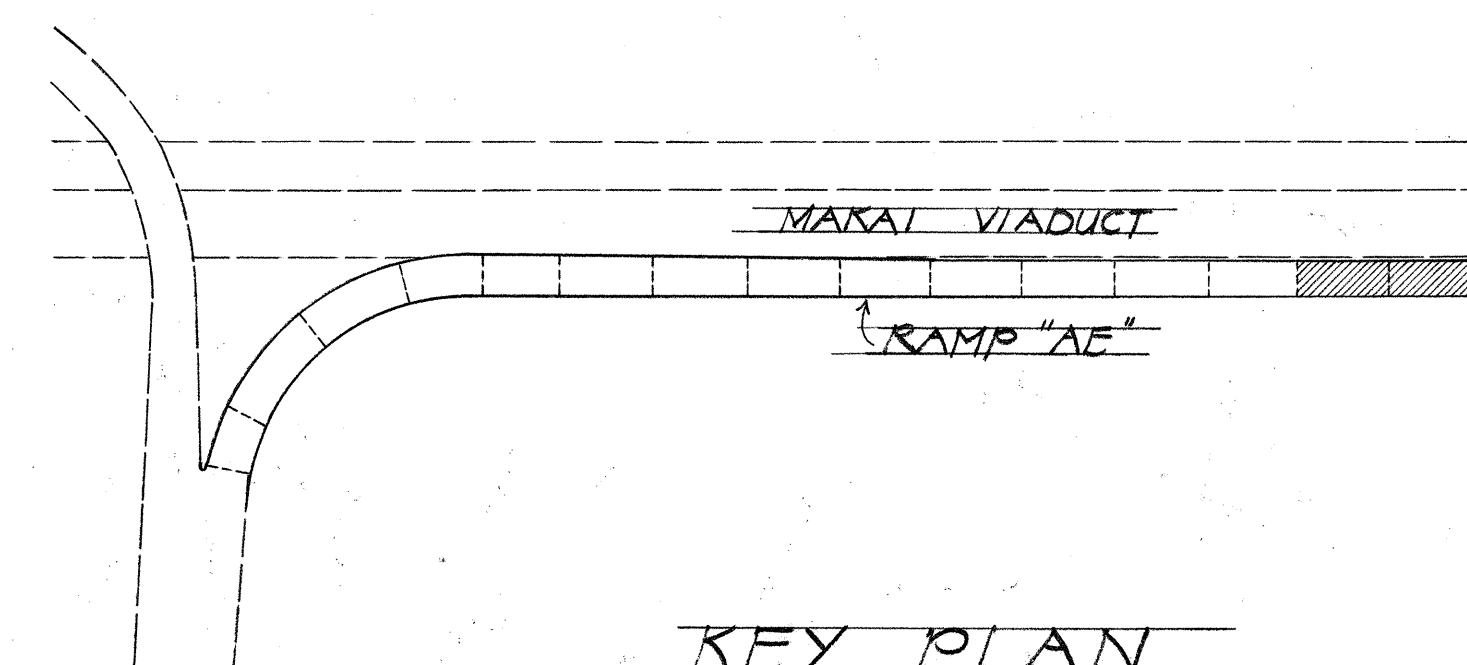
1. All deck transverse reinforcing shall be placed normal to Φ
See Normal Section on Sht #N17
2. For girder stirrup spacing - See Shts. #N37 thru #N39
3. Beam "B" location shall be measured along Φ & placed normal to Φ .
4. For pier caps (TOE) & (TIE) details - See H-1 Inbound Structure drawings
5. For Beam "A" bearing details on Sht. #N18
6. For limits of 4,000 & 5,000 psi concrete @ piers, see details on Sht. #N11



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK FRAMING PLAN

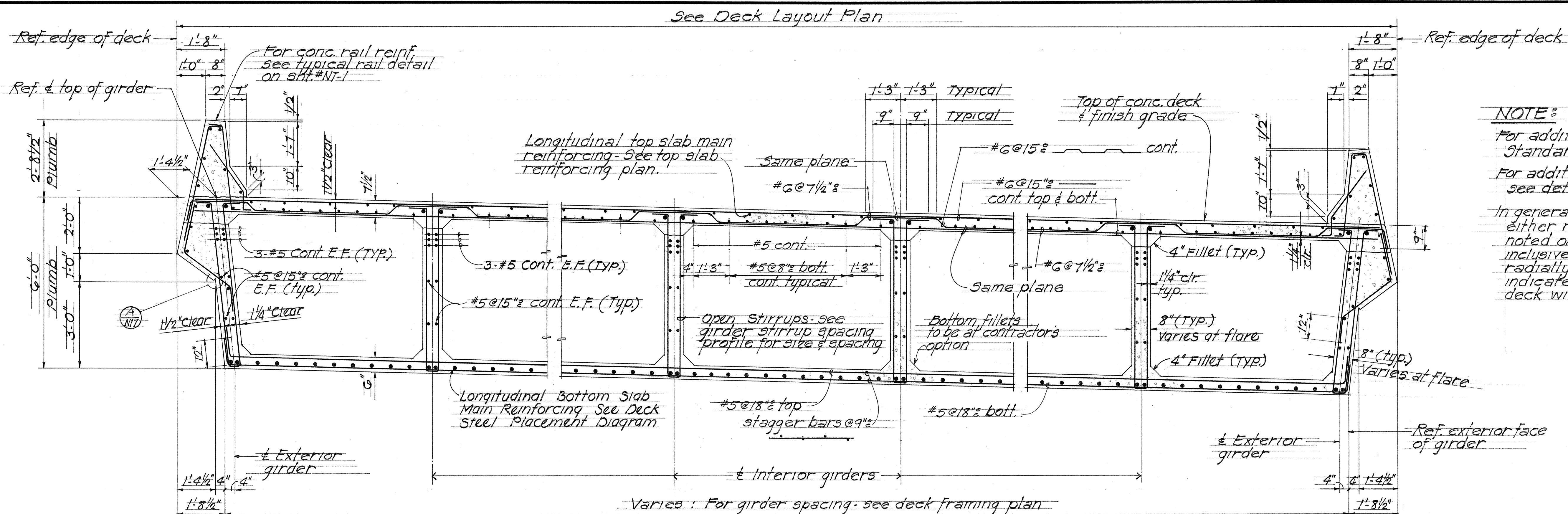
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AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1 (84)10

Scale $\frac{1}{8}'' = 1'-0''$ Date: Aug. 1978

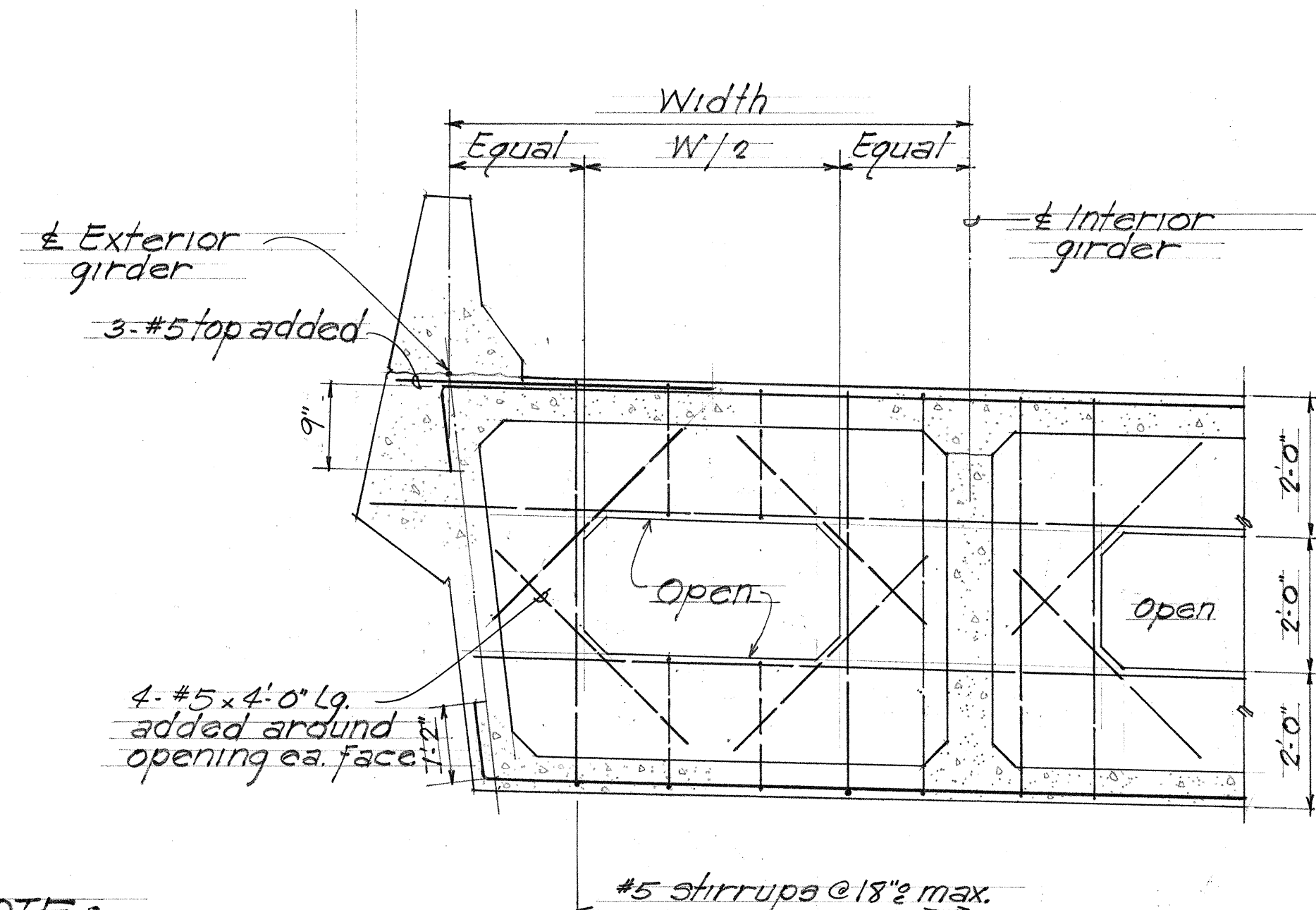
SHEET No. *N16* OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(84)16	1978	356	466



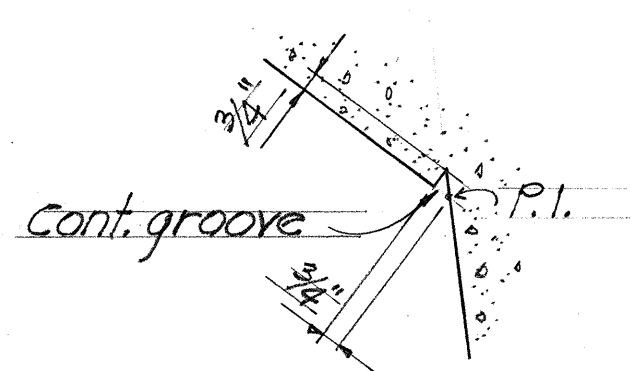
NORMAL DECK SECTION

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



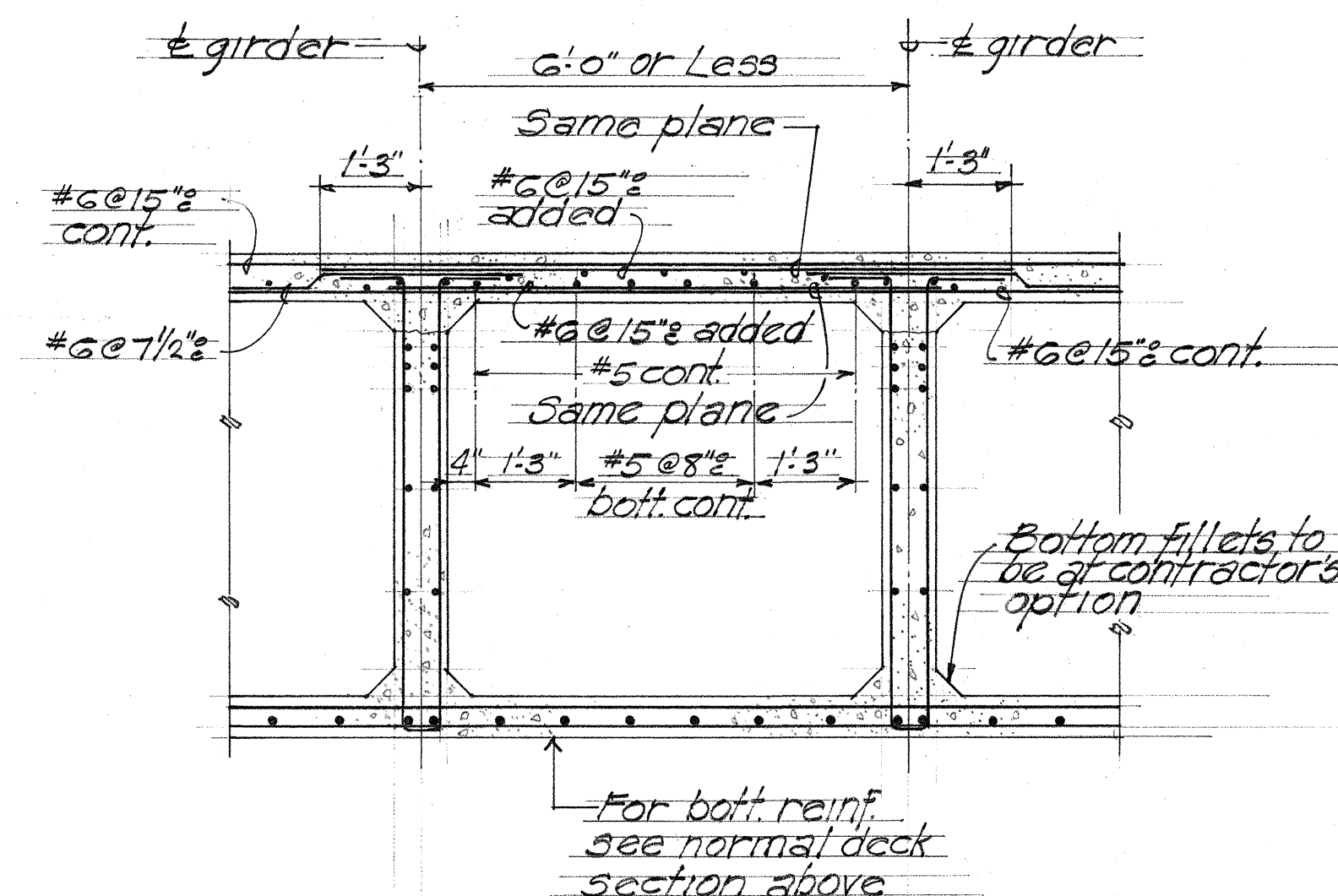
TYPICAL BEAM "B" DETAIL SHOWING END CONDITION ONLY

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

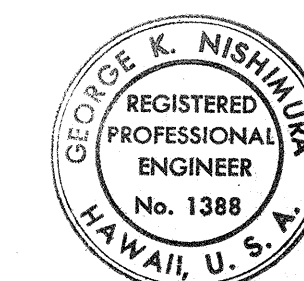


GROOVE DETAIL A

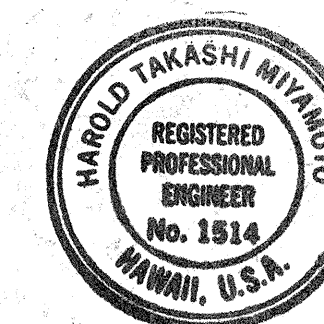
Scale: 3/4"=1'-0"



PARTIAL DECK SECTION AT GIRDER SPACING 6'-0" OR LESS



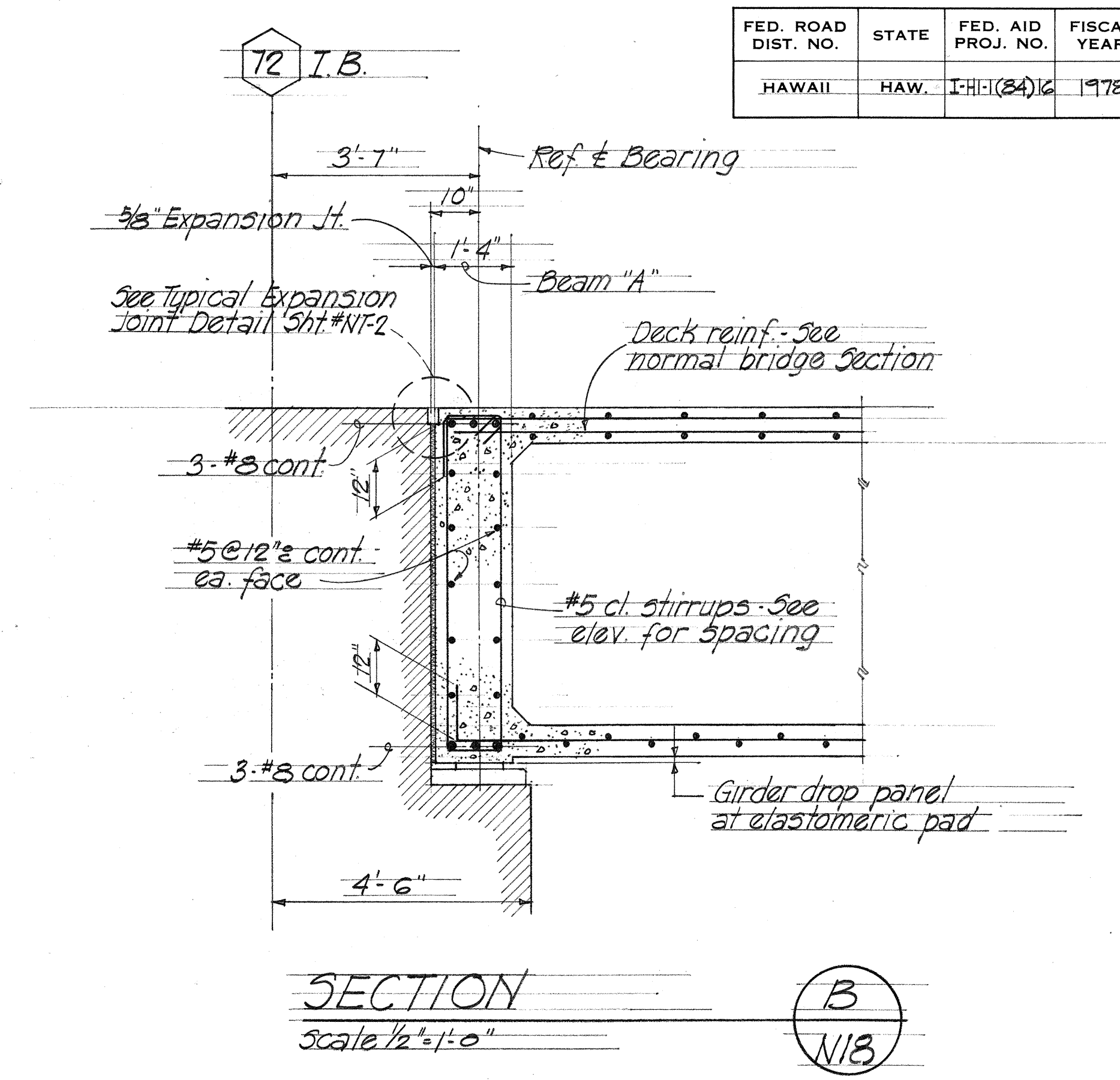
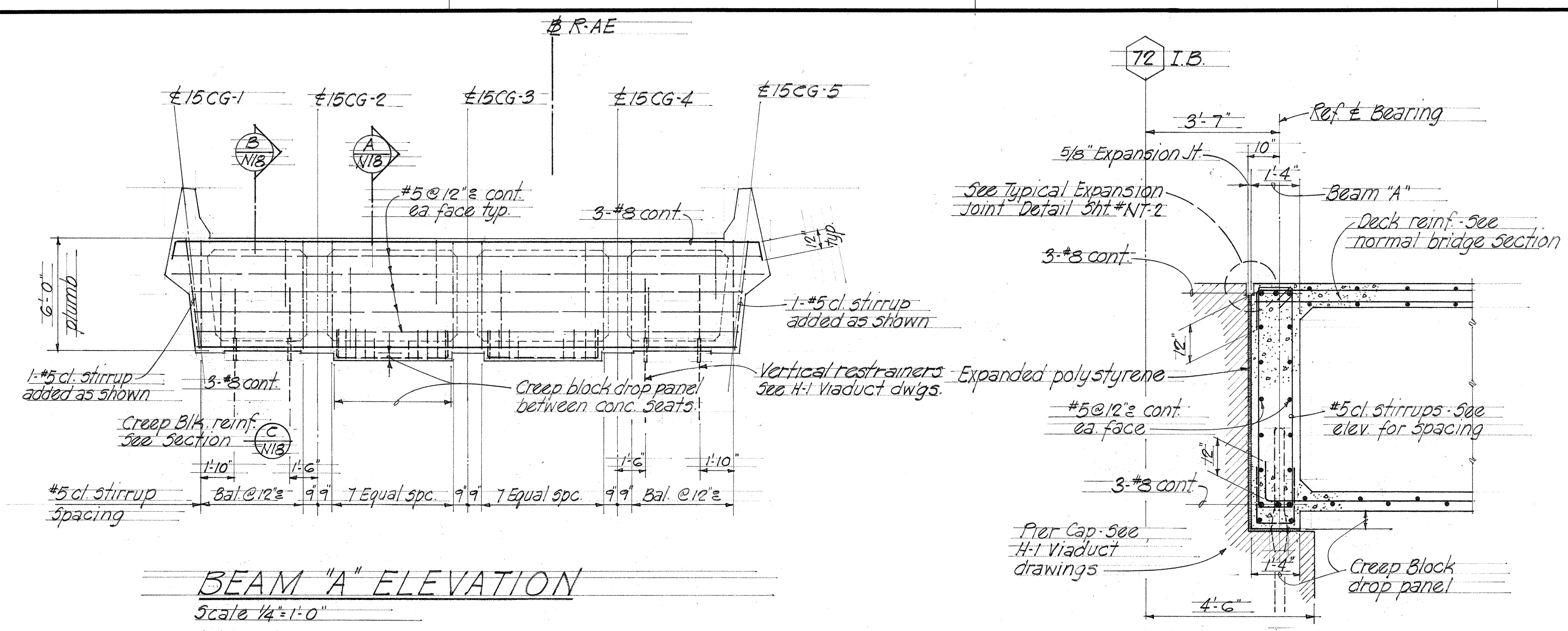
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G.K. Nishimura



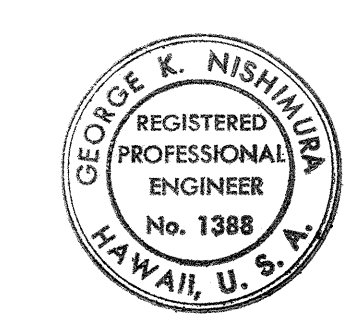
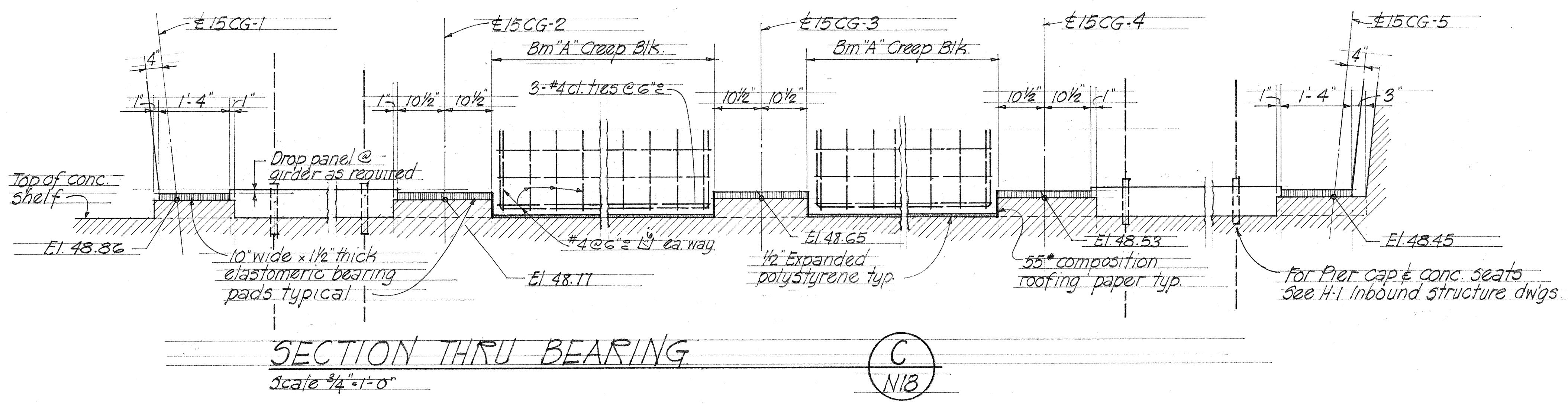
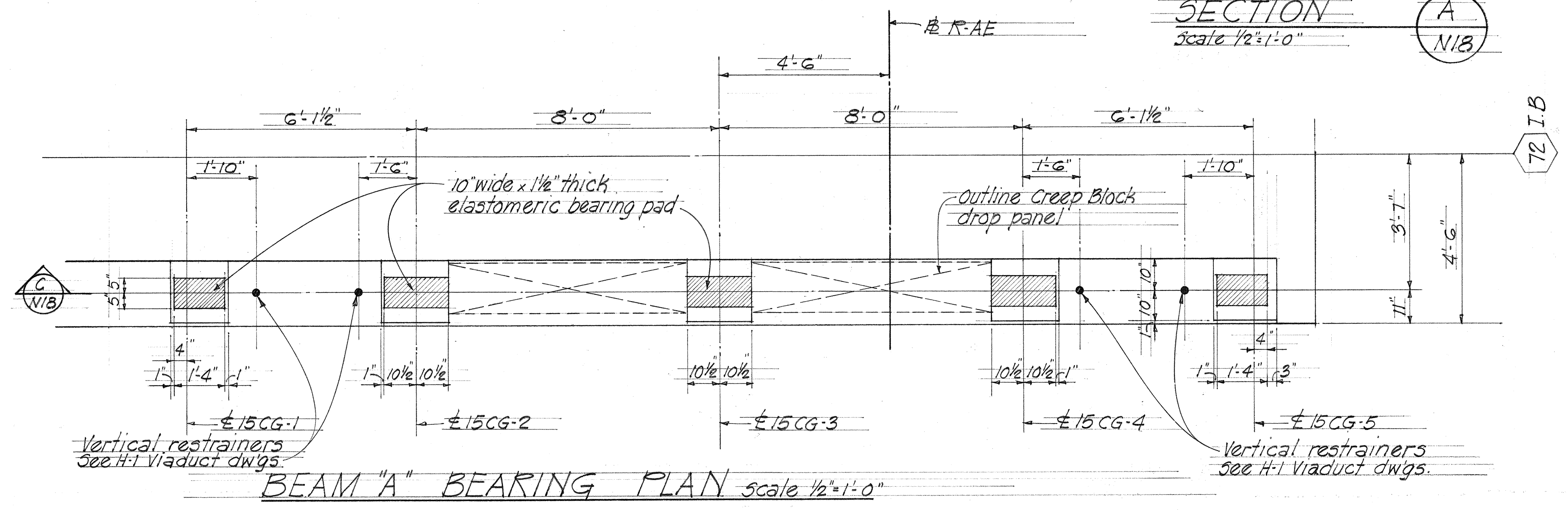
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Harold Miyamoto

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<u>NORMAL DECK SECTION</u>
<u>RAMP "AE"</u>
<u>AIRPORT INTERCHANGE</u>
<u>F.A.T. PROJ. NO. I-HI-1(84)16</u>
Scale: <u>As noted</u> Date: <u>Aug. 1978</u>
SHEET NO. N17 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(84)16	1978	357	466



- NOTE:**
1. Elastomeric bearing pads - See Standard Specs.
 2. Elastomeric bearing pads shall be incidental to concrete.



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George K. Nishimura
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Harold Takashi Yamaguchi
 REGISTERED PROFESSIONAL ENGINEER
 No. 1924
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BEAM "A" DETAIL
RAMP "AE"

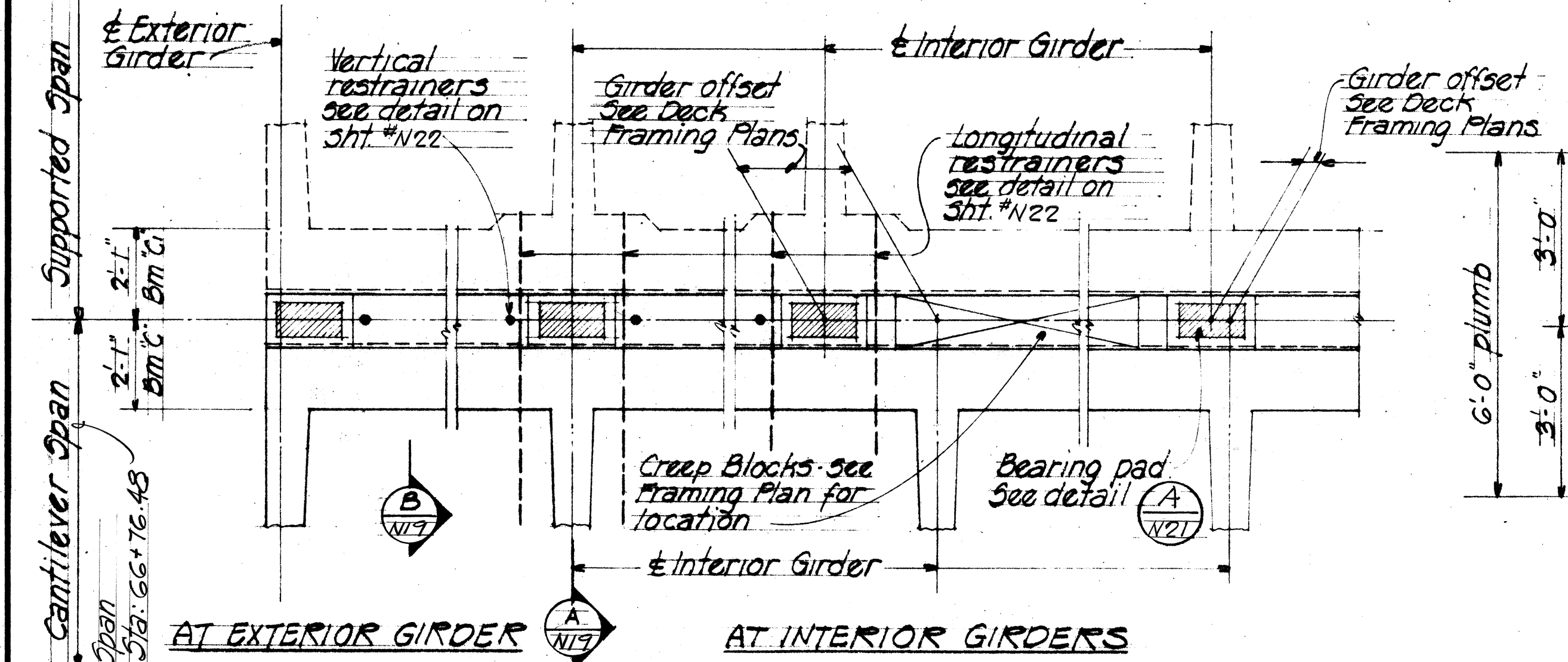
AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-H-1(84)16

Scale as noted Date Aug. 1978

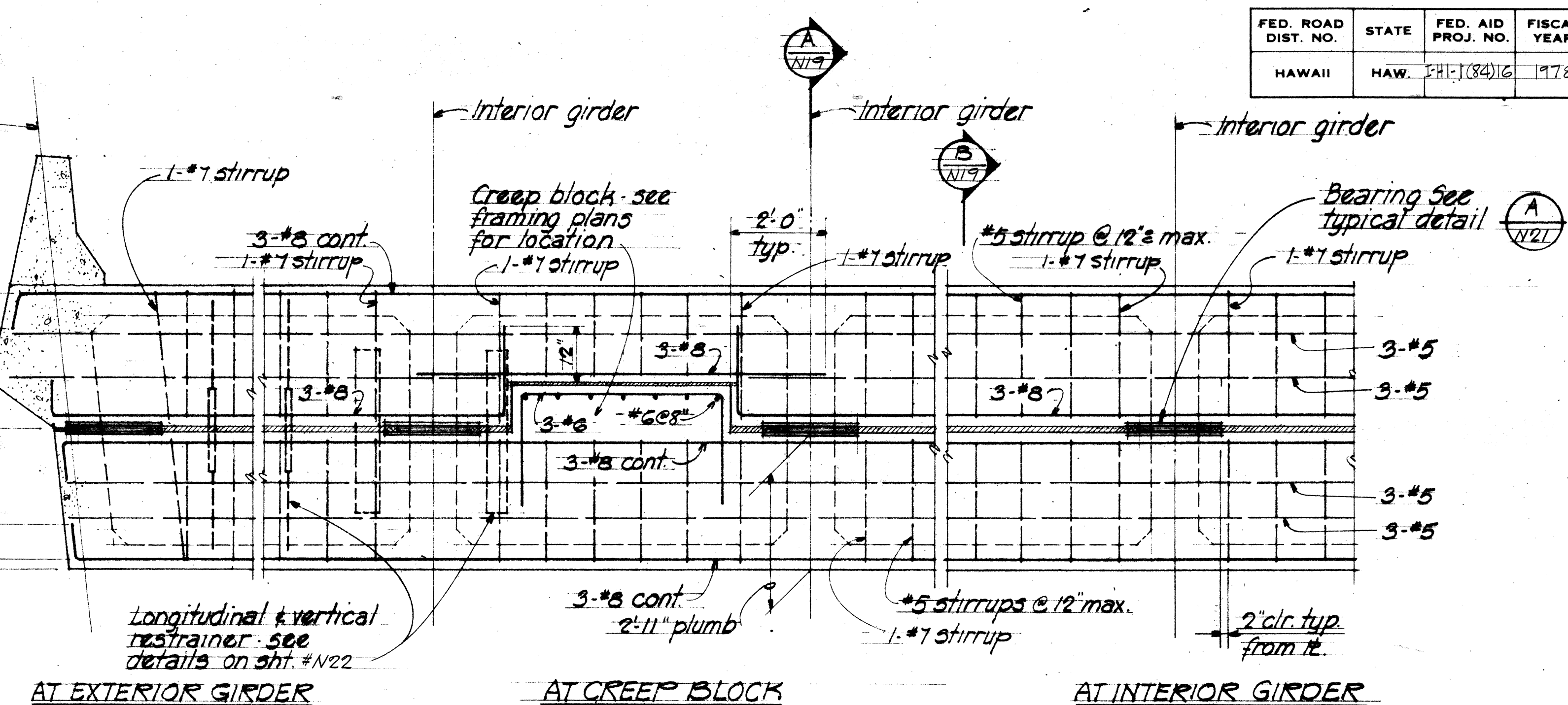
SHEET No. N18 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	SH-1(84)16	1978	358	466

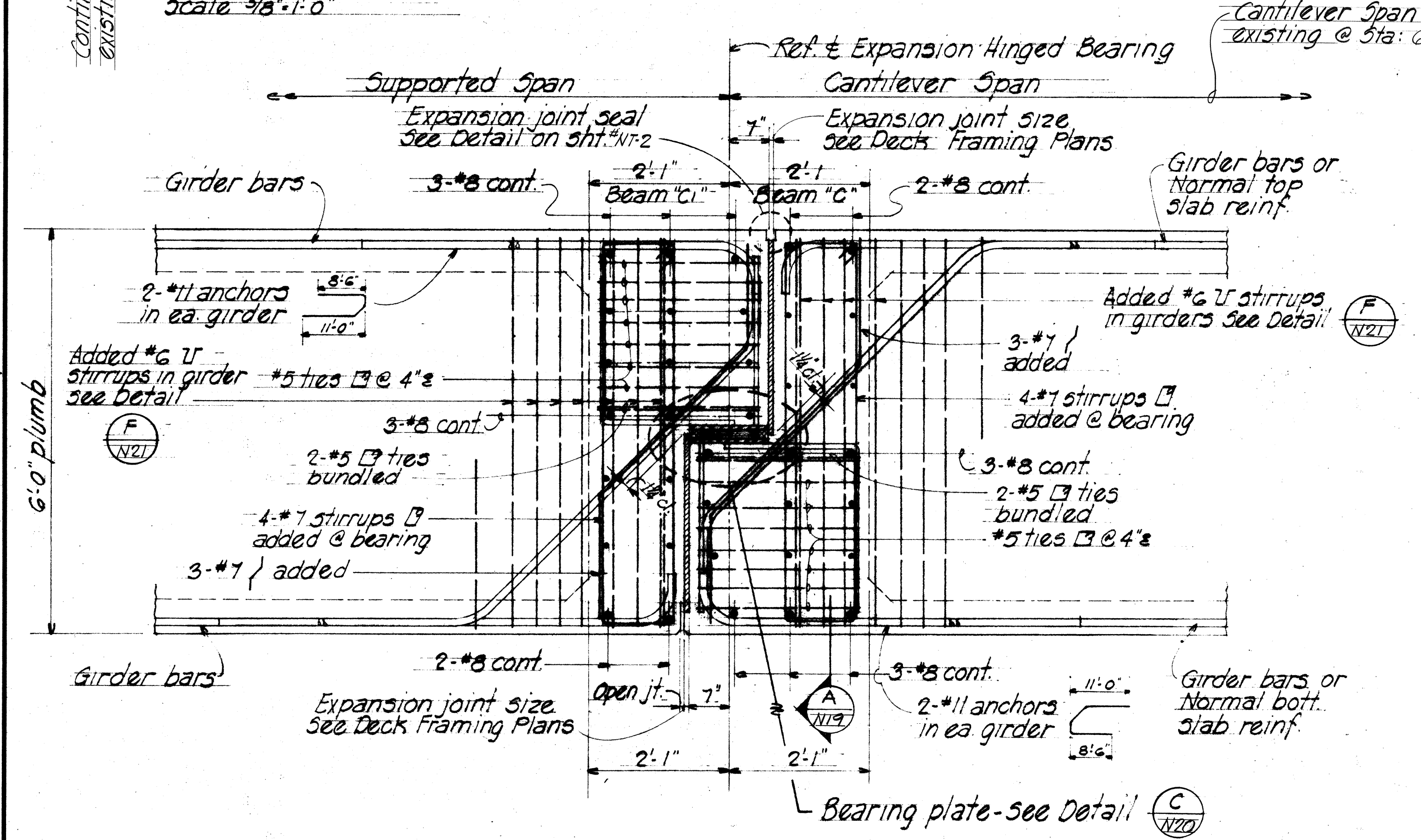
NOTE:
 For girder exact location - see Framing Plans.
 All interior bearing pads shall be centered on supported span girders.



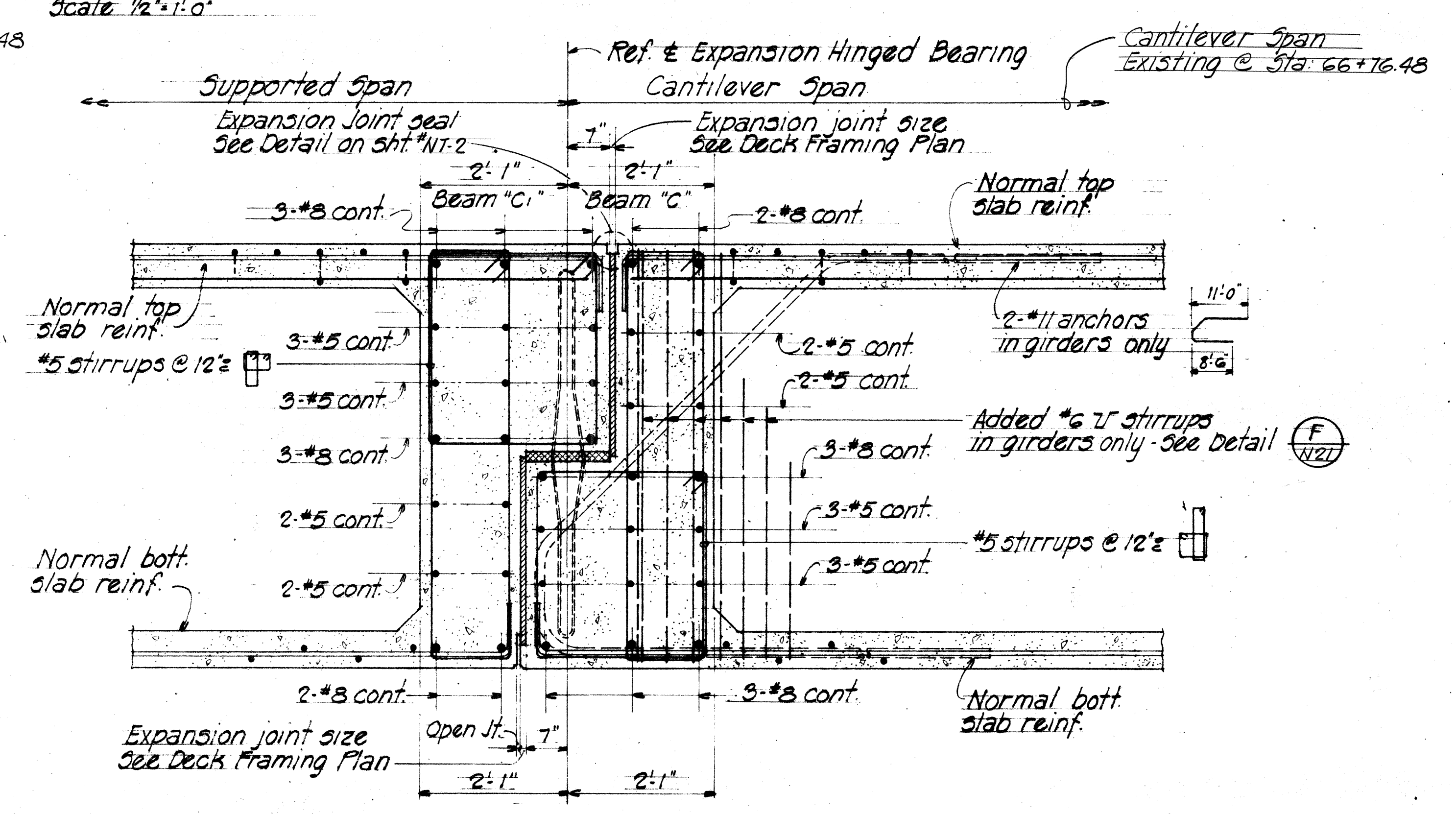
AT EXTERIOR GIRDER AT INTERIOR GIRDERS
TYPICAL PLAN @ HINGED BEARING
 Scale 3/8"=1'-0"



AT EXTERIOR GIRDER AT CREEP BLOCK AT INTERIOR GIRDER
TYPICAL SECTION THRU HINGED BEARING
 Scale 1/2"=1'-0"

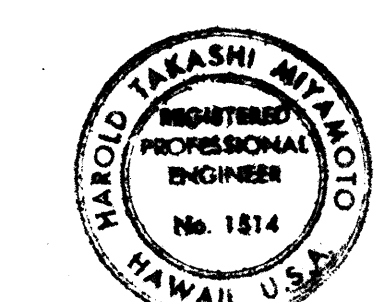
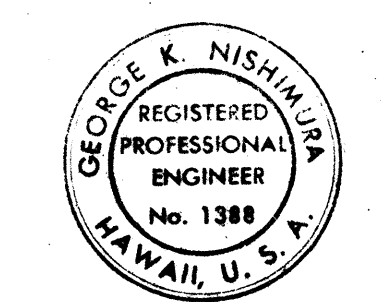


TYPICAL SECTION @ BEARING
 Scale 3/4"=1'-0"



TYPICAL SECTION BETWEEN BEARING
 Scale 3/4"=1'-0"

Note: Ref. See field change
 no. 5 sht. #351.



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

HINGED BEARING DETAILS

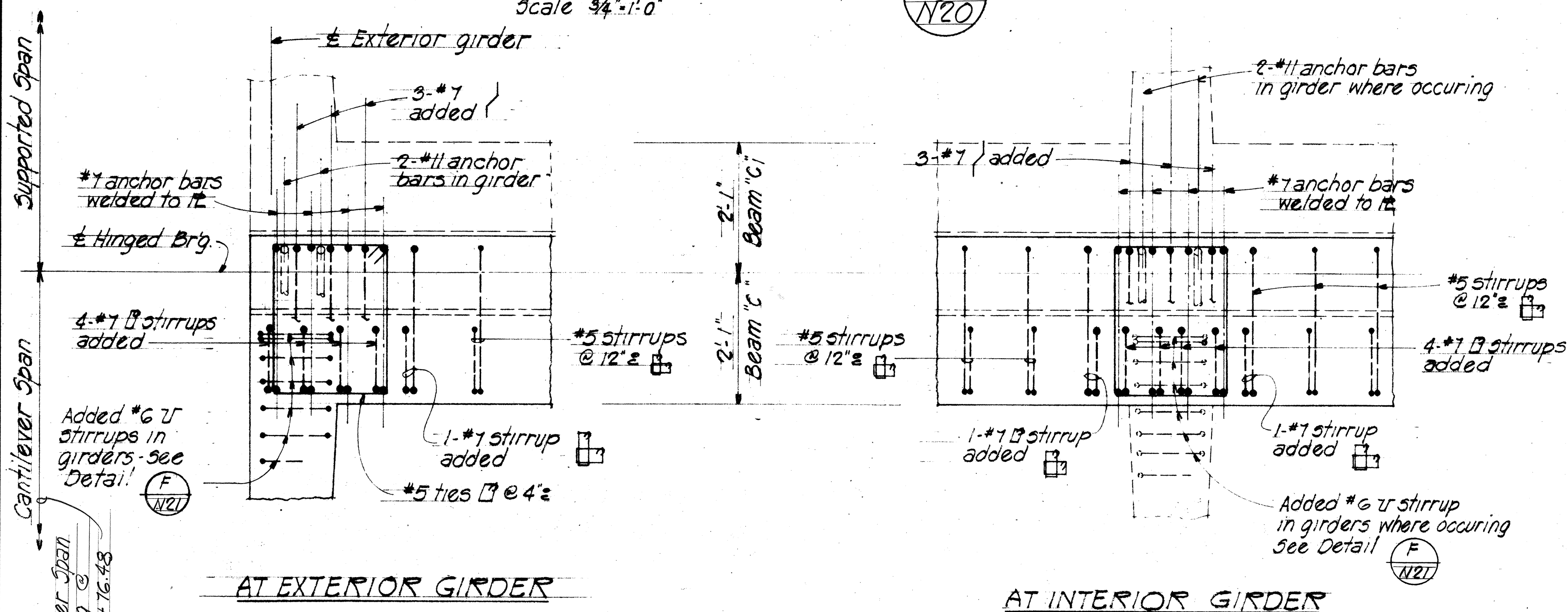
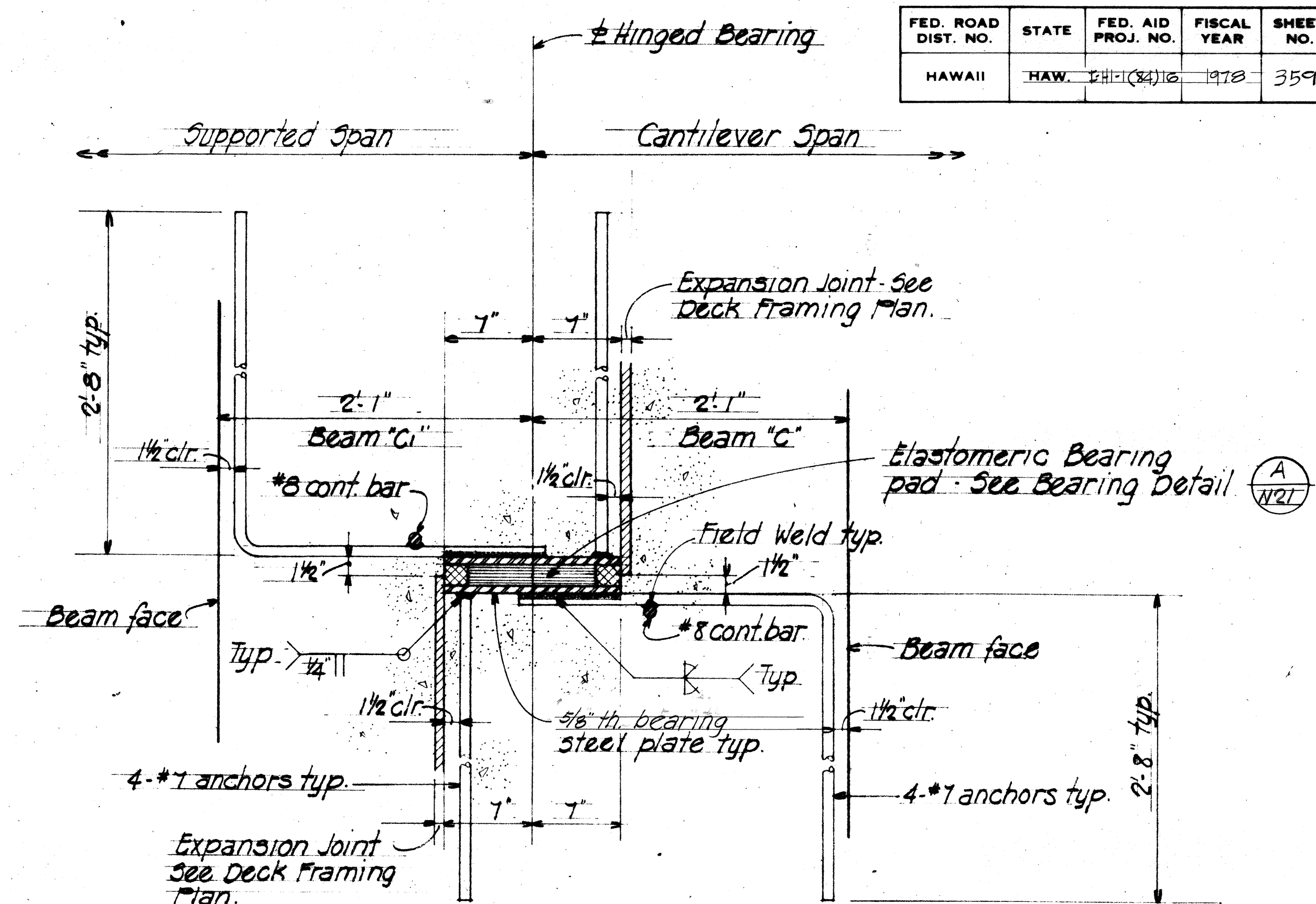
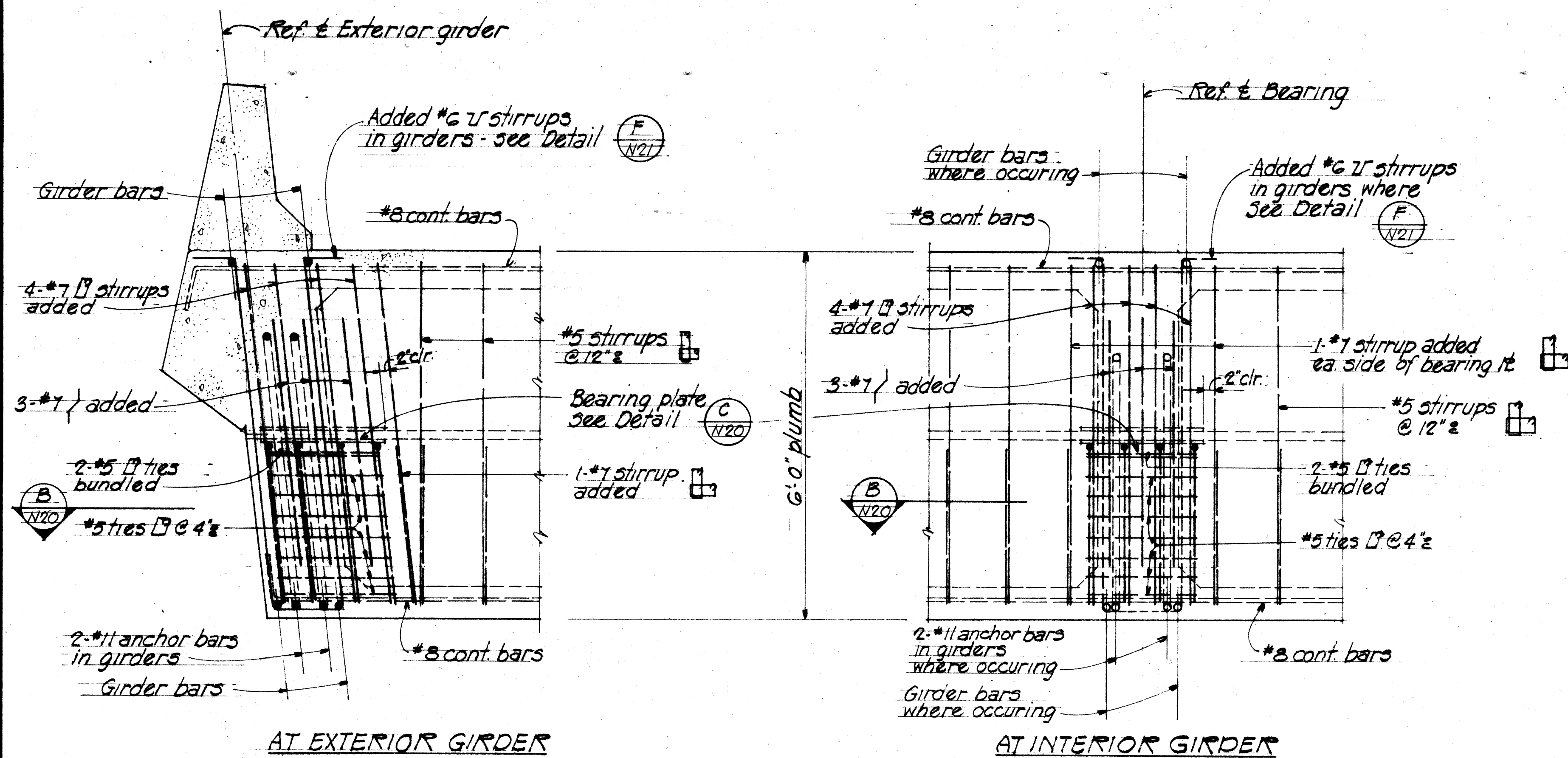
RAMP "AE"

AIRPORT INTERCHANGE

F.A.I. PROJECT NO. I-HI-1 (84)16

SCALE: AS NOTED DATE: AUG. 1978

SHEET NO. N19 OF 40 SHEETS

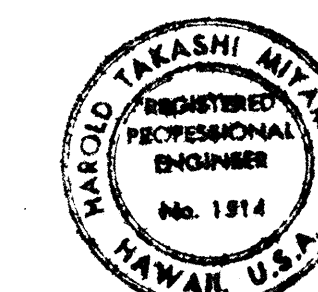
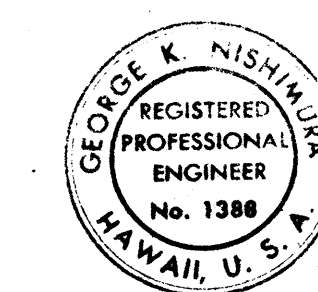


ELASTOMERIC BEARING PAD SCHEDULE

Girder Station	GIRDER	
	Interior pad size	Exterior pad size
Sta: 66+76.48	10" x 16" x 1 1/2" th.	10" x 16" x 1 1/2" th.
Sta: 68+31	10" x 21" x 1 1/2" th.	10" x 16" x 1 1/2" th.
Sta: 70+06	10" x 16" x 1 1/2" th.	10" x 16" x 1 1/2" th.
Sta: 71+83		
Sta: 73+78		
Sta: 75+68		
Sta: 77+64		
Sta: 80+24.42	10" x 21" x 1 1/2" th.	10" x 16" x 1 1/2" th.

NOTE:

- Expansion Hinged Bearing Cantilever span existing @ Sta: 66+76.48
- Items in contract:
 - Steel bearing plates on supported span.
 - All concrete work on supported span.
 - Elastomeric bearing pads.
 - Expansion joint seal and protective angle on supported span.
 - Expanded polystyrene.
 - Tensioning of longitudinal restrainer.
 - Contractor to check grease in p.v.c. pipe and add if required.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HINGED BEARING DETAIL

RAMP "AE"

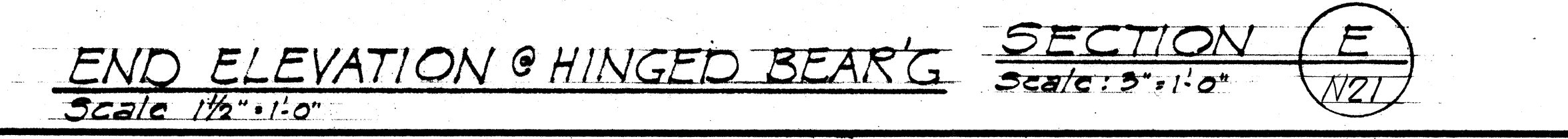
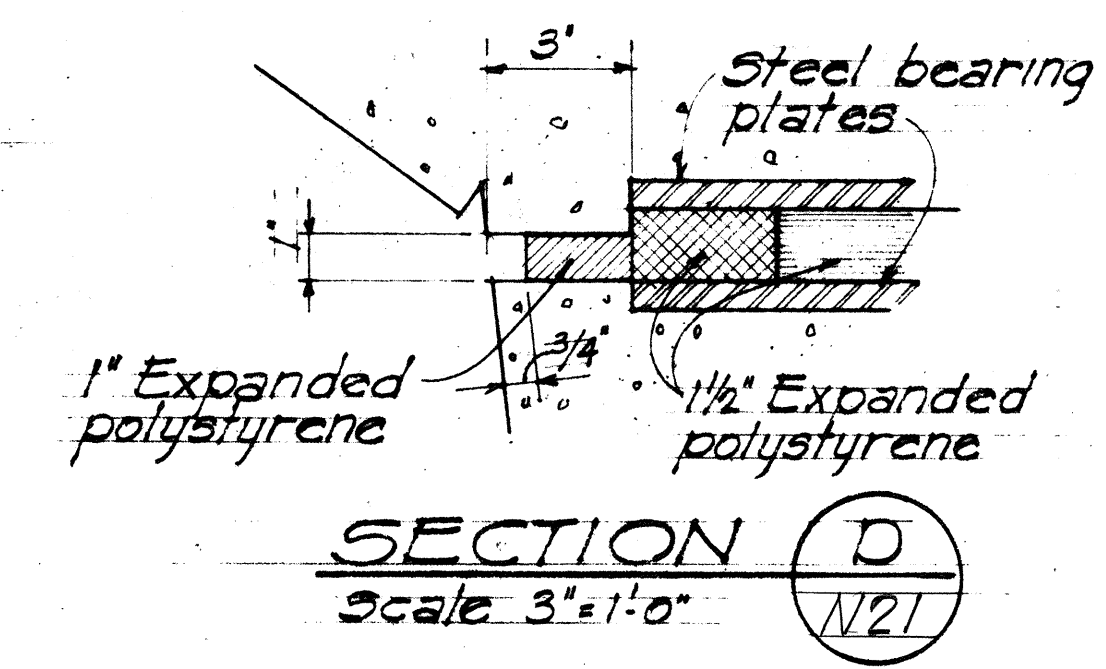
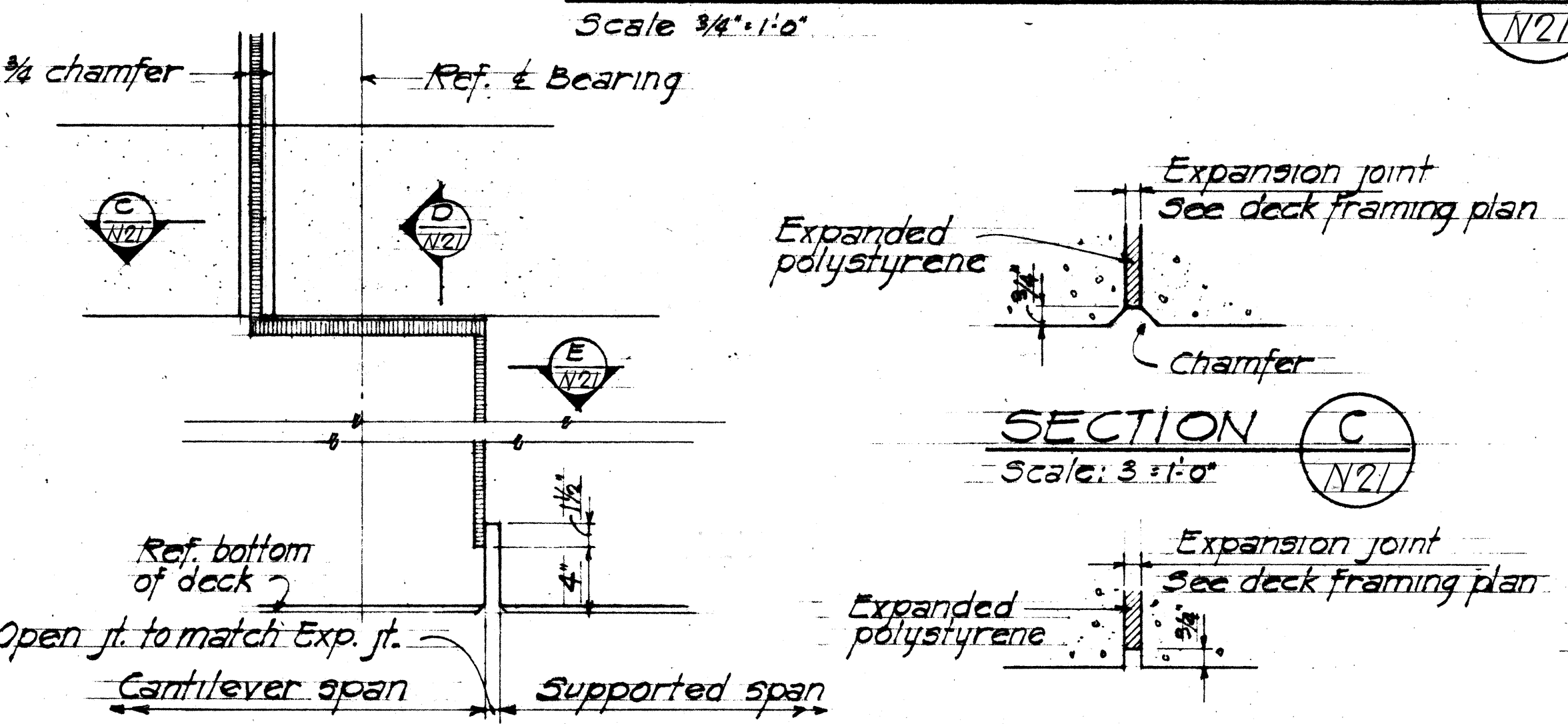
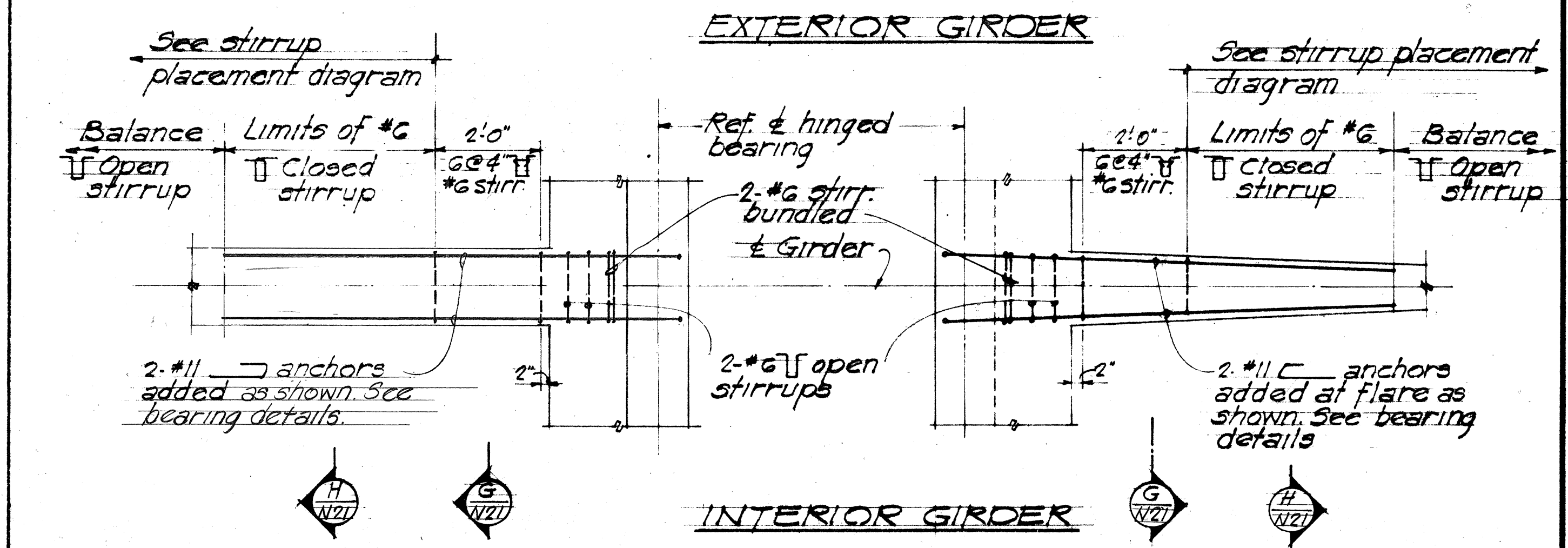
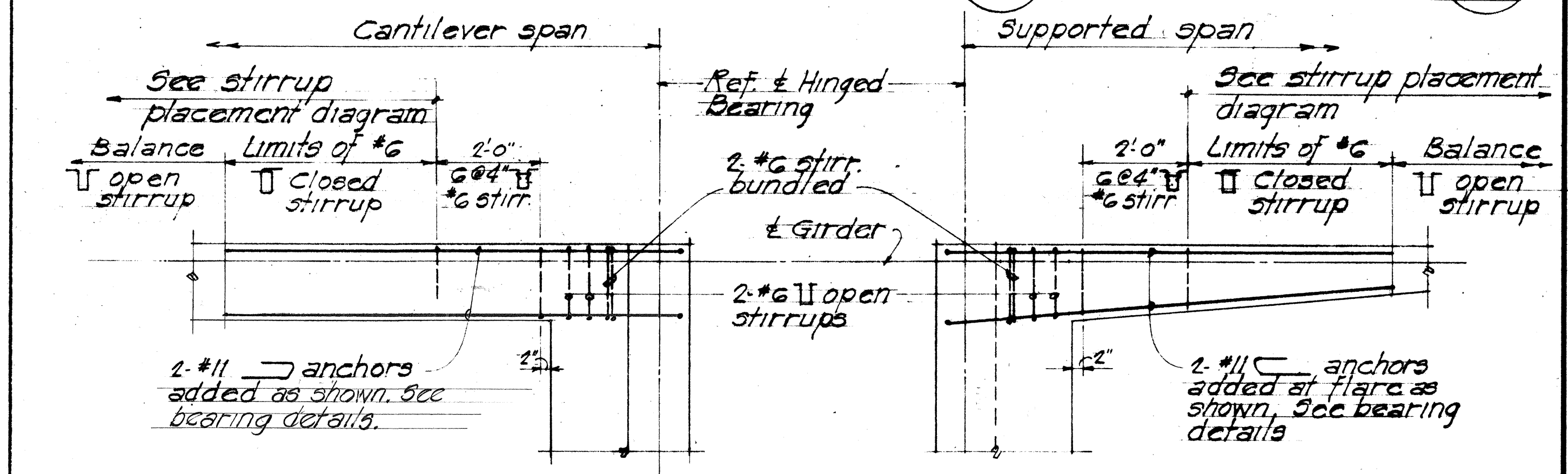
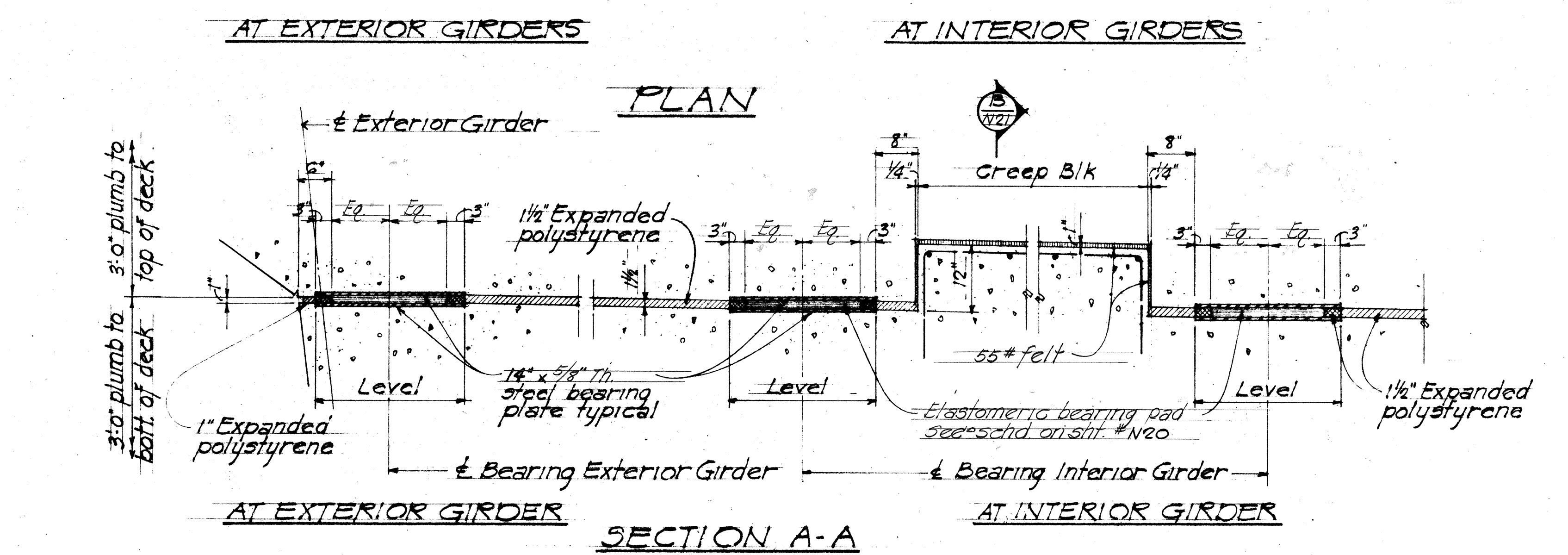
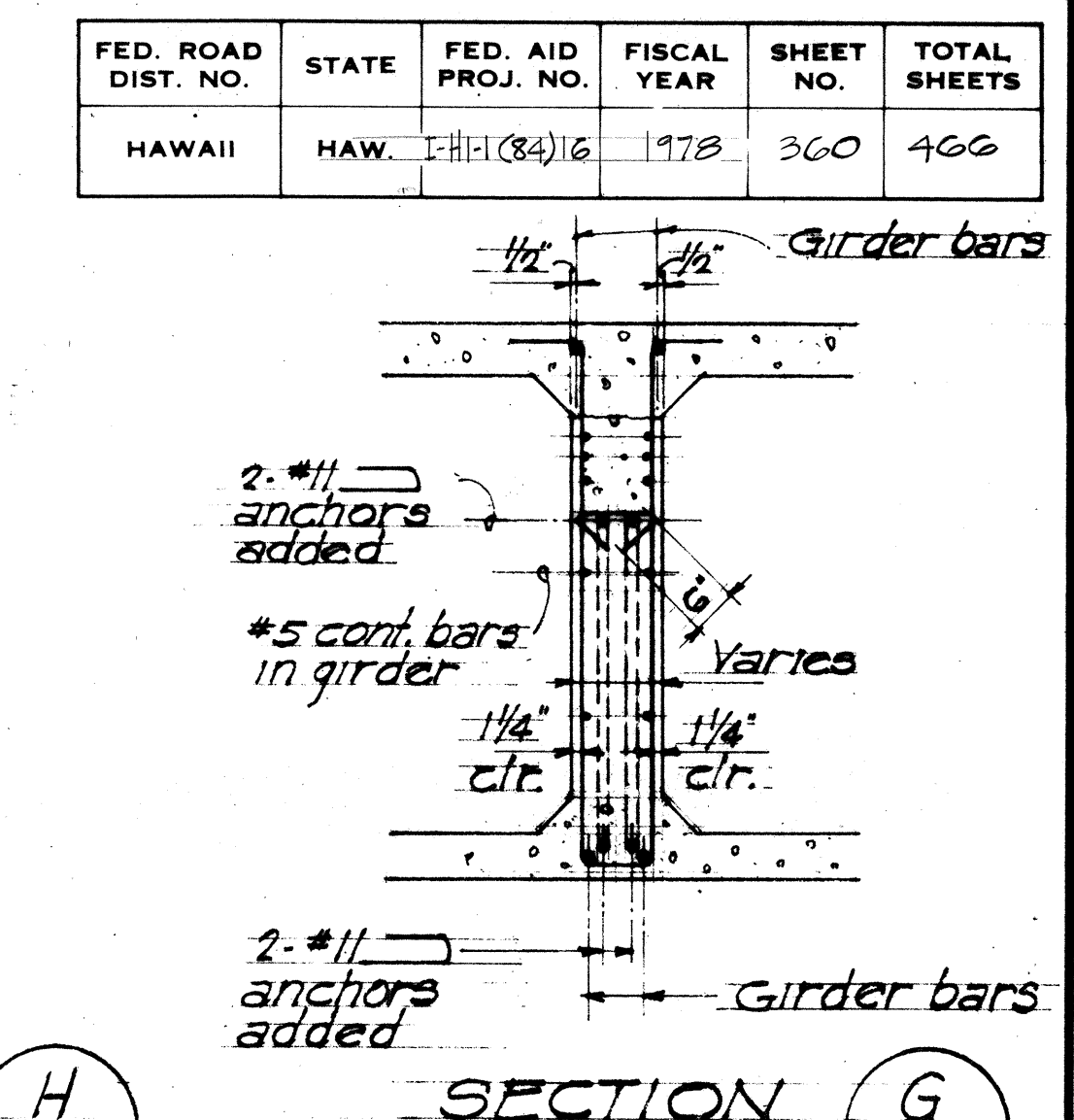
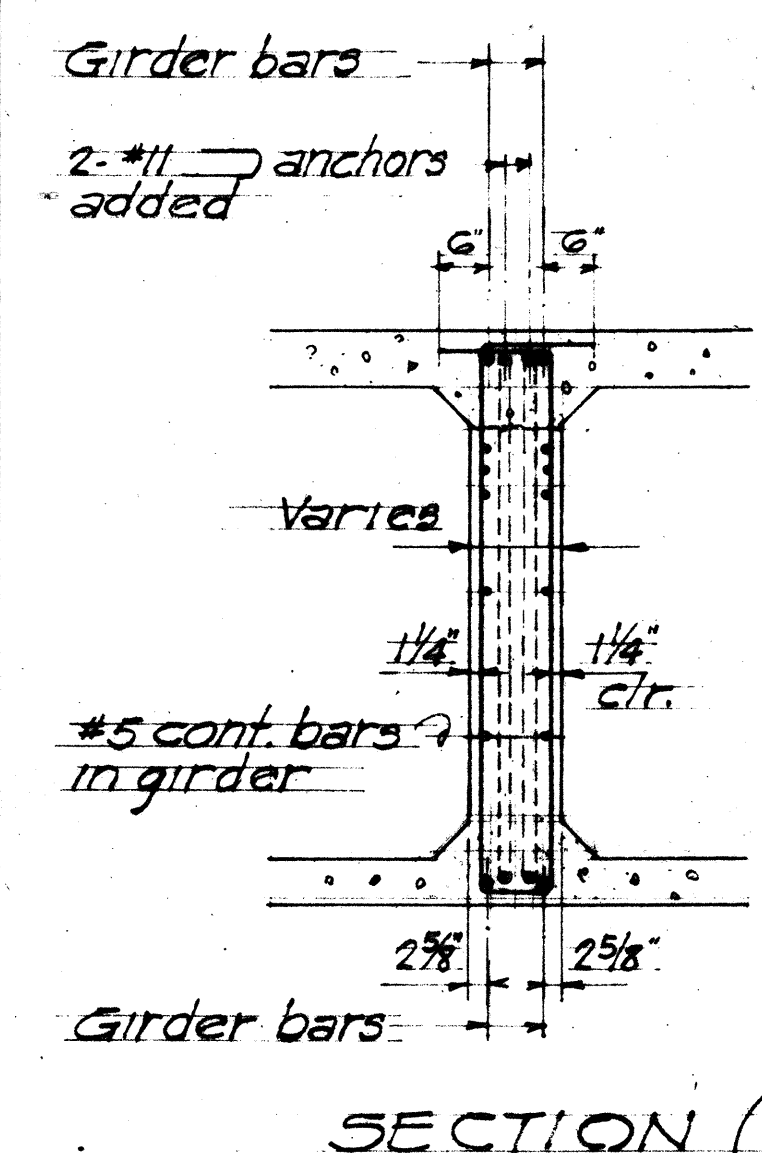
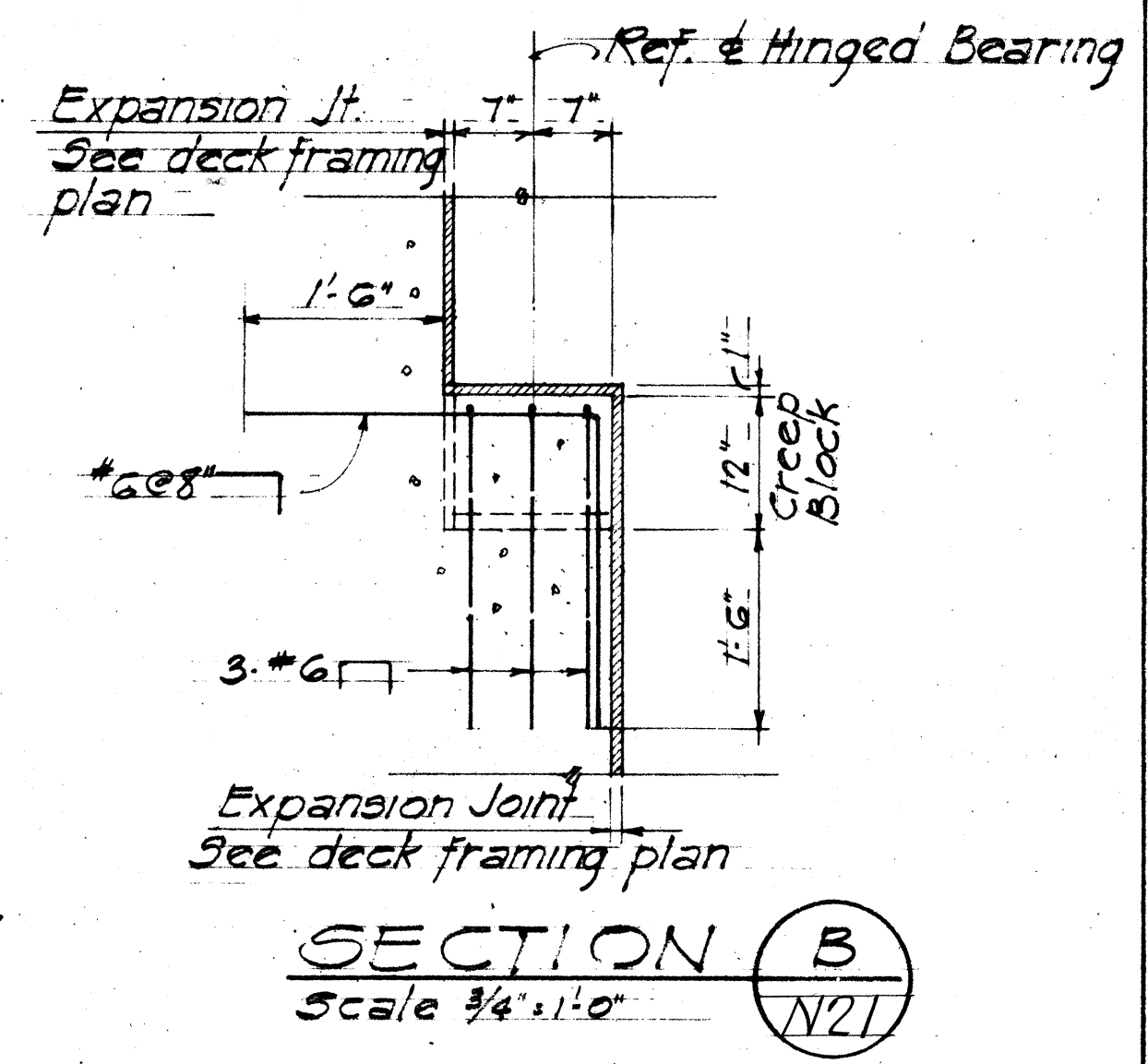
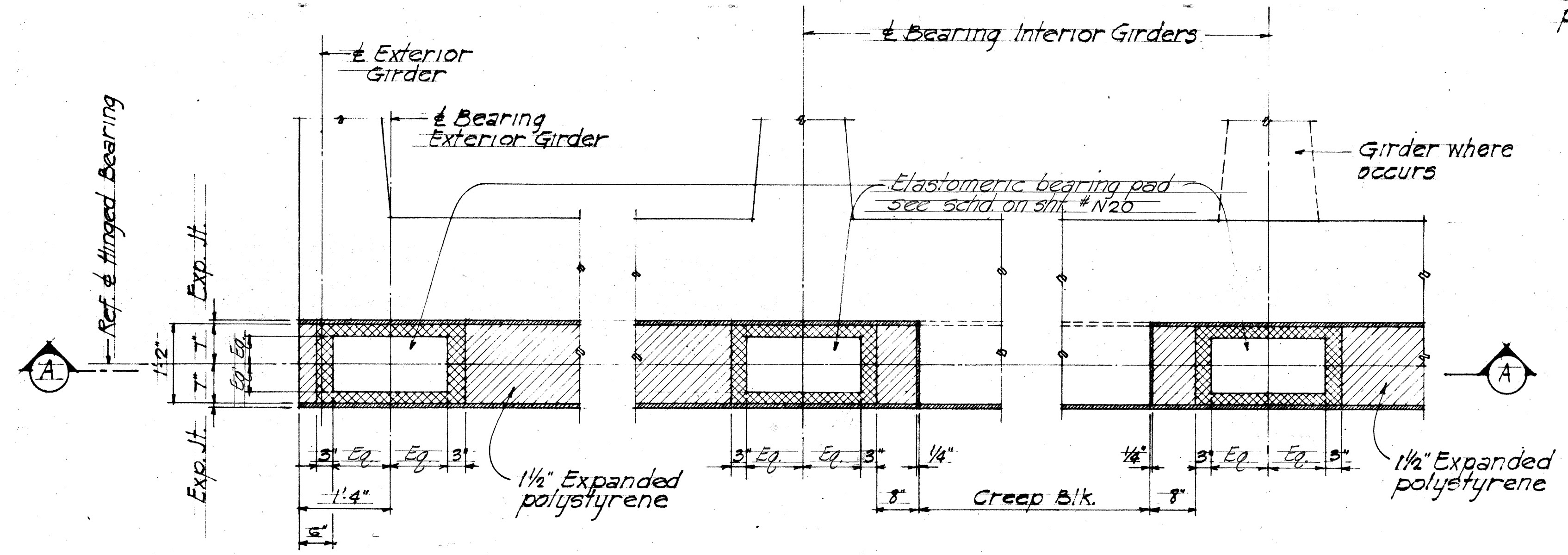
AIRPORT INTERCHANGE

F.A.I. PROJECT NO. I-HI-1 (84) 110

SCALE: AS NOTED DATE: Aug. 1978

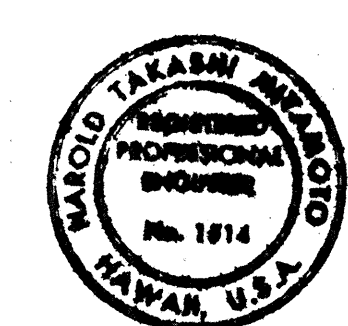
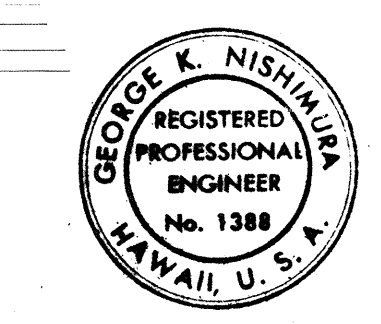
SHEET NO. N20 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111 (84) 16	1978	360	466



NOTE: All elastomeric pads, expanded polystyrene and bearing plates shall be incidental to concrete.

Note: Ref: See field change no. 5 sh. #351.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HINGED BEARING DETAILS

RAMP "AE"

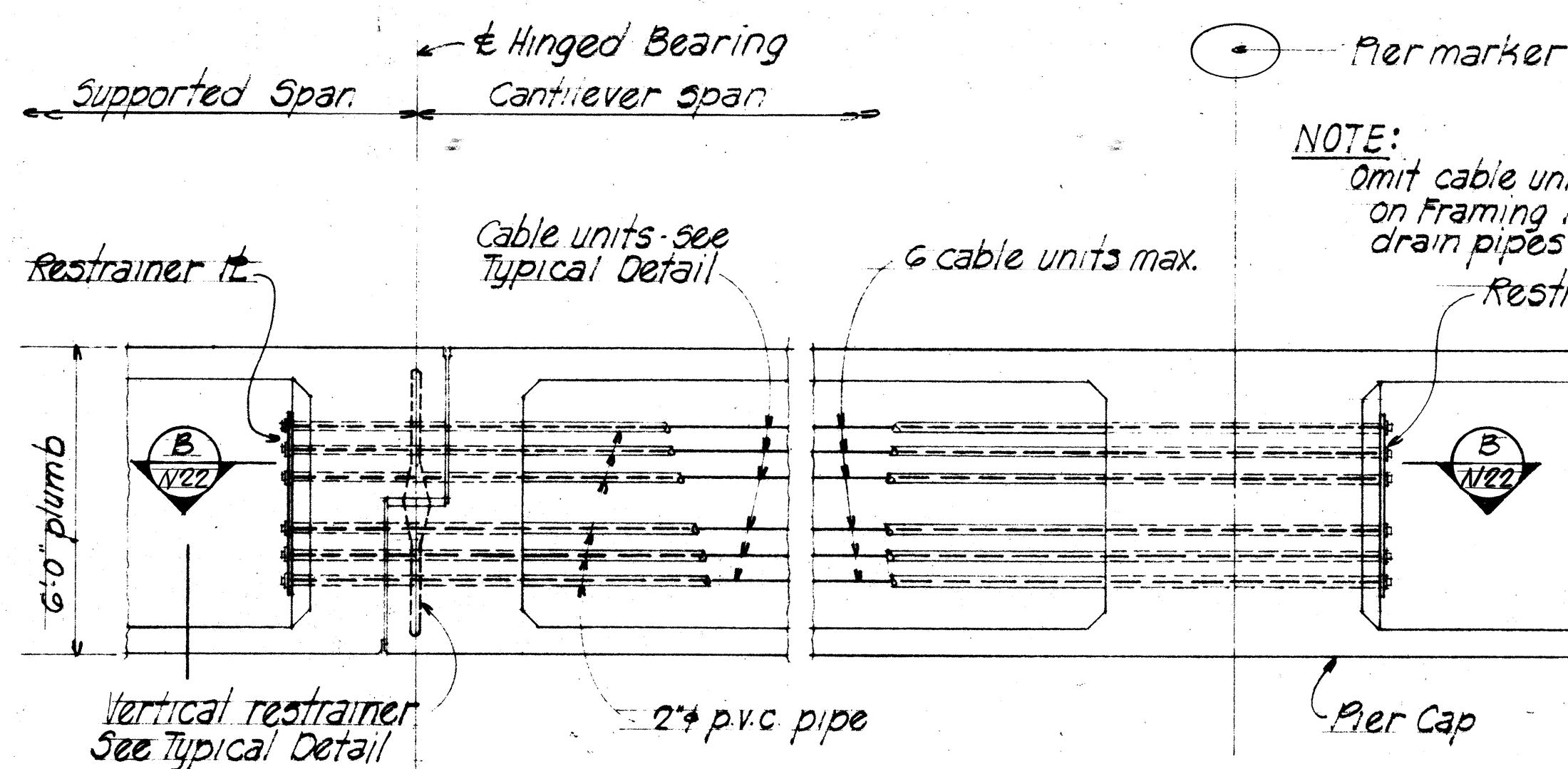
AIRPORT INTERCHANGE

F.A.I. PROJECT NO. I-HI-1 (84) 16

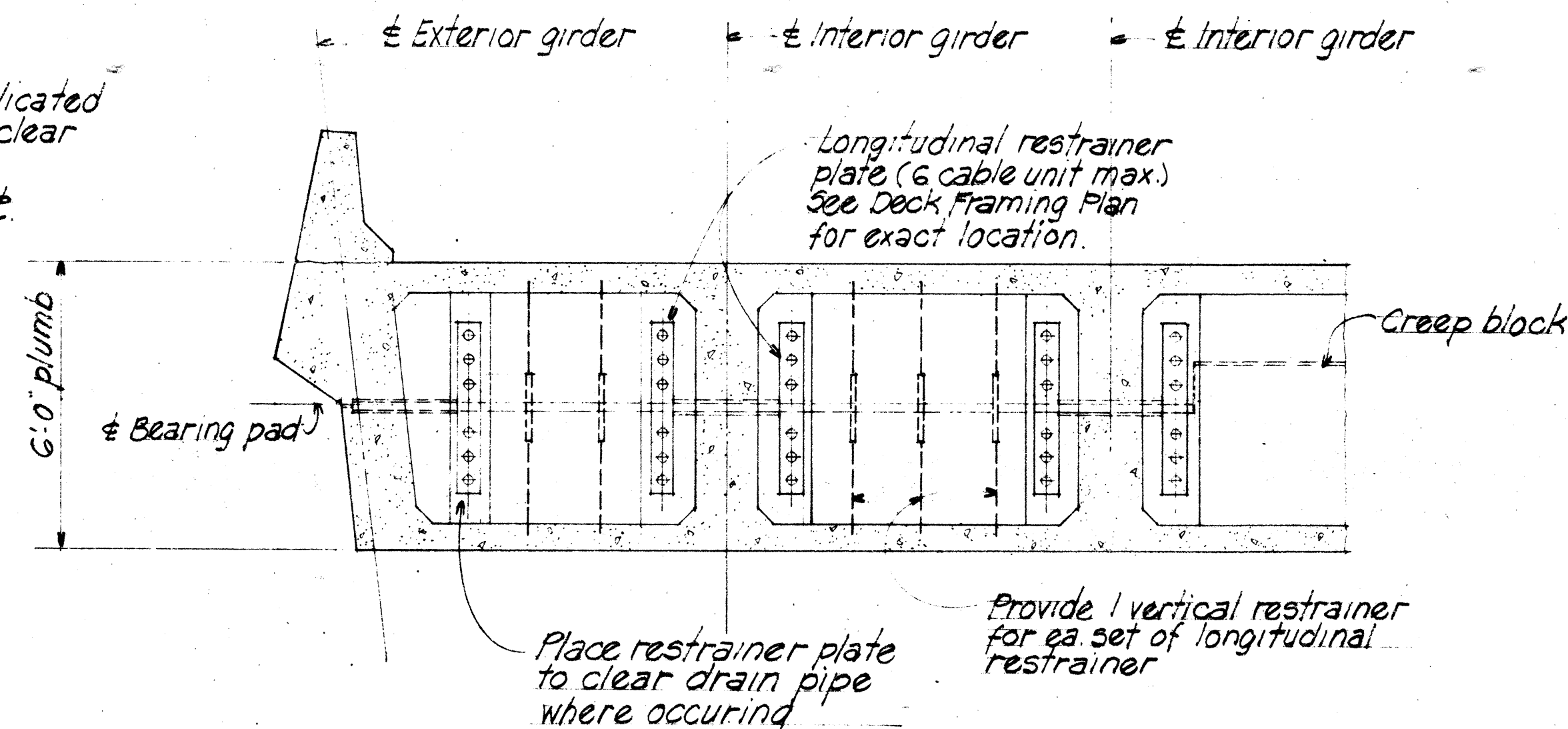
SCALE: AS NOTED DATE: Aug. 1978

SHEET NO. N21 OF 40 SHEETS

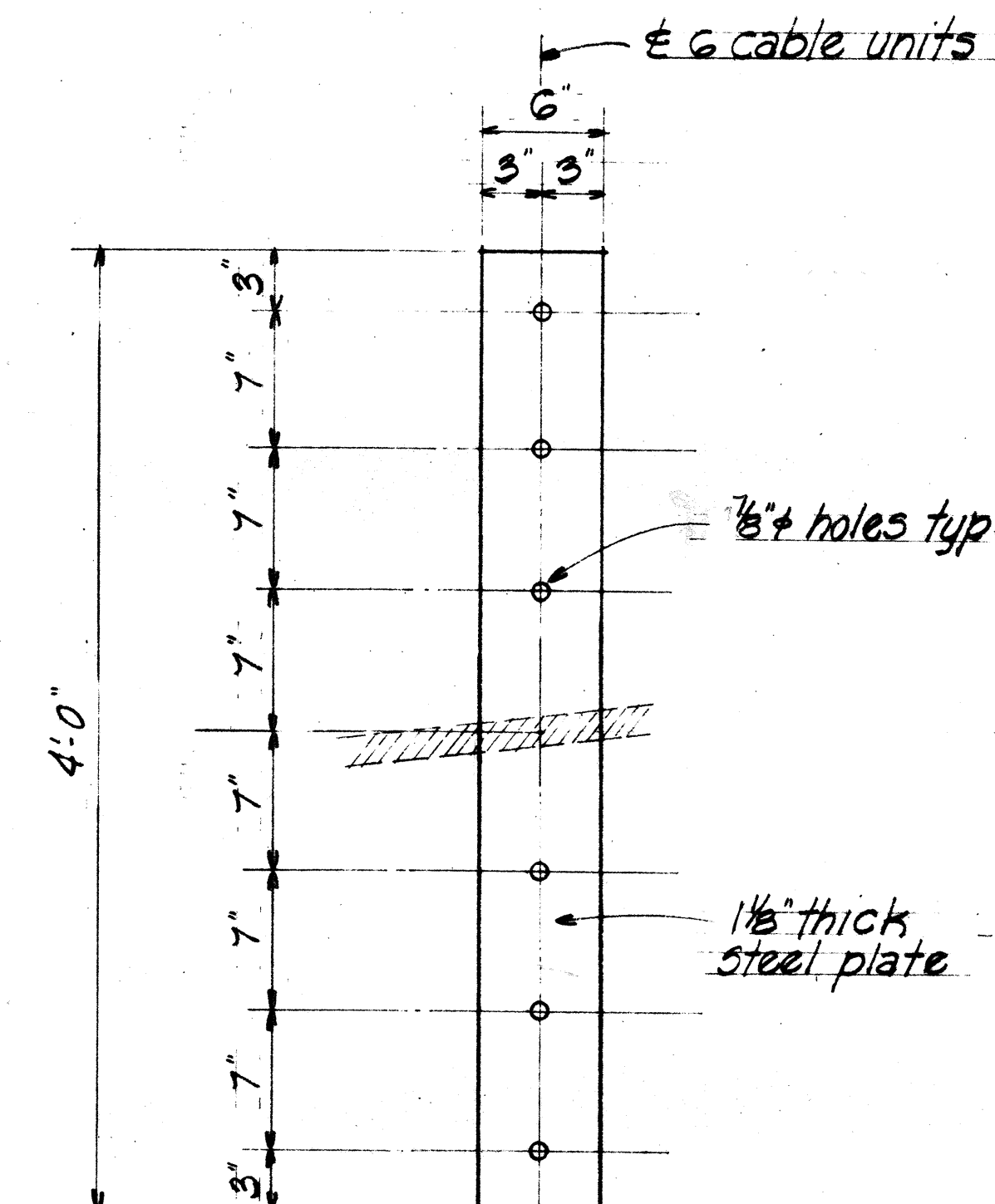
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PHC(84)16	1977	361	466



PROFILE ~ SHOWING RESTRAINERS @ HINGED BEARING
Scale 3/8" = 1'-0"



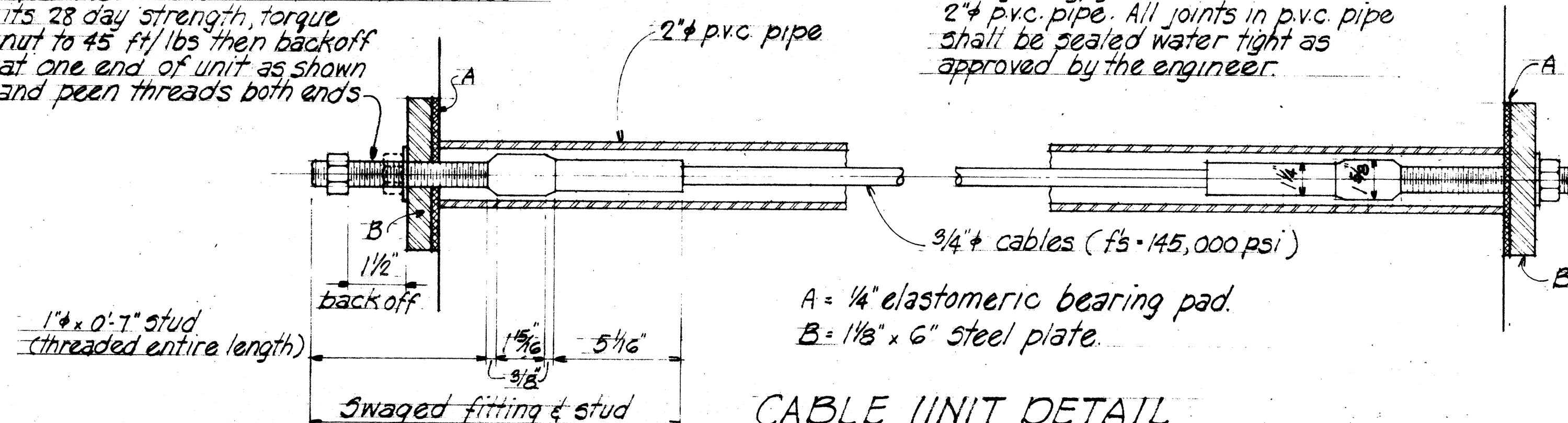
SECTION ~ SHOWING RESTRAINERS @ HINGED BEARING
Scale 3/8" = 1'-0"



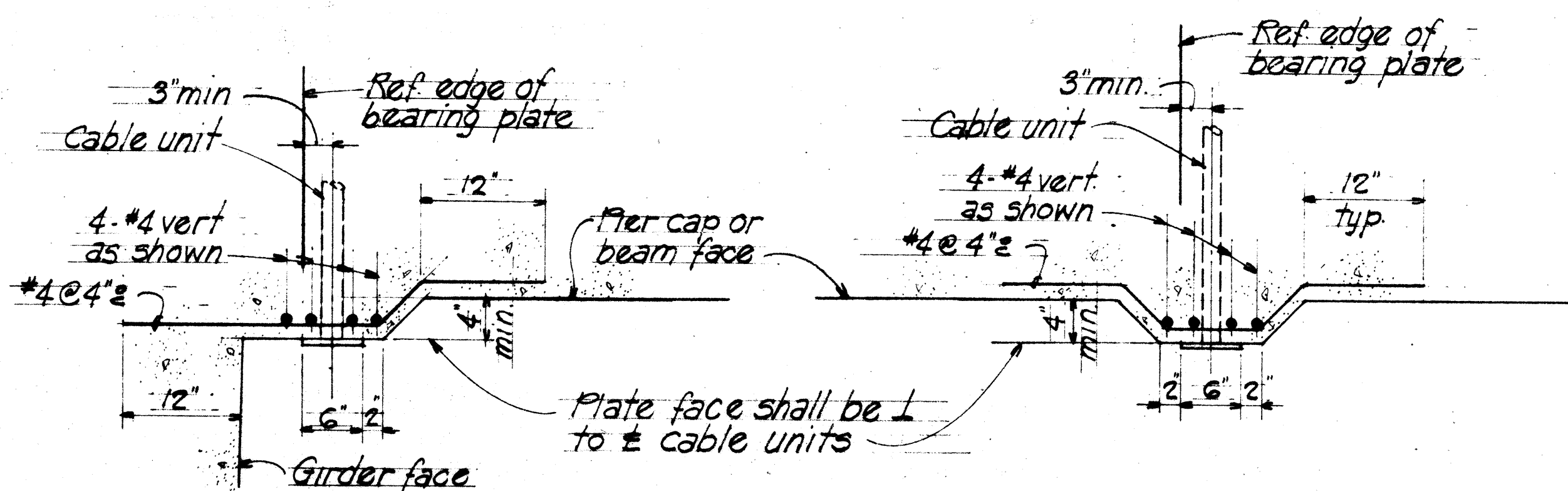
RESTRAINER PLATE DETAIL
Scale 1 1/2" = 1'-0"

After the web and bottom slab has attained its 28 day strength, torque nut to 45 ft/lbs then backoff at one end of unit as shown and peen threads both ends

NOTE: All cable units shall be greased with heavy duty grease and encased 2" pvc pipe. All joints in pvc pipe shall be sealed water tight as approved by the engineer.



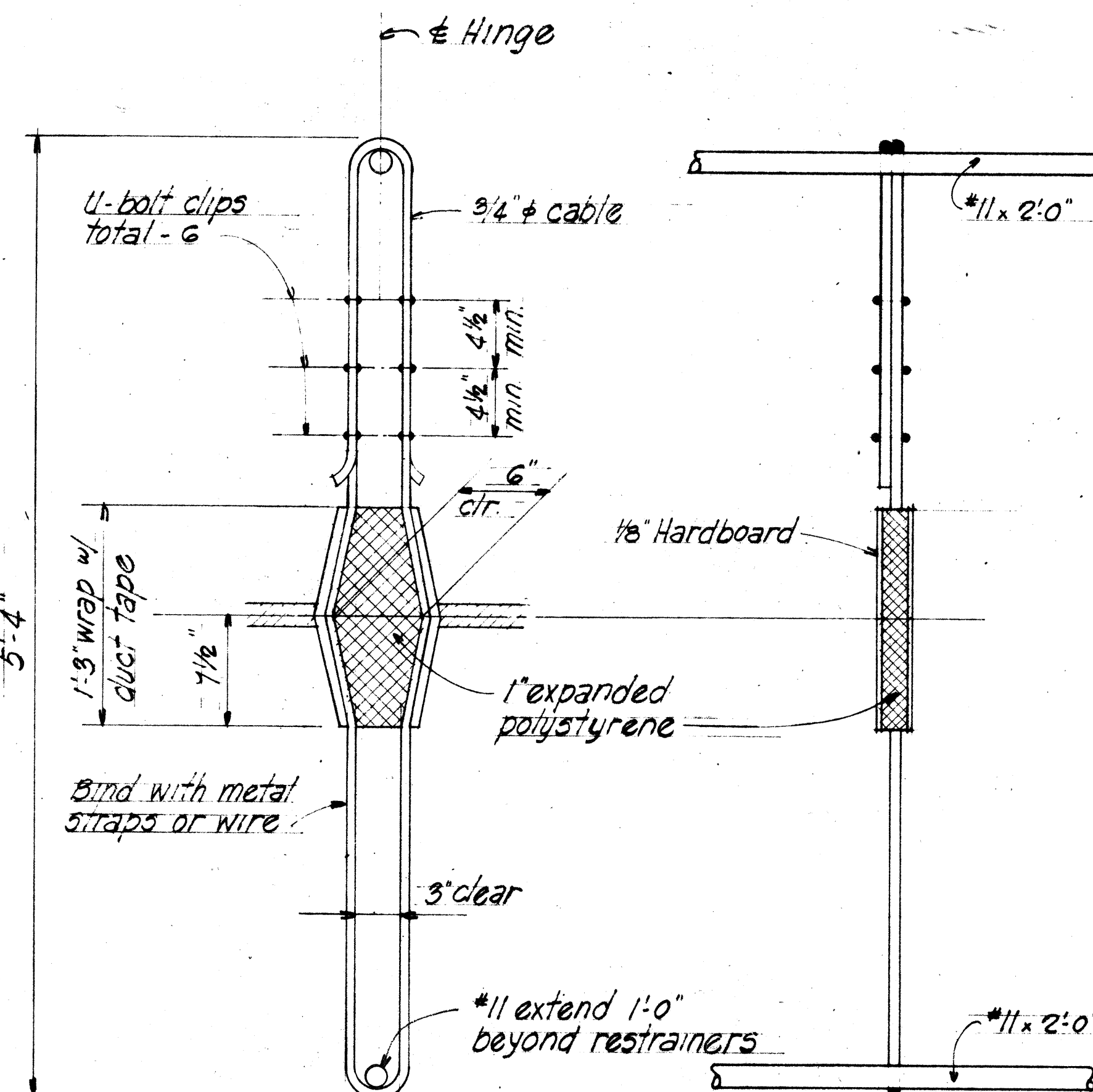
CABLE UNIT DETAIL
N.T.S.



AT GIRDER

BETWEEN GIRDERS

SECTION @ LONGITUDINAL RESTRAINER PLATE
Scale 1" = 1'-0"

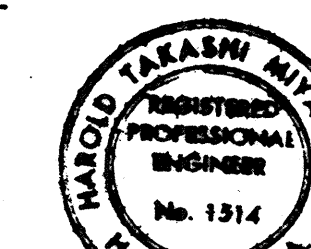


ELEVATION

SECTION

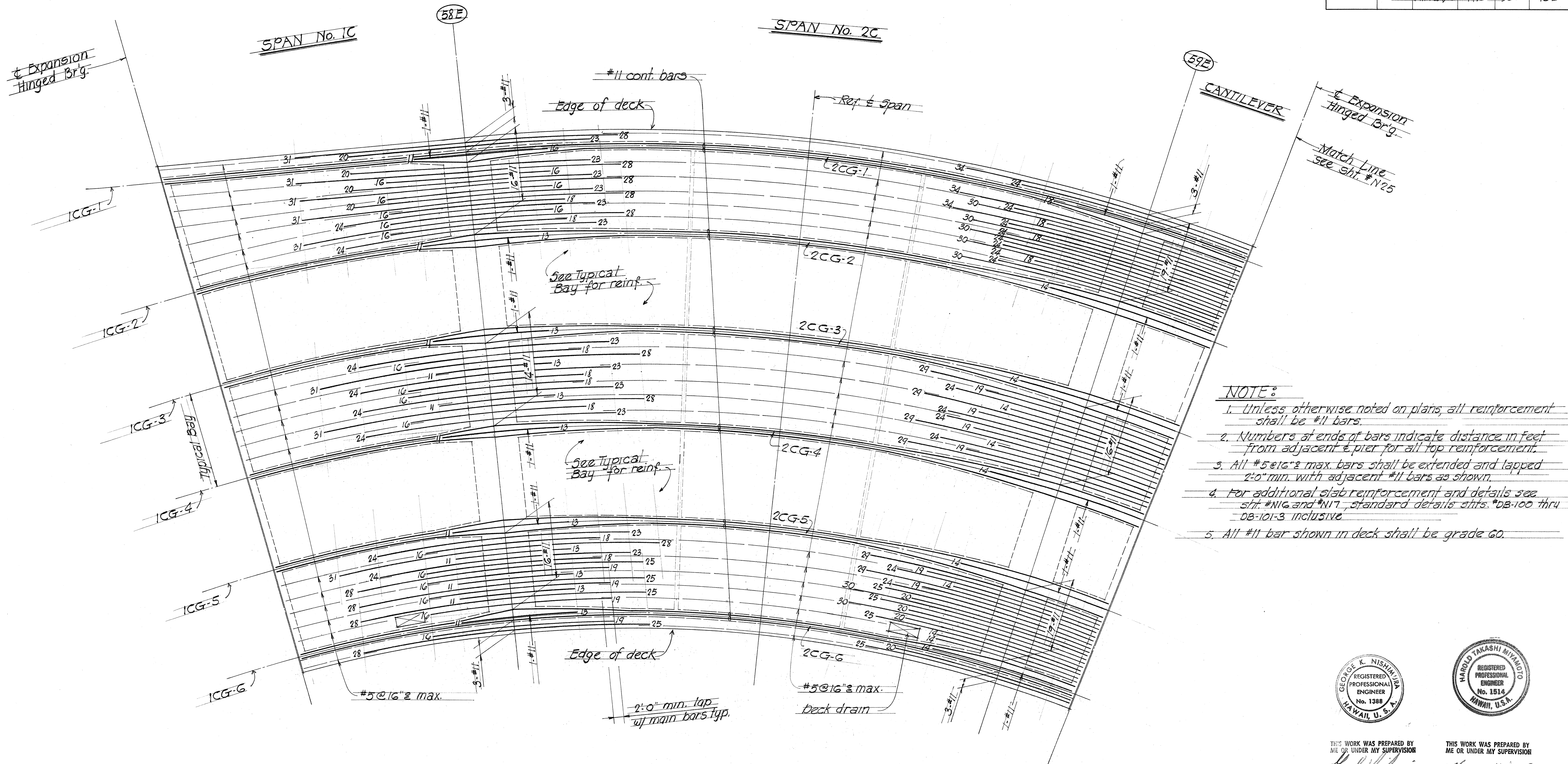
VERTICAL RESTRAINER DETAIL
N.T.S.

- NOTE:**
1. All cable units shall be placed so that cables are in a straight line.
 2. The exact position of the longitudinal restrainers to be determined by the contractor. One cable per set may be omitted to clear drain pipe in pier caps as noted on plans. Any removal of cables must be symmetrical about structure.
 3. All vertical & longitudinal restrainers units and plates shall be incidental to concrete.
 4. Restrainer plate shall conform to existing cable units @ existing cantilever span.
 5. Contractor shall submit shop drawing of the cable arrangement to the engineer for approval prior to installation.

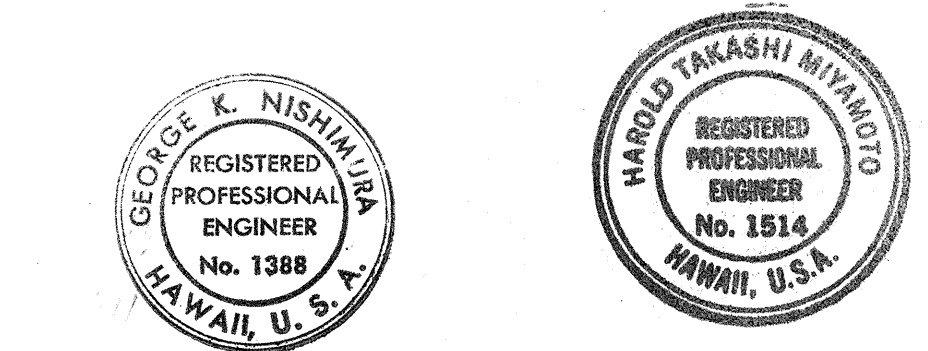
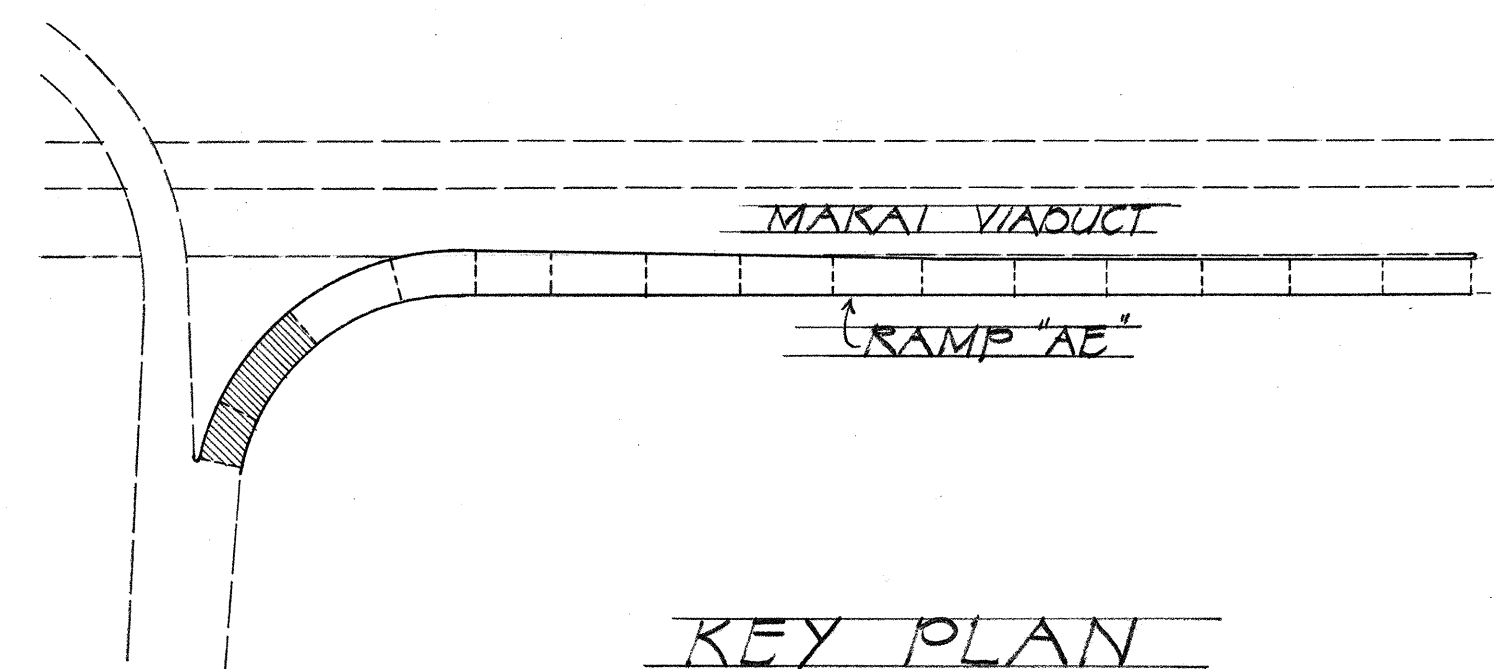


STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TYPICAL RESTRAINER DETAILS	
RAMP "AE"	
AIRPORT INTERCHANGE	
P.A.I. PROJECT NO. I-HI-1(84)16	
SCALE: AS NOTED	DATE: Aug. 1978
SHEET NO. N22 OF 40 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1H1(84)16	1978	362	466



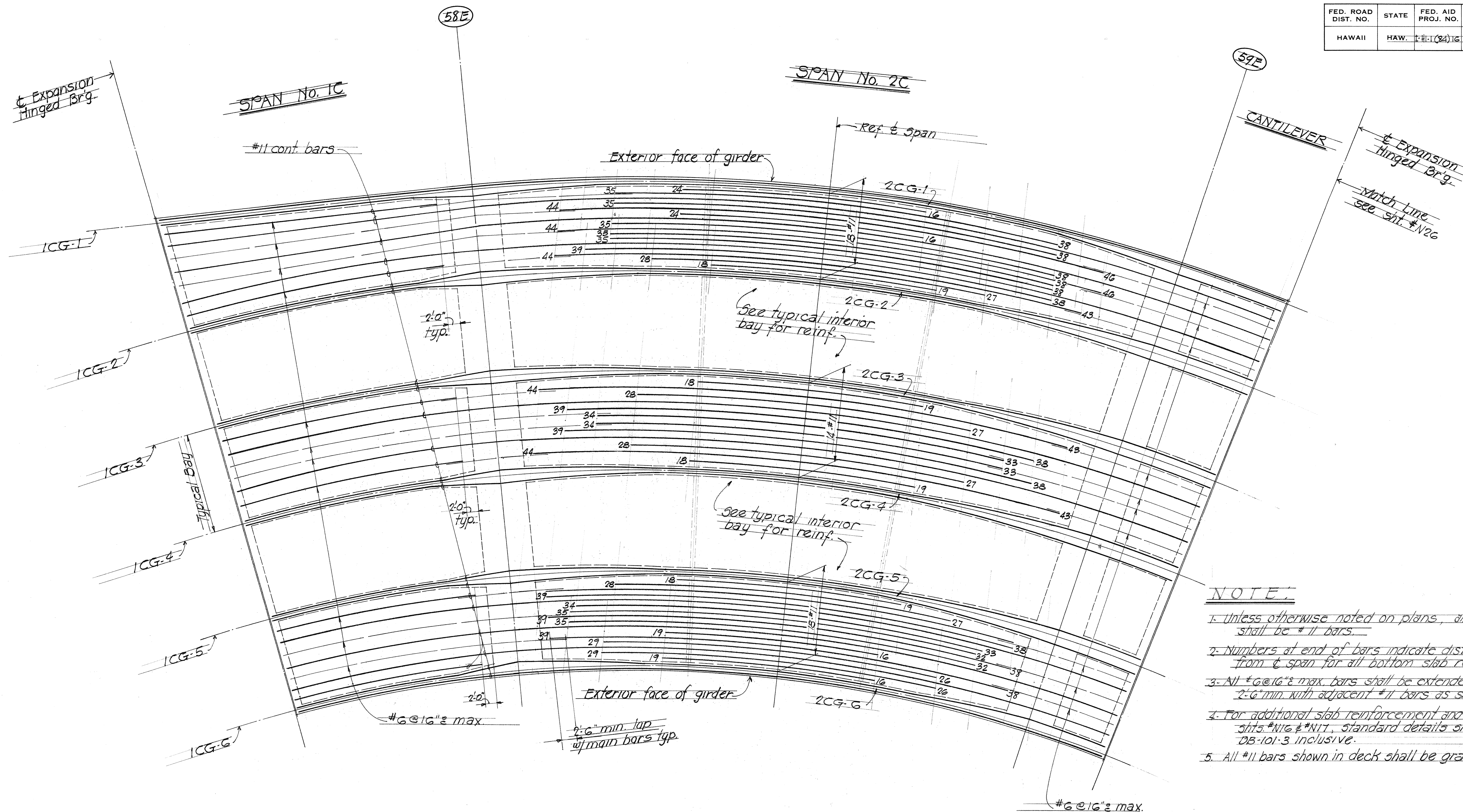
TOP SLAB MAIN REINFORCEMENT PLAN
 Scale: Vert. 1/4" = 1'-0"
 Horiz. 1/8" = 1'-0"



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 1C AND 2C
RAMP "AE"
 AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. 1-HI-1 (84) 16
 Scale: As Noted Date Aug. 1978
 SHEET NO. 23 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1 (84) 16	1978	363	466

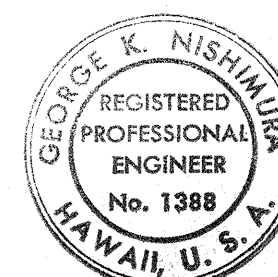


NOTE:

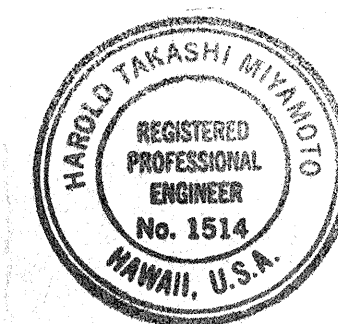
1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
2. Numbers at end of bars indicate distance in feet from ϕ span for all bottom slab reinforcement.
3. All #6 @ 16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
4. For additional slab reinforcement and details - see sheets #N16 & #N17, standard details sheets #PB-100 thru PB-101-3 inclusive.
5. All #11 bars shown in deck shall be grade 60.

BOTTOM SLAB MAIN REINFORCEMENT PLAN

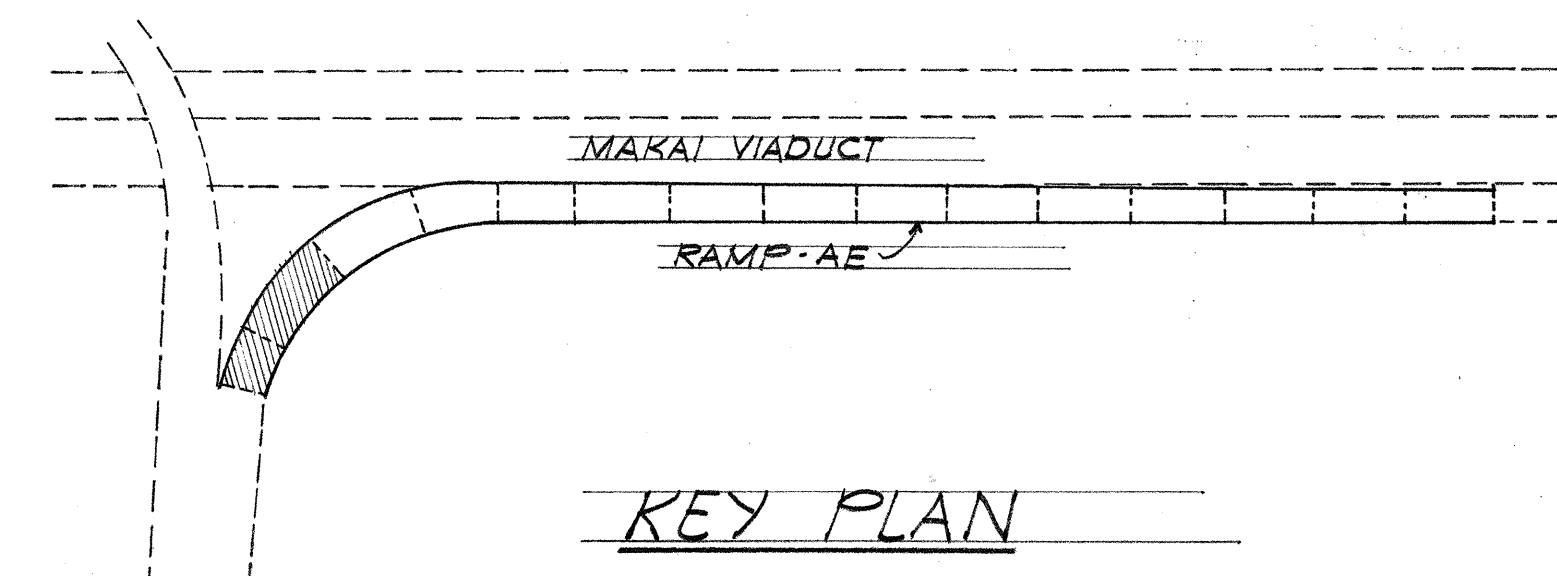
Scale: Vert. $\frac{1}{4}" = 1'-0"$
Horiz. $\frac{1}{8}" = 1'-0"$



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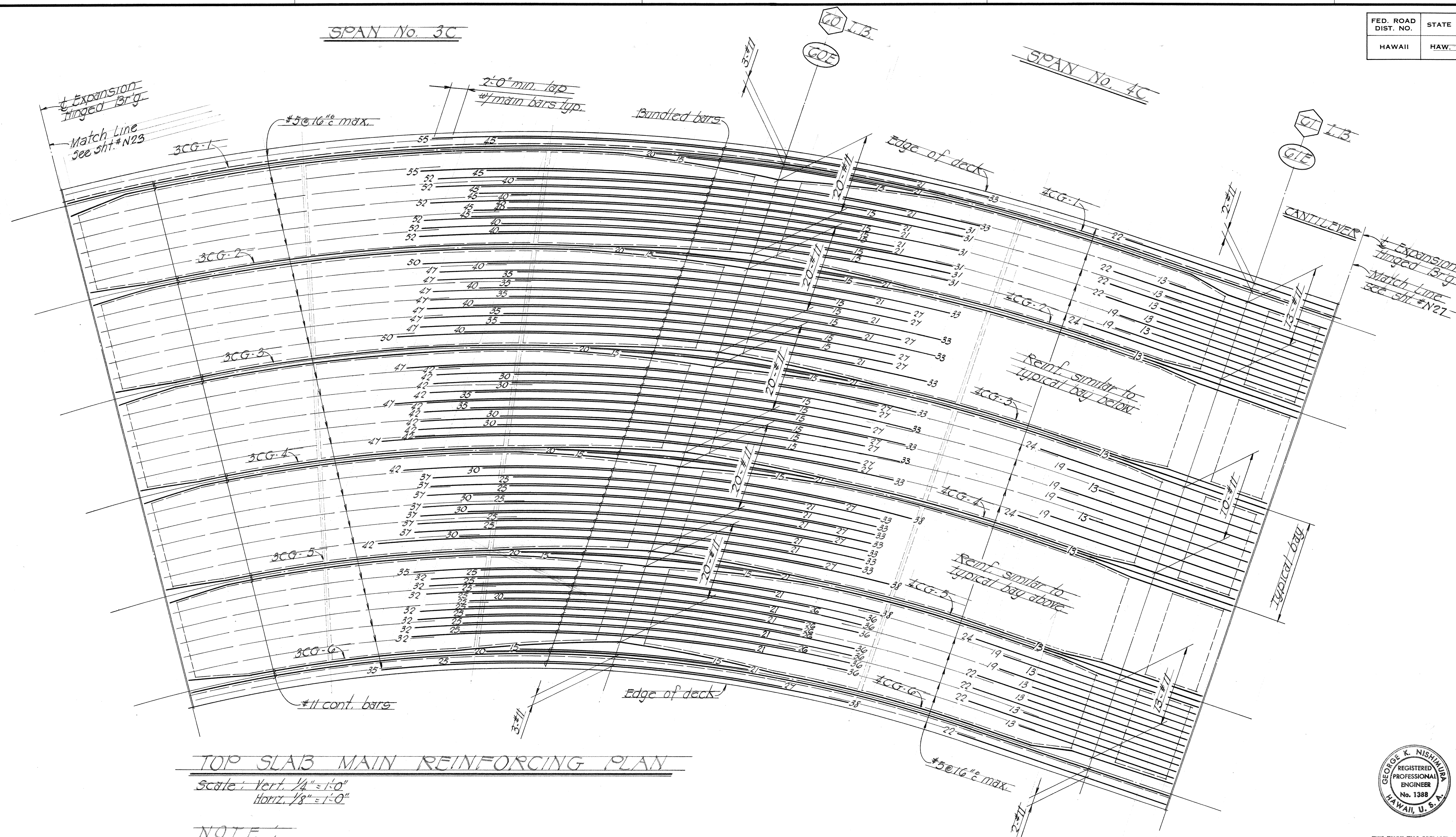


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Harold Takashi Miyamoto



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>DECK STEEL PLACEMENT DIAGRAM</u>	
<u>SPAN 1C AND 2C</u>	
<u>RAMP "AE"</u>	
<u>AIRPORT INTERCHANGE</u>	
<u>F.A.T. PROJ. NO. I-HI-1 (84) 16</u>	
Scale: As noted	Date: Aug. 1978
SHEET NO. <u>24</u> OF 40 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(84)16	1978	364	466

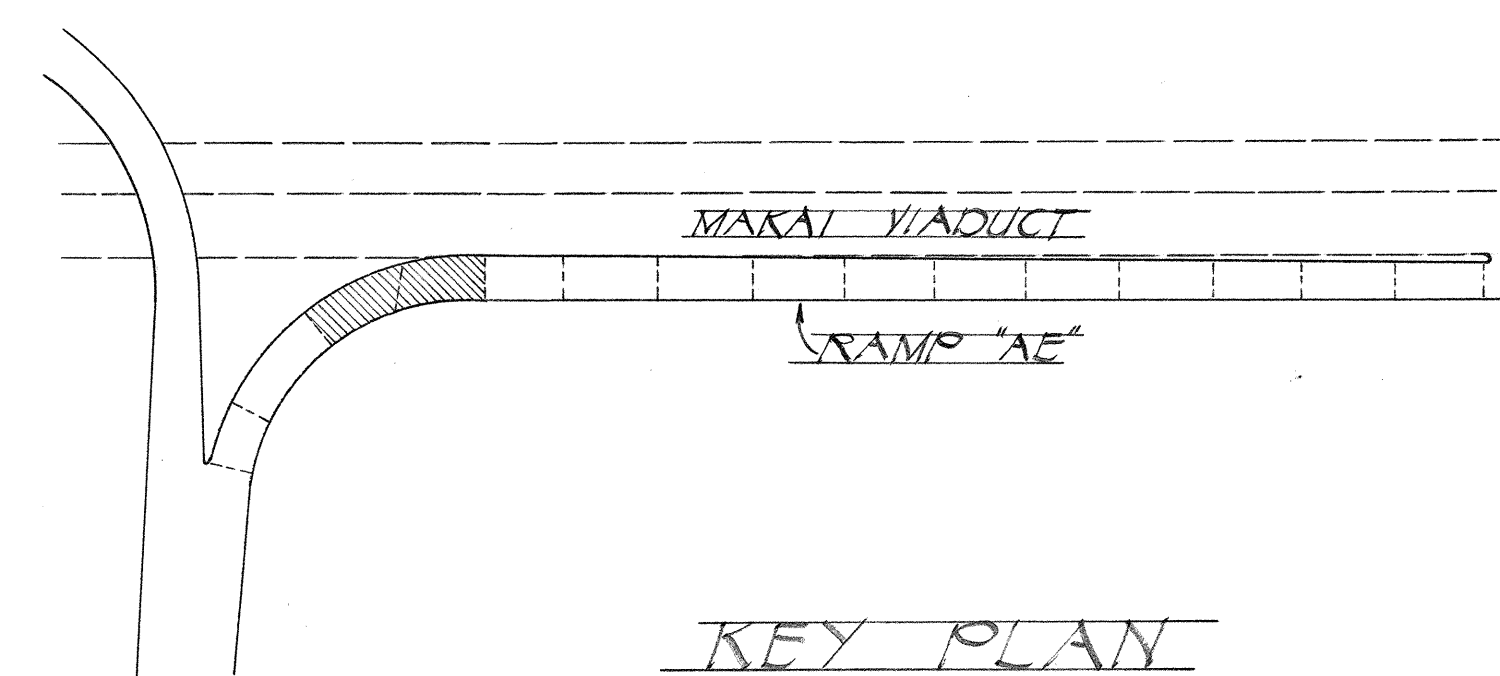


TOP SLAB MAIN REINFORCING PLAN

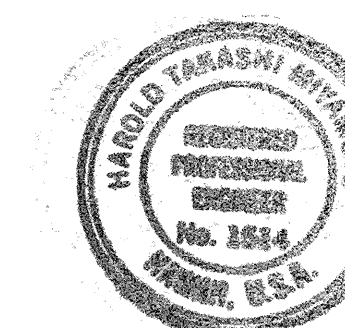
Scale: Vert. 1/4" = 1'-0"
Horiz. 1/8" = 1'-0"

NOTE:

- 1- Unless otherwise noted on plans, all reinforcement shall be #11 bars.
- 2- Numbers at ends of bars indicate distance in feet from adjacent pier for all top reinforcement.
- 3- All #5 @ 16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
- 4- For additional slab reinforcement and details - see sht #N16 and #N17 standard details shts #DB-100 thru #DB-101-3 inclusive.
- 5- All #11 bars shown in deck shall be grade 60.



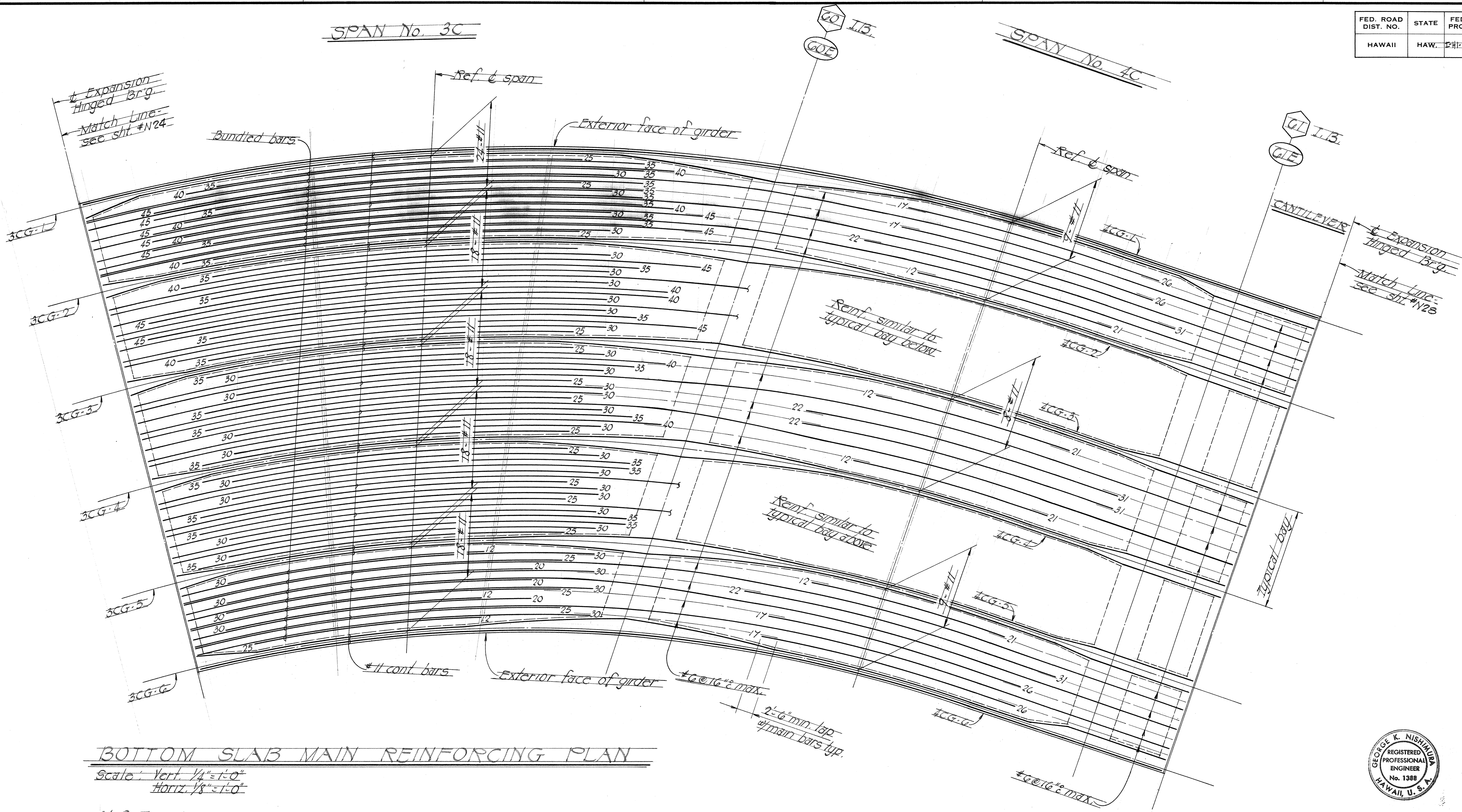
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 3C AND 4C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. 1-11-1(84)16
Scale: As noted Date: Aug. 1978
SHEET NO. 125 OF 40 SHEETS

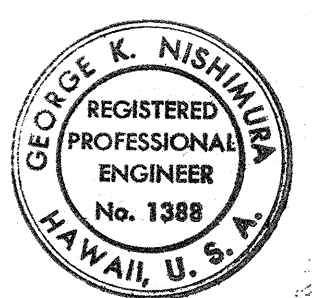
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PH-1(84)16	1978	365	466



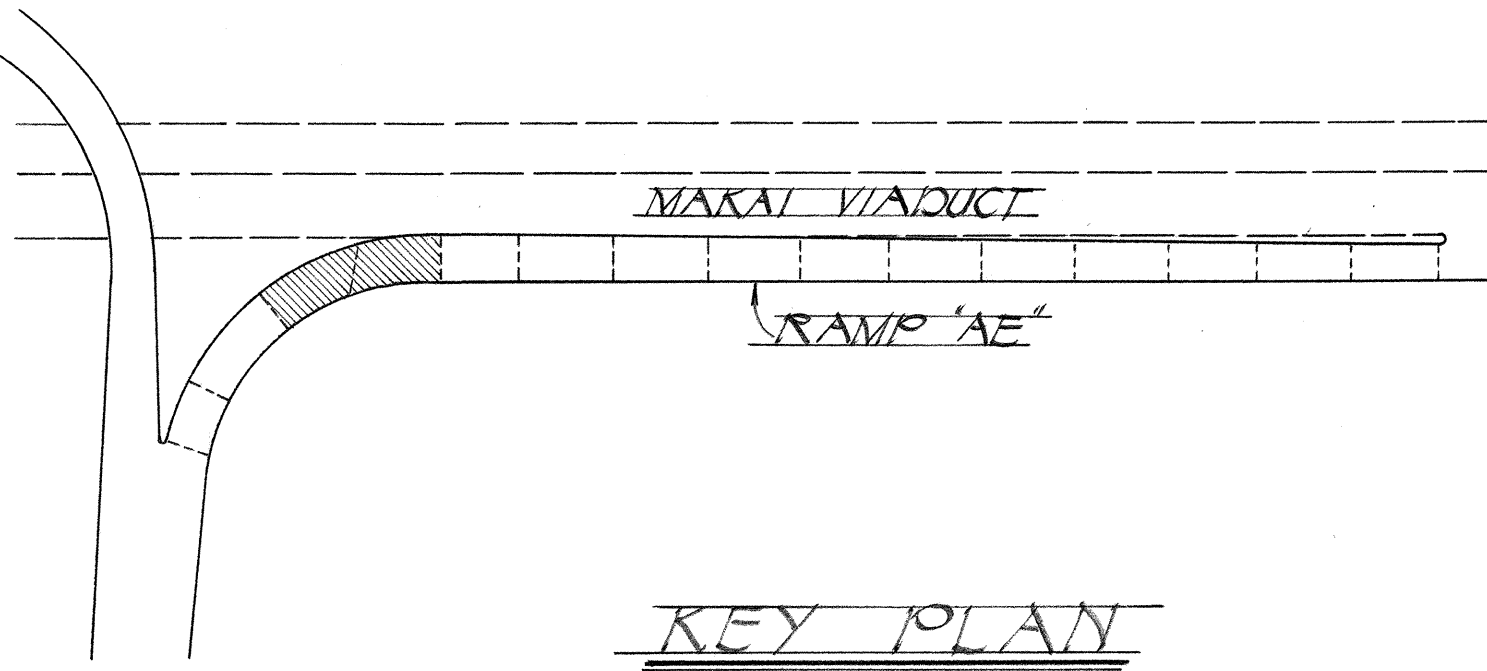
BOTTOM SLAB MAIN REINFORCING PLAN
 Scale: Vert. 1/4"=1'-0"
 Horiz. 1/8"=1'-0"

NOTE

- 1- Unless otherwise noted on plans, all reinforcement shall be #11 bars.
- 2- Numbers at ends of bars indicate distance in feet from ϵ span for all bottom slab reinforcement.
- 3- All #6 @ 16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
- 4- For additional slab reinforcement and details - see Sht. #N16 and #N17 standard details Shts. #DB-100 thru #DB-101-3 inclusive.
- 5- All #11 bars shown in deck shall be grade 60.



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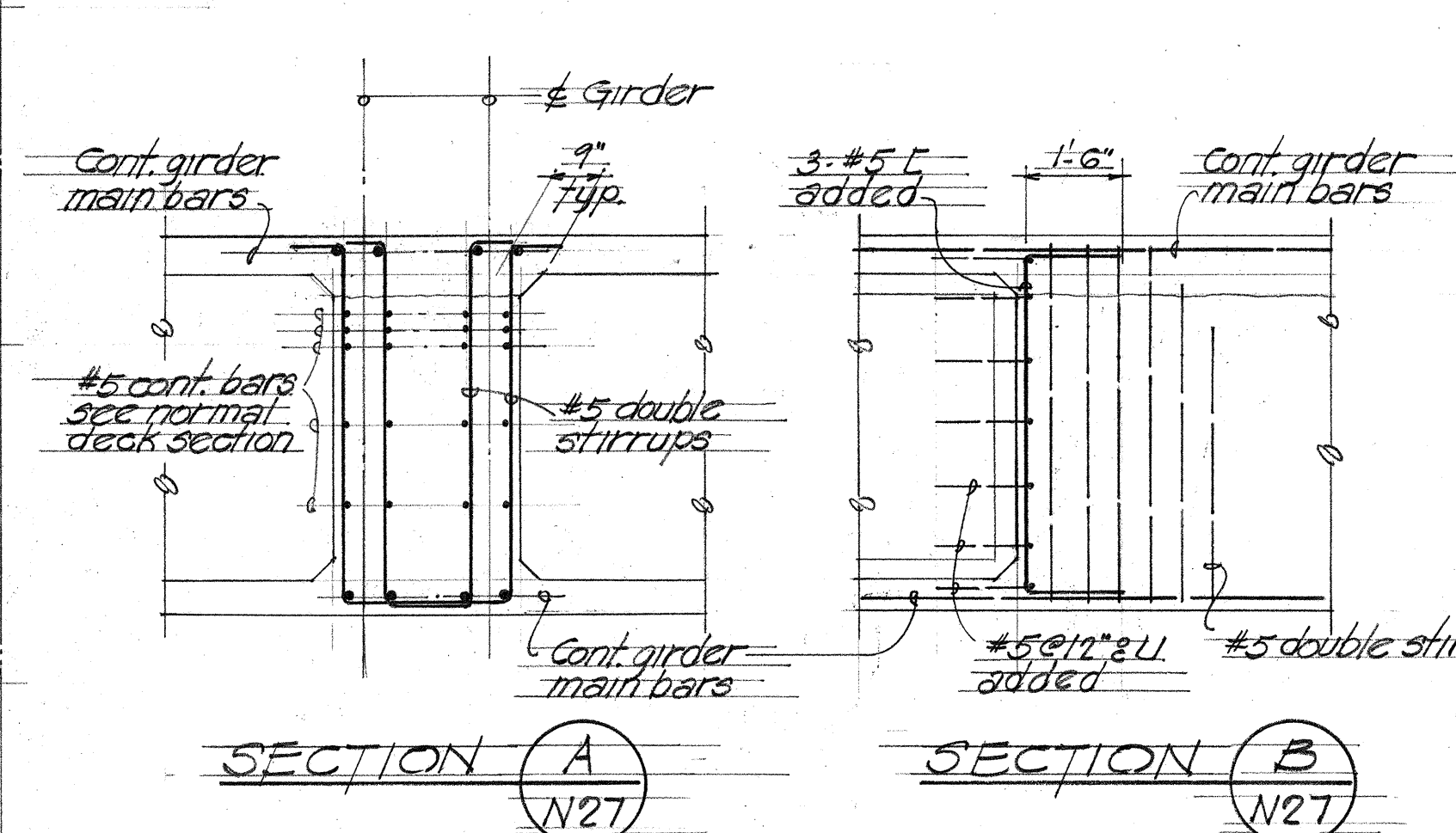
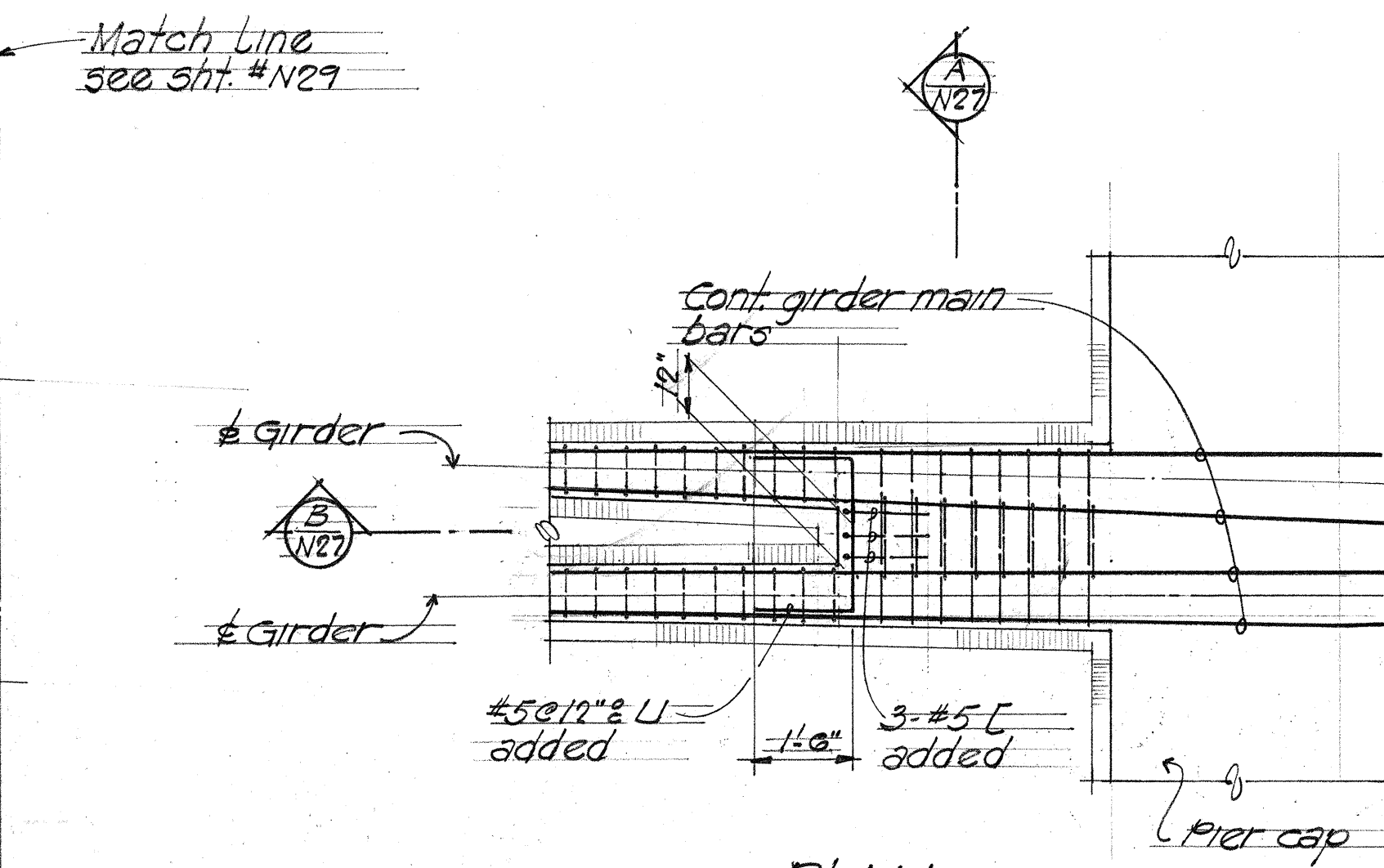
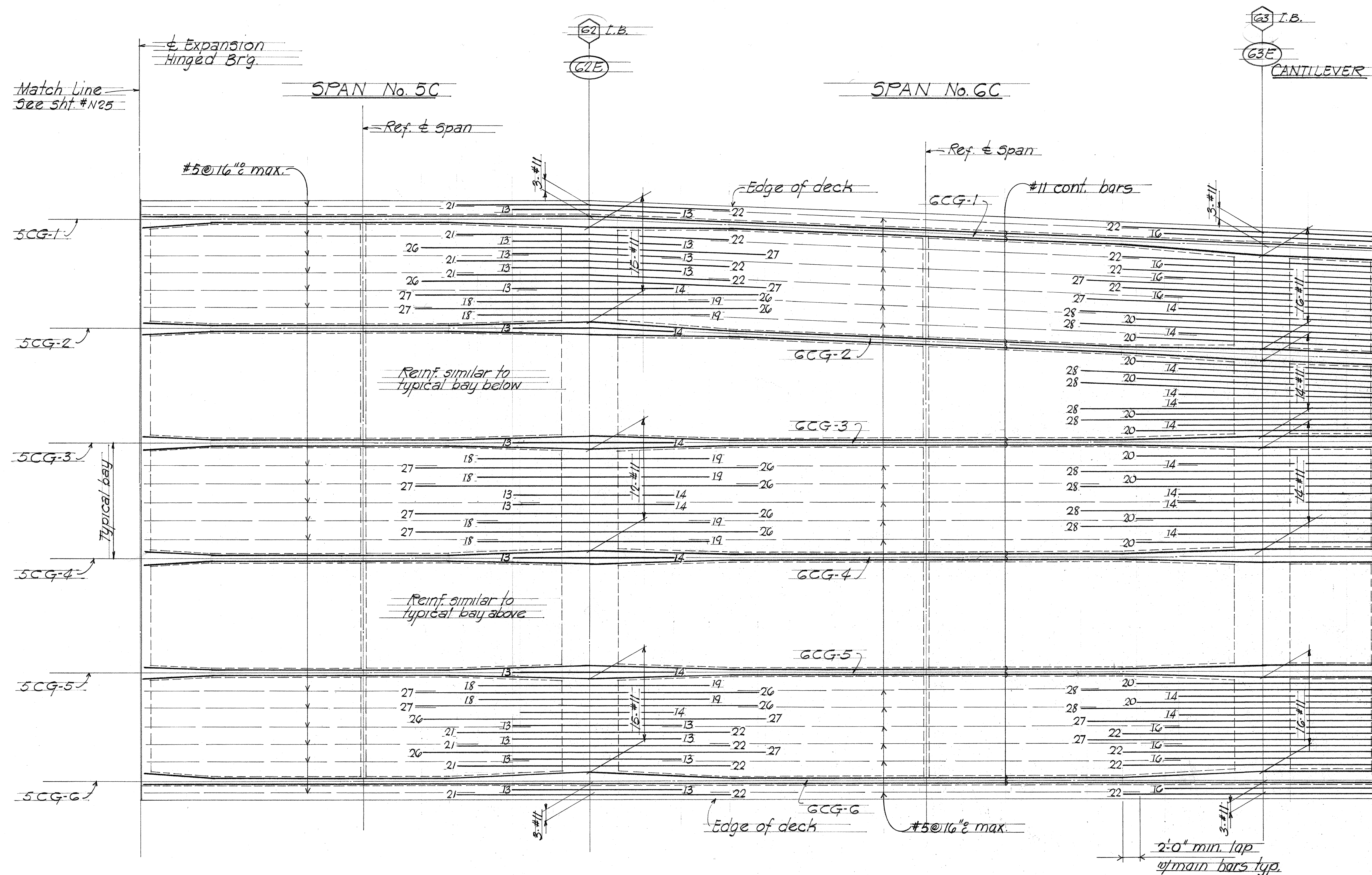
KEY PLAN

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DECK STEEL PLACEMENT DIAGRAM
SPAN 3C AND 4C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.T. PROJ. NO. I-HI-1(84)16
 Scale: As noted Date: Aug. 1978

SHEET NO. N26 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(84)16	1978	366	466

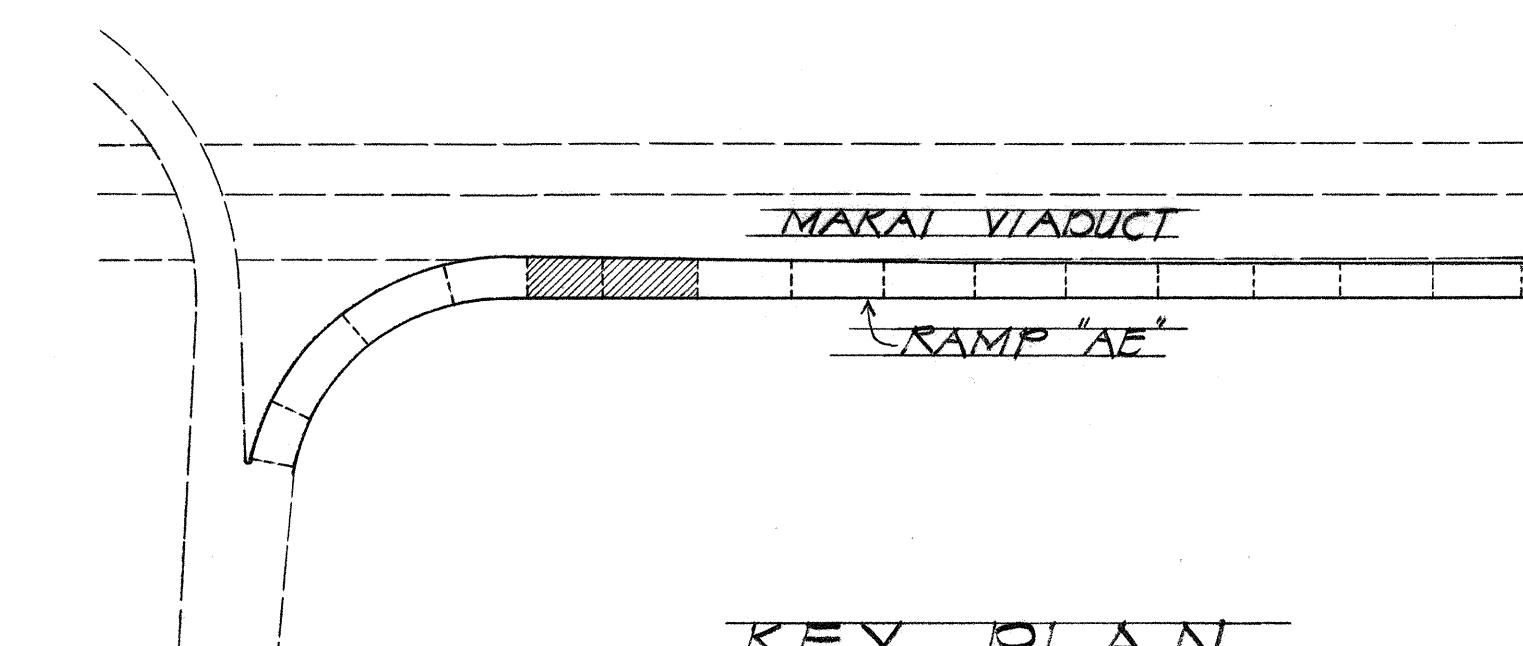


GIRDER SPECIAL REINFORCING DETAIL
Scale 3/8"=1'-0"

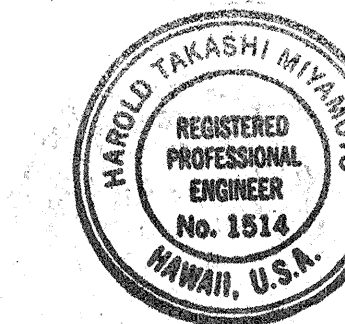
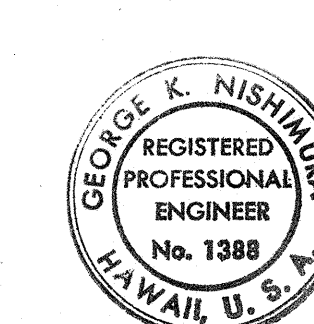
TOP SLAB MAIN REINFORCING PLAN

Scale Vert. 1/4"=1'-0"
Horiz. 1/8"=1'-0"

- NOTE:
1. Unless otherwise noted on plans, all reinforcing shall be #11 bars.
 2. Numbers at ends of bars indicate distance in feet from adjacent pier for all top reinforcement.
 3. All #5 @ 16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
 4. For additional slab reinforcement and details see sheet N16 & N17 and standard details sheets DB-100 thru DB-101-3 inclusive.
 5. All #11 bars shown in deck shall be grade 60.



KEY PLAN

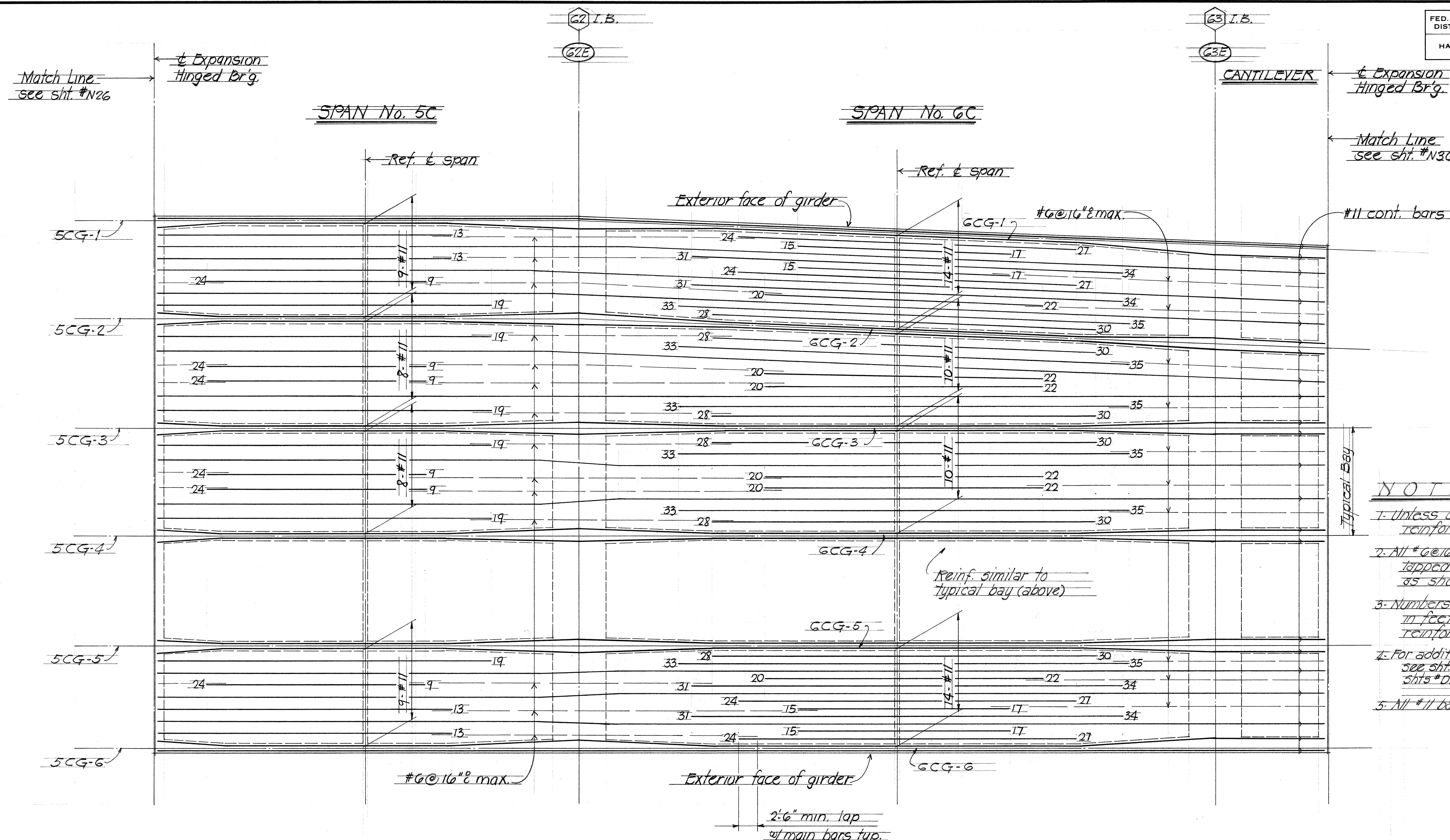


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Harold Takashi Miyamoto

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 5C AND 6C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1(84)16
Scale: As Noted Date: Aug. 1978
SHEET No. N27 OF 40 SHEETS

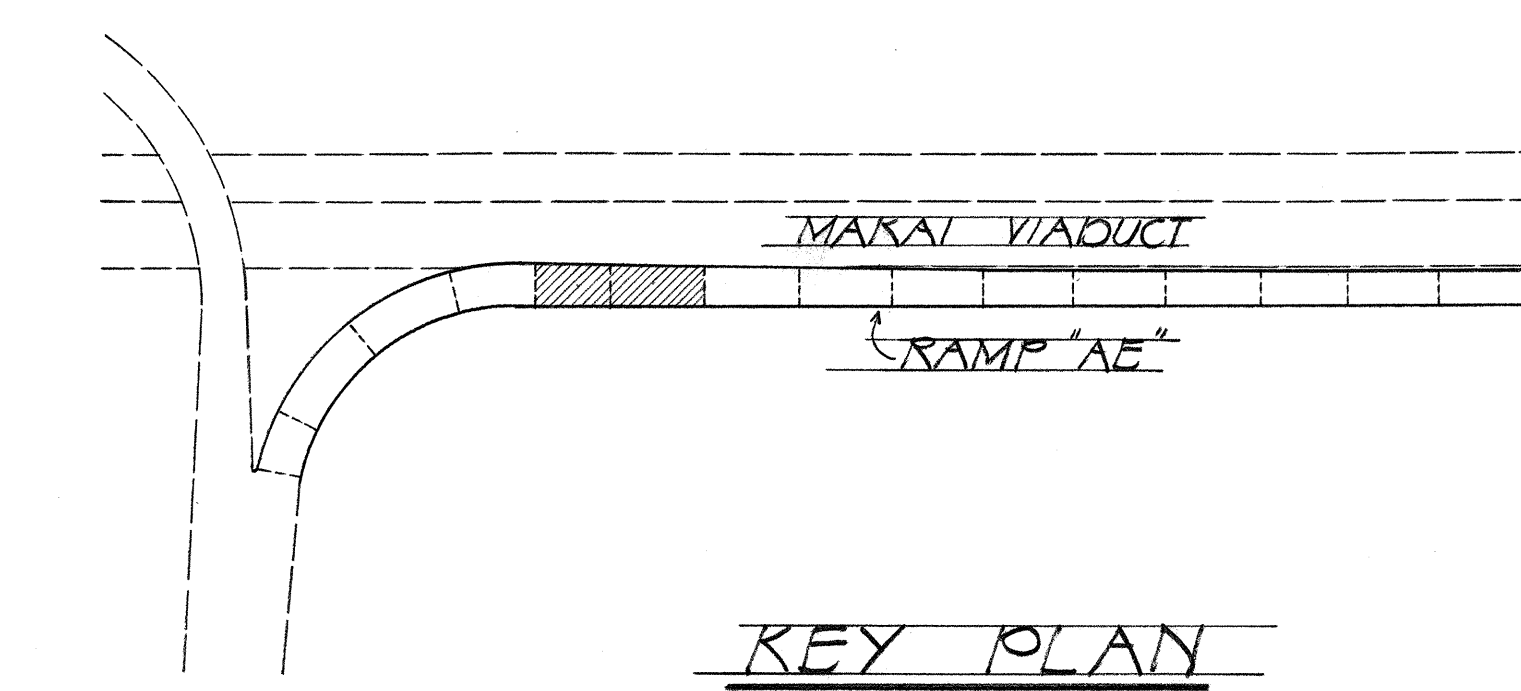
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CH-1(84)16	1978	367	466



- NOTE:**
1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
 2. All #6@16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
 3. Numbers at ends of bars indicate distance in feet from expansion hinged bridge reinforcement.
 4. For additional slab reinforcement and details see sheet #N16 and standard details sheets #DB-100 thru #DB-101-3.
 5. All #11 bars shown in deck shall be grade 60.

SURVEY PLOTTED BY: _____
 DATE: _____
 DRAWN BY: _____
 TRACED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 NO. _____

BOTTOM SLAB MAIN REINFORCING PLAN
 Scale: Vert. 1/4" = 1'-0"
 Horiz. 1/8" = 1'-0"

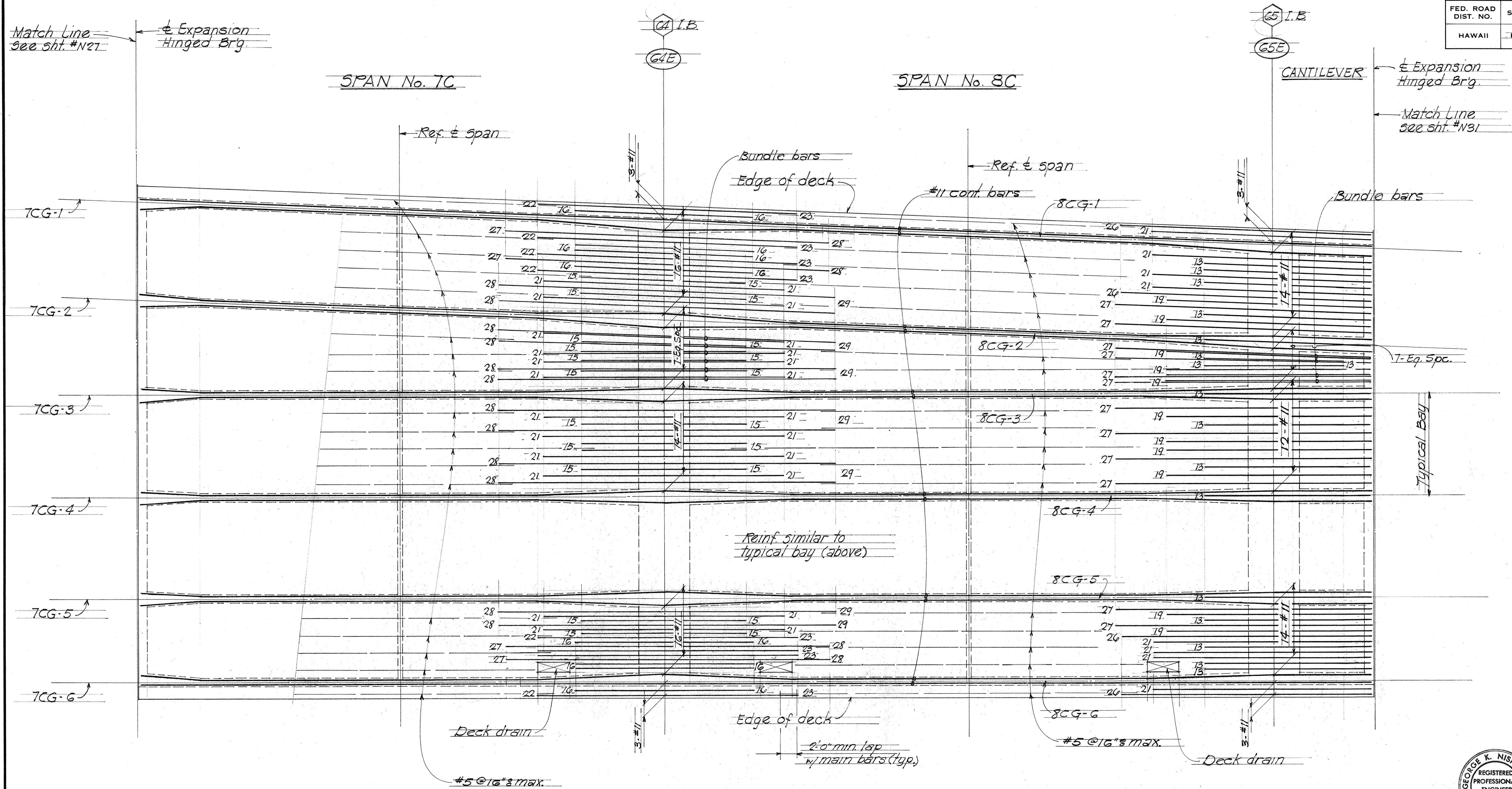


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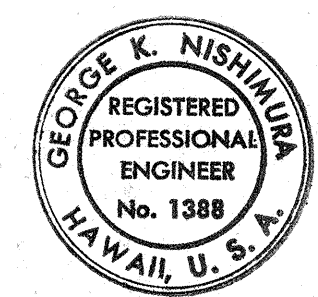
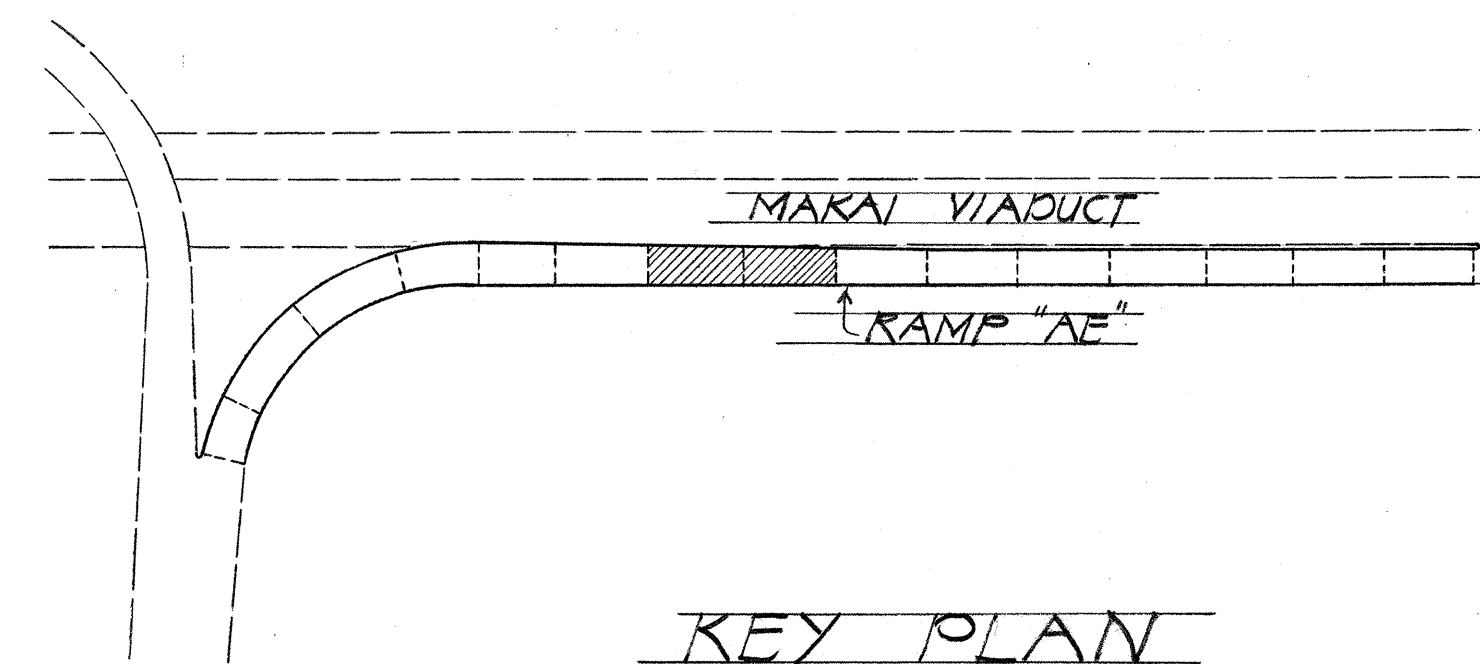
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
 SPAN 5C AND 6C
 RAMP "AE"
 AIRPORT INTERCHANGE
 F&T PROJ. NO. 1-HI-1 (84)16
 Scale: As noted Date: Aug. 1978
 SHEET No. 23 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(84)16	1978	368	460



TOP SLAB MAIN REINFORCING PLAN
 Scale Vert. 1/4"=1'-0"
 Horiz. 1/8"=1'-0"

- NOTE:**
1. Unless otherwise noted on plans, all reinforcement shall be #11 bars
 2. Numbers at ends of bars indicate distance in feet from adjacent pier for all top reinforcement
 3. All #5 @ 16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown
 4. For additional slab reinforcement and details see sht. #N16 & #N17 and standard details shts. #DB-100 thru #DB-101-3 inclusive.
 5. All #11 bars shown in deck shall be grade 60.



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
 SPAN 7C AND 8C
 RAMP "AE"
 AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-HI-1 (84) 16
 Scale: As noted Date: Aug. 1978
 SHEET NO. 368 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	11-1-1 (84) 16	1978	369	400

Match Line
see sht. #N28

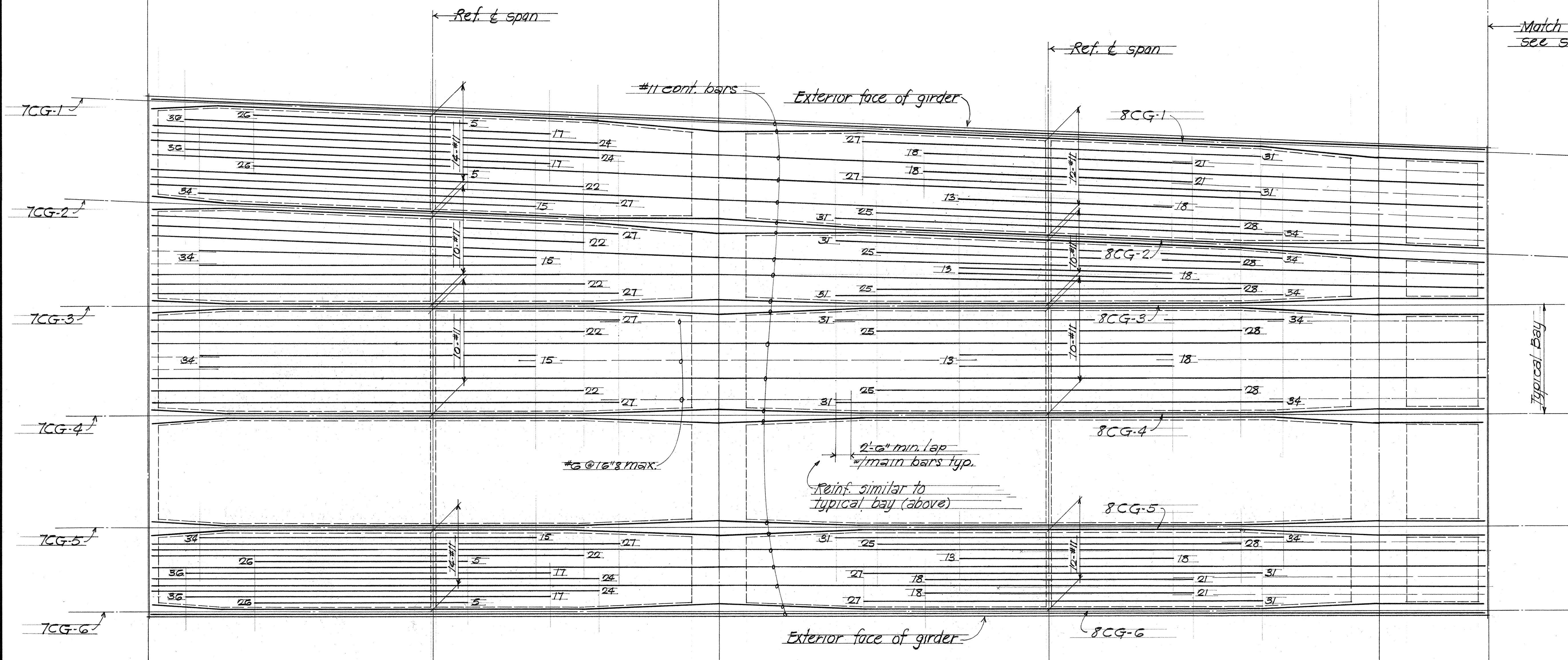
Expansion
Hinged Br'g.

SPAN No. 7C

SPAN No. 8C

Expansion
Hinged Br'g.

Match Line
see sht. #N32

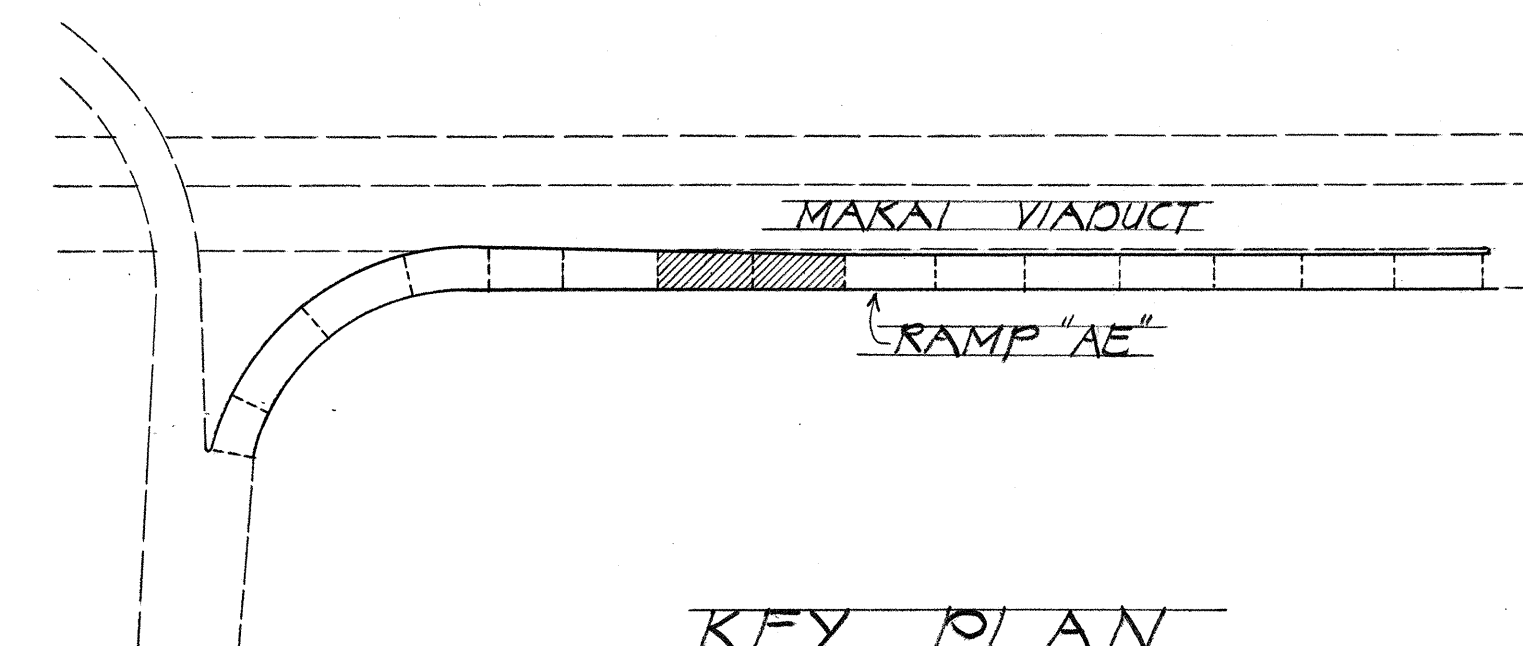


BOTTOM SLAB MAIN REINFORCING PLAN

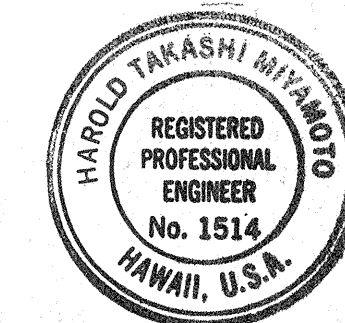
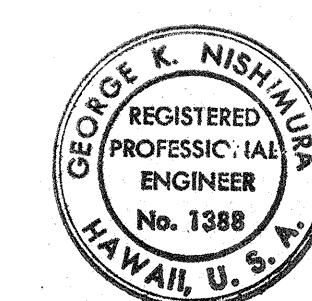
Scale: Vert. 1/4" = 1'-0"
Horiz. 1/8" = 1'-0"

NOTE:

1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
2. Numbers at ends of bars indicate distance in feet from span for all bottom slab reinforcement.
3. All #6 @ 16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
4. For additional slab reinforcement and details - see sht. #N16 & #N17 and standard details shts. #DB-100 thru #DB-100-3.
5. All #11 bars shown in deck shall be grade 60.



KEY PLAN



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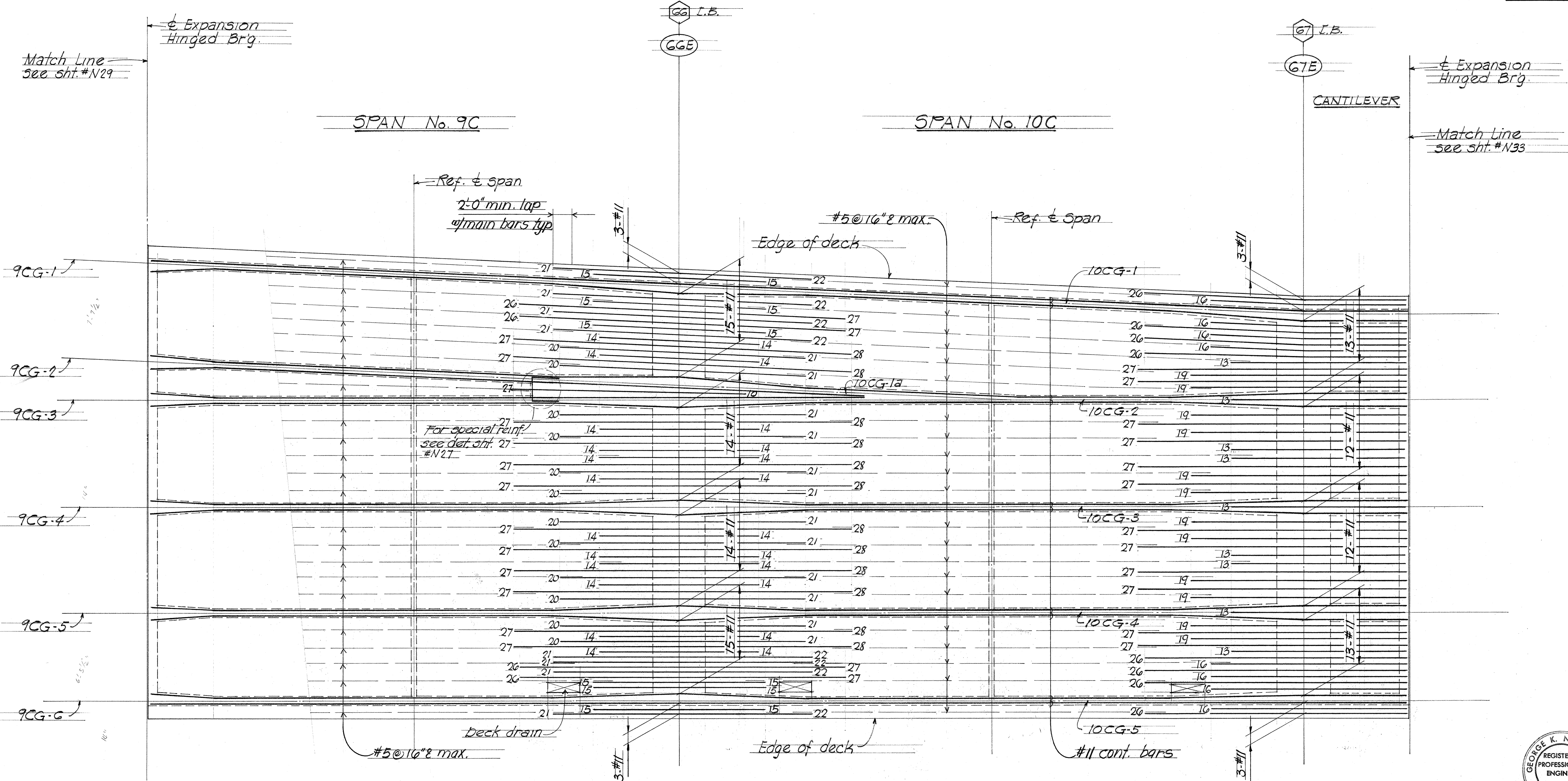
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By *[Signature]*

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 7C AND 8C
RAMP 'AE'
AIRPORT INTERCHANGE
P.A.I. PROJ. NO. 1-11-1 (84) 16
Scale: As noted Date: Aug. 1978

SHEET No. 369 OF 40 SHEETS

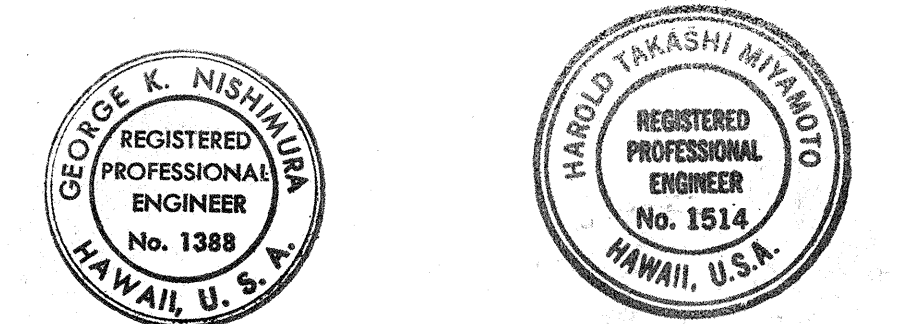
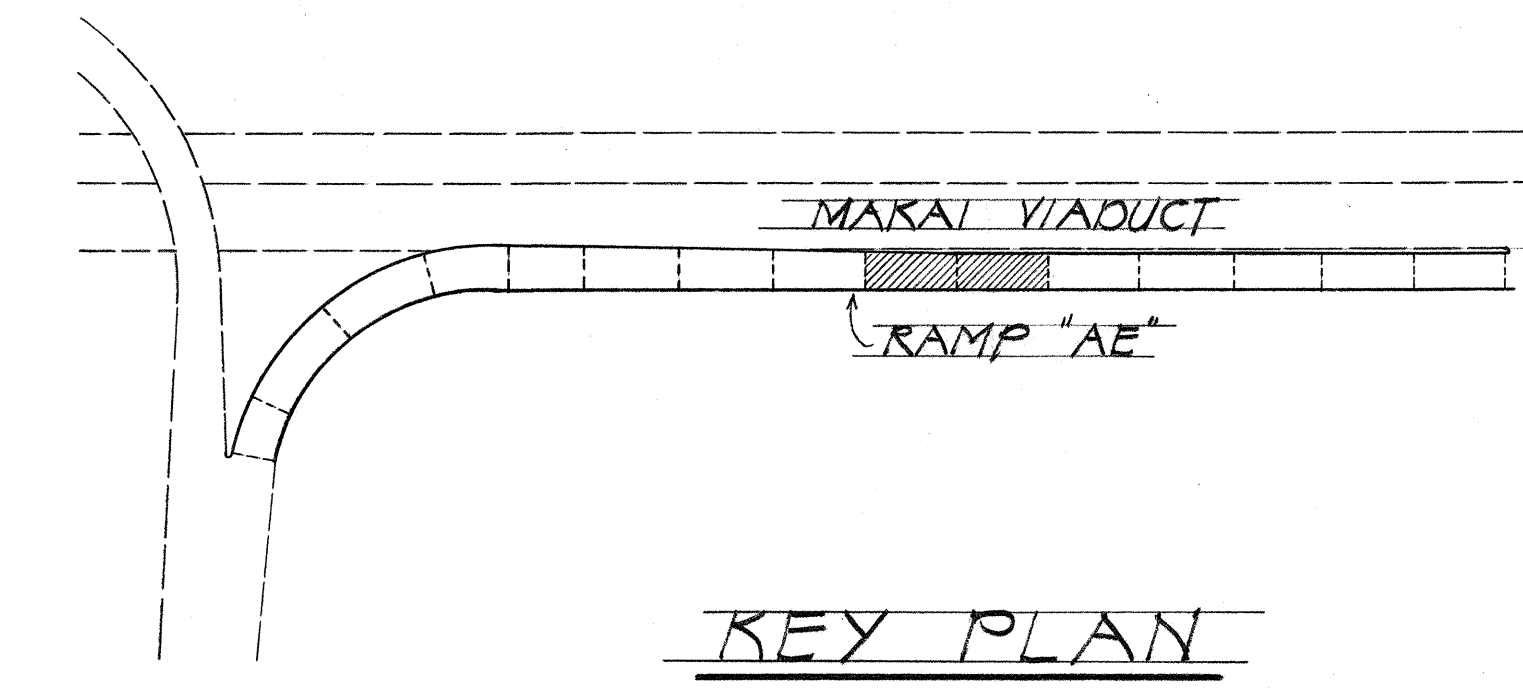
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1 (84) 16	1978	370	466



TOP SLAB MAIN REINFORCING PLAN

Scale: Vert. 1/4" = 1'-0"
 Horiz. 1/8" = 1'-0"

- NOTE:**
1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
 2. Numbers at ends of bars indicate distance in feet from adjacent expansion joint for all top reinforcement.
 3. All #5 @ 16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
 4. For additional slab reinforcement and details see sh. #N16 and #N17 standard details sh. #DB-100 thru #DB-101-3 inclusive.
 5. All #11 bars shown in deck shall be grade 60.



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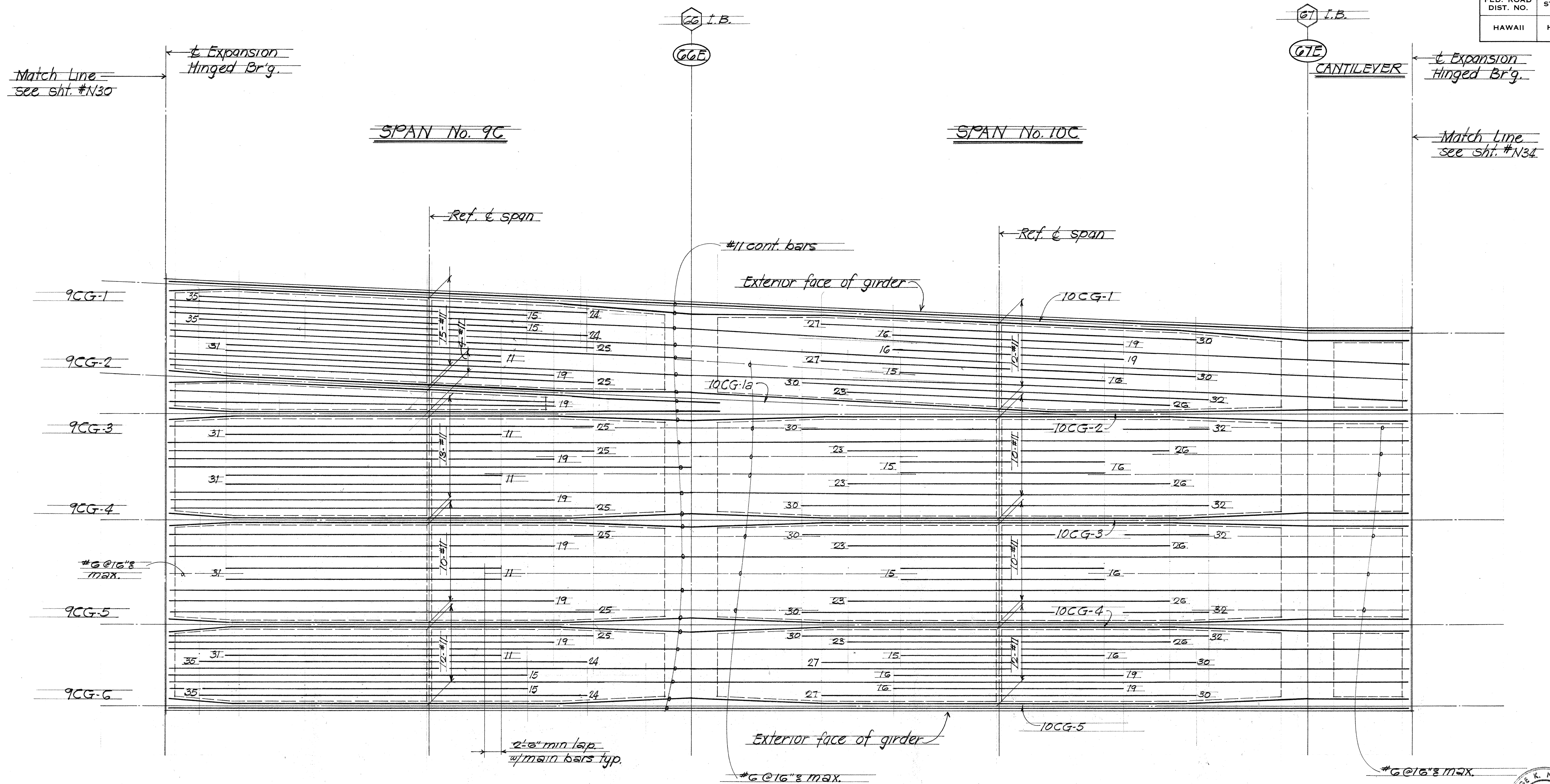
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK STEEL PLACEMENT DIAGRAM
SPAN 9C AND 10C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-HI-1 (84) 16
Scale As noted Date: Aug. 1978
SHEET No. N31 OF 40 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5HI-1(84)16	1978	371	466

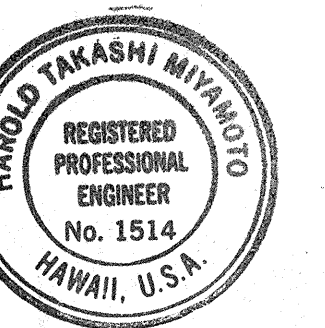
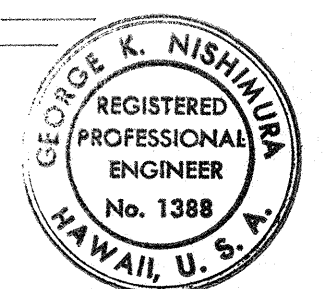
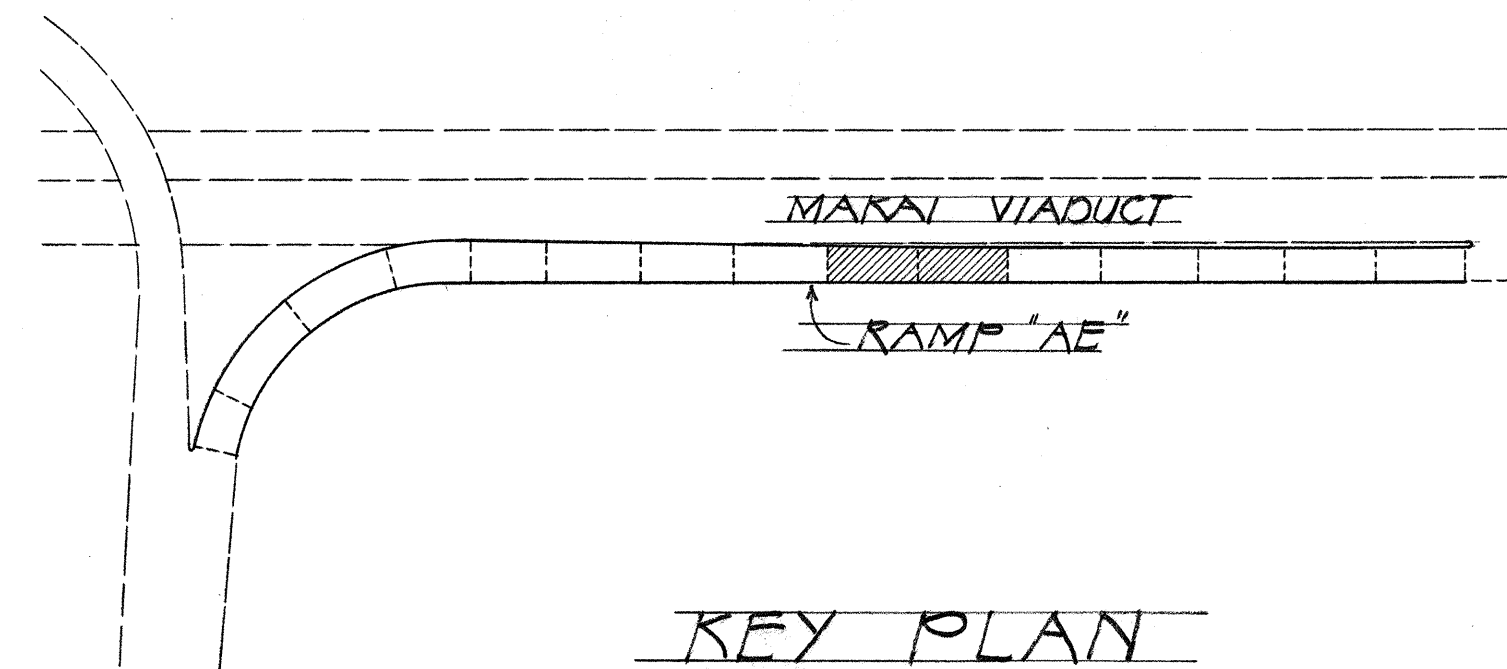


BOTTOM SLAB MAIN REINFORCING PLAN

Scale: Vert. 1/4" = 1'-0"
Horiz. 1/8" = 1'-0"

NOTE:

- 1- Unless otherwise noted on plans, all reinforcement shall be #11 bars.
- 2- Numbers at ends of bars indicate distance in feet from centerline of span for all bottom slab reinforcement.
- 3- All #6 @ 16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
- 4- For additional slab reinforcement and details - see sht. #N16 and #N17 - standard details shts. #DB-100 thru #DB-101-3 inclusive.
- 5- All #11 bars shown in deck shall be grade 60.

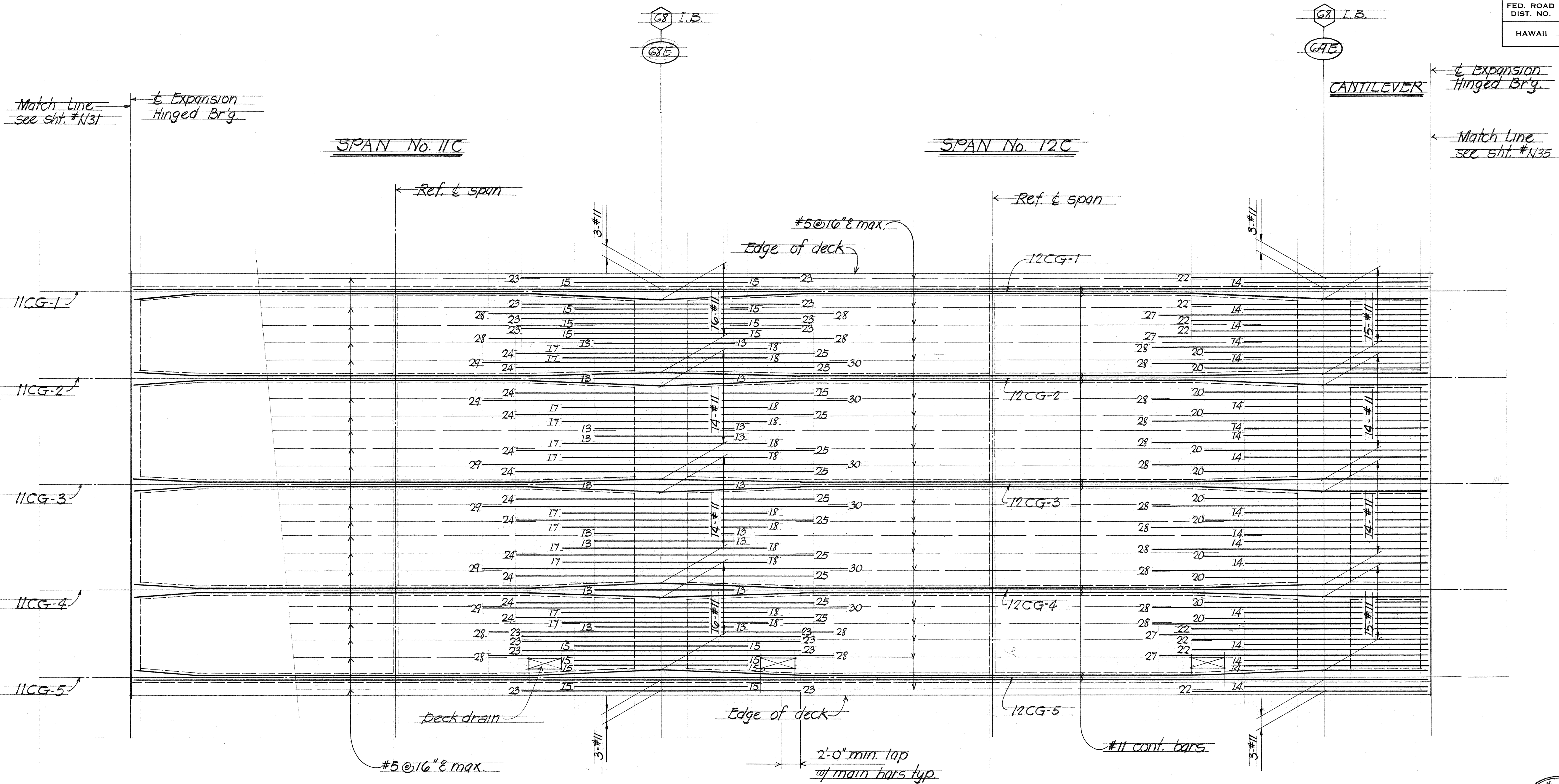


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Harold Takashi Miyamoto

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 9C AND 10C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.T. PROJ. NO. 1-HI-1(84)16
Scale: As noted Date: Aug. 1978
SHEET No. N32 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-41(84)16	1978	372	466

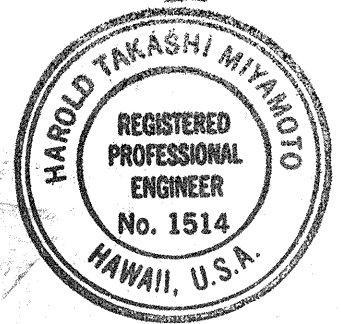
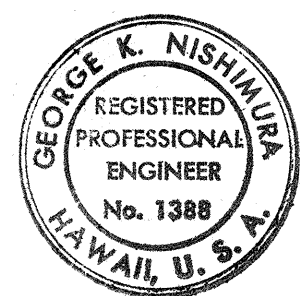
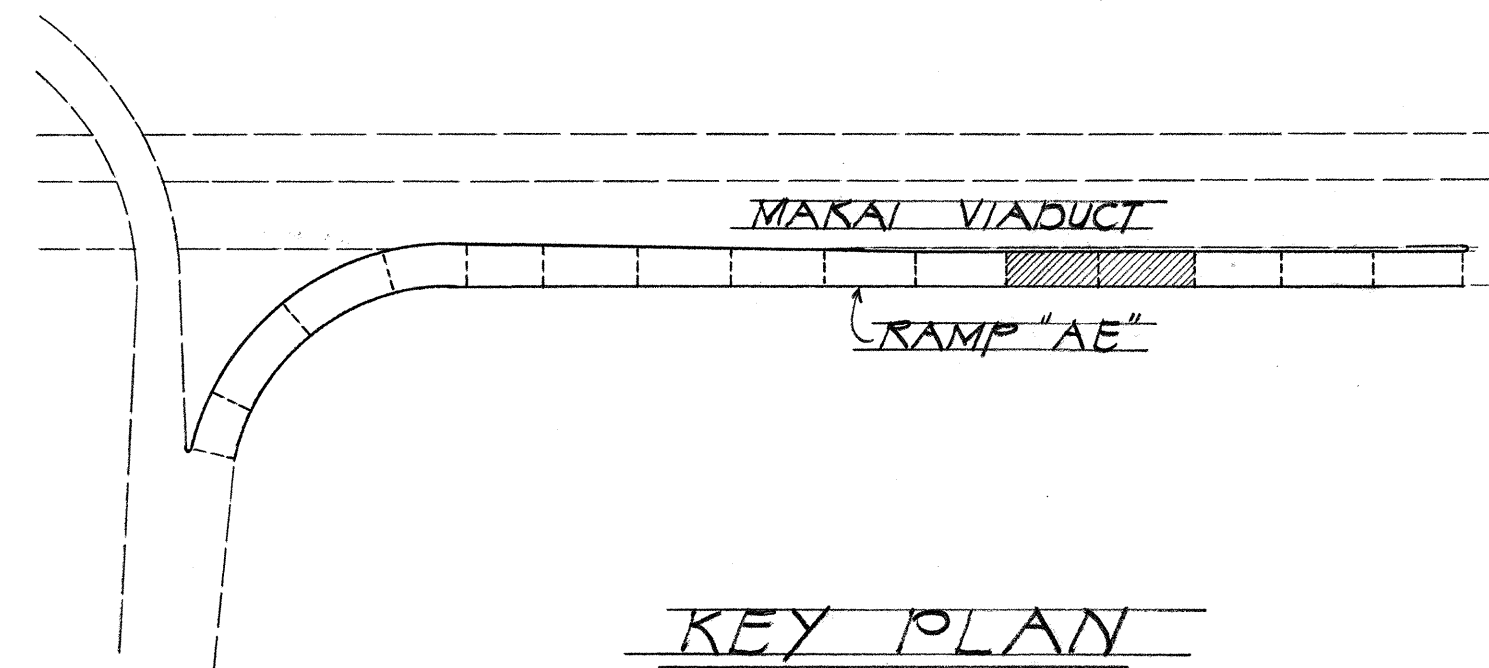


TOP SLAB MAIN REINFORCING PLAN

Scale: Vert. 1/4" = 1'-0"
 Horiz. 1/8" = 1'-0"

NOTE:

1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
2. Numbers at end of bars indicate distance in feet from adjacent pier for all top reinforcement.
3. All #5@16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
4. For additional slab reinforcement and details see sht #N16 and #N17 standard details shts. #DB-100 thru DB-101-3 inclusive.
5. All #11 bars shown in deck shall be grade 60.



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DECK STEEL PLACEMENT DIAGRAM

SPAN 11C AND 12C

RAMP "AE"

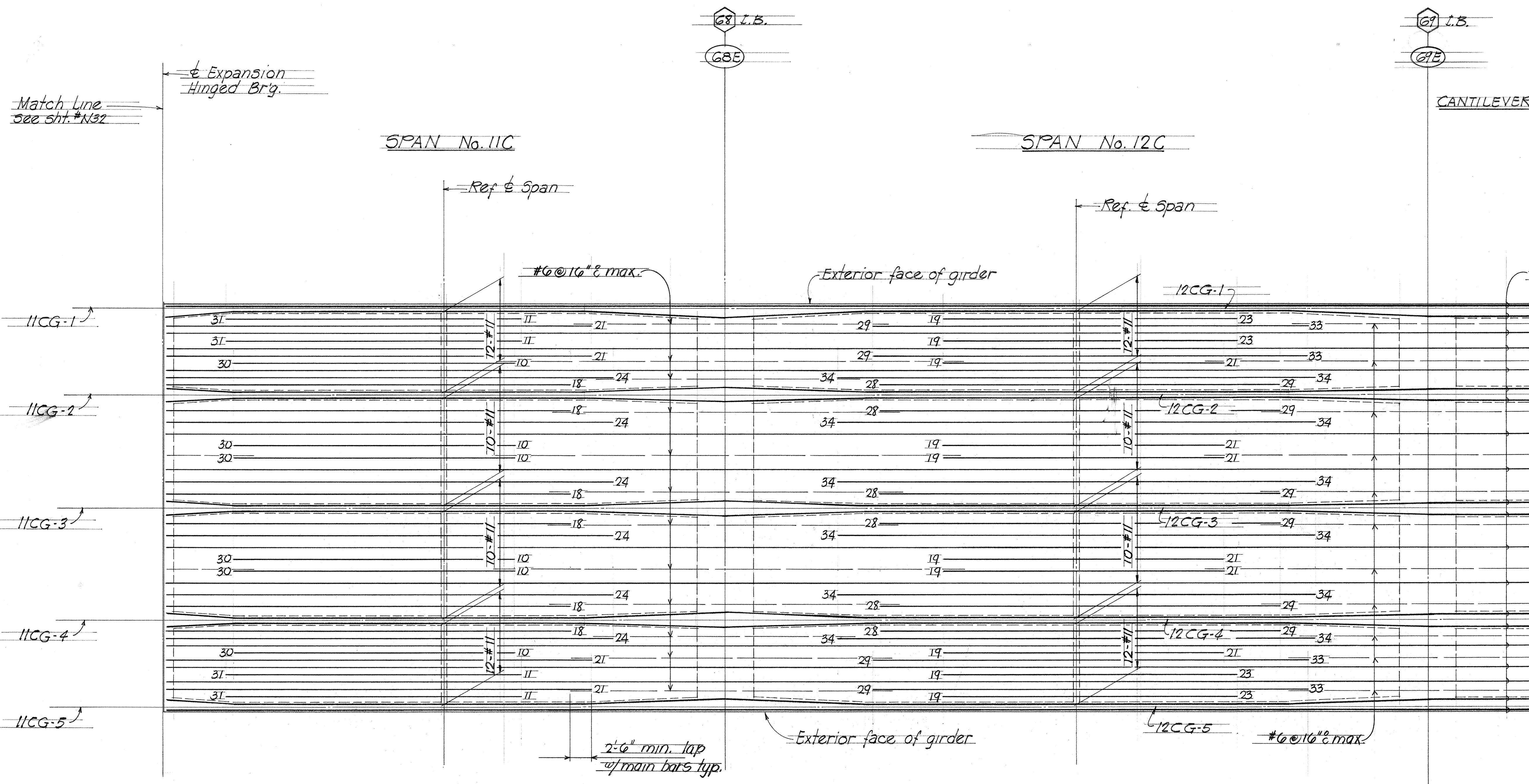
AIRPORT INTERCHANGE

H.A.I. PROJ. NO. 1-41(84)16

Scale: As noted Date: Aug. 1978

SHEET No. 1/33 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	#H-1(84)16	1978	373	466

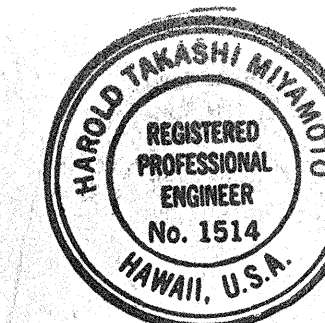
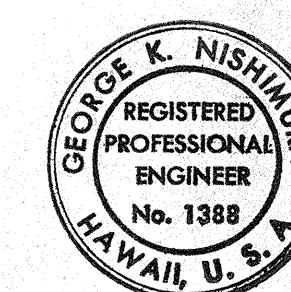
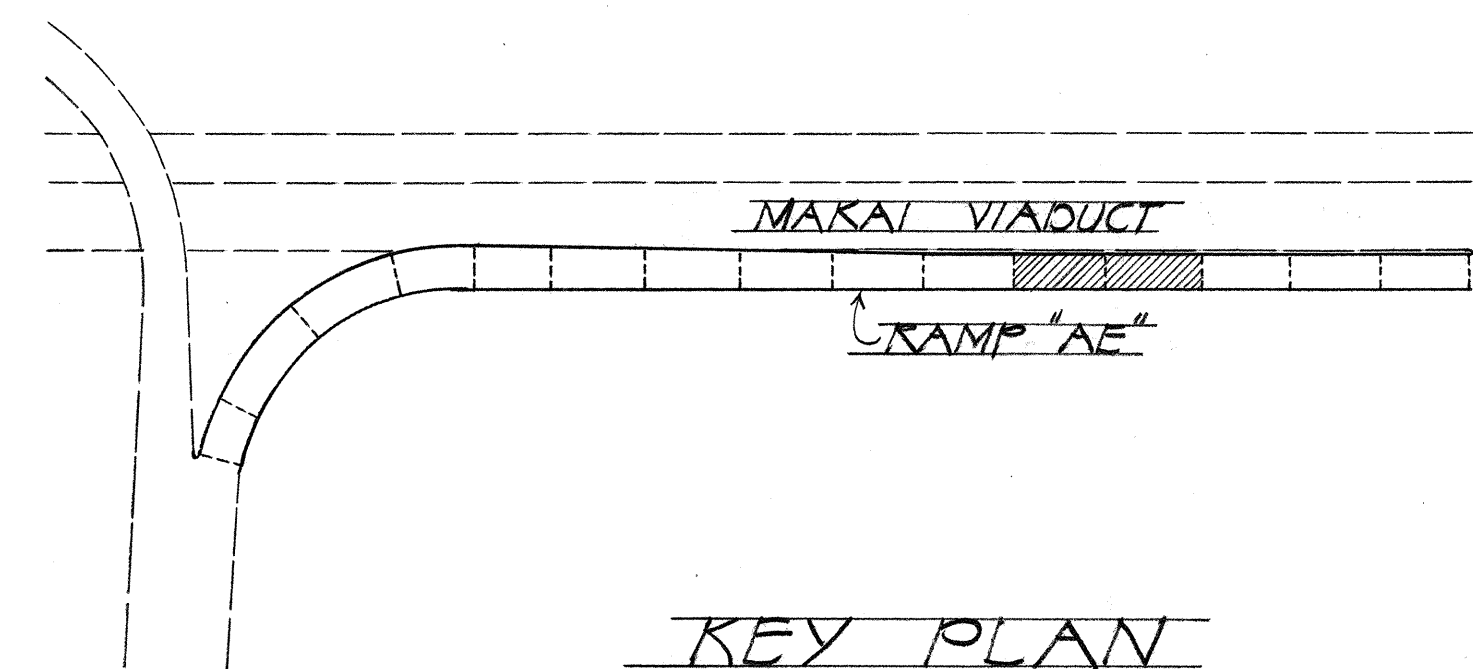


BOTTOM SLAB MAIN REINFORCING PLAN

Scale Vert. 1/4"=1'-0"
 Horiz. 1/8"=1'-0"

NOTE:

1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
2. Numbers at ends of bars indicate distance in feet from & span for all bottom slab reinforcement.
3. All #6 @ 16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
4. For additional slab reinforcement and details see Sht. #N16 and #N17 standard details Shts. #DB-100 thru #DB-101-3 inclusive.
5. All #11 bars shown in deck shall be grade 60.



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STATE OF HAWAII
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DECK STEEL PLACEMENT DIAGRAM
 SPAN 11C AND 12C
 RAMP "AE"
 AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-HI-1(84)16
 Scale: AS NOTED Date: Aug. 1978
 SHEET No. N34 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(84)16	1978	374	400

NOTE:

1. Unless otherwise noted on plans, all reinforcement shall be #11 bars
2. Numbers at ends of bars indicate distance in feet from adjacent pier for all top reinforcement.
3. All #5@16" max. bars shall be extended and lapped 2'-0" min. with adjacent #11 bars as shown.
4. For additional slab reinforcement and details see sht. #N16 and #N17 standard details sht. #DB-100 thru #DB-101-3 inclusive
5. All #11 bars shown in deck shall be grade 60.

Expansion Hinged Brg

Match Line see sht. #N33

70 I.B.
70E

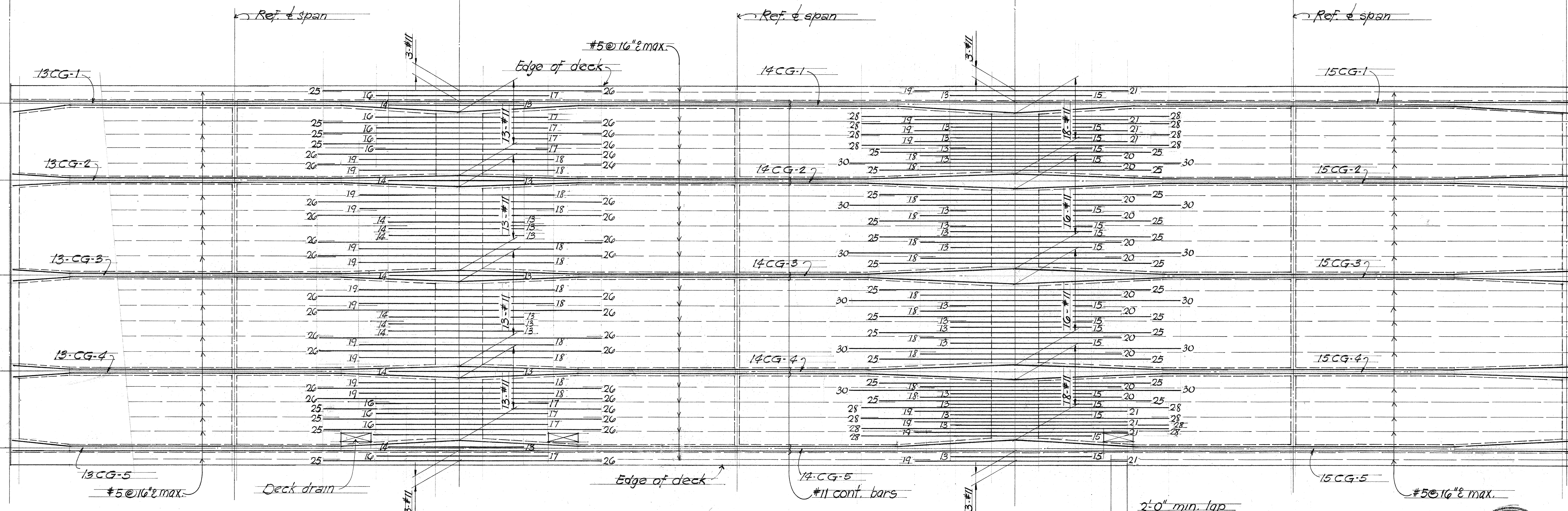
71 I.B.
71E

Bearing

SPAN No. 13C

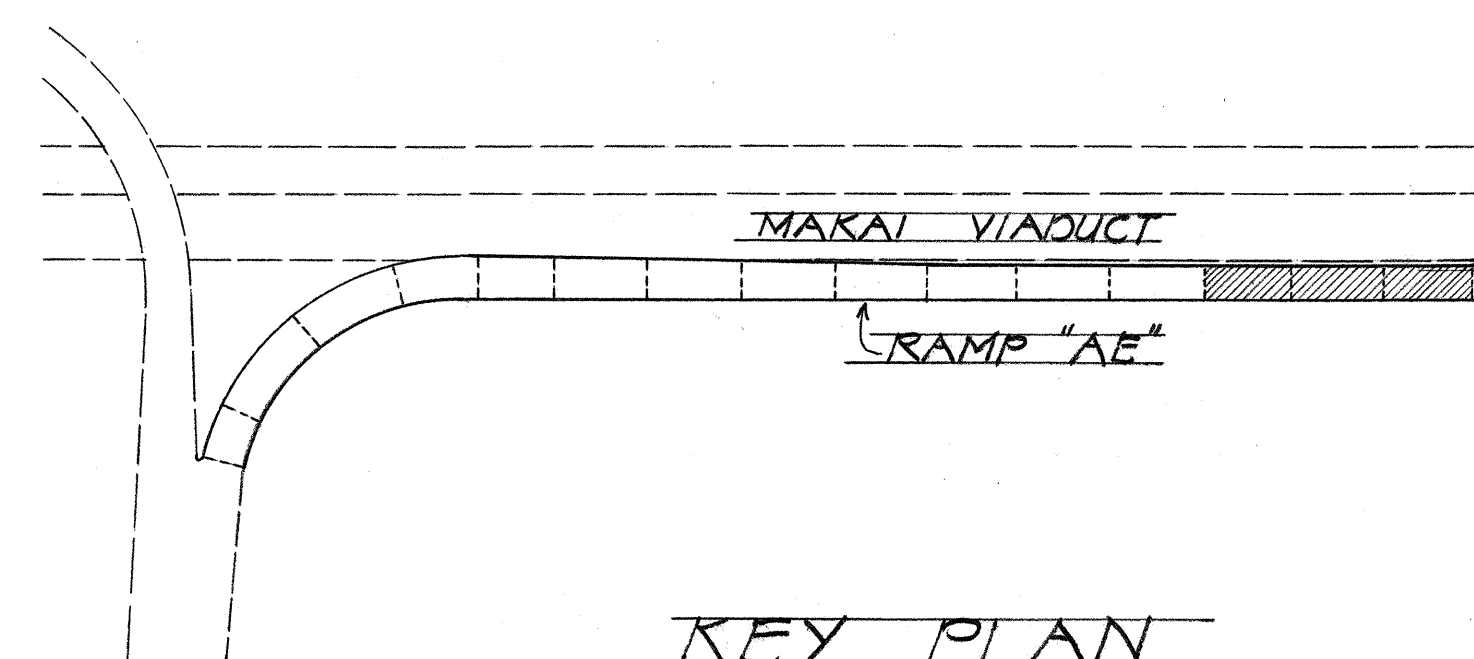
SPAN No. 14C

SPAN No. 15C

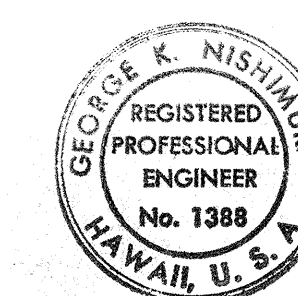


TOP SLAB MAIN REINFORCING PLAN

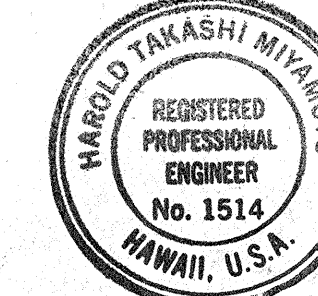
Scale: vert. 1/4" = 1'-0"
Horic. 1/8" = 1'-0"



KEY PLAN



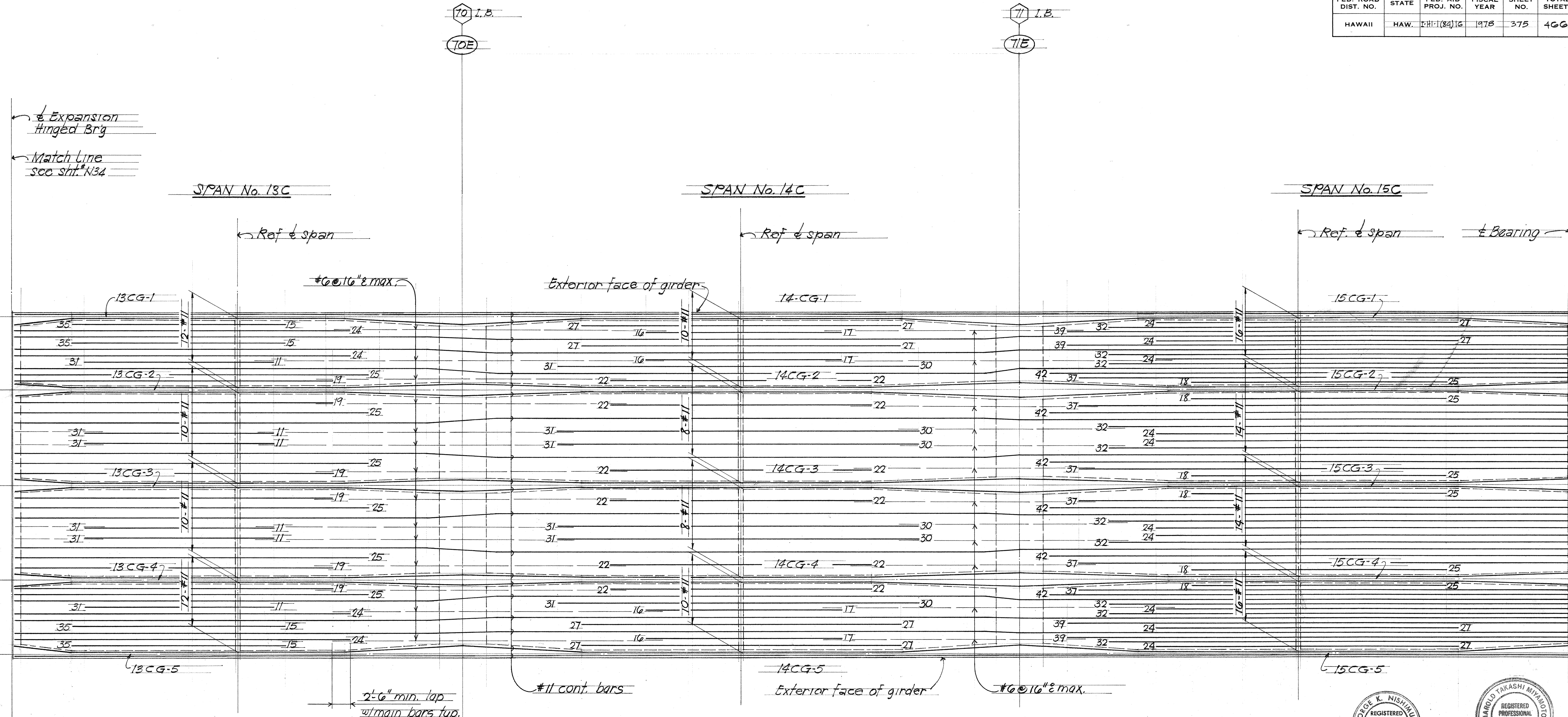
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK STEEL PLACEMENT DIAGRAM
SPAN 13C, 14C AND 15C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-H-1(84)16
Scale: As noted Date: Aug. 1978
SHEET NO. 374 OF 40 SHEETS

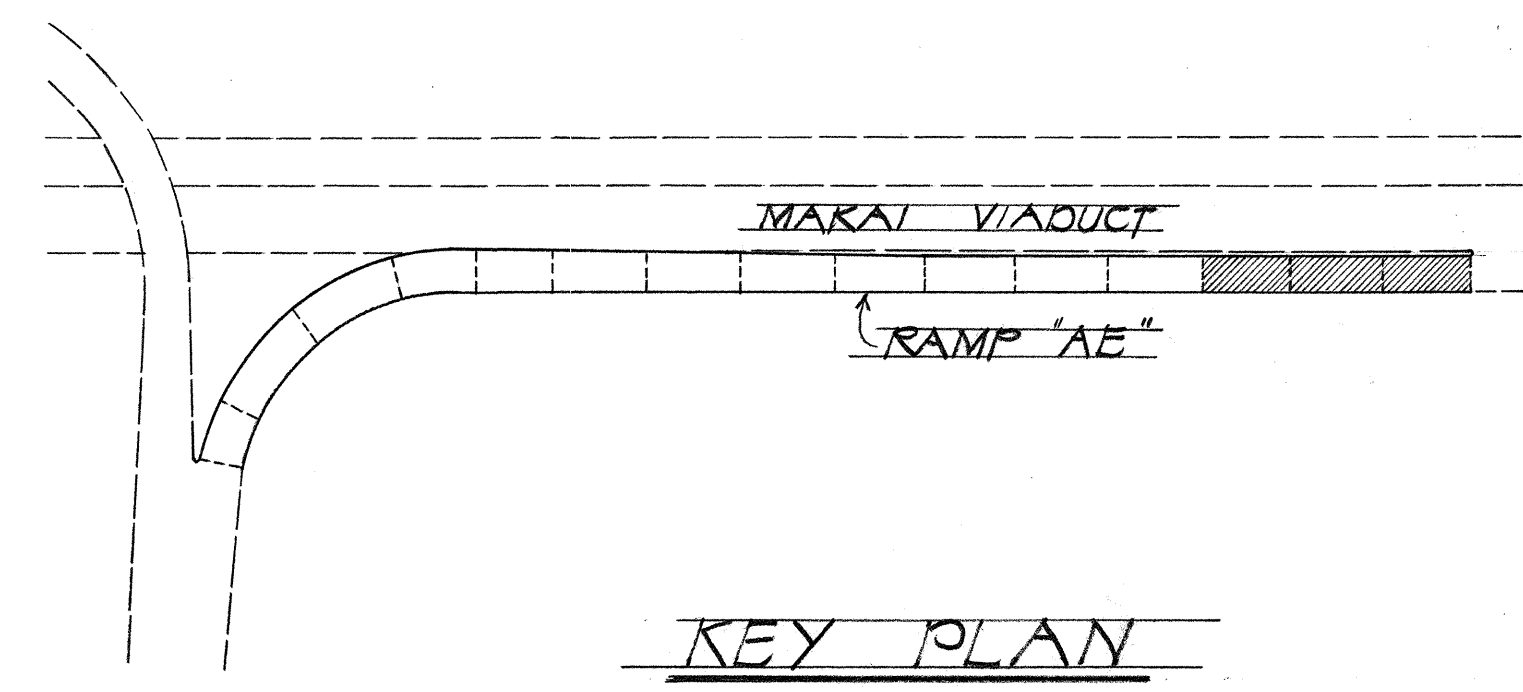
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(84)16	1978	375	400



BOTTOM SLAB MAIN REINFORCING PLAN

Scale: vert. 1/4" = 1'-0"
 Horiz. 1/8" = 1'-0"

- NOTE:**
1. Unless otherwise noted on plans, all reinforcement shall be #11 bars.
 2. Numbers at ends of bars indicate distance in feet from & span for all bottom slab reinforcement.
 3. All #6 @ 16" max. bars shall be extended and lapped 2'-6" min. with adjacent #11 bars as shown.
 4. For additional slab reinforcement and details: see sh. #N16 and #N17 standard details sh. #DB-100 thru #DB-101-3 inclusive.
 5. All #11 bars shown in deck shall be grade 60.



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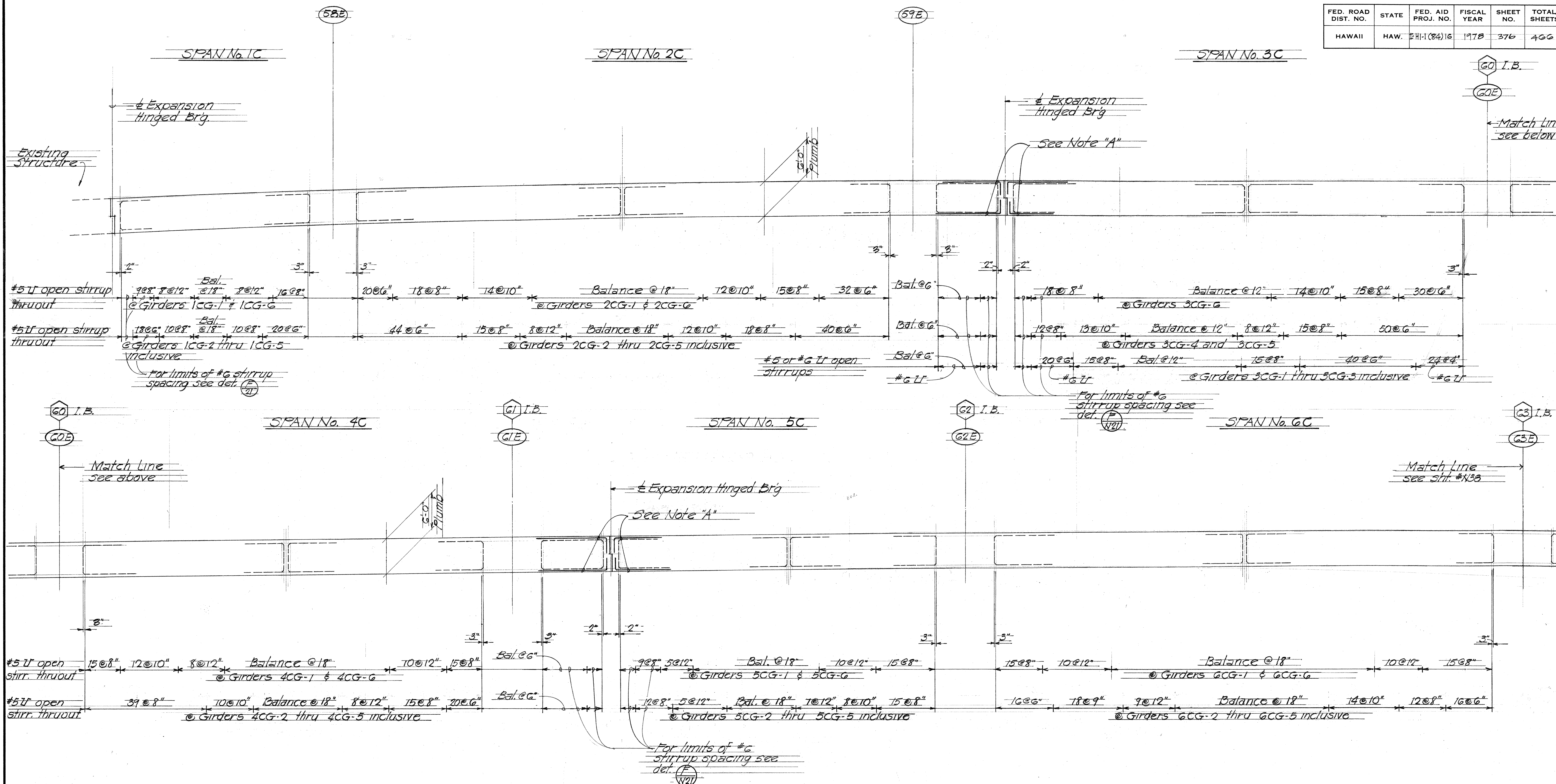
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STATE OF HAWAII
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 HIGHWAYS DIVISION

DECK STEEL PLACEMENT DIAGRAM
 SPAN 13C, 14C AND 15C
 RAMP "AE"
 AIRPORT INTERCHANGE
 F.A.I. PROJ. NO. I-H-1 (84) 16
 Scale: As noted Date: Aug. 1978
 SHEET No. 136 OF 40 SHEETS

SURVEY PLOTTED BY: _____
 DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NOTE BOOK: _____
 NO. _____

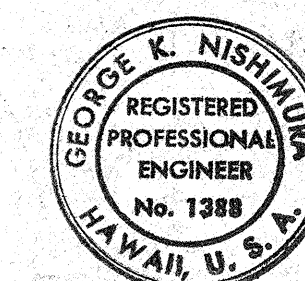
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(84)16	1978	376	400



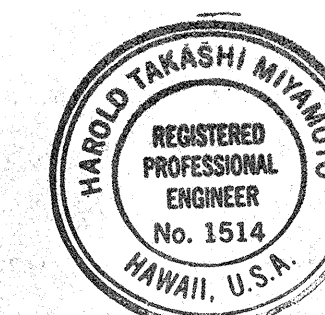
NOTE "A"
 Bend ends of all top & bott. slab main reinforcing at beams where occurs.

NOTE:
 All stirrup to be placed plumb. Girder depth measured plumb. See normal bridge sections.

GIRDER STIRRUP PLACEMENT DIAGRAM Not to scale



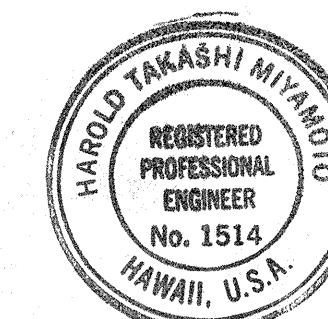
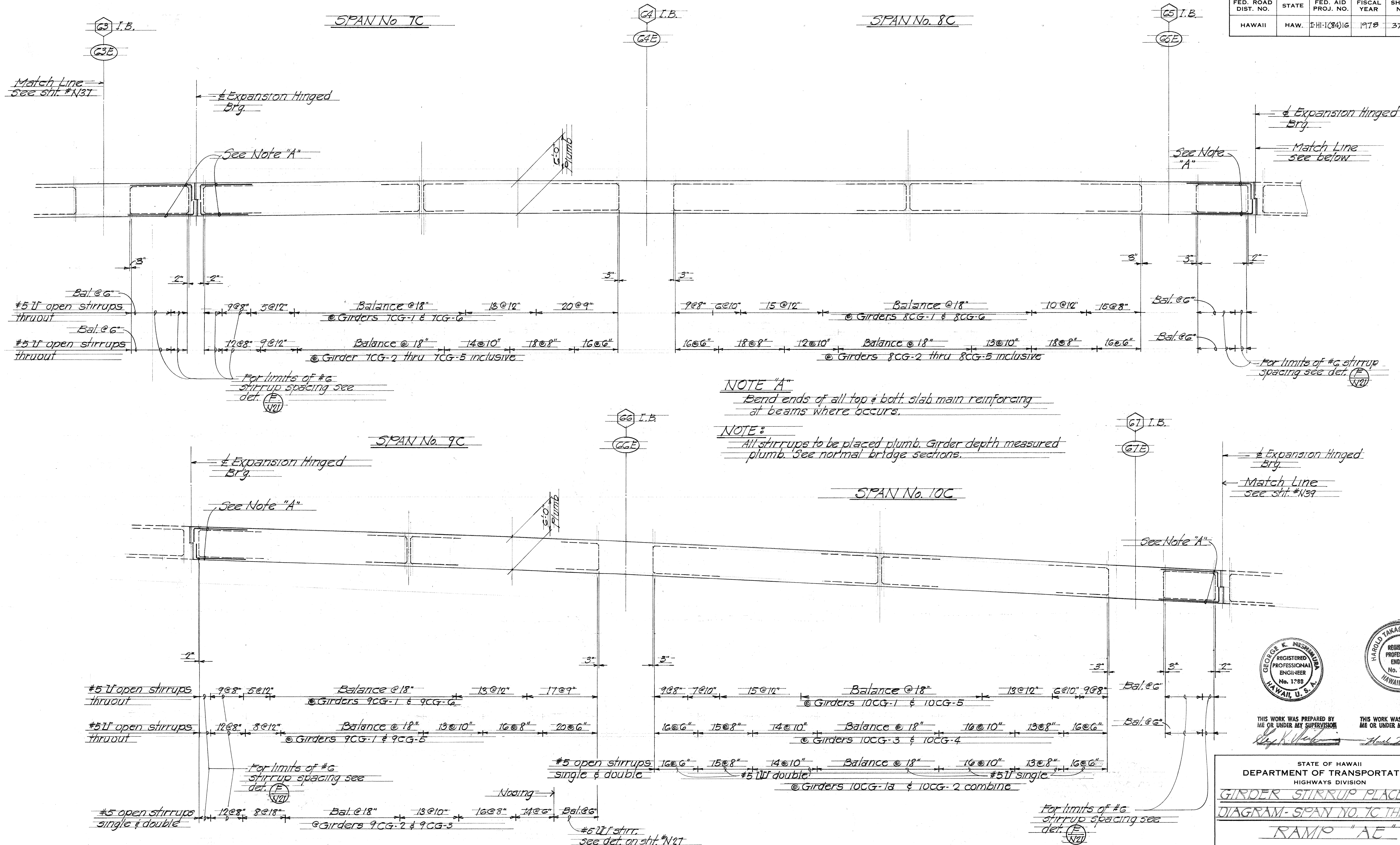
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 Harold Miyamoto

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GIRDER STIRRUP PLACEMENT	
DIAGRAM SPAN NO. 1C THRU 6C	
RAMP "AE"	
AIRPORT INTERCHANGE	
F.A.I. PROJ. NO. 1-HI-1(84)16	
Scale: As noted	Date: Aug. 1978
SHEET NO. 376 OF 40 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(84)16	1978	377	400

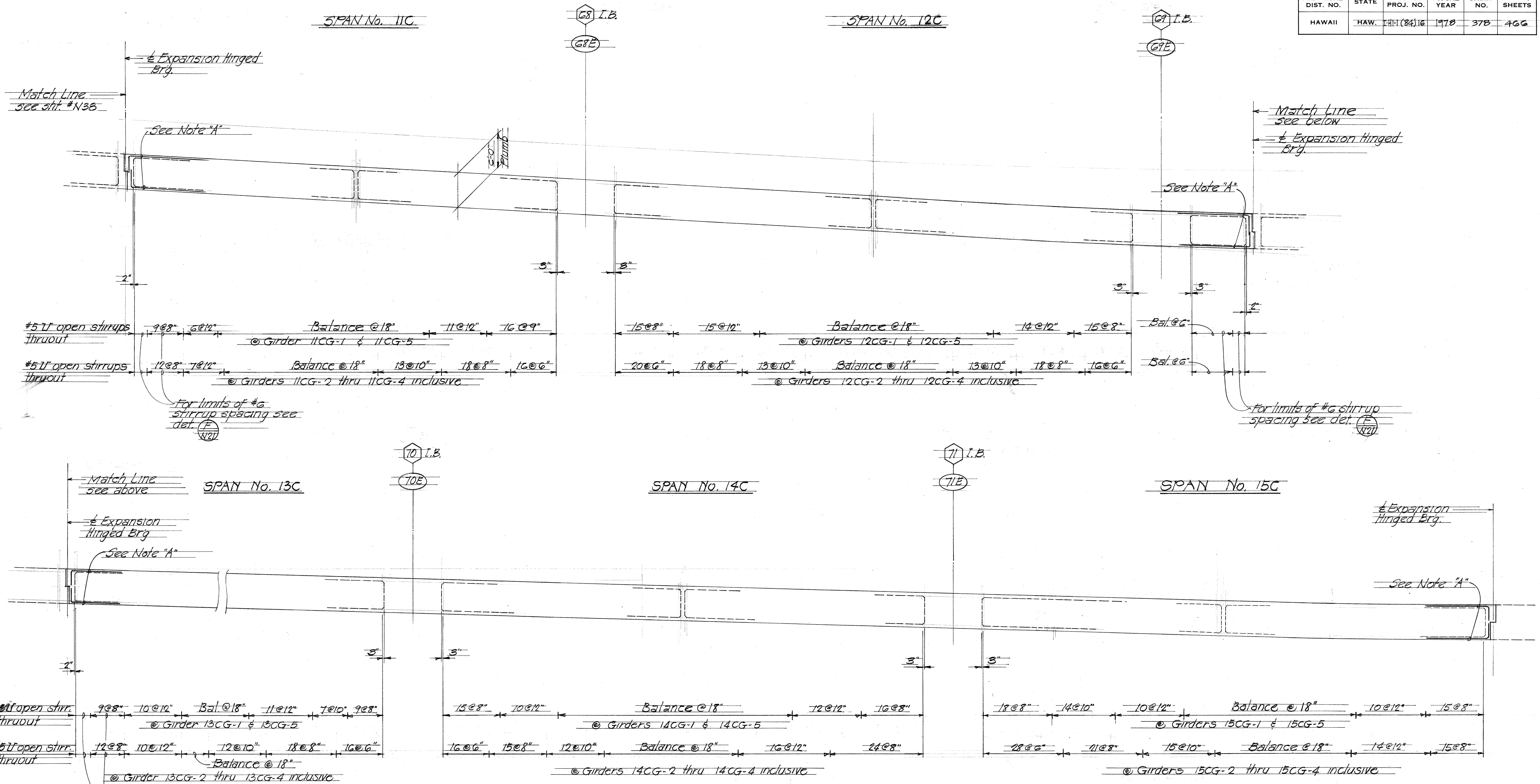


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GIRDER STIRRUP PLACEMENT
DIAGRAM - SPAN NO. 7C THRU 10C
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJ. NO. I-H-1 (84) 16
Scale: As noted Date: Aug. 1978
SHEET No. N33 OF 40 SHEETS

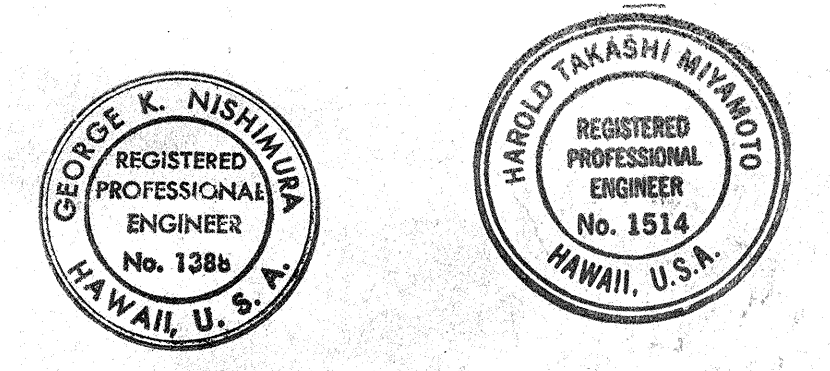
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-1(84)16	1978	378	466



NOTE "A"
 Bend ends of all top & bott slab main reinforcing at beams where occurs

NOTE:
 All stirrups to be placed plumb. Girder depth measured plumb. See normal bridge sections

GIRDER STIRRUP PLACEMENT DIAGRAM
 Not to scale



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
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**GIRDER STIRRUP PLACEMENT
 DIAGRAM SPAN NO. 11C THRU 15C**

RAMP "AE"
 AIRPORT INTERCHANGE
 T.A.T. PROJ. NO. 1-H-1(84)16
 Scale: As noted Date: Aug. 1978

SHEET No. 189 OF 40 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

Hand-drawn structural drawing of a tapered concrete beam with reinforcement details. The drawing shows a side elevation of a beam that tapers from left to right. Key dimensions include a total length of 31'-8", a column width of 10'-0", and various spacing intervals for reinforcement bars. Reinforcement details include 4 #18 bars in the top layer, 4 #18 bars in the 2nd layer, 14 #18 bars in the top layer, 10 #18 bars continuing in the top layer, and 8 #8 bars continuing. Stirrups are specified as #5 @ 12" E-F and #5 @ 12" L-T. A note indicates 4,000 psi concrete.

Hand-drawn structural drawing of a tapered bridge pier. The drawing shows a cross-section of the pier with various reinforcement details. Key dimensions include a total width of 31'-8" at the top, a column width of 10'-0", and a base width of 11'-8". Reinforcement details include 14 #18 bars in the top layer, 10 #18 bars in the second layer, 2 #18 bars in the top layer, and 12 #18 bars in the top layer. The drawing also shows 5 #12 bars in the bottom layer, 5 #8 bars in the bottom layer, and 9 #11 bars in the bottom layer. The concrete is specified as 4,000 psi concrete. The drawing is signed "C 11/10".

58E

8'-0"

Pier Cap

10-#13 cont. top layer

4-#18 a" bars top layer

4-#18 a" bars 2nd layer

14-#13 top layer

4-#13 2nd layer

8-#8 cont.

#6 stirrups

2" clr.

4" fillet typ.

16'-0" plumb

4"

2'-0" lap

3'-0" clr.

5-#8 cont. E.F.

9-#11 cont. bott.

59E

8'-0"
Pier Cap

6'-0"
plumb

4"
2'-0" lap

10-#18 "a" bars
2nd layer

12-#18 cont. top layer

2-#18 "a" bars top layer

14-#18 top layer

10-#18 2nd layer

8-#8 cont.

#6 stirrups

2" c/r

4" fillet top

5-#8 cont. E.F.

9-#11 cont. bott.

3 1/2" c/r

Hand-drawn sketch of a pier cap and exterior girder reinforcement. The sketch shows a vertical section of a pier cap with a width of 2'-0" and a height of 8'-0". The pier cap is labeled "Pier Cap" and has a "typ." (typical) dimension. The exterior girder is labeled "Exterior Girder" and has a "typ." dimension. The reinforcement is shown as horizontal bars with a spacing of #5 @ 12". A circular "Pier marker" is indicated on the right side. The reinforcement is labeled "#5 @ 12" = 1" and "#5 @ 12" = 7".

SECTION
Scale $\frac{1}{2}" = 1'-0"$

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

PRINTED ON NO. 1000M CLEARFIL™



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Shelley M. Morgan

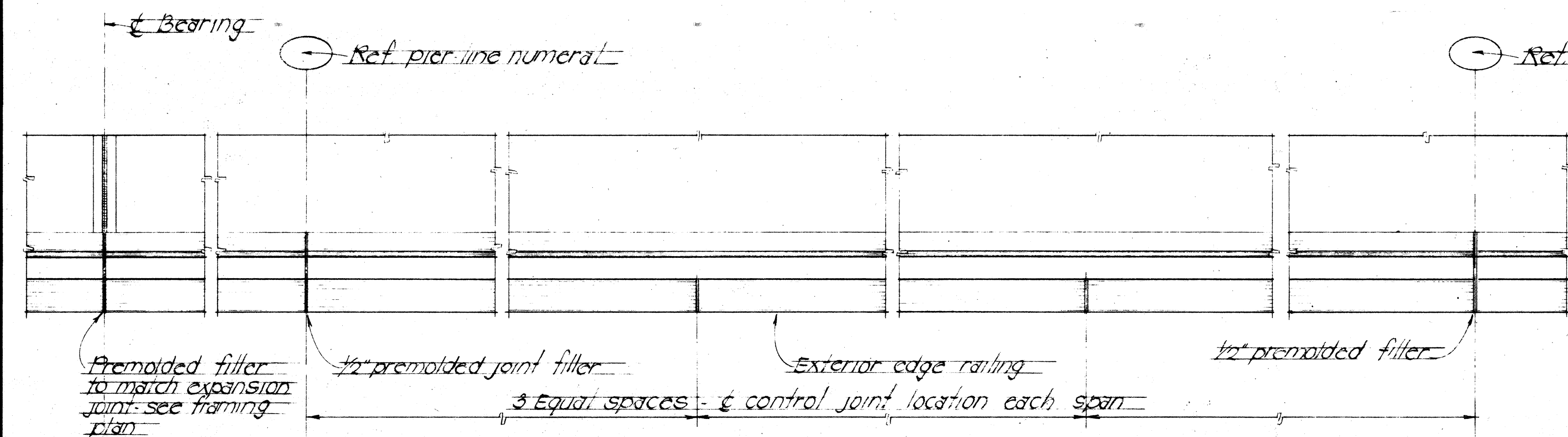
379

AT DECK EXPANSION JOINTS

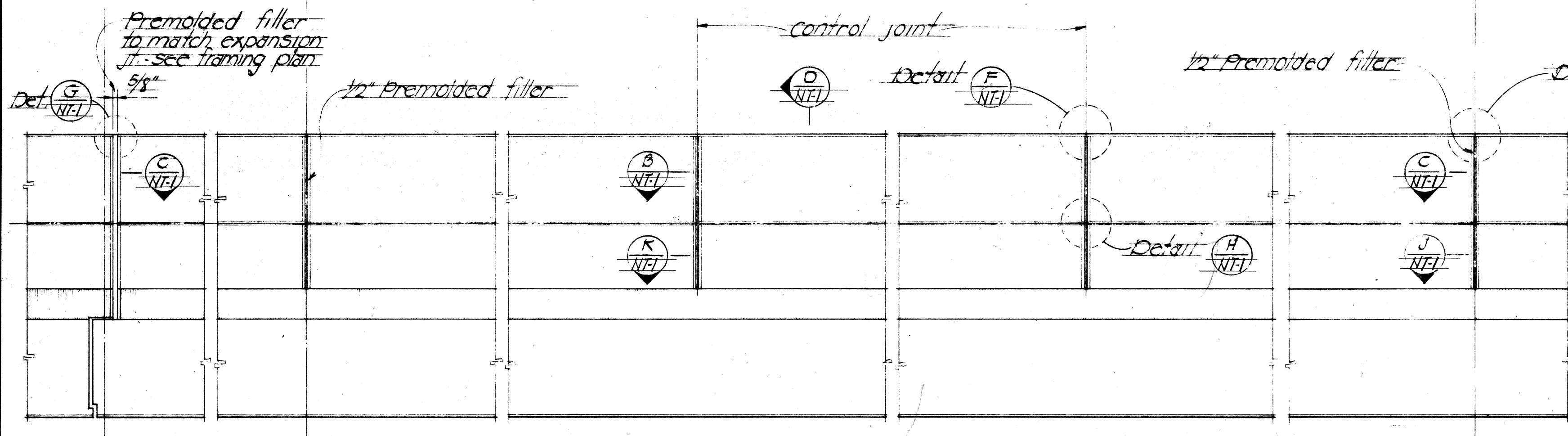
INTERMEDIATE CONTROL JOINTS

CONTINUOUS DECK OVER PIER

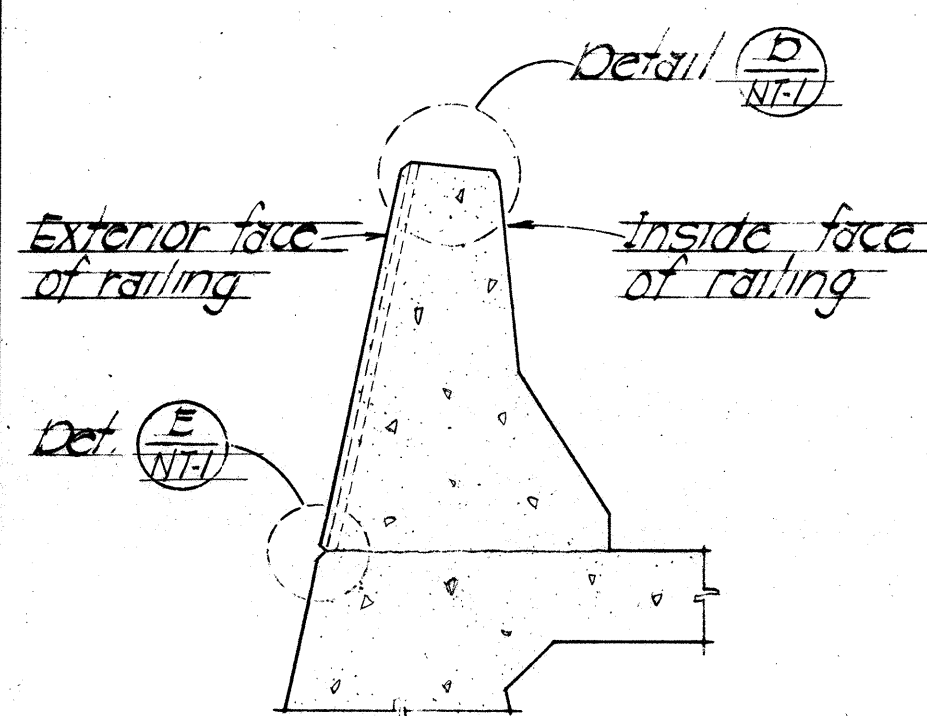
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111(84)16	1978	380	466



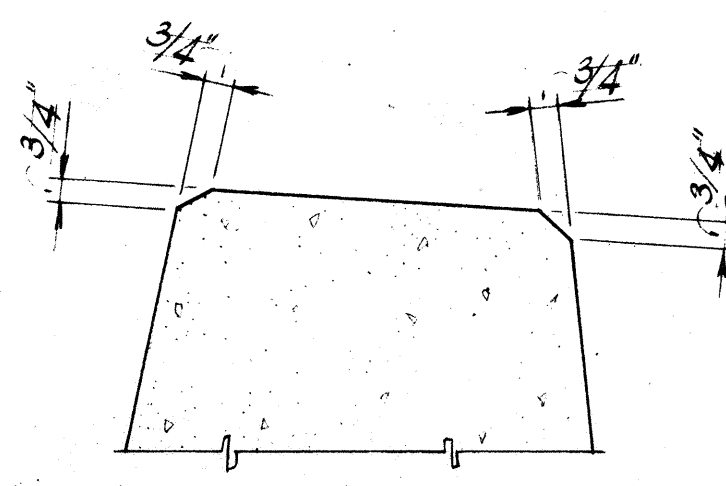
PART PLAN - TYPICAL RAILING
Scale: 3/8" = 1'-0"



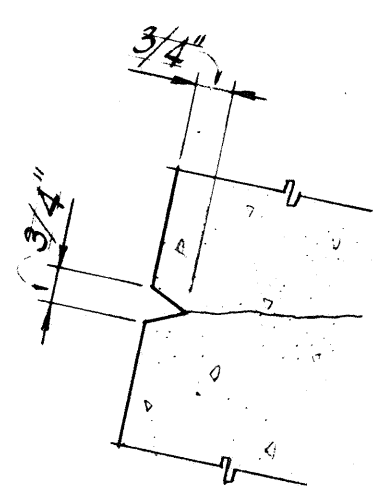
PART EXTERIOR ELEVATION - TYPICAL RAILING
Scale: 3/8" = 1'-0"



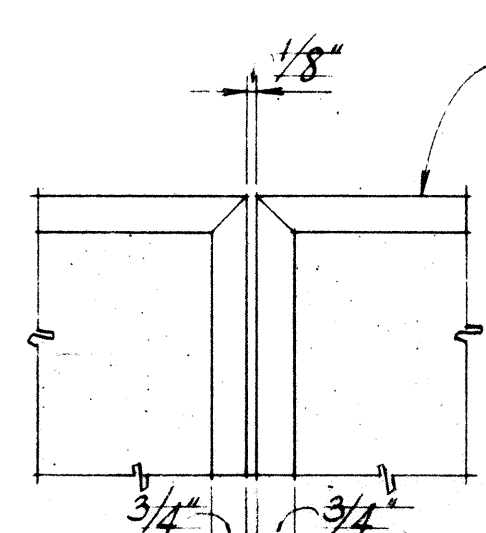
TYPICAL RAILING SECTION
Scale: 3/4" = 1'-0"



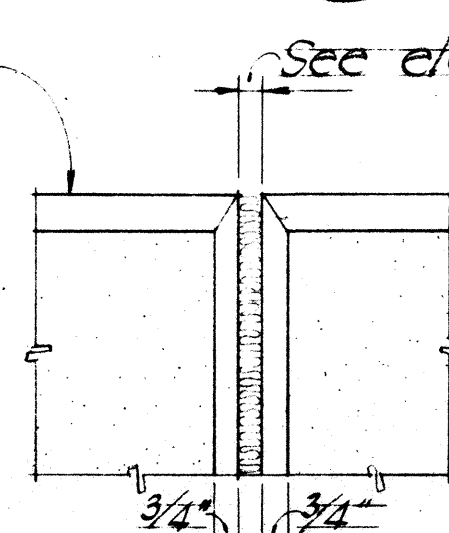
DETAIL D
Scale: 3" = 1'-0"



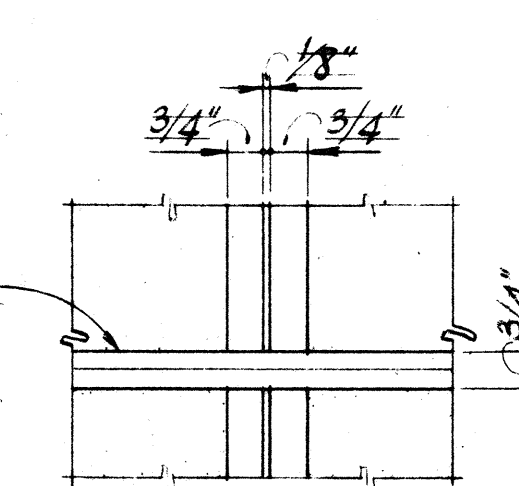
DETAIL E
Scale: 3" = 1'-0"



DETAIL F
Scale: 3" = 1'-0"



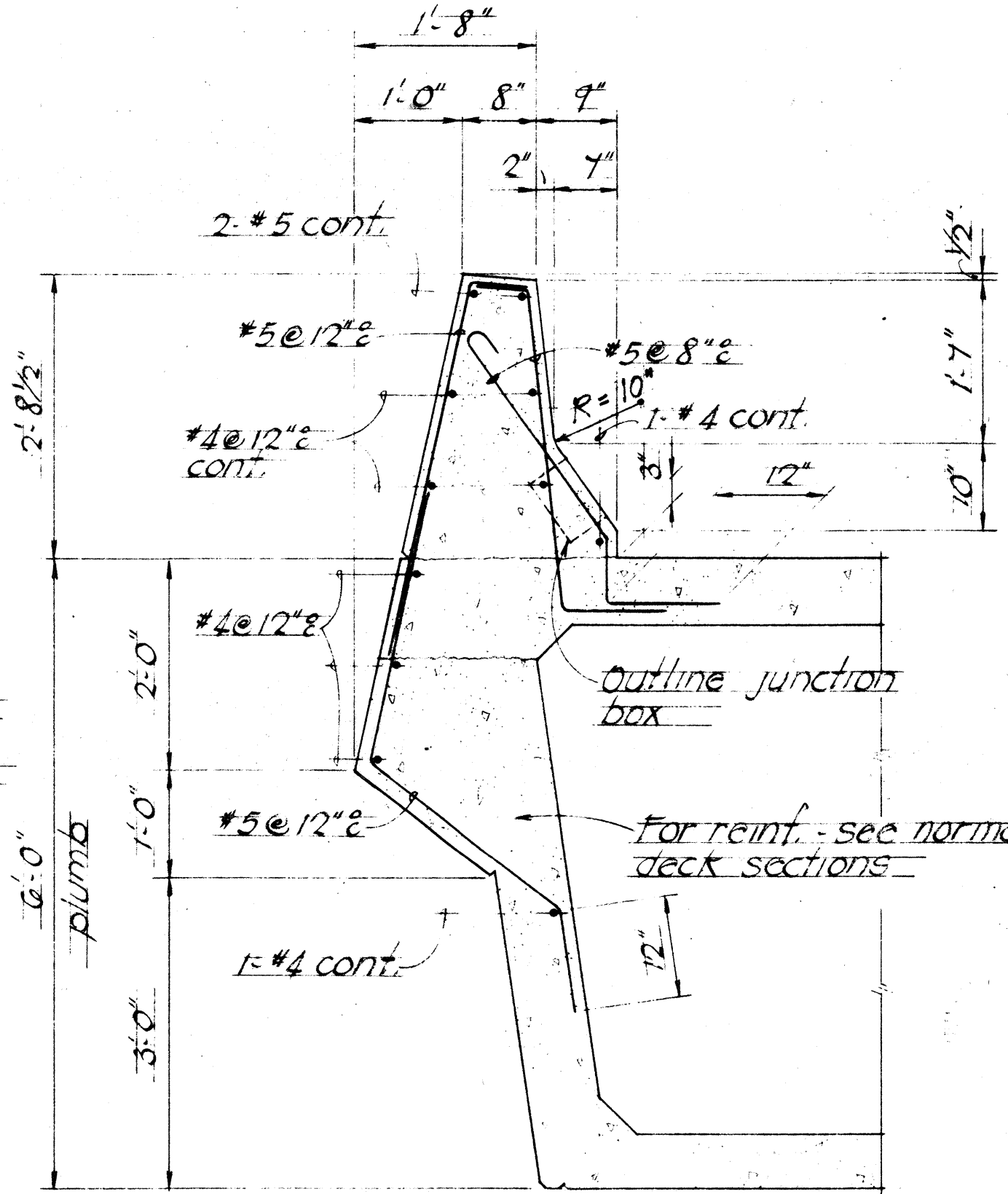
DETAIL G
Scale: 3" = 1'-0"



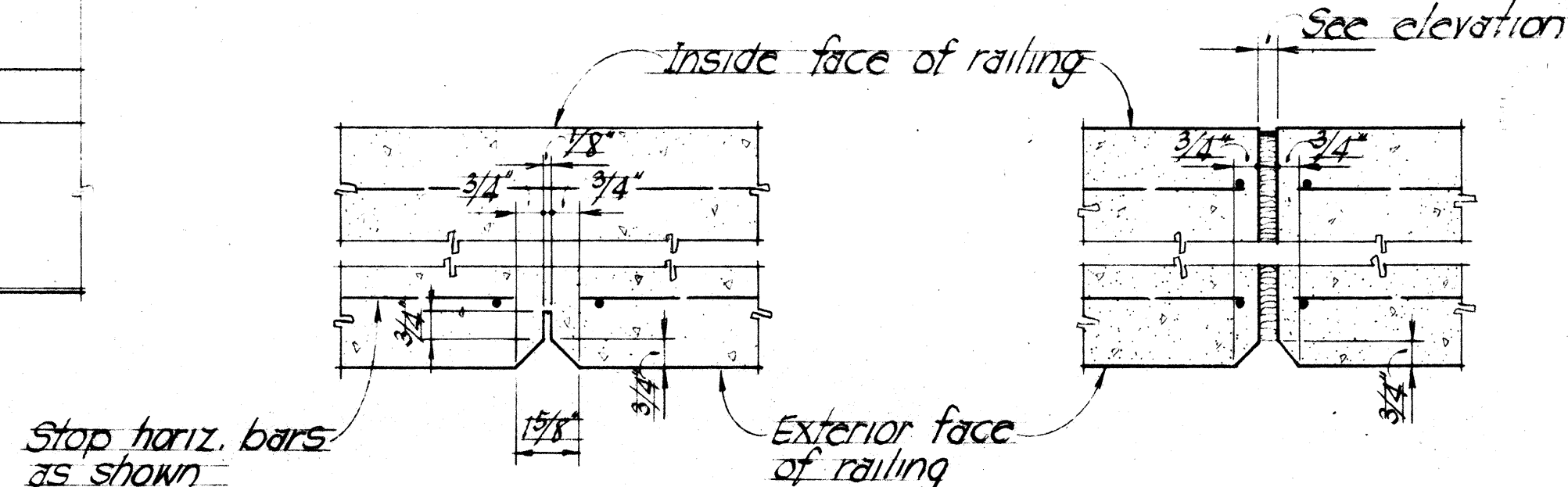
DETAIL H
Scale: 3" = 1'-0"

TYPICAL CONCRETE RAILING FASCIA DETAILS

NOTE:
All reinf. shown in rails shall be incidental to concrete.

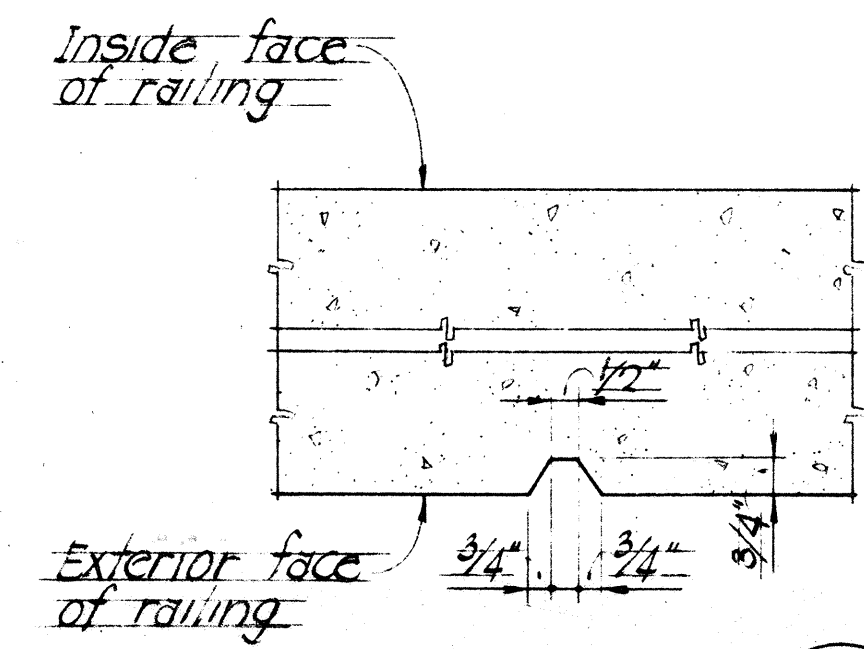


TYPICAL SECTION A
Scale: 3/4" = 1'-0"

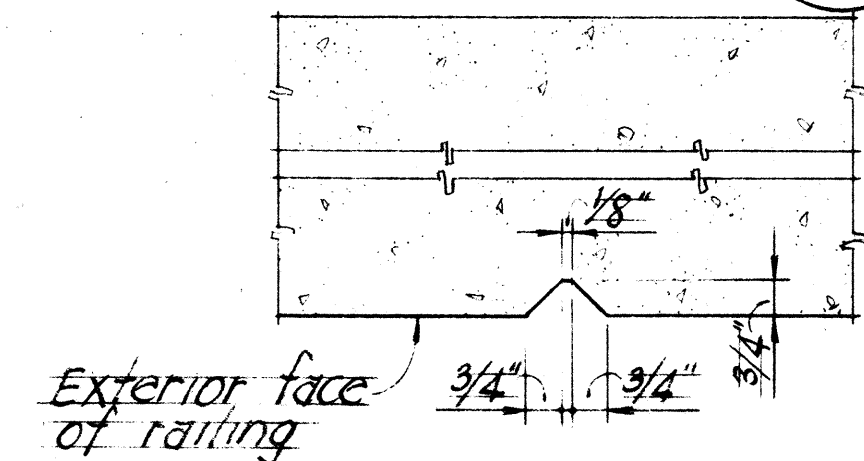


SECTION B
Scale: 3" = 1'-0"

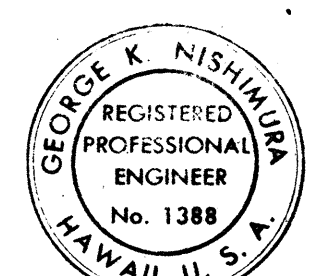
SECTION C
Scale: 3" = 1'-0"



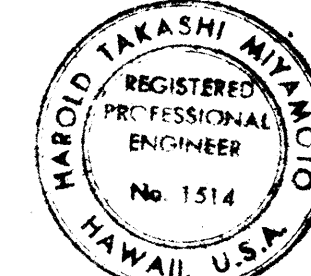
SECTION J
Scale: 3" = 1'-0"



SECTION K
Scale: 3" = 1'-0"



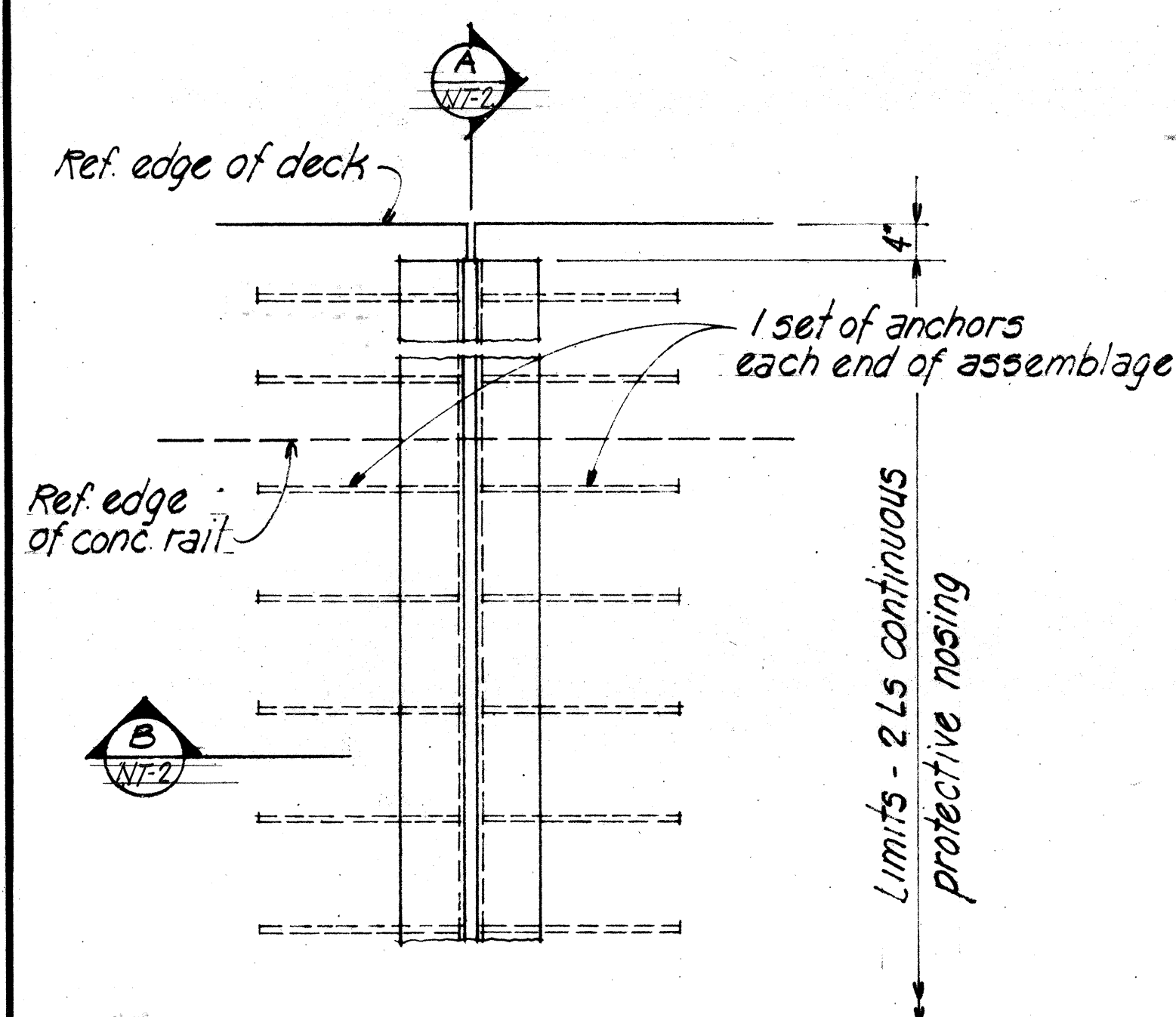
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STATE OF HAWAII
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HIGHWAYS DIVISION
TYPICAL CONCRETE RAILS DETAILS
RAMP "AE"
AIRPORT INTERCHANGE
P.A.T. PROJECT NO. 111-1(84)16
SCALE: AS NOTED DATE: Aug. 1978
SHEET NO. 111-1 OF 115 SHEETS

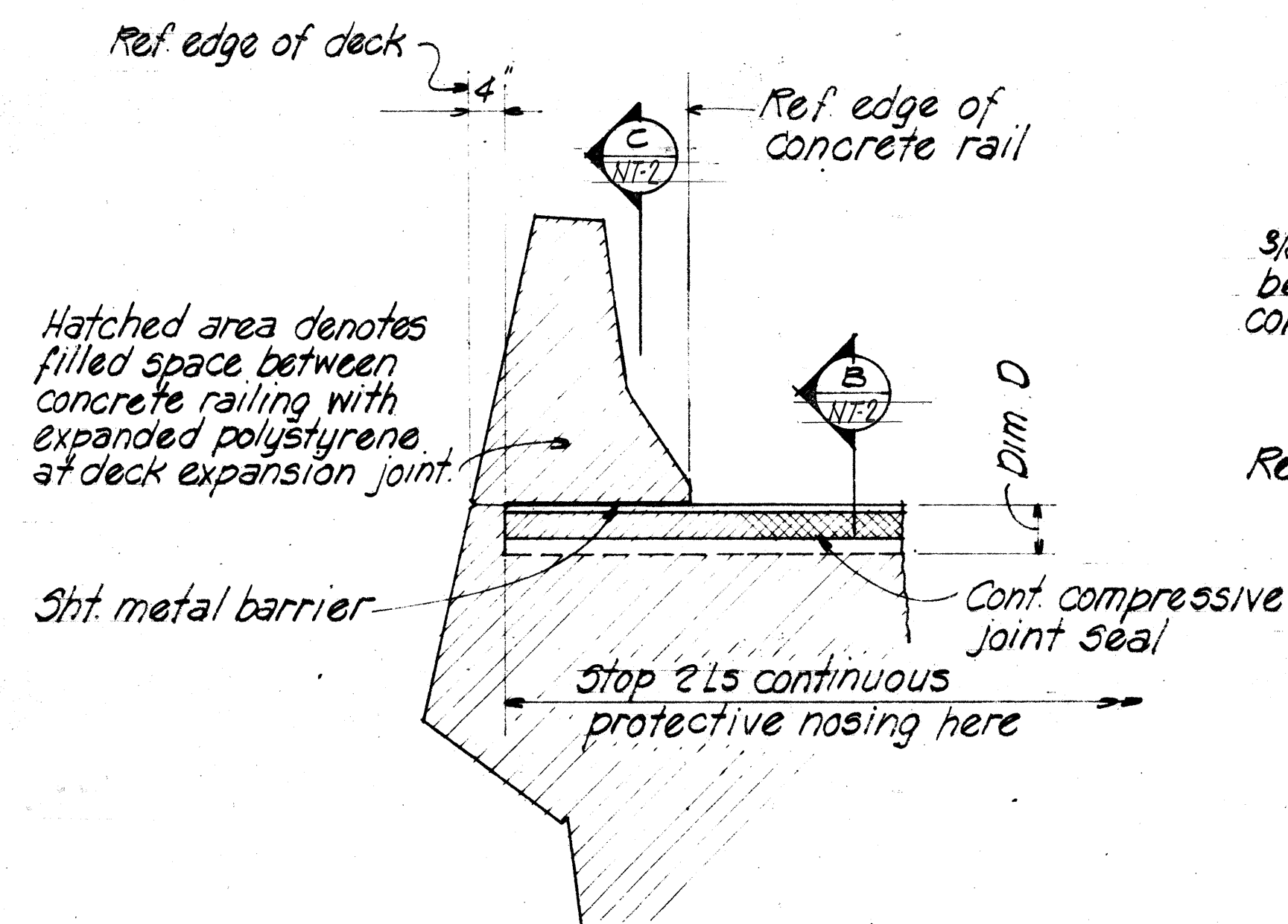
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.H.I. (84) 16	1978	381	466



RADIAL OR NORMAL

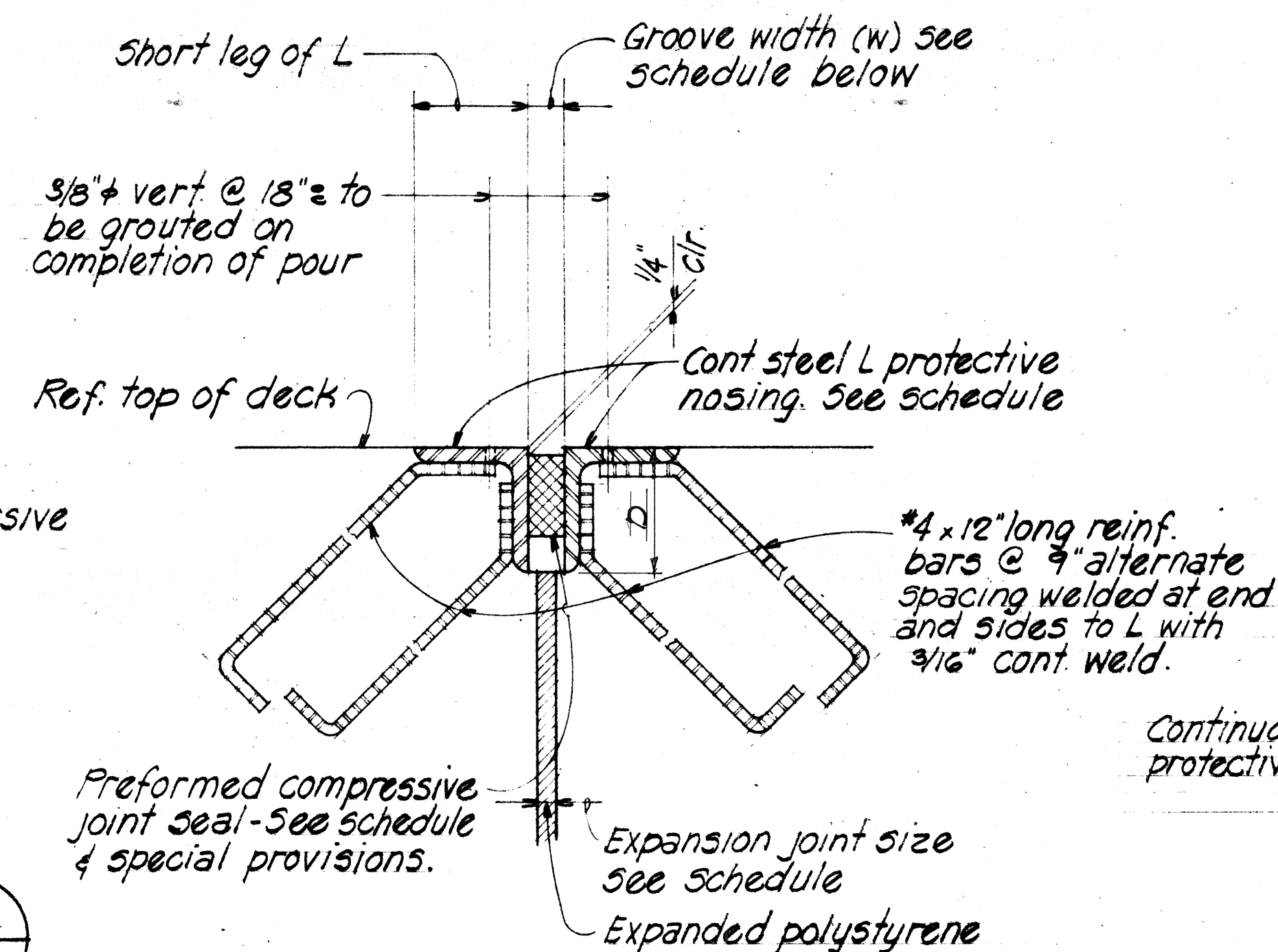
PLAN TRANSVERSE DECK EXPANSION JOINT

Scale: 1"=1'-0"



TYPICAL ELEVATION

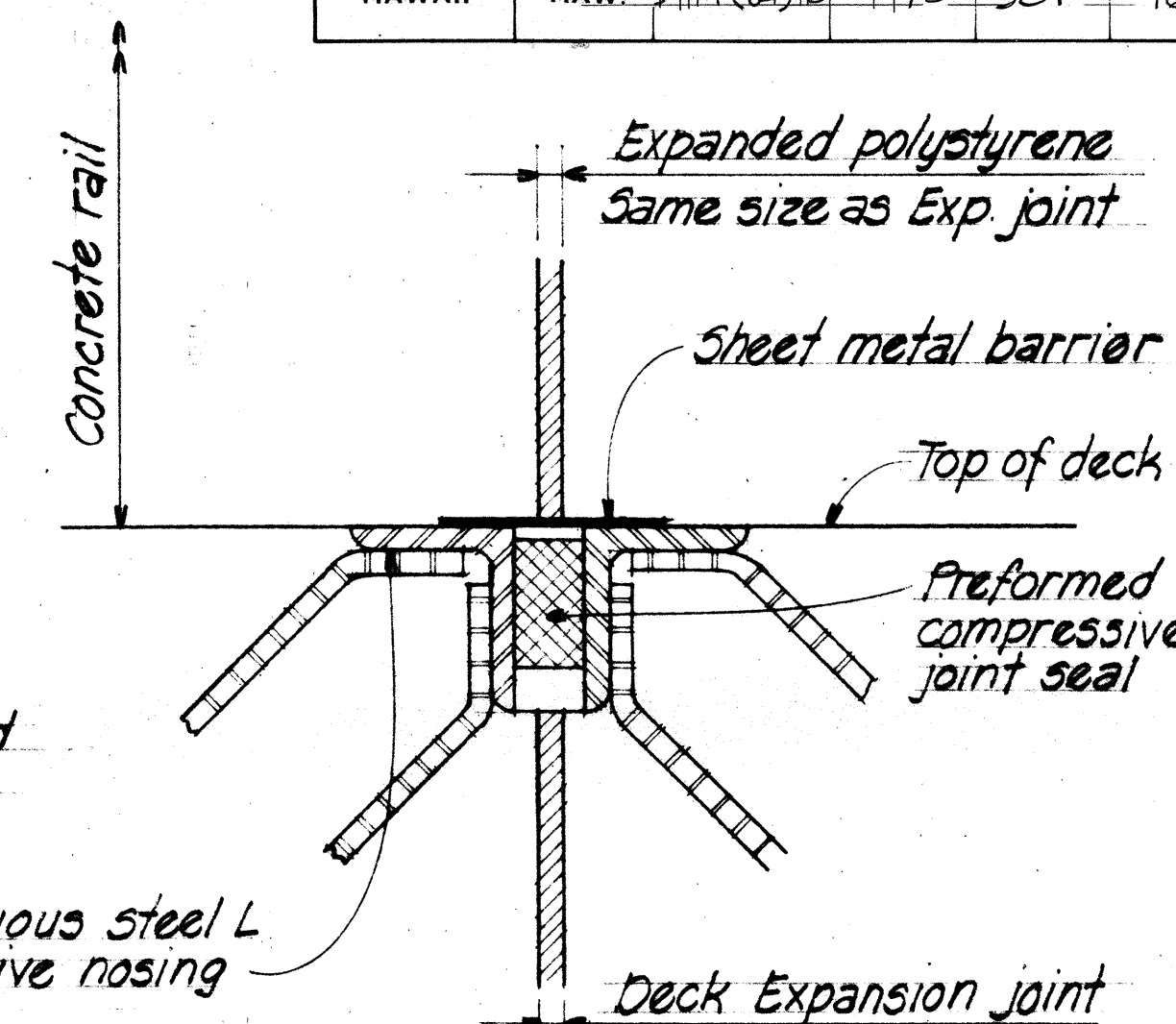
Scale: 3/4"=1'-0"



AT STEEL ANGLE PROTECTIVE NOSING

TYPICAL SECTION

Scale 3"=1'-0"



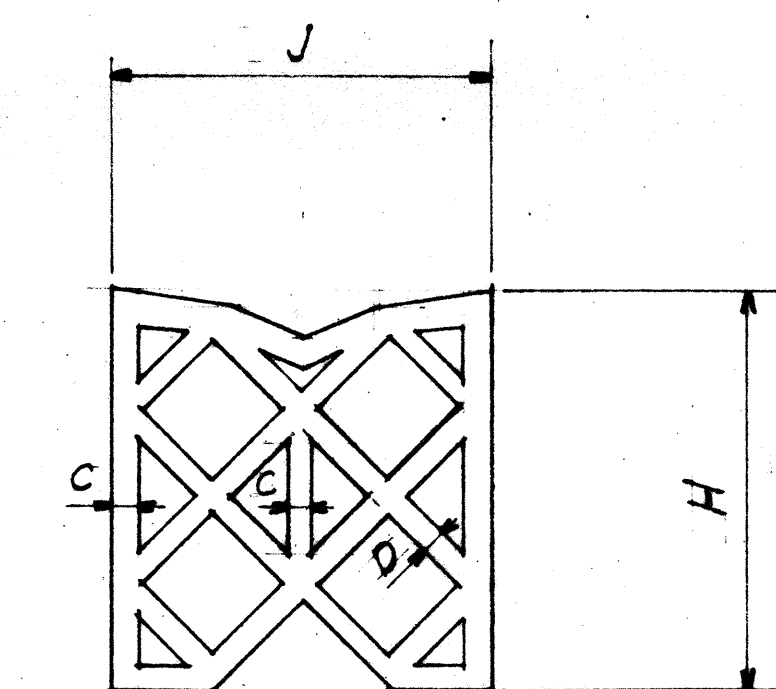
SECTION

Scale 3"=1'-0"

NOTE:

Steel angle protective nosing assembly shall be hot dipped galvanized after fabrication.
Steel angle protective nosing assembly and joint seal shall be incidental to concrete.

Joint seal type	Exp. Jt. Size	Steel angle protective nosing	Groove size during construction @ 70°F		Minimum groove size during installation		Joint seal dimensions, type, and tolerance					
			W	D	W	D	type	J	H	C	D	Total movement
												
①	5/8"	5" x 3 1/2" x 1/2"	1 1/4"	5"	2"	5"	A	3"	3 13/32"	3/16"	1/8"	1.219

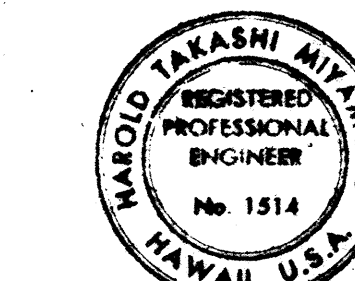
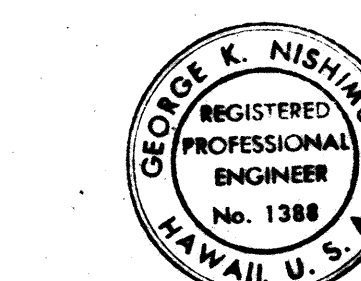


TYPE A SEAL

N.T.S.

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

PRINTED ON NO. 10000 CLEARPRINT

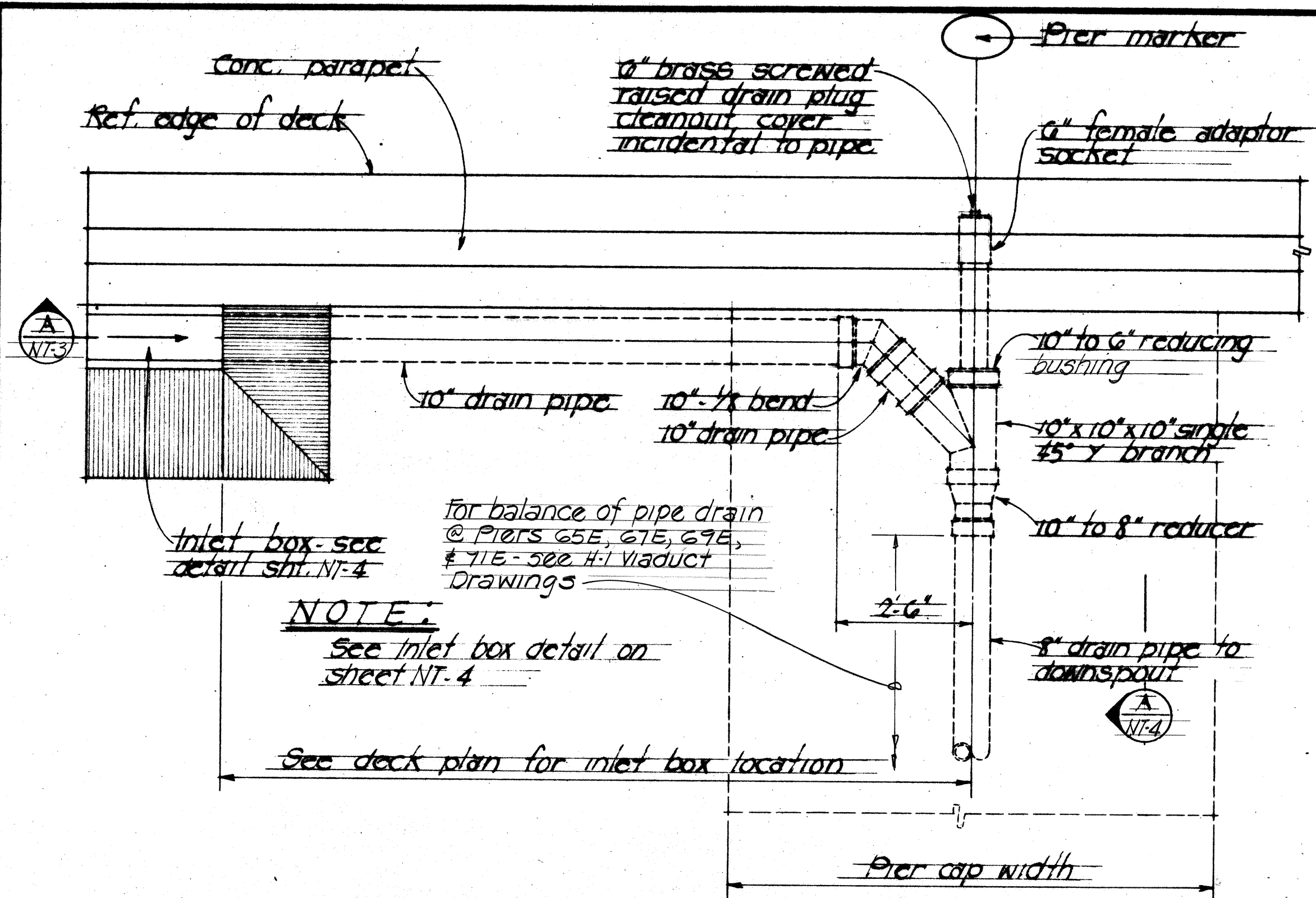


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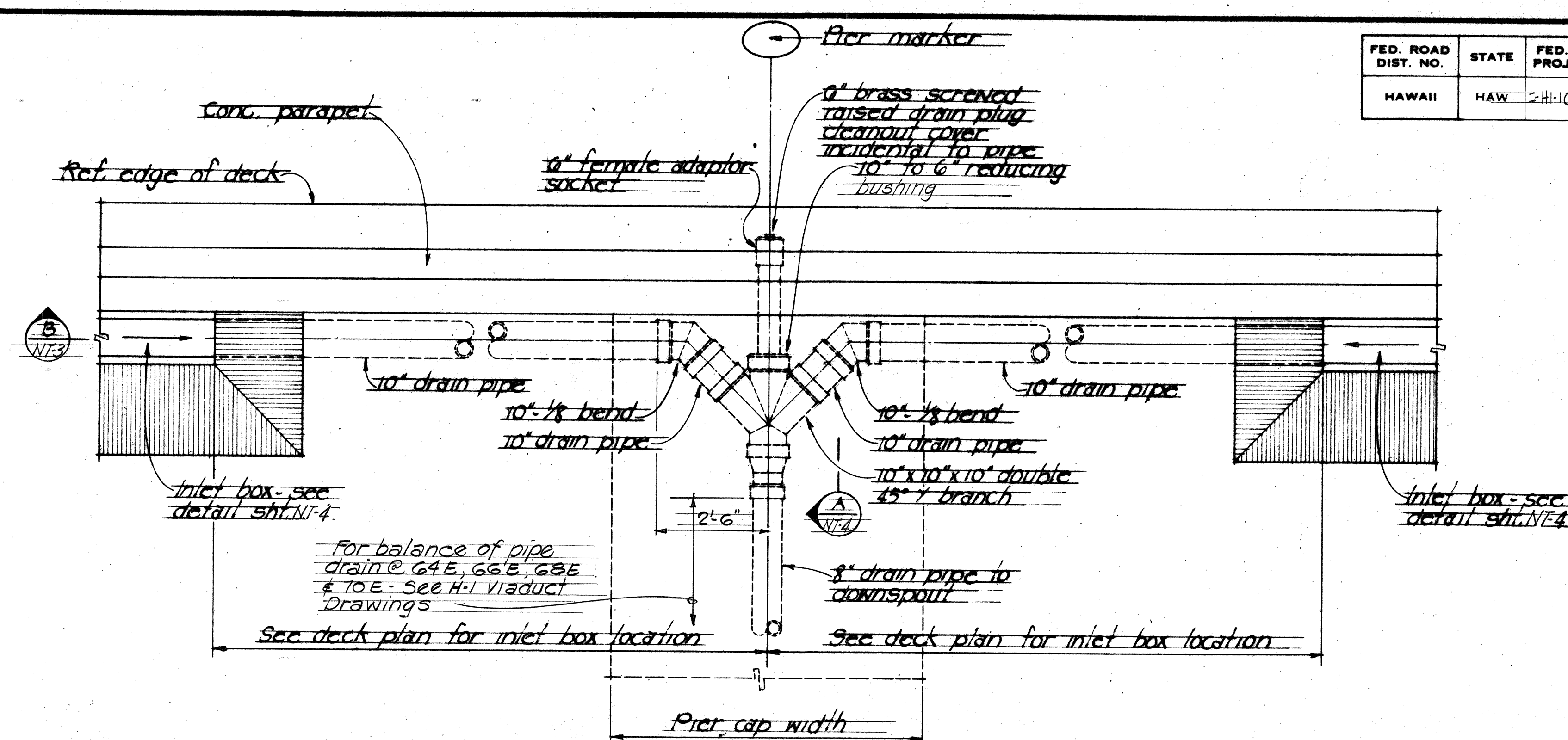
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TYPICAL EXPANSION JOINT DETAILS
RAMP "AE"
AIRPORT INTERCHANGE FAT PROJ. NO. I.H.I. (84) 116
SCALE: AS SHOWN DATE: Aug. 1978
SHEET No NF-2 OF NF-5 SHEETS

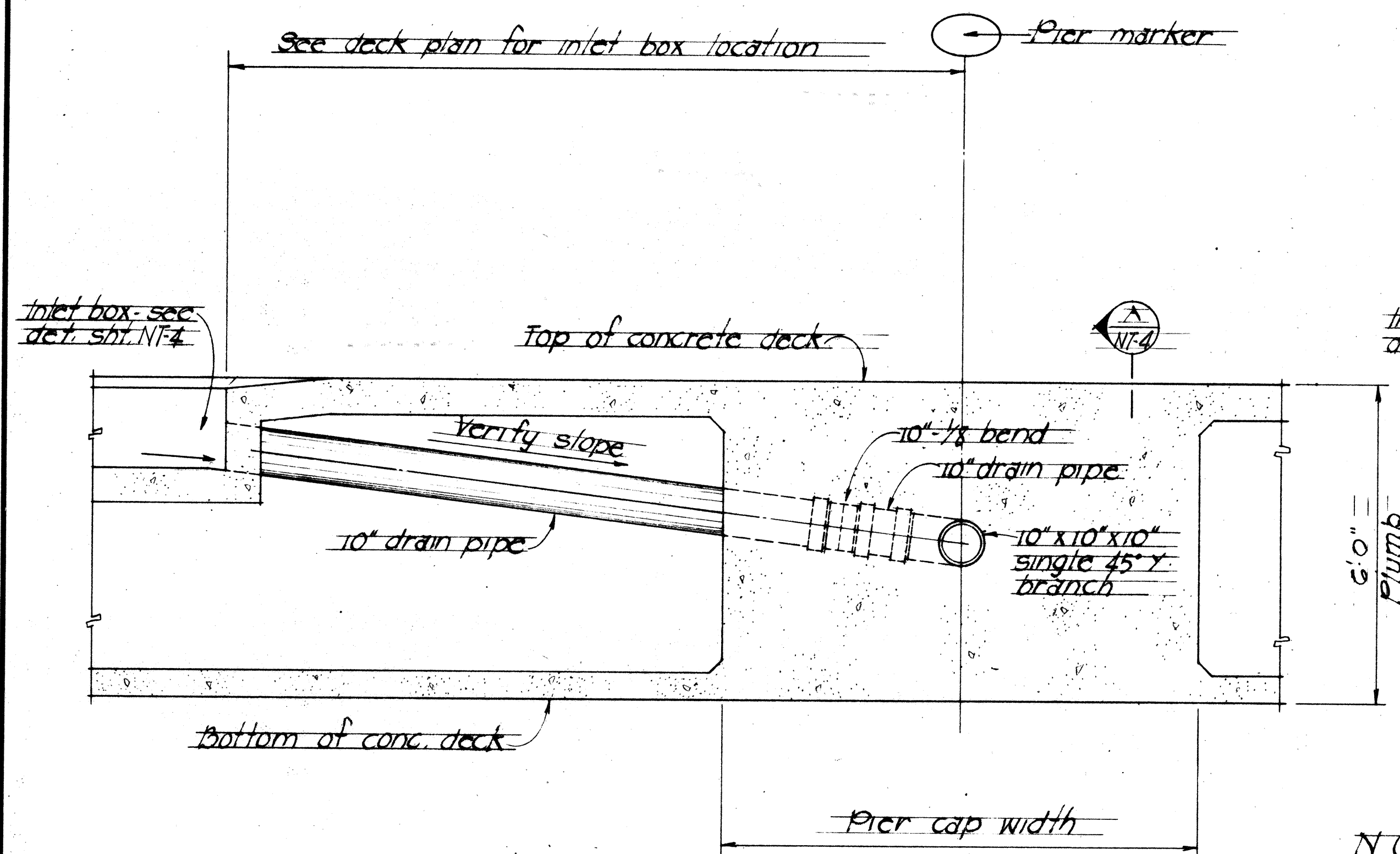
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2-H-1(84)16	1978	382	466



PLAN - SINGLE INLET BOX & DRAIN PIPE
Scale: 1/2" = 1'-0"

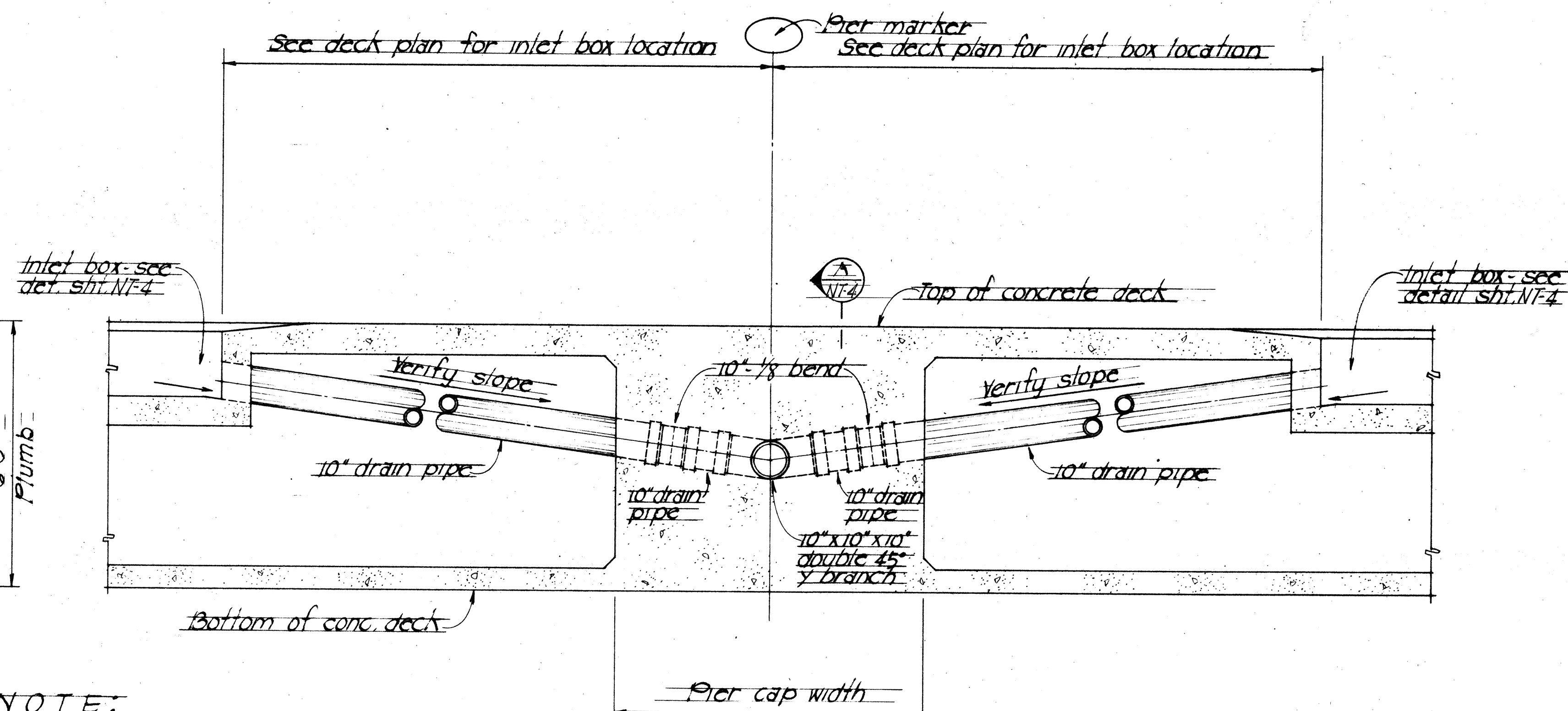


PLAN - DOUBLE INLET BOX & DRAIN PIPE
Scale: 1/2" = 1'-0"

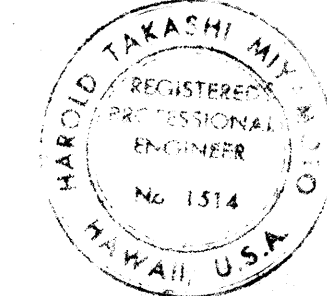
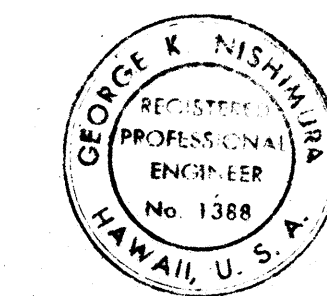


SECTION A
Scale: 1/2" = 1'-0"

NOTE:
For drain pipe notes - see sh. NI-4



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



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DATE: Aug. 1978

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INLET BOX & DRAIN DETAILS

RAMP "AE"

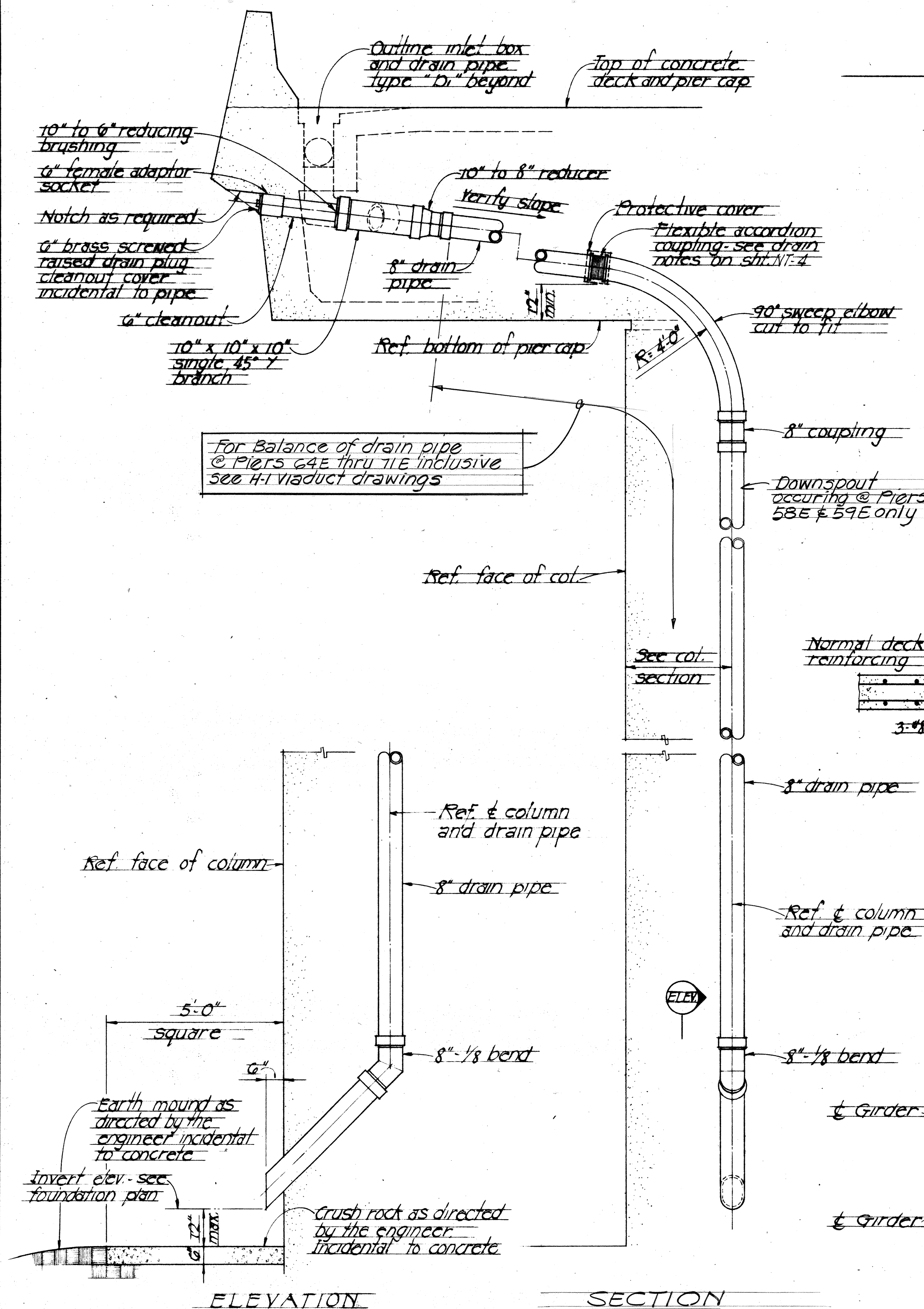
AIRPORT INTERCHANGE

F.A.T. PROJECT NO. I-H-1-1(84)16

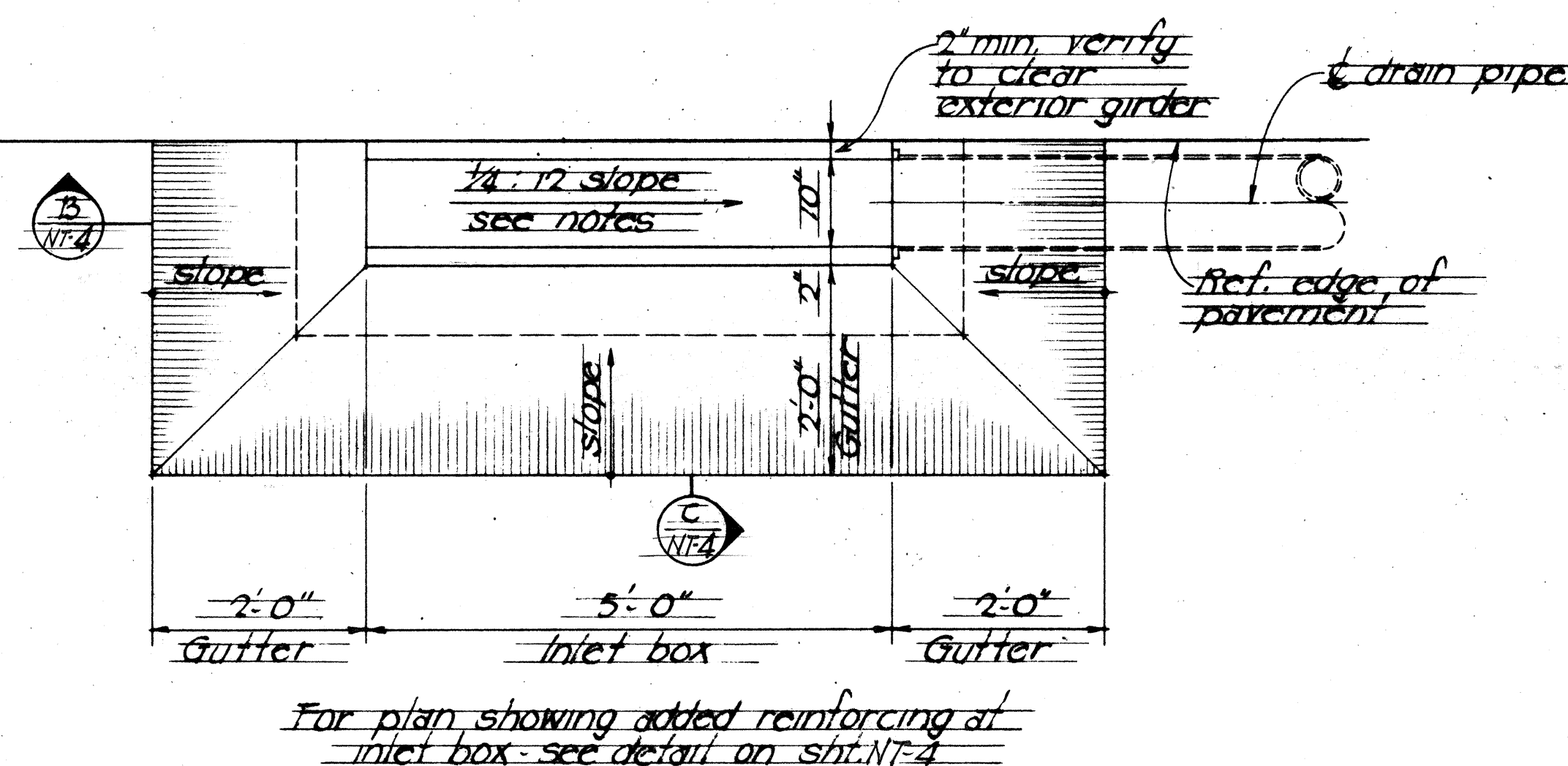
SCALE: AS NOTED DATE: Aug. 1978

SHEET NO. NI-3 OF NI-5 SHEETS

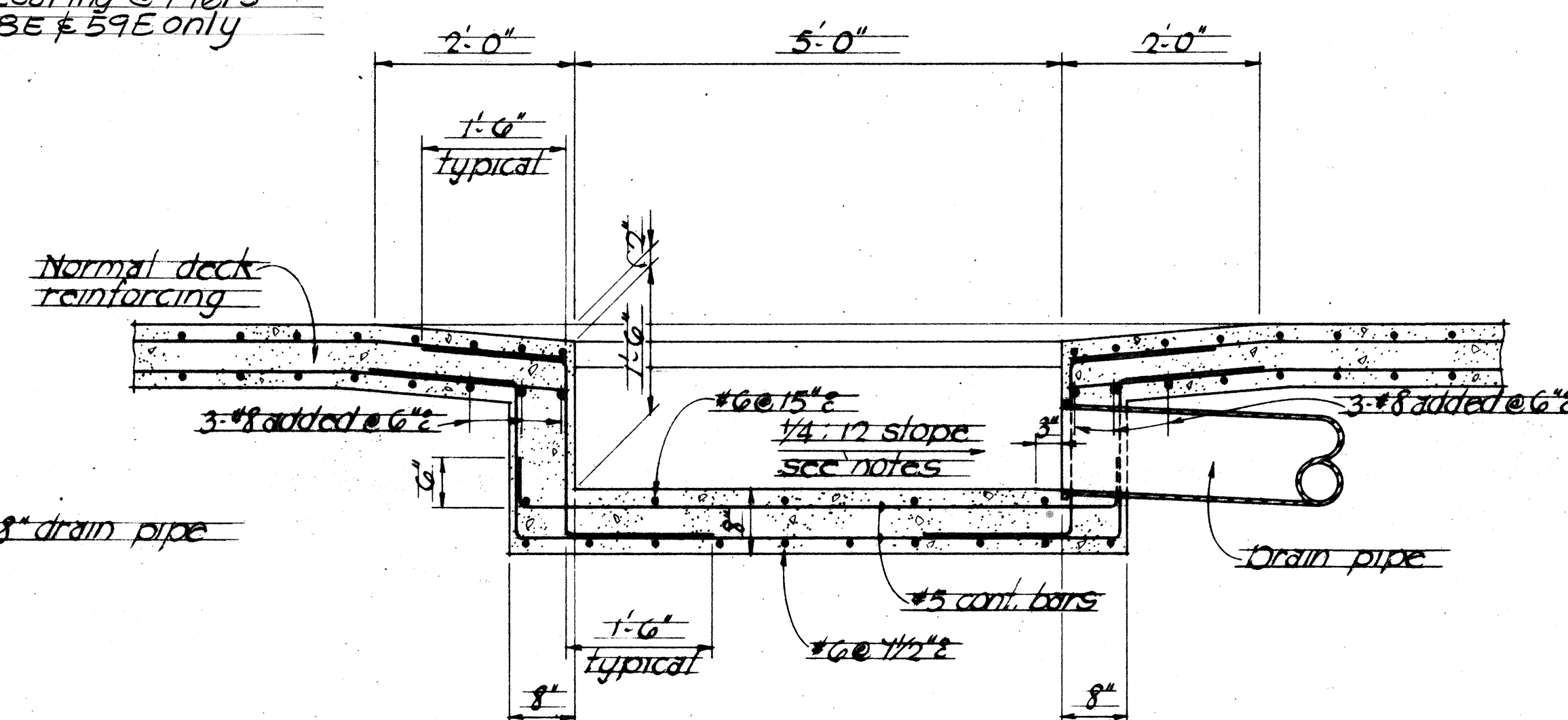
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	14-1 (84) 16	1978	383	466



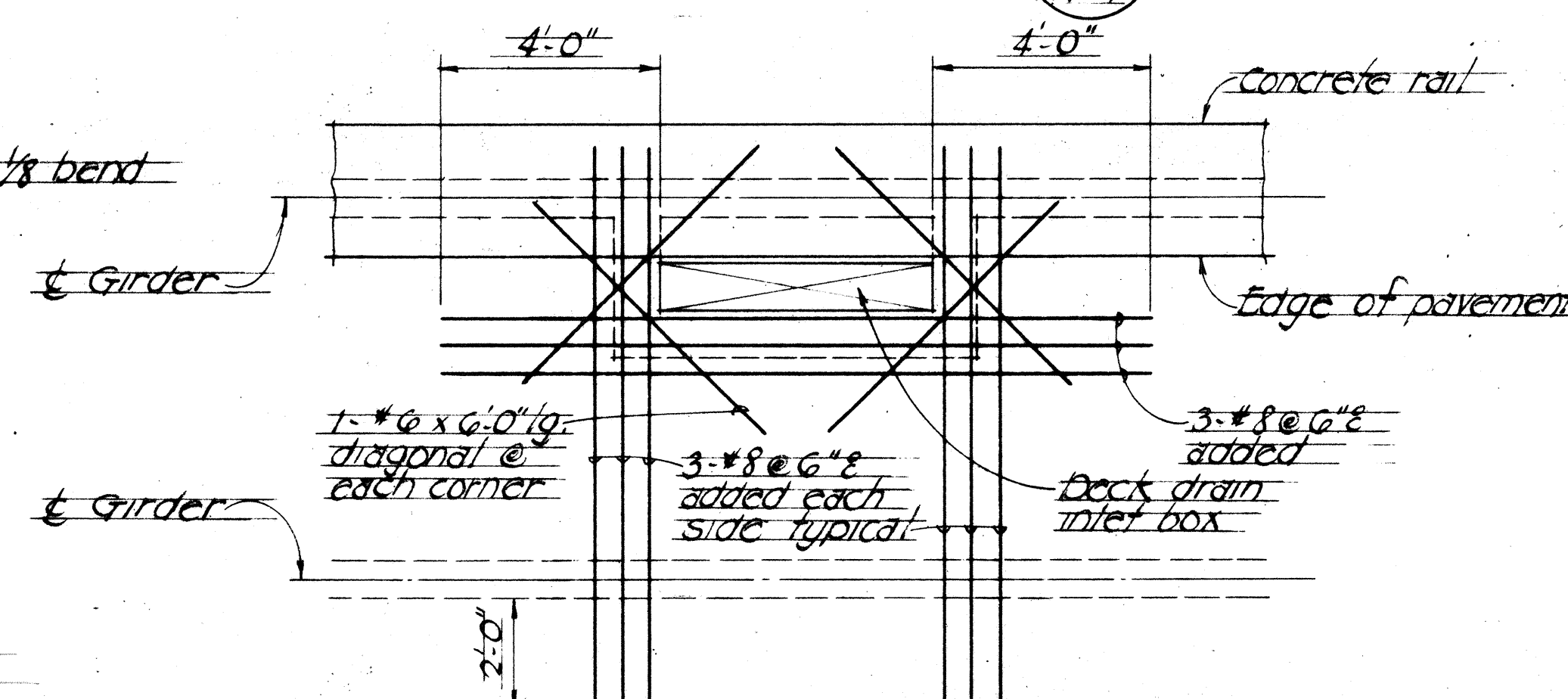
(A) TYPICAL SECTION THRU DRAIN & DOWN SPOUTS
Scale: 1/2" = 1'-0"



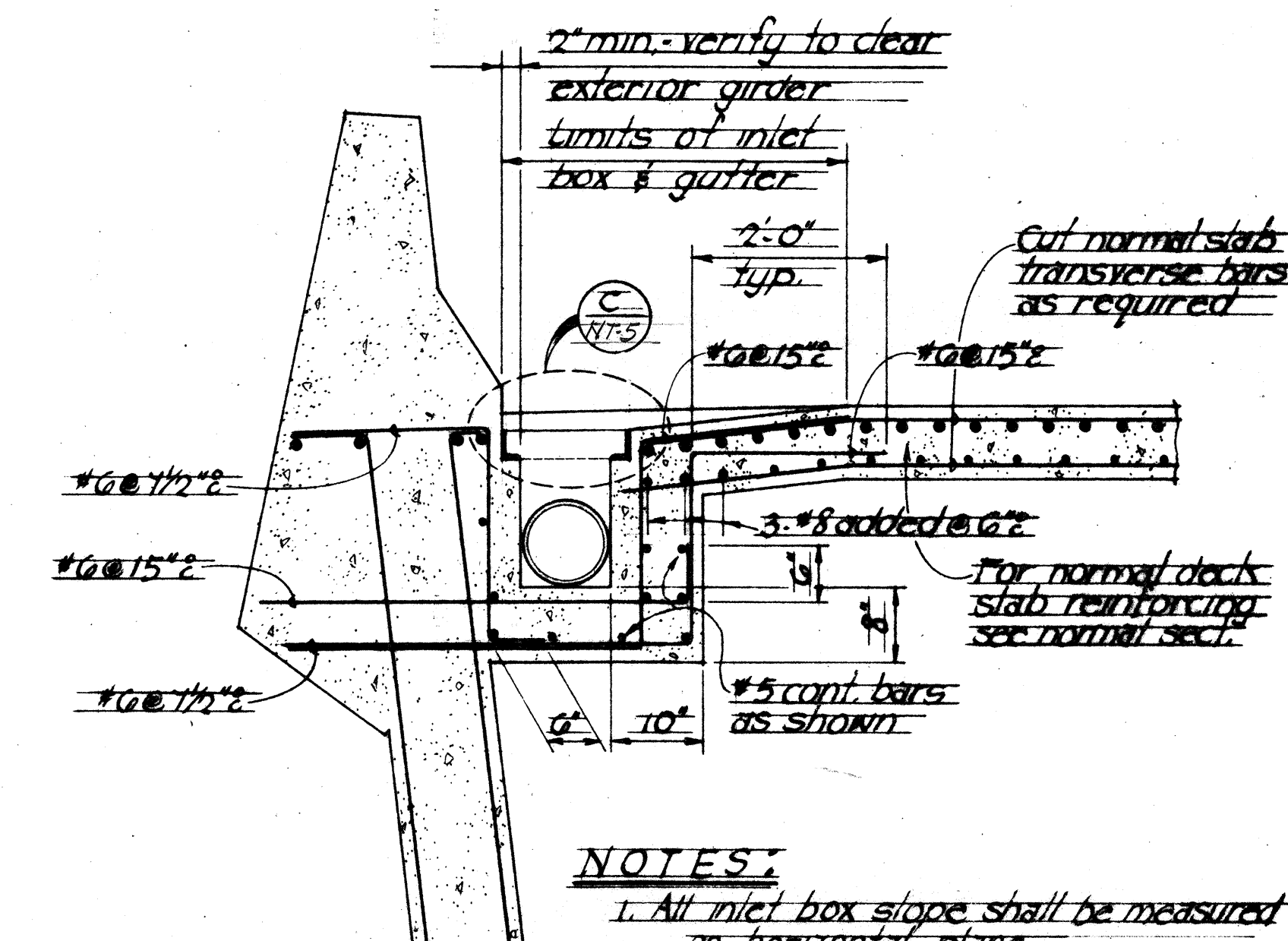
TYPICAL INLET BOX TYPE
Scale: 3/4" = 1'-0"



SECTION B
Scale: $3/4" = 1'-0"$ N.T.A



PLAN - SHOWING ADDED REINFORCING
AT DECK DRAIN INLET BOX
Scale: $3/8" = 1'-0"$



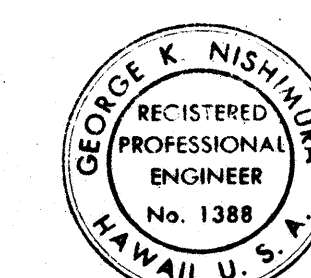
NOTES:

1. All inlet box slope shall be measured on horizontal plane
2. For grating & frame details see sheet

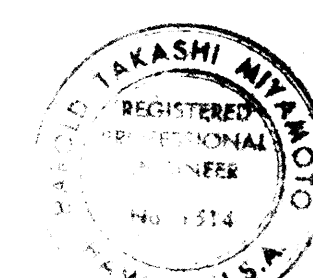
SECTION C
Scale: $3/4" = 1'-0"$ NF-4

DRAIN PIPE NOTES

1. All pipes & fittings to be pvc pipe. All fittings shall be fabricated from schedule 40 pipes. These may be nonpressure fittings suitable for intermittent service of 20 psi. Except otherwise noted for threaded ends, socket ends of fittings shall be fabricated for cement jointed.
2. Refer to specification & special provisions for product specification.
3. Flexible accordion coupling shall be flexible accordion type reinforced neoprene expansion coupling with 1" wide stainless steel heavy duty "T" bolt clamps, incidental to pipe. Submit manufacturer's brochure to the engineer for approval.
4. All pvc drain pipes, downspouts, fittings and flexible accordion couplings shall be incidental to concrete and will not be paid for separately.
5. Provide pipe support @ 4'-0" maximum on center. Type of support shall be selected by the manufacturer with the approval by engineer.
6. Drain pipes shall be placed to clear the exterior girders.
7. All slopes on drain pipes shall be measured from a horizontal plane. Contractor shall determine the exact slope and position of the drain pipes with the approval by the engineer.



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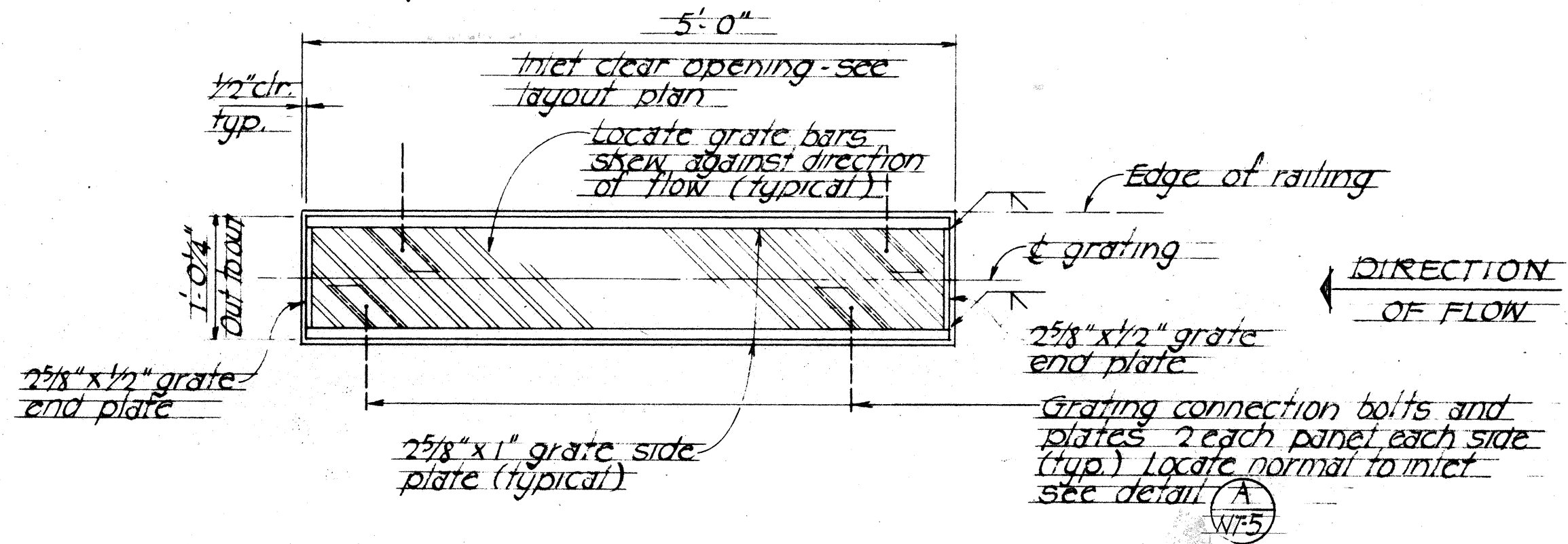
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS DRAIN PIPE
AND INLET BOX DETAILS

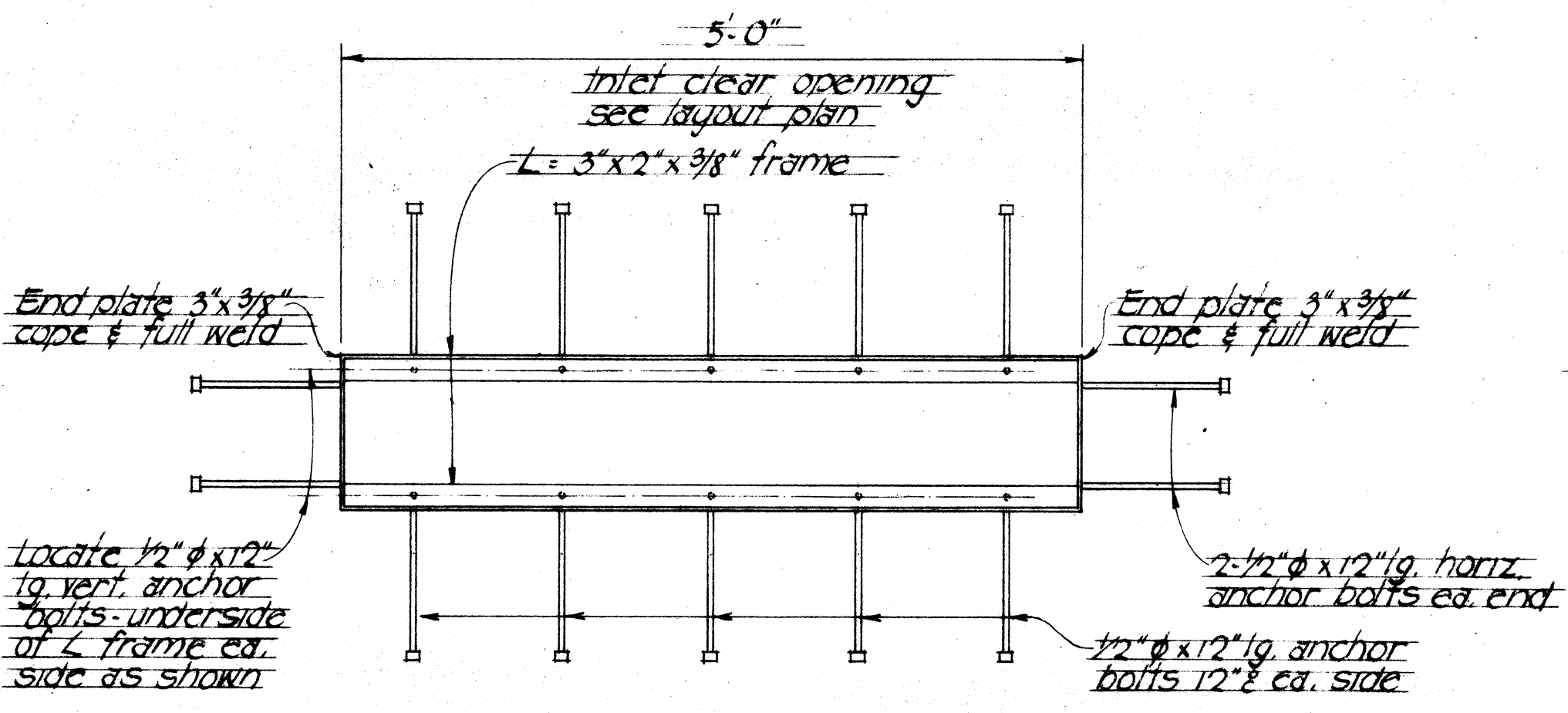
RAMP "AE"
AIRPORT INTERCHANGE
F.A.I. PROJECT NO. F-H-11(84)116
SCALE: AS NOTED DATE: Aug. 1974

SHEET No. NT-4 OF NT-5 SHEETS

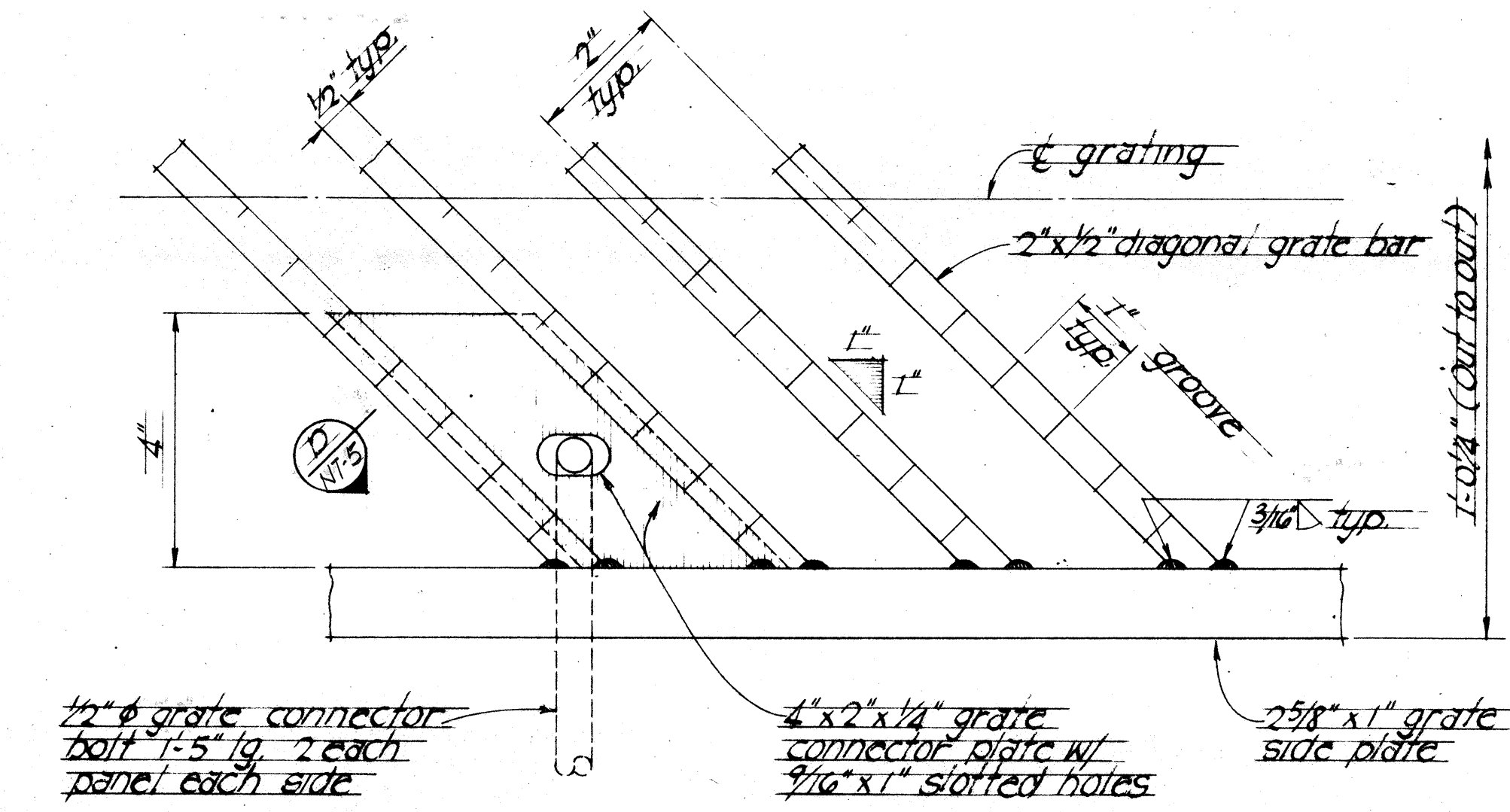
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2H-1(84)1G	1978	384	466



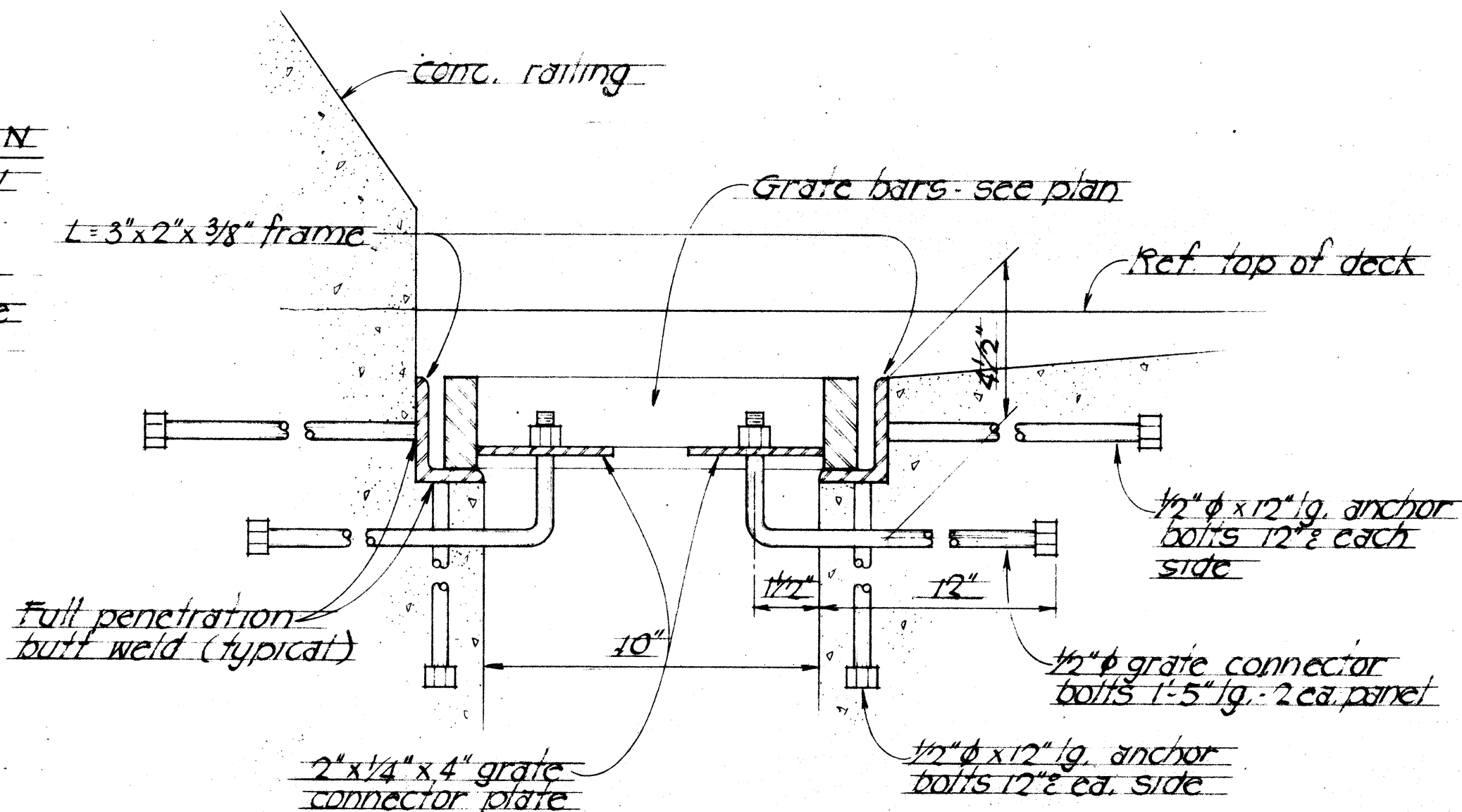
PLAN - GRATE
Scale: 1" = 1'-0"



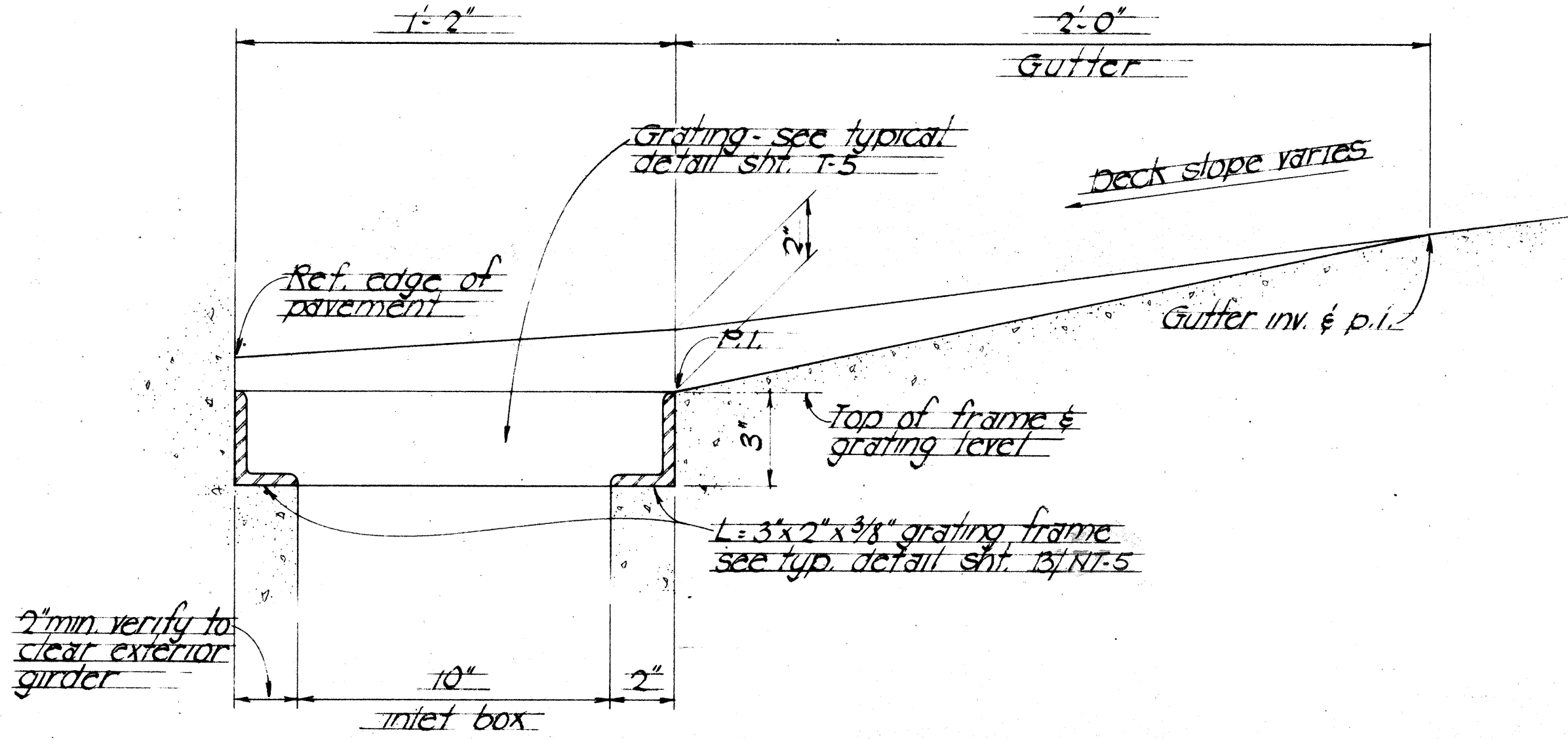
PLAN - GRATE FRAME
Scale: 1" = 1'-0"



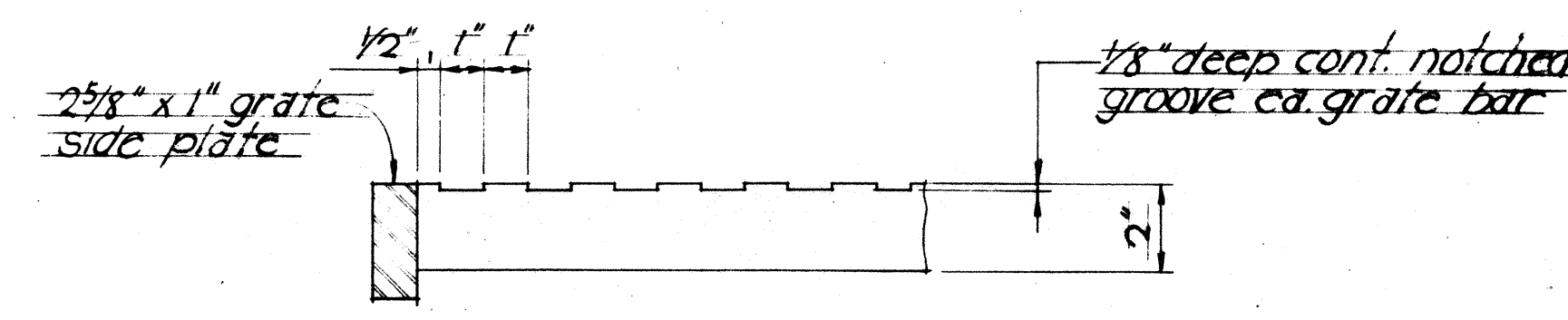
A TYPICAL GRATE CONNECTION DETAIL
Scale: Half scale



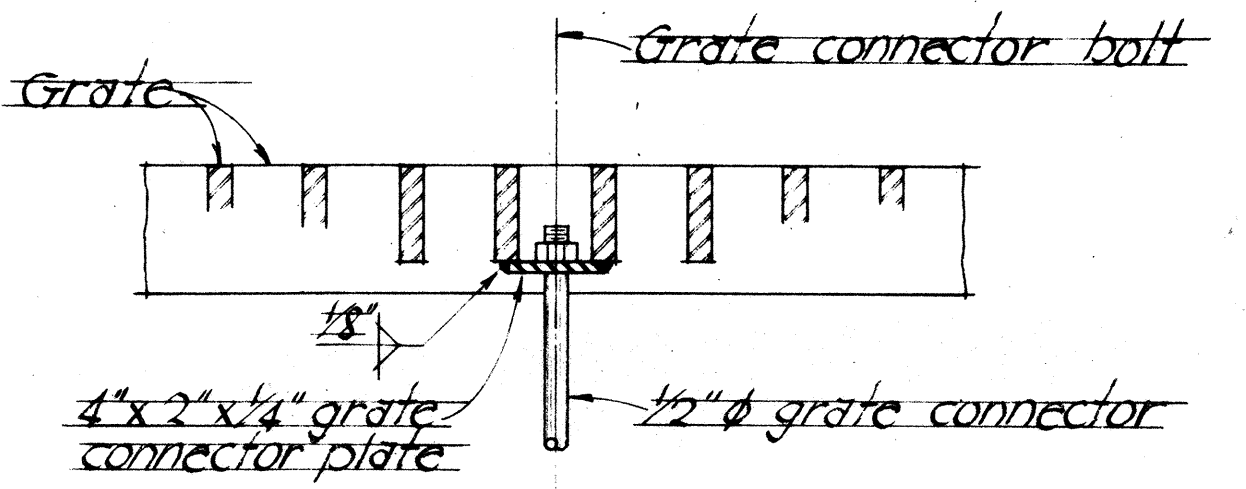
B TYPICAL SECTION (Grate & Frame Assemblage)
Scale: 3" = 1'-0"



C TYPICAL INLET BOX & GUTTER DETAIL
Scale: 3" = 1'-0"



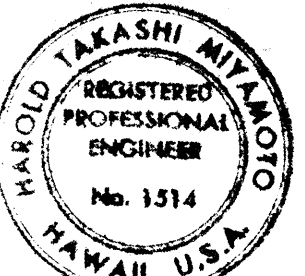
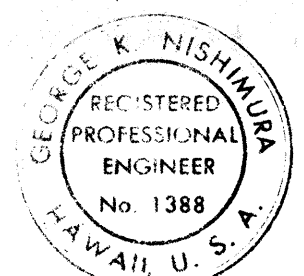
GRATE BAR DETAIL
Scale: 3" = 1'-0"



D SECTION
Scale: 3" = 1'-0"

- NOTE:**
1. Grate & frame assemblage shall be hot dipped galvanized after fabrication. See standard specs.
 2. Grate & frame assemblage shall be incidental to concrete.

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
NOTE BOOK NO. _____



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Signature: _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL GRATING & FRAME DETAIL

RAMP "AE"

AIRPORT INTERCHANGE

F.A.T. PROJECT NO. I.H.I. - 1 (1984) 1G

SCALE: AS NOTED DATE: Aug 1978

SHEET No. NT-50 OF NT-5 SHEETS