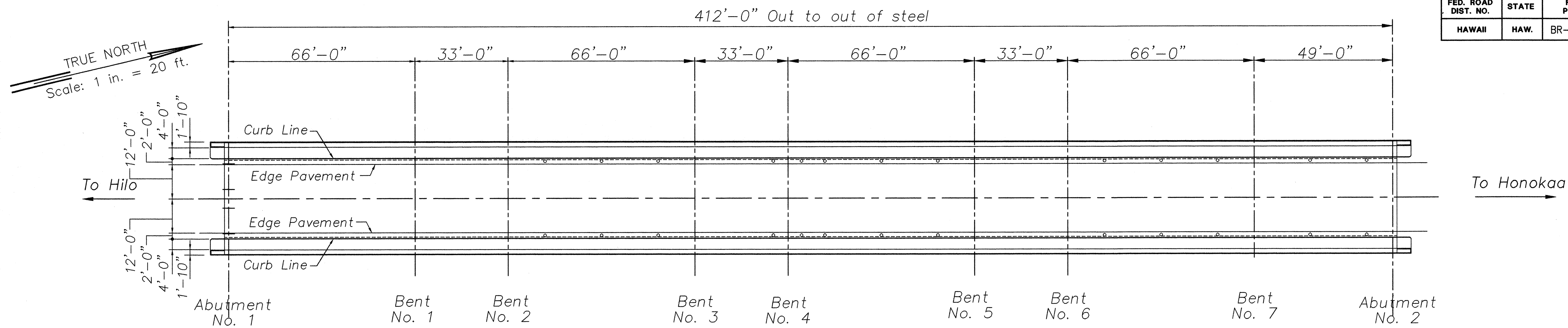
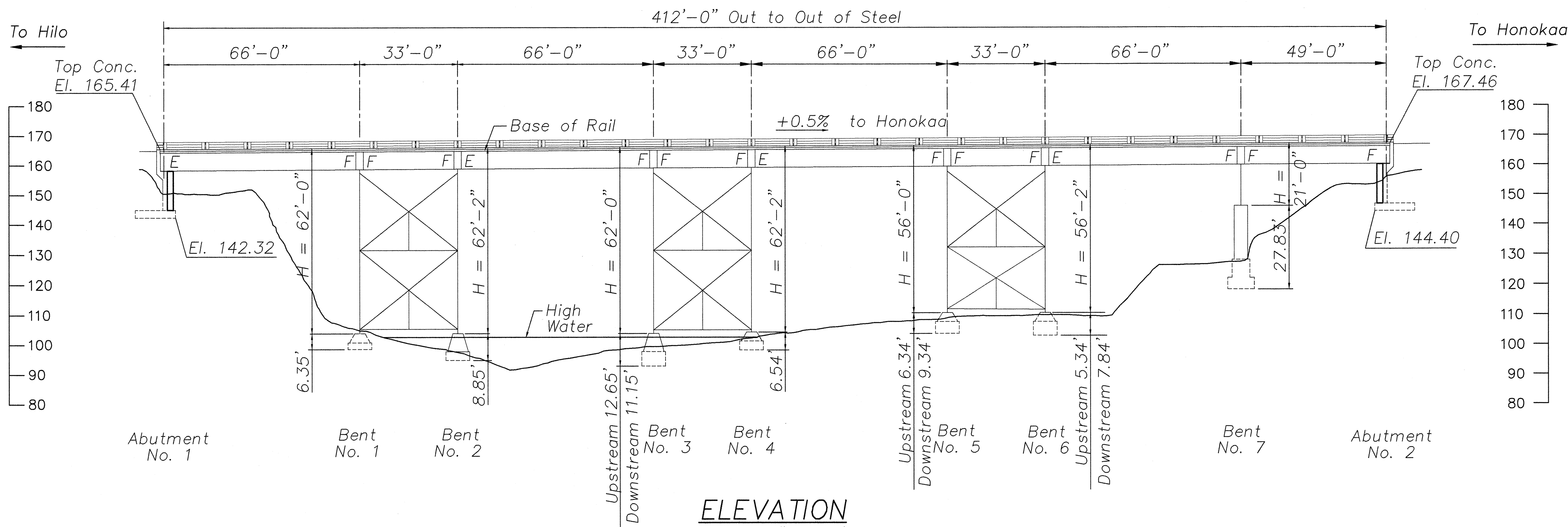


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	7	65



DECK PLAN
Scale: 1" = 20'



ELEVATION
Scale: 1" = 20'

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

KAPUE BRIDGE RETROFITS				
ITEM	LOCATION	QUANTITY		REFERENCE DRAWINGS
		PER LOC.	TOTAL	
Seat Extender	Abutments No. 1 and No. 2	2	4	S1.3
Seat Extender	Bents No. 2, No. 4, No. 6	4	12	S1.4, S1.5, S1.6, S1.7
Type I Single Cable Restrainer	Bents No. 2, No. 4, No. 6	8	24	S1.8, S5.1, S5.4, S5.5

DAVID K. FUJIMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8104-S
HAWAII, U.S.A.

David K. Fujimura

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAPUE BRIDGE

DECK PLAN AND ELEVATION

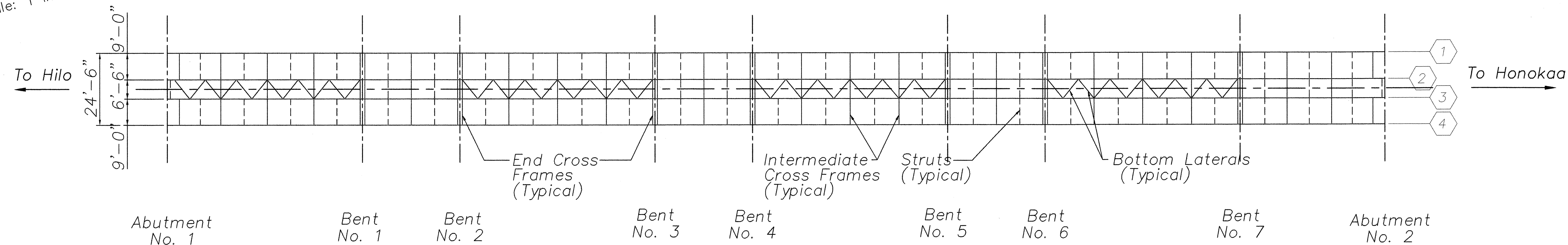
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOU, HAWAII
PROJECT NO. BR-019-2(43)

SCALE: AS NOTED DATE: August 12, 1999

SHEET No. S1.1 OF 59 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	8	65

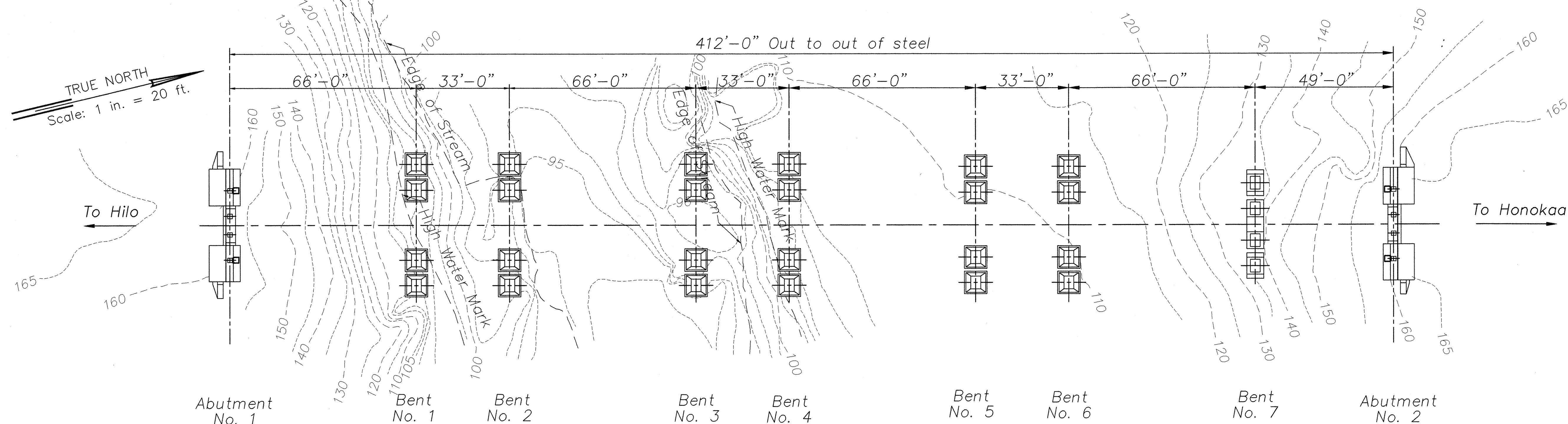
TRUE NORTH
Scale: 1 in. = 20 ft.



FRAMING PLAN

Scale: 1" = 20'

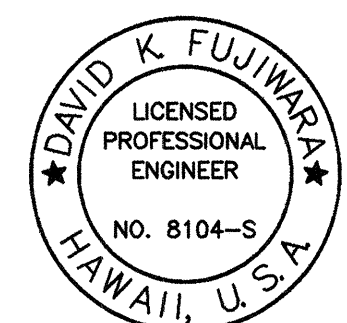
TRUE NORTH
Scale: 1 in. = 20 ft.



FOUNDATION PLAN

Scale: 1" = 20'

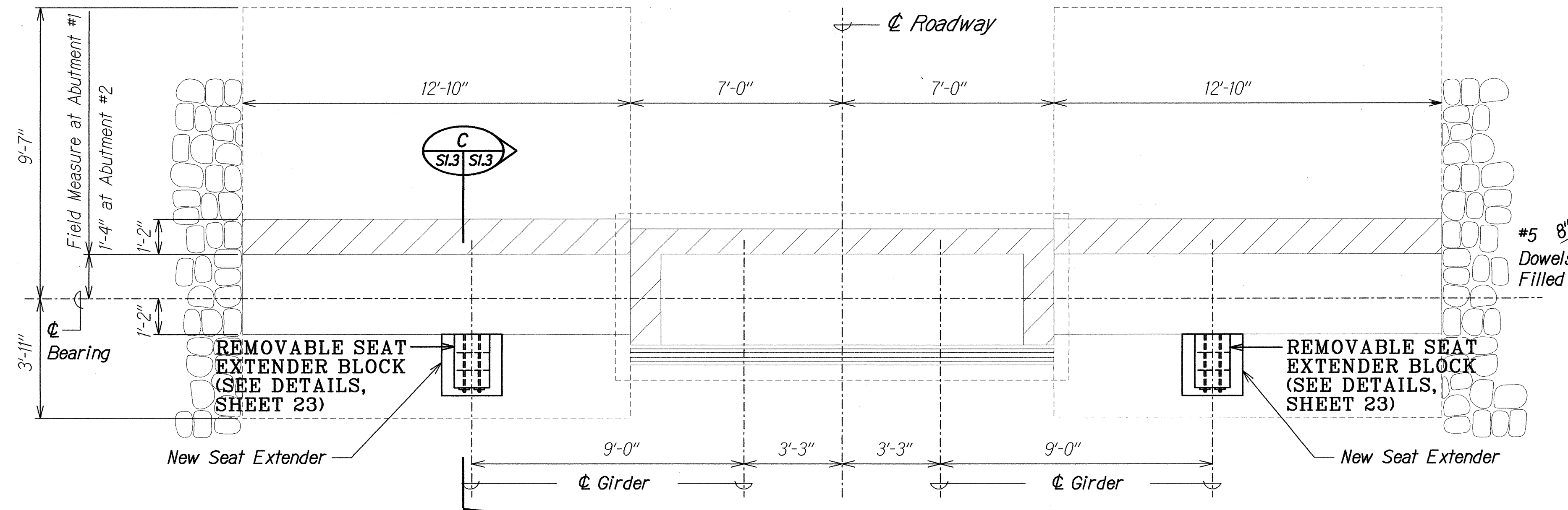
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____



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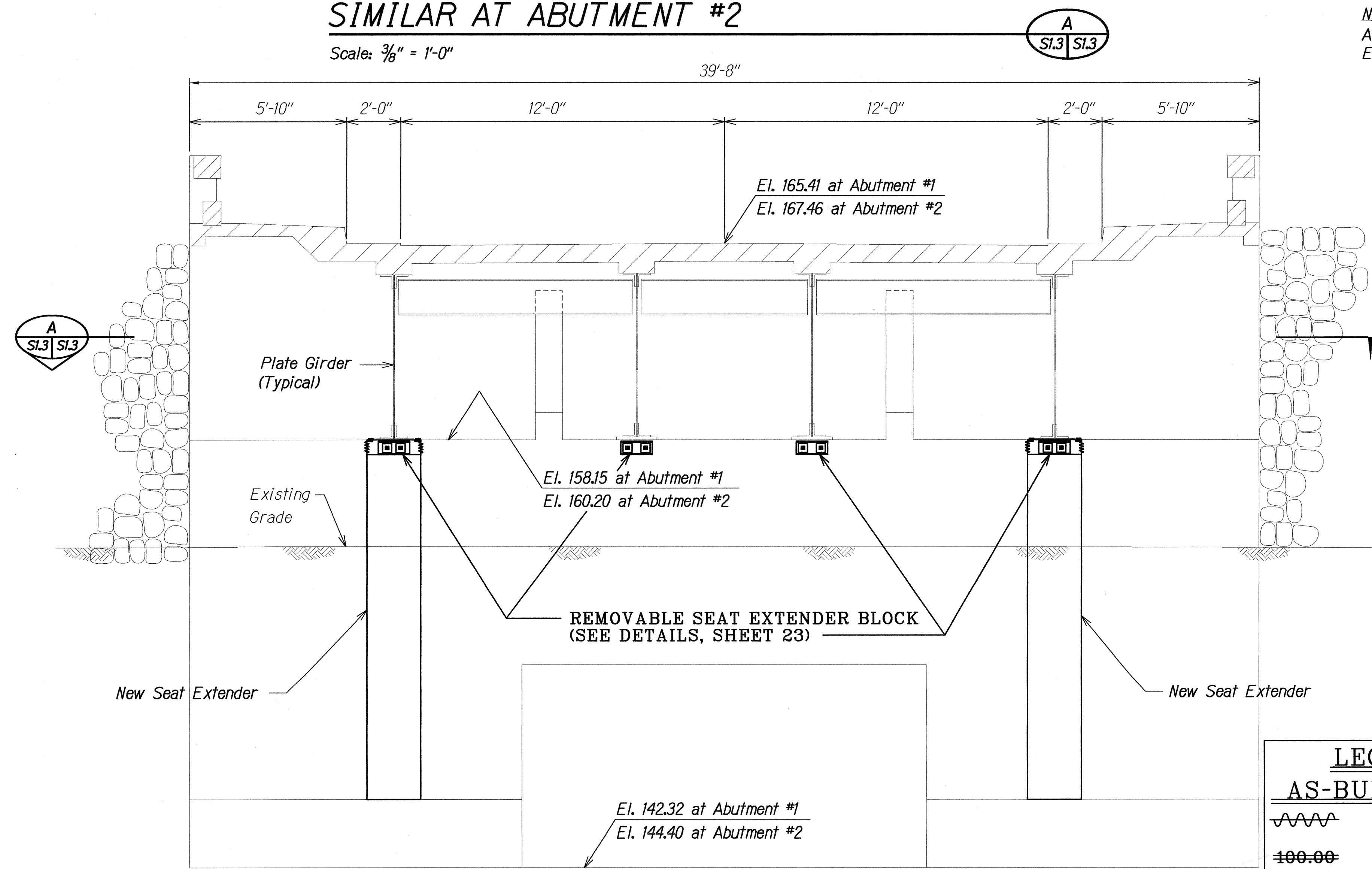
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAPUE BRIDGE
FRAMING AND FOUNDATION PLANS
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOU, HAWAII
PROJECT NO. BR-019-2(43)
SCALE: AS NOTED DATE: August 12, 1999
SHEET No. S1.2 OF 59 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	9	65



PLAN SECTION AS SHOWN AT ABUTMENT #1
SIMILAR AT ABUTMENT #2

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



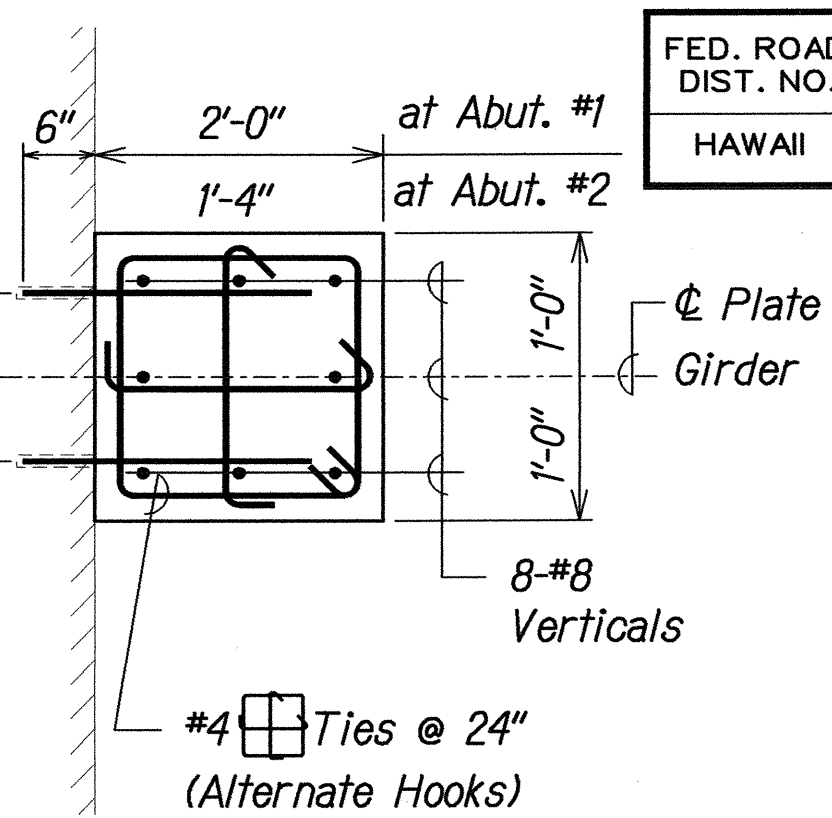
ELEVATION - ABUTMENT

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

SECTION

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

NOTE:
All Concrete and Steel Members
Existing Unless Otherwise Noted.



REMOVABLE SEAT EXTENDER BLOCK (SEE DETAILS, SHEET 23)

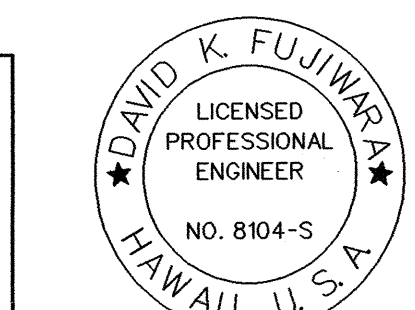
#4 Ties w/ 2-#5 8" 1'-6" Dowels @ 24"

SECTION

SECTION

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

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting



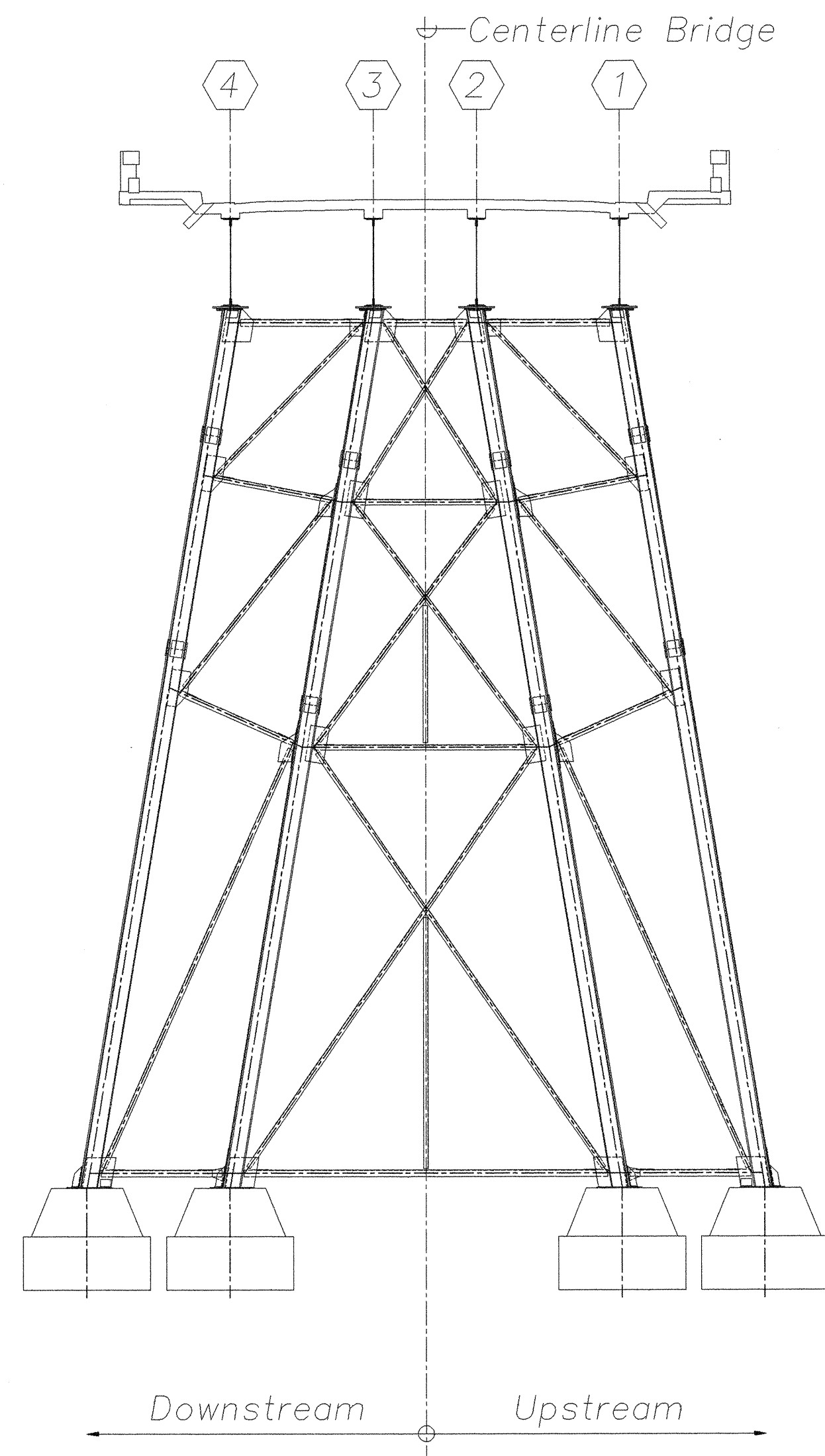
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAPUE BRIDGE
ABUTMENT PLAN,
ELEVATION AND SECTIONS
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOLOU, HAWAII
Project No. BR-019-2(43)

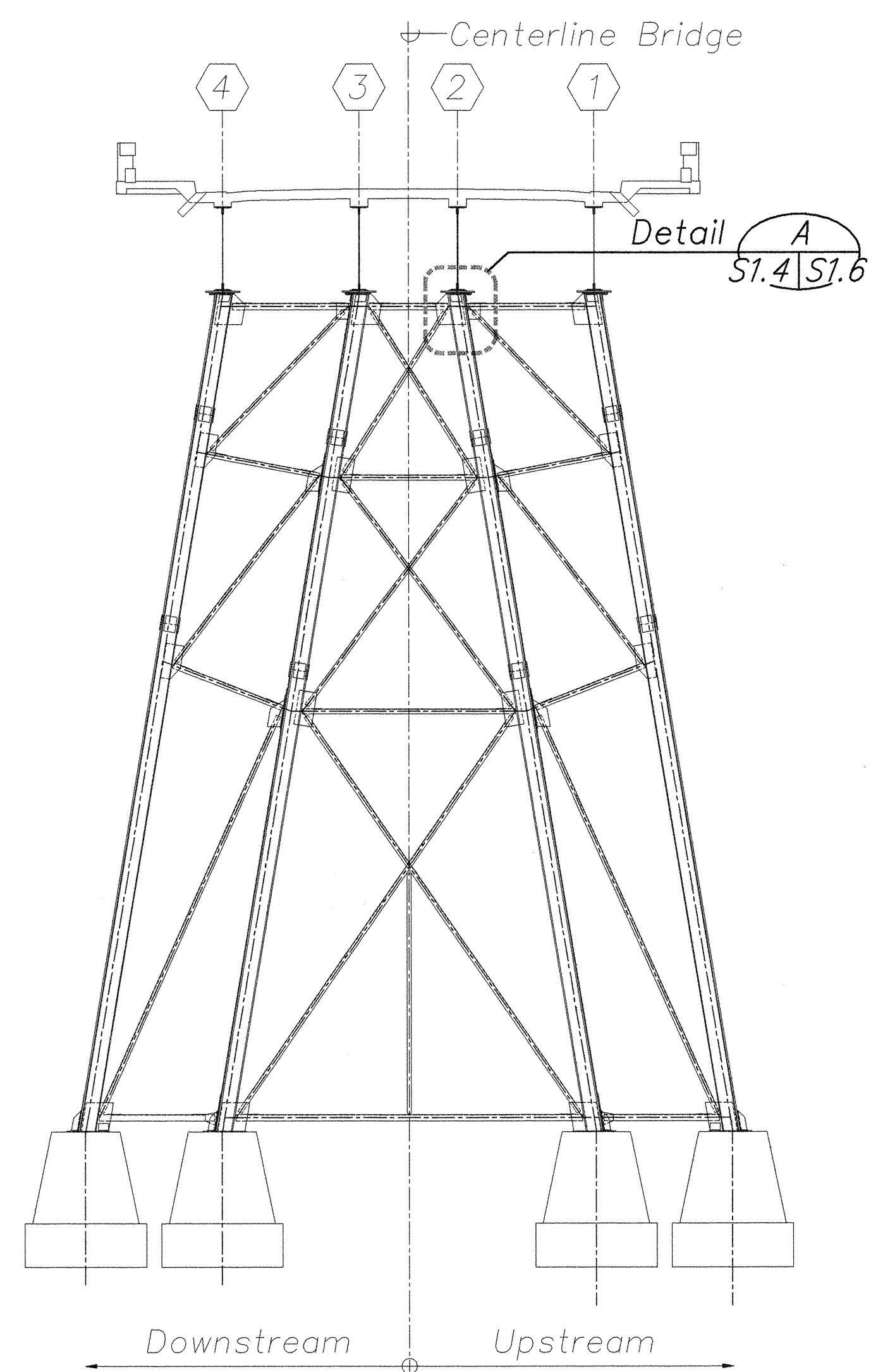
Scale: As Noted
Date: August 12, 1999

SHEET No. S1.3 OF 59 SHEETS

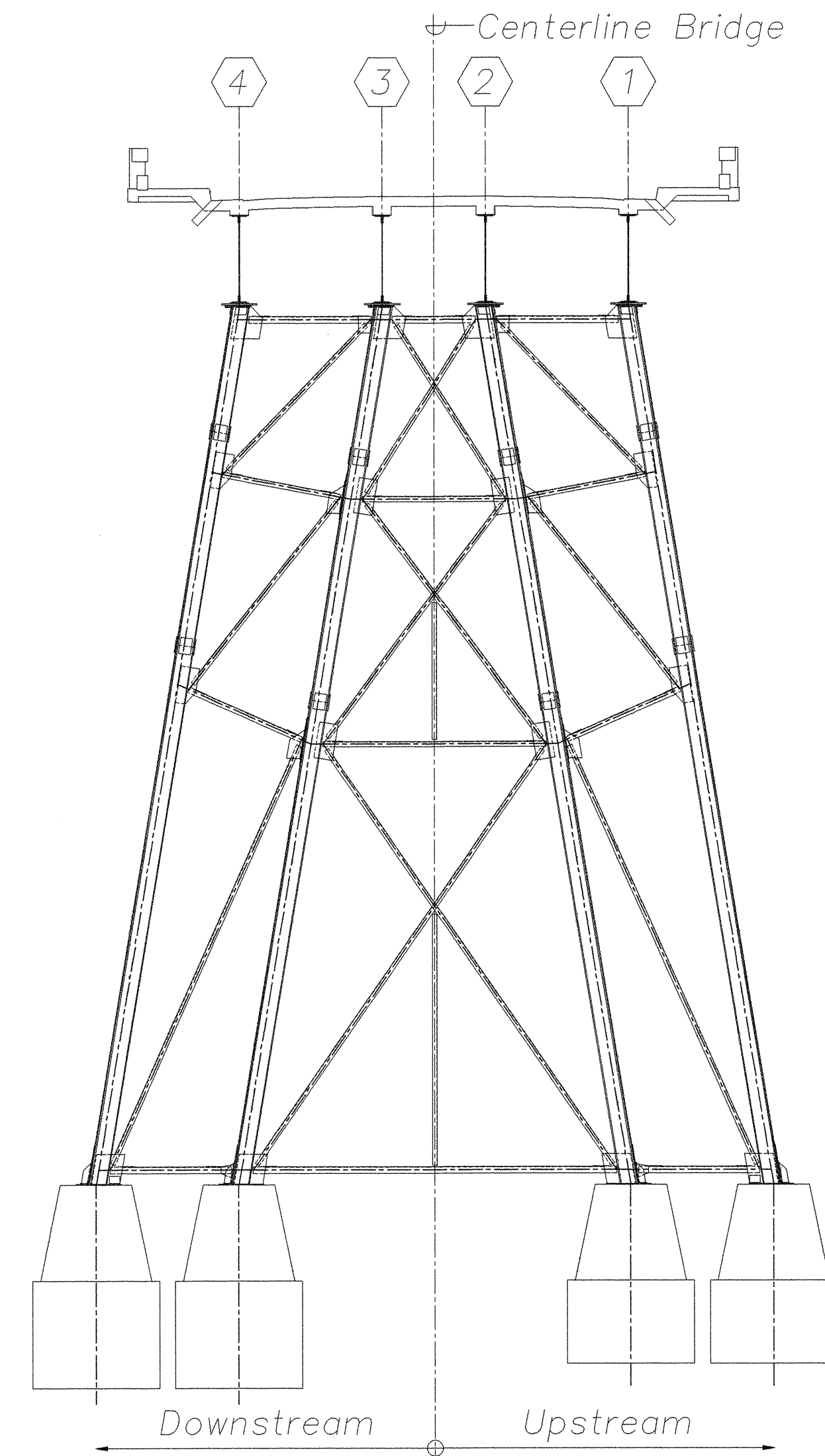
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	10	65



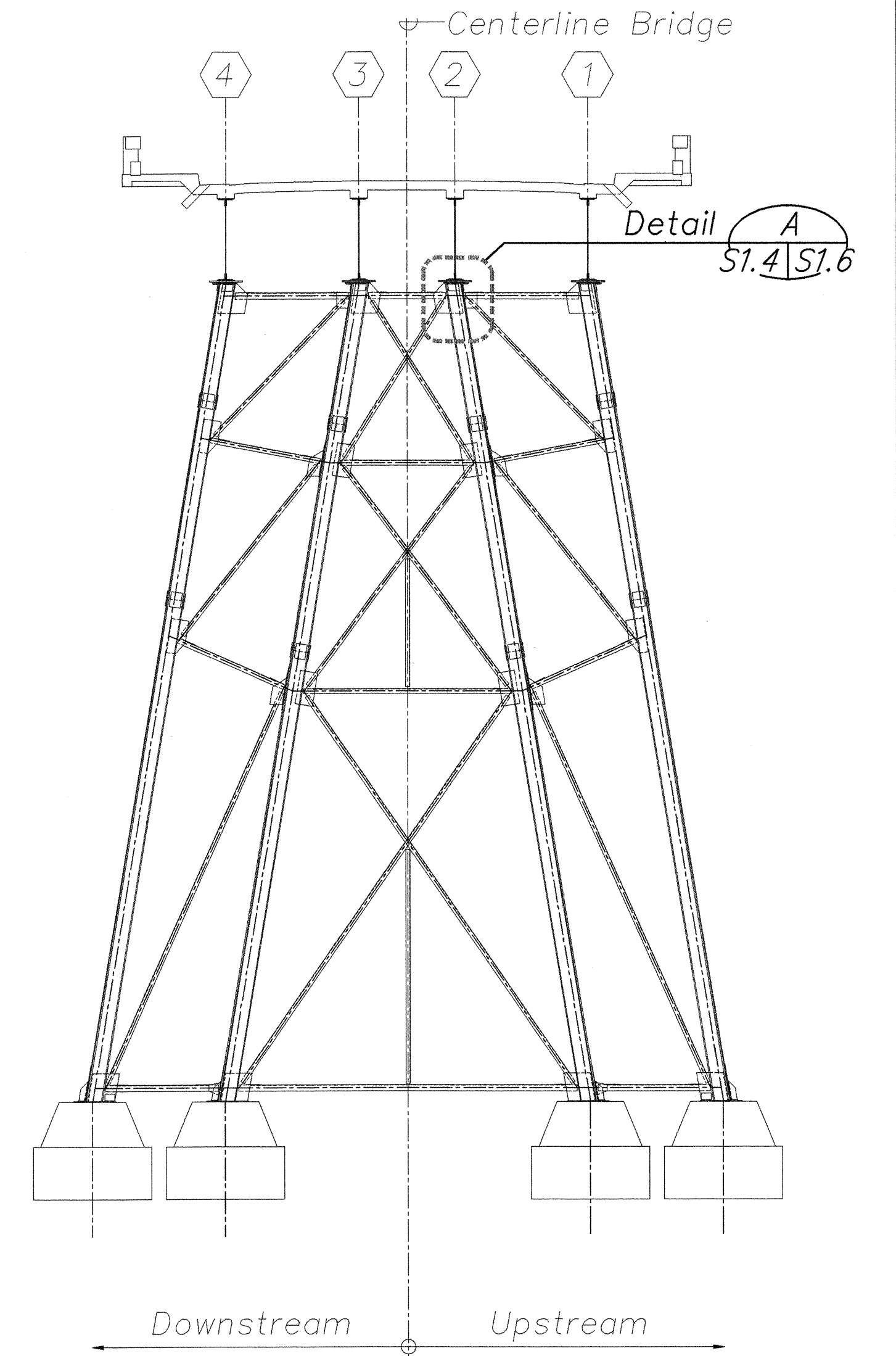
No Retrofit Required
ELEVATION — BENT NO. 1
 Scale: 1/8" = 1'-0"



Retrofit Required
ELEVATION — BENT NO. 2
 Scale: 1/8" = 1'-0"

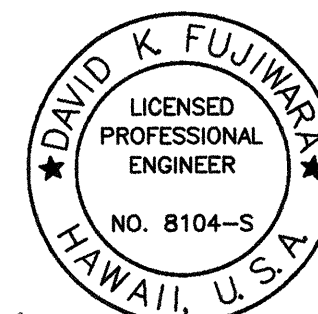


No Retrofit Required
ELEVATION — BENT NO. 3
 Scale: 1/8" = 1'-0"



Retrofit Required
ELEVATION — BENT NO. 4
 Scale: 1/8" = 1'-0"

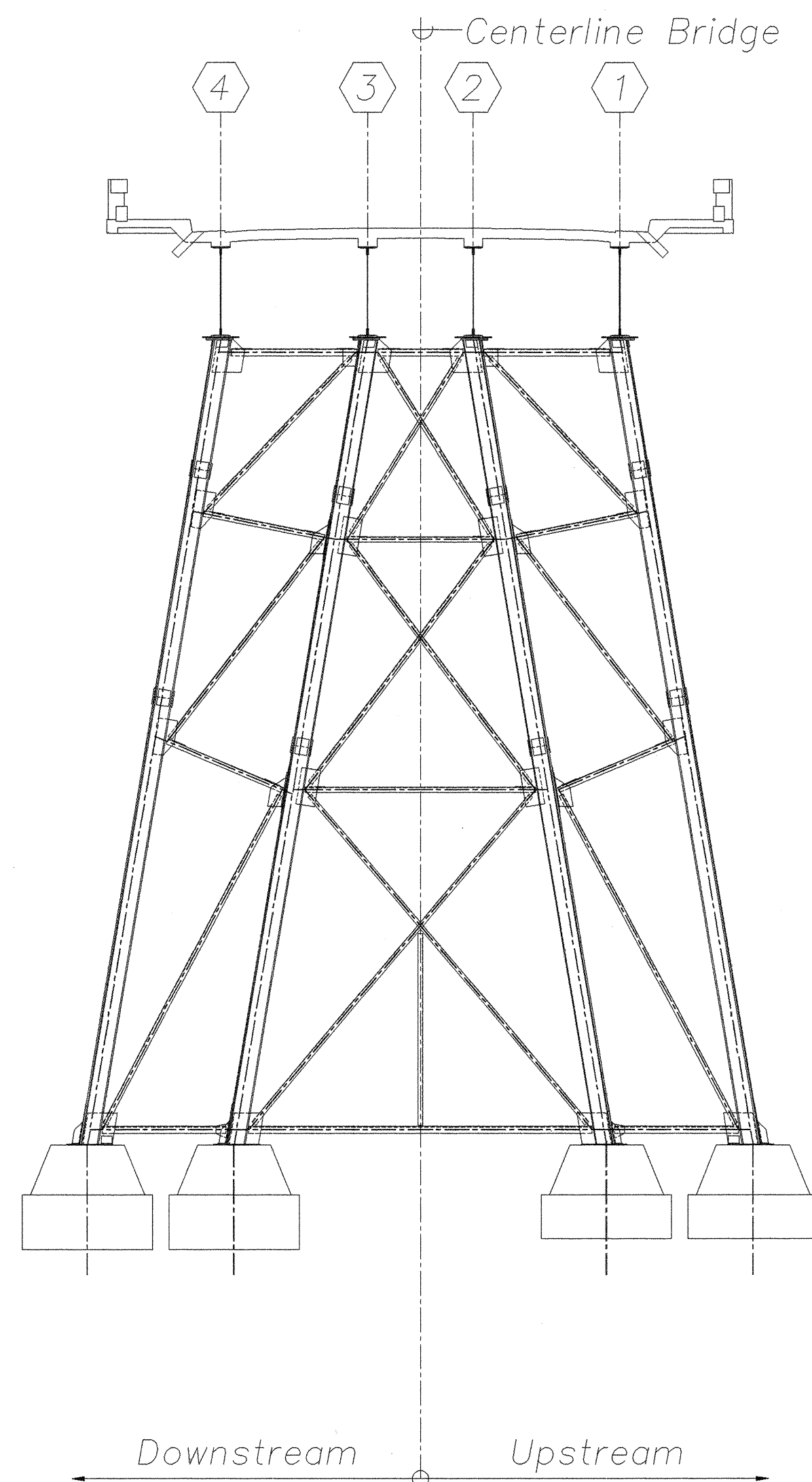
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
	QUANTITIES BY	
NOTE BOOK	CHECKED BY	
	No.	



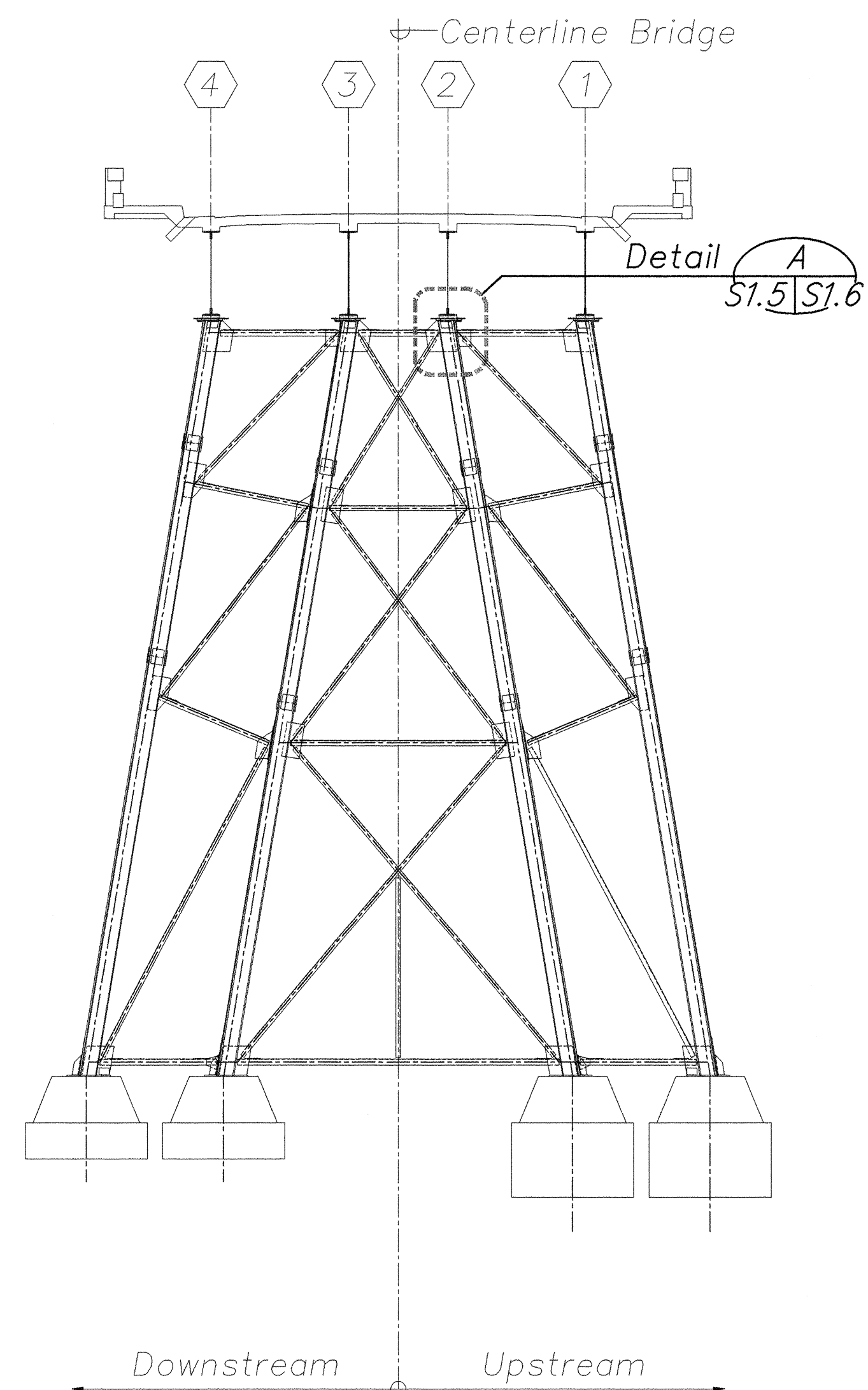
David K. Fujiwara
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
KAPUE BRIDGE
BENT ELEVATIONS
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOU, HAWAII
PROJECT NO. BR-019-2(43)
 SCALE: AS NOTED DATE: August 12, 1999
 SHEET No. S1.4 OF 59 SHEETS

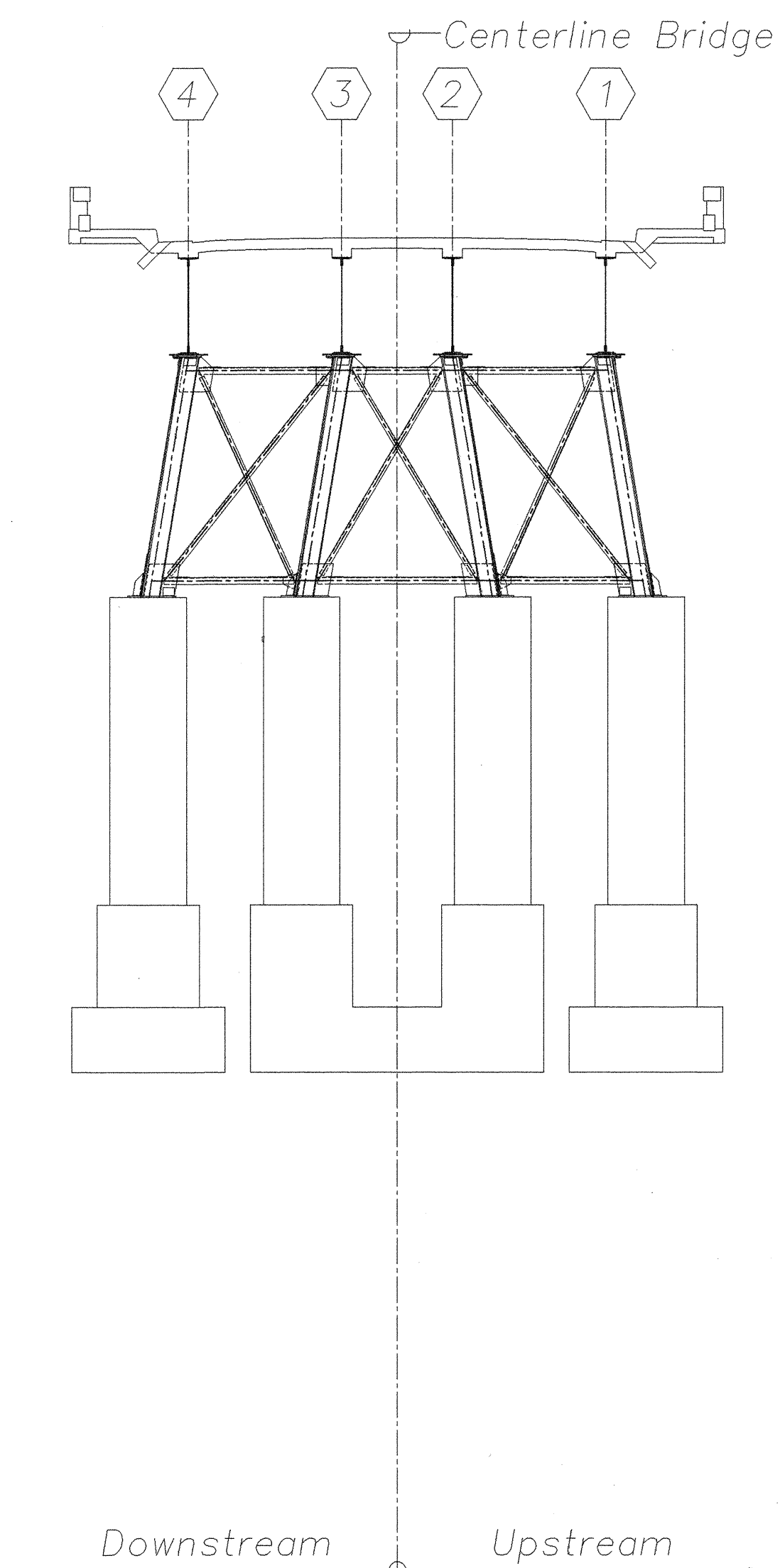
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	11	65



No Retrofit Required
ELEVATION — BENT NO. 5
Scale: 1/8" = 1'-0"

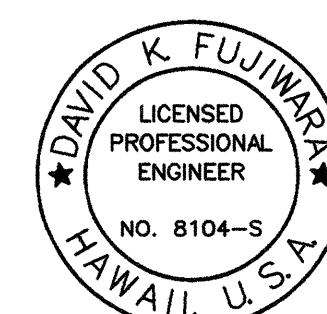


Retrofit Required
ELEVATION — BENT NO. 6
Scale: 1/8" = 1'-0"



No Retrofit Required
ELEVATION — BENT NO. 7
Scale: 1/8" = 1'-0"

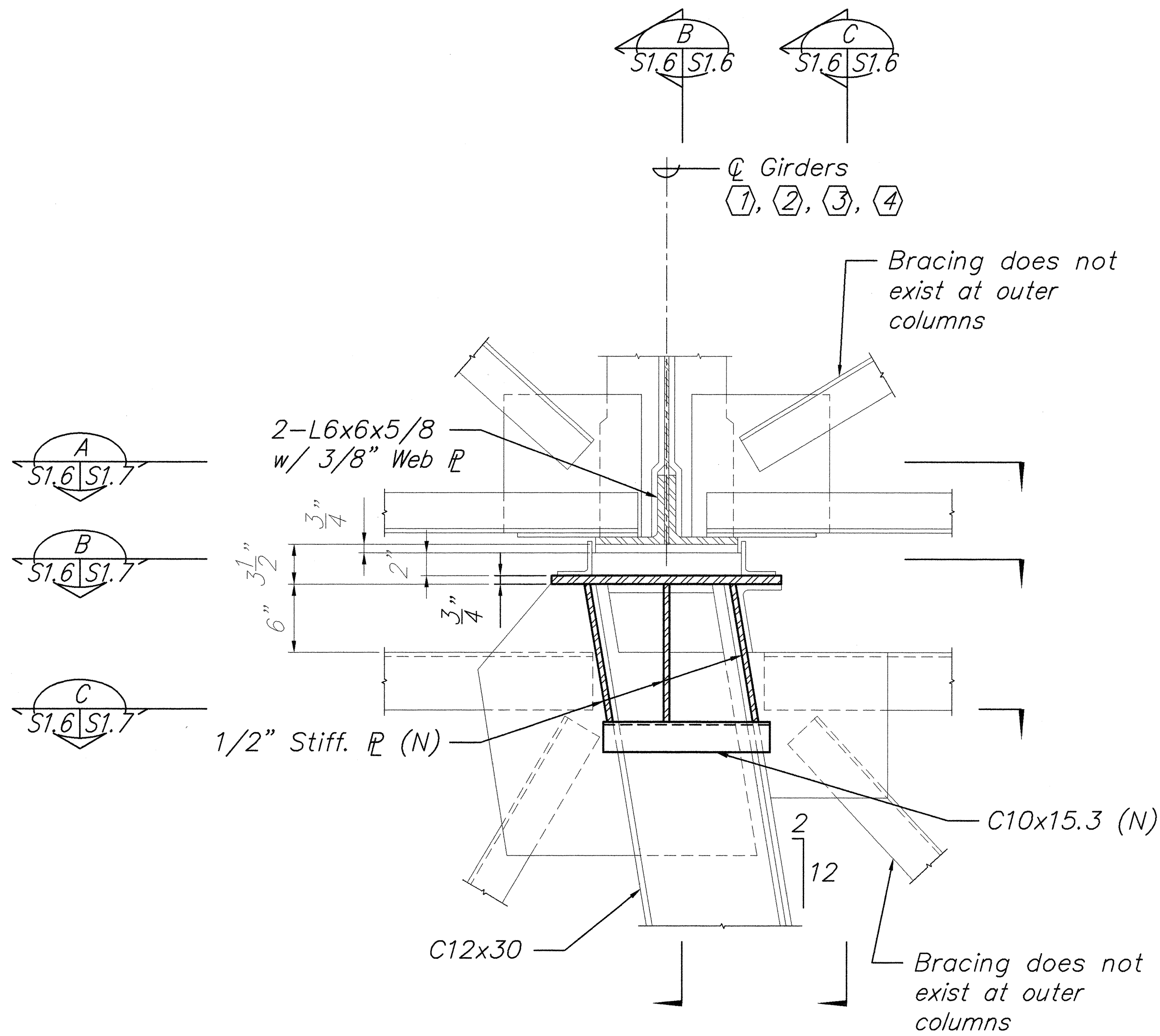
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTED BY	
NO.	



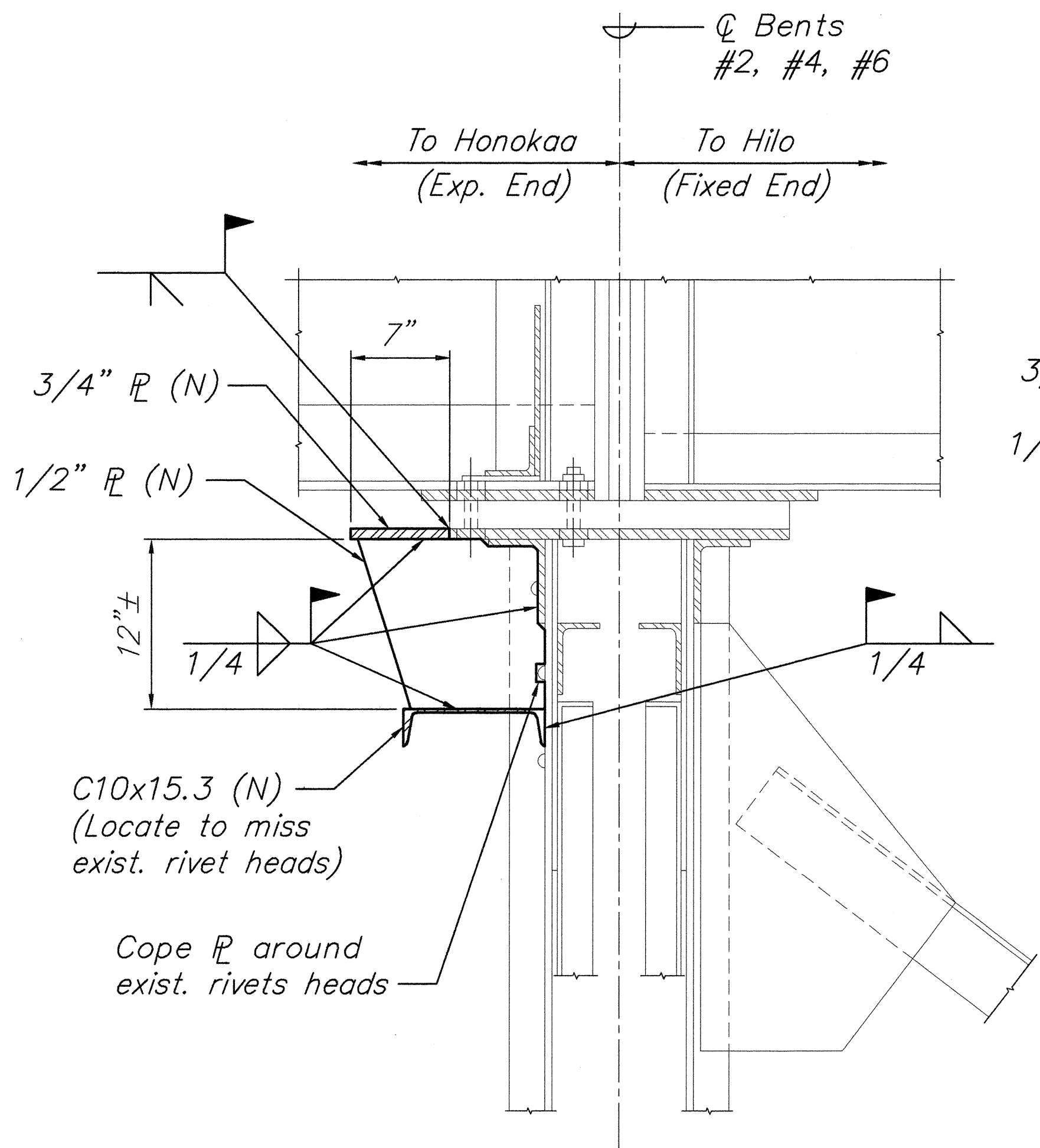
David K. Fujiwara
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <i>KAPUE BRIDGE</i> BENT ELEVATIONS <i>HAWAII BELT ROAD</i> SEISMIC RETROFIT OF VARIOUS BRIDGES VICINITY OF PAPAIKOU, HAWAII PROJECT NO. BR-019-2(43) SCALE: AS NOTED DATE: August 12, 1999 SHEET No. S1.5 OF 59 SHEETS

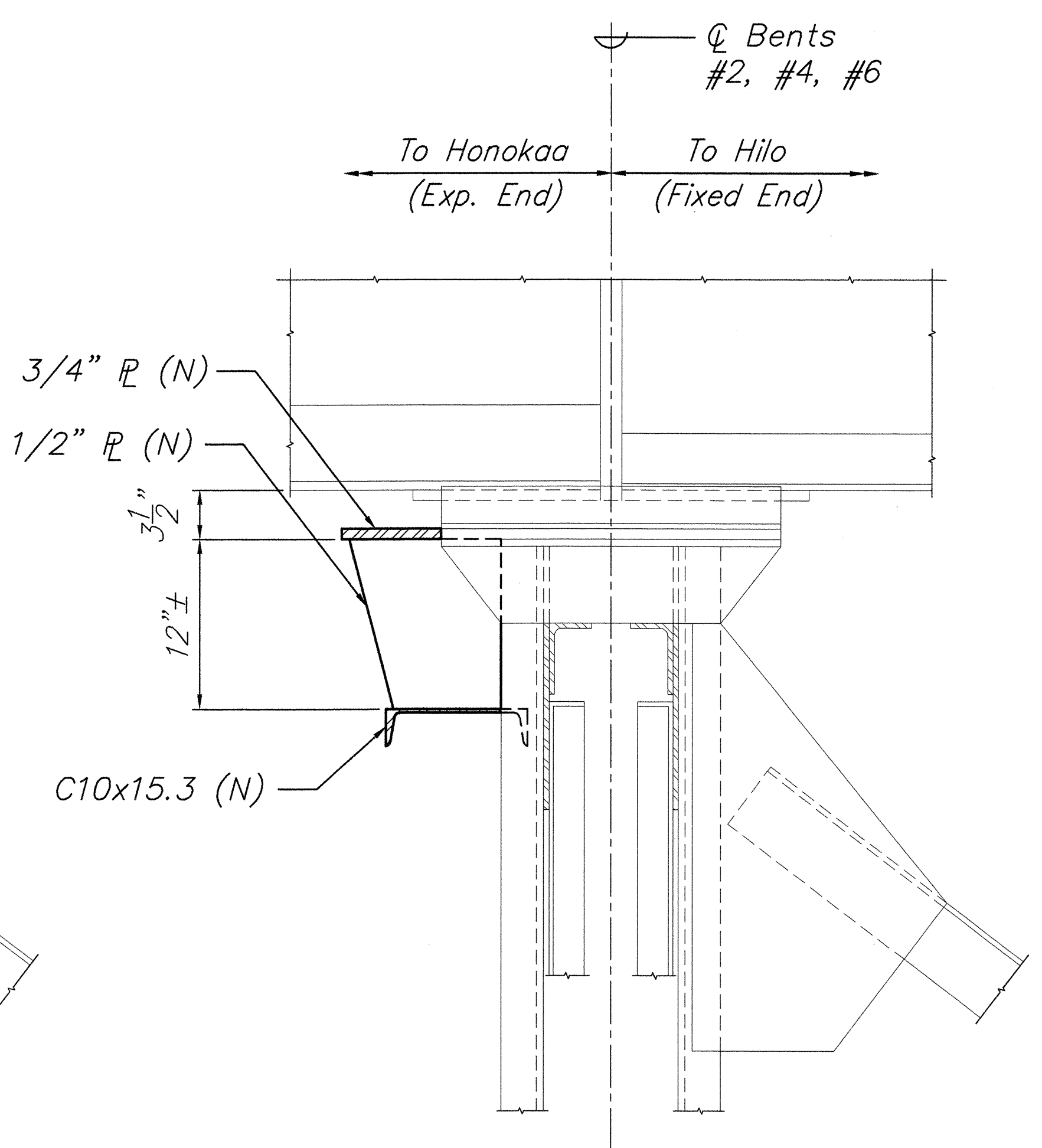
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	12	65



ELEVATION - DETAIL
AS SHOWN AT GIRDERS ① & ②
OPP. HAND AT GIRDERS ③ & ④
 Scale: 1 1/2" = 1'-0"
 S1.5, S1.7



SECTION
 Scale: 1 1/2" = 1'-0"
 S1.6, S1.6



ELEVATION
 Scale: 1 1/2" = 1'-0"
 S1.6, S1.6

NOTES:

1. All Members Existing Unless Otherwise Noted.
2. New Members Indicated Thus (N).
3. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FILE: 7008S1.6.DWG
 PLOT: 1 1/2" = 12"

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

KAPUE BRIDGE

SEAT EXTENDER AT GIRDER

EXP. JOINT - ELEV. AND SECT.

HAWAII BELT ROAD

SEISMIC RETROFIT OF VARIOUS BRIDGES

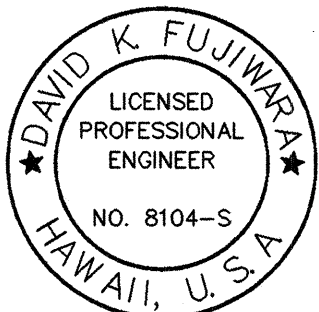
VICINITY OF PAPAIKOU, HAWAII

PROJECT NO. BR-019-2(43)

SCALE: AS NOTED

DATE: August 12, 1999

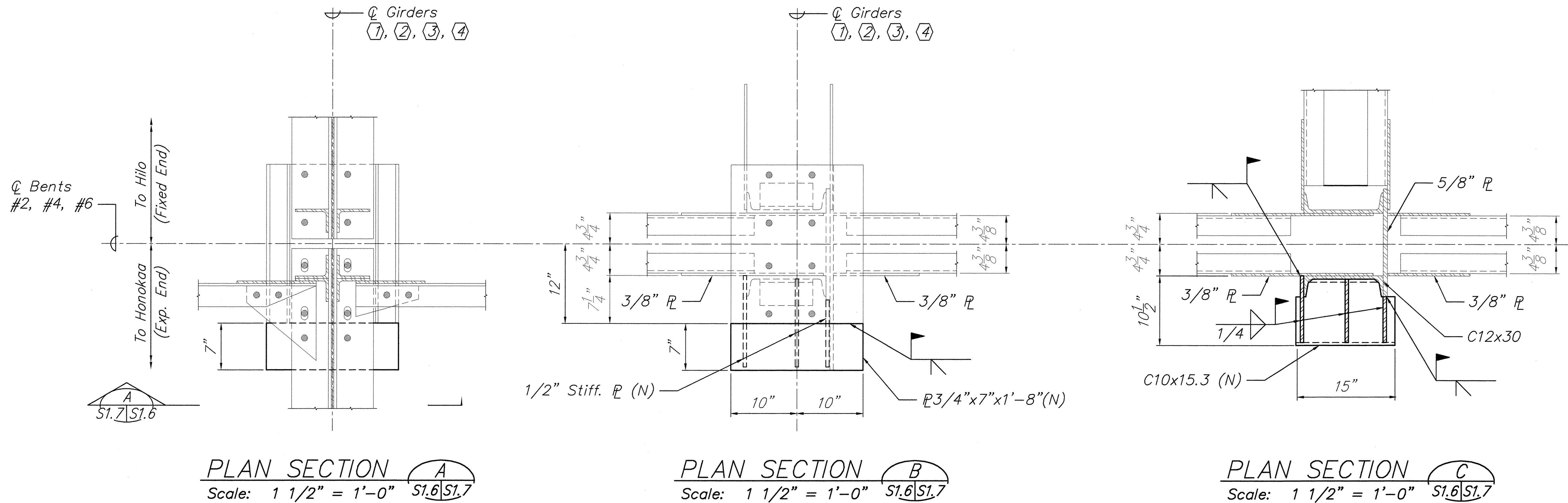
SHEET No. S1.6 OF 59 SHEETS



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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	13	65

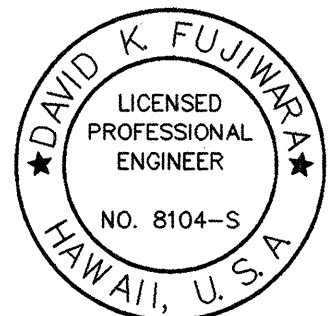


NOTES:

1. All Members Existing Unless Otherwise Noted.
2. New Members Indicated Thus (N).
3. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

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

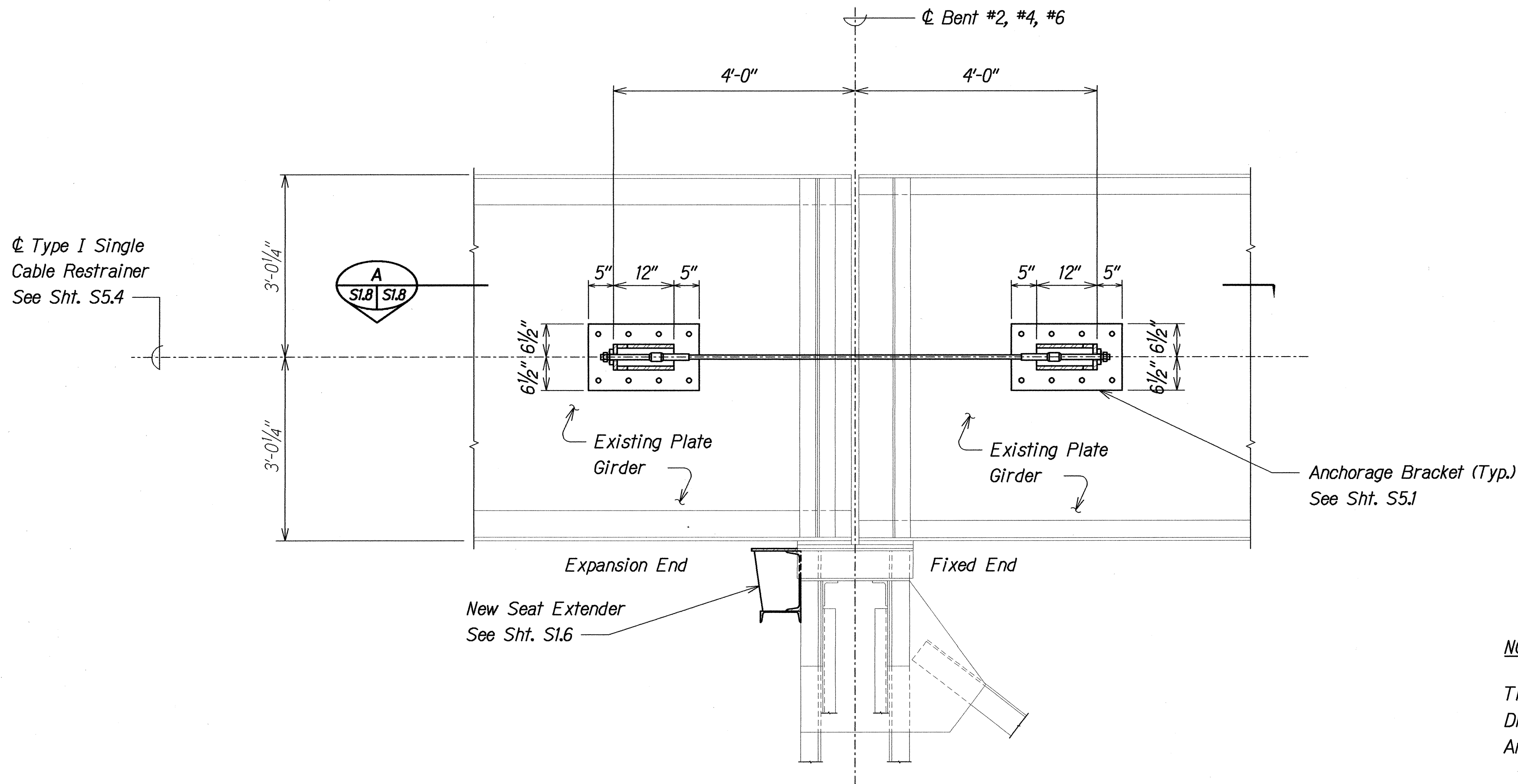
FILE: 7008516.DWG
PLOT: 1 1/2" = 12'



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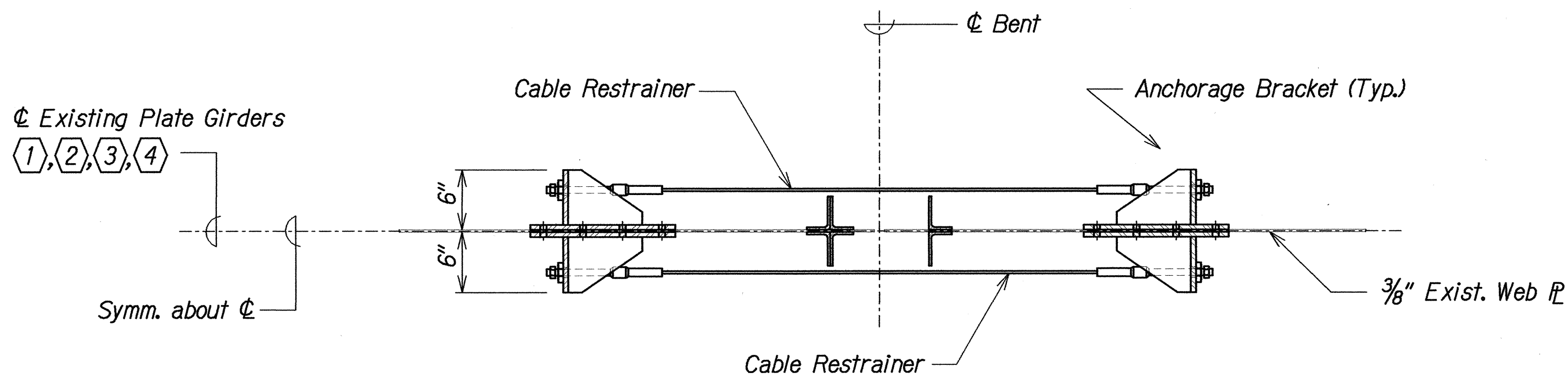
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAPUE BRIDGE
SEAT EXTENDER AT GIRDER
EXP. JOINT - PLAN SECT.
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIKOU, HAWAII
PROJECT NO. BR-019-2(43)
SCALE: AS NOTED DATE: August 12, 1999
SHEET No. S1.7 OF 59 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	14	65



ELEVATION

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



PLAN SECTION

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

SEAT EXTENDER AND CABLE RESTRAINER AT GIRDER EXPANSION JOINT

LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

NOTE:

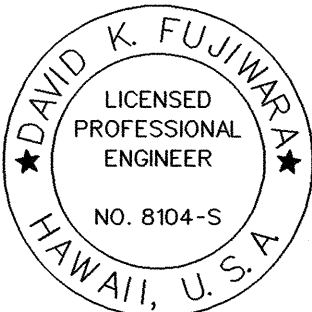
The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Any Material.

WORK SEQUENCE

1. Clean Surface and Remove Lead Paint.
2. Drill Holes in Plate Girder.
3. Repaint Entire Surface Area Previously Removed.
4. Install Anchorage Bracket.

NOTE:

- 1) LOCATION OF CABLE RESTRAINER ASSEMBLIES WERE MOVED SLIGHTLY TO ADJUST FOR EXISTING STEEL STIFFENERS.



David K. Fujiwara

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAPUE BRIDGE

SEAT EXTENDER AND

TYPE I CABLE RESTRAINER

HAWAII BELT ROAD

SEISMIC RETROFIT OF VARIOUS BRIDGES

VICINITY OF PAPAIKOUL, HAWAII

Project No. BR-019-2(43)

Scale: As Noted

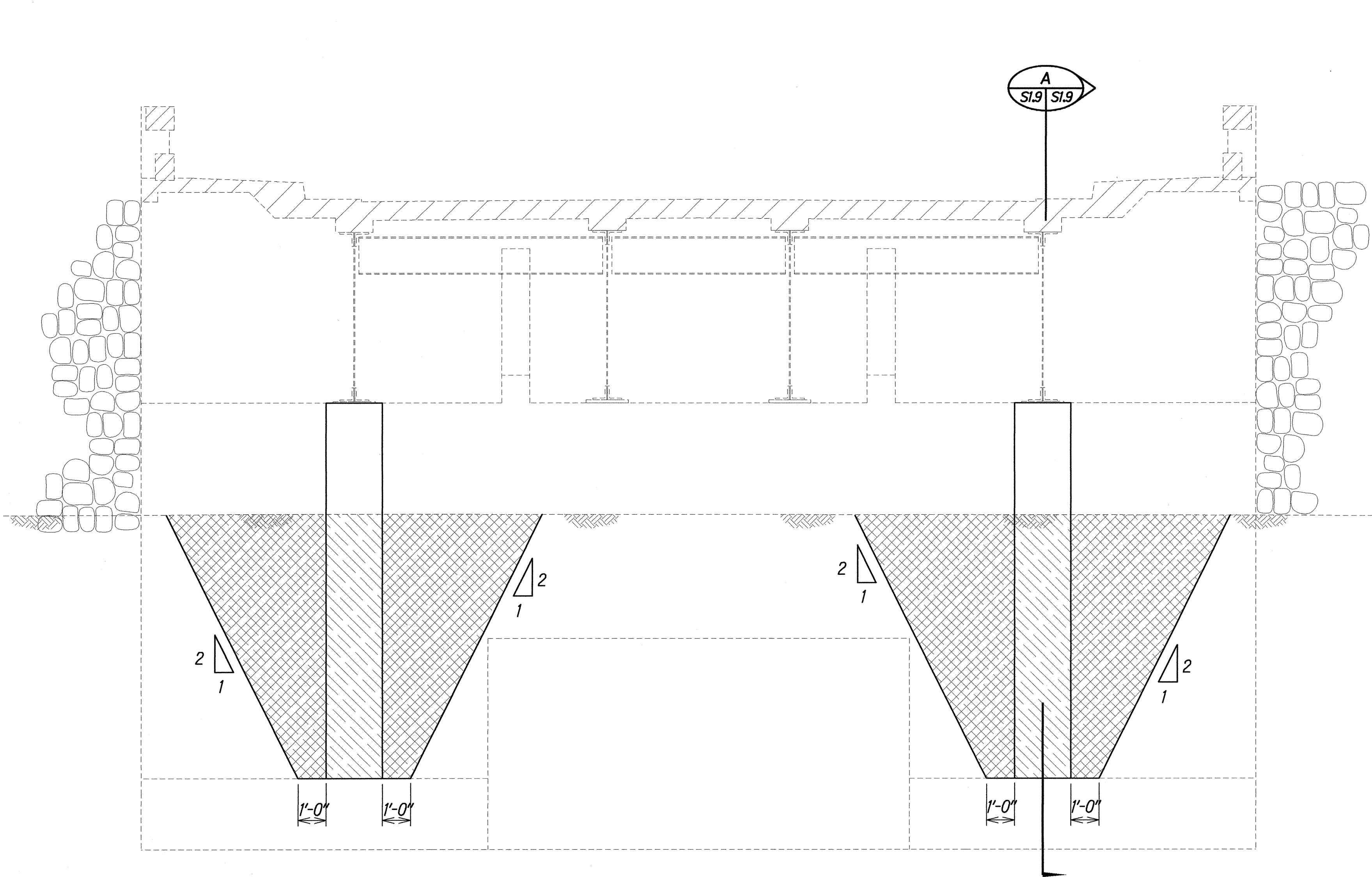
Date: August 12, 1999

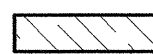
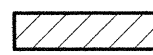
SHEET No. S1.8 OF 59 SHEETS

"AS-BUILT" 14

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	15	65

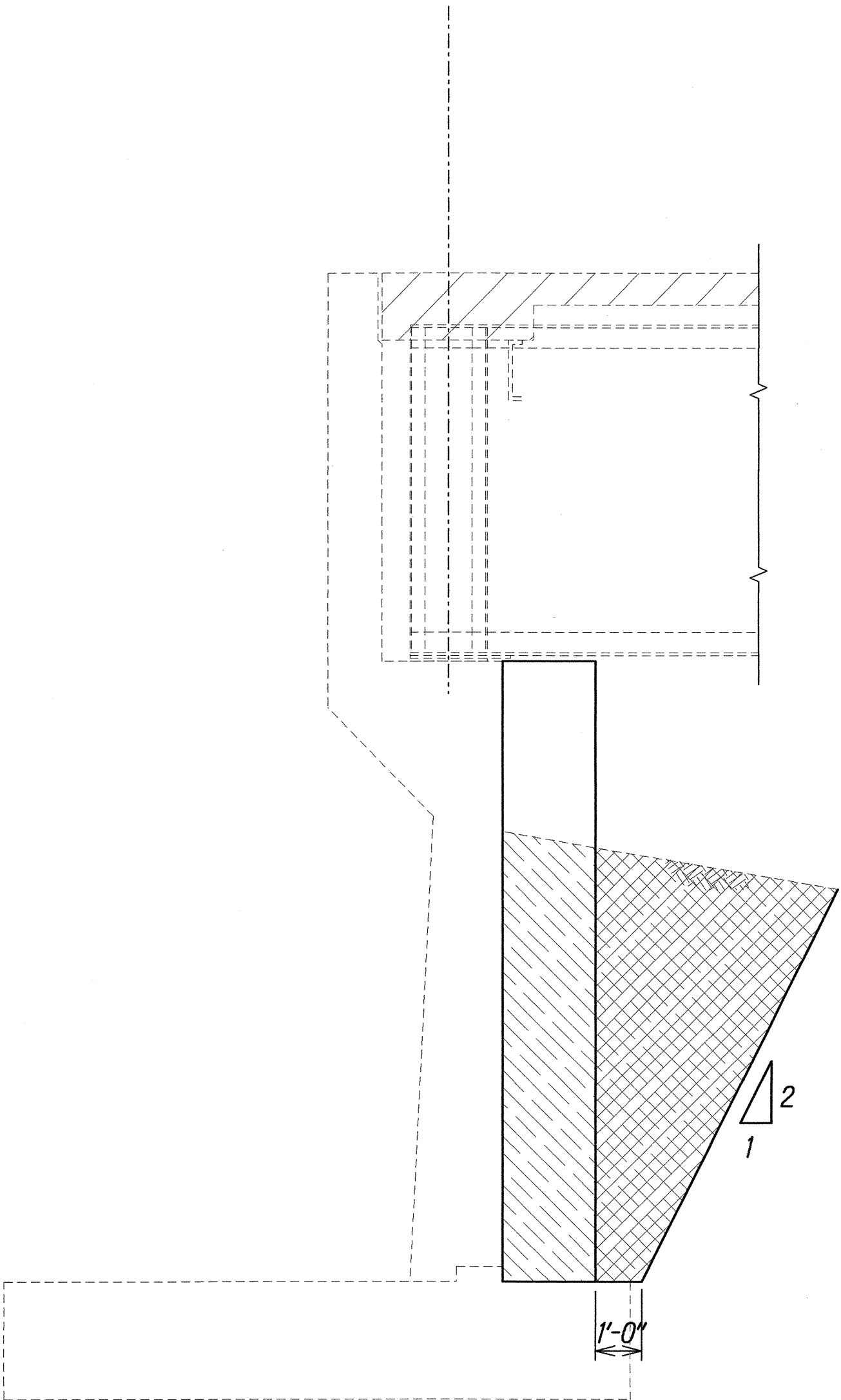


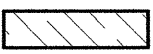
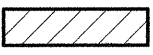
-  Structure Excavation
-  Structure Backfill - CLSM WAS USED AS STRUCTURE BACKFILL

ELEVATION - ABUTMENT

STRUCTURE EXCAVATION / BACKFILL PAY LIMITS

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



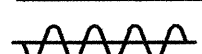
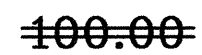
-  Structure Excavation
-  Structure Backfill

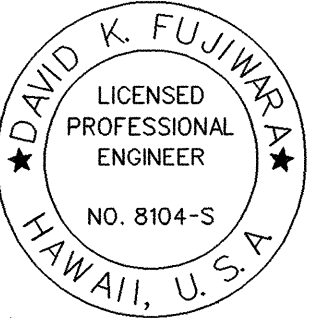
SECTION

A
S1.9 S1.9

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

LEGEND FOR AS-BUILT POSTINGS

-  Squiggly line for as-built deletion
-  Double line for as-built deletion
- Roadway Text for as-built posting



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAPUE BRIDGE
STRUCTURE EXC./BACKFILL
PAY LIMITS - ABUTMENT
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPA'IKOUL, HAWAII
Project No. BR-019-2(43)

Scale: As Noted
Date: August 12, 1999

SHEET No. S1.9 OF 59 SHEETS

"AS-BUILT" 15