

INDEX TO DRAWINGS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1988	75	137

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REDUCED PLAN (TRAF SIZE)			
0	1	2	3
1.3 INCHES ON ORIGINAL PLAN			

SSFM ENGINEERS INC.
501 Summer St., #502
Honolulu, Hawaii 96817



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Howard Y. Fukuda

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INDEX TO DRAWINGS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

DATE: SEPT. 1988

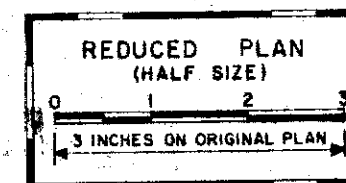
SHEET NO. 51 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	76	137

ESTIMATED STRUCTURAL QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITIES
206.6000	Structure Excavation for Bridges	C.Y.	4672
206.7200	Structure Backfill for Bridge Abutments, and Wingwalls	C.Y.	682
206.8210	Filter Material at Abutment	C.Y.	19
503.1900	Concrete In Bridges (Except Footings); H-3 Viaduct	L.S.	(5883 C.Y.)
503.1901	Concrete In Bridges (Except Footings); Ramp N	L.S.	(440 C.Y.)
503.1940	Concrete In Bridge Footing; H-3 Viaduct	L.S.	(2451 C.Y.)
503.1941	Concrete In Bridge Footings; Ramp N	L.S.	(256 C.Y.)
504.2301	AASHTO Type II Prestressed Concrete Girders	L.S.	(1001 L.F.)
504.2401	Keehi Type IIF Prestressed Concrete Girders	L.S.	(597 L.F.)
504.4501	Keehi Type IV Prestressed Concrete Girders	L.S.	(12,310 L.F.)
504.4511	Keehi Type IVF Prestressed Concrete Girders	L.S.	(1890 L.F.)
504.9500	Strand Slippage Measurements on Girders	Ea.	50
505.0010	Pile Load Tests	Ea.	3
504.0030	Strand Slippage Measurement on Piles	Ea.	20
505.0430	Precast, Prestressed Concrete Piles, Furnished (16 1/2" Octagonal)	L.F.	6580
505.4300	Precast, Prestressed Concrete Piles, Driven (16 1/2" Octagonal)	L.F.	5880
505.4810	Furnishing and Installing Splice Cans	Ea.	24
505.9000	Extension or "Build-ups" of Piles	F.A.	
505.9301	Retapping of Piles	F.A.	
507.7100	Concrete Bridge Exterior Parapet, Including End Post	L.F.	2638
507.7200	Concrete Bridge Parapet at Median	L.F.	1100
511.0100	Deck Expansion Joint	L.F.	650
602.1300	Reinforcing Steel in Bridges ; H-3 Viaduct	L.S.	(2,487,500 LBS)
602.1301	Reinforcing Steel In Bridges; Ramp N	L.S.	(130,000 LBS)
604.2300	Type B-1 Steel Frame And Grate	Ea.	34
634.0100	Exploratory Work at Structure Footings	F.A.	
505.9401	Pile Driving Equipment Expense (Not to exceed \$8,000)	L.S.	
505.9200	Repair or replacement of Engineer Pile testing equipment	F.A.	
505.6001	Predrilled Holes for Piling	L.S.	(250 L.F.)
505.9404	Replacement of Hammer	F.A.	
503.6000	Relocate Existing Utilities Under Bridge Footings	F.A.	

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES BY	
NOTE BOOK	
NO.	



1-25-89 Revised Quantities
Date Revision

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Honolulu, Hawaii 96817



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ESTIMATED QUANTITIES

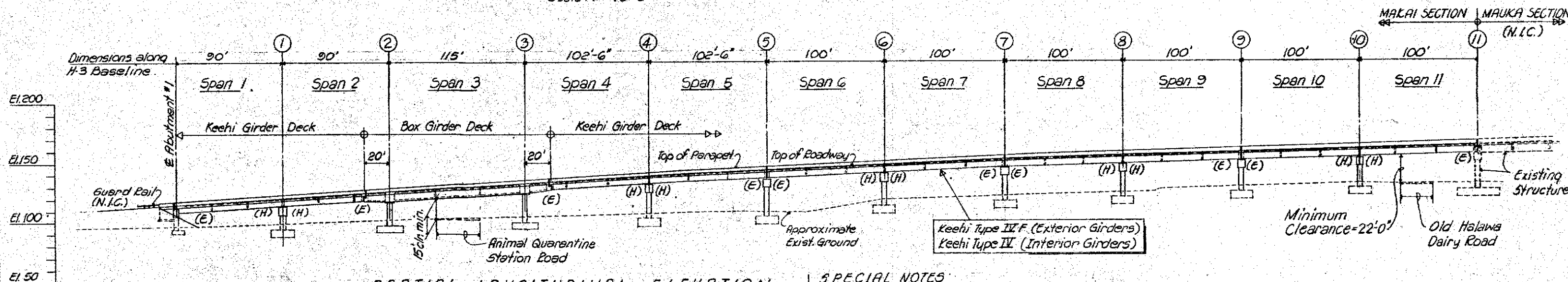
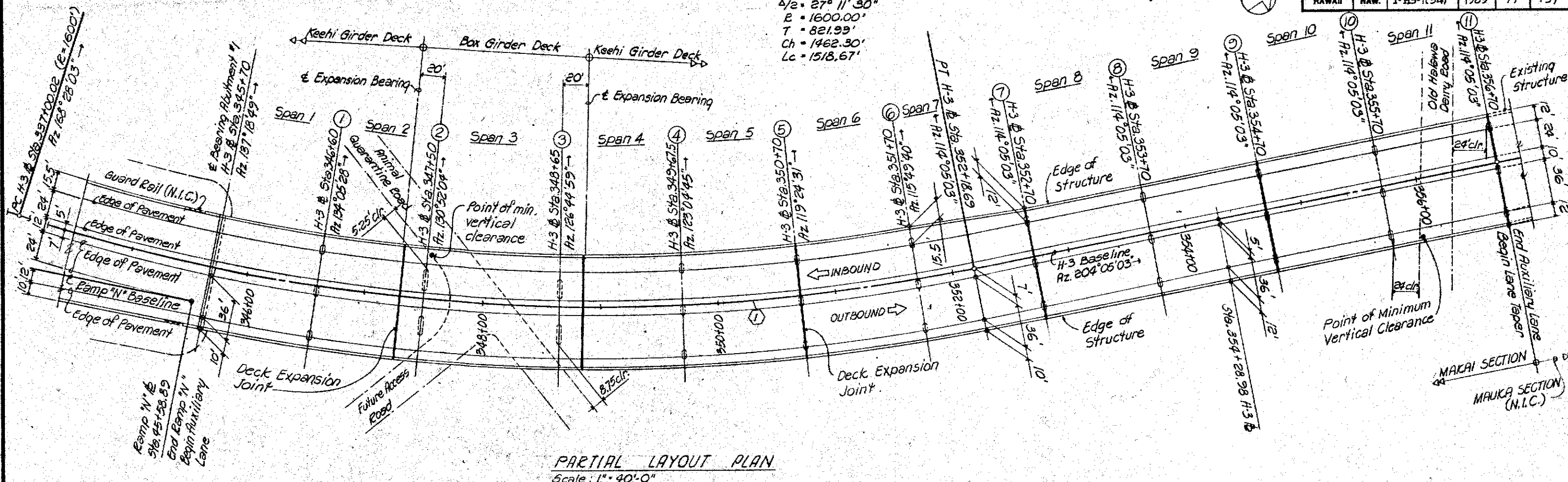
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

DATE: SEPT. 1988

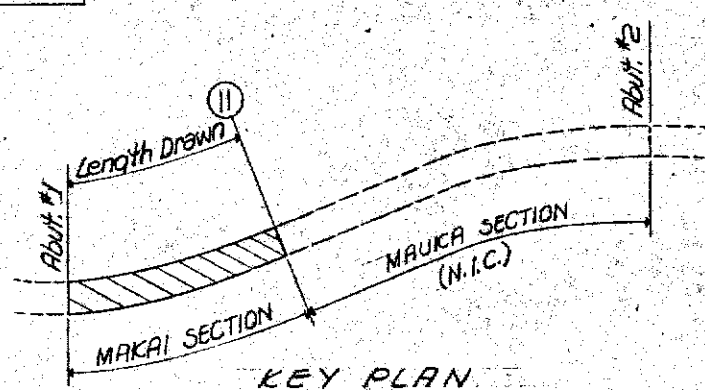
SHEET No. 52 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	77	137

① H-3 Baseline Curve Data
 $\Delta = 54^\circ 23' 00''$
 $\Delta/2 = 27^\circ 11' 30''$
 $E = 1600.00'$
 $T = 821.99'$
 $Ch = 1462.30'$
 $Lc = 1518.67'$



ORIGINAL PLAN	SURVEY & DRAWN BY	DATE
NOTE BOOK	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



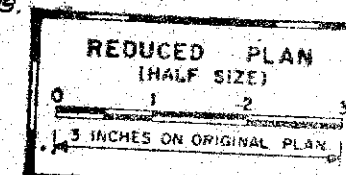
PARTIAL LONGITUDINAL ELEVATION
Scale: 1" = 40'-0"

LEGEND
(E) = Expansion Bearing
(H) = Hinged Bearing

REFERENCE DRAWINGS
1. Pier Elevations --- Sht. 54
2. Finish Deck Elevations --- Sht. 56
3. Prestr. Girder Details --- Sht. 78-713

SPECIAL NOTES

1. Unless otherwise shown, all transverse dimensions are perpendicular to H-3 Baseline.
2. See Civil Drawings for all vertical & horizontal controls.
3. See Sht. T1 for General Notes.
4. See Sht. T2 for Construction Sequence.
5. For cast-in-place concrete strength locations & reinforcing steel grade locations, see Sht. T2.
6. See Civil Drawings for drainage locations & details.



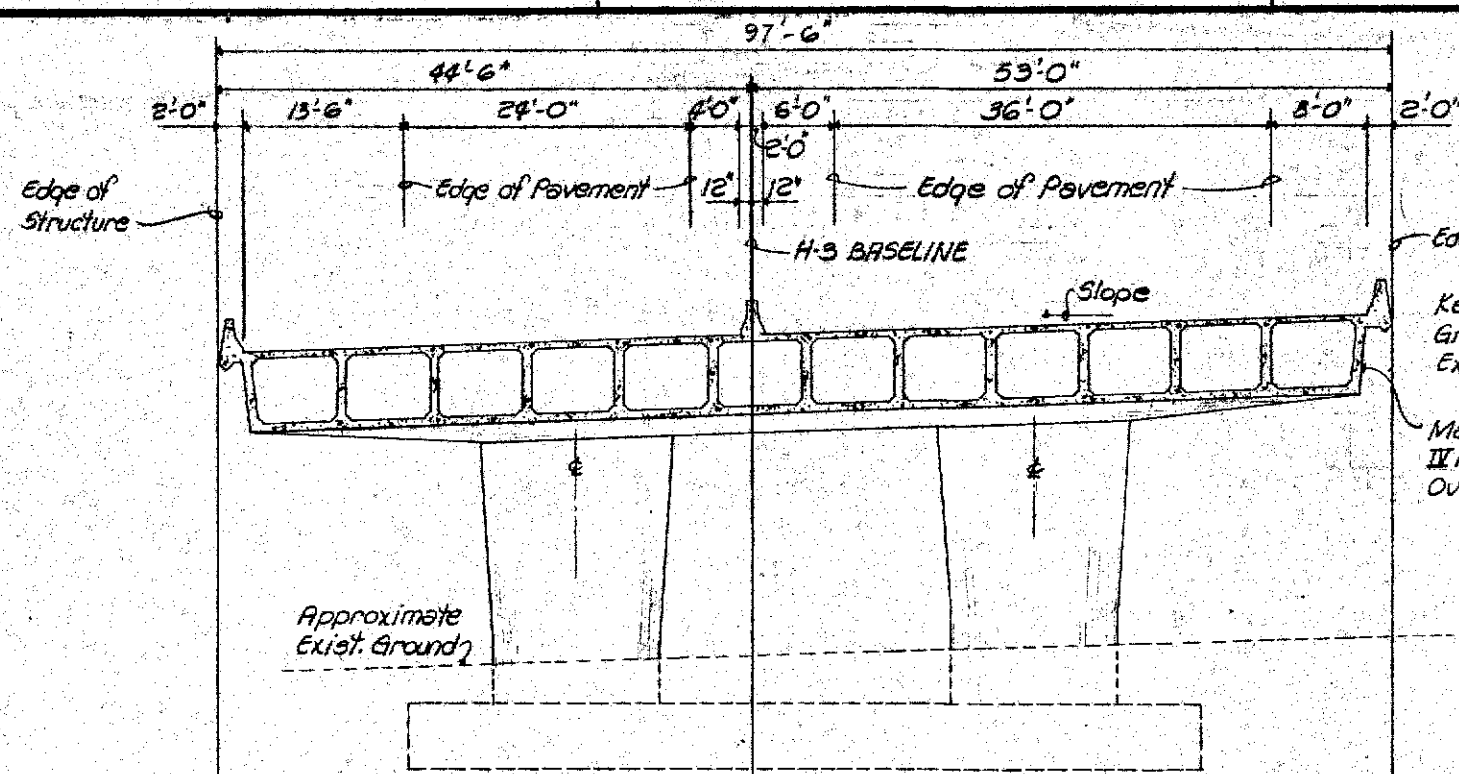
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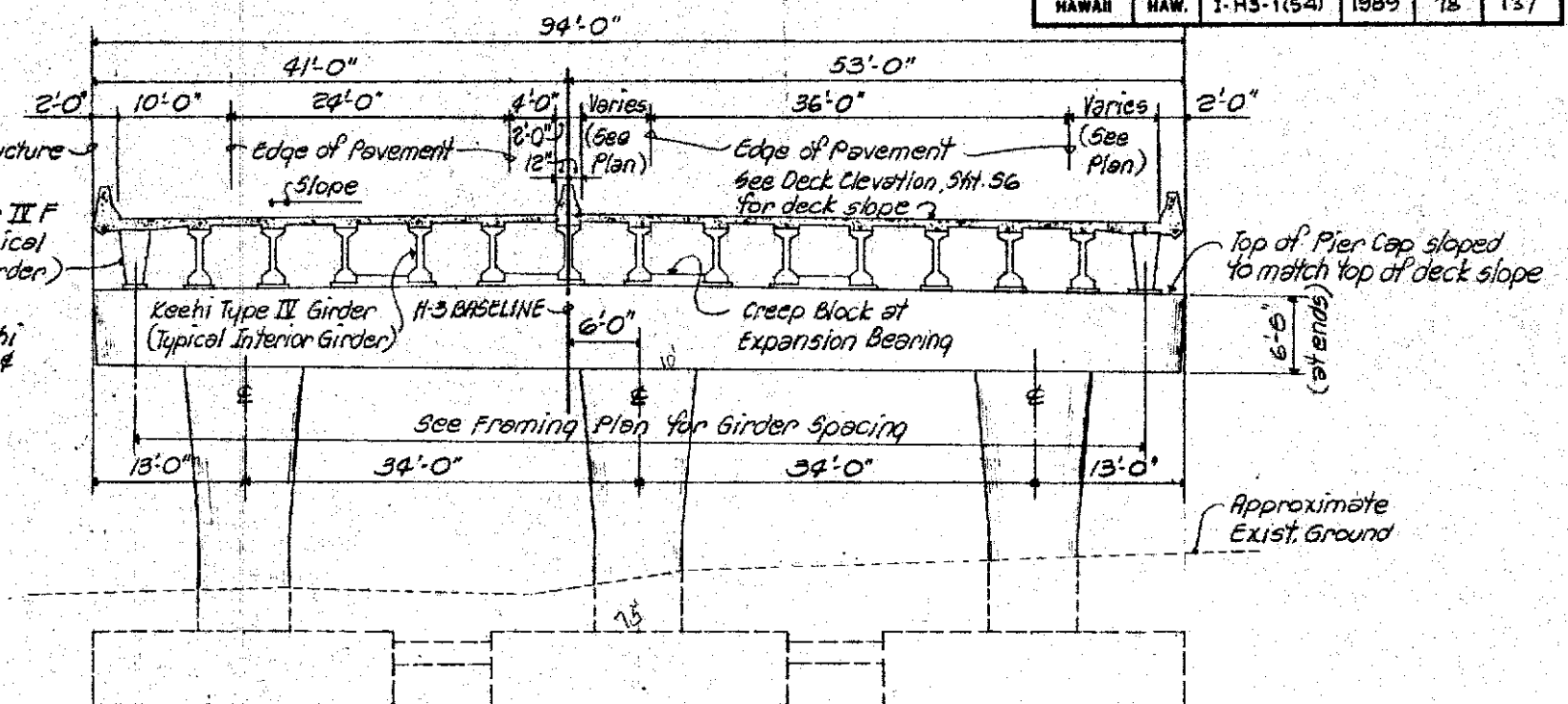
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Howard V. Fukuda

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LAYOUT PLAN AND LONGITUDINAL ELEVATION
STA. 345+70 TO STA. 356+70
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)
SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 53 OF 40 SHEETS

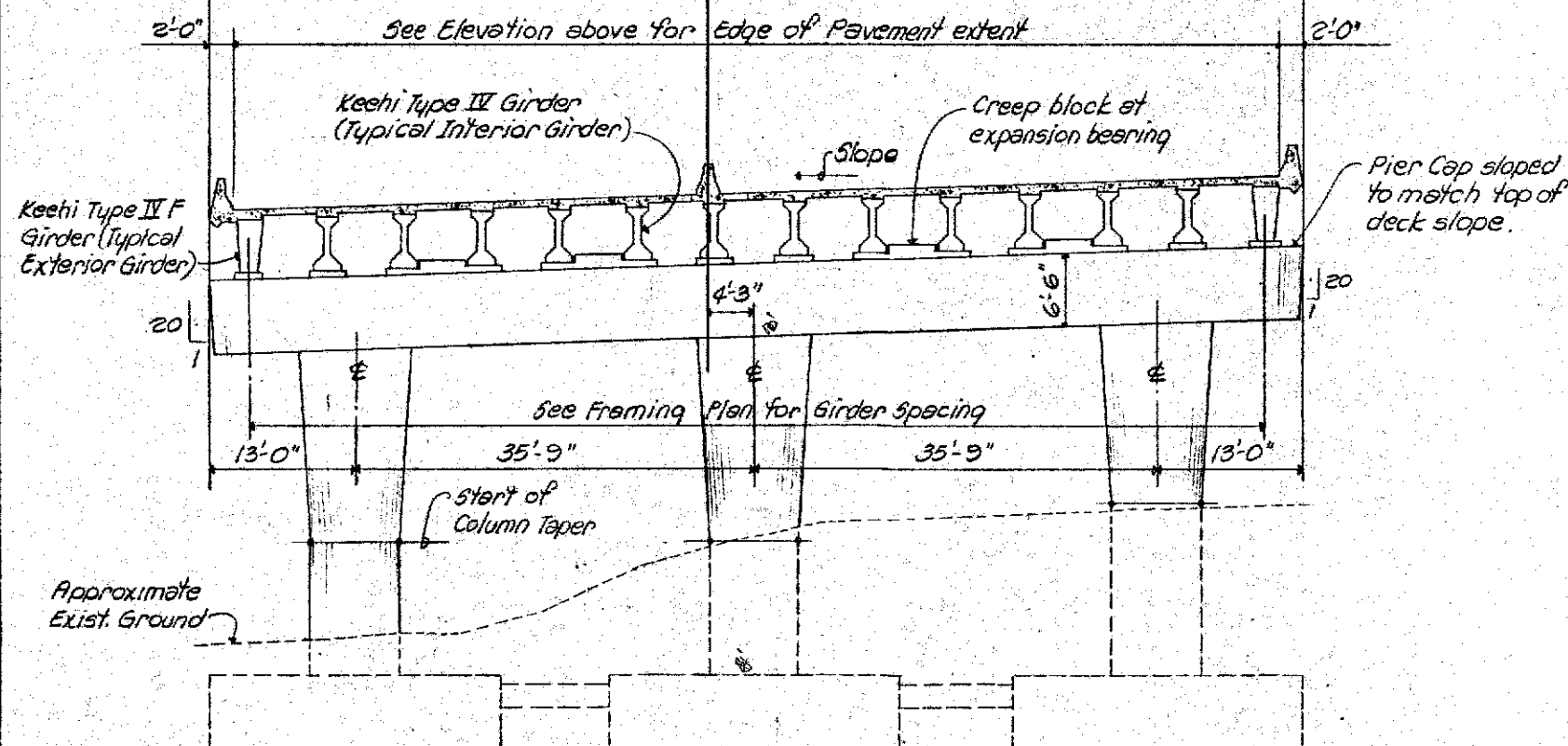
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	78	137



PIER #2 (STA. 347+50) & PIER #3 (STA. 348+65) ELEVATION
Scale: 1/8" = 1'-0"



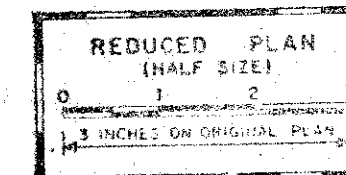
PIER #7 THRU PIER #10 ELEVATION (STA. 352+70 TO STA. 355+70)
Scale: 1/8" = 1'-0"



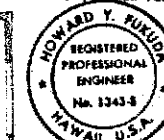
PIER #1 (STA. 346+60) & PIERS #4 THRU #6 (STA. 349+67.5 TO STA. 351+70) ELEVATION
Scale: 1/8" = 1'-0"

Reference Drawings

- Piers #2 & #3 Pier Cap & Columns ---- S18
- Piers #1, 4 thru 10
 - Columns ---- S10, S11
 - Pier Caps ---- S12.



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HIGHWAYS DIVISION

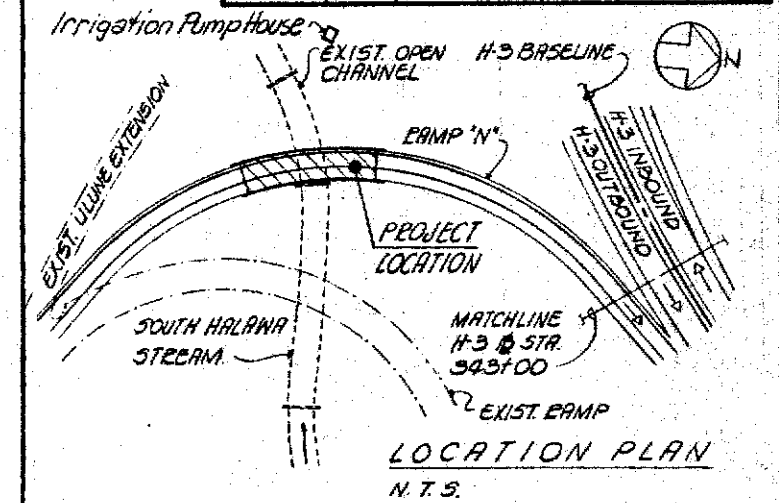
PIER ELEVATIONS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1989

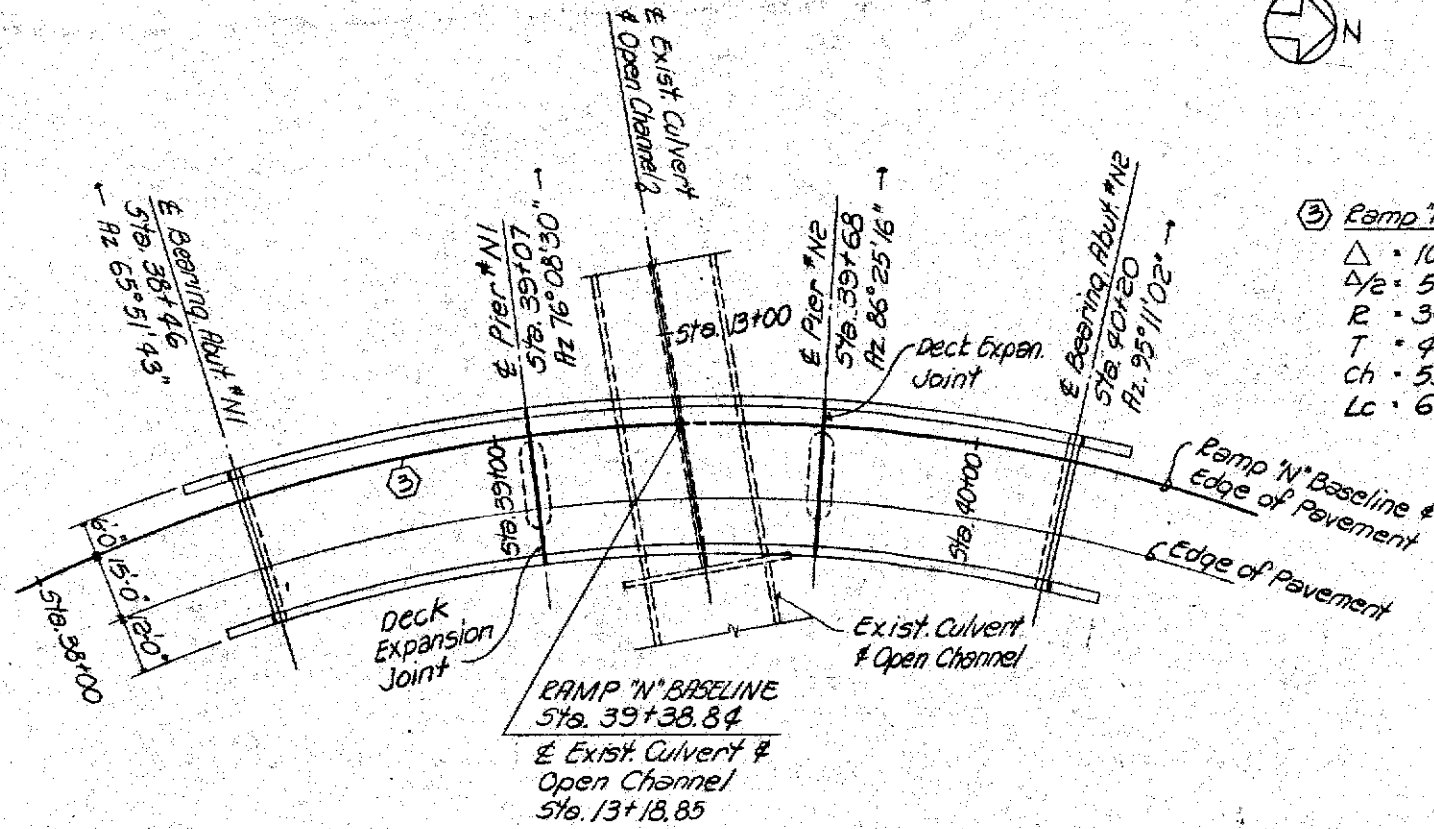
SHEET NO. 54 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	79	137

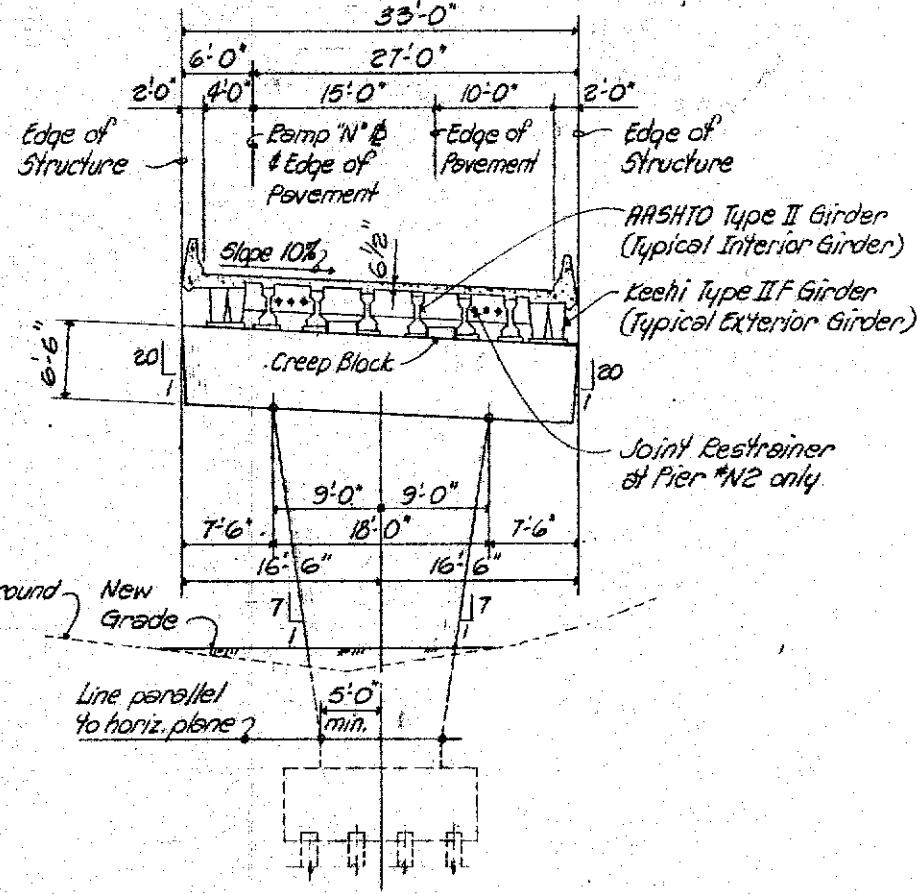


SPECIAL NOTES:
See Sheet 53

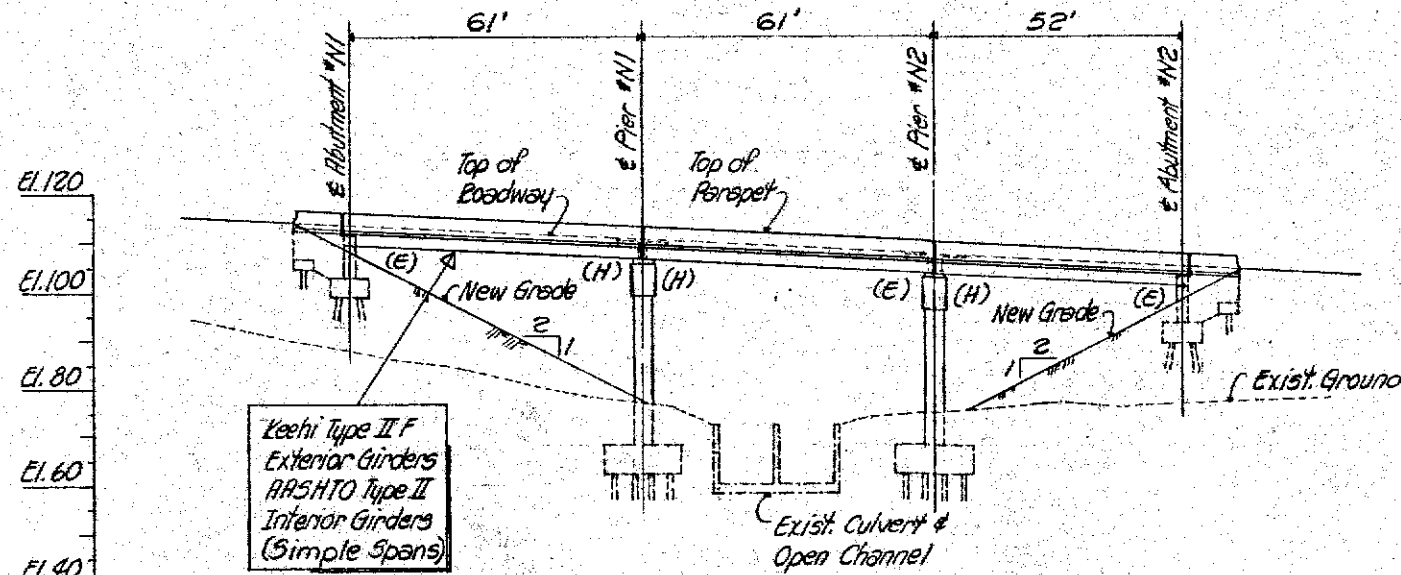
③ Ramp 'N' Baseline Curve Data
 $\Delta = 104^\circ 28' 00''$
 $\Delta/2 = 52^\circ 14' 00''$
 $R = 340.00'$
 $T = 438.85'$
 $Ch = 537.55'$
 $Lc = 619.92'$



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

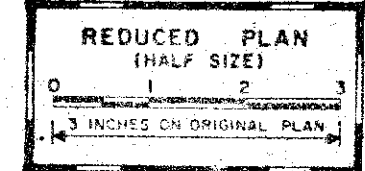


TYPICAL PIER ELEVATION
Scale: 1/8" = 1'-0"



LONGITUDINAL ELEVATION
Scale: 1" = 20'-0"

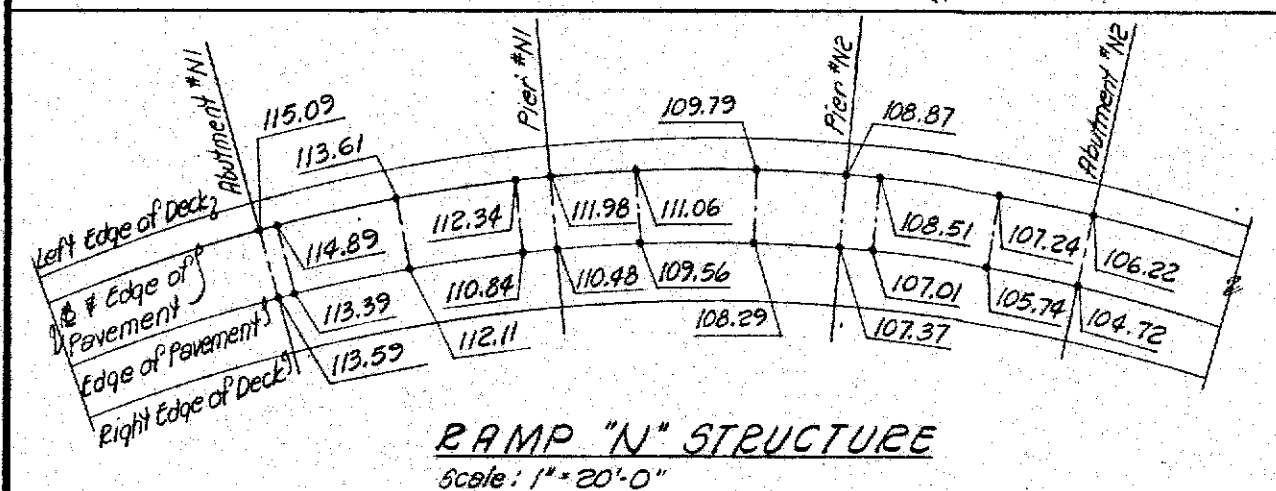
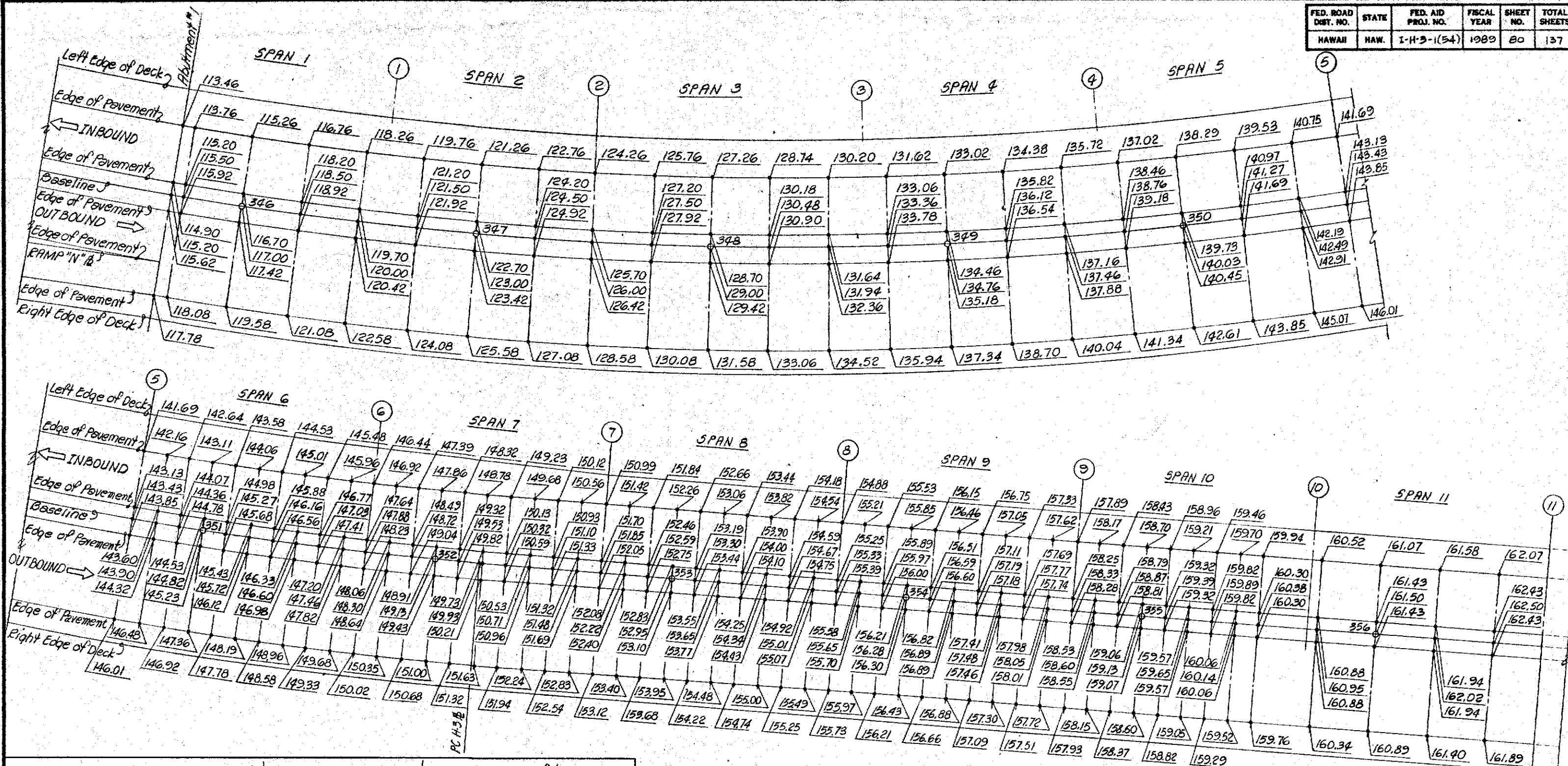
LEGEND:
 (E) Expansion Bearing
 (H) Hinge Bearing



SSFM ENGINEERS INC.
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 No. 1343-S
 HAWAII U.S.A.
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 Howard Y. Fujita

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
RAMP N
PLAN & ELEVATIONS
 INTERSTATE ROUTE H-3
 F.A.I. PROJ. NO. I-H3-1(54)
 SCALE: AS NOTED DATE: SEPT. 1988
 SHEET NO. 55 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-3-1(54)	1989	80	137



H-3 VIADUCT STRUCTURE

Scale: 1" = 20'-0"

NOTES:

- Deck elevations are shown at 10 foot intervals from Sta. 350+70 to Sta. 355+50. Deck elevations are shown at 25 foot intervals from Sta. 345+75 to Sta. 350+50 and Sta. 355+50 to Sta. 356+50.
- Deck elevations for Ramp "N" are at piers, abutments & at 25 foot intervals.

REDUCED PLAN
(HALF SIZE)

3 INCHES ON ORIGINAL PLAN

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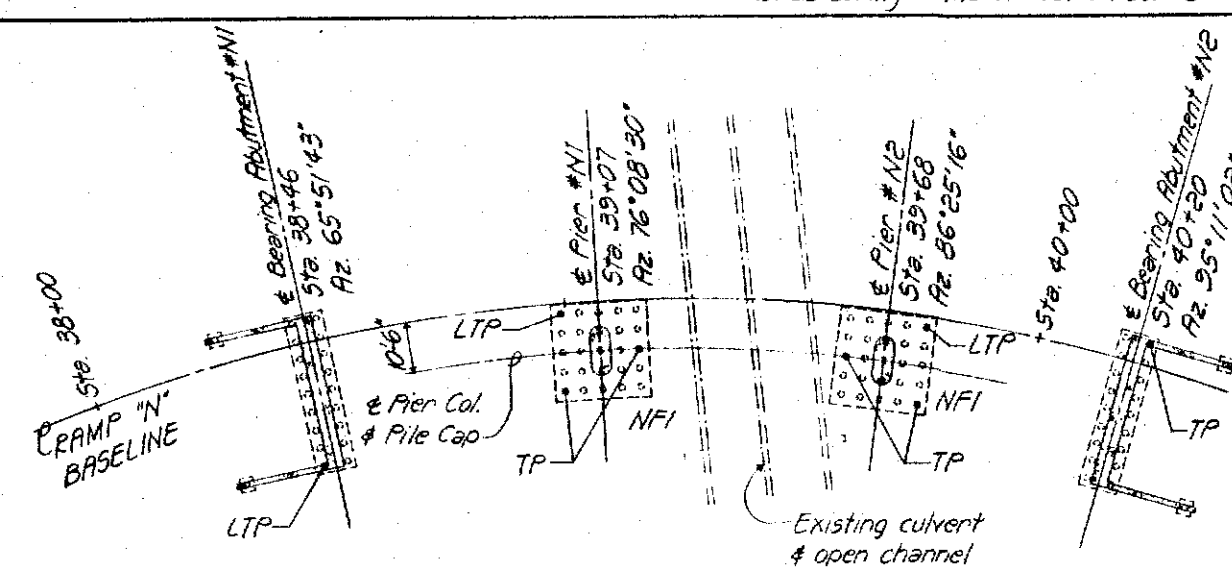
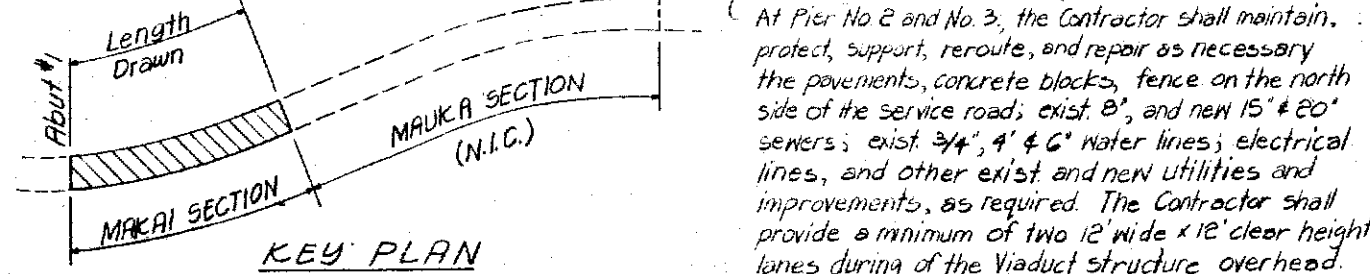
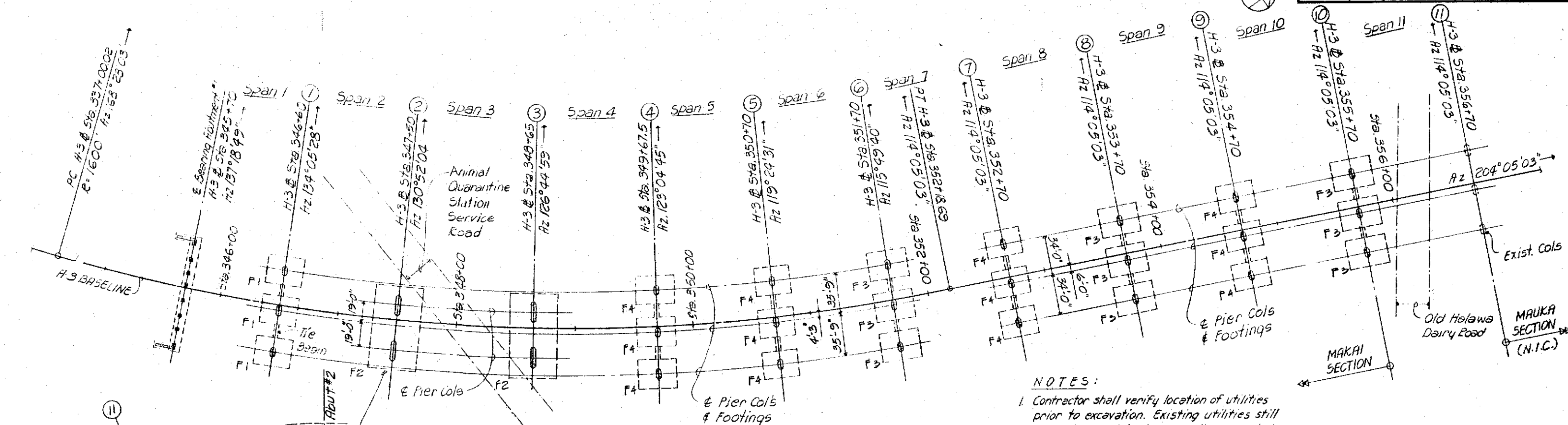


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK FINISH GRADE
(STA. 345+70 TO
STA. 356+70 & RAMP N
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 56 OF 40 SHEETS



Location	Elevations		
	PTE	PCE	PDE
Abut. #N1	17.00'	101.00'	—
Pier #N1	7.00'	64.00'	59.00'
Pier #N2	7.00'	66.00'	59.00'
Abut. #N2	10.00'	92.00'	—

PTE = Pile tip elevation
PCE = Pile cut-off elevation
PDE = Bottom of predrilled hole elevation

NOTES:

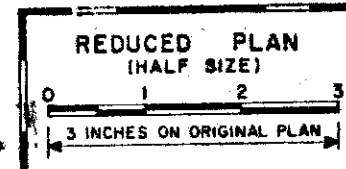
- All dimensions shown are parallel to their respective piers

LEGEND:

F1 = Spread footing designation
See Schedule on Sht. 58.
NFI = Pile cap designation
•TP = Test pile for pile length determination & where designated load test pile
•LTP = Load test pile

REFERENCE DRAWINGS:

- Spread footing & pile cap details — Sheet 58
- Abutment #1 foundation — Sheet 525
- Ramp N abutment foundation — Sheet 528
- Pile details — Sht. 14 thru 17



1-25-89 Revised Viaduct Ramp "N" Foundation Plans
DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOUNDATION PLAN

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 57 OF 40 SHEETS

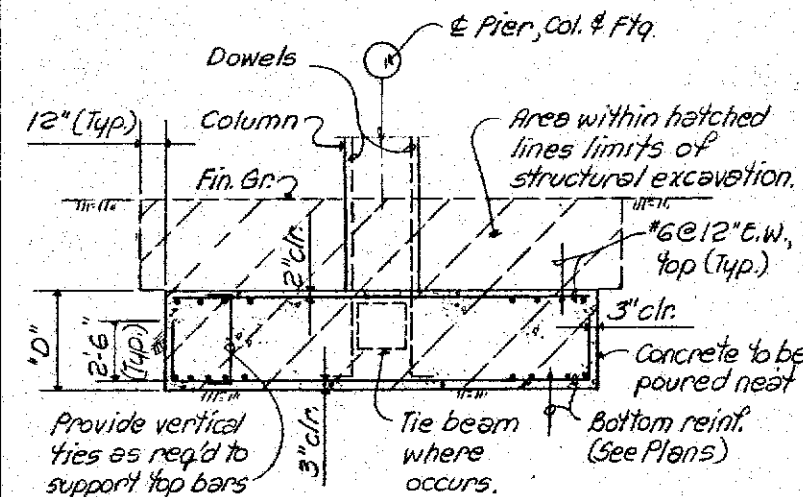
SSFM ENGINEERS INC.
501 Summer St., #502
Honolulu, Hawaii 96817

HOWARD Y. FUKUDA
REGISTERED PROFESSIONAL ENGINEER
No. 1343-B
HAWAII, U.S.A.

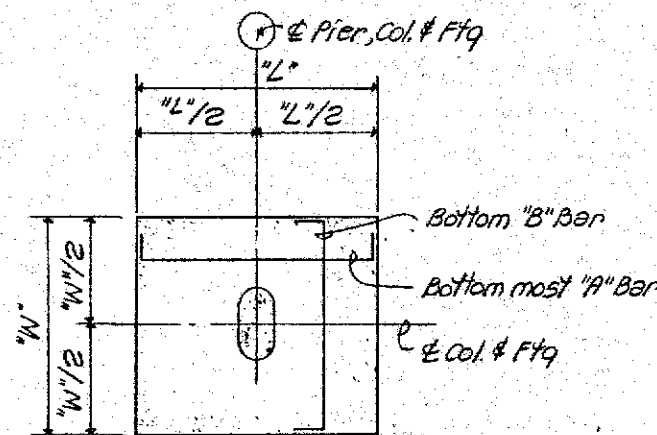
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DESIGNED BY
CHECKED BY
DATE

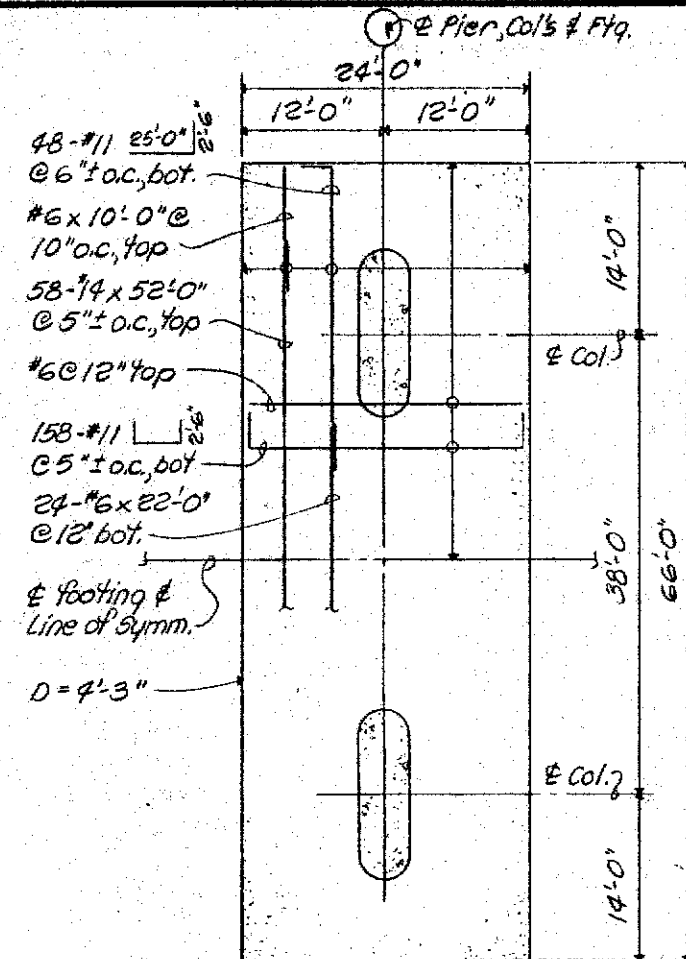
FOOTING SCHEDULE				
	F1	F3	F4	
"W"	18'-0"	21'-0"	20'-0"	
"L"	21'-0"	24'-0"	23'-0"	
"D"	4'-0"	4'-3"	4'-0"	
"A" Bars	38-#11	45-#11	40-#11	
"B" Bars	31-#11	40-#11	42-#11	



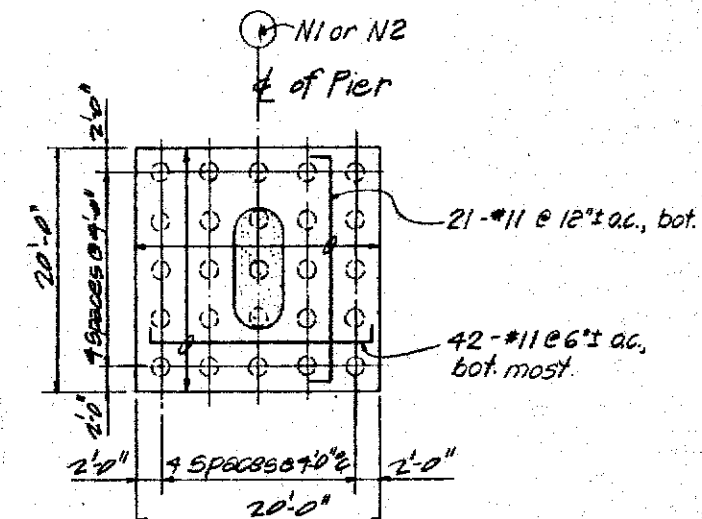
TYPICAL FOOTING SECTION SHOWING REINF. & LIMITS OF STRUCTURAL EXCAVATION
Not to scale



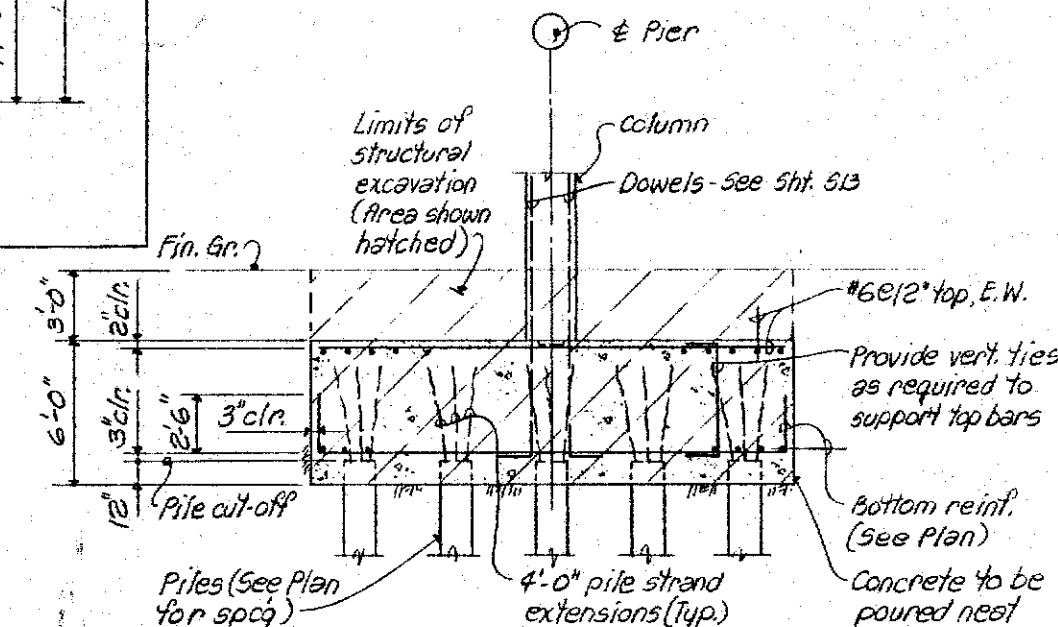
PLAN F1, F3 & F4 FOOTING
Not to scale



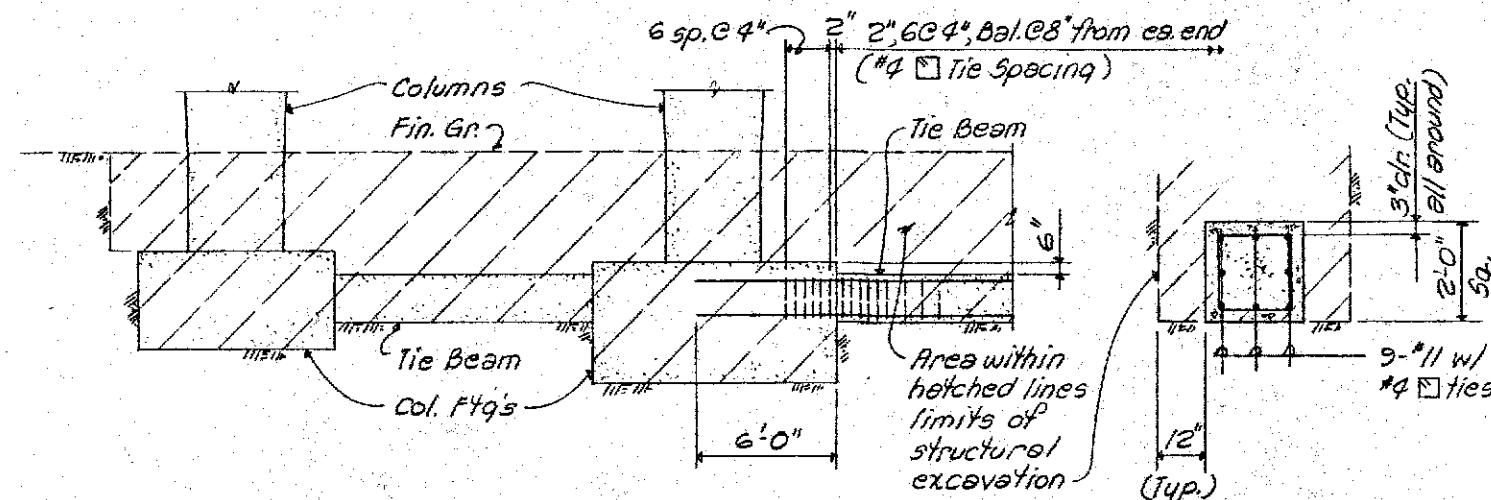
F2 FOOTING PLAN
Scale: 1/8\"/>



PILE CAP FOR NF1 AT RAMP 'N'
1/2\"/>



TYPICAL PILE CAP SECTION WITH STRUCTURAL EXCAVATION
Not to scale



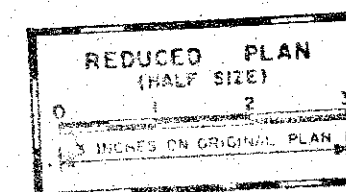
AT CHANGE OF FTG ELEVATION

TYPICAL

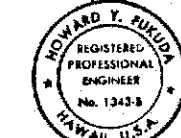
ELEVATIONS
Not to scale

TYPICAL SECTION
Scale: 1/2\"/>

TIE BEAM DETAILS



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STATE OF HAWAII
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HIGHWAYS DIVISION

FOOTING & TIE BEAM DETAILS

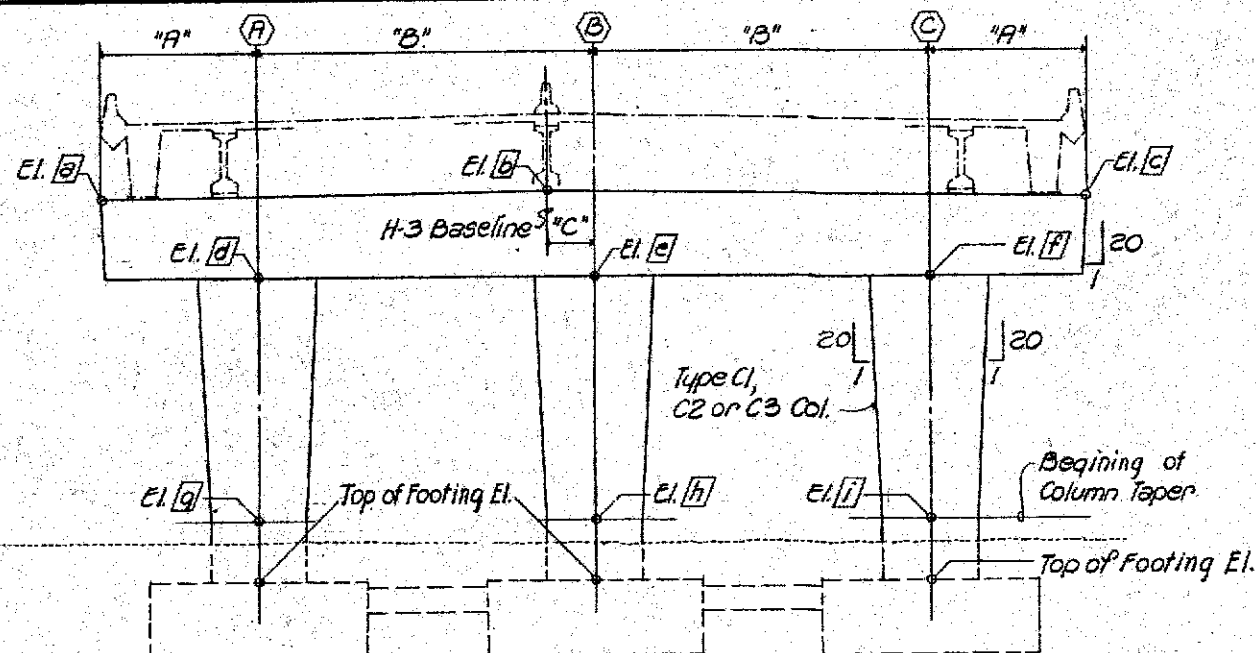
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 58 OF 40 SHEETS

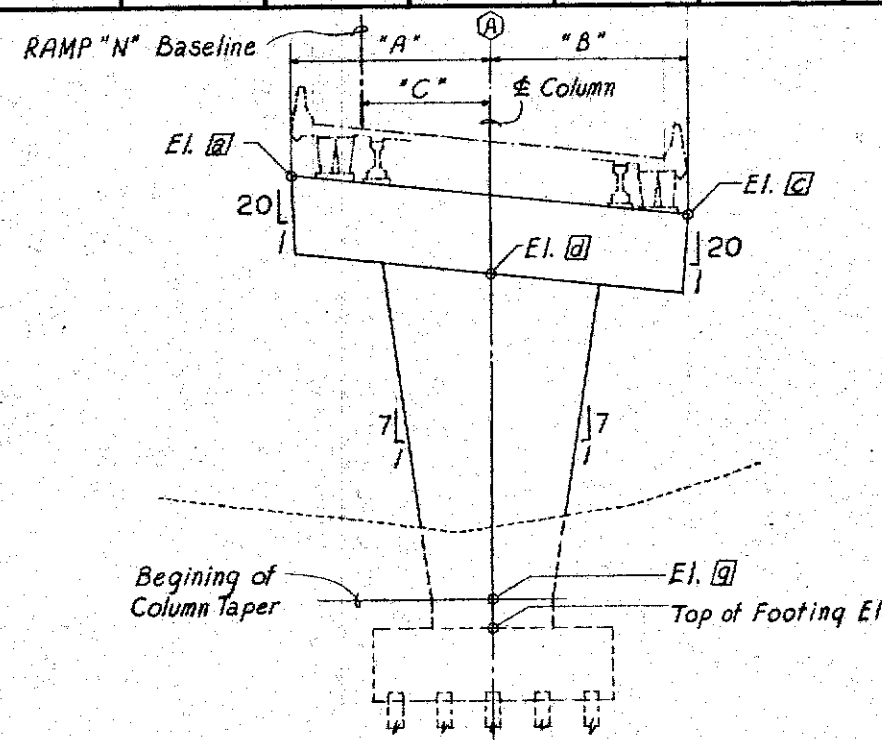
PIER FRAME SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	83	137

PIER NUMBER		1	4	5	6	7	8	9	10			N1	N2		
PIER TYPE		I	I	I	I	I	I					N	N		
BEARING TYPE		(H) (H)	(H) (H)	(E) (E)	(H) (H)	(E) (E)	(H) (H)	(E) (E)	(H) (H)						
DIMENSION "A"		13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"			16'-6"	16'-6"		
DIMENSION "B"		35'-9"	35'-9"	35'-9"	35'-9"	34'-0"	34'-0"	34'-0"	34'-0"			16'-6"	16'-6"		
DIMENSION "C"		4'-3"	4'-3"	4'-3"	4'-3"	6'-0"	6'-0"	6'-0"	6'-0"			10'-6"	10'-6"		
TOP OF PIER CAP ELEVATION	(a)	111.67	129.43	134.49	139.44	144.40	148.46	151.49	154.00			108.11	105.00		
	(b)	114.34	132.10	137.16	141.65	145.62	149.10	152.10	154.61			—	—		
	(c)	117.52	135.28	140.33	144.28	147.19	149.61	151.59	153.82			104.81	101.70		
SOFFIT OF PIER CAP ELEVATION (@ COLUMN LINE INTERSECTIONS)	(a)	105.95	123.71	128.77	133.58	138.29	142.12	145.00	147.47			100.46	97.35		
	(b)	108.09	125.85	130.91	135.36	139.30	142.54	145.04	147.41			—	—		
	(c)	110.24	128.00	133.06	137.14	140.31	142.96	145.08	147.34			—	—		
BEGIN COLUMN TAPER ELEVATION	(a)	95.00	103.71	108.77	113.58	118.29	122.12	125.00	127.47			72.46	69.35		
	(b)	95.00	105.85	110.91	115.36	119.30	122.54	125.04	127.41			—	—		
	(c)	95.00	108.00	113.06	117.14	120.31	122.96	125.08	127.34			—	—		
COLUMN FOOTINGS	(A)	FOOTING TYPE	F1	F4	F4	F3	F4	F3	F4	F3		PCI	PCI		
		GROUP LOADING	VII	VII	VII	VII	VII	VII	VII	VII		VII	VII		
		TOP OF FOOTING ELEVATION	95.00	102.00	104.00	115.00	117.00	120.00	125.00	126.00					
	(B)	FOOTING TYPE	F1	F4	F4	F3	F4	F3	F4	F3					
		GROUP LOADING	VII	VII	VII	VII	VII	VII	VII	VII					
		TOP OF FOOTING ELEVATION	95.00	102.00	104.00	115.00	117.00	120.00	125.00	126.00					
	(C)	FOOTING TYPE	F1	F4	F4	F3	F4	F3	F4	F3					
		GROUP LOADING	VII	VII	VII	VII	VII	VII	VII	VII					
		TOP OF FOOTING ELEVATION	95.00	102.00	104.00	115.00	117.00	120.00	125.00	126.00					



TYPE I PIER ELEVATION (LOOKING UPSTATION)
Scale: 1/8" = 1'-0"



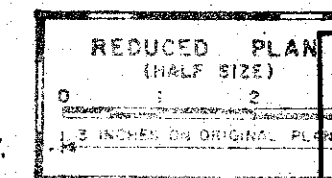
RAMP 'N' PIER ELEVATION (LOOKING UPSTATION)
Scale: 1/8" = 1'-0"

NOTES:

- The actual top of footing elevations shall be verified by the Foundation Engineer in the field.
- For foundation requirements see Foundation Report by Dames & Moore dated August 24, 1987.

LEGEND

- (E) = Expansion Joint
(H) = Hinged Joint



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PIER FRAME SCHEDULE

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. 1-H3-1(54)

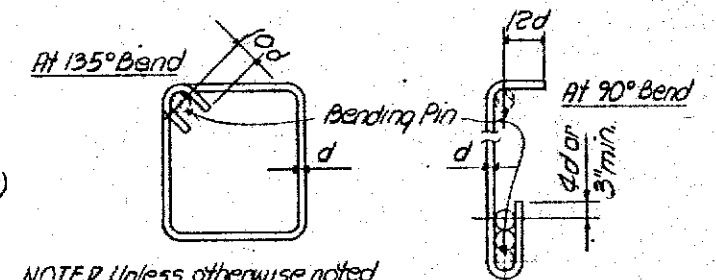
DATE: SEPT. 1988
SHEET No. 59 OF 40 SHEETS

SSFM ENGINEERS INC.
501 Summer St., #302
Honolulu, Hawaii 96817



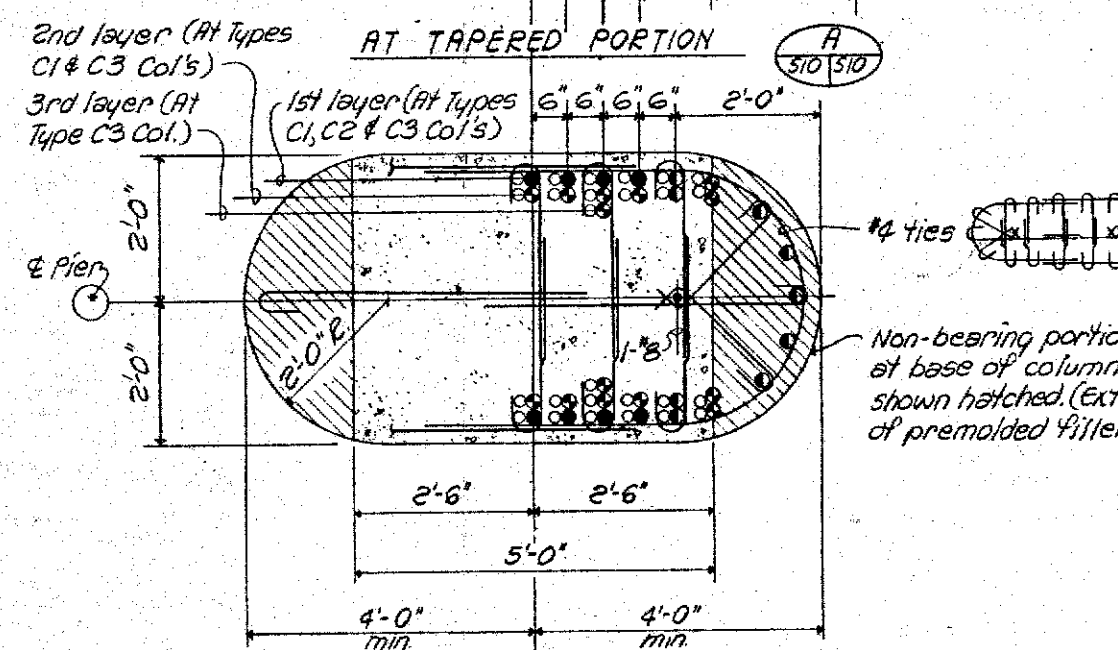
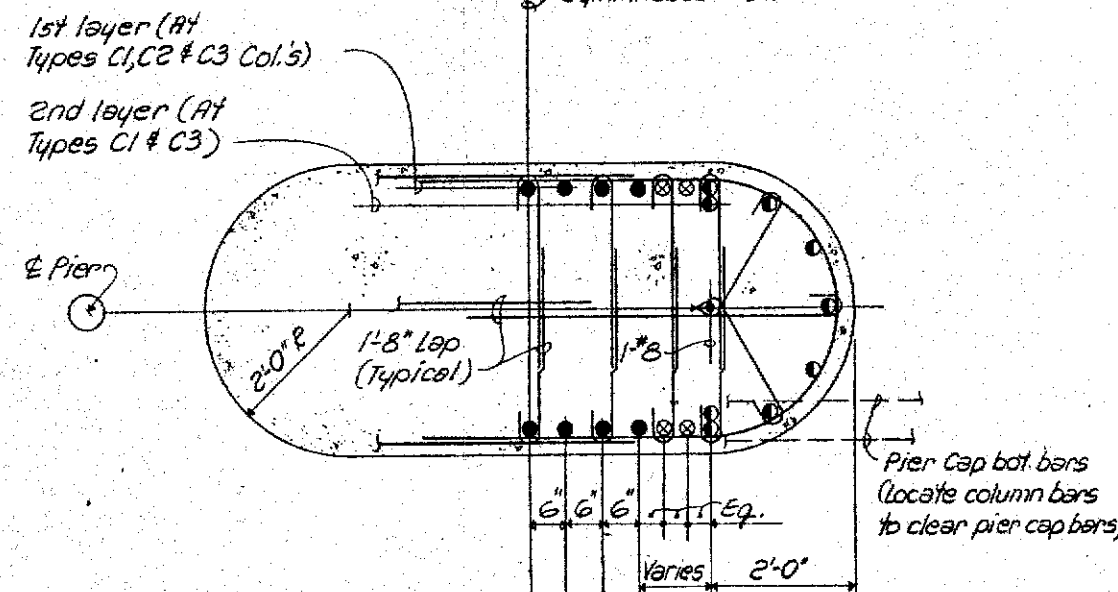
This work was prepared by me under my supervision.
Howard Y. Fukuda

- Dowels
- "a" bars (cont.)
- ① "b" bars (cont. flared)
- ⊕ "c" bars
- ⊗ "d" bars

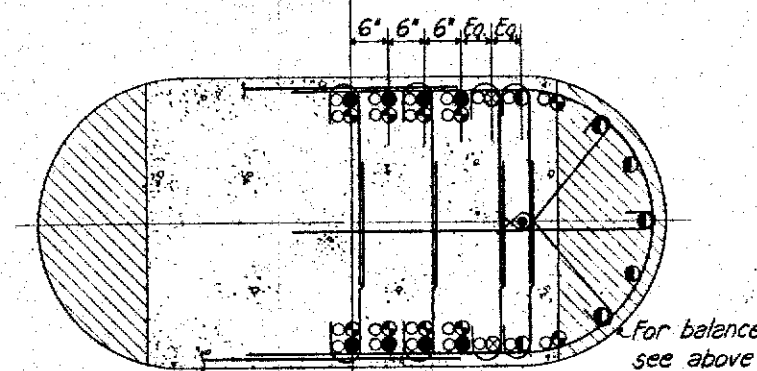


NOTE: Unless otherwise noted follow these minimum bend requirements.

TYPICAL COLUMN TIE OR PIER
CAP/BEAM STIRRUP BEND DETAILS
Not to scale



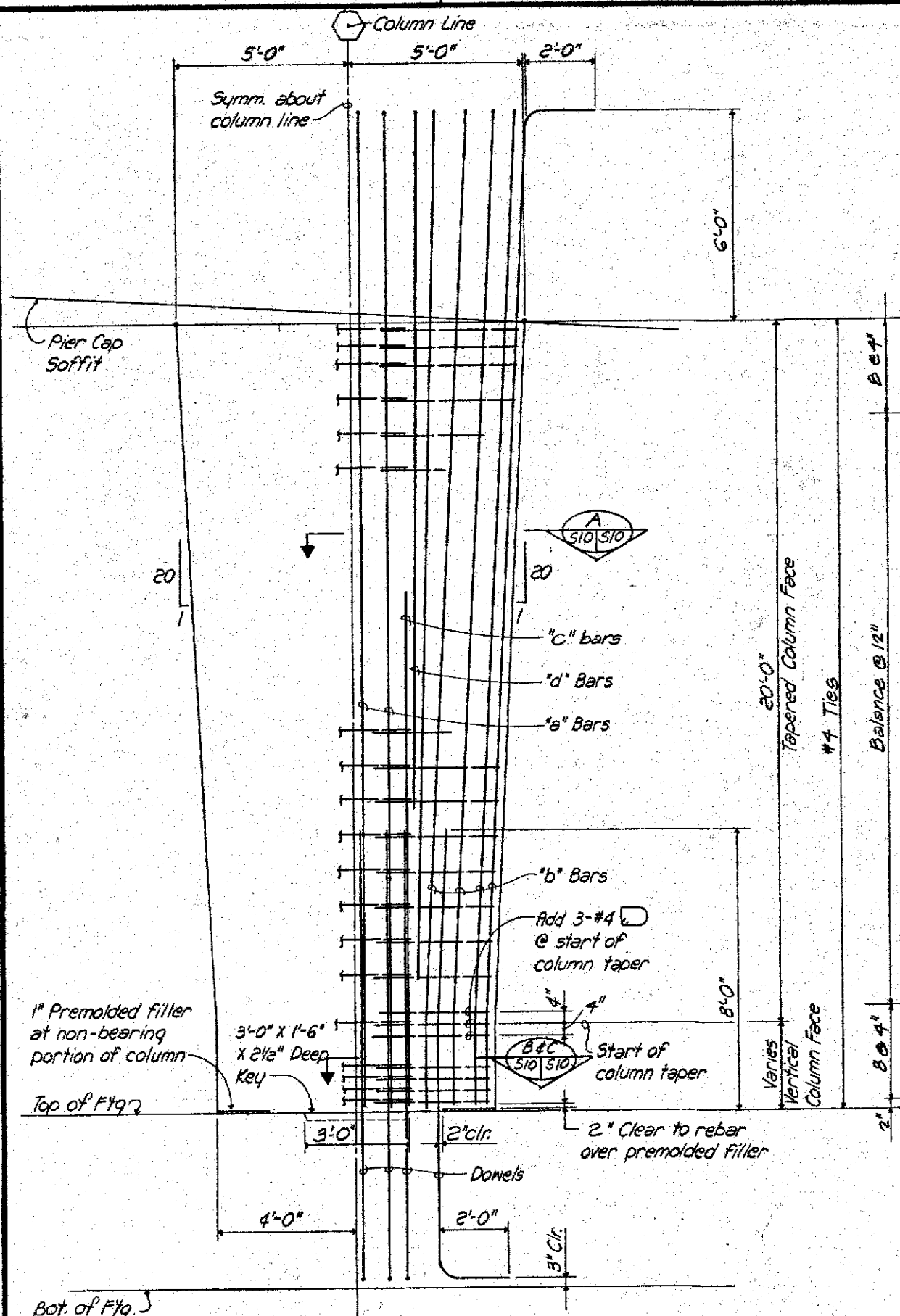
BOTTOM OF COLUMN AT PIERS #4 THRU #10



BOTTOM OF COLUMN AT PIER #1

TYPE "C" COLUMN SECTION AT PIERS #1 & #4 THRU #10

Scale: $\frac{3}{4}" = 1'-0"$



TYPE "C" COLUMN ELEVATION

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

ORIGINAL PLAN	SURVEYED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	
	TRACED BY _____	
	DESIGNED BY _____	
	QUANTITIES BY _____	
	CHECKED BY _____	

SSFA ENGINEERS INC.
501 Sumner St., #502
Honolulu, Hawaii 96817



This work was prepared by
me or under my supervision.
Howard A. Finkel

REDUCED PLAN
(HALF SIZE)

0 1 2 3

3 INCHES ON ORIGINAL PLAN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN REINFORCING DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. 1-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

SHEET No. 510 OF 40 SHEETS

PIER FRAME COLUMN REINFORCING SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	85	137

PIER	①	④	⑤	⑥	⑦	⑧	⑨	⑩	○	○	○	○	○
COLUMN	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C					
Reference Top of Pier Cap													
Reference Top of Column	28-#11 cont. (14-#8 bars & 14-#6 bars) 4-#11 "d" bars 12'-0" 4-#11 "d" bars 13'-0"	32-#11 cont. (14-#8 bars & 18-#6 bars) 4-#11 "d" bars 12'-0" 4-#11 "d" bars 18'-0"	28-#11 cont. (14-#8 bars & 14-#6 bars) 4-#11 "d" bars 12'-0" 4-#11 "d" bars 18'-0"	32-#11 cont. (14-#8 bars & 18-#6 bars) 4-#11 "d" bars 12'-0" 4-#11 "d" bars 18'-0"	26-#11 "c" bars 17'-6"	Similar to pier ⑤	Similar to pier ⑥	Similar to pier ⑤	Similar to pier ⑥				
COLUMN VERT. REINF. & TIE SPACING	18-#11 "c" bars 12'-6"	22-#11 "c" bars 17'-6"	4-#11 "c" bars 15'-0"	26-#11 "c" bars 17'-6"									
Reference Top of Footing													
NO. OF #11 DOWELS @ COLUMN BASE	40	44	22	48	22	48	22	48					
TYPE	C1	C1	C2	C3	C2	C3	C2	C3					

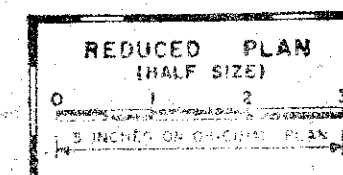
Note:

All vertical reinforcing bars shall be grade 60 & Stirrups grade 40.
All concrete strength shall be 5,000 p.s.i.

SSFM ENGINEERS INC.
301 Summer St., #502
Honolulu, Hawaii 96817



This work was prepared by me or under my supervision.
Howard Y. Fung



REFERENCE DRAWINGS:

- Pier schedule (column & footing elevations)---Sheet 59
- Column details-----Sheet 510

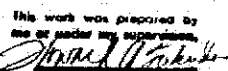
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN REINFORCING SCHEDULE

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

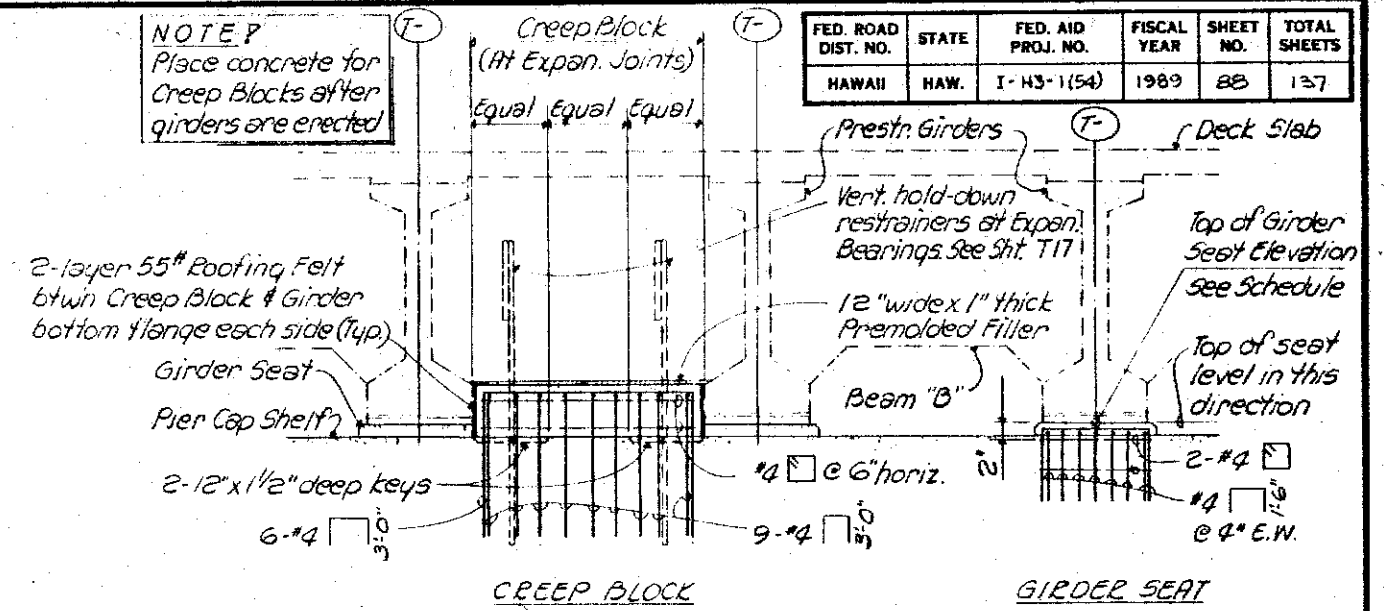
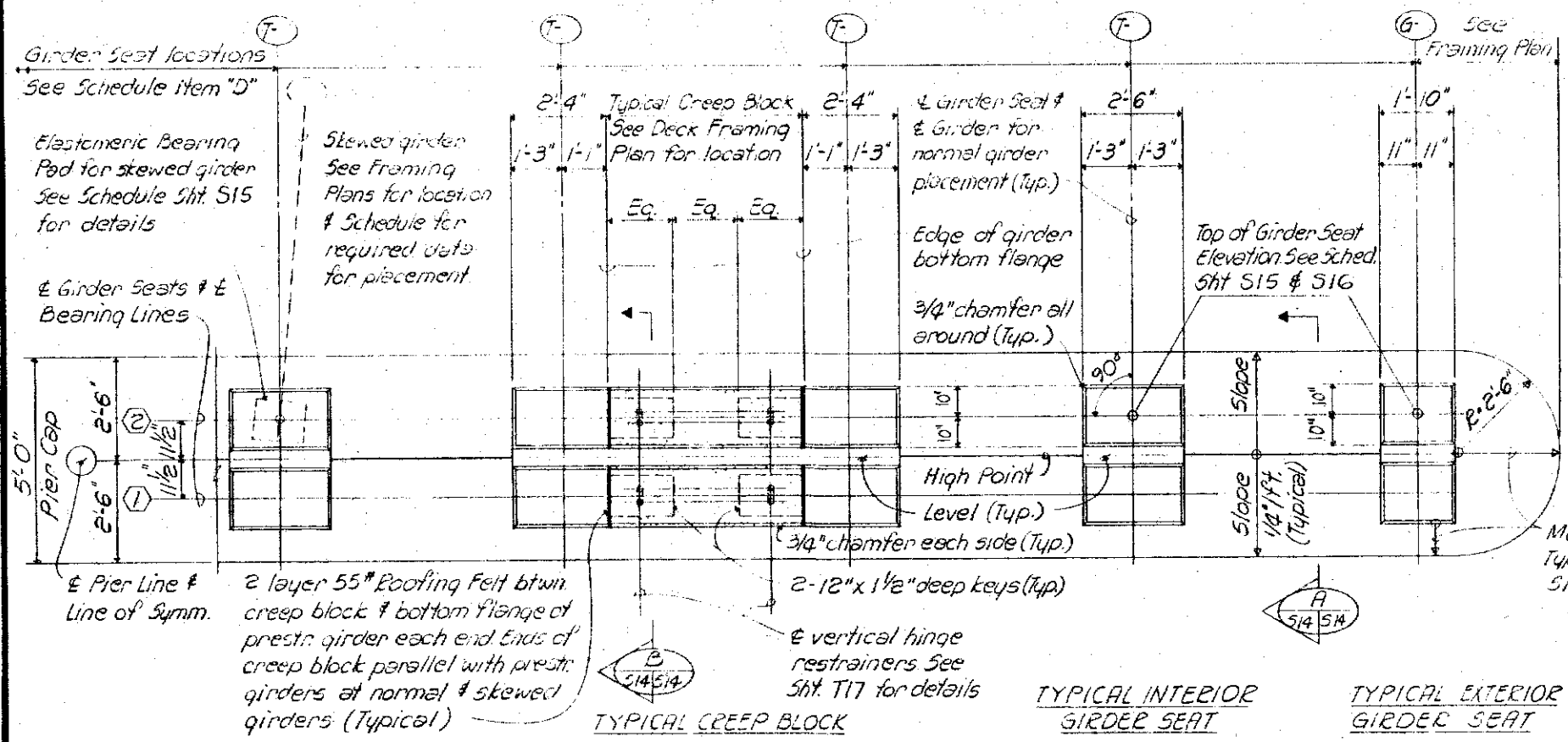
SHEET NO. 511 OF 40 SHEETS



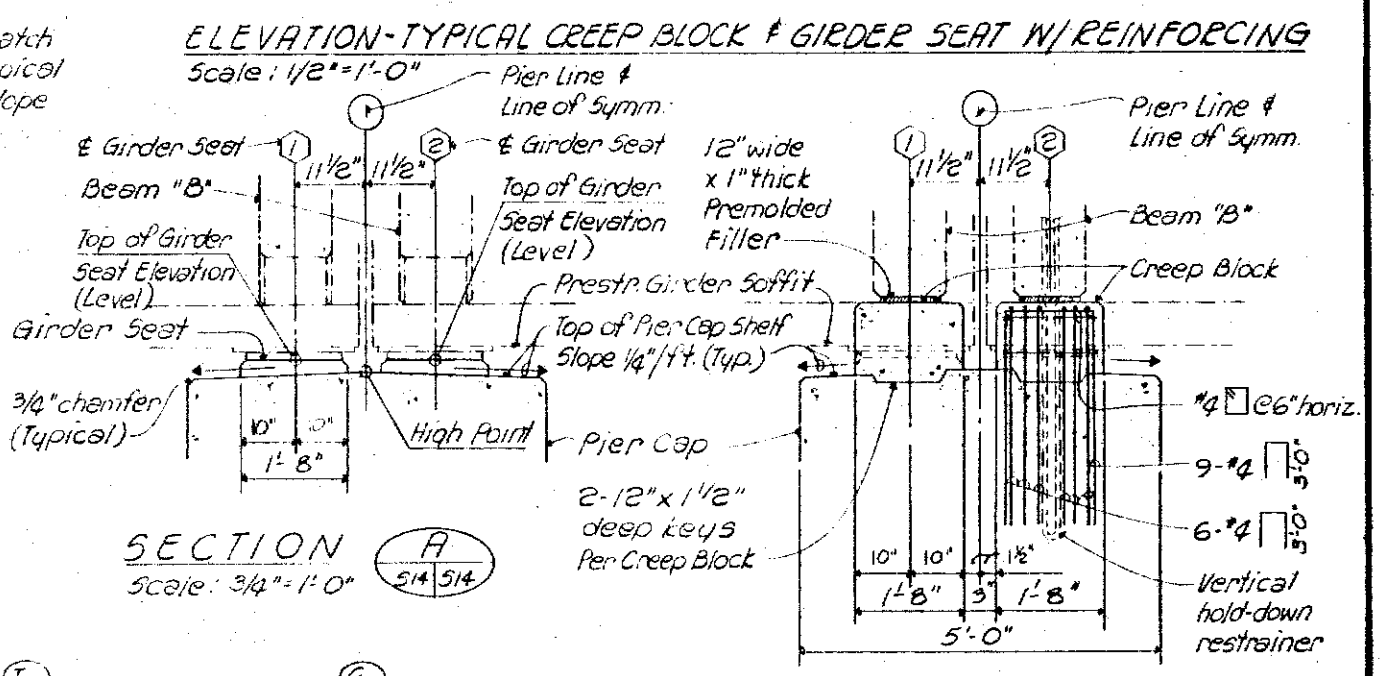
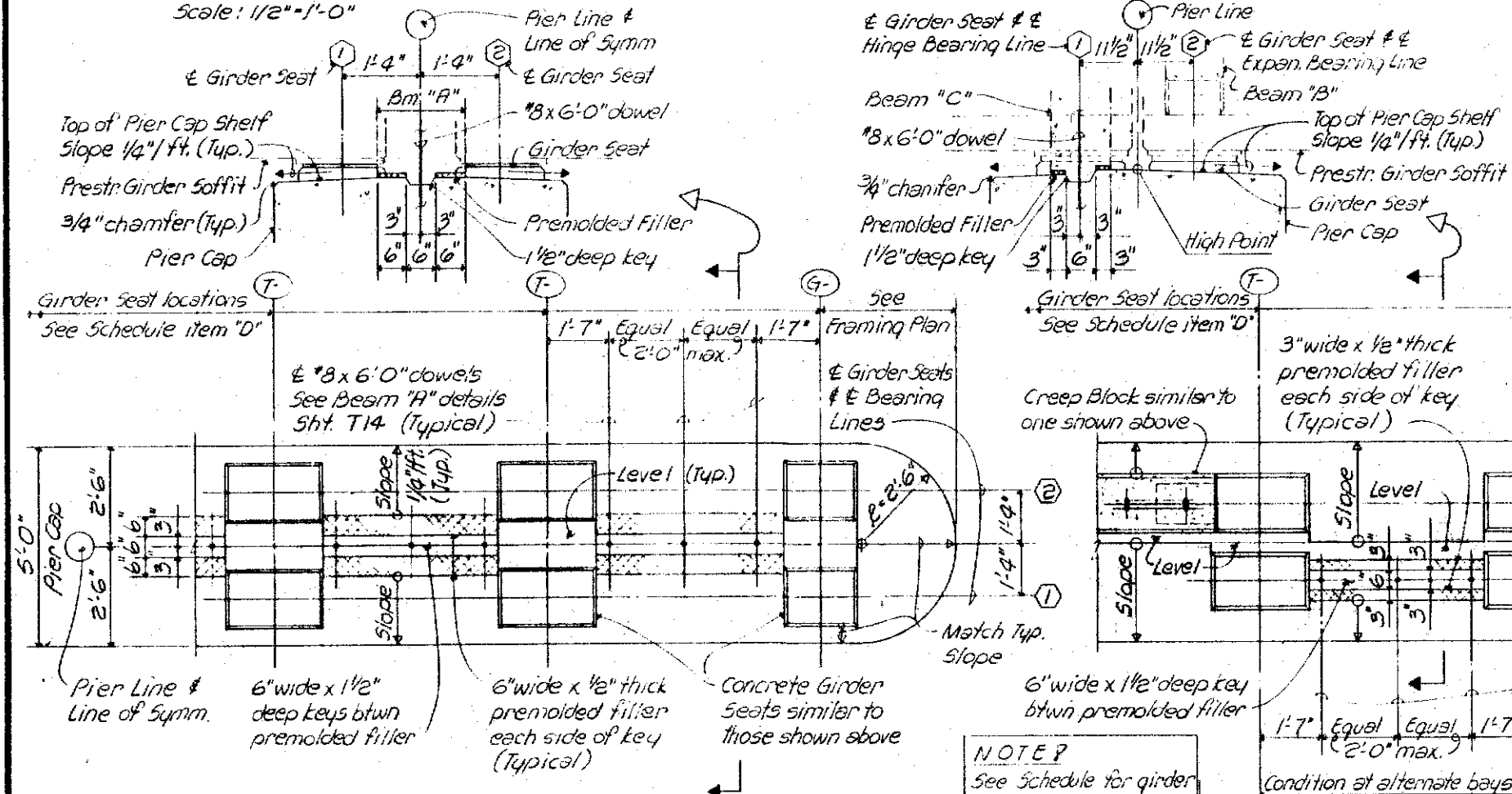
ORIGINAL PLAN	SURVEY	JO BY	DATE
NOTE BOOK	DRAWN BY		
	DESIGNED BY		
	QUANTITIES BY		
	CHECKED BY		
NO.			



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	88	137



PARTIAL PIER CAP SHELF PLAN AT EXPANSION BEARING PIERS
Scale: 1/2" = 1'-0"



PARTIAL PIER CAP SHELF PLAN AT HINGE BEARING PIERS WITH CONTINUOUS SUPPORT
Scale: 1/2" = 1'-0"

PARTIAL PIER CAP SHELF PLAN AT EXPANSION & HINGE BEARING PIERS WITH DISCONTINUOUS SUPPORT
Scale: 1/2" = 1'-0"

REDUCED PLAN
(HALF SIZE)
3 INCHES ON ORIGINAL PLAN

TYPICAL PIER CAP PLANS & DETAILS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)
SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 514 OF 40 SHEETS

SSFM ENGINEERS INC.
301 Sumner St., #502
Honolulu, Hawaii 96817

HOWARD V. FREUD
REGISTERED PROFESSIONAL ENGINEER
No. 13453
HAWAII, U.S.A.

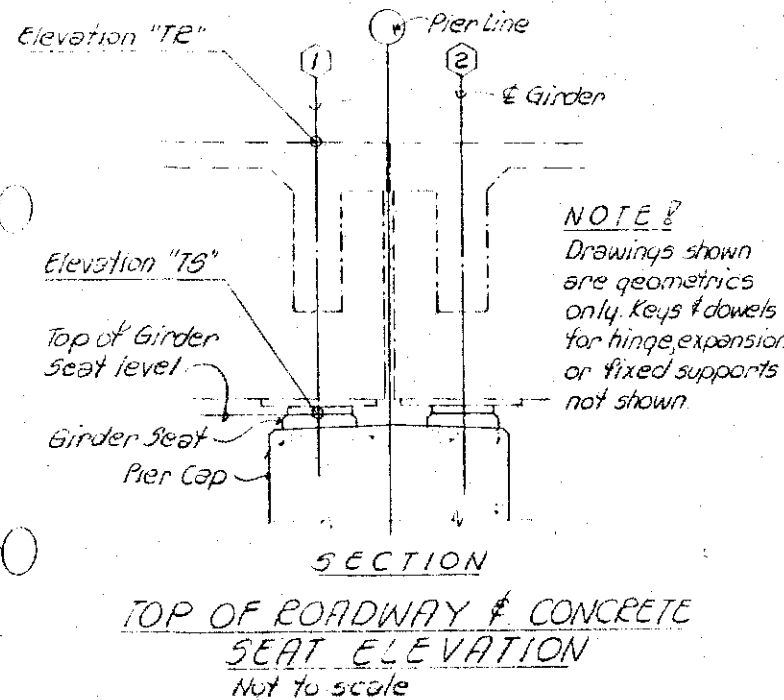
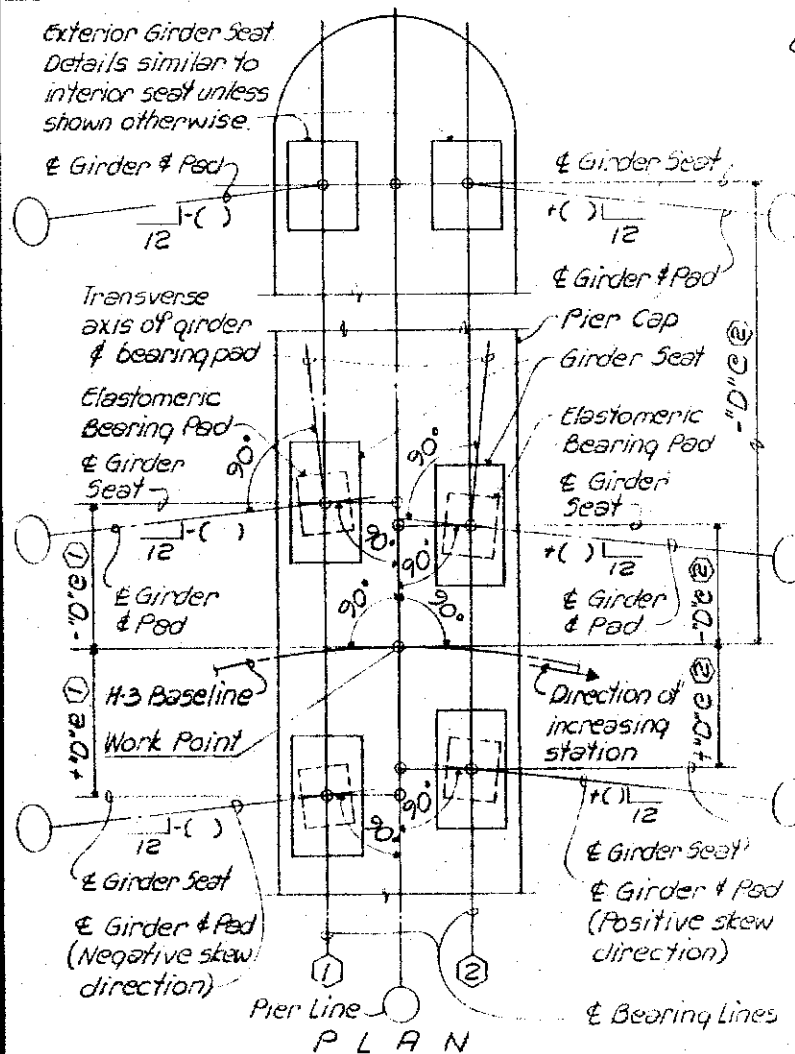
DATE: _____
DRAWN BY: _____
CHECKED BY: _____
NOTED BY: _____
QUANTITIES BY: _____

PIER CAP SHELF GIRDER SEAT LOCATIONS, ELEVATIONS & BEVELS & ELASTOMERIC BEARING PAD SKEW SCHEDULE

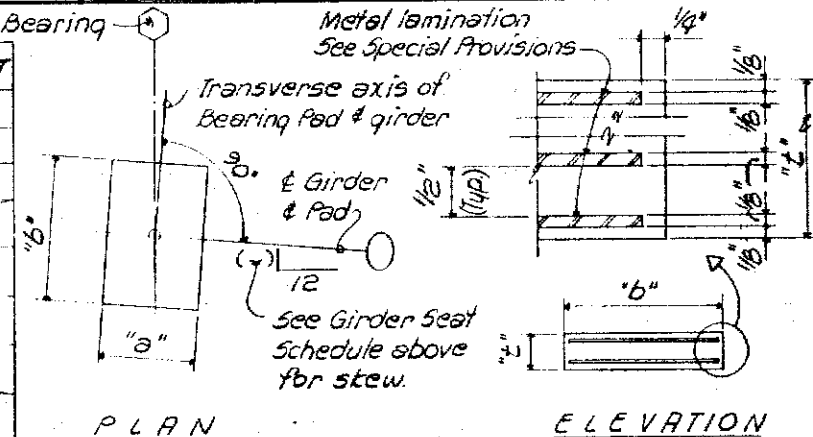
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	89	137

PIER LINE	①										PIER LINE	④										⑤					PIER LINE	⑤				
BEARING	①					②					BEARING	①					②					①					BEARING	②				
GIRDER	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	GIRDER	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	GIRDER	"D"	"TR"	"TS"	BEVEL	SKEW
G1	-41.00	118.06	112.23	11/16	5/16	-41.00	118.22	112.51	12/16	4/16	G1	-41.00	135.84	130.13	10/16	5/16	-41.00	135.98	130.19	10/16	6/16	-41.00	140.93	134.95	8/16	6/16	G1	-41.00	141.02	135.08	11/16	6/16
T1	-33.99	118.48	112.65	11/16	5/16	-33.99	118.64	112.93	12/16	4/16	T1	-36.00	136.14	130.43	10/16	5/16	-36.00	136.28	130.49	10/16	6/16	-36.00	141.23	135.25	8/16	6/16	T1	-36.50	141.29	135.35	11/16	6/16
T2	-26.98	118.90	113.07	11/16	5/16	-26.98	119.06	113.35	12/16	4/16	T2	-29.74	136.52	130.81	10/16	5/16	-29.74	136.66	130.86	10/16	6/16	-29.74	141.61	135.63	8/16	6/16	T2	-29.64	141.70	135.76	10/16	6/16
T3	-19.97	119.32	113.49	11/16	5/16	-19.97	119.48	113.77	12/16	4/16	T3	-23.48	136.89	131.18	10/16	5/16	-23.48	137.03	131.24	10/16	6/16	-23.48	141.98	136.00	8/16	6/16	T3	-22.79	142.11	136.17	10/16	6/16
T4	-12.96	119.74	113.91	11/16	5/16	-12.96	119.90	114.19	12/16	4/16	T4	-17.22	137.27	131.56	10/16	5/16	-17.22	137.41	131.61	10/16	6/16	-17.22	142.36	136.38	8/16	6/16	T4	-15.93	142.52	136.59	10/16	6/16
T5	-5.95	120.16	114.33	11/16	5/16	-5.95	120.32	114.61	12/16	4/16	T5	-10.96	137.64	131.93	10/16	5/16	-10.96	137.78	131.99	10/16	6/16	-10.96	142.73	136.75	8/16	6/16	T5	-9.07	142.94	137.00	10/16	6/16
T6	1.06	120.58	114.75	11/16	5/16	1.06	120.74	115.04	12/16	4/16	T6	-4.71	138.02	132.31	10/16	5/16	-4.70	138.16	132.37	10/16	6/16	-4.70	143.11	137.13	8/16	6/16	T6	-2.21	143.35	137.41	10/16	6/16
T7	8.07	121.00	115.17	11/16	5/16	8.07	121.16	115.46	12/16	4/16	T7	1.55	138.39	132.68	10/16	5/16	1.55	138.53	132.74	10/16	6/16	1.55	143.48	137.50	8/16	6/16	T7	4.64	143.76	137.82	10/16	6/16
T8	15.08	121.42	115.59	11/16	5/16	15.08	121.58	115.88	12/16	4/16	T8	7.81	138.77	133.06	10/16	5/16	7.81	138.91	133.12	10/16	6/16	7.81	143.86	137.88	8/16	6/16	T8	11.50	144.17	138.23	9/16	6/16
T9	22.09	121.85	116.01	11/16	5/16	22.09	122.01	116.30	12/16	4/16	T9	14.07	139.14	133.44	10/16	5/16	14.07	139.28	133.49	10/16	6/16	14.07	144.23	138.25	8/16	6/16	T9	18.35	144.58	138.64	9/16	6/16
T10	29.10	122.27	116.43	11/16	5/16	29.10	122.43	116.72	12/16	4/16	T10	20.33	139.52	133.81	10/16	5/16	20.33	139.66	133.87	10/16	6/16	20.33	144.61	138.63	8/16	6/16	T10	25.21	144.99	139.05	9/16	6/16
T11	36.11	122.69	116.85	11/16	5/16	36.11	122.85	117.14	12/16	4/16	T11	26.58	139.90	134.19	10/16	5/16	26.58	140.04	134.24	10/16	6/16	26.58	144.99	139.01	8/16	6/16	T11	32.07	145.40	139.47	9/16	6/16
T12	43.12	123.11	117.27	10/16	5/16	43.12	123.27	117.56	11/16	4/16	T12	32.84	140.27	134.56	10/16	5/16	32.84	140.41	134.62	10/16	6/16	32.84	145.36	139.38	8/16	6/16	T12	38.92	145.82	139.88	9/16	6/16
G2	50.13	123.53	117.69	10/16	5/16	50.13	123.69	117.98	11/16	4/16	T13	39.10	140.65	134.94	10/16	5/16	39.10	140.79	134.99	10/16	6/16	39.10	145.74	139.76	8/16	6/16	T13	45.78	146.23	140.29	9/16	6/16
											T14	45.36	141.02	135.31	10/16	5/16	45.36	141.16	135.37	10/16	6/16	45.36	146.11	140.13	8/16	6/16	G2	50.28	146.50	140.56	9/16	6/16
											G2	50.36	141.32	135.61	9/16	5/16	50.36	141.46	135.67	10/16	6/16	50.36	146.41	140.43	8/16	6/16						

LEGEND:
 "D" - Distance of ϵ girder intersection with bearing line from H-3 Baseline.
 "TR" - Top of roadway elevation at intersection of ϵ girder & bearing line.
 "TS" - Top of girder seat elevation at intersection of ϵ girder & bearing line.
 Bevel - Girder bearing & bevel
 Skew - Elastomeric bearing pad & girder skew
NOTE:
 Items "D", "TR" & "TS" are given in feet.



ELASTOMERIC BEARING PAD SCHEDULE FOR GIRDER SEAT							
Pier Line	Bearing Line	G1 & G2 Girders			T- Girders		
		Dimensions			Dimensions		
		"a"	"b"	"t"	"a"	"b"	"t"
		VOID					
⑤, ⑦ & ③	① & ②	18"	17"	2 1/4"	13"	20"	2 1/4"
⑪	①	18"	17"	2 1/4"	13"	20"	2 1/4"

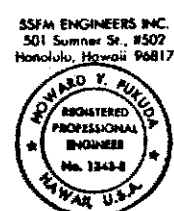


- NOTES:**
- Fiberglass reinforced elastomeric pads may be used in lieu of pads with metal lamination as shown.
 - Minimum total thickness of fiberglass reinforced elastomeric pads shall be equal to the sum of the 1/2" pads between metal laminations + 1/4" (Revise dimension "t" in schedule accordingly).
 - Any revisions to elastomeric bearing pad thicknesses shall be reflected in concrete seat & girder shelf elevations.
 - Cost of bearing pads incidental to concrete.

ELASTOMERIC BEARING PAD DETAIL
 Not to scale

1/25/89 Revised Pad & Girder Bearing Detail
 Date Revision

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PIER CAP BEARING GEOMETRICS
 INTERSTATE ROUTE H-3
 F.A.I. PROJ. NO. I-H3-1(54)
 SCALE: AS NOTED DATE: SEPT. 1988
 SHEET NO. 515 OF 40 SHEETS



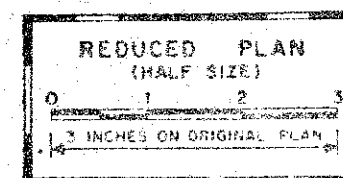
PIER CAP SHELF GIRDER SEAT LOCATIONS, ELEVATIONS & BEVELS
& ELASTOMERIC BEARING PAD SKEW SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-3-1(54)	1989	90	137

Pier Line	6										7										8									
Bearing	1					2					1					2					1					2				
Girder	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW
G1	-41.00	145.78	139.84	8/16	6/16	-41.00	145.91	139.97	10/16	3/16	-37.50	150.69	144.75	8/16	8/16	-37.50	150.78	144.85	9/16	0	-37.50	154.70	148.77	7/16	0	-37.50	154.79	148.85	7/16	0
T1	-36.50	146.00	140.07	9/16	6/16	-36.50	146.13	140.20	10/16	3/16	-33.00	150.82	144.89	8/16	8/16	-33.00	150.92	144.98	8/16	0	-33.00	154.78	148.84	7/16	0	-33.00	154.86	148.92	7/16	0
T2	-29.64	146.35	140.41	8/16	6/16	-29.64	146.47	140.54	9/16	1/16	-26.86	151.01	145.07	8/16	7/16	-26.50	151.11	145.17	8/16	0	-26.50	154.88	148.94	7/16	0	-26.50	154.96	149.02	7/16	0
T3	-22.79	146.69	140.75	8/16	6/16	-22.79	146.81	140.87	9/16	0	-20.71	151.19	145.25	7/16	5/16	-20.00	151.30	145.36	8/16	0	-20.00	154.98	149.04	6/16	0	-20.00	155.06	149.12	7/16	0
T4	-15.93	147.03	141.10	8/16	6/16	-15.93	147.15	141.21	9/16	-2/16	-14.57	151.37	145.44	7/16	4/16	-13.50	151.49	145.55	8/16	0	-13.50	155.08	149.14	6/16	0	-13.50	155.16	149.22	7/16	0
T5	-9.07	147.38	141.44	8/16	6/16	-9.07	147.49	141.55	8/16	-3/16	-8.43	151.56	145.62	7/16	3/16	-7.00	151.68	145.75	8/16	0	-7.00	155.18	149.24	6/16	0	-7.00	155.26	149.32	7/16	0
T6	-2.21	147.72	141.78	8/16	6/16	-2.22	147.83	141.89	8/16	-4/16	-2.29	151.74	145.80	6/16	1/16	-0.50	151.88	145.94	7/16	0	-0.50	155.28	149.34	6/16	0	-0.50	155.36	149.42	7/16	0
T7	4.64	148.06	142.12	8/16	6/16	4.64	148.17	142.23	8/16	-6/16	3.85	151.93	145.99	6/16	0	6.00	152.07	146.13	7/16	0	6.00	155.35	149.41	6/16	0	6.00	155.43	149.49	6/16	0
T8	11.50	148.40	142.47	7/16	6/16	11.50	148.51	142.57	7/16	-6/16	10.71	152.13	146.19	6/16	0	12.50	152.26	146.32	7/16	0	12.50	155.41	149.48	5/16	0	12.50	155.49	149.55	6/16	0
T9	18.35	148.75	142.81	7/16	6/16	18.35	148.85	142.91	7/16	-6/16	17.57	152.34	146.40	6/16	0	19.00	152.45	146.51	7/16	0	19.00	155.48	149.54	5/16	0	19.00	155.55	149.61	6/16	0
T10	25.21	149.09	143.15	7/16	6/16	25.21	149.19	143.25	7/16	-6/16	24.43	152.54	146.60	5/16	0	25.50	152.64	146.70	6/16	0	25.50	155.54	149.61	5/16	0	25.50	155.61	149.67	6/16	0
T11	32.07	149.43	143.50	7/16	6/16	32.07	149.53	143.59	7/16	-6/16	31.28	152.75	146.81	5/16	0	32.00	152.83	146.90	6/16	0	32.00	155.61	149.67	5/16	0	32.00	155.67	149.74	5/16	0
T12	38.92	149.78	143.84	7/16	6/16	38.92	149.87	143.93	6/16	-6/16	38.14	152.95	147.01	5/16	0	38.50	153.03	147.09	6/16	0	38.50	155.67	149.74	4/16	0	38.50	155.74	149.80	5/16	0
T13	45.78	150.12	144.18	7/16	6/16	45.78	150.21	144.27	6/16	-6/16	45.00	153.16	147.22	4/16	0	45.00	153.22	147.28	6/16	0	45.00	155.74	149.80	4/16	0	45.00	155.80	149.86	5/16	0
G2	50.28	150.34	144.41	6/16	6/16	50.28	150.43	144.49	6/16	-6/16	49.50	153.29	147.35	4/16	0	49.50	153.35	147.41	6/16	0	49.50	155.78	149.85	4/16	0	49.50	155.84	149.90	5/16	0

Pier Line	9										10									
Bearing	1					2					1					2				
Girder	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW
G1	-37.50	157.74	151.80	5/16	0	-37.50	157.79	151.85	6/16	0	-37.50	160.25	154.31	4/16	0	-37.50	160.31	154.37	5/16	0
T1	-33.00	157.80	151.87	5/16	0	-33.00	157.85	151.92	6/16	0	-33.00	160.31	154.38	4/16	0	-33.00	160.37	154.44	5/16	0
T2	-26.50	157.90	151.96	5/16	0	-26.50	157.95	152.01	6/16	0	-26.50	160.41	154.47	4/16	0	-26.50	160.47	154.53	5/16	0
T3	-20.00	158.00	152.06	5/16	0	-20.00	158.05	152.11	6/16	0	-20.00	160.51	154.57	4/16	0	-20.00	160.57	154.63	5/16	0
T4	-13.50	158.10	152.16	5/16	0	-13.50	158.15	152.21	6/16	0	-13.50	160.61	154.67	4/16	0	-13.50	160.67	154.73	5/16	0
T5	-7.00	158.19	152.26	5/16	0	-7.00	158.24	152.31	6/16	0	-7.00	160.70	154.77	4/16	0	-7.00	160.76	154.83	5/16	0
T6	-0.50	158.29	152.35	5/16	0	-0.50	158.34	152.40	6/16	0	-0.50	160.80	154.86	4/16	0	-0.50	160.86	154.92	5/16	0
T7	6.00	158.24	152.31	5/16	0	6.00	158.29	152.35	6/16	0	6.00	160.72	154.73	4/16	0	6.00	160.78	154.84	5/16	0
T8	12.50	158.18	152.24	4/16	0	12.50	158.23	152.29	5/16	0	12.50	160.62	154.68	4/16	0	12.50	160.68	154.74	5/16	0
T9	19.00	158.12	152.18	4/16	0	19.00	158.17	152.23	5/16	0	19.00	160.52	154.59	4/16	0	19.00	160.58	154.65	5/16	0
T10	25.50	158.06	152.12	4/16	0	25.50	158.10	152.16	5/16	0	25.50	160.43	154.49	4/16	0	25.50	160.49	154.55	5/16	0
T11	32.00	158.00	152.06	4/16	0	32.00	158.04	152.10	5/16	0	32.00	160.33	154.39	4/16	0	32.00	160.39	154.45	5/16	0
T12	38.50	157.94	152.00	4/16	0	38.50	157.98	152.04	5/16	0	38.50	160.23	154.29	4/16	0	38.50	160.29	154.35	5/16	0
T13	45.00	157.88	151.94	3/16	0	45.00	157.91	151.98	5/16	0	45.00	160.13	154.20	4/16	0	45.00	160.19	154.26	5/16	0
G2	49.50	157.83	151.90	3/16	0	49.50	157.87	151.93	5/16	0	49.50	160.07	154.13	3/16	0	49.50	160.13	154.19	5/16	0

DATE	_____
BY	_____
CHECKED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
NOTE BOOK	_____
NO.	_____



SSFM ENGINEERS INC.
501 Summer St., #502
Honolulu, Hawaii 96817



This work was prepared by me or under my supervision.
Howard Y. Fukuda

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

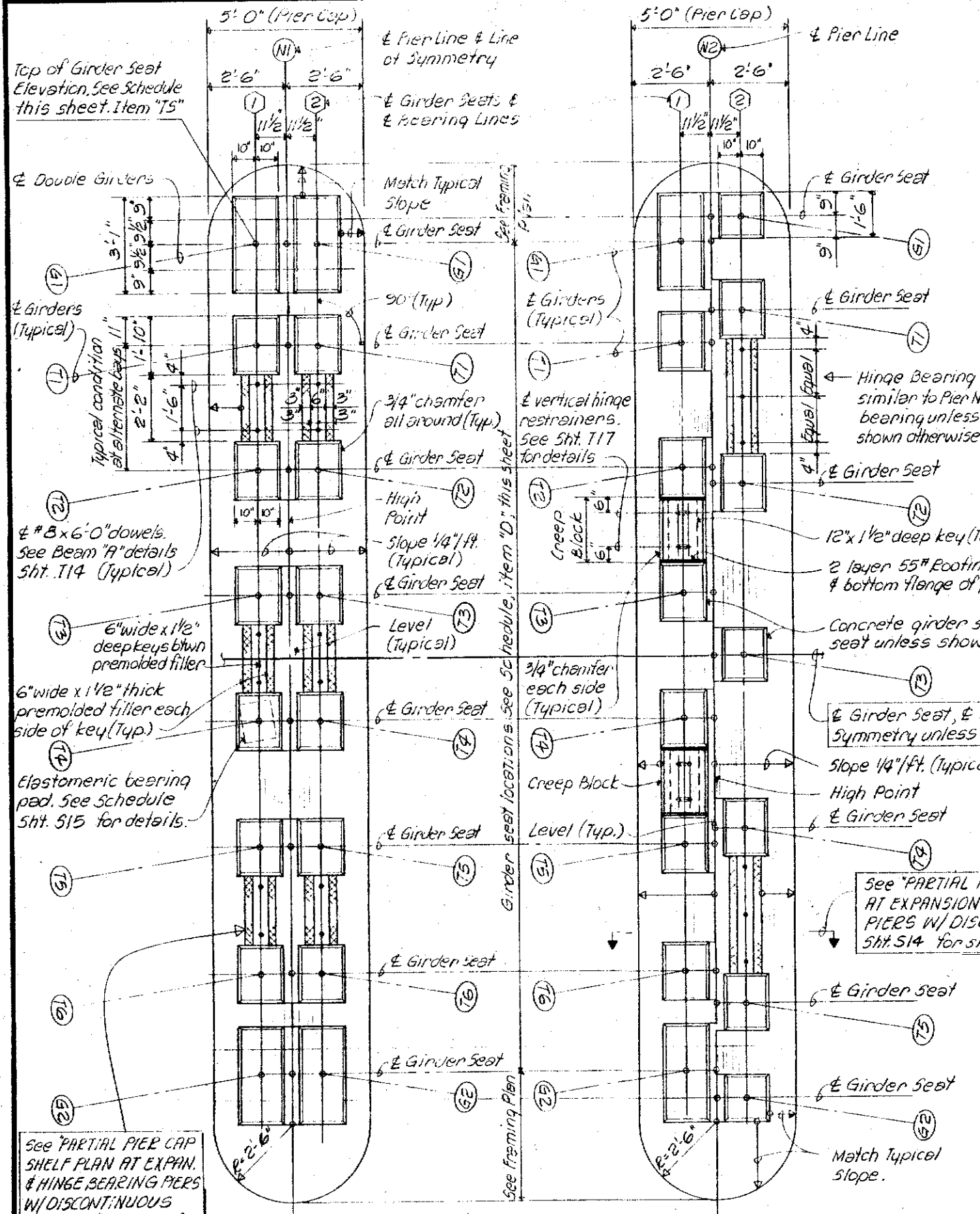
**PIER CAP
BEARING GEOMETRICS**

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

DATE: SEPT. 1988

SHEET NO. 516 OF 40 SHEETS

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



RAMP "N" PIER CAP SHELF PLANS
Scale: 1/2" = 1'-0"
1
517/517

**PIER CAP SHELF GIRDER SEAT LOCATIONS, ELEVATIONS & BEVELS
& ELASTOMERIC BEARING PAD SKEW SCHEDULE**

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	91	137

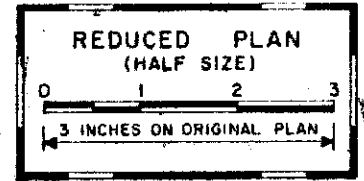
GIRDER	PIER LINE (N1)										PIER LINE (N2)									
	E BEARING										E BEARING									
	①					②					①					②				
	"D"	"TR"	"TS"	BEVEL	SEW	"D"	"TR"	"TS"	BEVEL	SEW	"D"	"TR"	"TS"	BEVEL	SEW	"D"	"TR"	"TS"	BEVEL	SEW
G1	-3.00	112.33	108.33	-11/16	-17/16	-3.00	112.23	108.28	-9/16	17/16	-3.00	109.22	105.13	-12/16	-17/16	-3.79	109.20	105.29	-9/16	14/16
T1	0.00	112.03	108.03	-11/16	-17/16	0.00	111.93	107.98	-9/16	17/16	0.00	108.92	104.83	-12/16	-17/16	-1.00	108.92	105.01	-9/16	14/16
T2	4.00	111.63	107.63	-11/16	-17/16	4.00	111.53	107.58	-9/16	17/16	4.00	108.52	104.43	-12/16	-17/16	4.50	108.37	104.46	-9/16	14/16
T3	8.00	111.23	107.23	-11/16	-17/16	8.00	111.13	107.18	-9/16	17/16	8.00	108.12	104.03	-12/16	-17/16	10.00	107.82	103.91	-9/16	14/16
T4	12.00	110.83	106.83	-11/16	-17/16	12.00	110.73	106.78	-9/16	17/16	12.00	107.72	103.63	-12/16	-17/16	15.50	107.27	103.36	-9/16	14/16
T5	16.00	110.43	106.43	-11/16	-17/16	16.00	110.33	106.38	-9/16	17/16	16.00	107.32	103.23	-12/16	-17/16	21.00	106.72	102.81	-9/16	14/16
T6	20.00	110.03	106.03	-12/16	-17/16	20.00	109.93	105.98	-9/16	17/16	20.00	106.92	102.83	-13/16	-17/16					
G2	23.00	109.73	105.73	-12/16	-17/16	23.00	109.63	105.68	-9/16	17/16	23.00	106.62	102.53	-13/16	-17/16	23.79	106.44	102.53	-9/16	14/16

Schedule Notes

- See Sht. S15 for schematic drawings of Pier Cap Shelf showing location of each item ("D", "TR", etc.) listed in schedule above & also for legend defining each item.
- See Sht. S15 for elastomeric bearing pad details & notes.

ELASTOMERIC BEARING PAD SCHEDULE FOR GIRDER SEAT

PIER LINE	BEARING LINE	G1 & G2 GIRDERS			T- GIRDERS		
		DIMENSIONS			DIMENSIONS		
		"a"	"b"	"c"	"a"	"b"	"c"
(N2)	(1)	17"	14"	1 5/8"	13"	13"	1 5/8"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**RAMP N PIER CAP
DETAILS & GEOMETRICS**

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET No. 517 OF 40 SHEETS

SSFM ENGINEERS INC.
501 Summer St., #502
Honolulu, Hawaii 96817

HOWARD Y. FUKUDA
REGISTERED
PROFESSIONAL
ENGINEER
No. 1343-S
HAWAII, U.S.A.

This work was prepared by me or under my supervision.
Howard Y. Fukuda

1-25-89	Revised seat & pad dimensions
Date	Revision

Hand-drawn structural drawing of a bridge deck section, showing reinforcement details, dimensions, and elevation markers.

Dimensions (Top): 21'-9", 8'-0", 8'-0", 6'-9", 15'-3", 8'-0", 8'-0", 21'-9"

Dimensions (Left): 2'-0" (Column #4 tie spacing), 8'-0", 6'-6", 2'-0" (Column #4 tie spacing)

Dimensions (Right): 2'-0", 6'-0", 8'-0" lap, 3'-0"

Reinforcement Details:

- Top Deck:**
 - 14-#14 cont.
 - 12-#14x40'-0"
 - 12-#14x35'-0"
 - 14-#14 cont.
 - 12-#14x40'-0"
 - 12-#14x35'-0"
- Bottom Deck:**
 - 11-#11 cont, bot.
 - 14-#5 @ 2'-0"
 - 6-#5 @ 2'-0" @ 12"
 - 10-#11x17'-0" bot
 - 11-#11x40'-0" bot
 - 11-#11 cont, bot.
 - 14-#5 @ 4'-0"
 - 6-#5 @ 2'-0" @ 12"
- Other Details:**
 - 6-#6 cont, ea. side
 - Cast weld splice
 - 4'-0" Lap
 - 3/4" chamfer (Typ.)
 - Cont. drip See Det 1/512

Elevation Markers: El. [a], El. [b], El. [c], El. [d], El. [e], El. [f], El. [g], El. [h]

Other Labels: Pier Cap, 5"irr. Spc., #5 5"irr., H-3 BASELINE, Column, Top of Ftq. El. 7, #11 Dowels

Typ. slab reinf.

#5 @ 12" cont.

Typ. slab reinf.

14-#14 cont.

12-#14 x 40'-0"

12-#14 x 35'-0"

11'-6" h.

4"

2'-0"

1'-2"

Constr. Jt.

#5 @ 24" cont.

8-#6 cont.

4-#6 @ 24"

6-#6 cont. ea. side

#5 stirrups

slab reinf.

1'-6" min. (Varies @ cantilever)

3/4" chamfer (Typ.)
Cont. drip along edge of Pier
Cap. See Det. 11/512

Column

8'-0"

10-#11 x 17'-0"
bot., added

11-#11 cont. bot.
(See Pier Cap Elevation)

14'-0" min. & 16'-0" max.

24 sp. @ 6 1/2" top of col.

24 sp. @ 5 1/2" bot. of col.

2" c/c

4'-0"

1'-8" Lap (Top)

1'-8"

#4 ties

#4 @ 6" (13 sets)

Non-bearing portion at base of column shown hatched (Extent of premolded filler)

ELEVATION	PIER #2	PIER #3
a	123.45	130.25
b	125.12	131.92
c	127.40	134.20
d	129.06	135.86
e	117.12	123.92
f	112.40	120.20
g	97.12	103.92
h	99.40	106.20
TOP OF FTG. ELEV.	97.00	101.00

- Dowels (total 50-#11)
- "a" bars (cont. flared total 60-#11)

1. Numbers at ends of rebars (Pier Cap elevation) indicate distance in feet from E of columns.
2. See SH-58 for Piers #2 & #3 footings.
3. Pier Cap concrete strength shall be 3,000 p.s.i. & reinforcing steel shall be Grade 40.

REDUCED PLAN
(HALF SIZE)
0 1 2
3 INCHES ON ORIGINAL PLAN



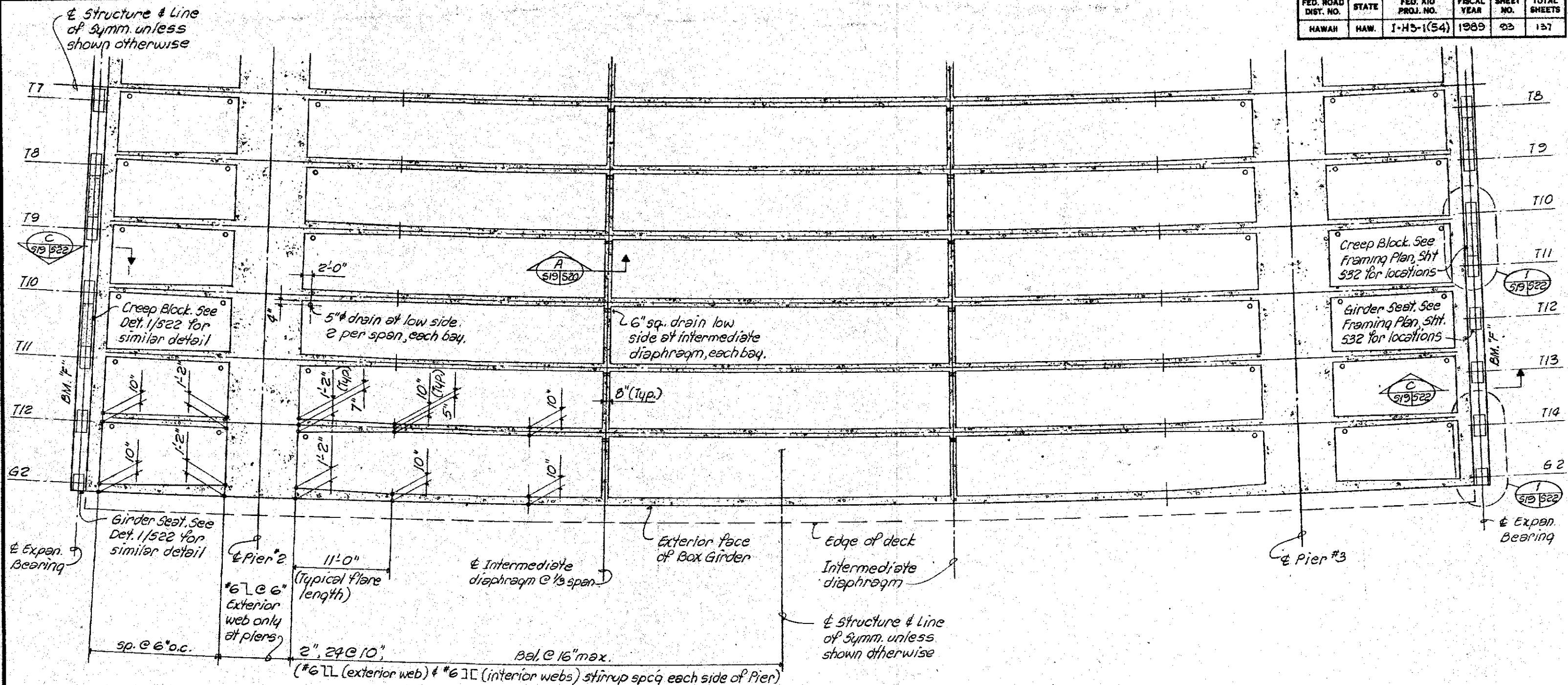
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Edward U. Gurnea

BOX GIRDER ELEVATION & SECTIONS

INTERSTATE ROUTE H-3
E.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT 1988
SHEET No. 518 OF 40 SHEETS

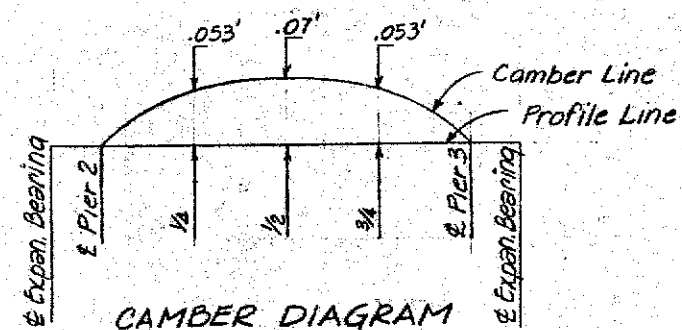
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	93	137



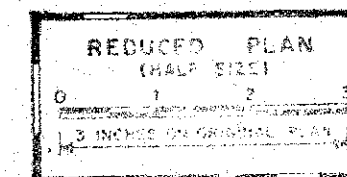
PARTIAL BOX GIRDER FRAMING PLAN

Scale: Horiz. = 3/32" = 1'-0", Vert. = 3/16" = 1'-0"

NOTE:
See Sht. 520 for Box Girder dimensions.



Does not include allowance for falsework settlement



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BOX GIRDER
FRAMING PLAN**

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

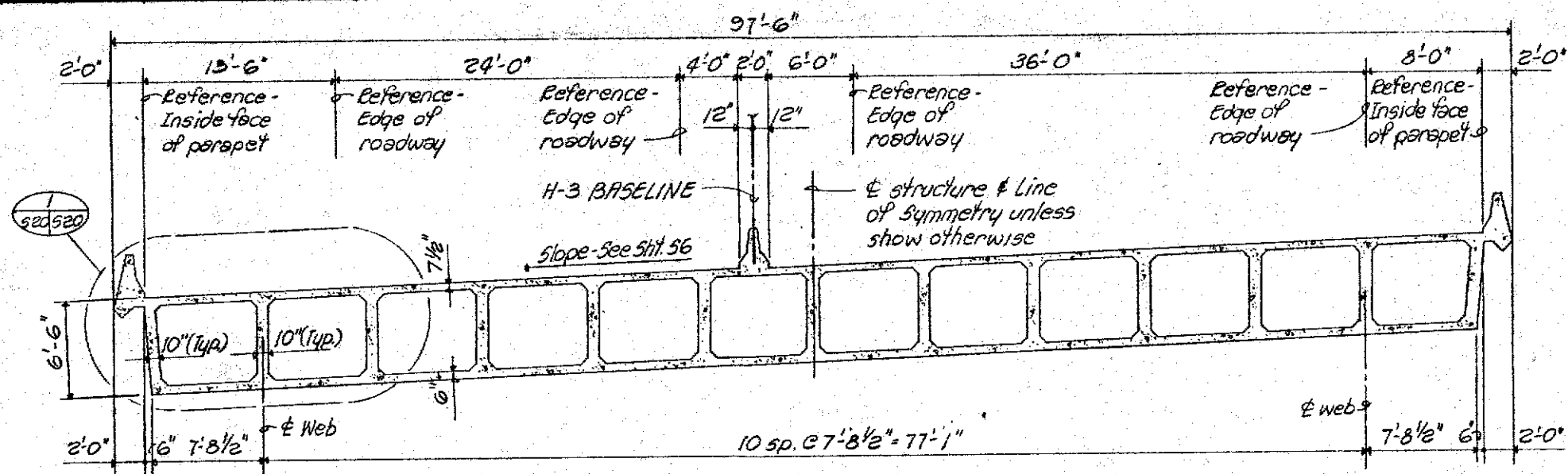
SHEET NO. 519 OF 40 SHEETS

SSFM ENGINEERS, INC.
501 Summer St., #502
Honolulu, Hawaii 96817

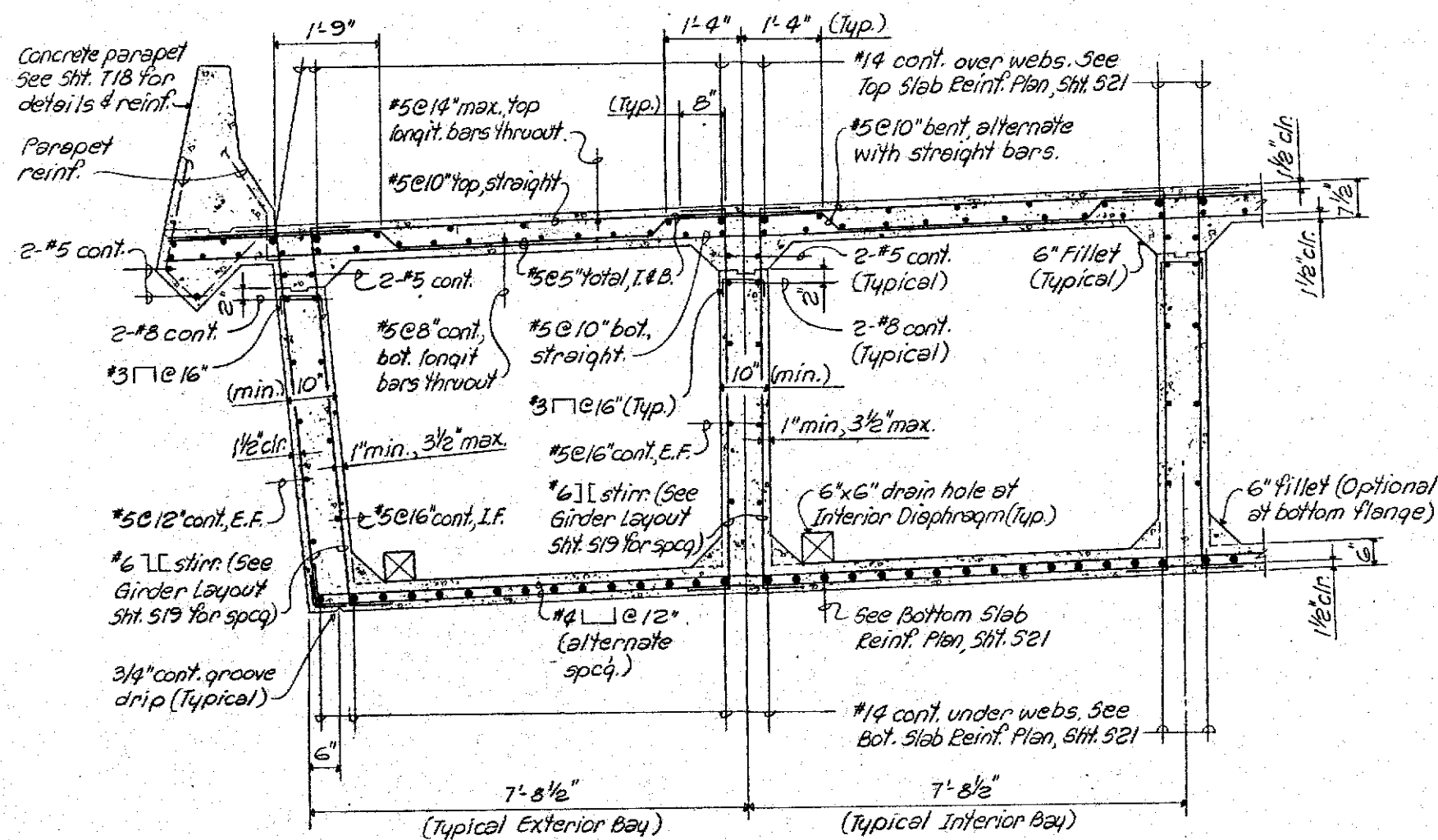


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Howard Y. Fukuda

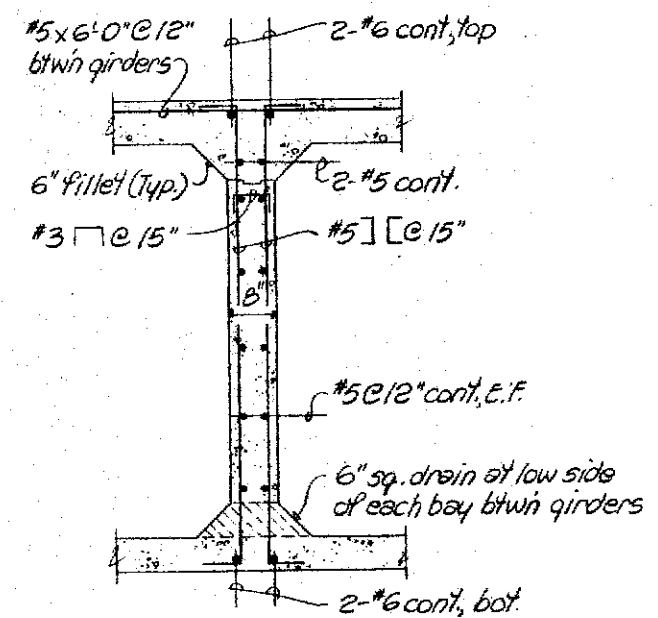
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1969	94	137



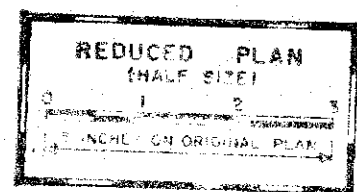
TYPICAL BOX GIRDER SECTION
Scale: 3/16" = 1'-0"



PARTIAL BOX GIRDER SECTION
Scale: 3/4" = 1'-0"



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



SSFM ENGINEERS INC.
501 Summer St., #502
Honolulu, Hawaii 96817



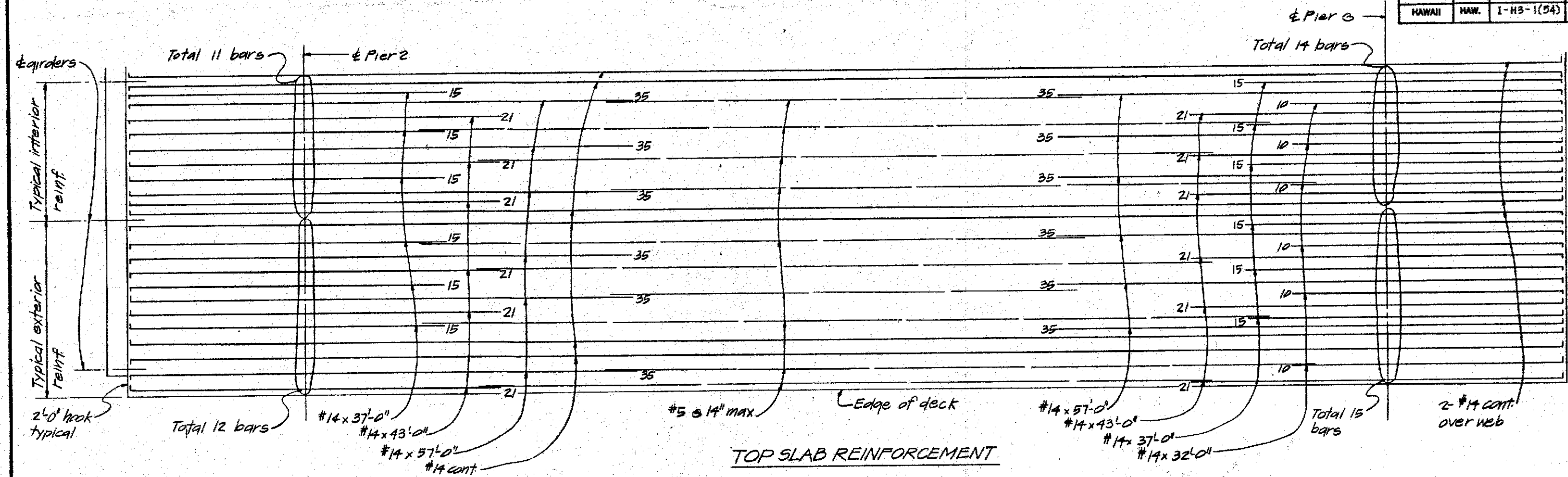
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Howard Y. Fukuda

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

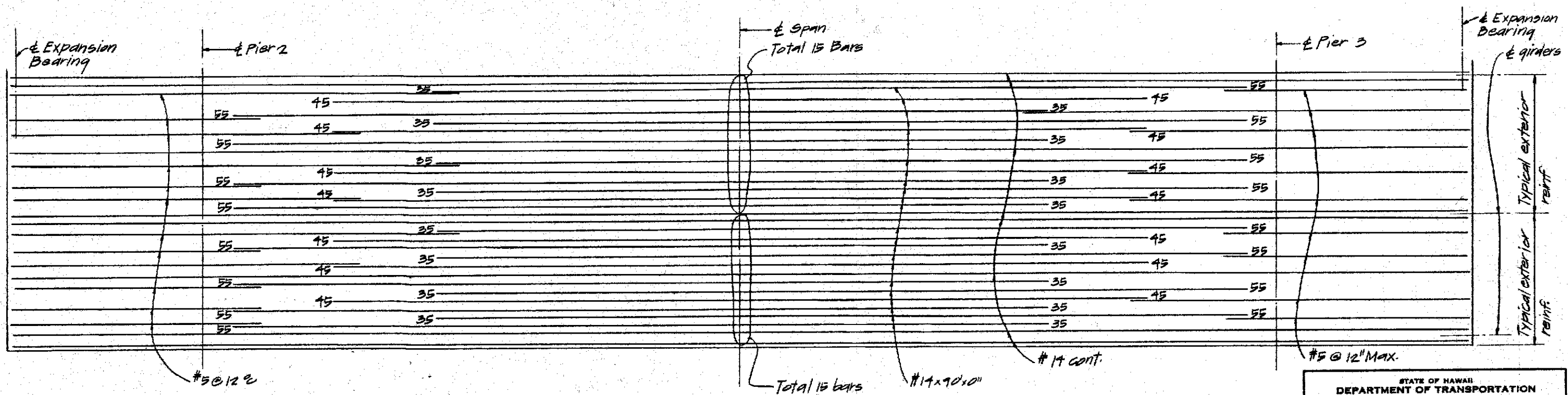
TYPICAL BOX GIRDER SECTION

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)
SCALE: AS NOTED DATE: SEPT. 1968
SHEET NO. S200 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	95	137



TOP SLAB REINFORCEMENT



BOTTOM SLAB REINFORCEMENT

REDUCED PLAN
(HALF SIZE)
0 1 2
3 INCHES ON ORIGINAL PLAN

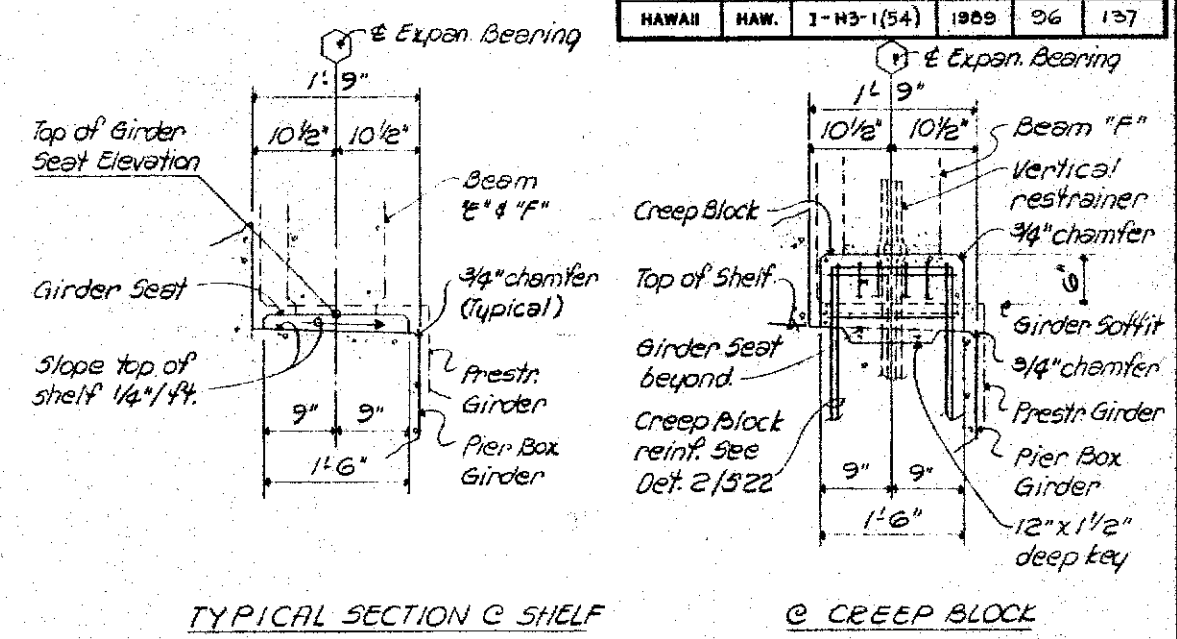
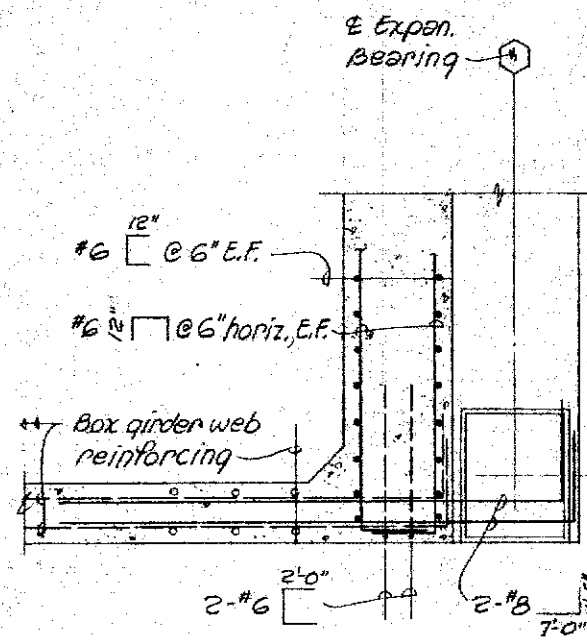
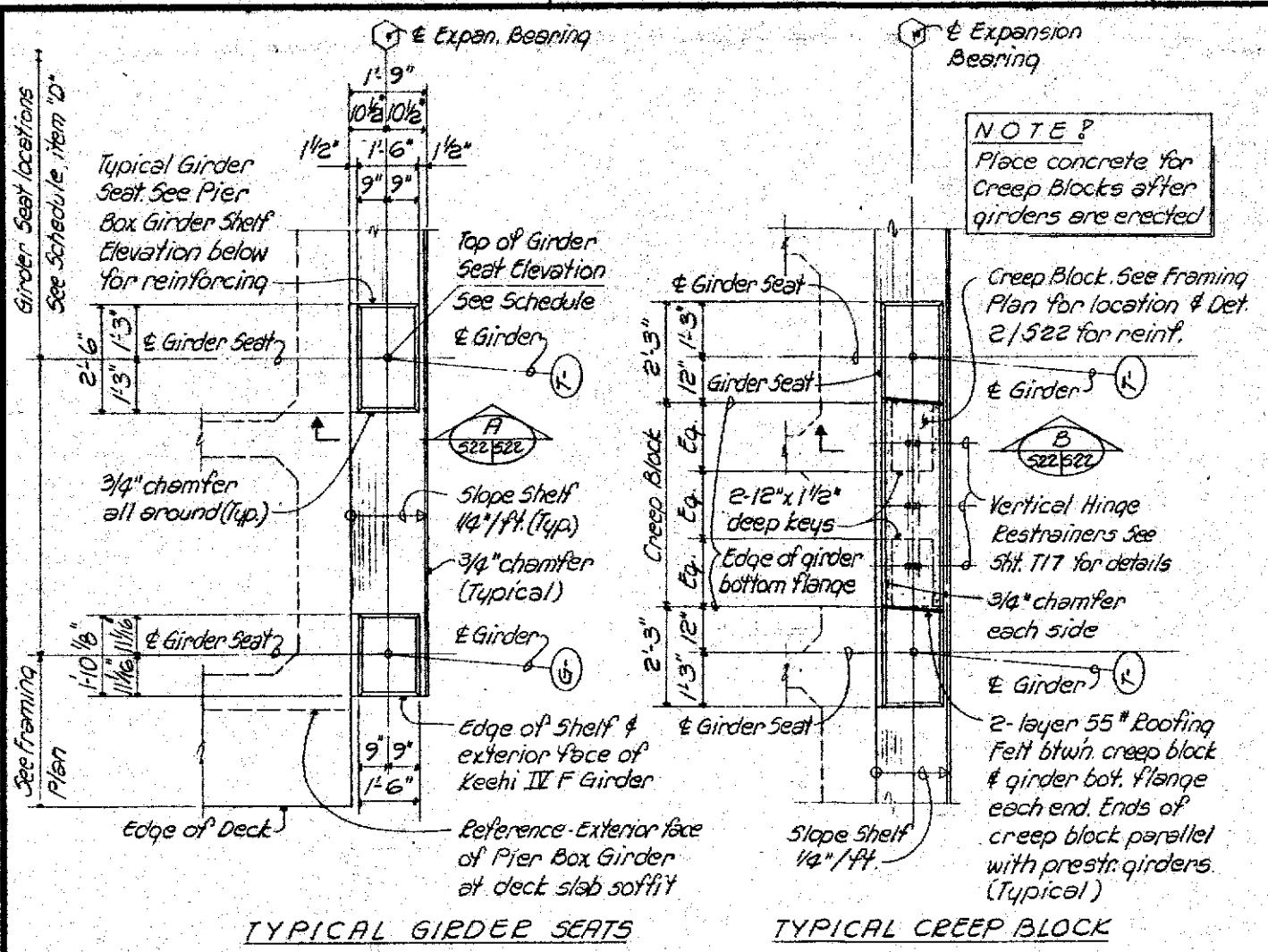
Note:
Numbers at ends of bar indicate distance in feet from & Pier for top reinforcing and & Span for bottom reinforcing. Provide staggered mechanical splice as required.

SSFM ENGINEERS INC.
301 Summer St., #502
Honolulu, Hawaii 96817
REGISTERED PROFESSIONAL ENGINEER
No. 1343-S
HAWAII, U.S.A.
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Howard Y. Fukuda

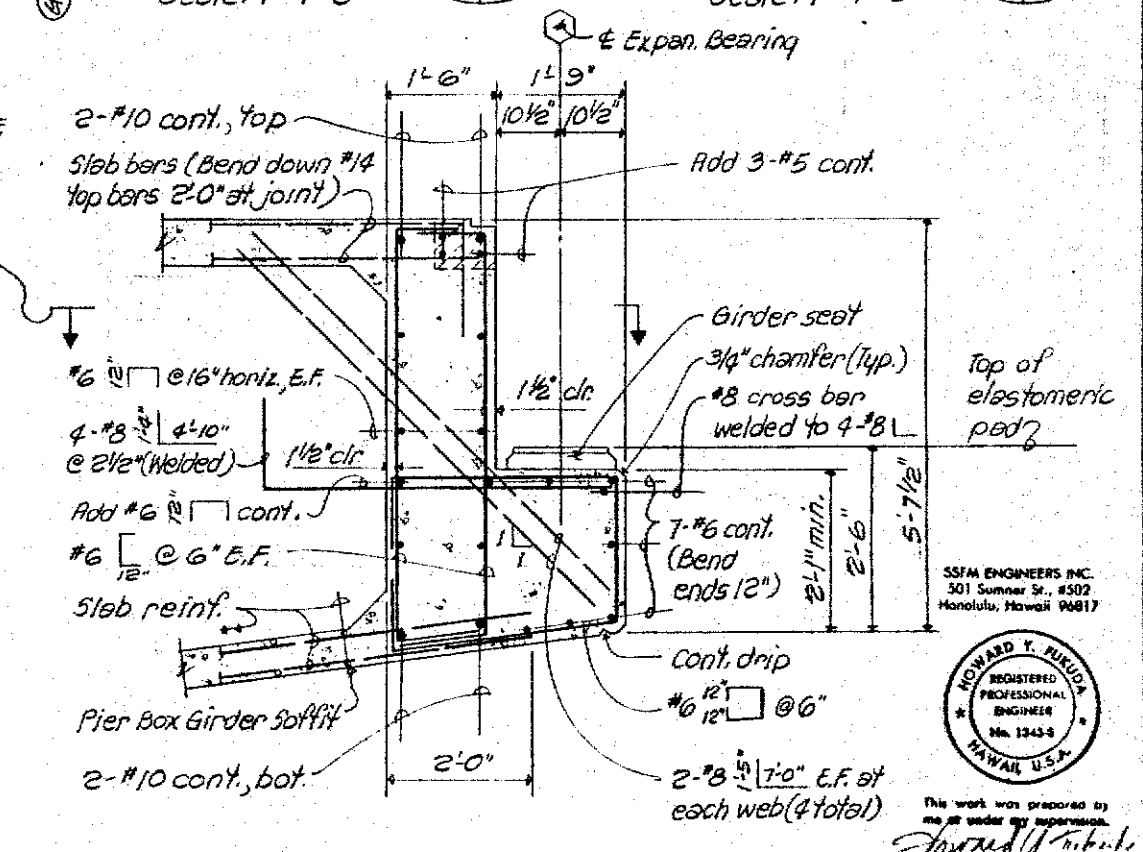
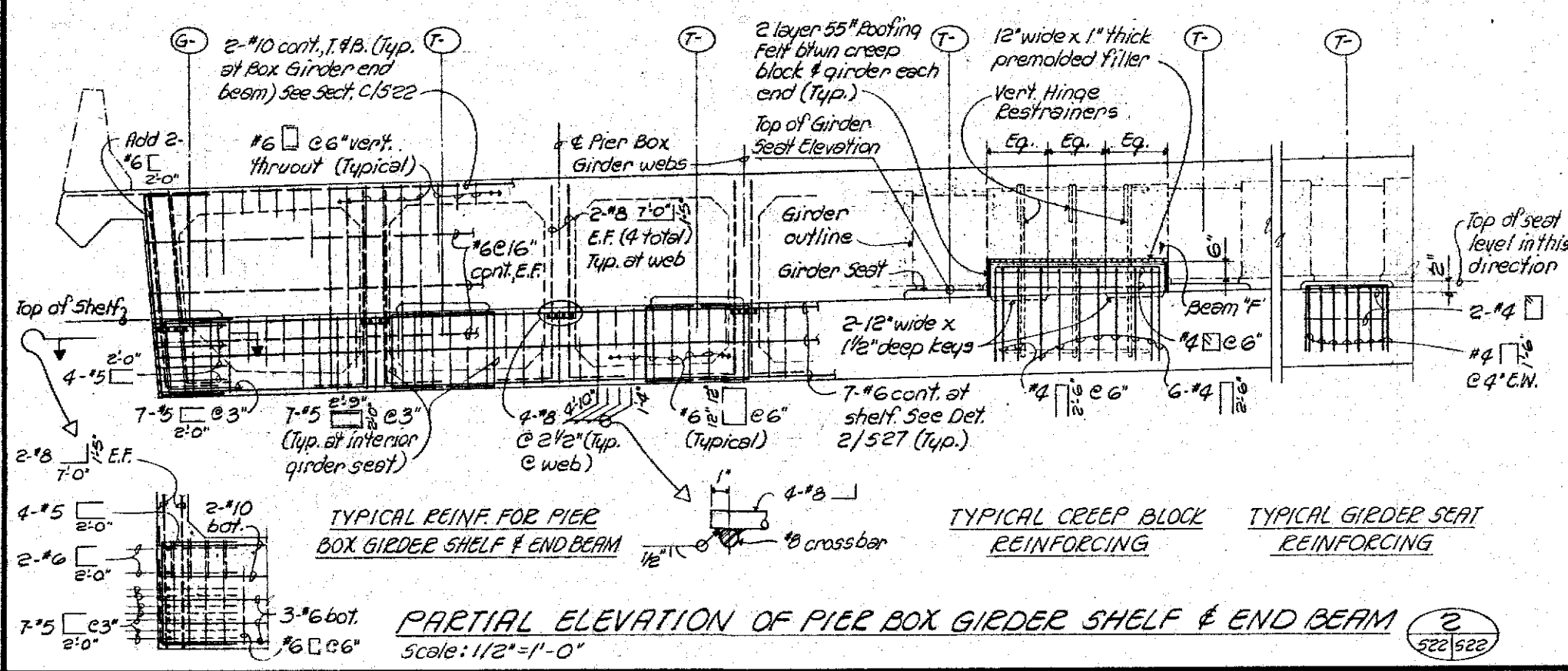
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
BOX GIRDER SLAB REINFORCEMENT
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)
SCALE: AS NOTED DATE: SEPT. 1989
SHEET NO. 521 OF 40 SHEETS

DATE	
BY	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTES BOOK	
ORIGINAL PLAN	
NO.	

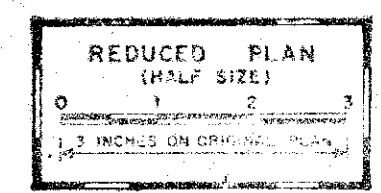
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	96	137



PIER BOX GIRDER SHELF PLAN FOR PRESTRESSED GIRDER BEARING SEATS
Scale: 1/2"=1'-0"



GIRDER SHELF SECTION
Scale: 3/4"=1'-0"



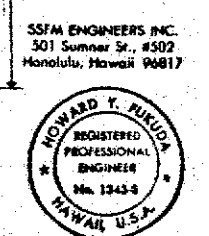
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BOX GIRDER SHELF DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. 1-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

SHEET NO. 522 OF 40 SHEETS



DATE	BY
DESIGNED BY	CHECKED BY
DRAWN BY	NOTED BY
ORIGINAL PLAN	NO.

PIER BOX GIRDER SHELF SEAT LOCATIONS, ELEVATIONS & BEVELS & ELASTOMERIC BEARING PAD SKEW SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	97	137

PIER LINE	②					③				
BEARING	①					①				
GIRDER	"D"	"TR"	"TS"	BEVEL	SKEW	"D"	"TR"	"TS"	BEVEL	SKEW
G1	-41.00	122.34	119.00	11/16	4/16	-41.00	131.47	128.13	12/16	-5/16
T1	-33.99	122.76	119.42	11/16	4/16	-36.00	131.77	128.43	12/16	-5/16
T2	-26.98	123.18	119.84	11/16	4/16	-29.74	132.15	128.80	12/16	-5/16
T3	-19.97	123.60	120.26	11/16	4/16	-23.48	132.52	129.18	12/16	-5/16
T4	-12.96	124.02	120.68	11/16	4/16	-17.22	132.90	129.55	11/16	-5/16
T5	-5.95	124.44	121.10	11/16	4/16	-10.96	133.27	129.93	11/16	-5/16
T6	1.06	124.86	121.52	10/16	4/16	-4.71	133.65	130.30	11/16	-5/16
T7	8.07	125.28	121.94	10/16	4/16	1.55	134.02	130.68	11/16	-5/16
T8	15.08	125.70	122.36	10/16	4/16	7.81	134.40	131.05	11/16	-5/16
T9	22.09	126.13	122.78	10/16	4/16	14.07	134.77	131.43	11/16	-5/16
T10	29.10	126.55	123.20	10/16	4/16	20.33	135.15	131.81	11/16	-5/16
T11	36.11	126.97	123.62	10/16	4/16	26.58	135.53	132.18	11/16	-5/16
T12	43.12	127.39	124.04	10/16	4/16	32.84	135.90	132.56	11/16	-5/16
T13	—	—	—	—	—	39.10	136.28	132.93	11/16	-5/16
T14	—	—	—	—	—	45.36	136.65	133.31	11/16	-5/16
G2	50.13	127.81	124.46	10/16	4/16	50.36	136.95	133.61	11/16	-5/16

LEGEND:

"D" - Distance of ϵ girder intersection with bearing line from H-3 Baseline

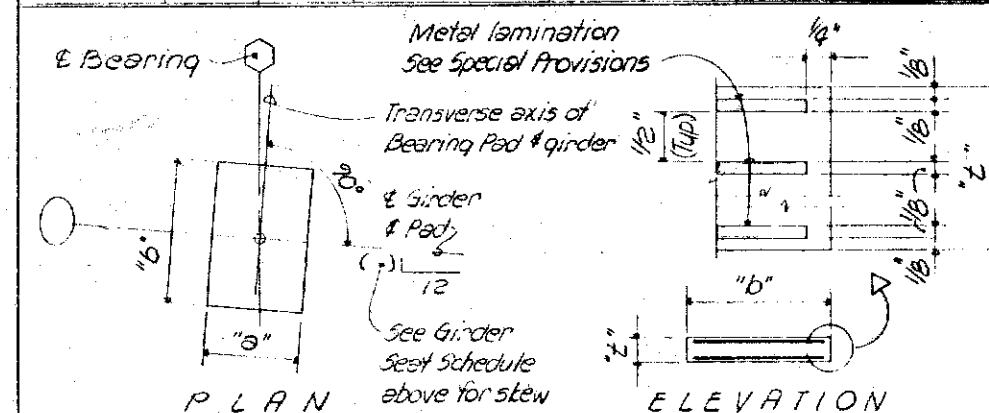
"TR" - Top of roadway elevation at intersection of ϵ girder & bearing line.

"TS" - Top of girder seat elevation at intersection of ϵ girder & bearing line.

Bevel - Girder Bearing ϵ bevel

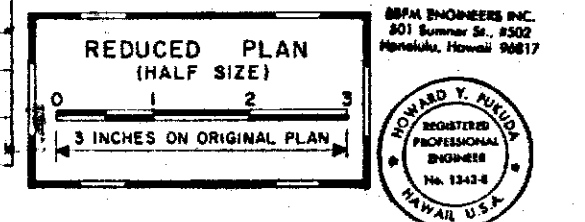
Skew - Elastomeric bearing pad & girder skew

NOTE: Items "D", "TR" & "TS" are given in feet.



ELASTOMERIC BEARING PAD SCHEDULE FOR GIRDER SEATS							
Pier Line	Bearing Line	G1 & G2 Girders			T- Girders		
		Dimensions			Dimensions		
②	①	"a"	"b"	"c"	"a"	"b"	"c"
③	①	15"	17"	1 5/8"	13"	17"	1 5/8"

1/25/89 Revised Pad & Girder Bearing Detail
Date Revision



NOTES:

- Fiberglass reinforced elastomeric pads may be used in lieu of pads with metal lamination as shown.
- Minimum total thickness of fiberglass reinforced elastomeric pads shall be equal to the sum of the 1/2" pads between metal laminations + 1/4" (Revise dimension "c" in schedule accordingly).
- Any revisions to elastomeric bearing pad thicknesses shall be reflected in concrete seat & girder shelf elevations.
- Cost of bearing pads incidental to concrete.

ELASTOMERIC BEARING PAD DETAILS

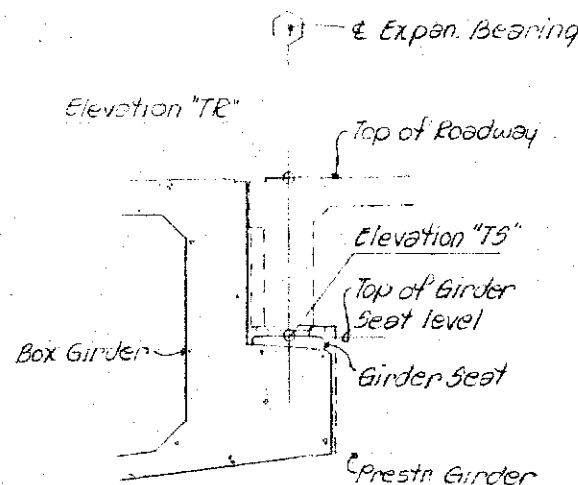
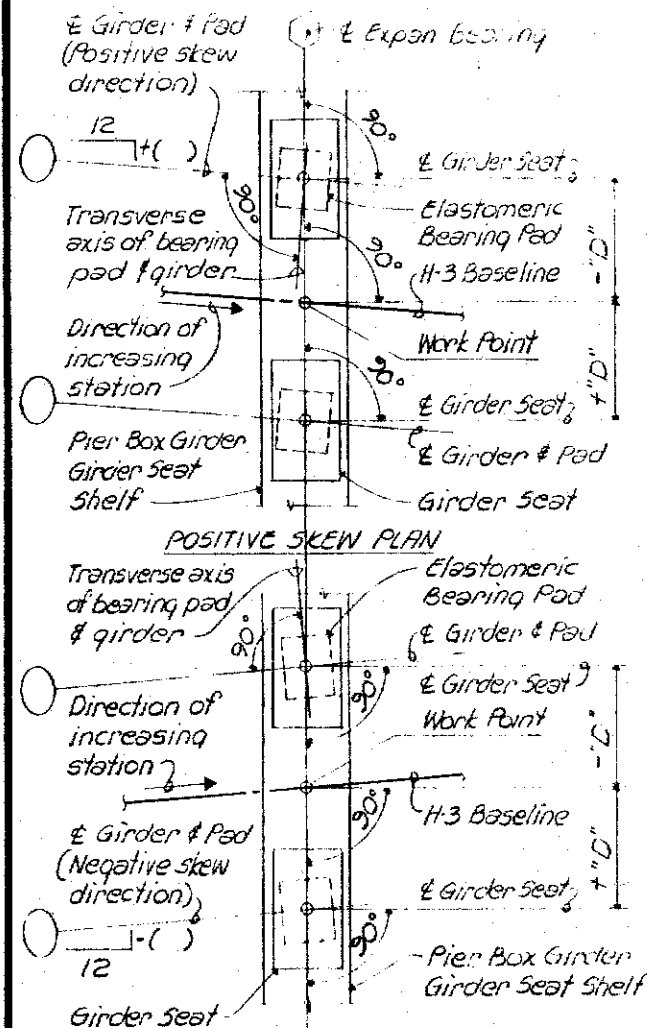
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BOX GIRDER
BEARING GEOMETRICS**

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1989

SHEET NO. S23 OF 40 SHEETS

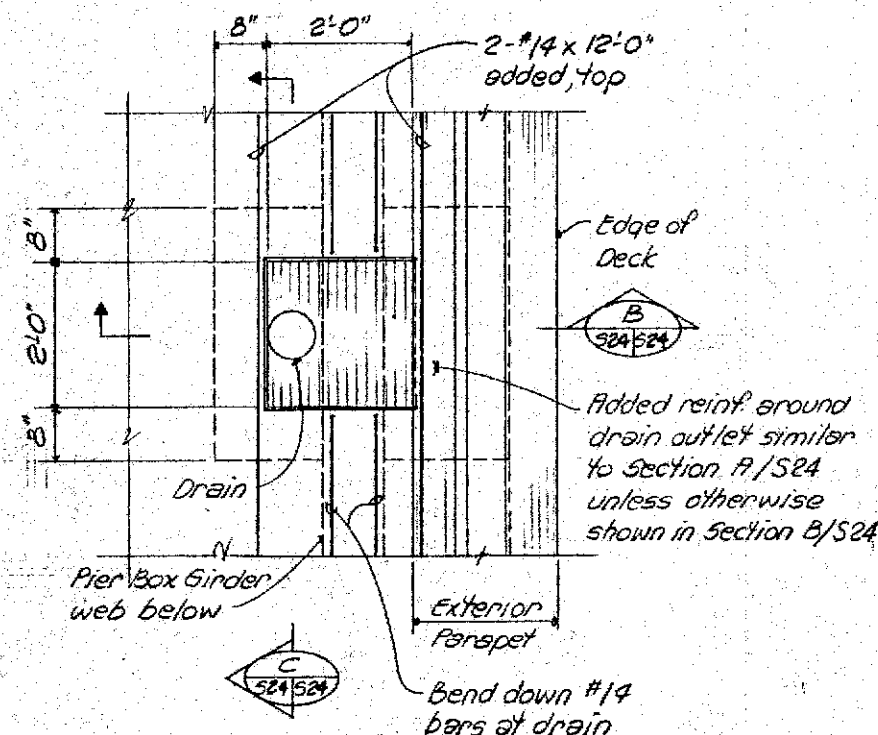
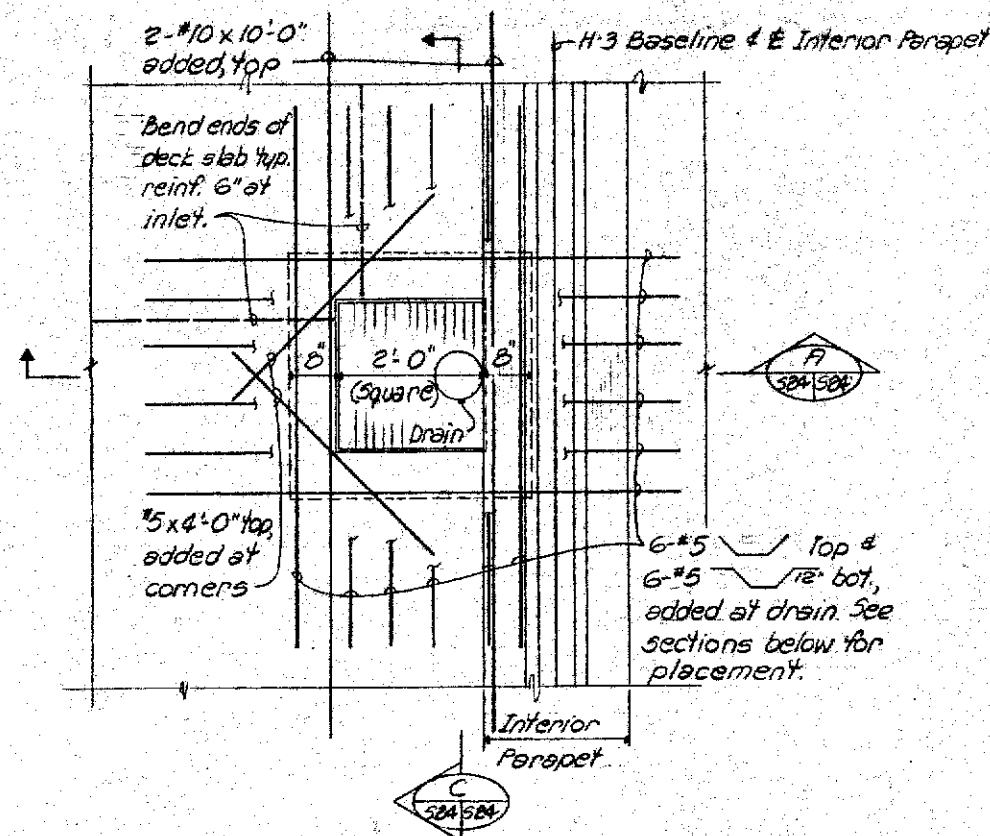


PIER BOX GIRDER END SECTION W/
E BEARING ELEVATION LOCATIONS
Not to scale

NEGATIVE SKEW PLAN
GIRDER SEAT LOCATION &
ELASTOMERIC BEARING PAD SKEW PLANS
Not to scale

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	28	137



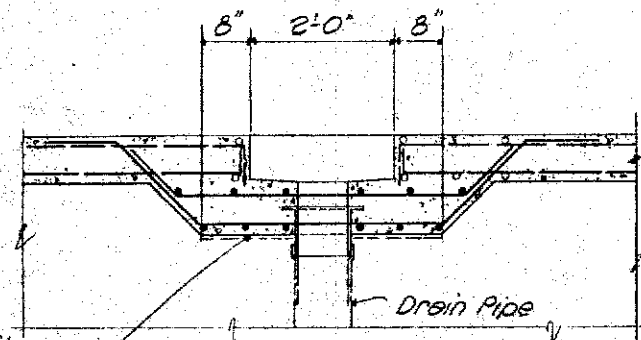
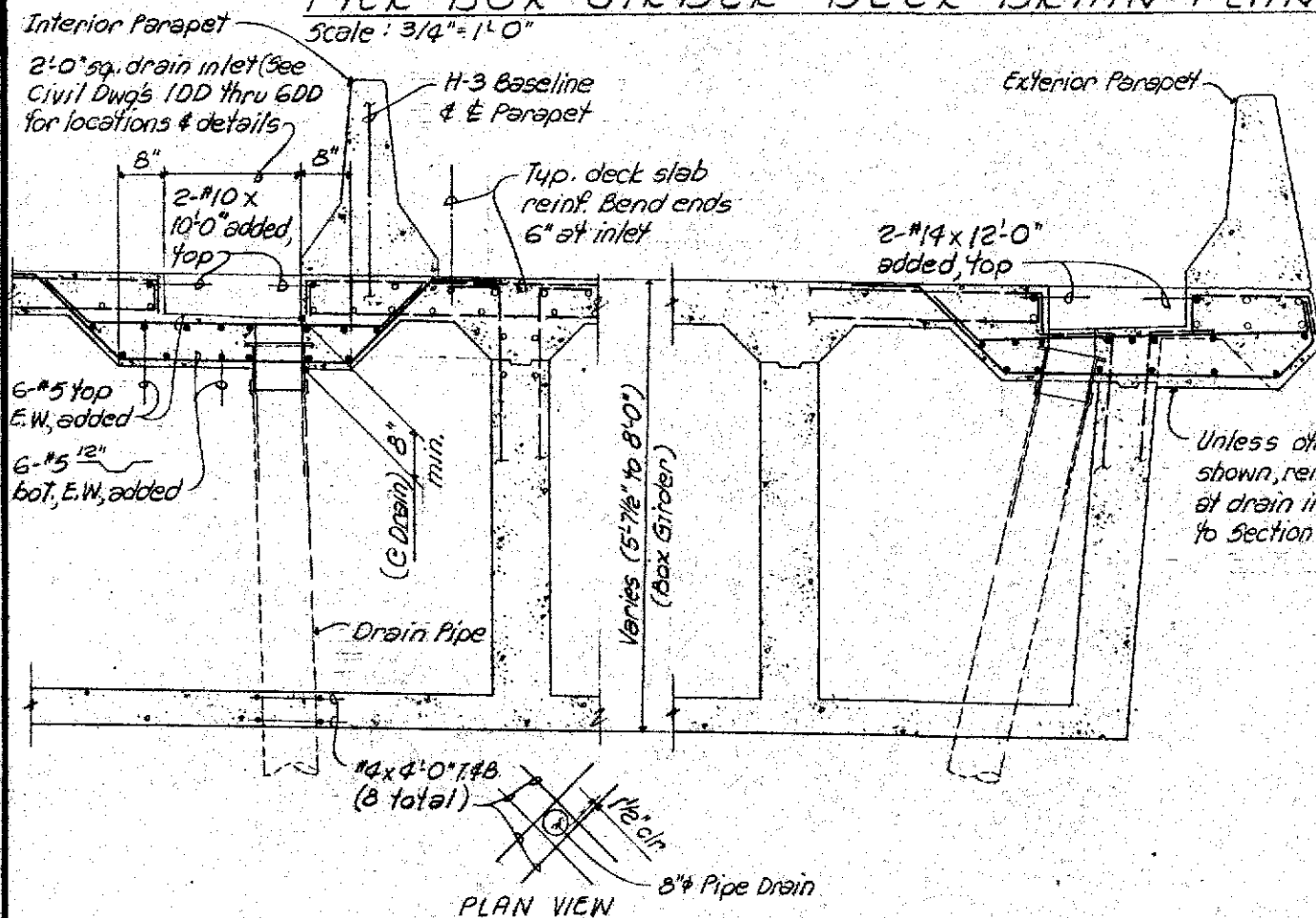
C INTERIOR PARAPET

C EXTERIOR PARAPET

PIER BOX GIRDER DECK DRAIN PLANS

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

1 524/524

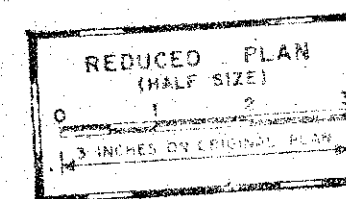


SECTION A 524/524

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

SECTION B 524/524

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



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Honolulu, Hawaii 96817



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

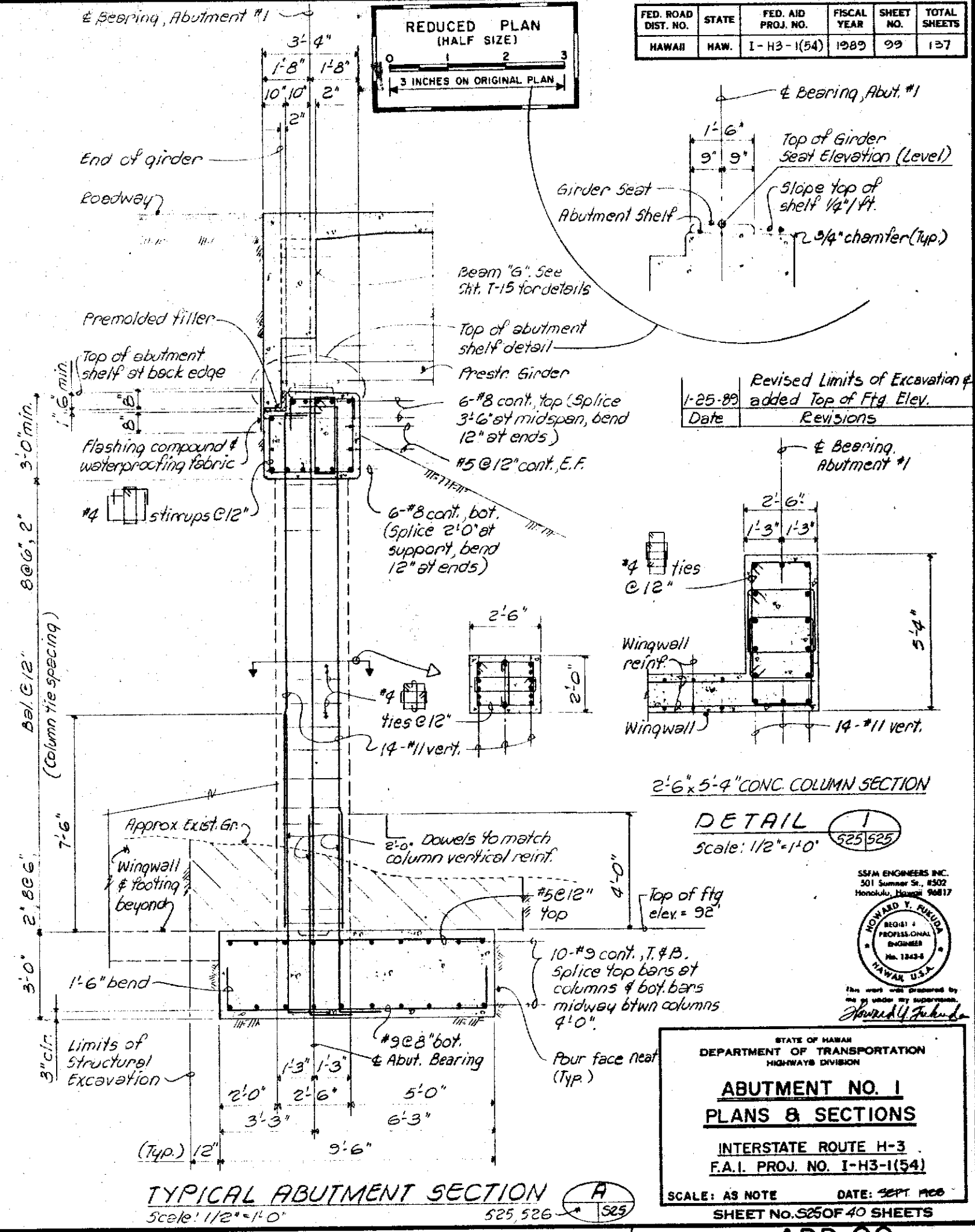
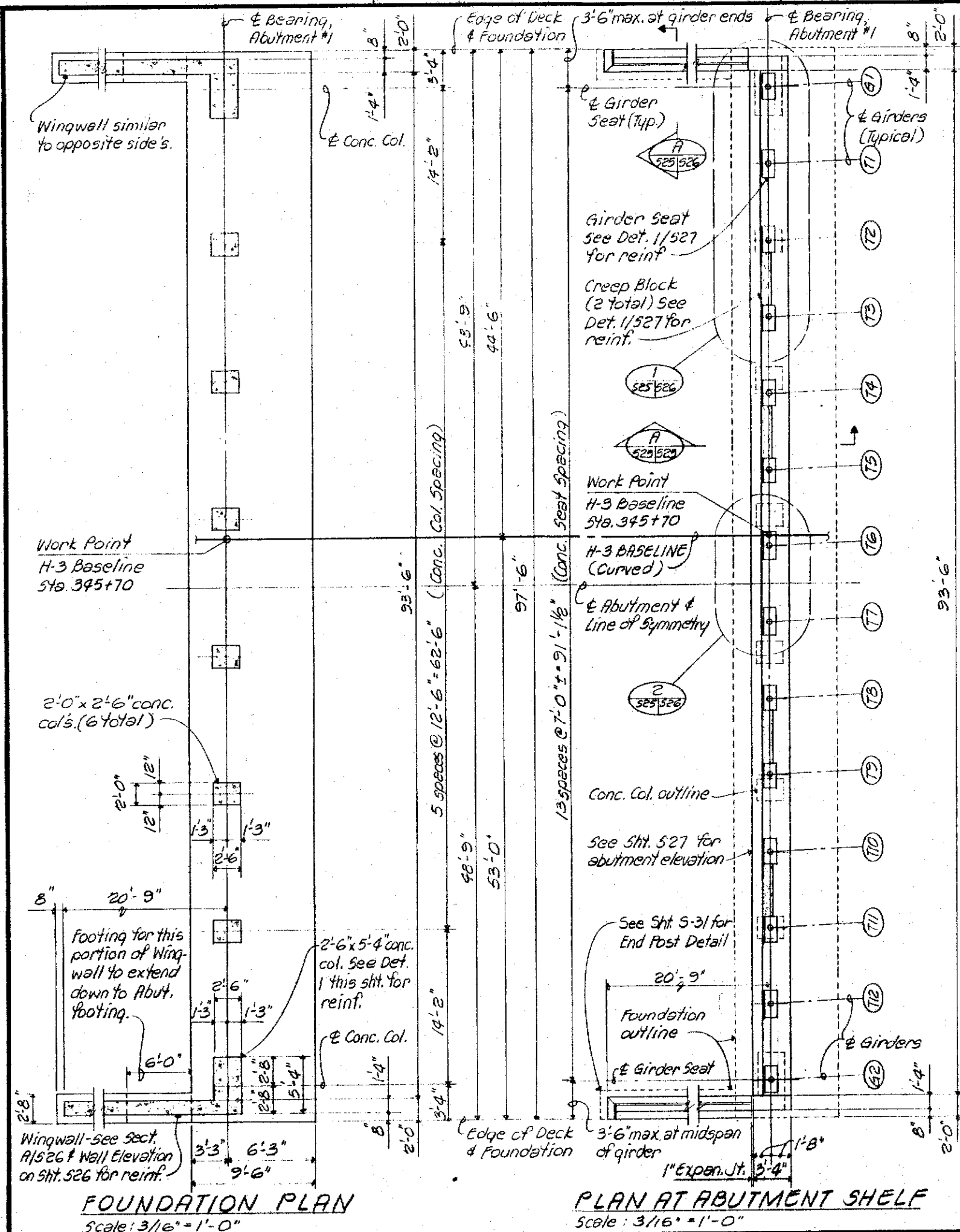
BOX GIRDER DECK DRAIN DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEP. 1989

SHEET No. 524 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	99	137



Date	Revised Limits of Excavation & added Top of Ftg. Elev.	Revisions
1-25-89		

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Honolulu, Hawaii 96817



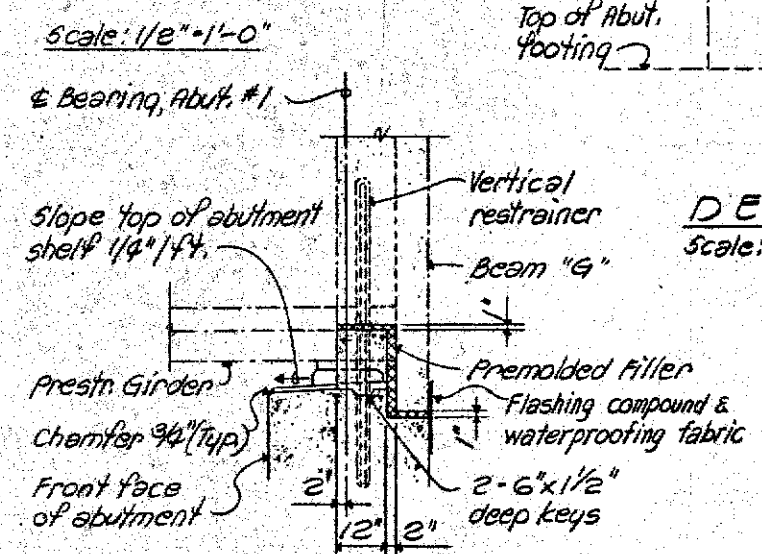
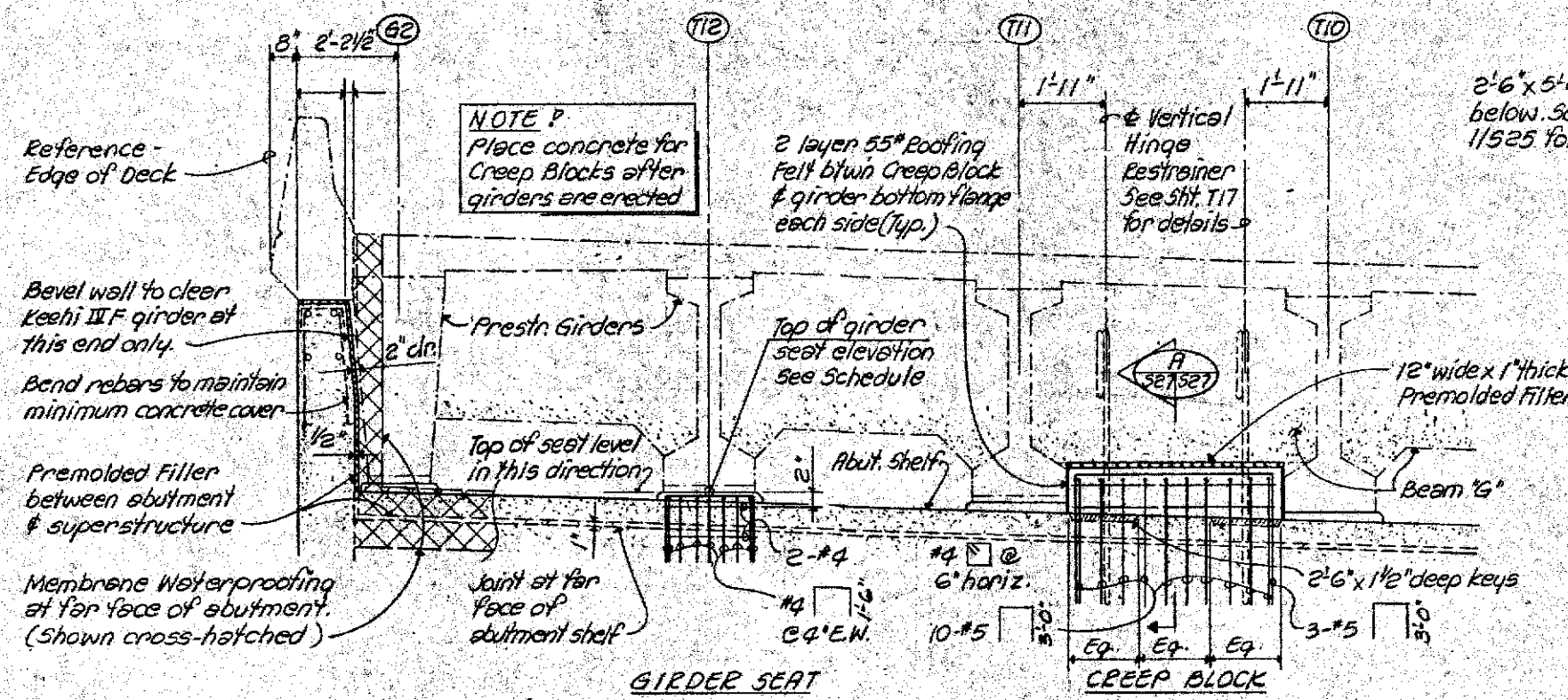
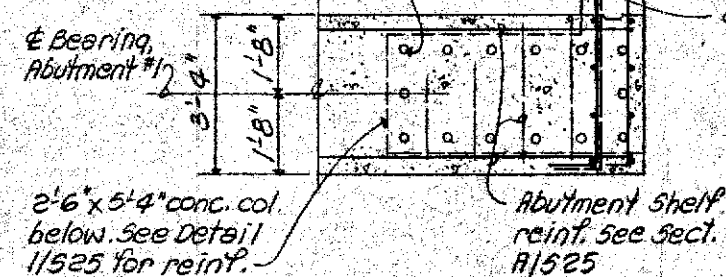
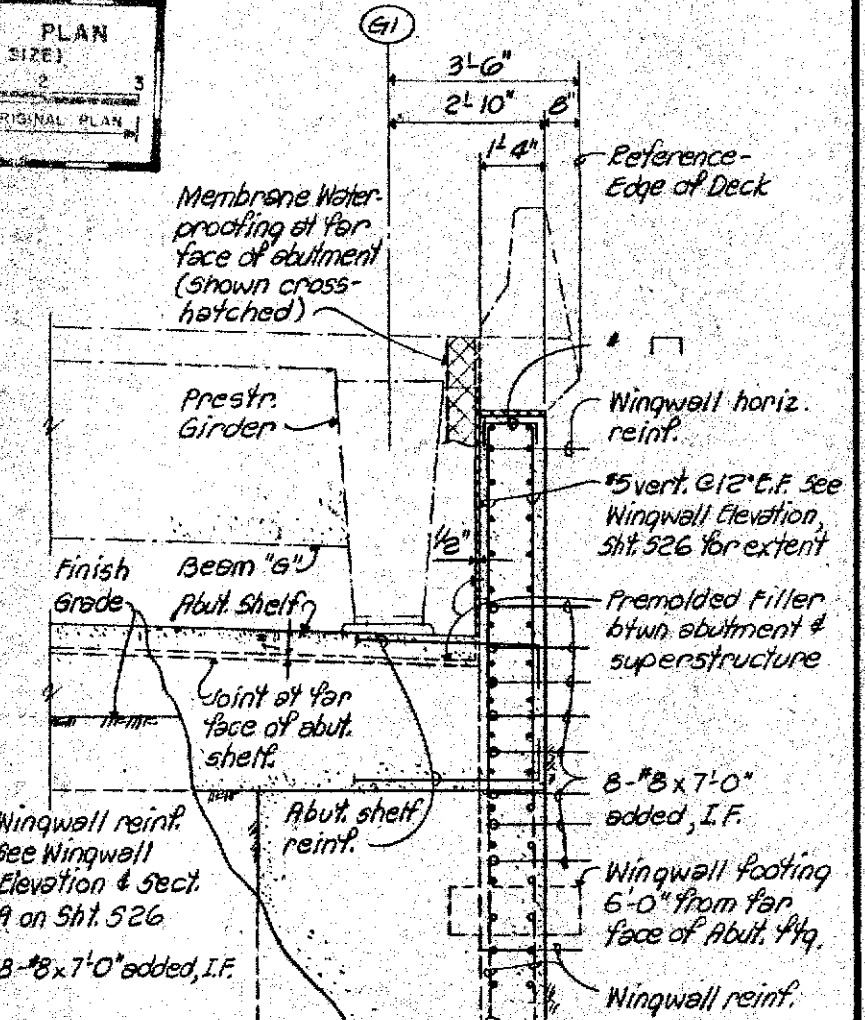
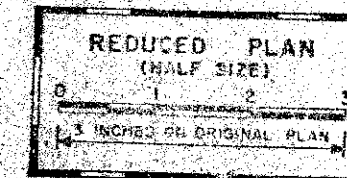
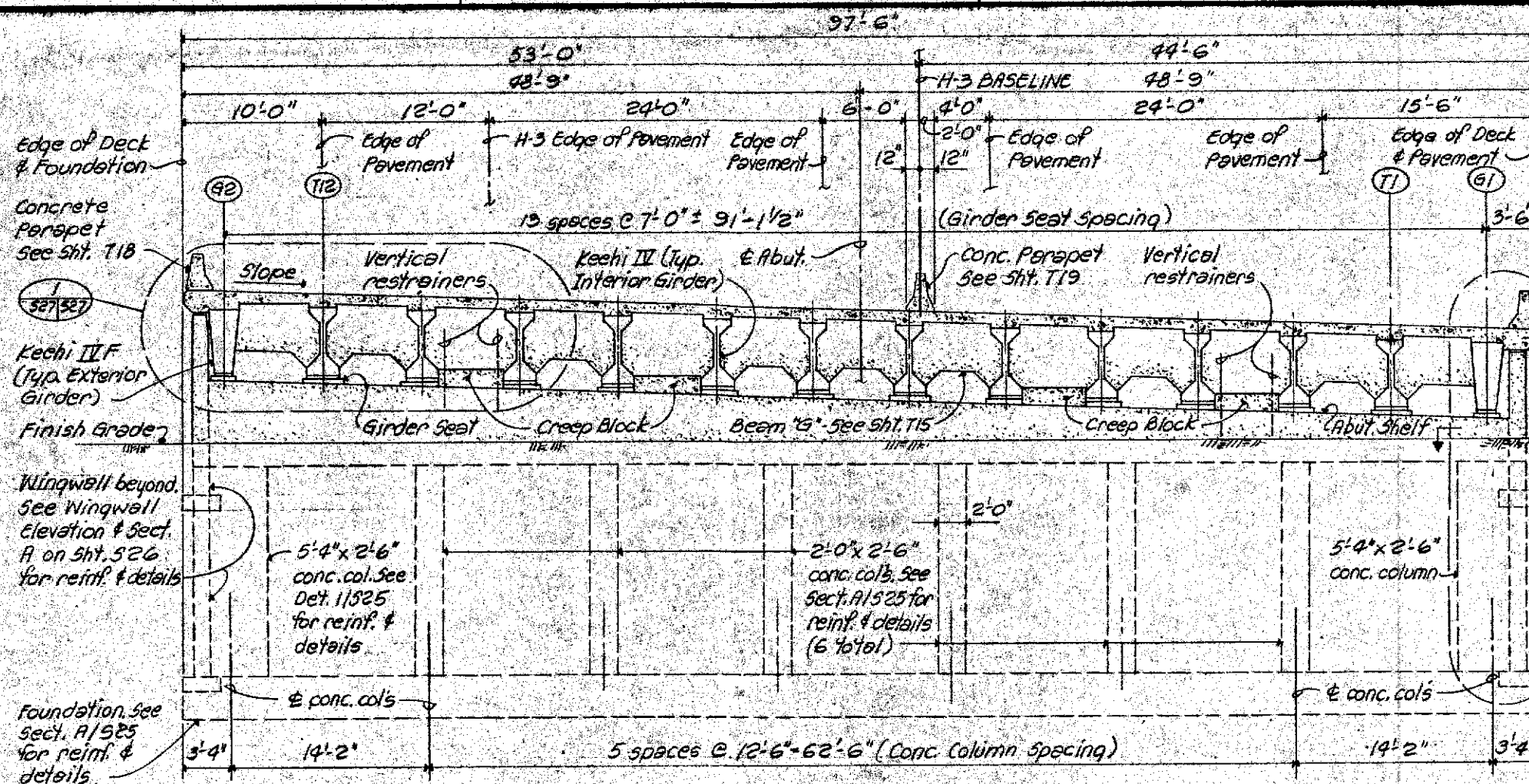
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT NO. 1
PLANS & SECTIONS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTE DATE: SEPT. 1989
SHEET NO. 525 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(34)	1989	101	137



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HIGHWAYS DIVISION

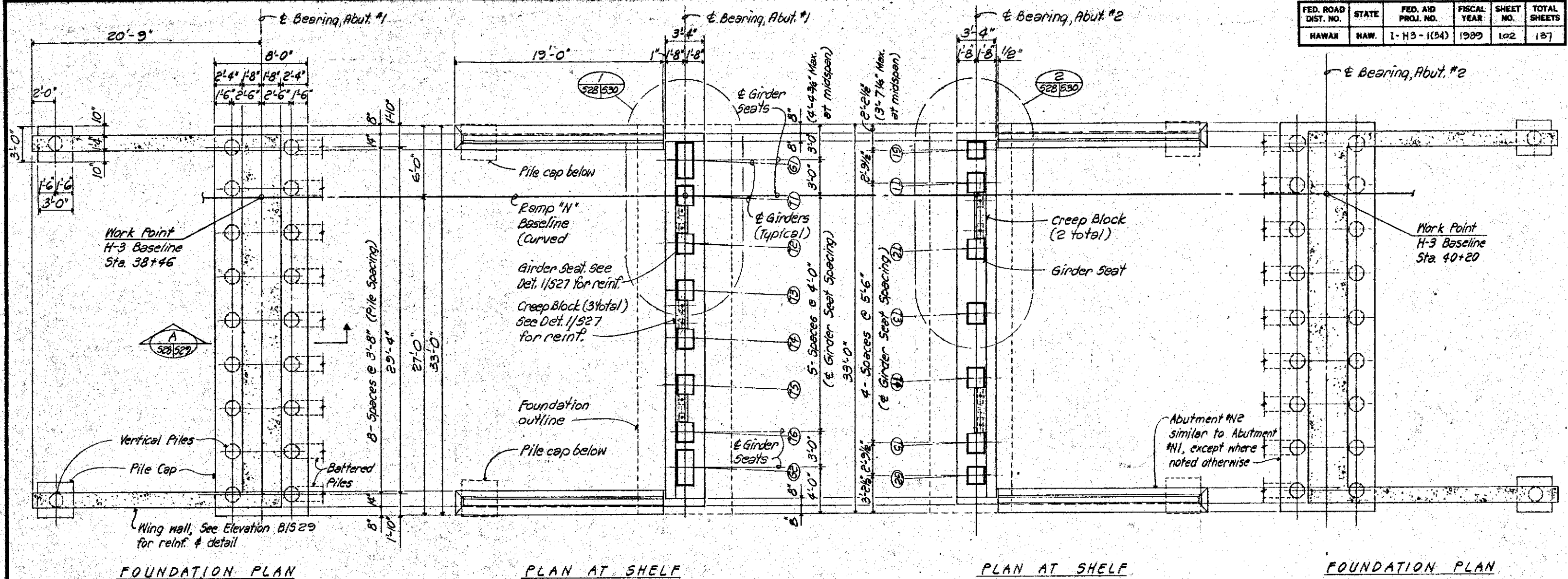
ABUTMENT NO. 1
ELEVATION & DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1960

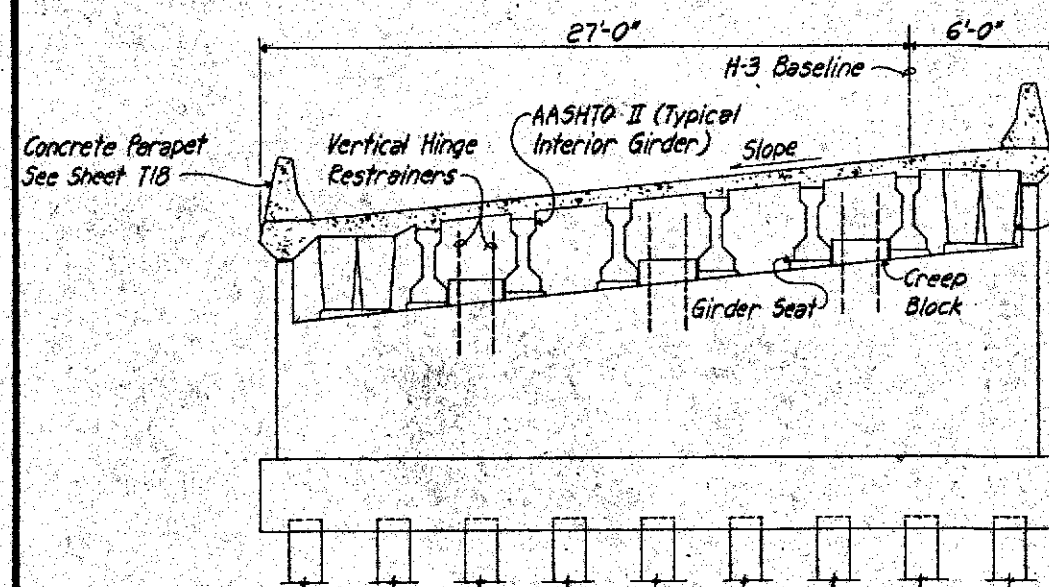
SHEET NO. 527 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-113-1(54)	1989	102	137

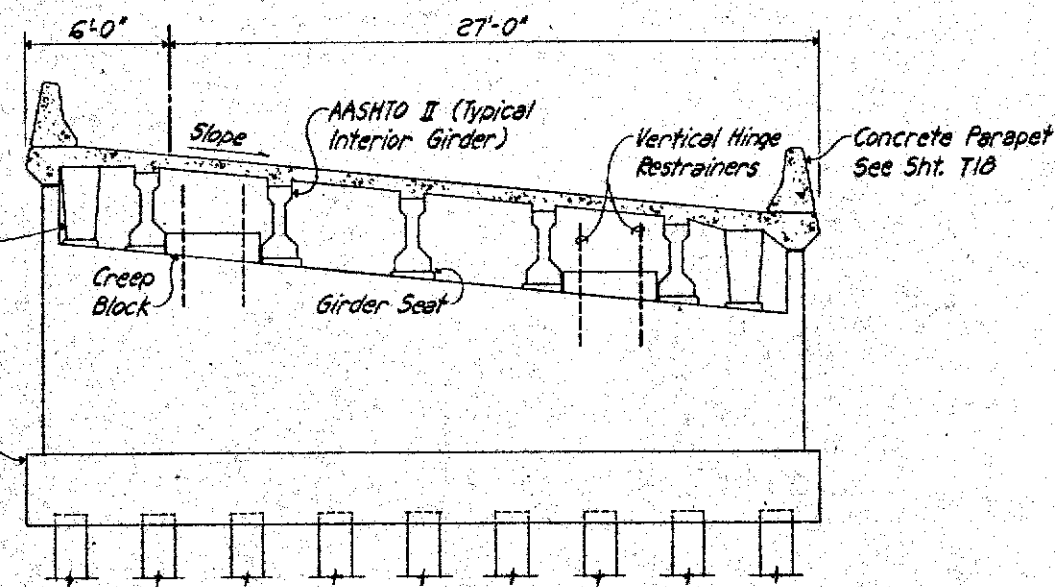


ABUTMENT #N1 PLANS
Scale: $\frac{1}{4}" = 1'-0"$

ABUTMENT #N2 PLANS
Scale: 1/4" = 1'-0"



ABUTMENT #1 FRONT ELEVATION
Scale: $\frac{1}{4}" = 1'-0"$



ABUTMENT #N2 FRONT ELEVATION
Scale: $\frac{1}{4}" = 1'-0"$

REDUCED PLAN
(HALF SIZE)

0 1 2 3

3 INCHES ON ORIGINAL PLAN

SEPM ENGINEERS INC.
501 Sumner St., #502
Honolulu, Hawaii 96817



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Howard U. Gahend

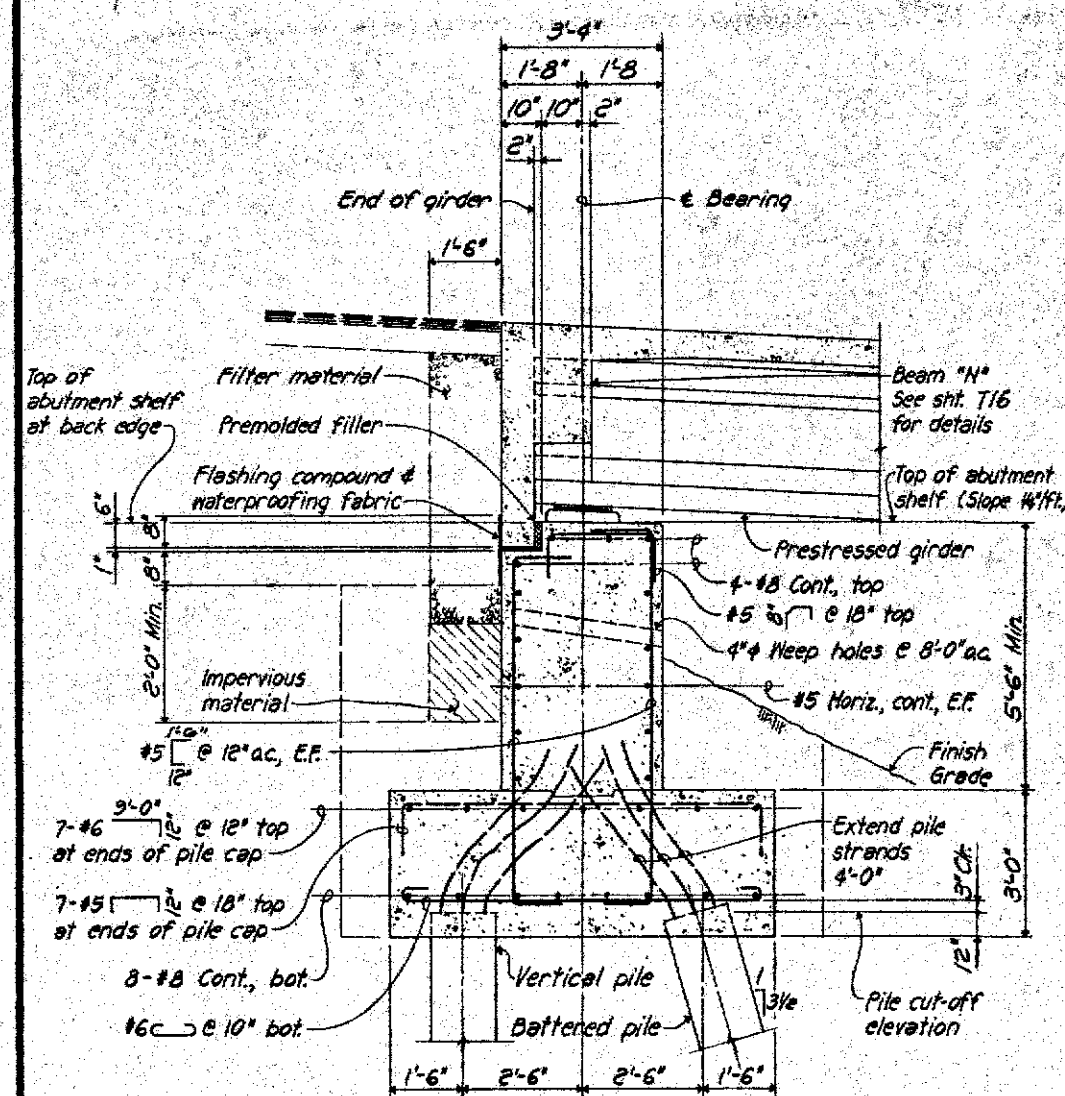
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RAMP N ABUTMENT PLANS & ELEVATIONS

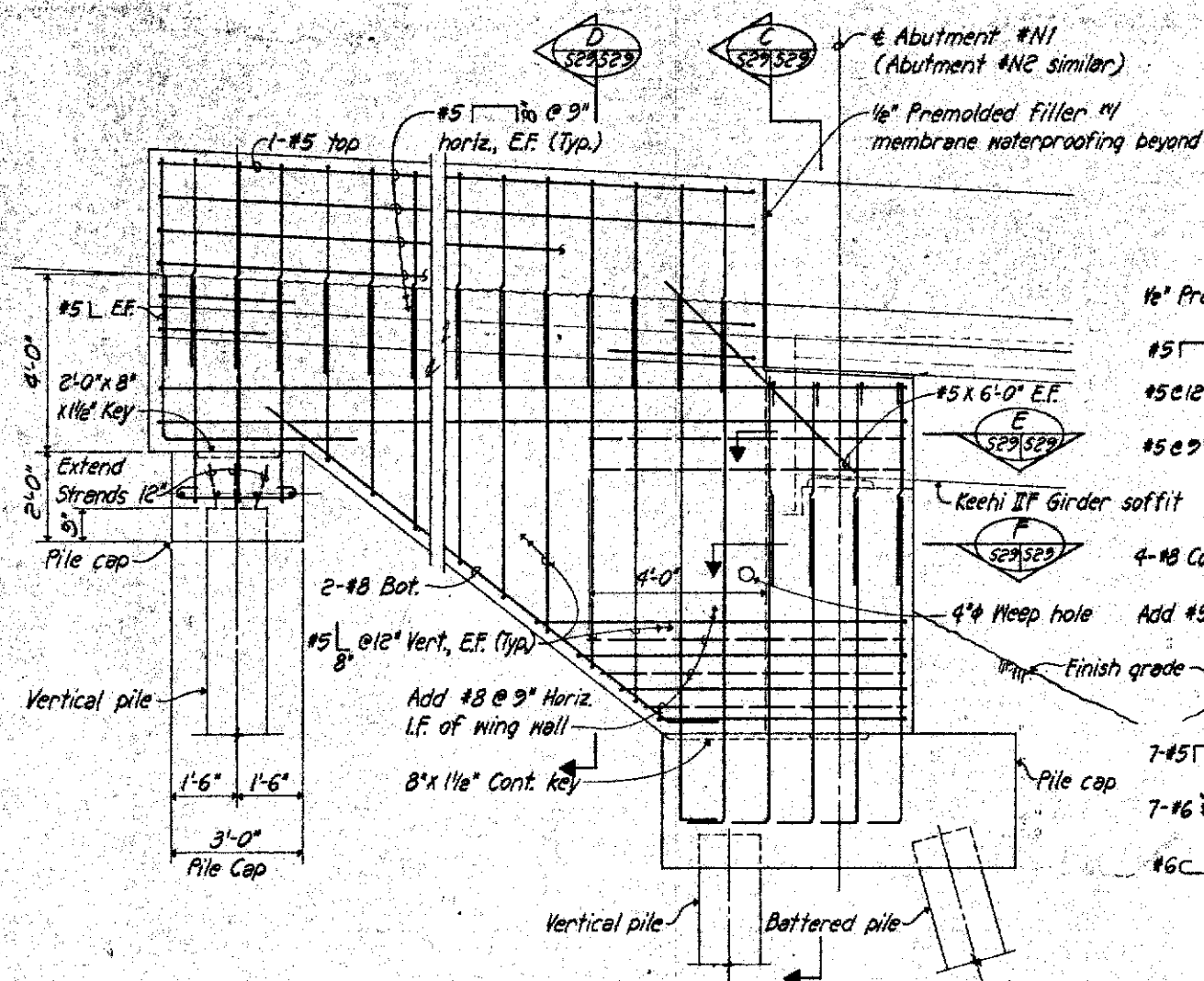
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1 (54)

SCALE: AS NOTED DATE: SEPT. 1968
SHEET No. 528 OF 40 SHEETS

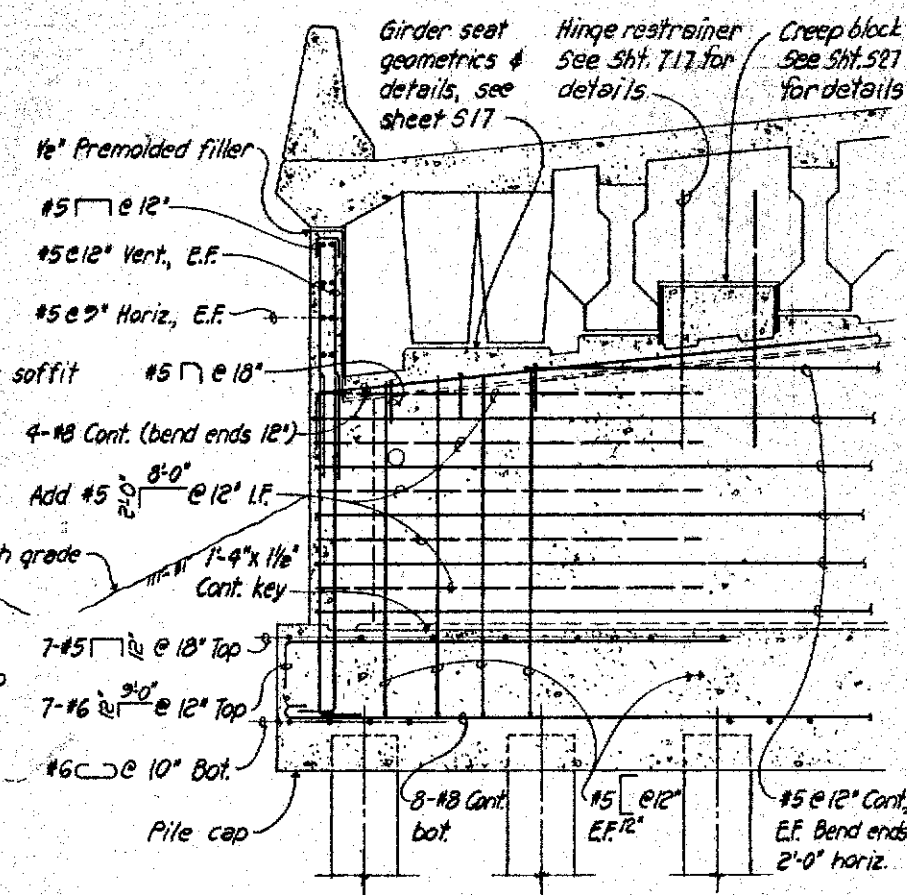
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	103	137



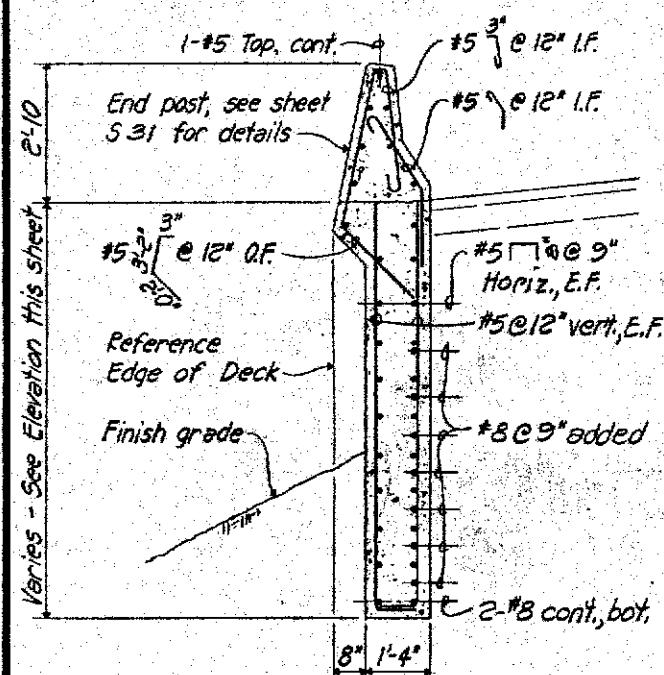
ABUTMENT #N1 SECTION (#N2 SIMILAR) A
Scale: 1/2" = 1'-0"



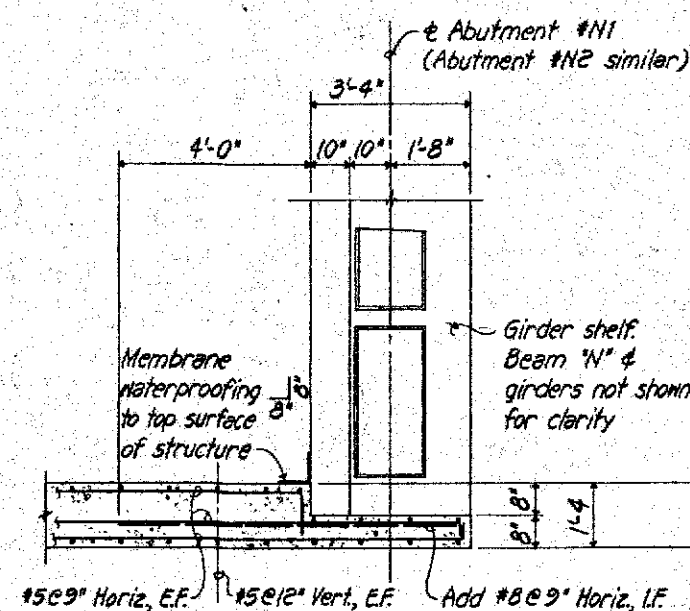
ABUTMENT WING WALL ELEVATION B
Scale: 1/2" = 1'-0"



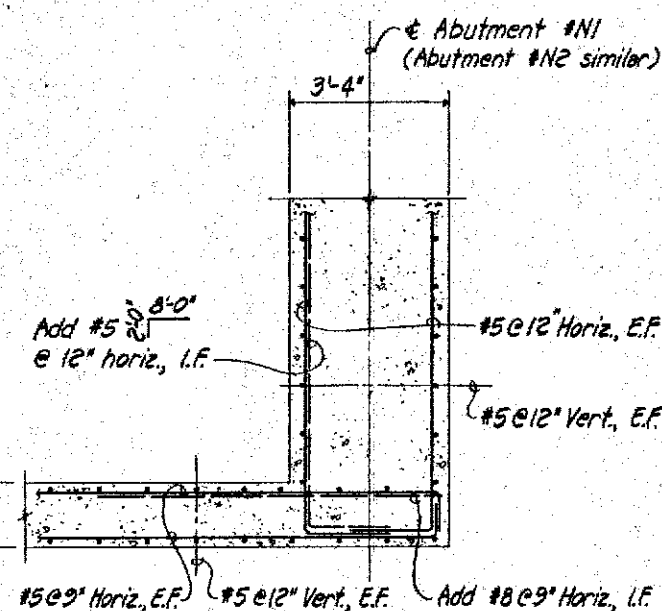
ABUTMENT SECTION C
Scale: 1/2" = 1'-0"



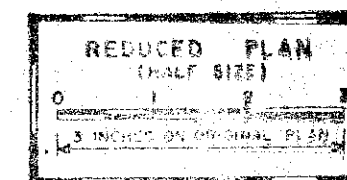
TYPICAL WING WALL SECTION D
Scale: 1/2" = 1'-0"



PLAN SECTION E
Scale: 1/2" = 1'-0"



PLAN SECTION F
Scale: 1/2" = 1'-0"



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Honolulu, Hawaii 96817



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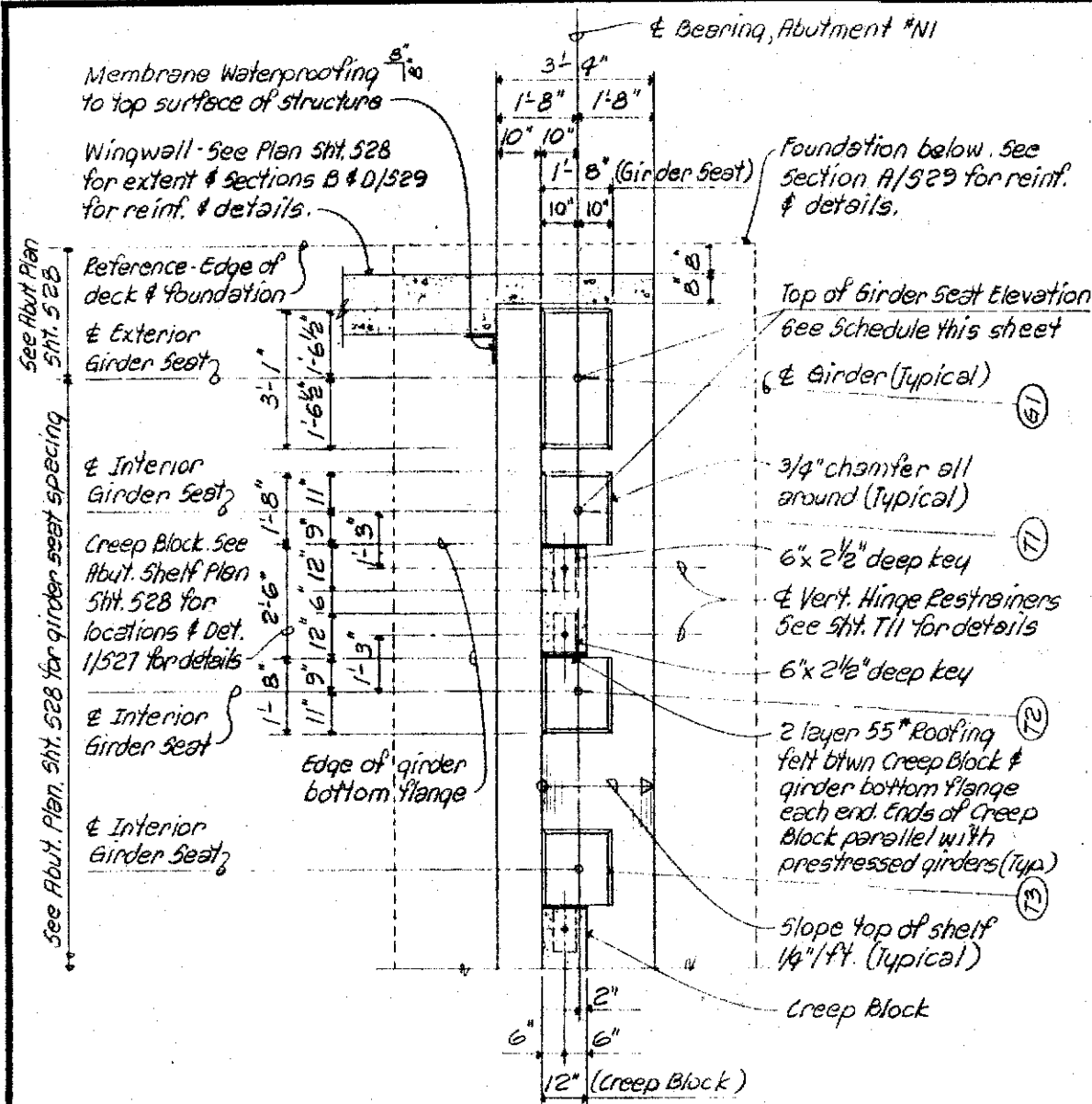
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RAMP N
SECTIONS & DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

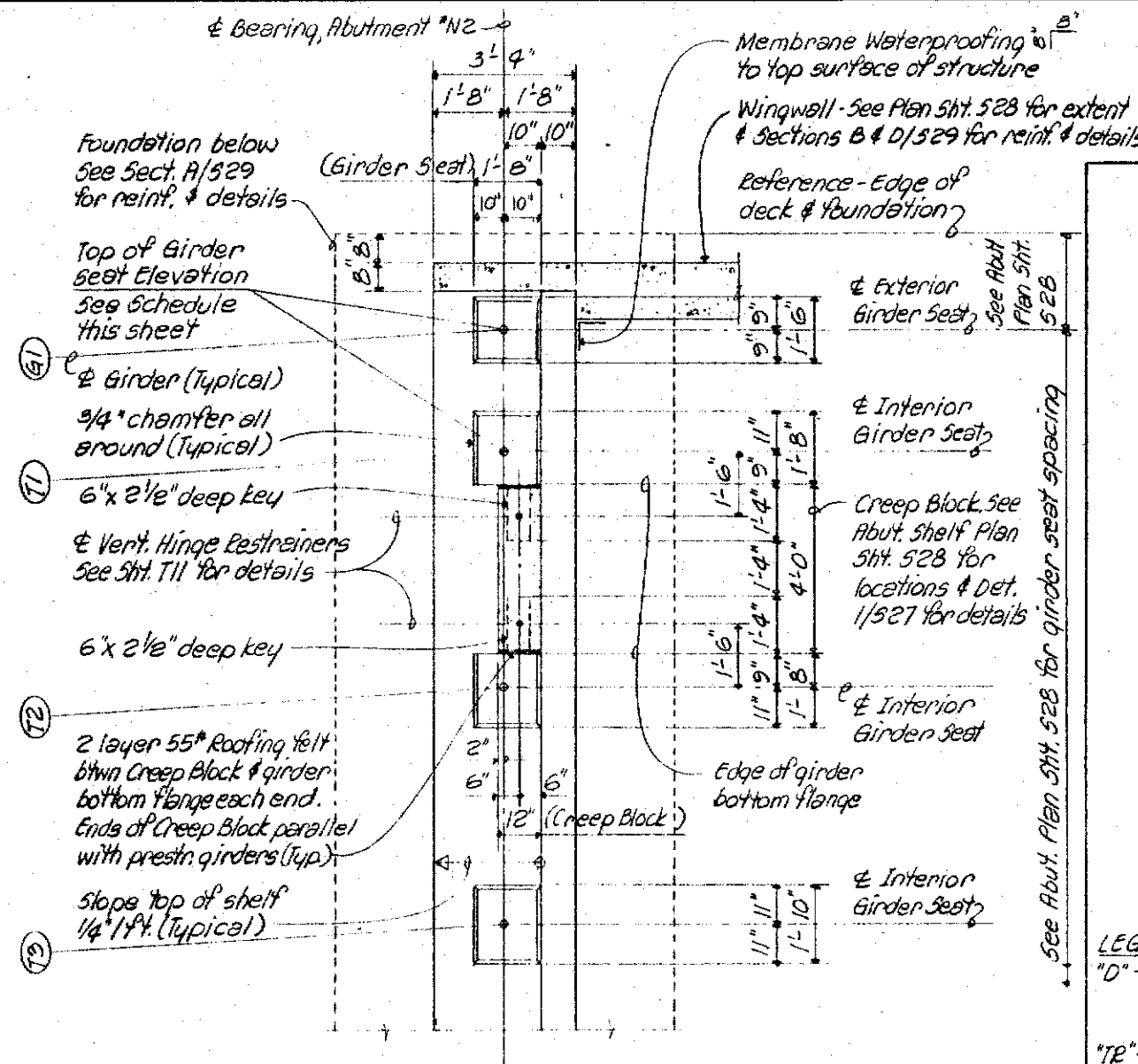
SCALE: AS NOTED DATE: SEPT 1988
SHEET NO. 529 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	104	137



ABUTMENT #N1 - PARTIAL SHELF PLAN

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



ABUTMENT #N2 - PARTIAL SHELF PLAN

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

GIRDER SEAT LOCATIONS, ELEVATIONS & BEVELS

GIRDER	"D"	"TR"	"TS"	BEVEL	SKEN
G1	-3.00	115.39	111.26	-8/16	+7/16
T1	0.00	115.09	110.96	-8/16	+7/16
T2	4.00	114.69	110.56	-8/16	+7/16
T3	8.00	114.29	110.16	-8/16	+7/16
T4	12.00	113.89	109.76	-8/16	+7/16
T5	16.00	113.49	109.36	-8/16	+7/16
T6	20.00	113.09	108.96	-8/16	+7/16
G2	23.00	112.79	108.66	-8/16	+7/16
G1	-3.79	106.60	102.55	-12/16	-14/16
T1	-1.00	106.32	102.27	-12/16	-14/16
T2	4.50	105.77	101.72	-12/16	-14/16
T3	10.00	105.22	101.17	-12/16	-14/16
T4	15.50	104.67	100.62	-12/16	-14/16
T5	21.00	104.12	100.07	-12/16	-14/16
G2	23.79	103.84	99.79	-12/16	-14/16

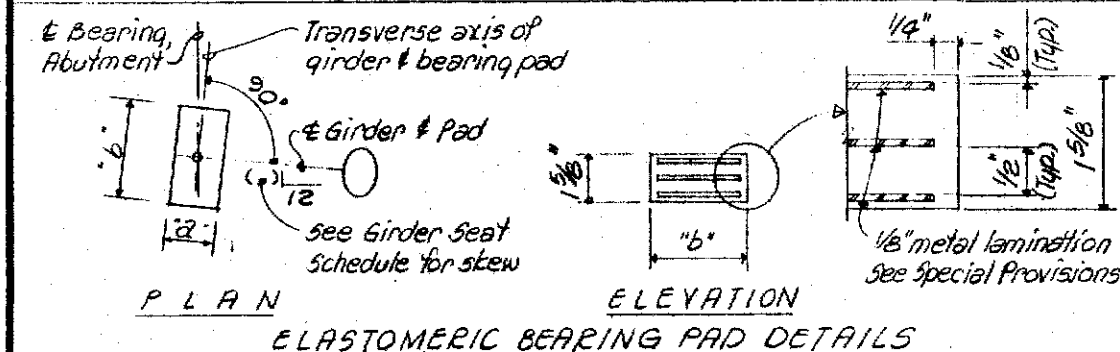
LEGEND

"D" - Distance of & girder intersection with bearing line from H-3 Baseline
 "TR" - Top of roadway elevation at intersection of & girder & bearing line
 "TS" - Top of girder seat elevation at intersection of & girder & bearing line
 Bevel - Girder Bearing & bevel

SCHEDULE OF DIMENSIONS FOR ELASTOMERIC BEARING PAD

Girders	G-Girders	T-Girders		
Dimensions	"a"	"b"	"a"	"b"
Abut. #N1	17"	14"	13"	13"
Abut. #N2	13"	13"	13"	13"

NOTE: Items "D", "TR" & "TS" are given in feet.

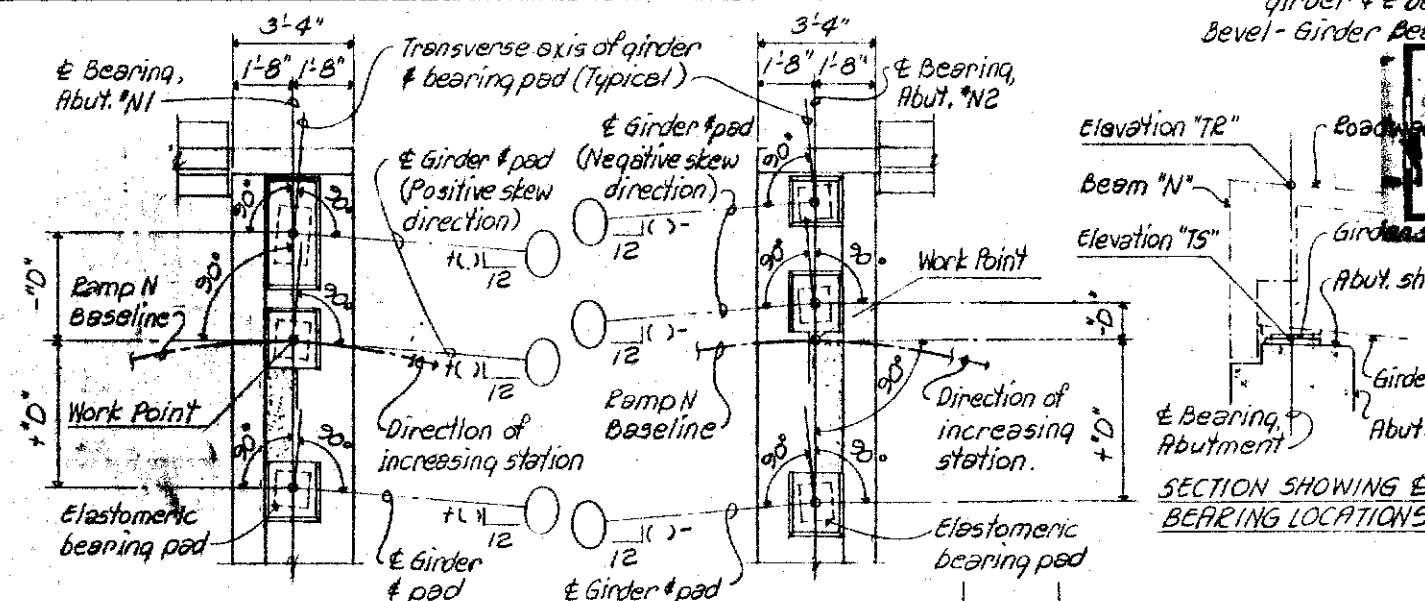


ELASTOMERIC BEARING PAD NOTES

- Fiberglass reinforced elastomeric pads may be used in lieu of pads with metal laminations as shown.
- Minimum total thickness of fiberglass reinforced elastomeric bearing pads shall be equal to the sum of the 1/2" pads between metal laminations + 1/4" (Revise bearing pad thickness accordingly).
- Any revisions to elastomeric bearing pad thickness shall be reflected in concrete seat & girder shelf elevations.
- Cost of bearing pads incidental to concrete.

GIRDER SEAT SCHEDULE & ELASTOMERIC BEARING PAD DETAILS

Not to scale

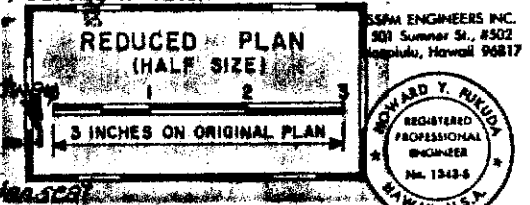


ABUTMENT #N1

PARTIAL PLANS OF ABUTMENT SHELVES

ABUTMENT #N2

1/25/89 Revised Girder Bearing Detail



RAMP N DETAILS & BEARING GEOMETRICS

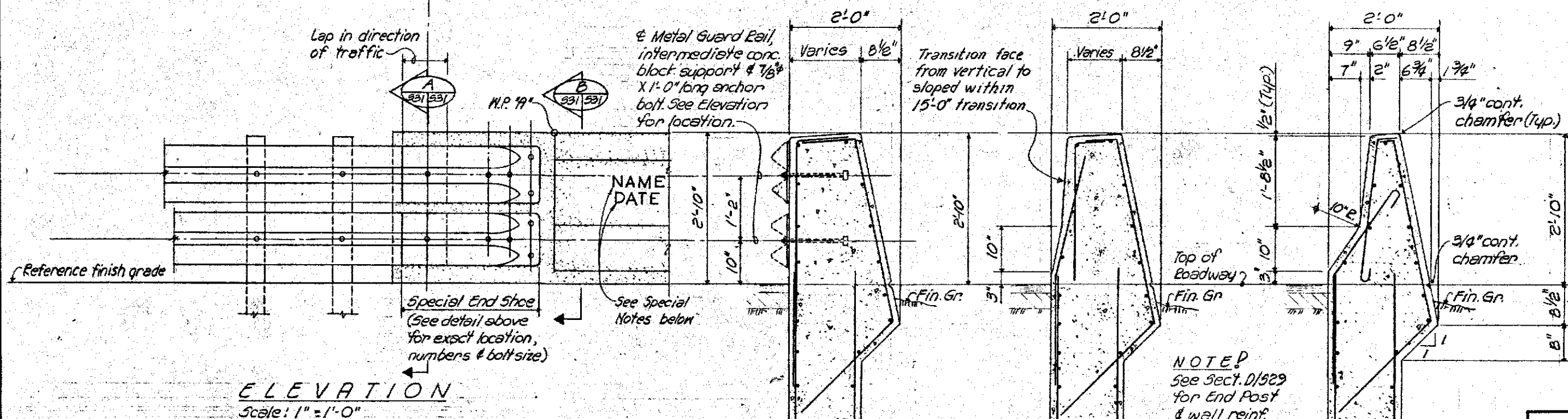
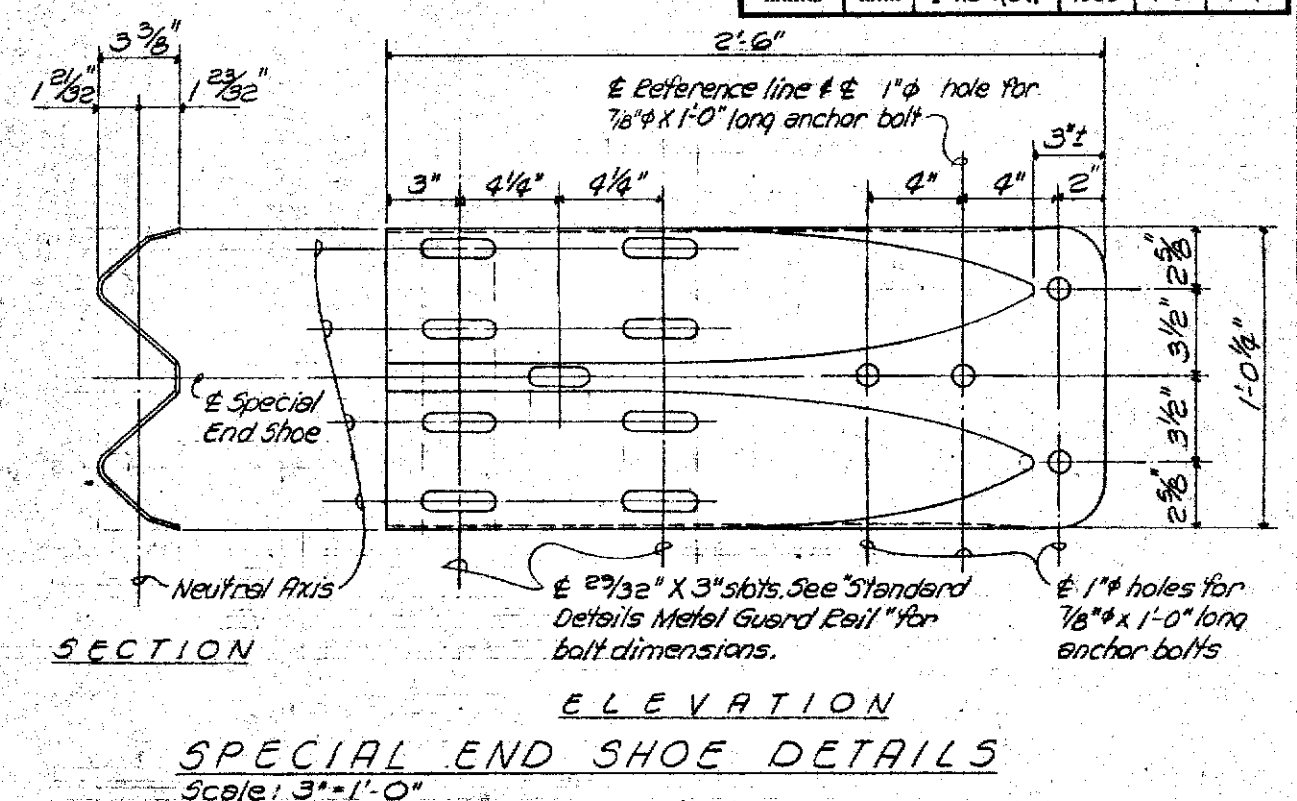
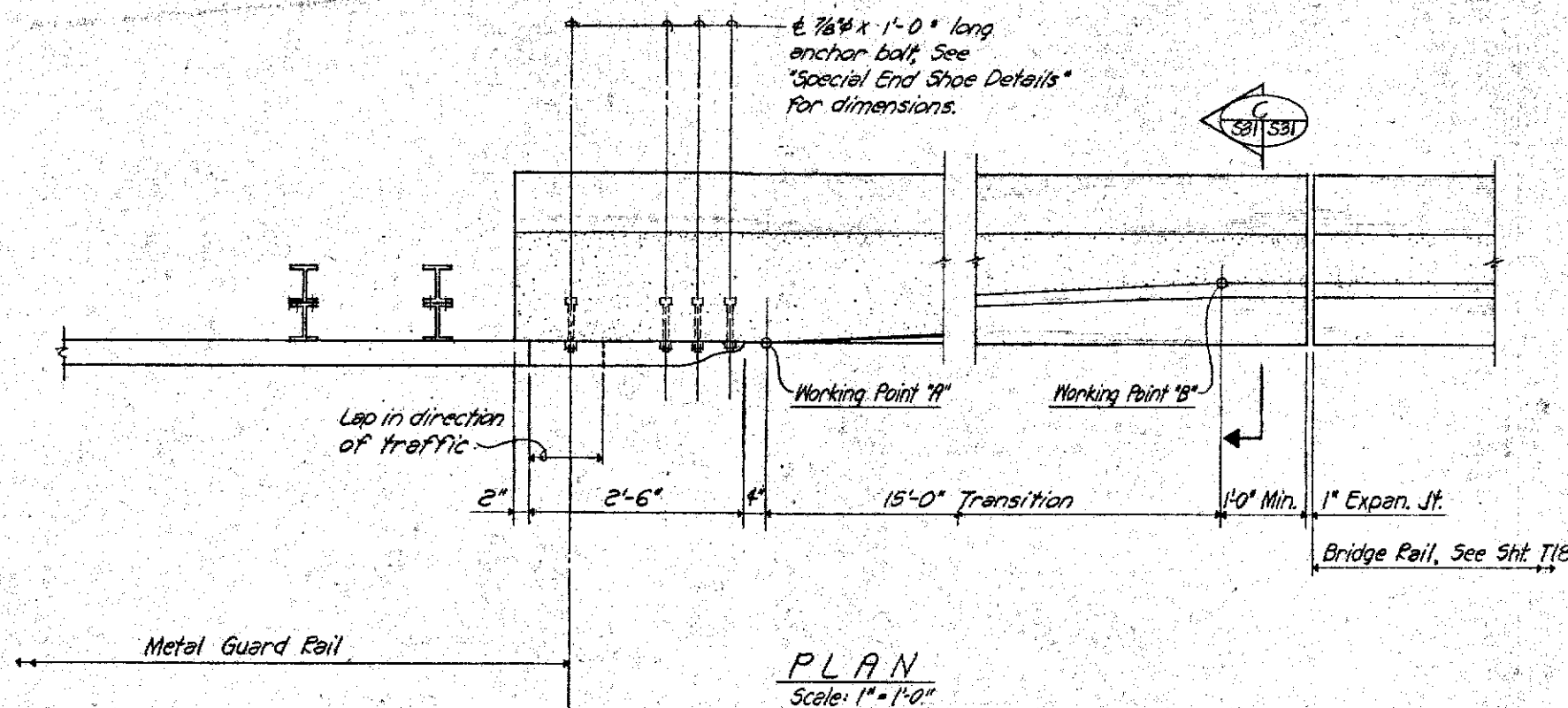
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

SHEET NO. 530 OF 40 SHEETS

ADD 104

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	105	137



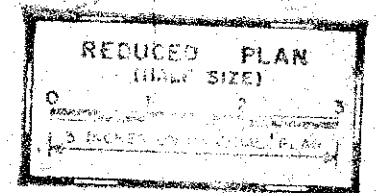
- CONCRETE END POST NOTES:**
1. All anchor bolts shall be high strength bolts conforming to the requirements of ASTM A-325.
 2. All shoe assembly, including anchor bolts, nuts & washers shall be galvanized.
 3. Special End Shoe shall be fabricated from 10 gage steel conforming to the requirements of AASHTO 180.
 4. First guard rail panel adjoining "Special End Shoe" shall be of galvanized steel. See Special Provisions for requirements.
 5. Anchor bolt length given from under bolt head.

- SPECIAL NOTES:**
1. Place name of structure as shown. For location see "Plan" on Contract Drawings.
 2. Date shown will be year structure is completed.
 3. Letter size & detail, see "Standard Bridge Details."

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

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

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



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301 Summer St., #502
Honolulu, Hawaii 96817



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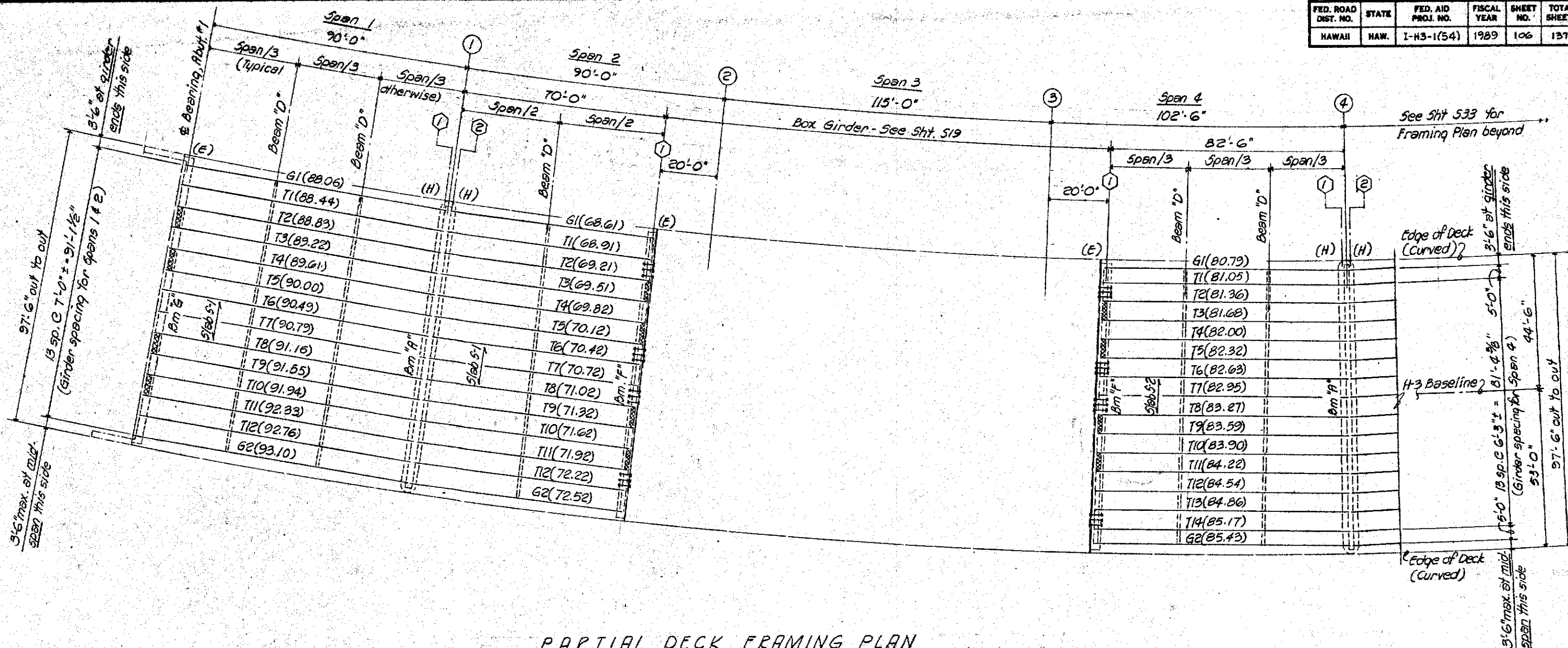
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

END POST DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT 1988

SHEET No. 531 OF 40 SHEETS



PARTIAL DECK FRAMING PLAN
 Scale: 1/16" = 1'-0"

PRESTRESSED GIRDER SCHEDULE		
SPAN NUMBER	GIRDER MARK NUMBER	GIRDER TYPE
1	G1 & G2	IVF-4
	T1 thru T12	IV-4
2	G1 & G2	IVF-5
	T1 thru T12	IV-5
4	G1 & G2	IVF-3
	T1 thru T14	IV-3

PRESTRESSED GIRDER NOTES

- See Deck Framing Plans for Girder Mark Numbers.
- Girder lengths are measured along $\pm$ of girders out to out in plan. Length shown in () on Framing Plans. See Shit. T8 & T9 for diagram.

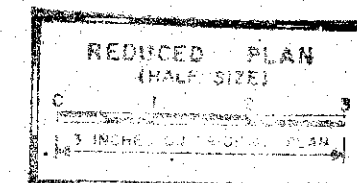
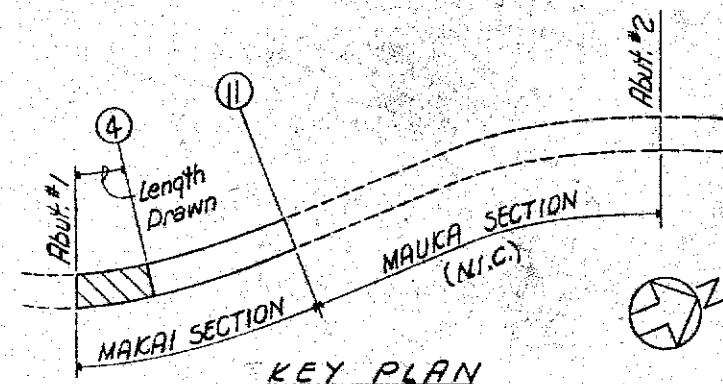
REFERENCE DRAWINGS

- Hinge Restraints --- Shit. T17
- Prestressed Girder Details & Schedule --- Shit. T8-T13
- Beam "A", "B" & "D" --- Shit. T14
- Beam "F" & "G" --- Shit. T15
- Slab Reinforcing Schedule --- Shit. 536
- Deck Slab Camber Schedule --- Shit. 538
- Deck Drain Locations --- Civil Drawings
- Deck Drain Details @ Typ. Deck --- Civil Drawings
- Deck Drain Detail @ Box Girder --- Shit. 524
- Creep Block --- Shit. T14, T22 & T27

LEGEND:

- G1, T1, etc. = Girder Mark Number
- (E) = Expansion end of girders
- (H) = Hinge end of girders
- = Horizontal Hinge Restraints
- ▣ = Creep Block w/ Vertical Restraints

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	



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 501 Sumner St., #502
 Honolulu, Hawaii 96817



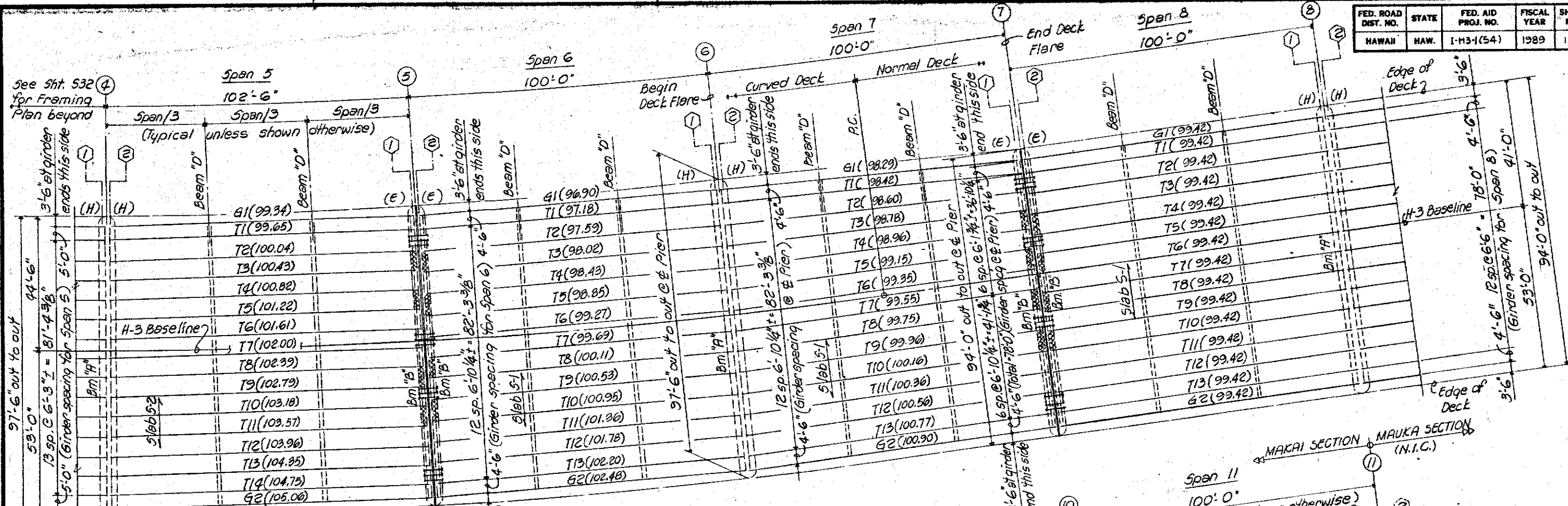
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PARTIAL FRAMING PLAN
 ABUTMENT #1 TO PIER #4

INTERSTATE ROUTE H-3
 F.A.I. PROJ. NO. I-H3-1(54)

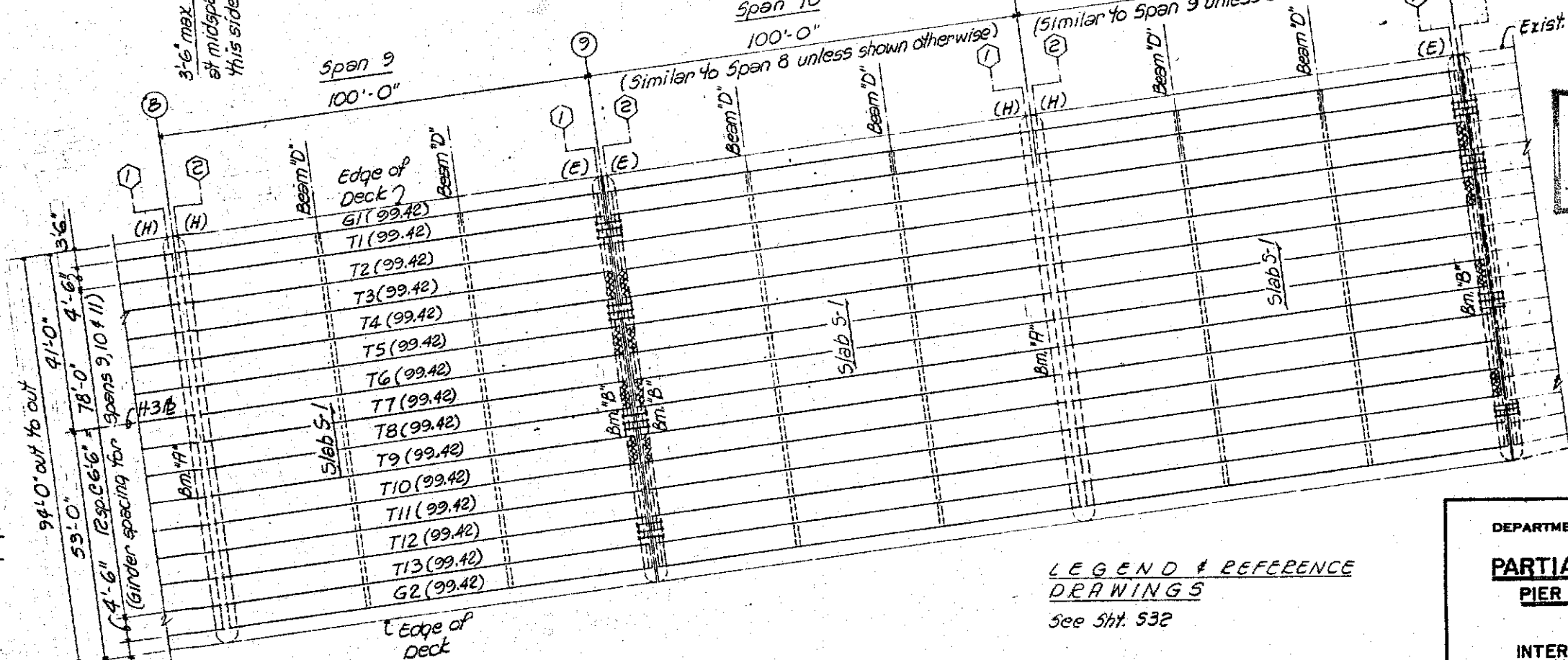
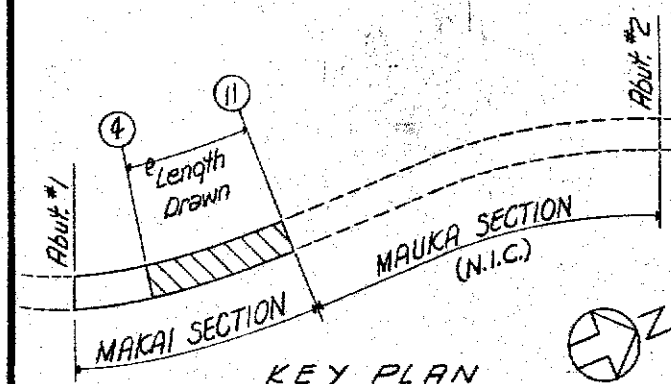
SCALE: AS NOTED DATE: SEPT. 1989
 SHEET NO. 532 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	MAW.	I-H3-1(54)	1989	107	137



PRESTRESSED GIRDER SCHEDULE		
SPAN NUMBER	GIRDER MARK NUMBER	GIRDER TYPE
5	G1 & G2	IV-F-2
	T1 thru T14	IV-2
6, 7, 8, 9, 10 & 11	G1 & G2	IV-F-1
	T1 thru T13	IV-1

PRESTRESSED GIRDER NOTES
See Sht. 532



LEGEND & REFERENCE DRAWINGS
See Sht. 532

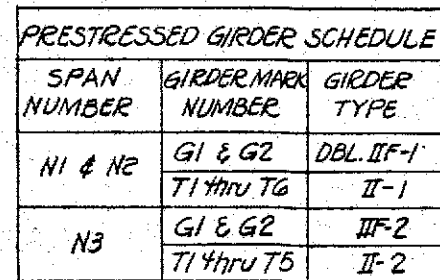
REDUCED PLAN (HALF SIZE)

SSFM ENGINEERS INC.
501 Sumner St., #502
Honolulu, Hawaii 96817
HOWARD Y. FUKUDA
REGISTERED PROFESSIONAL ENGINEER
No. 13434
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PARTIAL FRAMING PLAN
PIER #4 TO PIER #11
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)
SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 533 OF 40 SHEETS

PARTIAL DECK FRAMING PLANS
Scale: 1/16" = 1'-0"

ORIGINAL PLAN	SURVEY DRAWN	DATE
NOTE BOOK	TRACED BY	
NO.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



1. See Deck Framing Plan for Girder Mark Numbers.
2. Girder lengths are measured along $\pm$ of girders out to out in plan. Length shown in () on Framing Plans, see Sht T10 for diagram.

1. Hinge Restrainers ----- Sht. T17
2. Prestressed Girder Details & Schedule -- Sht. T10 & T11
3. Beams "K", "L", "M" & "N" ----- Sht. T16
4. Slab Reinforcing ----- Sht. 536 & 537
5. Deck Slab Camber Schedule ----- Sht. 538
6. Creep Blocks ----- Sht. T14, T22 & T27

(E) = Expansion Bearing
(H) = Hinge Bearing
— = Horizontal Hinge Restrainers
▣ = Creep Block w/ Vertical Restrainers
G1, T1, etc. = Girder mark number.

SSFA ENGINEERS INC.
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Honolulu, Hawaii 96817



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James U. Fuchs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-I(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET No. 534 OF 40 SHEETS

Deck Dimensions
(Abut. #1 to Pier #6)

Deck Dimensions
(Pier #7 to Pier #11)

NOTE?
Dimensions btwn
Pier #6 & #7 varies
(Tapered span)

Concrete
Parapet
See Sht. T18

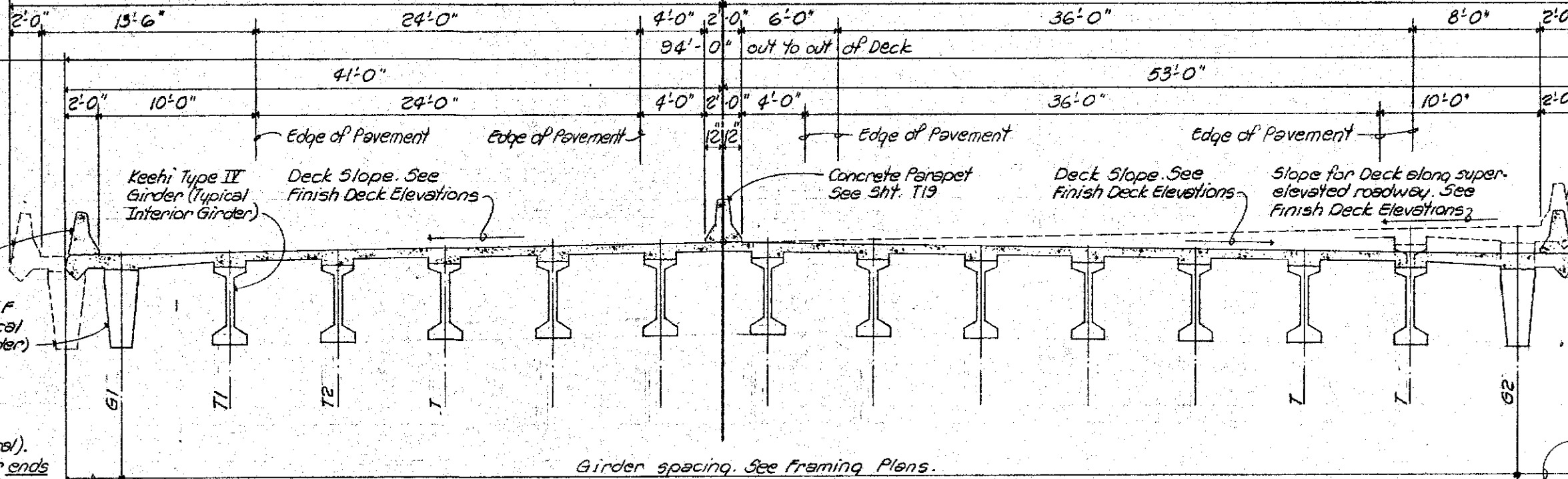
Keehi Type II F
Girder (Typical
Exterior Girder)

3'-6" max. (typical).
3'-6" at girder ends
for deck along super-
elevated roadway.
(Low side of deck)

97'-6" out to out of Deck

44'-6"

53'-0"



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	109	137

Dimensions for extent of Edge of Pavement this side of Baseline (Abut. #1 to Sta. 352+34.54)

Dimensions for extent of Edge of Pavement this side of Baseline (Sta. 354+28.98 to Pier #11)

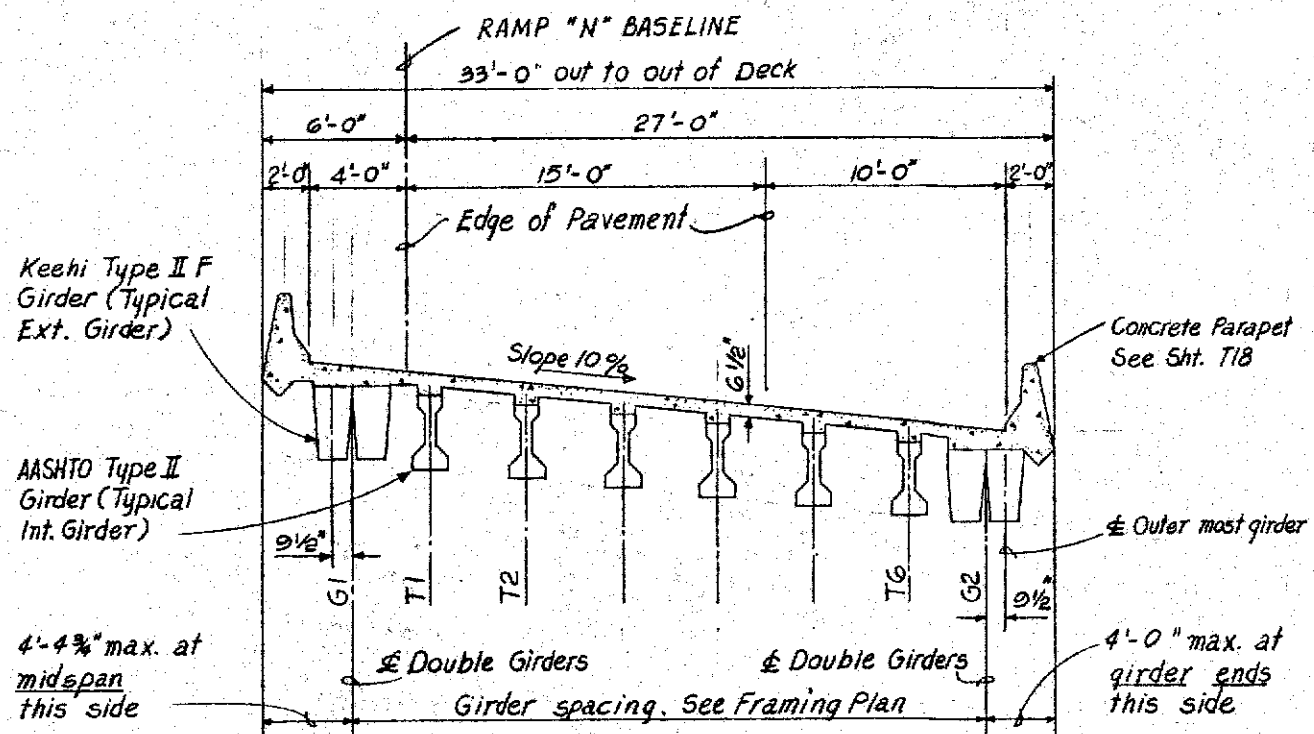
NOTE?
Dimensions btwn Sta. 352+34.54 & Sta. 354+28.98 varies (Tapered)

Outline of structure of super-elevated roadway (Between Sta. 345+70 & Sta. 352+18.69)

3'-6" max. (typical).
3'-6" at midspan btwn piers for deck along super-elevated roadway.
(High side of deck)

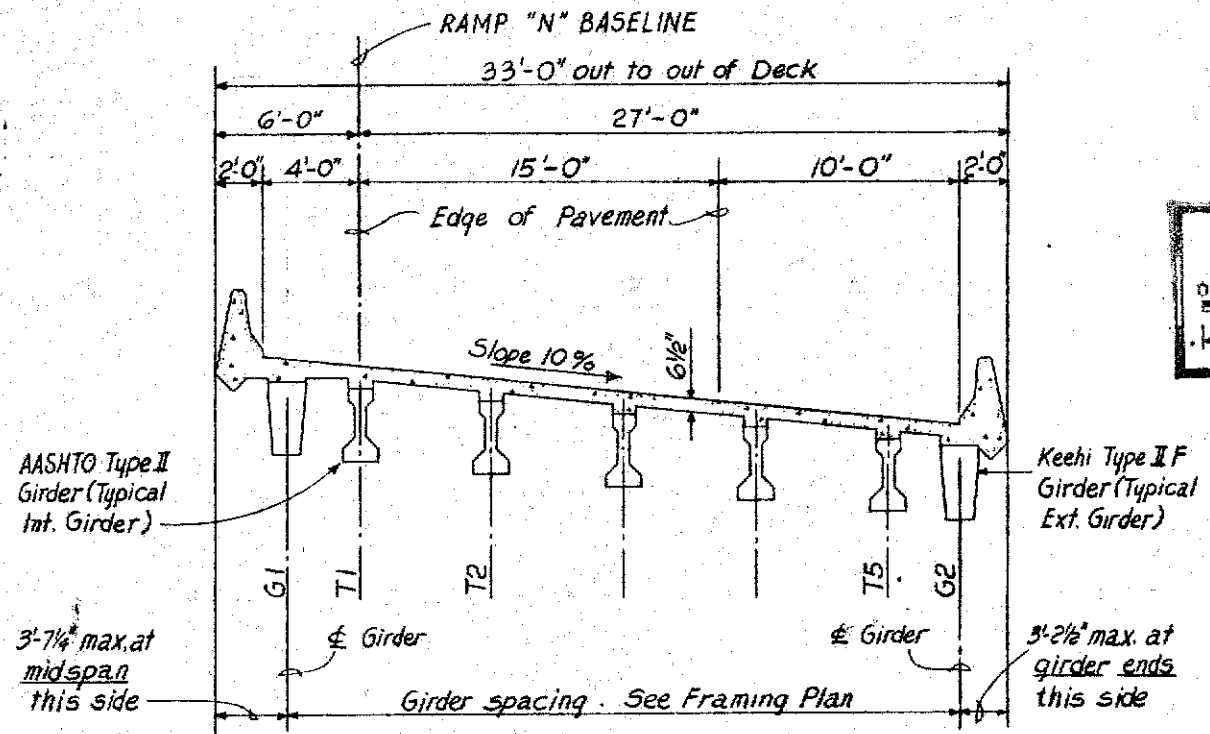
TYPICAL DECK SECTION FOR VIADUCT

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



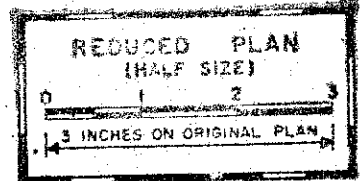
DECK SECTION FOR SPAN N1 & N2 — RAMP "N"

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



DECK SECTION FOR SPAN N3 — RAMP "N"

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



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Howard Y. Fung

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK SECTIONS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

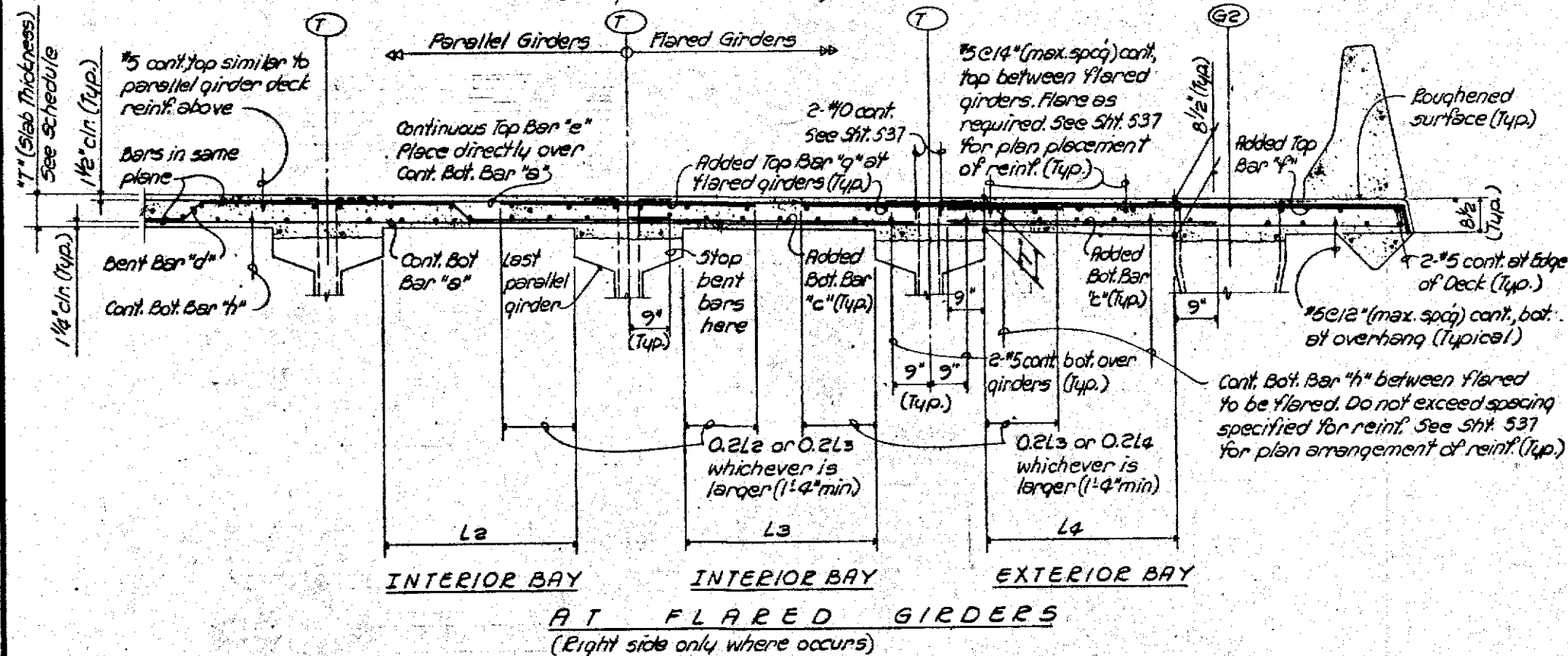
SCALE: AS NOTED DATE: SEPT 1988

SHEET NO. 535 OF 40 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
IN CHARGE	
NO.	

1. *Splices*
 - a) *Splice top & bottom bars as required at interior bays only.*
 - b) *Alternate bars shall be spliced at the same location.*
2. *Top & bottom transverse deck slab reinforcing shall be placed normal to girders. See plan arrangement for deck slab reinf. Sht. 5-37*
3. *See Deck Framing Plans for deck slab mark number locations.*
4. *For deck reinf. details not shown on this sheet, see plan arrangement for deck slab reinf. Sht. 5-37*
5. *All deck slab concrete, except diaphragm & parapet, shall be Class B.D.*
6. *For added top longitudinal bars across supports, see sheet 530.*

DECK SLAB REINFORCING SCHEDULE

[illegible]

PARTIAL DECK SECTIONS SHOWING TYPICAL DECK SLAB REINFORCING
Not to scale

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This work was supported by
the National Science Foundation.
James U. Wilson

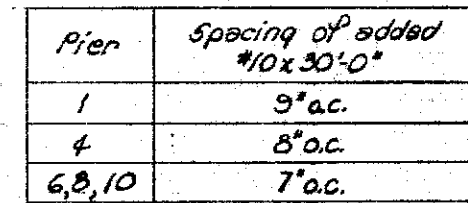
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK SLAB
REINFORCING SCHEDULE

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988

SHEET No. 536 OF 40 SHEETS



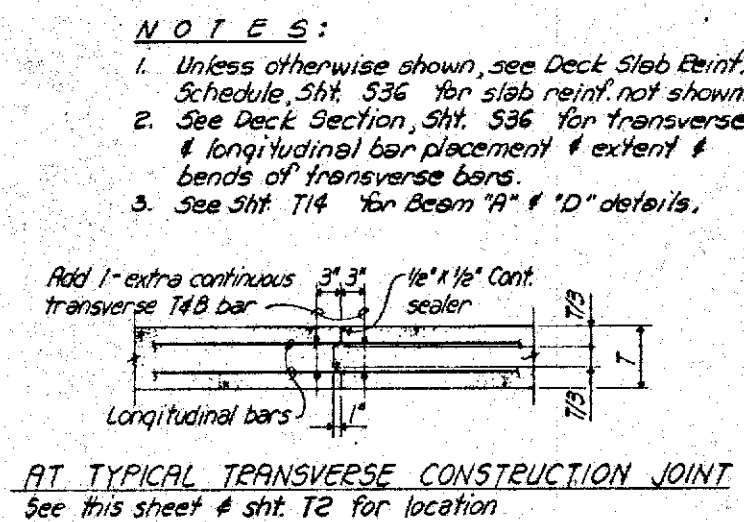
STATE OF KANSAS
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK SLAB
REINFORCING PLAN

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

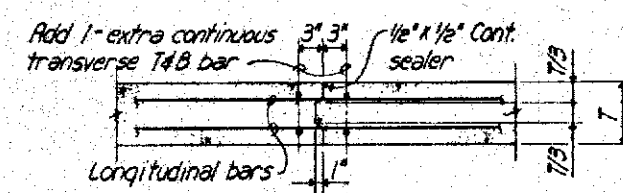
SCALE: AS NOTED DATE: SEPT. 1988

SHEET No. 537 OF 40 SHEETS



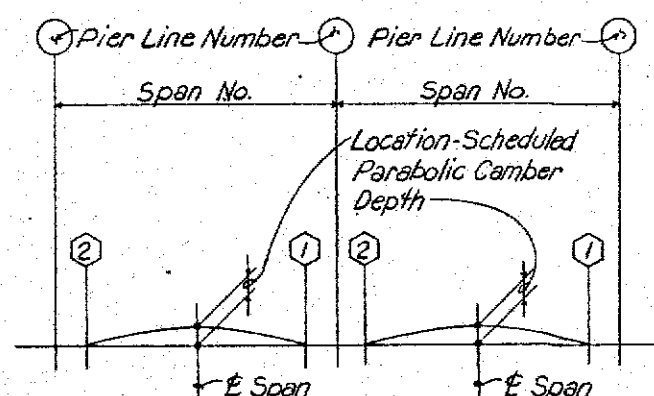
NOTES:

1. Unless otherwise shown, see Deck Slab Reinf. Schedule, Sht. 536 for slab reinf. not shown.
2. See Deck Section, Sht. 536 for transverse & longitudinal bar placement & extent & bends of transverse bars.
3. See Sht. T14 for Beam "A" & "D" details.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	112	137

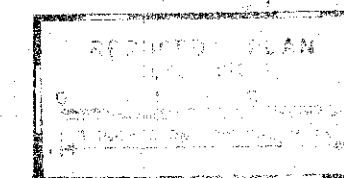
DECK SLAB CAMBER SCHEDULE														RAMP N			
LOCATION	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪						
GIRDERS	SPAN No. 1	SPAN No. 2	SPAN No. 3	SPAN No. 4	SPAN No. 5	SPAN No. 6	SPAN No. 7	SPAN No. 8	SPAN No. 9	SPAN No. 10	SPAN No. 11	ABUT. N1	SPAN N1	SPAN N2	SPAN N3	ABUT. N2	
G-1	5/16	1/8		1/4	1/16	5/16	5/16	5/16	5/16	5/16	5/16		1/2	1/2	3/8		
F-1	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-2	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-3	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-4	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-5	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-6	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16		1/4	1/4	1/4		
F-7	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-8	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-9	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-10	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-11	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-12	1/8	1/8		1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-13				1/8	1/16	-3/16	-3/16	-1/16	-1/16	-1/16	-1/16						
F-14				1/8	1/16												
G-2	5/16	1/8		1/8	1/16	5/16	5/16	5/16	5/16	5/16	5/16		1/2	1/2	3/8		



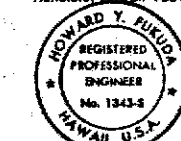
TYPICAL DECK SLAB CAMBER DIAGRAM

NOTES:

1. The slab camber values includes the combined effects of the initial prestress force, the weight of the girder and the weight of the slab and diaphragm.
2. Camber values shown do not account for any camber growth of the girder.
3. Positive cambers indicate upward displacement.
Negative " " downward "



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

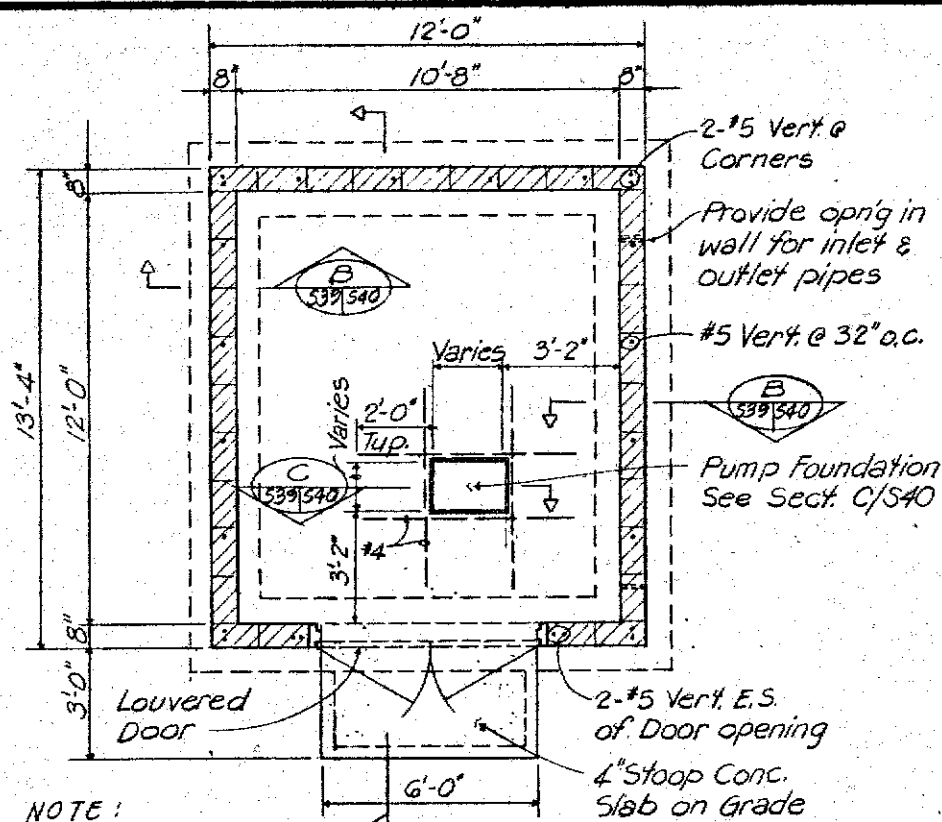
DECK SLAB CAMBER SCHEDULE

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

DATE: SEPT. 1988

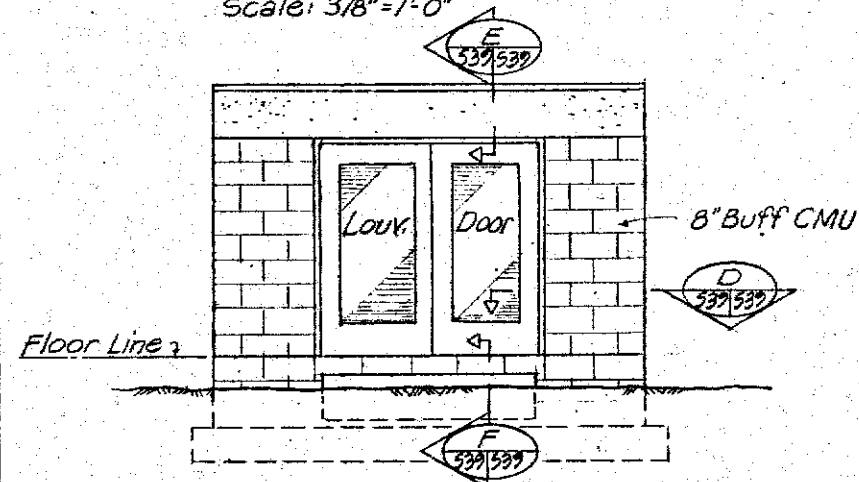
SHEET No. 538 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	113	137

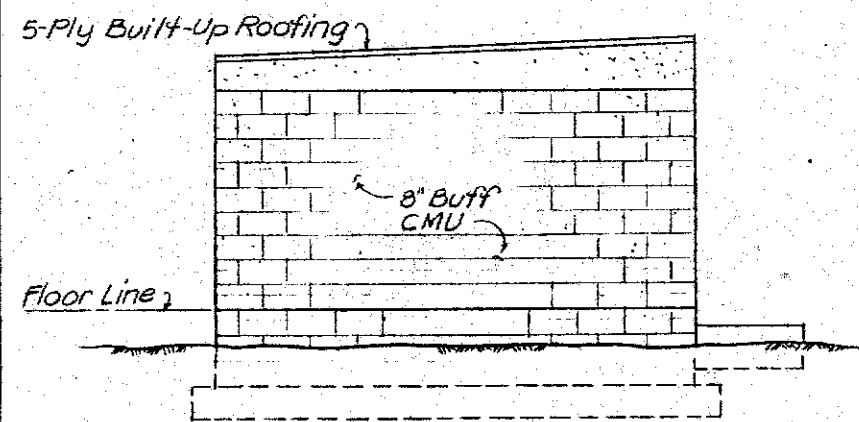


NOTE:
See Civil Dwg's
for location.

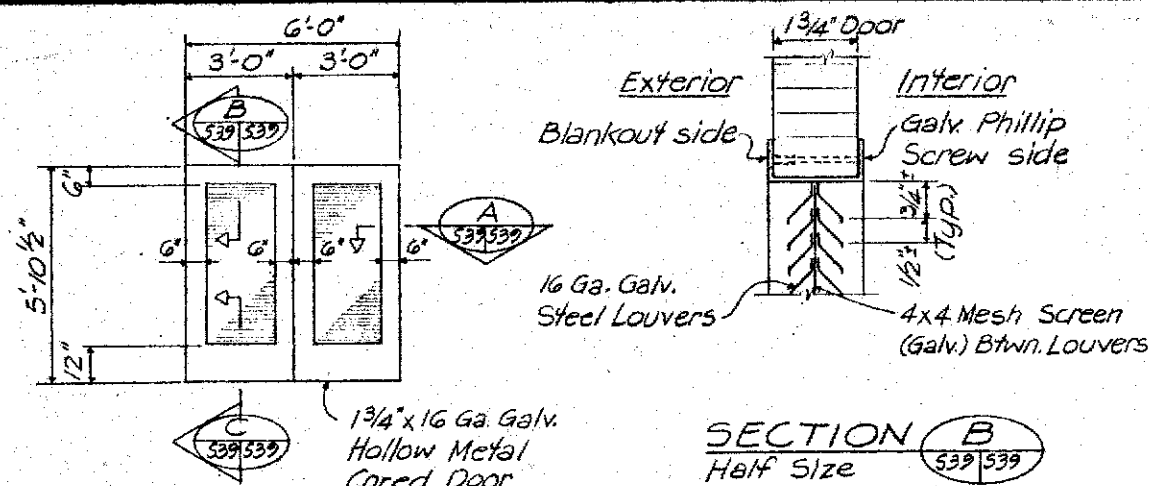
PLAN - PUMP HOUSE
Scale: 3/8" = 1'-0"



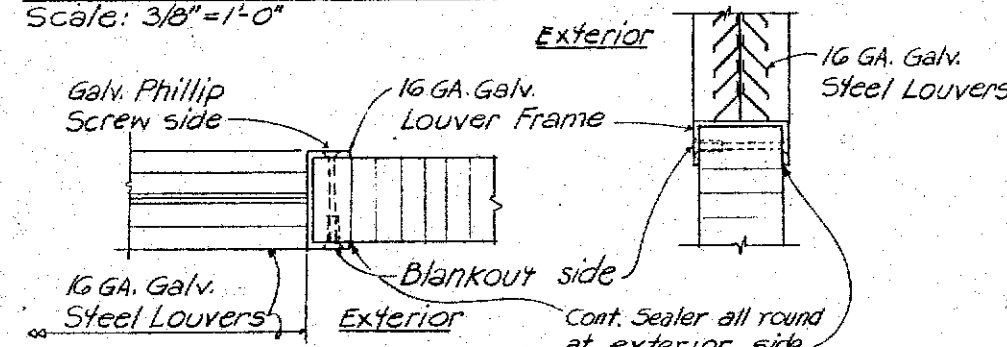
FRONT ELEVATION
Scale: 3/8" = 1'-0"



LEFT ELEVATION (RIGHT SIM.)
Scale: 3/8" = 1'-0"

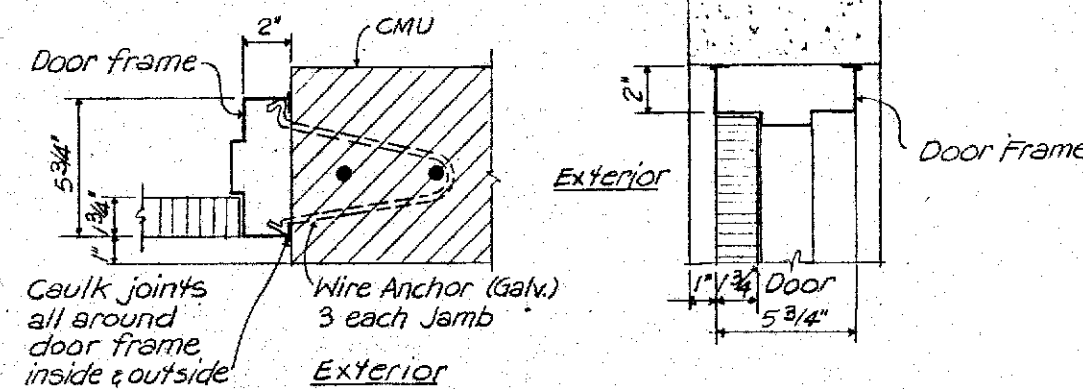


LOUVER DOOR ELEVATION
Scale: 3/8" = 1'-0"



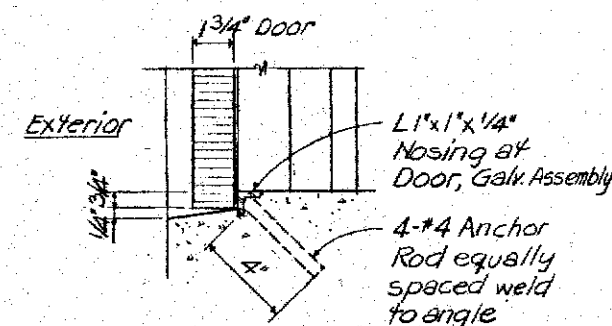
SECTION A
Half Size

SECTION C
Half Size



SECTION D
3" = 1'-0"

HEAD E
3" = 1'-0"



THRESHOLD F
3" = 1'-0"

TYPICAL LOUVER DOOR DETAILS

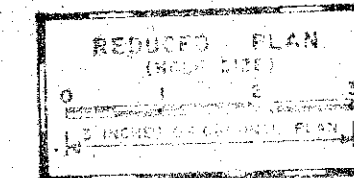
SPECIAL NOTES:

- See general notes on Sht. T-1.
- Concrete block notes:
 - All standard units shall be 2-Cell type, grade N-II, unless otherwise shown.
 - All cells containing reinforcing, bolts, or inserts shall be solidly filled with 3,500 p.s.i. grout.
 - Concrete block shall be laid in running bond pattern unless otherwise specified and/or shown.

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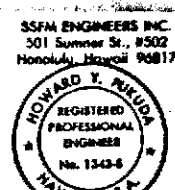
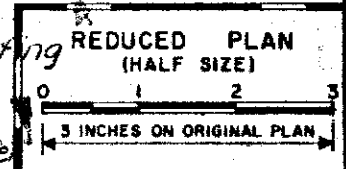
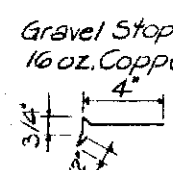
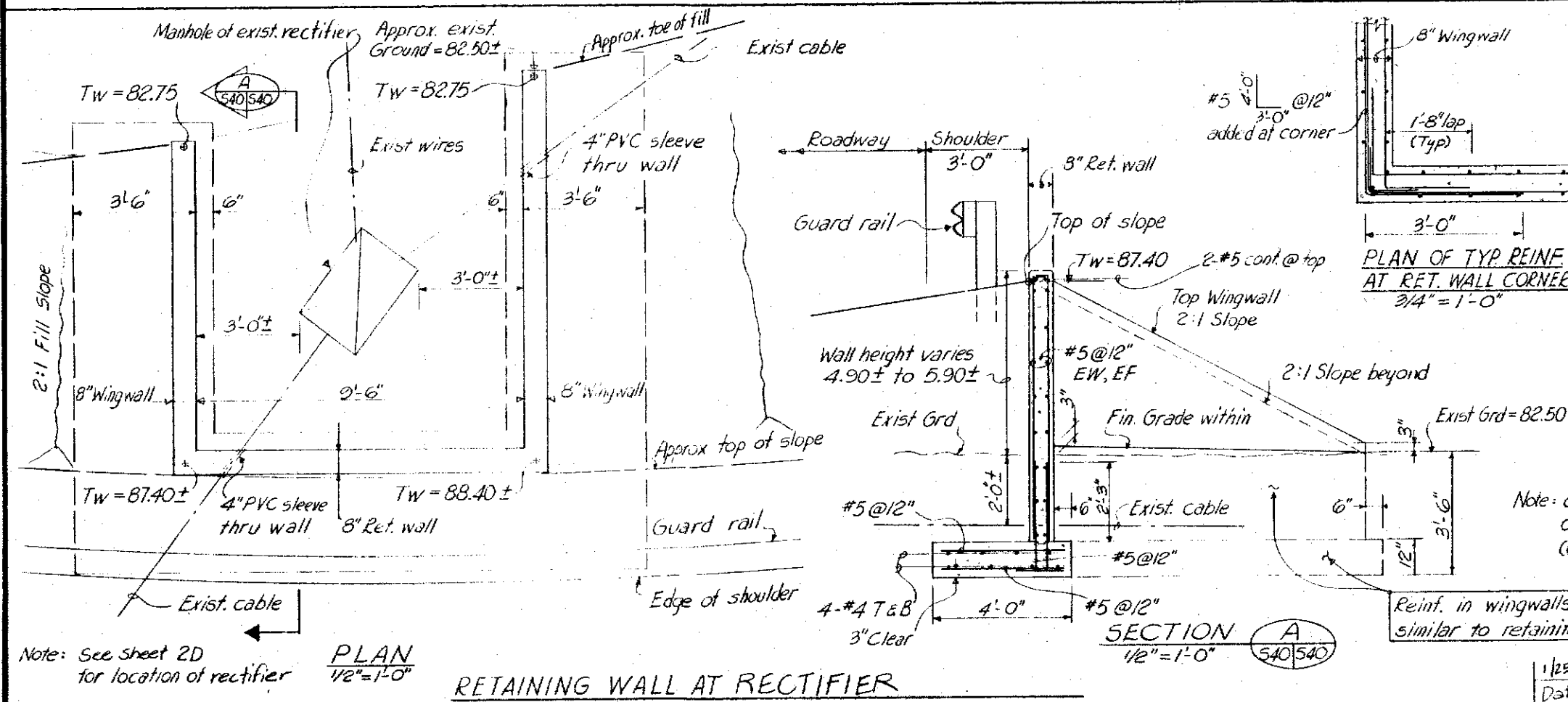
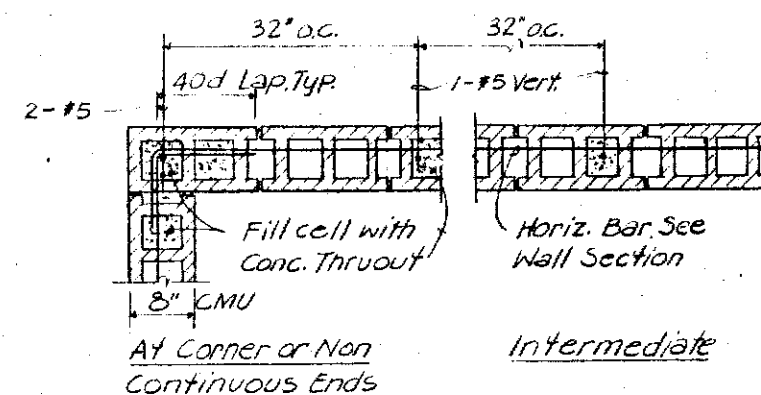
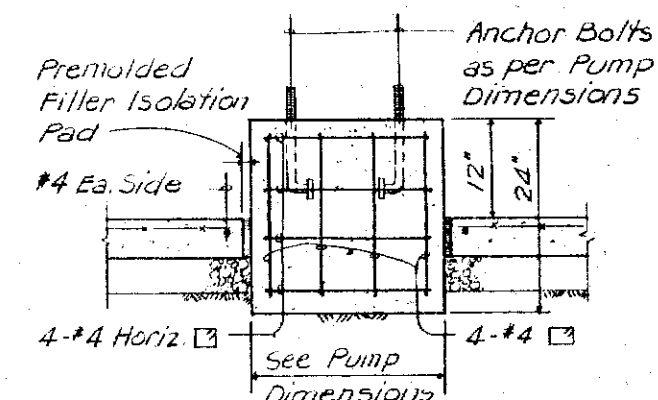
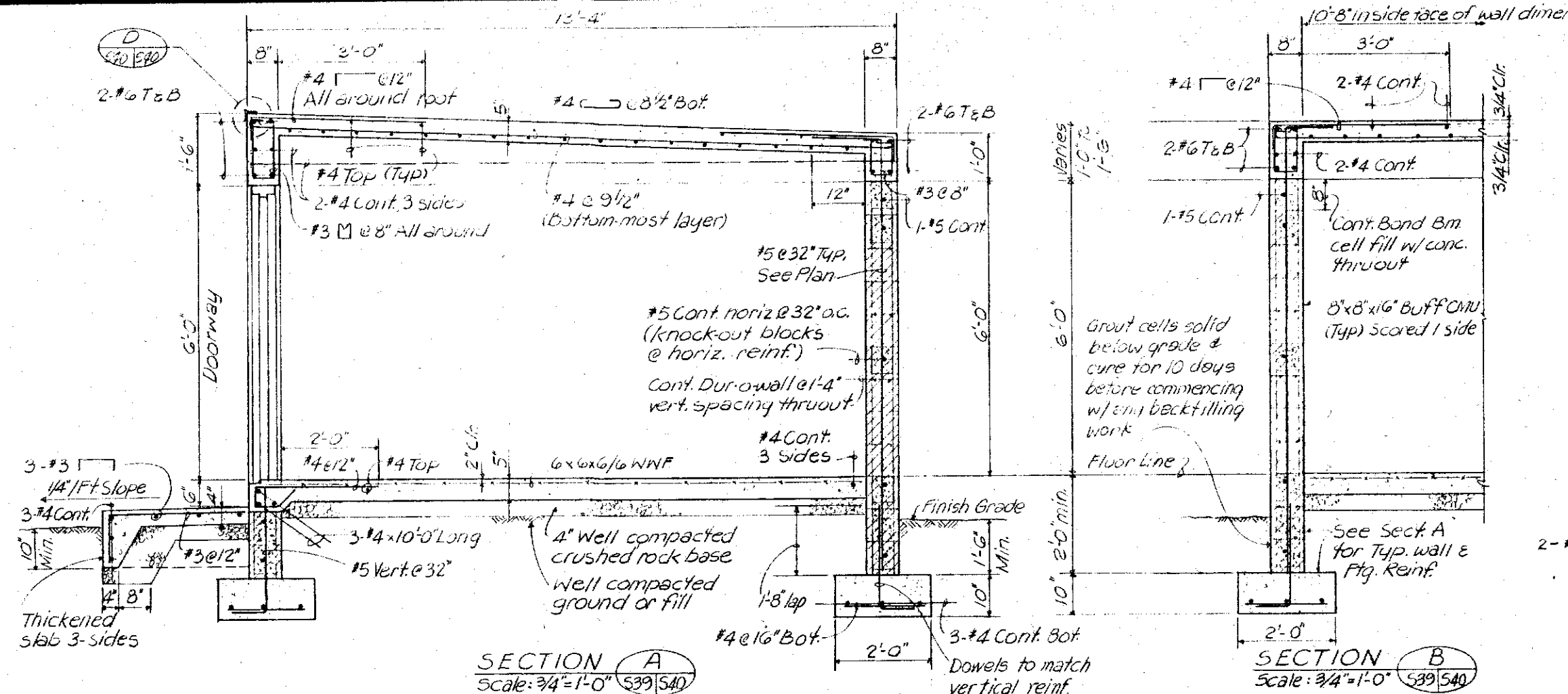
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PUMP HOUSE
PLAN & DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT 1988
SHEET No. 539 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	114	137



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**IRRIGATION PUMP HOUSE
SECTIONS & RETAINING
WALL AT RECTIFIER**

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(54)

SCALE: AS NOTED DATE: SEPT. 1988
SHEET NO. 540 OF 40 SHEETS

Note: cost of retaining wall shall be included in cost for Navy JP-5 Fuel Line Relocation (655.0100).

1/25/89	Changed "c.p." to "Rectifier"
Date	REVISION