

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

STATE OF HAWAII

VECP #2

PLANS FOR

CONSTRUCTION OF A PORTION OF

INTERSTATE ROUTE H-3

WINDWARD VIADUCT

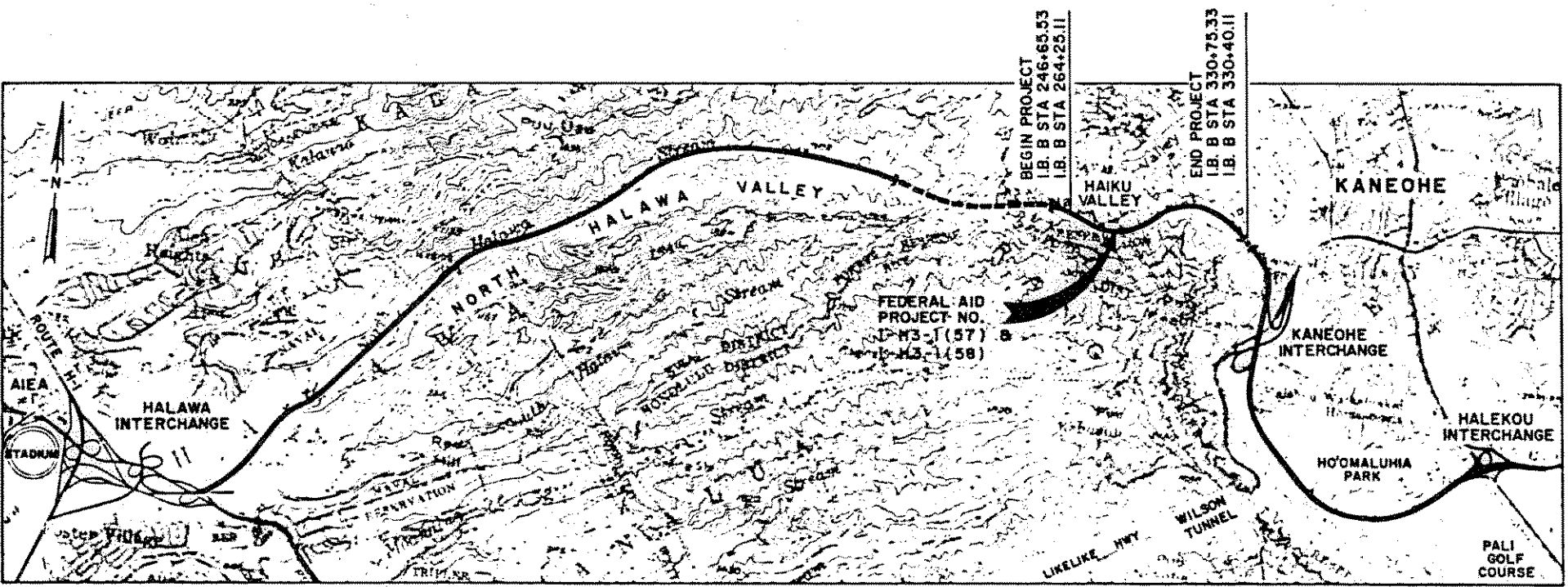
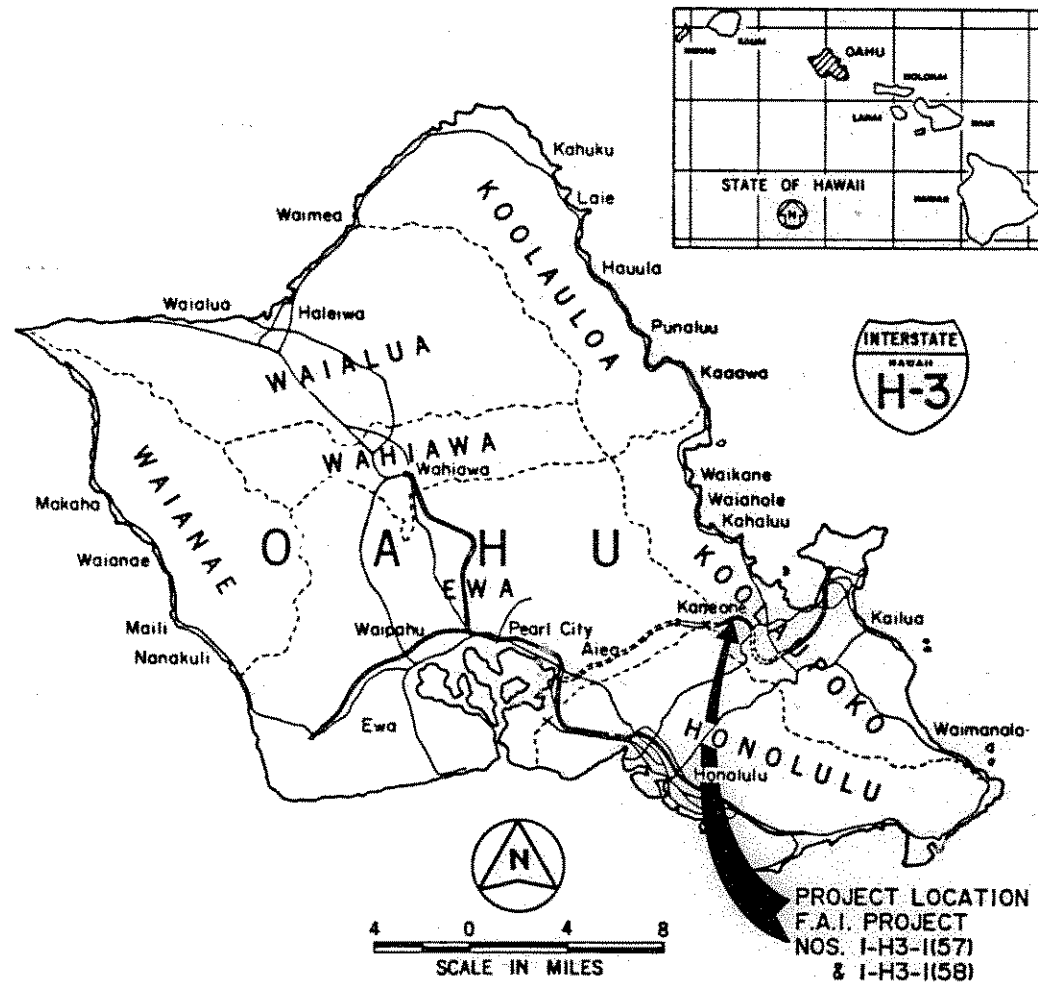
FEDERAL AID INTERSTATE PROJECT NO. I-H3-1 (57)

AND

FEDERAL AID INTERSTATE PROJECT NO. I-H3-1 (58)

DISTRICT OF KOOLAUPOKO

ISLAND OF OAHU



LAYOUT PLAN

GROSS LENGTH OF PROJECT 1.35 MI.

BRIDGES OVER 20.00' SPAN 1.25 MI.

NET LENGTH OF ROADWAY 0.10 MI.

FEDERAL AID INTERSTATE PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION

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

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1 (57)

F.A.I. PROJECT No. I-H3-1 (58)

SCALE : AS NOTED

DATE : JUN. 1990

SHEET No. 1 OF 280 SHEETS

DATE

REVISION

J. MULLER INTERNATIONAL

Libby Engineers

INDEX TO BRIDGE DRAWINGS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

SHT. NO.	DWG. NO.	SHEET TITLE	SHT. NO.	DWG. NO.	SHEET TITLE	SHT. NO.	DWG. NO.	SHEET TITLE	SHT. NO.	DWG. NO.	SHEET TITLE
1	N1	Index to Bridge Drawings	92	AB6	Retaining Wall Sections & Footing Details	143	DP18	Abutment 2 Segment Dimensions	194	SK1	Shear Key Schedule
42	N2	Structural General Notes	93	AB7	Plans & Elevations: Inbound Abutment No. 2	144	DP19	Abutment 2 Segment P.T. Details	195	CR1	Concrete Railing Details
43	GP1	Partial General Plan	94	AB8	Plans & Elevations: Outbound Abutment No. 2	145	DP20	Abutment 2 Segment Reinforcing	196	CR2	Concrete Railing Details Faraday Shield Support
44	GP2	Partial General Plan	95	AB9	Abutment Elevations	146	DP21	Abutment 2 Segment Reinforcing II	197	DD1	Deck Drain Details
45	A1	Partial Deck Layout and Elevation I	96	AB10A	Abutment Sections: Abutment No. 2 Inbound Structure	147	HD1	Hinge Segment Dimensions I	198	ED1	Electric Manhole Details
46	A2	Partial Deck Layout and Elevation II	97	AB10B	Abutment Sections: Abutment No. 2 Outbound Structure	148	HD2	Hinge Segment Dimensions II	199	PT1A	Contingency Tendon, Temp. P.T. Bars Layout I
47	A3	Partial Deck Layout and Elevation III	98	AB11	Wing Wall Sections	149	HD3	Hinge Segment A P.T. Details	200	PT1B	Contingency Tendon, Temp. P.T. Bars Layout II
48	A4	Partial Deck Layout and Elevation IV	99	AB12	Abutment No. 1 Sections Inbound Structure	150	HD4	Hinge Segment A Reinforcing I	201	PT1C	Contingency Tendon, Temp. P.T. Bars Layout III
49	A5	Partial Deck Layout and Elevation V	100	SB1	Slab Bridge Details	151	HD5	Hinge Segment A Reinforcing II	202	PT1D	Contingency Tendon, Temp. P.T. Bars Layout IV
50	A6	Partial Deck Layout and Elevation VI	101	SB2	Details	152	HD6	Hinge Segment B P.T. Details	203	PT1E	Contingency Tendon, Temp. P.T. Bars Layout V
51	A7	Partial Deck Layout and Elevation VII	102	CS1	Cross Sections Inbound Girder	153	HD7	Hinge Segment B Reinforcing I	204	PT1F	Contingency Tendon, Temp. P.T. Bars Layout VI
52	A8	Partial Deck Layout and Elevation VIII	103	CS2	Cross Sections Outbound Girder	154	HD8	Hinge Segment B Reinforcing II	205	PT2	Contingency Tendon Details Bottom Blocks
53	A9	Partial Deck Layout and Elevation IX	104	G1	Treatment of Horizontal Curvature	155	HD9	Hinge Segment Temporary Blocking	206	PT3	Contingency Tendon Details Top Blocks
54	A10	Partial Deck Layout and Elevation X	105	S1	Segment Layout I L.B. Sta. 264+63.78 to 296+65.53	156	SF1	Bulkhead Dimensions	207	CM1	Erection Schematic I
55	A11	Partial Deck Layout and Elevation XI	106	S2	Segment Layout II L.B. Sta. 296+65.53 to 330+77.29	157	TL1	P.T. Layout I Inbound Pier 3 thru Pier 5	208	CM2	Erection Schematic II
56	A12	Partial Deck Layout and Elevation XII	107	S3	Segment Layout III O.B. Sta. 264+23.36 to 297+05.1	158	TL2	P.T. Layout II Inbound Pier 3 thru Pier 5	209	CM3	Erection Schematic III
57	A13	Partial Deck Layout and Elevation XIII	108	S4	Segment Layout IV O.B. Sta. 297+05.11 to 330+41.86	159	TL3	P.T. Layout III Outbound Pier 3 thru Pier 5	210		Not Used
58	A14	Partial Deck Layout and Elevation XIV	109	PB1	Box Girder Segment Dimensions	160	TL4	P.T. Layout IV Outbound Pier 3 thru Pier 5	211		Not Used
59	A15	Partial Deck Layout and Elevation XV	110	PB2	Box Girder Segment Reinforcing I	161	TL5	P.T. Layout V Inbound Pier 5 thru Pier 7	212		Not Used
60	A16	Partial Deck Layout and Elevation XVI	111	PB3	Box Girder Segment Reinforcing II	162	TL6	P.T. Layout VI Inbound Pier 7 thru Pier 9	213		Not Used
61	A17	Partial Deck Layout and Elevation XVII	112	PB4A	Box Girder Segment Reinforcing III	163	TL7	P.T. Layout VII Outbound Pier 5 thru Pier 7	214		Not Used
62	A18	Partial Deck Layout and Elevation XVIII	113	PB4B	Box Girder Segment Reinforcing IV	164	TL8	P.T. Layout VIII Outbound Pier 7 thru Pier 9	215		Not Used
63	A19	Partial Deck Layout and Elevation XIX	114	PB4C	Box Girder Segment Reinforcing V	165	TL9	P.T. Layout IX Inbound Pier 9 thru Pier 11	216		Not Used
64	A20	Partial Deck Layout and Elevation XX	115	PB4D	Box Girder Segment Reinforcing VI	166	TL10	P.T. Layout X Inbound Pier 11 thru Pier 13	217		Not Used
65	A21	Partial Deck Layout and Elevation XXI	116	PB4E	Box Girder Segment Reinforcing VII	167	TL11	P.T. Layout XI Outbound Pier 9 thru Pier 11	218		Not Used
66	A22	Partial Deck Layout and Elevation XXII	117	PB4F	Box Girder Segment Reinforcing VIII	168	TL12	P.T. Layout XII Outbound Pier 11 thru Pier 13	219		Not Used
67	A23	Partial Deck Layout and Elevation XXIII	118	PB5	Closure Joint Reinforcing	169	TL13	P.T. Layout XIII Inbound Pier 13 thru Pier 15	220		Not Used
68	A24	Partial Deck Layout and Elevation XXIV	119	BG3	Deck Overlay Reinforcing	170	TL14	P.T. Layout XIV Inbound Pier 15 thru Pier 17	221		Not Used
69	FP1	Partial Foundation Plan I	120	DP1A	Fixed Pier Segment Dimensions Type I	171	TL15	P.T. Layout XV Outbound Pier 13 thru Pier 15	222		Not Used
70	FP2	Partial Foundation Plan II	121	DP1B	Fixed Pier Segment Dimensions Type II	172	TL16	P.T. Layout XVI Outbound Pier 15 thru Pier 17	223		Not Used
71	FP3	Partial Foundation Plan III	122	DP2A	Fixed Pier Segment P.T. Details Type I	173	TL17	P.T. Layout XVII Inbound Pier 17 thru Pier 19	224		Not Used
72	FP4	Partial Foundation Plan IV	123	DP2B	Fixed Pier Segment P.T. Details Type II	174	TL18	P.T. Layout XVIII Inbound Pier 19 thru Pier 21	225		Not Used
73	FP5	Partial Foundation Plan V	124	DP3A	Fixed Pier Segment Reinforcing Type I	175	TL19	P.T. Layout XIX Outbound Pier 17 thru Pier 19	226		Not Used
74	FP6	Partial Foundation Plan VI	125	DP3B	Fixed Pier Segment Reinforcing Type II	176	TL20	P.T. Layout XX Outbound Pier 19 thru Pier 21	227		Not Used
75	FT1	Footing Layout & Schedule	126	DP4	Fixed and Sliding Pier Segment Top Slab Reinforcing	177	TL21	P.T. Layout XXI Inbound Pier 21 thru Pier 23	228		Not Used
76	FT2	Pile Cap Reinforcing Type I	127	DP5A	Sliding Pier Segment Dimensions Type I	178	TL22	P.T. Layout XXII Inbound Pier 23 thru A2	229		Not Used
77	FT3	Pile Cap Reinforcing Type II	128	DP5B	Sliding Pier Segment Dimensions Type II	179	TL23	P.T. Layout XXIII Outbound Pier 21 thru Pier 23	230		Not Used
78	FT4	Pile Cap Reinforcing Type III	129	DP6A	Sliding Pier Segment P.T. Details Type I	180	TA1	P.T. Details I Bottom Blocks	NOTE: * INDICATES THAT DRAWINGS ARE UNCHANGED FROM ORIGINAL DESIGN.		
79	FT5	Pile Cap Reinforcing Type IV	130	DP6B	Sliding Pier Segment P.T. Details Type II	181	TA2A	P.T. Details II A Top Blocks			
80	FT6	Pile Cap Reinforcing Type V	131	DP7A	Sliding Pier Segment Reinforcing I Type I	182	TA2B	P.T. Details II B Anchorage Details			
81	P1	5'-0" Pile Details	132	DP7B	Sliding Pier Segment Reinforcing I Type II	183	TA3A	P.T. Details III A Typical Deviations			
82	P2	6'-0" Pile Details	133	DP8	Sliding Pier Segment Reinforcing II Type I	184	TA3B	P.T. Details III B Typical Deviations			
83	PS1	Pier Schedule	134	DP9	Fixed and Sliding Pier Segment Sign Support Reinforcing	185	TA4	P.T. Details IV Reinforcing I Bottom Blocks	08/23/91 01/04/91 10/08/90 09/21/90 DATE REVISION J. MULLER INTERNATIONAL Libby Engineers		
84	PS2	Pier Cross Sections	135	DP10	Abutment 1 Segment Dimensions Inbound Structure	186	TA5	P.T. Details V Reinforcing II Bottom Blocks			
85	PS3	Pier Cap Reinforcing	136	DP11	Abutment 1 Segment P.T. Details Inbound Structure	187	TA6	P.T. Details VI Reinforcing Top Blocks			
86	PS4	Pier Control Elevations	137	DP12	Abutment 1 Segment Reinforcing Inbound Structure	188	TA7	P.T. Details VII Abutment Spans			
87	AB1	Abutment Location Plans	138	DP13	Abutment 1 Segment Reinforcing II Inbound Structure	189	TT1	Transverse Post Tensioning Details			
88	AB2	Plans & Elevations: Inbound Abutment No. 1	139	DP14	Abutment 1 Segment Dimensions Outbound Structure	190	BD1	Bearing Schedule	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION INDEX TO BRIDGE DRAWINGS INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58) SCALE: AS NOTED DATE: JUN. 1990		
89	AB3	Plans & Elevations: Outbound Abutment No. 1	140	DP15	Abutment 1 Segment P.T. Details Outbound Structure	191	EJ1	Expansion Joint Schedule			
90	AB4	Abutment No. 1 Sections L.B. & O.B. Structures	141	DP16	Abutment 1 Segment Reinforcing I Outbound Structure	192	EJ2	Expansion Joint Details Condition at Concrete Railing			
91	AB5	Wing Wall Sections	142	DP17	Abutment 1 Segment Reinforcing II Outbound Structure	193					
92											

DRAWN BY
 CHECKED BY
 DESIGNED BY
 QUANTITY BY
 EXAMINED BY



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

A. SPECIFICATIONS:

- GENERAL SPECIFICATIONS: STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1985 AND SPECIAL PROVISIONS WITH ADDENDUMS PREPARED FOR THIS CONTRACT.
- DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, THIRTEENTH EDITION, 1983 AND INTERIM SUPPLEMENTS OF 1984 THROUGH 1987 AND MODIFICATIONS BY THE STATE OF HAWAII DEPARTMENT OF TRANSPORTATION.

B. DESIGN LOADS:

- DEAD LOADS:
 - UNIT WEIGHT OF CONCRETE: 160 PCF (150 PCF FOR COMPUTATION OF MODULUS OF ELASTICITY)
 - 3" THICK OVERLAY: 40 PSF
 - BRIDGE RAILING 500 PLF EACH
 - ELECTRICAL LINE (OUTBOUND ONLY): 525 PLF
 - STEEL POLES FOR ELECTROMAGNETIC PROTECTION: 2 KIPS EACH
- LIVE LOADS:

ASSHTO HS 20-44 AND INTERSTATE HIGHWAY LOADING WITH IMPACT.
- WIND LOADS:

DESIGN WIND VELOCITY: 100 MPH.
- SEISMIC LOAD:

SEISMIC PERFORMANCE CATEGORY B IN ACCORDANCE WITH AASHTO GUIDE SPECIFICATION FOR SEISMIC DESIGN OF HIGHWAY BRIDGES, 1983. MINIMUM COMBINED RESPONSE COEFFICIENT SHALL BE EQUAL TO 0.06 OF THE DEAD LOAD.
- THERMAL FORCES:
 - COEFFICIENT OF THERMAL EXPANSION: 0.000006 PER DEGREE F
 - TEMPERATURE RISE: 10°F
TEMPERATURE FALL: 20°F
ASSUMED TEMPERATURE AT THE TIME OF ERECTION: 75°F
 - THERMAL GRADIENT IN THE LONGITUDINAL DIRECTION: ACCORDING TO NATIONAL COOPERATIVE RESEARCH PROGRAM REPORT 276: "THERMAL EFFECTS ON CONCRETE BRIDGE STRUCTURES."
 - THERMAL GRADIENT IN THE TRANSVERSE DIRECTION: TEMPERATURE DIFFERENTIAL OF ± 10°F BETWEEN OUTSIDE AND INSIDE SURFACES OF THE BOX GIRDER.
 - ONE-HALF MAXIMUM GRADIENT IS USED IN COMBINATION WITH LIVE LOADS.
- CREEP AND SHRINKAGE:

STRAINS CALCULATED IN ACCORDANCE WITH CEB-FIP MODEL CODE FOR STRUCTURES. RELATIVE HUMIDITY: 75%
- CONSTRUCTION LOADS:
 - LAUNCHING GANTRY REACTIONS (ONE TRUSS):

REAR SUPPORT DEAD LOAD: 77 K
CENTRAL SUPPORT DEAD LOAD: 300 K
GANTRY CRANE DEAD LOAD: 50 K
GANTRY CRANE LIFTING TROLLEY AND SEGMENT: 190 K
GANTRY LOAD ON CANTILEVER DURING LAUNCHING: 390 K
 - TOTAL WEIGHT OF SEGMENT AND SEGMENT CARRIER: 200 K
 - DISTRIBUTED CONSTRUCTION LIVE LOAD: 10 PSF
 - LOADS ASSUMED TO COMPUTE MAXIMUM UNBALANCED MOMENT (SERVICE LOAD DESIGN)
 - UNBALANCED SEGMENT
 - CONSTRUCTION LIVE LOAD: 10 PSF ON ONE CANTILEVER ARM, 5 PSF ON THE OTHER

- WIND UPLIFT: 5 PSF ON ONE CANTILEVER ARM
- UNBALANCED DEAD LOAD: 2% OF THE DEAD LOAD APPLIED TO ONE CANTILEVER
- MAXIMUM UNBALANCED MOMENT (LOAD FACTOR DESIGN)

THE ACCIDENTAL RELEASE OR APPLICATION OF A PRECAST SEGMENT LOAD WILL BE TAKEN INTO ACCOUNT BY APPLYING AN IMPACT FACTOR OF 2.

LOAD COMBINATIONS:

1.1 (DL + DIFF) + 1.3 CE + 2 A

DL + CE + 2 A

DIFF = DIFFERENTIAL DEAD LOAD
CE = CONSTRUCTION EQUIPMENT
A = UNBALANCED SEGMENT

C. MATERIALS

- CONCRETE:
 - CAST IN PLACE PIERS AND FOOTINGS, CAST IN PLACE PILES: F'c = 4500 PSI
 - ABUTMENTS, ABUTMENTS FOOTINGS, RAILINGS: CLASS A (F'c = 3000 PSI)
 - 3" CONCRETE OVERLAY: CLASS B0 (F'c = 3750 PSI)
 - PRECAST DECK SEGMENTS AND CAST-IN-PLACE DECK ELEMENTS: F'c = 5500 PSI
- REINFORCING STEEL:
 - ASTM 615 GRADE 60 UNLESS OTHERWISE NOTED.
 - THE MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS OTHERWISE SPECIFIED ON THE PLANS:
 - BOX GIRDER TOP SLAB: TOP BARS: 1 1/2"
BOTTOM BARS: 1 1/4"
 - BOX GIRDER BOTTOM SLAB: TOP BARS: 1 1/4"
BOTTOM BARS: 1 1/2"
 - BOX GIRDER WEBS: STIRRUPS AT OUTSIDE FACE: 1 1/4"
STIRRUP AT INSIDE FACE: 1"
 - ABUTMENTS, RETAINING WALLS: 2"
 - BRIDGE PIERS: 2 1/2" TO TIES
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - REINFORCING STEEL DETAILED IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE" TWENTY-FOURTH EDITION BY CONCRETE REINFORCING STEEL INSTITUTE.
 - ALL DIMENSIONS RELATING TO REINFORCING BARS (I.E. SPACING OF BARS, ETC.) ARE TO CENTERS OF BARS UNLESS NOTED OTHERWISE..
 - END HOOPS FOR REINFORCING STEEL TO BE STANDARD HOOK UNLESS NOTED OTHERWISE.
- POST-TENSIONING STEEL:
 - STRAND: ASTM A416 GRADE 270 STRESS RELIEVED - LOW RELAXATION
 - HIGH STRENGTH BARS: ASTM A722 - GRADE 150
 - PRESTRESSING PARAMETERS:
 - FRICTION COEFFICIENT: 0.25 (STRANDS)
0.30 (BARS)
 - WOBBLE COEFFICIENT: 0.0002
 - MAXIMUM JACKING STRESS: 0.8 Fsu
 - MAXIMUM STRESS AFTER ANCHORING: 0.7 Fsu
 - ASSUMED ANCHOR SET: 3/8" (STRAND TENDONS)
1/16" (BARS)

D. ALLOWABLE STRESSES

- REINFORCED CONCRETE: AS PER AASHTO
- PRESTRESSED CONCRETE:
 - LONGITUDINAL CONCRETE STRESSES:
 - F'ci = CONCRETE COMPRESSIVE STRENGTH AT THE TIME OF INITIAL PRESTRESS - F'ci > 0.7 F'c
 - Fci = 0.55 F'ci MAXIMUM COMPRESSIVE STRESS AT THE TIME OF INITIAL PRESTRESS (OR OTHER CONSTRUCTION STAGES)
 - Fc = 0.40 F'c MAXIMUM COMPRESSIVE STRESS AT SERVICE LOADS AFTER PRESTRESS LOSSES.
 - MINIMUM COMPRESSIVE STRESS ACROSS THE JOINTS UNDER THE EFFECTS OF ALL LOADINGS: 200 PSI
 - MAXIMUM TENSION ACROSS THE JOINTS DURING CONSTRUCTION STAGES: 0
 - TRANSVERSE CONCRETE STRESSES
 - Fci = 0.55 F'ci MAXIMUM COMPRESSIVE STRESS AT THE TIME OF INITIAL PRESTRESS
 - Fci = 0.40 F'c MAXIMUM COMPRESSIVE STRESS AT SERVICE LOADS AFTER PRESTRESS LOSSES
 - MAXIMUM TENSION IN THE PRECOMPRESSED TENSILE ZONE: 0
 - BEARING STRESSES UNDER ANCHORAGES: ACCORDING TO AASHTO GUIDE SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF SEGMENTAL CONCRETE BRIDGES SECTION 9.2.3.

E. SEGMENTS CASTING AND ERECTION

- REMOVAL OF FORMS:

MINIMUM CONCRETE STRENGTH: 2500 PSI
- TRANSVERSE POST-TENSIONING:

INITIAL POST-TENSIONING FORCE UP TO 60% OF THE FINAL VALUE
MINIMUM CONCRETE STRENGTH: 2750 PSI

FULL POST-TENSIONING FORCE:
MINIMUM CONCRETE STRENGTH: 0.7 F'ci

COMPRESSION BEHIND ANCHORAGES NOT TO EXCEED VALUES GIVEN IN AASHTO GUIDE SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF SEGMENTAL CONCRETE BRIDGES SECTION 9.2.3.
- SEGMENT HANDLING:

MINIMUM CONCRETE STRENGTH: 3000 PSI
- SEGMENT ERECTION - LONGITUDINAL POST-TENSIONING:

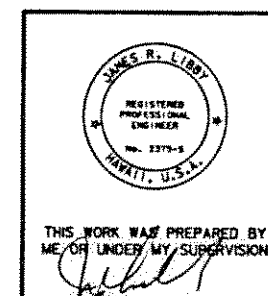
MINIMUM CURING TIME: 28 DAYS

MINIMUM CONCRETE STRENGTH: 5500 PSI
- CAST IN PLACE CLOSURE JOINTS:

MINIMUM COMPRESSIVE STRENGTH BEFORE POST-TENSIONING: 2750 PSI
- TEMPORARY STRESSES ON EPOXY JOINTS:

MINIMUM COMPRESSIVE STRESS: 40 PSI.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTES	
DATE	

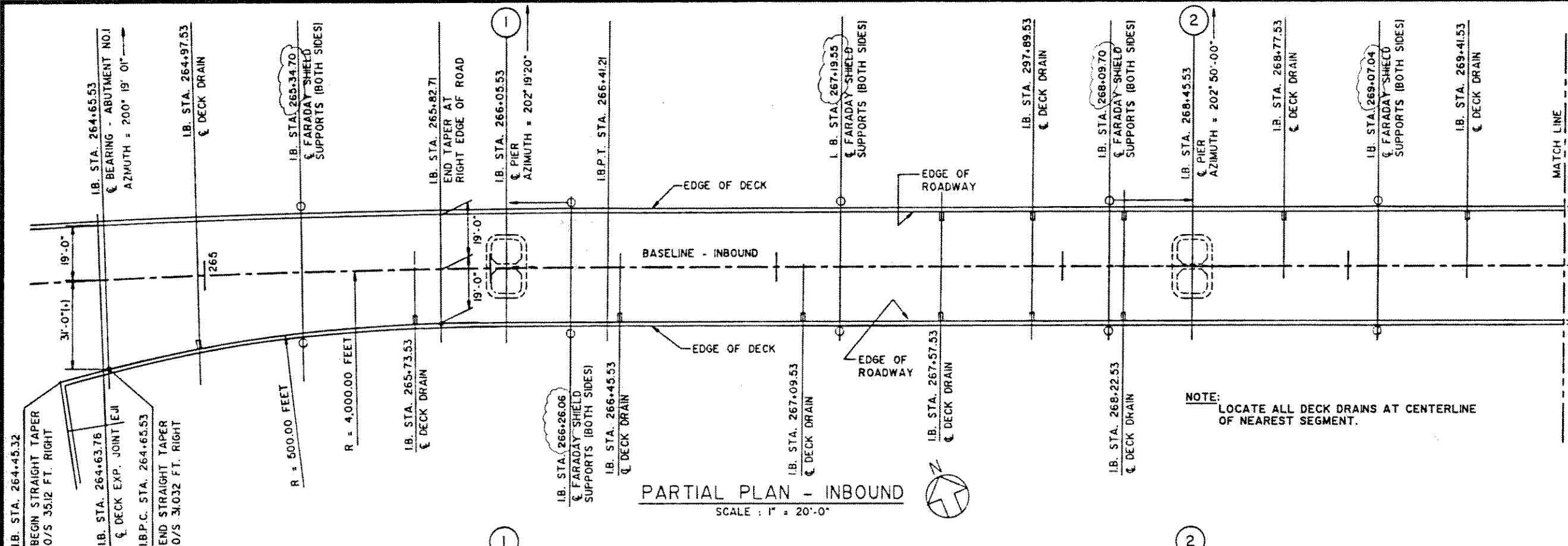


08/23/91	REVISED LAUNCHING GANTRY REACTIONS.
01/04/91	REVISED NOTES D.2.C AND E.2.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STRUCTURAL GENERAL NOTES
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. N2 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

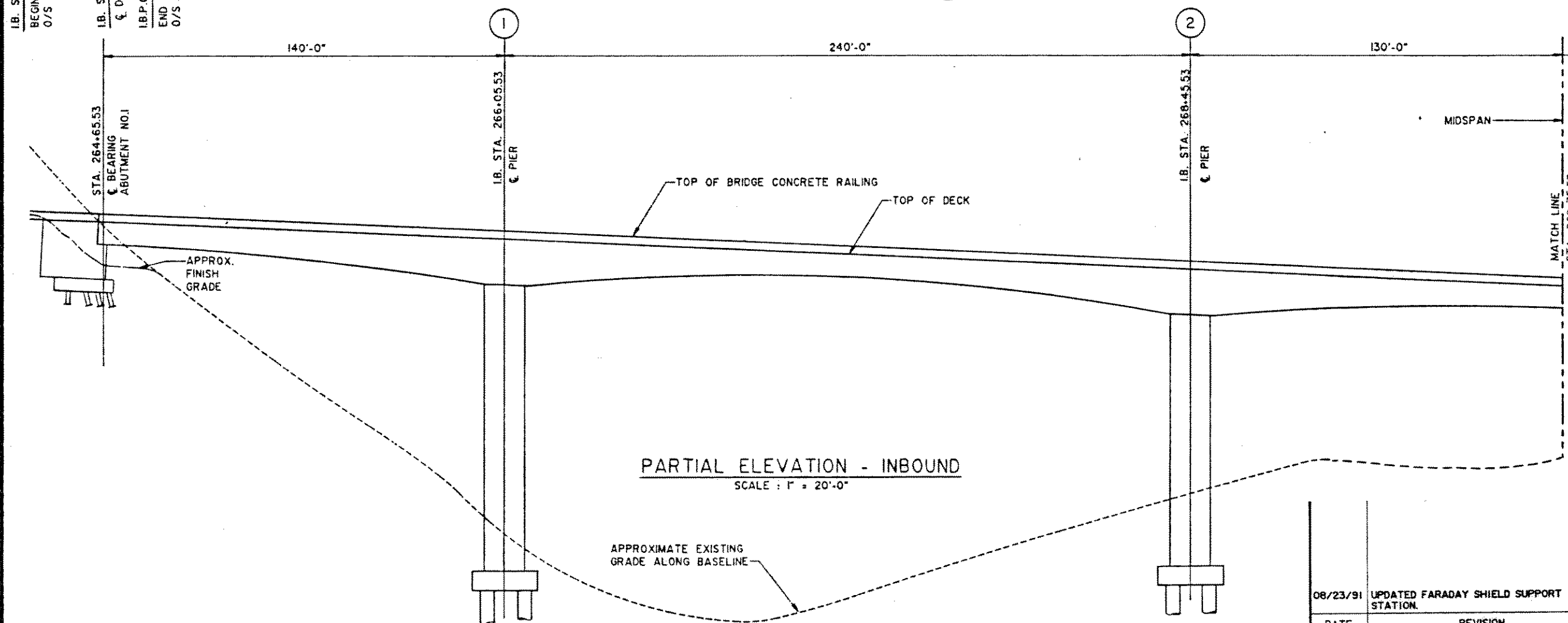


NOTE: FARADAY SHIELD SUPPORT SHALL BE LOCATED RADIALLY TO THE BASELINE.

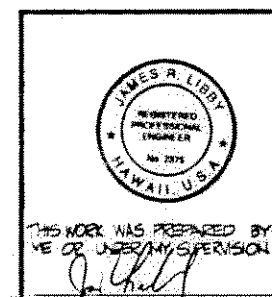
FOR CONTINUATION SEE SHEET A2

LEGEND:

1. ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.



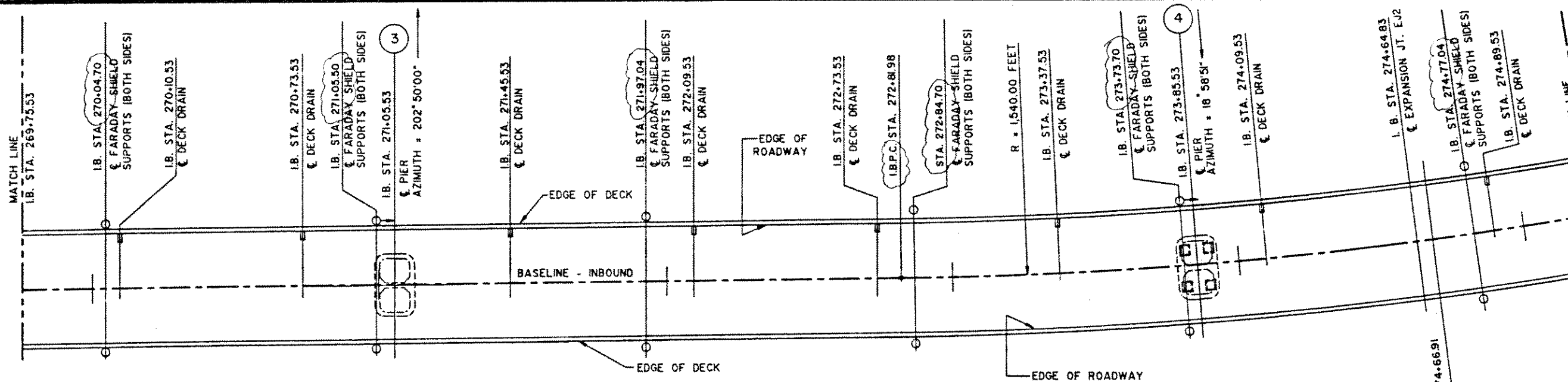
FOR CONTINUATION SEE SHEET A2



DATE	08/23/91	REVISION	UPDATED FARADAY SHIELD SUPPORT STATION.
J. MULLER INTERNATIONAL		Libby Engineers	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PART. DECK LAYOUT & ELEVATION	
ABUTMENT NO. 1 TO STA. 269+75.53	
INBOUND STRUCTURE	
INTERSTATE ROUTE H-3	
F.A.I. PROJECT NO. I-H3-1 (57)	
F.A.I. PROJECT NO. I-H3-1 (58)	
SCALE: AS NOTED	DATE: JUNE 1990
SHEET No. A1 OF 24 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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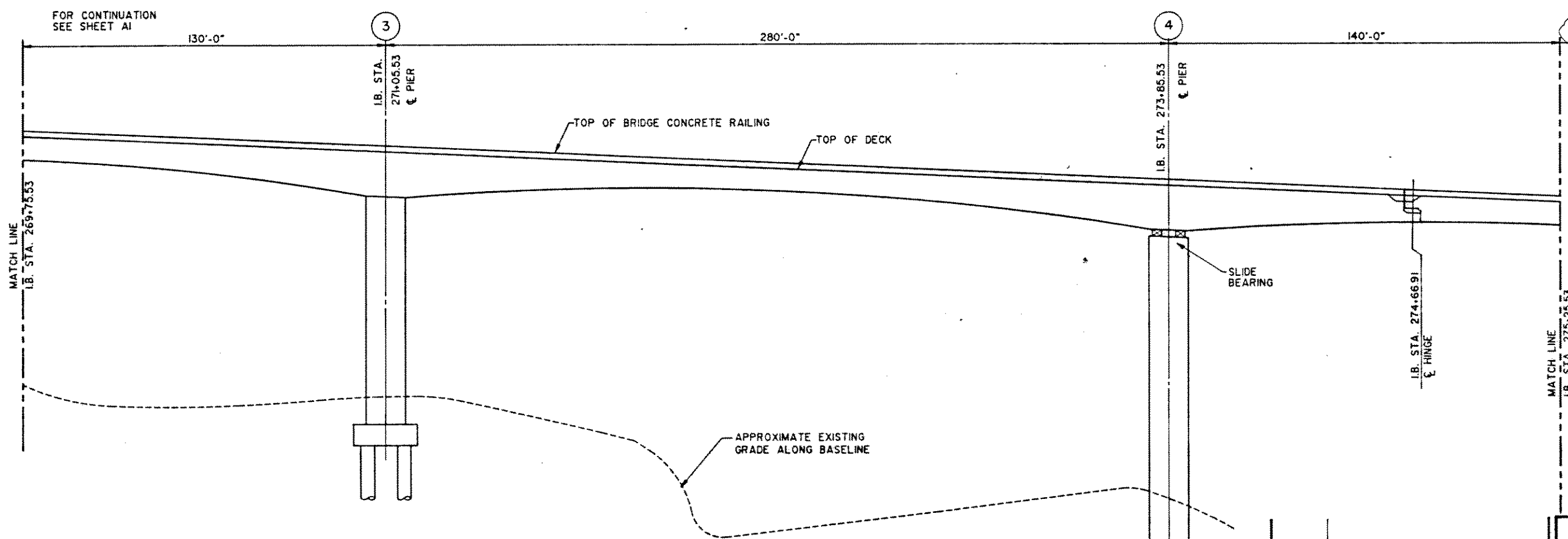


FOR CONTINUATION
SEE SHEET A1

NOTE:
LOCATE ALL DECK DRAINS AT CENTERLINE
OF NEAREST SEGMENT.

PARTIAL PLAN - INBOUND
SCALE: 1" = 20'-0"

LEGEND:
I ——— INDICATES GROUND BUSS EXTENDING
DOWN PIER TO GROUND ROD.



FOR CONTINUATION
SEE SHEET A1

PARTIAL ELEVATION - INBOUND
SCALE: 1" = 20'-0"

FOR CONTINUATION
SEE SHEET A3

DESIGNED BY	DATE
DRAWN BY	2/10
CHECKED BY	2/10
APPROVED BY	2/10
ORIGINAL PLAN	
NOTED	

08/23/91 UPDATED FARADAY SHIELD SUPPORT STATION.

DATE: 08/23/91 REVISION:

J. MULLER INTERNATIONAL Libby Engineers

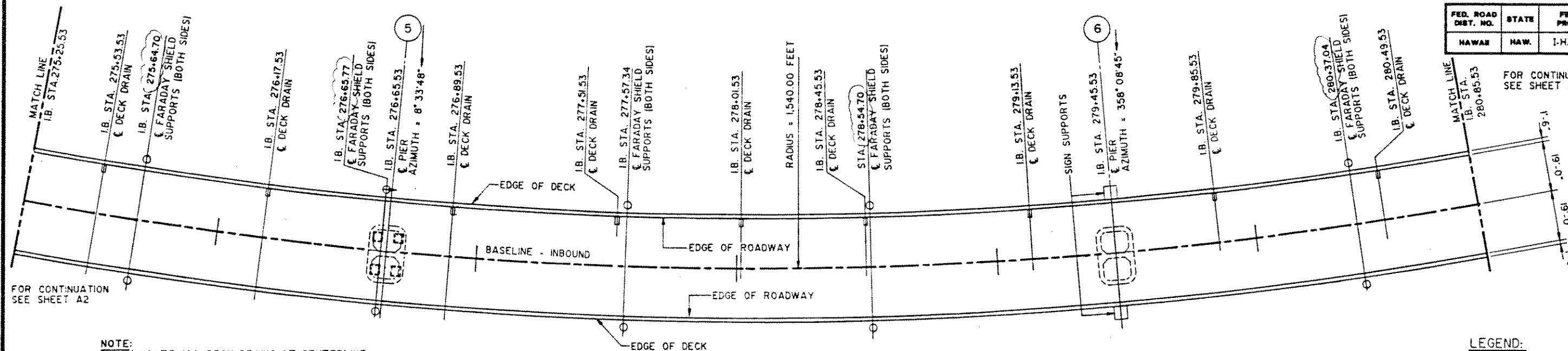
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 269+75.53 TO STA. 275+25.53
INBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990

SHEET No. A2 OF 24 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

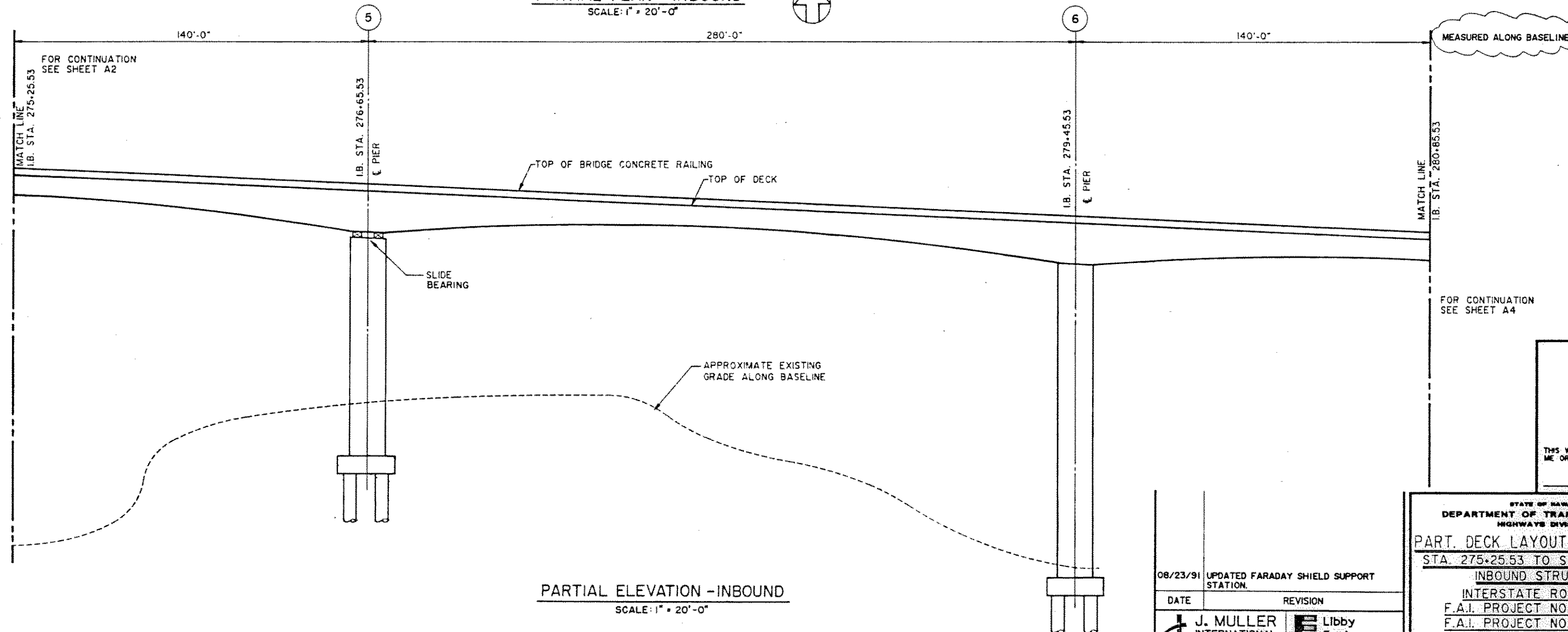


LEGEND:

1. ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

PARTIAL PLAN - INBOUND

SCALE: 1" = 20'-0"



PARTIAL ELEVATION - INBOUND

SCALE: 1" = 20'-0"

08/23/91 UPDATED FARADAY SHIELD SUPPORT STATION.

DATE

REVISION

J. MULLER INTERNATIONAL

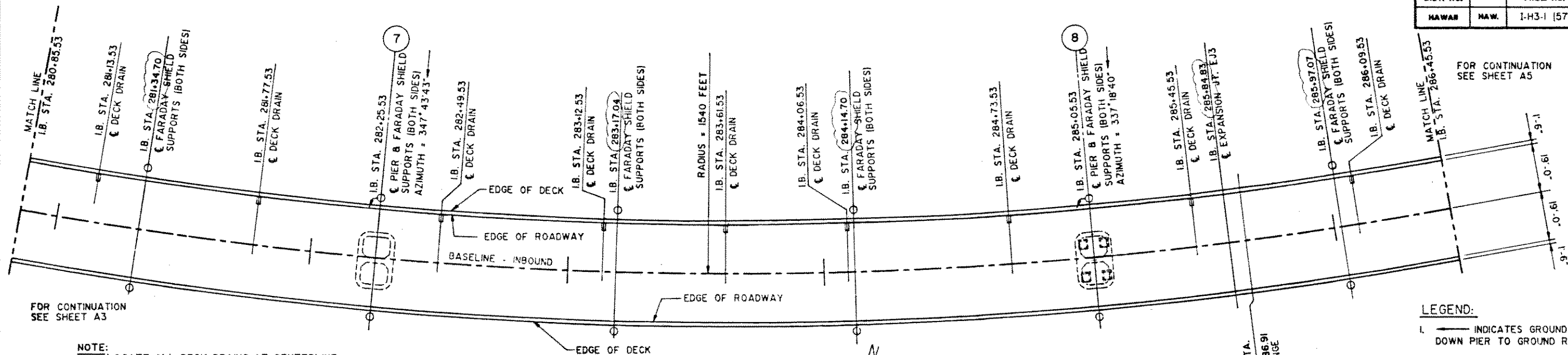
Libby Engineers



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

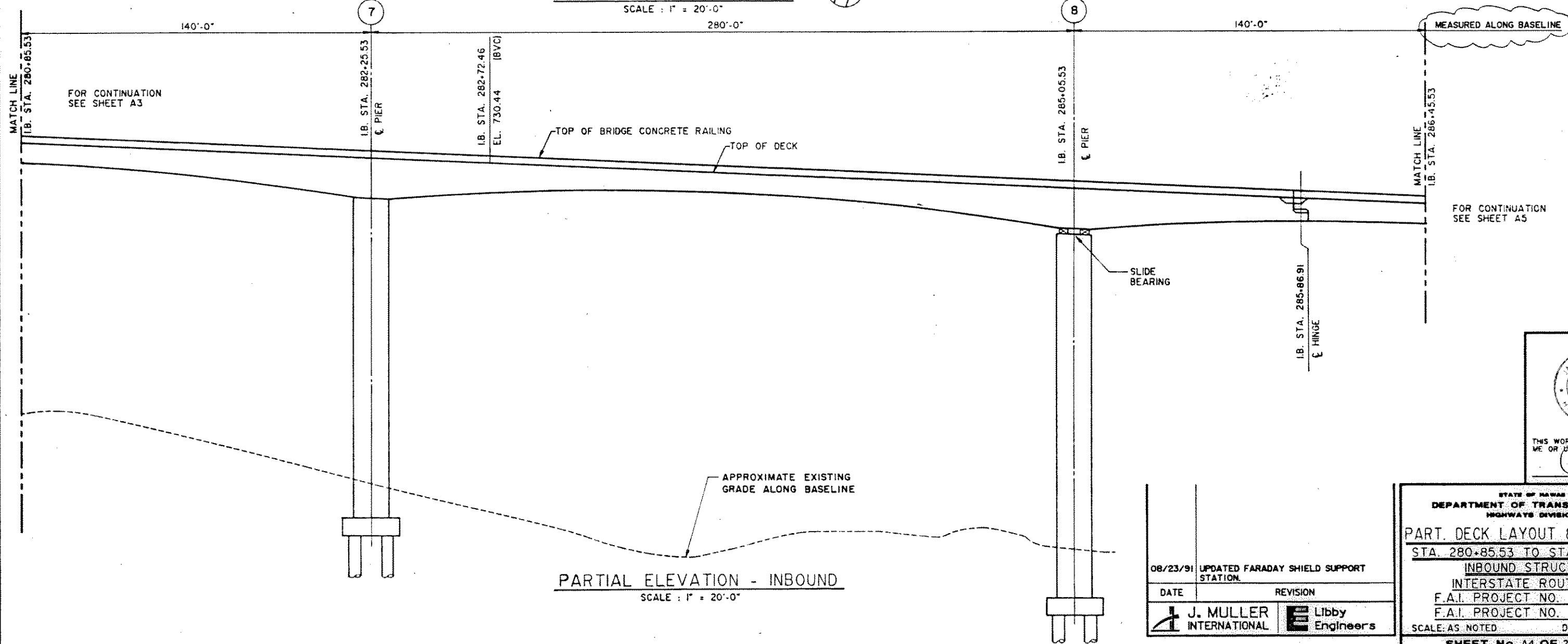
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION
STA. 275+25.53 TO STA. 280+85.53
INBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A3 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



PARTIAL PLAN - INBOUND

SCALE: 1" = 20'-0"

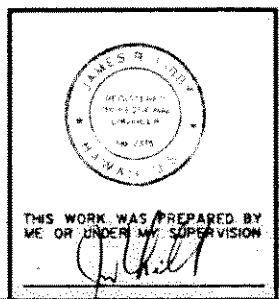


PARTIAL ELEVATION - INBOUND

SCALE: 1" = 20'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
ORIGINAL PLAN	
NOTED	

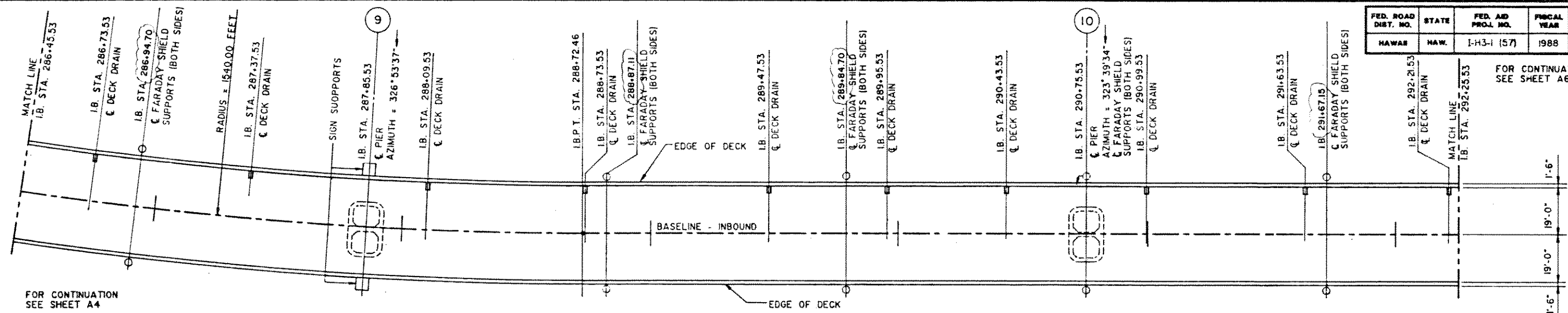
08/23/91	UPDATED FARADAY SHIELD SUPPORT STATION.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION STA. 280+85.53 TO STA. 286+45.53 INBOUND STRUCTURE INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1 (57) F.A.I. PROJECT NO. I-H3-1 (58) SCALE: AS NOTED DATE: JUNE 1990 SHEET No. A4 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

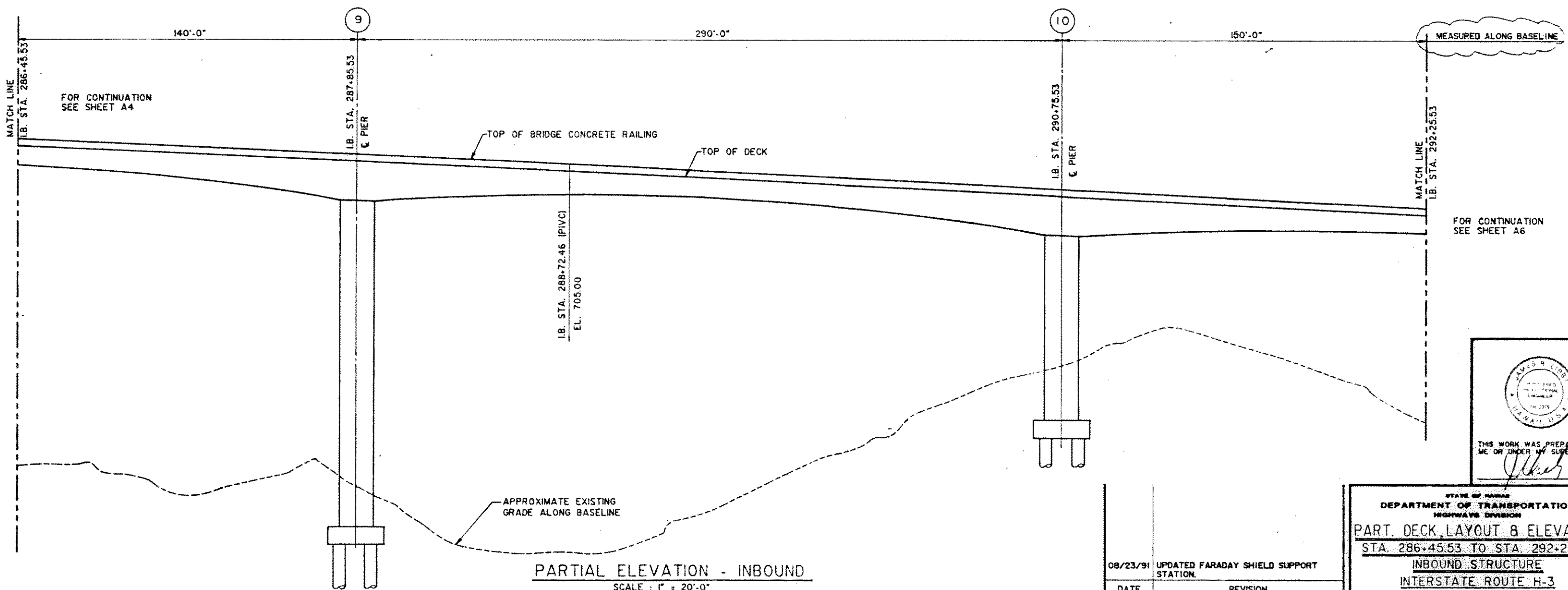
FOR CONTINUATION
SEE SHEET A6



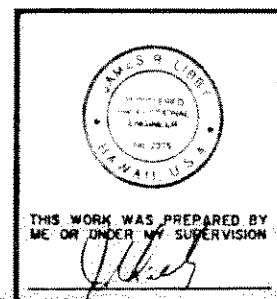
NOTE:
LOCATE ALL DECK DRAINS AT CENTERLINE
OF NEAREST SEGMENT.

PARTIAL PLAN - INBOUND
SCALE : 1" = 20'-0"

LEGEND:
1. ——— INDICATES GROUND BUSS EXTENDING
DOWN PIER TO GROUND ROD.



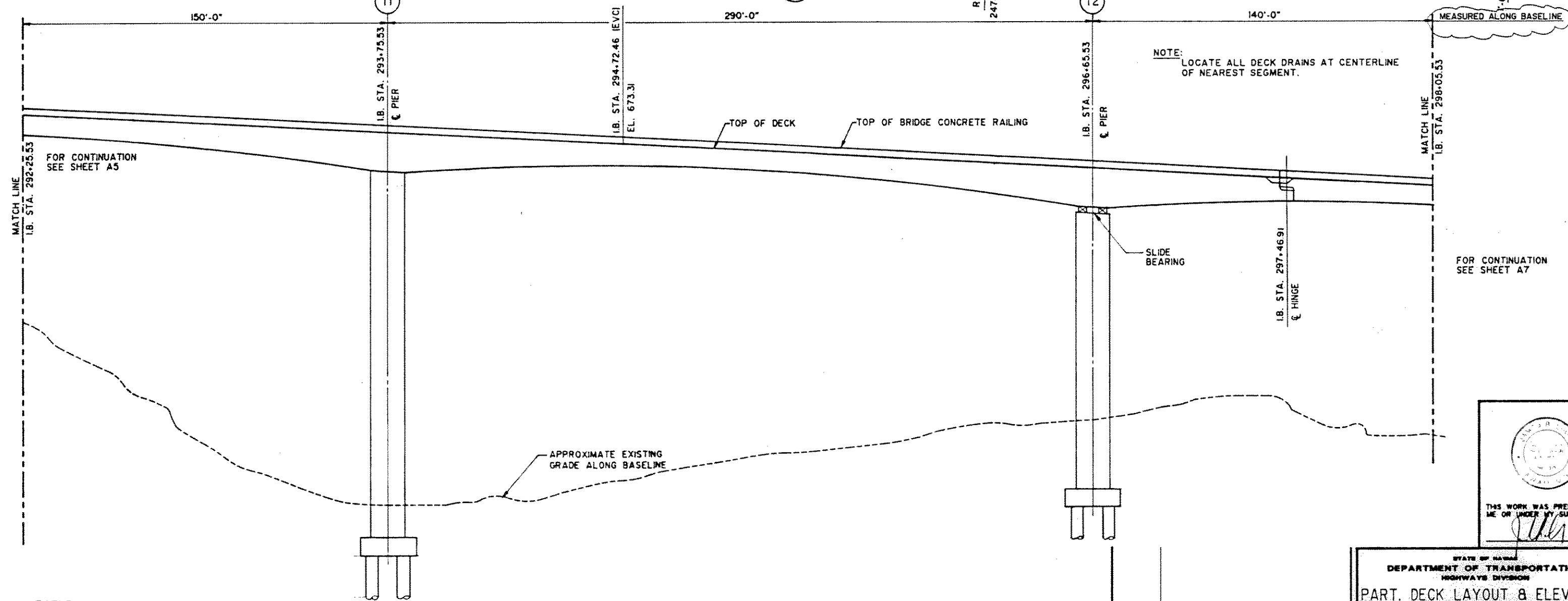
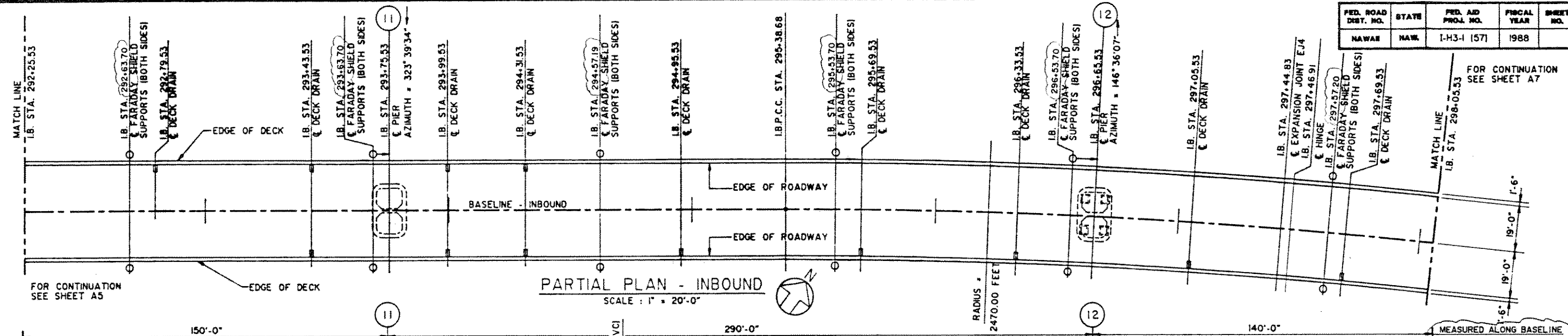
PARTIAL ELEVATION - INBOUND
SCALE : 1" = 20'-0"



08/23/91	UPDATED FARADAY SHIELD SUPPORT STATION.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
PART. DECK LAYOUT & ELEVATION
STA. 286+45.53 TO STA. 292+25.53
INBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A5 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



LEGEND:
 L — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

08/23/91	UPDATED FARADAY SHIELD SUPPORT STATION.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

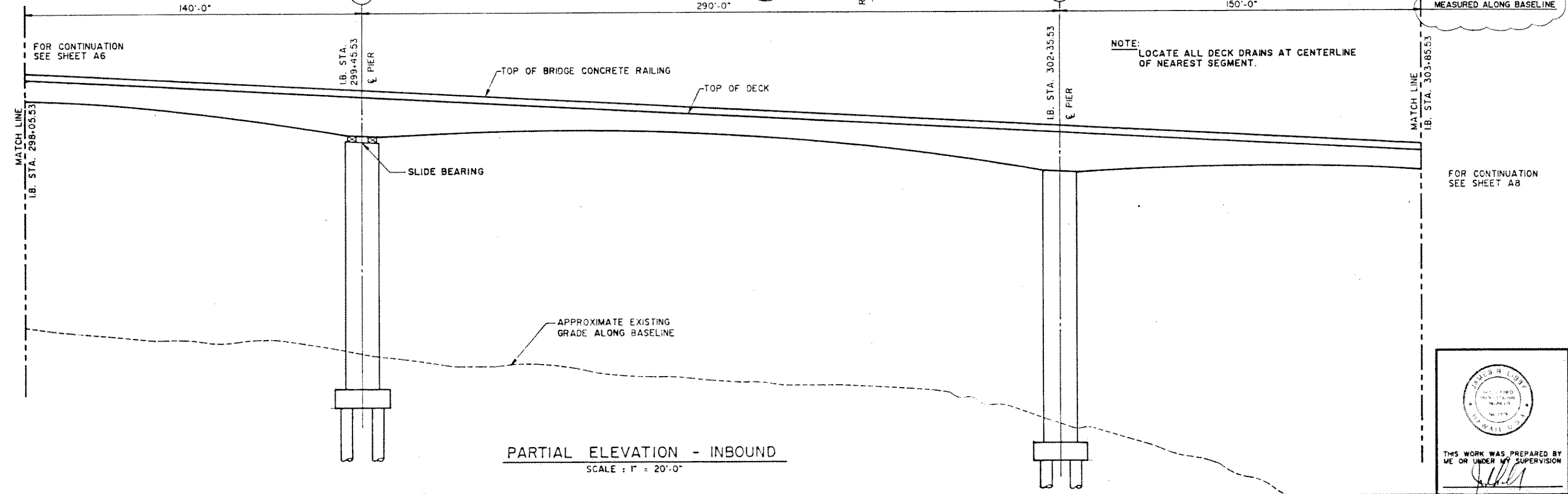
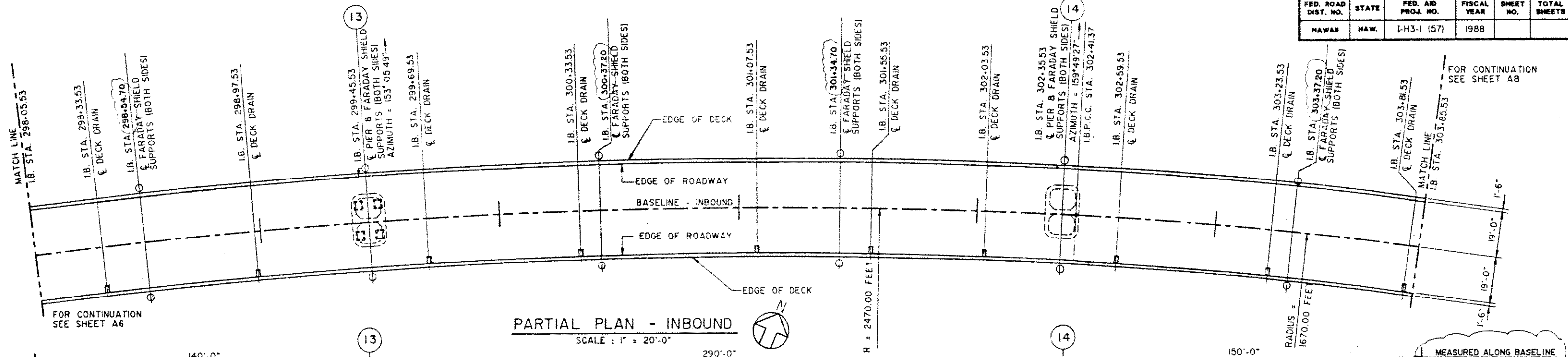
PART. DECK LAYOUT & ELEVATION
 INBOUND STRUCTURE
 STA. 292+25.53 TO STA. 298+05.53
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT NO. I-H3-1 (57)
 F.A.I. PROJECT NO. I-H3-1 (58)
 SCALE: AS NOTED DATE: JUNE 1990

SHEET No. A6 OF 24 SHEETS



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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



LEGEND:
 I. — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

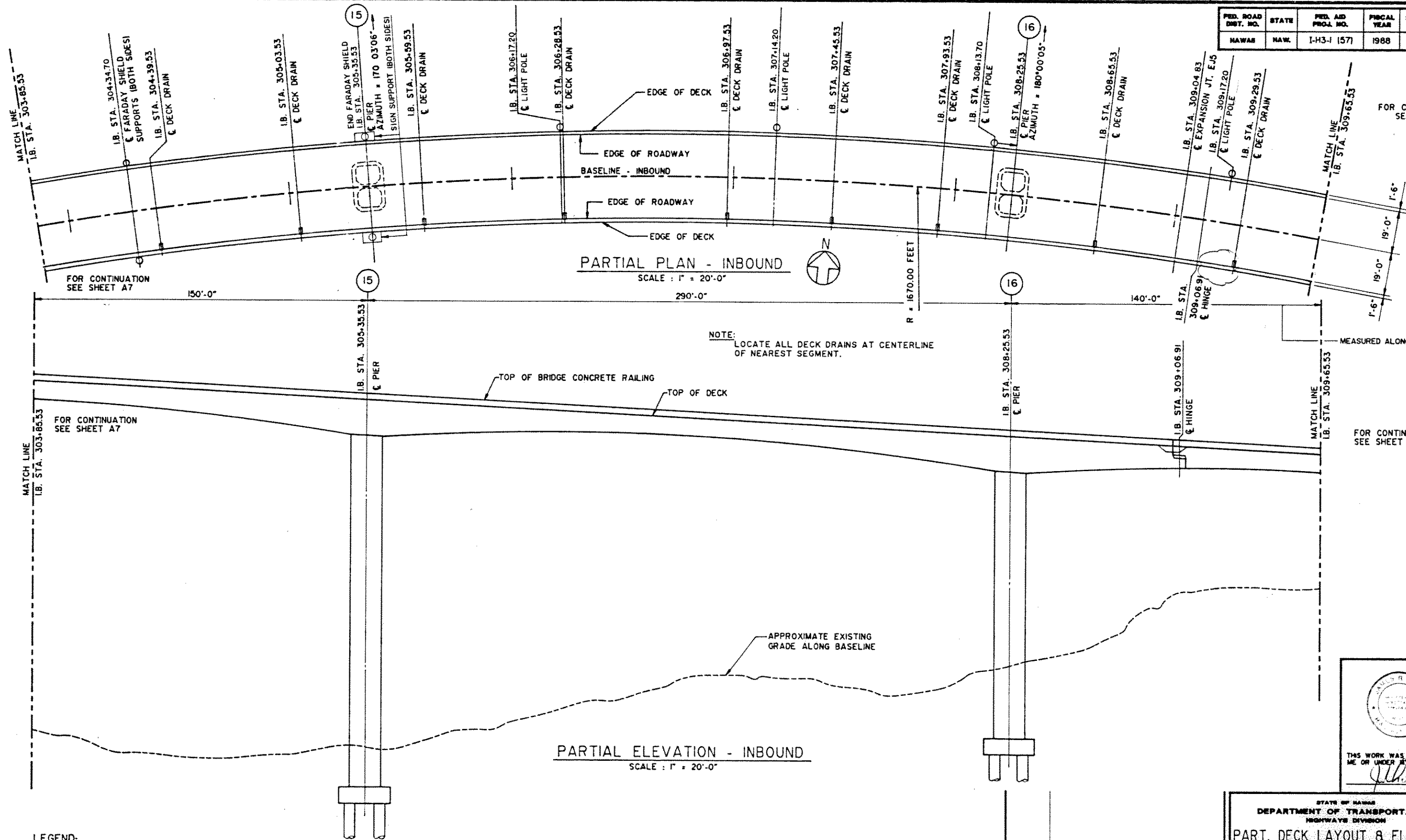
08/23/91 UPDATED FARADAY SHIELD SUPPORT STA. AND REMOVED SIGN SUPPORT IP-14.
 DATE REVISION
 J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 PART. DECK LAYOUT & ELEVATION
 STA. 298+05.53 TO STA. 303+85.53
 INBOUND STRUCTURE
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT NO. I-H3-1 (57)
 F.A.I. PROJECT NO. I-H3-1 (58)
 SCALE: AS NOTED DATE: JUNE 1990
 SHEET NO. A7 OF 24 SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 J. MULLER

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	I-H3-1 (57)	1988		



NOTE:
LOCATE ALL DECK DRAINS AT CENTERLINE OF NEAREST SEGMENT.

FOR CONTINUATION
SEE SHEET A9

FOR CONTINUATION
SEE SHEET A9

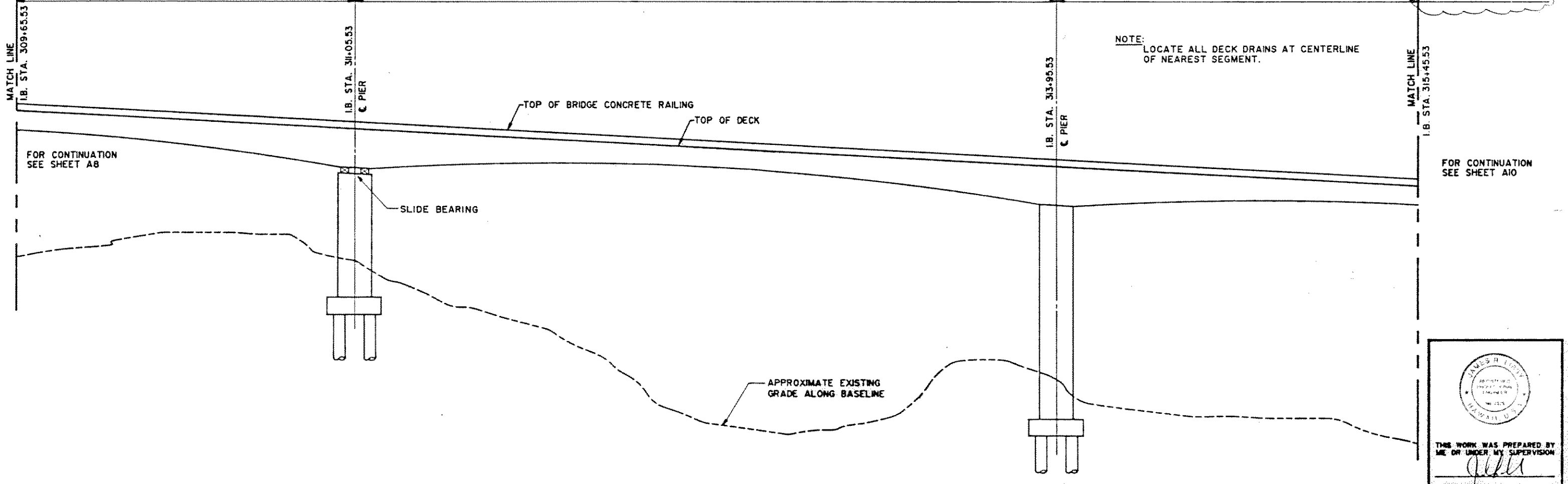
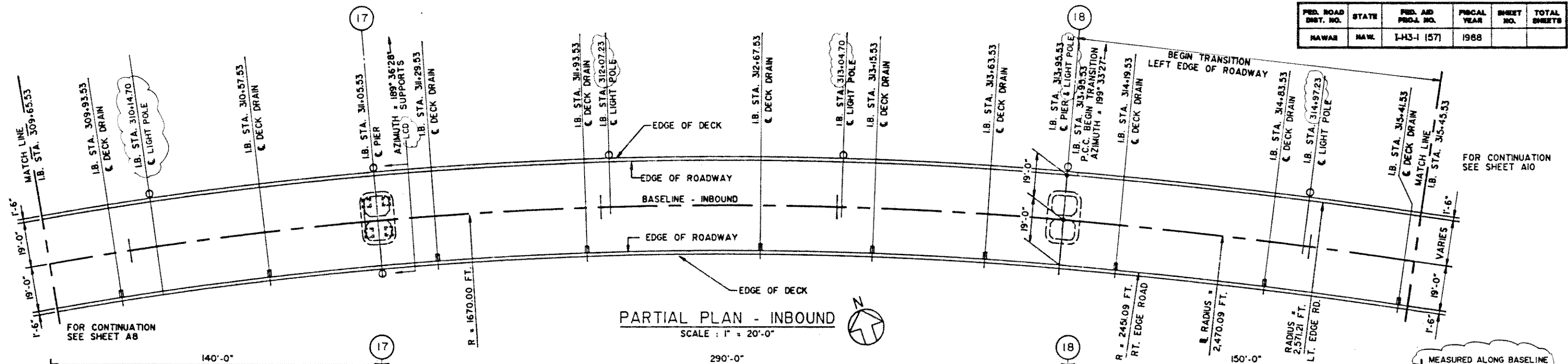
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

09/30/91	UPDATED LIGHT POLE STATION.
08/23/91	UPDATED FARADAY SHIELD SUPPORT STA. AND ADDED SIGN SUPPORT IP-15.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PART. DECK LAYOUT & ELEVATION
INBOUND STRUCTURE
STA. 303+85.53 TO STA. 309+65.53
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A8 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
IN CHARGE	

08/23/91 UPDATED LIGHT POLE STATIONS

DATE: 08/23/91 REVISION:

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

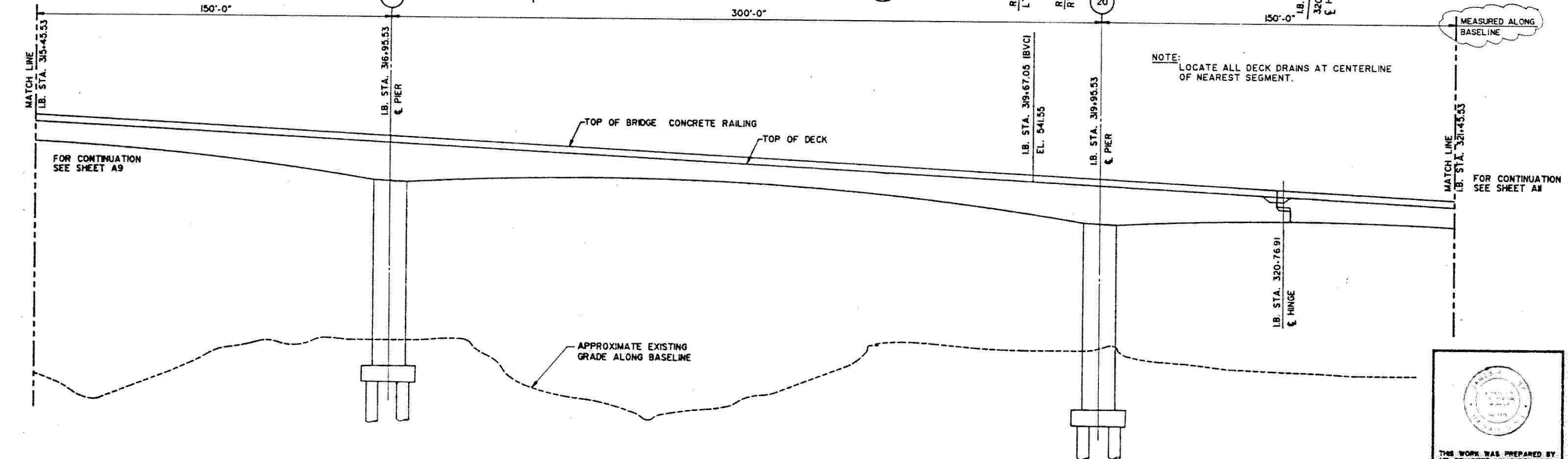
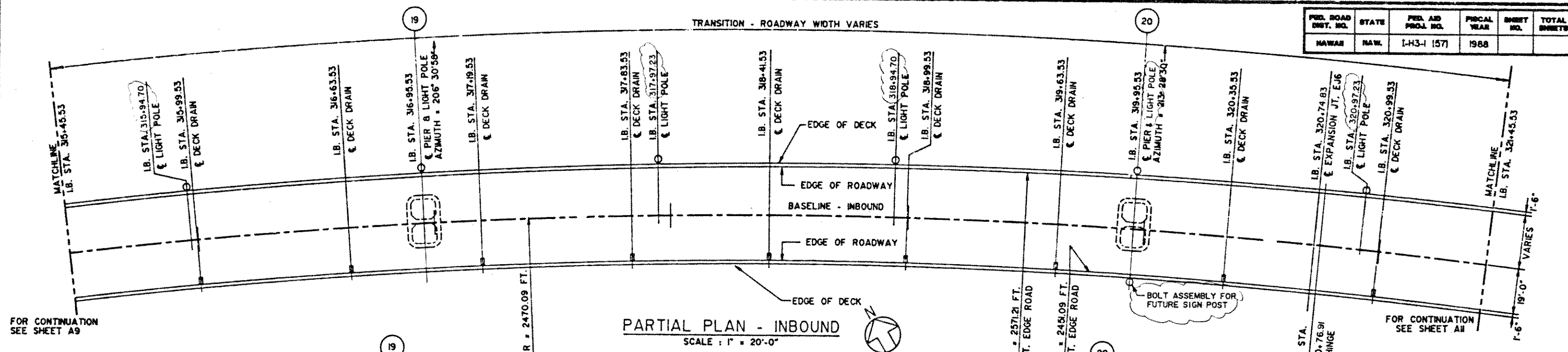
PART. DECK LAYOUT & ELEVATION
STA. 309+65.53 TO STA. 315+45.53
INBOUND STRUCTURE

INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)

SCALE: AS NOTED DATE: JUNE 1990

SHEET No. 49 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-43-1 (57)	1988		



LEGEND:

1. — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.
2. O/R INDICATES OFFSET RIGHT OF BASELINE.
3. O/L INDICATES OFFSET LEFT OF BASELINE.

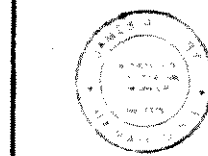
08/23/91 UPDATED LIGHT POLE STATIONS & FUTURE SIGN POST.

DATE

REVISION

J. MULLER INTERNATIONAL

Libby Engineers



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION

STA. 315+45.53 TO STA. 321+45.53

INBOUND STRUCTURE

INTERSTATE ROUTE H-3

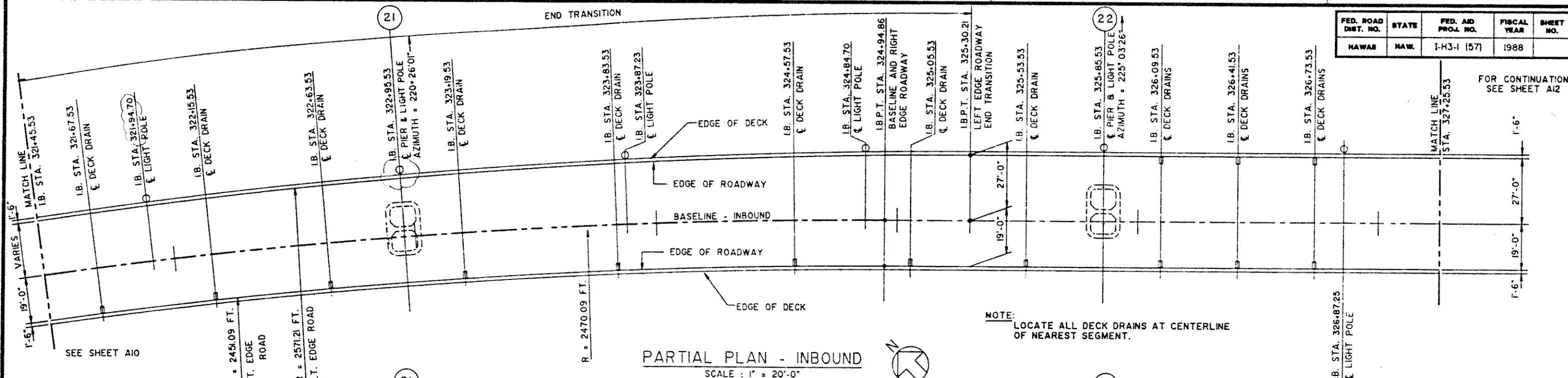
F.A.I. PROJECT NO. I-43-1 (57)

F.A.I. PROJECT NO. I-43-1 (58)

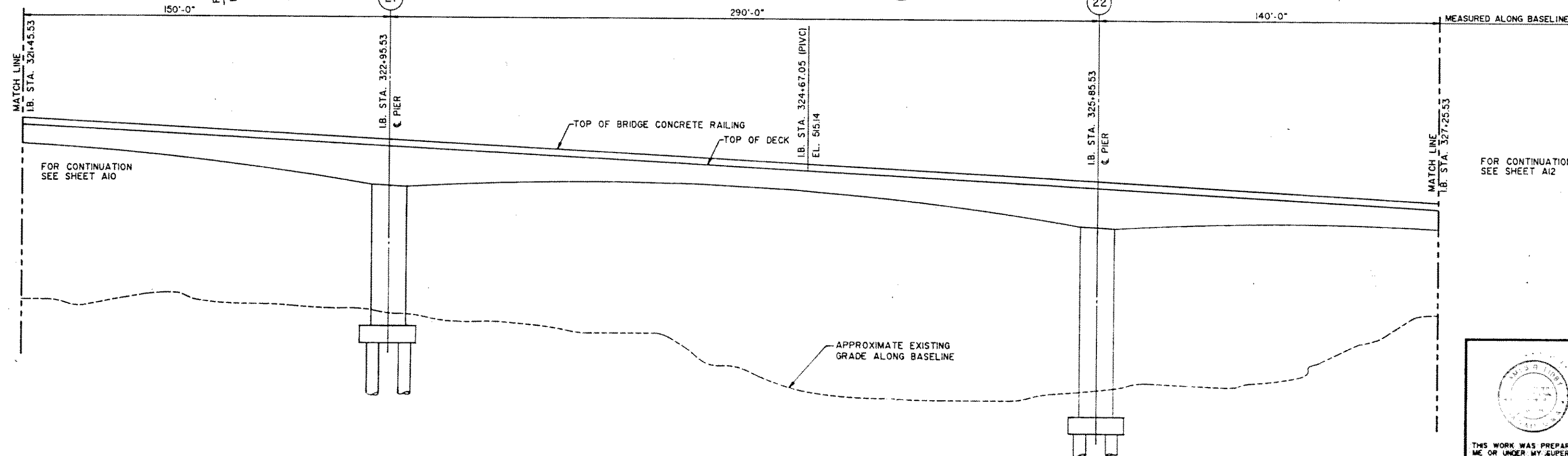
SCALE: AS NOTED DATE: JUNE 1990

SHEET No. 110 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



PARTIAL PLAN - INBOUND
SCALE : 1" = 20'-0"



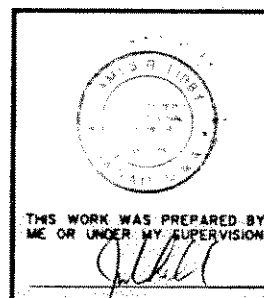
PARTIAL ELEVATION - INBOUND
SCALE : 1" = 20'-0"

LEGEND:
I ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

09/30/91 UPDATED LIGHT POLE STATION.
08/23/91 UPDATED LIGHT POLE STATIONS.

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

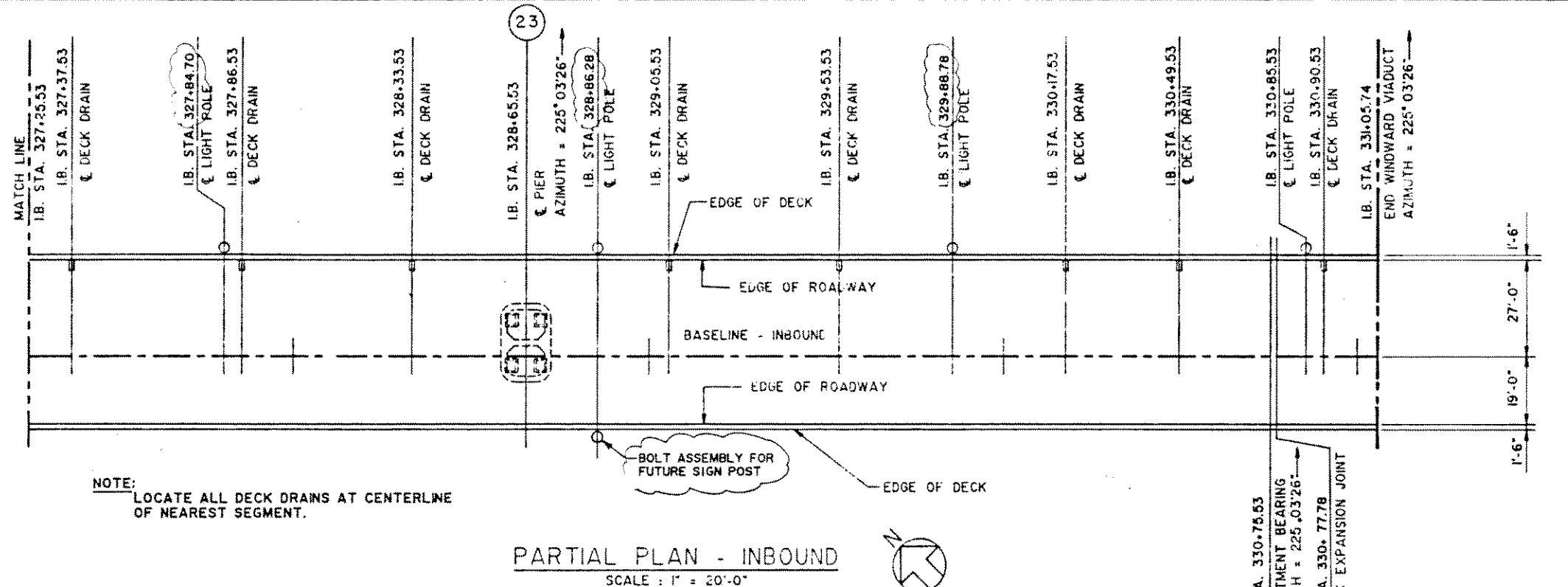
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION
STA. 321+45.53 TO STA. 327+25.53
INBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE, 1990
SHEET No. 11 OF 24 SHEETS



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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

FOR CONTINUATION
SEE SHEET AH

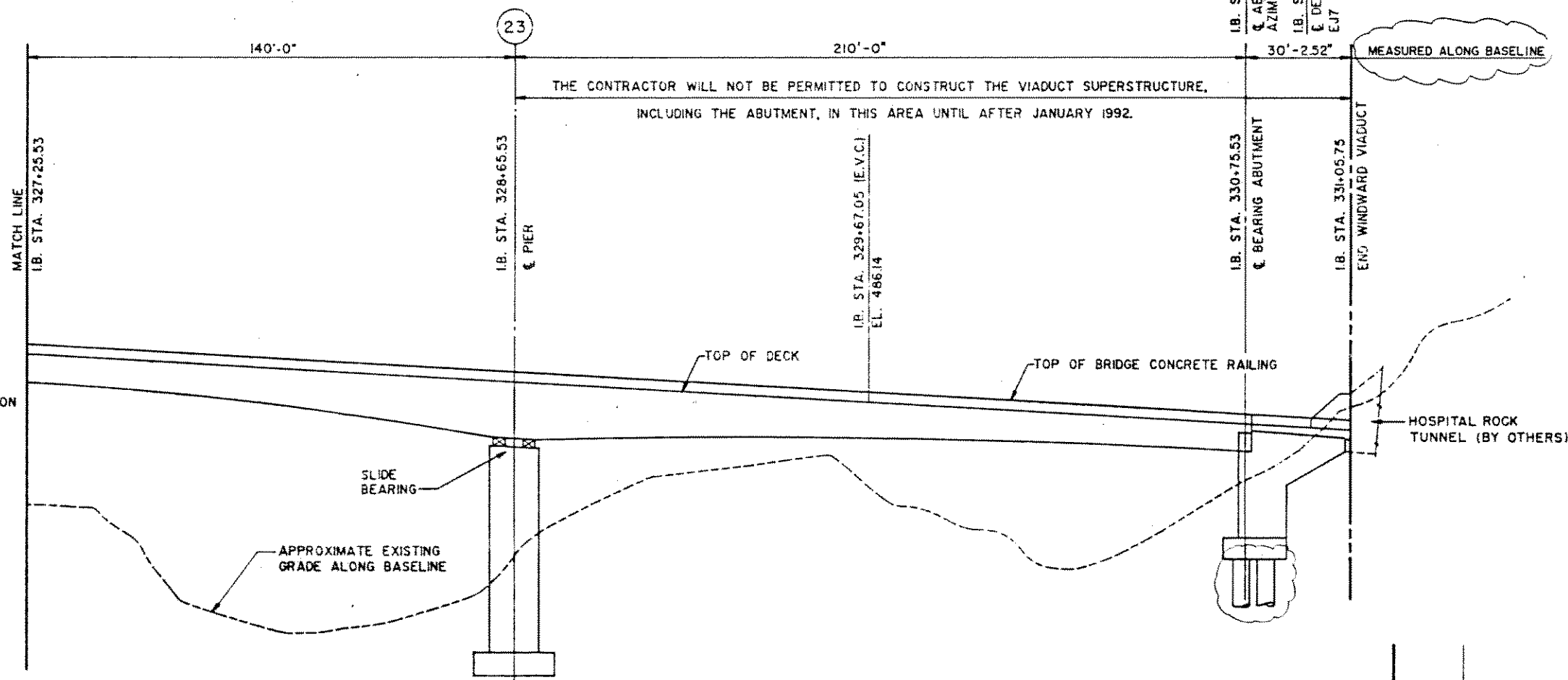


NOTE:
LOCATE ALL DECK DRAINS AT CENTERLINE
OF NEAREST SEGMENT.

PARTIAL PLAN - INBOUND

SCALE : 1" = 20'-0"

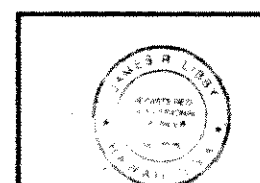
FOR CONTINUATION
SEE SHEET AH



PARTIAL ELEVATION - INBOUND

SCALE : 1" = 20'-0"

08/23/91	UPDATED LIGHT POLE STATIONS AND FUTURE SIGN POST.
07/02/91	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers



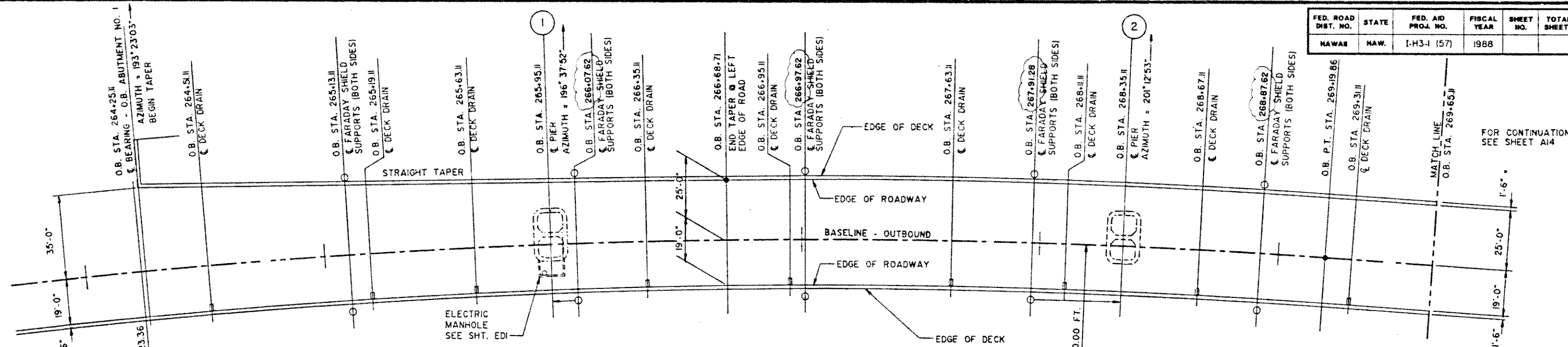
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J. Libby

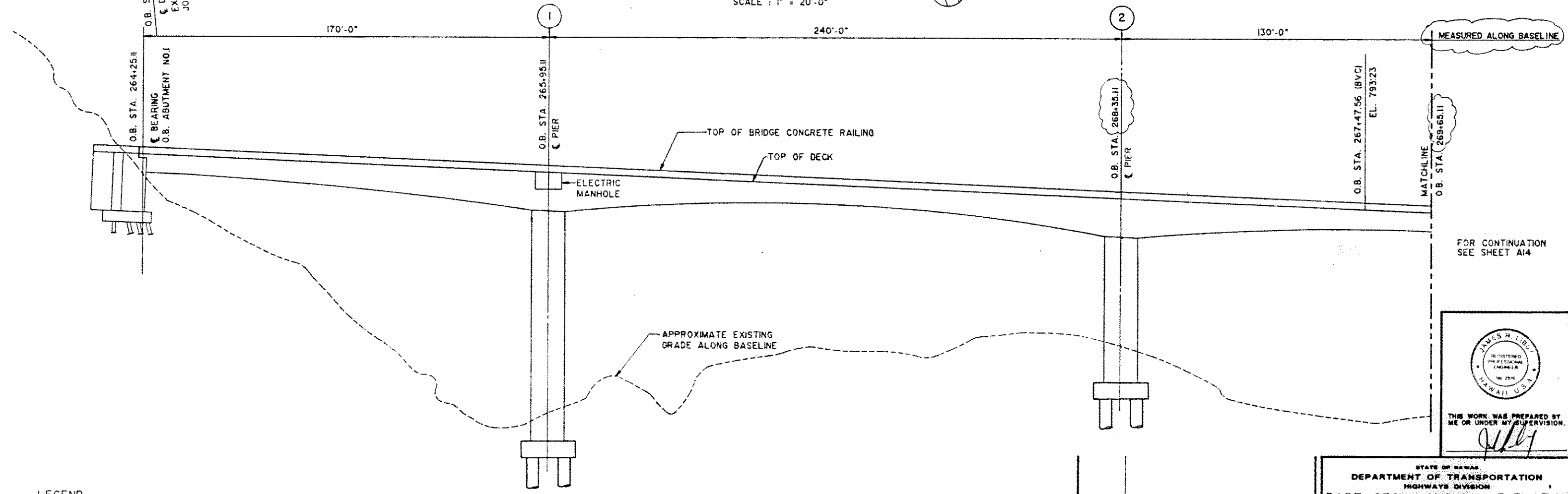
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 327+25.53 TO STA. 331+05.75
INBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A12 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



PARTIAL PLAN - OUTBOUND
SCALE : 1" = 20'-0"



PARTIAL ELEVATION - OUTBOUND
SCALE : 1" = 20'-0"

LEGEND:
I. ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

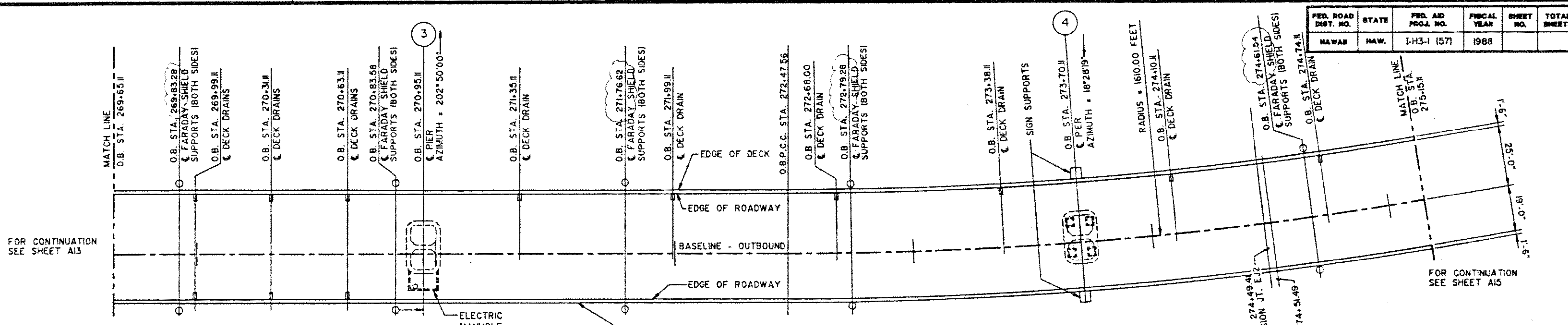
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	

08/23/91	UPDATED FARADAY SHIELD SUPPORT STA.
DATE	REVISION
J. MULLER	Libby
INTERNATIONAL	Engineers

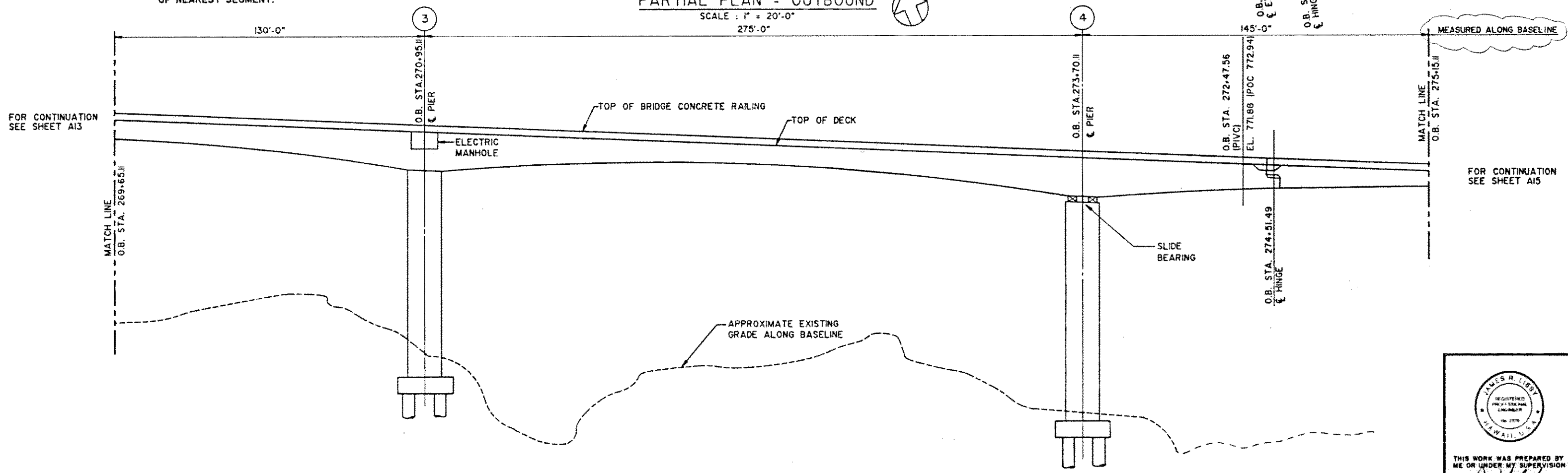
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION
STA. 264.25 II TO STA. 269.65 II
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A13 OF 24 SHEETS

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[Signature]

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



PARTIAL PLAN - OUTBOUND
SCALE: 1" = 20'-0"



PARTIAL ELEVATION - OUTBOUND
SCALE: 1" = 20'-0"

- LEGEND:**
- 1. ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.
 - 2. O/R INDICATES OFFSET RIGHT OF BASELINE.
 - 3. O/L INDICATES OFFSET LEFT OF BASELINE.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
INTEGRITY	

08/23/91 UPDATED FARADAY SHIELD SUPPORT STA.

DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

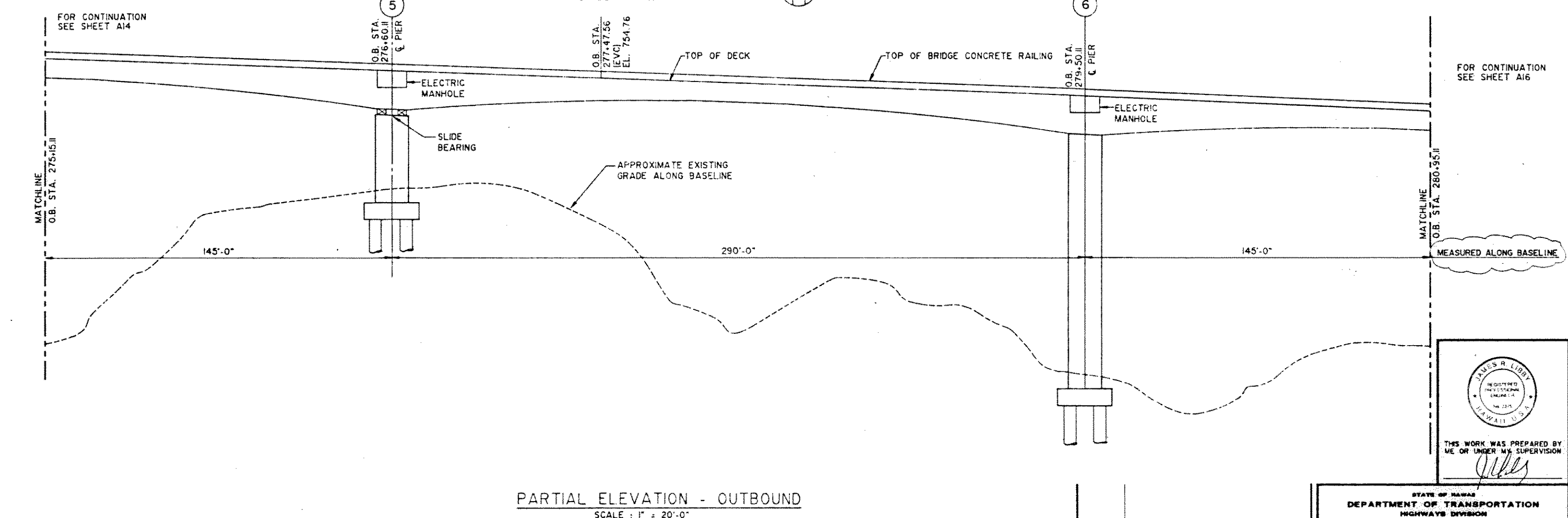
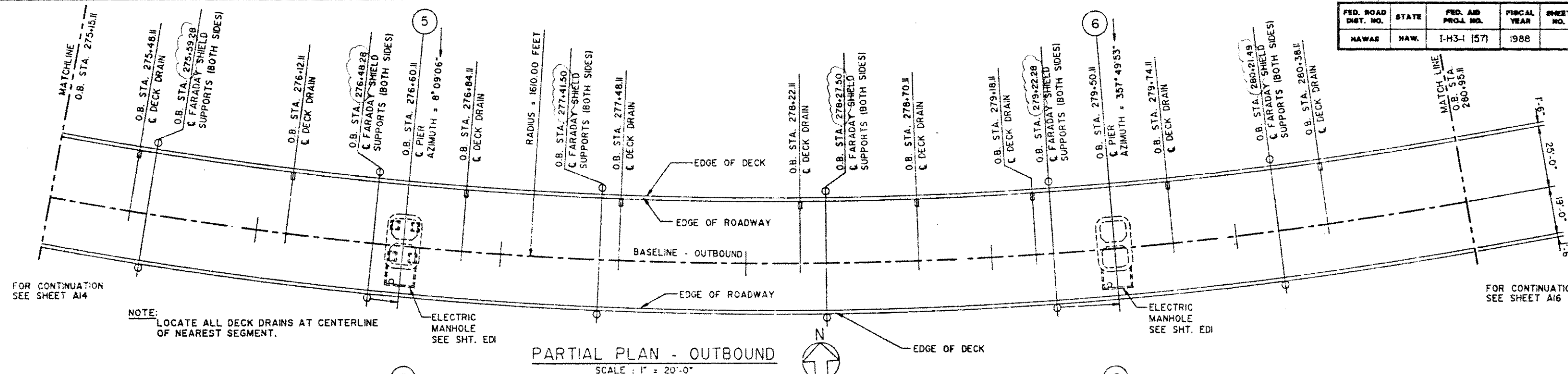
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 269+65.11 TO STA. 275+15.11
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A14 OF 24 SHEETS

JAMES R. LIBBY
REGISTERED PROFESSIONAL ENGINEER
NO. 2276
HAWAII, U.S.A.

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



LEGEND:
 L ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

08/23/91	UPDATED FARADAY SHIELD SUPPORT STA.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

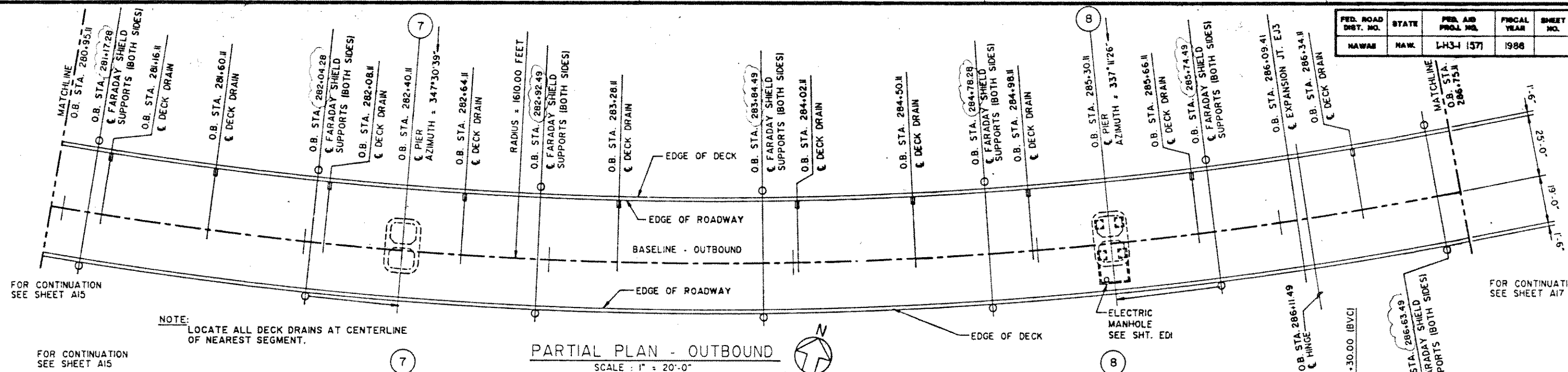
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
 STA. 275+15.11 TO STA. 280+95.11
 OUTBOUND STRUCTURE
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT NO. I-H3-1 (57)
 F.A.I. PROJECT NO. I-H3-1 (58)
 SCALE: AS NOTED DATE: JUNE 1990
 SHEET No. 15 OF 24 SHEETS



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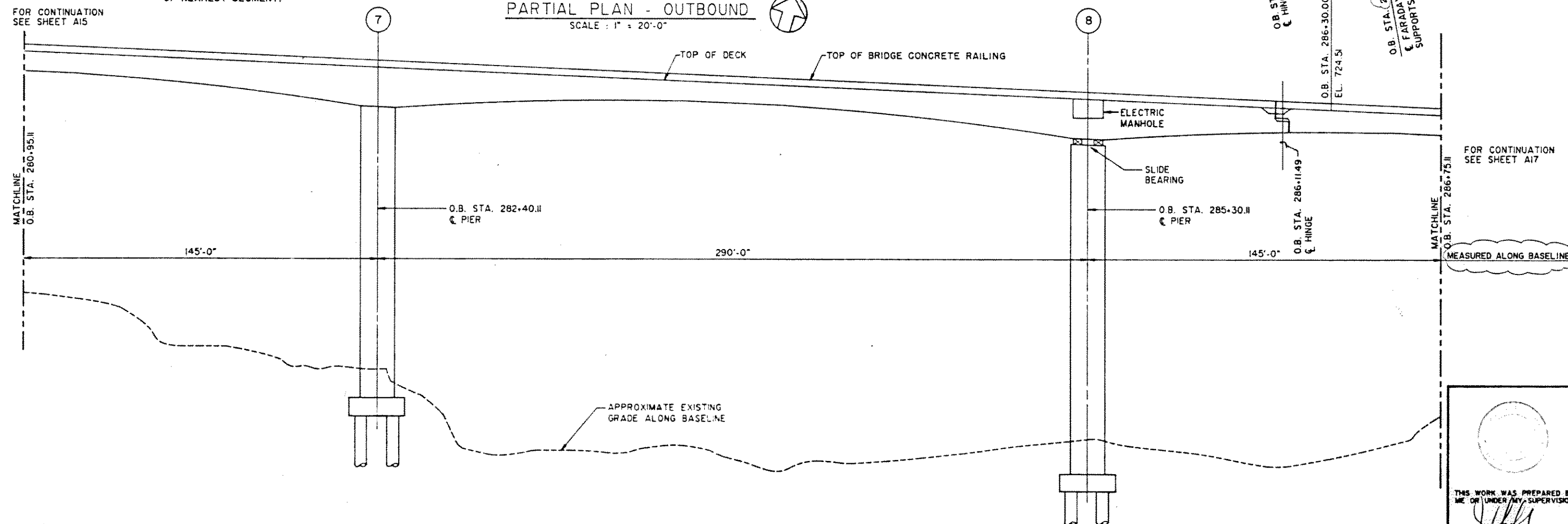
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (57)	1988		



FOR CONTINUATION
SEE SHEET A15

FOR CONTINUATION
SEE SHEET A17

PARTIAL PLAN - OUTBOUND
SCALE: 1" = 20'-0"



LEGEND:

INDICATES GROUND BUSS EXTENDING
DOWN PIER TO GROUND ROD.

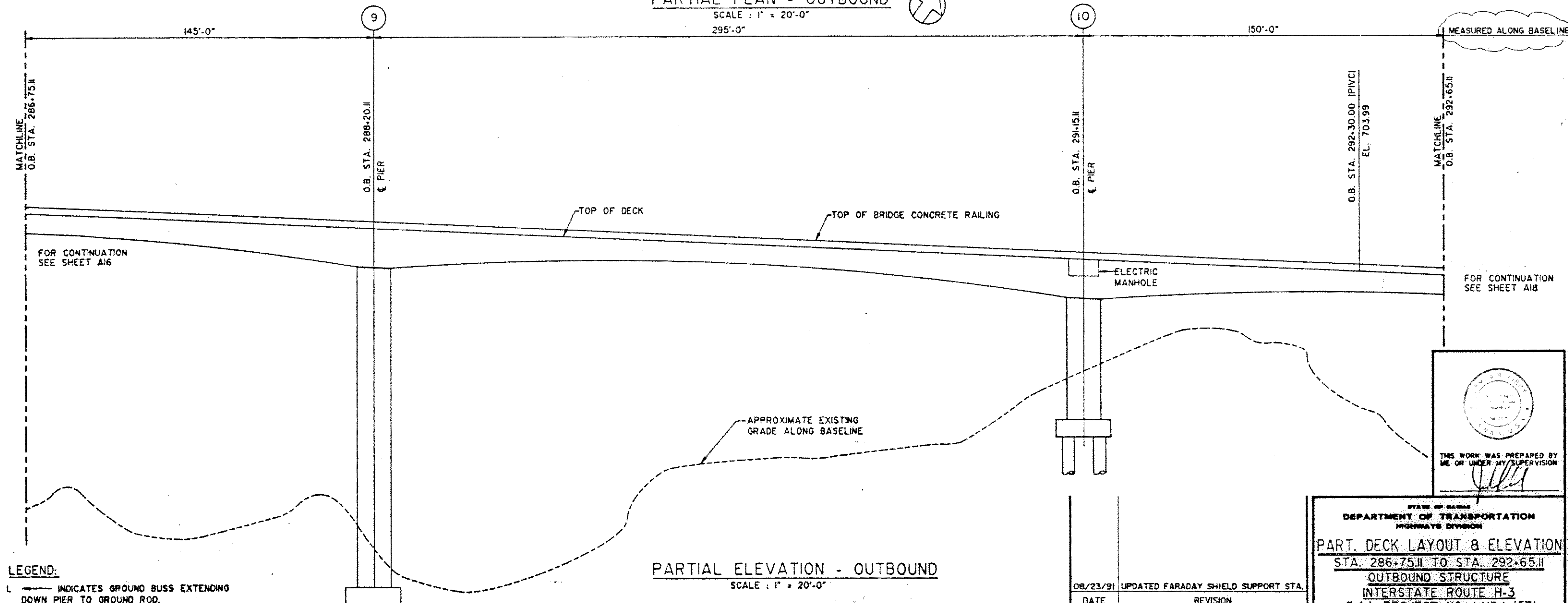
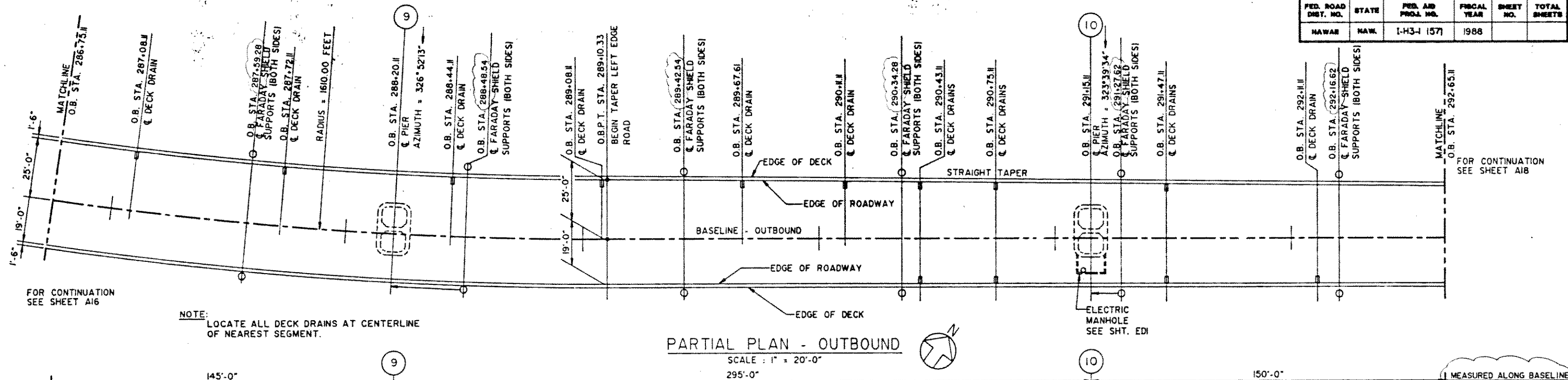
PARTIAL ELEVATION - OUTBOUND
SCALE: 1" = 20'-0"

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
[Signature]

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION
STA. 280+95.11 TO STA. 286+75.11
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. 1-H3-1 (57)
F.A.I. PROJECT NO. 1-H3-1 (58)
SCALE: AS NOTED DATE: JUNE, 1990
SHEET NO. A16 OF 24 SHEETS

08/23/91 UPDATED FARADAY SHIELD SUPPORT STA.
DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

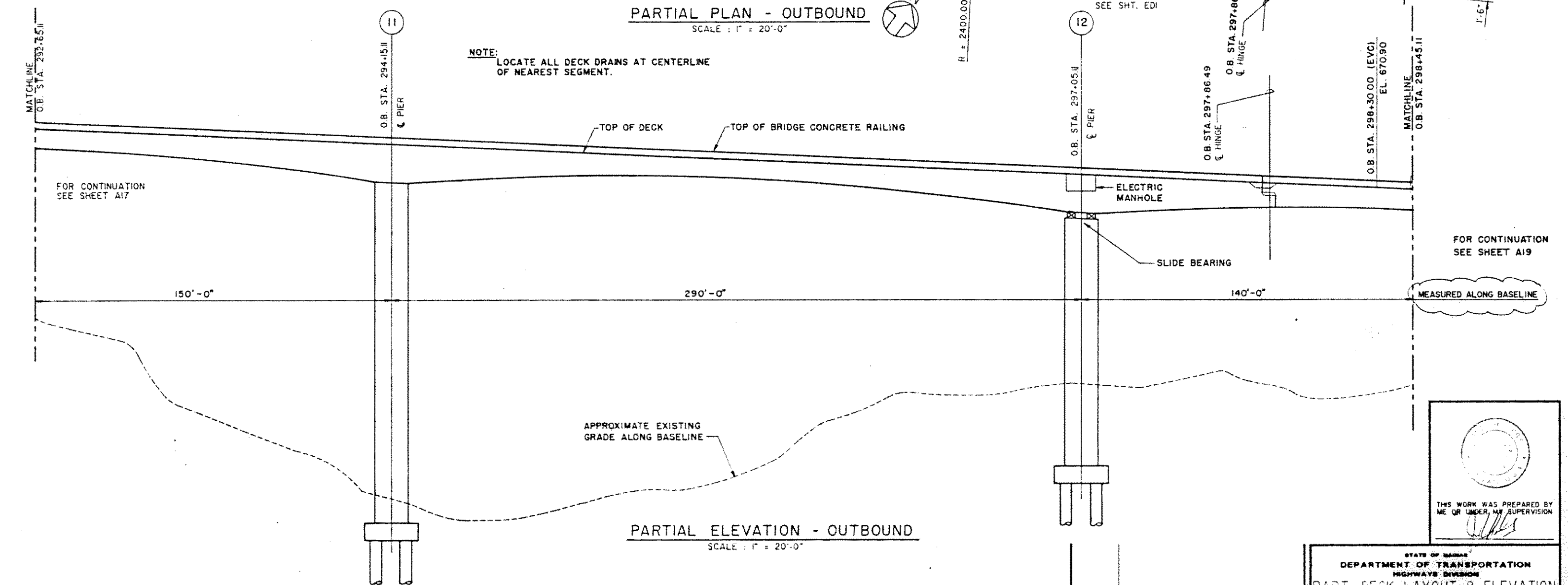
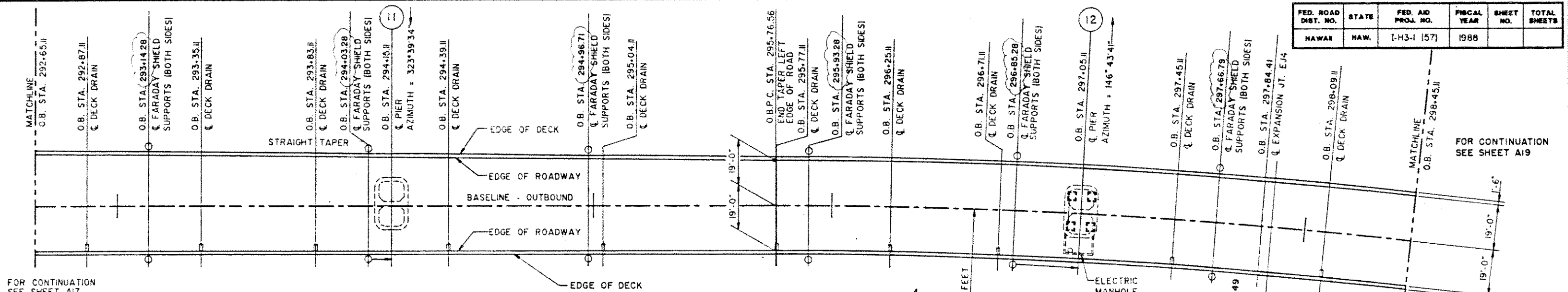


08/23/91	UPDATED FARADAY SHIELD SUPPORT STA.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 286+75.11 TO STA. 292+65.11
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET NO. A17 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



SURVEY PLATTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	

08/23/91 UPDATED FARADAY SHIELD SUPPORT STA.

DATE REVISION

J. MULLER **Libby**
INTERNATIONAL Engineers

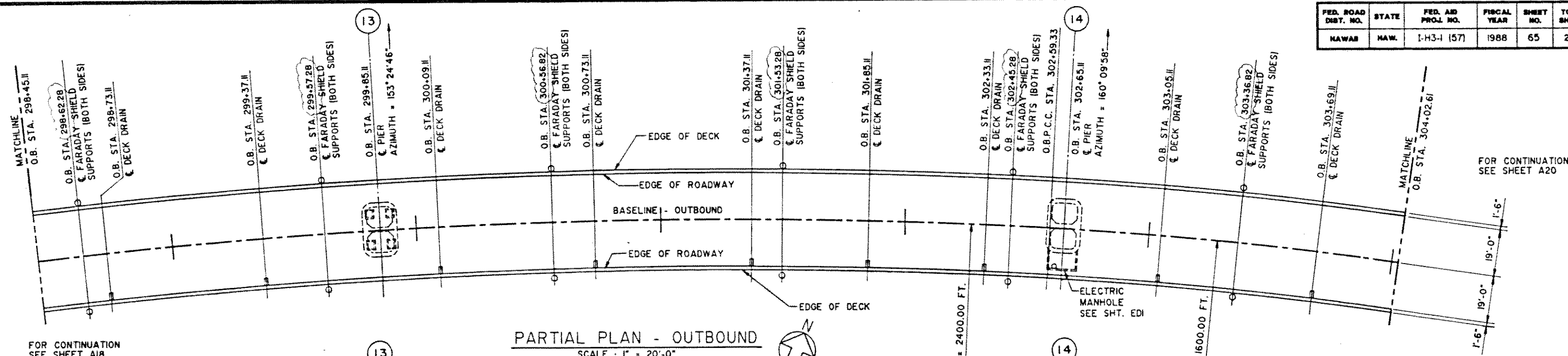
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 292+65.11 TO STA. 298+45.11
OUTBOUND STRUCTURE

INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990

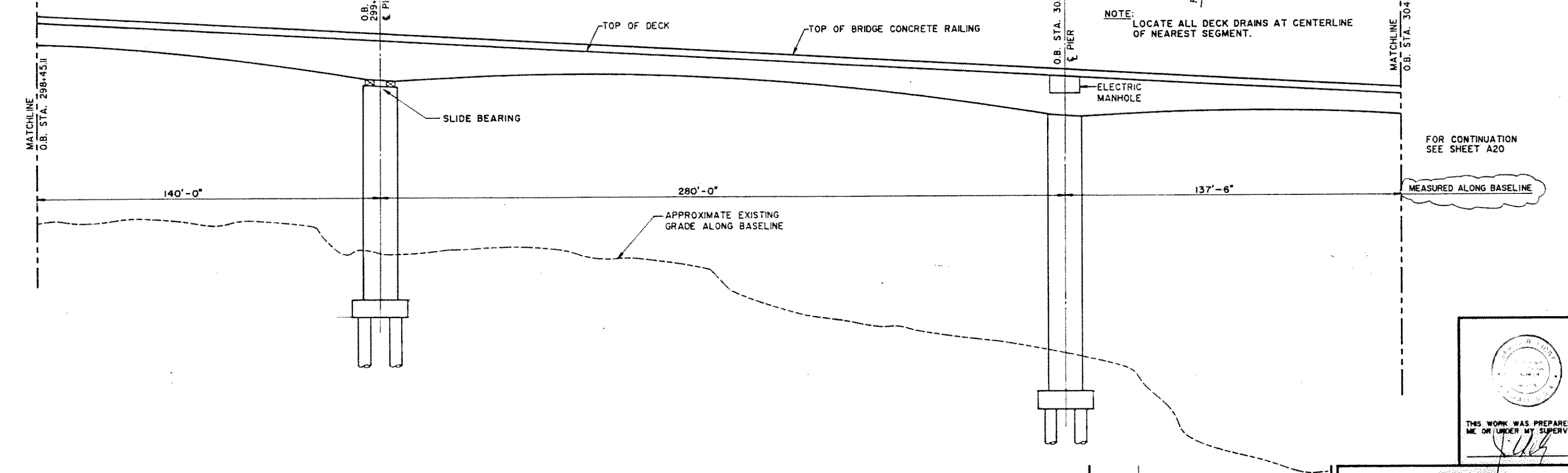
SHEET NO. A18 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988	65	274



FOR CONTINUATION
SEE SHEET A18

FOR CONTINUATION
SEE SHEET A18



LEGEND:

- 1. — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

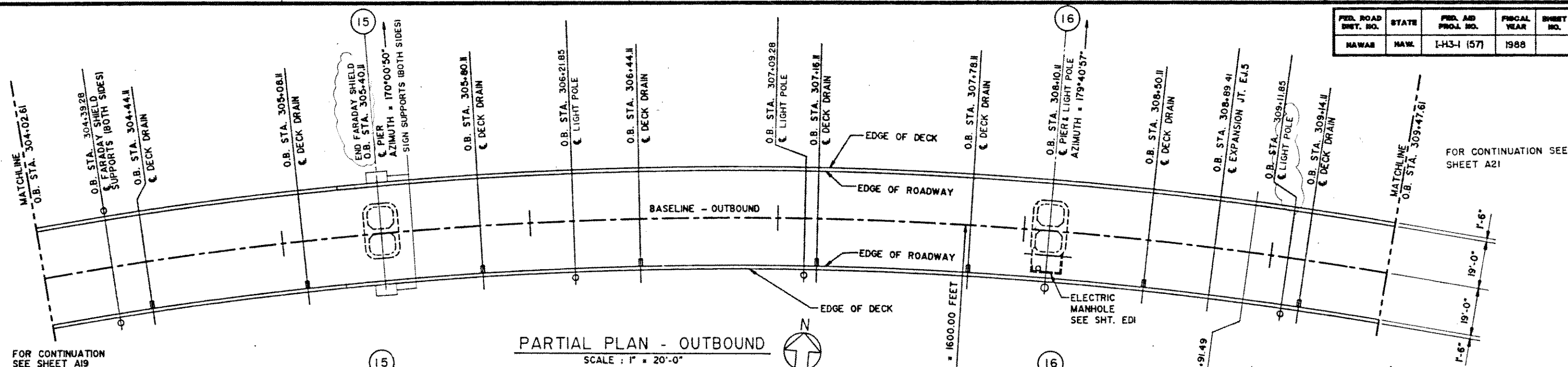
PARTIAL ELEVATION - OUTBOUND
SCALE: 1" = 20'-0"

08/23/91	UPDATED FARADAY SHIELD SUPPORT STA.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

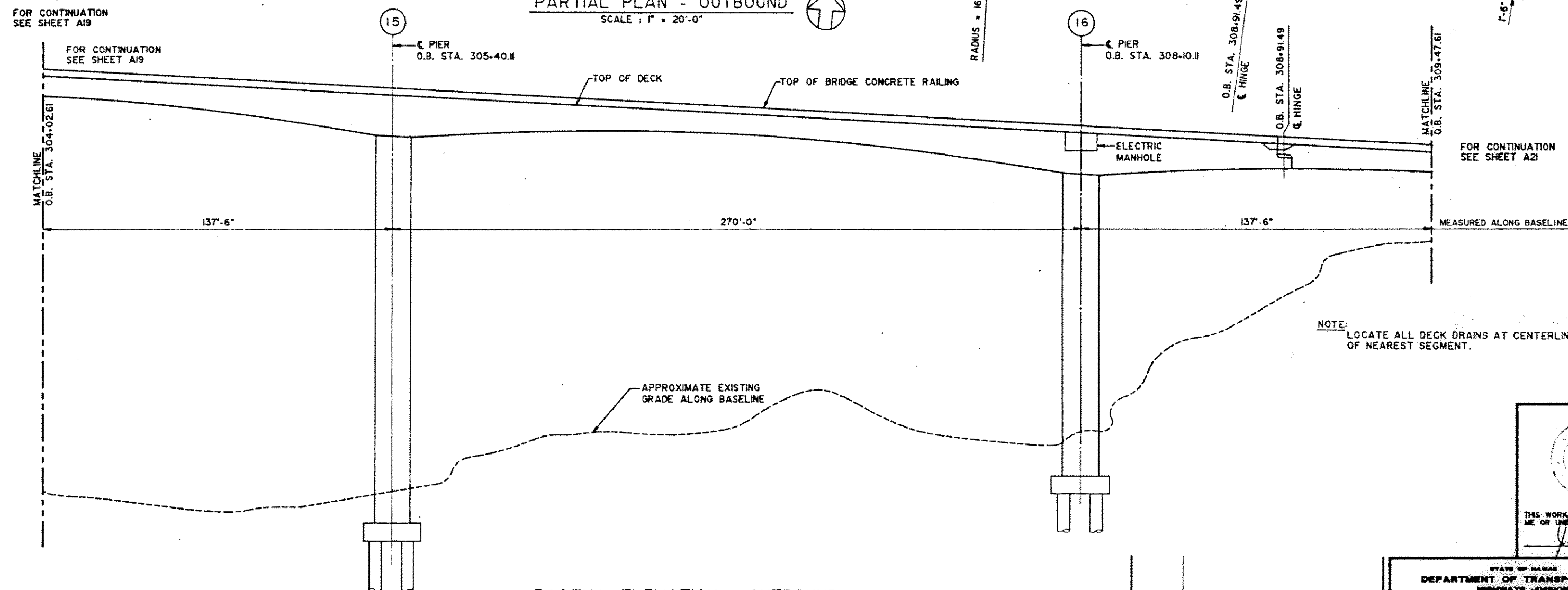
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 298.45.11 TO STA. 304.02.61
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A19 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	I-43-1 (57)	1968		



PARTIAL PLAN - OUTBOUND
SCALE : 1" = 20'-0"



PARTIAL ELEVATION - OUTBOUND
SCALE : 1" = 20'-0"

- LEGEND:
1. ——— INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.
 2. O/R INDICATES OFFSET RIGHT OF BASELINE.
 3. O/L INDICATES OFFSET LEFT OF BASELINE.

09/30/91	UPDATED DRAWING.
08/23/91	UPDATED FARADAY SHIELD SUPPORT STA AND SIGN SUPPORT.
DATE	REVISION
 J. MULLER INTERNATIONAL	 Libby Engineers

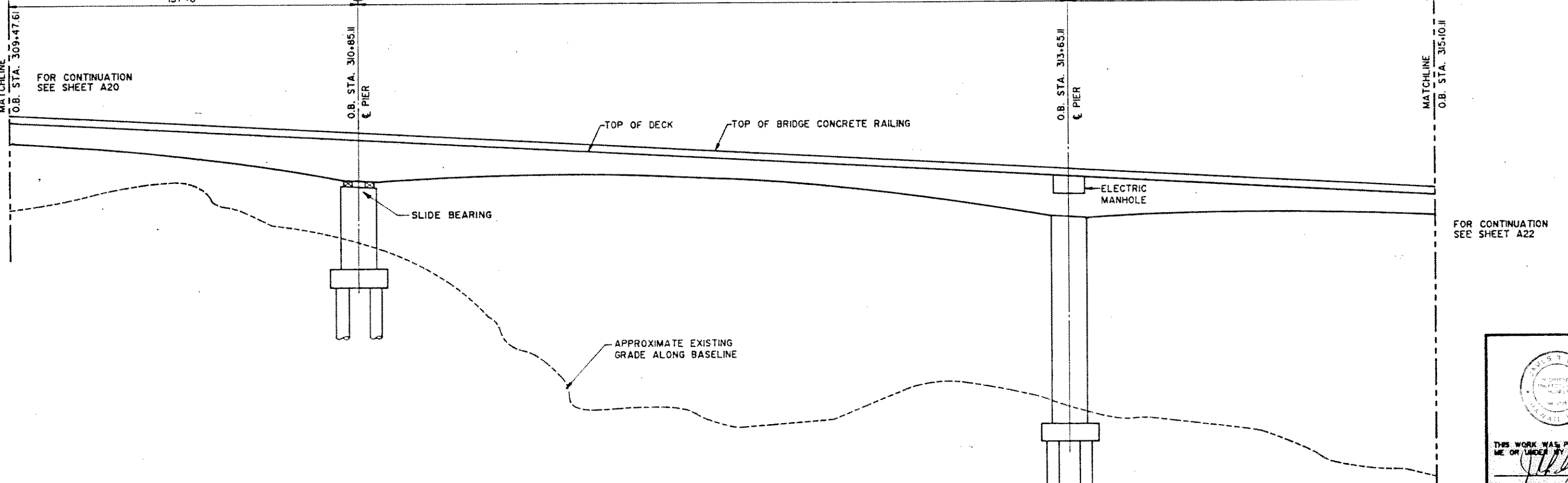
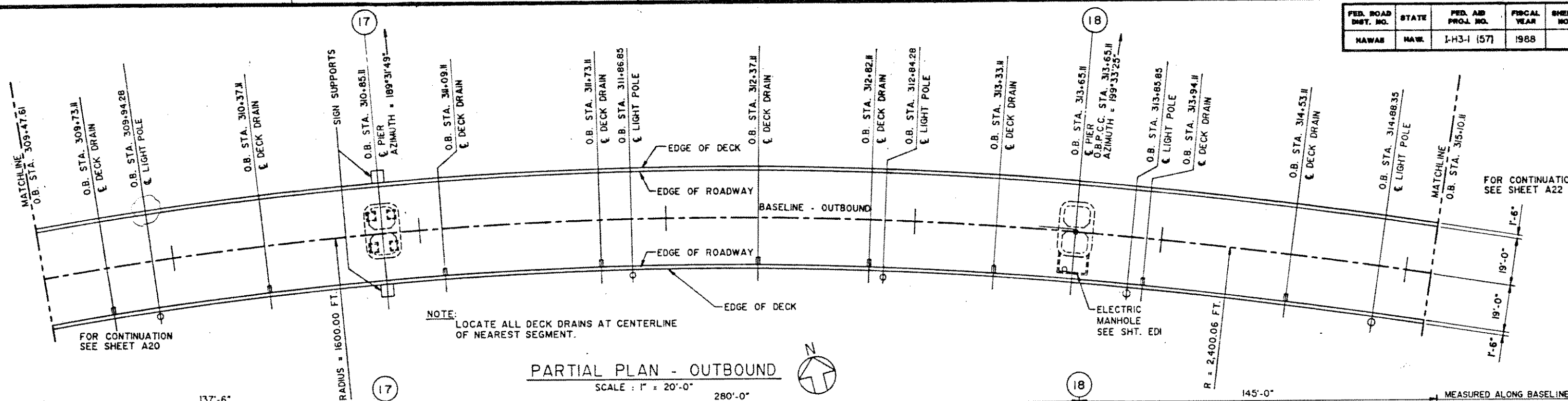
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 304+02.61 TO STA. 309+47.61
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)

SCALE: AS NOTED DATE: JUNE 1990

SHEET No. A20 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



LEGEND:
 I — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.

PARTIAL ELEVATION - OUTBOUND
 SCALE: 1" = 20'-0"

09/30/91	UPDATED LIGHT POLE STATION.
08/23/91	UPDATED LIGHT POLE STATIONS.
DATE	REVISION

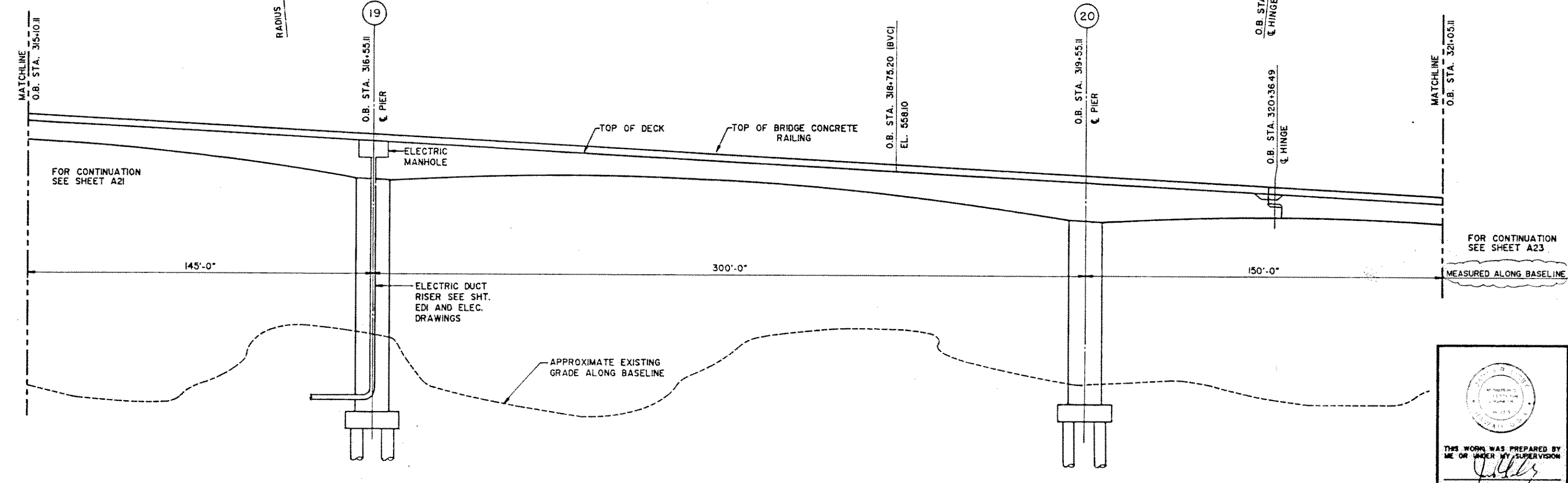
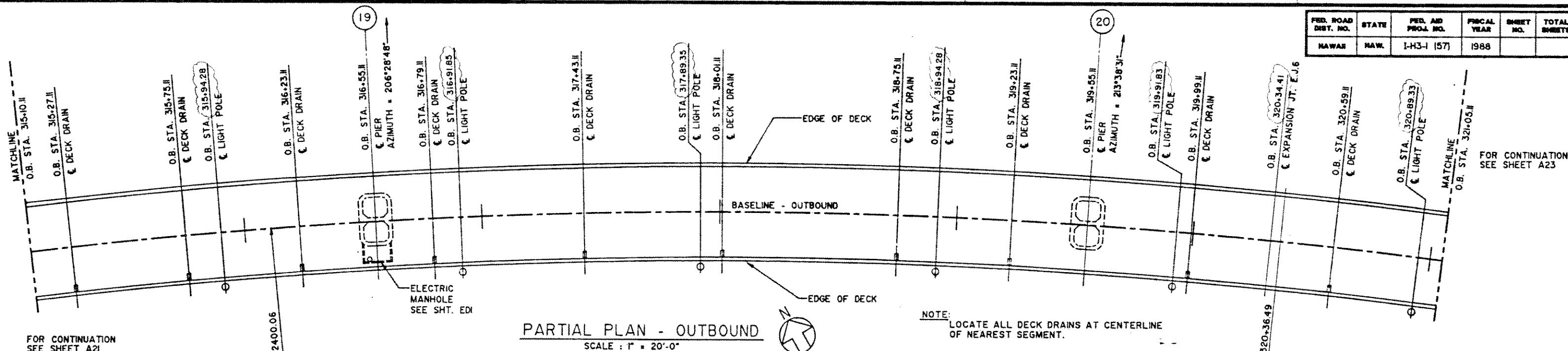
J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PART. DECK LAYOUT & ELEVATION
 STA. 309.47.61 TO STA. 315.10.11
 OUTBOUND STRUCTURE
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT NO. I-H3-1 (57)
 F.A.I. PROJECT NO. I-H3-1 (58)
 SCALE: AS NOTED DATE: JUNE 1990
SHEET No. 23 OF 24 SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



- LEGEND:
- 1. — INDICATES GROUND BUSS EXTENDING DOWN PIER TO GROUND ROD.
 - 2. O/R INDICATES OFFSET RIGHT OF BASELINE.
 - 3. O/L INDICATES OFFSET LEFT OF BASELINE.

08/23/91 UPDATED LIGHT POLES & E.J. STA.
DATE REVISION

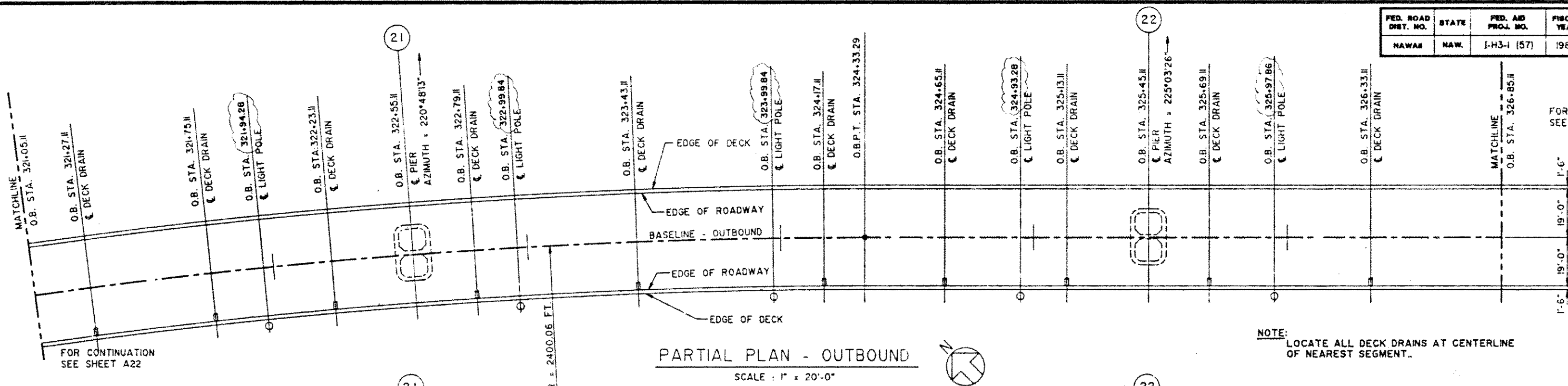
J. MULLER
INTERNATIONAL

Libby
Engineers

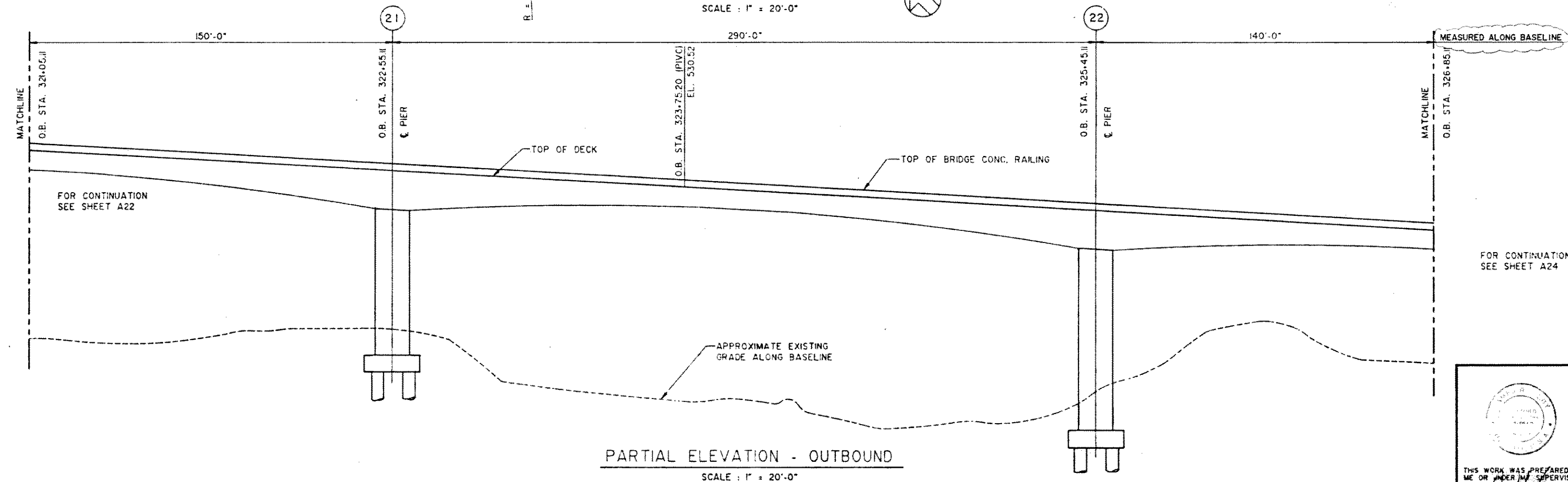
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 315+10.11 TO STA. 321+05.11
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A22 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



NOTE: LOCATE ALL DECK DRAINS AT CENTERLINE OF NEAREST SEGMENT.



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

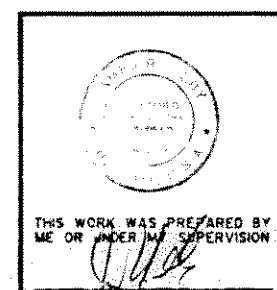
08/23/91 UPDATED LIGHT POLES & E.J. STA.
DATE REVISION

J. MULLER
INTERNATIONAL

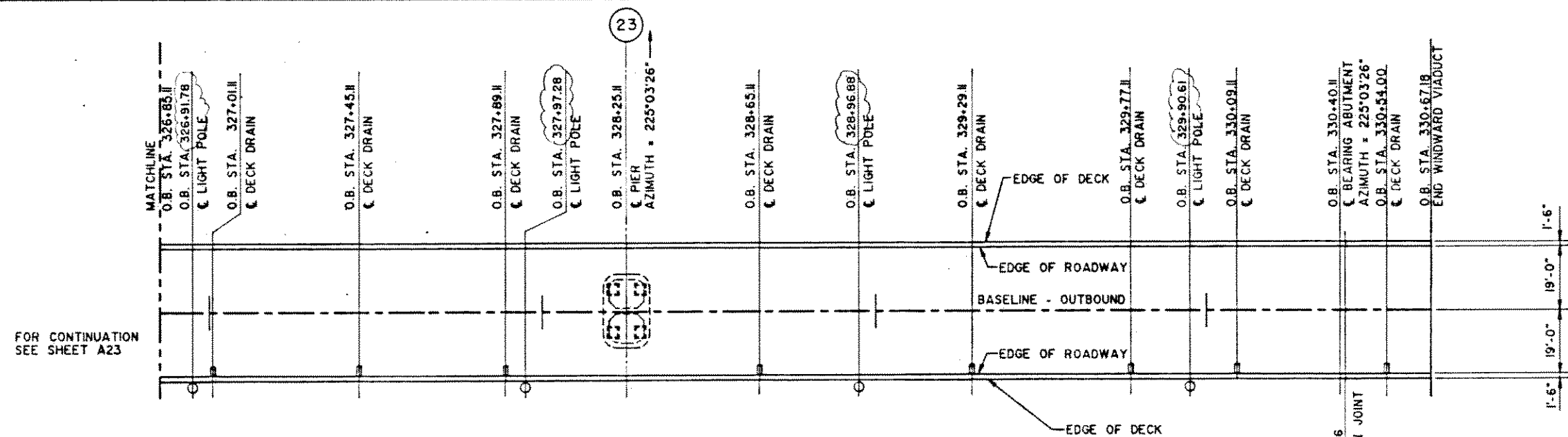
Libby
Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 322+55.11 TO STA. 326+85.11
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No. A23 OF 24 SHEETS

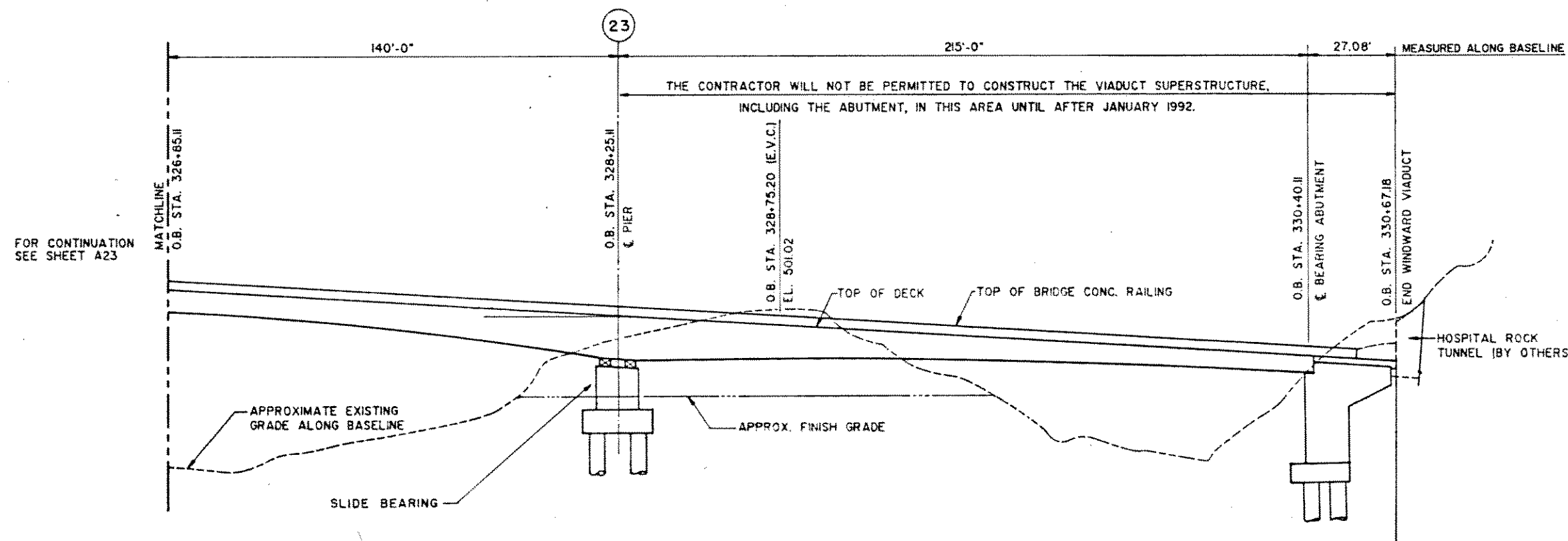


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

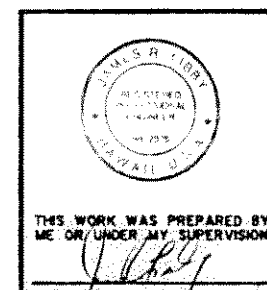


PARTIAL PLAN - OUTBOUND
SCALE: 1" = 20'-0"

NOTE: LOCATE ALL DECK DRAINS AT CENTERLINE OF NEAREST SEGMENT.



PARTIAL ELEVATION - OUTBOUND
SCALE: 1" = 20'-0"



08/23/91	UPDATED LIGHT POLES & E.J. STA.
07/02/91	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PART. DECK LAYOUT & ELEVATION
STA. 326+85.11 TO STA. 330+67.18
OUTBOUND STRUCTURE
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED DATE: JUNE 1990
SHEET No24 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

FOOTING SCHEDULE

PIER NO.	TYPE	DIMENSIONS			TOP OF FOOTING ELEVATION	BOTTOM OF FOOTING ELEVATION	PILE DATA		REINFORCING					
		LONGIT. FOOTING	TRANS. FOOTING	THK. FOOTING			SERVICE LOAD IN KIPS	PILE TIP ELEVATION	TOP BARS		BOTTOM BARS			
									LONGITUDINAL	TRANSVERSE	LONGITUDINAL 'A'	LONGITUDINAL 'B'	TRANSVERSE	
INBOUND STRUCTURE	1	I	20'-0"	32'-0"	7'-9"	695.00	687.25	2000	562.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	2	I	20'-0"	32'-0"	7'-9"	687.00	679.25	1600	534.25	44-#6@9"	20-#6@1'-0"	11-#10@9"	22-#10@9"	20x2-#14@1'-0"
	3	I	20'-0"	32'-0"	7'-9"	677.00	669.25	1800	574.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	4	I	20'-0"	32'-0"	7'-9"	636.00	628.25	2000	508.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	5	I	20'-0"	32'-0"	7'-9"	656.00	648.25	1800	579.00	38-#6@10"	21-#6@1'-0"	9-#11@10"	20-#11@10"	21x2-#14@1'-0"
	6	I	20'-0"	32'-0"	7'-9"	606.00	598.25	2200	509.00	28-#7@1'-2"	28-#9@9"	7x2-#11@1'-2"	14x2-#11@1'-2"	28x2-#14@9"
	7	I	20'-0"	32'-0"	7'-9"	588.00	580.25	2100	486.00	44-#7@9"	37-#10@6"	11-#14@9"	22-#14@9"	19x2-#18@1'-1"
	8	I	20'-0"	32'-0"	7'-9"	557.00	549.25	2100	460.00	28-#7@1'-2"	19-#10@1'-1"	7x2-#11@1'-2"	14x2-#11@1'-2"	19x2-#18@1'-1"
	9	I	20'-0"	32'-0"	7'-9"	559.00	551.25	2000	456.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	10	II	35'-0"	32'-0"	12'-9"	600.00	587.25	2000	536.00	44-#6@9"	36-#6@1'-0"	11-#11@18@9"	22-#11@18@9"	36x2-#11@1'-0"
	11	I	20'-0"	32'-0"	7'-9"	516.00	508.25	2200	418.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	12	I	20'-0"	32'-0"	7'-9"	532.00	524.25	2000	439.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	13	I	20'-0"	32'-0"	7'-9"	530.00	522.25	2000	448.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	14	I	20'-0"	32'-0"	7'-9"	502.00	494.25	2300	406.00	31-#7@1'-0"	23-#10@10"	10-#14@9"	20-#14@9"	17x2-#18@1'-2"
	15	I	20'-0"	32'-0"	7'-9"	442.00	434.25	2000	357.00	44-#6@9"	28-#6@9"	9-#14@10"	18-#14@10"	28x2-#14@9"
	16	IV	SEE SHEET FT5			461.00	444.25	2900	407.00	SEE SHEET FT5 FOR PIER 16 I.B. FOOTING REINFORCING				
	17	I	20'-0"	32'-0"	7'-9"	519.00	511.25	1600	451.25	44-#6@9"	28-#6@9"	11-#10@9"	22-#10@9"	28x2-#11@9"
	18	I	20'-0"	32'-0"	7'-9"	471.00	463.25	2100	373.25	33-#7@1'-0"	28-#7@9"	8-#14@1'-0"	17-#14@1'-0"	28-#18@9"
	19	I	20'-0"	32'-0"	7'-9"	461.00	453.25	1700	368.25	33-#7@1'-0"	28-#6@9"	8-#14@1'-0"	17-#14@1'-0"	28-#11@14@9"
	20	I	20'-0"	32'-0"	7'-9"	444.00	436.25	1900	346.25	33-#7@1'-0"	28-#6@9"	8-#14@1'-0"	17-#14@1'-0"	28-#11@14@9"
	21	I	20'-0"	32'-0"	7'-9"	437.00	429.25	1800	360.25	33-#7@1'-0"	26-#6@9"	8-#14@1'-0"	17-#14@1'-0"	26x2-#14@9"
	22	I	20'-0"	32'-0"	7'-9"	406.00	398.25	1700	330.25	44-#6@9"	26-#6@9"	11-#11@9"	22-#11@9"	26-#11@14@9"
	23	V	35'-0"	34'-0"	7'-0"	407.00	400.00	SEE SHEET FT6 FOR PIER 23 I.B. FOUNDATION REINFORCING						
OUTBOUND STRUCTURE	1	I	20'-0"	32'-0"	7'-9"	688.00	680.25	1700	580.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	2	I	20'-0"	32'-0"	7'-9"	713.00	705.25	1900	605.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	3	I	20'-0"	32'-0"	7'-9"	675.00	667.25	2300	552.25	44-#6@9"	28-#7@9"	8-#14@1'-0"	16-#14@1'-0"	26x2-#14@9"
	4	I	20'-0"	32'-0"	7'-9"	661.00	653.25	2100	503.25	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	5	I	20'-0"	32'-0"	7'-9"	705.00	697.25	1600	623.00	44-#6@9"	20-#6@1'-0"	11-#10@9"	22-#10@9"	20x2-#14@1'-0"
	6	I	20'-0"	32'-0"	7'-9"	628.00	620.25	2300	556.00	36-#6@11"	28-#6@9"	9-#14@11"	18-#14@11"	28x2-#14@9"
	7	I	20'-0"	32'-0"	7'-9"	606.00	598.25	2000	524.00	28-#7@1'-2"	19-#10@1'-1"	7x2-#11@1'-2"	14x2-#11@1'-2"	19x2-#18@1'-1"
	8	I	20'-0"	32'-0"	7'-9"	569.00	561.25	2100	512.00	44-#7@9"	38-#9@6"	11-#14@9"	22-#14@9"	19x2-#18@1'-1"
	9	I	20'-0"	32'-0"	7'-9"	570.00	562.25	1900	488.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	10	III	44'-9"	32'-0"	14'-9"	642.00	627.25	2100	587.00	SEE SHEET FT4 FOR PIER 10 O.B. FOOTING REINFORCING				
	11	I	20'-0"	32'-0"	7'-9"	536.00	528.25	2300	444.00	33-#6@11"	28-#6@9"	8-#14@11"	17-#14@1'-1"	28-#18@9"
	12	I	20'-0"	32'-0"	7'-9"	555.00	547.25	1900	463.00	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#10@14@9"
	13	I	20'-0"	32'-0"	7'-9"	558.00	550.25	2250	465.25	44-#6@9"	24-#7@10"	8-#14@1'-0"	16-#14@1'-0"	28x2-#14@9"
	14	I	20'-0"	32'-0"	7'-9"	520.00	512.25	2100	432.25	44-#6@9"	20-#10@1'-0"	10-#14@9 1/2"	20-#14@9 1/2"	20x3-#14@1'-0"
	15	I	20'-0"	32'-0"	7'-9"	463.00	455.25	1600	395.25	44-#6@9"	24-#7@10"	8-#14@11"	19-#14@11"	24x3-#14@10"
	16	I	20'-0"	32'-0"	7'-9"	489.00	481.25	2000	441.25	44-#6@9"	24-#7@10"	8-#14@11"	19-#14@11"	24x3-#14@10"
	17	I	20'-0"	32'-0"	7'-9"	551.00	543.25	2000	463.25	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	18	I	20'-0"	32'-0"	7'-9"	490.00	482.25	2000	397.25	44-#6@9"	28-#6@9"	11-#11@9"	22-#11@9"	28-#11@14@9"
	19	I	20'-0"	32'-0"	7'-9"	476.00	468.25	1600	388.25	33-#7@1'-0"	28-#6@9"	8-#14@1'-0"	17-#14@1'-0"	28-#18@9"
	20	I	20'-0"	32'-0"	7'-9"	458.00	450.25	2000	370.25	33-#7@1'-0"	28-#6@9"	8-#14@1'-0"	17-#14@1'-0"	28x2-#14@9"
	21	I	20'-0"	32'-0"	7'-9"	460.00	452.25	1800	360.00	44-#6@9"	24-#7@10"	11-#11@9"	22-#11@9"	24x2-#14@10"
	22	I	20'-0"	32'-0"	7'-9"	432.00	424.25	1700	352.00	38-#7@10"	20-#7@1'-0"	10-#11@10"	18-#11@10"	20x2-#14@1'-0"
	23	I	20'-0"	32'-0"	7'-9"	475.00	467.25	1700	424.00	38-#7@10"	20-#7@1'-0"	10-#11@10"	18-#11@10"	20x2-#14@1'-0"

- NOTES:
- ALL EXCAVATION AND DRILLING OPERATIONS FOR FOUNDATIONS SCHEDULED ON THIS SHEET SHALL BE MONITORED BY THE ENGINEER.
 - EXCEPT AS NOTED, THESE NOTES PERTAIN ONLY TO THE PILES AND FOOTINGS SCHEDULED ON THIS SHEET.
 - BOTTOM OF EXCAVATIONS AND HOLES FOR CAST-IN-DRILLED-HOLE PILES SHALL BE CLEARED OF DEBRIS AND LOOSE MATERIAL PRIOR TO PLACING REINFORCING STEEL OR CONCRETE.
 - BOTTOM OF EXCAVATIONS AND HOLES FOR CAST-IN-DRILLED-HOLE PILES SHALL BE FREE OF WATER PRIOR TO PLACING REINFORCING STEEL OR CONCRETE.
 - BOTTOM OF FOOTING AND PILE TIP ELEVATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
 - EACH PIER LOCATION SHALL BE EXPLORED BY DRILLING AT LEAST ONE BORING TO VERIFY SOIL/ROCK CONDITIONS AND TO DETERMINE THE TYPE OF PILE (FRICTION OR END BEARING IN ROCK) APPLICABLE FOR THAT LOCATION.
 - CONCRETE SHALL NOT BE PLACED WITHOUT APPROVAL OF THE ENGINEER.
 - PILE LOAD TESTS SHALL BE PERFORMED AT PIERS IP2, OP3, IP7, OPT1, IP19 AND IP14. REACTION PILES ARE LOCATED AS SHOWN ON SHEET FT2.
 - THE FOUR CORNERS AND THE CENTER OF EACH SPREAD FOOTING SHALL BE PROBED TO A DEPTH OF 10 FEET MINIMUM BELOW THE BOTTOM OF FOOTING ELEVATION. LIMITS OF CAVITIES ENCOUNTERED SHALL BE FULLY IDENTIFIED AND FILLED WITH CLASS 'D' CONCRETE.
 - SEE SPECIAL PROVISIONS SECTION 206 - EXCAVATION AND BACKFILL FOR CONDUITS AND STRUCTURES. SEE SPECIAL PROVISIONS SECTION 209 - MECHANICALLY STABILIZED SLOPES.
 - PILE TIP ELEVATIONS SHOWN ON THIS SCHEDULE OR ON THE ABUTMENT SHEET ARE ESTIMATED ELEVATIONS. THE ACTUAL PILE TIP ELEVATIONS WILL BE DETERMINED BY THE ENGINEER, BASED ON THE RESULTS OF THE BORING PROGRAM AND THE LOAD TEST PROGRAM.
 - END BEARING PILES IN ROCK:
 - END BEARING PILES SHALL EXTEND A MINIMUM OF FIVE FEET INTO BEDROCK. THE DEPTH OF ROCK MATERIAL SHALL BE CONFIRMED AT END BEARING PILE LOCATIONS.
 - THE ROCK SHALL BE EXPLORED AT EACH PILE LOCATION TO A DEPTH EQUAL TO THE SCHEDULED DEPTH PLUS THREE PILE DIAMETERS, OR AS DIRECTED BY THE ENGINEER.
 - IF TEST RESULTS INDICATE THE BEARING STRATUM IS NOT ADEQUATE, THE ENGINEER SHALL BE NOTIFIED.
 - CONSTRUCTION OF CAST-IN-DRILLED-HOLE PILES SHALL COMPLY WITH THE "STANDARDS AND SPECIFICATIONS FOR THE FOUNDATION DRILLING INDUSTRY," REVISED NOV. 1988, BY ADSC; THE INTERNATIONAL ASSOCIATION OF FOUNDATION DRILLING.
 - SHAFTS WITHIN THREE DIAMETERS OF AN ADJACENT SHAFT SHALL NOT BE DRILLED WITHIN 8 HOURS OF COMPLETION OF CONCRETING OF THE ADJACENT SHAFT.
 - TOLERANCES:
 - PLAN DIMENSION: THE TOP OF CAST-IN-DRILLED-HOLE PILES SHALL NOT BE MORE THAN THREE INCHES FROM THE LOCATION SHOWN IN PLAN.
 - PLUMB: VERTICAL ALIGNMENT SHALL NOT VARY BY MORE THAN 2 PERCENT FROM THE ALIGNMENT SHOWN.

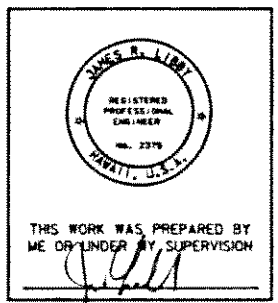
9/06/91	REVISED PIER 14 O.B.
1/16/91	REVISE PIER 22 I.B.
12/13/90	ADD PIERS 21-23 I.B.
12/10/90	ADD PIERS 17-20 I.B. & O.B.
12/05/90	ADD PIERS 17-23 O.B.
10/25/90	REVISED PIERS 13-16 I.B. & 11, 13-16 O.B.
10/17/90	REVISED PIERS 14, 15 AND 16.
9/26/90	ADD PIERS 9-16 O.B. & CHANGE PIER 10 I.B. & PIER 6 I.B.
9/14/90	ADD PIERS 9, 10 & 12 I.B.
8/30/90	ADD PILES-PIER 11 O.B. AND I.B.
6/29/90	ADD PIERS 5 & 6, ADD REINFORCING PIERS 5, 6, 7 & 8.
6/22/90	ADD PIERS 7, 8 I.B.

DATE

REVISION

J. MULLER
INTERNATIONAL

Libby
Engineers



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FOOTING SCHEDULE & NOTES

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUNE 1990

SHEET No. FT10F SHEETS

ORIGINAL PLAN
DRAWN BY
CHECKED BY
DATE

NOTES:

-

Diagram illustrating the cross-section of a pile cap and footing assembly, showing the following components and dimensions:

- LONGITUDINAL REINFORCING (TOP)**: Reinforcing bars at the top of the pile cap.
- PIER**: The central vertical structure.
- TOP OF FOOTING ELEVATION**: The upper boundary of the footing.
- PILE CAP**: The horizontal structure supporting the pier.
- *6 CONT.**: Reinforcing bars (6 continuous) shown on both the top and bottom of the pile cap.
- BOTTOM OF FOOTING ELEVATION**: The lower boundary of the footing.
- MUD SLAB**: The horizontal slab below the pile cap.
- DRILLED SHAFT OR REACTION PILE**: The vertical pile supporting the footing.
- LONGIT. 'A' REINF. (BOTTOM)**: Longitudinal reinforcing bars at the bottom of the footing.
- LONGITUDINAL 'B' REINFORCING (BOTTOM)**: Longitudinal reinforcing bars at the bottom of the footing.
- 5/4"**: Dimension indicating the width of the footing at the bottom.
- 3" CLR. TYP.**: Typical clearance dimension.
- 12" CLR.**: Clearance dimension between the pile cap and the mud slab.

Plan view of the bridge deck showing dimensions and structural details. The overall width is 20'-0" and the overall length is 32'-0". The deck is symmetrical about the centerline (CL). The deck is divided into four sections by the centerline and two transverse lines, each 3'-6" wide. The central section is 6'-6" wide. The deck is supported by four reaction piles, one in each corner. The piles are labeled A and B. The centerline is labeled CL. The transverse lines are labeled FT2/FT2. The longitudinal lines are labeled FT2/FT2. The centerline is labeled CL. The transverse lines are labeled FT2/FT2. The longitudinal lines are labeled FT2/FT2. The centerline is labeled CL. The transverse lines are labeled FT2/FT2. The longitudinal lines are labeled FT2/FT2.

DATE		REVISION	
 J. MULLER INTERNATIONAL		 Libby Engineers	

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUNE 1990
SHEET No. FT2 OF SHEETS

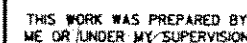
Technical drawing of a pier cross-section showing dimensions and reinforcement details. The drawing includes the following labels and dimensions:

- Overall Dimensions:**
 - Top width: $60' \pm 6 \text{ @ } 9'' \pm$
 - Top section width: $20' - 3''$ and $24' - 6''$
 - Left height: $5' - 0''$ and $9' - 9''$
- Internal Dimensions:**
 - Top section: $12' - 0''$ and $14' - 0''$
 - Bottom section: $28' - 18 \text{ @ } 9'' \pm$, $19' - 9 \text{ @ } 9'' \pm$, and $13' - 18 \text{ @ } 9'' \pm$
 - Vertical spacing: $12'' \text{ CLR.}$ (twice), $1' - 0''$, and $1' - 2'' \text{ MIN. LAP (TYP.)}$
- Reinforcement and Structural Details:**
 - PIER SHAFT:** Indicated on the left side.
 - BARS 'C' and 'D':** Reinforcement bars at the top and bottom.
 - *6 CONT.:** Continuation of #6 reinforcement bars.
 - C.J.:** Centerline joint.
 - 1' - 0" MIN. LAP (TYP.):** Minimum lap length for reinforcement bars.
 - MUD SLAB (IF REQUIRED):** Indicated at the bottom.
 - DRILLED SHAFT:** Indicated at the bottom right.
 - EMBED 9" TYP.:** Embedment depth for the shaft.
 - 3" CLR. (TYP.):** Typical clearance for reinforcement.

[illegible]

Plan view of the bridge structure. The overall width is 44'-9". The overall height is 32'-0". The structure is symmetrical about the centerline (CL) of the footing. Dimensions are given in feet and inches. The structure is divided into sections by vertical and horizontal centerlines. The horizontal centerline is labeled 'A' and the vertical centerline is labeled 'B'. The structure is symmetrical about both centerlines. The structure is divided into sections by vertical and horizontal centerlines. The horizontal centerline is labeled 'A' and the vertical centerline is labeled 'B'. The structure is symmetrical about both centerlines. The structure is divided into sections by vertical and horizontal centerlines. The horizontal centerline is labeled 'A' and the vertical centerline is labeled 'B'. The structure is symmetrical about both centerlines.

1. PILE CAP CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS OF AGE.
2. REINFORCING SHALL BE ASTM A615, GRADE 60.
3. THE CONTRACTOR SHALL COORDINATE PILE, PILE CAP AND PIER SHAFT REINFORCING STEEL TO AVOID CONFLICTS.
4. FOR 5'-0" PILE REINFORCING AND DETAILS SEE SHEET P1.
5. FOR PIER SHAFT REINFORCING (INCLUDING PILE CAP DOWELS) SEE SHEET PS1 AND PS2.
6. FOR PILE CAPACITIES AND FOOTING ELEVATIONS SEE SHEET FT1.
7. REINFORCING STEEL FABRICATION SHALL BE IN CONFORMANCE WITH THE "MANUAL OF STANDARD PRACTICE" TWENTY FOURTH EDITION, BY CONCRETE REINFORCING STEEL INSTITUTE.
8. THE HARD ROCK DIKE AT OUTBOUND PIER 10 SHALL BE EXCAVATED TO A DEPTH OF AT LEAST ONE FOOT BELOW BOTTOM OF PILE CAP. THE EXCAVATION SHALL BE BACKFILLED WITH ON-SITE SOIL PLACED AT A MOISTURE CONTENT OF UP TO 65 PERCENT. THE SOIL SHOULD BE COMPACTED TO 95 PERCENT OF THE MODIFIED PROCTOR DRY DENSITY AT THE AS PLACED MOISTURE CONTENT.
9. CONSTRUCTION JOINT (C.J.) SHALL BE ROUGHENED TO A FULL AMPLITUDE OF $\frac{1}{4}$ ".



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

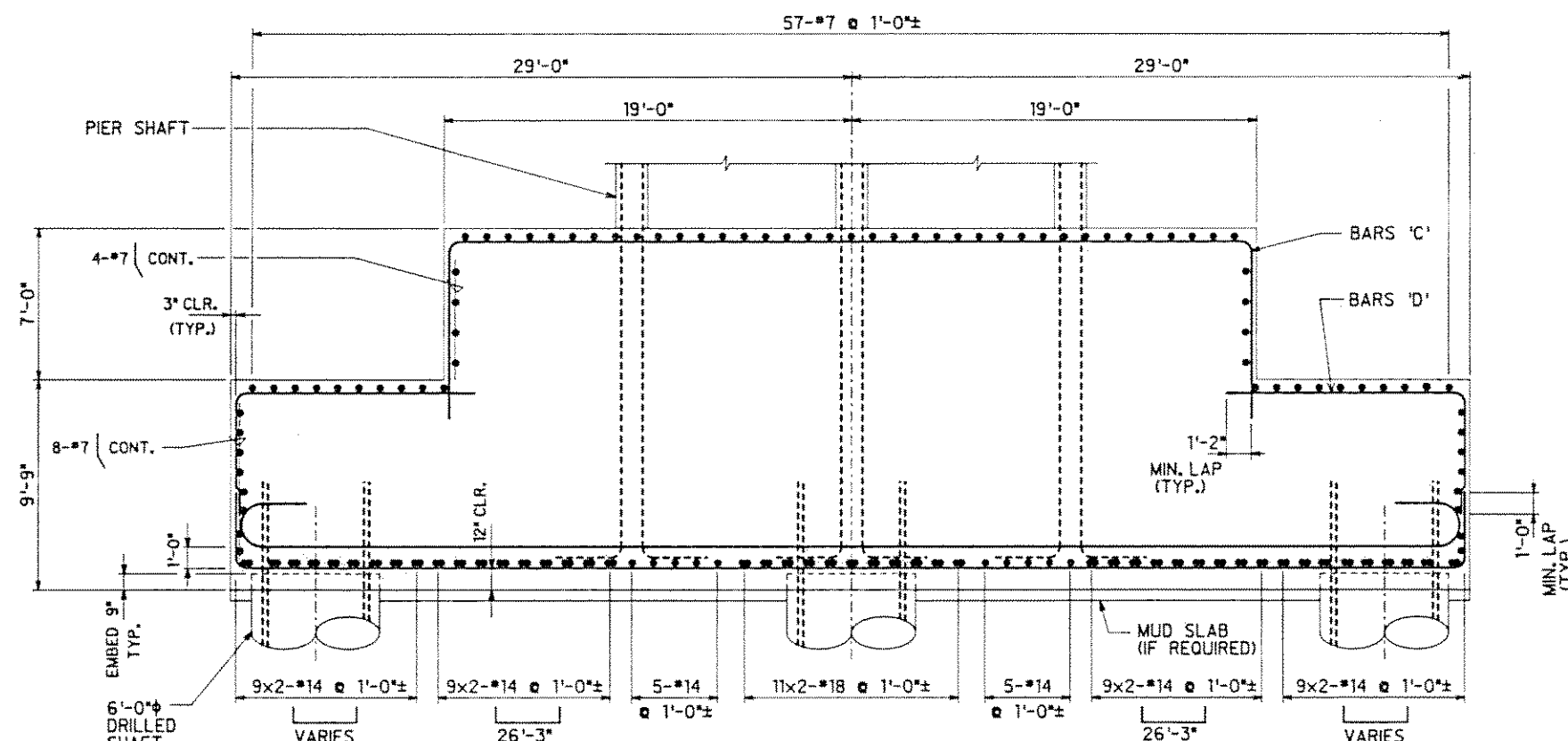
PILE CAP REINFORCING
TYPE III

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

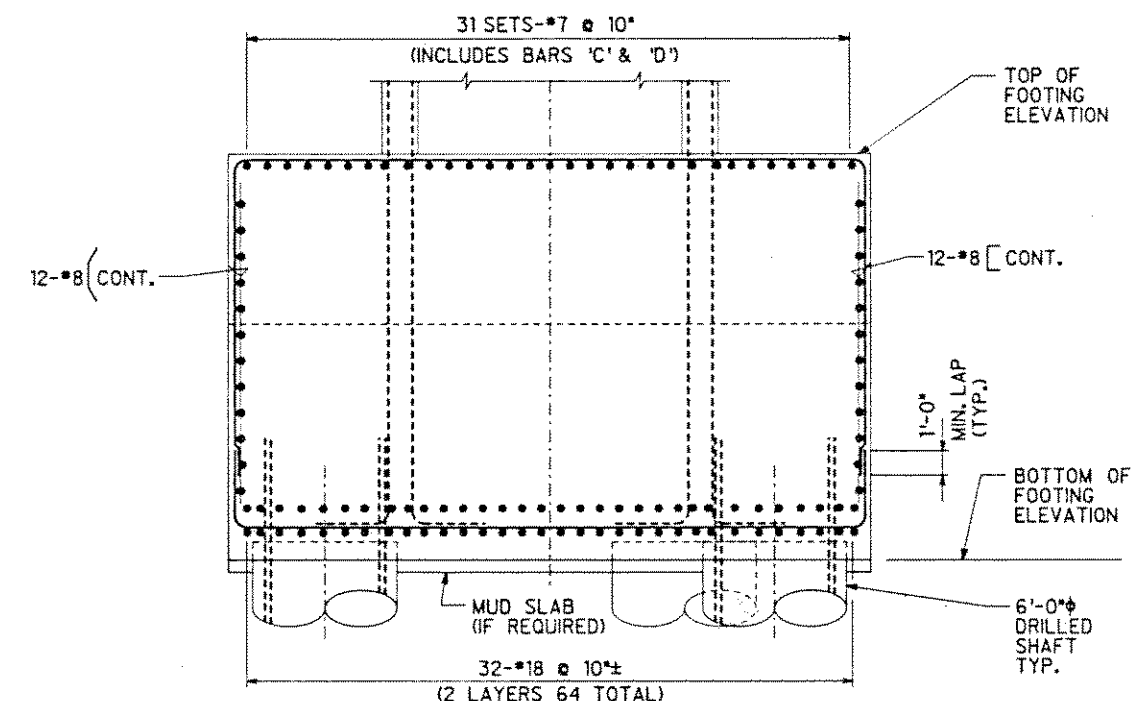
SCALE : AS NOTED DATE : SEP. 1990

SHEET No. FT4 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



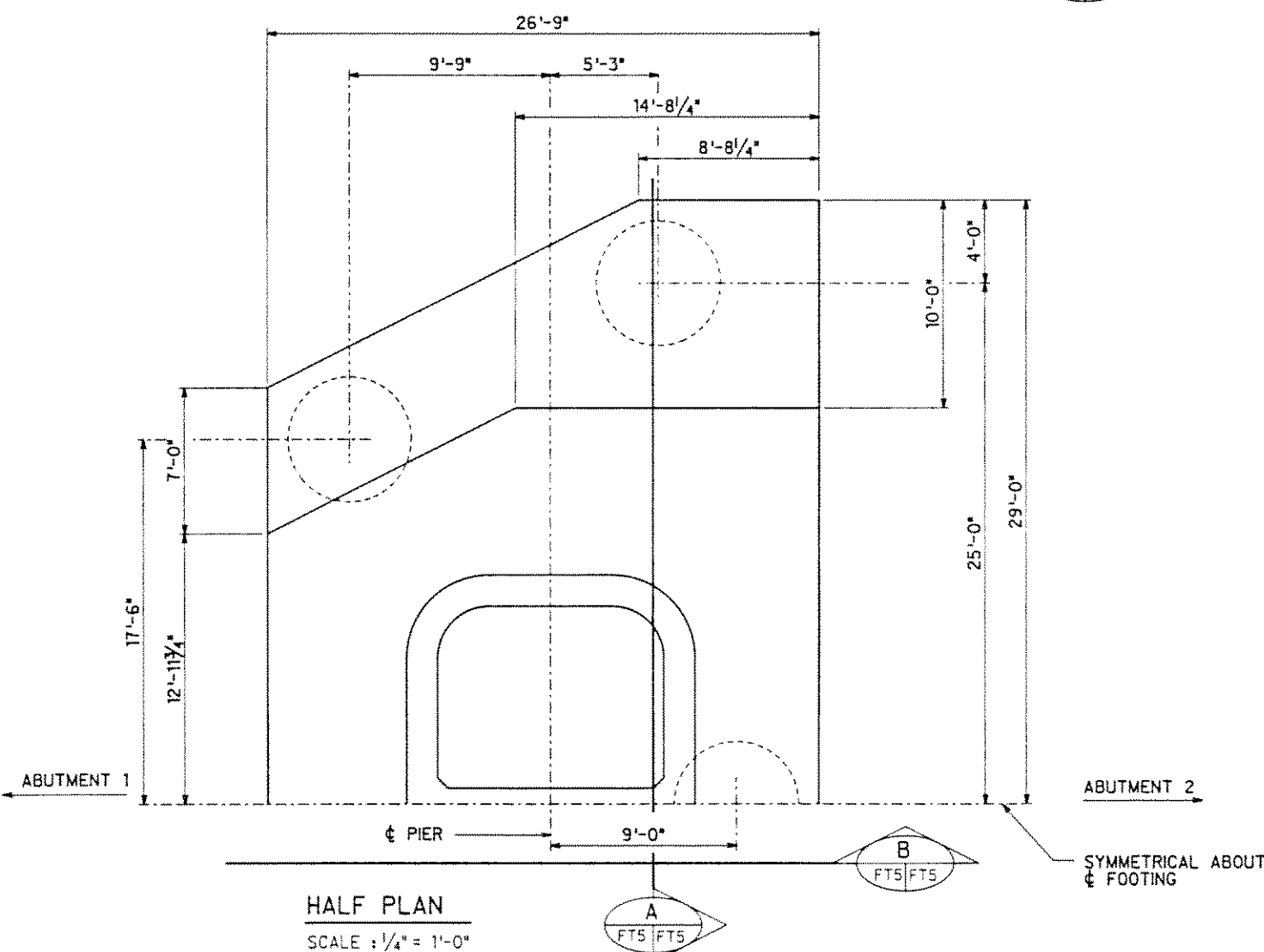
SECTION A
SCALE: 1/4" = 1'-0"



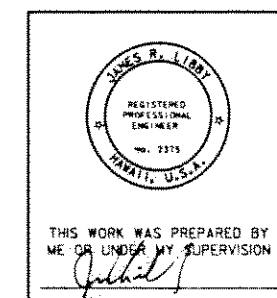
SECTION B
SCALE: 1/4" = 1'-0"

NOTES:

- PILE CAP CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS OF AGE.
- REINFORCING SHALL BE ASTM A615, GRADE 60.
- THE CONTRACTOR SHALL COORDINATE PILE, PILE CAP AND PIER SHAFT REINFORCING STEEL TO AVOID CONFLICTS.
- FOR 6'-0" PILE REINFORCING AND DETAILS SEE SHEET P2.
- FOR PIER SHAFT REINFORCING (INCLUDING PILE CAP DOWELS) SEE SHEETS PS1 AND PS2.
- FOR PILE CAPACITIES AND FOOTING ELEVATIONS SEE SHEET FT1.
- REINFORCING STEEL FABRICATION SHALL BE IN CONFORMANCE WITH THE "MANUAL OF STANDARD PRACTICE" TWENTY FOURTH EDITION, BY CONCRETE REINFORCING STEEL INSTITUTE.
- THE HARD ROCK DIKE AT INBOUND PIER 16 SHALL BE EXCAVATED TO A DEPTH OF AT LEAST ONE FOOT BELOW BOTTOM OF PILE CAP. THE EXCAVATION SHALL BE BACKFILLED WITH ON-SITE SOIL PLACED AT A MOISTURE CONTENT OF UP TO 65 PERCENT. THE SOIL SHOULD BE COMPACTED TO 95 PERCENT OF THE MODIFIED PROCTOR DRY DENSITY AT THE AS-PLACED MOISTURE CONTENT.



HALF PLAN
SCALE: 1/4" = 1'-0"

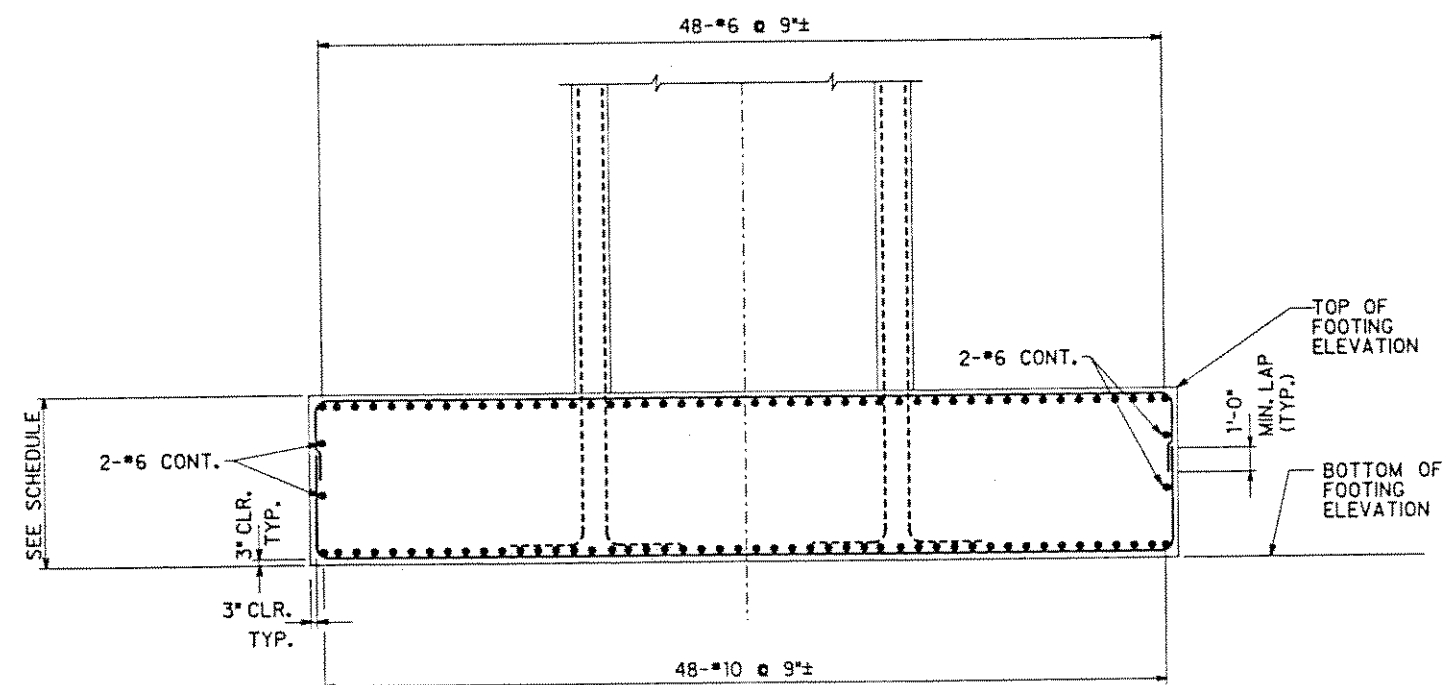


11/29/90	GENERAL
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

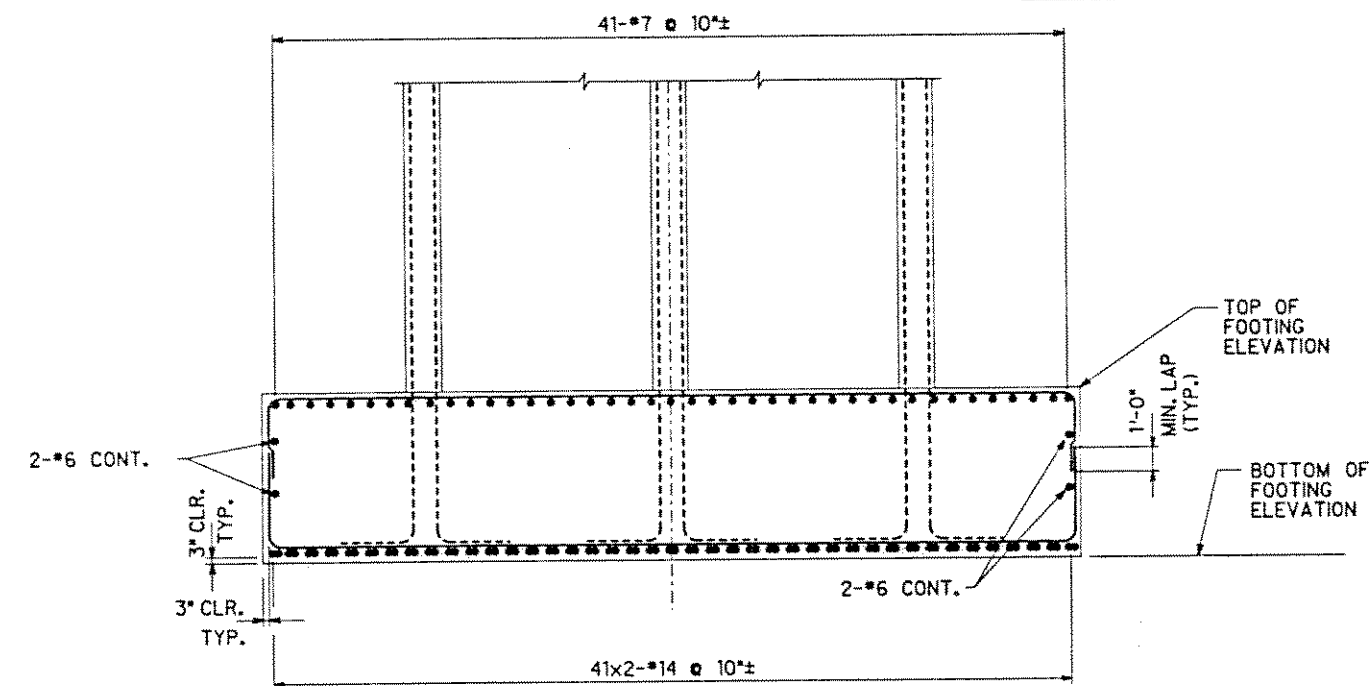
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PILE CAP REINFORCING TYPE IV
INTERSTATE ROUTE H-3 F.A.J. PROJECT No. I-H3-1(57) F.A.J. PROJECT No. I-H3-1(58) SCALE: AS NOTED DATE: OCT. 1990

FT5

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



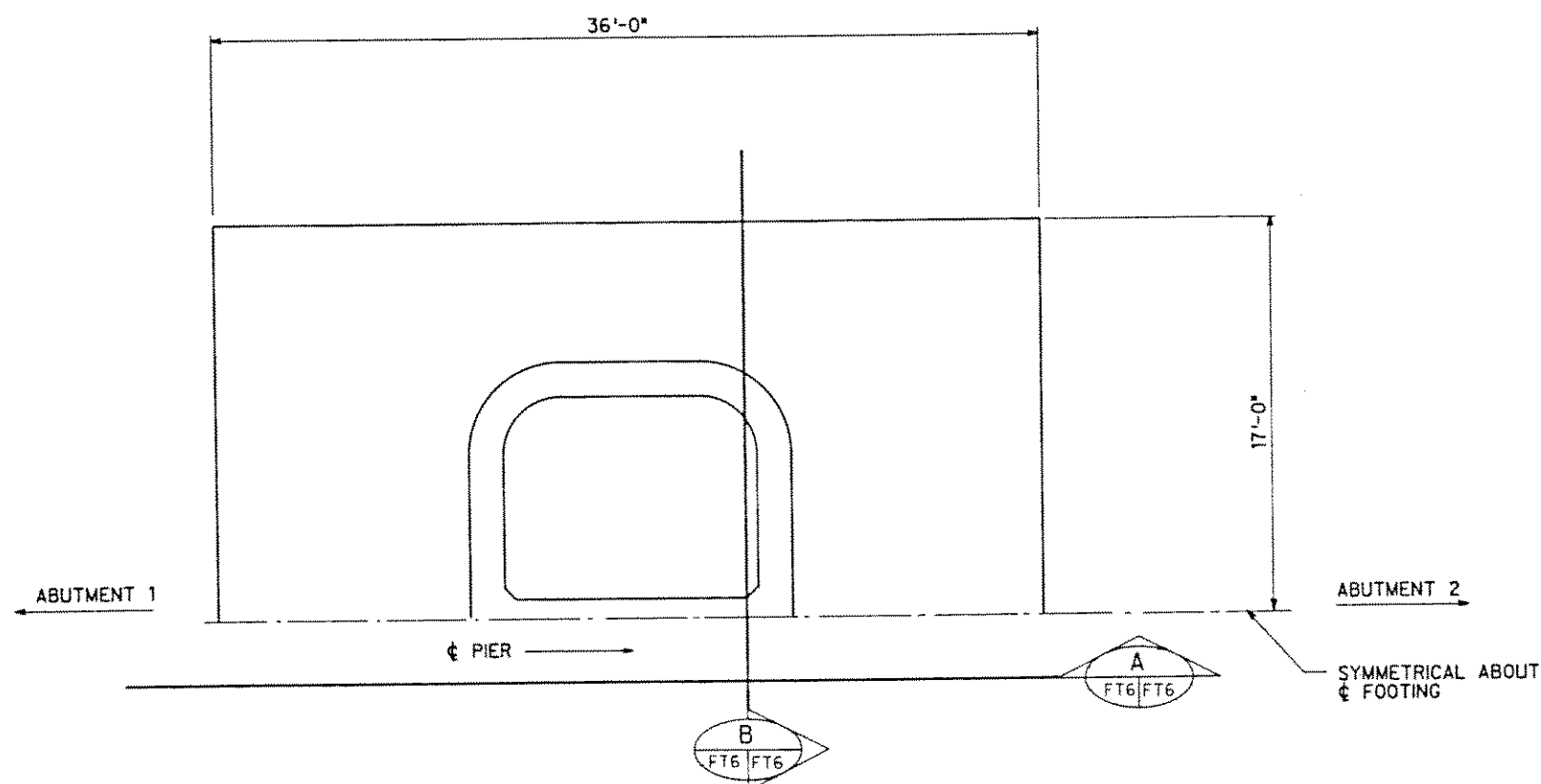
SECTION A
SCALE: 1/4" = 1'-0"



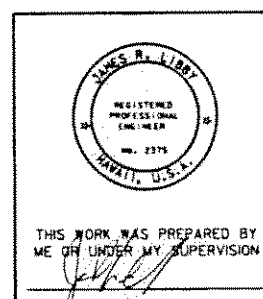
SECTION B
SCALE: 1/4" = 1'-0"

NOTES:

1. FOUNDATION CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS OF AGE.
2. REINFORCING SHALL BE ASTM A615, GRADE 60.
3. THE CONTRACTOR SHALL COORDINATE FOUNDATION AND PIER SHAFT REINFORCING STEEL TO AVOID CONFLICTS.
4. FOR PIER SHAFT REINFORCING (INCLUDING FOUNDATION DOWELS) SEE SHEETS PS1 AND PS2.
5. REINFORCING STEEL FABRICATION SHALL BE IN CONFORMANCE WITH THE "MANUAL OF STANDARD PRACTICE" TWENTY FOURTH EDITION, BY CONCRETE REINFORCING STEEL INSTITUTE.
6. SPLICES IN FOUNDATION REINFORCEMENT SHALL NOT BE PERMITTED.



HALF PLAN
SCALE: 1/4" = 1'-0"

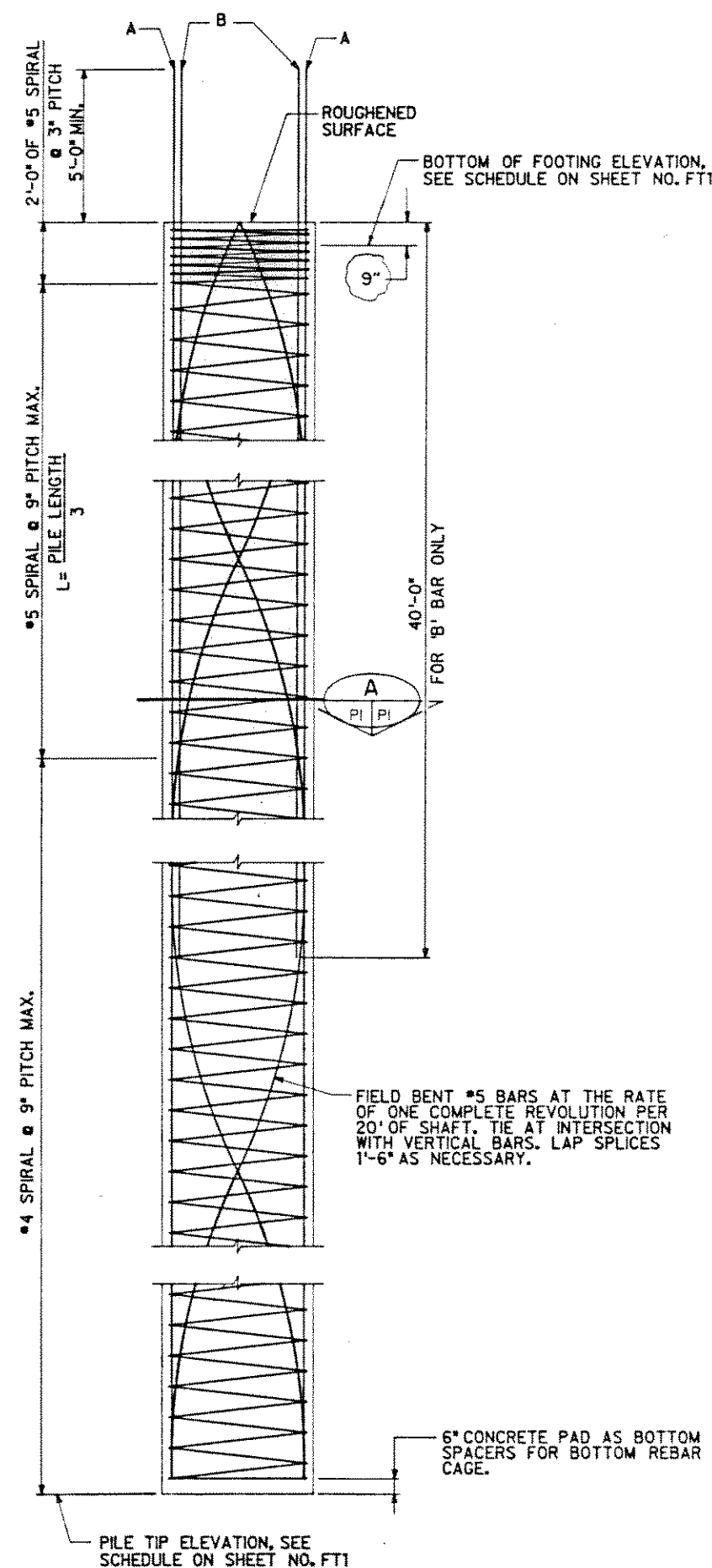


DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

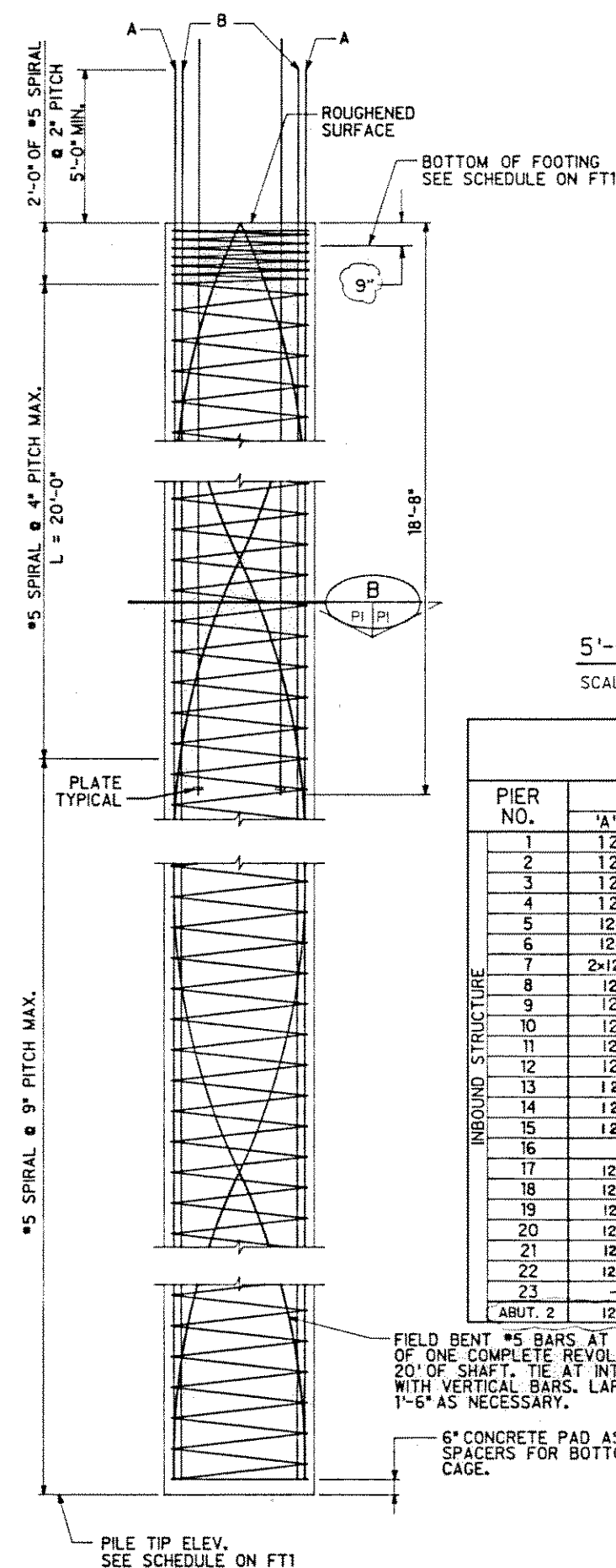
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION FOUNDATION REINFORCING TYPE V	INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58) SCALE: AS NOTED DATE: DEC. 1990
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SHEET NO. FT6 OF SHEETS

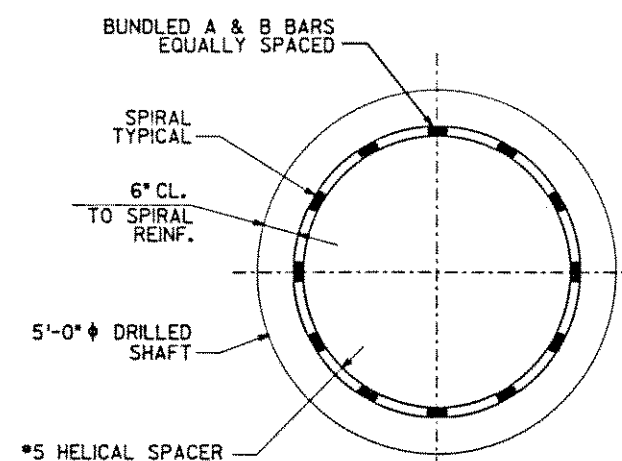
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



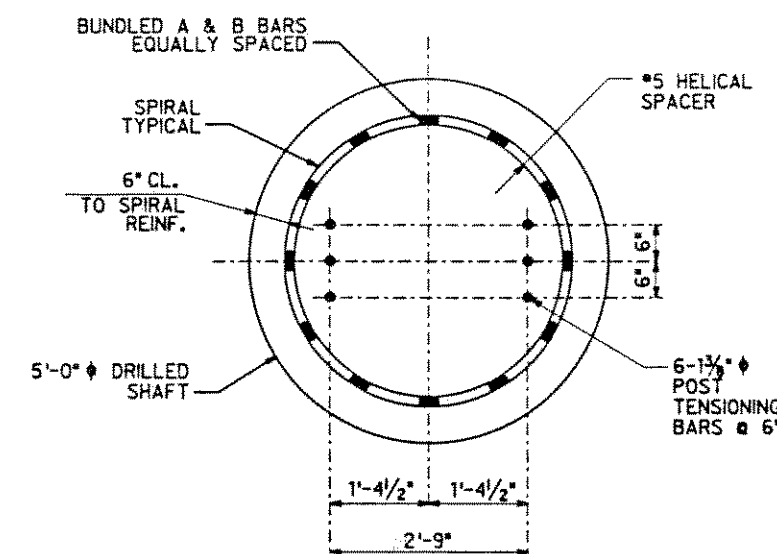
5'-0" φ TYPICAL PILE ELEVATION
SCALE : 3/8" = 1'-0"



5'-0" φ REACTION PILE ELEVATION
SCALE : 3/8" = 1'-0"



5'-0" φ TYPICAL PILE SHAFT REINFORCING
SCALE : 3/4" = 1'-0"

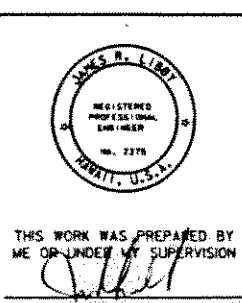


5'-0" φ TYPICAL REACTION PILE REINFORCING
SCALE : 3/4" = 1'-0"

PILE SCHEDULE					
PIER NO.	REINFORCING		PIER NO.	REINFORCING	
	'A' BARS	'B' BARS		'A' BARS	'B' BARS
1	12-#11	12-#11	1	12-#11	12-#11
2	12-#11	12-#11	2	12-#11	12-#11
3	12-#11	12-#11	3	12-#11	12-#11
4	12-#11	12-#11	4	12-#11	12-#11
5	12-#11	12-#11	5	12-#11	12-#11
6	12-#11	12-#14	6	12-#11	12-#11
7	2x12-#11	12-#11	7	12-#11	12-#11
8	12-#11	12-#11	8	12-#11	12-#14
9	12-#11		9	12-#11	
10	12-#11		10	12-#11	12-#11
11	12-#11	12-#11	11	12-#11	12-#11
12	12-#11		12	12-#11	
13	12-#11	12-#11	13	12-#11	12-#11
14	12-#11	12-#11	14	12-#11	12-#11
15	12-#11	12-#11	15	12-#11	12-#11
16	SEE SHEET P2		16	12-#11	12-#11
17	12-#11	12-#11	17	12-#11	
18	12-#11	2x12-#11	18	12-#11	12-#14
19	12-#11	12-#14	19	12-#11	12-#11
20	12-#11	12-#14	20	12-#11	12-#11
21	12-#11	12-#11	21	12-#11	12-#14
22	12-#11	12-#11	22	12-#11	12-#14
23			23	12-#11	12-#11
ABUT. 2	12-#11	12-#11	ABUT. 2	12-#11	12-#11

NOTES:

1. BARS SHALL NOT BE SPLICED WITHIN 30 FEET OF THE BOTTOM OF THE PILE CAP.
2. NOT MORE THAN ONE HALF OF THE BARS SHALL BE SPLICED WITHIN ONE SPLICE LENGTH. SPLICED BARS SHALL ALTERNATE WITH CONTINUOUS BARS.
3. LAP LENGTH FOR LONGITUDINAL BARS SHALL BE 6'-1" MINIMUM.
4. LAP LENGTH FOR TRANSVERSE REINFORCEMENT SHALL BE 48 BAR DIAMETERS OR 12 INCHES MINIMUM.
5. CONCRETE SPACER BLOCKS SHALL BE USED TO MAINTAIN PROPER POSITION AND CLEARANCES TO THE REINFORCING BARS.
6. PILE CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS OF AGE.
7. REINFORCING SHALL BE ASTM A615, GRADE 60.
8. REINFORCING STEEL FABRICATION SHALL BE IN CONFORMANCE WITH THE "MANUAL OF STANDARD PRACTICE" TWENTY FOURTH EDITION, BY CONCRETE REINFORCING STEEL INSTITUTE.
9. BAR SIZE #14 SHALL NOT BE LAP SPLICED. IF MECHANICAL SPLICES ARE USED, THEY SHALL DEVELOP NOT LESS THAN 90% OF THE SPECIFIED ULTIMATE TENSILE STRENGTH OF THE REINFORCING.
10. 2x12 #XX INDICATES 12 2-BAR BUNDLES.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

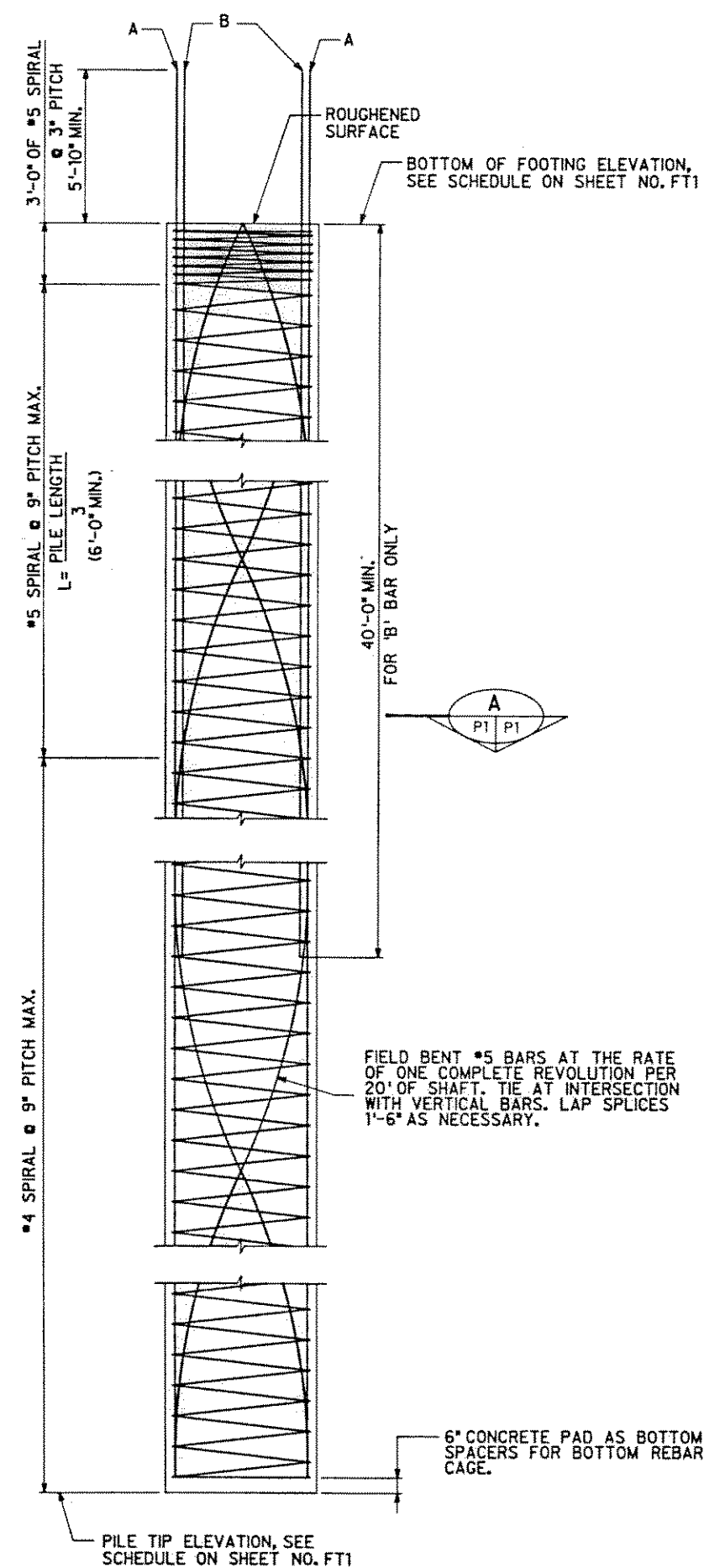
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12/13/90
12/10/90
12/05/90
10/25/90
9/26/90
9/14/90
8/30/90
06/29/90
06/22/90

ADDED ABUTMENT 2.
ADD PIERS 21 & 22 I.B.
ADD PIERS 17, 18, 19 & 20 I.B. & O.B.
ADD PIERS 21, 22 & 23 O.B.
ADD PIER 16 I.B.
ADD PIERS 9, 10 & 12 O.B.
ADD PIERS 9, 10 & 12 I.B.
ADD PIER 11 O.B. AND I.B.
ADD PIERS 5 & 6
ADD PIERS 7, 8 I.B.

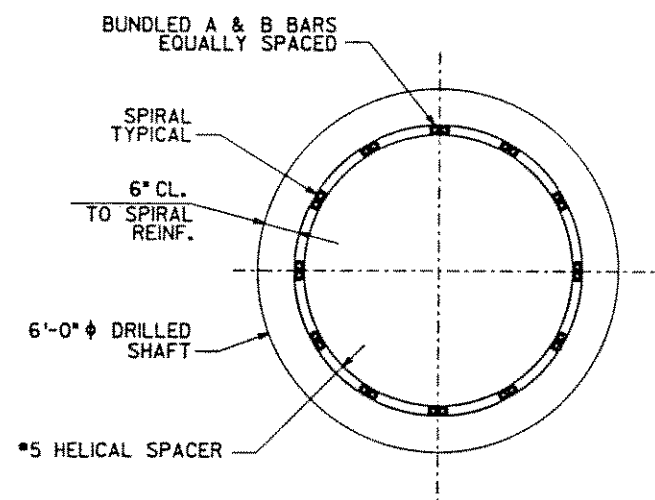
DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
5'-0" PILE DETAILS
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUNE 1990
SHEET No. p1 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



6'-0" φ TYPICAL PILE ELEVATION
SCALE : 3/8" = 1'-0"



6'-0" φ TYPICAL PILE SHAFT REINFORCING
SCALE : 3/4" = 1'-0"

PILE SCHEDULE					
PIER NO.	REINFORCING		PIER NO.	REINFORCING	
	'A' BARS	'B' BARS		'A' BARS	'B' BARS
16	12-#11	2x12-#11			

NOTES:
FOR PILE NOTES SEE SHEET P1

11/29/90 GENERAL

DATE REVISION

J. MULLER INTERNATIONAL

LIBBY ENGINEERS

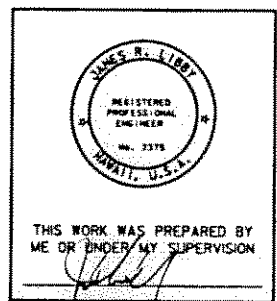
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

6'-0" PILE DETAILS

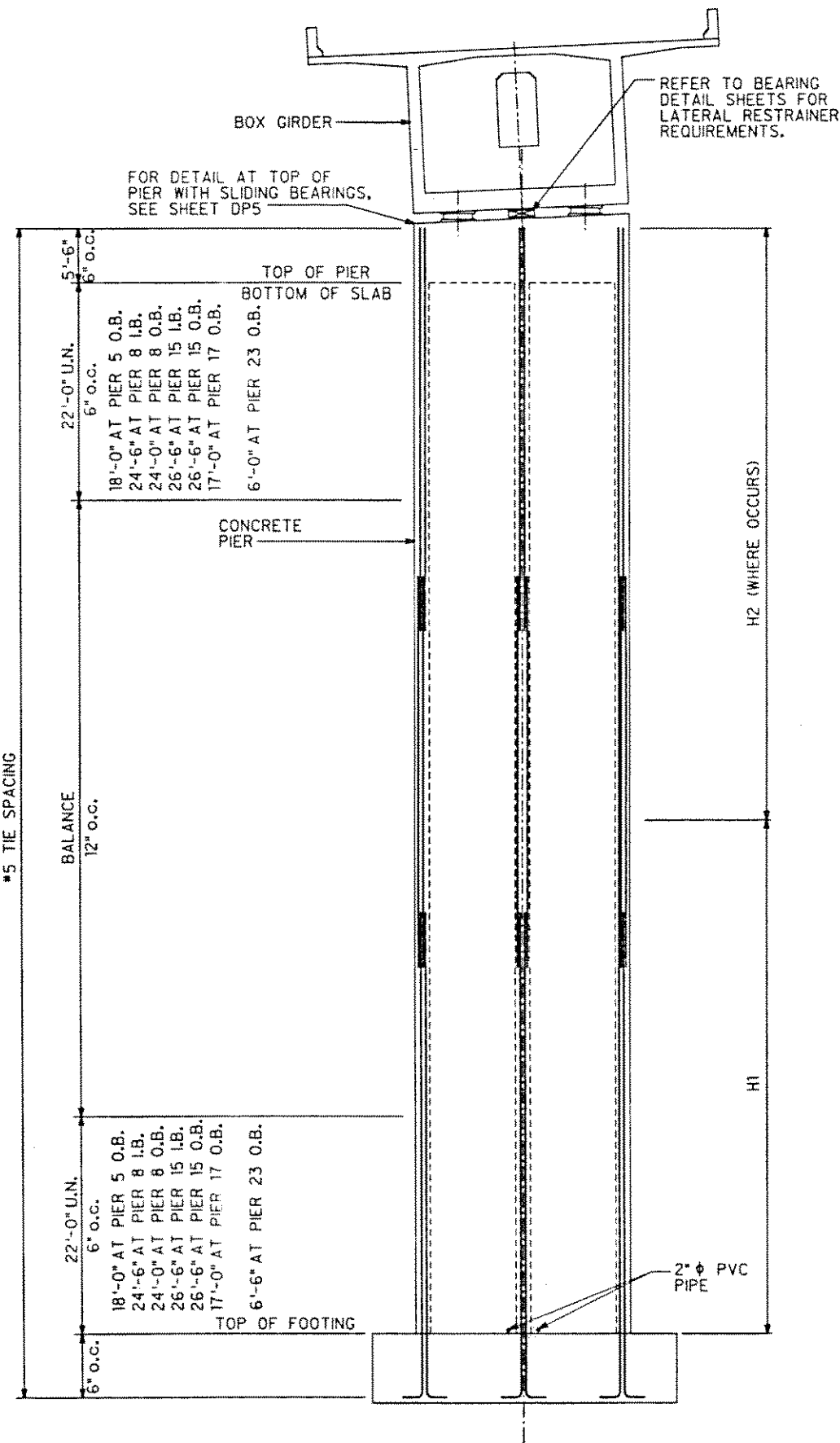
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE : AS NOTED DATE : OCT. 1990

SHEET NO. P2 OF SHEETS

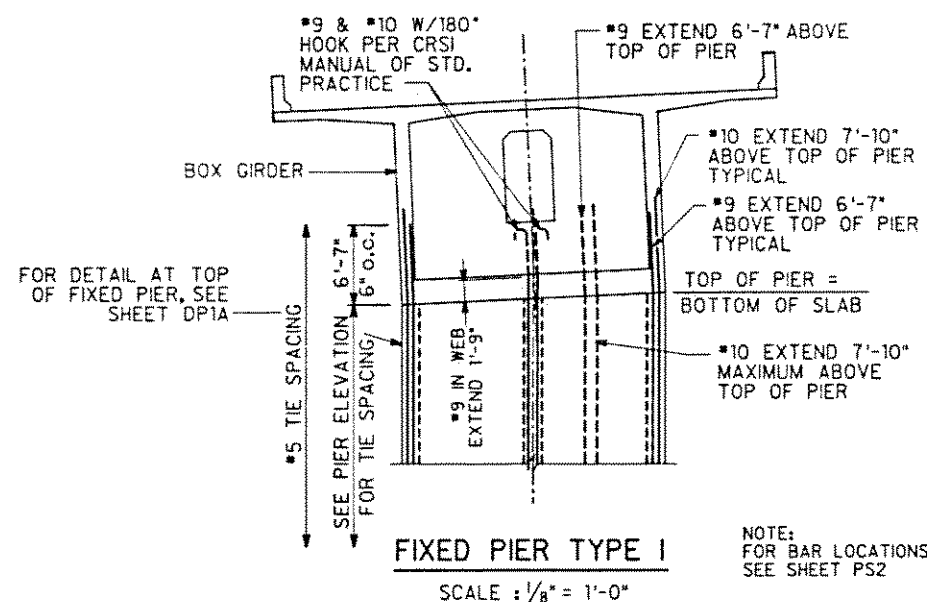


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



PIER ELEVATION
SCALE : 1/8" = 1'-0"

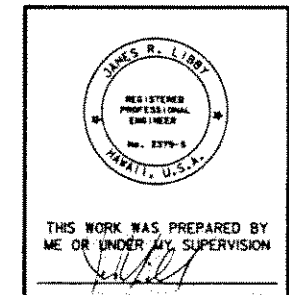
PIER NO. INBOUND	H1	REFERENCE SECTION	H2	REFERENCE SECTION	CONNECTION CONDITION	PIER SEGMENT TYPE	PIER NO. OUTBOUND	H1	REFERENCE SECTION	H2	REFERENCE SECTION	CONNECTION CONDITION	PIER SEGMENT TYPE
1	FULL HT.	A/PS2	N/A		FIXED	I	1	FULL HT.	A/PS2	N/A		FIXED	I
2	FULL HT.	A/PS2	N/A		FIXED	I	2	FULL HT.	A/PS2	N/A		FIXED	I
3	FULL HT.	A/PS2	N/A		FIXED	I	3	FULL HT.	A/PS2	N/A		FIXED	I
4	FULL HT.	A/PS2	N/A		SLIDING	I	4	FULL HT.	A/PS2	N/A		SLIDING	I
5	FULL HT.	A/PS2	N/A		SLIDING	I	5	FULL HT.	A/PS2	N/A		SLIDING	I
6	FULL HT.	A/PS2	N/A		FIXED	II	6	FULL HT.	A/PS2	N/A		FIXED	II
7	110'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II	7	90'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
8	FULL HT.	A/PS2	N/A		SLIDING	II	8	FULL HT.	A/PS2	N/A		SLIDING	II
9	FULL HT.	A/PS2	N/A		FIXED	II	9	FULL HT.	A/PS2	N/A		FIXED	II
10	FULL HT.	A/PS2	N/A		FIXED	II	10	28'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
11	FULL HT.	A/PS2	N/A		FIXED	II	11	FULL HT.	A/PS2	N/A		FIXED	II
12	FULL HT.	A/PS2	N/A		SLIDING	II	12	FULL HT.	A/PS2	N/A		SLIDING	II
13	FULL HT.	A/PS2	N/A		SLIDING	II	13	FULL HT.	A/PS2	N/A		SLIDING	II
14	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II	14	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
15	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II	15	FULL HT.	A/PS2	N/A		FIXED	II
16	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II	16	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
17	FULL HT.	A/PS2	N/A		SLIDING	II	17	FULL HT.	A/PS2	N/A		SLIDING	II
18	FULL HT.	A/PS2	N/A		FIXED	II	18	FULL HT.	A/PS2	N/A		FIXED	II
19	FULL HT.	A/PS2	N/A		FIXED	II	19	FULL HT.	A/PS2	N/A		FIXED	II
20	FULL HT.	A/PS2	N/A		FIXED	II	20	FULL HT.	A/PS2	N/A		FIXED	II
21	FULL HT.	A/PS2	N/A		FIXED	II	21	40'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
22	65'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II	22	50'	A/PS2	BALANCE OF PIER HT.	B/PS2	FIXED	II
23	FULL HT.	A/PS2	N/A		SLIDING	II	23	FULL HT.	A/PS2	N/A		SLIDING	II



FIXED PIER TYPE I
SCALE : 1/8" = 1'-0"

DATE	REVISION
06/21/91	UPDATED DRAWING
05/03/91	UPDATED DRAWING
04/05/91	UPDATED SCHEDULE
12/13/90	ADD PIERS 21-23 I.B.
12/10/90	ADD PIERS 17-20 I.B. & O.B.
12/05/90	ADD PIERS 21-23 O.B.
10/25/90	ADD PIERS 13-16 I.B.
10/04/90	UPDATED DRAWING
9/26/90	ADD PIERS 9-16 O.B.
9/14/90	ADD PIERS 9, 10, & 12 I.B.
7/16/90	SHOW REINFORCING ON FIXED PIER
6/29/90	ADD PIERS 5 & 6

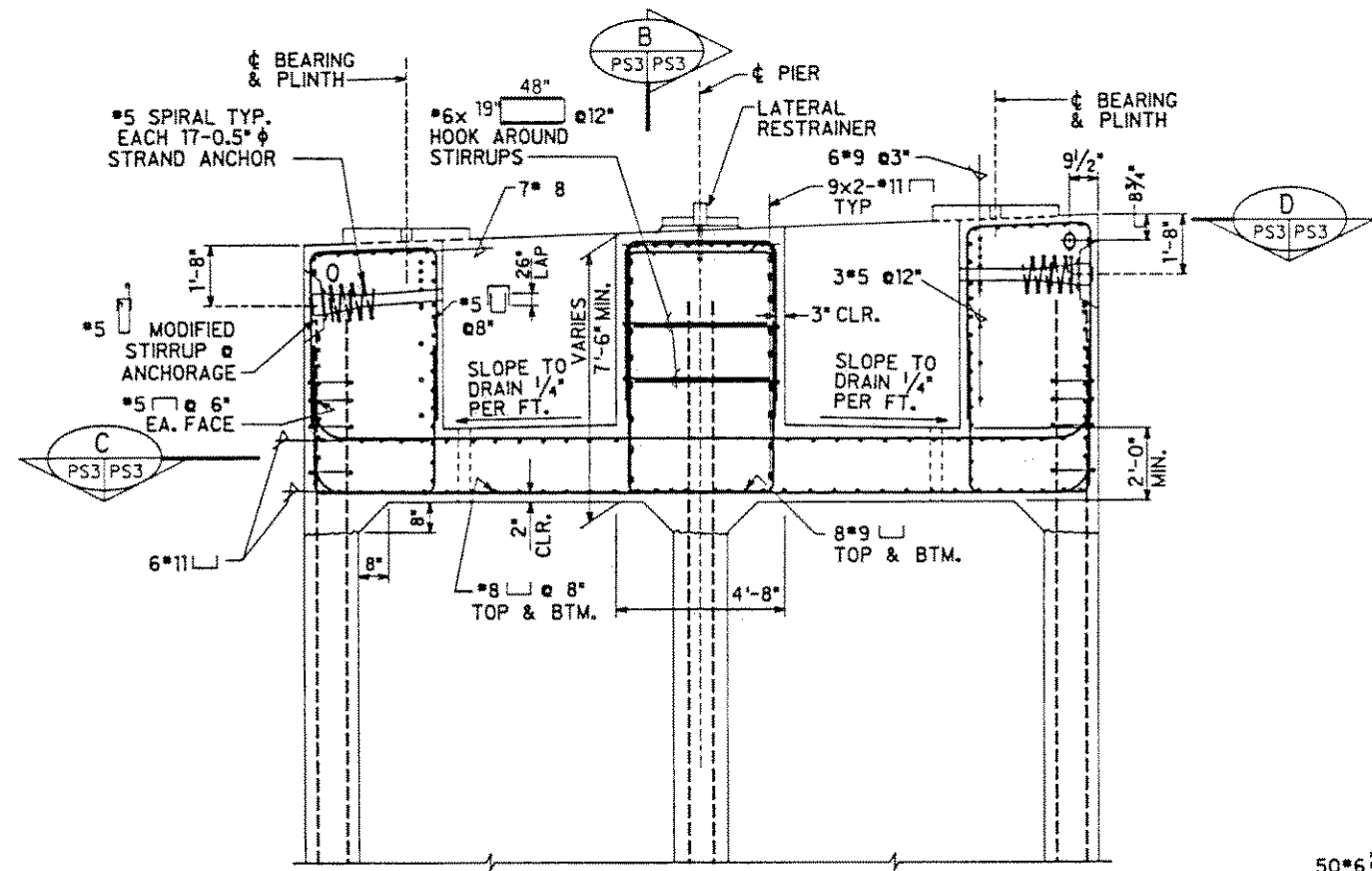
J. MULLER INTERNATIONAL
Libby Engineers



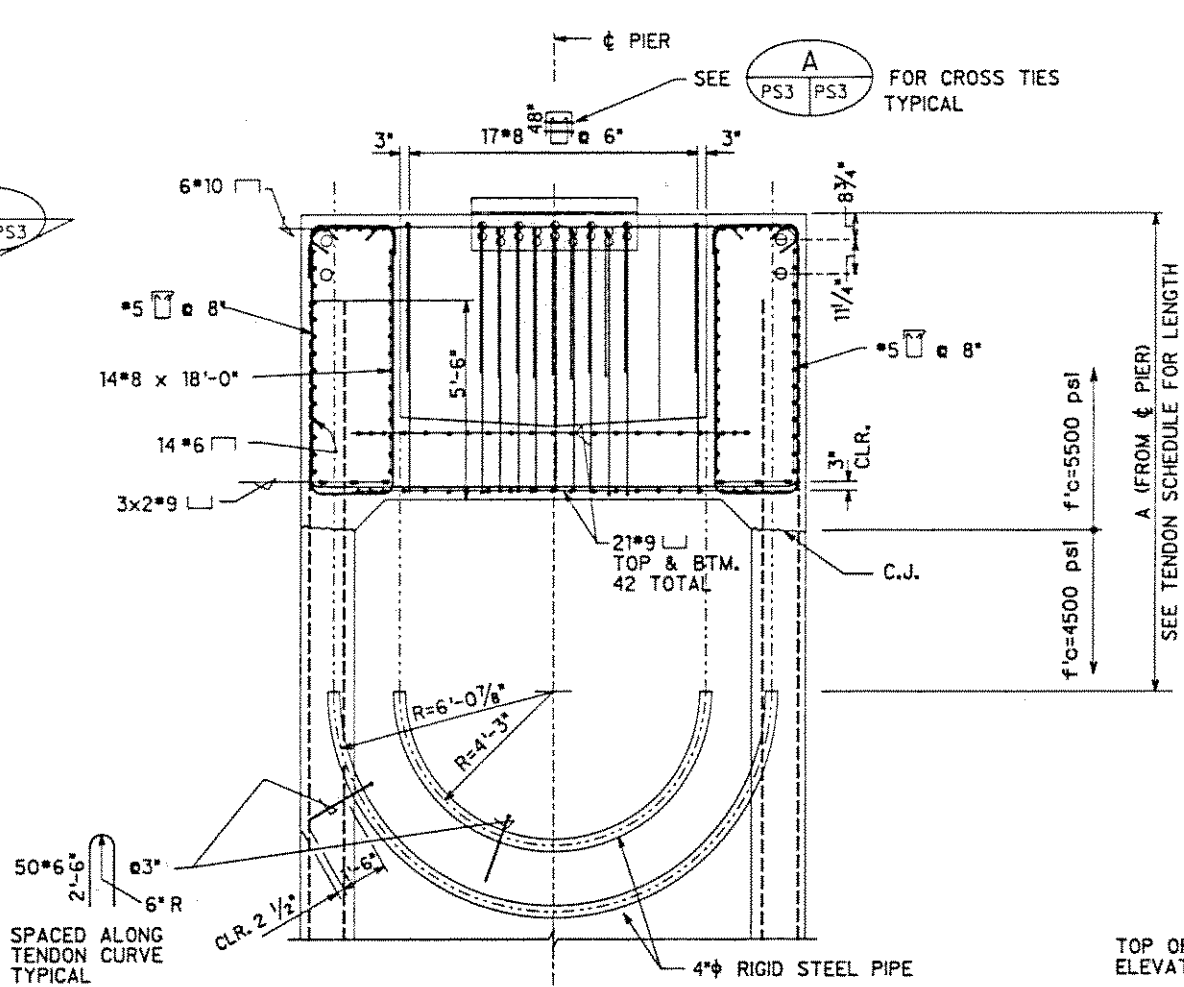
STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
PIER SCHEDULE	
INTERSTATE ROUTE H-3	
F.A.I. PROJECT No. I-H3-1(57)	
F.A.I. PROJECT No. I-H3-1(58)	
SCALE : AS-NOTED	DATE : JUNE 1990
SHEET NO. PS1 OF	SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

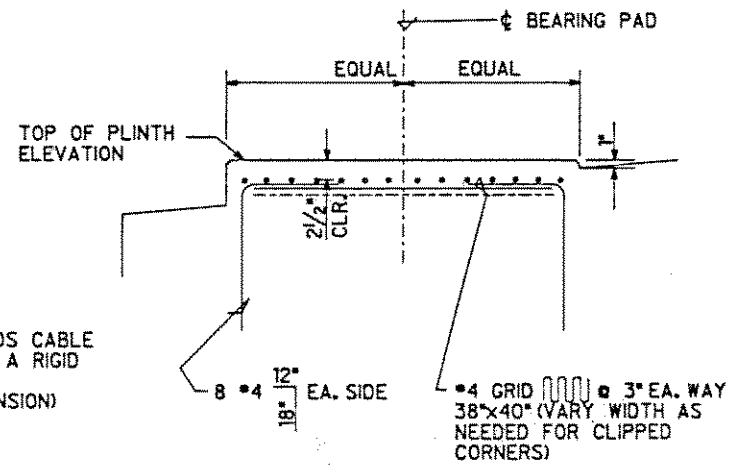
SLIDING PIER TENDON SCHEDULE					
PIER NO.	A	PIER NO.	A		
4	14'-0"	4	14'-0"	INBOUND	OUTBOUND
5	8'-0"	5	8'-0"		
8	14'-0"	8	14'-0"		
12	14'-0"	12	14'-0"		
13	14'-0"	13	14'-0"		
17	14'-0"	17	14'-0"		
23	14'-0"	23	14'-0"		



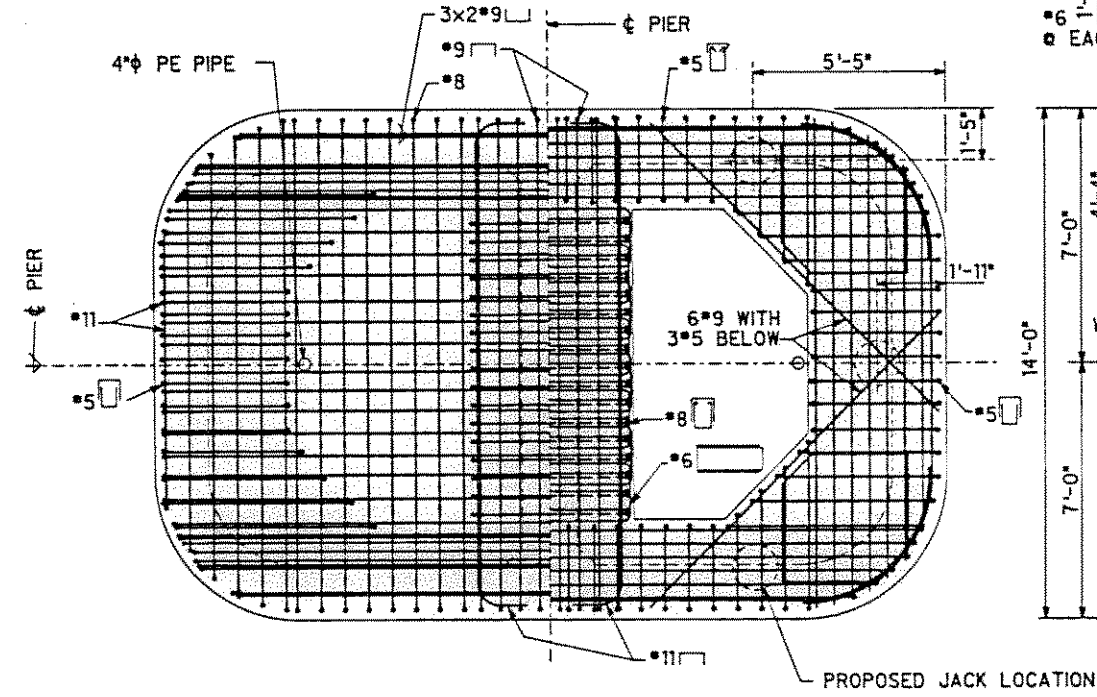
TYPICAL PIER CAP ELEVATION-
DETAIL FOR SLIDE BEARING
SCALE : 3/8" = 1'-0"
PS3 PS3



SECTION
SCALE : 3/8" = 1'-0"
PS3 PS3

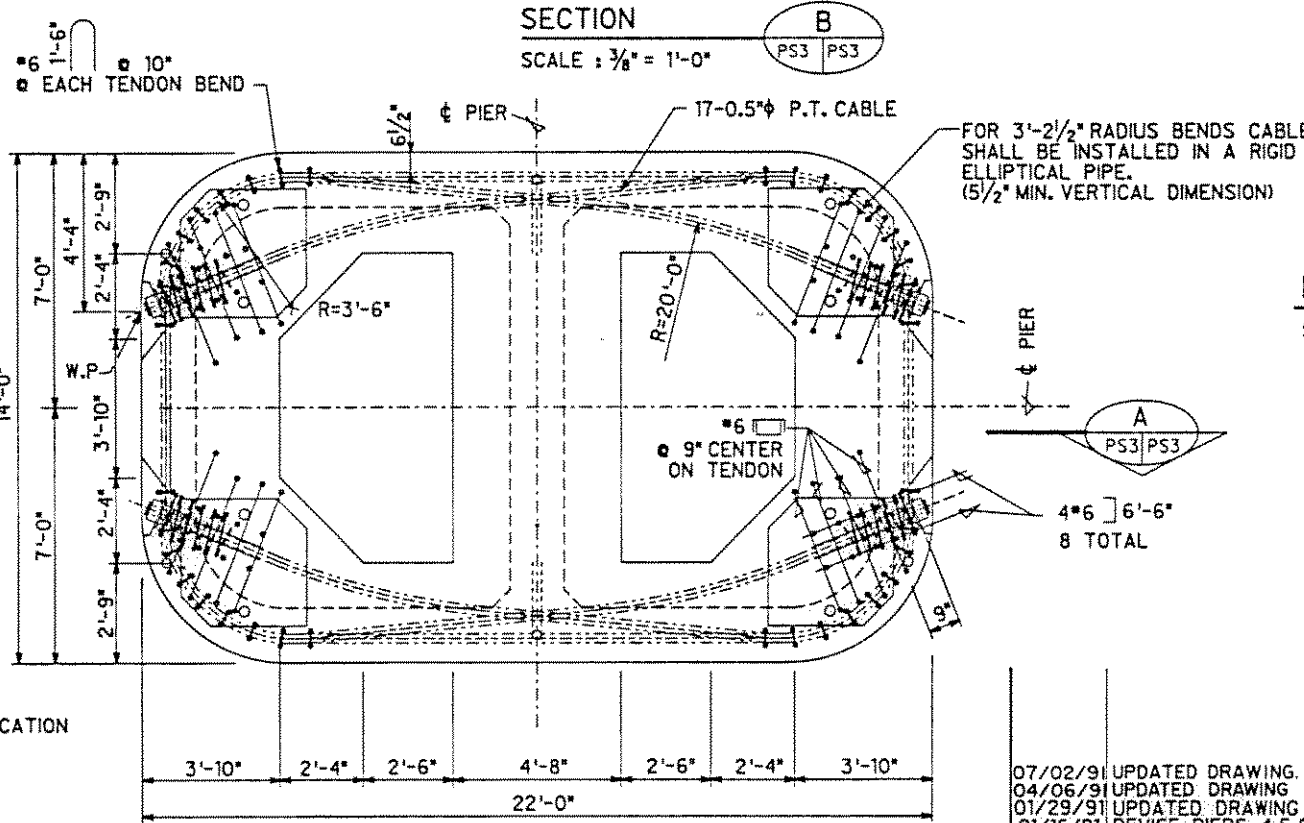


PLINTH DETAIL AT PIERS
SCALE : 1" = 1'-0"
PS3 PS3



HALF SECTION
SCALE : 3/8" = 1'-0"
PS3 PS3

HALF SECTION
SCALE : 3/8" = 1'-0"
PS3 PS3

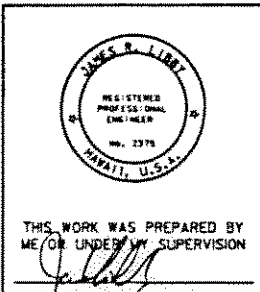


TENDON LAYOUT
SCALE : 3/8" = 1'-0"

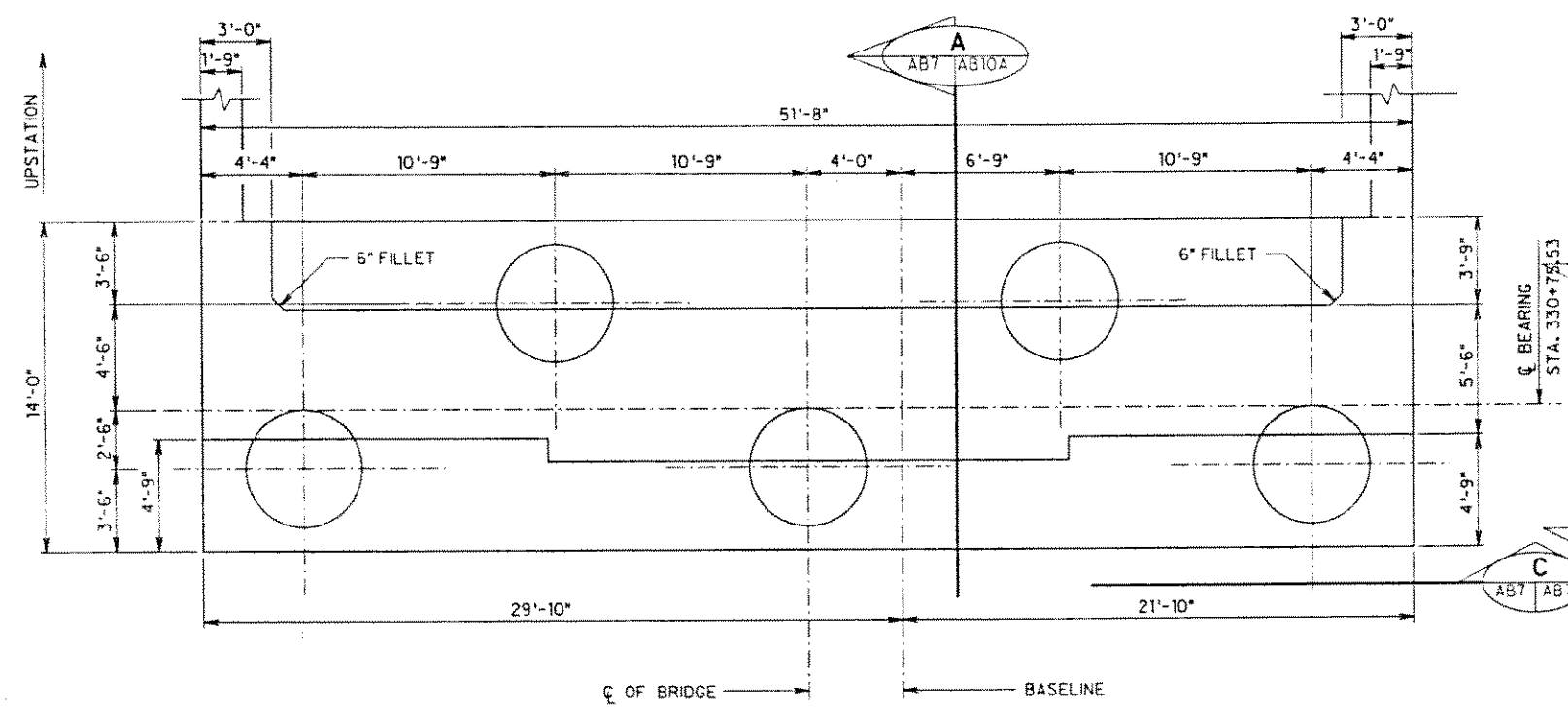
07/02/91 UPDATED DRAWING.	
04/06/91 UPDATED DRAWING	
01/29/91 UPDATED DRAWING	
01/16/91 REVISE PIERS 4, 5, 8 & 12 I.B. & O.B.	
10/25/90 UPDATED DRAWING	
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PIER CAP REINFORCING

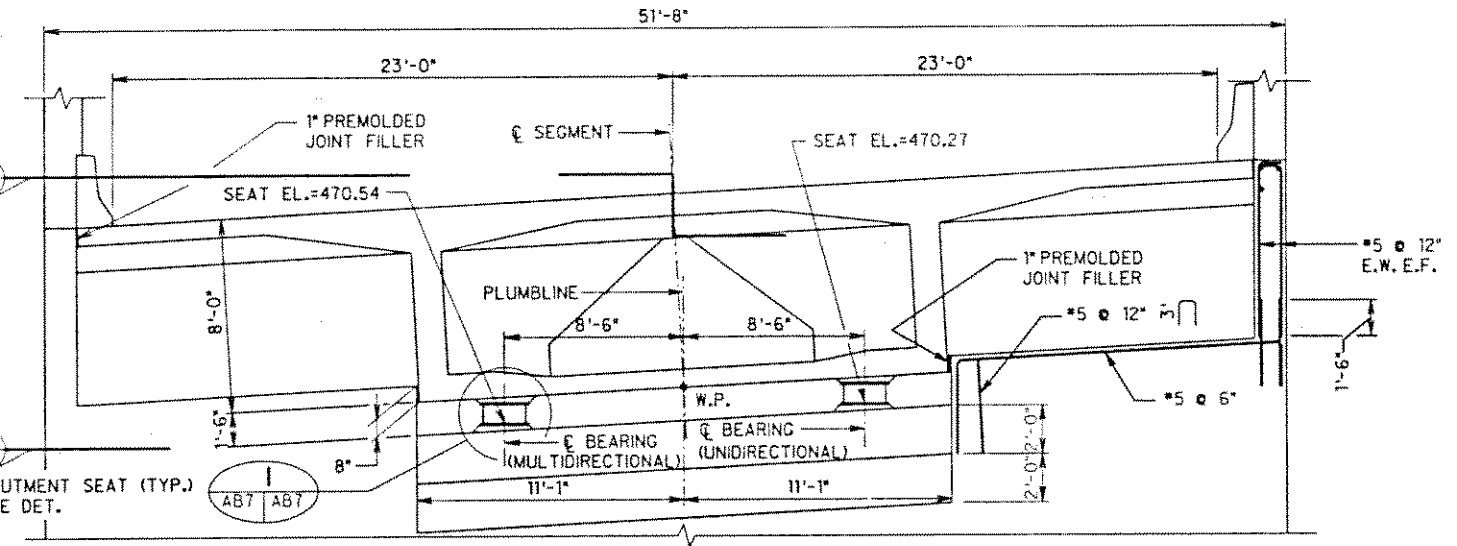
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUNE 1990
SHEET NO. PS3 OF SHEETS



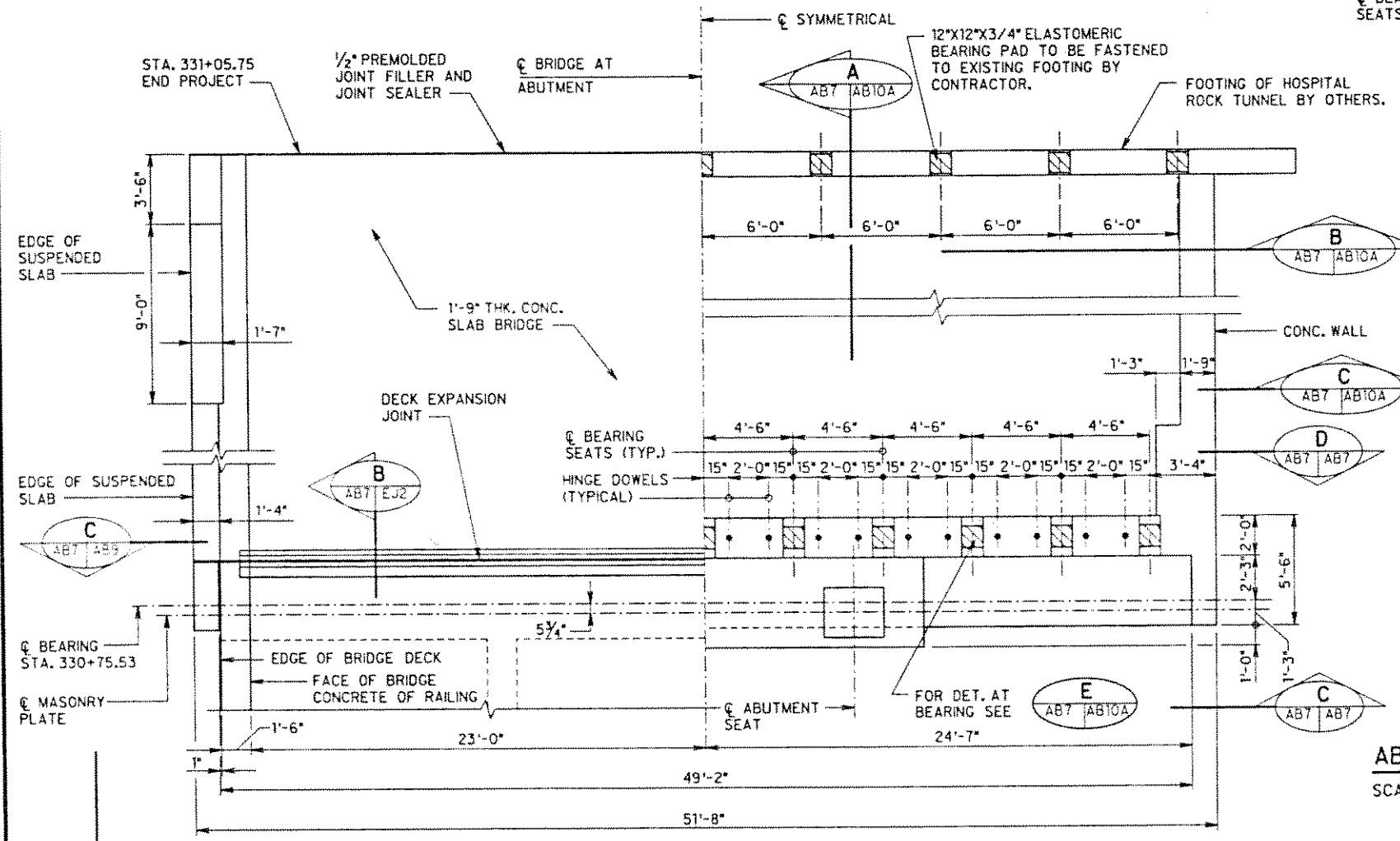
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



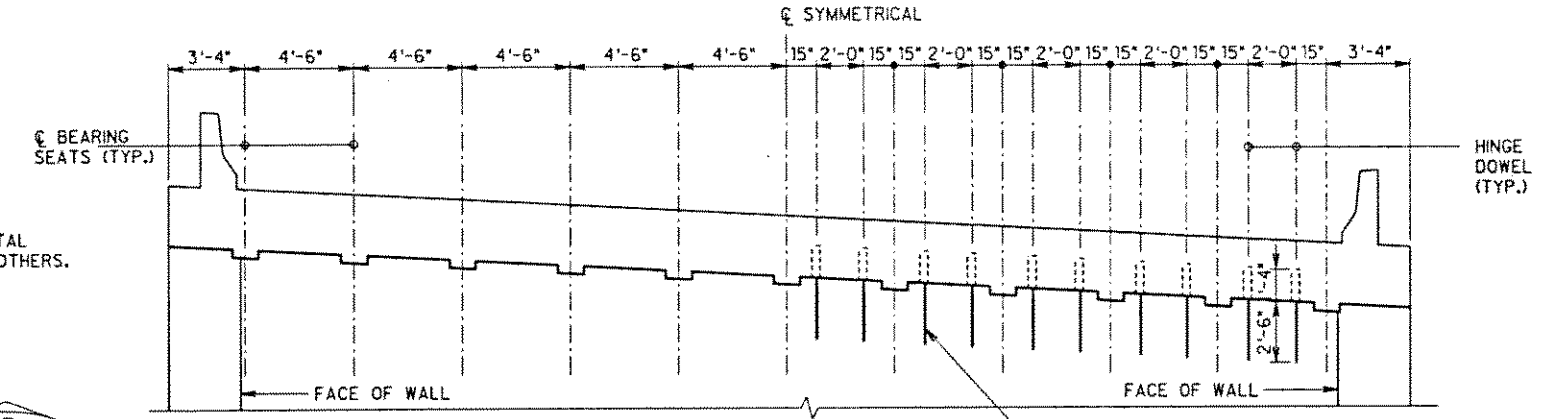
PLAN SECTION A
SCALE 1/4" = 1'-0"



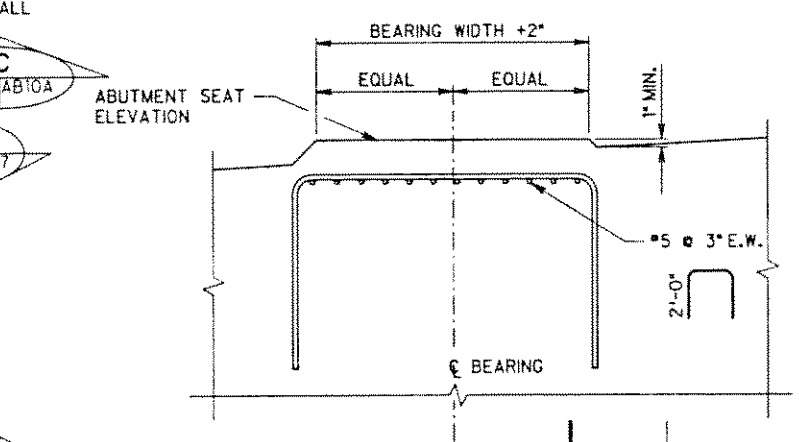
PARTIAL ELEVATION C
SCALE 1/4" = 1'-0"



PLAN SECTION B
SCALE 1/4" = 1'-0"



PARTIAL ELEVATION D
SCALE 1/4" = 1'-0"



ABUTMENT SEAT DETAIL
SCALE 1/4" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANS AND ELEVATIONS
INBOUND ABUTMENT 2

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN 1991

SHEET No. AB7 OF SHEETS

DATE: _____ REVISION: _____

J. MULLER INTERNATIONAL Libby Engineers

REVIEWED BY: _____ DATE: _____

DRAWN BY: _____

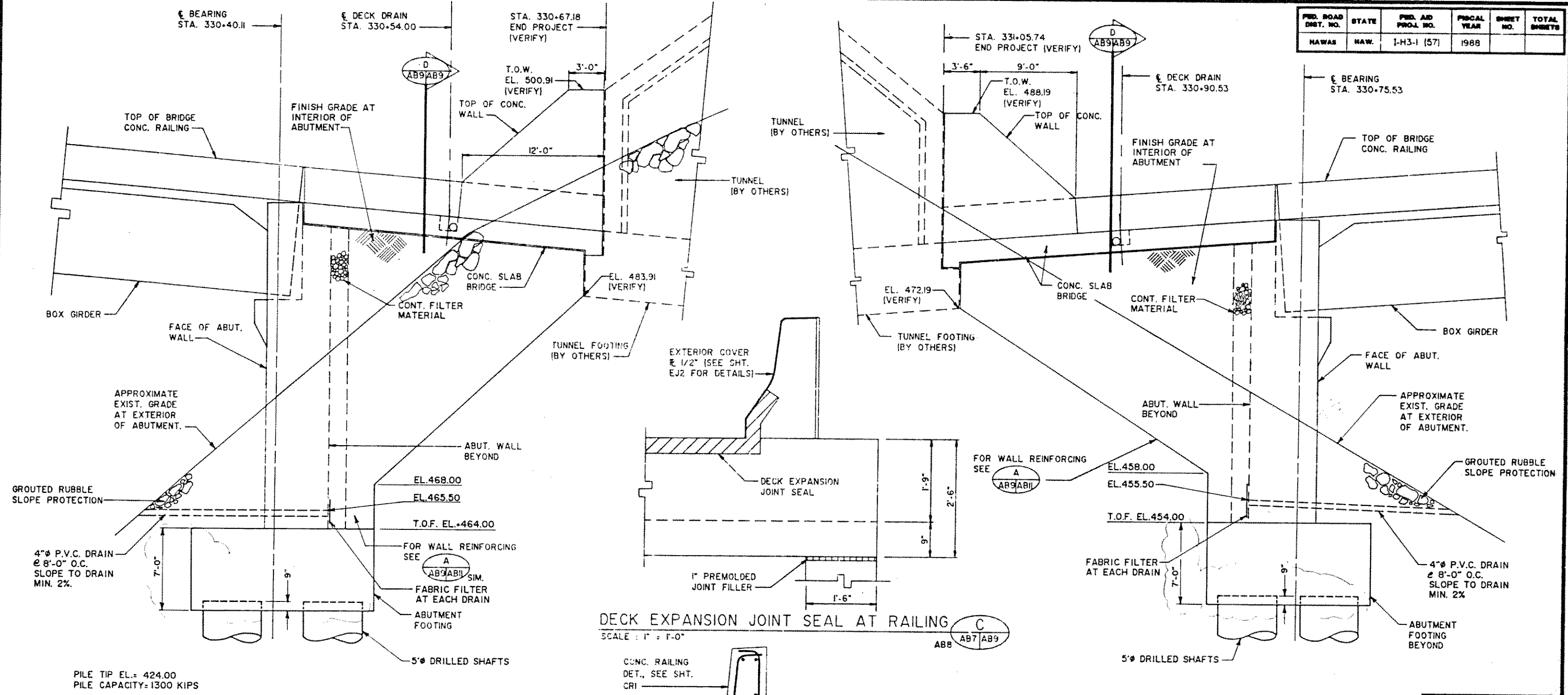
CHECKED BY: _____

NOTED BY: _____

QUANTITY BY: _____

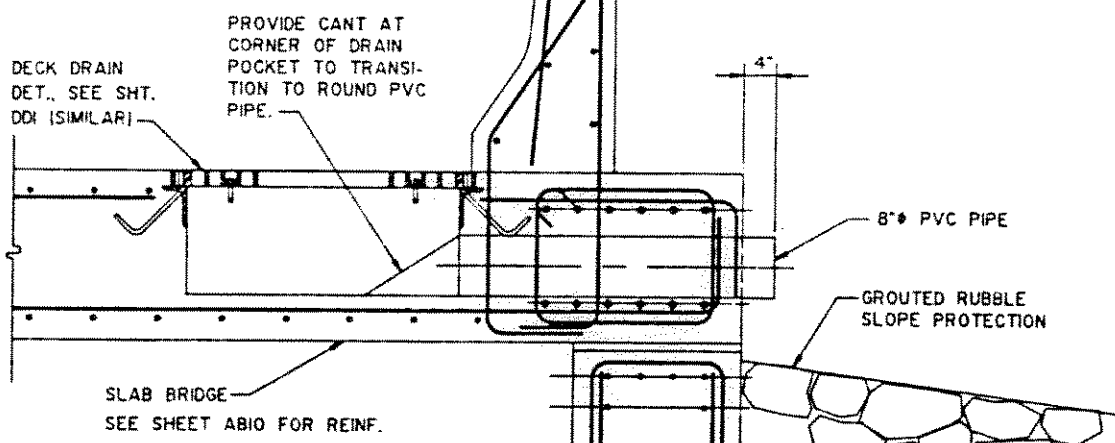
NOTES: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



WALL ELEVATION - OUTBOUND
SCALE: 1/4" = 1'-0"

CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO AVOID DISTURBING EXISTING HOSPITAL ROCK TUNNEL.



DECK DRAIN AT SLAB BRIDGE
SCALE: 1" = 1'-0"

WALL ELEVATION - INBOUND
SCALE: 1/4" = 1'-0"

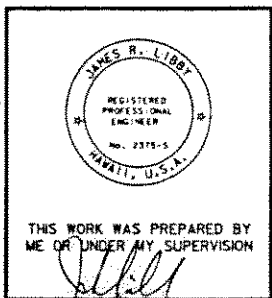
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT ELEVATIONS
INBOUND - STA. 330+75.53
OUTBOUND - STA. 330+40.11
INTERSTATE ROUTE H-3
F.A.I. PROJECT NO. I-H3-1 (57)
F.A.I. PROJECT NO. I-H3-1 (58)
SCALE: AS NOTED
DATE: SEPT. 1988

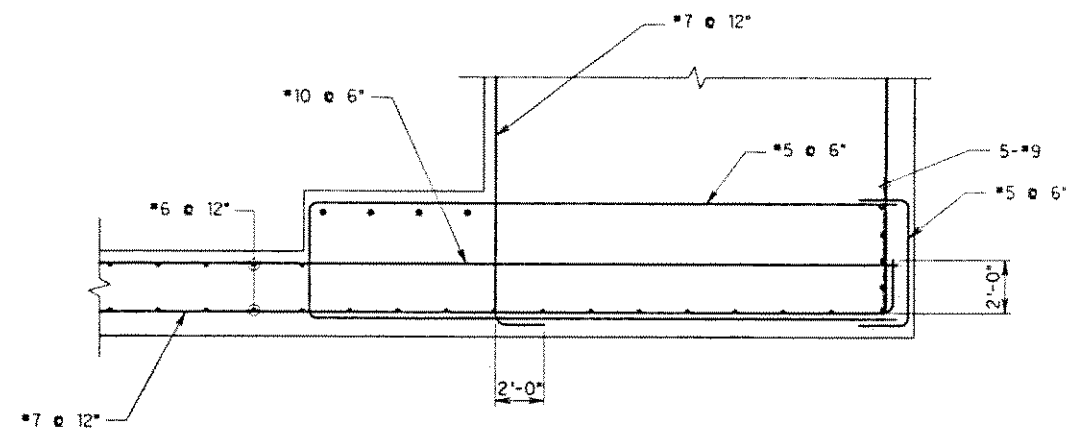
DATE	REVISION
09/30/91	UPDATED DRAWING.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRAINED BY	
	REVIEWED BY	
	QUANTITIES BY	
	CHECKED BY	
N.		

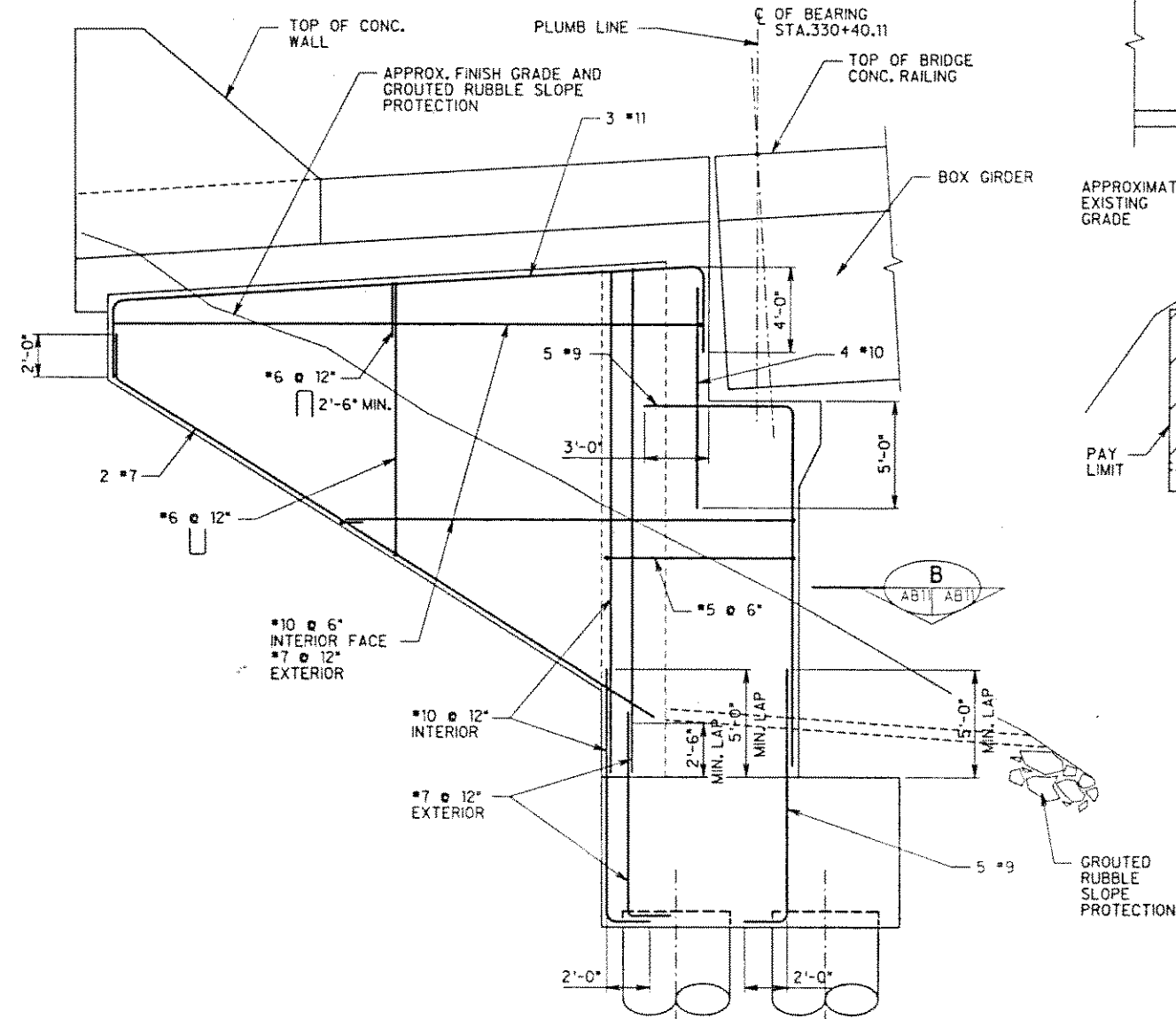


98

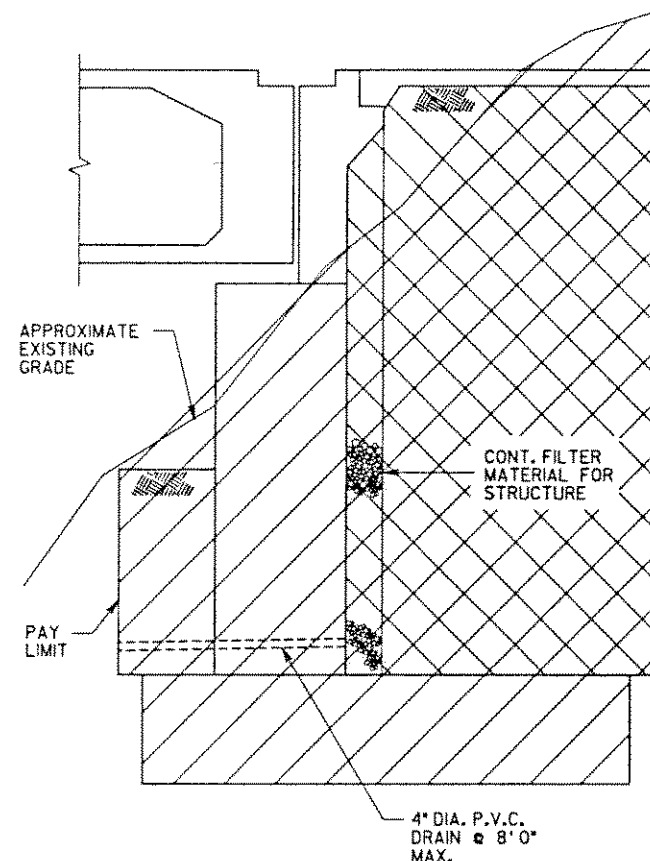
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



SECTION B
SCALE 1/2" = 1'-0"

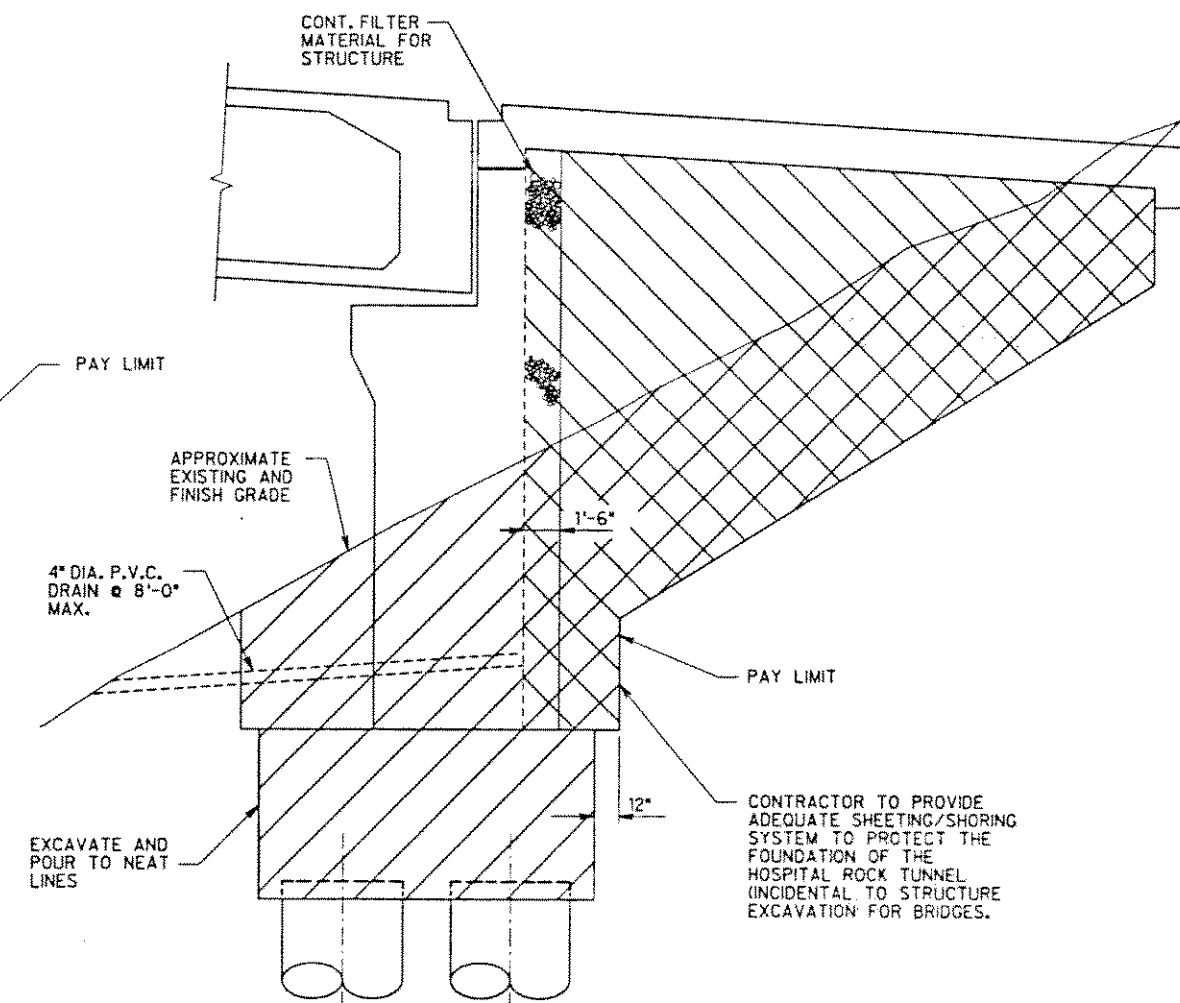


WALL ELEVATION ABUTMENT NO. 2
SCALE 1/4" = 1'-0"



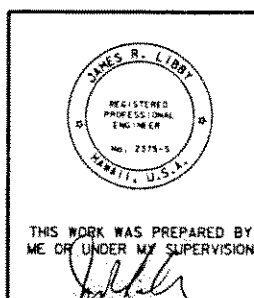
STRUCTURE EXCAVATION
STRUCTURE BACKFILL

PAYLIMITS AT ABUTMENTS NO. 1
AND RETAINING WALL
NOT TO SCALE



STRUCTURE EXCAVATION
STRUCTURE BACKFILL

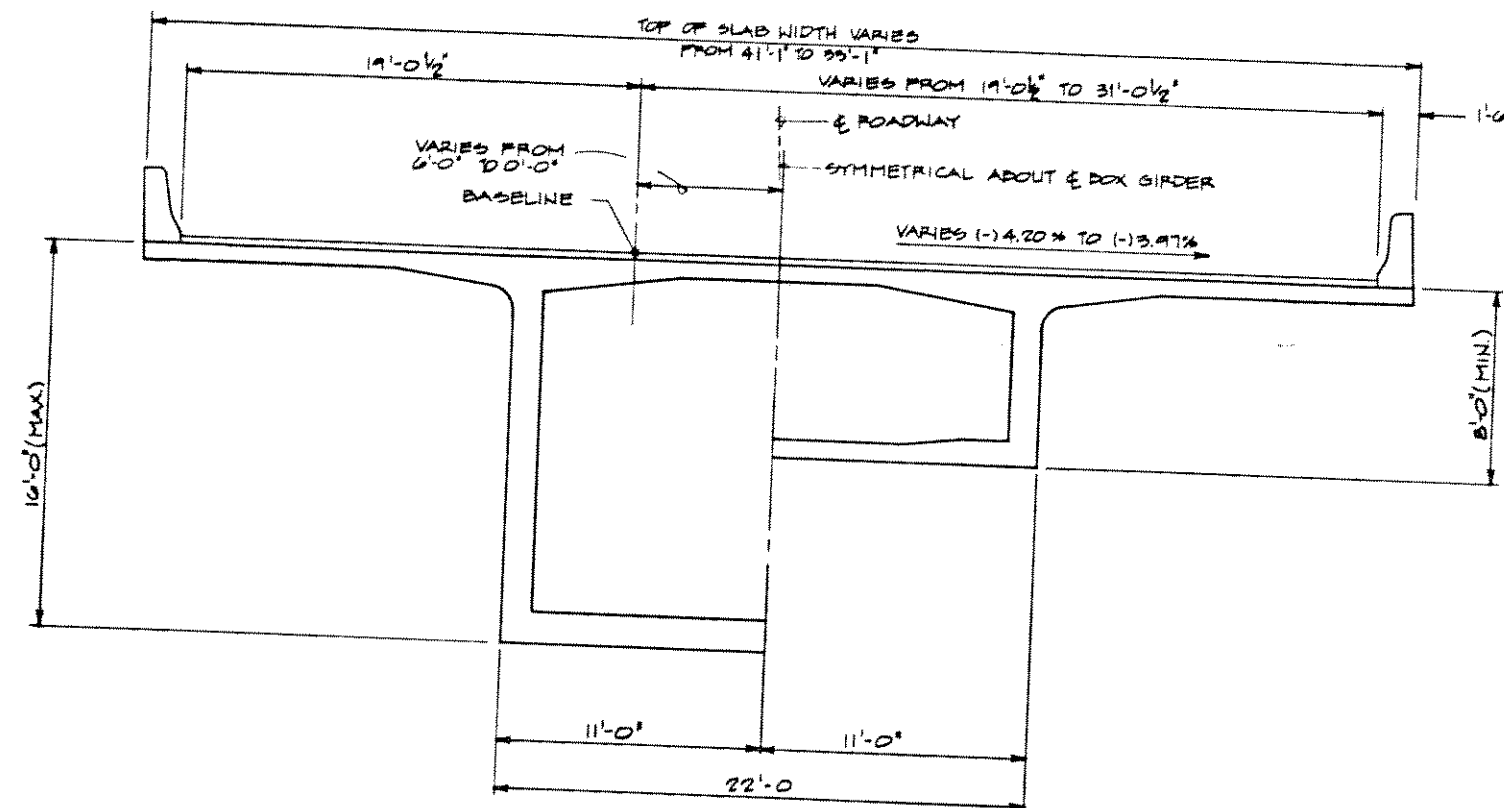
PAYLIMITS AT ABUTMENTS NO. 2
NOT TO SCALE



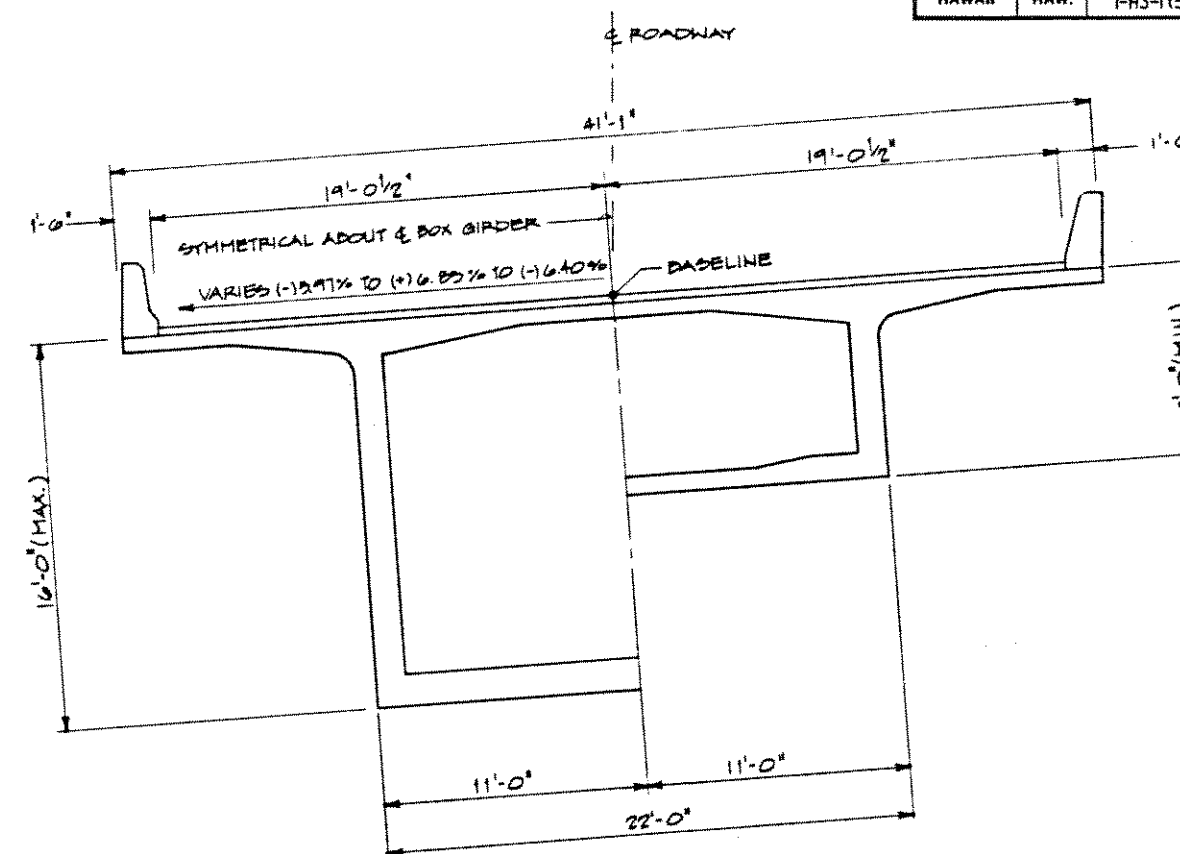
09/30/91 UPDATED DRAWING.
DATE REVISION
J. MULLER INTERNATIONAL E Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WING WALL SECTIONS
AND PAYLIMITS
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE JUL 1990
SHEET No. AB11 OF SHEETS

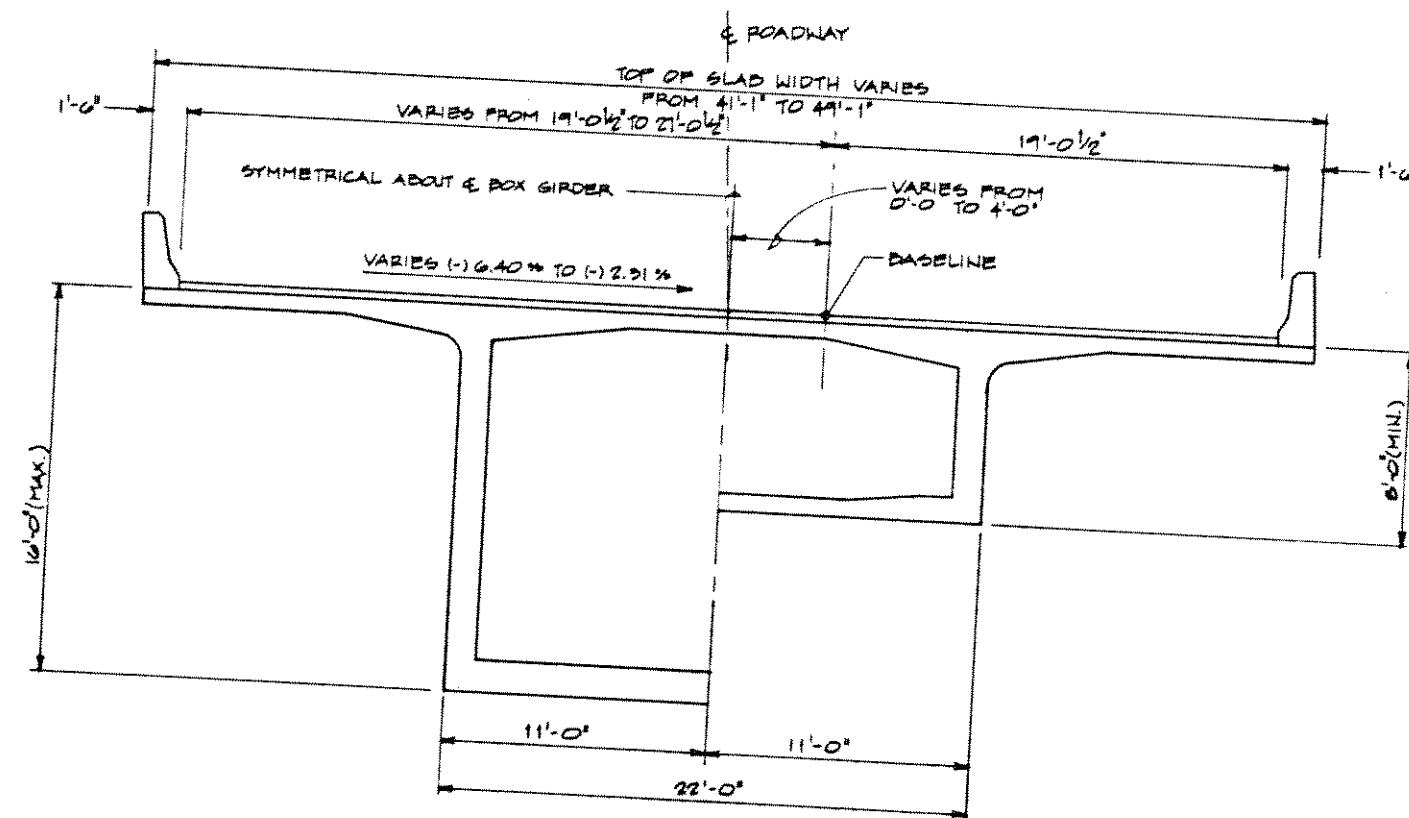
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



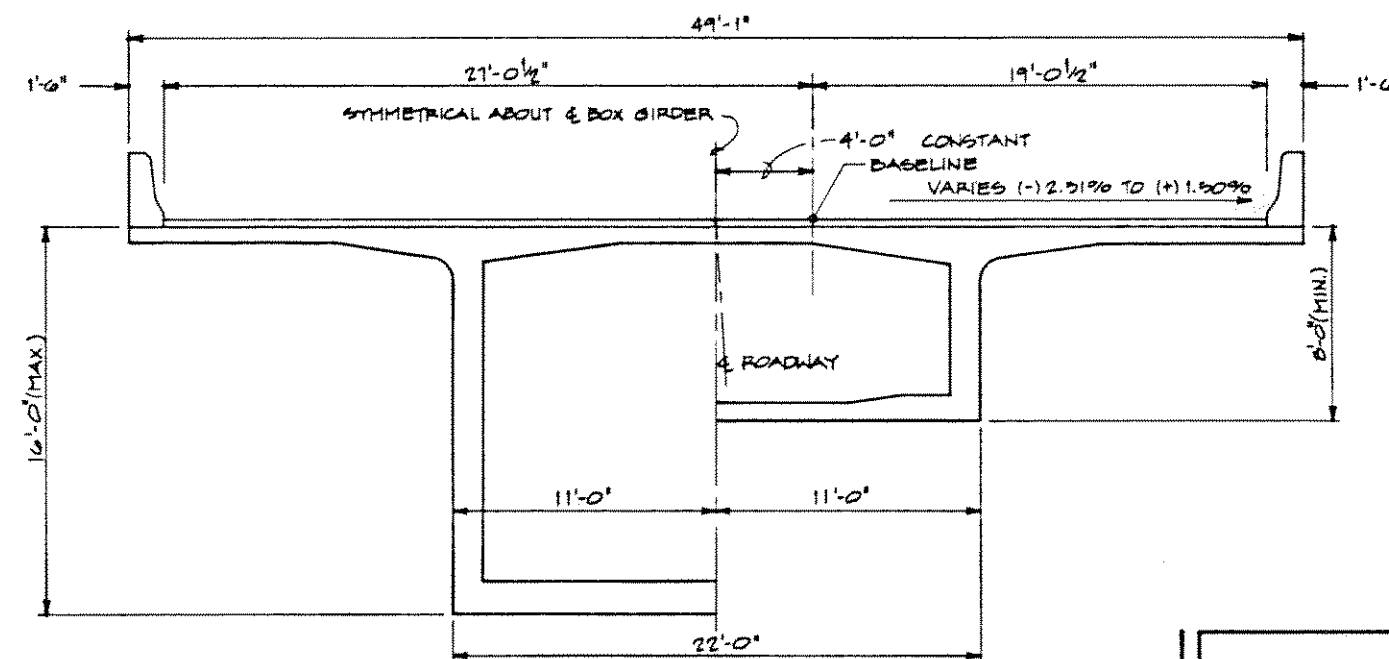
CROSS SECTION FROM STA. 264+65.53 TO STA. 265+82.71
LOOKING UPSTATION



CROSS SECTION FROM STA. 265+82.71 TO STA. 313+95.53
LOOKING UPSTATION

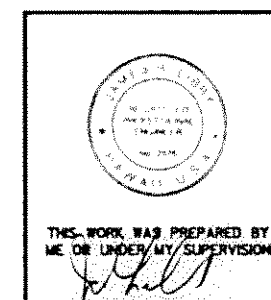


CROSS SECTION FROM STA. 313+95.53 TO STA. 325+30.21
LOOKING UPSTATION



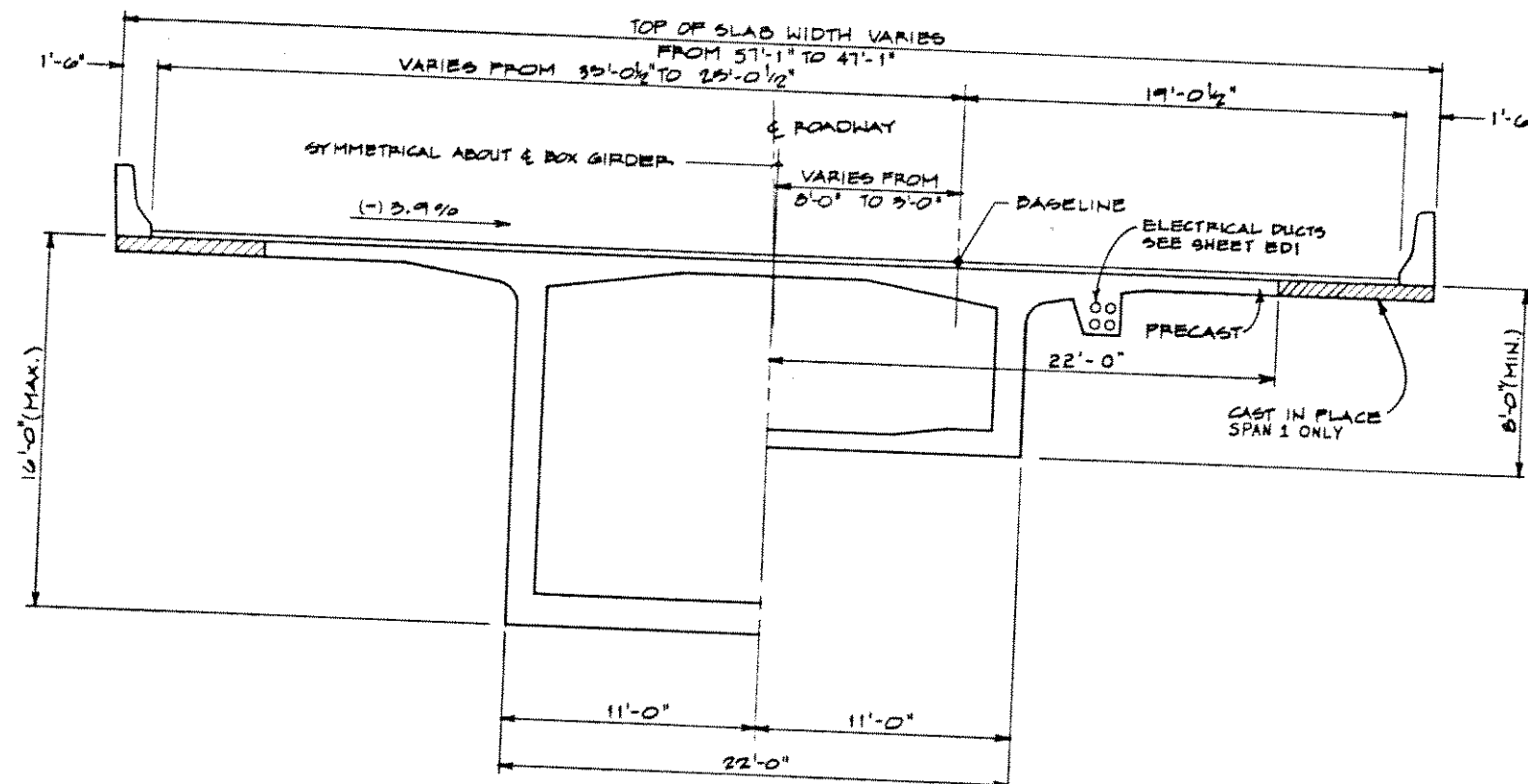
CROSS SECTION FROM
STA. 325+30.21 TO STA. 330+75.53
LOOKING UPSTATION

DATE	REVISION
J. MULLER INTERNATIONAL	E Libby Engineers

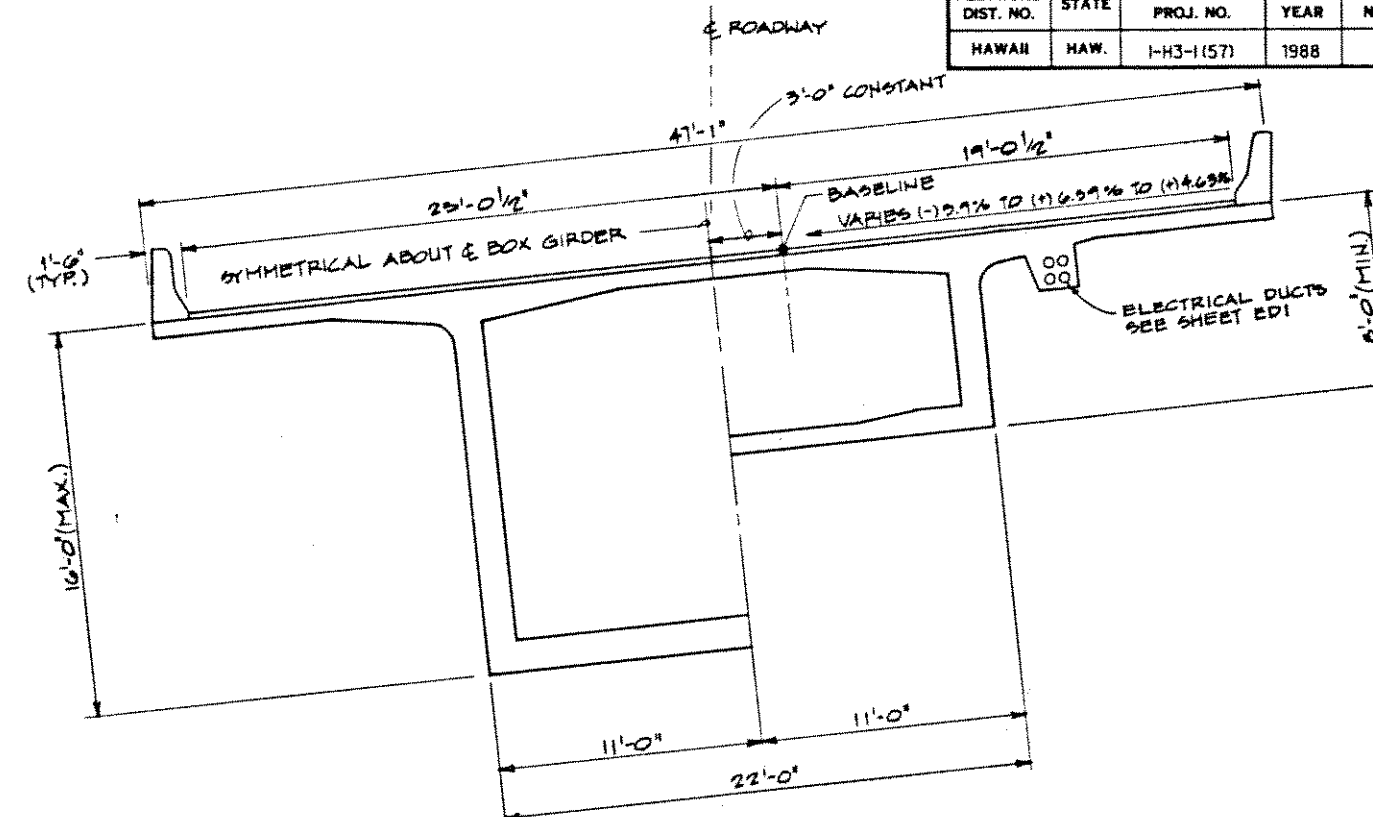


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DECK CROSS SECTIONS
INBOUND
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: 1/4"=1'-0" DATE: JUN. 1990
SHEET No. CSI OF SHEETS

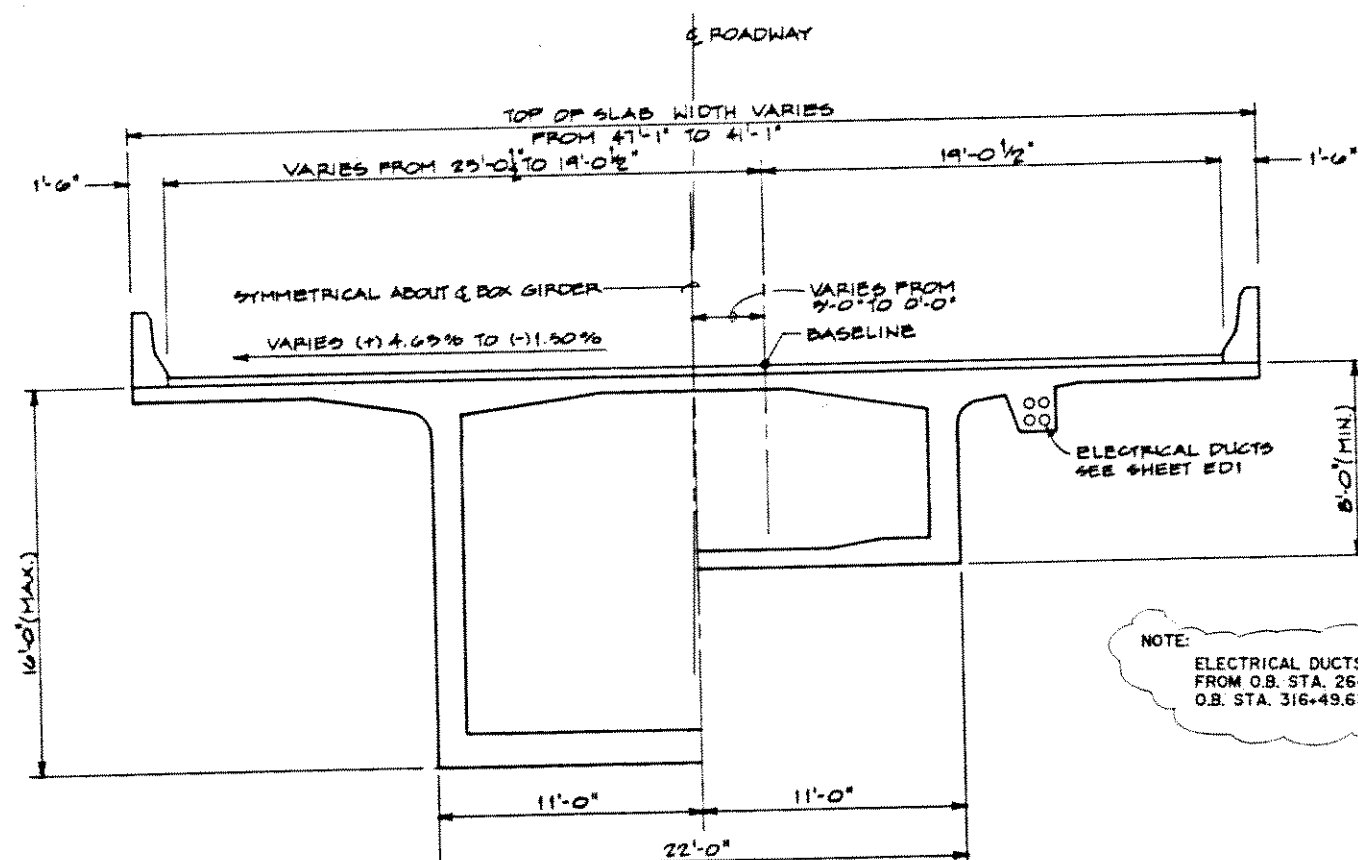
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



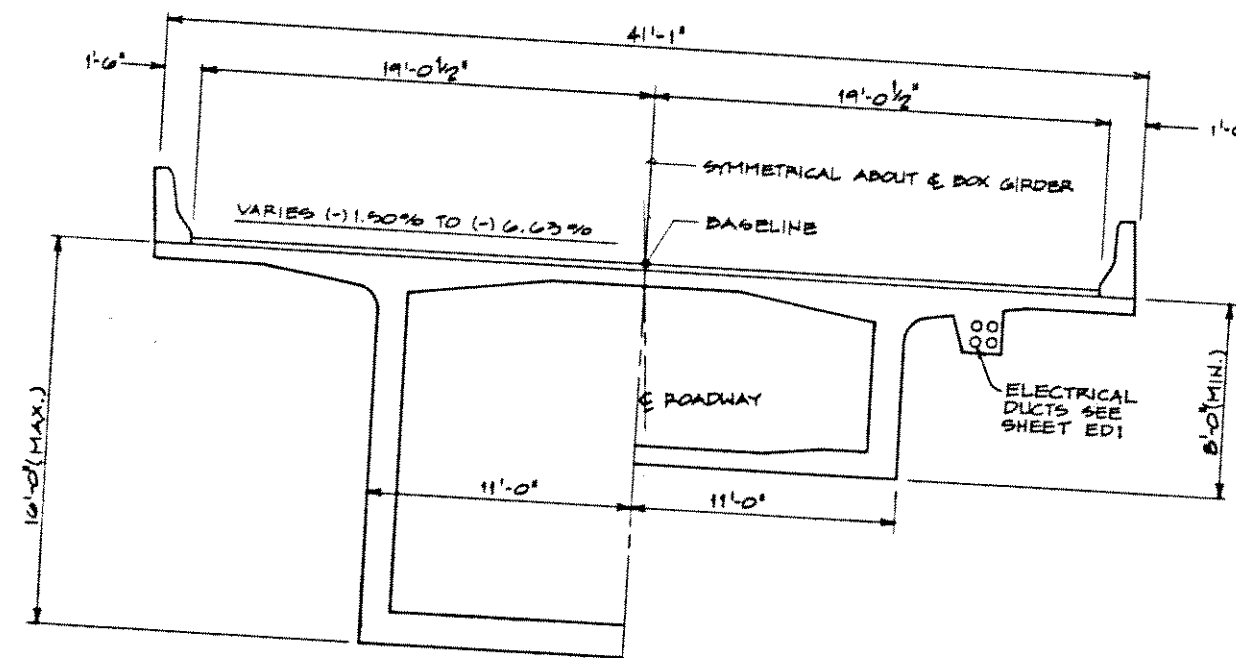
CROSS SECTION FROM STA. 264+25.11 TO STA. 266+68.71
LOOKING UPSTATION



CROSS SECTION FROM STA. 266+68.71 TO STA. 289+10.33
LOOKING UPSTATION



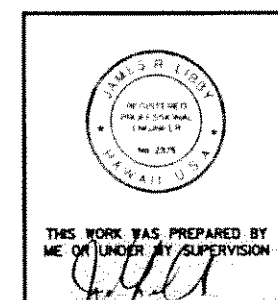
CROSS SECTION FROM STA. 289+10.33 TO STA. 295+76.56
LOOKING UPSTATION



CROSS SECTION FROM
STA. 295+76.56 TO STA. 331+05.74
LOOKING UPSTATION

NOTE:
ELECTRICAL DUCTS ARE LOCATED
FROM O.B. STA. 264+23.36 TO
O.B. STA. 316+49.61

08/23/91 DATE
J. MULLER INTERNATIONAL
LIBBY ENGINEERS



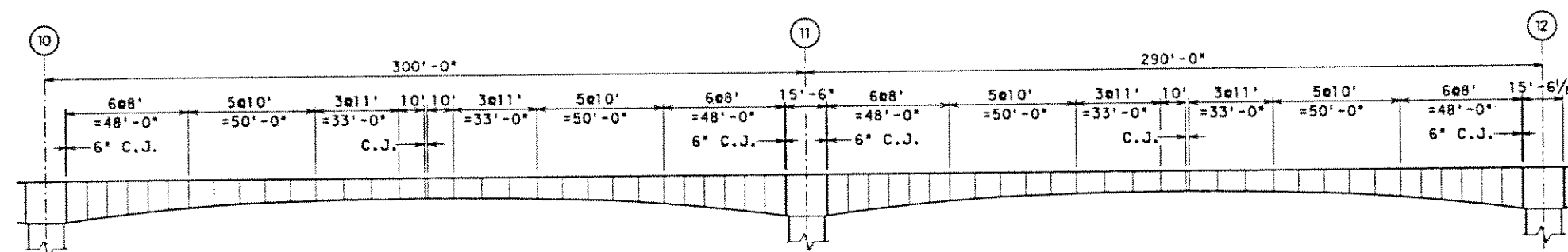
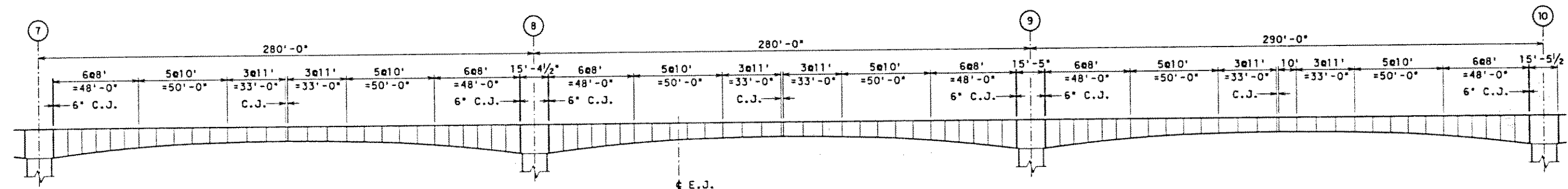
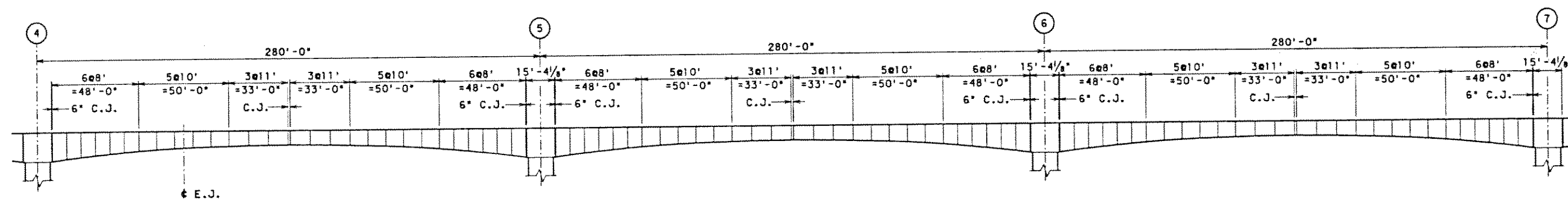
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DECK CROSS SECTIONS
OUTBOUND

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: 1/4"=1'-0" DATE: JUN. 1990
SHEET No. CS2 OF SHEETS

Plan view of the bridge showing the layout of the bridge deck, including the main span and approach spans. The diagram includes dimensions for the bridge deck, including the main span (240'-0") and approach spans (140'-0" and 280'-0"). It also shows the location of the bridge piers (1, 2, 3, 4) and the centerline of the bridge deck. The diagram is labeled "Bearing" and "C.J." (Center of Gravity).



I=INBOUND (O=OUTBOUND) U=UPSTATION SIDE
 (D=DOWNSTATION SIDE)

PIER No. SEGMENT RANGE No. IN THE CANTILEVER FROM THE PIER

I-3-TU

SEGMENT DESIGNATION

```

      I=INBOUND (O=OUTBOUND)
          |
          v
        IA1-2
    ABUTMENT No. / \ SEGMENT RANGE No. IN THE
                  /   \ SPAN FROM THE ABUTMENT

```

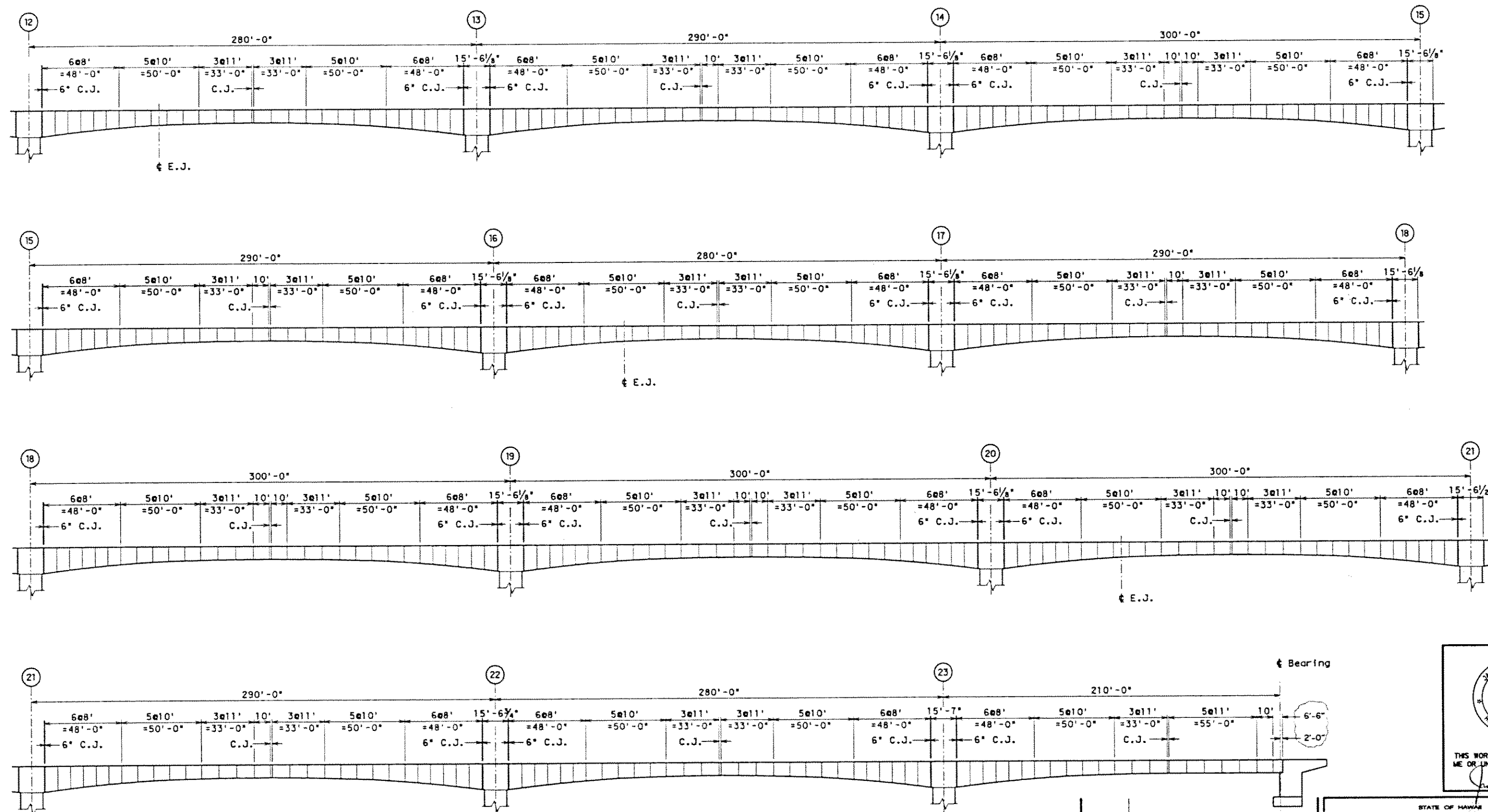
 **J. MULLER**
INTERNATIONAL
  **Libby**
Engineers

SHEET No. 51 OF SHEETS



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



I=INBOUND (O=OUTBOUND) U=UPSTATION SIDE (D=DOWNSTATION SIDE)

PIER No. 13-12U SEGMENT RANGE No. IN THE CANTILEVER FROM THE PIER

ABUTMENT No. 1A1-2 SEGMENT RANGE No. IN THE SPAN FROM THE ABUTMENT

SEGMENT DESIGNATION

07/02/91 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEGMENT LAYOUT II
I.B. STA. 296+65.53 TO
I.B. STA. 330+77.29

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

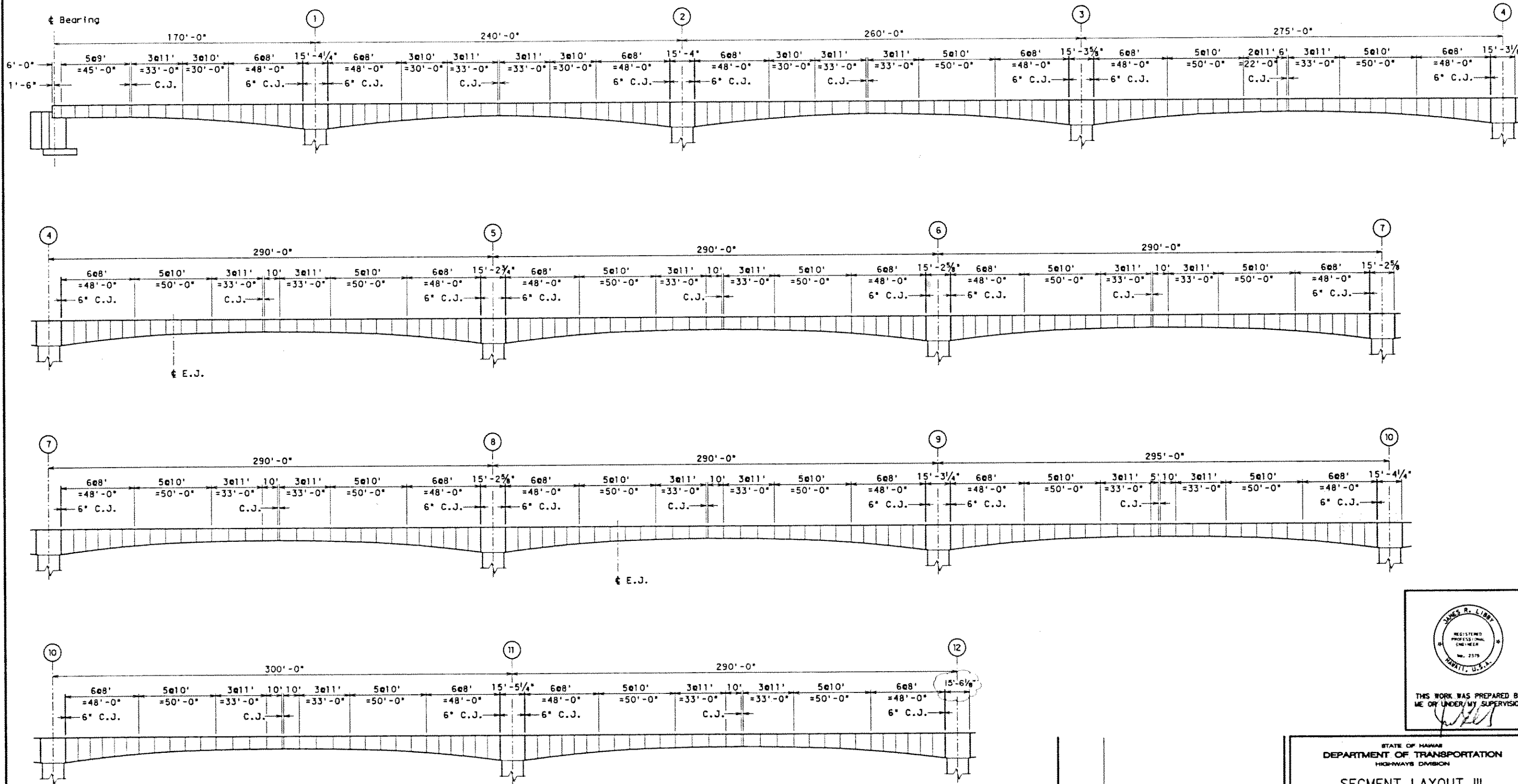
SHEET No. 52 OF SHEETS



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

James R. Libby

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

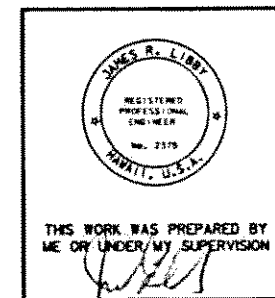


I=INBOUND (O=OUTBOUND) U=UPSTATION SIDE (O=DOWNSTATION SIDE)

PIER No. 13-12U SEGMENT RANGE No. IN THE CANTILEVER FROM THE PIER

ABUTMENT No. 1A1-2 SEGMENT RANGE No. IN THE SPAN FROM THE ABUTMENT

SEGMENT DESIGNATION



08/23/91 UPDATED PIER SEGMENT LENGTH.
DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

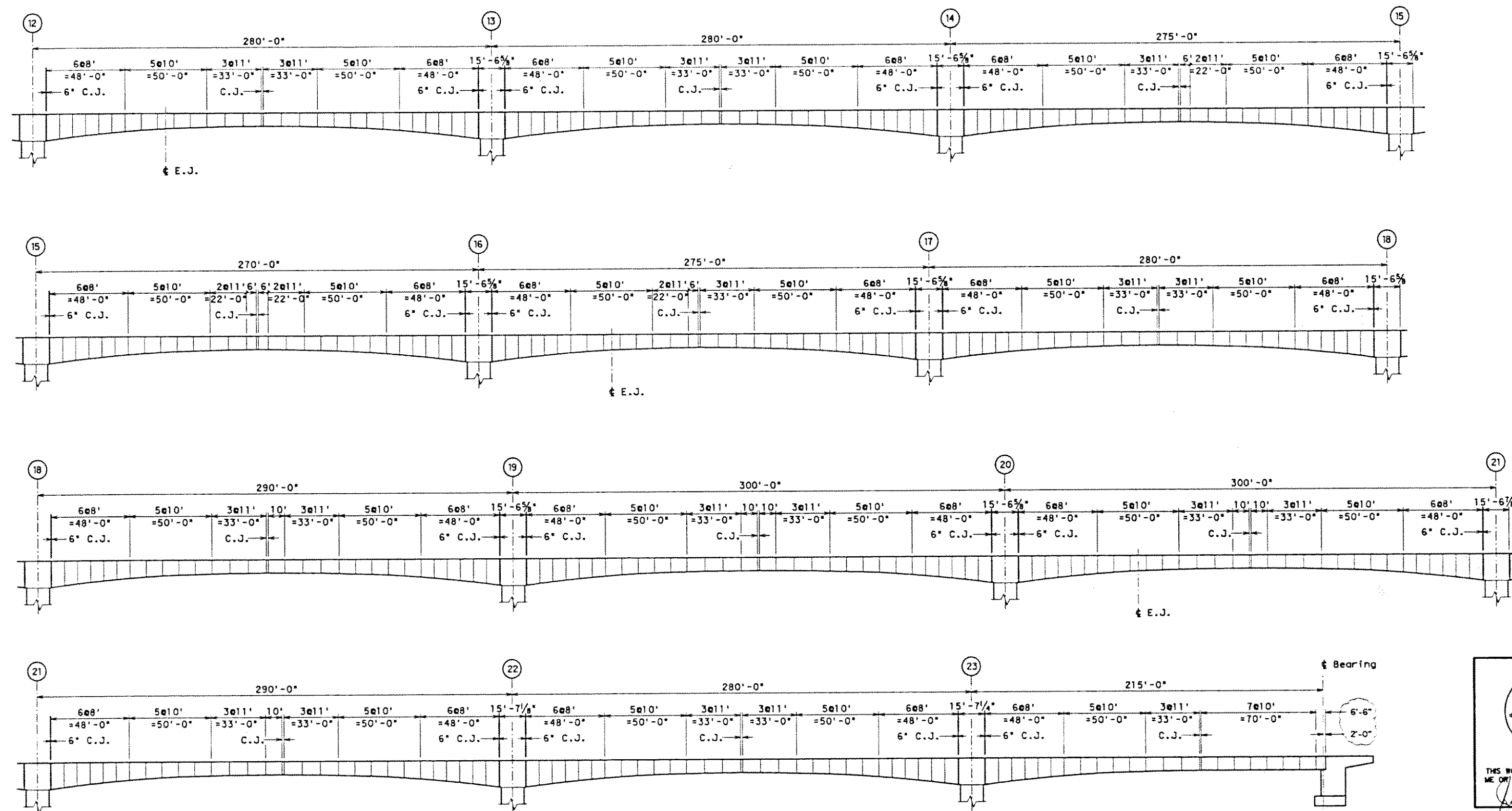
SEGMENT LAYOUT III
O.B. STA. 264+23.36 TO
O.B. STA. 297+05.11

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

SHEET No. 53 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



I=INBOUND (O=OUTBOUND) U=UPSTATION SIDE (D=DOWNSTATION SIDE)

PIER No. 13-12U SEGMENT RANGE No. IN THE CANTILEVER FROM THE PIER

ABUTMENT No. 1A1-2 SEGMENT RANGE No. IN THE SPAN FROM THE ABUTMENT

SEGMENT DESIGNATION

07/02/91 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEGMENT LAYOUT IV

O.B. STA. 297+05.11 TO

O.B. STA. 330+41.86

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

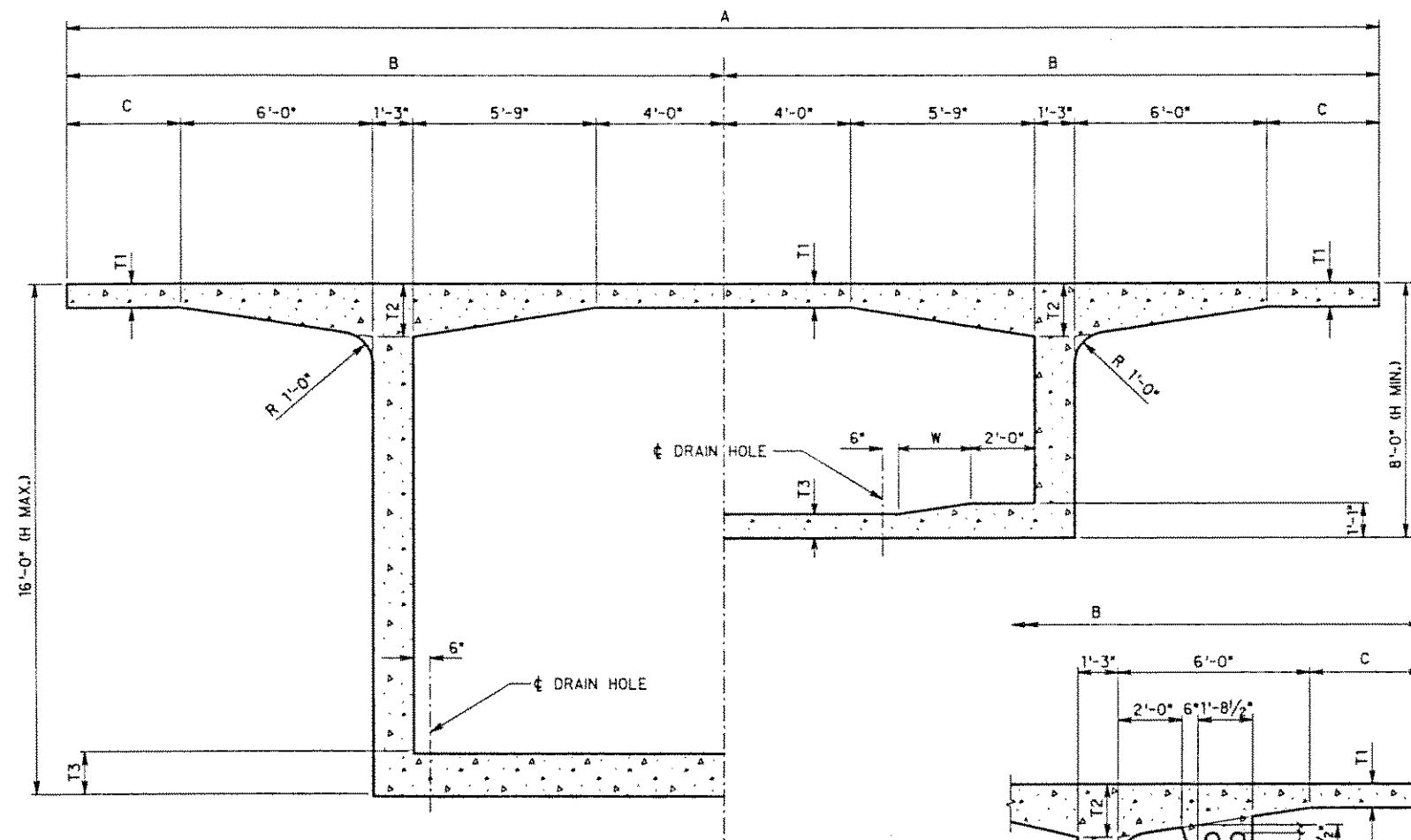
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. 54 OF SHEETS



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

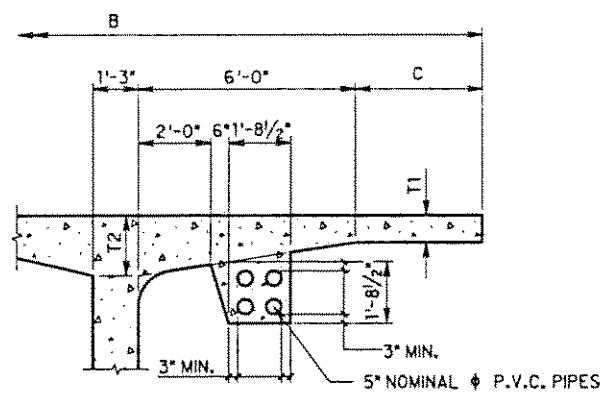
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



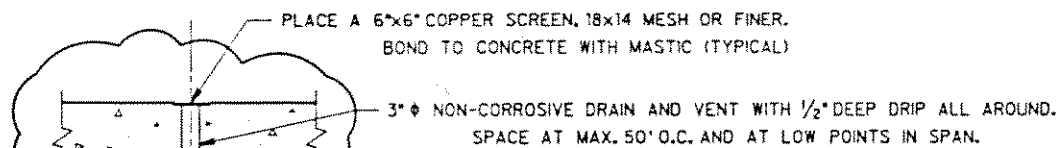
		FROM	TO	FROM	TO
INBOUND	A	51'-11 ¹¹ / ₁₆ "	49'-1"	49'-1"	41'-1"
	B	25'-11 ¹¹ / ₁₆ "	24'-6"	24'-6"	20'-6 ¹ / ₂ "
	C	8'-11 ¹¹ / ₁₆ "	7'-6"	7'-6"	3'-6 ¹ / ₂ "
OUTBOUND	A	56'-7 ³ / ₄ "	49'-1"	49'-1"	47'-1"
	B	28'-3 ³ / ₈ "	24'-6"	24'-6"	23'-6 ¹ / ₂ "
	C	11'-3 ³ / ₈ "	7'-6"	7'-6"	6'-6 ¹ / ₂ "
	T1	11"		9"	
	T2	1'-10"		1'-8"	

NOTE: T1 AND T2 VARIATIONS ARE MADE IN SEGMENTS 1A1-2 AND 0-P1

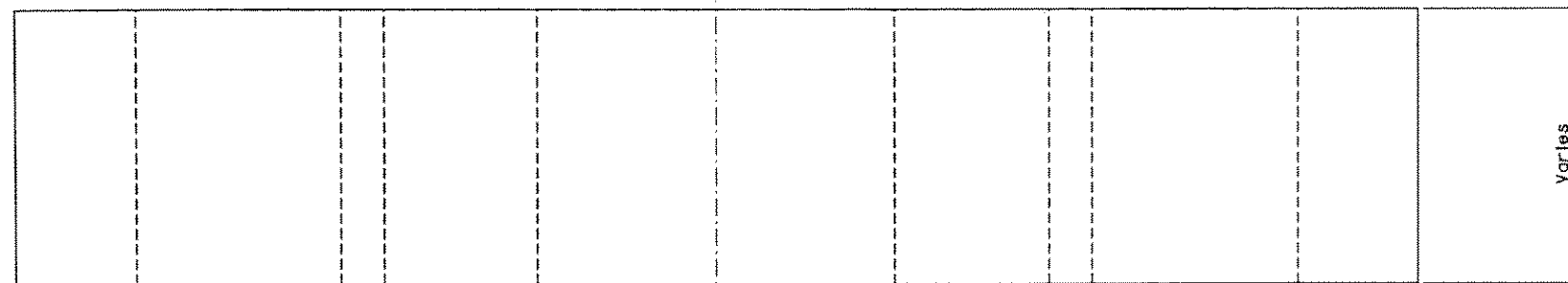
CROSS SECTION
SCALE: 3/8" = 1'-0"



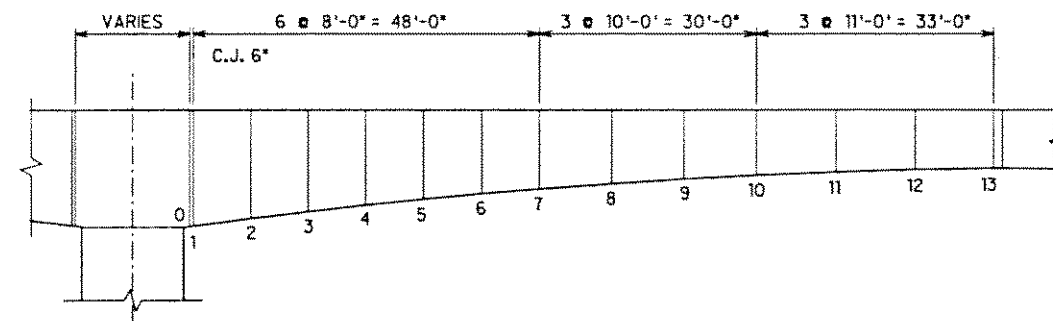
OUTBOUND WING DETAIL
SCALE: 3/8" = 1'-0"



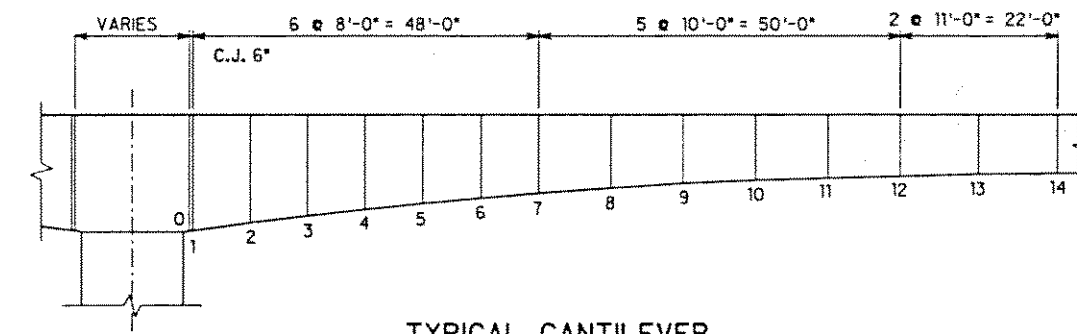
TYPICAL DRAIN HOLE DETAIL
SCALE: 3/4" = 1'-0"



PLAN VIEW
SCALE: 3/8" = 1'-0"



SHORT CANTILEVER
(INBOUND, OUTBOUND PIERS 1 AND 2)



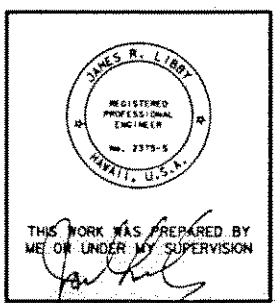
TYPICAL CANTILEVER

JOINT No.	H	T3	W
1	16'-0"	1'-4"	0
2	14'-11 ⁵ / ₈ "	1'-2 ³ / ₄ "	0
3	14'-0 ¹ / ₈ "	1'-1 ⁵ / ₈ "	0
4	13'-1 ¹ / ₁₆ "	1'-0 ¹ / ₂ "	3 ³ / ₈ "
5	12'-3 ⁵ / ₈ "	11 ³ / ₈ "	11 ³ / ₈ "
6	11'-6 ¹¹ / ₁₆ "	10 ¹ / ₄ "	1'-7"
7	10'-10 ⁹ / ₁₆ "	9"	2'-3"
8	10'-1 ⁵ / ₈ "		
9	9'-6"		
10	8'-11 ³ / ₄ "		
11	8'-6 ¹³ / ₁₆ "		
12	8'-3 ¹ / ₄ "		
13	8'-0 ¹³ / ₁₆ "		
14	8'-0"	9"	2'-3"

JOINT No.	H	T3	W
1	16'-0"	1'-4"	0
2	14'-11 ⁵ / ₈ "	1'-2 ³ / ₄ "	0
3	14'-0 ¹ / ₈ "	1'-1 ⁵ / ₈ "	0
4	13'-1 ¹ / ₁₆ "	1'-0 ¹ / ₂ "	3 ³ / ₈ "
5	12'-3 ⁵ / ₈ "	11 ³ / ₈ "	11 ³ / ₈ "
6	11'-6 ¹¹ / ₁₆ "	10 ¹ / ₄ "	1'-7"
7	10'-10 ⁹ / ₁₆ "	9"	2'-3"
8	10'-1 ⁵ / ₈ "		
9	9'-6"		
10	8'-11 ³ / ₄ "		
11	8'-6 ¹³ / ₁₆ "		
12	8'-2 ¹¹ / ₁₆ "		
13	*	9"	2'-3"

* H = 8'-0" FOR SEGMENTS No. 1-12D AND 2-12U
H = 8'-1¹/₂" FOR SEGMENTS No. 1-12U AND 2-12D

NOTE: SEGMENT LENGTH ARE MEASURED ALONG BASE LINE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

10/15/90 REPLACED DRAIN HOLE DETAIL.
10/04/90 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BOX GIRDER SEGMENT
DIMENSIONS

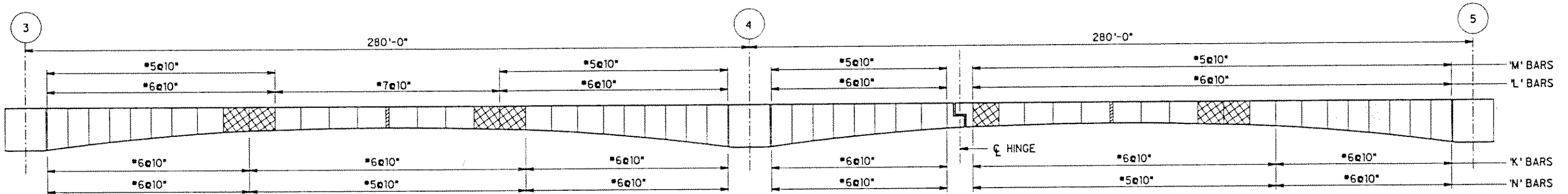
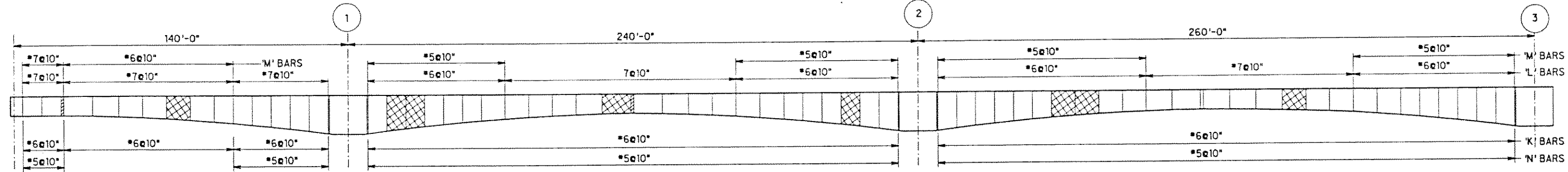
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

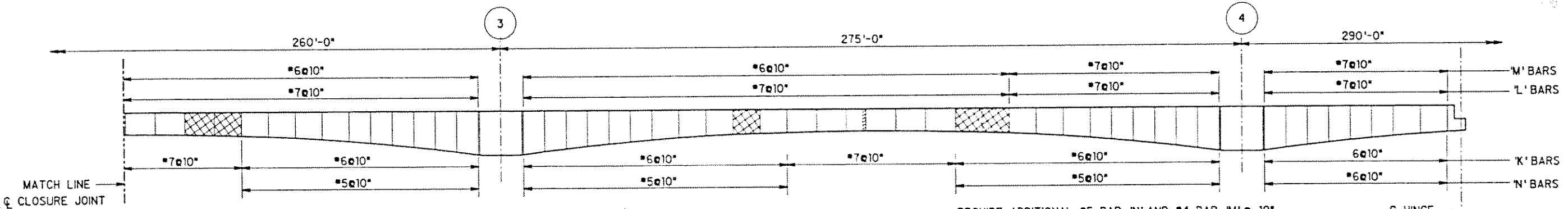
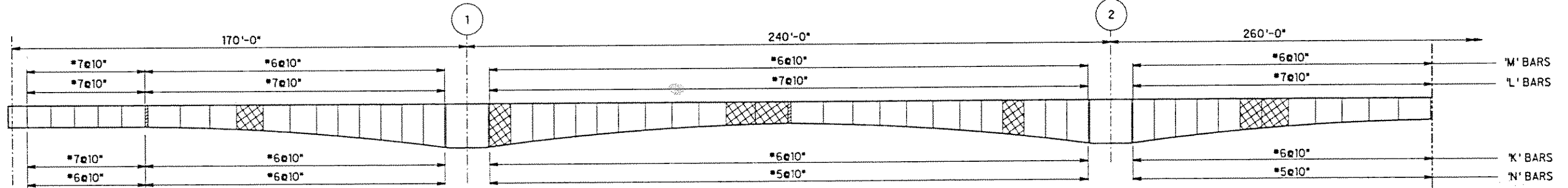
SHEET No. P81 OF SHEETS



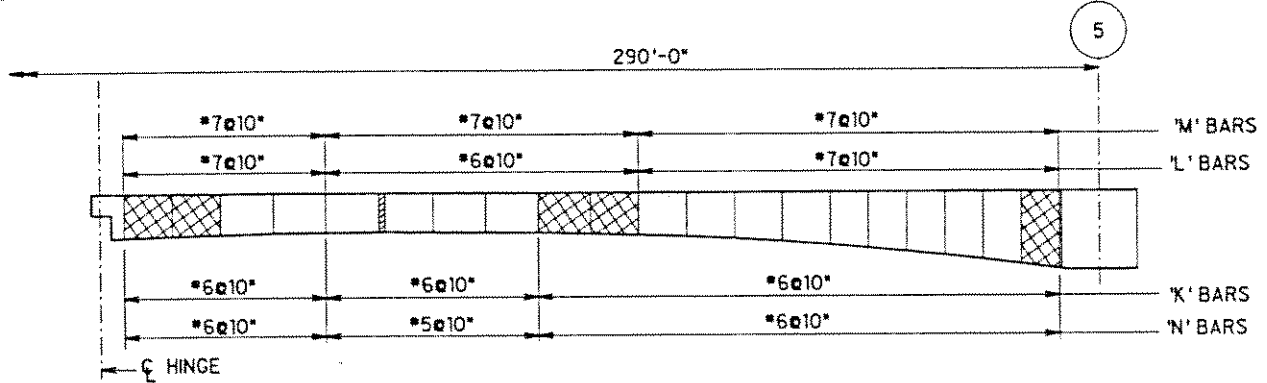
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



INBOUND
 PROVIDE ADDITIONAL #5 BAR 'N' AND #10 BAR 'M' IN HATCHED SEGMENTS (INBOUND)



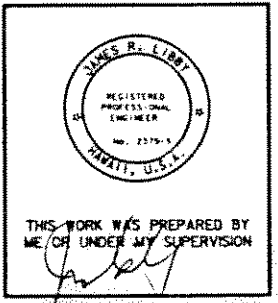
OUTBOUND
 PROVIDE ADDITIONAL #5 BAR 'N' AND #4 BAR 'M' IN HATCHED SEGMENTS (OUTBOUND)



NOTE:
 1. WORK THIS SHEET WITH SHEETS PB2 AND PB3
 2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE

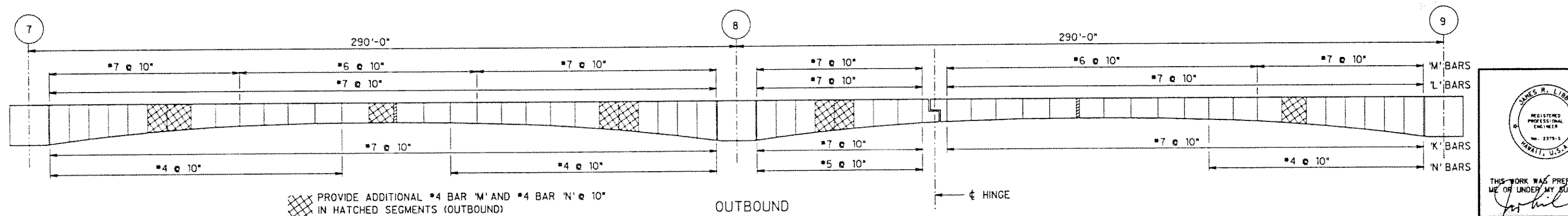
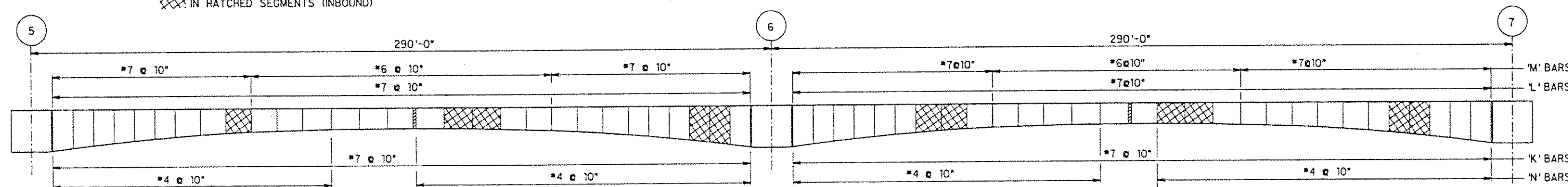
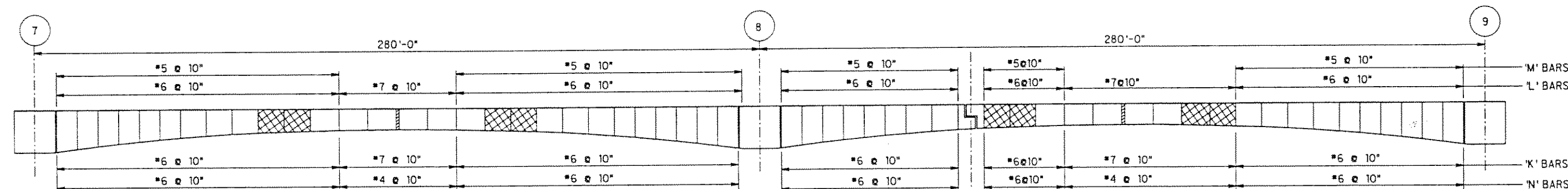
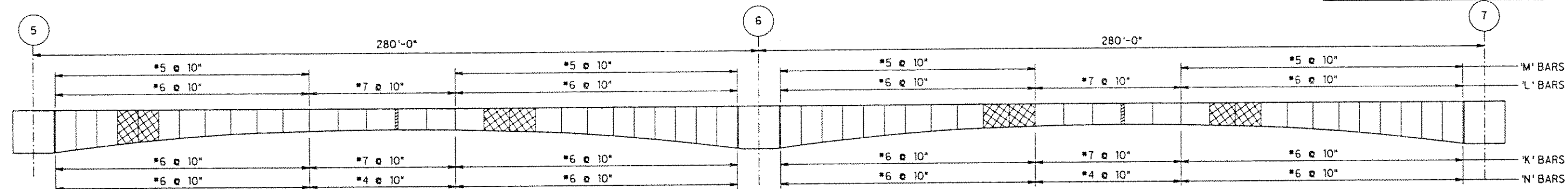
09/17/90	MOD. DRAWING No. TO PB4A AND GENERAL REVISIONS.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**BOX GIRDER SEGMENT
 REINFORCING III**
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT No. I-H3-1(57)
 F.A.I. PROJECT No. I-H3-1(58)
 SCALE: AS NOTED DATE: JUN 1990
 SHEET No. PB4A OF SHEETS



REVIEWED BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 DRAWN BY: _____
 DATE: _____

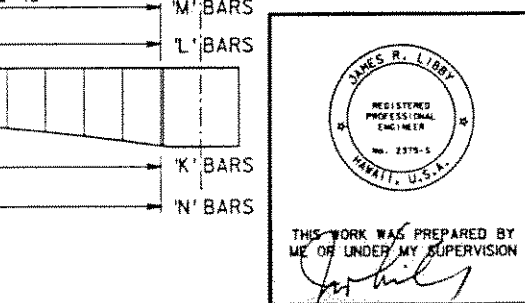
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



- NOTE:
1. WORK THIS SHEET WITH SHEETS PB2 AND PB3
 2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE

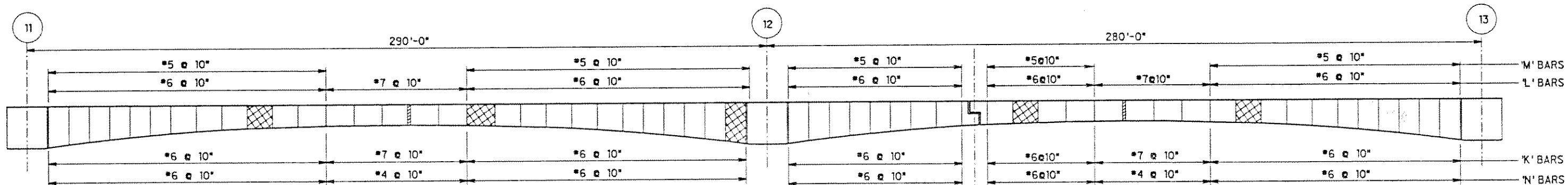
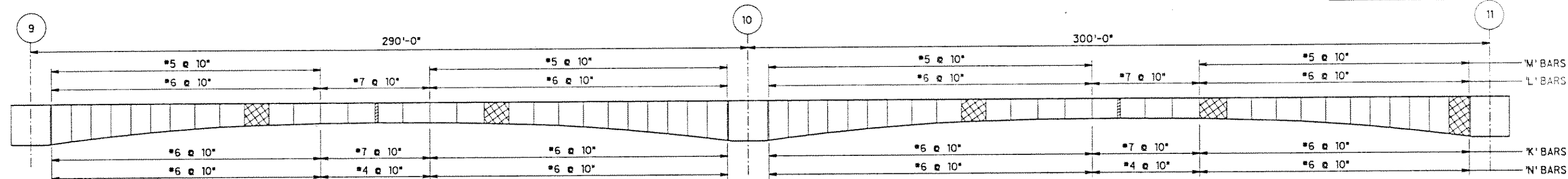
DESIGNED BY	DATE
CHECKED BY	
IN CHARGE	
REVISION	
DATE	

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers



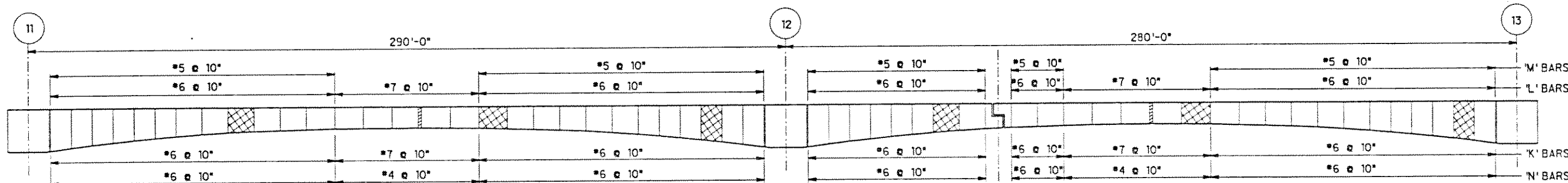
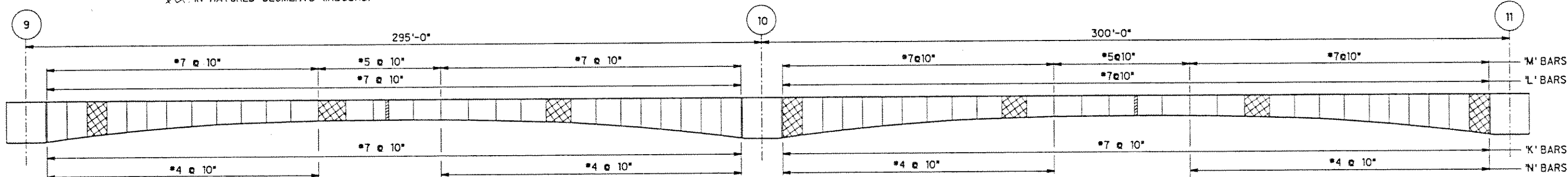
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
BOX GIRDER SEGMENT REINFORCING IV
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: SEP. 1990
SHEET No. PB48OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



PROVIDE ADDITIONAL #4 BAR 'M' AND 'N' @ 10" IN HATCHED SEGMENTS (INBOUND)

INBOUND



PROVIDE ADDITIONAL #4 BAR 'M' AND #4 BAR 'N' @ 10" IN HATCHED SEGMENTS (OUTBOUND)

OUTBOUND

NOTE:

1. WORK THIS SHEET WITH SHEETS PB2 AND PB3
2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE
3. HATCHED SEGMENTS INDICATE FARADAY SHIELD SUPPORT LOCATIONS.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
NOTED BY	
REVISION	

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

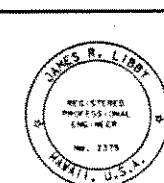
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BOX GIRDER SEGMENT
REINFORCING V**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

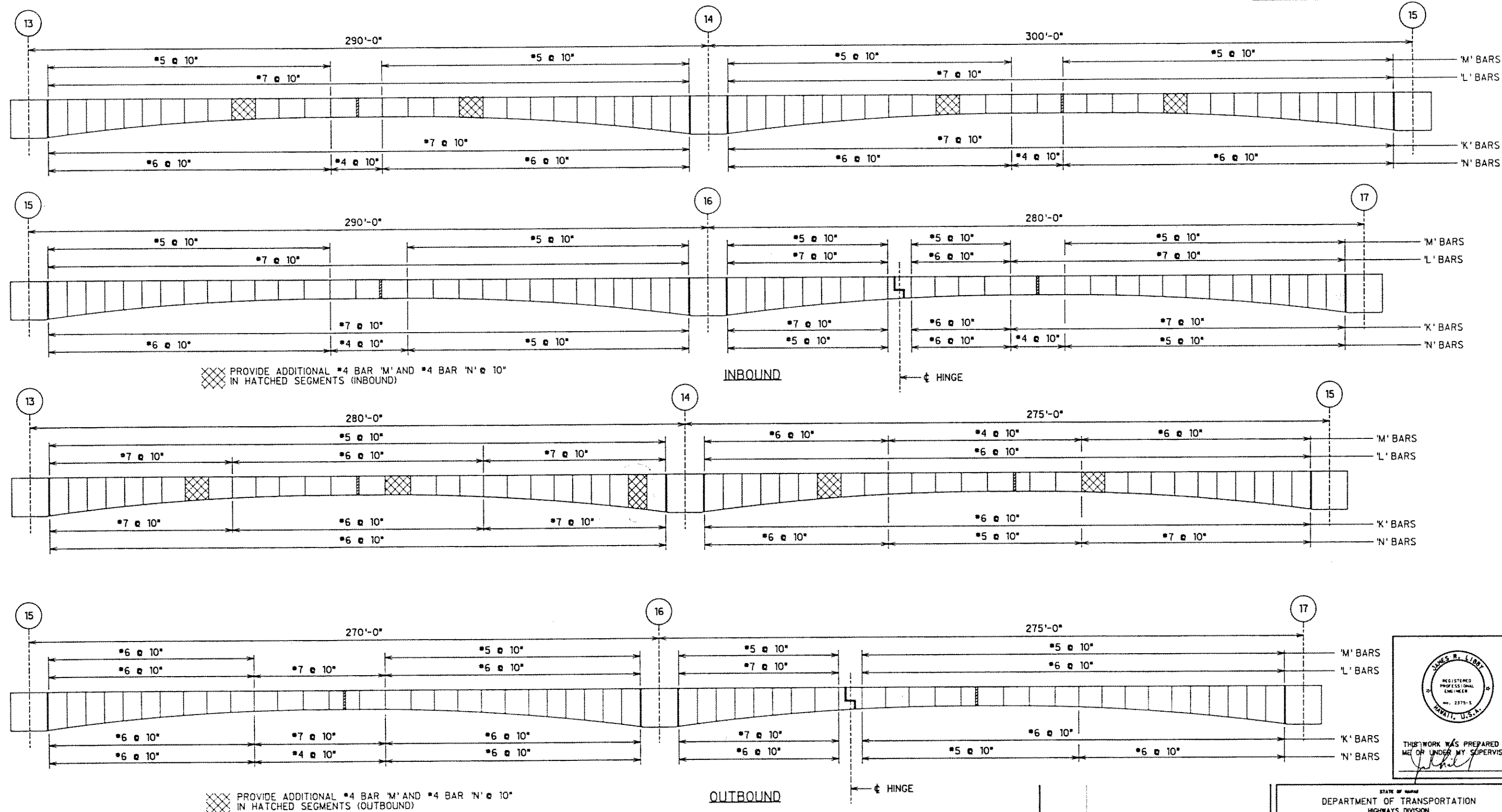
SCALE: AS NOTED DATE: SEP. 1990

SHEET No. PB40CF SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

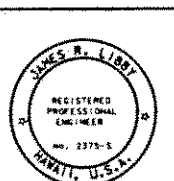
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



NOTE:
 1. WORK THIS SHEET WITH SHEETS PB2 AND PB3.
 2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE.
 3. HATCHED SEGMENTS INDICATE FARADAY SHIELD SUPPORT LOCATIONS.

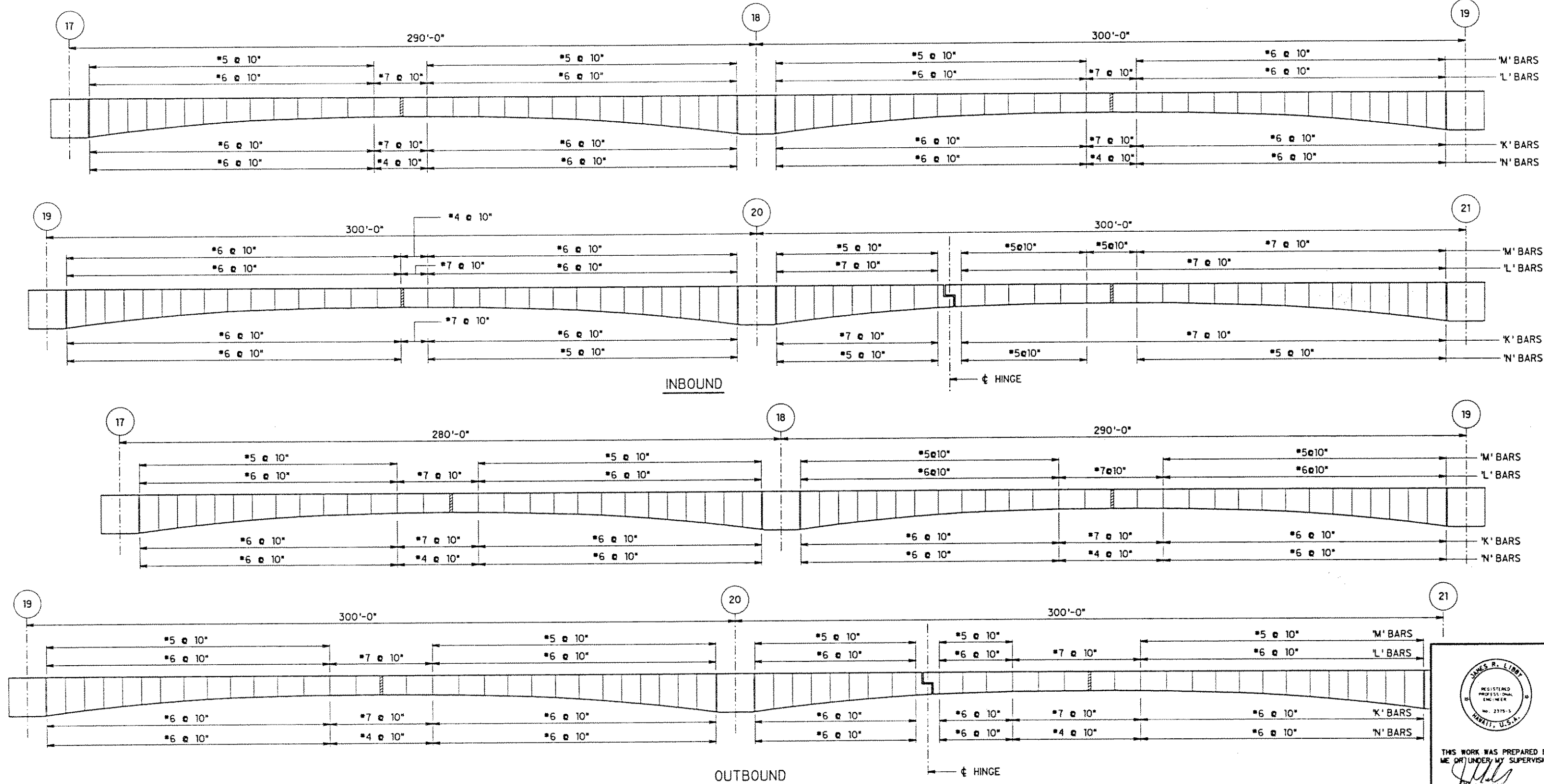
08/23/91 UPDATED DRAWING.
 DATE REVISION
 J. MULLER INTERNATIONAL E Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**BOX GIRDER SEGMENT
 REINFORCING VI**
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT No. I-H3-1 (57)
 F.A.I. PROJECT No. I-H3-1 (58)
 SCALE: AS NOTED DATE: APRIL 1991
 SHEET NO. PB40 OF SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



- NOTE:
1. WORK THIS SHEET WITH SHEETS PB2 AND PB3
 2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTIFIED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

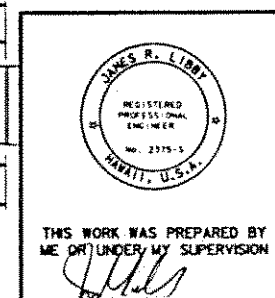
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BOX GIRDER SEGMENT
REINFORCING VII**

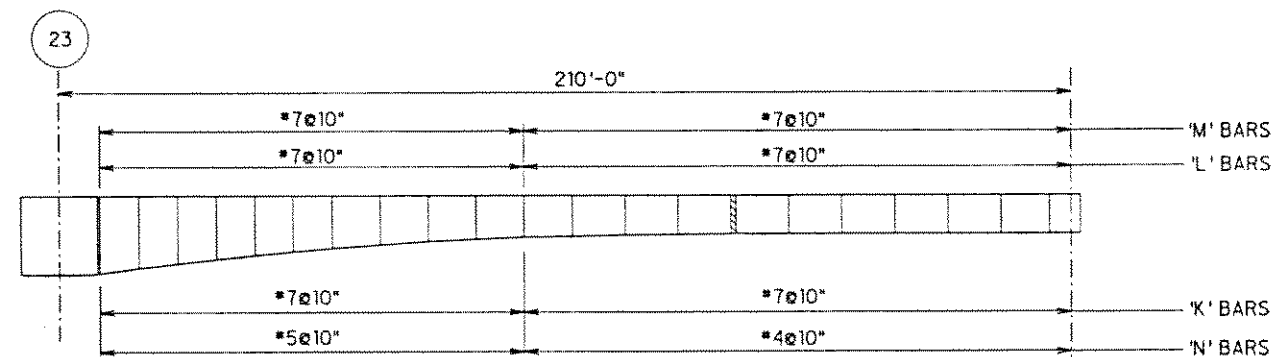
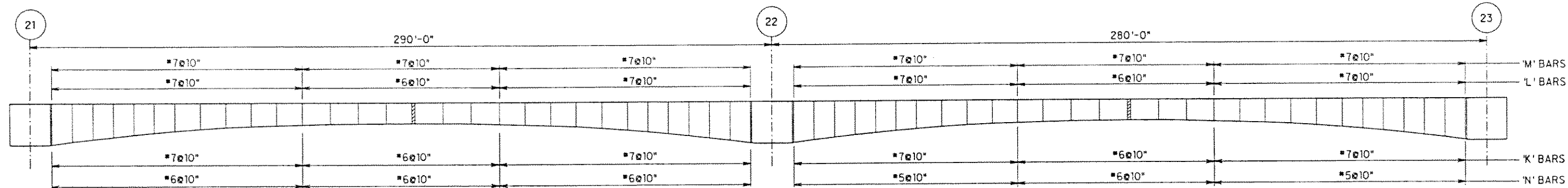
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE : AS NOTED DATE : MAR. 1991

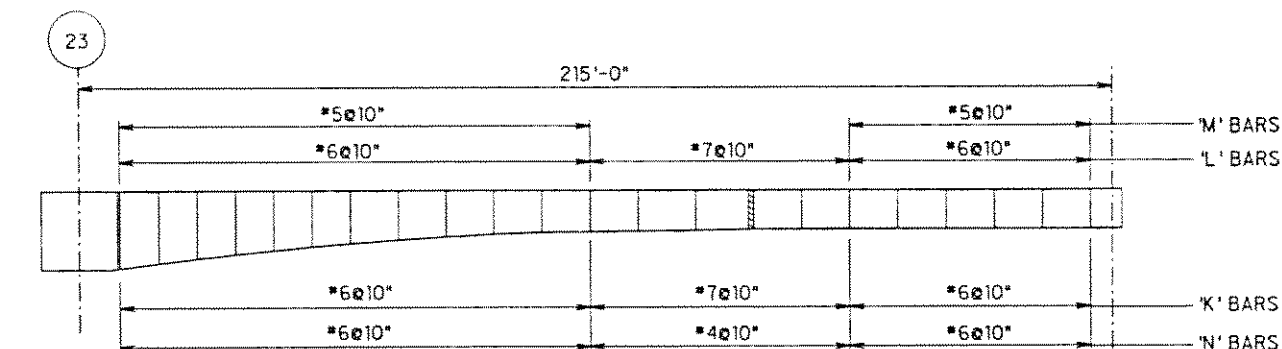
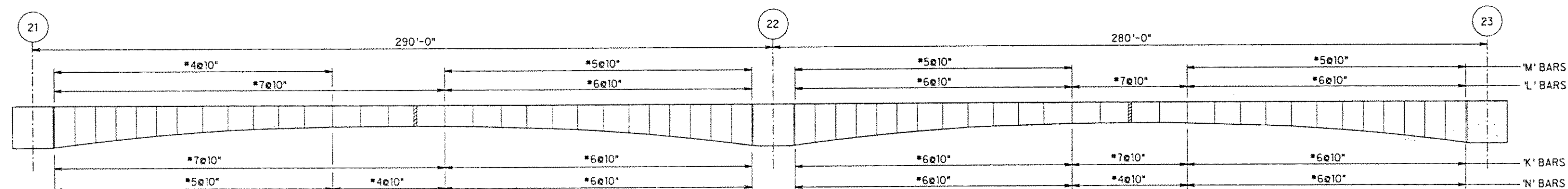
SHEET No. PB4EOF SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

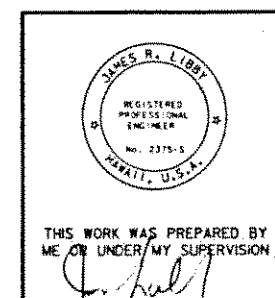


INBOUND



OUTBOUND

- NOTE:
1. WORK THIS SHEET WITH SHEETS PB2 AND PB3
 2. ALL SPAN LENGTHS ARE MEASURED ALONG THE BASELINE



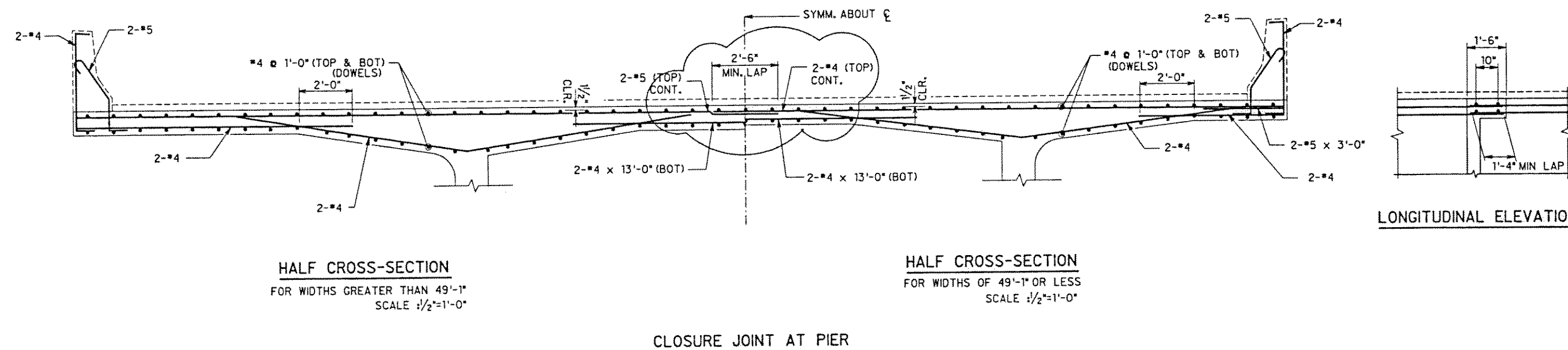
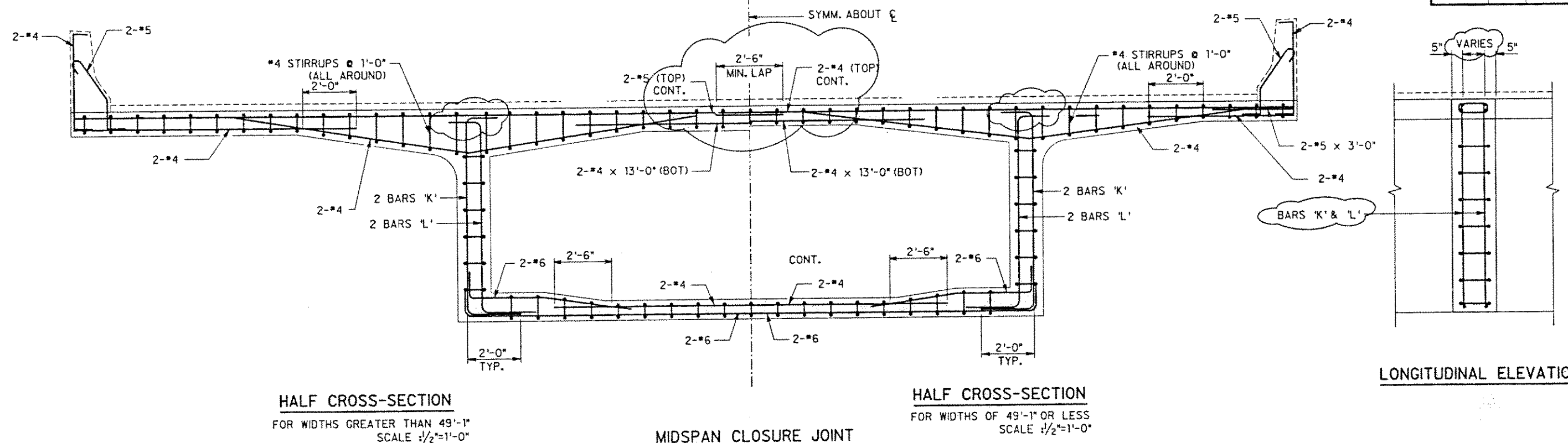
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

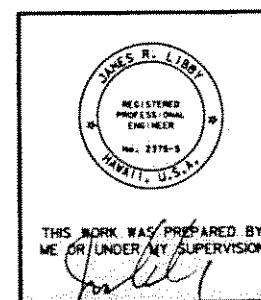
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
BOX GIRDER SEGMENT REINFORCING VIII
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN 1991

SHEET No. PB4F OF SHEETS

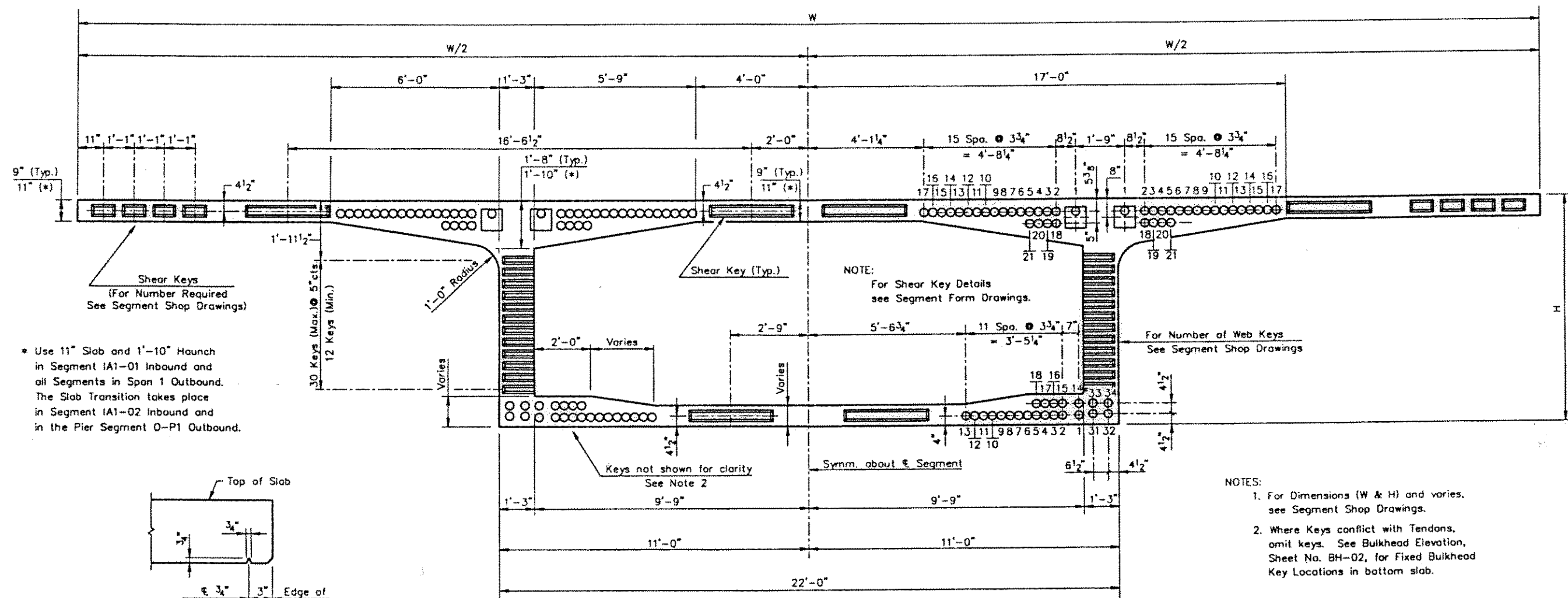
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	I-H3-1(57)	1988		



ORIGINAL PLAIN	SURVEY PLATTED BY _____	DATE _____
	DRAWN BY _____	_____
	TRACED BY _____	_____
	DAMAGED BY _____	_____
NOTE BOOK	QUANTITIES BY _____	_____
	CHECKED BY _____	_____
N.		



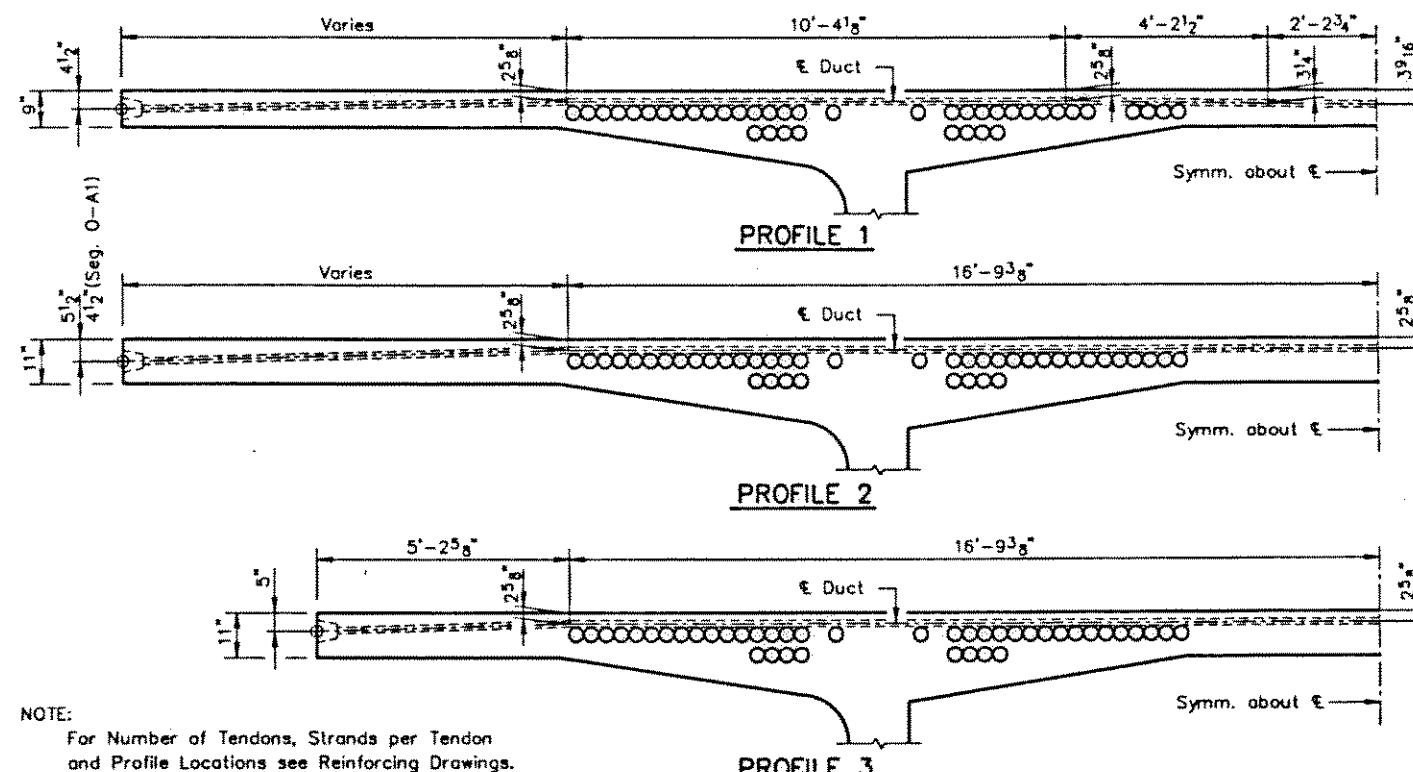
		STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
		<u>CLOSURE JOINT REINFORCING</u>	
09/14/90	UPDATED DRAWING		
DATE	REVISION		
 J. MULLER INTERNATIONAL	 Libby Engineers	INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58) SCALE : AS NOTED DATE : JUN. 1990	
		SHEET No. PB5 OF SHEETS	



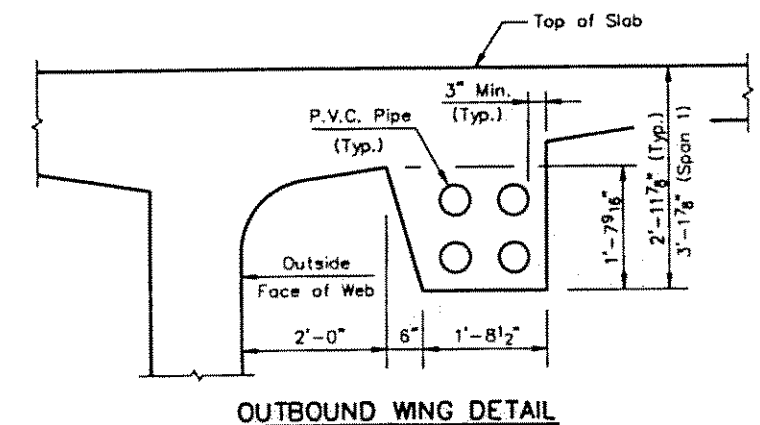
D RIP GROOVE DETAIL

TYPICAL BULKHEAD ELEVATION
MINIMUM DEPTH

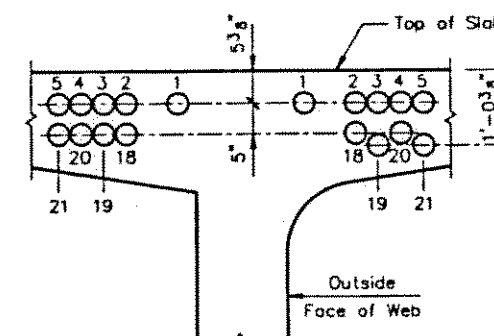
- NOTES:
1. For Dimensions (W & H) and varies, see Segment Shop Drawings.
 2. Where Keys conflict with Tendons, omit keys. See Bulkhead Elevation, Sheet No. BH-02, for Fixed Bulkhead Key Locations in bottom slab.



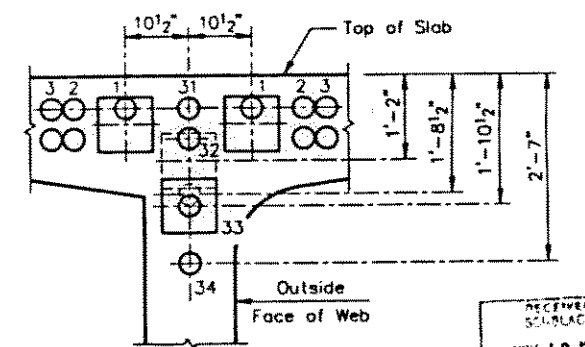
PROFILE 1
PROFILE 2
PROFILE 3
TRANSVERSE P.T. PROFILES



OUTBOUND WING DETAIL



PARTIAL DETAIL AT PIERS



PARTIAL DETAIL AT HINGE CANTILEVER

NOTE:
For Number of Tendons, Strands per Tendon
and Profile Locations see Reinforcing Drawings.

REV.	DATE	REVISION	BY	CHKD	APPROV.	DATE
2	11/90	General Update	M.W.R.	J.A.L.		
1	10/24/90	General Update	M.W.R.	J.A.L.		

SCI/E.E. BLACK
JOINT VENTURE

J. MULLER INTERNATIONAL
SAN DIEGO, CALIFORNIA

LoBuono, Armstrong & Associates
A DIVISION OF FREDERIC R. HARRIS, INC.
San Pedro, California Tallahassee, Florida

PROJECT: H-3 WINDWARD VIADUCT

SHEET TITLE
TYPICAL SEGMENT DIMENSIONS
AND TENDON DUCT LOCATIONS
1 OF 2

Rev. A
SHEET
BH-01
OF 2

* Use 11" Slab and 1'-10" Haunch in Segment IA1-01 Inbound and all Segments in Span 1 Outbound. The Slab Transition takes place in Segment IA1-02 Inbound and in the Pier Segment O-P1 Outbound.

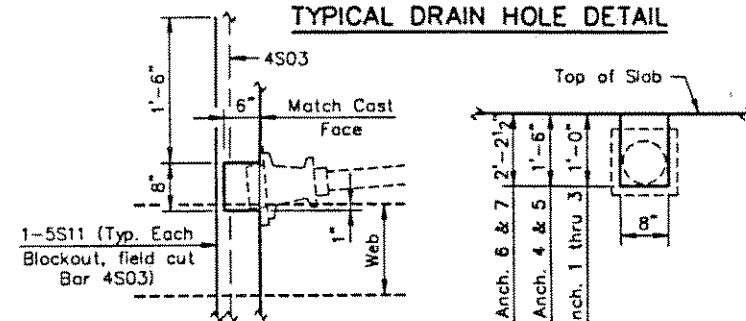
Shear Keys
(For Number Required
See Segment Shop Drawings)

3" Non-corrosive Drain and Vent
with 1/2" deep drip all around.
(For location, see Segment Shop Dwg.)

Place a 6" x 6" copper screen,
18 x 14 mesh or finer. Bond to
concrete with mastic.

1/2" Deep Drip Groove
(All around)

TYPICAL DRAIN HOLE DETAIL



PLAN

ELEVATION

BLOCKOUT - MATCH CAST FACE

NOTE:
For Shear Key Details
see Segment Form Drawings.

For Number of Web Keys
See Segment Shop Drawings

NOTES:

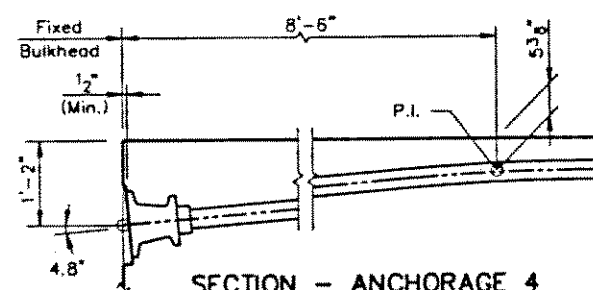
1. For Dimensions (W & H) and varies,
see Segment Shop Drawings.
2. Where Keys conflict with Tendons,
omit keys. See Typical Bulkhead Elevation,
Sheet BH-01, for Tendon Locations
in bottom slab. For Number Required,
see Segment Shop Drawings.

Bottom Slab Tendons
not shown for clarity
See Note 2

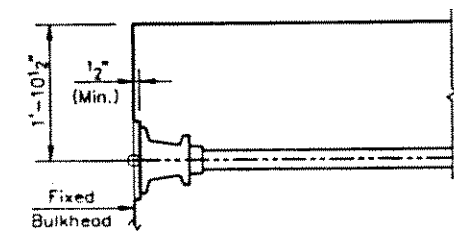
FLOATING

BULKHEAD ELEVATION

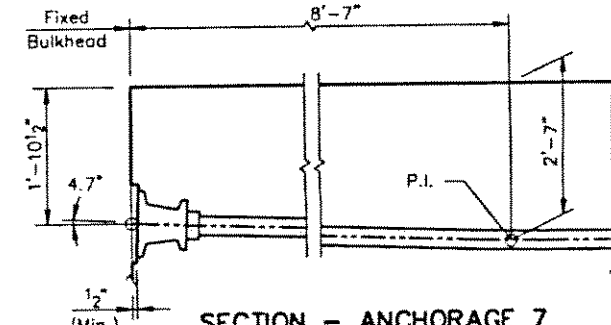
FIXED



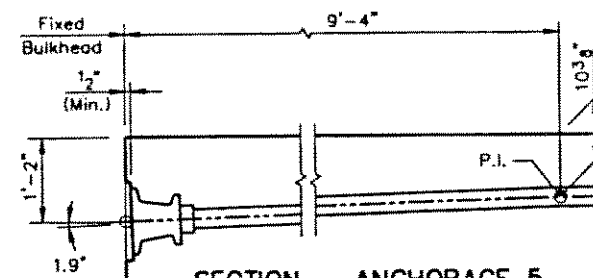
SECTION - ANCHORAGE 4



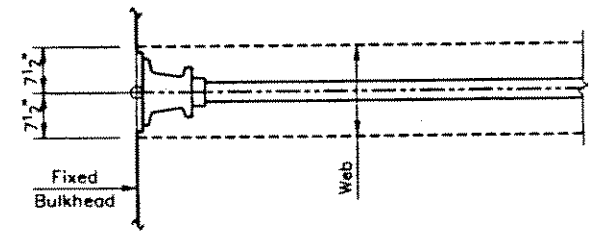
SECTION - ANCHORAGE 6



SECTION - ANCHORAGE 7



SECTION - ANCHORAGE 5



PLAN - ANCHORAGES 4 THRU 7

NOTE:
Use 30'-0" Minimum Tendon Radius,
unless otherwise noted. (Typ.)
For Anchorage Type required,
See Segment Shop Drawings.

PROJECT: H-3 WINDWARD VIADUCT

Rev. A

TYPICAL SEGMENT DIMENSIONS
AND TENDON DUCT LOCATIONS
2 OF 2

SHEET
BH-02
OF 2

SCI/E.E. BLACK
JOINT VENTURE

J. MULLER INTERNATIONAL
SAN DIEGO, CALIFORNIA

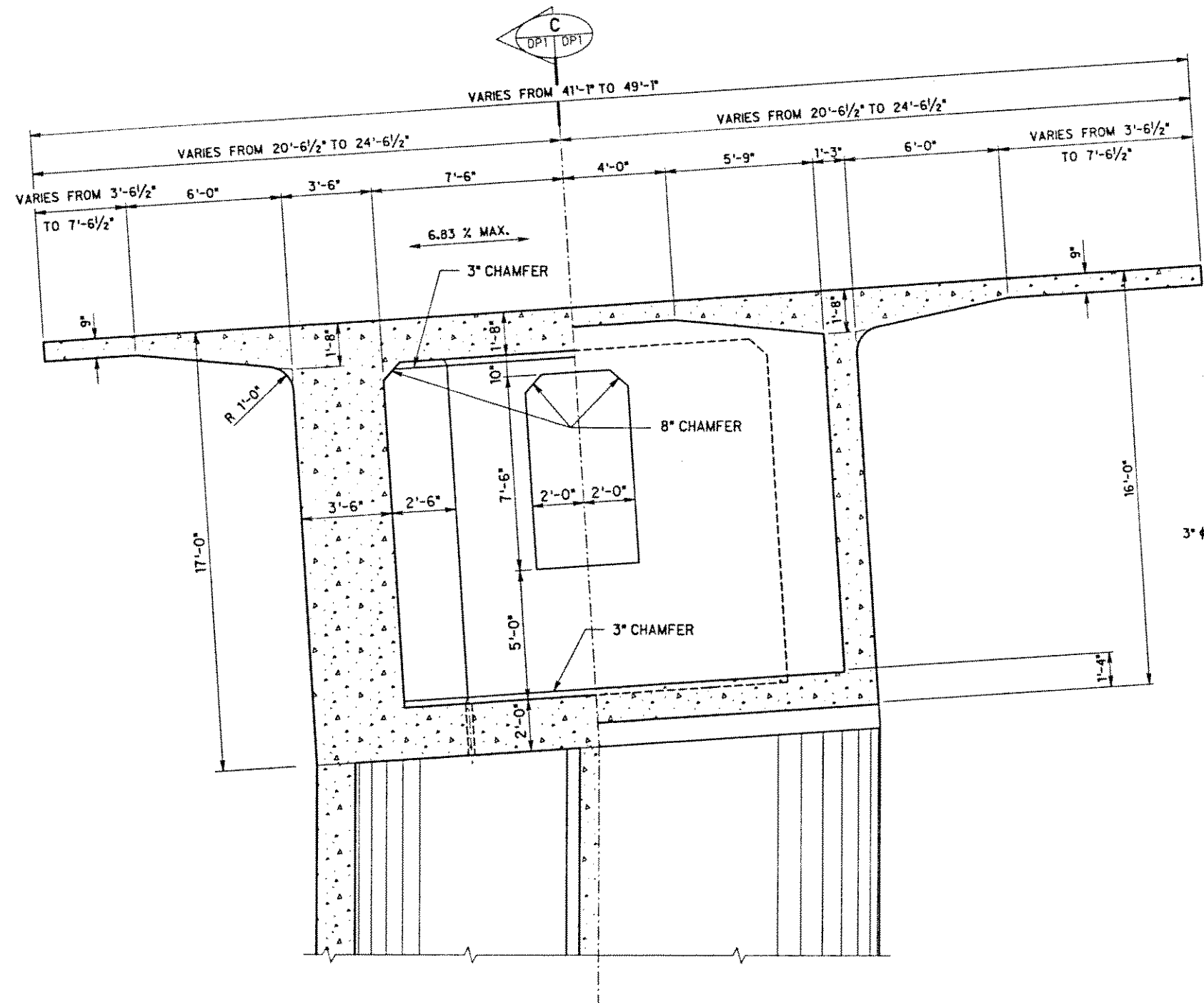
LoBuono, Armstrong & Associates
A DIVISION OF FREDERIC R. HARRIS, INC.
San Pedro, California Tallahassee, Florida

DESIGNED BY M.W.R. 8/90
DRAWN BY G.M.R. 8/90
CHK BY
APPROVE BY

CLIENT

NO.	DATE	REVISION	BY	CHKD
2	11/90	General Update	M.W.R.	J.A.L.
1	10/24/90	General Update	M.W.R.	J.A.L.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



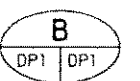
HALF SECTION

SCALE: $\frac{3}{8}" = 1'-0"$
SHOWING 20'-6 1/2"

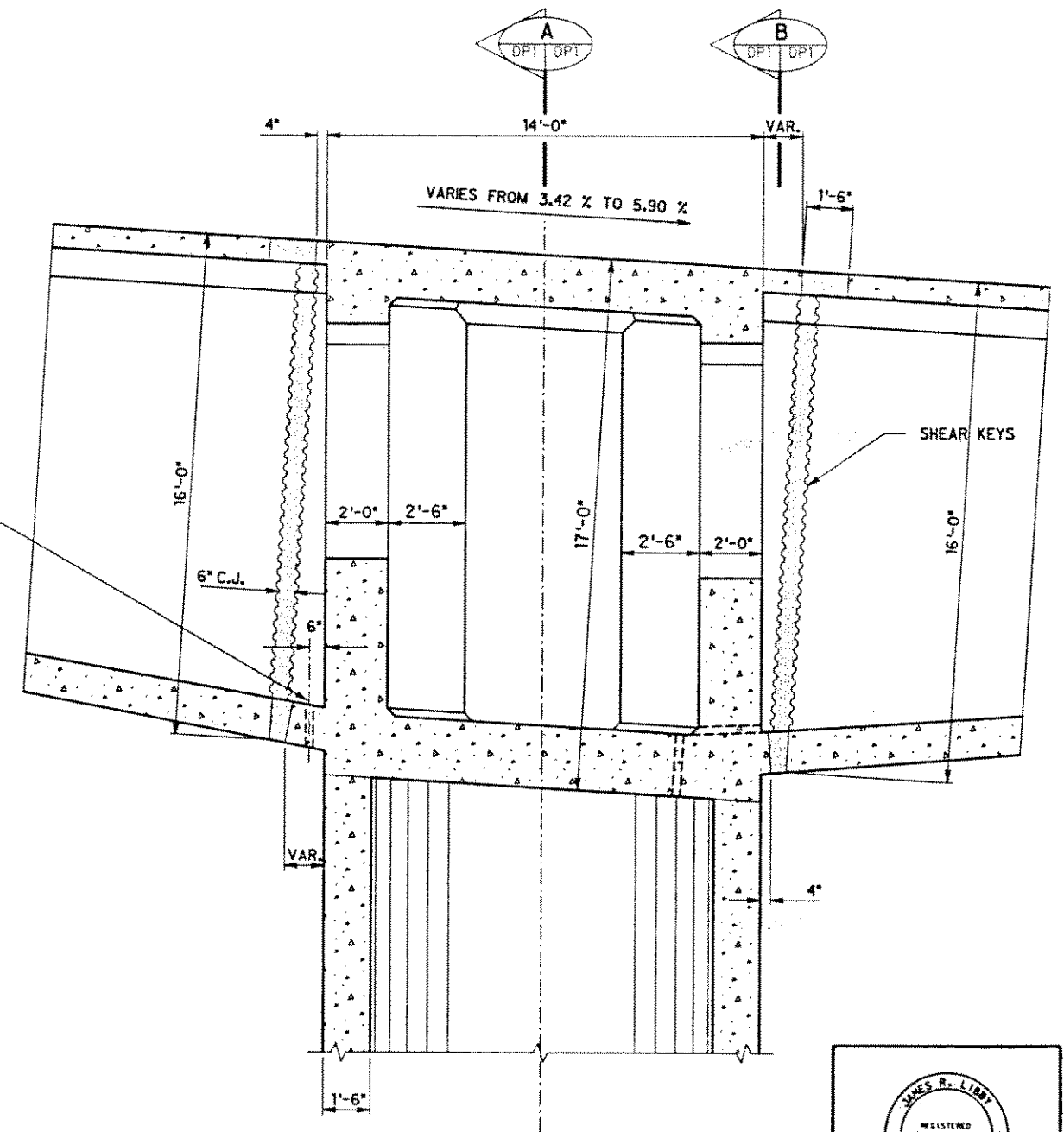


HALF SECTION

SCALE: $\frac{3}{8}" = 1'-0"$
SHOWING 24'-6 1/2"



NOTE: TOP SLAB THICKNESS VARIES FROM 9" TO 11" AT OUTBOUND PIER 1 (SEE SHEET No. PB1)
FOR DRAIN HOLE DETAIL SEE SHEET PB1
FOR DETAILS OF CONNECTION AT CLOSURE JOINT SEE SHEET PB5



SECTION

SCALE: $\frac{3}{8}" = 1'-0"$



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

[Signature]

04/05/91 UPDATED TITLE AND SHEET NO.
DATE: _____ REVISION: _____

J. MULLER INTERNATIONAL **Libby Engineers**

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

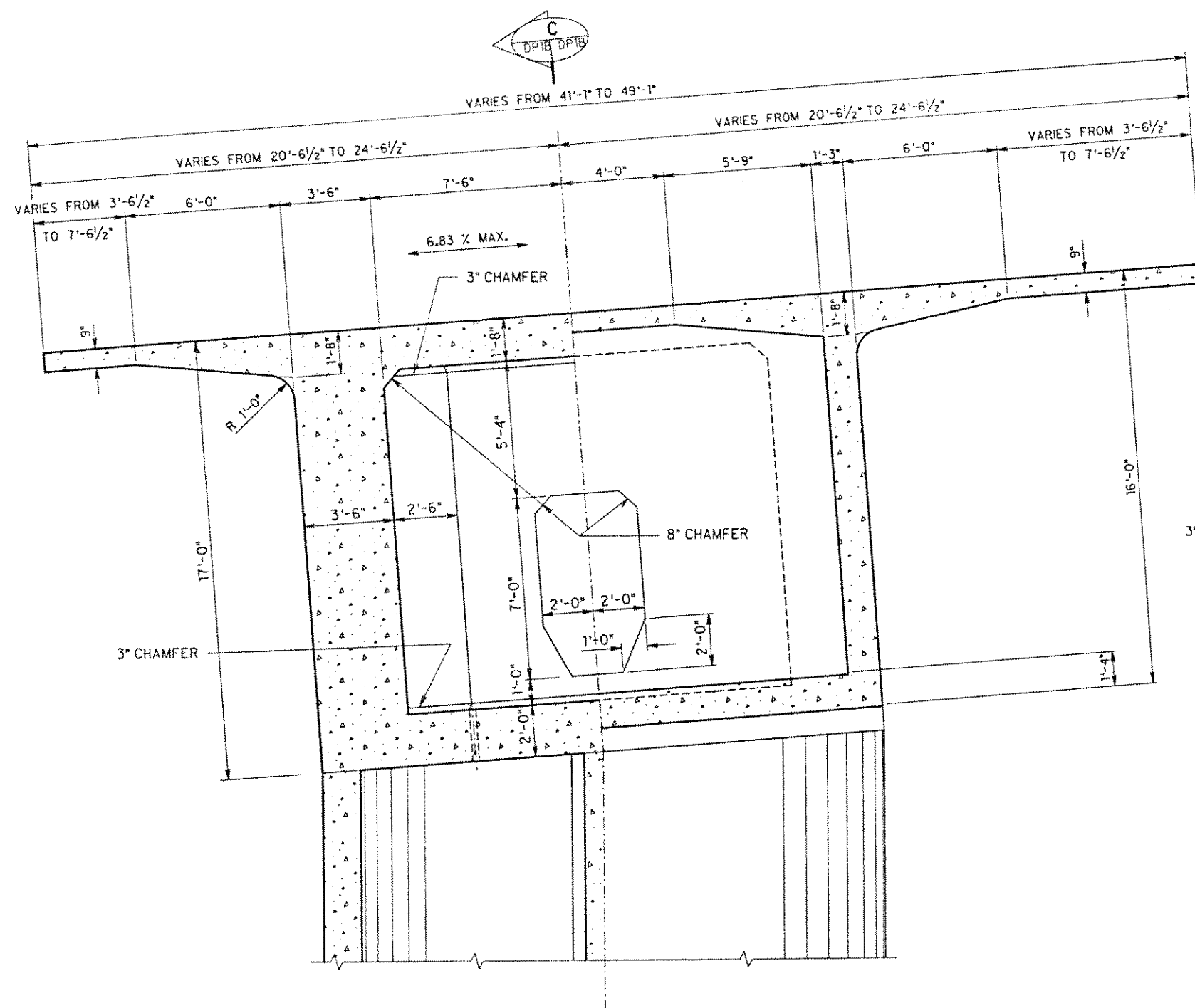
**FIXED PIER SEGMENT
DIMENSIONS
(TYPE I)**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

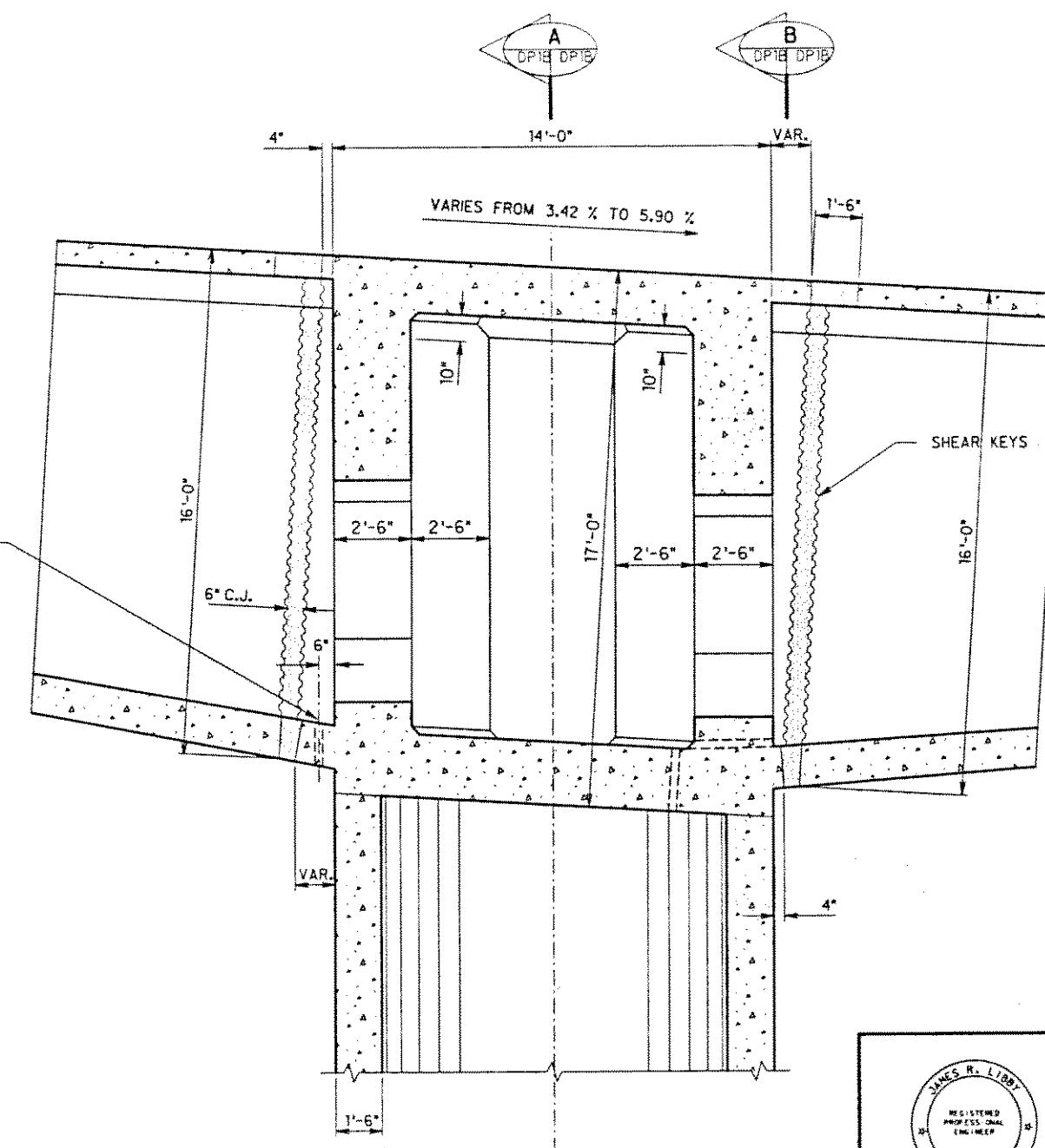
SHEET No. DP1A OF SHEETS

DESIGNED BY	DATE
CHECKED BY	
APPROVED BY	
NOTED BY	
DATE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



3" ϕ DRAIN HOLE (TYP.)

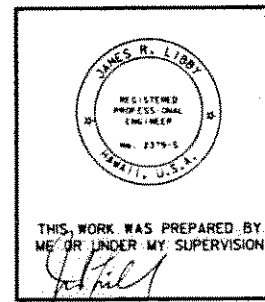


HALF SECTION A
 $\frac{3}{8}" = 1'-0"$
 SHOWING 20'-6 1/2"

HALF SECTION B
 $\frac{3}{8}" = 1'-0"$
 SHOWING 24'-6 1/2"

SECTION C
 $\frac{3}{8}" = 1'-0"$

SEE SHEET PS1 FOR LOCATION OF TYPE II PIER SEGMENTS
 FOR DRAIN HOLE DETAIL SEE SHEET PB1
 FOR DETAILS OF CONNECTION AT CLOSURE JOINT SEE SHEET PB5

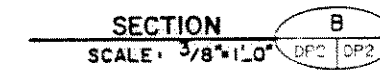
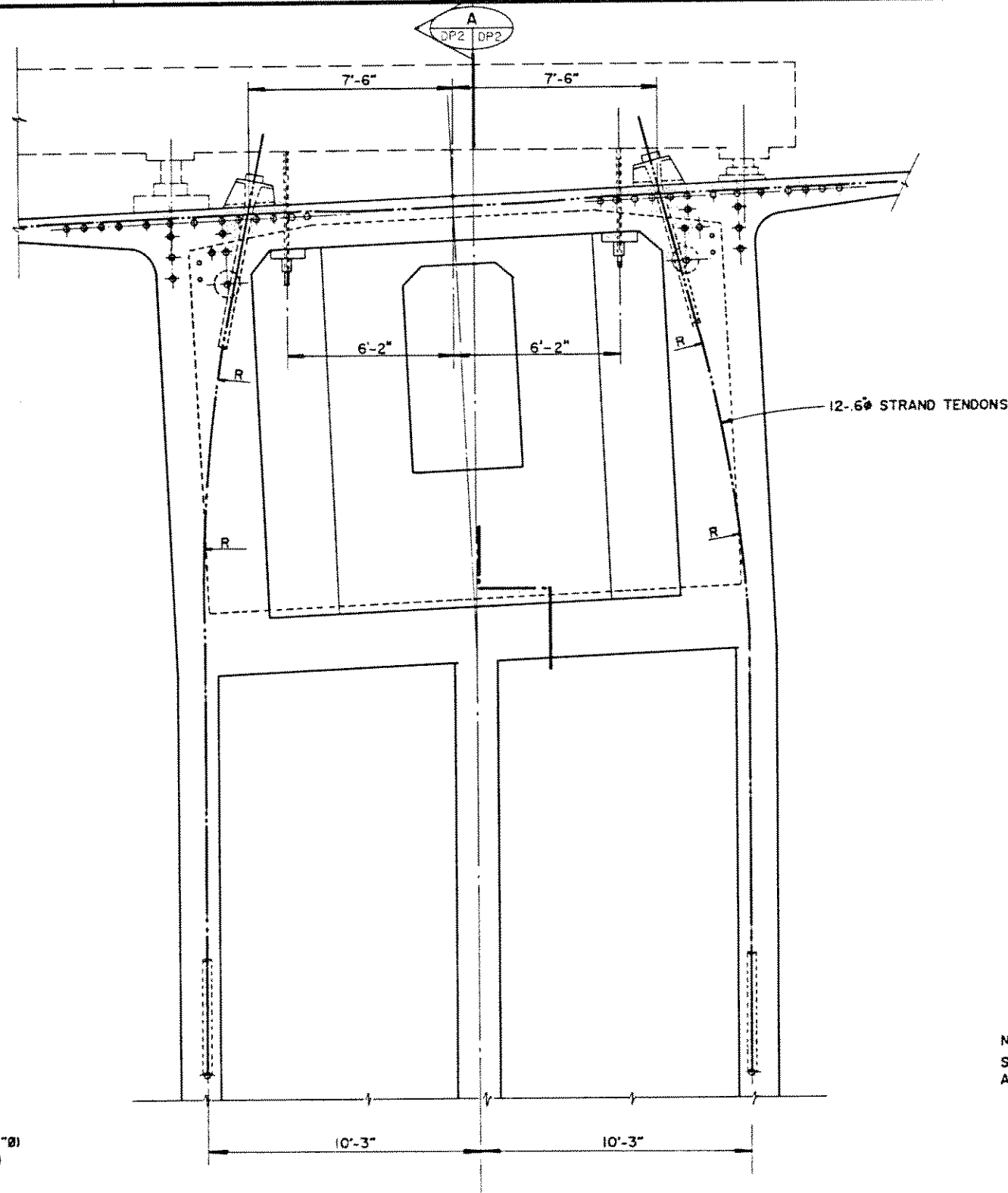
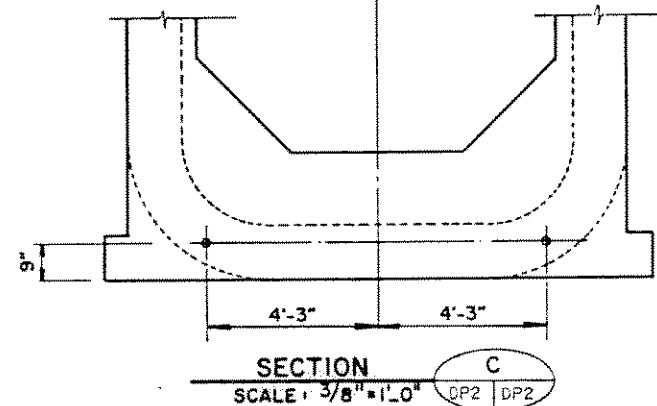
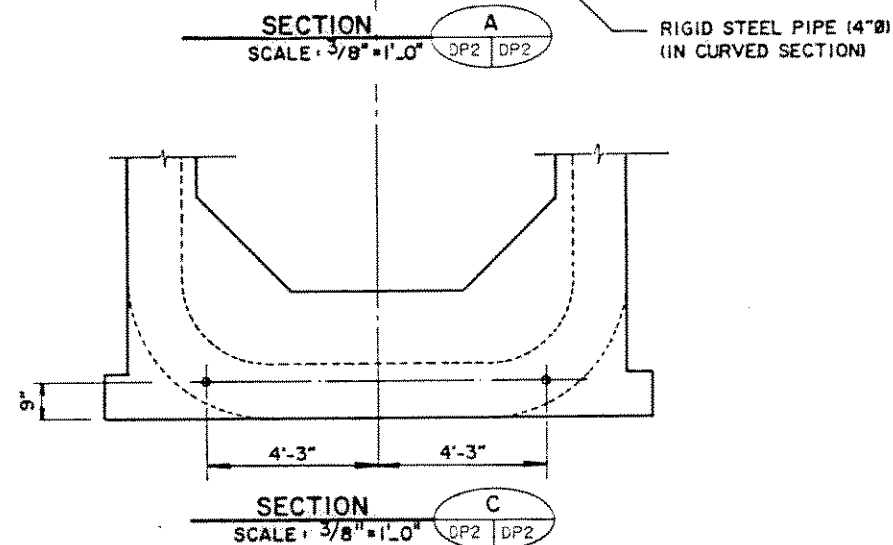
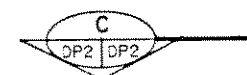
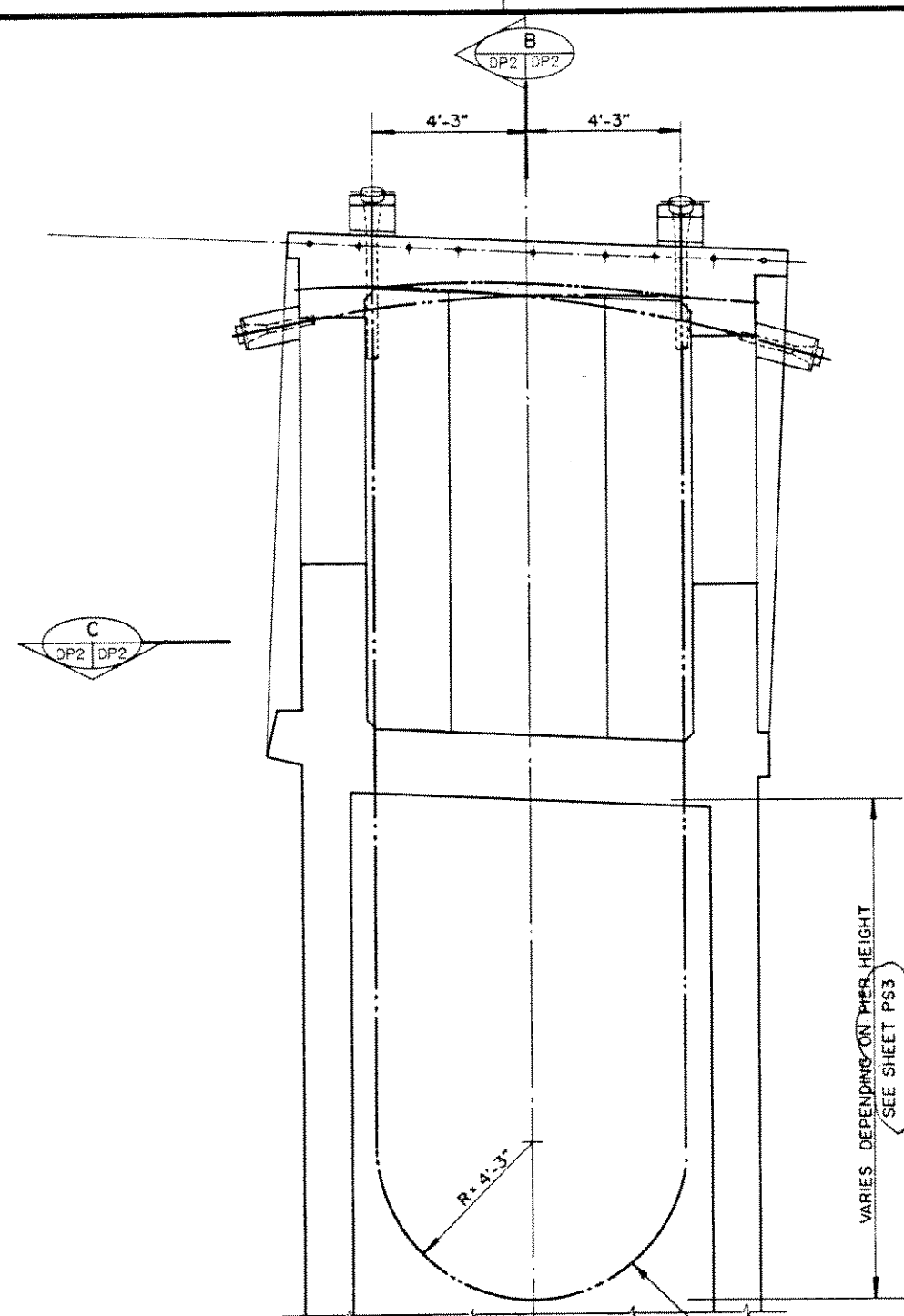


STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**FIXED PIER SEGMENT
 DIMENSIONS
 TYPE II**
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT No. I-H3-1(57)
 F.A.I. PROJECT No. I-H3-1(58)
 SCALE: AS NOTED DATE: MARCH 1991
 SHEET No. DP1B OF SHEETS

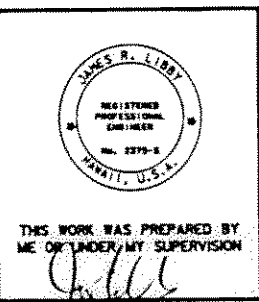
DATE: REVISION:
J. MULLER INTERNATIONAL
Libby Engineers

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



NOTE:
SEE SHEET NO. PS3 FOR REINFORCING
AROUND CURVED TENDON



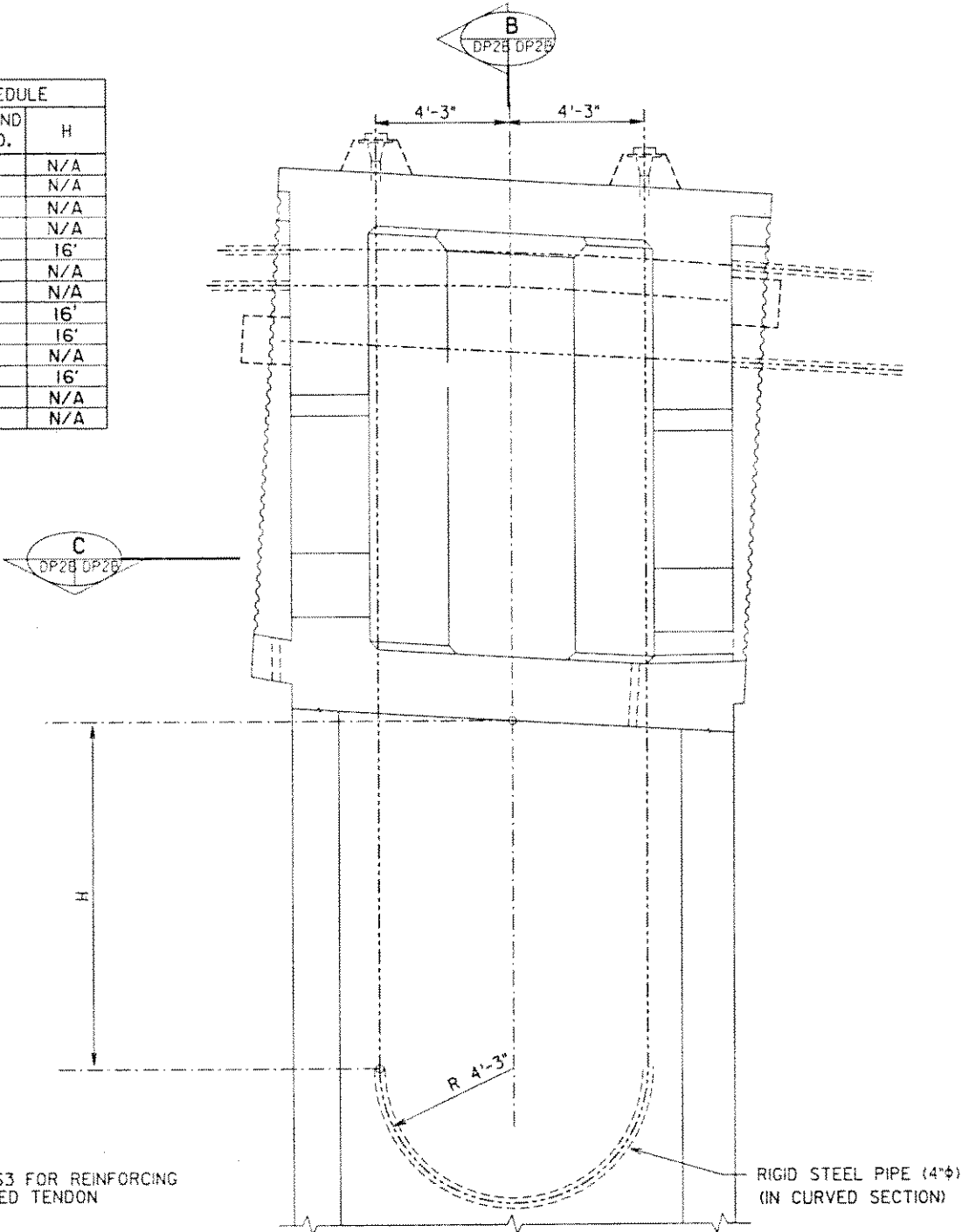
04/05/91	UPDATED TITLE AND SHEET NO.
10/04/90	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
FIXED PIER SEGMENT P.T. DETAILS TYPE 1
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990
SHEET NO. DP2 OF SHEETS

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

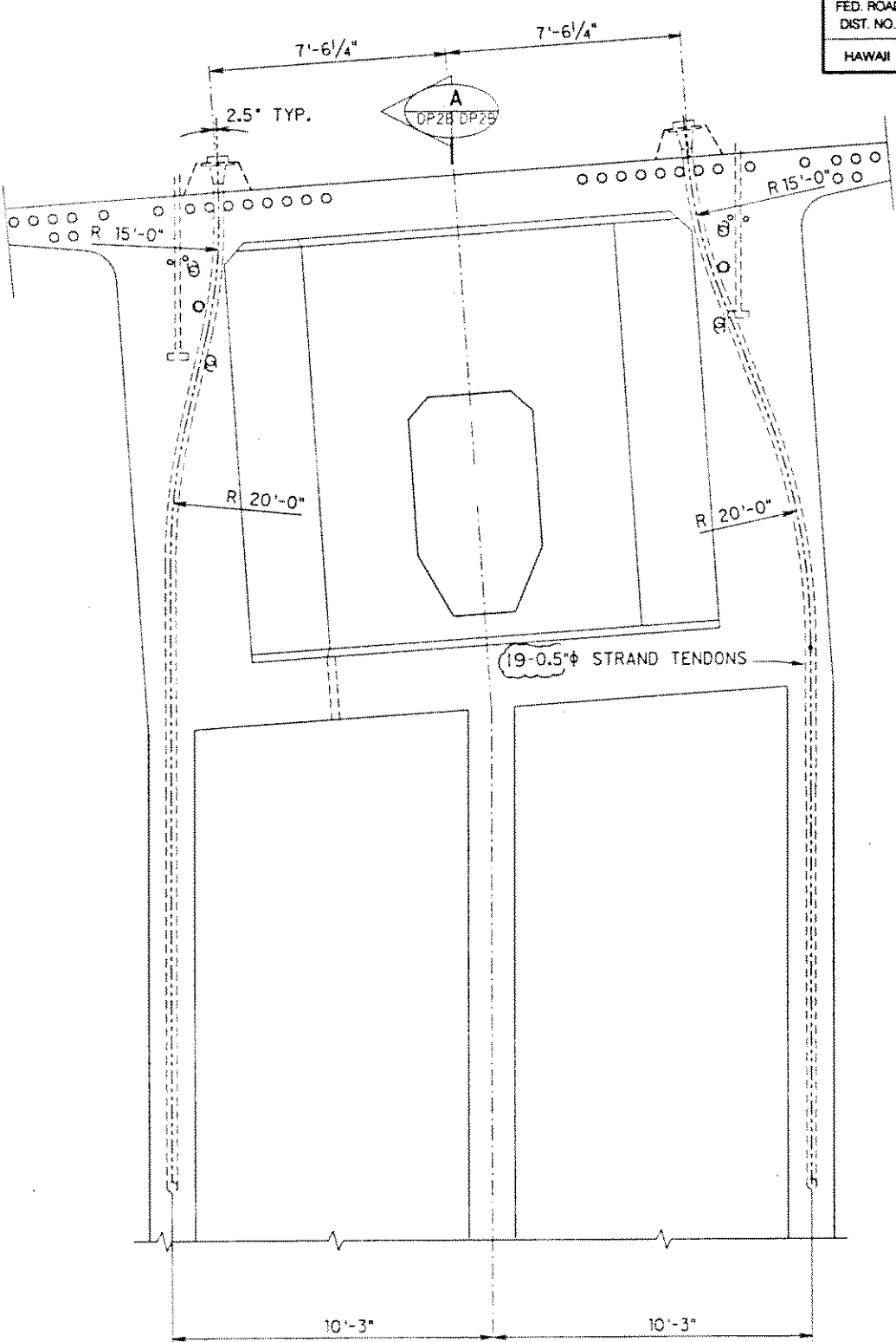
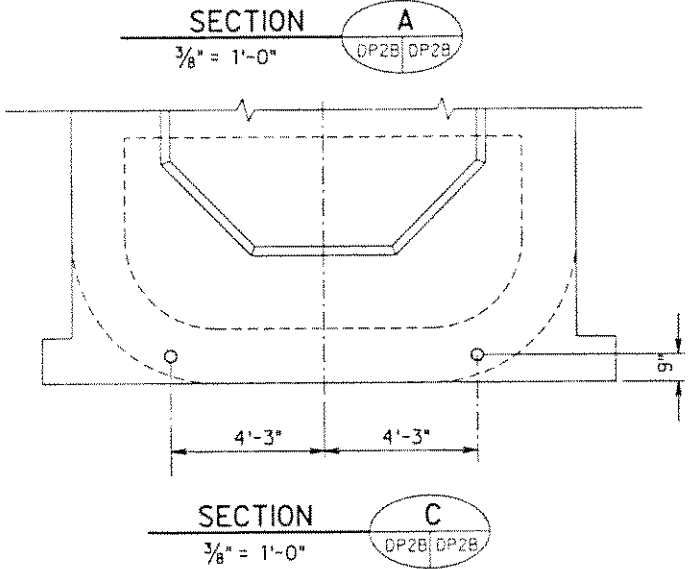
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

FIXED PIER TENDON SCHEDULE			
INBOUND PIER NO.	H	OUTBOUND PIER NO.	H
6	N/A	6	N/A
7	N/A	7	N/A
9	16'	9	N/A
10	N/A	10	N/A
11	16'	11	16'
14	N/A	14	N/A
15	N/A	15	N/A
16	N/A	16	16'
18	16'	18	16'
19	16'	19	N/A
20	16'	20	16'
21	N/A	21	N/A
22	N/A	22	N/A



NOTE:
SEE SHEET PS3 FOR REINFORCING
AROUND CURVED TENDON

TENDONS SHALL BE 19-0.5" STRANDS.
THE TENDONS SHALL BE STRESSED
TO 628 K SIMULTANEOUSLY
FROM BOTH ENDS.



SECTION B
3/8" = 1'-0"

07/02/91 UPDATED DRAWING.
05/03/91 UPDATED DRAWING.

DATE

REVISION

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Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIXED PIER SEGMENT
P.T. DETAILS

TYPE II

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

SCALE : AS NOTED

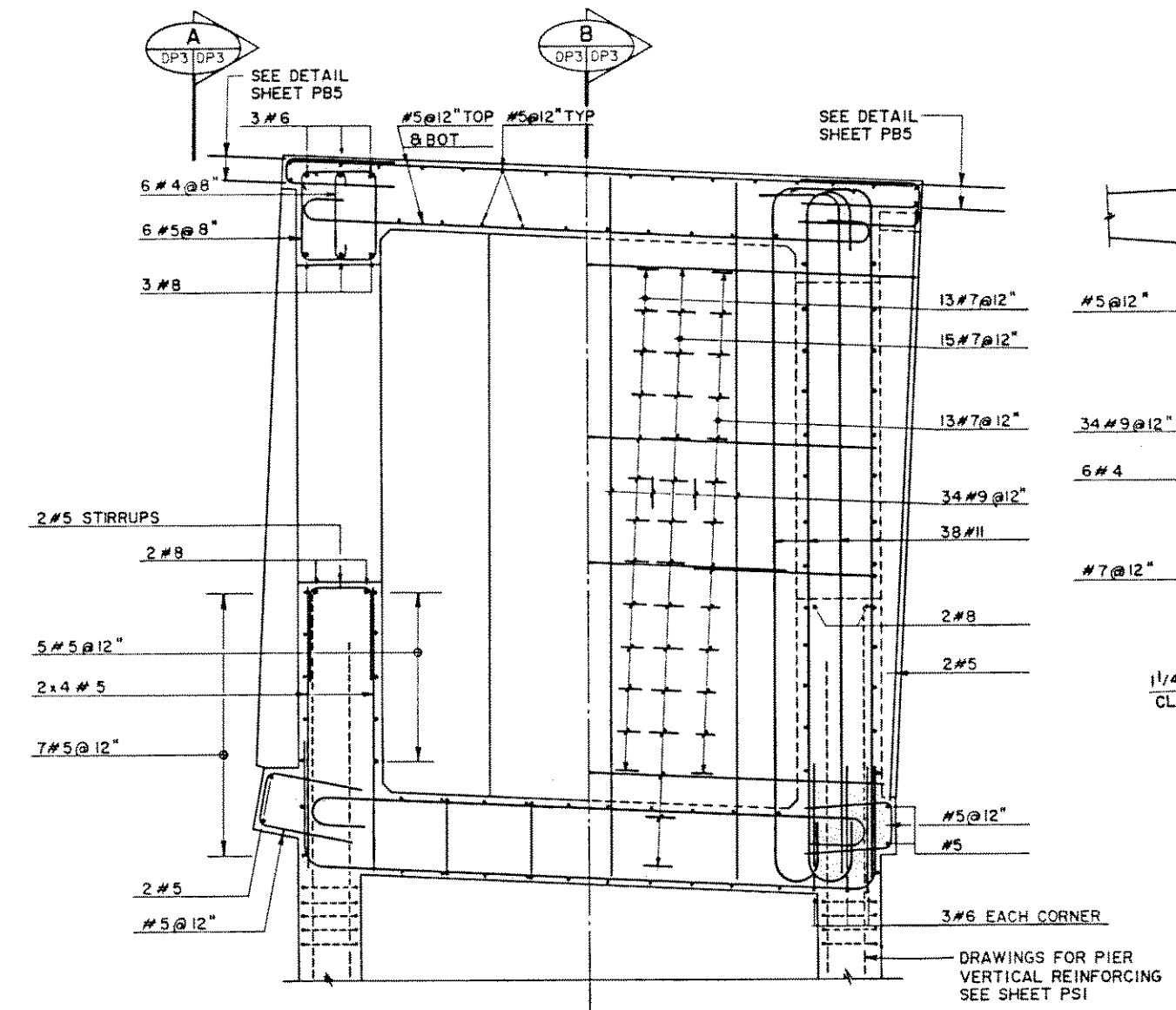
DATE : MAR. 1991

SHEET No. DP2B OF

SHEETS

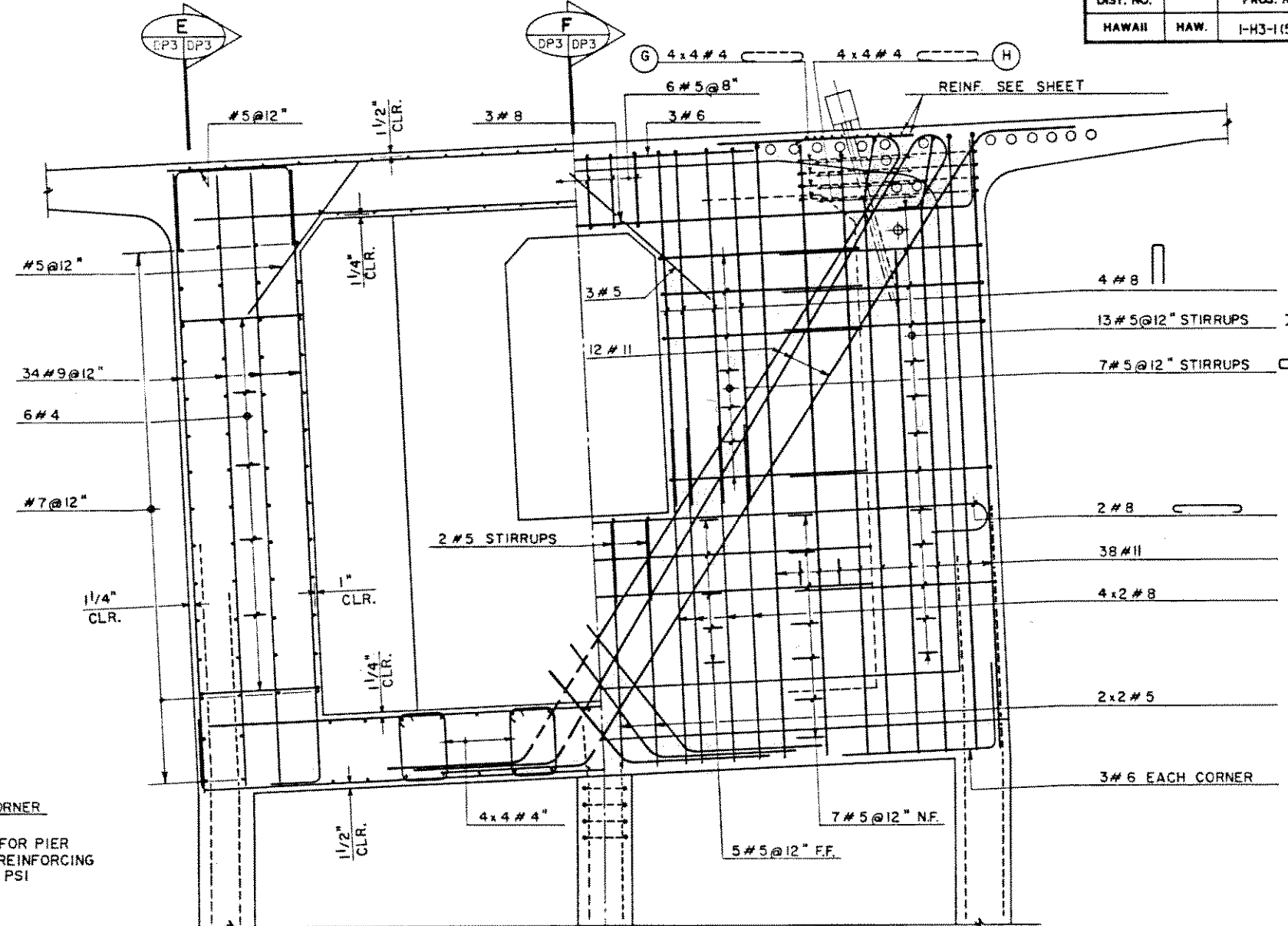
ORIGINAL	DATE
PLAN	
DRAWN BY	
CHECKED BY	
DESIGNED BY	
NOTED BY	
DATE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF SECTION F
SCALE: 1/2" = 1'-0"

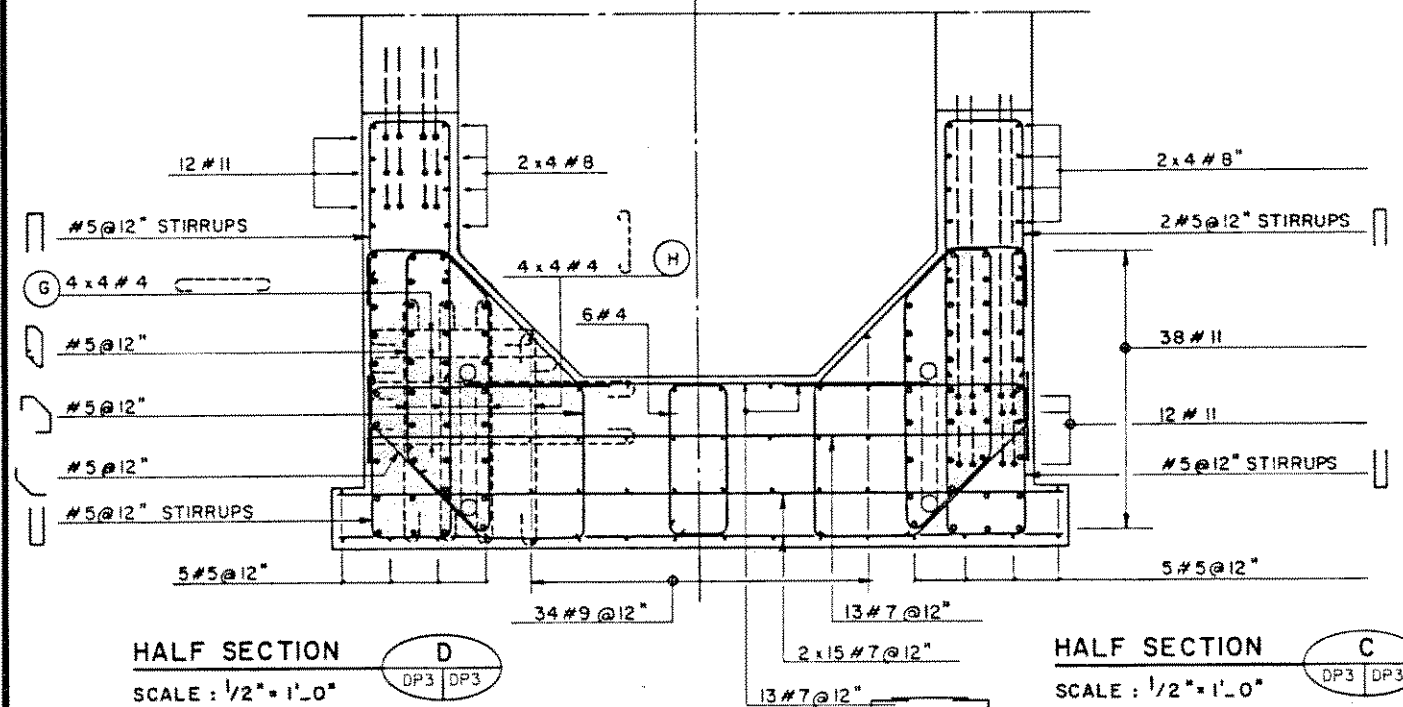
HALF SECTION E
SCALE: 1/2" = 1'-0"



HALF SECTION B
SCALE: 1/2" = 1'-0"

HALF SECTION A
SCALE: 1/2" = 1'-0"

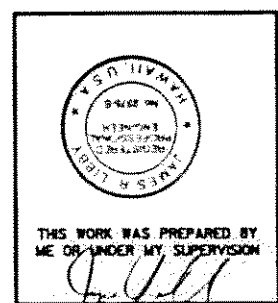
NOTE:
FOR ELECTRICAL MANHOLE
DETAILS SEE SHEET ED



HALF SECTION D
SCALE: 1/2" = 1'-0"

HALF SECTION C
SCALE: 1/2" = 1'-0"

DATE	
DESIGNED BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
NO.	



04/05/91

DATE

UPDATED TITLE AND SHEET NO.

REVISION

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Libby

Engineers

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

FIXED PIER SEGMENT

REINFORCING

(TYPE I)

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

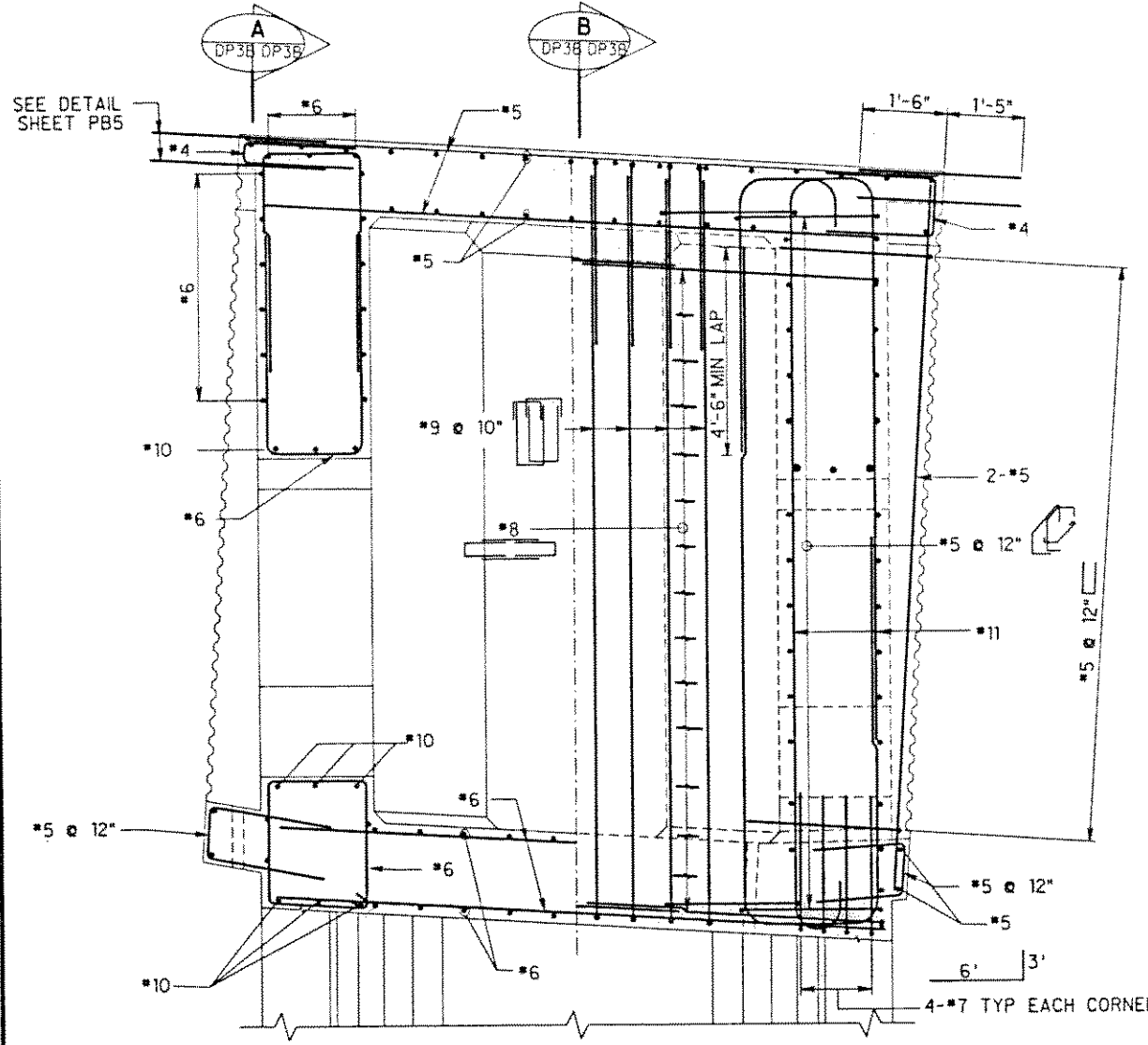
SCALE: AS NOTED

DATE: JUN. 1990

SHEET No. DP3A OF

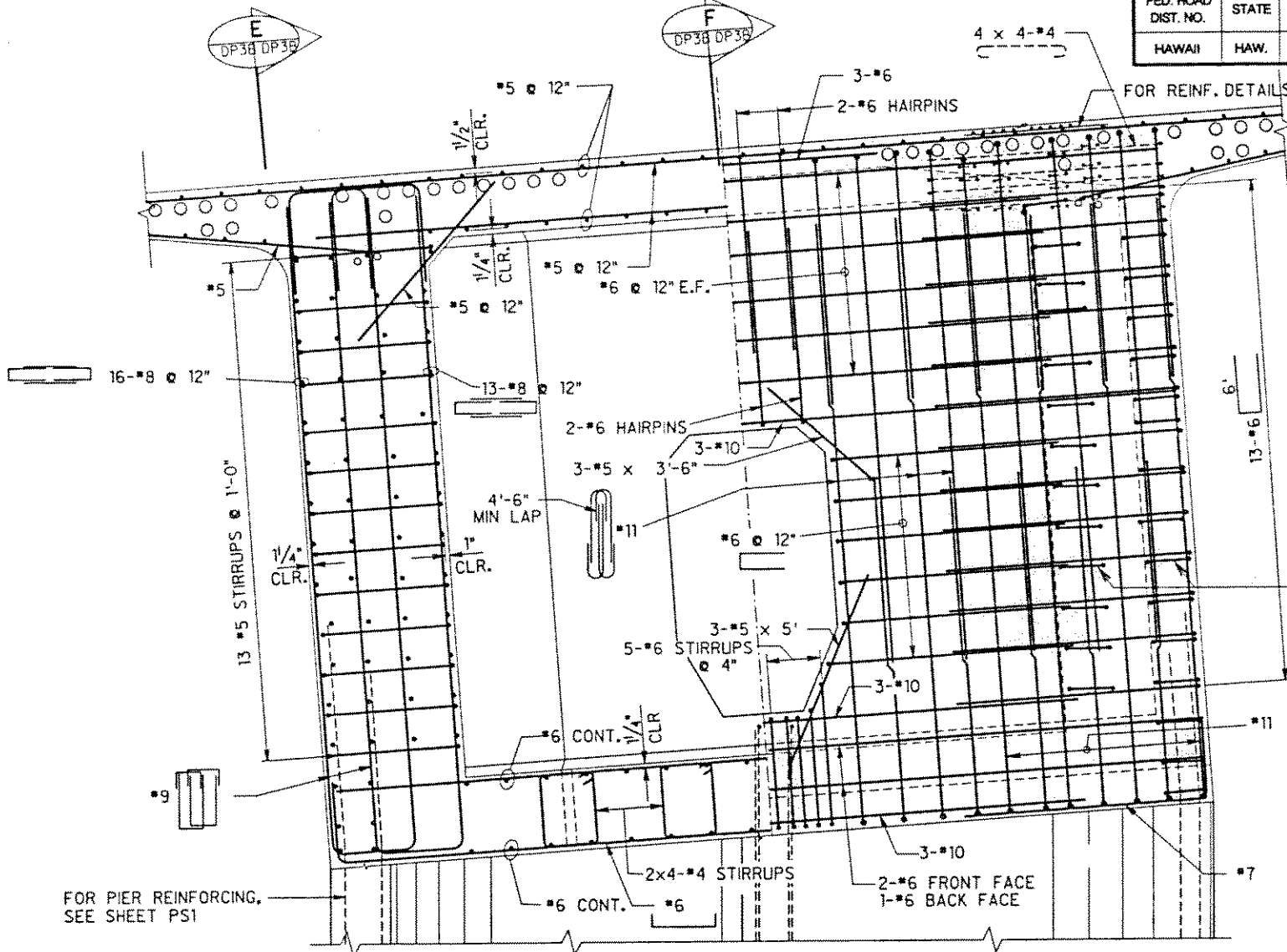
SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



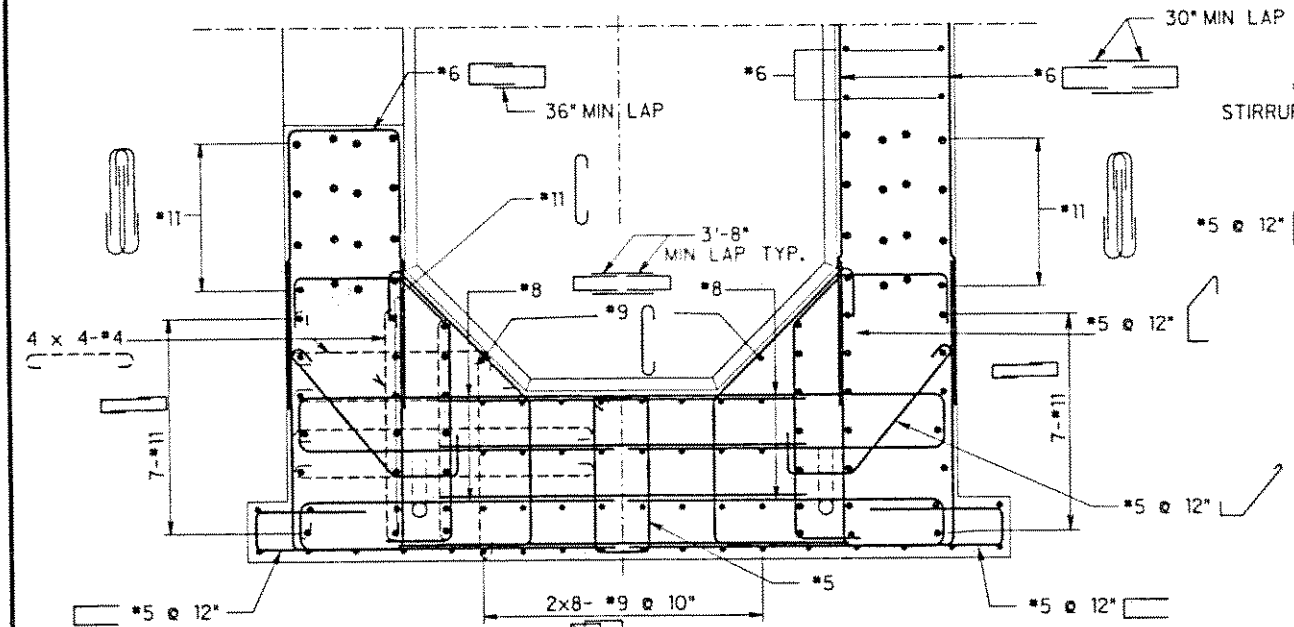
HALF SECTION F
1/2" = 1'-0" DP3B DP3B

HALF SECTION E
1/2" = 1'-0" DP3B DP3B



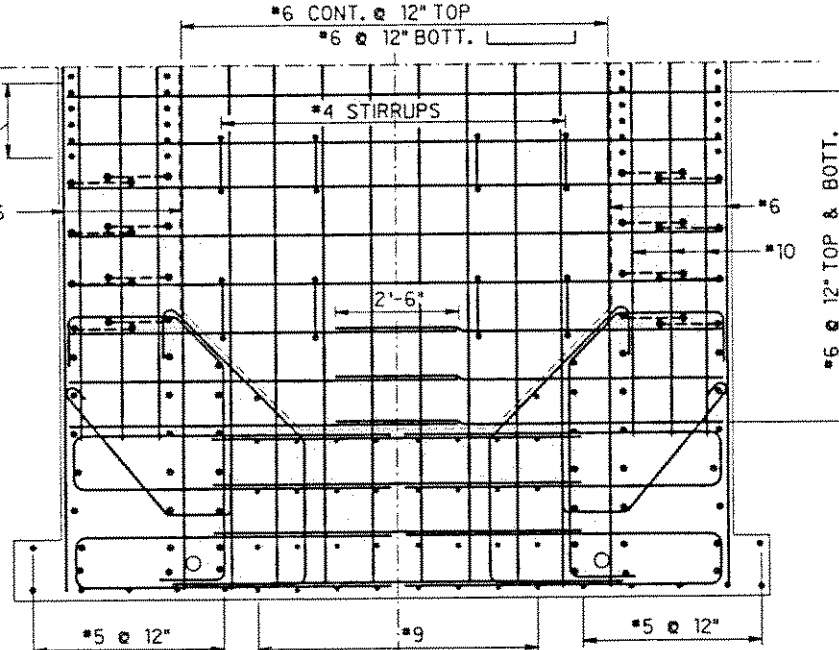
HALF SECTION B
1/2" = 1'-0" DP3B DP3B

HALF SECTION A
1/2" = 1'-0" DP3B DP3B



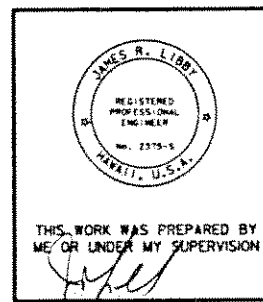
HALF SECTION D
1/2" = 1'-0" DP3B DP3B

HALF SECTION C
1/2" = 1'-0" DP3B DP3B



HALF SECTION G
1/2" = 1'-0" DP3B DP3B

NOTE: FOR ELECTRICAL MANHOLE DETAILS, SEE SHEET ED1

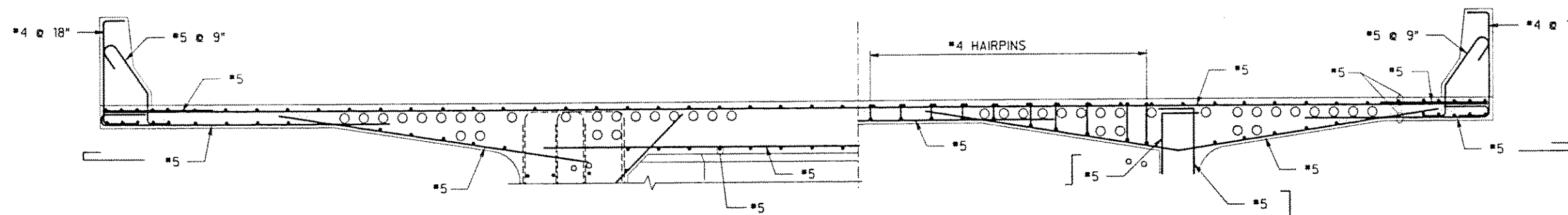


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**FIXED PIER SEGMENT
REINFORCING
TYPE II**
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: MAR 1991
SHEET No. DP3B OF SHEETS

08/23/91 UPDATED DRAWING.
DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

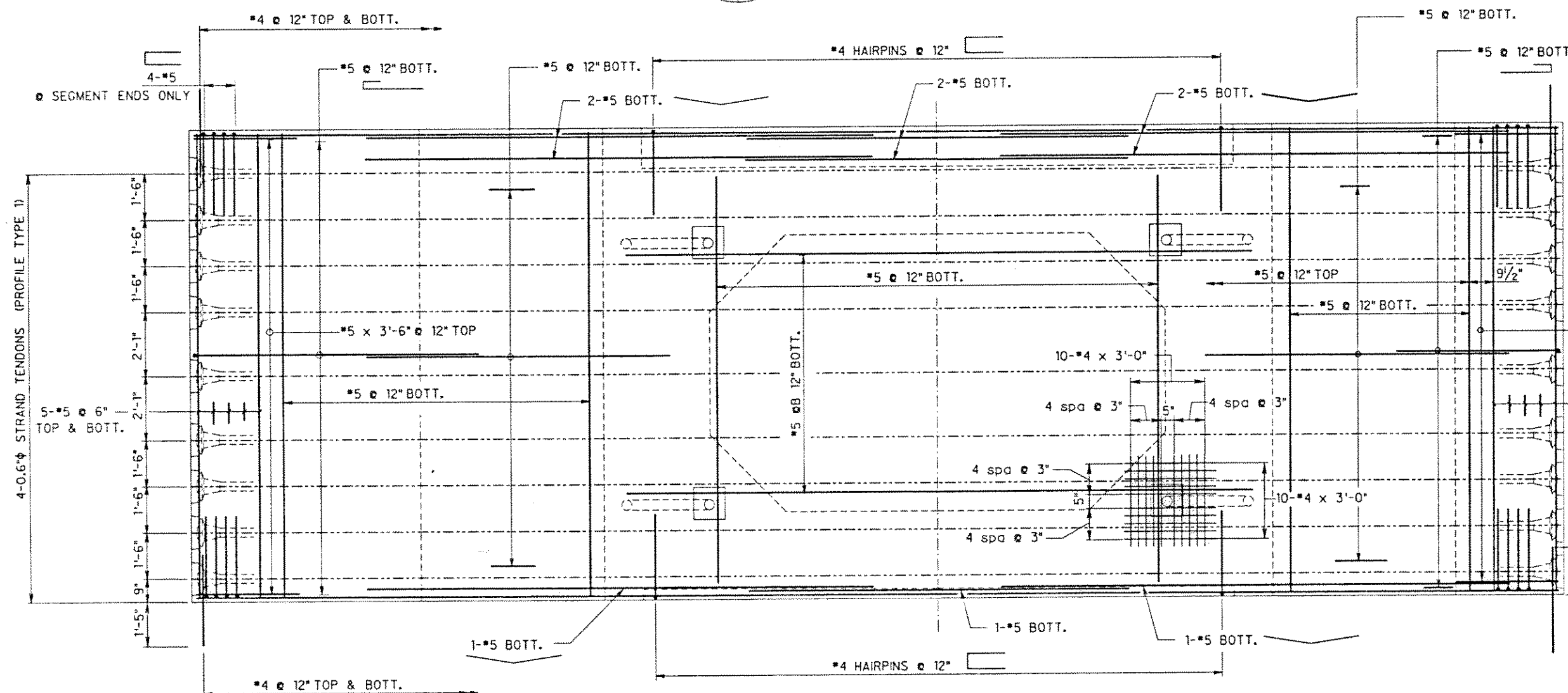
DATE
SURVEY PLOTTED BY
DRAWN BY
CHECKED BY
NOTE BOOK
NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF SECTION B
1/2" = 1'-0"

HALF SECTION A
1/2" = 1'-0"

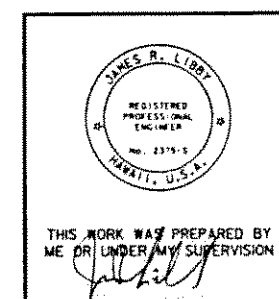


PLAN
1/2" = 1'-0"

NOTE: FOR TRANSVERSE TENDON PROFILES SEE SHEET TT1

5-#5 @ 6" TOP & BOTT.

1-6"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TOP SLAB PIER SEGMENTS
REINFORCING**

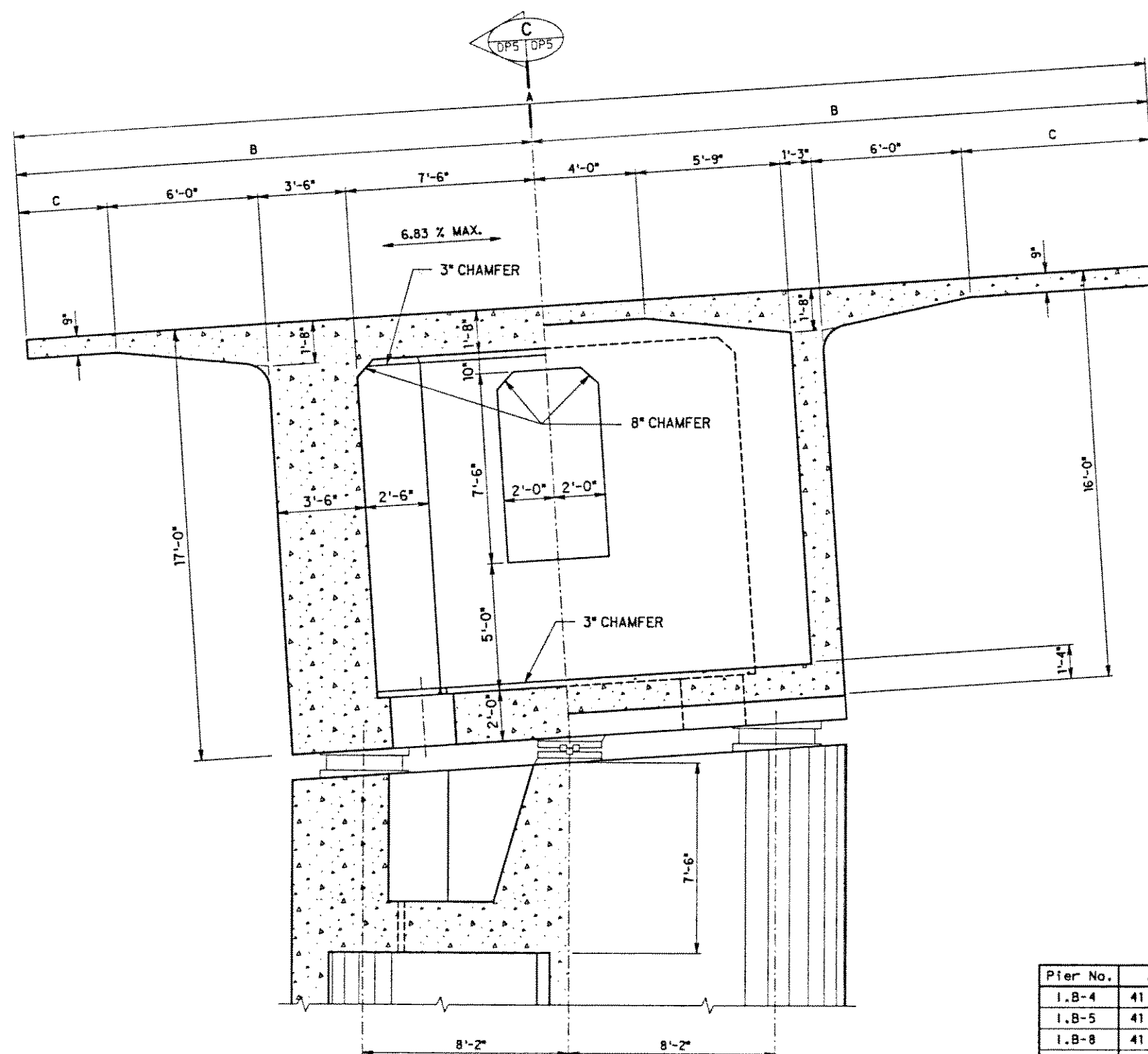
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. DP4 OF SHEETS

MAR 1991 REVISED DRAWING
DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

ORIGINAL PLAN
NOTES
DATE
DESIGNED BY
CHECKED BY
QUANTITIES BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF SECTION
SCALE: 3/8" = 1'-0"

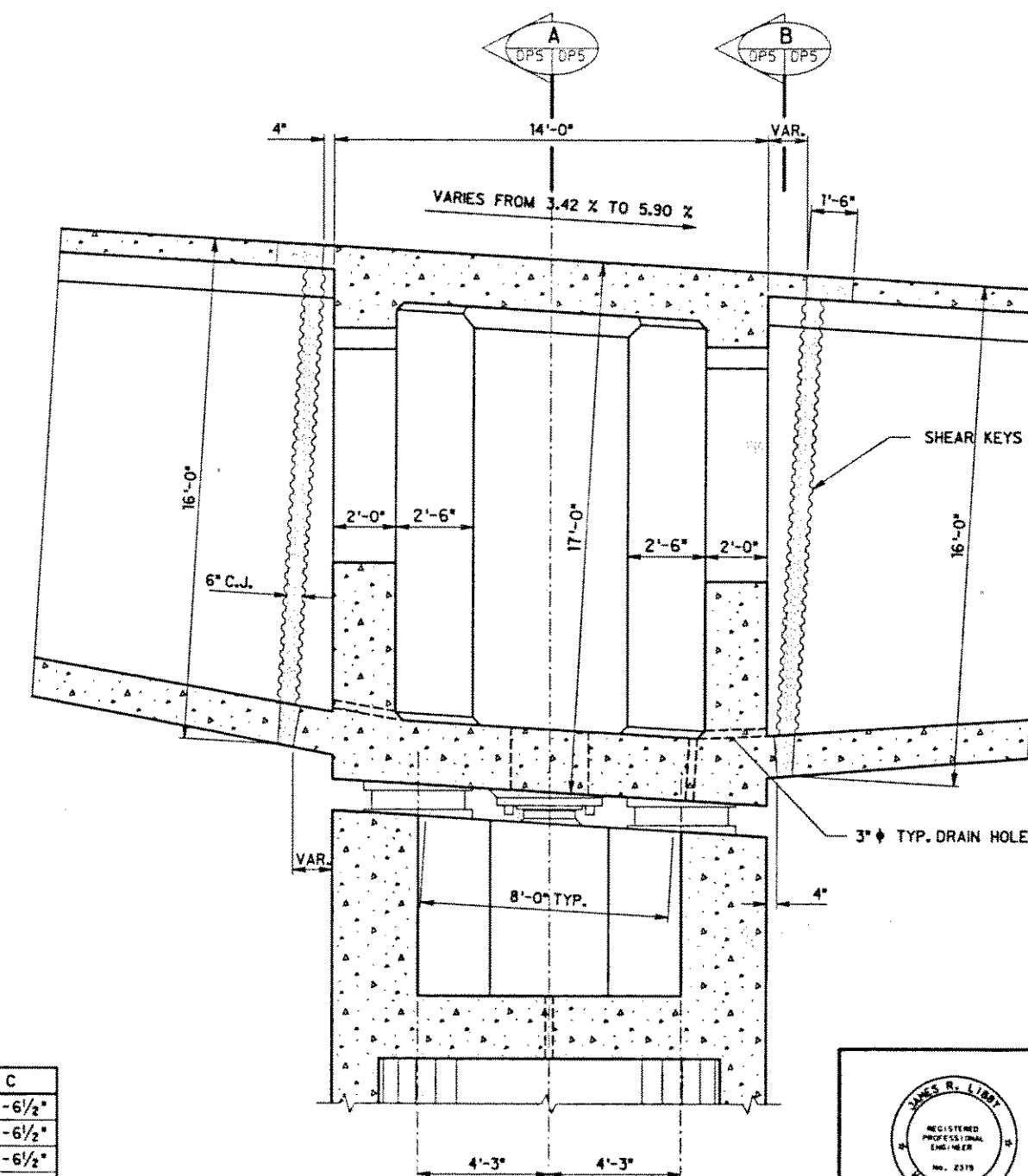
A
DPS DPS

HALF SECTION
SCALE: 3/8" = 1'-0"

B
DPS DPS

NOTE: FOR DRAIN HOLE DETAIL SEE SHEET PB1
FOR DETAILS OF CONNECTION AT CLOSURE JOINT SEE SHEET PB5

Pier No.	A	B	C
I.B-4	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-5	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-8	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-12	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-13	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-17	41'-1"	20'-6 1/2"	3'-6 1/2"
I.B-23	49'-1"	24'-6 1/2"	7'-6 1/2"
O.B-4	47'-1"	23'-6 1/2"	6'-6 1/2"
O.B-5	47'-1"	23'-6 1/2"	6'-6 1/2"
O.B-8	47'-1"	23'-6 1/2"	6'-6 1/2"
O.B-12	41'-1"	20'-6 1/2"	3'-6 1/2"
O.B-13	41'-1"	20'-6 1/2"	3'-6 1/2"
O.B-17	41'-1"	20'-6 1/2"	3'-6 1/2"
O.B-23	41'-1"	20'-6 1/2"	3'-6 1/2"



SECTION

SCALE: 3/8" = 1'-0"

C
DPS DPS

4/29/91 UPDATED DRAWING.

DATE REVISION

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SLIDING PIER SEGMENT
DIMENSIONS
(TYPE I)

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

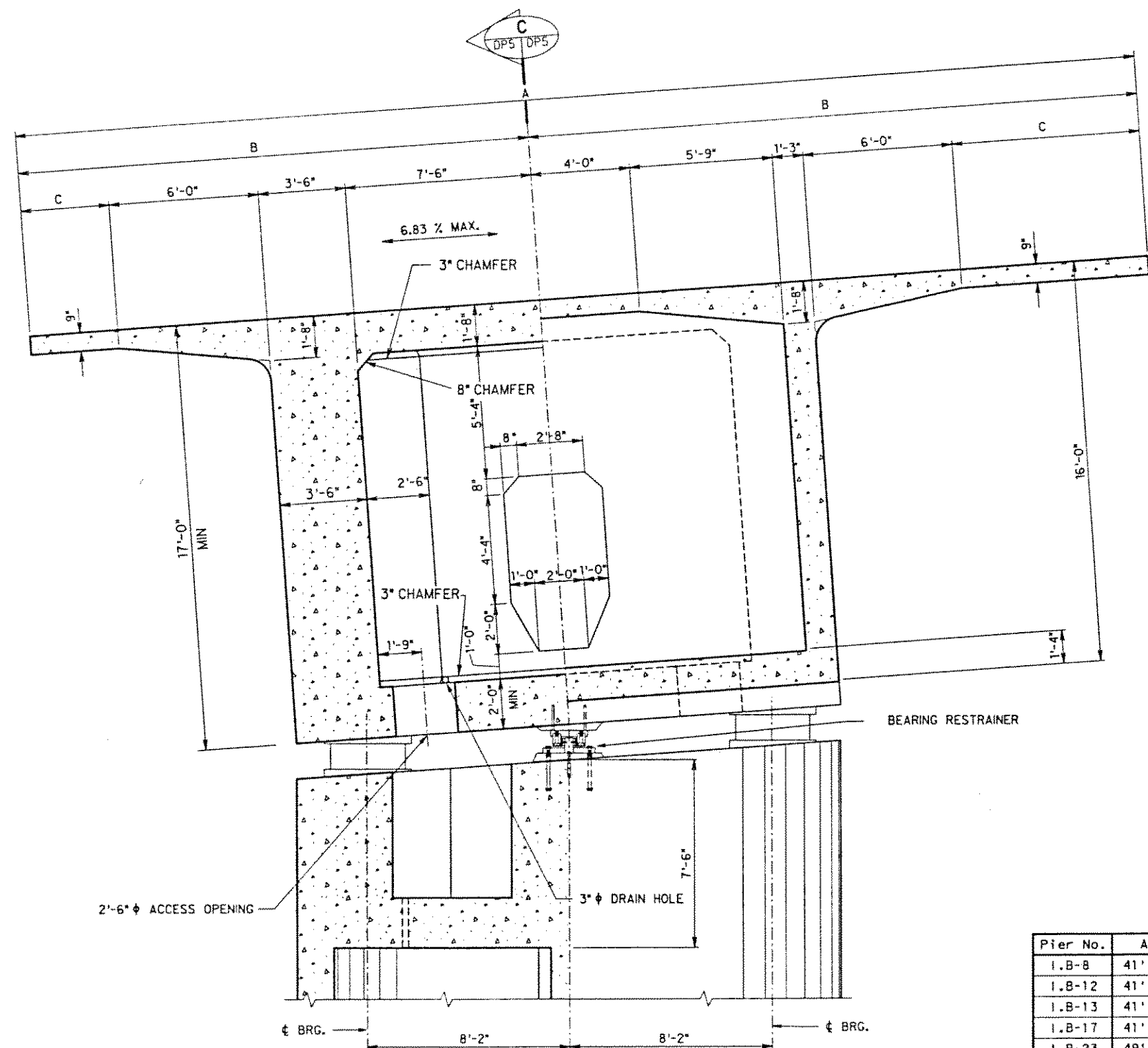
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

SHEET No. DP5A0F SHEETS

139

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

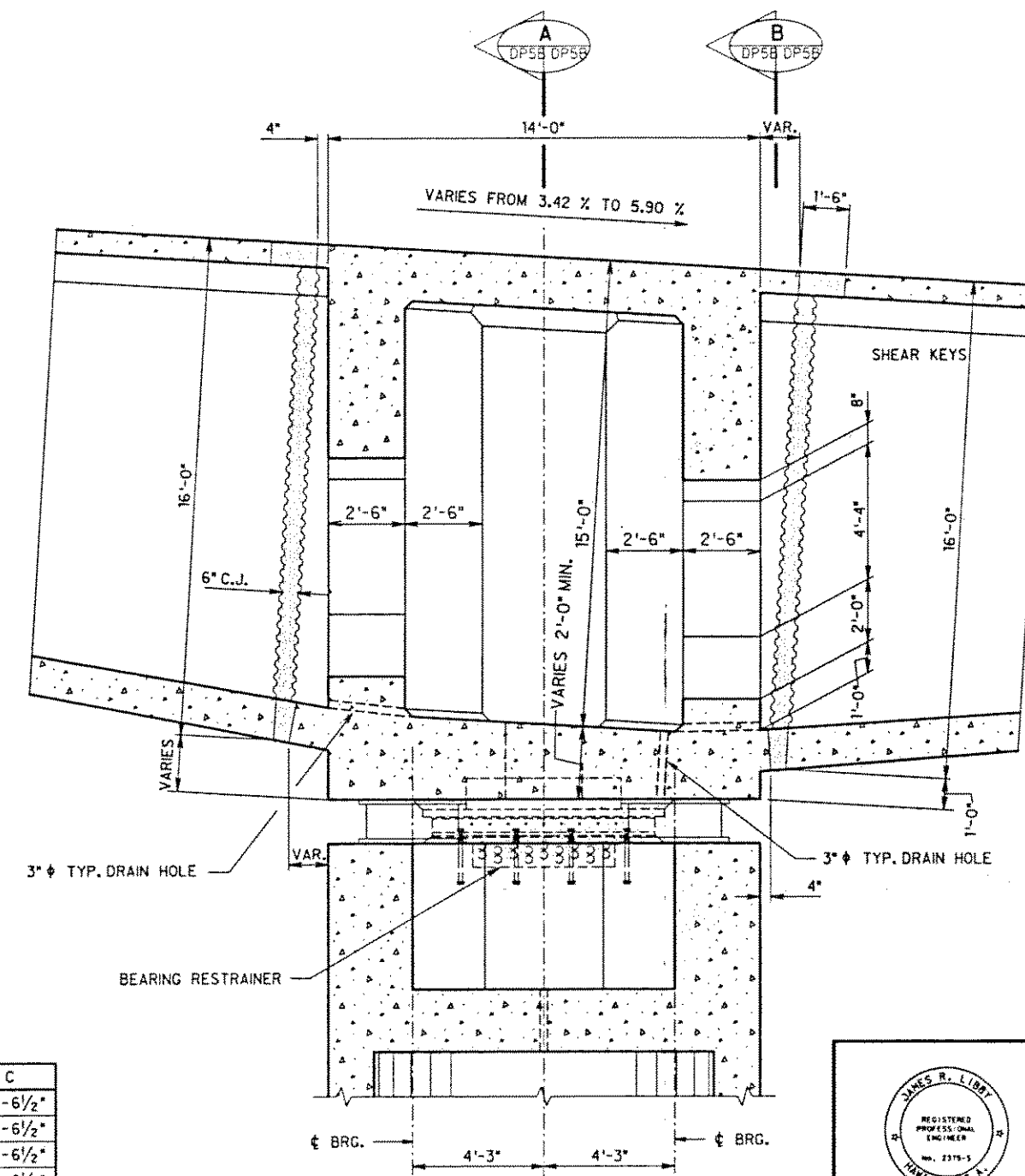


HALF SECTION A
SCALE: $\frac{3}{8}" = 1'-0"$

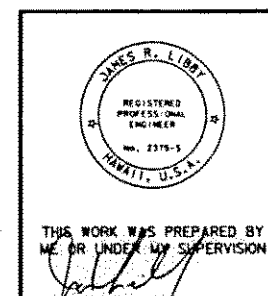
HALF SECTION B
SCALE: $\frac{3}{8}" = 1'-0"$

NOTE: FOR DRAIN HOLE DETAIL SEE SHEET PB1
FOR DETAILS OF CONNECTION AT CLOSURE JOINT SEE SHEET PB5

Pier No.	A	B	C
1.B-8	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
1.B-12	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
1.B-13	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
1.B-17	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
1.B-23	49'-1"	24'-6 $\frac{1}{2}$ "	7'-6 $\frac{1}{2}$ "
0.B-8	47'-1"	23'-6 $\frac{1}{2}$ "	6'-6 $\frac{1}{2}$ "
0.B-12	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
0.B-13	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
0.B-17	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "
0.B-23	41'-1"	20'-6 $\frac{1}{2}$ "	3'-6 $\frac{1}{2}$ "



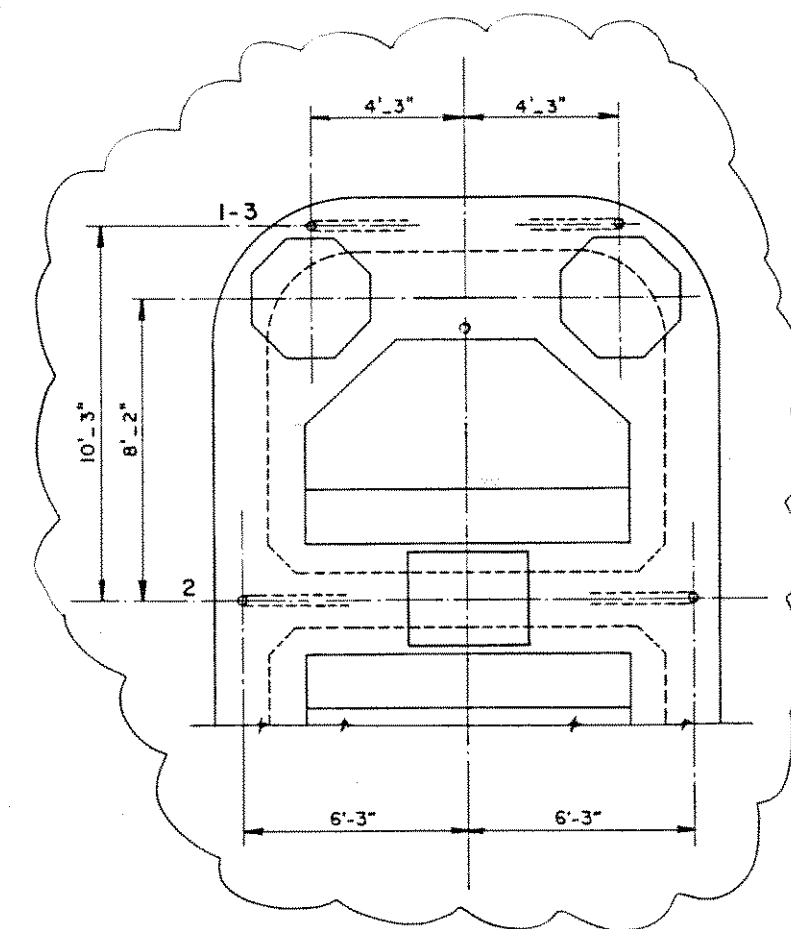
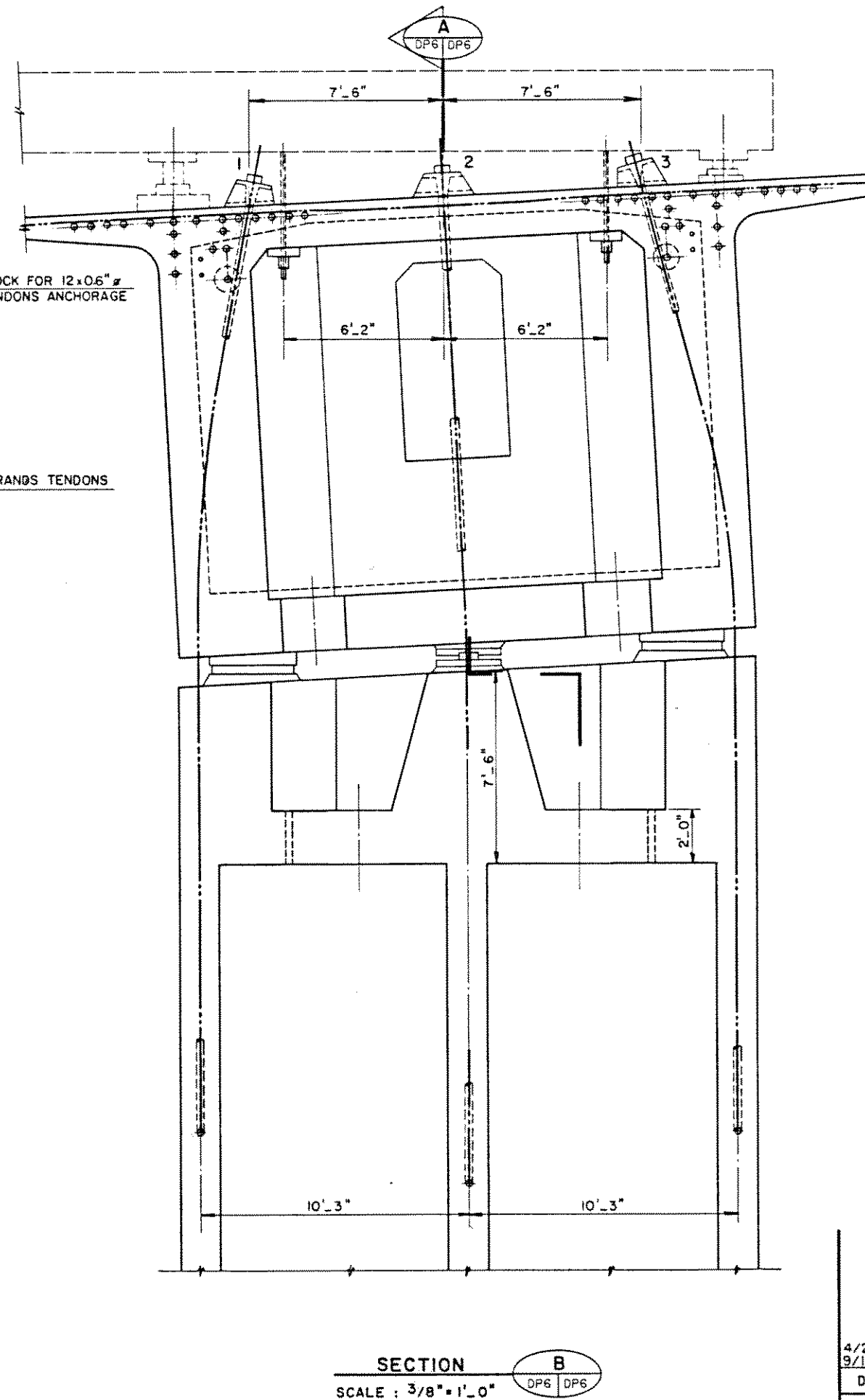
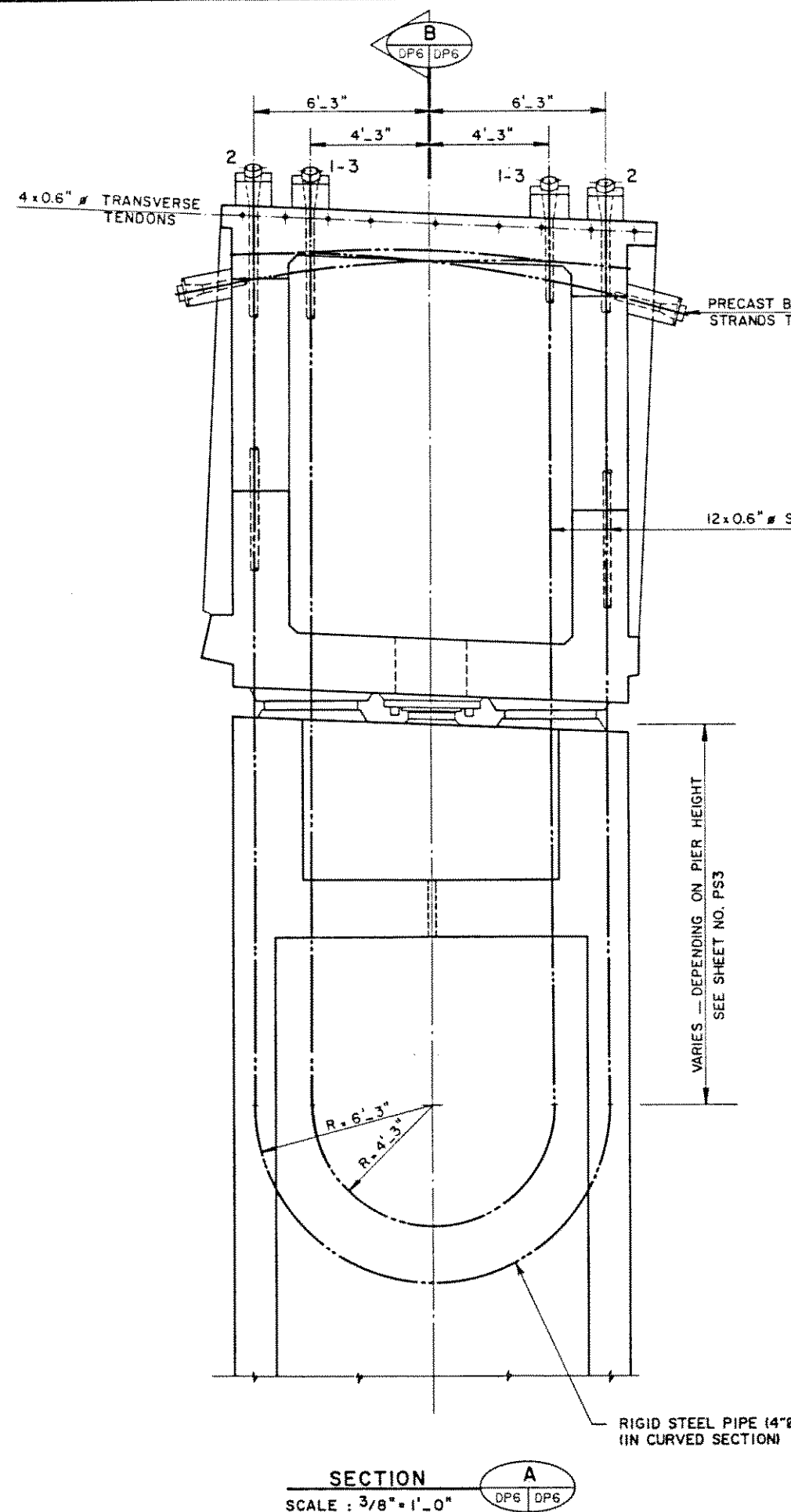
SECTION C
SCALE: $\frac{3}{8}" = 1'-0"$



DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SLIDING PIER SEGMENT DIMENSIONS
TYPE II
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED
DATE: APR. 1991
SHEET No. DP5B OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
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4/29/91 UPDATED DRAWING.
9/17/90 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL E Libby Engineers

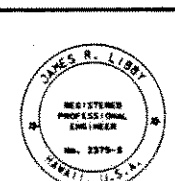
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SLIDING PIER SEGMENT
P.T. DETAILS

TYPE 1
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)

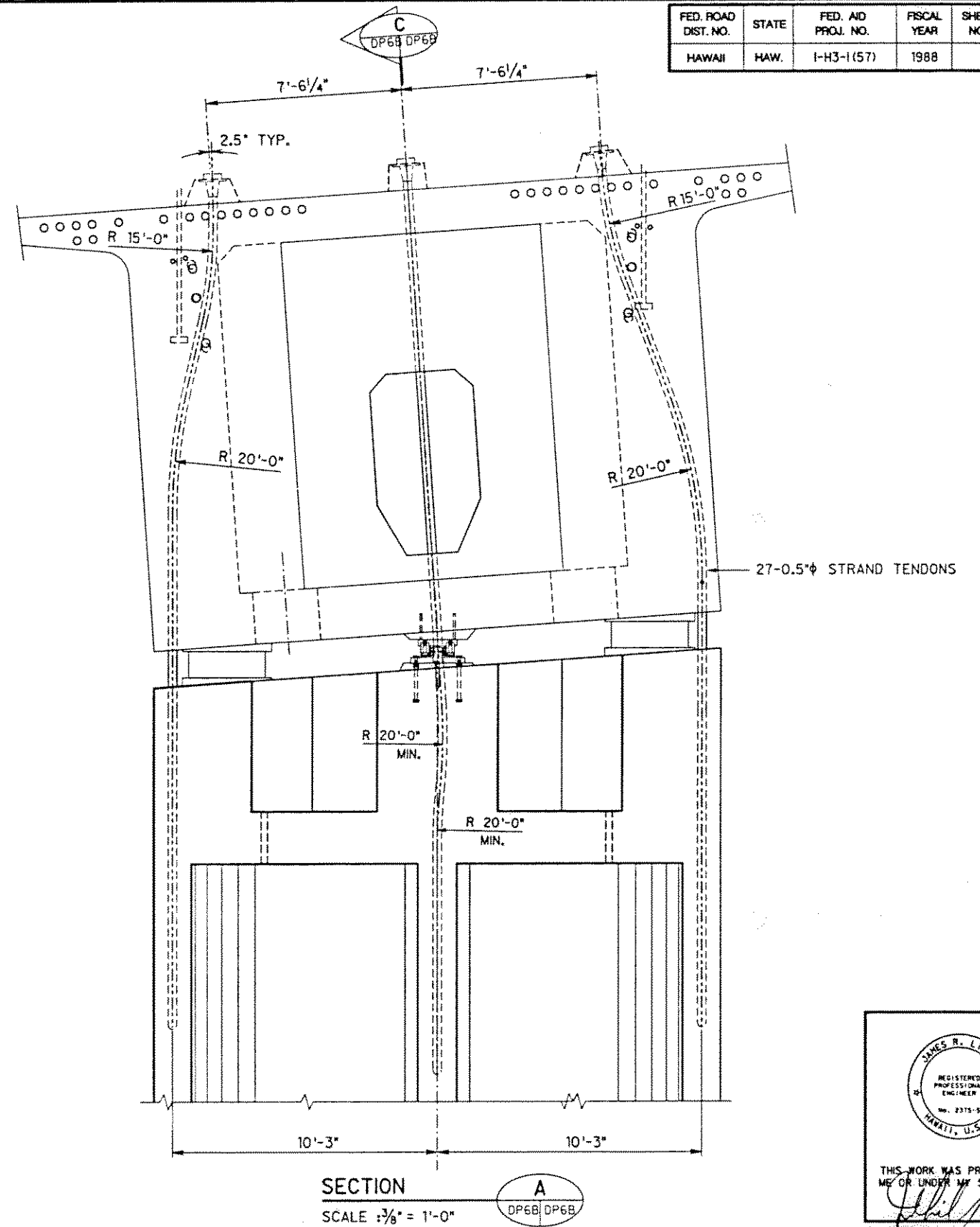
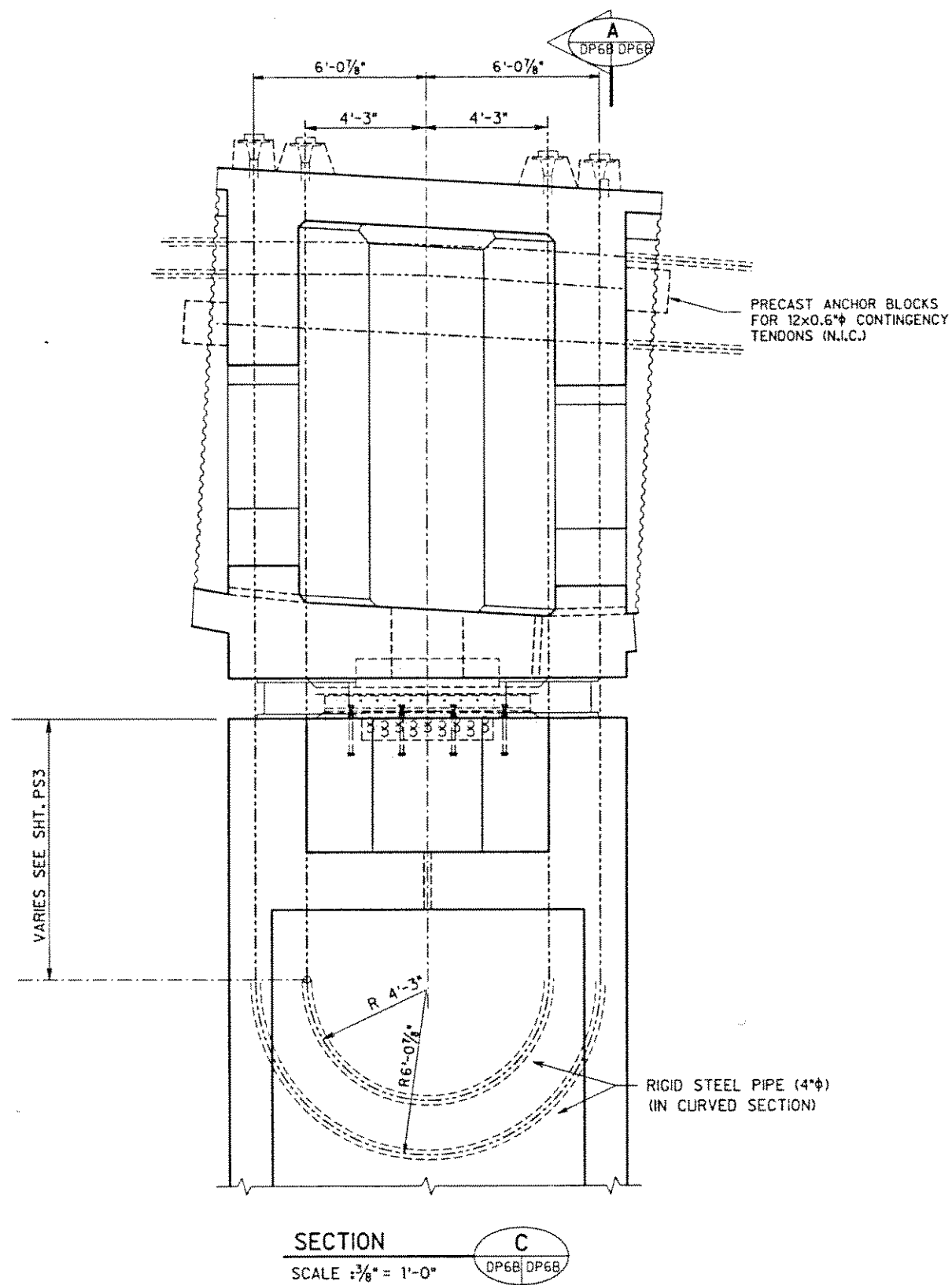
SCALE: AS NOTED DATE: JUN. 1990

SHEET NO. DP6A OF SHEETS

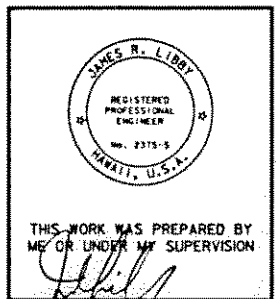


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTES	
NO.	



DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

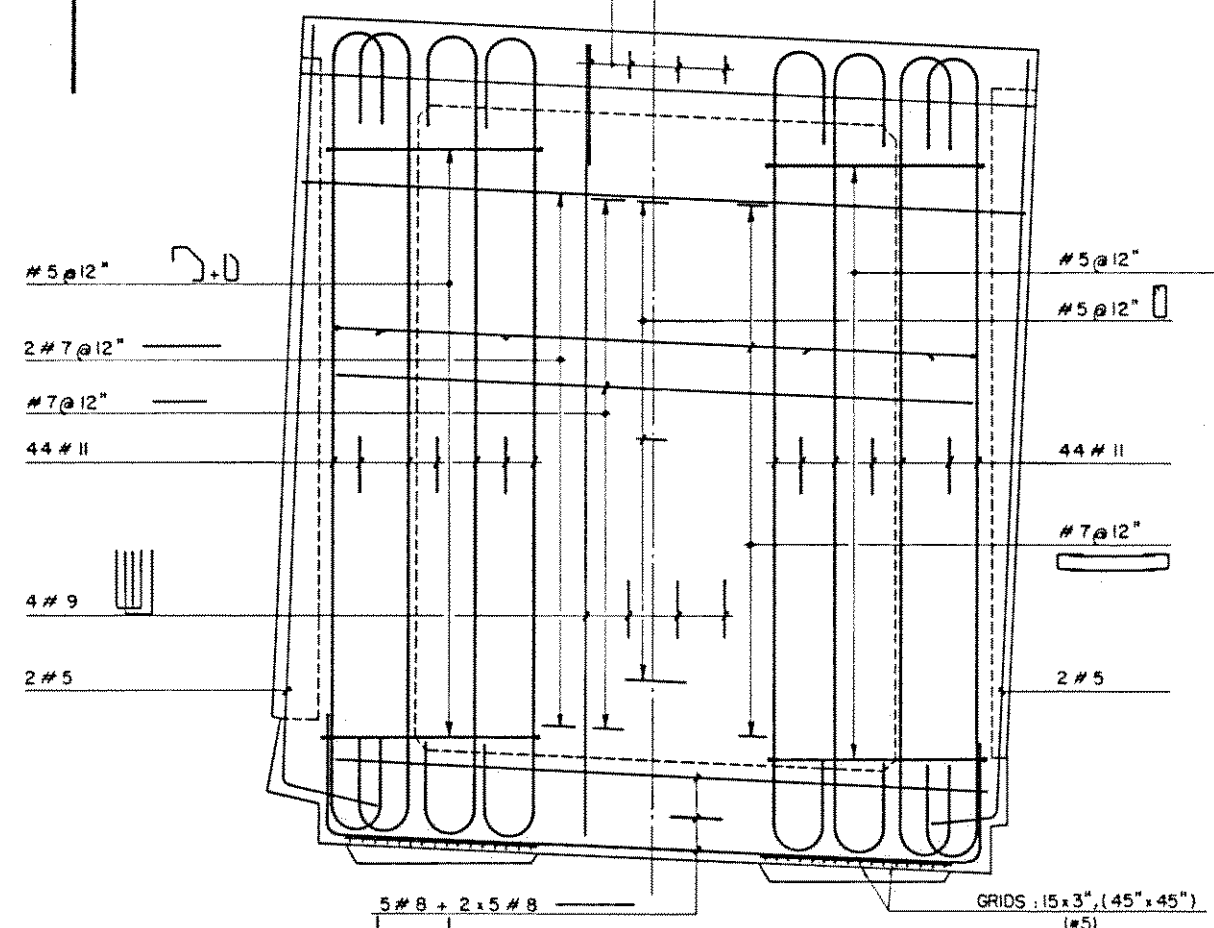
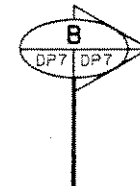
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SLIDING PIER SEGMENT
P.T. DETAILS
TYPE II

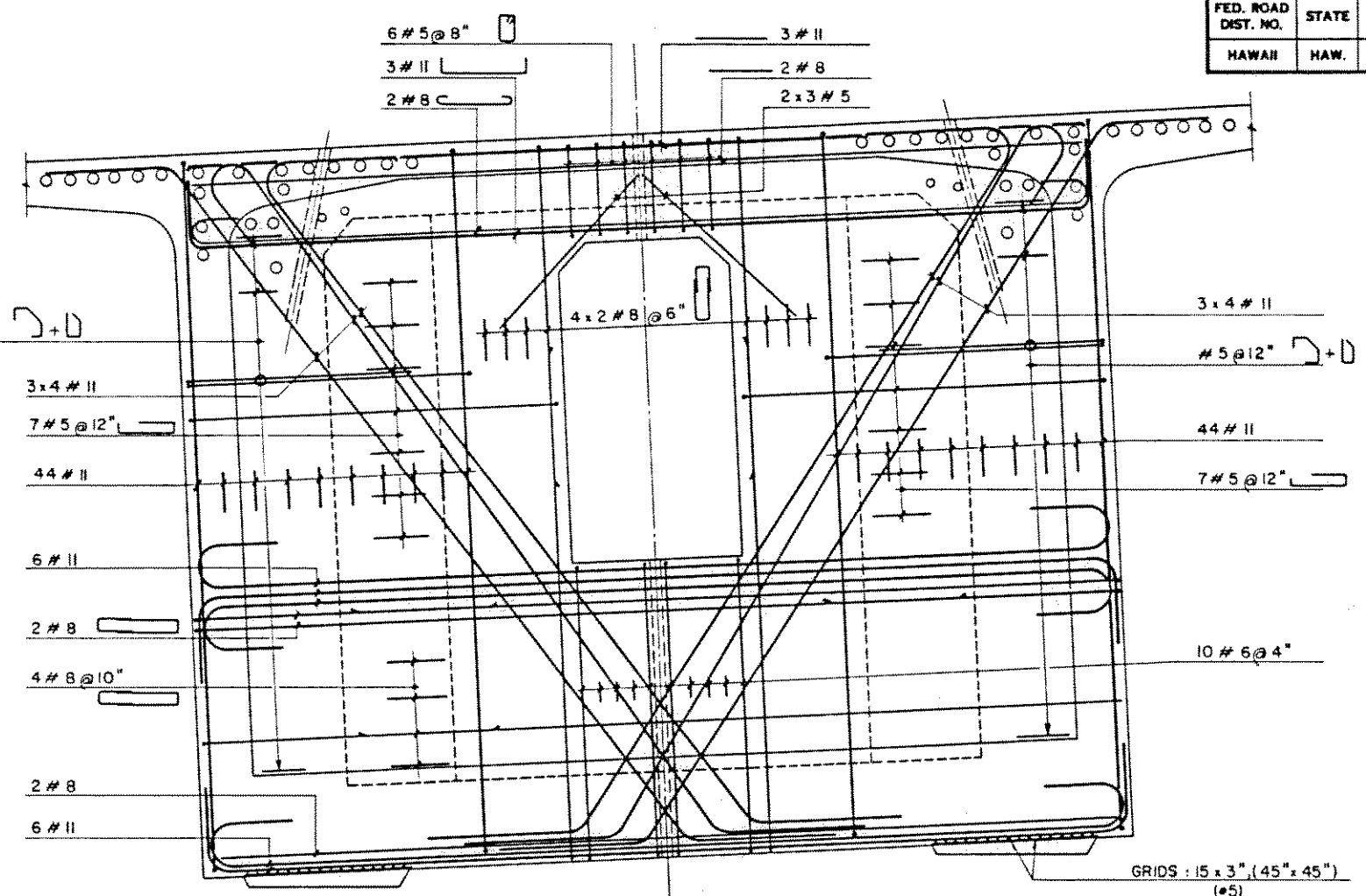
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: APR. 1991

SHEET No. DP6B OF SHEETS

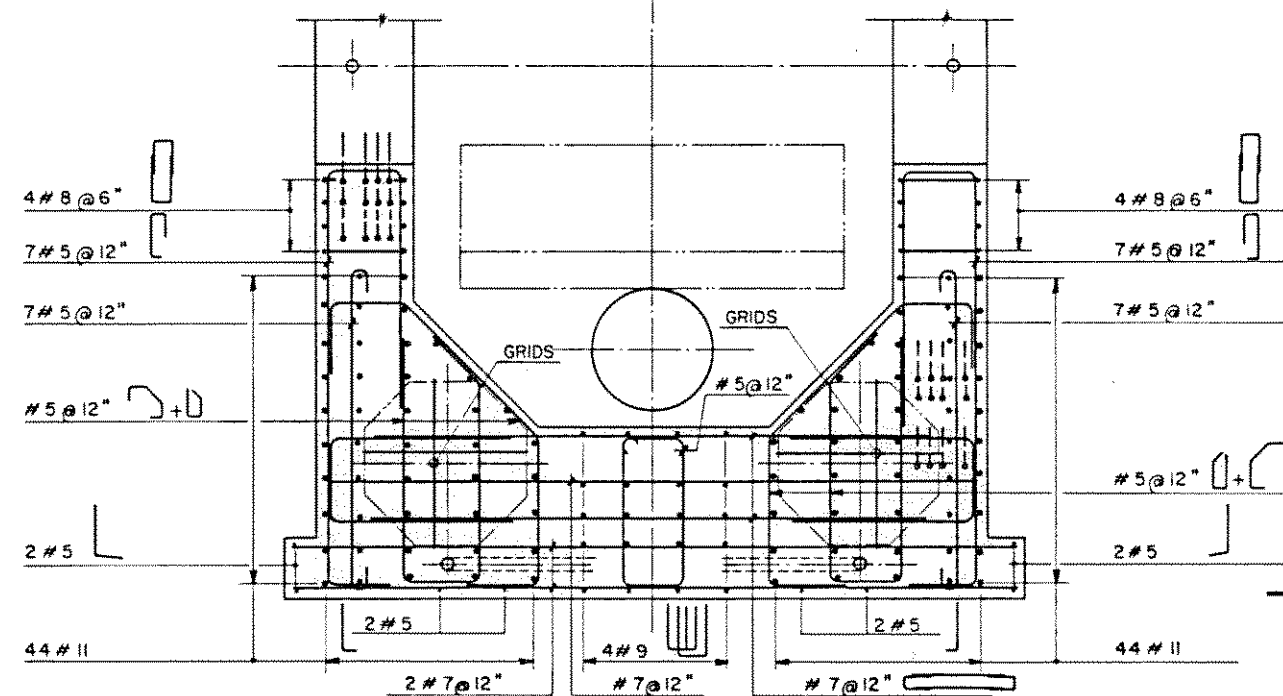
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



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

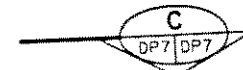
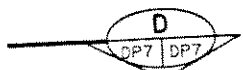


SECTION B
SCALE: 1/2" = 1'-0"

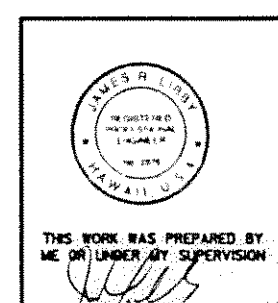


HALF SECTION C
SCALE: 1/2" = 1'-0"

HALF SECTION D
SCALE: 1/2" = 1'-0"



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
APPROVED BY	



4/29/91 UPDATED DRAWING.

DATE	REVISION

J. MULLER INTERNATIONAL **E Libby** Engineers

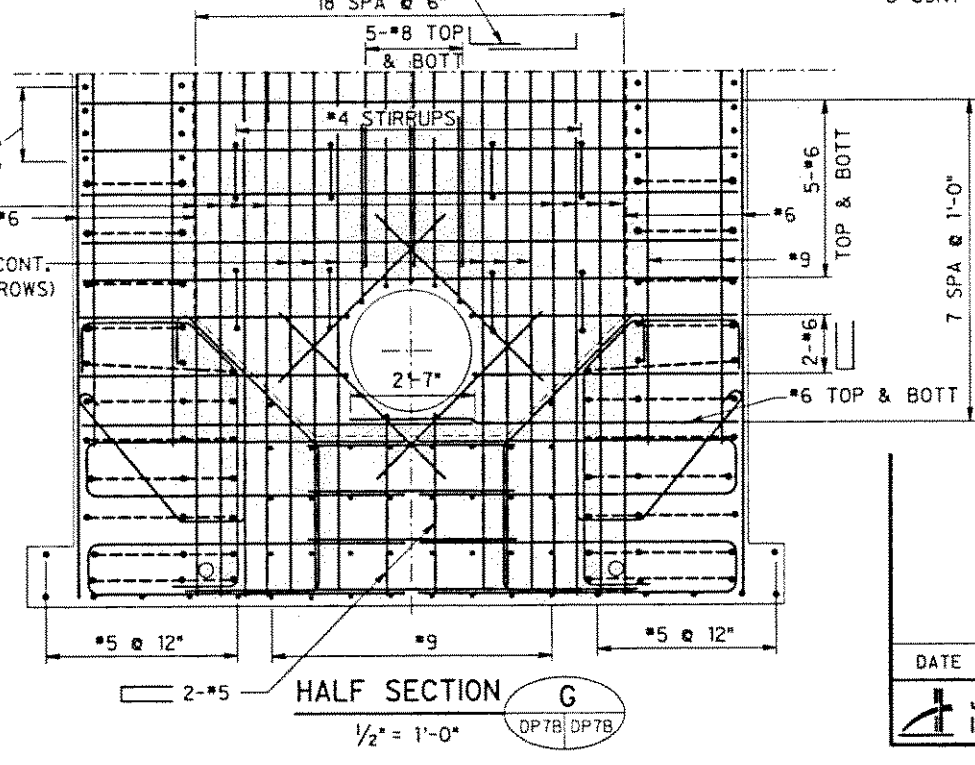
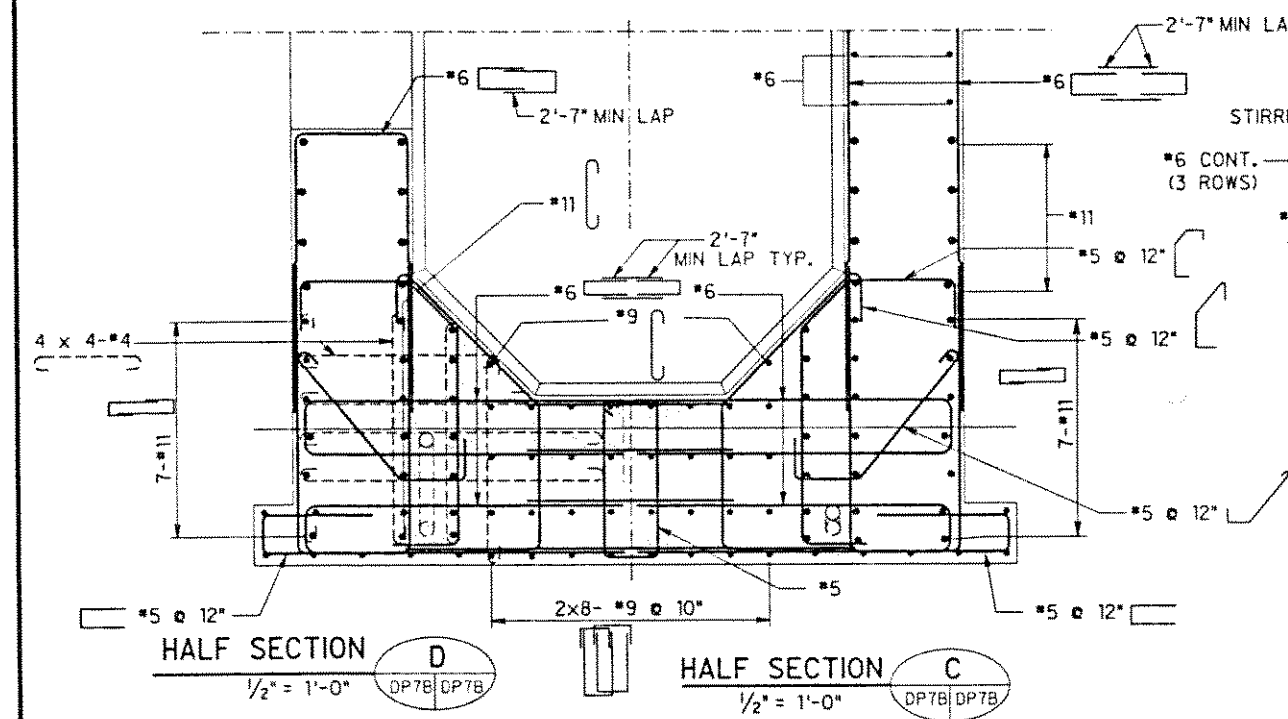
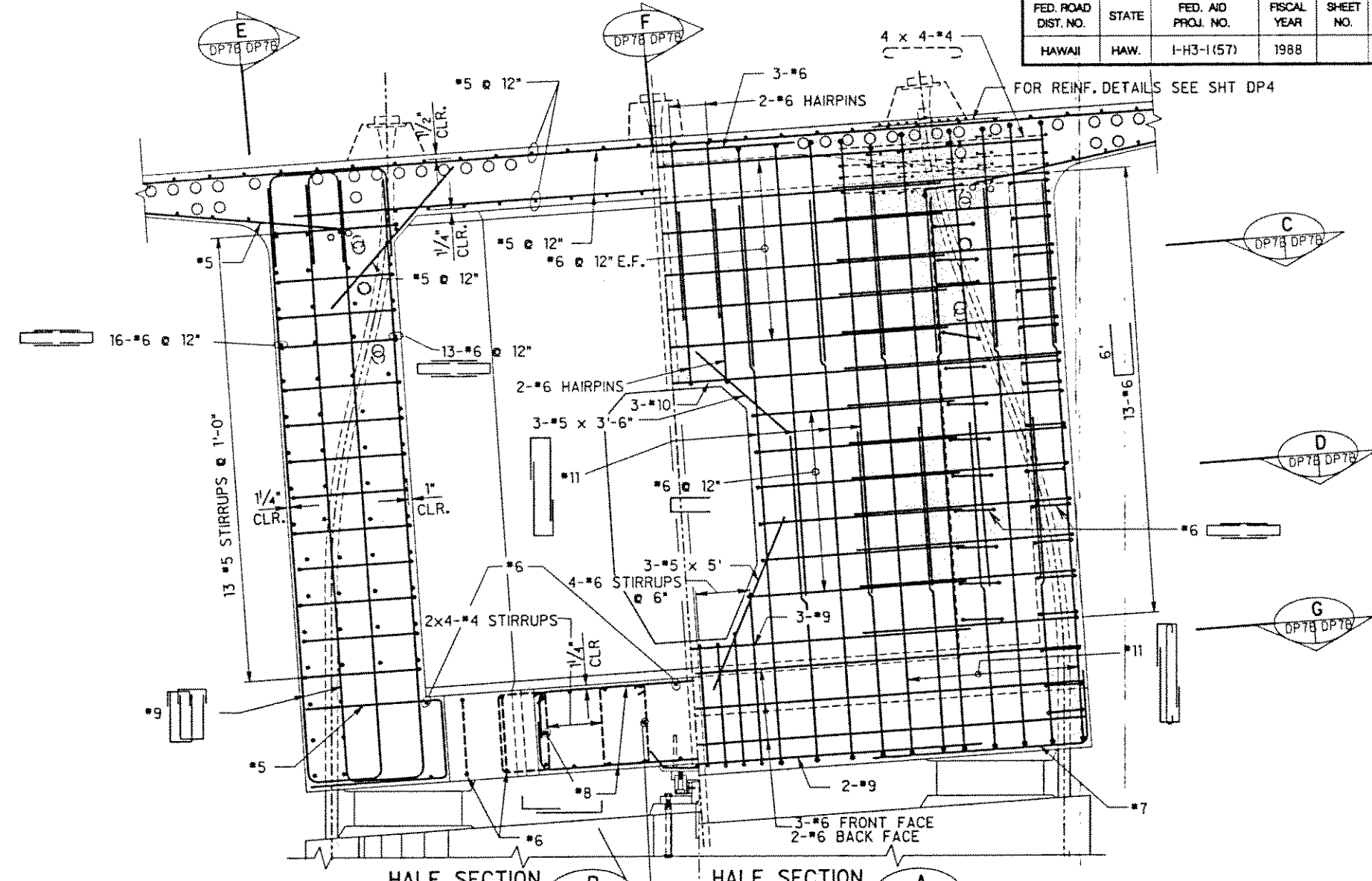
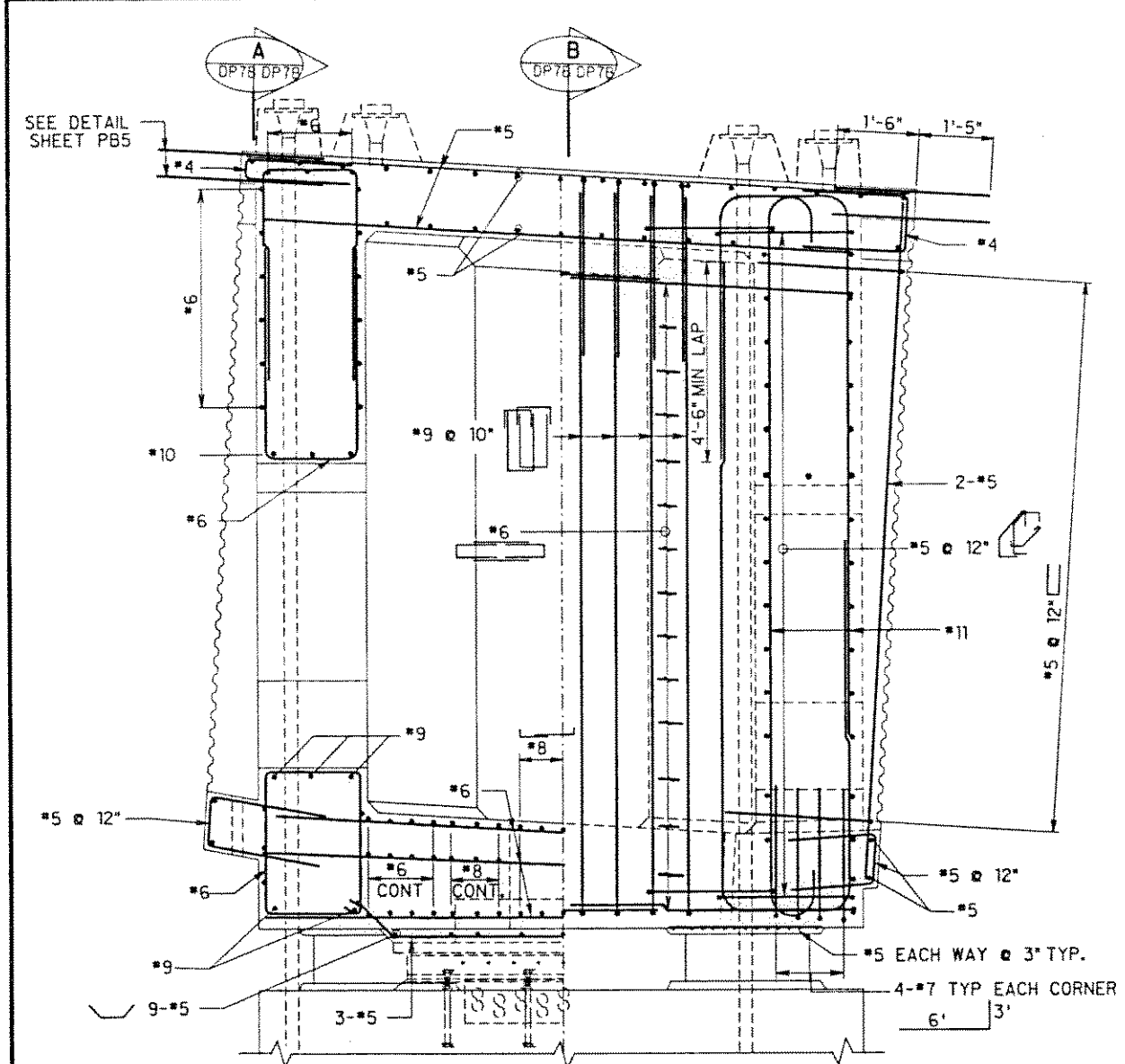
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SLIDING PIER SEGMENT
REINFORCING I
(TYPE I)**

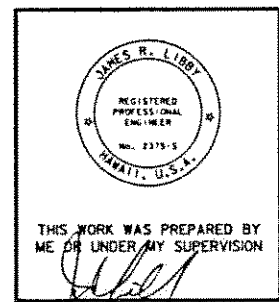
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. **DP7** OF **DP7** SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



NOTE: FOR ELECTRICAL MANHOLE DETAILS, SEE SHEET ED1



DATE: _____ REVISION: _____

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

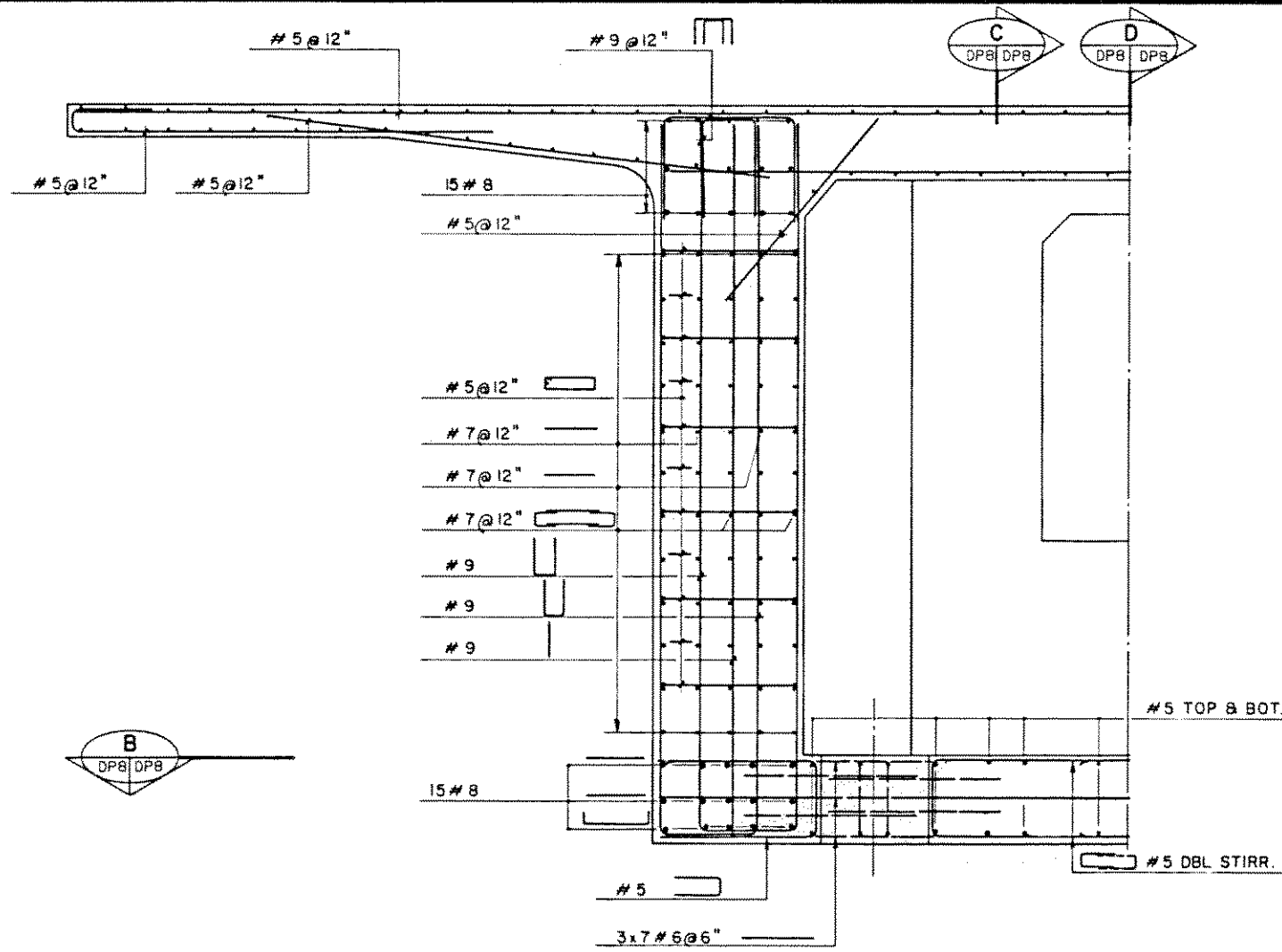
SLIDING PIER SEGMENT
REINFORCING
TYPE II

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

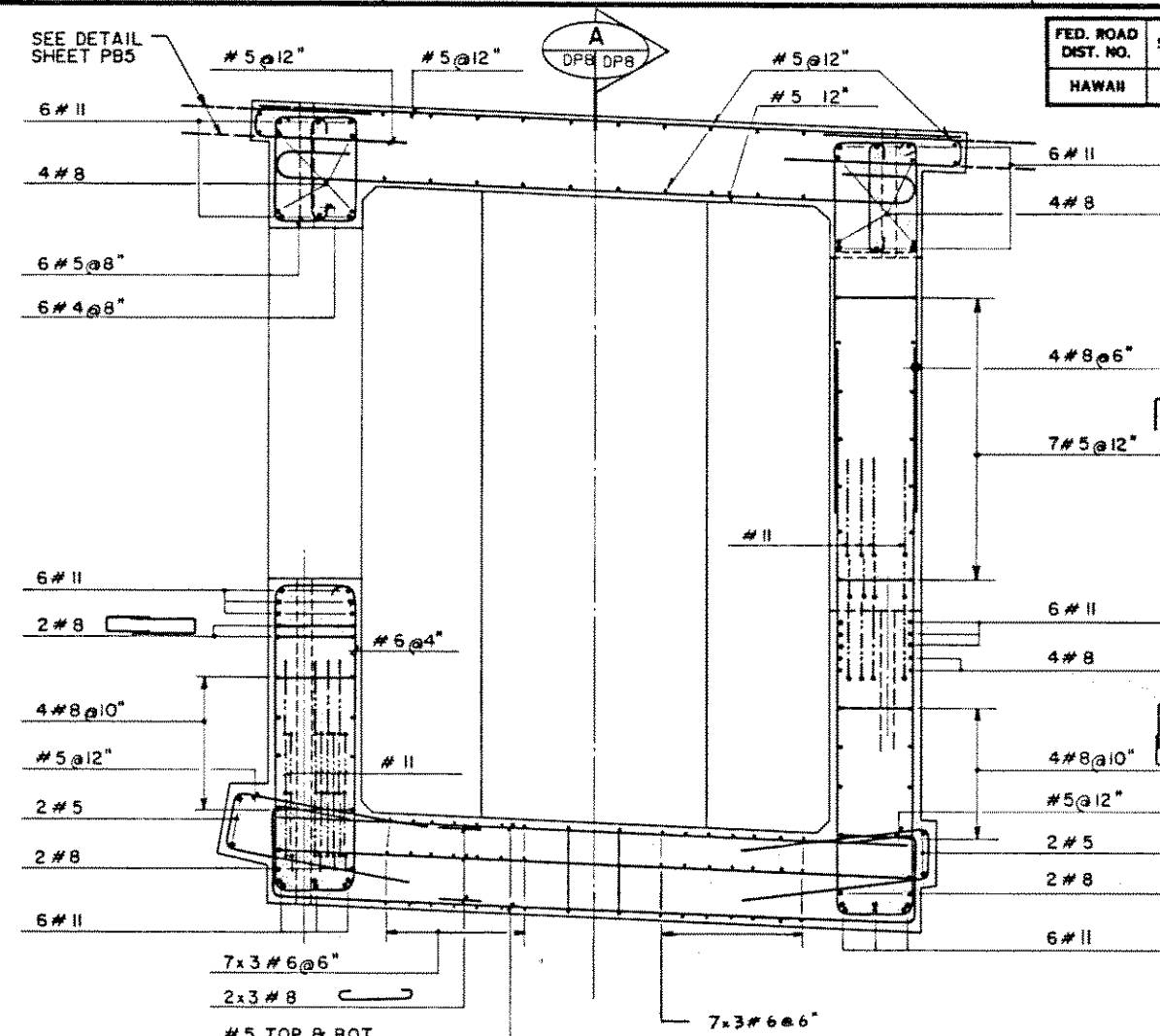
SCALE: AS NOTED DATE: APR 1991

SHEET No. DP7B OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

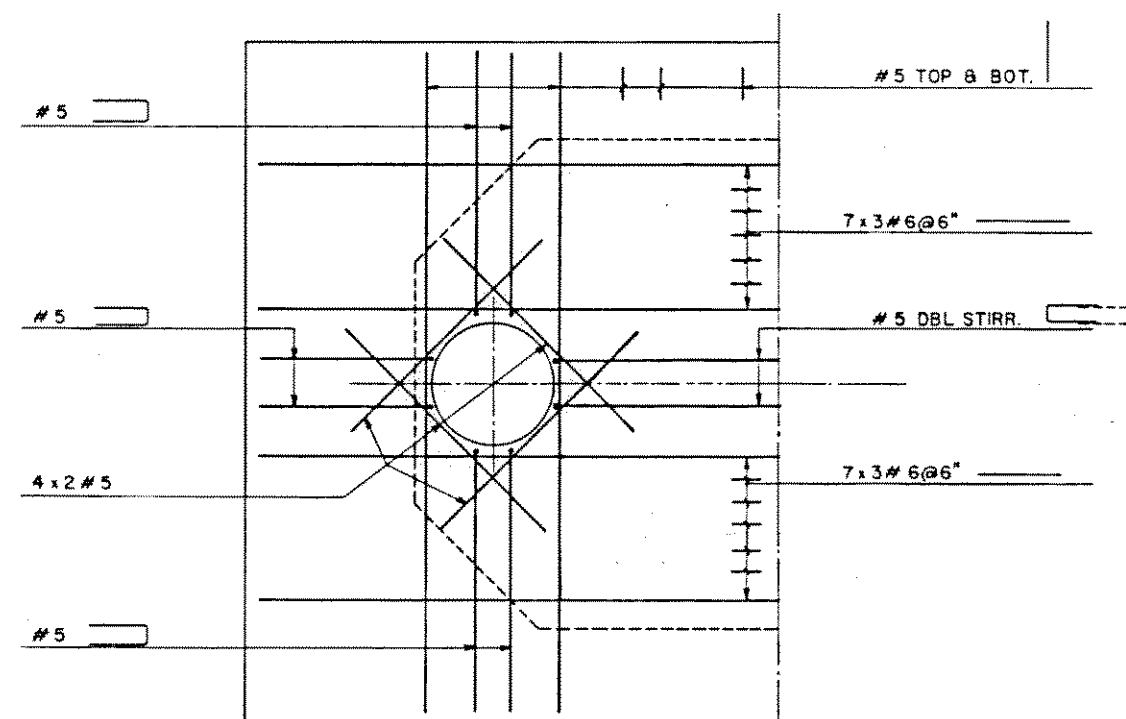


HALF SECTION A
SCALE: 1/2" = 1'-0"



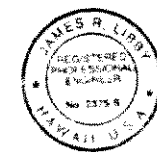
HALF SECTION D
SCALE: 1/2" = 1'-0"

HALF SECTION C
SCALE: 1/2" = 1'-0"



HALF SECTION B
SCALE: 1/2" = 1'-0"

DATE	
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	



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9/06/91 REVISED SHEET NO.
4/29/91 UPDATED DRAWING.

DATE REVISION
J. MULLER INTERNATIONAL E Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

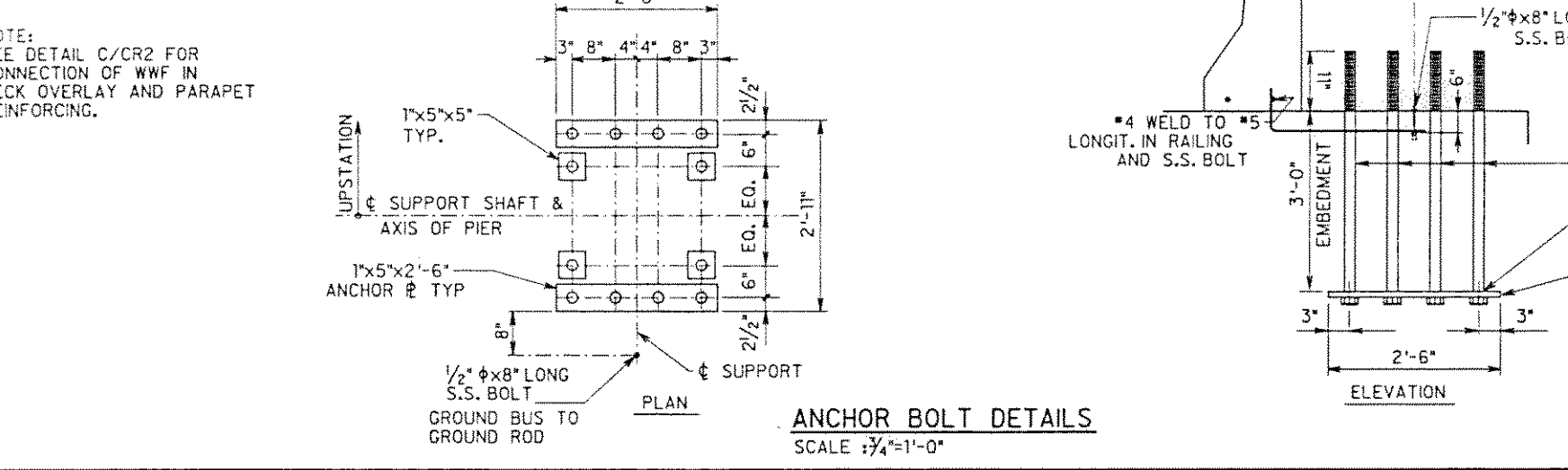
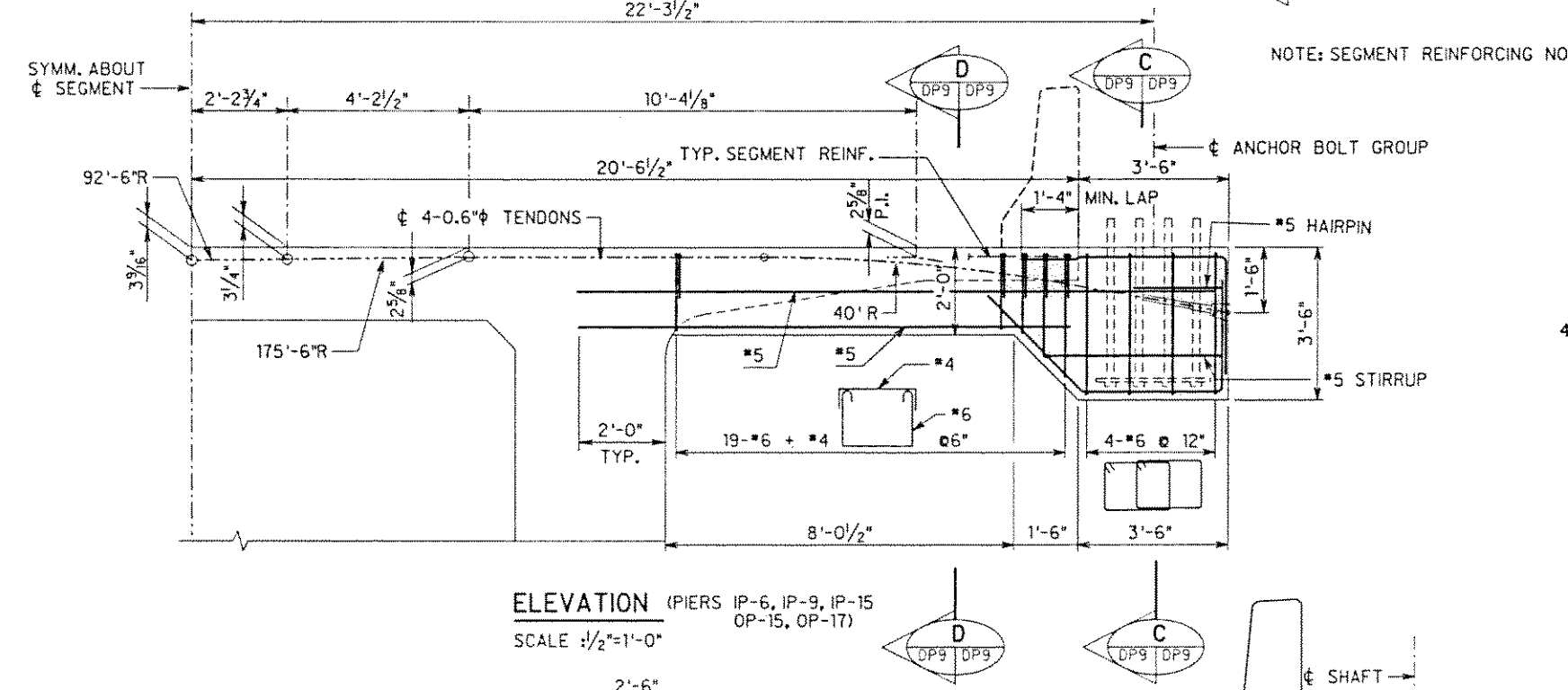
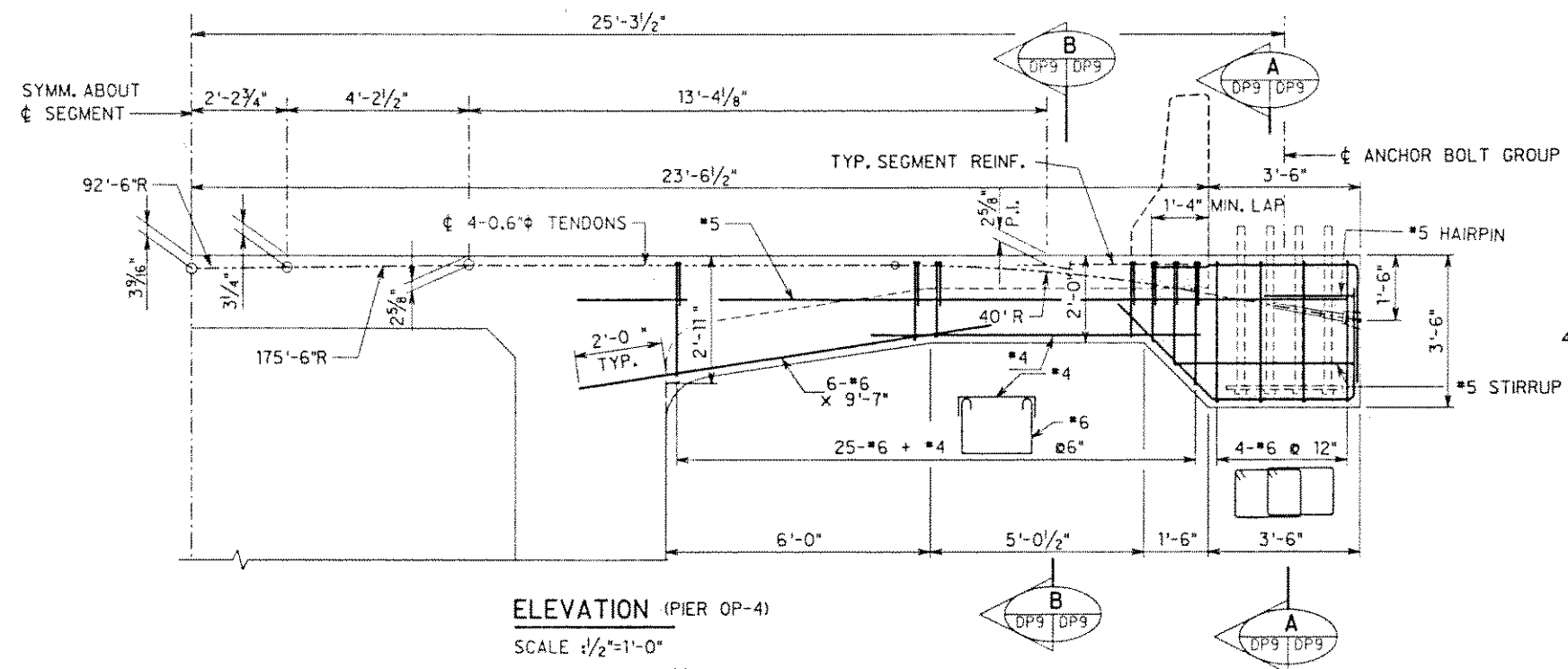
SLIDING PIER SEGMENT
REINFORCING II
(TYPE I)

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

SHEET NO. DP8 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



05/22/91 GENERAL REVISION.

DATE REVISION

J. MULLER INTERNATIONAL

Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIXED AND SLIDING PIER SEGMENT
SIGN SUPPORT REINFORCING

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: MAY 1991

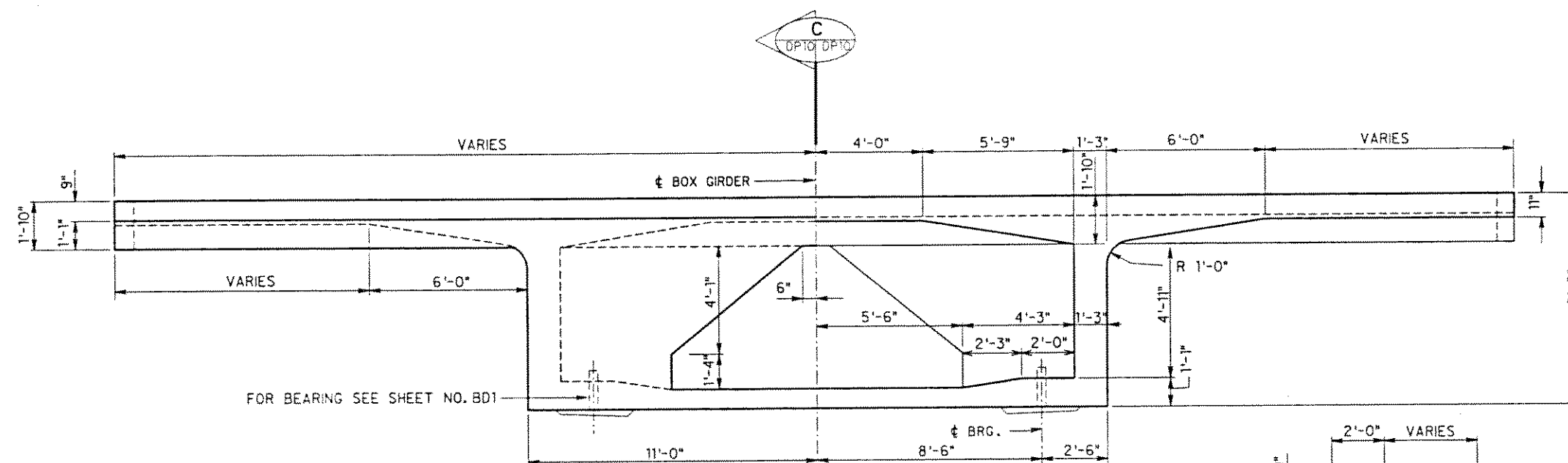
SHEET No. 0P9 OF SHEETS

JAMES R. LIBBY
REGISTERED PROFESSIONAL ENGINEER
HAWAII, U.S.A.

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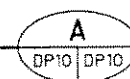
DESIGNED BY	5/91
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTES	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



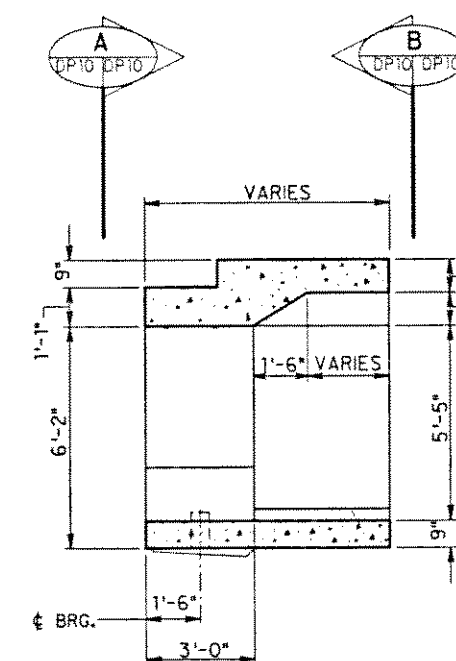
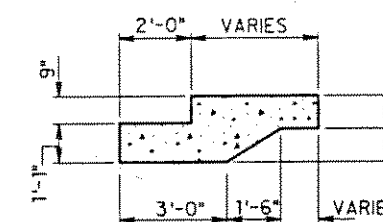
HALF VIEW

SCALE : $\frac{3}{8}$ " = 1'-0"



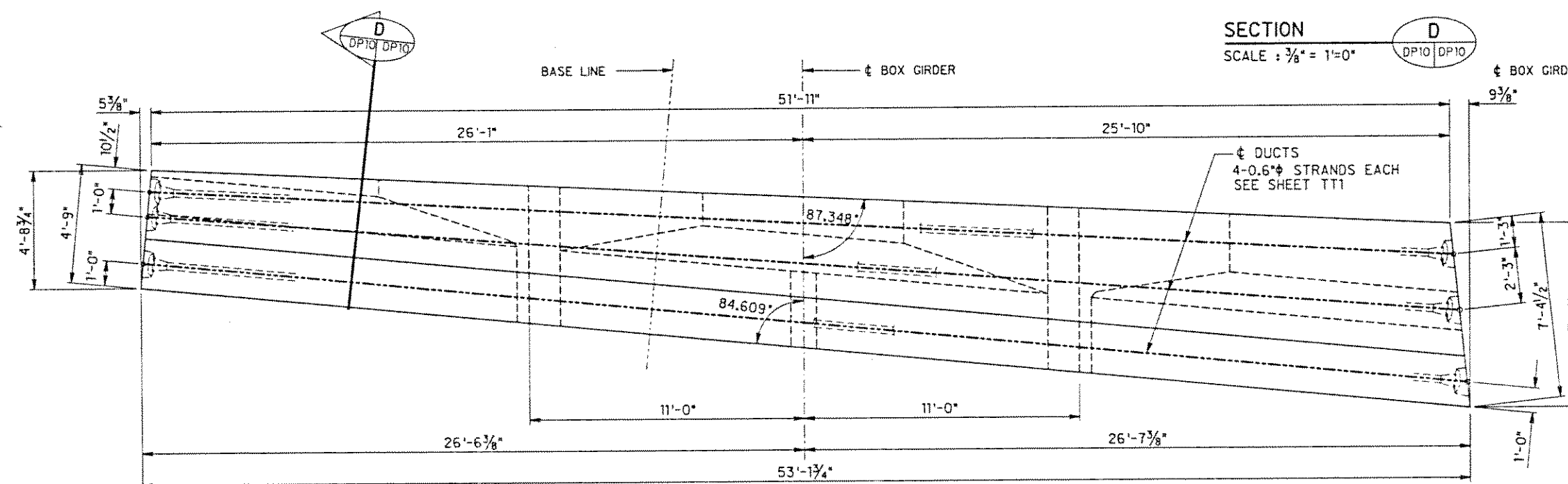
HALF VIEW

SCALE : $\frac{3}{8}$ " = 1'-0"



SECTION

SCALE : $\frac{3}{8}$ " = 1'-0"



PLAN VIEW

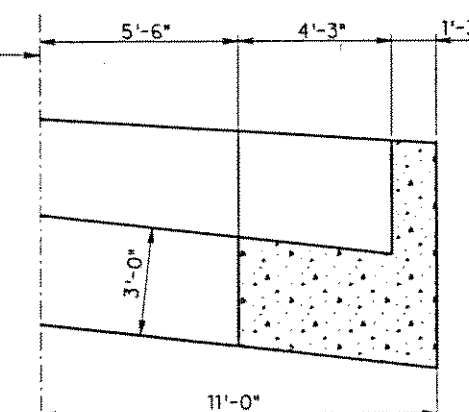
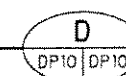
SCALE : $\frac{3}{8}$ " = 1'-0"

NOTES:

1. FOR BEARING DETAILS, SEE SHEET NO. BD1
2. FOR EXPANSION JOINT DETAILS, SEE SHEET NO. EJ1
3. FOR POST-TENSIONING DETAILS, SEE SHEET NO. DP11.
4. FOR BULKHEAD DETAILS, SEE SHEET NO. SF1

SECTION

SCALE : $\frac{3}{8}$ " = 1'-0"



HALF PLAN BOTTOM

SCALE : $\frac{3}{8}$ " = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	CHECKED BY	
	APPROVED BY	

08/23/91	UPDATED NOTES.
10/04/90	MOD. PLAN VIEW & E.J. BEAM THICKNESS
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT 1 SEGMENT

DIMENSIONS
INBOUND STRUCTURE

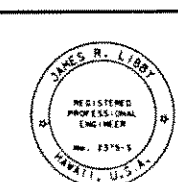
INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

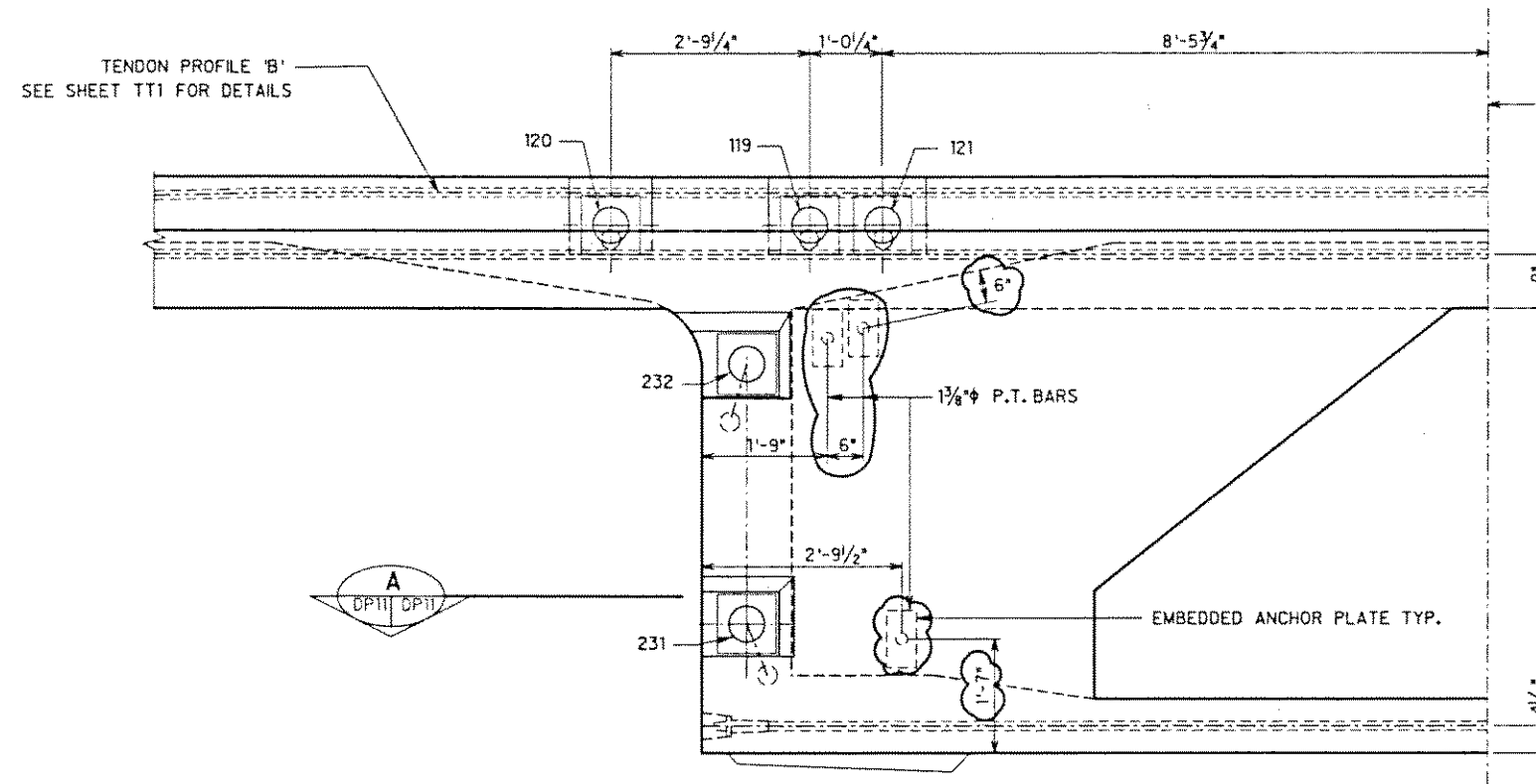
SCALE : AS NOTED DATE : JUN. 1990

SHEET No. DP10 OF SHEETS



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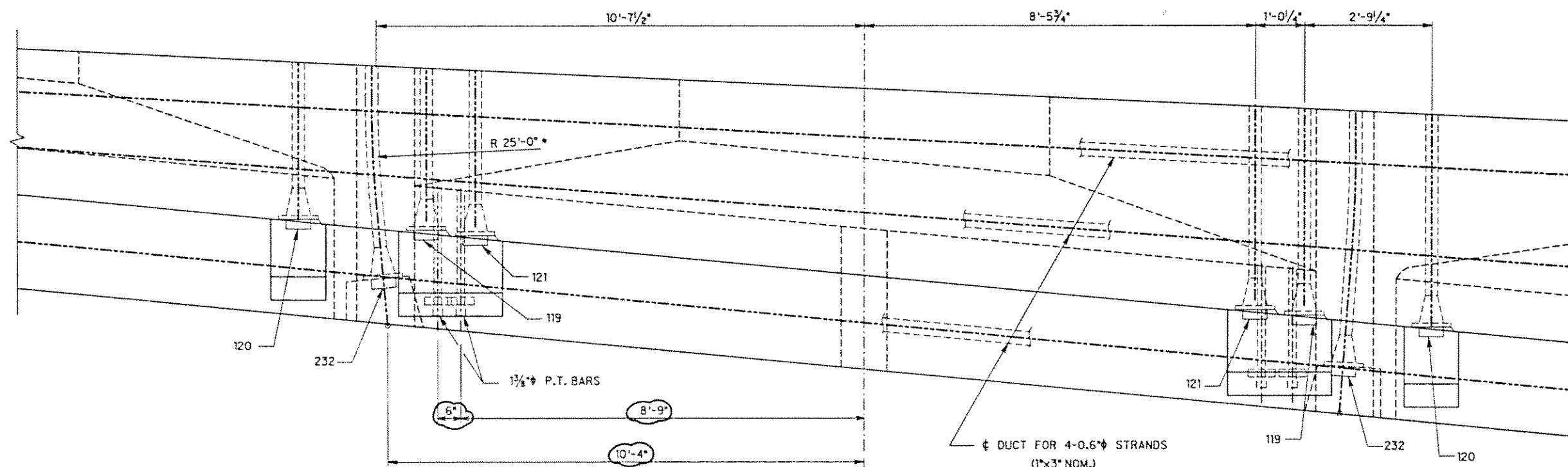
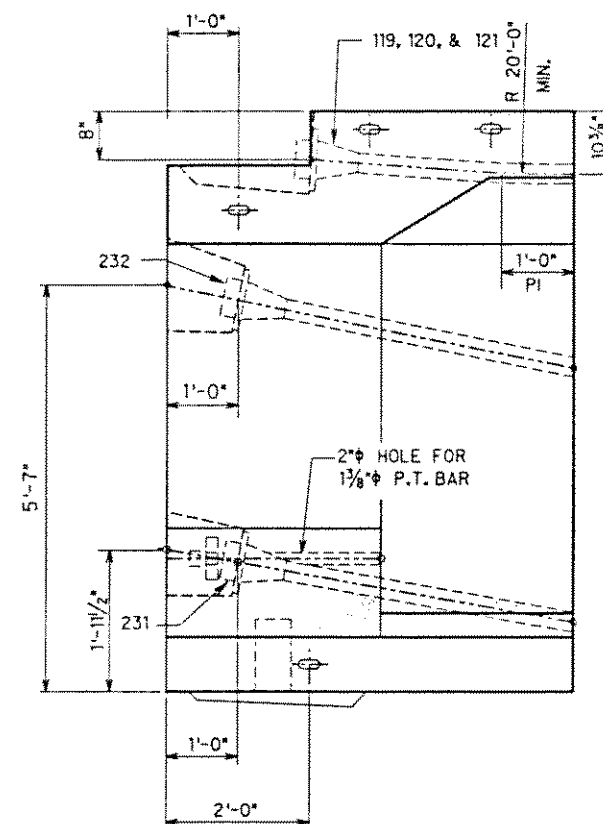
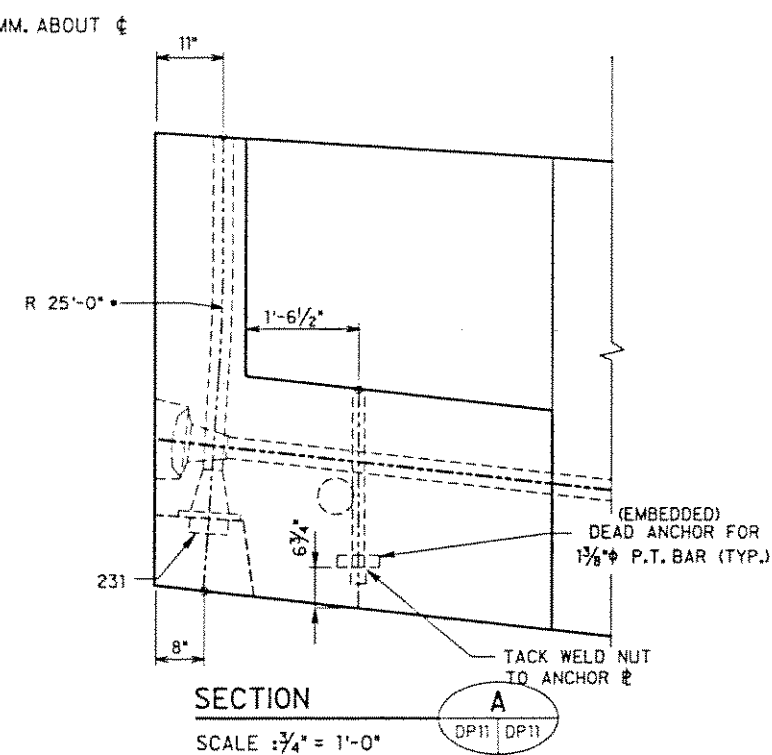
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF CROSS SECTION

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

* MINIMUM RADIUS IN PLANE OF TENDON AXIS



NOTES:

1. ALL LONGITUDINAL TENDONS ARE 12-0.6" ϕ STRANDS EACH.
2. ALL TRANSVERSE TENDONS ARE 4-0.6" ϕ STRANDS EACH.
3. VARIATIONS (IF ANY) DUE TO HORIZONTAL CURVATURE NOT SHOWN
4. MINIMUM TENDON RADIUS IS 20' FOR 12-0.6" ϕ STRAND TENDONS UNLESS SHOWN OTHERWISE
5. STRESS TRANSVERSE TENDONS TO 216 ksi.
6. SEE SHEET DP10 FOR PLAN LOCATION OF TOP SLAB TRANSVERSE TENDONS.

10/04/90 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL

Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT 1 SEGMENT
P.T. DETAILS

INBOUND STRUCTURE

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

SCALE : AS NOTED DATE : JUN. 1990

SHEET No. DP11 OF SHEETS

119, 419, & 120

4-0.6"ϕ STRANDS TYP.

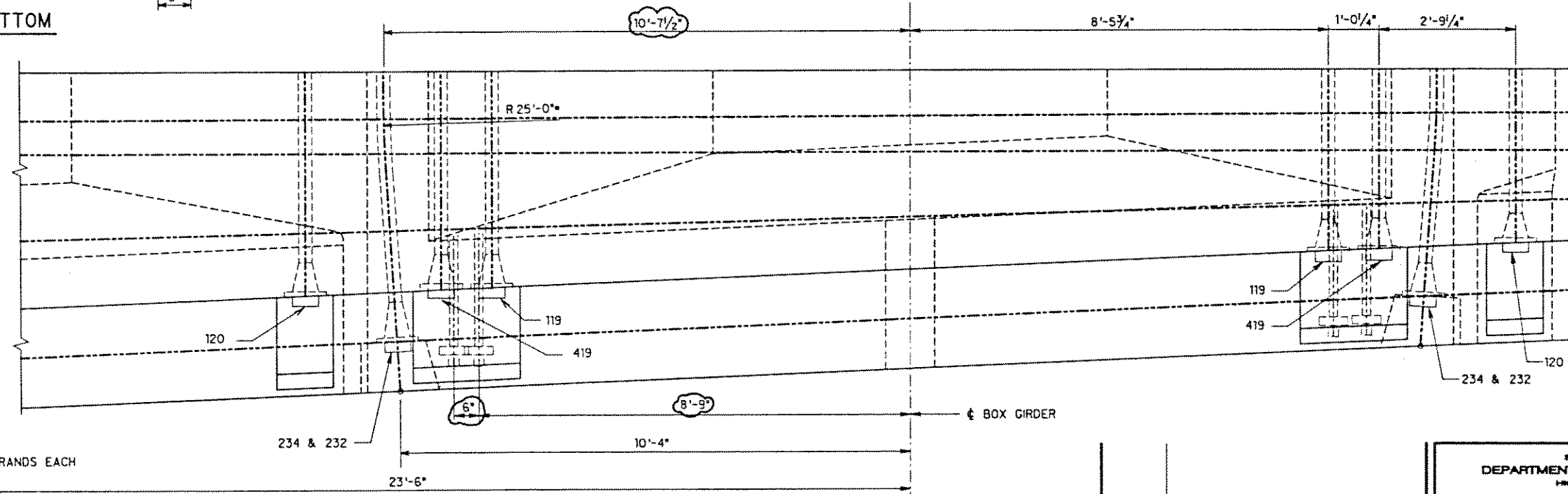
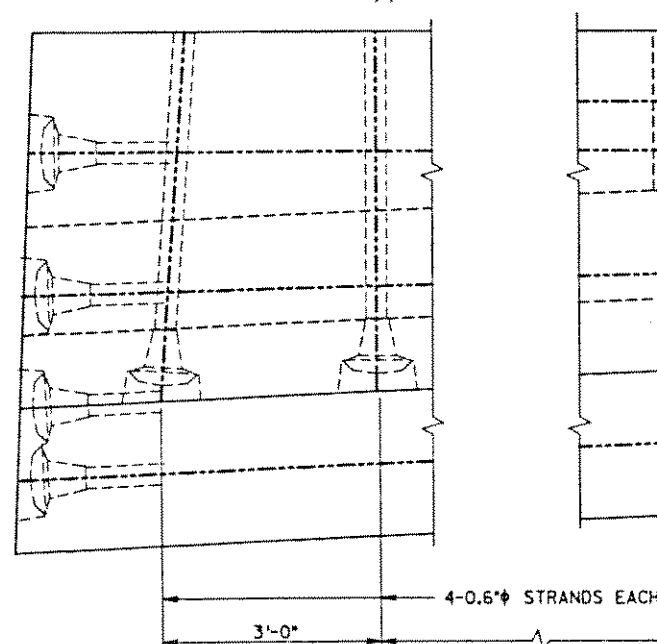
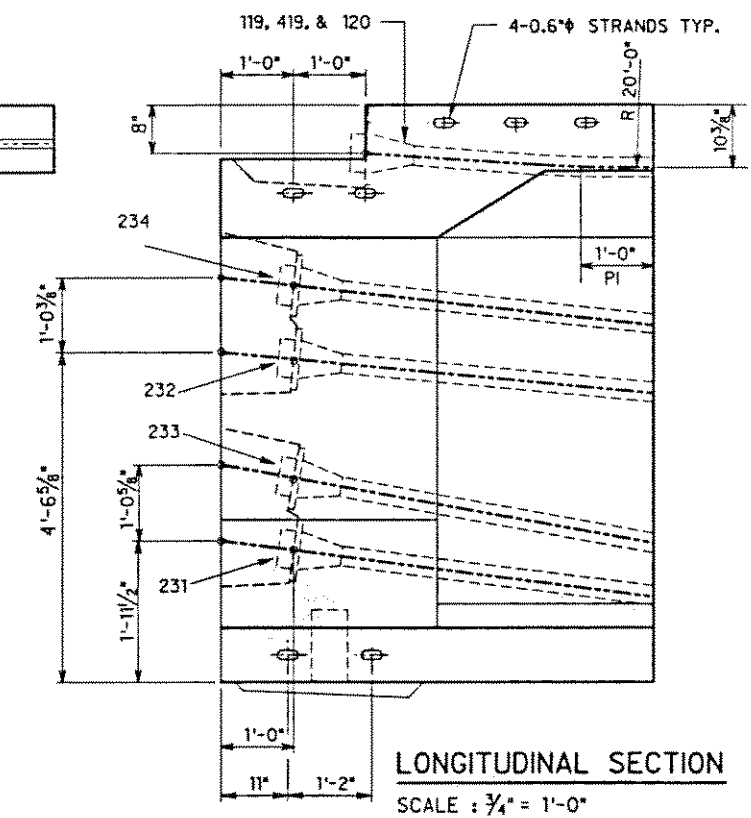
1'-0" 1'-0" R 20'-0" 10'-3/4"

1'-0" P1

1'-0" 1'-2" 11"

LONGITUDINAL SECTION

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



- NOTES:
1. ALL LONGITUDINAL TENDONS ARE 12-0.6" STRANDS EACH.
 2. ALL TRANSVERSE TENDONS ARE 4-0.6" STRANDS EACH.
 3. VARIATIONS (IF ANY) DUE TO HORIZONTAL CURVATURE NOT SHOWN
 4. MINIMUM RADIUS IS 20' FOR 12-0.6" TENDONS UNLESS SHOWN OTHERWISE
 5. STRESS TRANSVERSE TENDONS TO 216 ksi.
 6. SEE SHEET DP14 FOR PLAN LOCATION OF TOP SLAB TRANSVERSE TENDONS.

DATE	REVISION
------	----------

1

REVISION


J. MULLER
INTERNATIONAL

Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

ABUTMENT 1 SEGMENT

P.T. DETAILS

OUTBOUND STRUCTURE

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

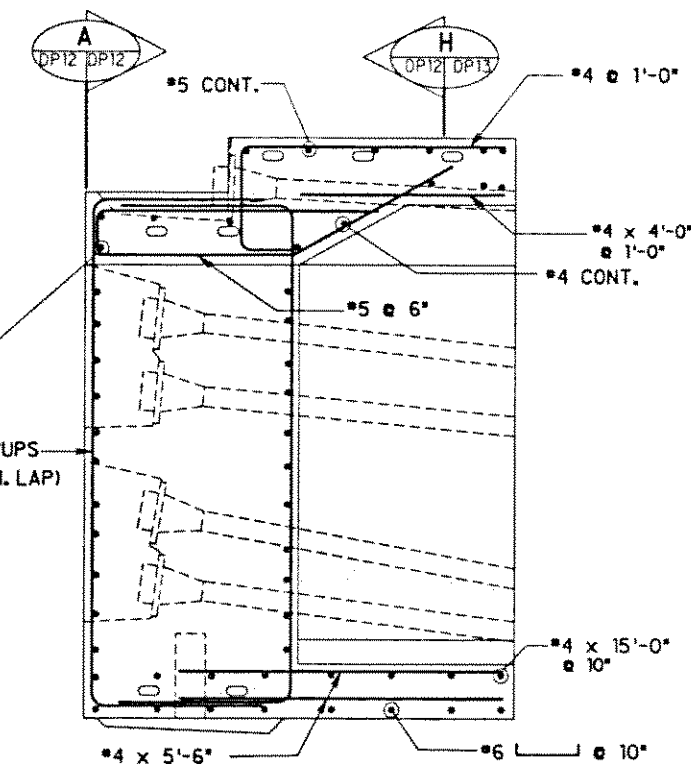
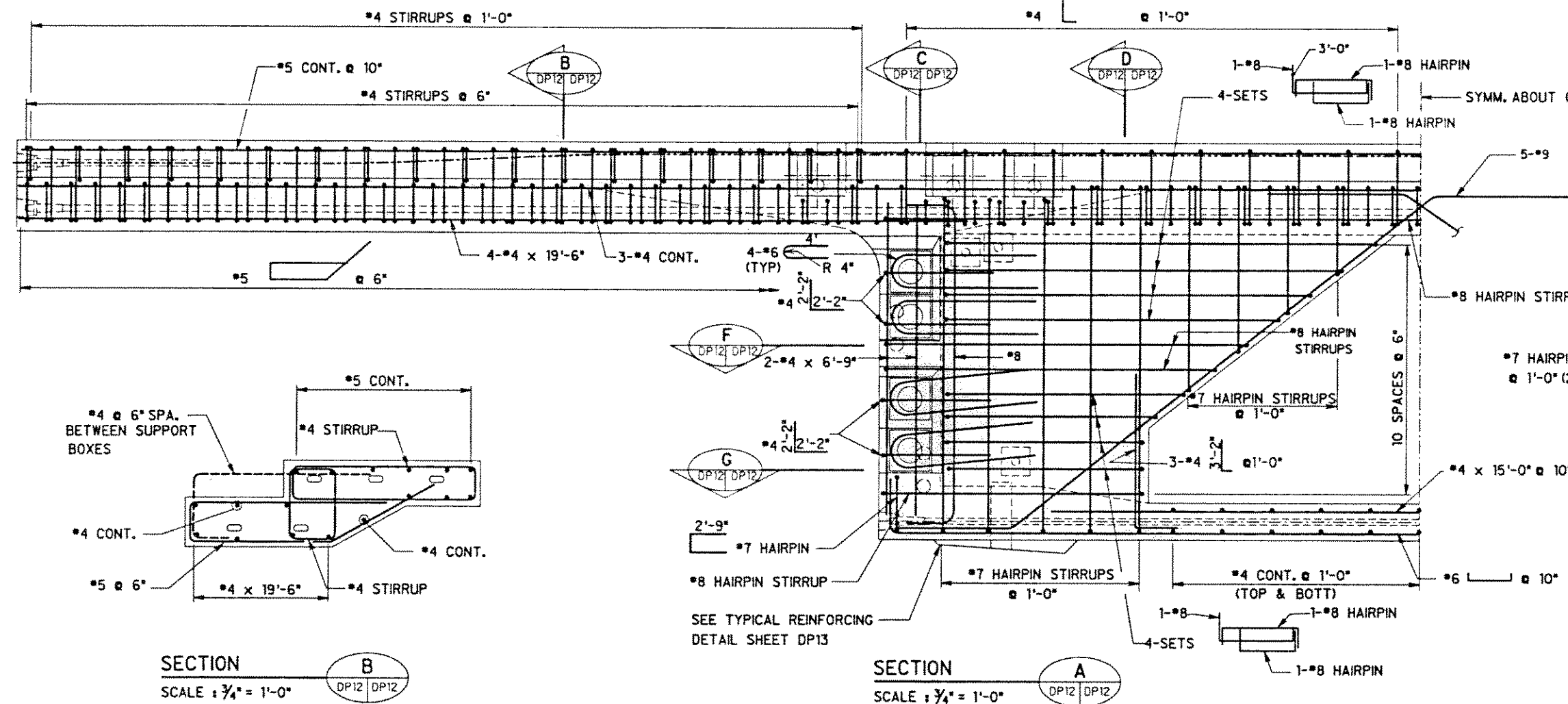
F.A.I. PROJECT No. I-H3-1(58)

F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1990

SHEET No. DP15 OF SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

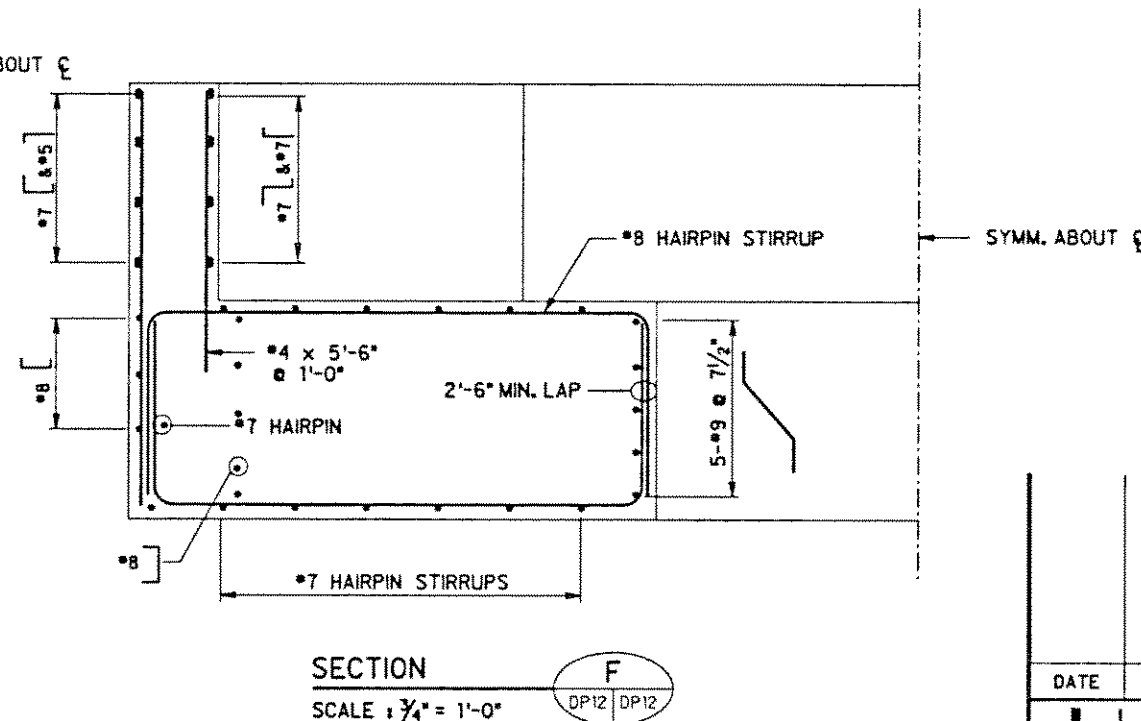
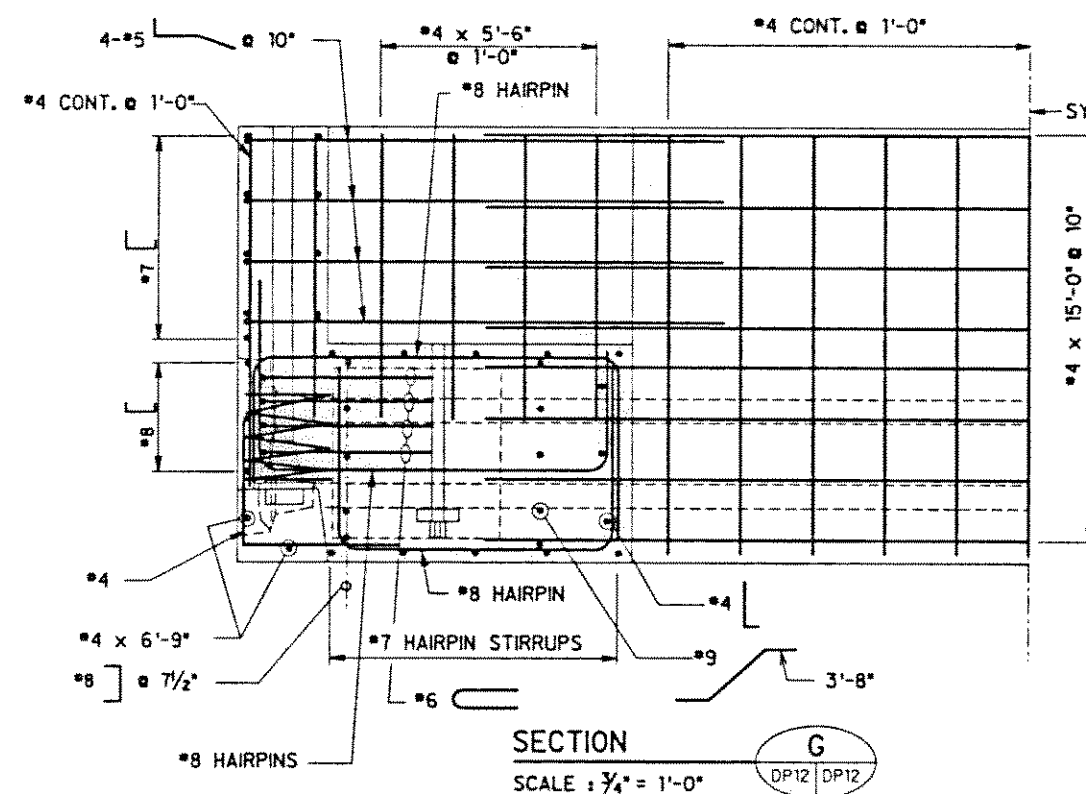


SECTION

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

NOTE:

1. FOR ADDITIONAL REINFORCING AROUND TENDON ANCHORAGES, SEE SHEET TT1
2. SKEW OF SEGMENT HAS NOT BEEN SHOWN FOR CLARITY



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT 1 SEGMENT
REINFORCING - I
OUTBOUND STRUCTURE

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN, 1990

SHEET No. DP16 OF SHEETS

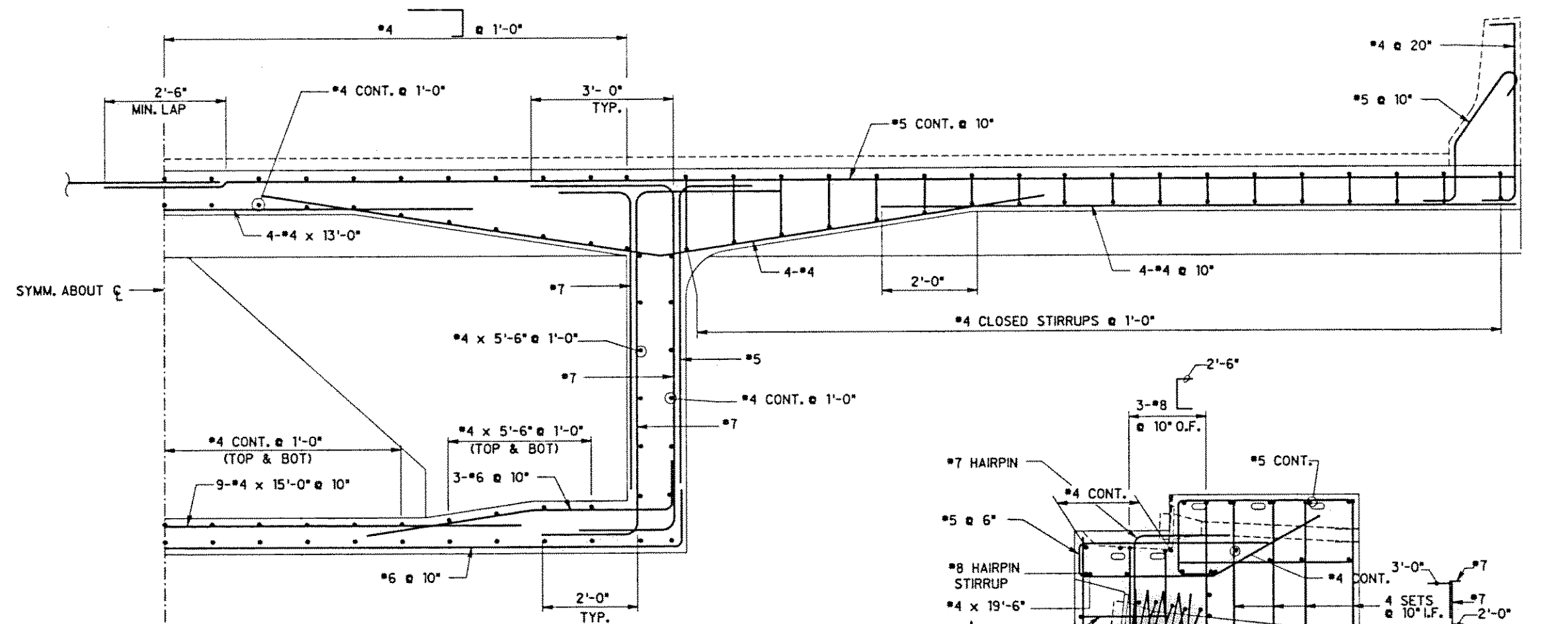
DATE

REVISION

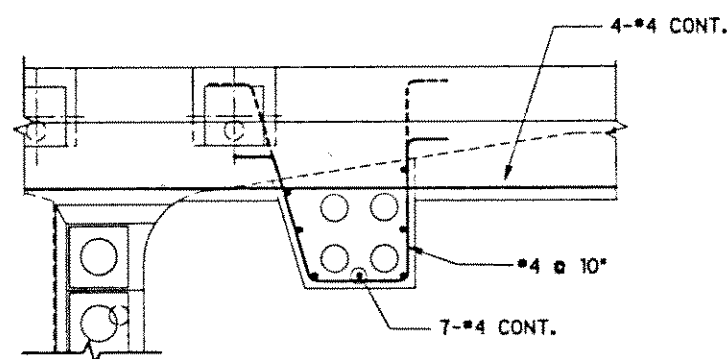
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Engineers

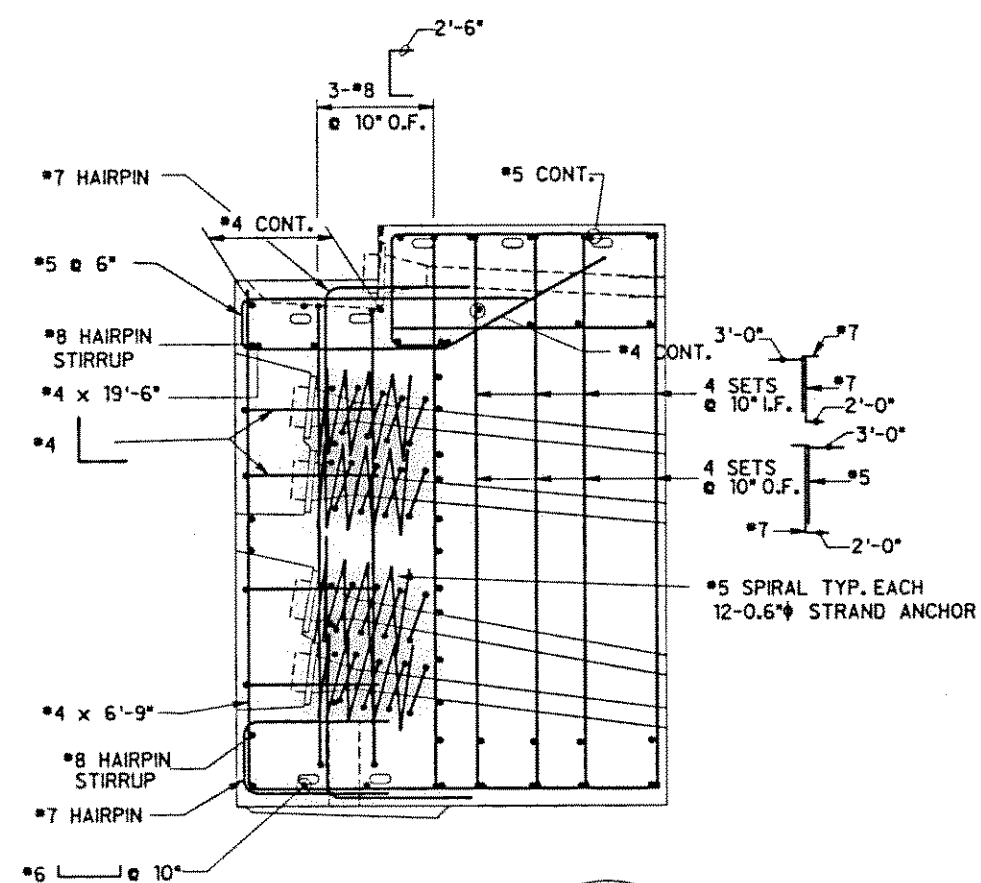
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



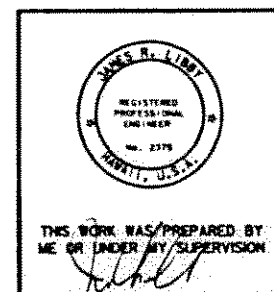
VIEW
SCALE: $\frac{3}{4}'' = 1'-0''$



ELECTRICAL DUCT REINFORCING DETAIL
SCALE: $\frac{3}{4}'' = 1'-0''$



SECTION
SCALE: $\frac{3}{4}'' = 1'-0''$

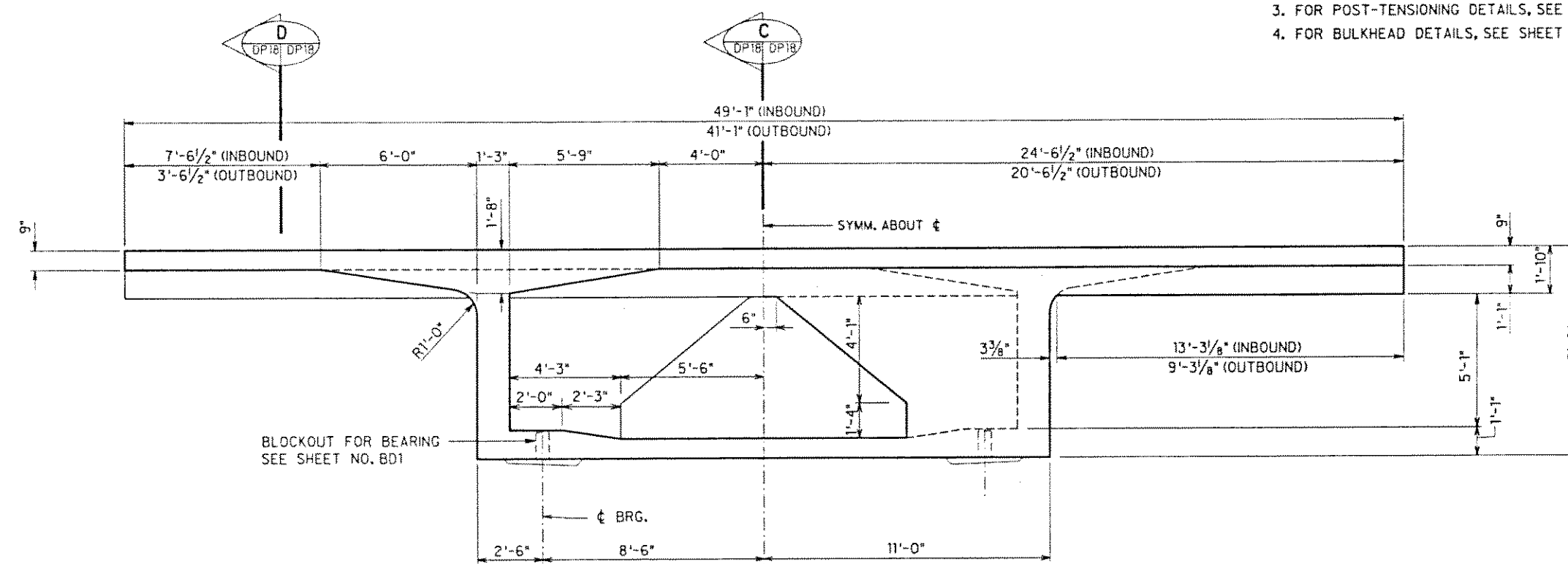


DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**ABUTMENT SEGMENT 1
REINFORCING II
OUTBOUND STRUCTURE**
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990
SHEET No. DP17 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

- NOTES:
1. FOR BEARING DETAILS, SEE SHEET NO. BD1
 2. FOR EXPANSION JOINT DETAILS, SEE SHEET NO. EJ1.
 3. FOR POST-TENSIONING DETAILS, SEE SHEET NO. DP19 & TT1
 4. FOR BULKHEAD DETAILS, SEE SHEET NO. SF1.



HALF VIEW

SCALE : 3/8" = 1'-0"

A

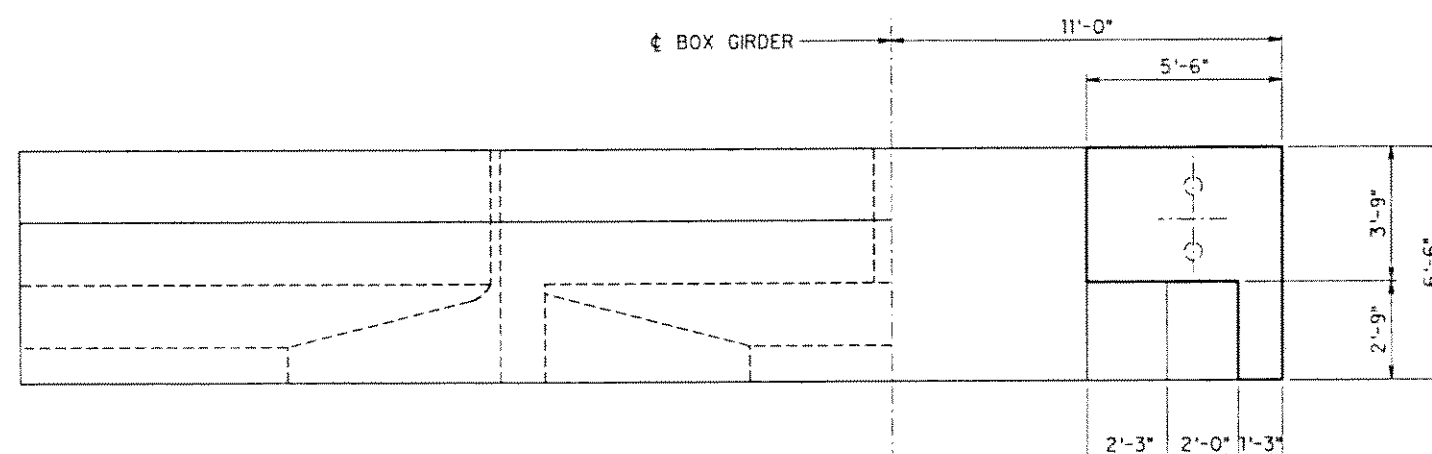
DP18 DP18

HALF VIEW

SCALE : 3/8" = 1'-0"

B

DP18 DP18

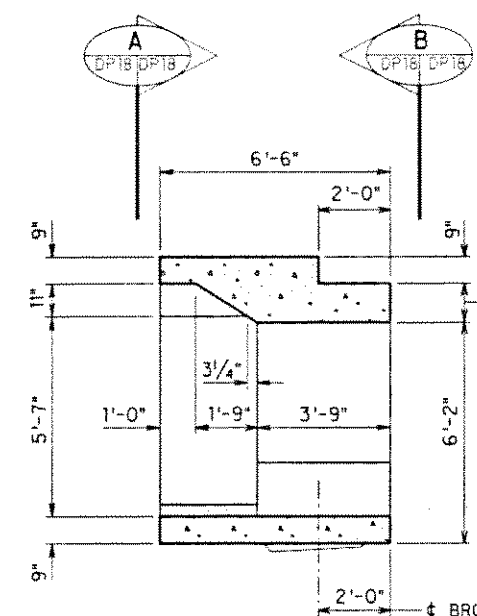


HALF TOP VIEW

HALF BOTTOM VIEW

PLAN VIEW

SCALE : 3/8" = 1'-0"

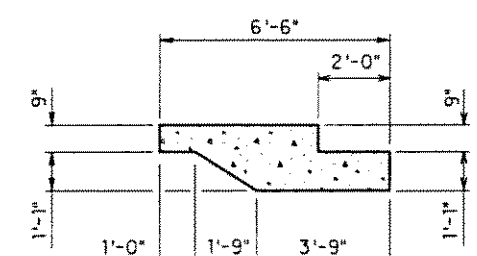


SECTION

SCALE : 3/8" = 1'-0"

C

DP18 DP18

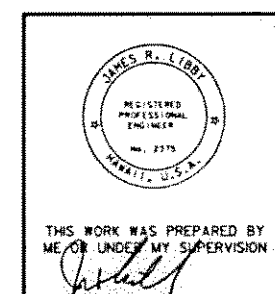


SECTION

SCALE : 3/8" = 1'-0"

D

DP18 DP18



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT 2 SEGMENT
DIMENSIONS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

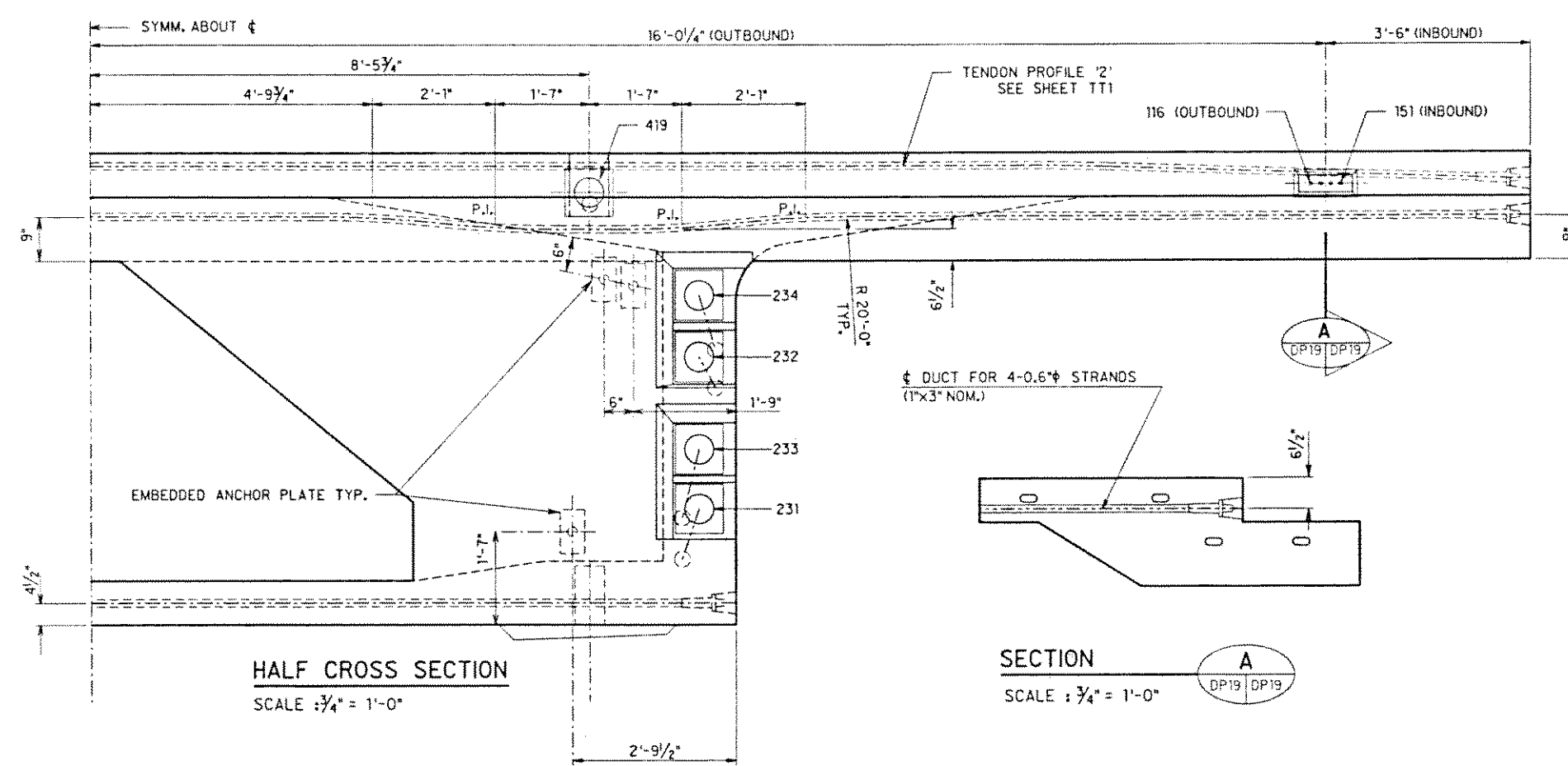
SCALE : AS NOTED DATE : JUN. 1991

SHEET NO. DP18 OF SHEETS

DATE REVISION
J. MULLER
INTERNATIONAL Libby
Engineers

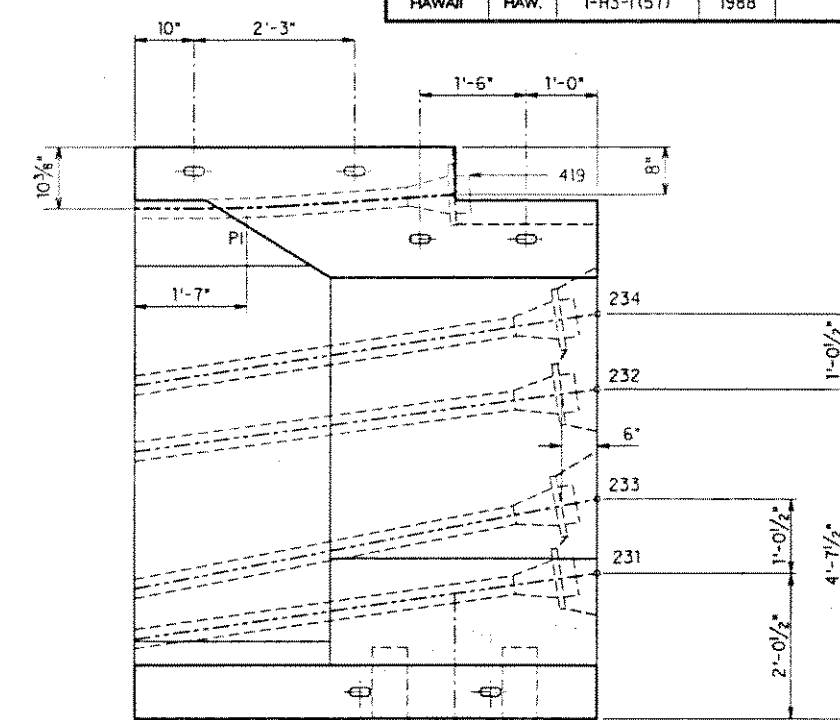
DESIGNER: J. MULLER
CHECKED BY: J. MULLER
DATE: 6/1/88
NOTES: 1. SEE SHEET NO. DP19 FOR POST-TENSIONING DETAILS.
2. SEE SHEET NO. SF1 FOR BULKHEAD DETAILS.
3. SEE SHEET NO. EJ1 FOR EXPANSION JOINT DETAILS.
4. SEE SHEET NO. BD1 FOR BEARING DETAILS.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

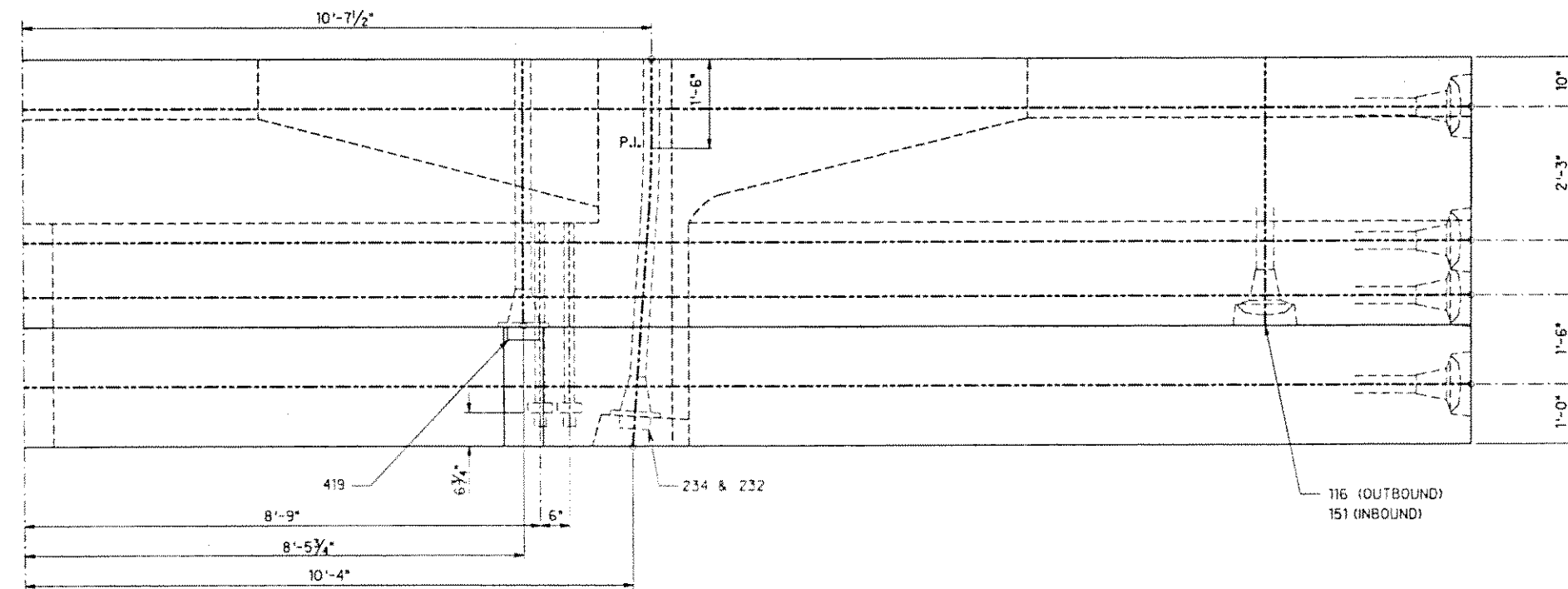


HALF CROSS SECTION
SCALE : 3/4" = 1'-0"

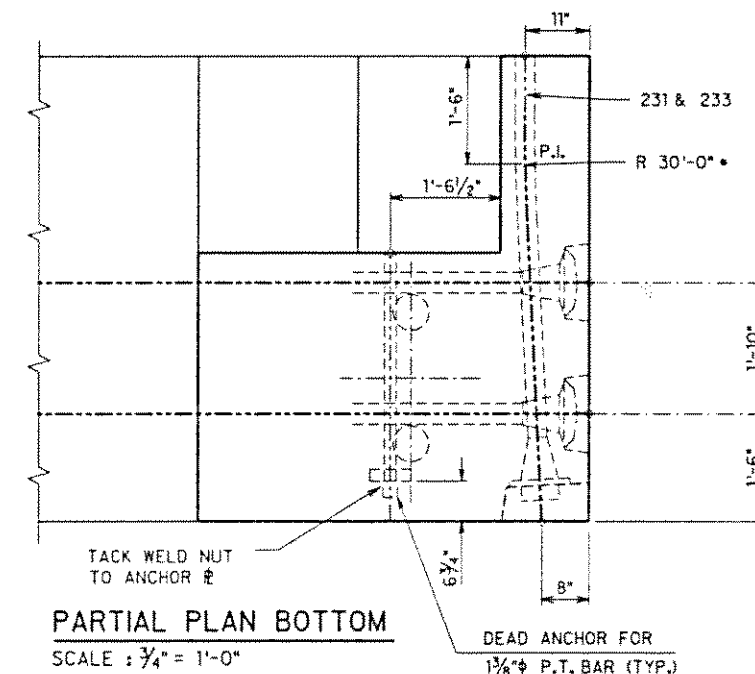
SECTION A
SCALE : 3/4" = 1'-0"



LONGITUDINAL SECTION
SCALE : 3/4" = 1'-0"



HALF TOP VIEW
SCALE : 3/4" = 1'-0"



PARTIAL PLAN BOTTOM
SCALE : 3/4" = 1'-0"

- NOTES:
1. ALL LONGITUDINAL TENDONS ARE 19*0.5" STRANDS EACH.
 2. ALL TRANSVERSE TENDONS ARE 4*0.6" STRANDS EACH.
 3. VARIATIONS (IF ANY) DUE TO HORIZONTAL CURVATURE NOT SHOWN.
 4. MINIMUM RADIUS IS 20' FOR 19*0.5" TENDONS UNLESS SHOWN OTHERWISE.
 5. STRESS TRANSVERSE TENDONS TO 205 ksi EXCEPT BOTTOM SLAB TENDONS WHICH SHALL BE STRESSED TO 216 ksi.

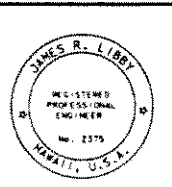
DATE: _____ REVISION: _____
J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**ABUTMENT 2 SEGMENT
P.T. DETAILS**

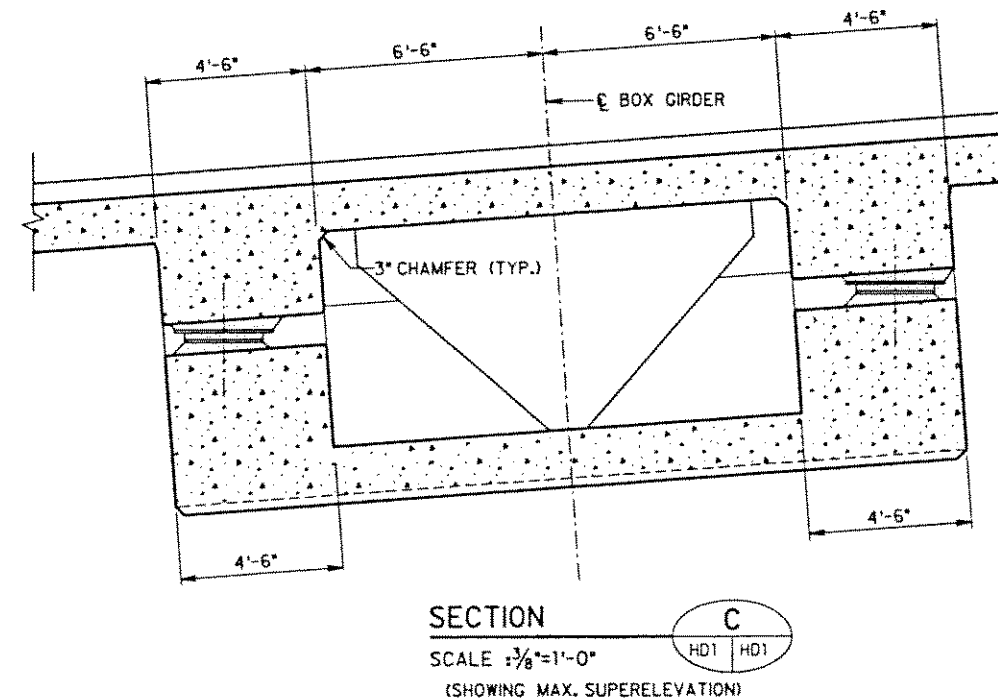
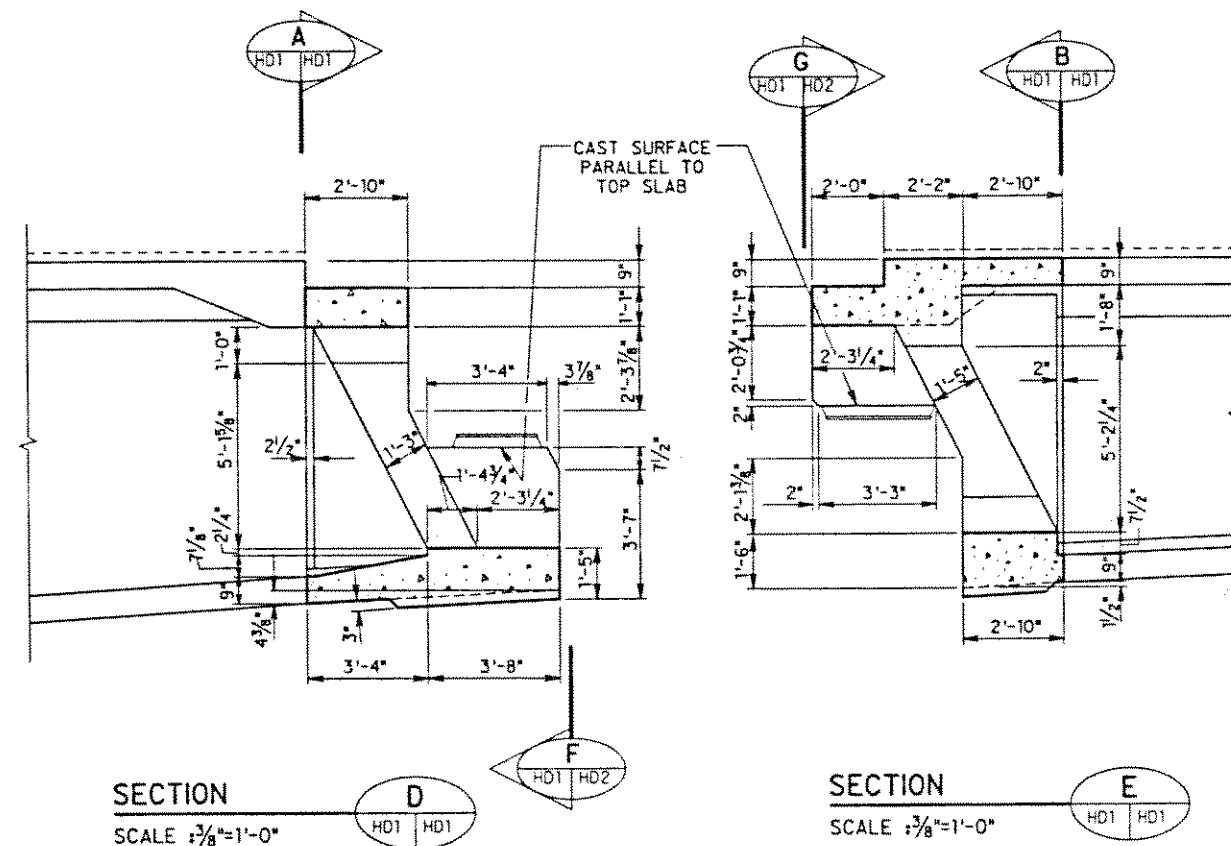
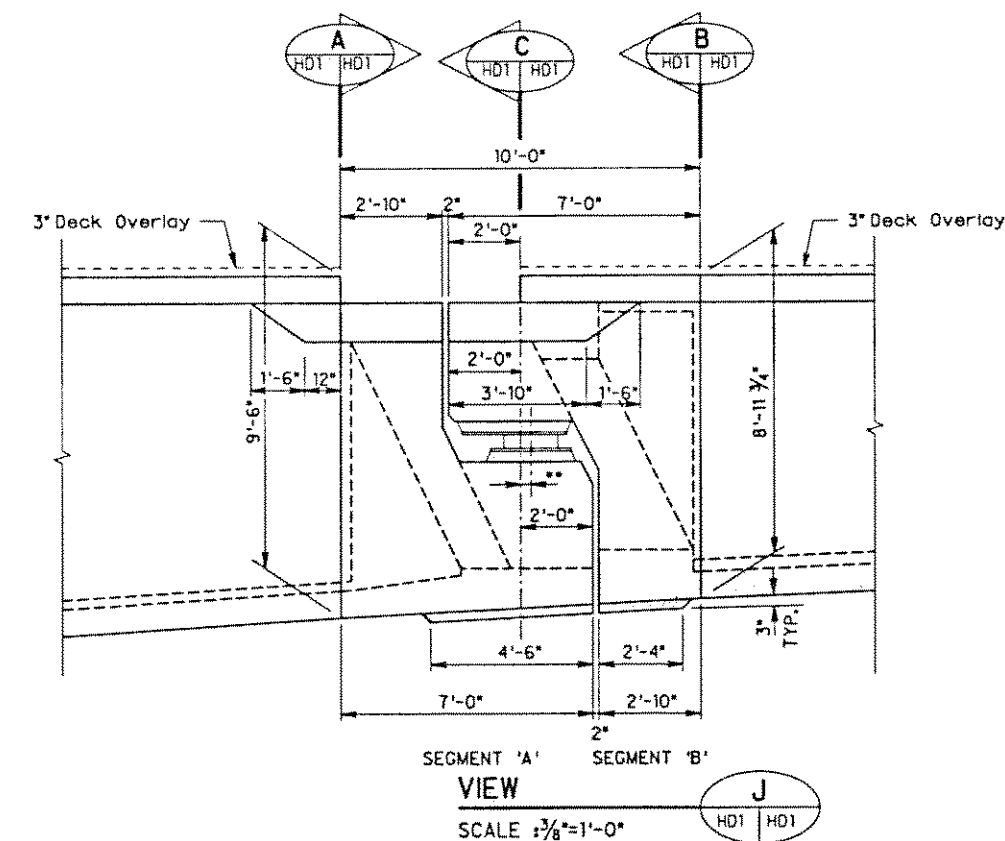
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE : AS NOTED DATE : JUN. 1991

SHEET No. DP19 OF SHEETS



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REVIEW PLotted BY: _____ DATE: _____
ORIGINAL PLotted BY: _____ DATE: _____
NOTE BOOK: _____
QUANTITIES BY: _____
CHECKED BY: _____

[illegible]

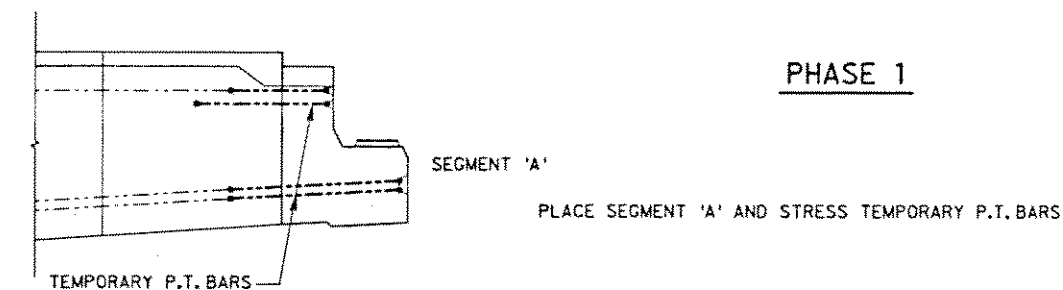
- | | | |
|---|----------------------------|--|
| 10/04/90 | UPDATED DRAWING. | |
| DATE | REVISION | |
|  | J. MULLER
INTERNATIONAL |  Libby
Engineers |

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DEATH BY		
TRACED BY		
NOTES MADE		
QUANTITIES BY		
CHECKED BY		

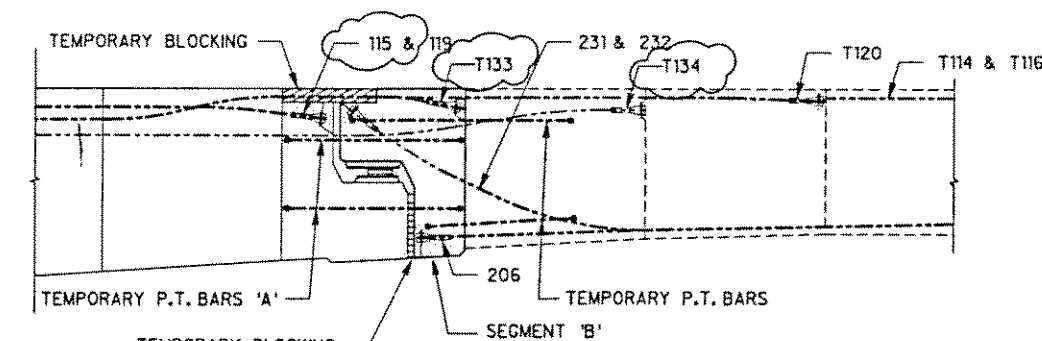
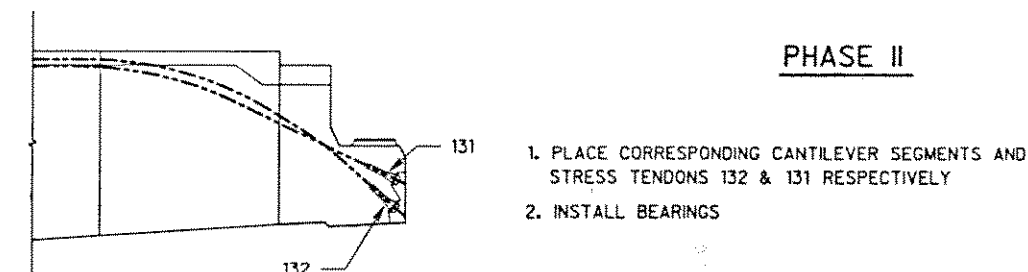
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

ERECTION SEQUENCE

PHASE 1

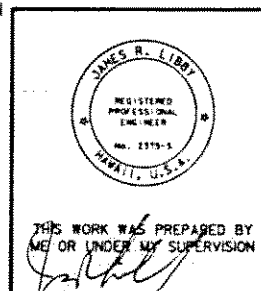


PHASE II



PHASE III

1. ERECT AND ADJUST SEGMENT 'B'
2. PLACE TEMPORARY SHIMS IN THE EXPANSION JOINT GAP AND STRESS TEMPORARY P.T. BARS 'A'
3. INSTALL TEMPORARY BLOCKING ACCORDING TO DETAILS SHOWN ON SHEET HD9
4. ERECT SEGMENT AT OPPOSITE END OF CANTILEVER
5. INSTALL AND STRESS TENDONS T134 AND T119
6. ERECT REMAINING PAIRS OF CANTILEVER SEGMENTS, STARTING WITH THE DOWNSTATION SEGMENT. STRESS TENDONS T133, T120, T115, T114, & T116.
7. FOLLOWING CLOSURE AND STRESSING OF CONTINUITY TENDONS IN THE SPAN UPSTATION OF THE HINGED SPAN AND AFTER THE ERECTION GANTRY CENTER LEGS HAS BEEN MOVED TO THE THIRD PIER AFTER THE HINGE, THE HINGE WILL BE RELEASED AS FOLLOWS:
 - a. RELEASE TEMPORARY P.T. BARS 'A' THROUGH THE HINGE SEGMENT.
 - b. RELEASE TEMPORARY TENDONS IN THE FOLLOWING ORDER: T133, T120, T114, T116
 - c. REMOVE TEMPORARY BLOCKING



10/04/90

UPDATED DRAWING.

DATE

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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HINGE SEGMENT

DIMENSIONS II

INTERSTATE ROUTE H-3

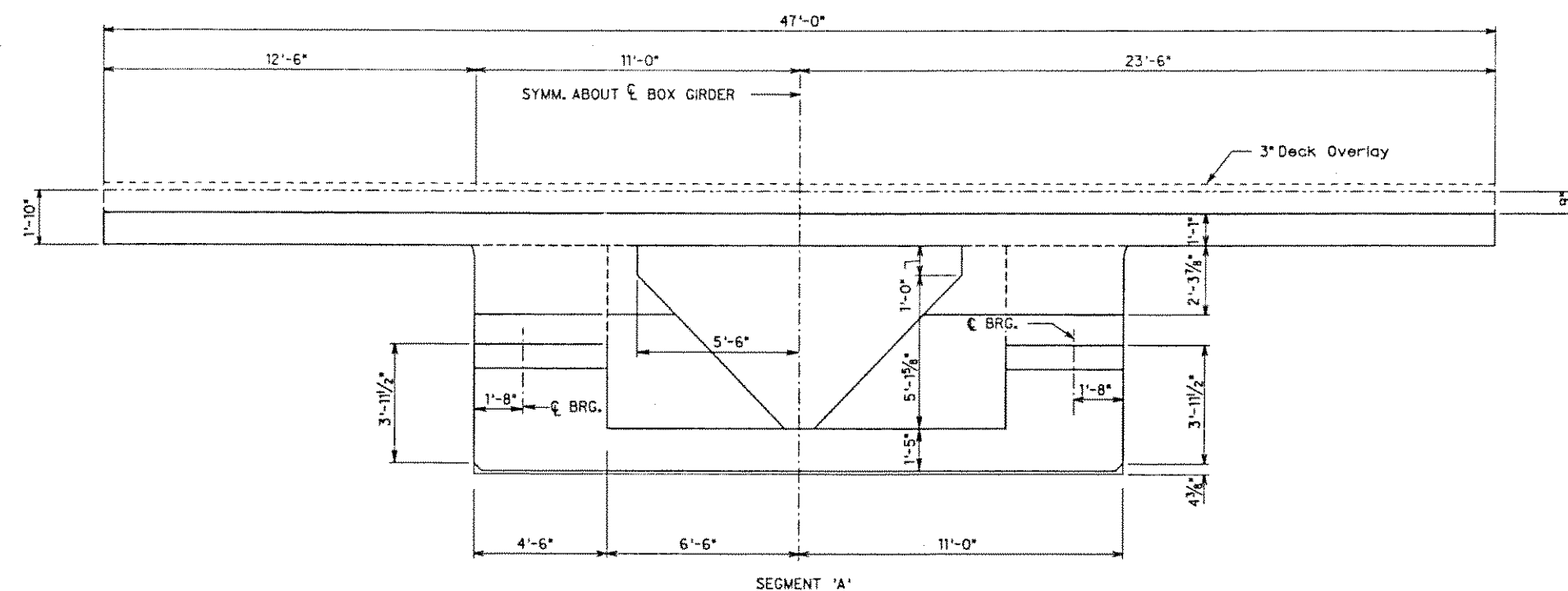
F.A.J. PROJECT No. I-H3-1(57)

F.A.J. PROJECT No. I-H3-1(58)

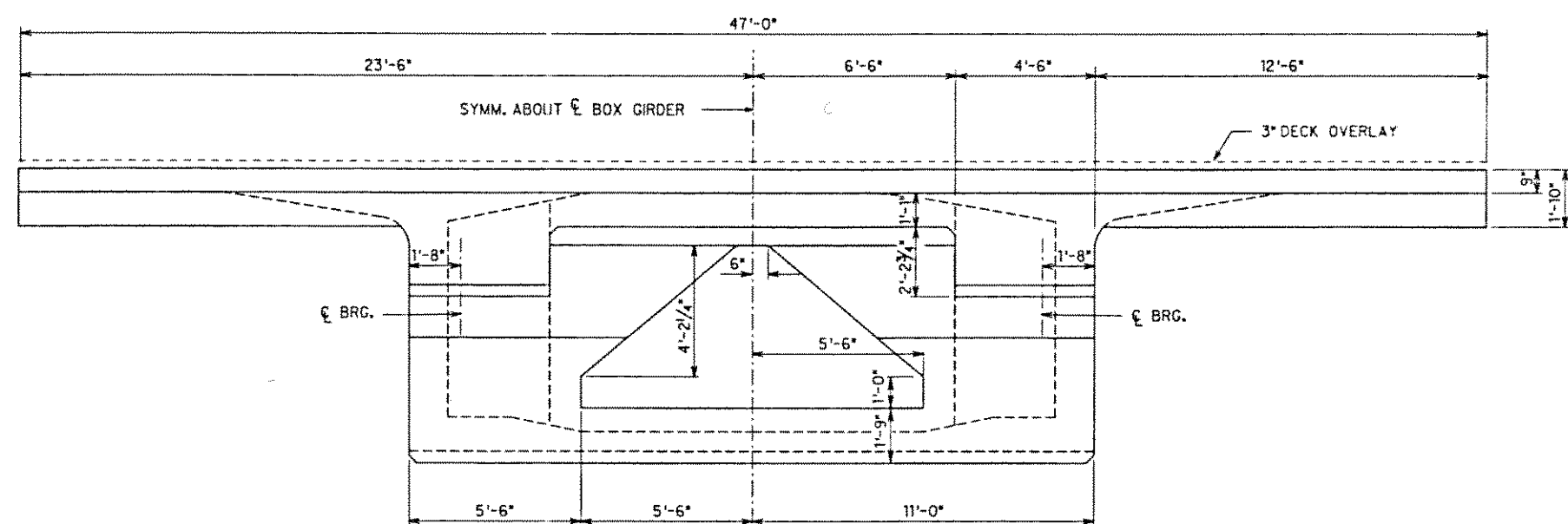
SCALE : AS NOTED

DATE : SEP. 1990

SHEET No. HD2 OF SHEETS



SECTION F
SCALE 3/8"=1'-0"

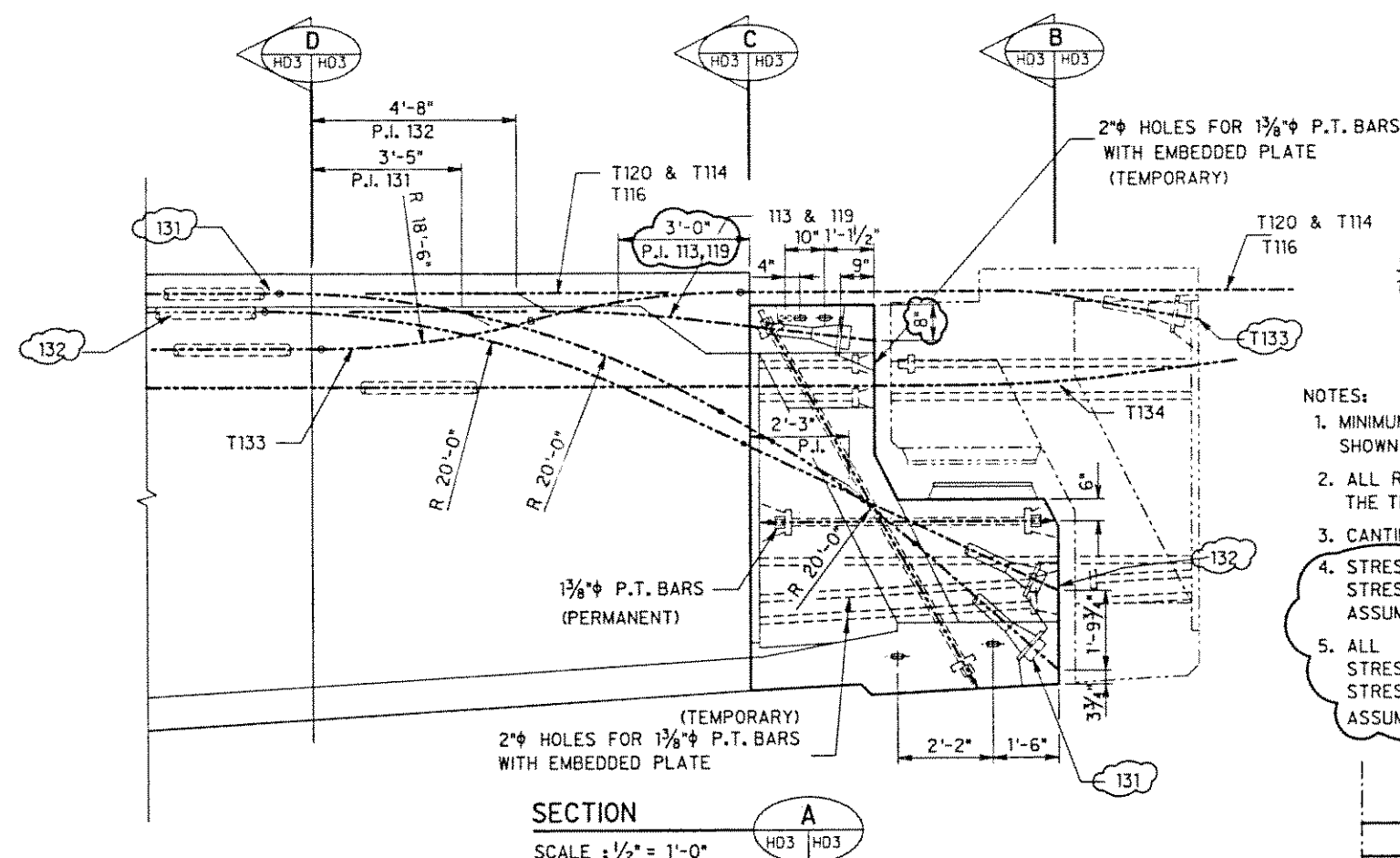


SECTION G
SCALE 3/8"=1'-0"

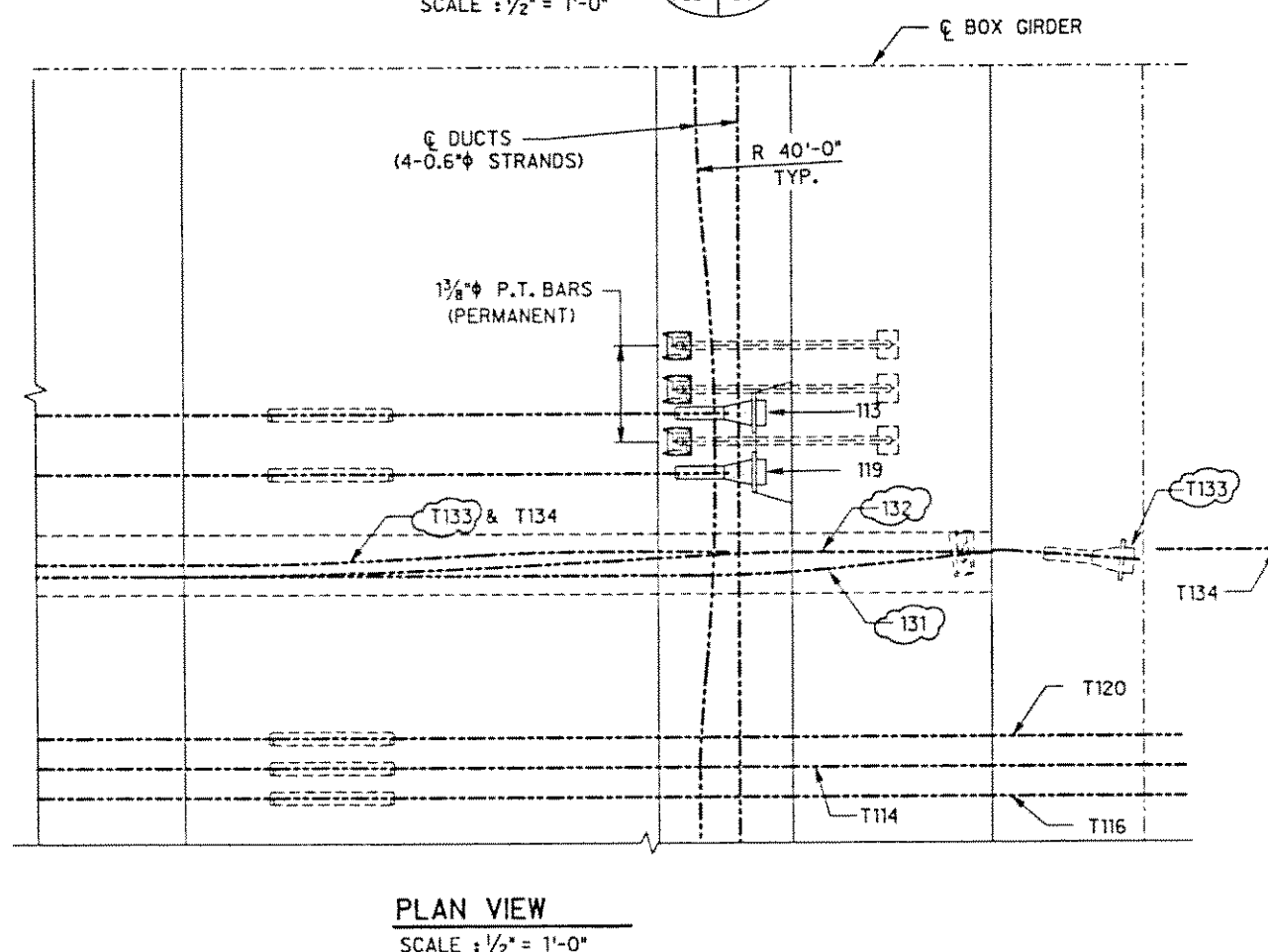
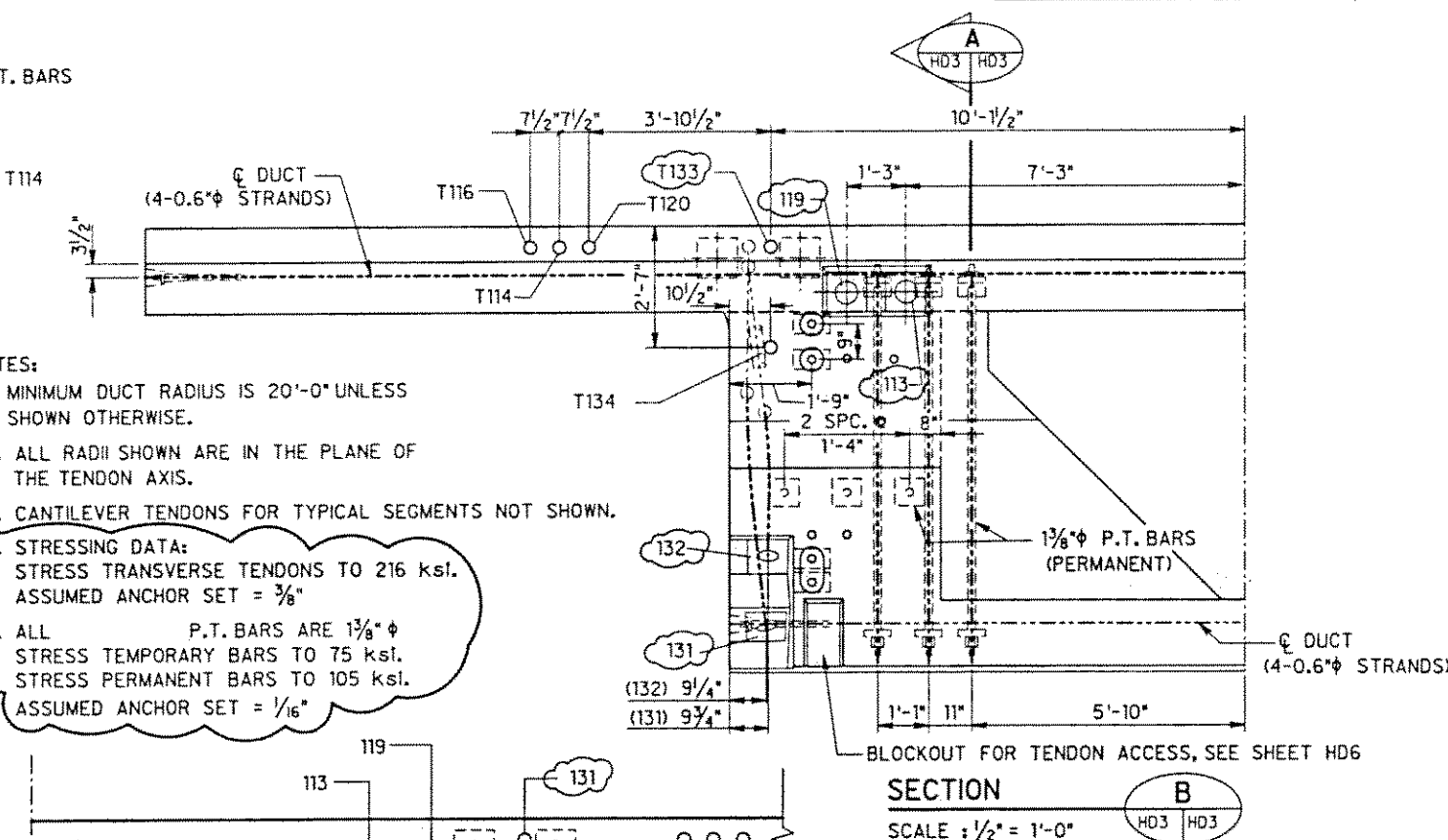
NOTES:
1. FOR NOTES SEE SHEET HD1.

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NO.	

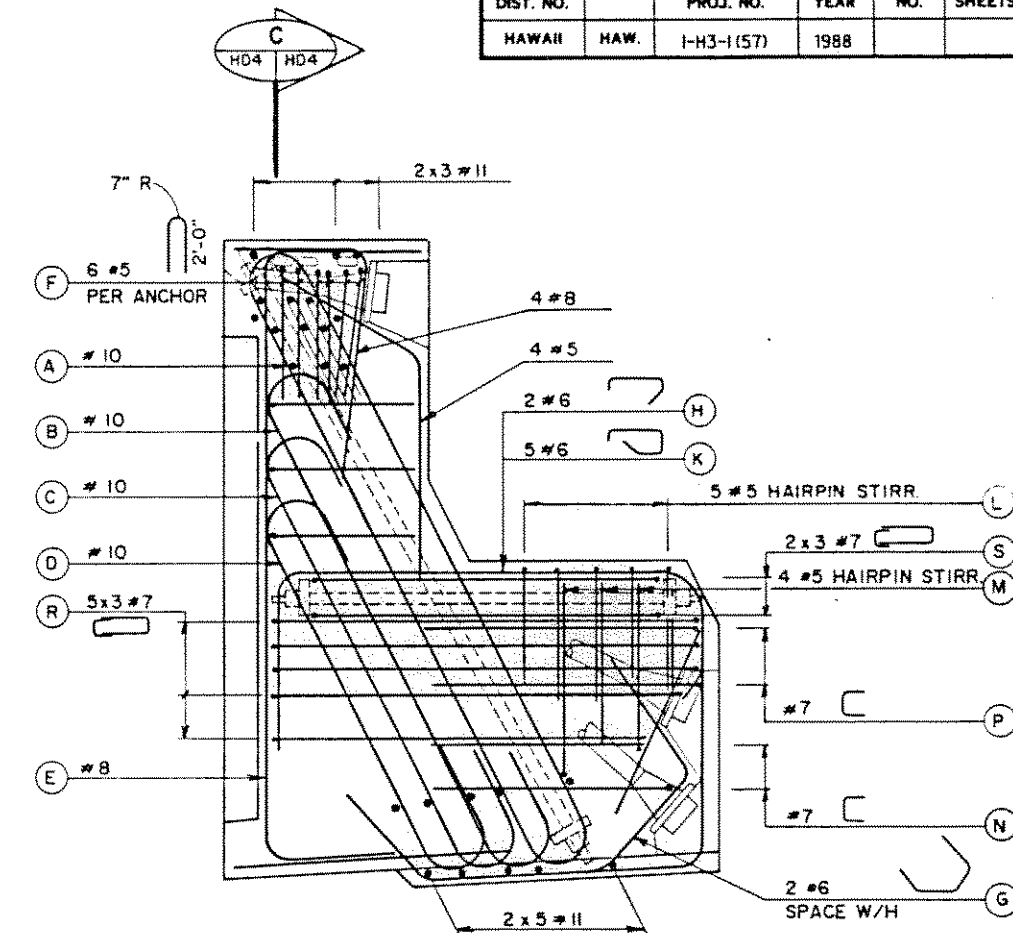
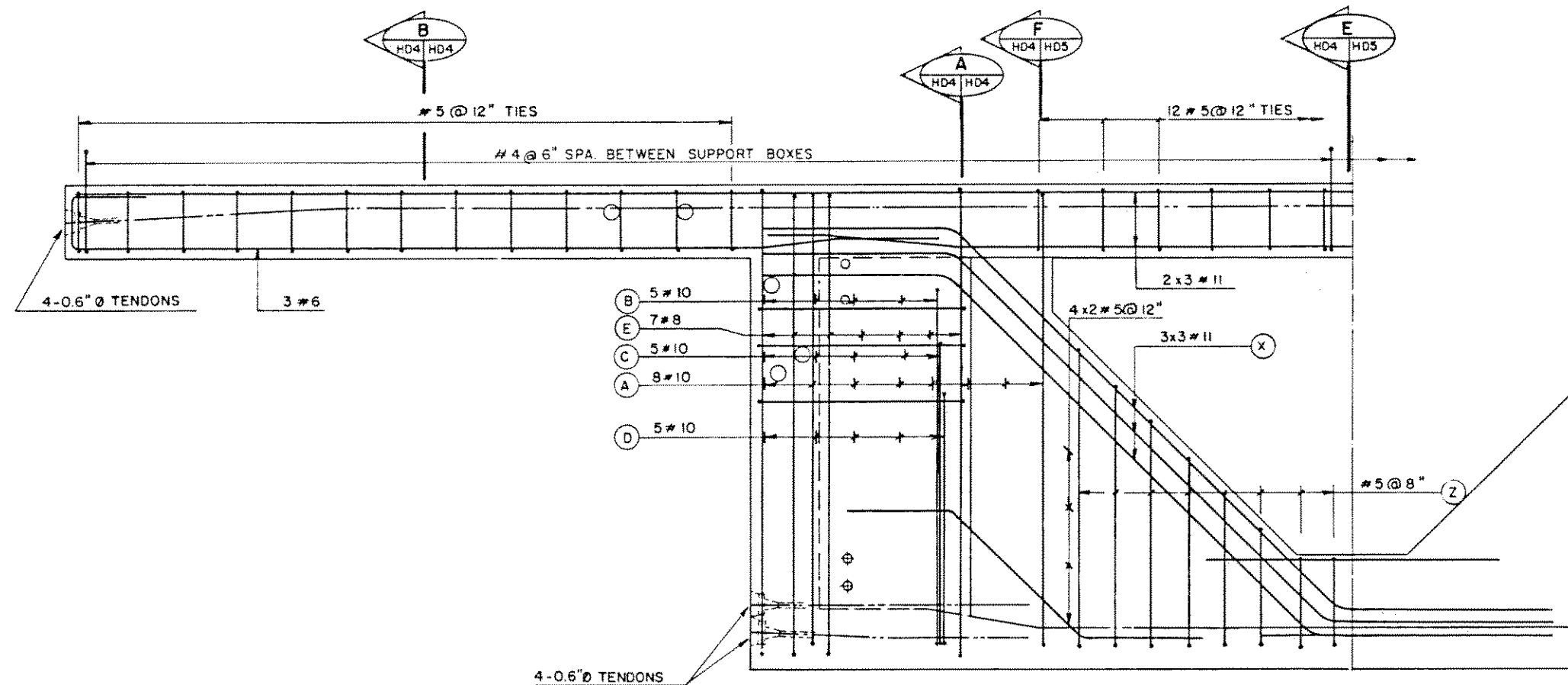
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



- NOTES:
1. MINIMUM DUCT RADIUS IS 20'-0" UNLESS SHOWN OTHERWISE.
 2. ALL RADII SHOWN ARE IN THE PLANE OF THE TENDON AXIS.
 3. CANTILEVER TENDONS FOR TYPICAL SEGMENTS NOT SHOWN.
 4. STRESSING DATA:
STRESS TRANSVERSE TENDONS TO 216 ksi.
ASSUMED ANCHOR SET = 3/8"
 5. ALL P.T. BARS ARE 1 3/8" ϕ
STRESS TEMPORARY BARS TO 75 ksi.
STRESS PERMANENT BARS TO 105 ksi.
ASSUMED ANCHOR SET = 1/16"

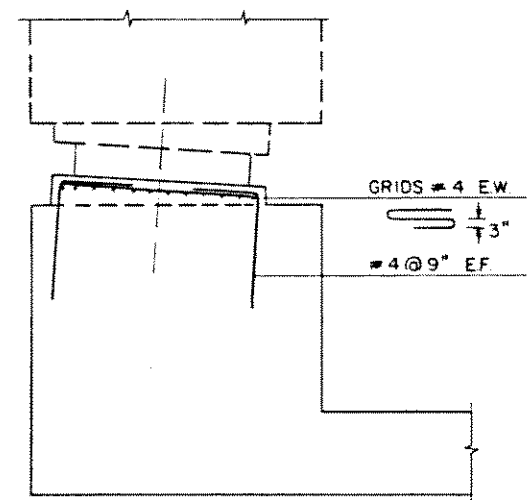


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

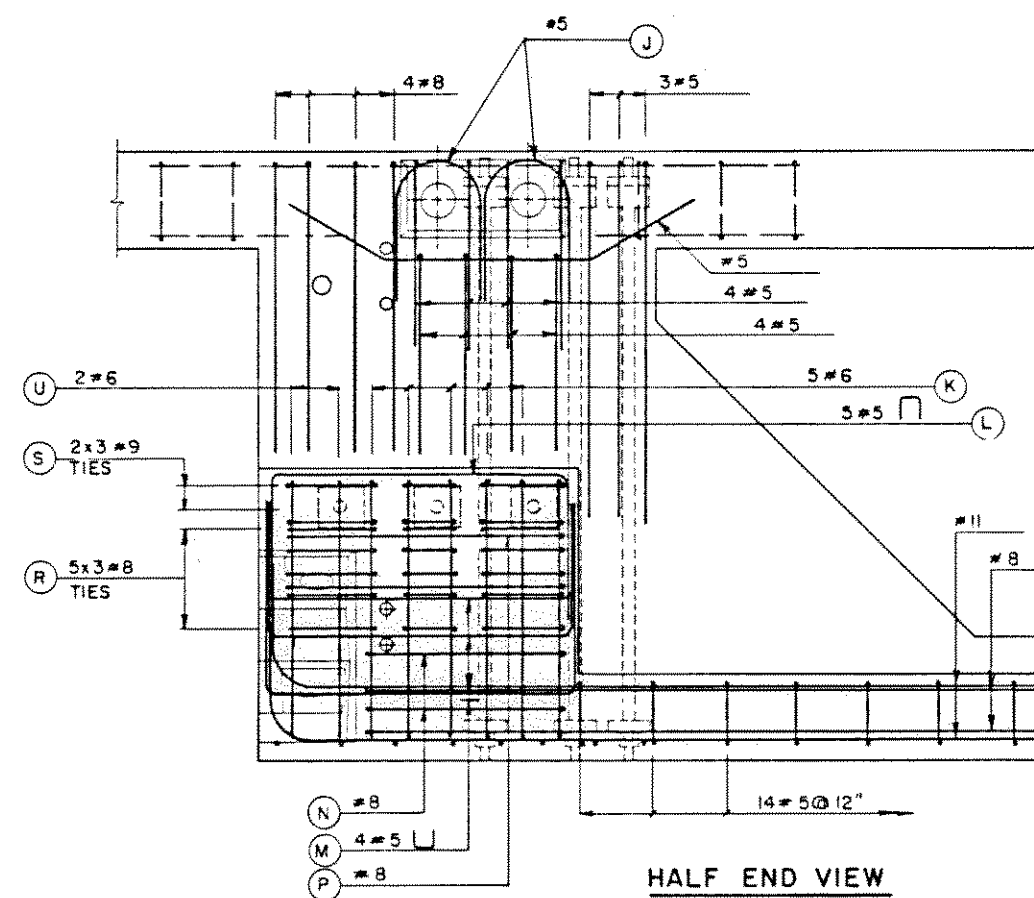


SECTION C
SCALE: 3/4" = 1'-0"

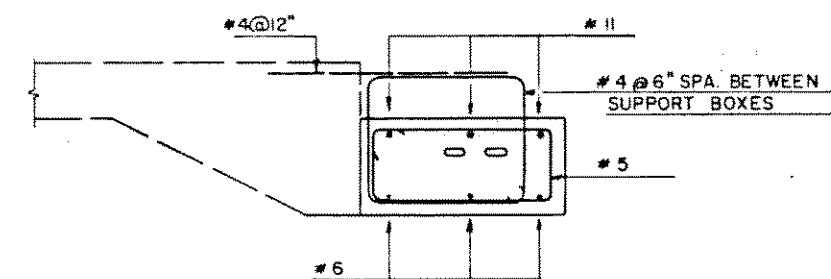
SECTION A
SCALE: 3/4" = 1'-0"



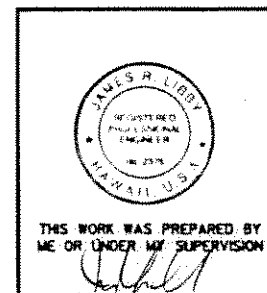
BEARING PLINTH
SCALE: 3/4" = 1'-0"



HALF END VIEW
SCALE: 3/4" = 1'-0"



SECTION B
SCALE: 3/4" = 1'-0"



DATE	REVISION
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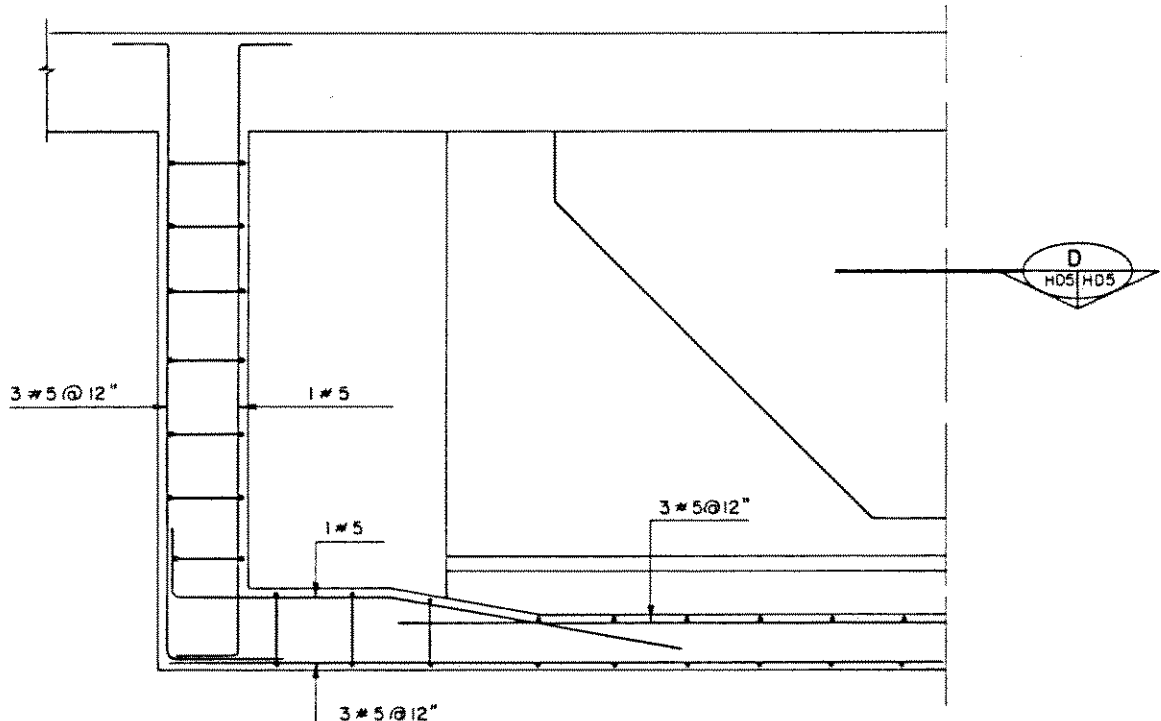
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**HINGE SEGMENT A
REINFORCING I**

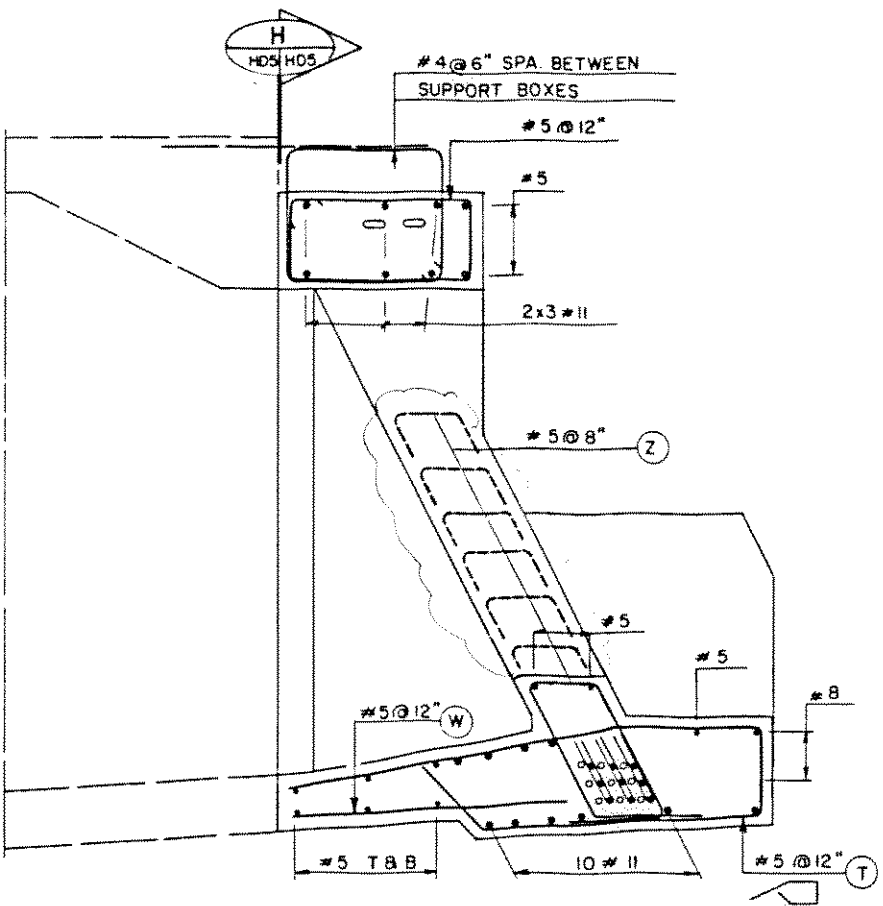
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. HD4 OF SHEETS

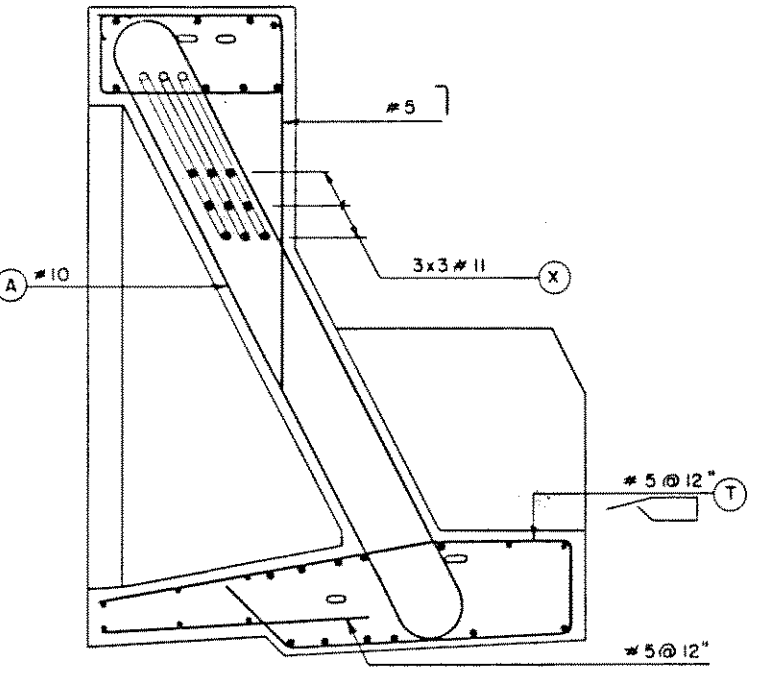
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-I (57)	1988		



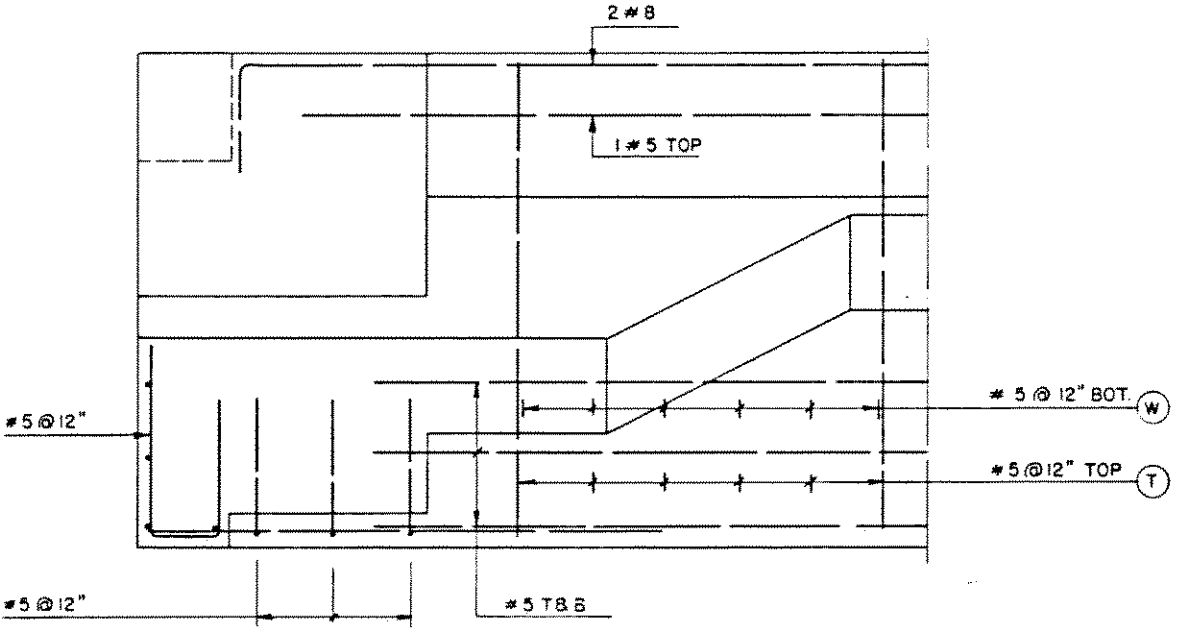
VIEW
SCALE: 3/4" = 1'-0"



SECTION
SCALE: 3/4" = 1'-0"



SECTION
SCALE: 3/4" = 1'-0"



SECTION
SCALE: 3/4" = 1'-0"

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
REVISION	

08/23/91	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HINGE SEGMENT A

REINFORCING II

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-I (57)

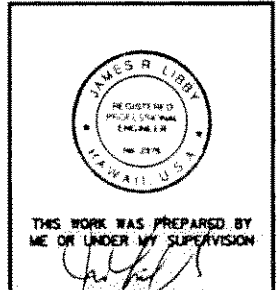
F.A.I. PROJECT No. I-H3-I (58)

SCALE: AS NOTED

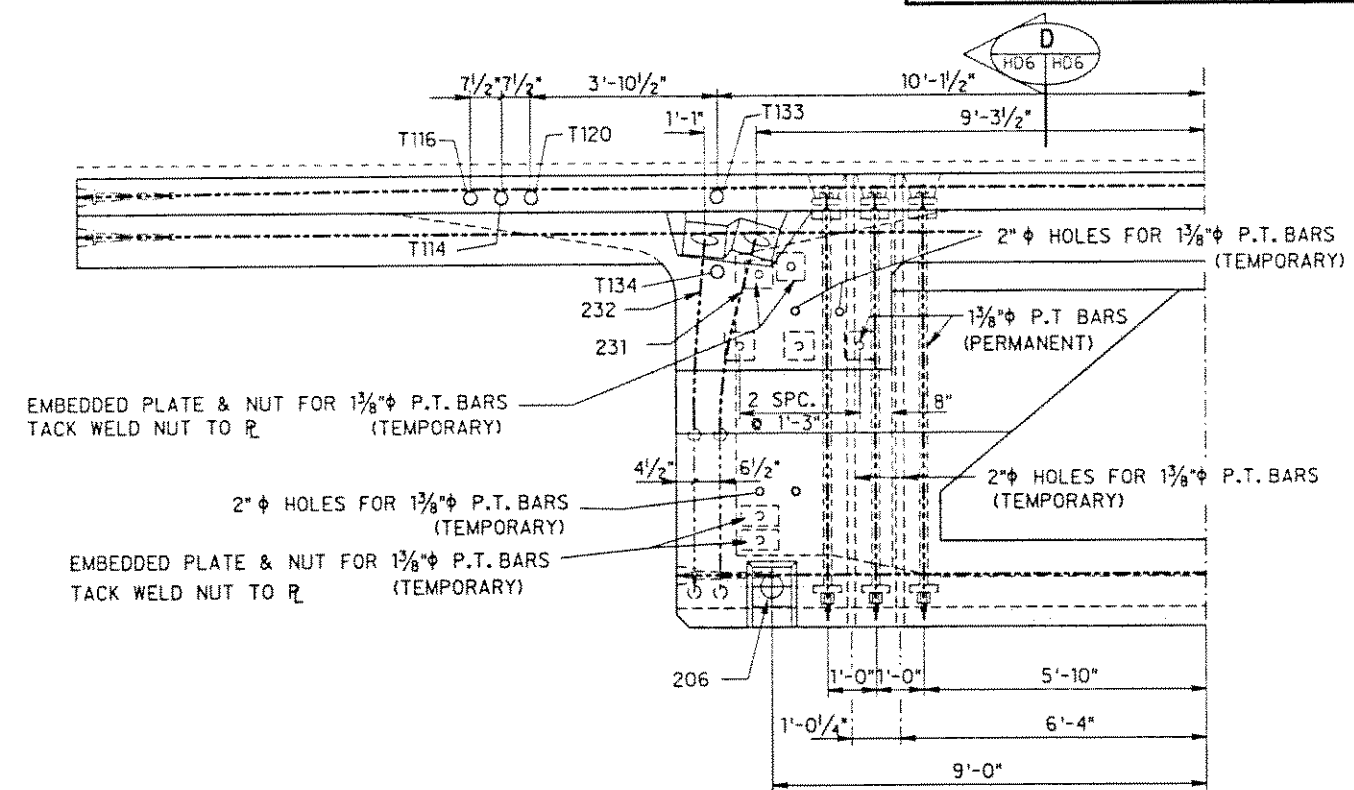
DATE: JUN. 1990

SHEET No. HD5 OF

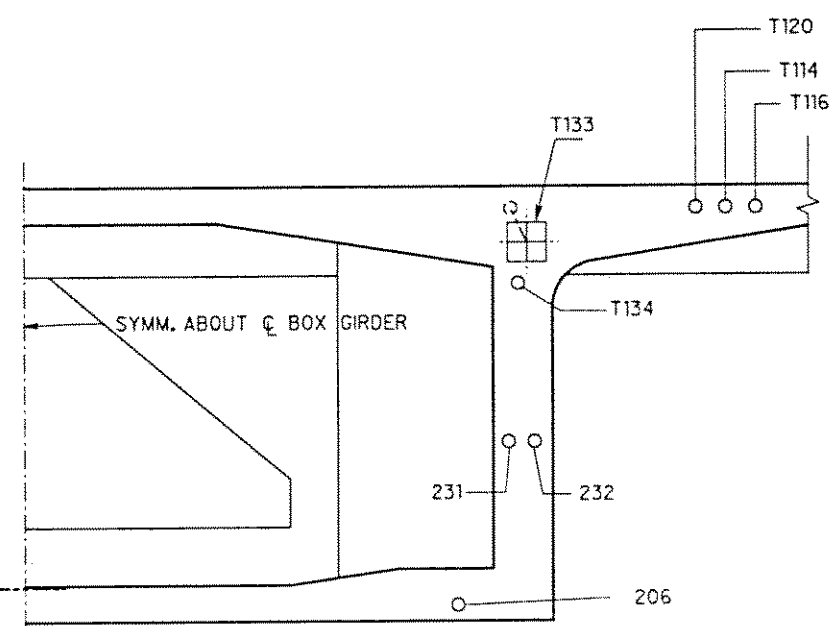
SHEETS



(TEMPORARY)
2 x 1 3/8" ϕ P.T BARS

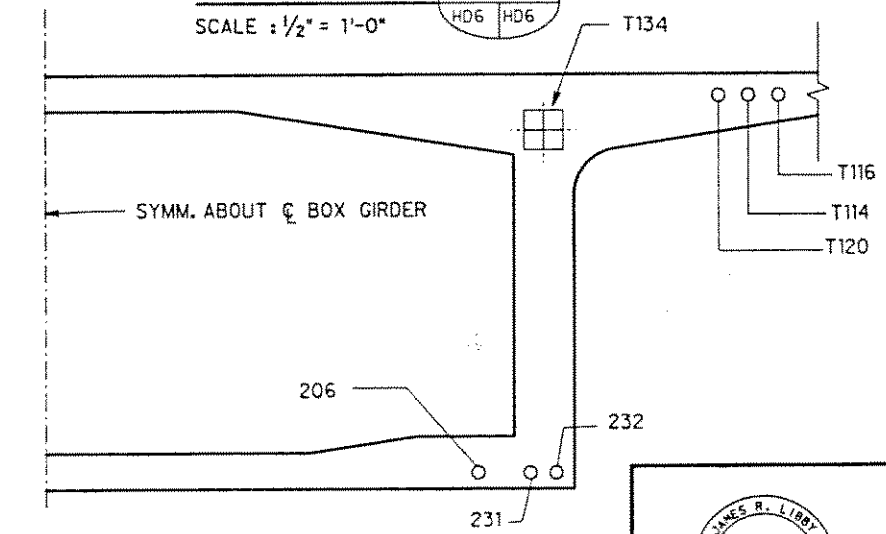


SECTION  A
SCALE : 1/2" = 1'-0" T134



SECTION 

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



NOTES:

1. MINIMUM DUCT RADIUS IS 20'-0" UNLESS SHOWN OTHERWISE.
2. ALL RADII SHOWN ARE IN PLANE OF THE TENDON AXIS.
3. CANTILEVER TENDONS FOR TYPICAL SEGMENTS NOT SHOWN.
4. TRANSVERSE TENDONS:
STRESS TENDONS TO 216ksi.
ASSUMED ANCHOR SET = $\frac{3}{8}$ "
5. ALL P.T. BARS ARE $1\frac{3}{8}$ "
STRESS ALL PERMANENT AND VERTICAL TEMPORARY BARS TO 105ksi.
STRESS ALL HORIZONTAL TEMPORARY BARS TO 75ksi.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

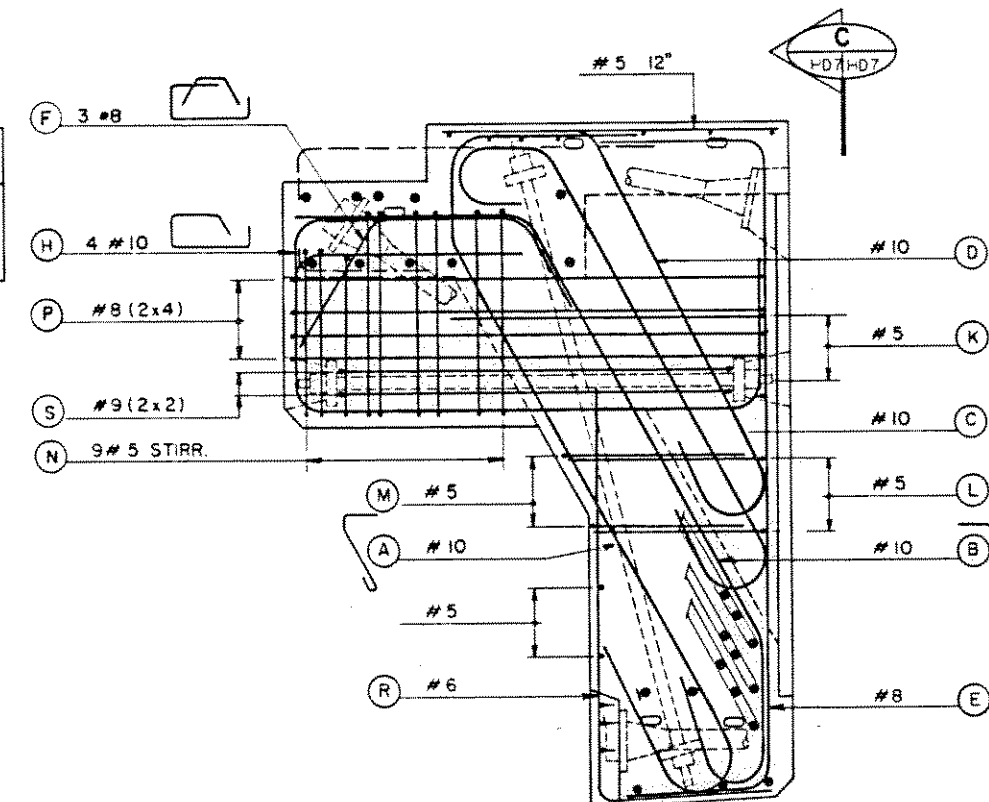
HINGE SEGMENT B
POST-TENSIONING DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-I(57)
F.A.I. PROJECT No. I-H3-I(58)

SCALE : AS NOTED DATE : SEP. 1990

SHEET No. HD6 OF SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DRAWN BY	1	1
TRACED BY	2	2
DESIGNED BY	3	3
QUANTITY BY	4	4
INVESTIGATED BY	5	5
NOTED BY	6	6

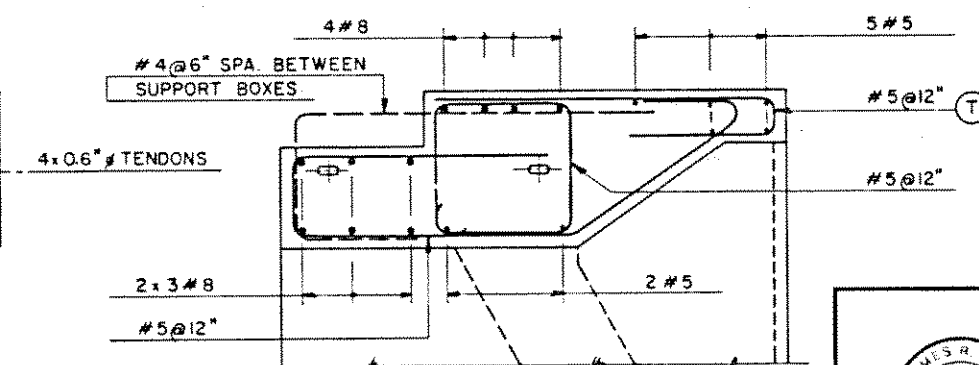


HALF VIEW

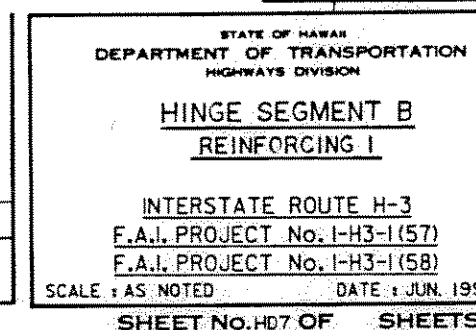
SCALE : $\frac{3}{4}" = 1'-0"$

C

HD7 HD7

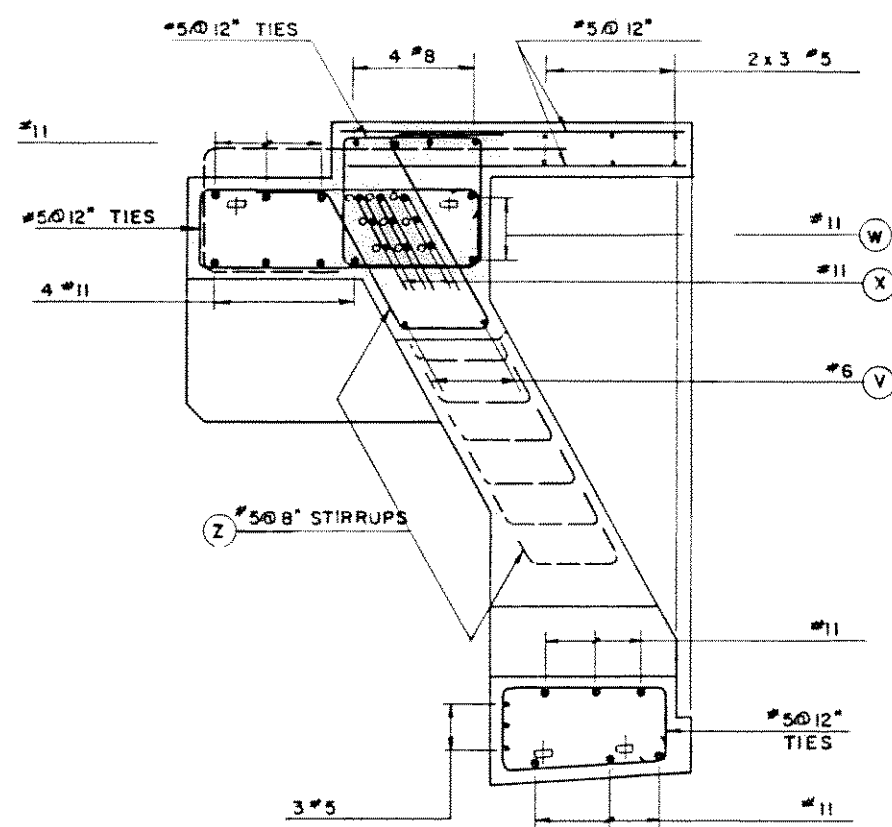


HALF END VIEW D
SCALE: $\frac{3}{4}'' = 1'-0''$ HD7 HD7

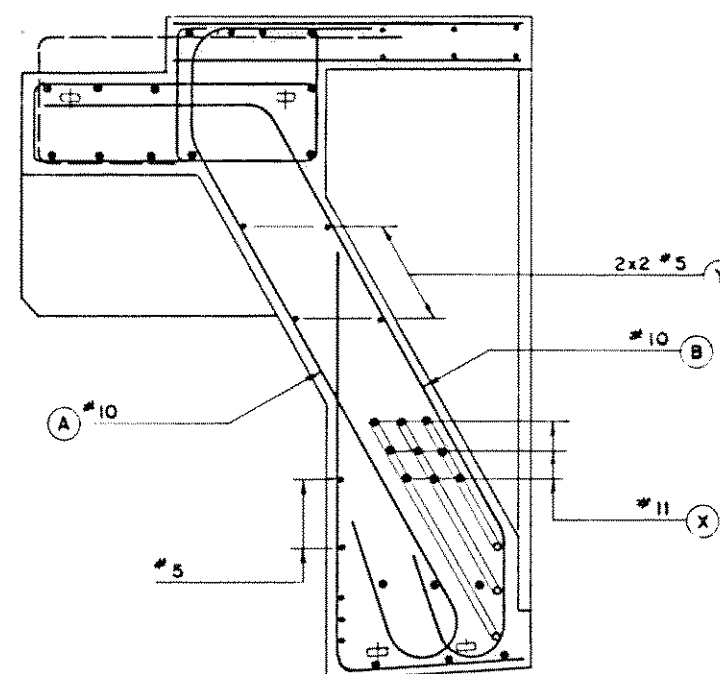


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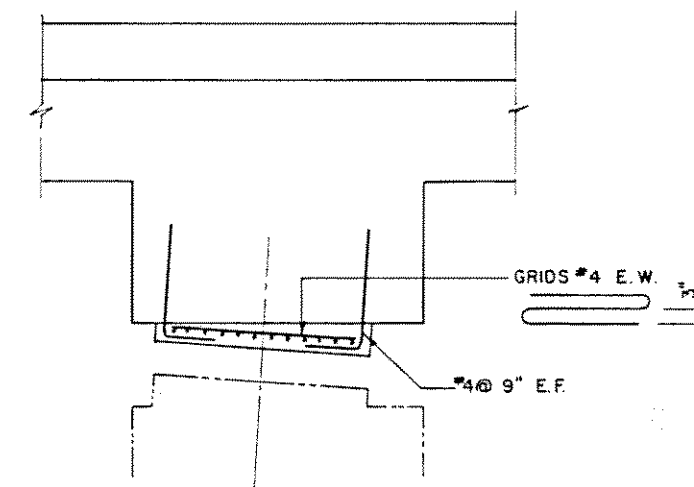
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



SECTION **D**
SCALE: 3/4\" = 1'-0\"
HD7 HD8

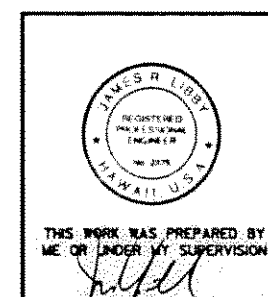


SECTION **F**
SCALE: 3/4\" = 1'-0\"
HD7 HD8



BEARING PLINTH
SCALE: 3/4\" = 1'-0\"

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



DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

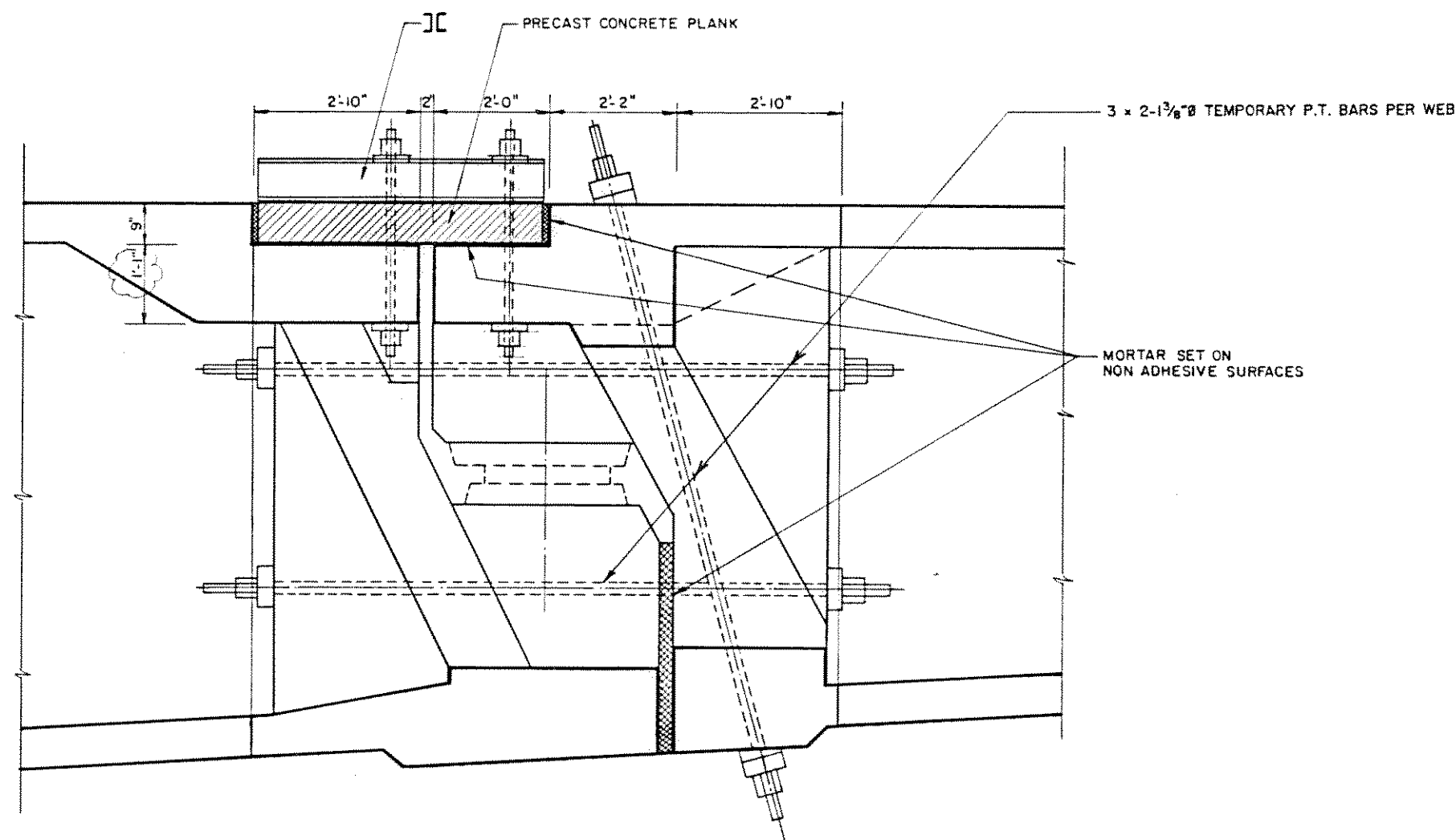
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**HINGE SEGMENT B
REINFORCING II**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. HD8 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



SCHEME OF PRINCIPLE
SCALE: 3/4" = 1'-0"

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HINGE SEGMENTS
TEMPORARY BLOCKING

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

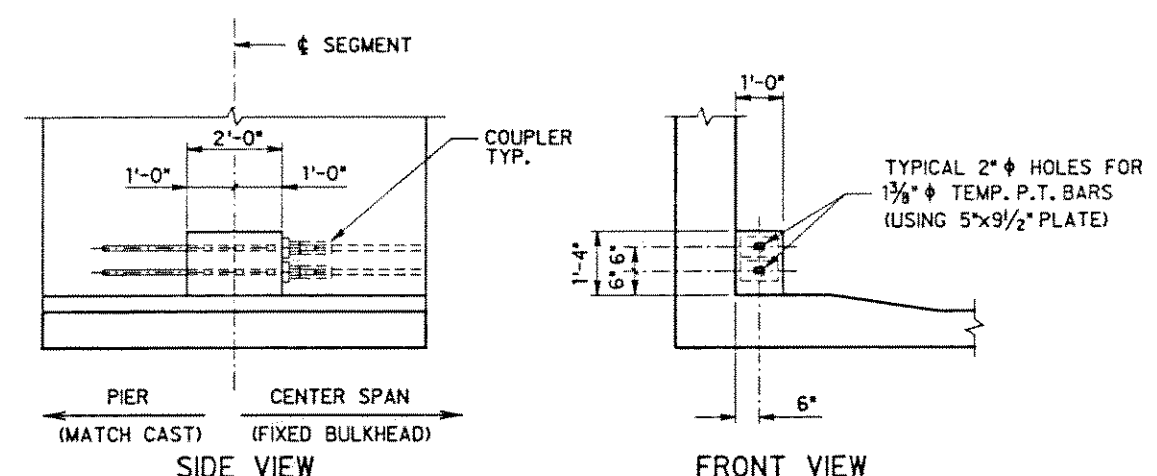
SHEET No. H09 OF SHEETS

08/23/91 UPDATED DRAWING

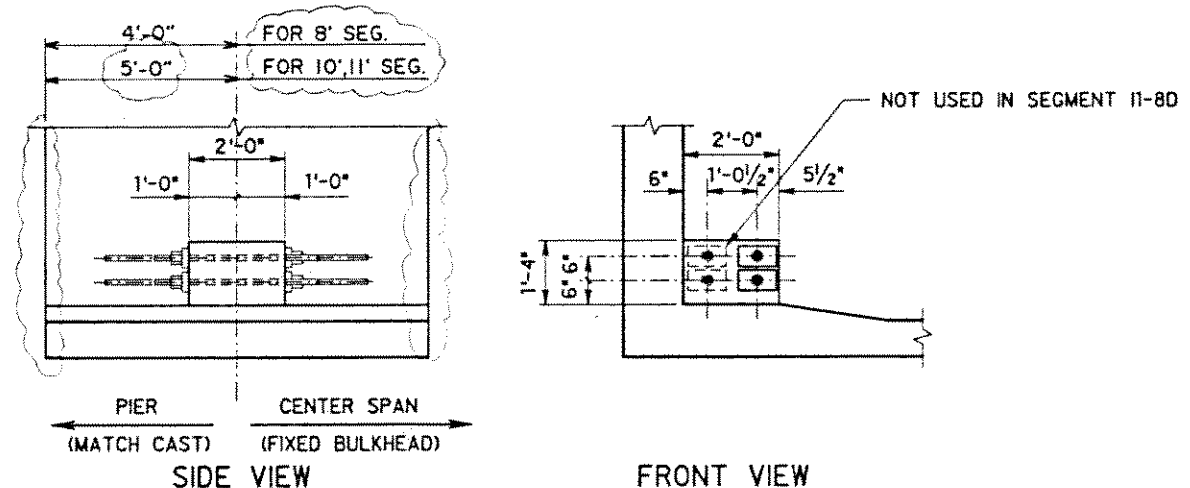
DATE REVISION

J. MULLER INTERNATIONAL E Libby Engineers

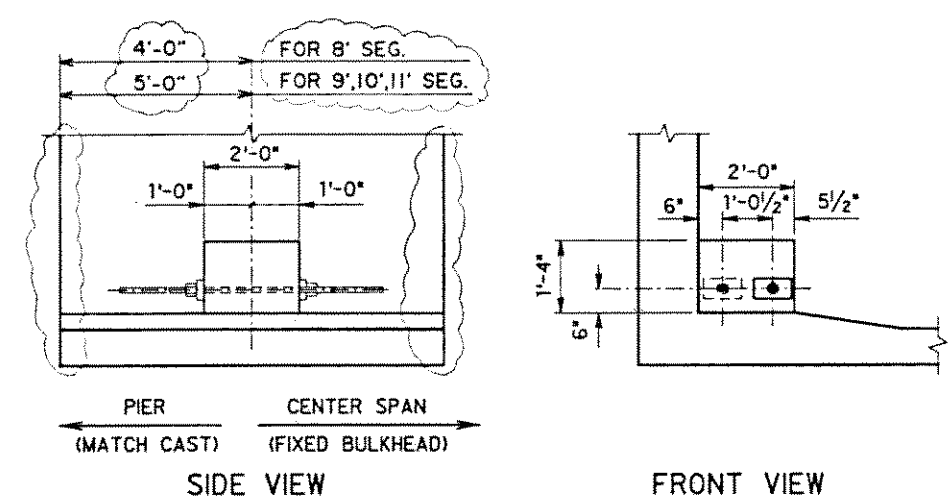
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



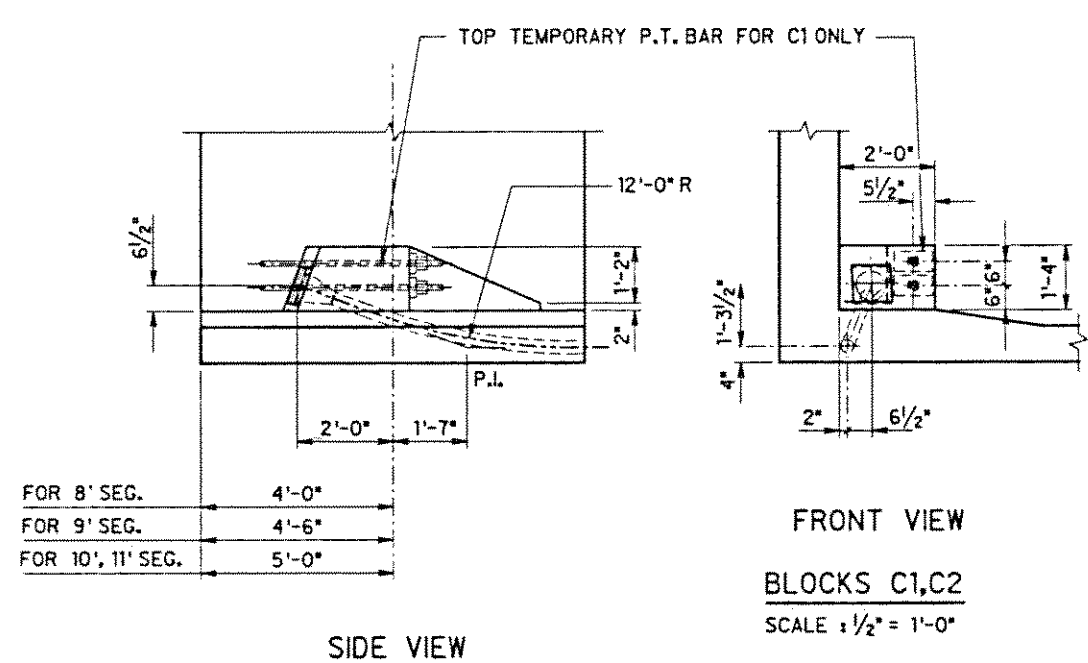
BLOCK A
SCALE: 1/2" = 1'-0"



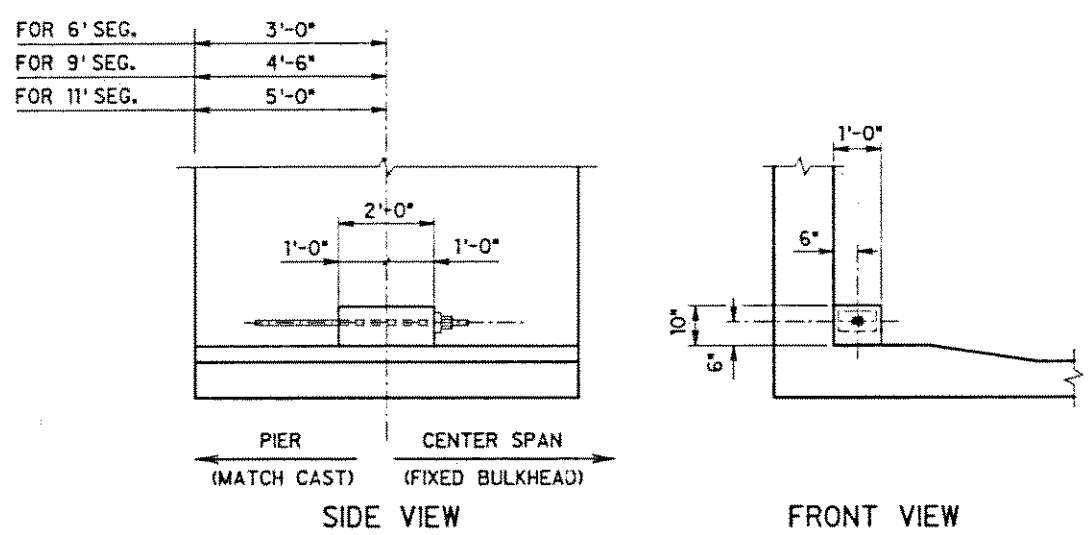
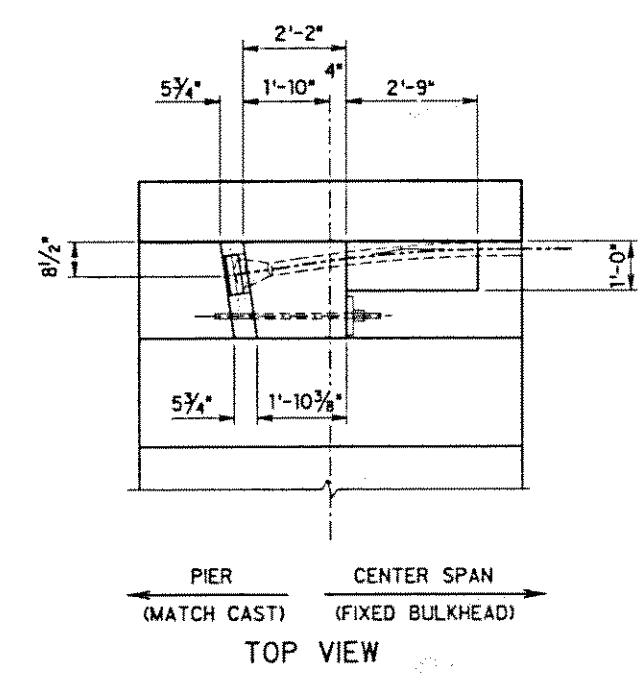
BLOCK B1
SCALE: 1/2" = 1'-0"



BLOCK B2
SCALE: 1/2" = 1'-0"

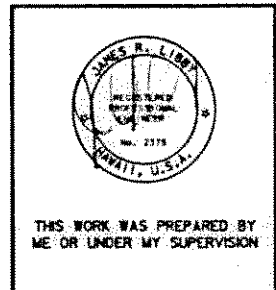


BLOCKS C1, C2
SCALE: 1/2" = 1'-0"



BLOCK D
SCALE: 1/2" = 1'-0"

NOTE: FOR BLOCKS B3 THRU B5, C3, C4, E1, E2 SEE SHEET No. PT2



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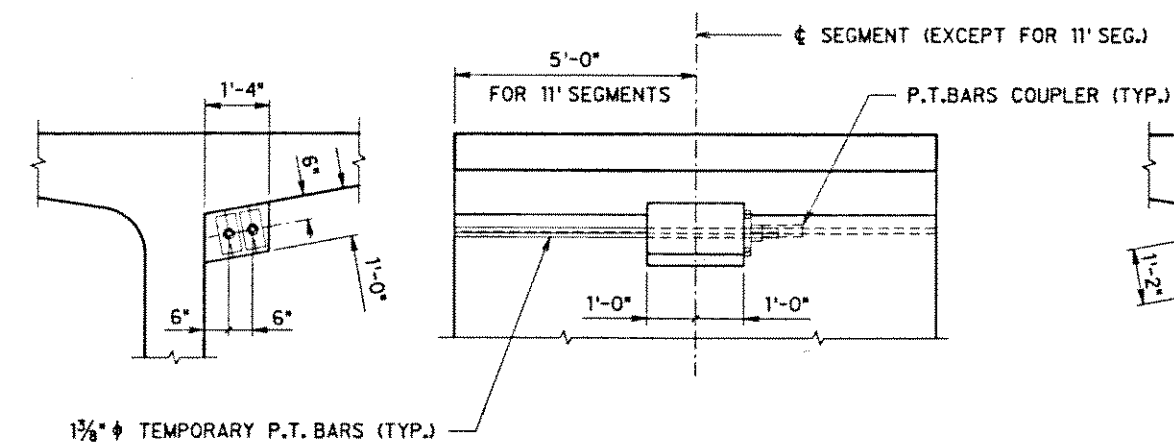
02/25/91 UPDATED DRAWING. 07/25/90 UPDATED DRAWING	
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**POST-TENSIONING DETAILS I
BOTTOM BLOCKS**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE: AS NOTED DATE: JUN. 1990

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

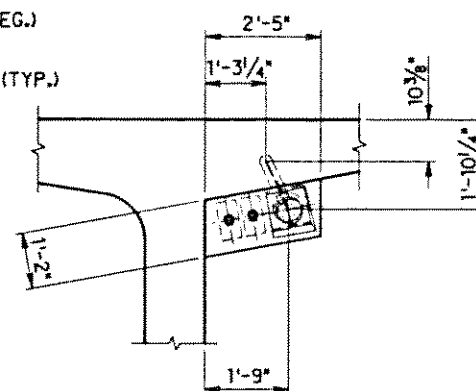


FRONT VIEW
TYPICAL P.T. BARS LOCATION

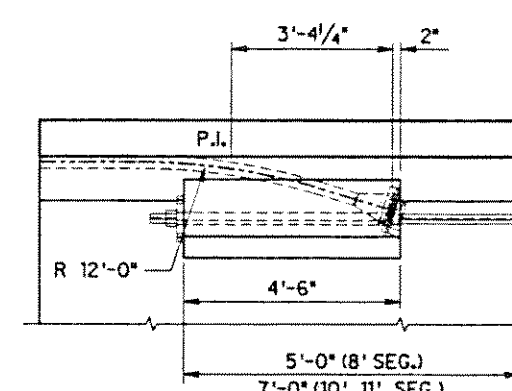
SIDE VIEW

PIER (MATCH CAST) CENTER SPAN (FIXED BULKHEAD)

BLOCK 1
SCALE: 1/2" = 1'-0"



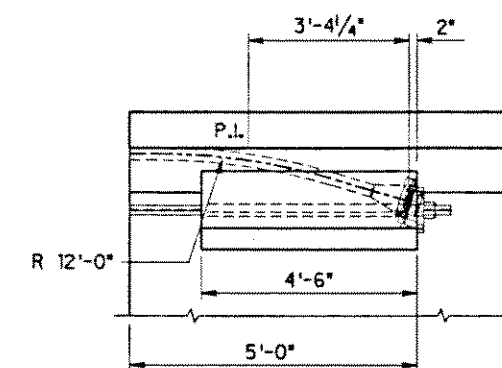
FRONT VIEW



SIDE VIEW

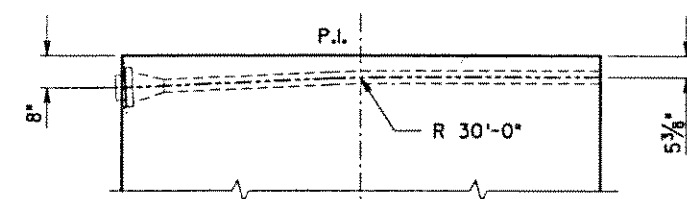
CENTER SPAN (FIXED BULKHEAD) PIER (MATCH CAST)

BLOCK 2
SCALE: 1/2" = 1'-0"



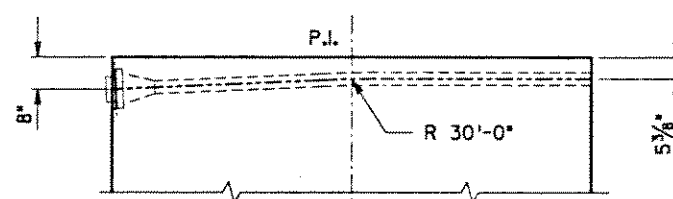
SIDE VIEW AT SEG. 01-2U

PIER (MATCH CAST) CENTER SPAN (FIXED BULKHEAD)



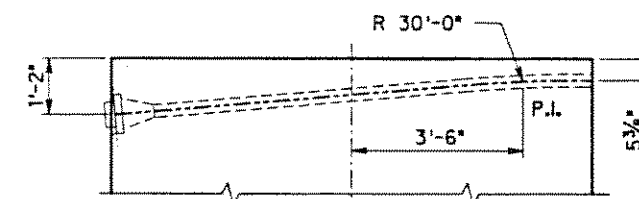
SECTION A

TA2 TA2



SECTION B

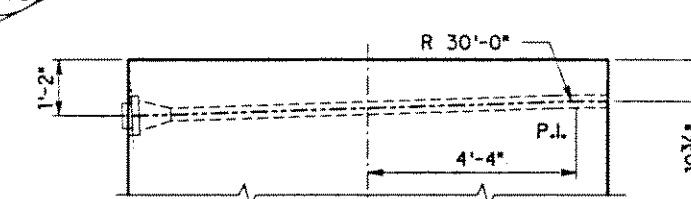
TA2 TA2



ANCHORAGE 4

TA2 TA2

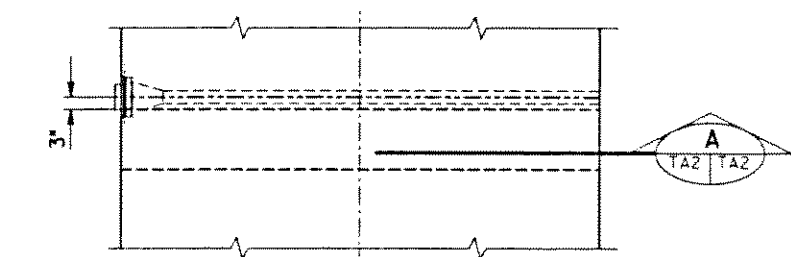
SCALE: 1/2" = 1'-0"



ANCHORAGE 5

TA2 TA2

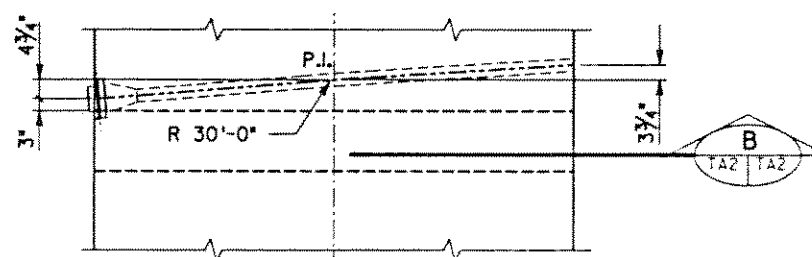
SCALE: 1/2" = 1'-0"



TOP VIEW

ANCHORAGE 1

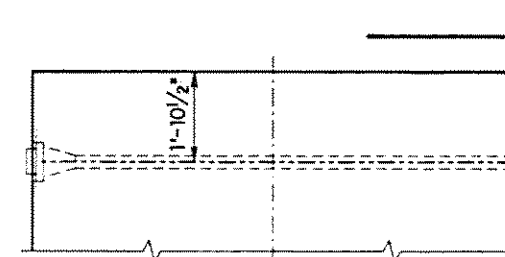
SCALE: 1/2" = 1'-0"



TOP VIEW

ANCHORAGE 2, 3

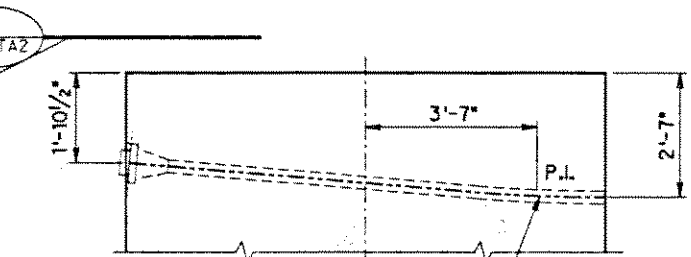
SCALE: 1/2" = 1'-0"



ANCHORAGE 6

TA2 TA2

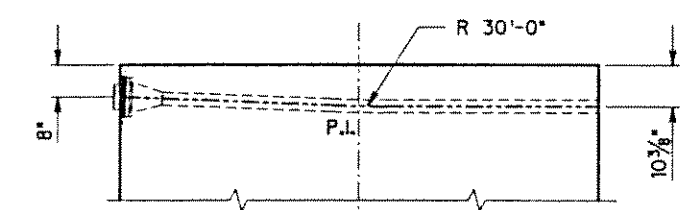
SCALE: 1/2" = 1'-0"



ANCHORAGE 7

TA2 TA2

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

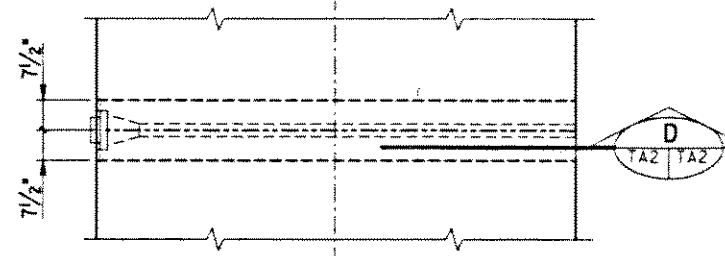


SECTION B

TA2 TA2

ANCHORAGE 3

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

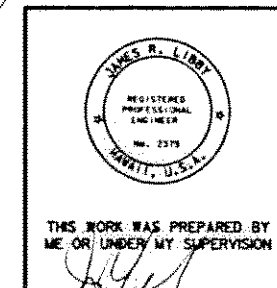


TOP VIEW

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

TA2 TA2

02/06/91	REVISED SHEET NO. AND TITLE
07/25/90	REV. BLOCKS 1,2 ANCHORAGES 6, 7
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

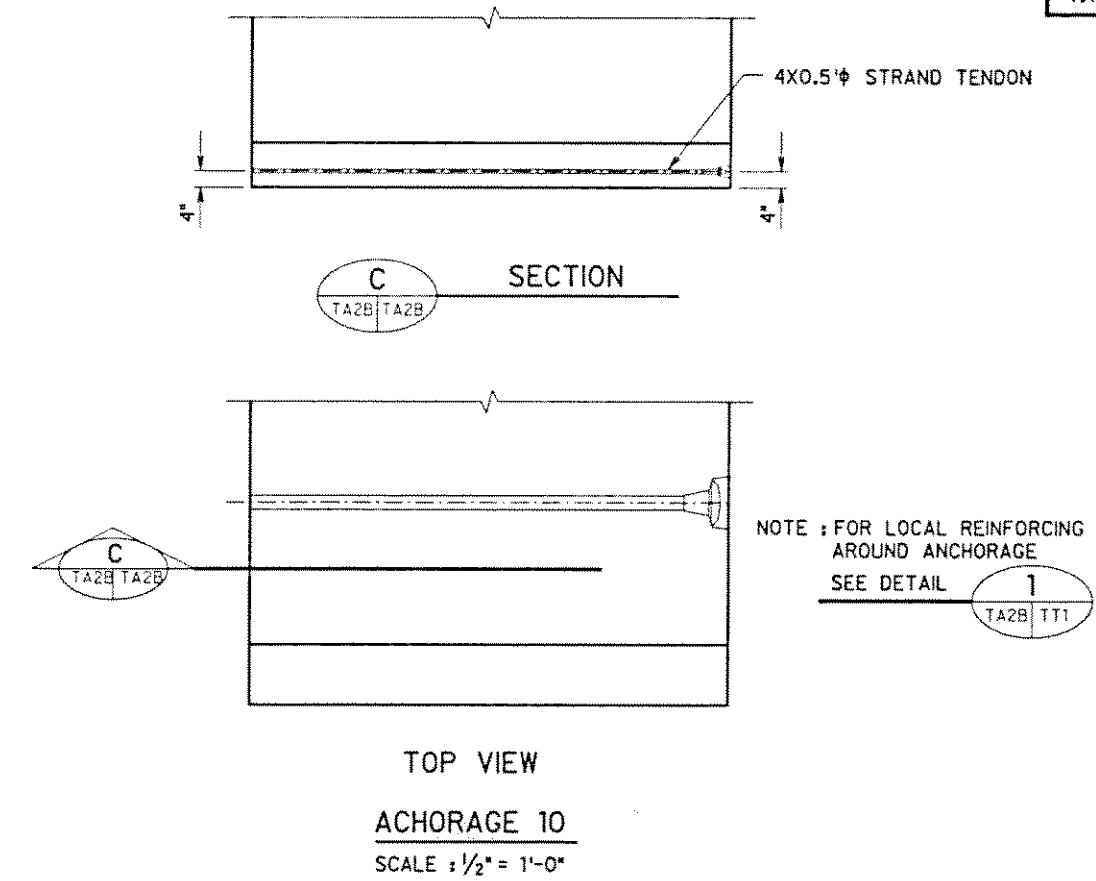
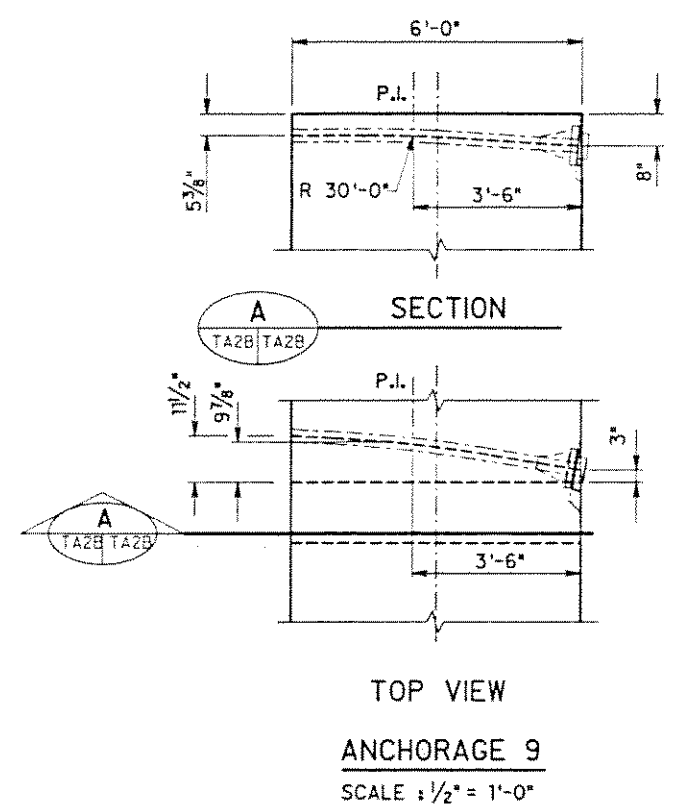
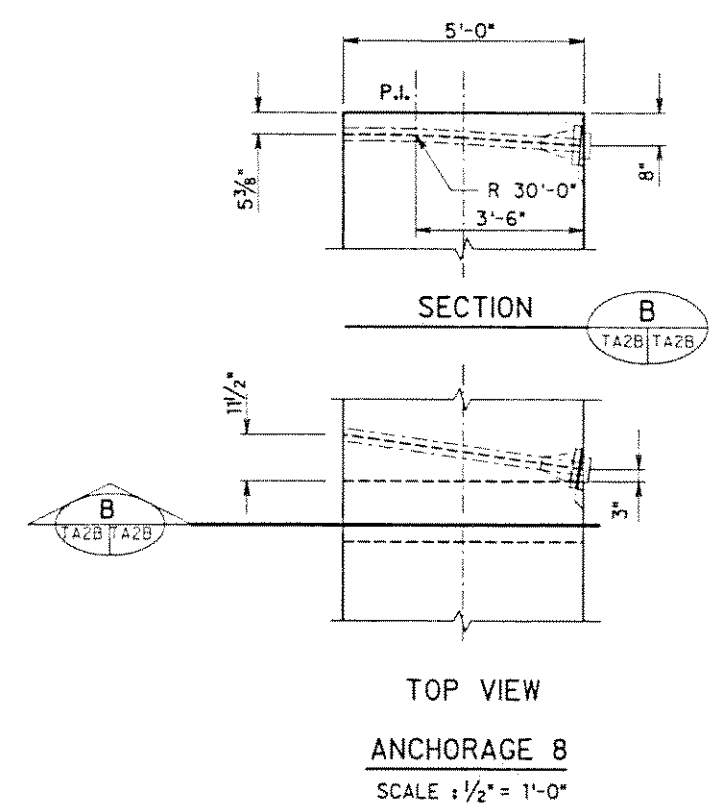
POST-TENSIONING DETAILS IIA
TOP BLOCKS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. TA2A OF SHEETS

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NOTES	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



ORIGINAL PLAN	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

04/01/91	ADDED ANCHORAGE 9 AND 10.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

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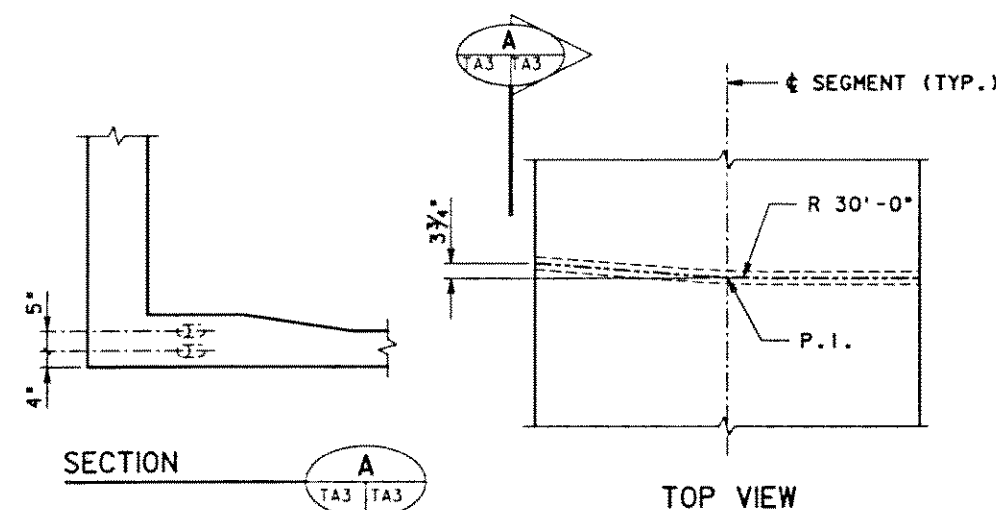
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING DETAILS IIB
ANCHORAGE DETAILS

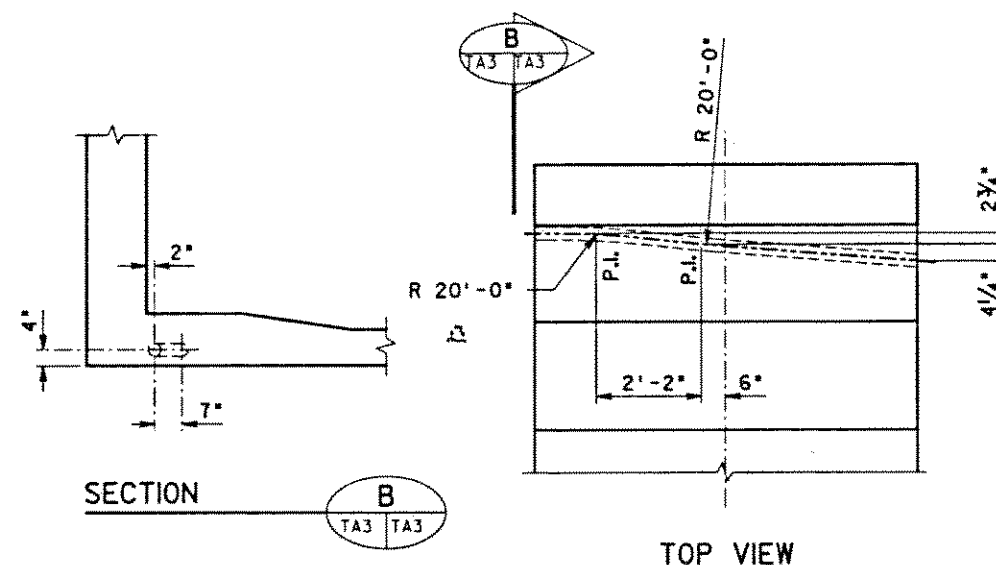
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : FEB. 1991

SHEET No. TA2B OF SHEETS

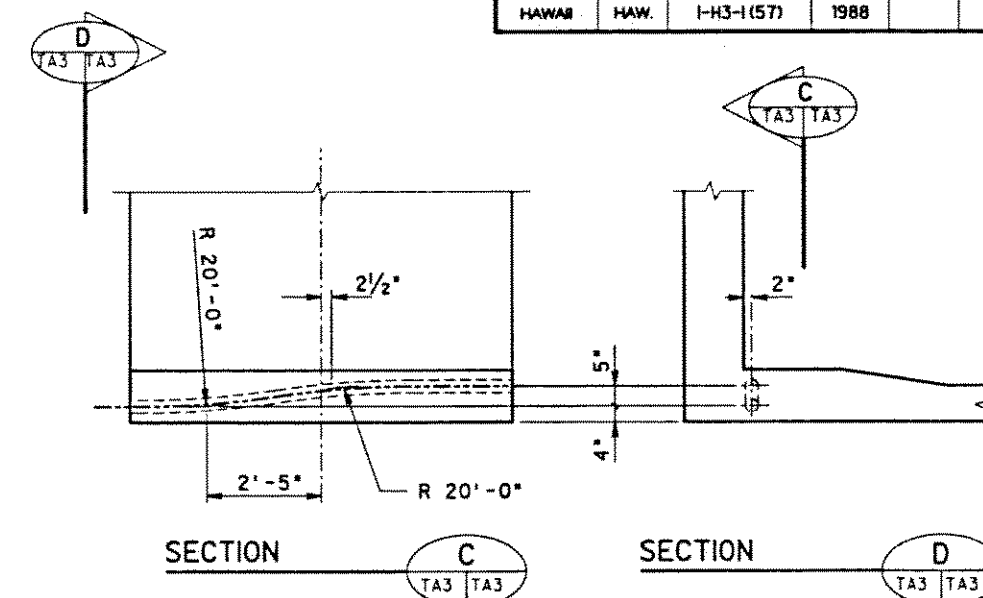
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



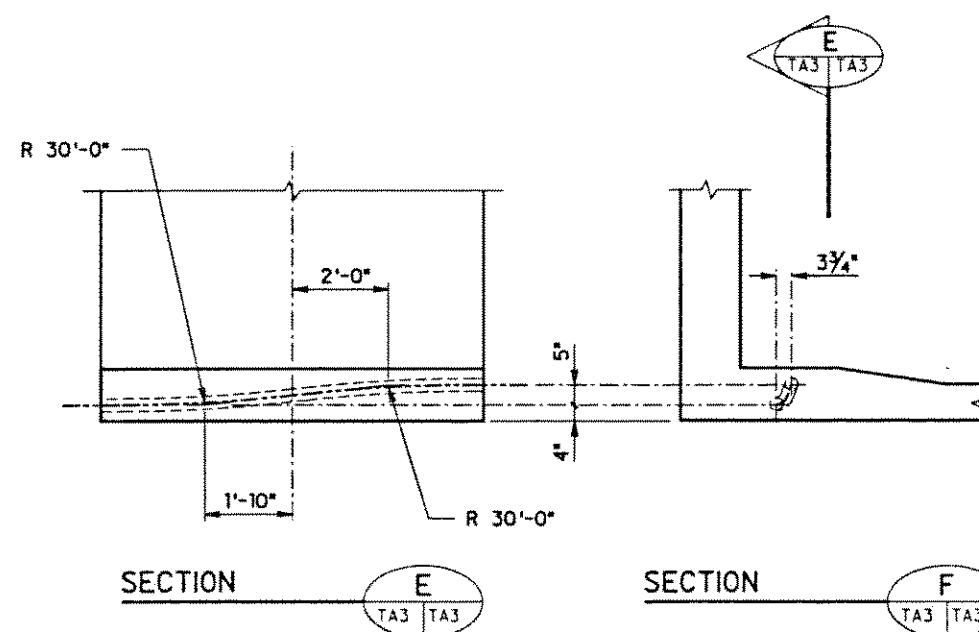
DEVIATION 1
SCALE: 1/2" = 1'-0"



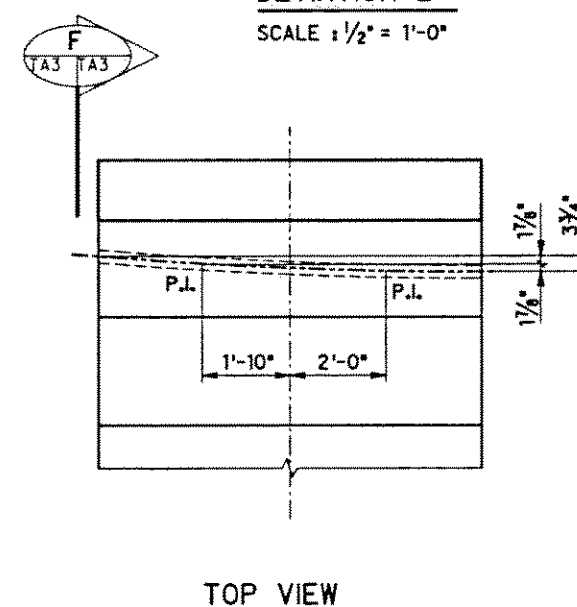
DEVIATION 2
SCALE: 1/2" = 1'-0"



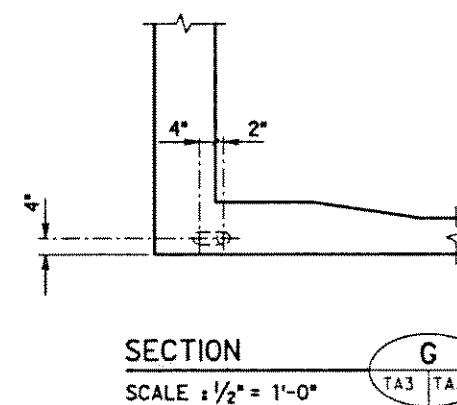
DEVIATION 3
SCALE: 1/2" = 1'-0"



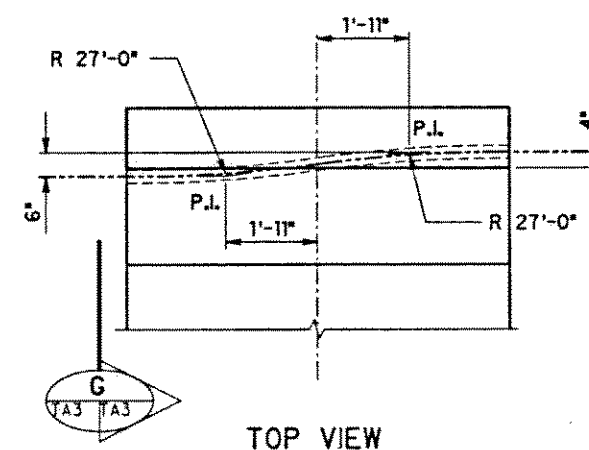
DEVIATION 4
SCALE: 1/2" = 1'-0"



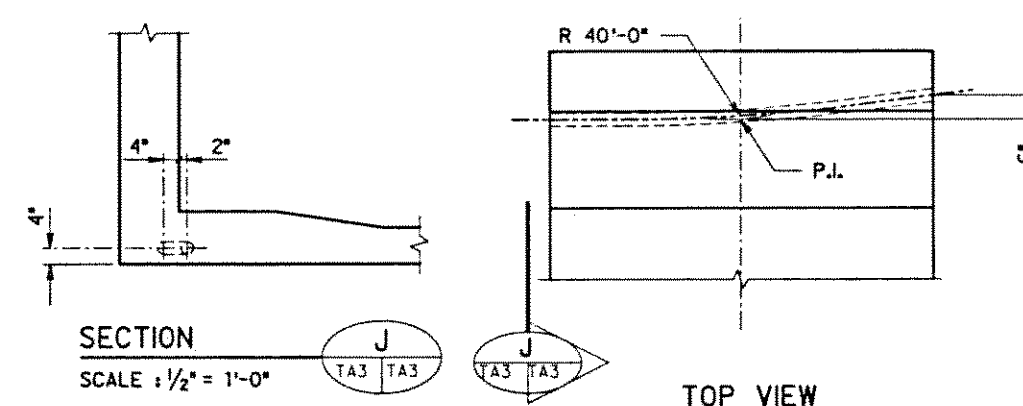
TOP VIEW



DEVIATION 5
SCALE: 1/2" = 1'-0"



DEVIATION 6
SCALE: 1/2" = 1'-0"



DEVIATION 7
SCALE: 1/2" = 1'-0"

NOTE: DEVIATIONS SHOWN MAY APPLY TO BOTH TOP AND BOTTOM SLAB TENDONS



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING DETAILS III
TYPICAL DEVIATIONS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: JUN. 1990

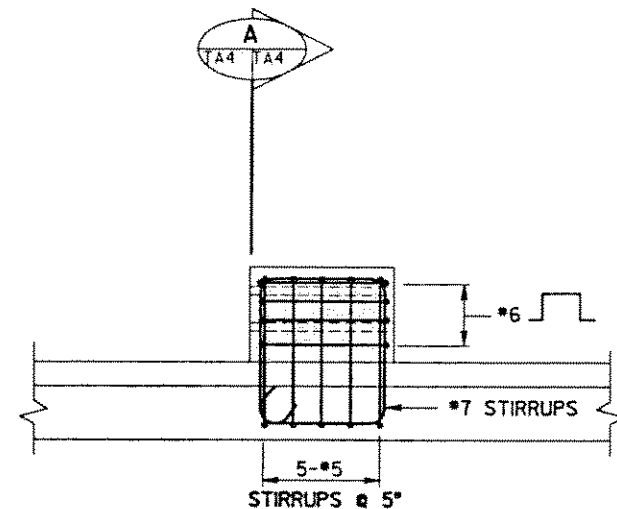
SHEET No. TA3A/OF SHEETS

01/04/91 TA3A WAS TA3.

DATE REVISION

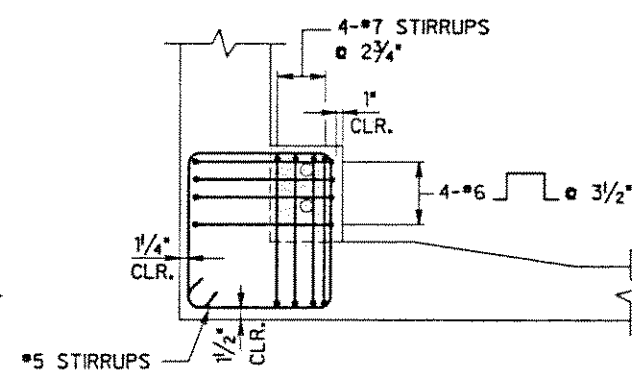
J. MULLER INTERNATIONAL Libby Engineers

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



ELEVATION

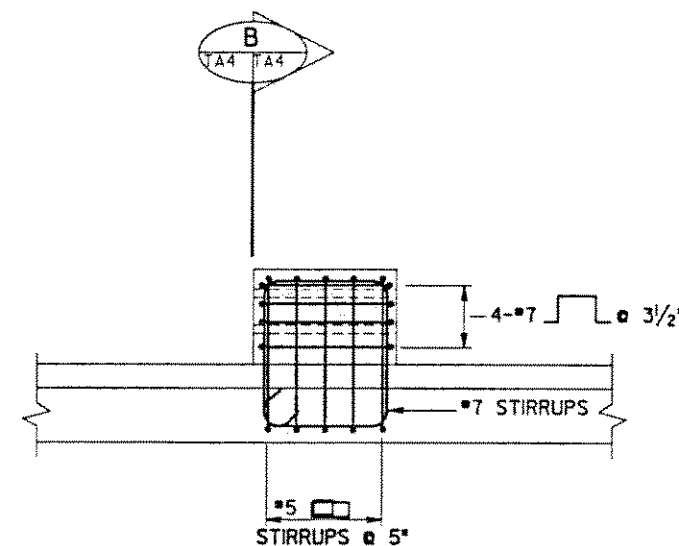
SCALE: 3/4" = 1'-0"



SECTION

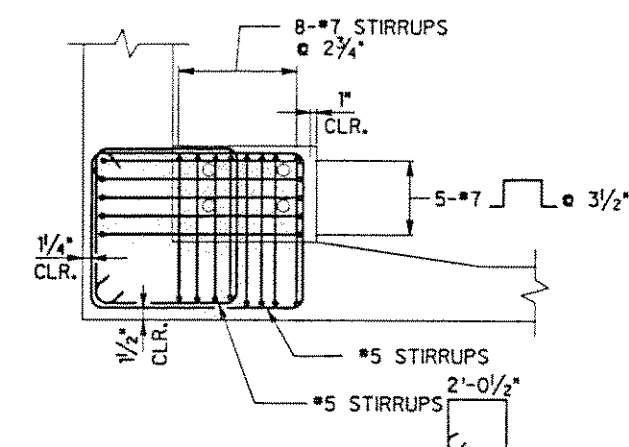
SCALE: 3/4" = 1'-0"

BLOCK A



ELEVATION

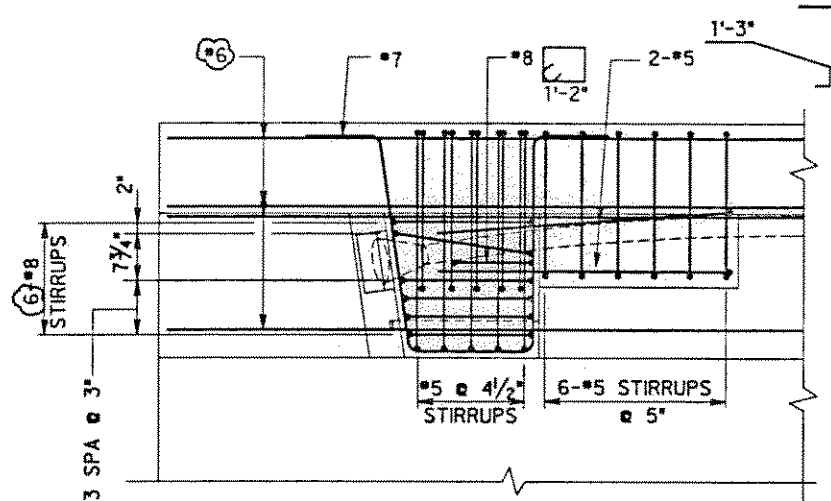
SCALE: 3/4" = 1'-0"



SECTION

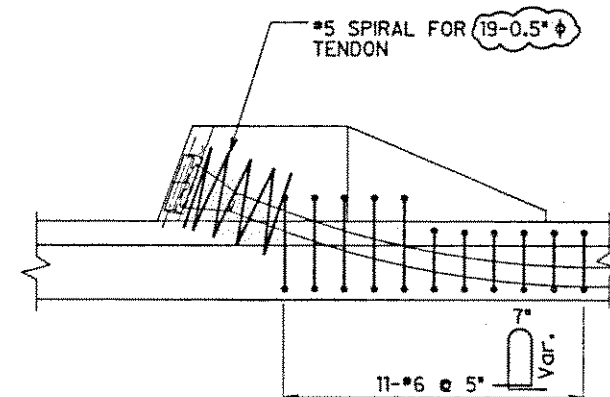
SCALE: 3/4" = 1'-0"

BLOCK B



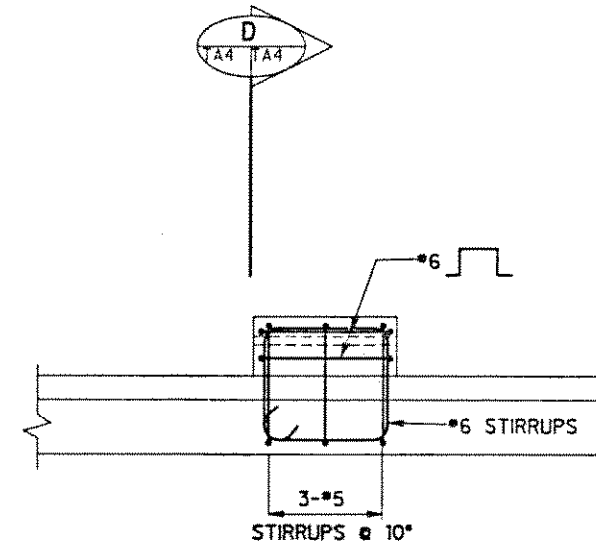
PLAN

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



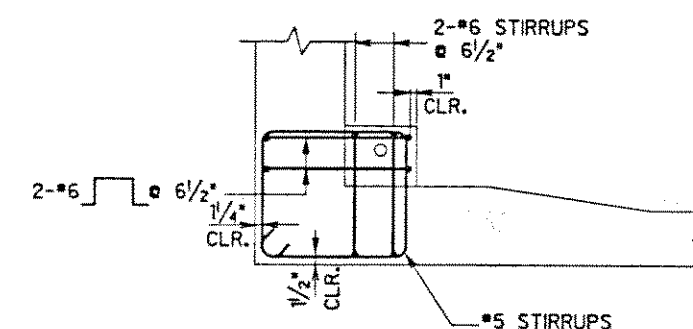
REINFORCING AT ANCHORAGE AND TENDON

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



ELEVATION

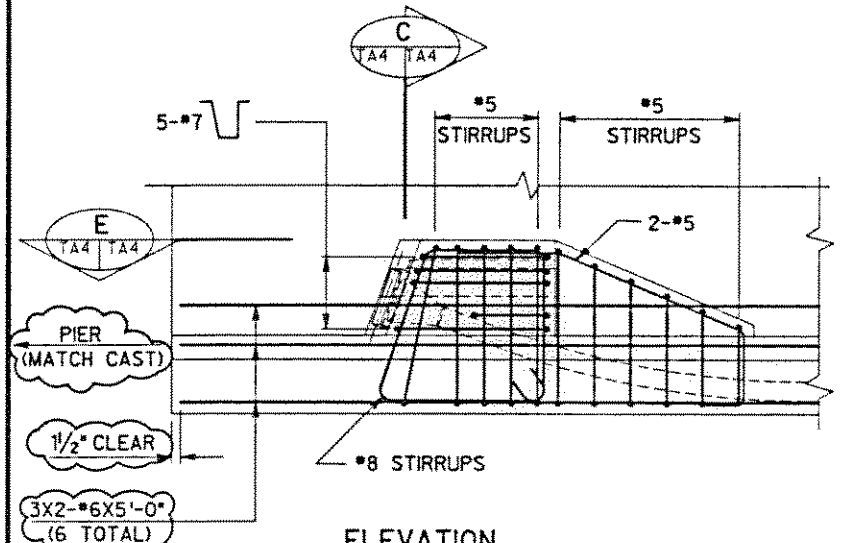
SCALE: 3/4" = 1'-0"



SECTION

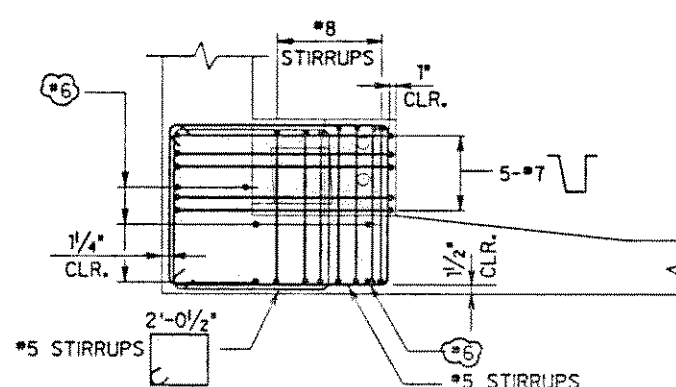
SCALE: 3/4" = 1'-0"

BLOCK D



ELEVATION

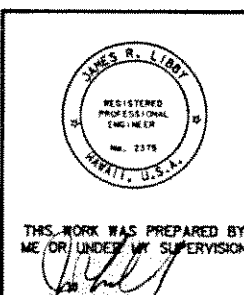
SCALE: 3/4" = 1'-0"



SECTION

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

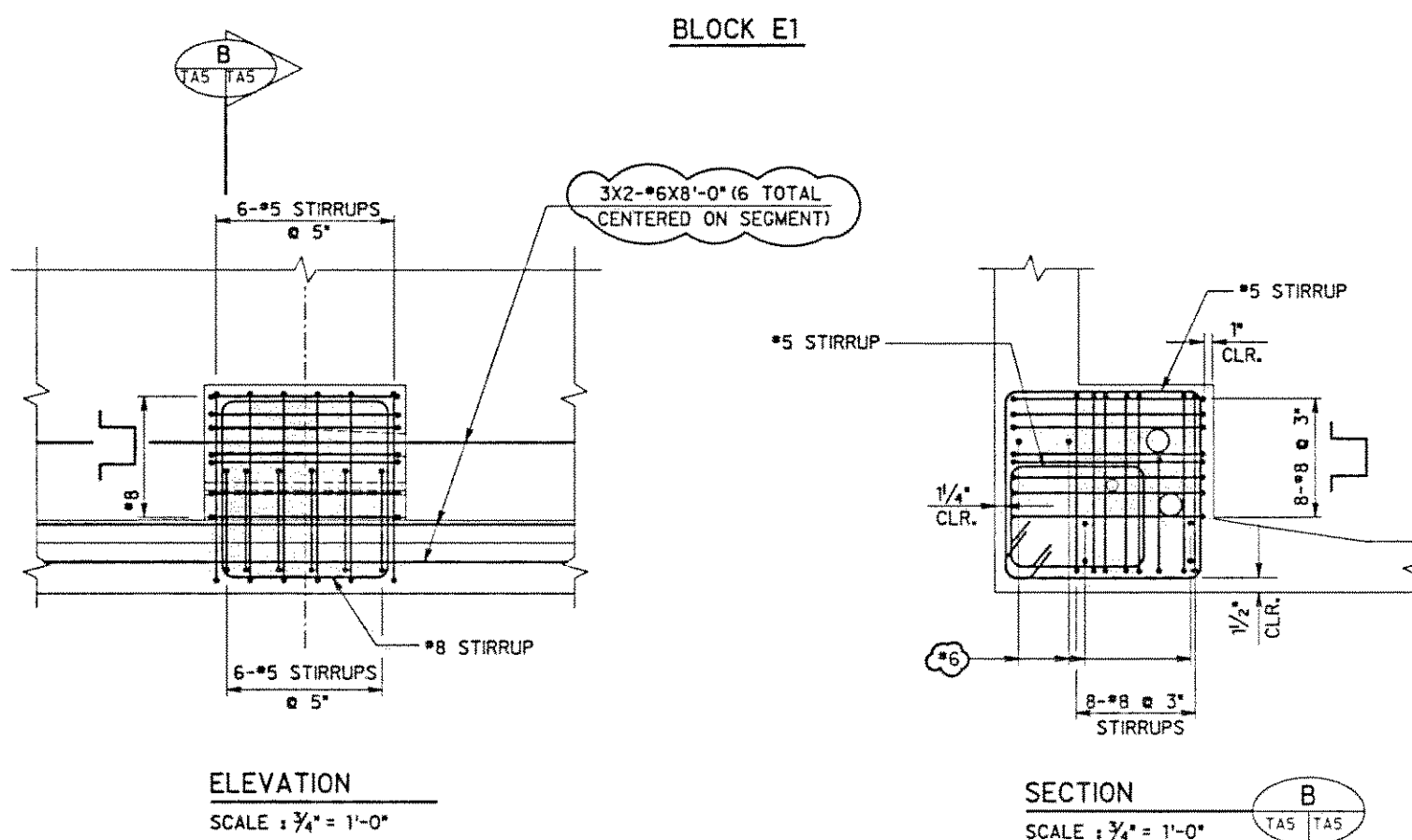
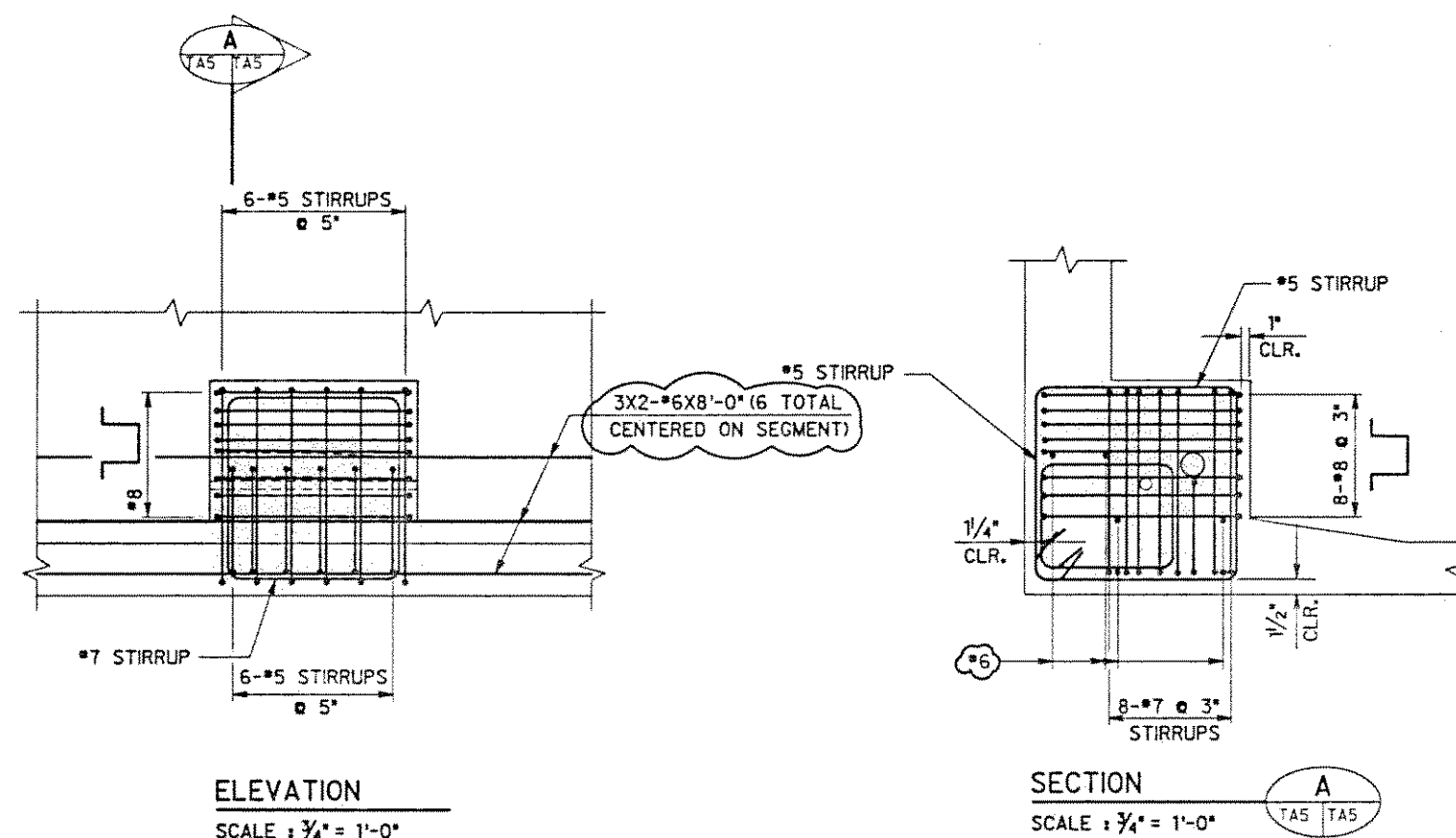
BLOCK C



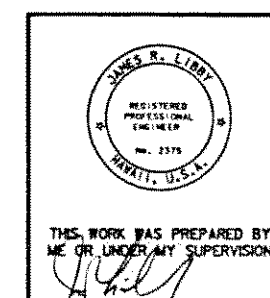
01/21/91 07/25/90	REVISED REINFORCING. UPDATED DRAWING
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
POST-TENSIONING DETAILS IV REINFORCING I BOTTOM BLOCKS
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990
SHEET No. TA4 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



ORIGINAL PLAN	DATE
NOTED	DATE
QUANTITIES BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

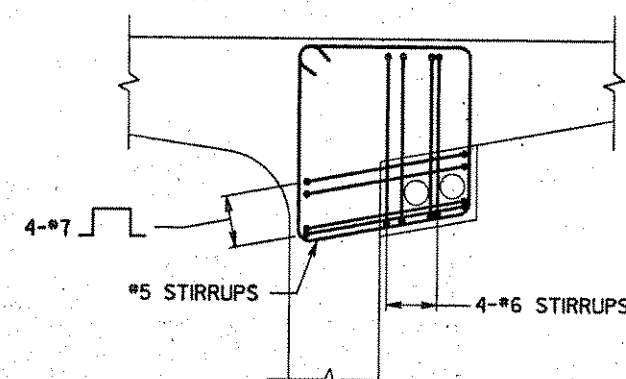


01/21/91	REVISED REINFORCING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

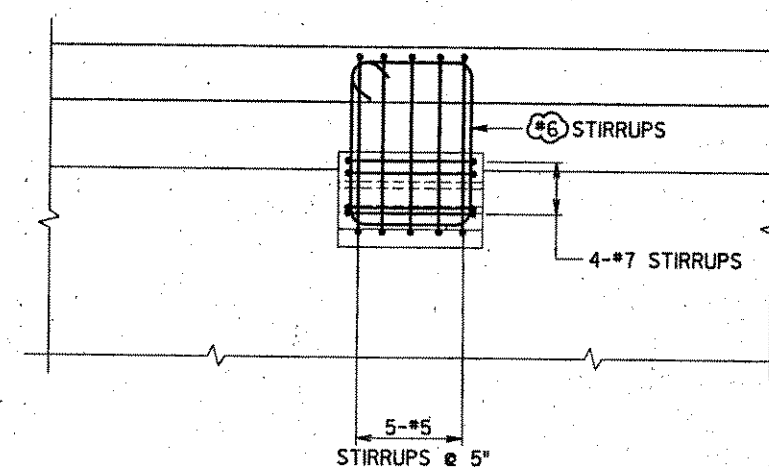
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
POST-TENSIONING DETAILS V
REINFORCING II
BOTTOM BLOCKS
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE : AS NOTED
DATE : JUN. 1990

SHEET No. TAS OF SHEETS

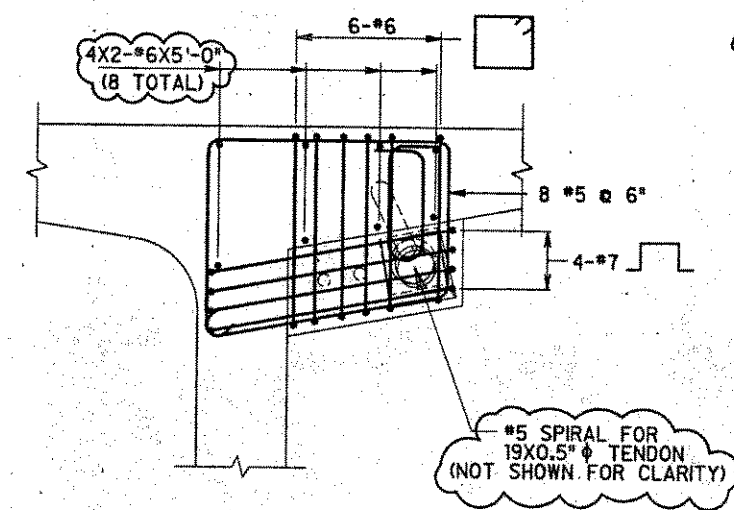
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



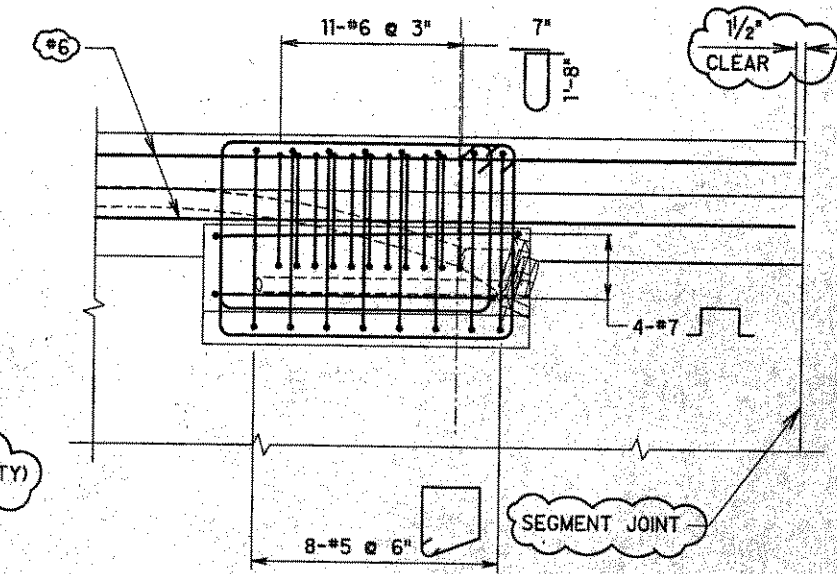
FRONT VIEW



SIDE VIEW

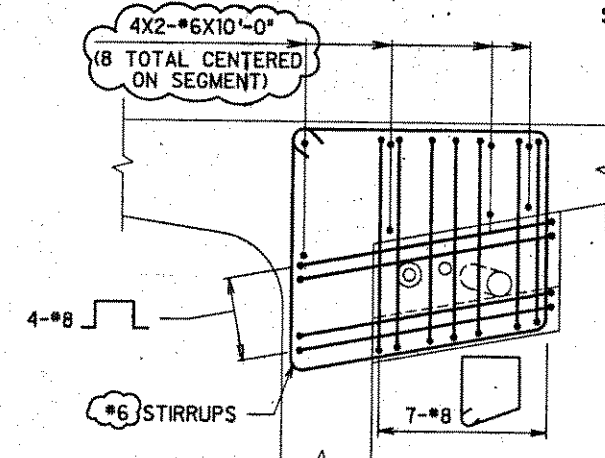


FRONT VIEW

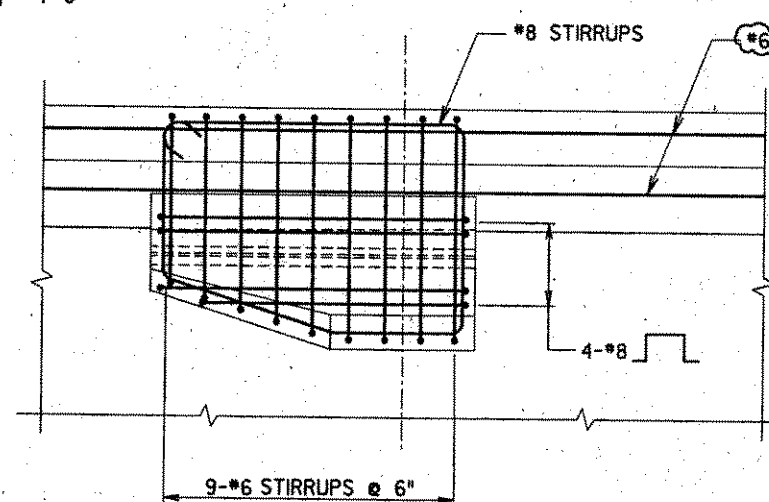


SIDE VIEW

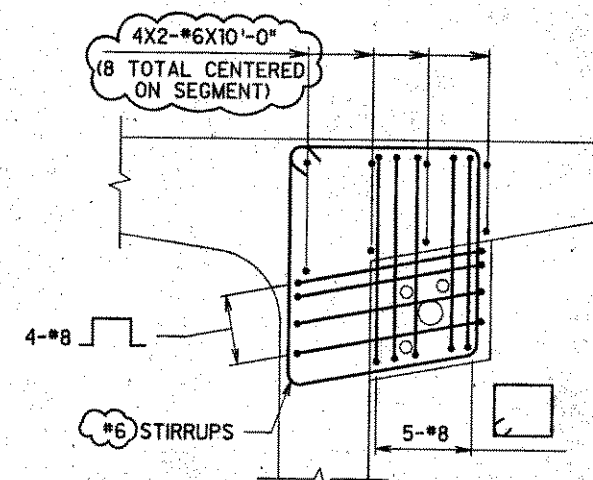
TOP BLOCK 1 & 3
SCALE : 3/4" = 1'-0"



FRONT VIEW

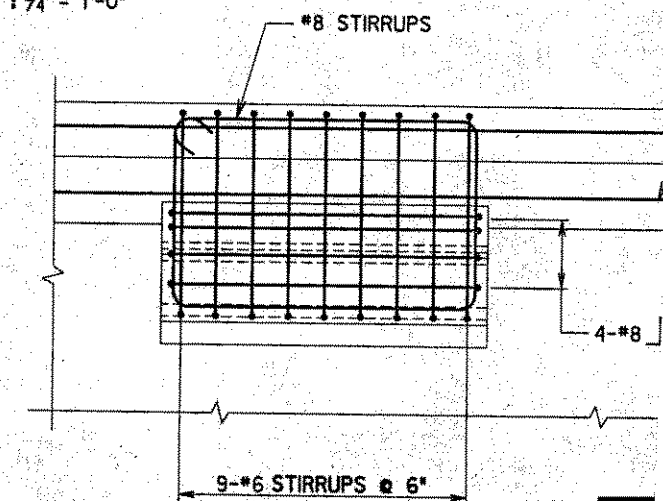


SIDE VIEW



FRONT VIEW

TOP BLOCK 2
SCALE : 3/4" = 1'-0"



SIDE VIEW

TOP BLOCK 4
SCALE : 3/4" = 1'-0"

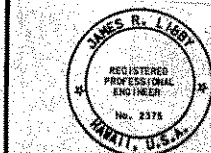
DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTES BOOK	

TAG
NEED 1/2 size
1/16" W/M

TOP BLOCK 5
SCALE : 3/4" = 1'-0"

01/21/91 07/25/90	REVISED REINFORCING. UPDATED DRAWING
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

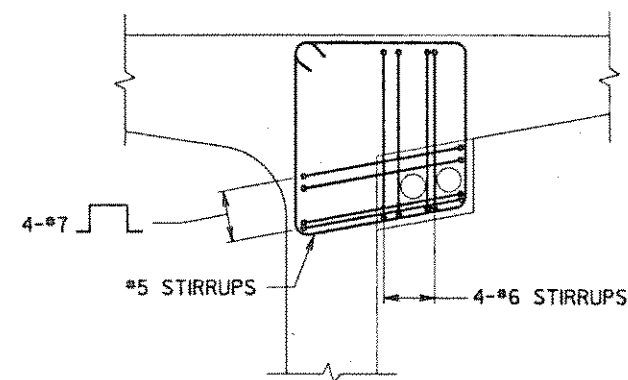
RECEIVED
SHEET BLACK
FEB 11 1991
HIGHWAY DIVISION



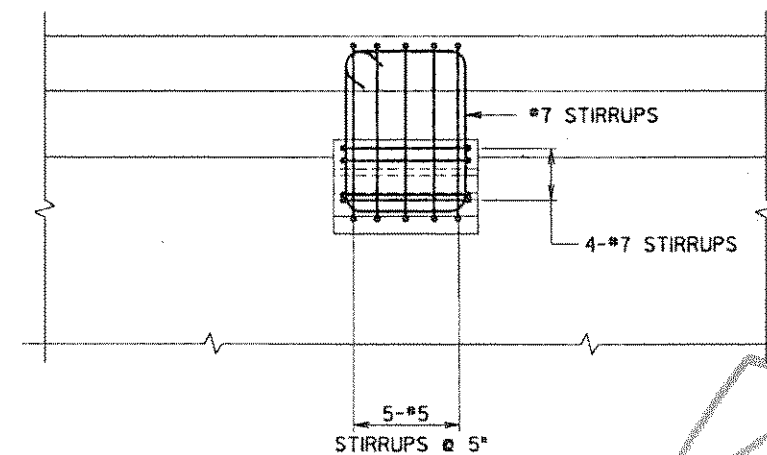
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING DETAILS VI
REINFORCING
TOP BLOCK
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED
DATE : JUN. 1990
SHEET No. TA6 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

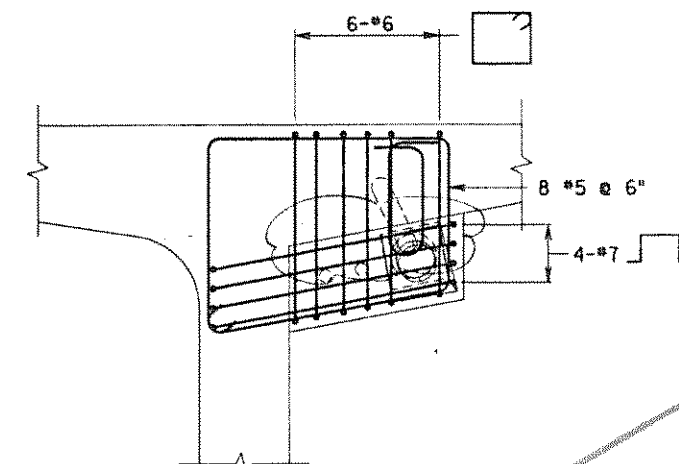


FRONT VIEW

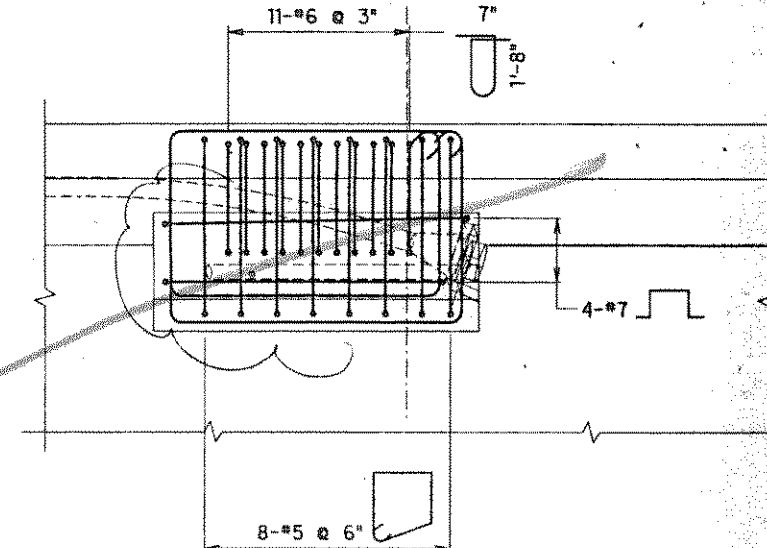


SIDE VIEW

TOP BLOCK 1 & 3
SCALE : $\frac{3}{4}" = 1'-0"$

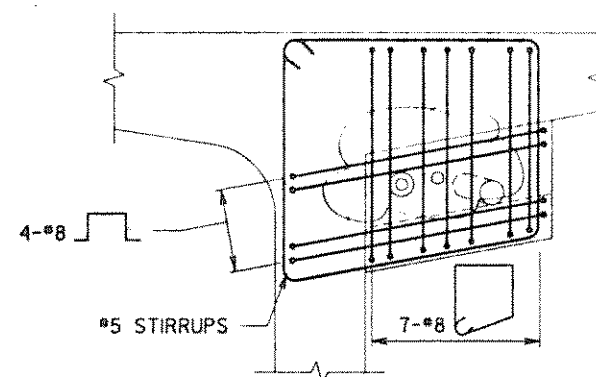


FRONT VIEW

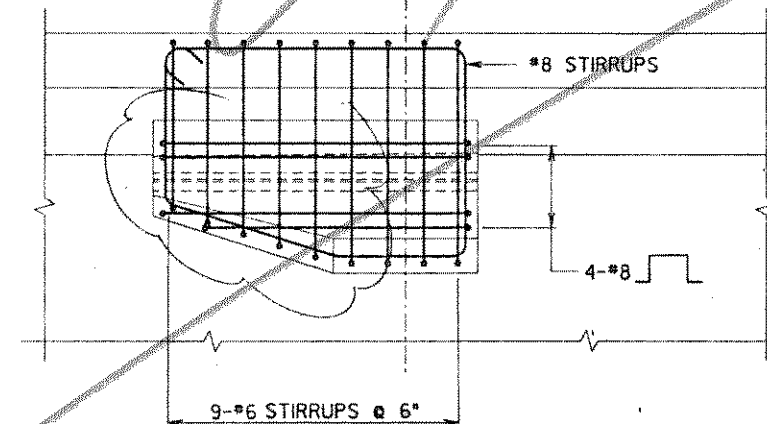


SIDE VIEW

TOP BLOCK 2
SCALE : $\frac{3}{4}" = 1'-0"$

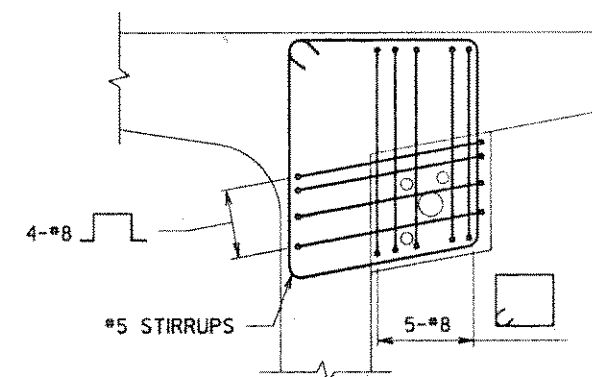


FRONT VIEW

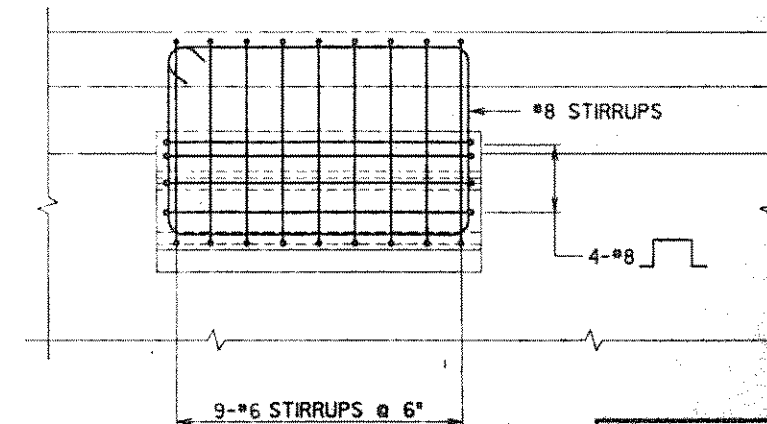


SIDE VIEW

TOP BLOCK 4
SCALE : $\frac{3}{4}" = 1'-0"$



FRONT VIEW



SIDE VIEW

TOP BLOCK 5
SCALE : $\frac{3}{4}" = 1'-0"$

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITY BY	
CHECKED BY	

07/25/90 UPDATED DRAWING
DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

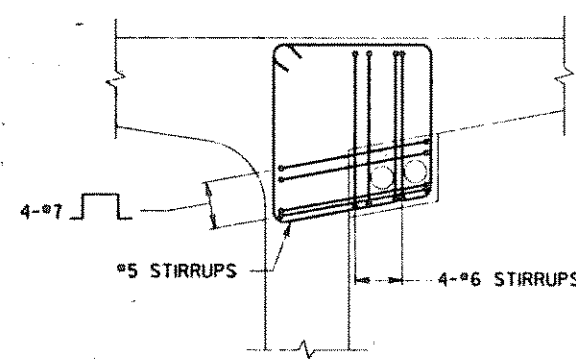
RECEIVED
SEA-BLACK
OCT 10 1990
HAWAIIAN AIRPORT
HONOLULU, HI

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

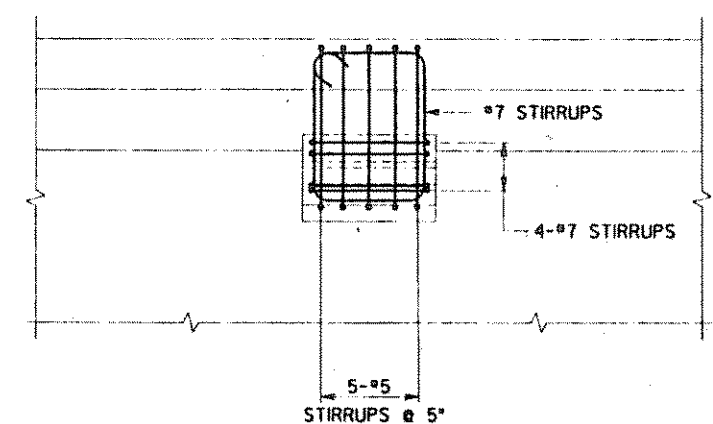
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING DETAILS VI
REINFORCING
TOP BLOCK
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1990

SHEET No. TA6 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988	-	-

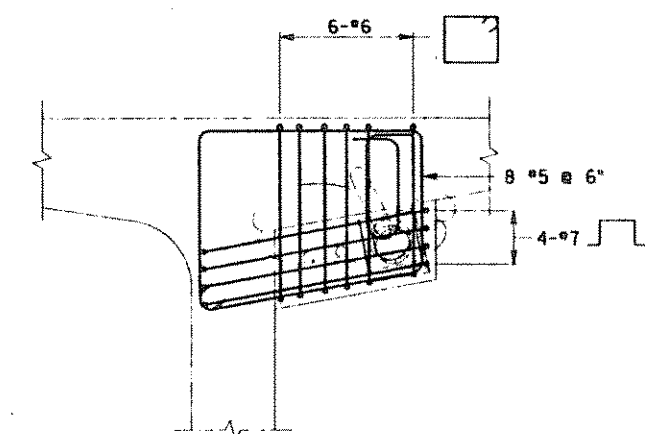


FRONT VIEW

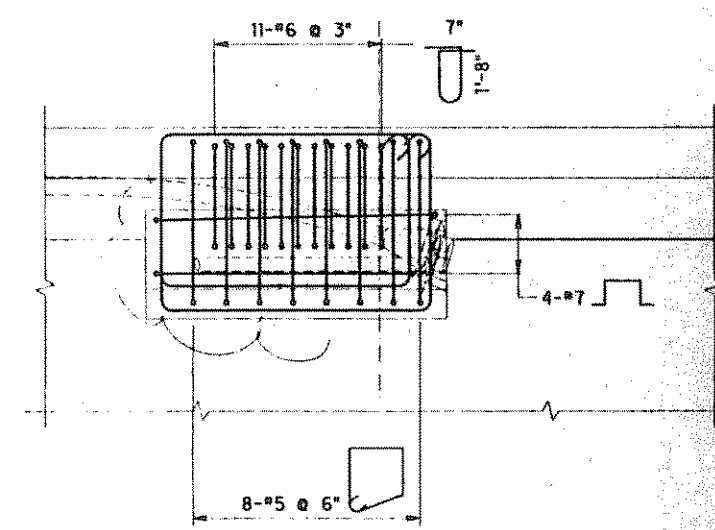


SIDE VIEW

TOP BLOCK 1 & 3
SCALE : 3/4" = 1'-0"

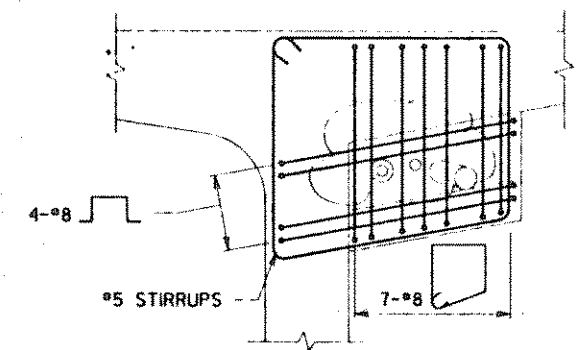


FRONT VIEW

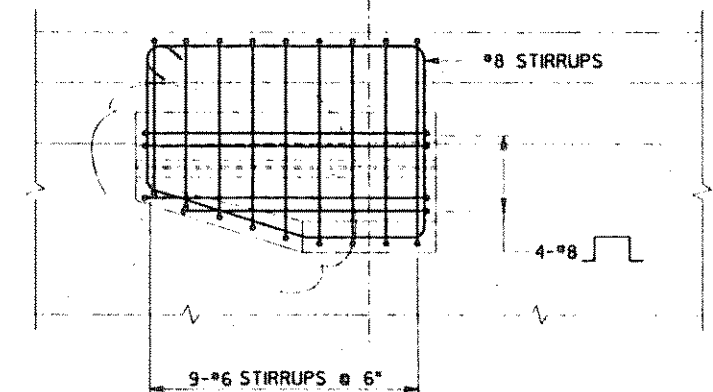


SIDE VIEW

TOP BLOCK 2
SCALE : 3/4" = 1'-0"

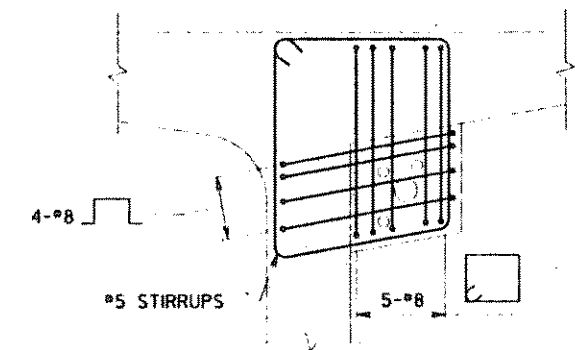


FRONT VIEW

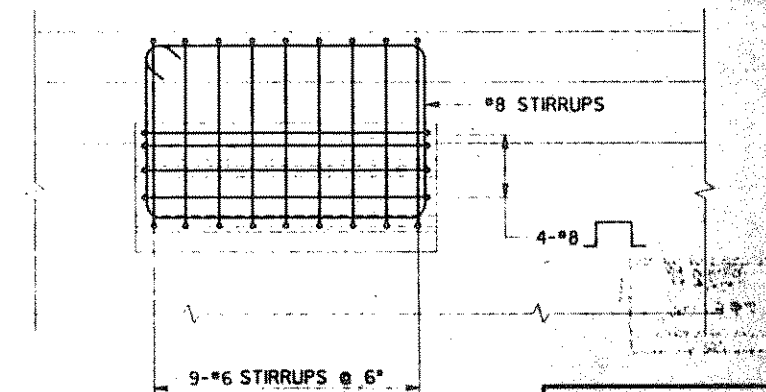


SIDE VIEW

TOP BLOCK 4
SCALE : 3/4" = 1'-0"



FRONT VIEW



SIDE VIEW

TOP BLOCK 5
SCALE : 3/4" = 1'-0"

DESIGNED BY	DATE
CHECKED BY	
IN CHARGE	
REVIEWED BY	
APPROVED BY	

07/25/90, UPDATED DRAWING
DATE
J. MULLER INTERNATIONAL
LIBBY ENGINEERS

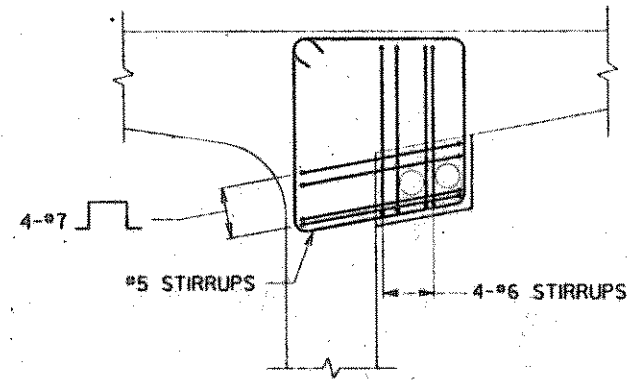
RECEIVED
JUL 27 1990
HAWAIIAN ENGINEERING
NO. 2316

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ME OR UNDER MY SUPERVISION

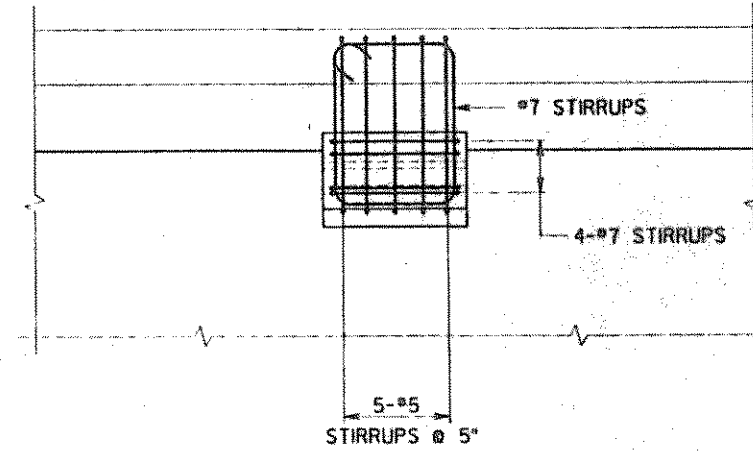
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING DETAILS VI
REINFORCING
TOP BLOCK
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED
DATE : JUN. 1990
SHEET No. TA6 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

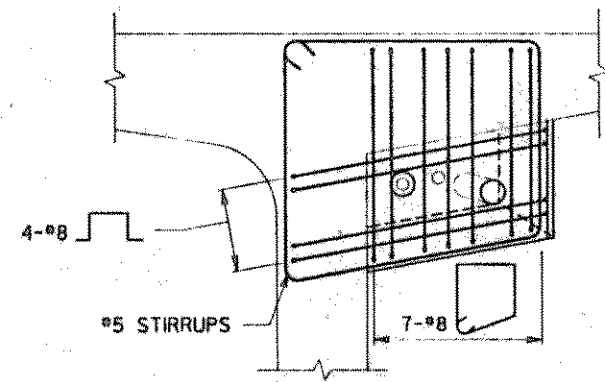


FRONT VIEW

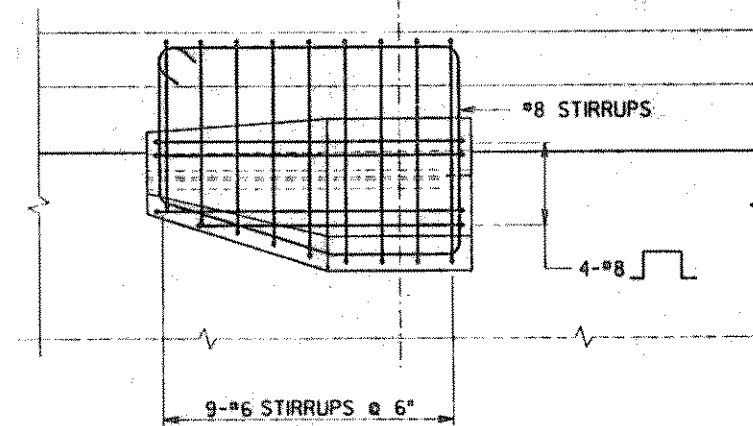


SIDE VIEW

TOP BLOCK 1 & 3
SCALE : $\frac{3}{4}" = 1'-0"$

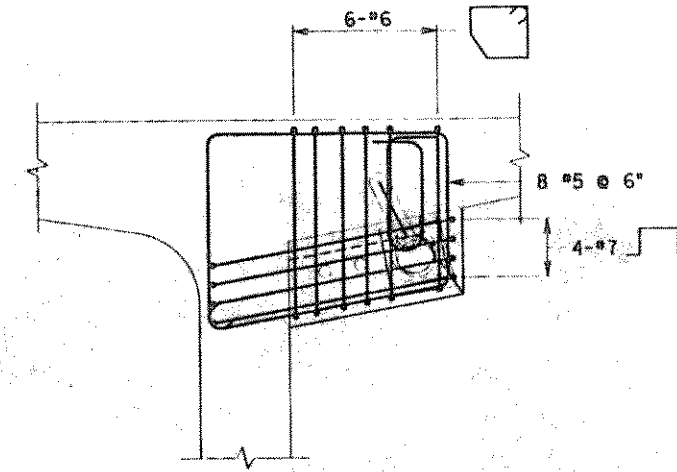


FRONT VIEW

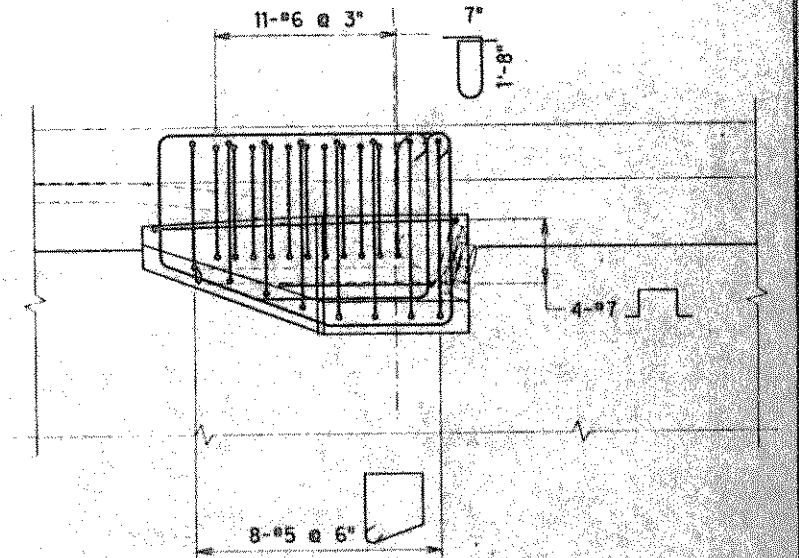


SIDE VIEW

TOP BLOCK 4
SCALE : $\frac{3}{4}" = 1'-0"$

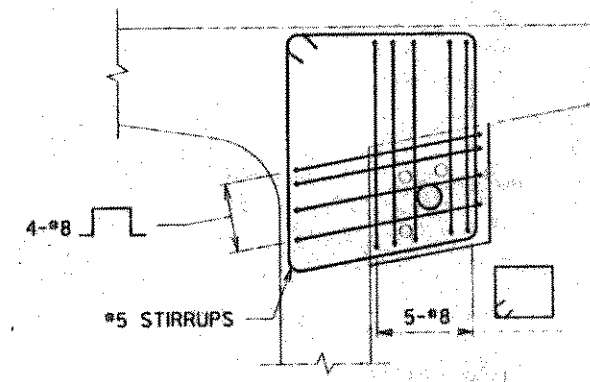


FRONT VIEW

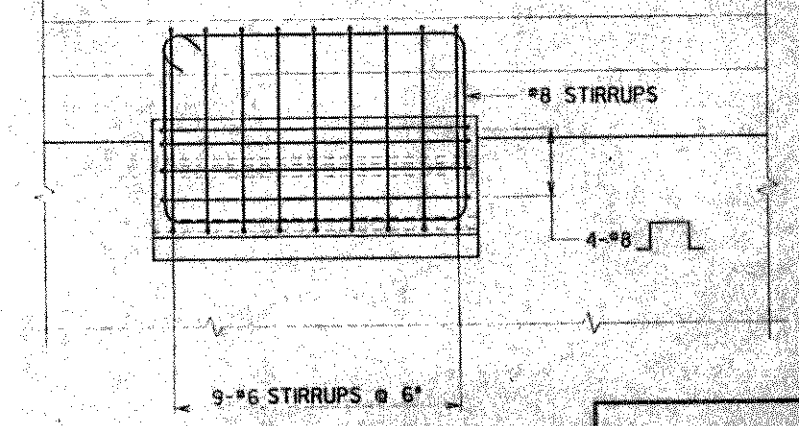


SIDE VIEW

TOP BLOCK 2
SCALE : $\frac{3}{4}" = 1'-0"$



FRONT VIEW

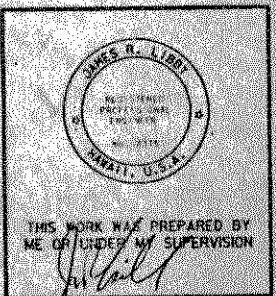


SIDE VIEW

TOP BLOCK 5
SCALE : $\frac{3}{4}" = 1'-0"$

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED	
REVISION	

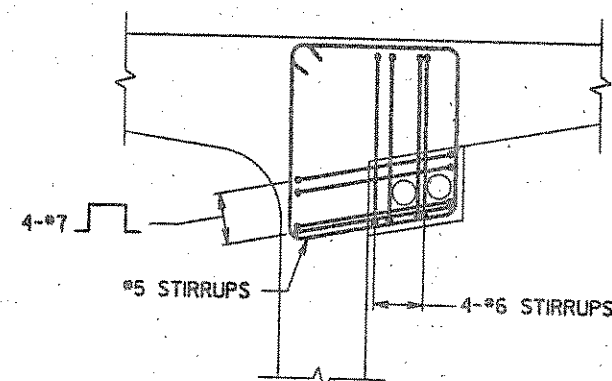
RECEIVED
SOI-BLACK
JUN 15 1990
H-3 WINDWARD VADUCT
JTB



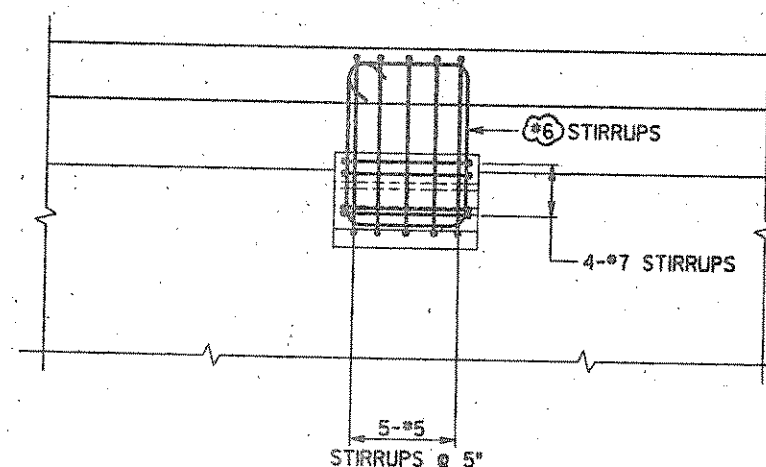
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**POST-TENSIONING DETAILS VI
REINFORCING
TOP BLOCK**
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS-NOTED
DATE : JUN. 1990
SHEET No. TAG OF SHEETS

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

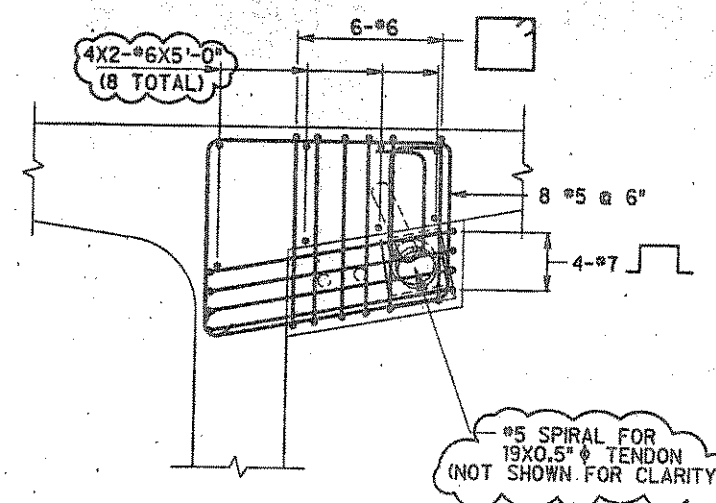
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



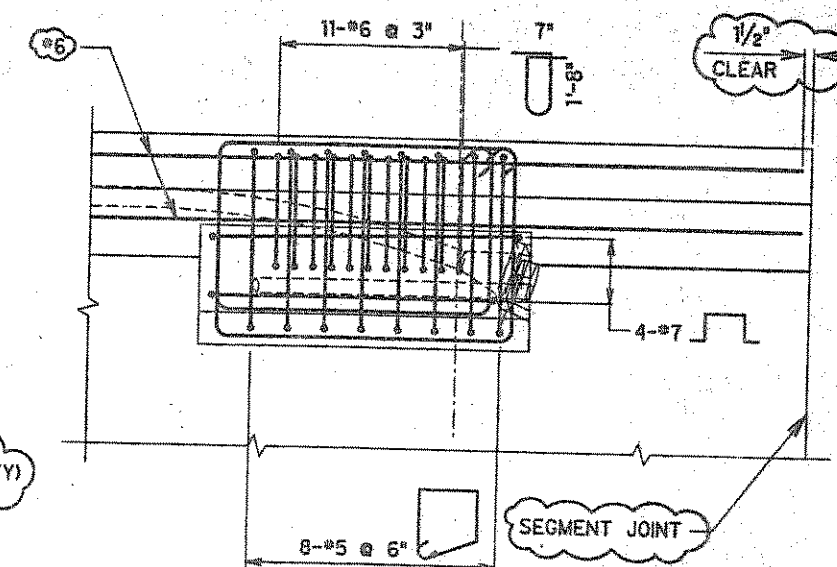
FRONT VIEW



SIDE VIEW

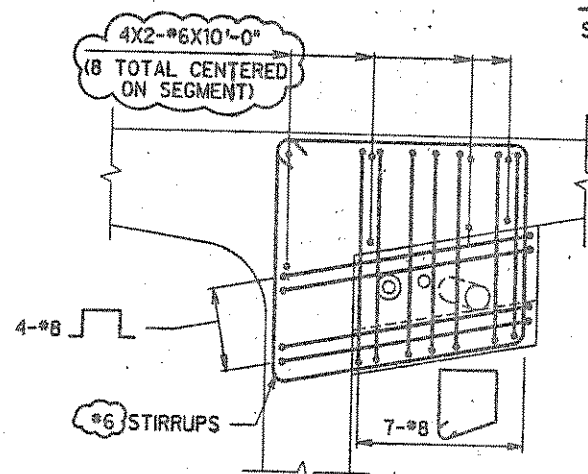


FRONT VIEW

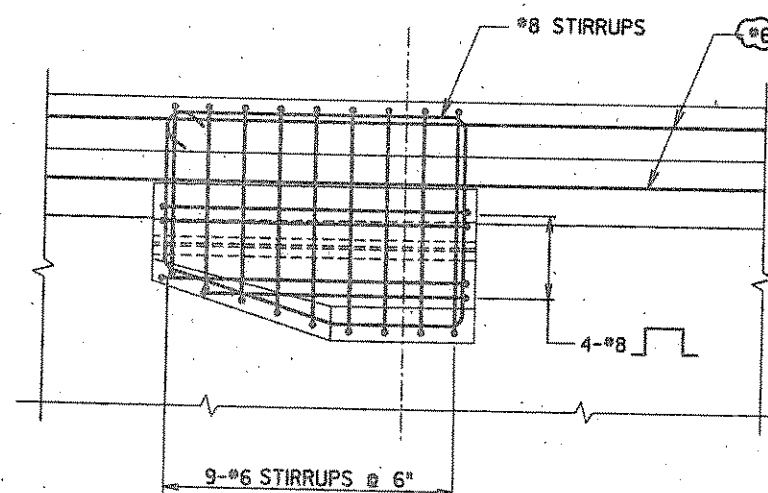


SIDE VIEW

TOP BLOCK 1 & 3
SCALE: 3/4" = 1'-0"

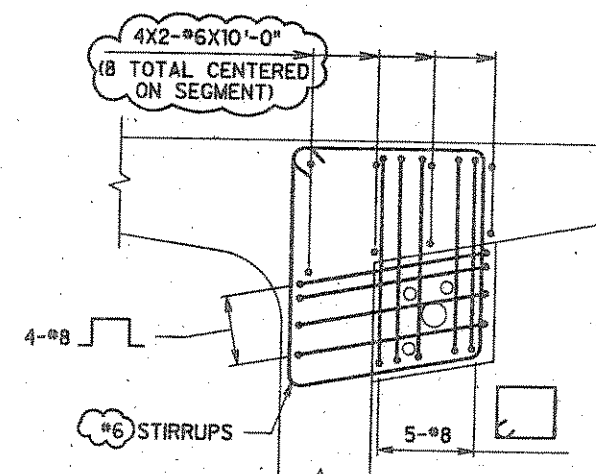


FRONT VIEW

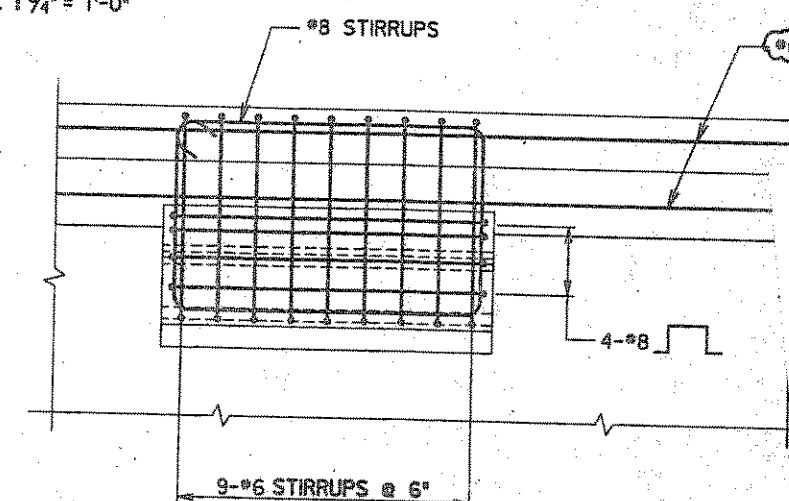


SIDE VIEW

TOP BLOCK 2
SCALE: 3/4" = 1'-0"



FRONT VIEW



SIDE VIEW

TOP BLOCK 4
SCALE: 3/4" = 1'-0"

TOP BLOCK 5
SCALE: 3/4" = 1'-0"

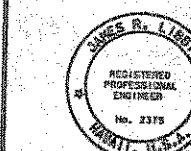
01/21/91
07/25/90
DATE

REVISED REINFORCING.
UPDATED DRAWING
REVISION

J. MULLER
INTERNATIONAL

Libby
Engineers

RECEIVED
SCL-BLACK
FEB 11 1991
H-3 VIADUCT
SITE



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING DETAILS VI
REINFORCING
TOP BLOCK

INTERSTATE ROUTE H-3

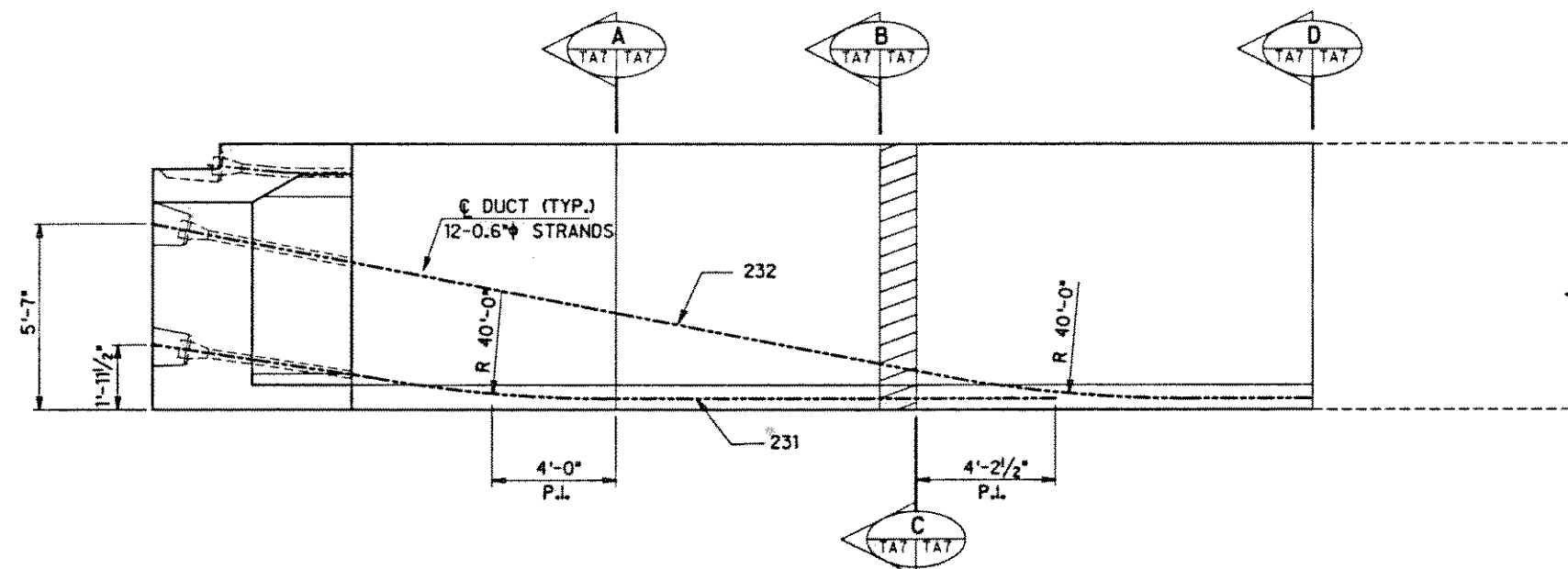
F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. I-H3-1(58)

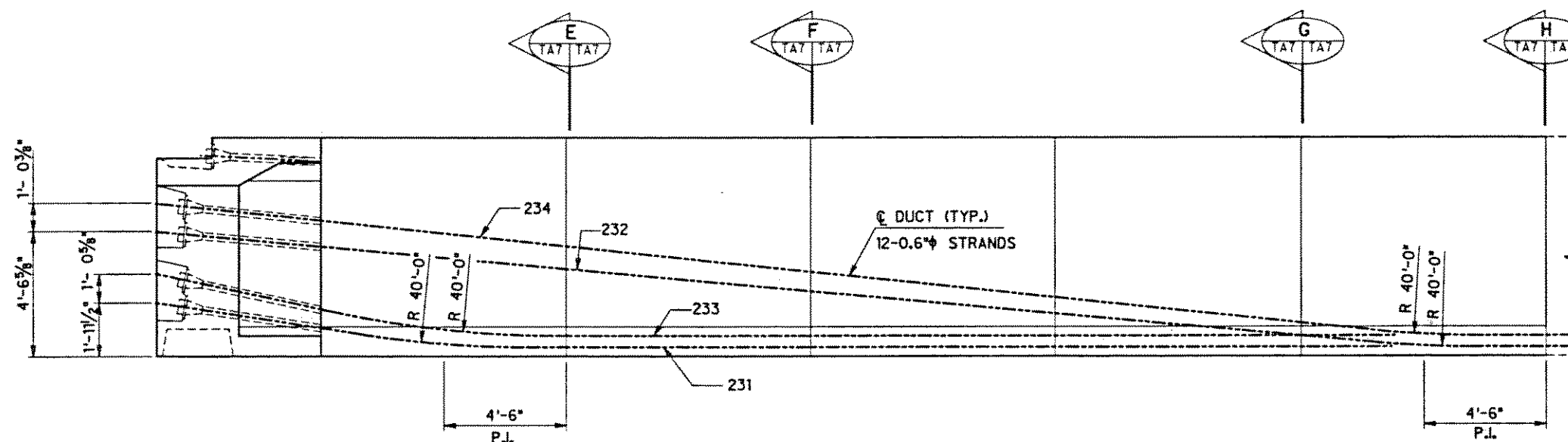
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. TAG OF SHEETS

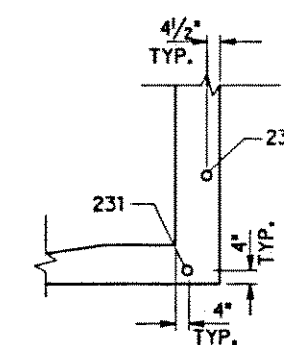
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



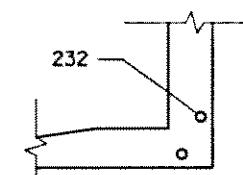
ELEVATION - ABUTMENT SPAN
SCALE: $\frac{3}{8}$ "=1'-0" (INBOUND)



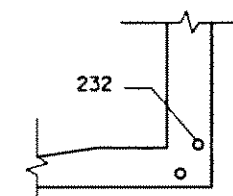
ELEVATION - ABUTMENT SPAN
SCALE: $\frac{3}{8}$ "=1'-0" (OUTBOUND)



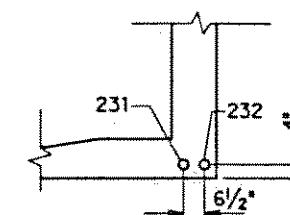
SECTION A
SCALE: $\frac{3}{8}$ "=1'-0"



SECTION B
SCALE: $\frac{3}{8}$ "=1'-0"

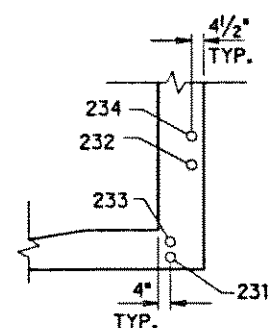


SECTION C
SCALE: $\frac{3}{8}$ "=1'-0"

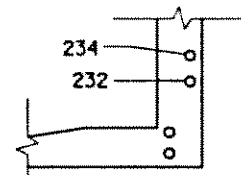


SECTION D
SCALE: $\frac{3}{8}$ "=1'-0"

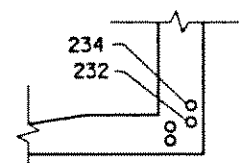
- NOTE:
- VARIATIONS (IF ANY) DUE TO HORIZONTAL CURVATURE NOT SHOWN
 - ALL TENDONS SHOWN ARE 12-0.6" STRANDS EACH.



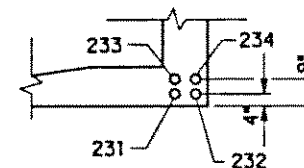
SECTION E
SCALE: $\frac{3}{8}$ "=1'-0"



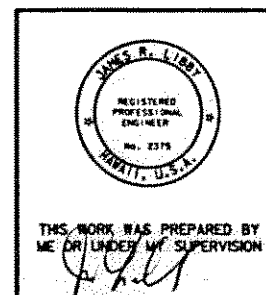
SECTION F
SCALE: $\frac{3}{8}$ "=1'-0"



SECTION G
SCALE: $\frac{3}{8}$ "=1'-0"



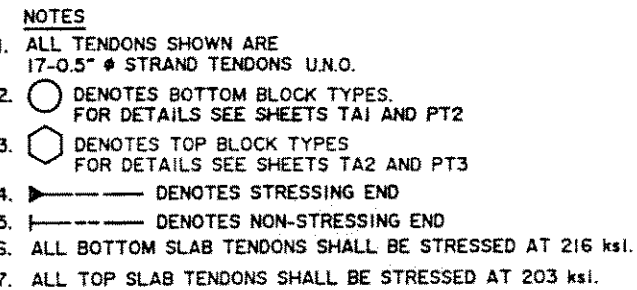
SECTION H
SCALE: $\frac{3}{8}$ "=1'-0"



DATE	REVISION
J. MULLER	Libby
INTERNATIONAL	Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING DETAILS VII
ABUTMENT SPANS
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN 1990
SHEET No. TA7 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-I (57)	1988		



03/07/91	UPDATED DRAWING.
11/16/90	UPDATED DRAWING.
10/08/90	UPDATED DRAWING.
08/27/90	UPDATED DRAWING.

DATE	REVISION	
 J. MULLER INTERNATIONAL	 Libby Engineers	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT 1
INBOUND A1 THRU PIER 3

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE : NO SCALE DATE : JUN. 1990

SHEET No. TL1 OF SHEETS

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

1. ALL TENDONS SHOWN ARE
17-0.5" ϕ STRAND TENDONS U.N.O.
2.  DENOTES BOTTOM BLOCK TYPES
FOR DETAILS SEE SHEETS TA1 AND PT2
3.  DENOTES TEMPORARY TENDONS.
4.  DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3
5.  ----- DENOTES STRESSING END
6.  ----- DENOTES NON-STRESSING END
7. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
8. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
9.  DENOTES STRAIGHT TENDON LOCATION.
10.  DENOTES DEVIATED TENDON LOCATION.

08/23/91 REV. TENDON IIO & III CANTILEVER 5
04/23/91 REVISED TENDON 412.
03/07/91 UPDATED DRAWING.
02/15/91 UPDATED TENDON 203.
12/28/90 UPDATED DRAWING.
11/16/90 UPDATED DRAWING.
10/04/90 UPDATED DRAWING.
08/28/90 UPDATED DRAWING.

DATE	REVISION	
 J. MULLER INTERNATIONAL	 Libby Engineers & Architects	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT II
INBOUND PIER 3 THRU PIER 5

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

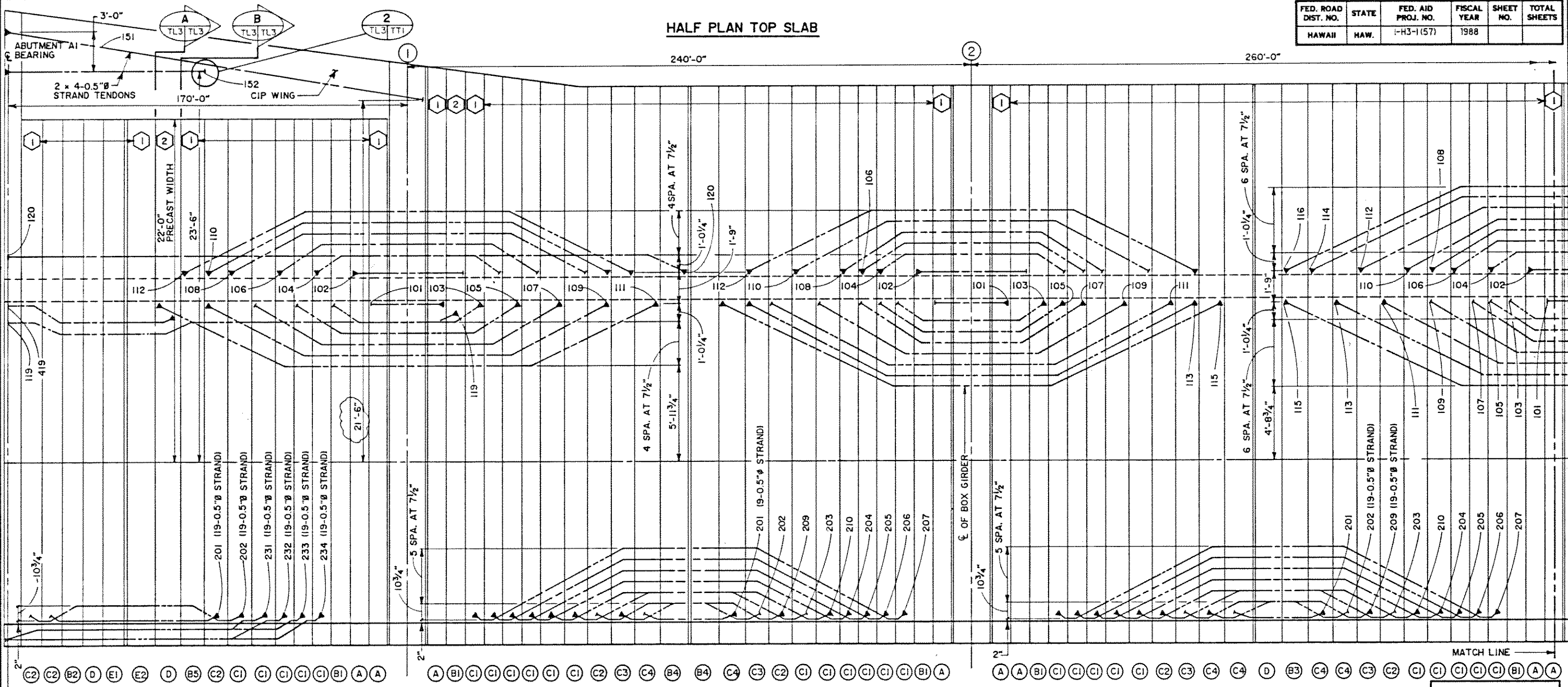
F.A.I. PROJECT No. 1-H3-1(58)

SCALE : NO SCALE DATE : JUN 1990

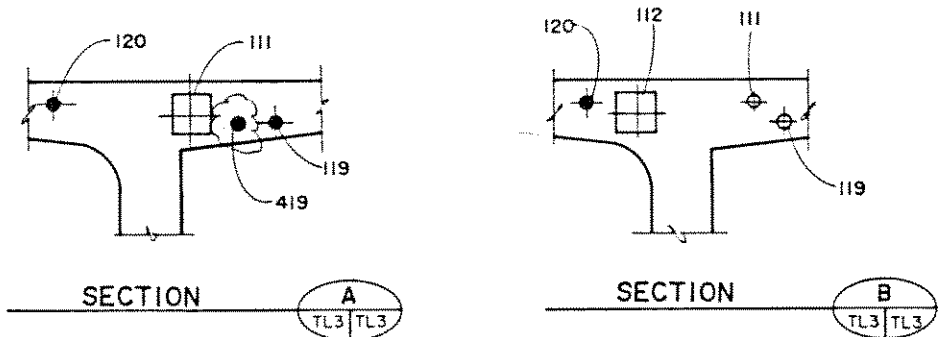
SHEET No. 12 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

HALF PLAN TOP SLAB



HALF PLAN BOTTOM SLAB



- NOTES**
1. ALL TENDONS SHOWN ARE 17-0.5 # STRAND TENDONS U.N.O.
 2. ○ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2
 3. ○ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3
 4. ——— DENOTES STRESSING END
 5. - - - - - DENOTES NON-STRESSING END
 6. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
 7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
 8. ● DENOTES STRAIGHT TENDON LOCATION
 9. ○ DENOTES DEVIATED TENDON LOCATION

12/03/90 UPDATED DRAWING.
11/16/90 UPDATED DRAWING.
10/23/90 UPDATED DRAWING.
10/08/90 UPDATED DRAWING.
08/28/90 UPDATED DRAWING.

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

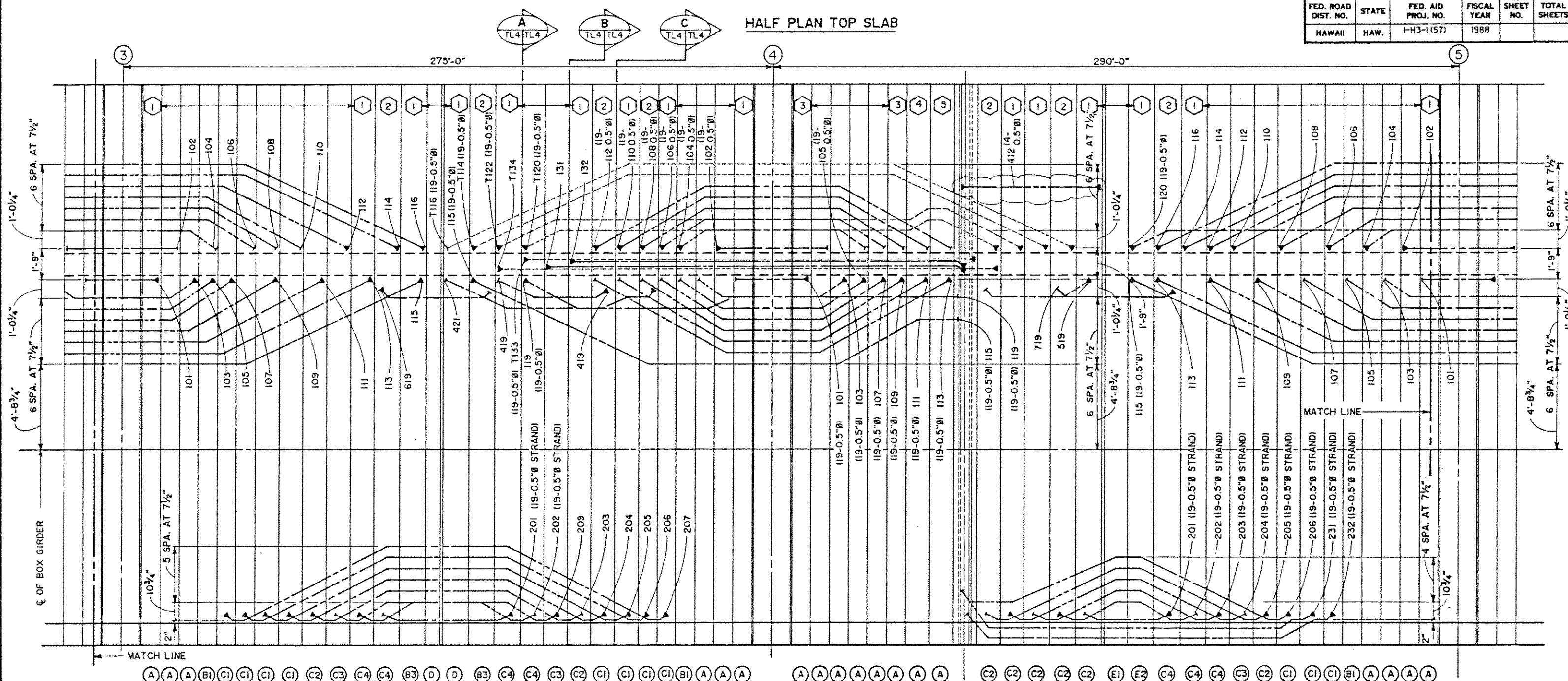
**POST-TENSIONING LAYOUT III
OUTBOUND A1 THRU PIER 3**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: NO SCALE DATE: JUN. 1990

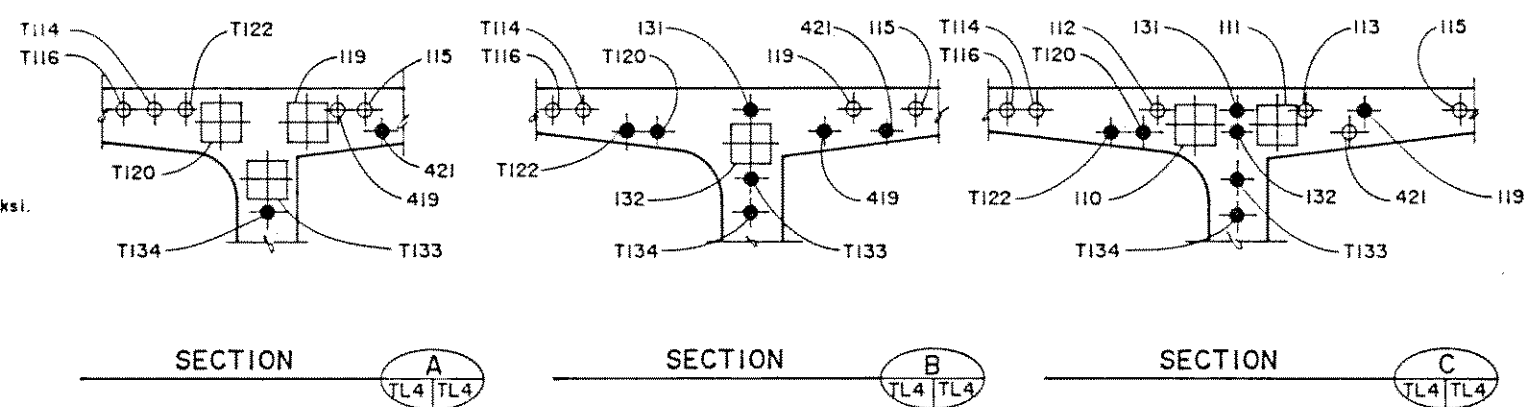
SHEET NO. TL3 OF SHEETS

ORIGINAL PLAN
NOTES
DATE
DRAWN BY
CHECKED BY
DESIGNED BY
QUANTITIES BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



HALF PLAN BOTTOM SLAB

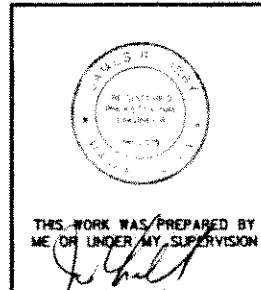


- NOTES**
- ALL TENDONS SHOWN ARE 17-0.5" Ø STRAND TENDONS U.N.O.
 - DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2
 - ⊕ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3
 - DENOTES STRESSING END
 - DENOTES NON-STRESSING END
 - ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
 - ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.

04/23/91 REVISED TENDON 412.
 12/28/90 UPDATED DRAWING.
 12/03/90 UPDATED DRAWING.
 11/16/90 UPDATED DRAWING.
 10/23/90 UPDATED DRAWING.
 10/04/90 UPDATED DRAWING.
 08/28/90 UPDATED DRAWING.

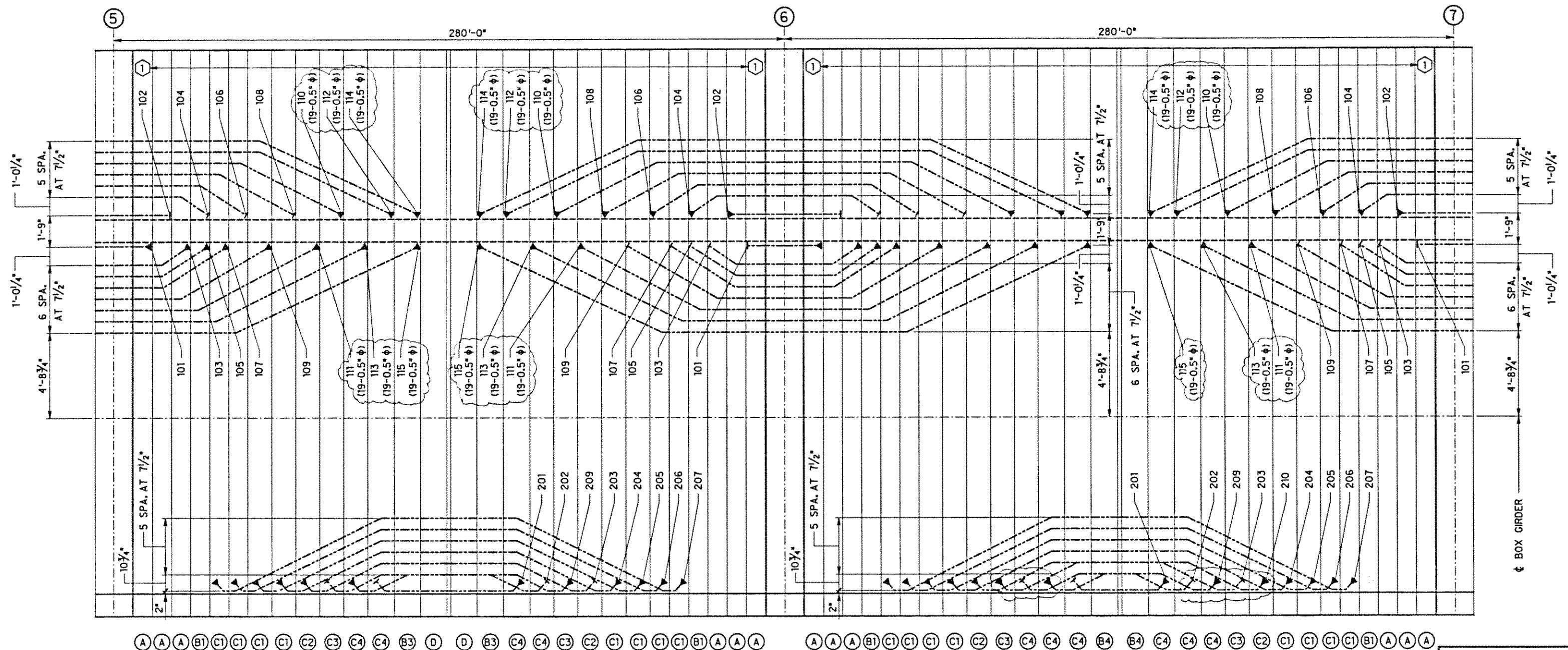
DATE: J. MULLER INTERNATIONAL
 REVISION: Libby Engineers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
POST-TENSIONING LAYOUT IV
OUTBOUND PIER 3 THRU PIER 5
 INTERSTATE ROUTE H-3
 F.A.I. PROJECT No. I-H3-1 (57)
 F.A.I. PROJECT No. I-H3-1 (58)
 SCALE: NO SCALE DATE: JUN. 1990
 SHEET No. TL4 OF SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

HALF PLAN TOP SLAB



HALF PLAN BOTTOM SLAB

NOTES

- ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
- $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
- *T* DENOTES TEMPORARY TENDONS.
- $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
- $\blacktriangleright$ DENOTES STRESSING END.
- $\dashv$ DENOTES NON-STRESSING END.
- ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
- ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.



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James R. Libby

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT V
INBOUND PIER 5 THRU PIER 7

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: SEP. 1990

SHEET No. TL5 OF SHEETS

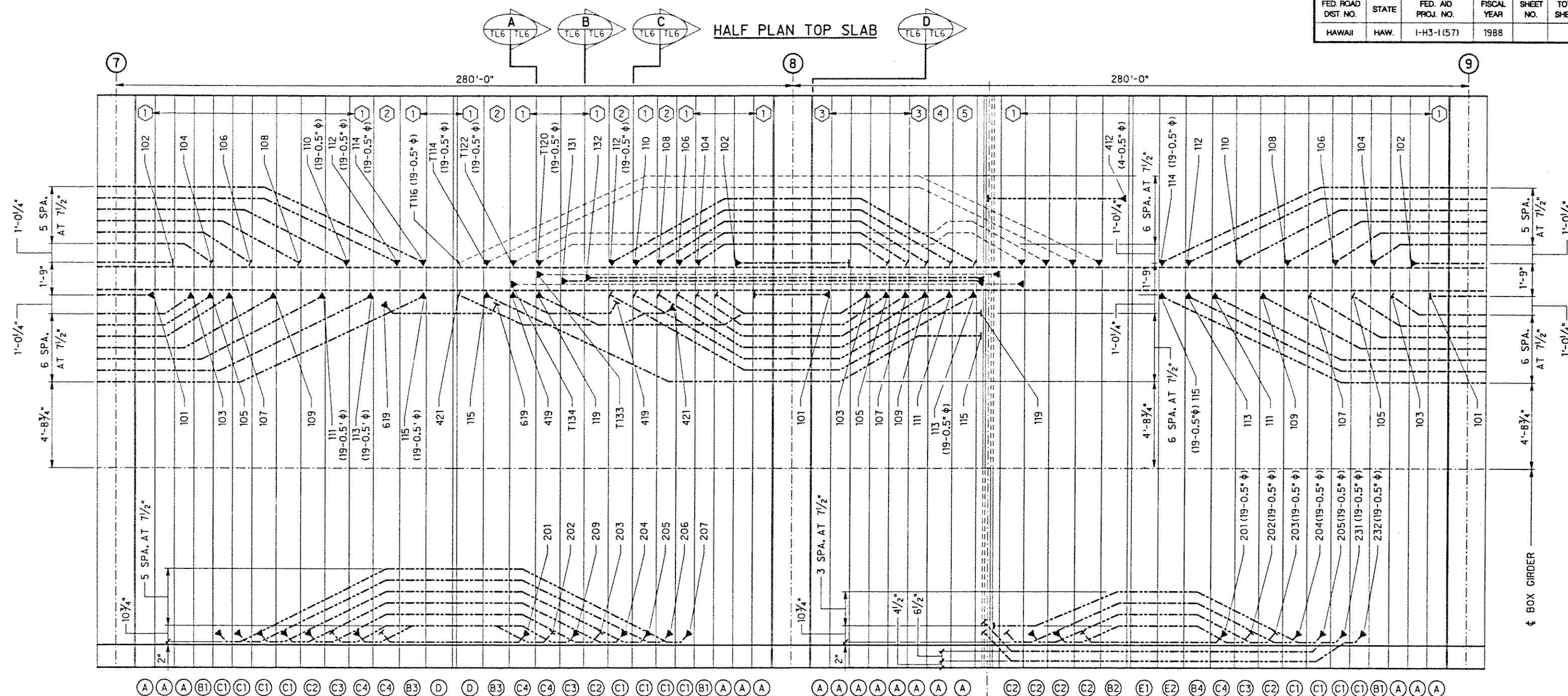
02/14/91 UPDATED DRAWING.
01/04/91 UPDATED DRAWING.

DATE REVISION

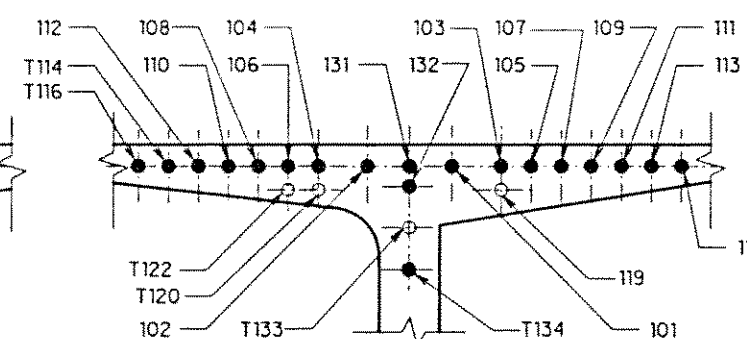
J. MULLER INTERNATIONAL Libby Engineers

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
APPROVED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	I-H3-1(57)	1988		

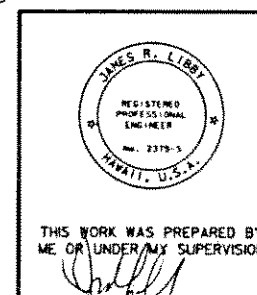


HALF PLAN BOTTOM SLAB



NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
2.  DENOTES BOTTOM BLOCK TYPES
FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4.  DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3.
5.  ----- DENOTES STRESSING END.
6.  ----- DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
9. ● DENOTES STRAIGHT TENDON LOCATION.
10. ○ DENOTES DEVIATED TENDON LOCATION.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

POST-TENSIONING LAYOUT VI
INBOUND PIER 7 THRU PIER 9

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. 1-H3-1(58)

SCALE : AS NOTED DATE : SEP. 1990

SHEET No. TL6 OF SHEETS

SECTION

SCALE : N.T.S.

SECTION

SCALE : N.T.S.

SECTION

SCALE : N.T.S.

SECTION

SCALE : N.T.S.

04/22/91	REVISED TENDON 412.
02/14/91	UPDATED DRAWING.
02/02/91	UPDATED LAYOUT ON CANTILEVER 9 AND SECTIONS.
01/04/91	UPDATED LAYOUT AND SECTIONS ON CANTILEVER 8.

DATE	REVISION
------	----------

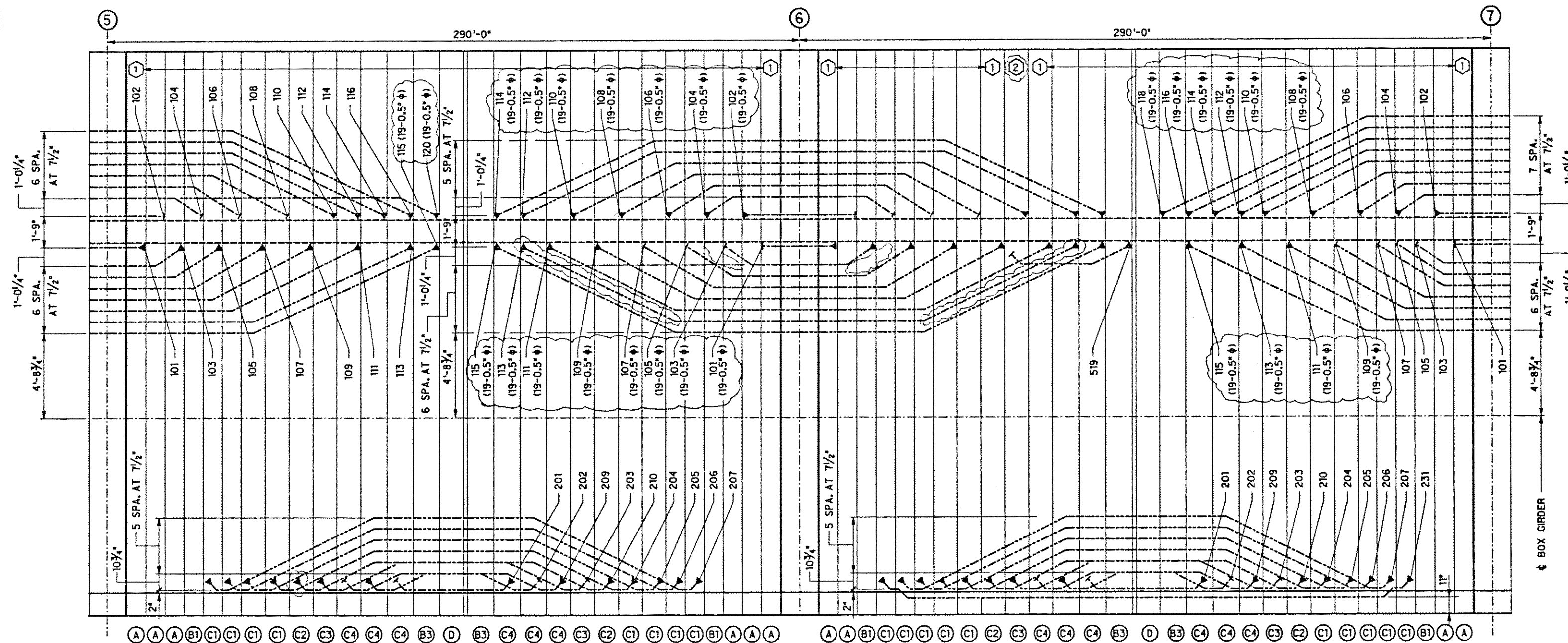

**J. MULLER
INTERNATIONAL**

REVISION

Libby
Engineers

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

HALF PLAN TOP SLAB



HALF PLAN BOTTOM SLAB

NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" STRAND TENDONS U.N.O.
2. ○ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. ○ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
5. ———— DENOTES STRESSING END.
6. ———— DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT VII
OUTBOUND PIER 5 THRU PIER 7

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE: AS NOTED DATE: SEP. 1990

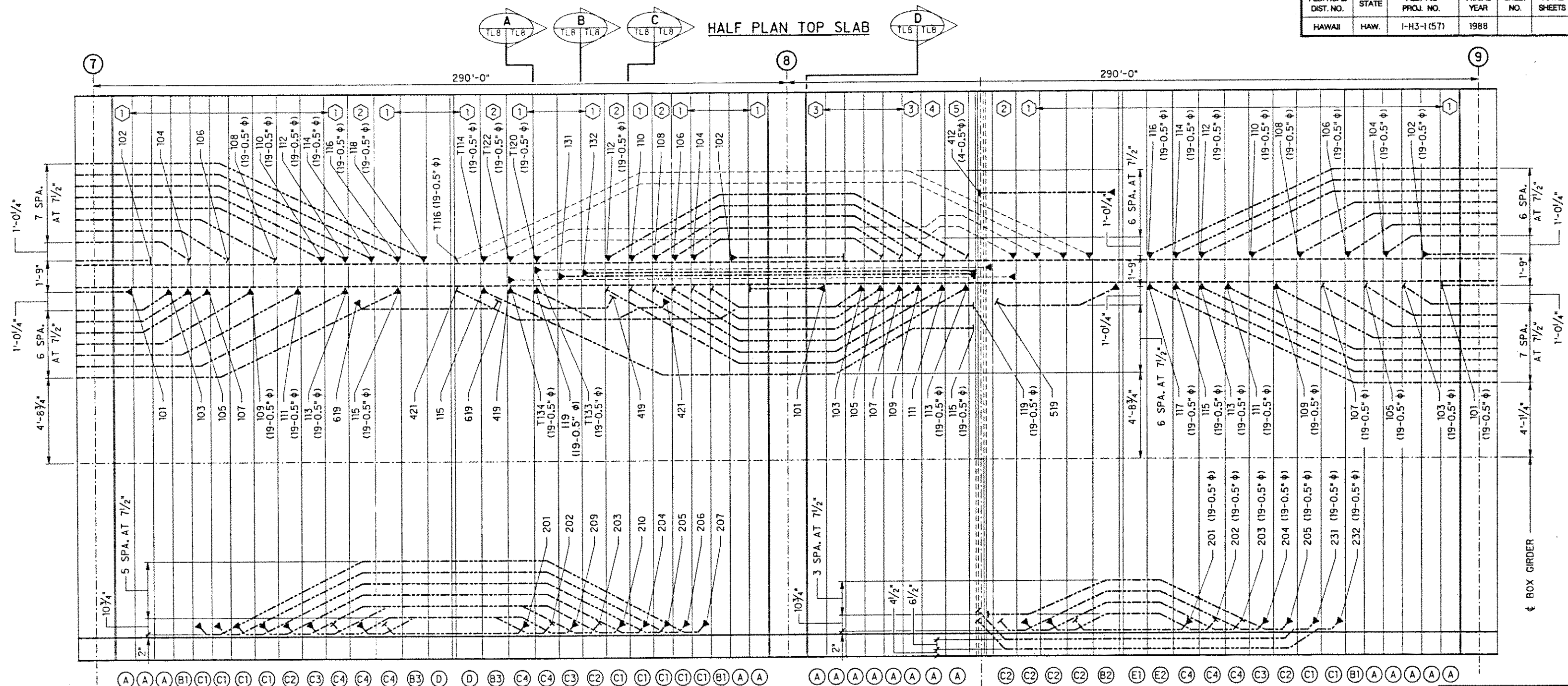
SHEET No. TL7 OF SHEETS

02/14/91 UPDATED DRAWING.
01/04/91 REVISED LAYOUT ON CANTILEVER 5.
DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
APPROVED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



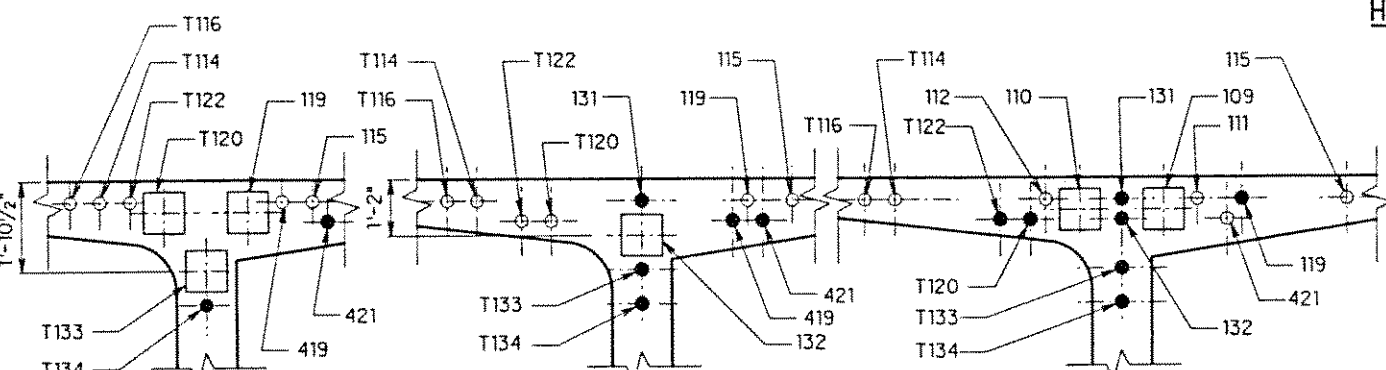
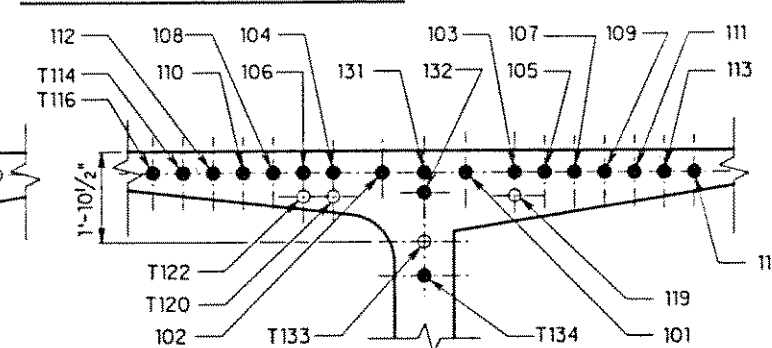
NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" φ STRAND TENDONS U.N.O.
2. ○ DENOTES BOTTOM BLOCK TYPES
FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. ○ DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3.
5. — DENOTES STRESSING END.
6. — DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
9. ● DENOTES STRAIGHT TENDON LOCATION.
10. ○ DENOTES DEVIATED TENDON LOCATION.



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HALF PLAN BOTTOM SLAB



SECTION A
SCALE : N.T.S.

SECTION B
SCALE : N.T.S.

SECTION C
SCALE : N.T.S.

SECTION D
SCALE : N.T.S.

01/15/92 REVISED TENDON 119 CANTILEVER 8.
04/22/91 REVISED TENDON 412.
02/14/91 UPDATED DRAWING.
01/04/91 UPDATED LAYOUT AND SECTIONS ON
CANTILEVER 8.

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

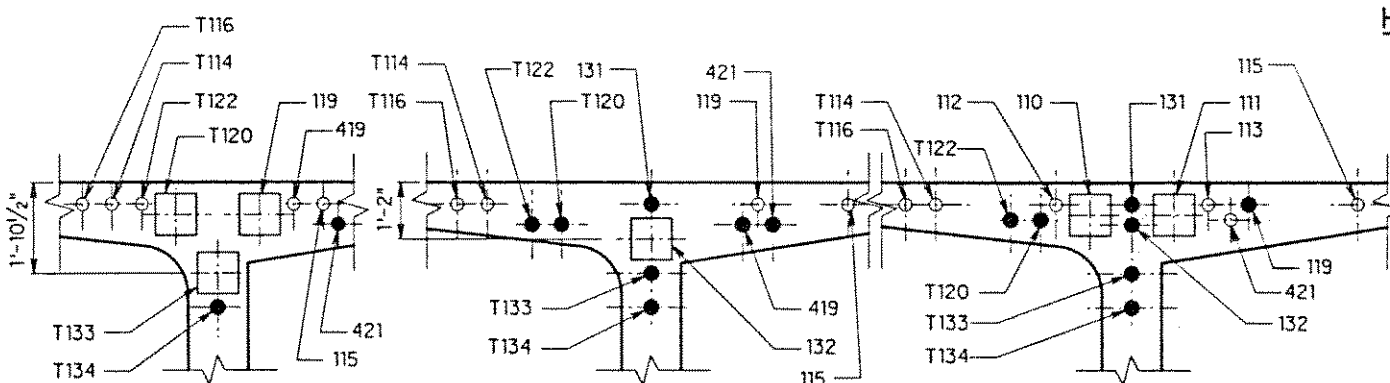
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT VIII
OUTBOUND PIER 7 THRU PIER 9

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : SEP. 1990

SHEET No. TL8 OF SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
	DESIGNED BY	
NOTE BOOK	QUANTITIES BY	
N _o .	CHECKED BY	



A

B
TL10 TL10

C

D



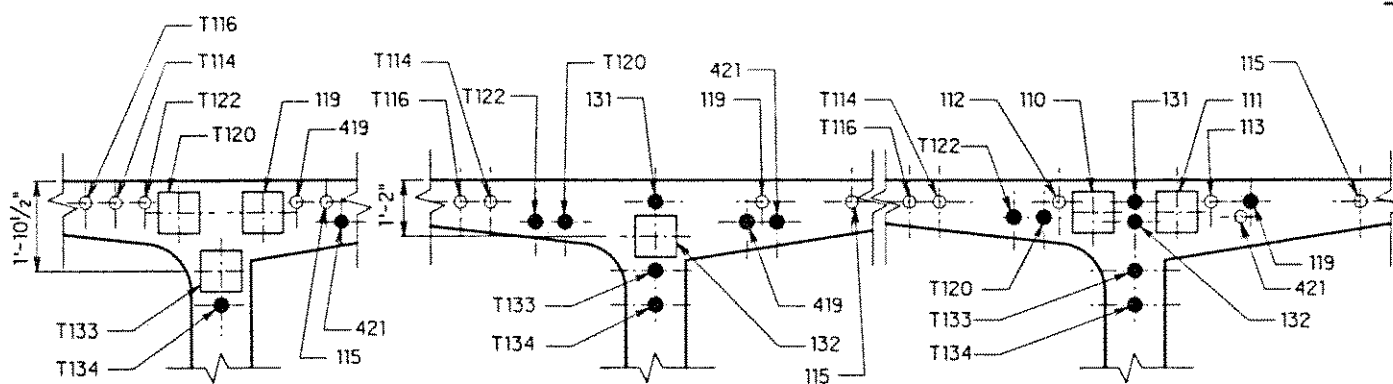
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

James R. Libby

SHEET No. TL10 OF SHEETS

 Libby
Engineers

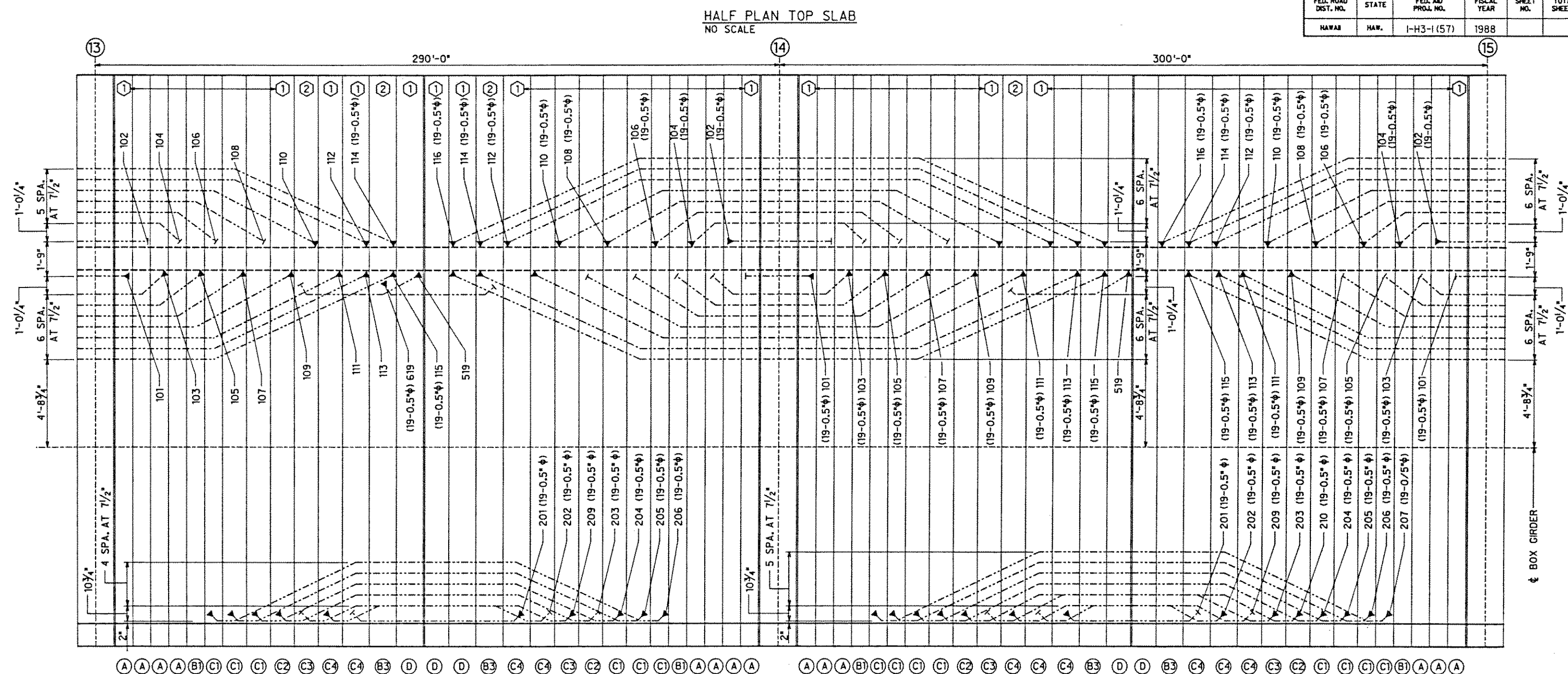
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	TRACED BY	
	DESIGNED BY	
	QUANTIFIED BY	
No.	CHECKED BY	



-
- THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
- James R. Libby*

SHEET No. TL12 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



NOTES

- ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
- $\bigcirc$ DENOTES BOTTOM BLOCK TYPES
FOR DETAILS SEE SHEETS TA1 AND PT2.
- *T* DENOTES TEMPORARY TENDONS.
- $\bigcirc$ DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3.
- DENOTES STRESSING END.
- DENOTES NON-STRESSING END.
- ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
- ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.

HALF PLAN BOTTOM SLAB

NO SCALE



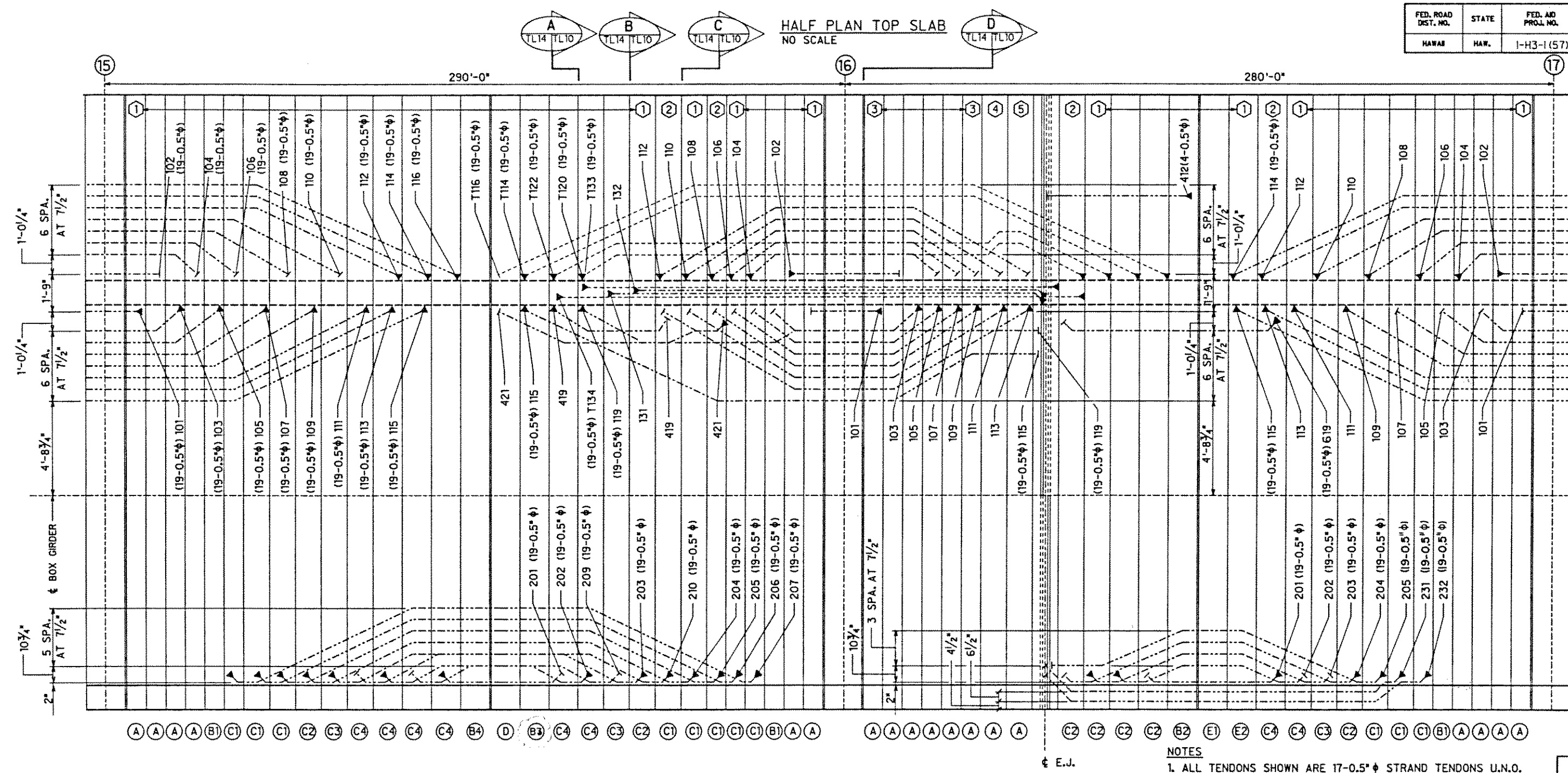
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING LAYOUT
INBOUND PIER 13 THRU PIER 15

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE: AS NOTED DATE: APRIL 1991
SHEET NO. TL13 OF SHEETS

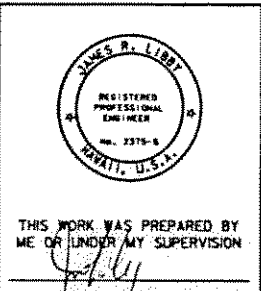
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF PLAN BOTTOM SLAB
NO SCALE

NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
2. $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
5. ----- DENOTES STRESSING END.
6. |----- DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.



08/23/91 5/29/91		UPDATED DRAWING. TENDON LAYOUT	
DATE		REVISION	
J. MULLER INTERNATIONAL		Libby Engineers	

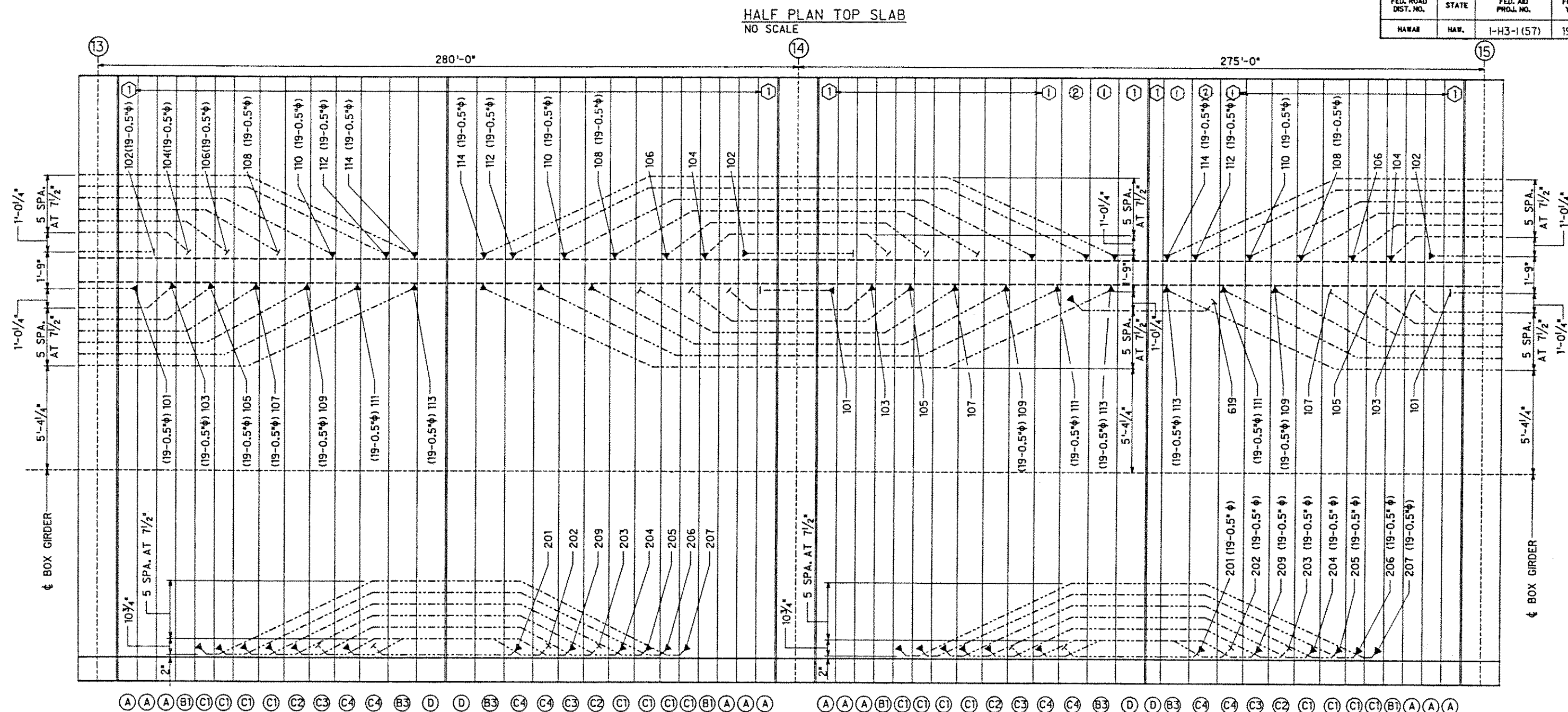
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT
INBOUND PIER 15 THRU PIER 17

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : APRIL 1991

SHEET NO. TL14 OF SHEETS

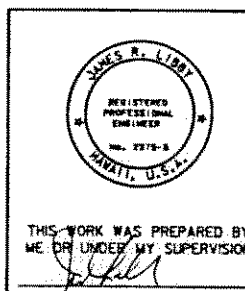
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



NOTES

- ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
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FOR DETAILS SEE SHEETS TA1 AND PT2.
- *T* DENOTES TEMPORARY TENDONS.
- $\bigcirc$ DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3.
- DENOTES STRESSING END.
- DENOTES NON-STRESSING END.
- ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
- ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.

HALF PLAN TOP SLAB NO SCALE



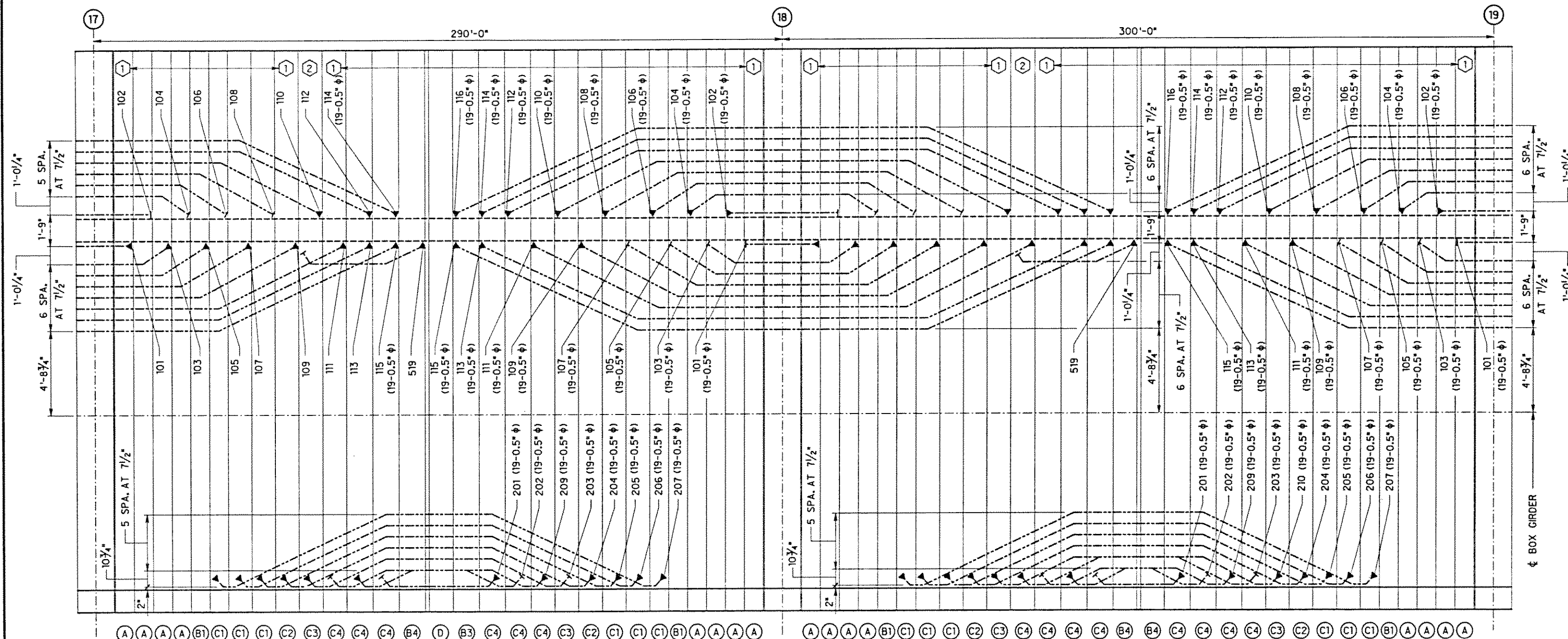
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**POST-TENSIONING LAYOUT
OUTBOUND PIER 13 THRU PIER 15**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE: AS NOTED DATE: APRIL 1991
SHEET NO. TL15 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		

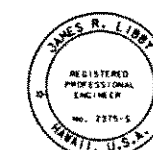
HALF PLAN TOP SLAB



HALF PLAN BOTTOM SLAB

NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
2. $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
5. $\blacktriangleright$ DENOTES STRESSING END.
6. $\dashv$ DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING LAYOUT XVII
INBOUND PIER 17 THRU PIER 19

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)

SCALE: AS NOTED DATE: MAR. 1991

SHEET No. TL17 OF SHEETS

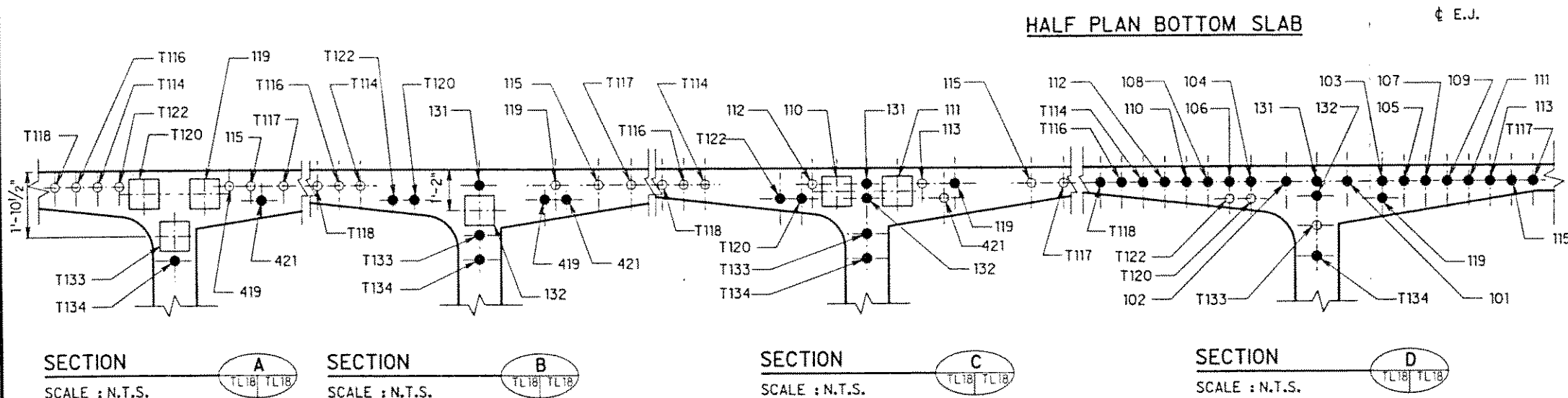
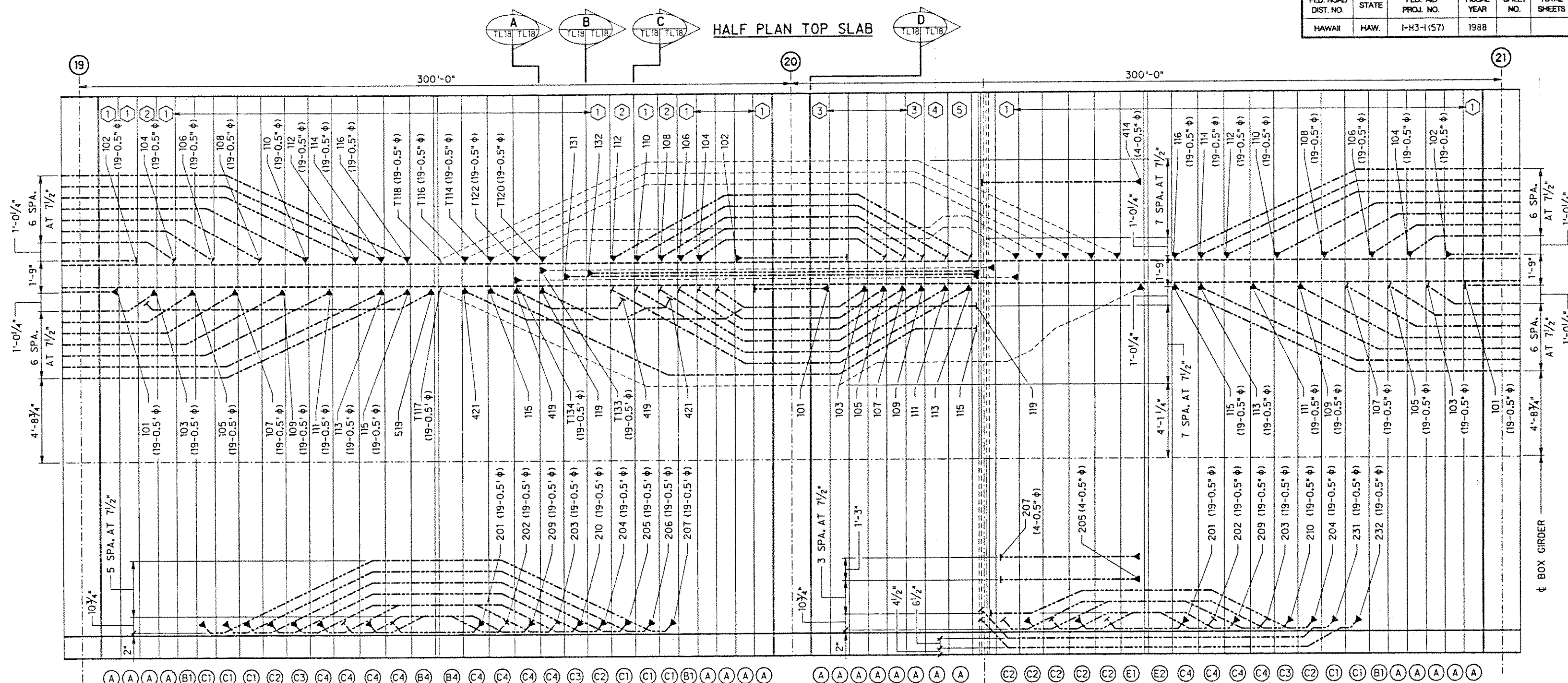
04/12/91 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL Libby Engineers

ORIGINAL PLANNED BY	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITY BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



- NOTES
1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
 2.  DENOTES BOTTOM BLOCK TYPES
FOR DETAILS SEE SHEETS TA1 AND PT2.
 3. "T" DENOTES TEMPORARY TENDONS.
 4.  DENOTES TOP BLOCK TYPES
FOR DETAILS SEE SHEETS TA2 AND PT3.
 5.  ----- DENOTES STRESSING END.
 6.  ----- DENOTES NON-STRESSING END.
 7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
 8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
 9.  DENOTES STRAIGHT TENDON LOCATION.
 10.  DENOTES DEVIATED TENDON LOCATION.



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ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAY DESIGN

POST-TENSIONING LAYOUT XVIII
INBOUND PIER 19 THRU PIER 21

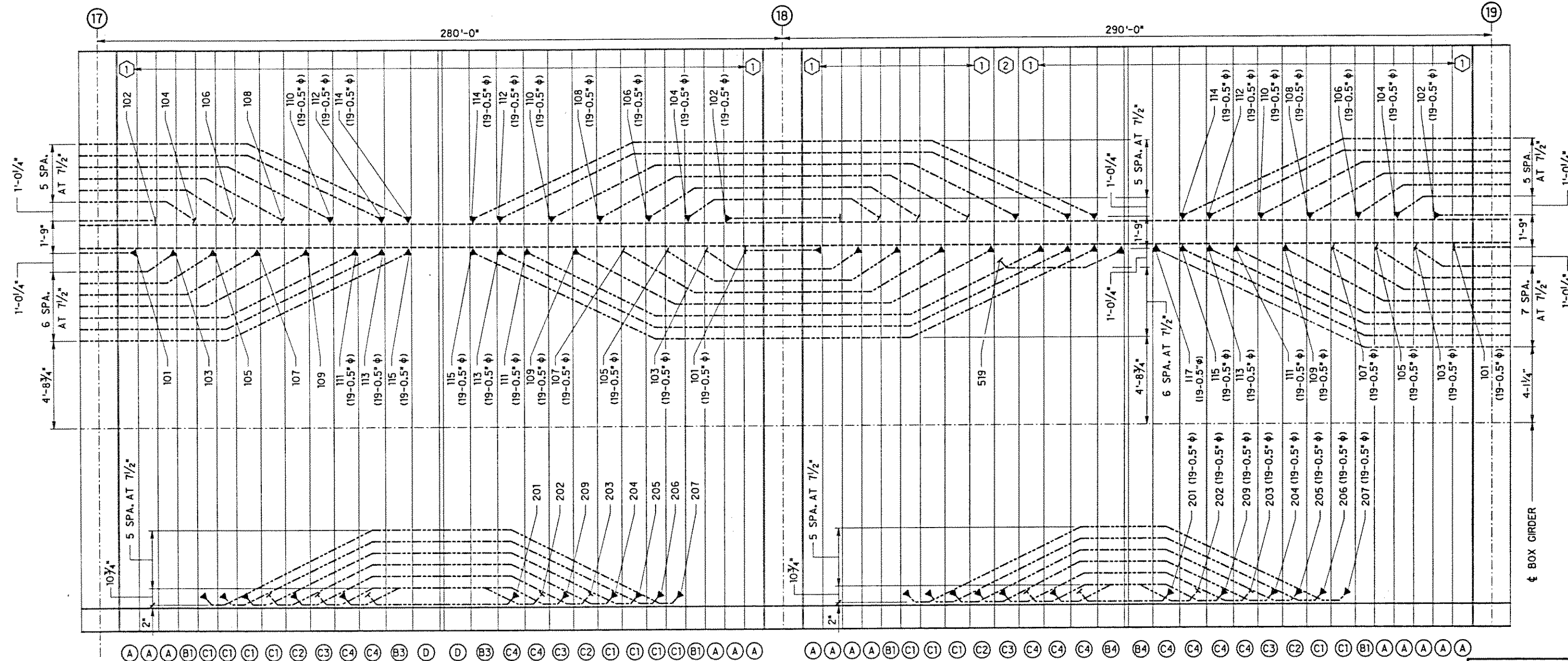
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

SCALE : AS NOTED DATE : MAR. 1991

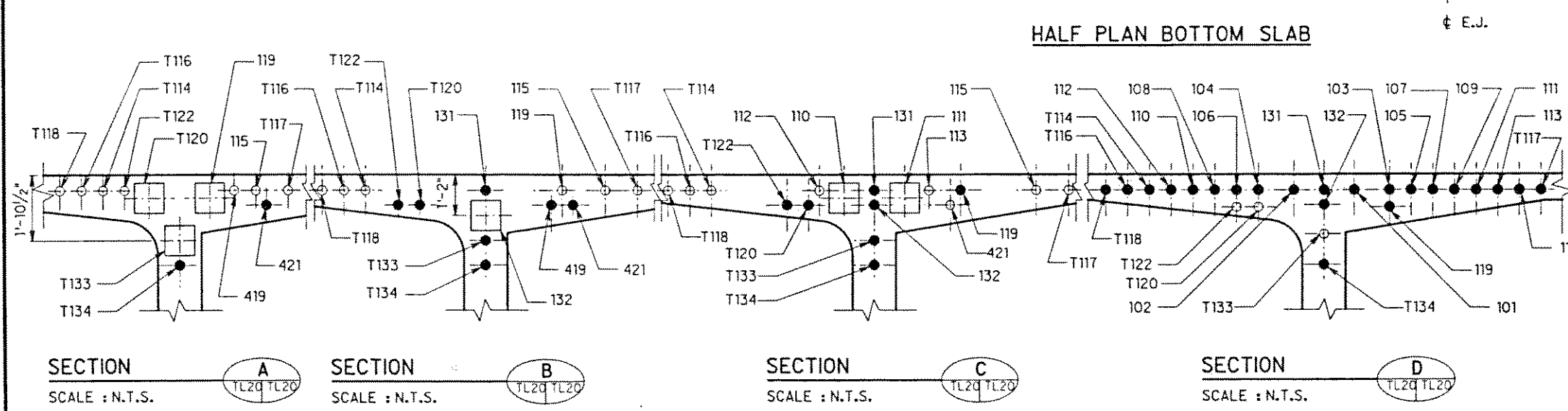
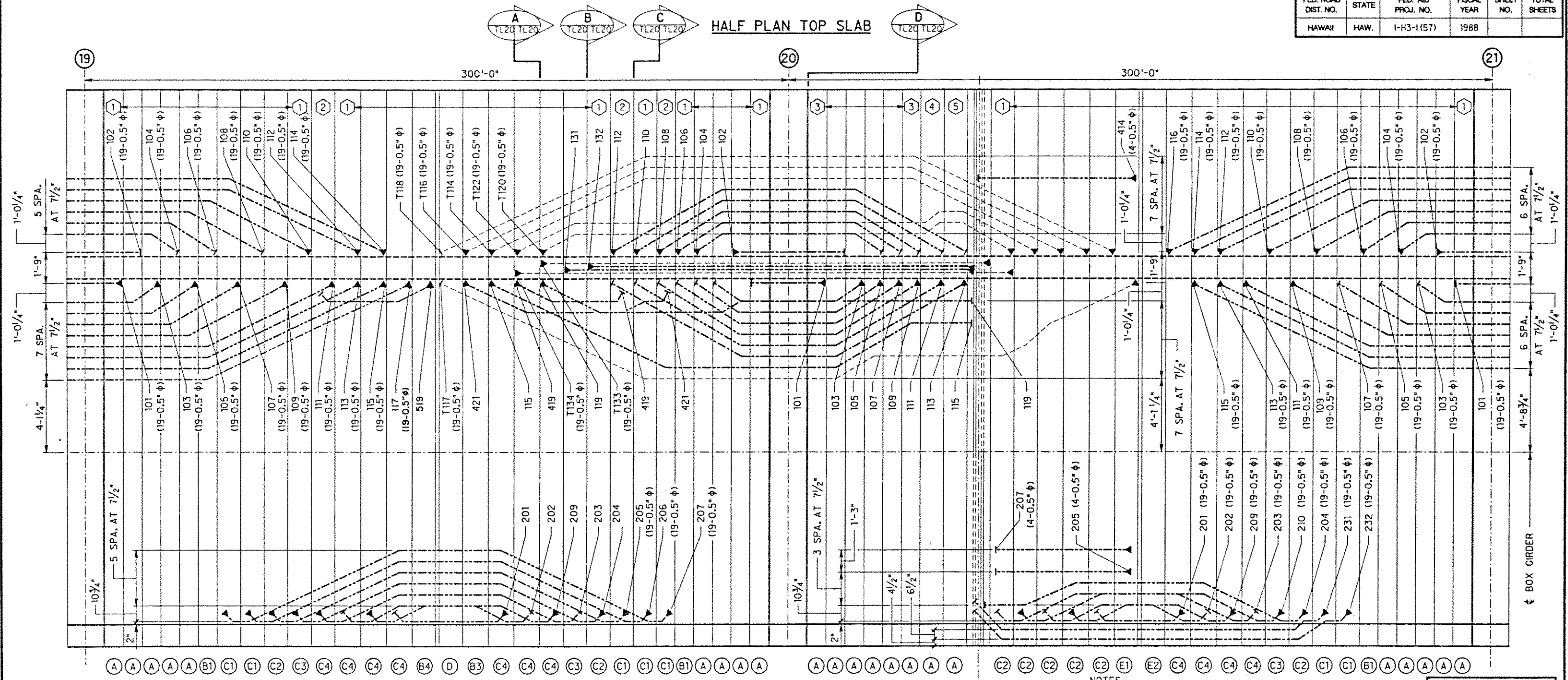
SHEET No. 1118 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

HALF PLAN TOP SLAB



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



NOTES

- ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
- $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
- *T* DENOTES TEMPORARY TENDONS.
- $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
- DENOTES STRESSING END.
- DENOTES NON-STRESSING END.
- ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
- ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.
- $\bullet$ DENOTES STRAIGHT TENDON LOCATION.
- $\circ$ DENOTES DEVIATED TENDON LOCATION.

08/23/91 DELETED TENDON 116 AND ADDED TENDON 117 FOR CANTILEVER 19.
05/06/91 TENDON 414 WAS 412.
04/22/91 REVISED TENDON 412.

DATE: 08/23/91 REVISION: 05/06/91

J. MULLER INTERNATIONAL **Libby Engineers**

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT XX
OUTBOUND PIER 19 THRU PIER 21

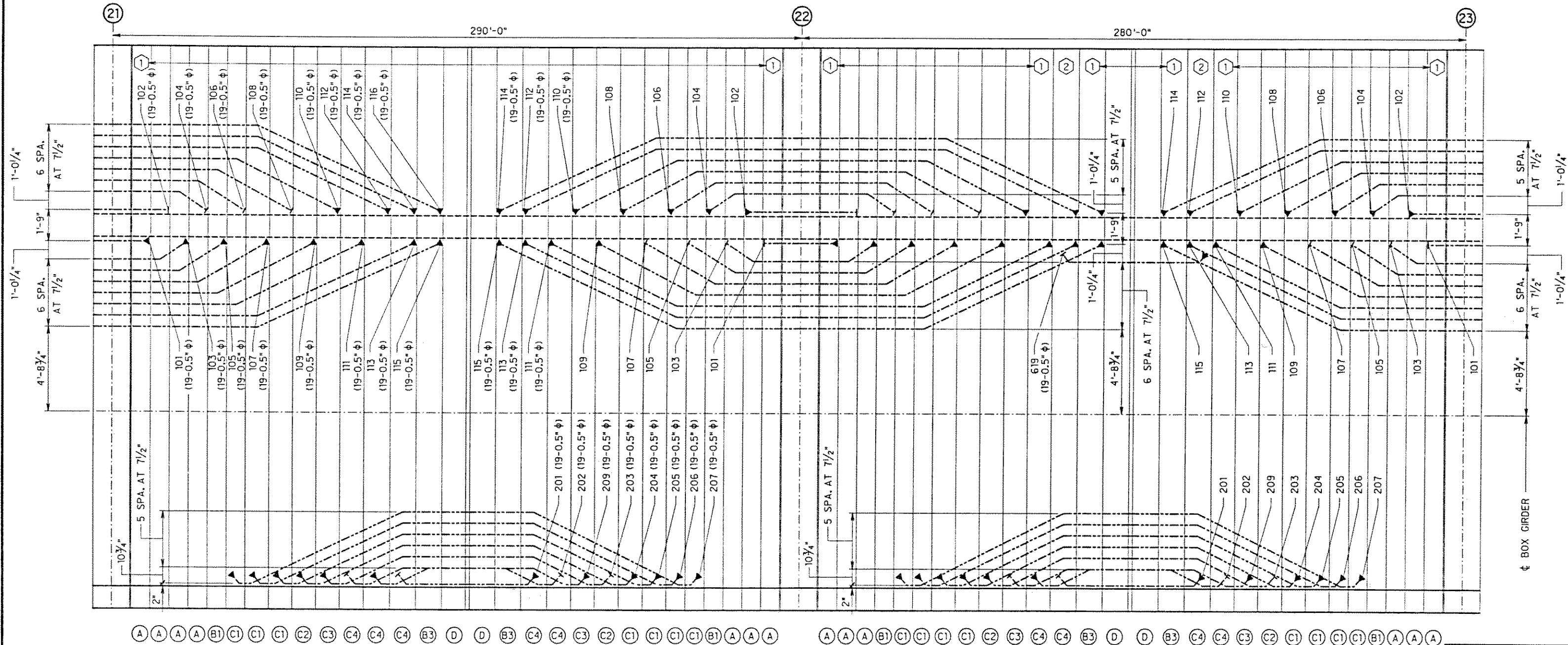
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: MAR. 1991

SHEET No. TL20 OF SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTES	
QUANTITY BY	
CREATED BY	

HALF PLAN TOP SLAB

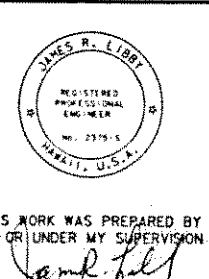
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



HALF PLAN BOTTOM SLAB

NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" φ STRAND TENDONS U.N.O.
2. ○ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. ◻ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
5. ———— DENOTES STRESSING END.
6. - - - - - DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 KSI.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 KSI.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING LAYOUT XXI
INBOUND PIER 21 THRU PIER 23

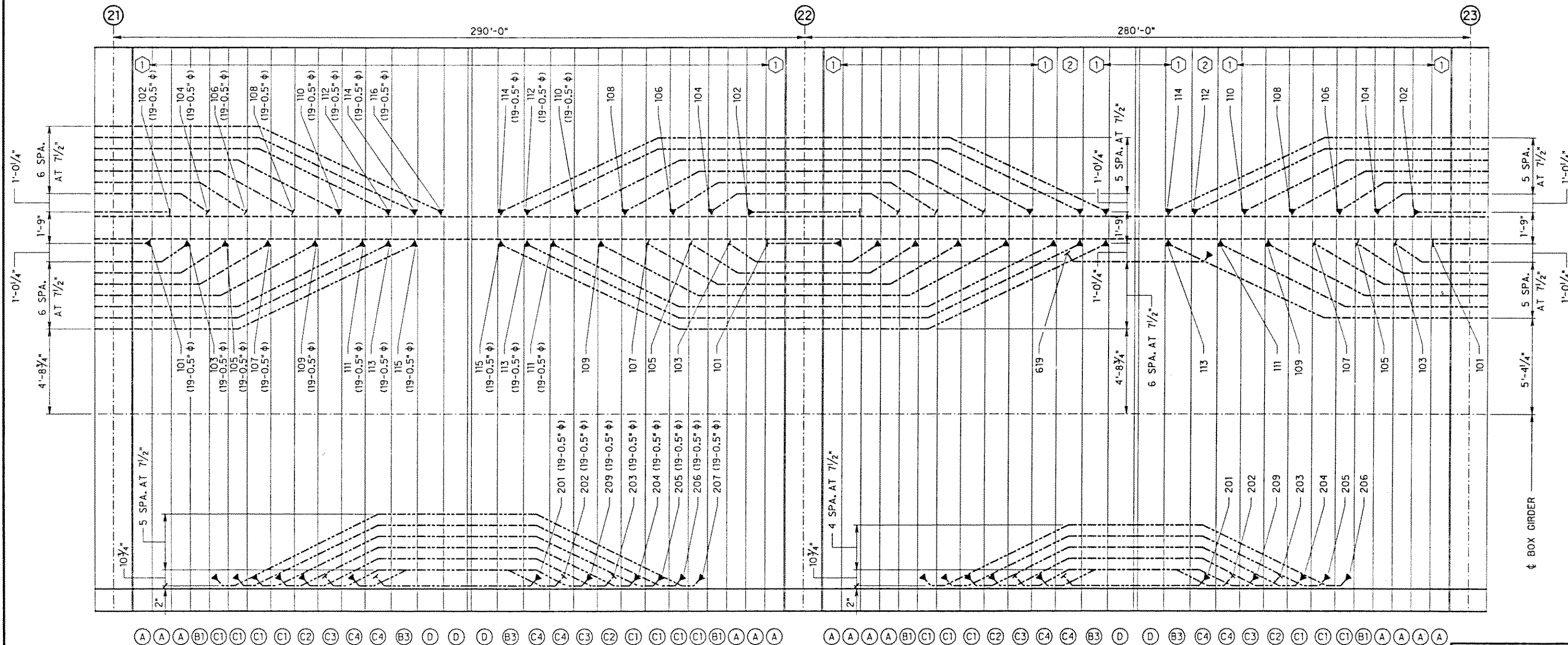
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN, 1991

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

SHEET No. TL21 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

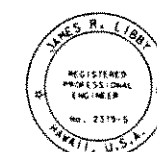
HALF PLAN TOP SLAB



HALF PLAN BOTTOM SLAB

NOTES

1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
2. $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
3. *T* DENOTES TEMPORARY TENDONS.
4. $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
5. $\blacktriangleright$ DENOTES STRESSING END.
6. $\dashv$ DENOTES NON-STRESSING END.
7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
POST-TENSIONING LAYOUT XXIII
OUTBOUND PIER 21 THRU PIER 23

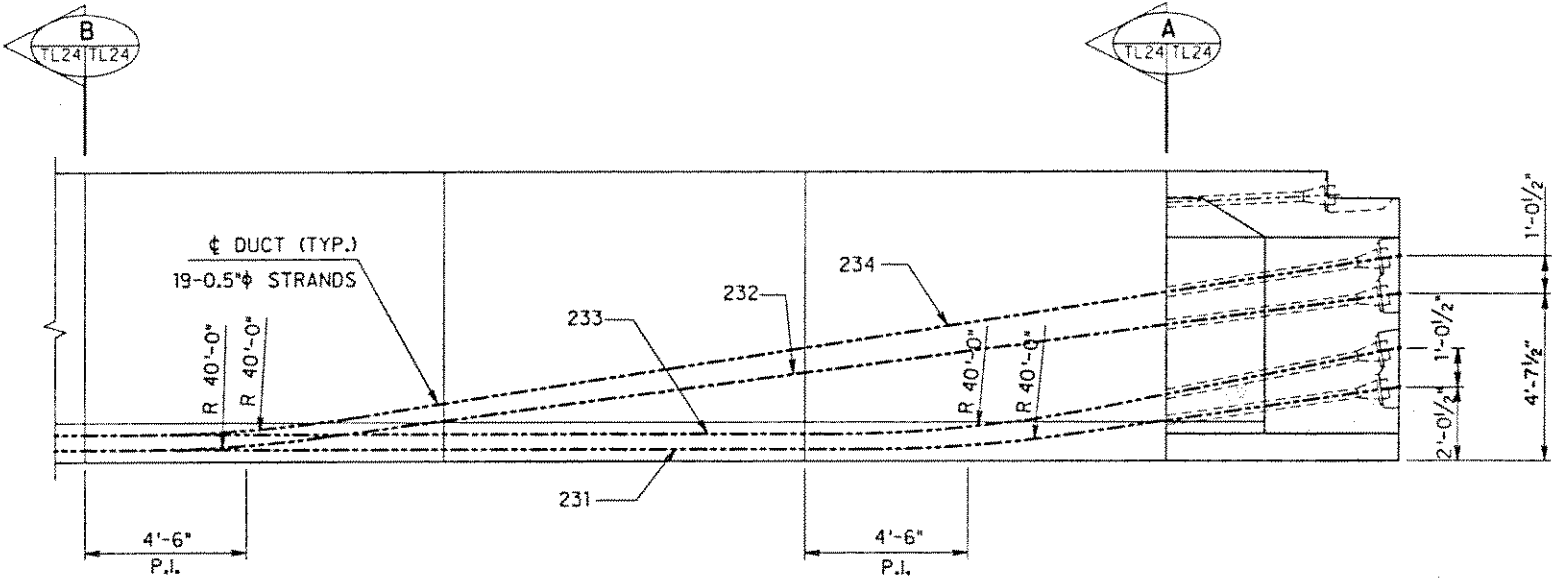
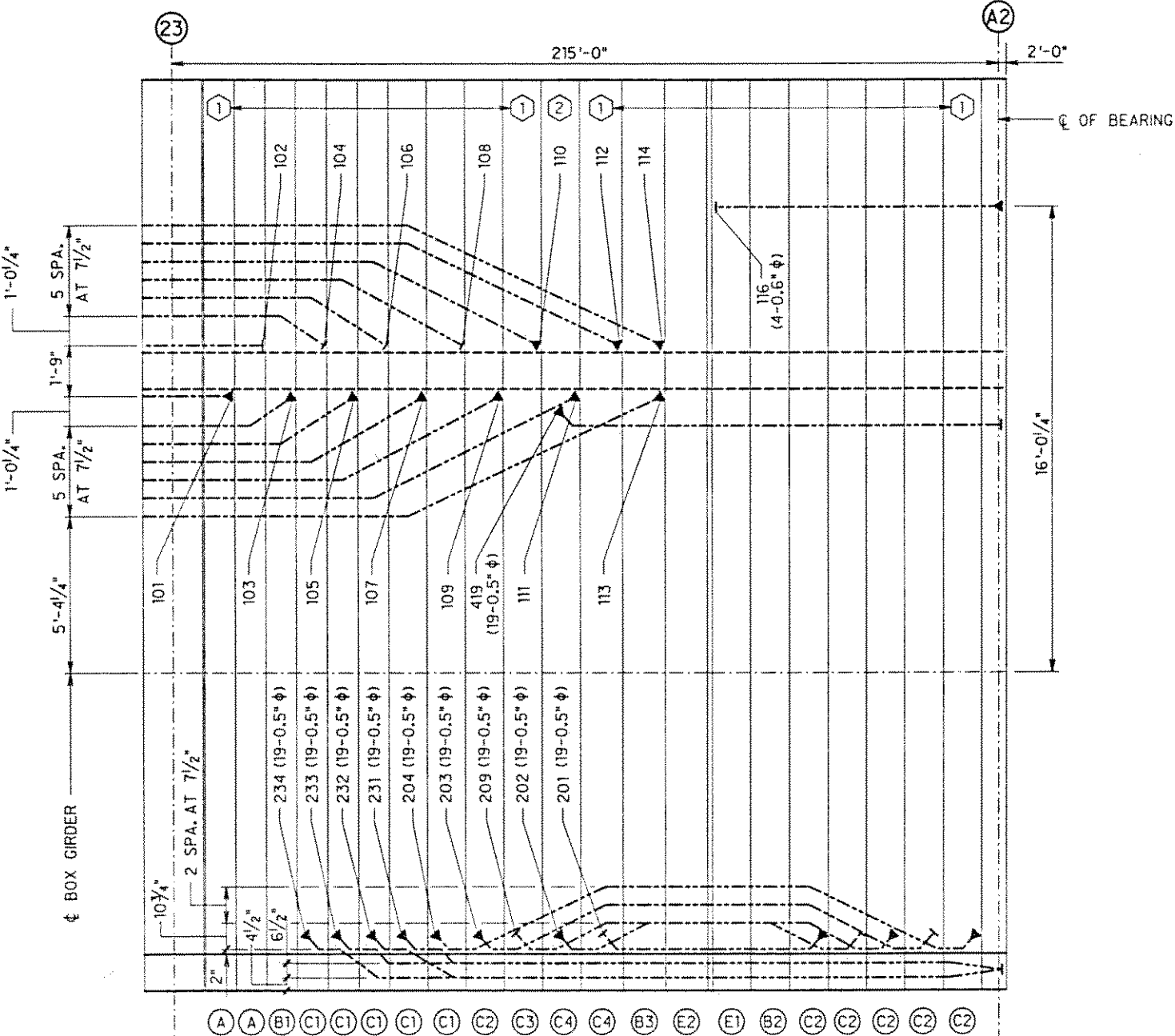
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1991

DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

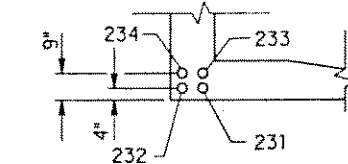
SHEET No. TL23 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

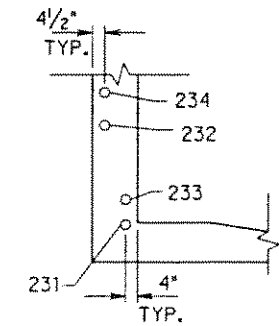
HALF PLAN TOP SLAB



ELEVATION - ABUTMENT SPAN
SCALE : 3/8"=1'-0"



SECTION B
SCALE : 3/8"=1'-0"



SECTION A
SCALE : 3/8"=1'-0"

- NOTES
1. ALL TENDONS SHOWN ARE 17-0.5" ϕ STRAND TENDONS U.N.O.
 2. $\bigcirc$ DENOTES BOTTOM BLOCK TYPES FOR DETAILS SEE SHEETS TA1 AND PT2.
 3. "T" DENOTES TEMPORARY TENDONS.
 4. $\bigcirc$ DENOTES TOP BLOCK TYPES FOR DETAILS SEE SHEETS TA2 AND PT3.
 5. $\blacktriangleright$ DENOTES STRESSING END.
 6. $\blacktriangleleft$ DENOTES NON-STRESSING END.
 7. ALL TOP SLAB TENDONS SHALL BE STRESSED AT 203 ksi.
 8. ALL BOTTOM SLAB TENDONS SHALL BE STRESSED AT 216 ksi.

REVIEWED BY	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	

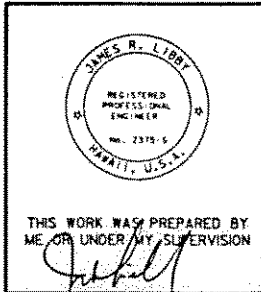
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

POST-TENSIONING LAYOUT XXIV
OUTBOUND PIER 23 THRU ABUTMENT 2

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1991

SHEET No. TL24 OF SHEETS

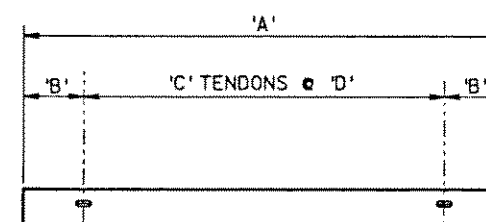
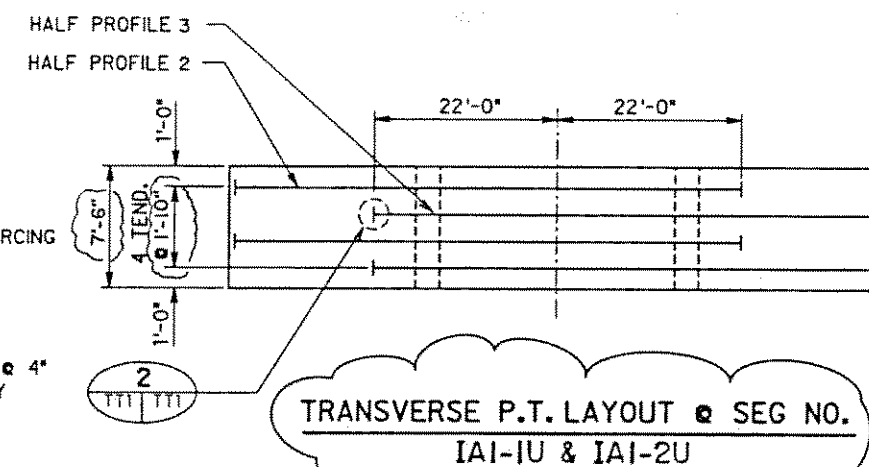


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

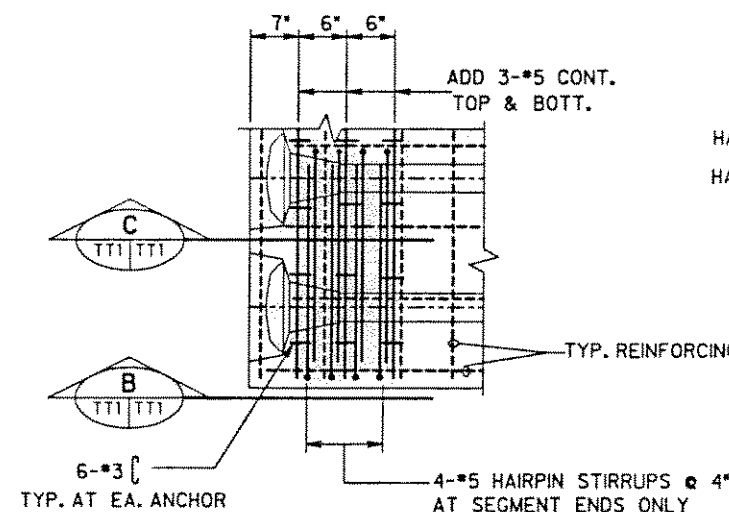
TENDON PROFILE	SEGMENT WIDTH	'A'	NO FARADAY SHIELD			FARADAY SHIELD		
			'B'	'C'	'D'	'B'	'C'	'D'
'1'	TO 44'-1"	8'-0"	1'-4"	3	2'-8"	1'-0"	4	2'-0"
		10'-0"	1'-3"	4	2'-6"	1'-0"	5	2'-0"
		11'-0"	1'-4 1/2"	4	2'-9"	1'-1"	5	2'-2 1/2"
'2' ALT W/3'	TO 53'-0"	8'-0"	1'-0"	4	2'-0"	10"	5	1'-7"
		10'-0"	1'-0"	5	2'-0"	10"	6	1'-8"
		11'-0"	11"	6	1'-10"	9"	7	1'-7"
OUTBOUND	TO 57'-0"	8'-0"	1'-0"	4	2'-0"			
		10'-0"	10"	*	1'-8"	10"	6	1'-8"
		11'-0"	11"	*	1'-10"			
		8'-0"	10 1/2"	6	1'-3"			
		10'-0"	11"	8	1'-2"			
		11'-0"	SEE SECTION E					

* SEE SECTION D

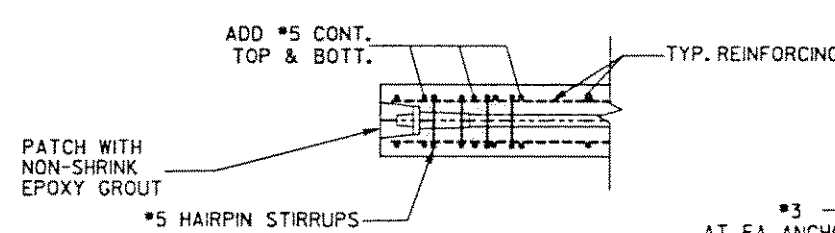
NOTE: STRESS TENDONS TO 205 ksi. ASSUMED ANCHOR SET = 3/8"



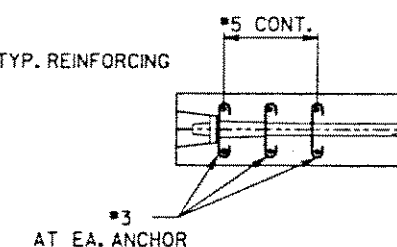
SECTION A
SCALE: 1/2" = 1'-0"



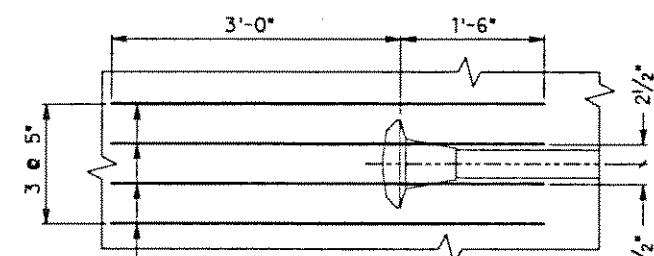
DETAIL 1
SCALE: 1" = 1'-0"



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

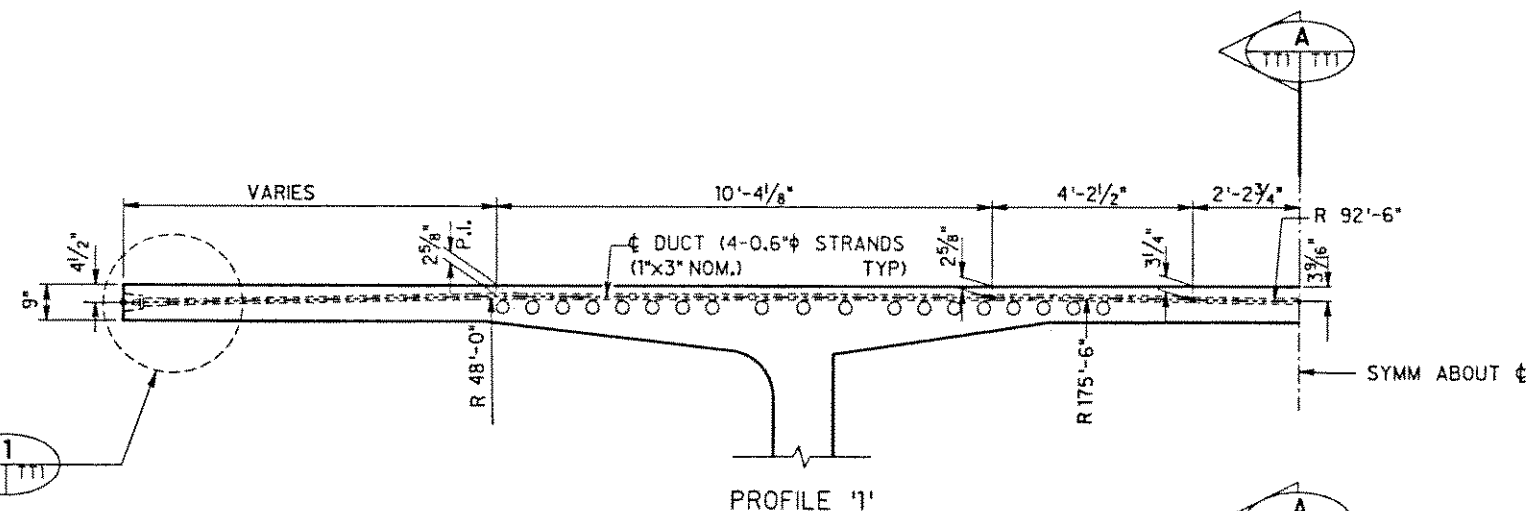


SECTION C
SCALE: 1" = 1'-0"

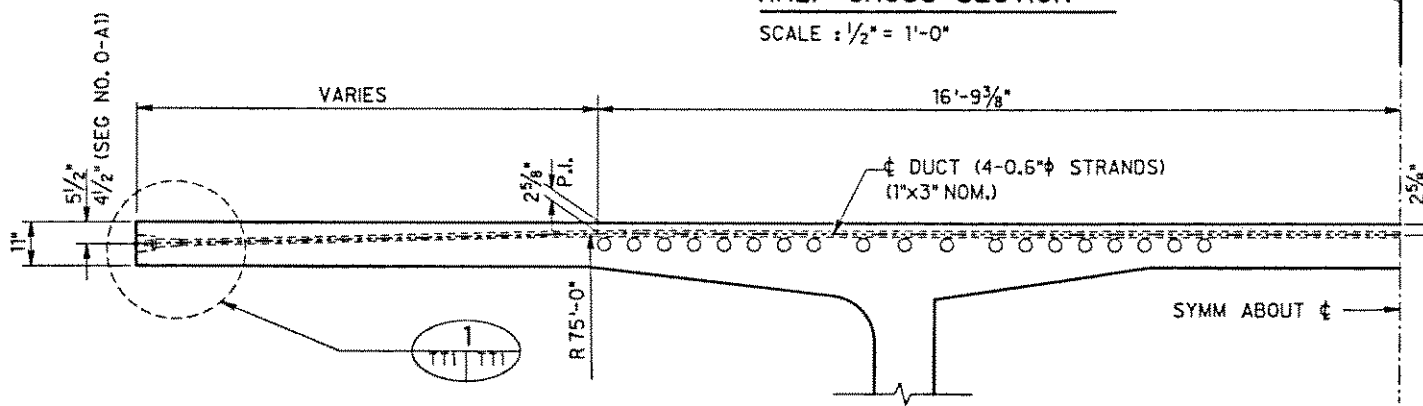


DETAIL 2
SCALE: 1" = 1'-0"

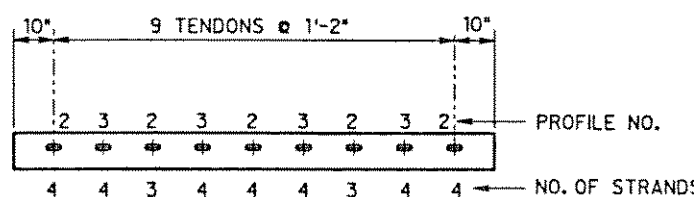
ADDITIONAL 4- #4 TOP & BOTT.



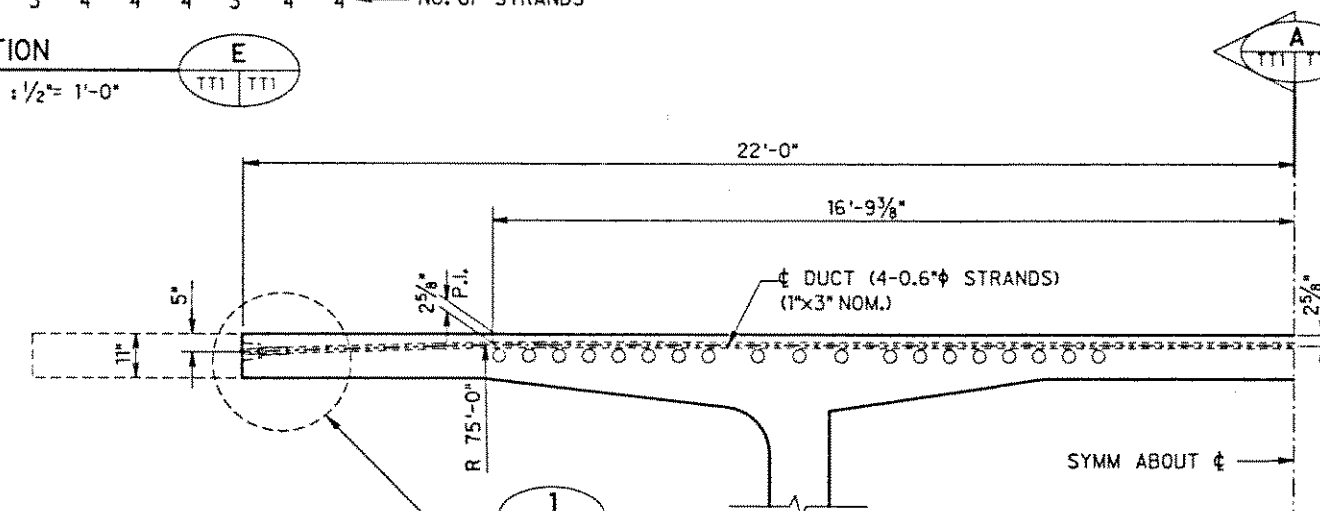
PROFILE 1
HALF CROSS SECTION
SCALE: 1/2" = 1'-0"



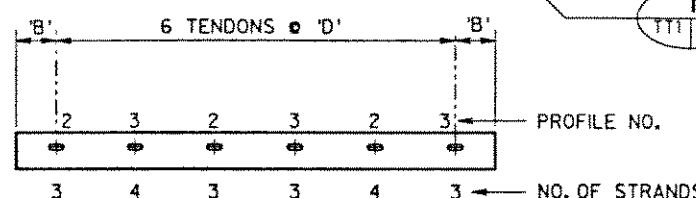
PROFILE 2
OUTBOUND SPAN 1
HALF CROSS SECTION
SCALE: 1/2" = 1'-0"



SECTION E
SCALE: 1/2" = 1'-0"

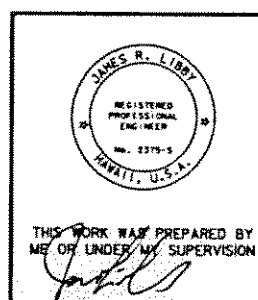


PROFILE 3
OUTBOUND SPAN 1
HALF CROSS SECTION
SCALE: 1/2" = 1'-0"



SECTION D
SCALE: 1/2" = 1'-0"

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
IN CHARGE	_____
NOTED	_____
REVISION	_____



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRANSVERSE POST-TENSIONING DETAILS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: SEP. 1990

SHEET No. TT1 OF SHEETS

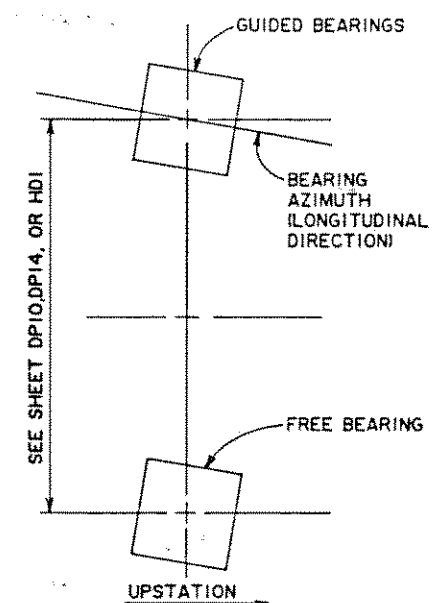
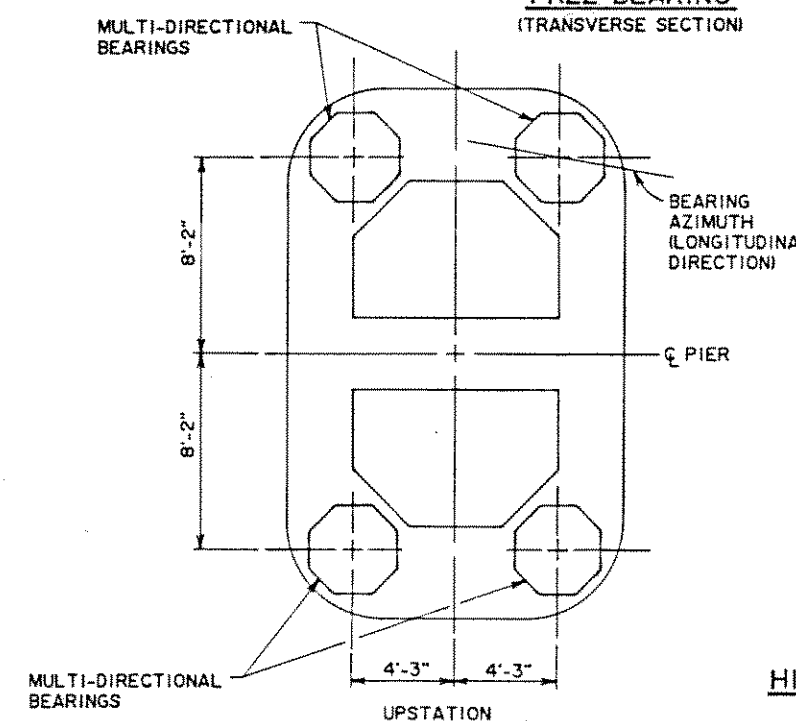
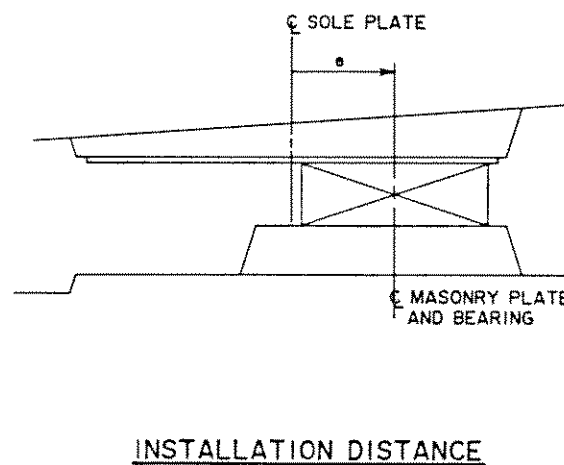
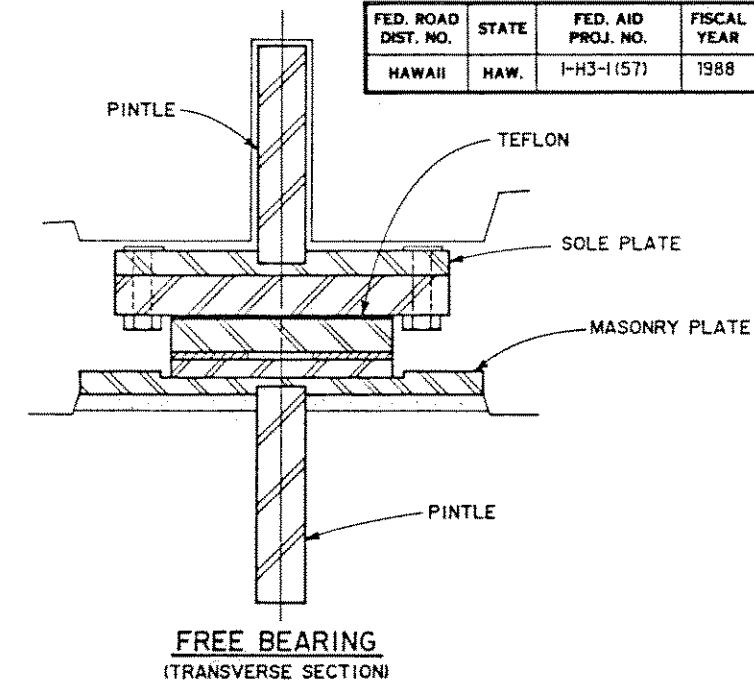
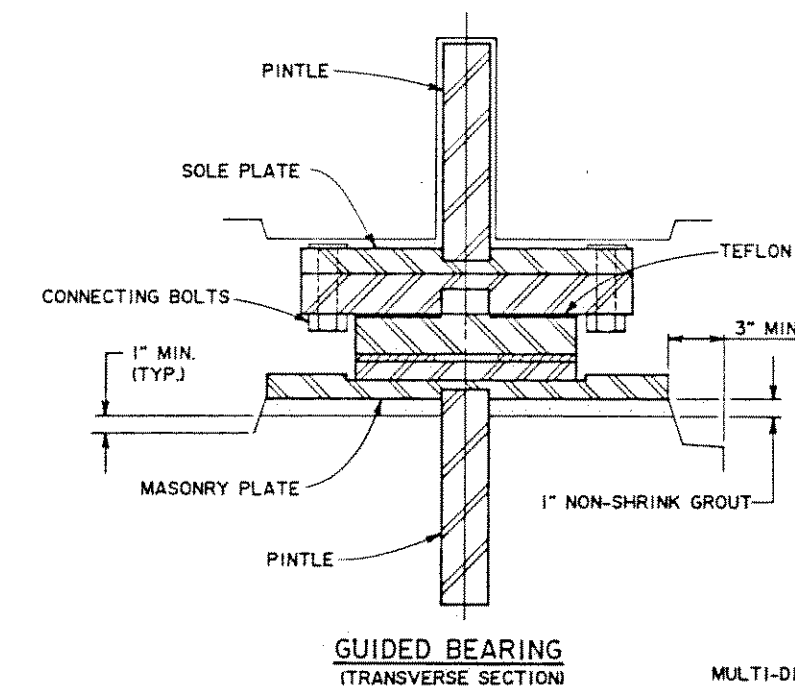
8/23/91 UPDATED DRAWING.
9/17/90 UPDATED DRAWING.

DATE REVISION

J. MULLER **Libby**
INTERNATIONAL **Engineers**

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

LOCATION	DEAD LOAD REACTION (kips)	LATERAL CAPACITY (kips)	VERTICAL CAPACITY (kips)	TOTAL MOVEMENT	INSTALLATION DISTANCE ("e")	BEARING HEIGHT	BEARING AZIMUTH
INBOUND STRUCTURE							
ABUTMENT 1	500	200	1000	7"	2"	11 5/8"	291° 22' 29"
PIER 4	1400	0	3000	7"	-2 1/2"	9 3/8"	288° 58' 51"
HINGE 1	700	200	1000	12"	+6"	10"	283° 12' 51"
PIER 5	1600	0	3000	7"	2 1/2"	9 3/8"	278° 33' 48"
PIER 8	2000	0	3000	7"	-3 1/2"	9 3/8"	247° 18' 40"
HINGE 2	550	200	1000	12"	+5 1/2"	10"	245° 17' 2"
PIER 12	1800	0	3000	7"	-3 1/2"	9 3/8"	236° 36' 07"
HINGE 3	600	200	1000	12"	+6"	10"	241° 29' 36"
PIER 13	1600	0	3000	7"	2 1/2"	9 3/8"	250° 22' 48"
HINGE 4	650	200	1000	12"	5 1/2"	10"	278° 57' 10"
PIER 17	1700	0	3000	7"	+2"	9 3/8"	279° 36' 28"
HINGE 5	650	200	1000	12"	+5"	10"	304° 54' 34"
PIER 23	1700	0	3000	7"	-2"	9 3/8"	314° 26' 18"
ABUTMENT 2	600	200	1000	7"	-2 1/2"	11 5/8"	314° 36' 59"
OUTBOUND STRUCTURE							
ABUTMENT 1	500	200	1000	7"	2"	11 5/8"	287° 54' 43"
PIER 4	1600	0	3000	7"	-2 1/2"	9 3/8"	288° 28' 19"
HINGE 1	700	200	1000	12"	+6"	10"	282° 53' 54"
PIER 5	1700	0	3000	7"	2 1/2"	9 3/8"	278° 9' 6"
PIER 8	2000	0	3000	7"	-3 1/2"	9 3/8"	247° 11' 26"
HINGE 2	700	200	1000	12"	+5 1/2"	10"	245° 14' 33"
PIER 12	1700	0	3000	7"	-3 1/2"	9 3/8"	236° 43' 41"
HINGE 3	650	200	1000	12"	+6"	10"	241° 26' 48"
PIER 13	1600	0	3000	7"	2 1/2"	9 3/8"	250° 27' 16"
HINGE 4	650	200	1000	12"	5 1/2"	10"	278° 28' 01"
PIER 17	1500	0	3000	7"	+2"	9 3/8"	279° 31' 49"
HINGE 5	650	200	1000	12"	+5"	10"	305° 10' 23"
PIER 23	1400	0	3000	7"	-2"	9 3/8"	314° 58' 25"
ABUTMENT 2	600	200	1000	7"	-2 1/2"	11 5/8"	315° 01' 22"

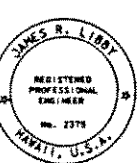


- NOTES:
- ALL BEARINGS SHALL ALLOW A MINIMUM ROTATION OF 0.015 RADIAN.
 - THE HORIZONTAL AND VERTICAL CAPACITY GIVEN IN THE TABLE ARE FOR ONE BEARING AND THE ACTUAL CAPACITY OF THE BEARING PROVIDED SHALL BE EQUAL TO OR GREATER THAN THE VALUE GIVEN. THE LATERAL CAPACITY IS FOR THE TRANSVERSE DIRECTION ON THE UNIDIRECTIONAL GUIDED BEARINGS ONLY.
 - THE BEARINGS SHALL BE DESIGNED TO BE REPLACEABLE BY JACKING THE BRIDGE UP, REMOVING THE CONNECTING BOLTS AND EXTRACTING THE BEARING.
 - THE UPPER PINTLE SHALL BE CAST WITH THE SLIDING PIER SEGMENT OR GROUTED INTO THE PRECAST HINGE OR ABUTMENT SEGMENT AFTER THE SEGMENT HAS BEEN SET TO GRADE AND ELEVATION.
 - THE MASONRY PLATE SHALL BE GROUTED WITH NON-SHRINK GROUT TO THE BEARING SEAT AFTER THE BEARING HAS BEEN SET TO GRADE AND ELEVATION.
 - THE BEARING HEIGHTS GIVEN REPRESENT THE TOTAL HEIGHT FROM THE BASE OF THE MASONRY PLATE TO THE TOP OF THE SOLE PLATE AT THE CENTERLINE OF BEARING UNDER FULL DESIGN LOAD. THE CONTRACTOR WILL VERIFY THESE DIMENSIONS TO REFLECT THE HEIGHT OF THE BEARING ACTUALLY SUPPLIED. WHERE GUIDED AND MULTI-DIRECTIONAL BEARINGS ARE USED, THE HEIGHT IS GIVEN FOR THE GUIDED BEARING.
 - THE INSTALLATION DISTANCE, e , IS POSITIVE FOR THE CENTERLINE OF THE BEARING AND MASONRY PLATE UPSTATION OF THE CENTERLINE OF THE SOLE PLATE.
 - THE BEARING AZIMUTHS ARE GIVEN UPSTATION BASED FROM TRUE SOUTH.

DATE	DATE
DESIGNED BY	DESIGNED BY
DRAWN BY	DRAWN BY
CHECKED BY	CHECKED BY
NOTED BY	NOTED BY
APPROVED BY	APPROVED BY

06/21/91 UPDATED DRAWING.	REVISION
05/03/91 UPDATED DRAWING.	
04/02/91 UPDATED DRAWING.	
02/08/91 UPDATED DRAWING.	
10/04/90 UPDATED DRAWING.	
DATE	REVISION
J. MULLER	Libby
INTERNATIONAL	Engineers

STATE OF HAWAII	DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION	
BEARING SCHEDULE	
INTERSTATE ROUTE H-3	
F.A.I. PROJECT No. I-H3-1(57)	
F.A.I. PROJECT No. I-H3-1(58)	
SCALE : AS NOTED	DATE : JUN. 1990
SHEET No. 801 OF	SHEETS



THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION

A detailed cross-sectional diagram of a bridge deck joint. The diagram shows a central joint area with two support beams (labeled 'SUPPORT BEAMS') and neoprene seals (labeled 'NEOPRENE SEAL') between them. Reinforcement bars are shown at the top and bottom of the concrete structure. The top reinforcement is labeled '*4 @ 1'-0" (SHOWN AT SUPPORT BOX)' and '*4 CONT. (TYP.)'. The bottom reinforcement is labeled '*4 @ 1'-0" (SHOWN BETWEEN SUPPORT BOXES)'. The concrete structure is labeled 'CONCRETE OVERLAY'. Dimensions are provided: a total width of 2'-0" on each side of the joint, a central joint width of 1'-0", and a total width of 2'-0" for the joint area. Vertical dimensions show a 3" thickness for the top concrete layer and a 9" thickness for the bottom concrete layer.

SCALE : NONE

		'A' MIN	'A' MAX	'A' @ 75°F	TOTAL MOVEMENT
INBOUND	ABUT. 1	6.3"	11.3"	7.3"	6.0"
	HINGE 1	3.0"	13.5"	4.1"	12.0"
	HINGE 2	2.0"	13.5"	3.1"	12.0"
	HINGE 3	3.3"	13.3"	3.7"	12.0"
	HINGE 4	3.9"	12.2"	4.7"	12.0"
	HINGE 5	2.8"	7.2"	3.3"	12.0"
	ABUT. 2	2.8"	7.2"	3.3"	6.0"
OUTBOUND	ABUT. 1	6.6"	11.6"	7.6"	6.0"
	HINGE 1	3.0"	13.5"	4.1"	12.0"
	HINGE 2	2.0"	13.5"	2.9"	12.0"
	HINGE 3	2.9"	12.9"	3.4"	12.0"
	HINGE 4	3.3"	11.7"	4.1"	12.0"
	HINGE 5	2.7"	7.1"	3.2"	12.0"
	ABUT. 2	2.9"	7.4"	3.3"	6.0"

1. THE DETAILS SHOWN INDICATE THE GENERAL DECK EXPANSION JOINT INSTALLATION REQUIREMENTS. THE EXACT DETAILS SHALL BE ADJUSTED TO SUIT THE RECOMMENDATIONS OF THE MANUFACTURER OF THE ACTUAL EXPANSION JOINT USED. THE CONTRACTOR SHALL VERIFY ALL INSTALLATION REQUIREMENTS AND SUBMIT SHOP DRAWINGS INDICATING THE ACTUAL INSTALLATION REQUIREMENTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
2. DECK EXPANSION JOINTS SHALL NOT BE INSTALLED UNTIL A MINIMUM OF 60 DAYS AFTER ALL POST-TENSIONING WORK HAS BEEN COMPLETED FOR ADJACENT FRAMES.
3. ASSUMED TEMPERATURE AT THE TIME OF JOINT INSTALLATION IS 75°F.
4. DECK EXPANSION JOINTS SHALL BE INSTALLED PERPENDICULAR TO SEGMENT CENTERLINE FOR HINGE LOCATIONS AND RADIAL TO THE BASELINE FOR ABUTMENT LOCATIONS. SEE SHEET E-2 FOR CONDITION AT BRIDGE CONCRETE RAILING.
5. THE 'A' MINIMUM AND 'A' MAXIMUM VALUES ARE THE EXTREMES EXPECTED AFTER THE JOINT HAS BEEN SET.



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ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXPANSION JOINT SCHEDULE

INTERSTATE ROUTE H-3

F.A.I. PROJECT No. I-H3-1(57)

F.A.I. PROJECT No. 1-H3-1(58)

SCALE : AS NOTED DATE : JUN. 1990

SHEET No. EJ1 OF SHEETS

06/21/91	UPDATED DRAWING
05/03/91	UPDATED DRAWING.
04/01/91	UPDATED DRAWING.
10/04/90	UPDATED DRAWING.

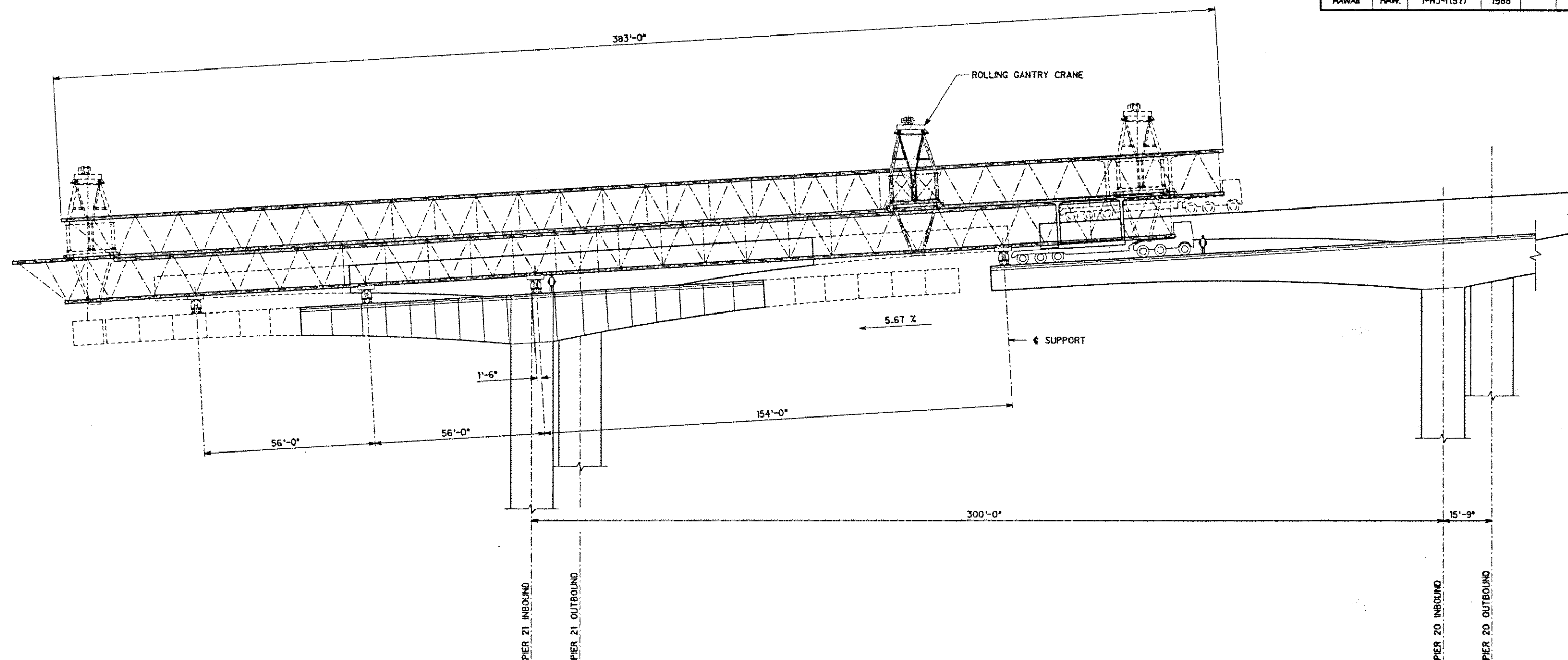
DATE	REVISION
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 J. MULLER
INTERNATIONAL

REVISION

Libby Engineers

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
CONSTRUCTED BY	



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ME OR UNDER MY SUPERVISION

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

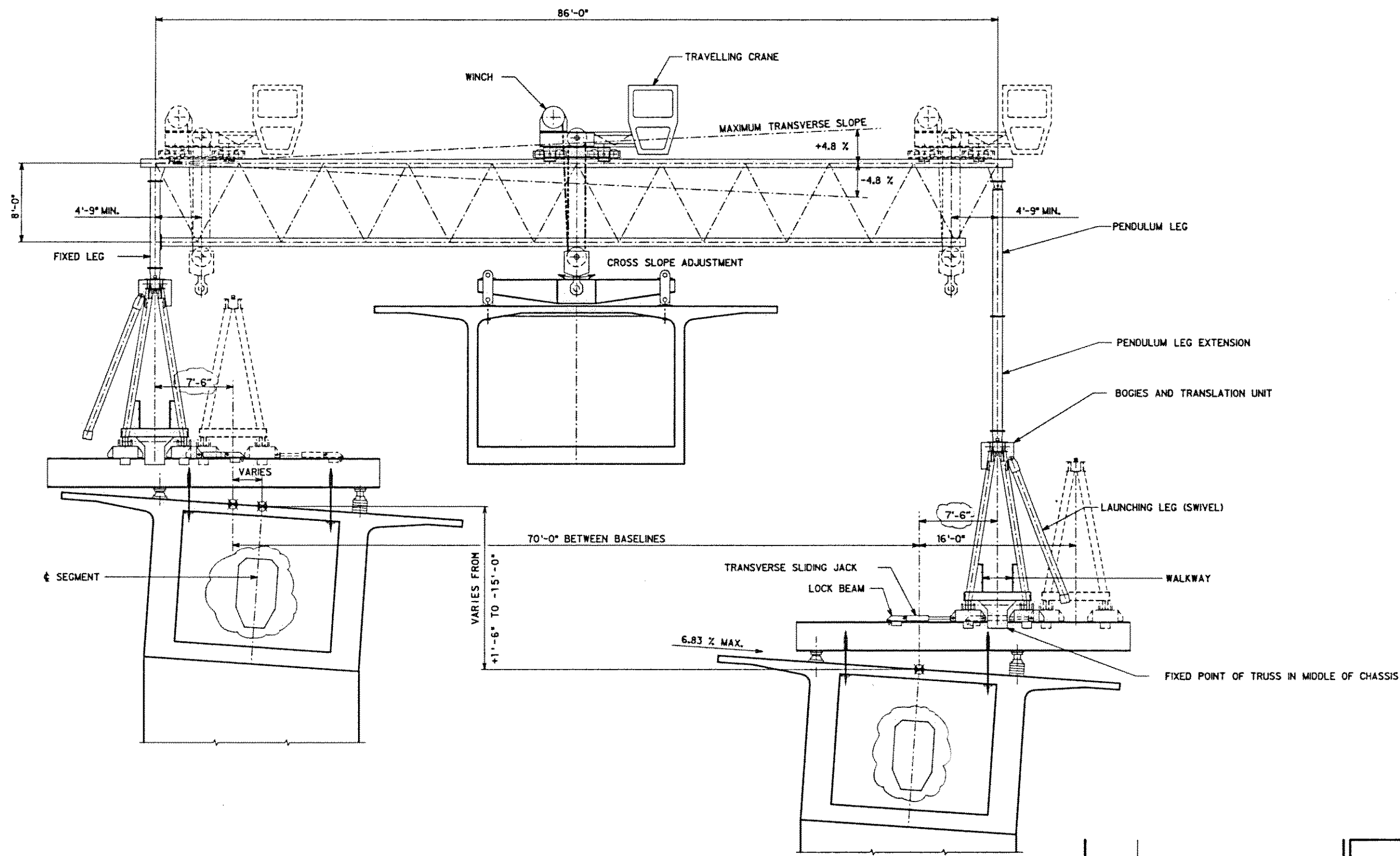
ERECTION SCHEMATIC I

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

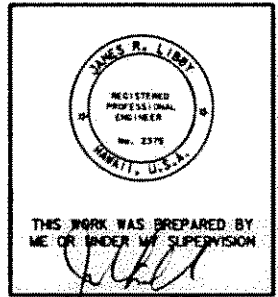
SCALE: AS NOTED DATE: JUN. 1990

SHEET No. CM1 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITY BY	
PLANNED BY	



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ERECTION SCHEMATIC II

INTERSTATE ROUTE H-3

F.A.J. PROJECT No. I-H3-1(57)

F.A.J. PROJECT No. I-H3-1(58)

SCALE : AS NOTED

DATE : JUN. 1990

08/23/91

UPDATED DRAWING.

DATE

REVISION

J. MULLER

INTERNATIONAL

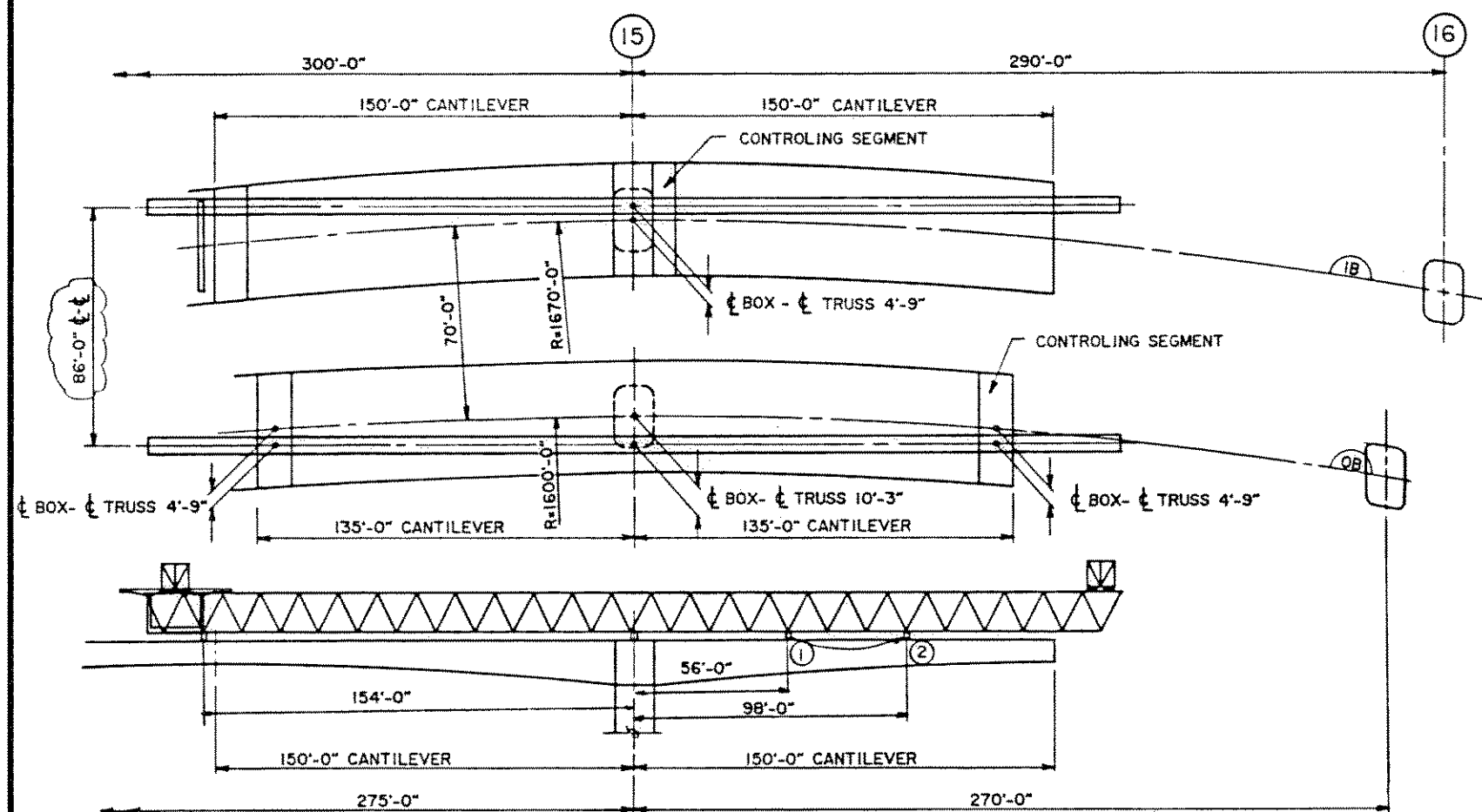
Libby

Engineers

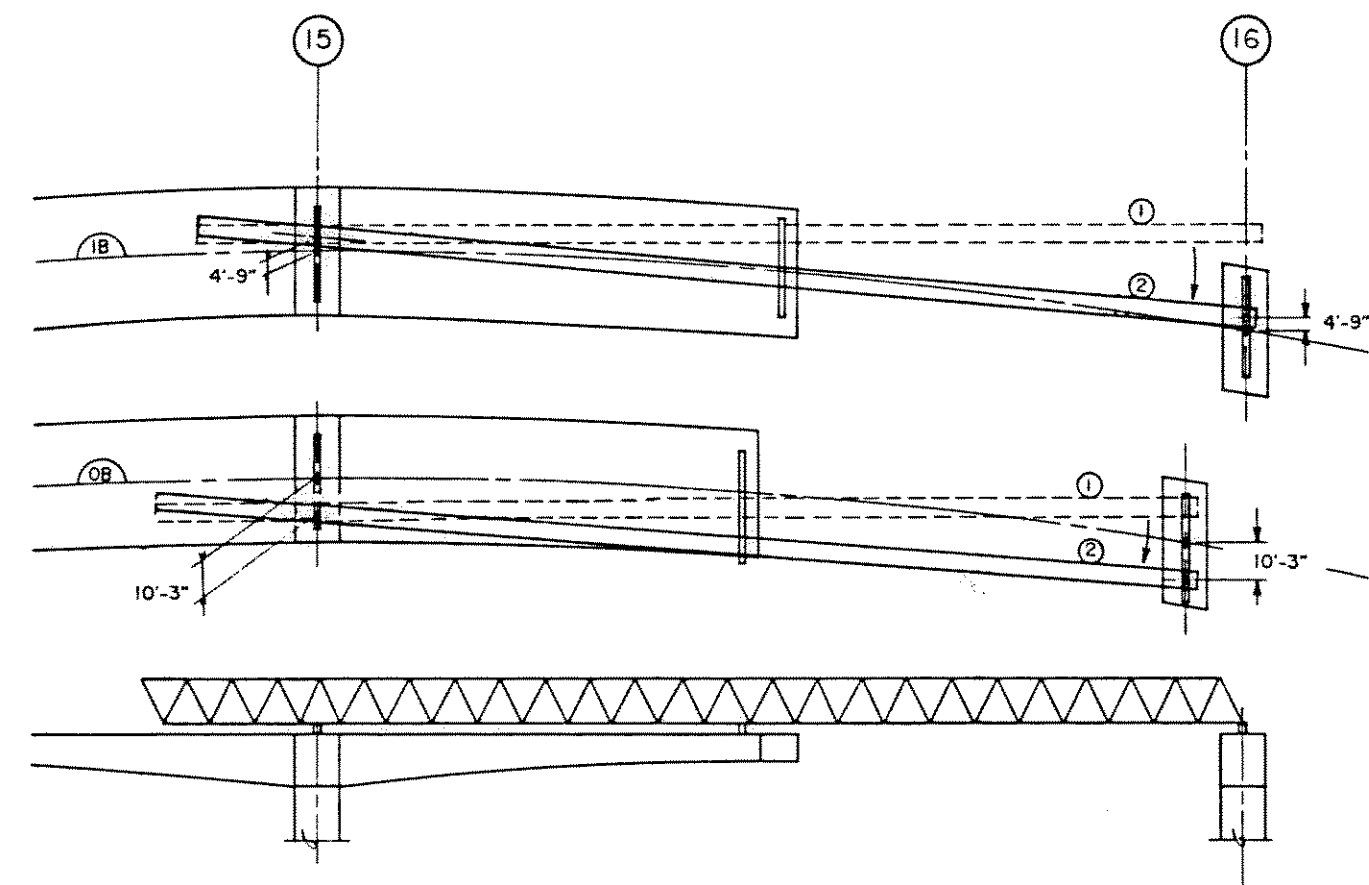
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SHEETS

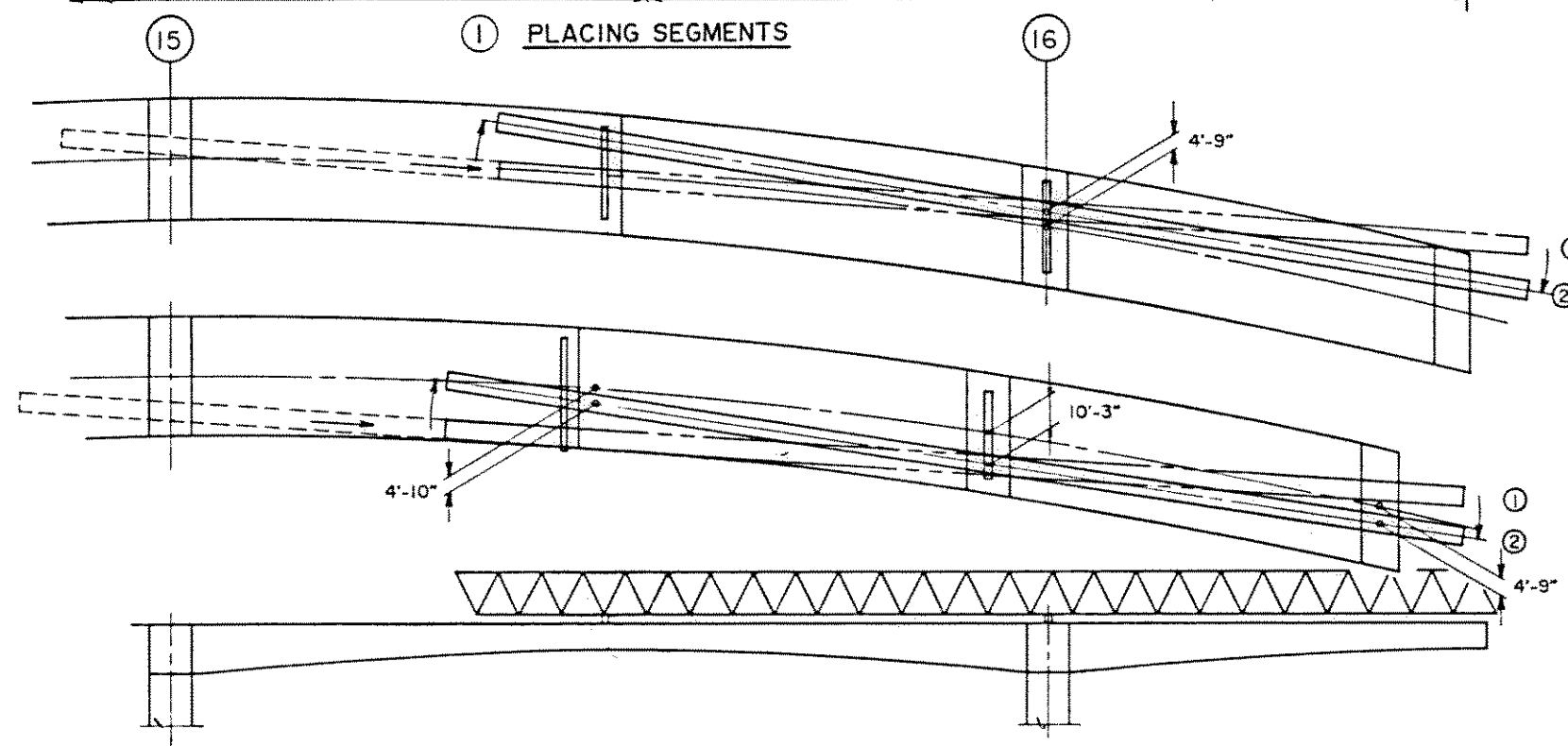
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



① PLACING SEGMENTS



② LAUNCHING TRUSSES - PHASE I



③ LAUNCHING TRUSSES - PHASE II

DATE	08/23/91
DESIGNED BY	J.M.
CHECKED BY	J.M.
NOTED BY	
ORIGINAL PLAN	

08/23/91 UPDATED DRAWING.

DATE REVISION

J. MULLER INTERNATIONAL E Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ERECTION SCHEMATIC III

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

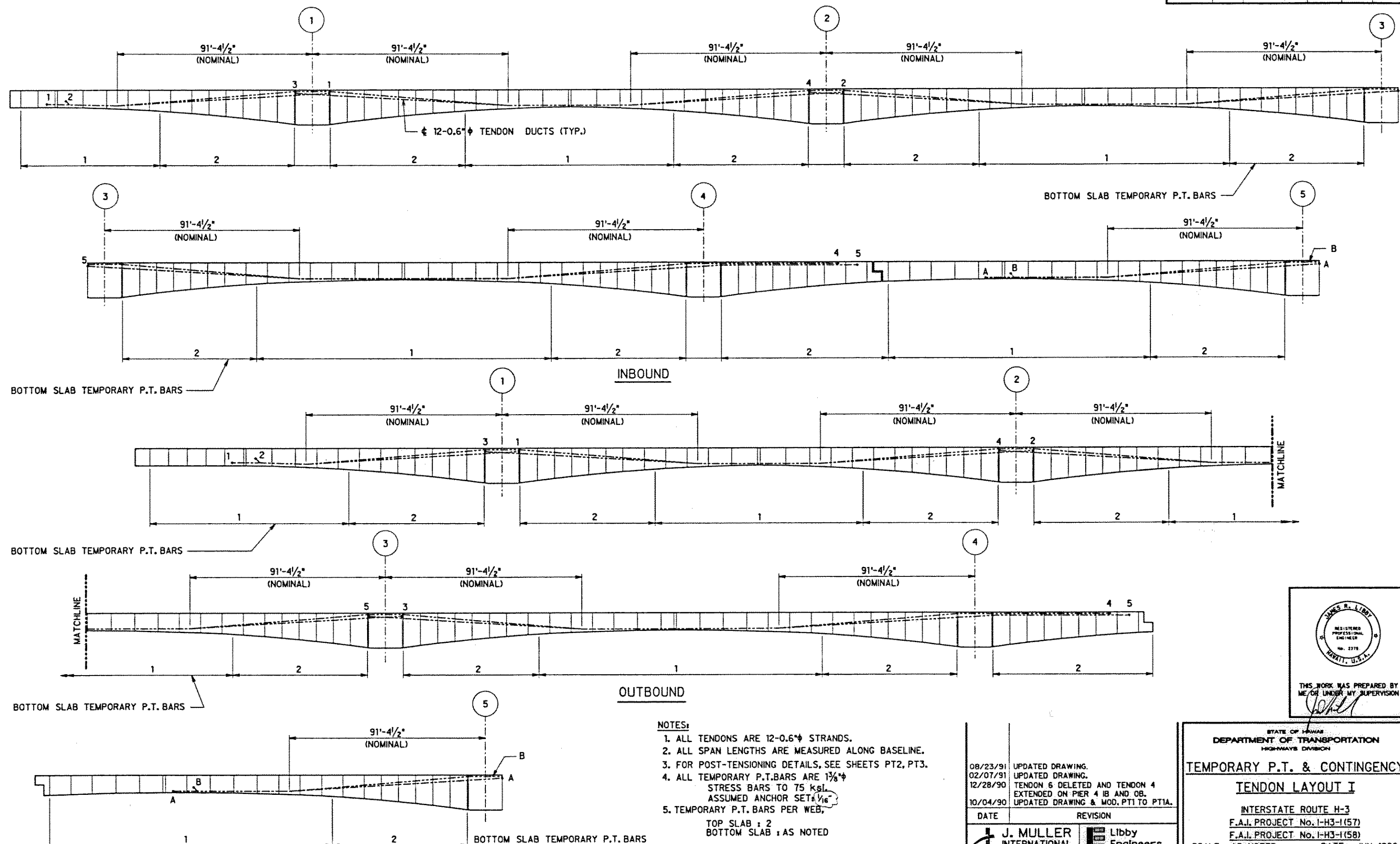
SCALE: NO SCALE DATE: APR. 1990

SHEET No. CM30F SHEETS



THIS WORK WAS PREPARED BY
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



NOTES:

- ALL TENDONS ARE 12-0.6" STRANDS.
- ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
- FOR POST-TENSIONING DETAILS, SEE SHEETS PT2, PT3.
- ALL TEMPORARY P.T.BARS ARE 1 1/8" STRESS BARS TO 75 KSI. ASSUMED ANCHOR SET 1/16"
- TEMPORARY P.T. BARS PER WEB, TOP SLAB : 2 BOTTOM SLAB : AS NOTED

DATE	REVISION
08/23/91	UPDATED DRAWING.
02/07/91	UPDATED DRAWING.
12/28/90	TENDON 6 DELETED AND TENDON 4 EXTENDED ON PIER 4 IB AND OB.
10/04/90	UPDATED DRAWING & MOD. PT1 TO PT1A.

J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

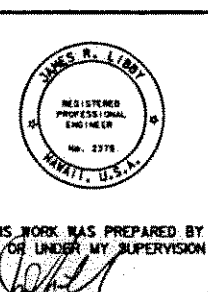
TEMPORARY P.T. & CONTINGENCY

TENDON LAYOUT I

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)

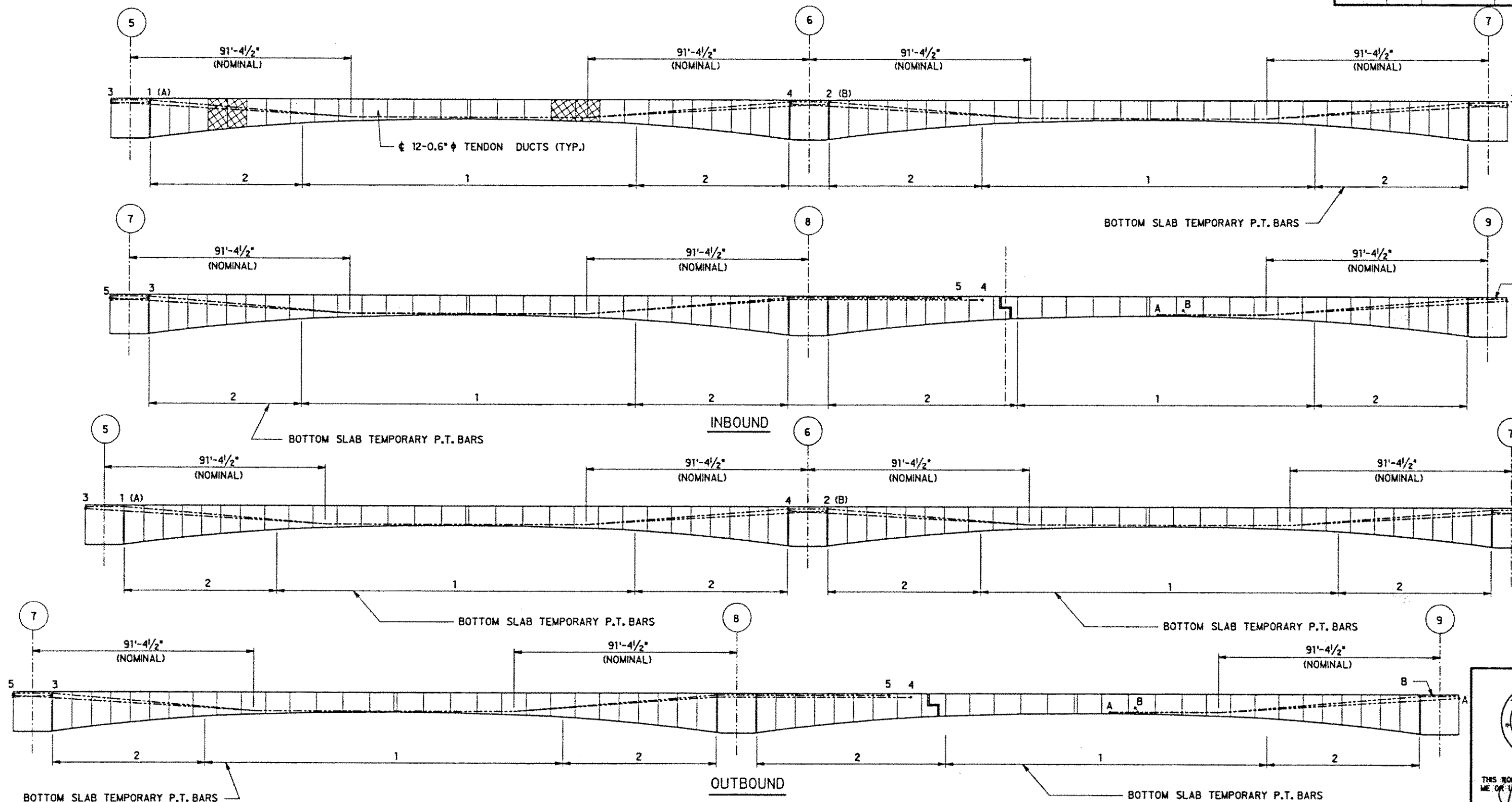
SCALE : AS NOTED DATE : JUN. 1990

SHEET No. PT1A OF SHEETS



THIS WORK WAS PREPARED BY ME/OR UNDER MY SUPERVISION

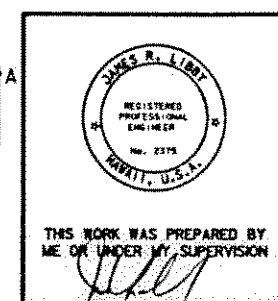
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



- NOTE:
1. ALL TENDONS ARE 12-0.6" STRANDS.
 2. ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
 3. FOR POST-TENSIONING DETAILS, SEE SHEETS PT2, PT3.
 4. ALL TEMPORARY P.T.BARS ARE 1 3/8" STRESS BARS TO 75 KSI. ASSUMED ANCHOR SET: 1/16"
 5. TEMPORARY P.T. BARS PER WEB, TOP SLAB : 2 BOTTOM SLAB : AS NOTED

08/23/91	UPDATED DRAWING.
07/01/91	UPDATED DRAWING.
02/07/91	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

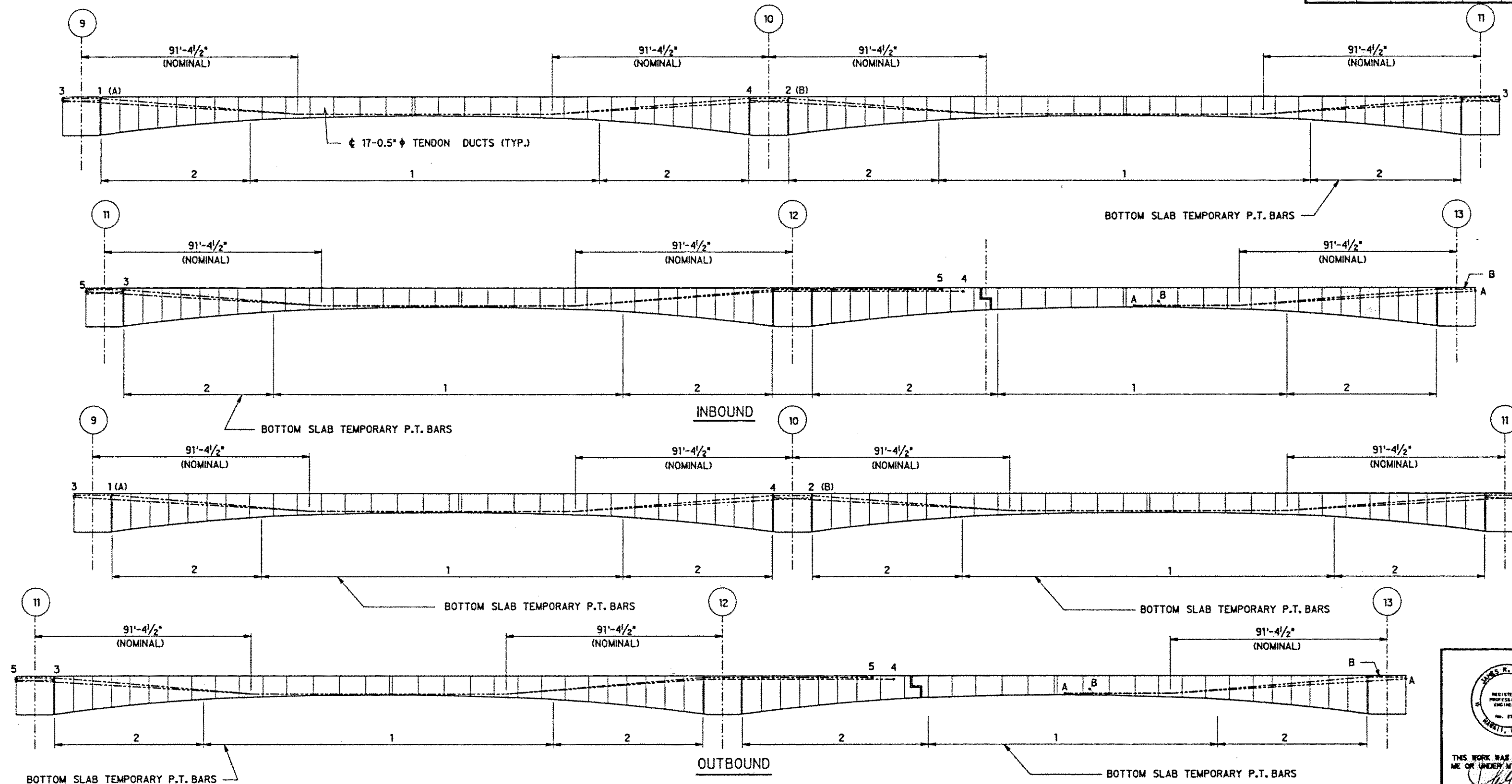
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TEMPORARY P.T. & CONTINGENCY TENDON LAYOUT II
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : SEP. 1990



DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
REVISION	

SHEET No. PT18 OF SHEETS

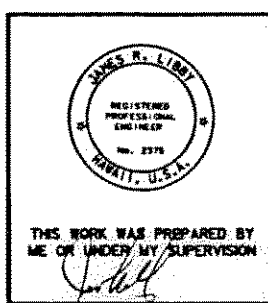
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



- NOTE:
1. ALL TENDONS ARE 17-0.5" STRANDS.
 2. ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
 3. FOR POST-TENSIONING DETAILS, SEE SHEETS PT2, PT3.
 4. ALL TEMPORARY P.T. BARS ARE 1 1/4" STRESS BARS TO 75 ksi. ASSUMED ANCHOR SET 1/16"
 5. TEMPORARY P.T. BARS PER WEB, TOP SLAB : 2 BOTTOM SLAB : AS NOTED

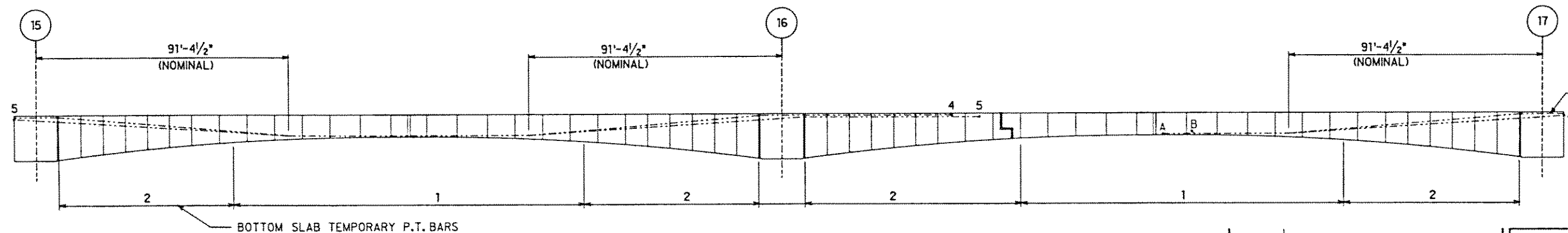
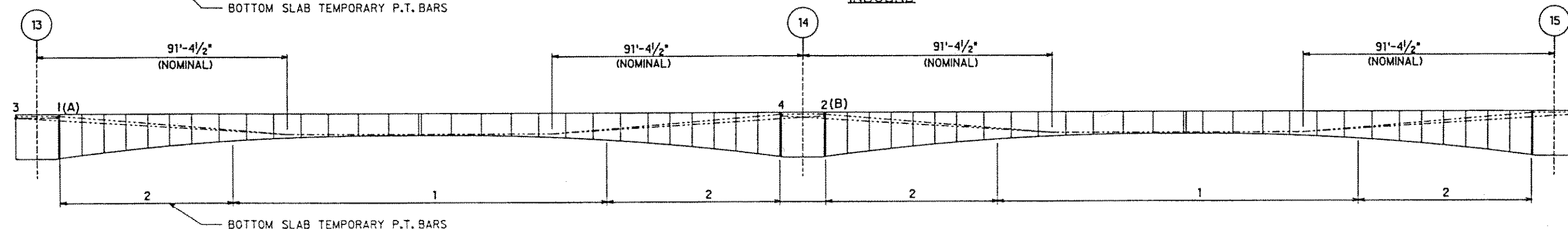
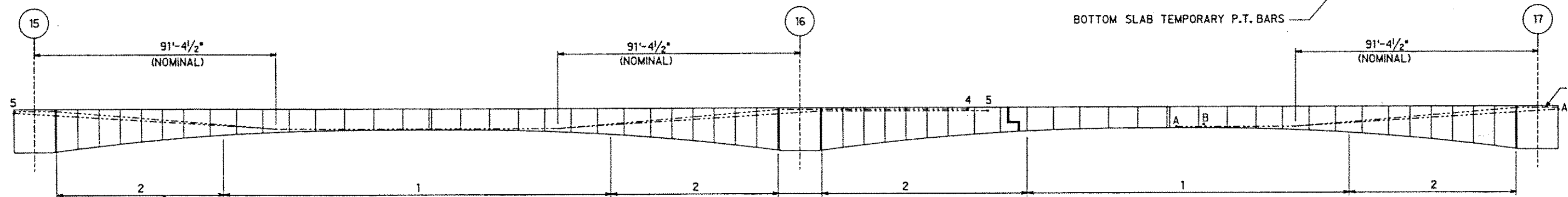
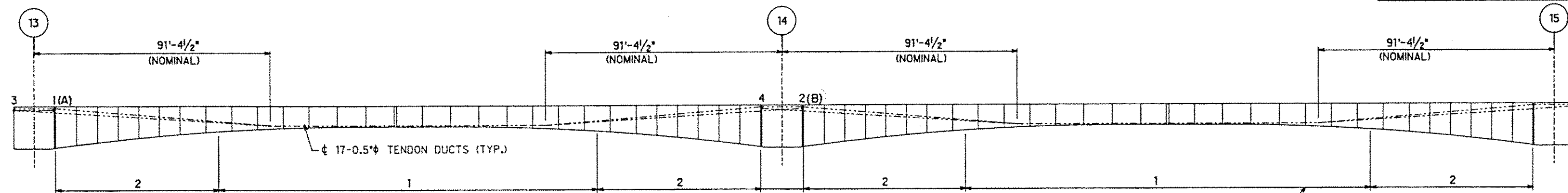
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TEMPORARY P.T. & CONTINGENCY TENDON LAYOUT III	
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)	
SCALE : AS NOTED	DATE : JAN. 1991
SHEET No. PTIC OF SHEETS	



DATE	REVISION
ORIGINAL PLAN	NOTE BOOK
DESIGNED BY	CHECKED BY
DATE	DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



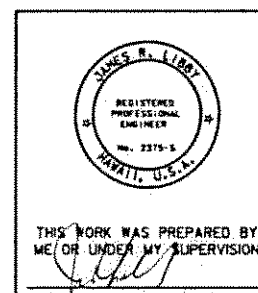
OUTBOUND

- NOTES:
1. ALL TENDONS ARE 17-0.5" STRANDS.
 2. ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
 3. FOR POST-TENSIONING DETAILS, SEE SHEETS PT2 AND PT3.
 4. ALL TEMPORARY P.T. BARS ARE 1 1/8" STRESS BARS TO 75 KSI ASSUMED ANCHOR SET: 1/16"
 5. TEMPORARY P.T. BARS PER WEB
TOP SLAB: 2
BOTTOM SLAB: AS NOTED

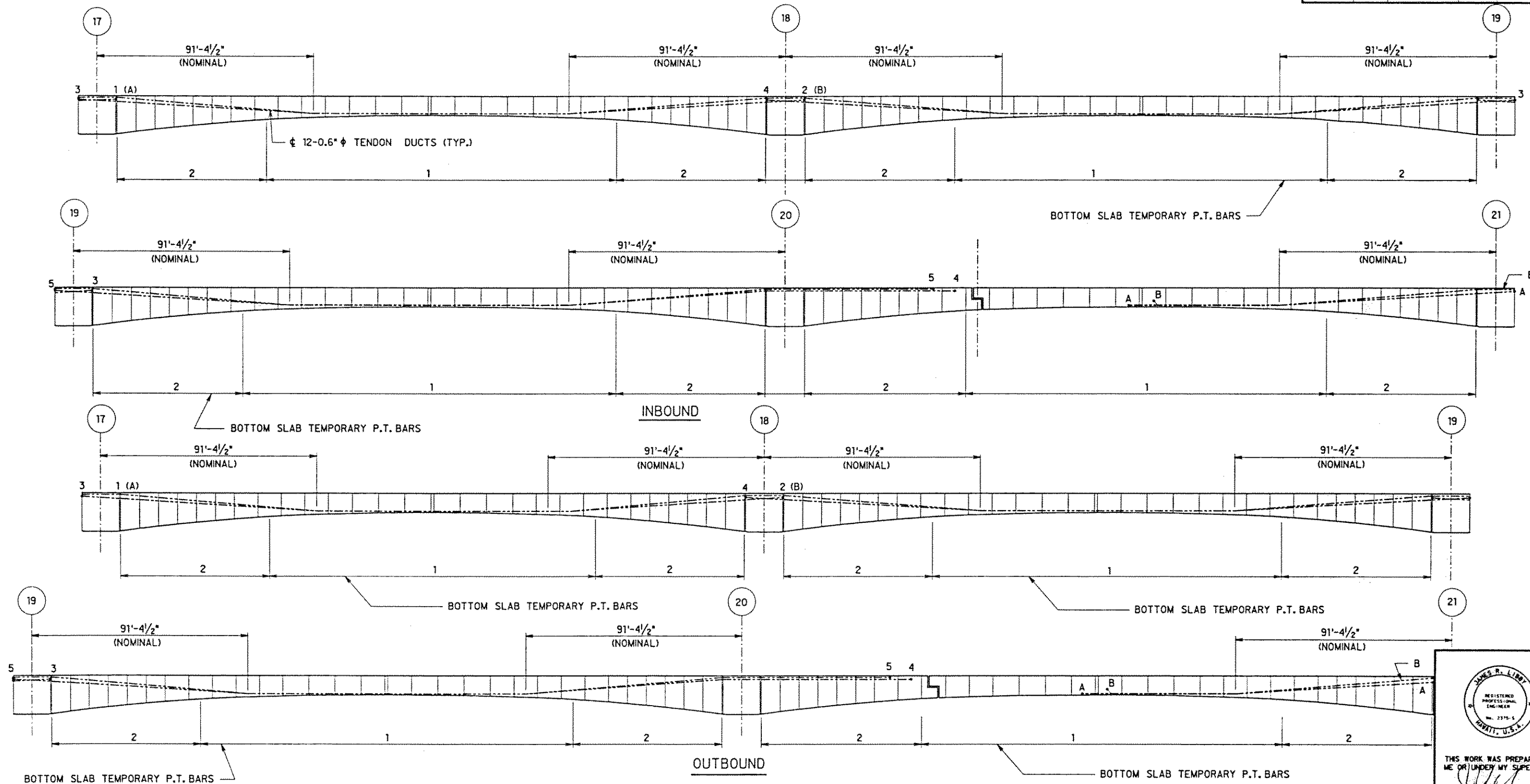
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TEMPORARY P.T. & CONTINGENCY
TENDON LAYOUT IV**

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: APRIL 1991
SHEET NO. PTID OF SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



- NOTE:
1. ALL TENDONS ARE 12-0.6" STRANDS.
 2. ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
 3. FOR POST-TENSIONING DETAILS, SEE SHEETS PT2, PT3.
 4. ALL TEMPORARY P.T.BARS ARE 1 3/8" STRESS BARS TO 75 ksi. ASSUMED ANCHOR SET: 1/16"
 5. TEMPORARY P.T. BARS PER WEB, TOP SLAB : 2
BOTTOM SLAB : AS NOTED

08/23/91 UPDATED DRAWING.
04/09/91 UPDATED DRAWING.

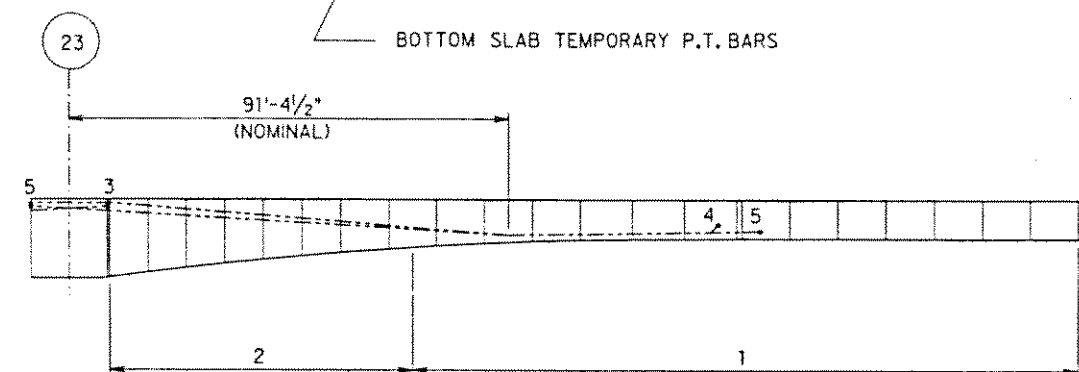
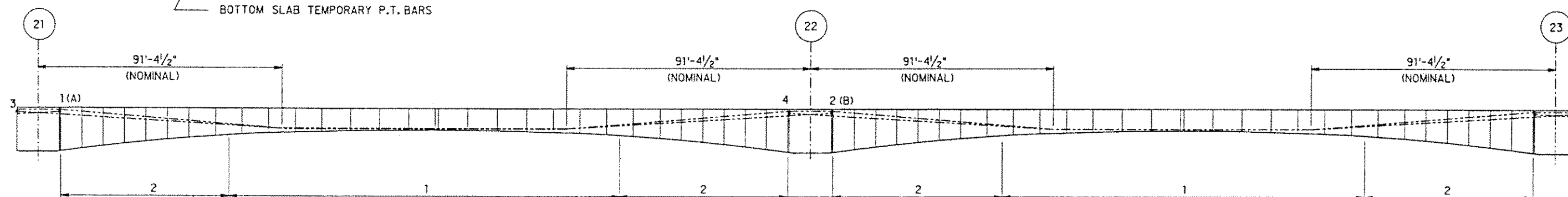
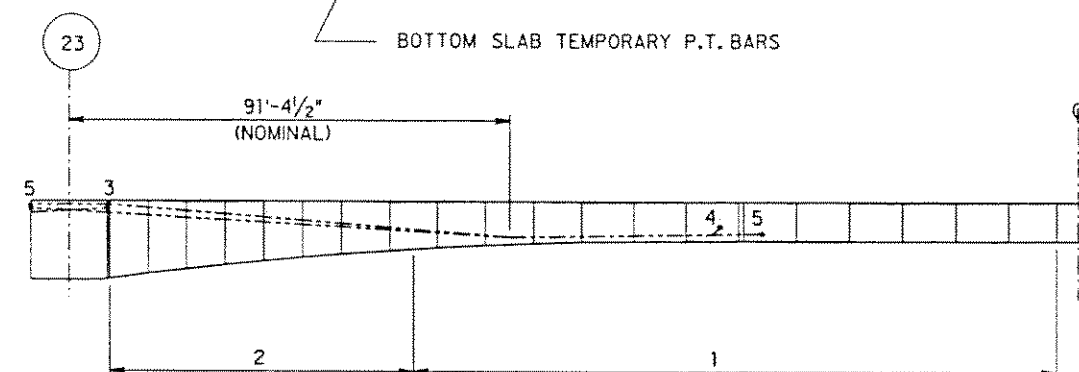
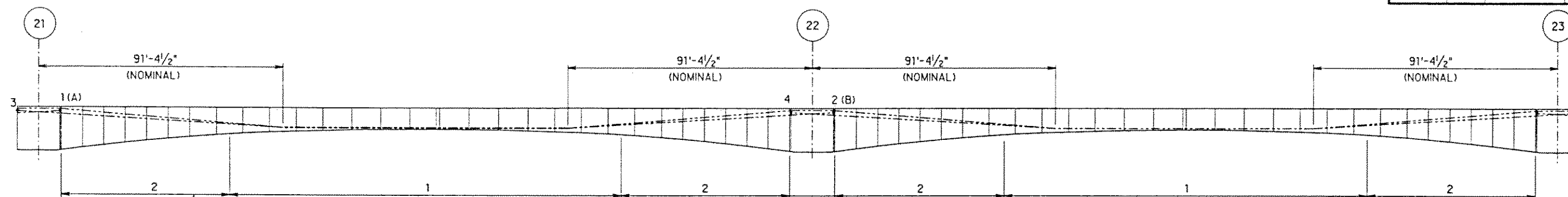
DATE REVISION
J. MULLER INTERNATIONAL Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TEMPORARY P.T. & CONTINGENCY
TENDON LAYOUT V
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : MAR. 1991
SHEET No. PT1E OF SHEETS

DATE
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
NOTE NO.
CHECKED BY
N.

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
JAMES R. LIBBY
REGISTERED PROFESSIONAL ENGINEER
No. 2775-S
HAWAII, U.S.A.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



INBOUND

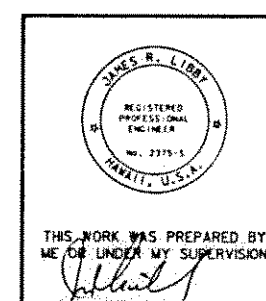
CL BRG. ABUTMENT 2

OUTBOUND

NOTES:

1. ALL TENDONS ARE 12-0.6" Φ STRANDS.
2. ALL SPAN LENGTHS ARE MEASURED ALONG BASELINE.
3. FOR POST-TENSIONING DETAILS, SEE SHEETS PT2, PT3.
4. ALL TEMPORARY P.T.BARS ARE 1 3/8" Φ STRESS BARS TO 75 ksi. ASSUMED ANCHOR SET 1/16"
5. TEMPORARY P.T. BARS PER WEB, TOP SLAB : 2
BOTTOM SLAB : AS NOTED

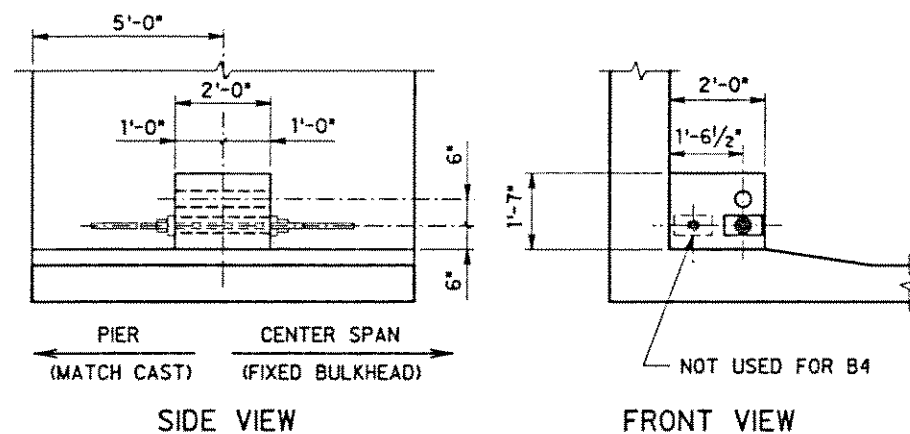
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers



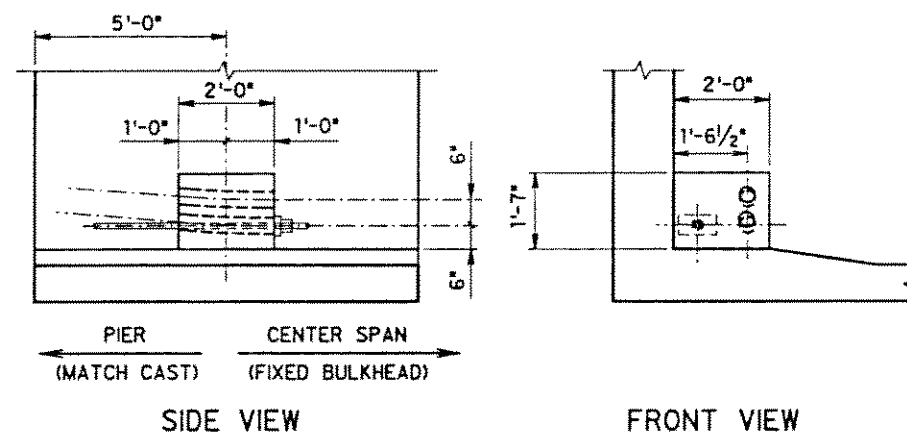
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TEMPORARY P.T. & CONTINGENCY TENDON LAYOUT VI
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1991
SHEET No. PT1F OF SHEETS

REVIEWED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
APPROVED BY	

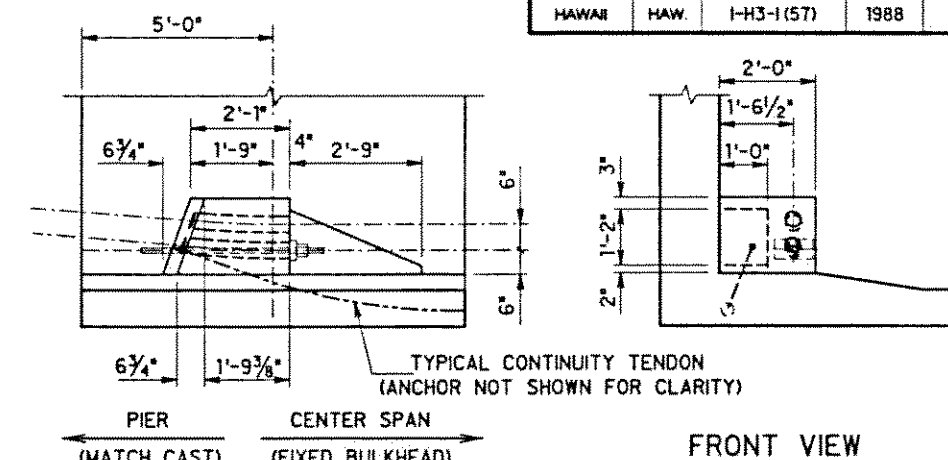
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



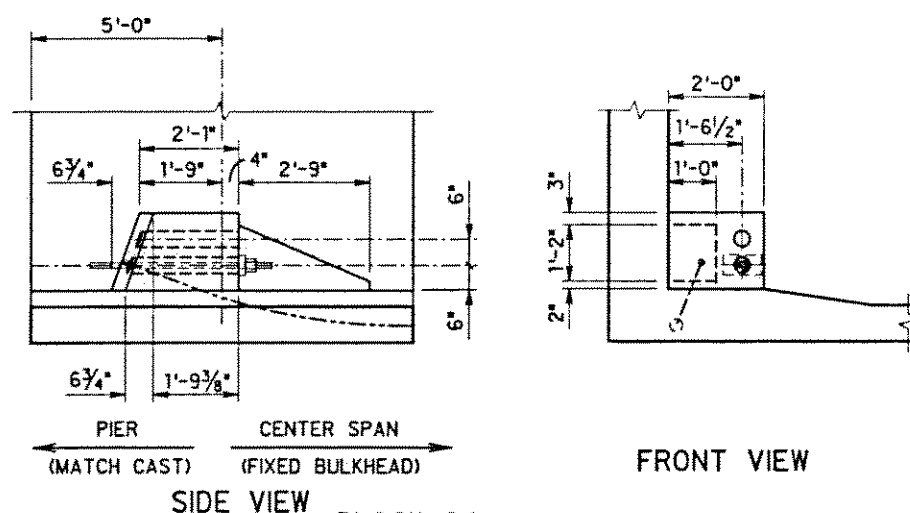
BLOCK B3, B4
SCALE: 1/2" = 1'-0"



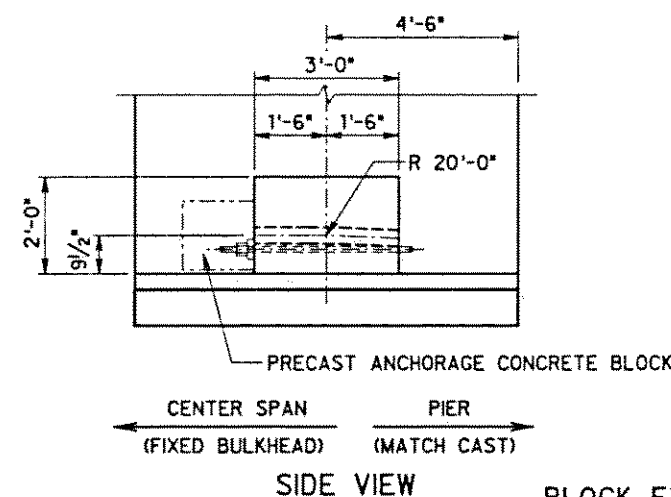
BLOCK B5
SCALE: 1/2" = 1'-0"



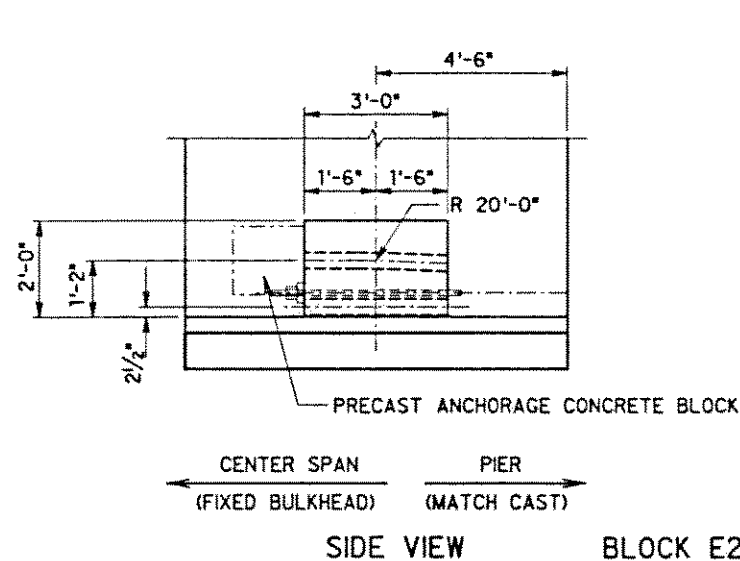
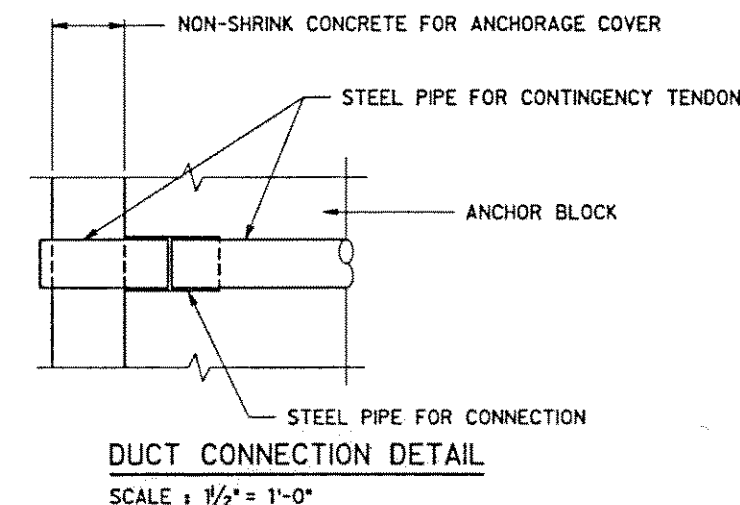
BLOCK C3
SCALE: 1/2" = 1'-0"



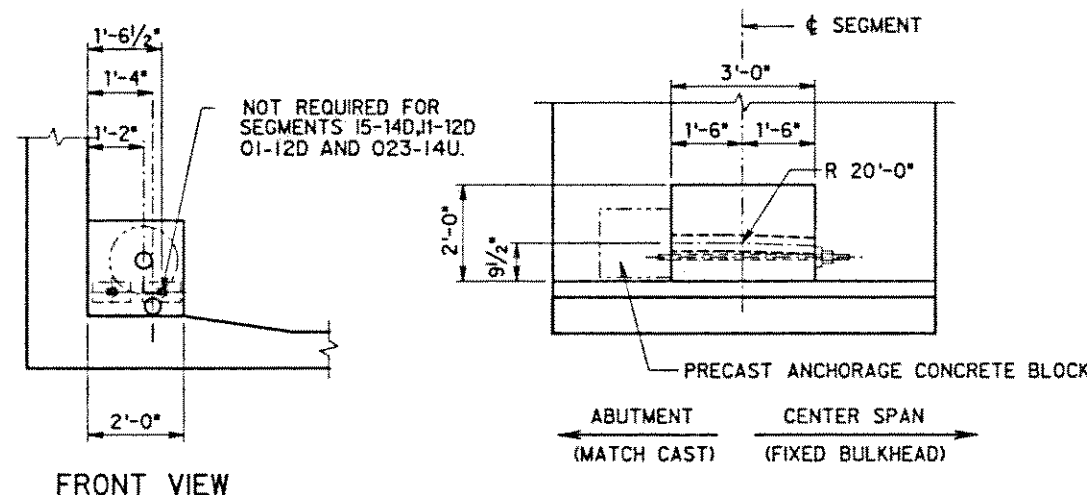
BLOCK C4
SCALE: 1/2" = 1'-0"



BLOCK E1
SCALE: 1/2" = 1'-0"

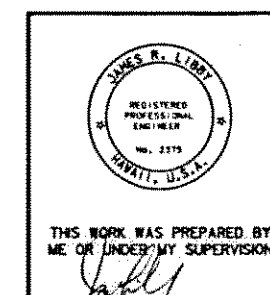


BLOCK E2
SCALE: 1/2" = 1'-0"



BLOCK E1
SCALE: 1/2" = 1'-0"

NOTE: FOR LOCATION OF TENDON ANCHORAGE AND P.T. BARS SEE SHEET No. TA1

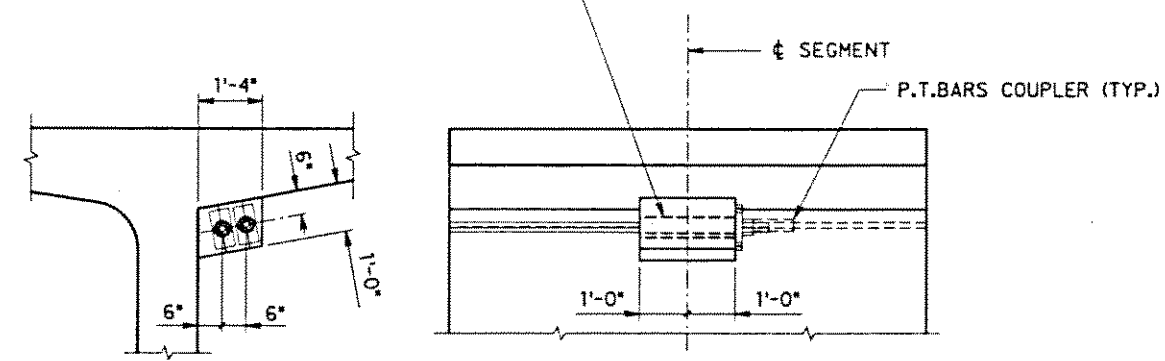


DATE	REVISION
08/23/91	UPDATED DRAWING.
07/02/91	UPDATED DRAWING.
04/09/91	UPDATED DRAWING.
04/02/91	UPDATED DRAWING.
02/07/91	UPDATED DRAWING.
10/04/90	UPDATED DRAWING.
07/25/90	UPDATED DRAWING.
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
CONTINGENCY TENDON DETAILS BOTTOM BLOCKS
INTERSTATE ROUTE H-3 F.A.I. PROJECT No. I-H3-1(57) F.A.I. PROJECT No. I-H3-1(58) SCALE: AS NOTED DATE: JUN. 1990
SHEET No. PT2 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		

4" ϕ STEEL PIPE FOR CONTINGENCY TENDONS (TYP.)

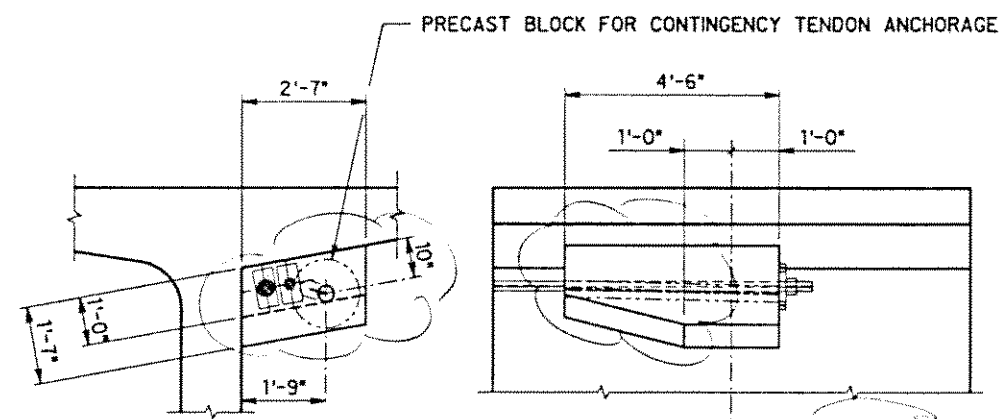
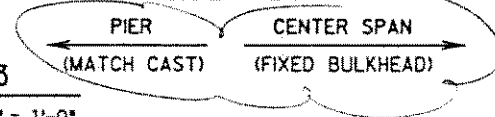


FRONT VIEW
TYPICAL P.T. BARS LOCATION

SIDE VIEW

BLOCK 3

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

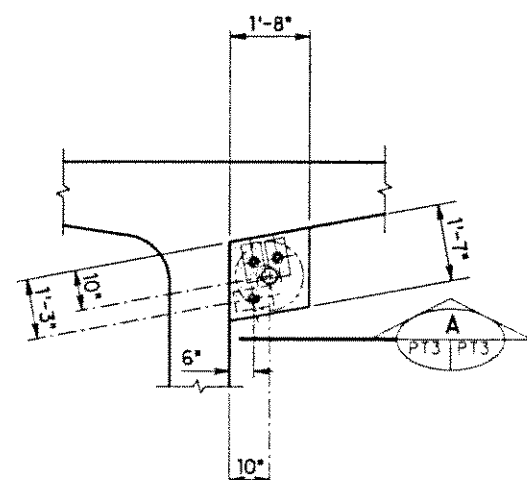


FRONT VIEW

SIDE VIEW

BLOCK 4

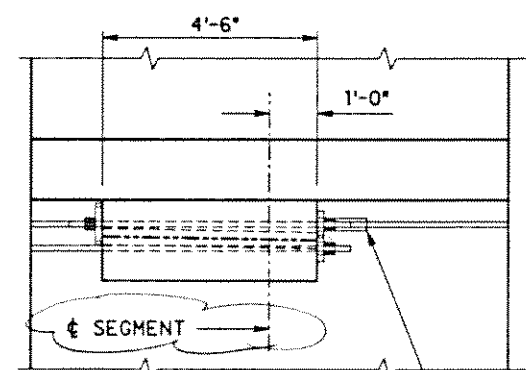
SCALE: $\frac{1}{2}$ " = 1'-0"



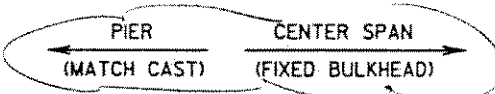
FRONT VIEW

BLOCK 5

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



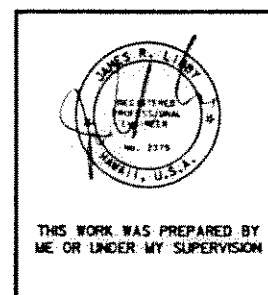
COUPLER FOR TOP P.T. BAR



SECTION A



DATE	
SURVEY PLOTTED BY	
DRAWN BY	
CHECKED BY	
NOTES	
ORIGINAL PLAN	
NOTES BOOK	
DATE	

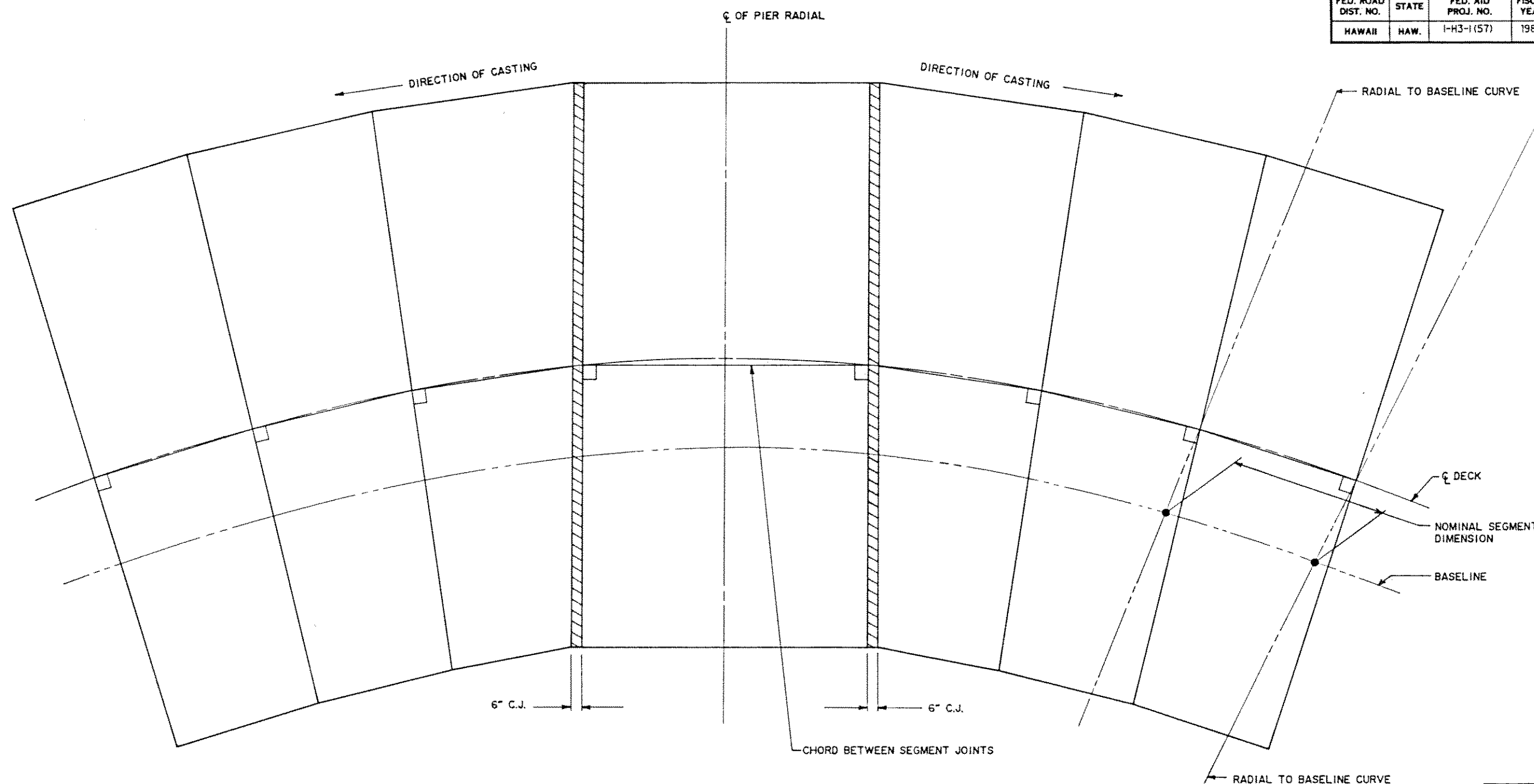


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

07/25/90	REV. BLOCKS 3, 4, 5
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

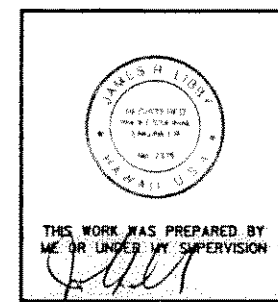
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CONTINGENCY TENDON LAYOUT
TOP BLOCKS**
INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE: AS NOTED DATE: JUN. 1990
SHEET No. PT3 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (57)	1988		



NOTE:
BULKHEAD FACES ARE PERPENDICULAR
TO THE CHORD

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	
NO.	



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ME OR UNDER MY SUPERVISION

DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

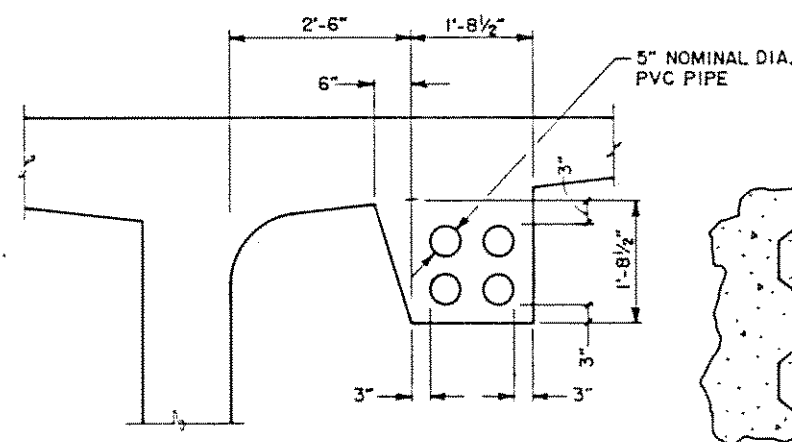
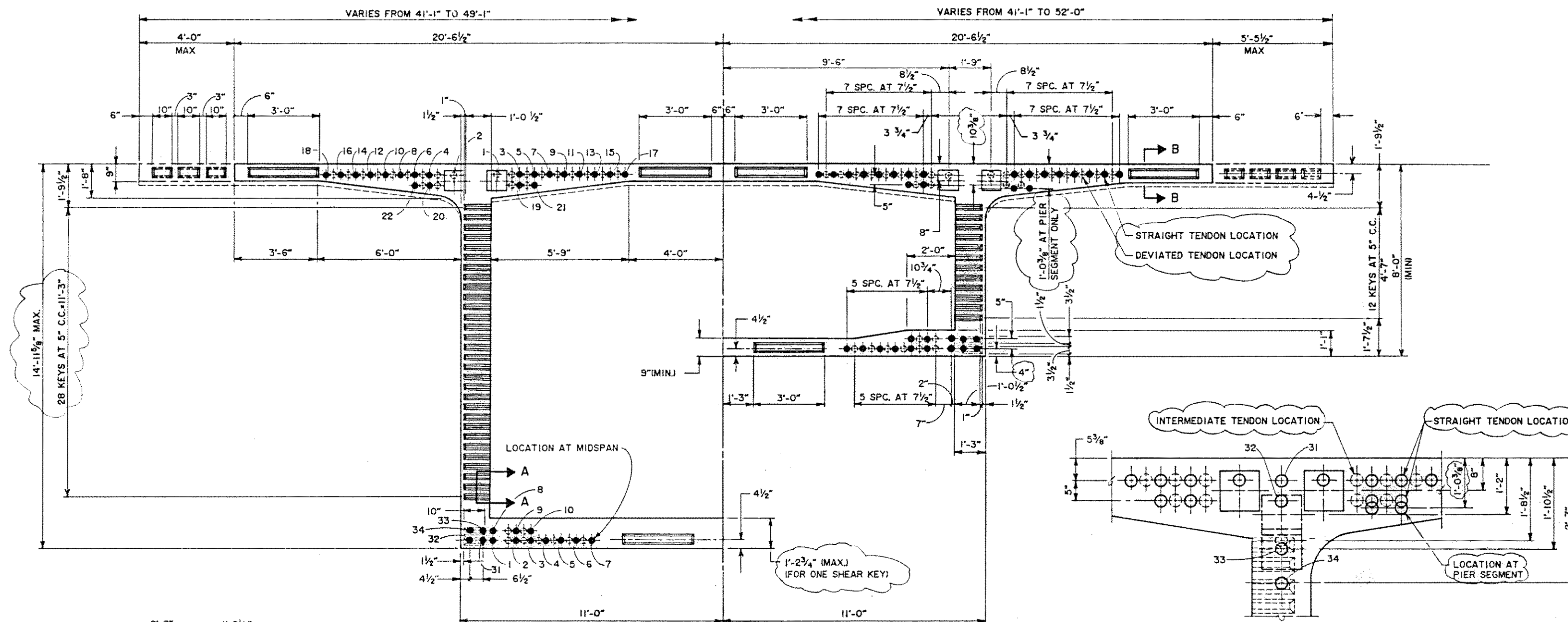
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HORIZONTAL CURVE TREATMENT

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1 (57)
F.A.I. PROJECT No. I-H3-1 (58)
SCALE : AS NOTED DATE : JUN. 1990

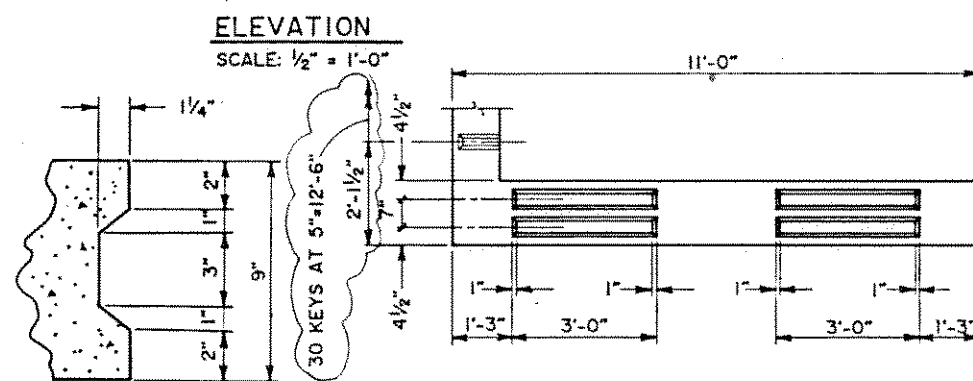
SHEET No. 61 OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-I (57)	1988		



OUTBOUND WING DETAIL
SCALE: 3/4" = 1'-0"

SECTION A
SCALE: 3'-0" = 1"



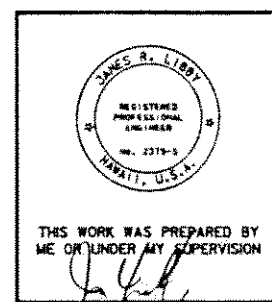
SECTION B
SCALE: 3'-0" = 1"

SECTION C
SCALE: 1/2" = 1'-0"

BOTTOM SLAB DETAIL AT FLOATING BULKHEAD
SCALE: 1/2" = 1'-0"

PARTIAL DETAIL AT HINGE CANTILEVER
SCALE: 1" = 1'-0"

NOTE: FOR DUCT HOLES IN WEB OF ABUTMENT AND EXPANSION JOINTS SPAN, SEE DETAIL SHEET TA7, HD3,6.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BULKHEAD DIMENSIONS

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-I (57)
F.A.I. PROJECT No. I-H3-I (58)
SCALE: AS NOTED DATE: JUN. 1990

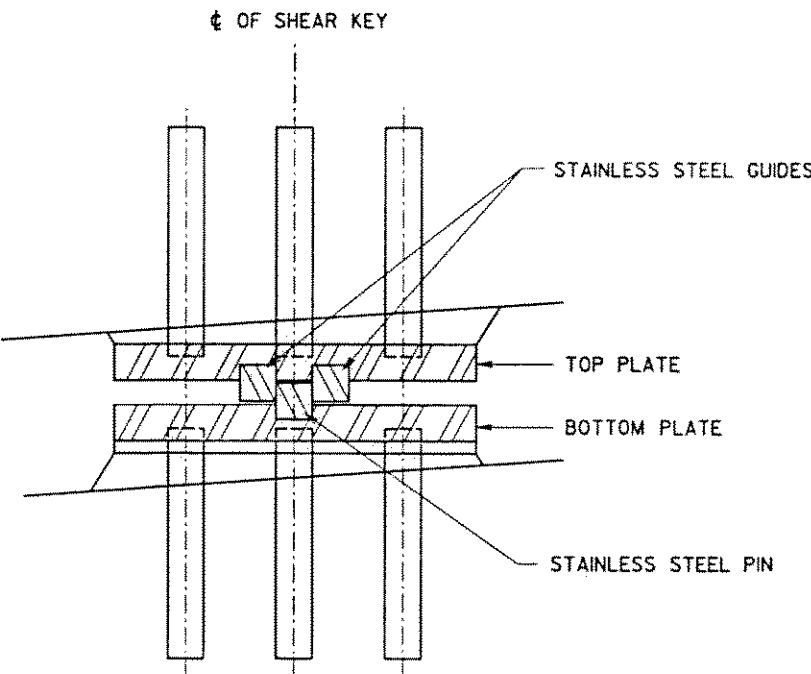
SHEET No. SFI OF SHEETS

9/04/90 UPDATED DRAWING.

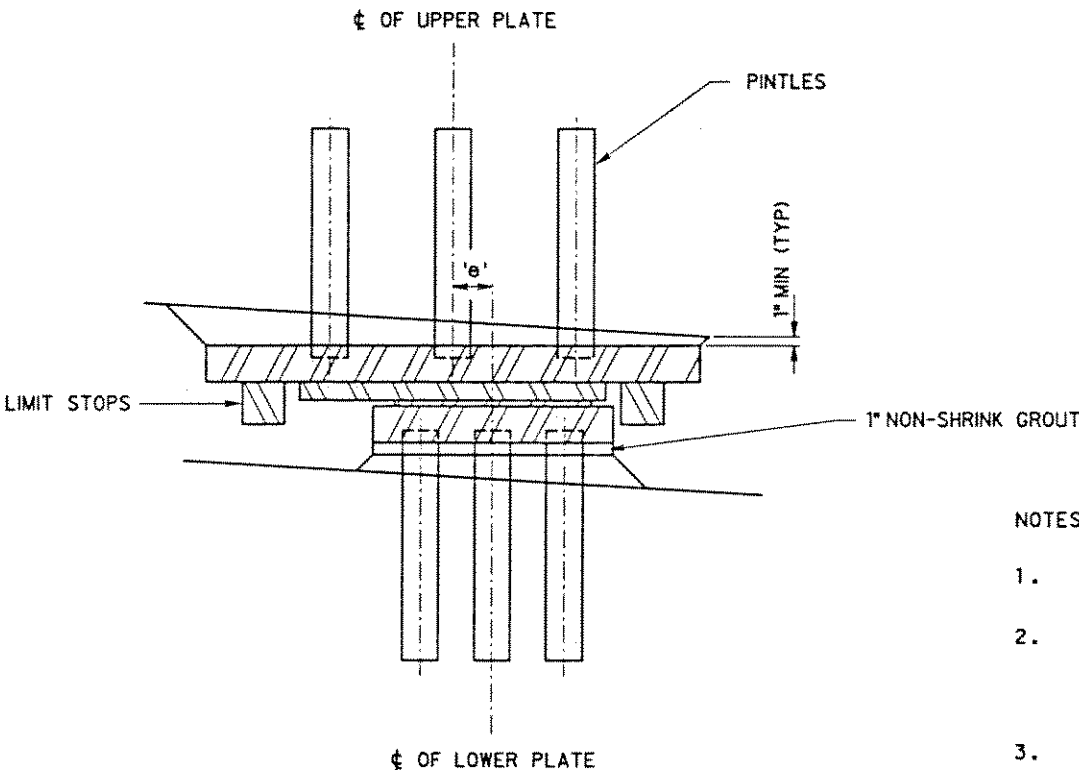
DATE	REVISION
9/04/90	1

J. MULLER INTERNATIONAL Libby Engineers

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(57)	1988		



TRANSVERSE ELEVATION
SCALE: NONE

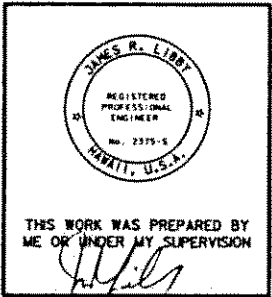


LONGITUDINAL ELEVATION
SCALE: NONE

- NOTES:
1. THE LOWER PLATE SHALL BE GROUTED WITH NON-SHRINK GROUT TO THE SHEAR KEY SEAT AFTER THE SHEAR KEY HAS BEEN SET TO GRADE AND ELEVATION.
 2. THE BEARING HEIGHTS GIVEN REPRESENT THE TOTAL HEIGHT FROM THE BASE OF THE LOWER PLATE TO THE TOP OF THE UPPER PLATE AT THE CENTERLINE OF DEVICE. THE CONTRACTOR WILL VERIFY THESE DIMENSIONS TO REFLECT THE HEIGHT OF THE SHEAR KEY ACTUALLY SUPPLIED.
 3. THE INSTALLATION DISTANCE, *e*, IS POSITIVE FOR THE CENTERLINE OF THE LOWER PLATE UP STATION OF THE CENTERLINE OF THE UPPER PLATE.
 4. THE SHEAR KEY SHALL BE PLACED LEVEL AND ORIENTED AT THE GIVEN AZIMUTH. THE AZIMUTHS ARE GIVEN UP STATION BASED FROM TRUE SOUTH.
 5. THE SHEAR KEY SHALL HAVE LONGITUDINAL LIMIT STOPS WITH A CAPACITY OF 20% OF THE TOTAL DEAD LOAD REACTION ON THE PIER.
 6. THE SHEAR KEYS SHALL BE DESIGNED TO BE REPLACEABLE BY JACKING THE BRIDGE UP, PRYING THE UPPER AND LOWER PLATES FROM THE PINTLES AND EXTRACTING THE SHEAR KEY.

	LOCATION	LATERAL CAPACITY	TOTAL MOVEMENT	HEIGHT	INSTALLATION DISTANCE 'e'	AZIMUTH
INBOUND	PIER 4	1000 KIPS	7"	8"	-2½"	292°-33'-36"
	PIER 5	1000 KIPS	7"	8"	+2½"	270°-36'-7"
	PIER 8	1000 KIPS	7"	8"	-3½"	255°-16'-22"
	PIER 12	1000 KIPS	7"	8"	-3½"	234°-03'-54"
	PIER 13	1000 KIPS	7"	8"	+2½"	250°-22'-48"
	PIER 17	1000 KIPS	7"	8"	+2"	288°-43'-41"
	PIER 23	1000 KIPS	7"	8"	-2"	314°-26'-18"
OUTBOUND	PIER 4	1000 KIPS	7"	8"	-2½"	292°-23'-5"
	PIER 5	1000 KIPS	7"	8"	+2½"	270°-39'-54"
	PIER 8	1000 KIPS	7"	8"	-3½"	254°-40'-40"
	PIER 12	1000 KIPS	7"	8"	-3½"	234°-0'-57"
	PIER 13	1000 KIPS	7"	8"	+2½"	250°-27'-16"
	PIER 17	1000 KIPS	7"	8"	+2"	288°-41'-54"
	PIER 23	1000 KIPS	7"	8"	-2"	314°-58'-25"

REVIEWED BY	DATE
DRAWN BY	
CHECKED BY	
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
DATE	



06/21/91	UPDATED DRAWING.
05/03/91	UPDATED DRAWING.
04/01/91	UPDATED DRAWING.
02/06/91	UPDATED DRAWING.
10/04/90	UPDATED DRAWING.
DATE	REVISION
J. MULLER INTERNATIONAL	Libby Engineers

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SHEAR KEY SCHEDULE

INTERSTATE ROUTE H-3
F.A.I. PROJECT No. I-H3-1(57)
F.A.I. PROJECT No. I-H3-1(58)
SCALE : AS NOTED DATE : JUN. 1990.
SHEET No. SK1 OF SHEETS