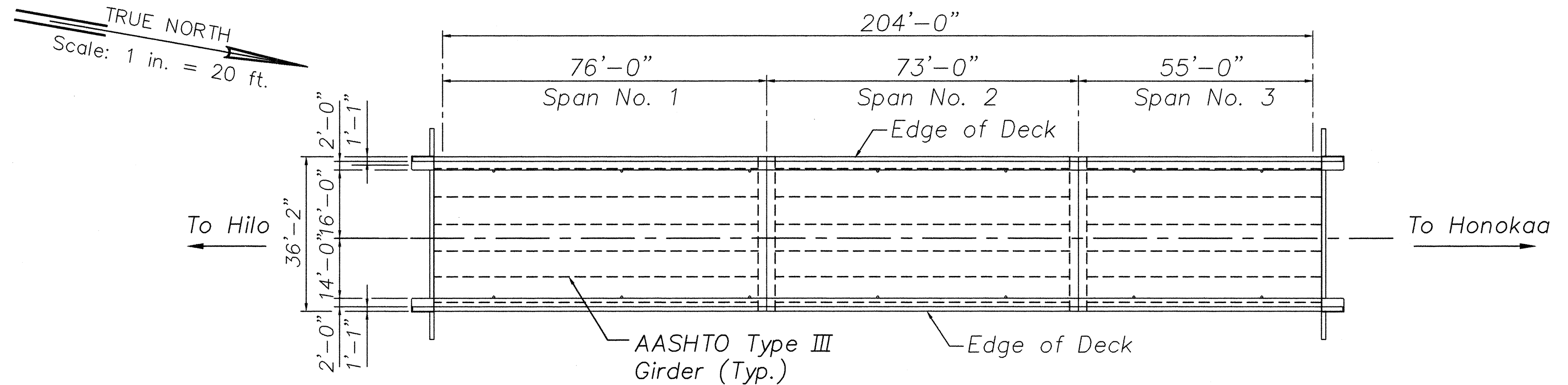
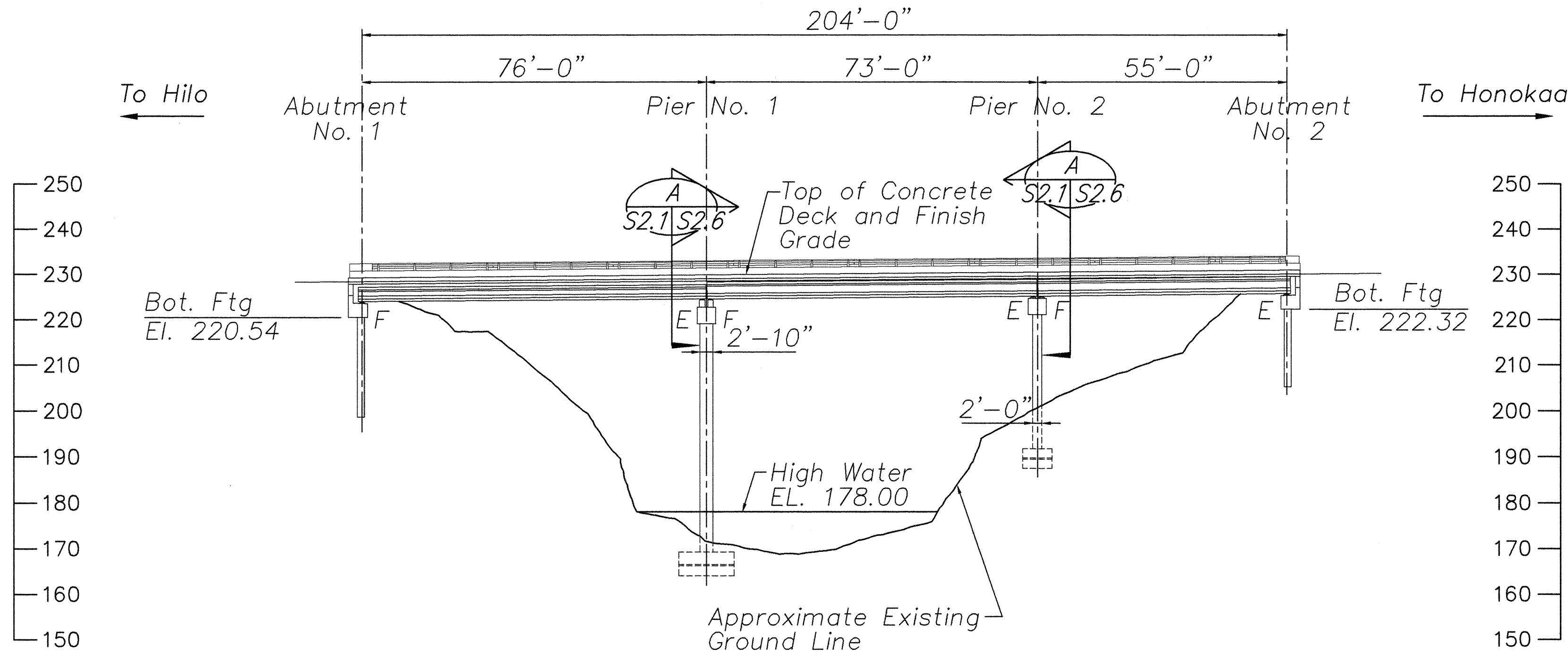


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	16	65



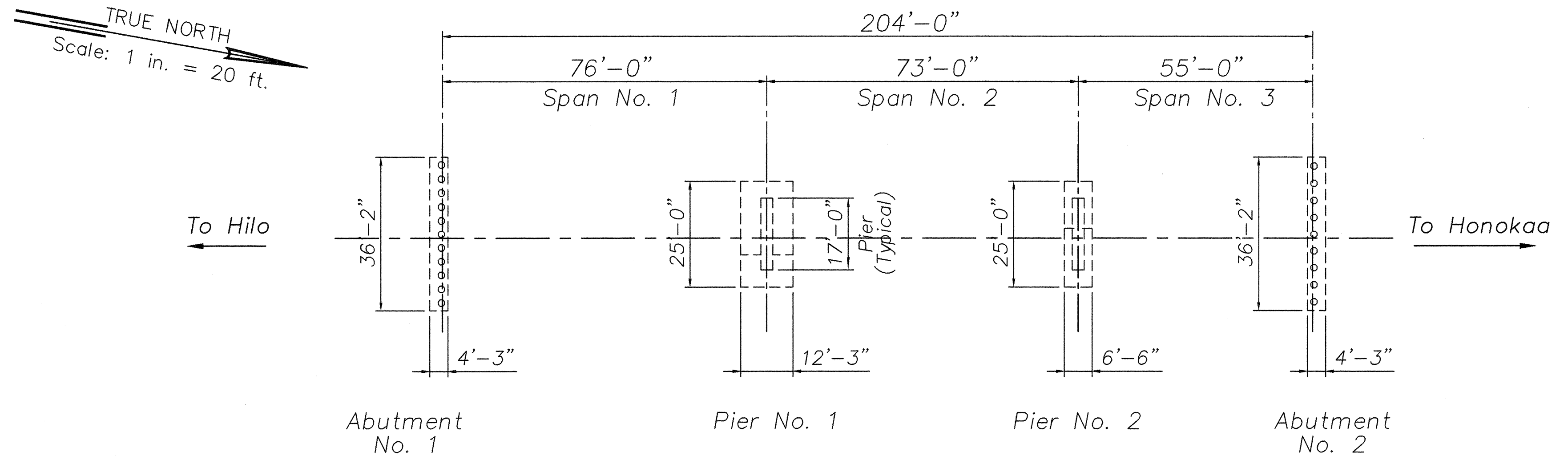
DECK FRAMING PLAN

Scale: 1" = 20'



ELEVATION

Scale: 1" = 20'



FOUNDATION PLAN

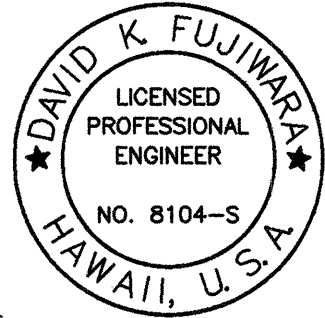
Scale: 1" = 20'

LEGEND

- F Fixed End
- E Expansion End

KAIEIE BRIDGE RETROFITS				
ITEM	LOCATION	QUANTITY		REFERENCE DRAWINGS
		PER LOC.	TOTAL	
Seat Extender	Abutments No. 1, No. 2	1	2	S2.2, S2.3, S2.4
Creep Block	Abutments No. 1, No. 2	5	10	S2.2, S2.3, S2.4
Creep Block	Piers No. 1, No. 2	10	20	S2.5, S2.6, S2.7, S2.9
Seat Extender	Piers No. 1, No. 2	12	24	S2.5, S2.6, S2.7, S2.8
Type II Dual Cable Restrainer	Piers No. 1, No. 2	10	20	S2.10, S5.2, S5.4, S5.5
Diaphragm	Abutments No. 1, No. 2	5	10	S2.3, S2.4
Diaphragm	Piers No. 1, No. 2	10	20	S2.6, S2.7
Longitudinal Bumper	Abutments No. 1, No. 2	6	12	S2.2, S2.4

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

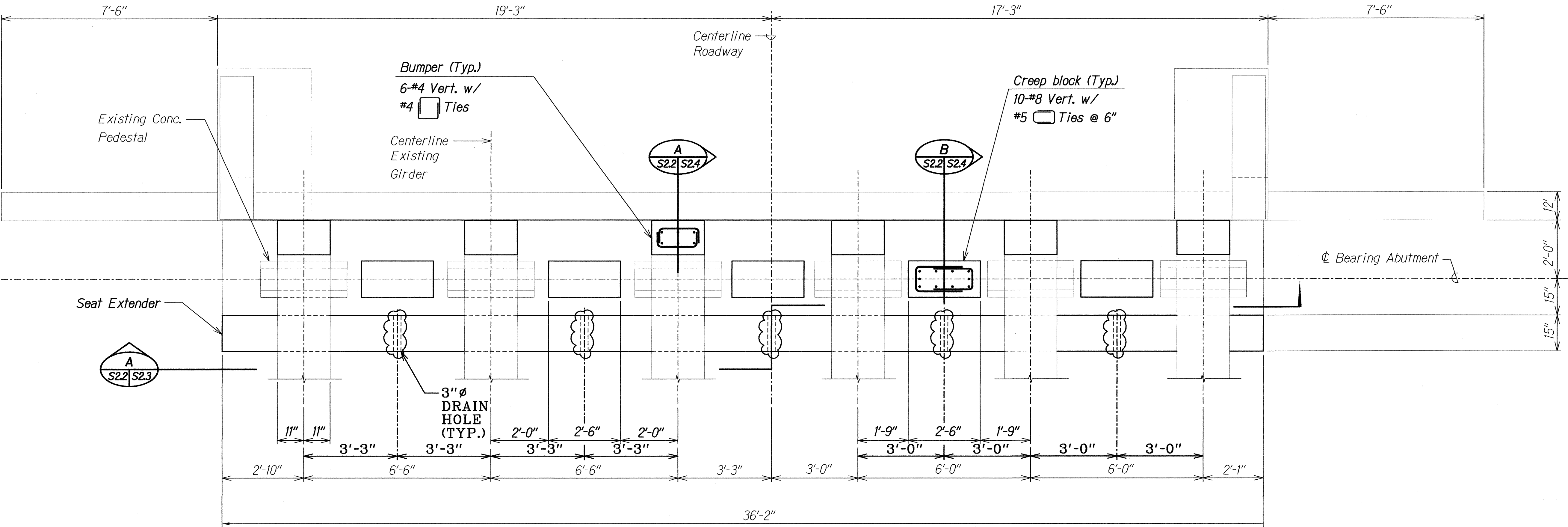


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE
DECK PLAN, ELEVATION
AND FOUNDATION PLAN
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOU, HAWAII
PROJECT NO. BR-019-2(43)

SCALE: AS NOTED
DATE: August 12, 1999
SHEET No. S2.1 OF 59 SHEETS

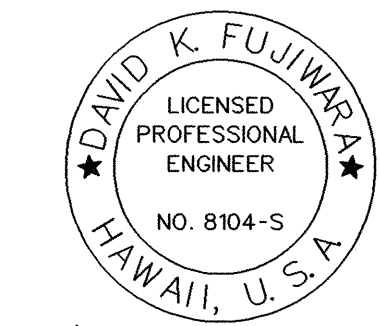
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	17	65



ABUTMENT NO. 2 - PLAN AS SHOWN
ABUTMENT NO. 1 - PLAN OPP. HAND
 Scale: 1/2" = 1'-0"

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

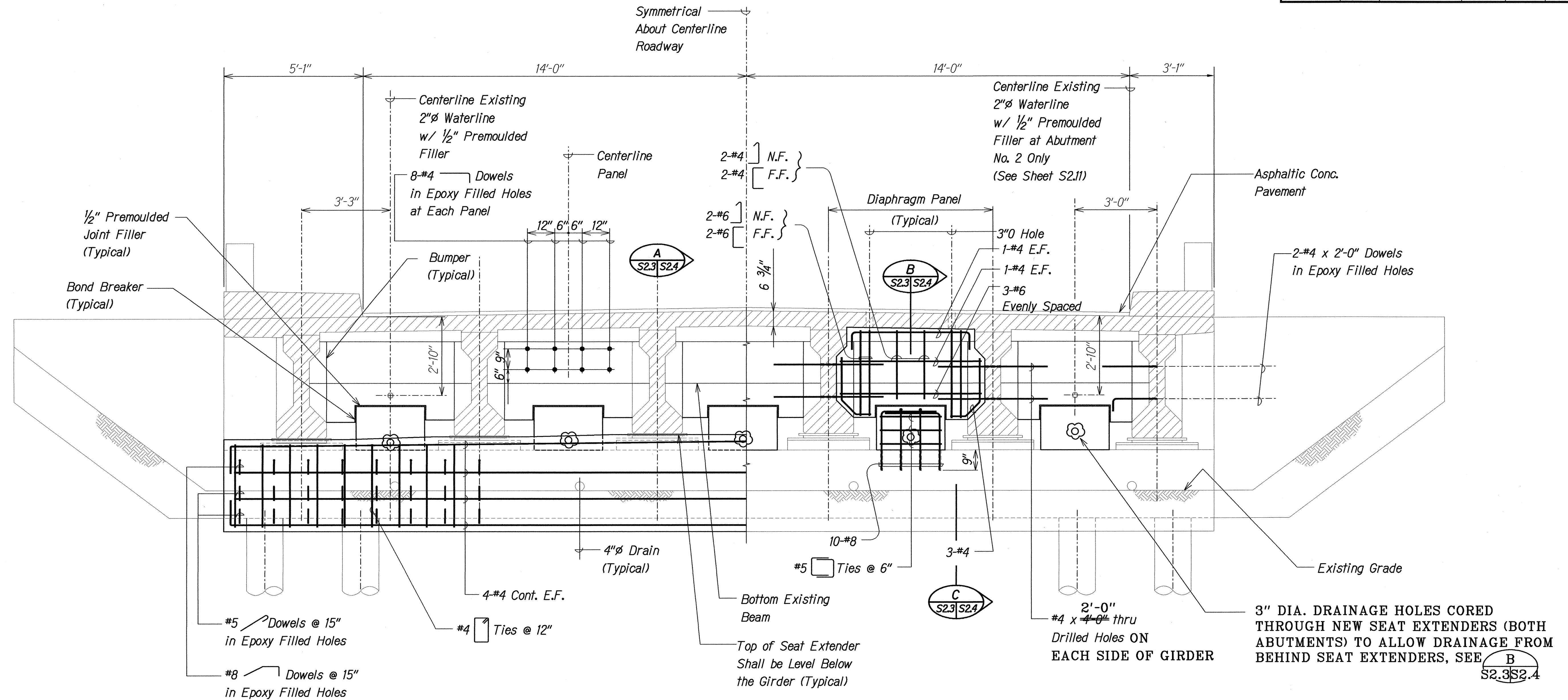


David K. Fujiwara

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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
KAIEIE BRIDGE
ABUTMENT NO. 1 AND NO. 2 PLAN
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. S2.2 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	18	65



ABUTMENT NO. 2 - ELEVATION ABUTMENT NO. 1 - OPP. HAND

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

NOTES:

1. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
2. Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations are Subject to the Approval of the Engineer.

LEGEND FOR AS-BUILT POSTINGS

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE
ABUTMENT NO. 1 AND NO. 2
ELEVATION
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

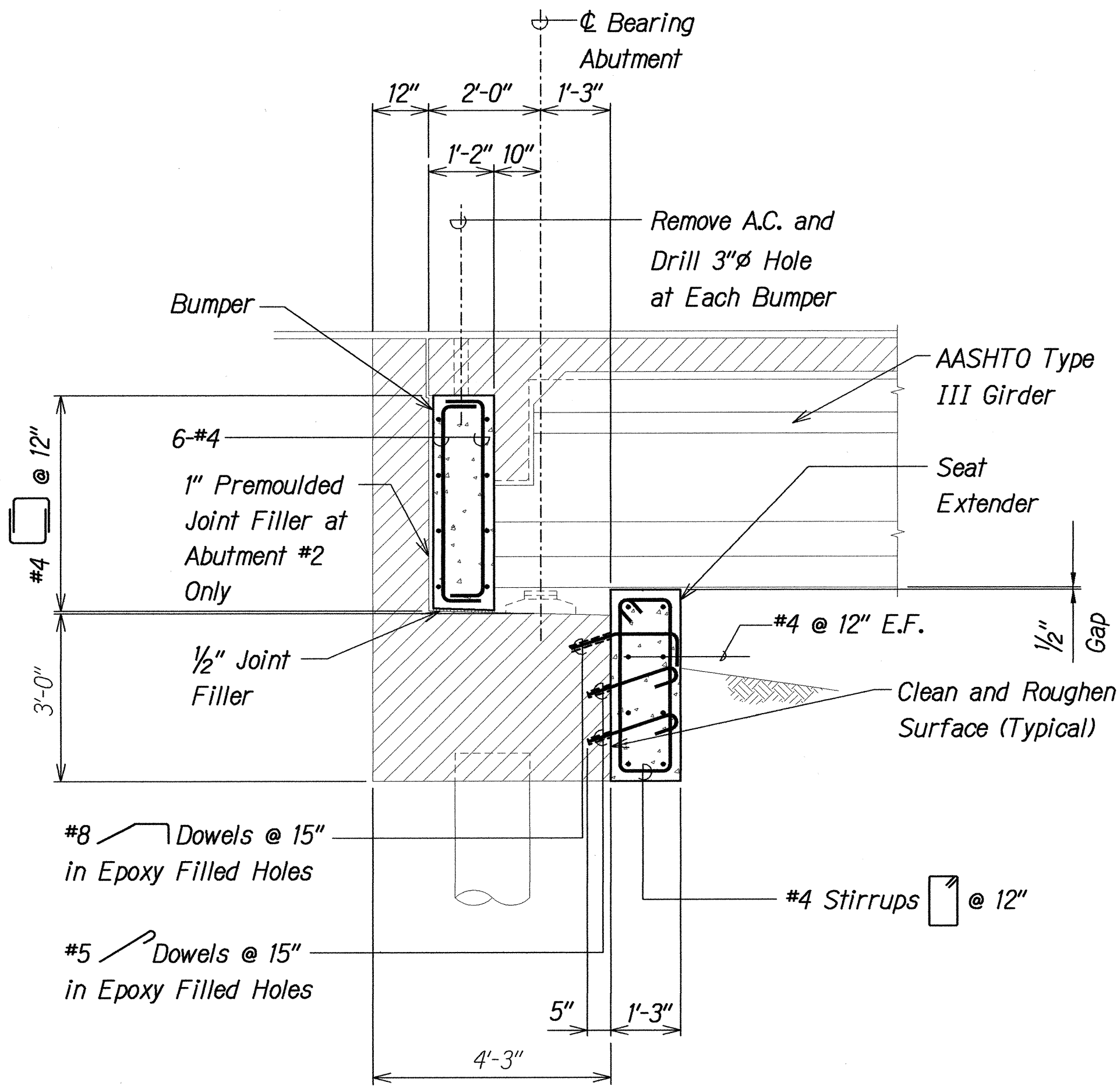
SHEET No. S2.3 OF 59 SHEETS

"AS-BUILT" 18

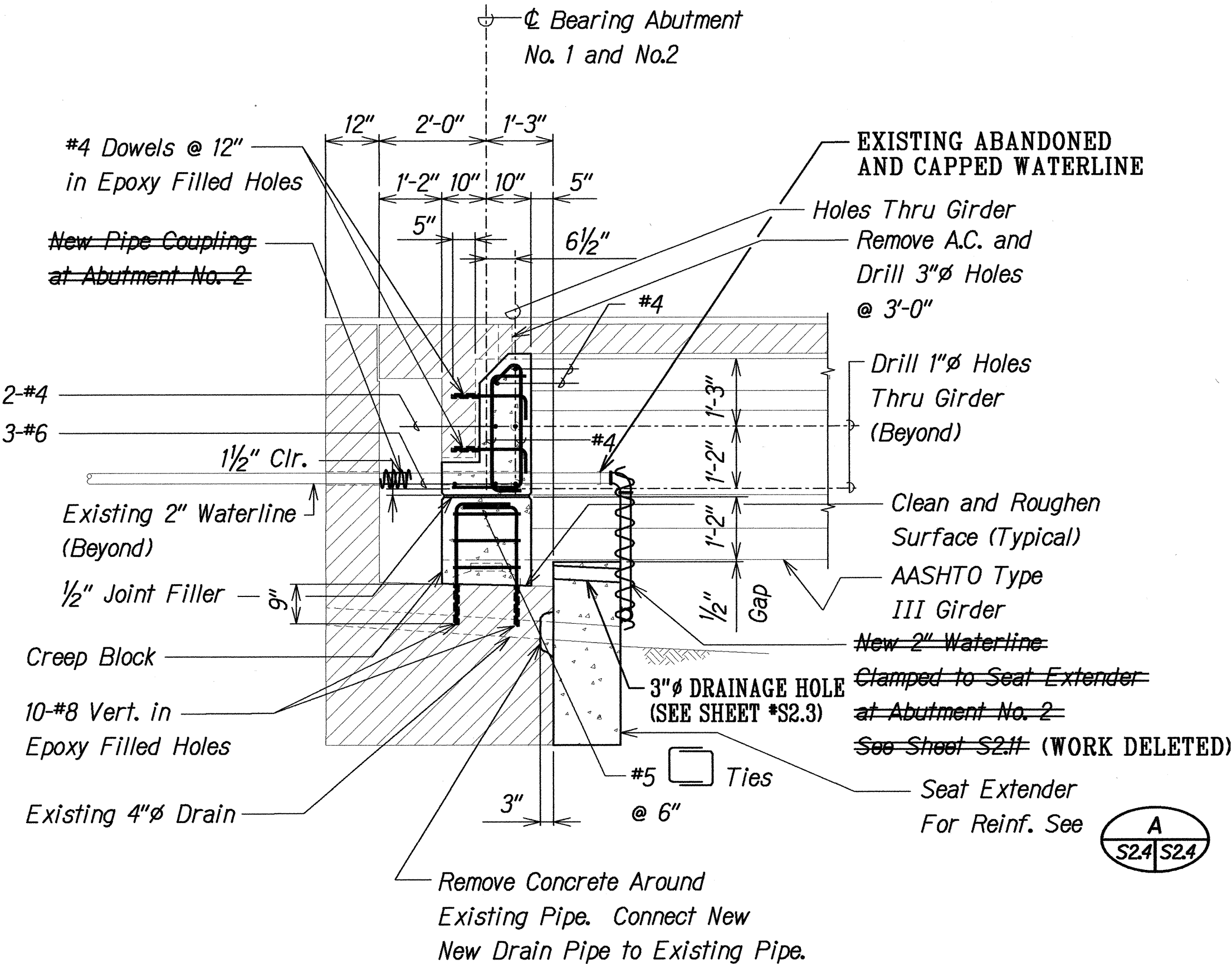
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FILE: 700853.DWG
PLOT: 1/2" = 1'-0"

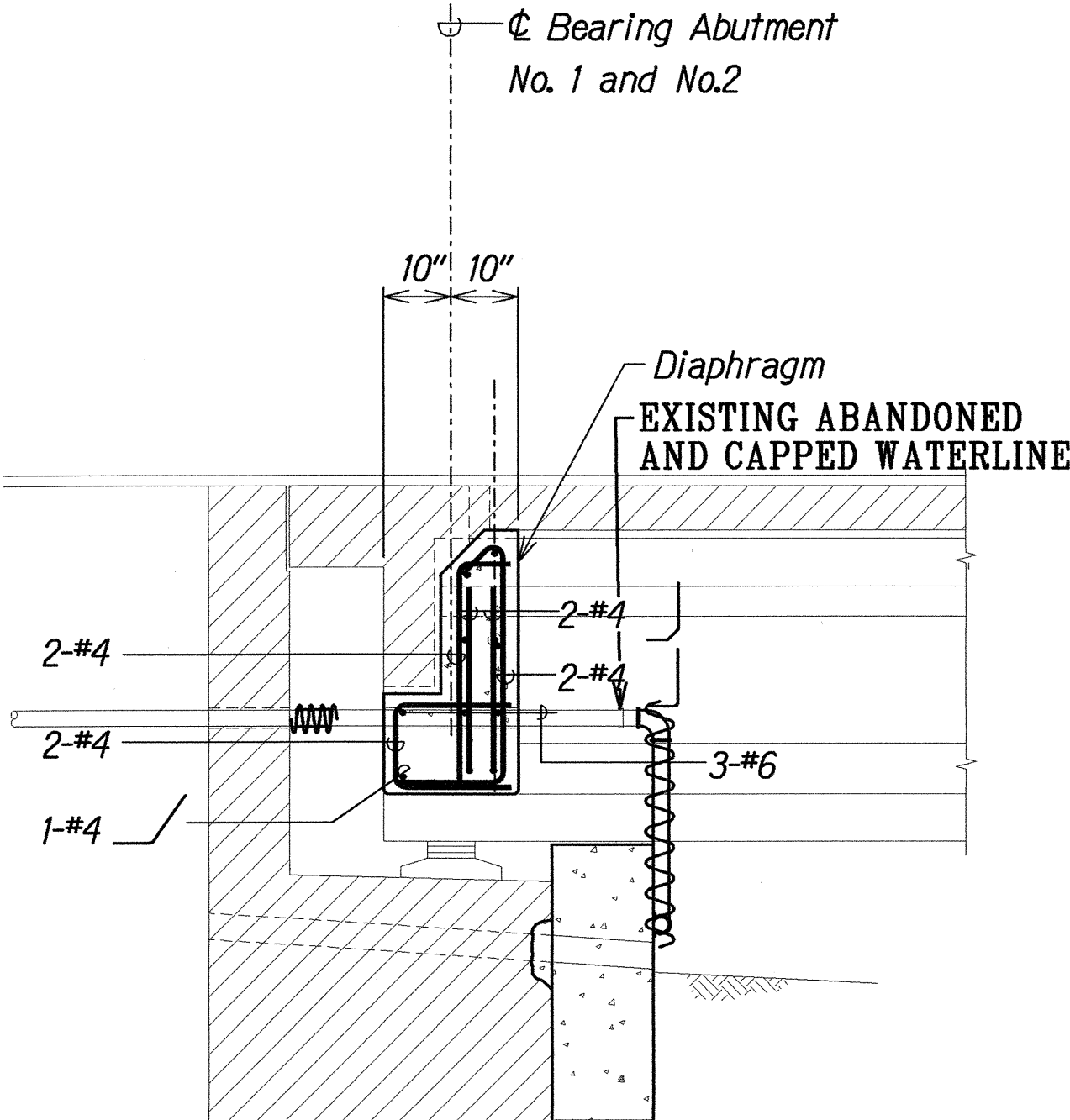
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	19	65



SECTION A
Scale: 1/2" = 1'-0"
S2.3, S2.4



SECTION B
Scale: 1/2" = 1'-0"
S2.3



SECTION C
Scale: 1/2" = 1'-0"
S2.3, S2.4

NOTES:

1. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
2. Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations are Subject to the Approval of the Engineer.
3. When Pouring Concrete Thru 3" Diameter Holes There Shall Be No Void Spaces, Entrapped Air, or Entrapped Water.
4. After Pouring Concrete to Top of Deck, A.C. shall be Replaced to Original Elevation. Do not Place A.C. Until Concrete has Sufficiently Hardened.
5. For Lane Closures, see Specifications.

LEGEND FOR AS-BUILT POSTINGS

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE

ABUTMENT SECTIONS

HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOLO, HAWAII
Project No. BR-019-2(43)

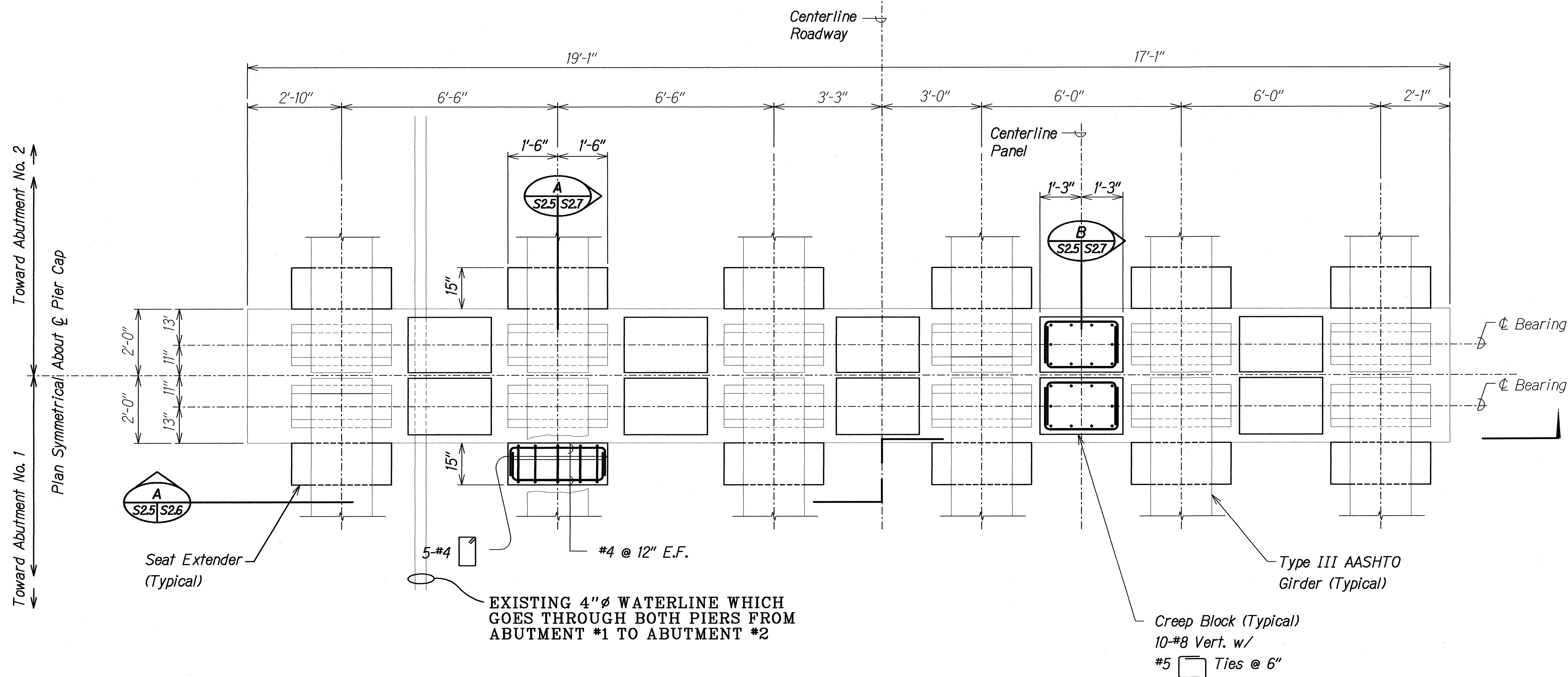
Scale: As Noted Date: August 12, 1999

SHEET No. S2.4 OF 59 SHEETS

"AS-BUILT" 19

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	20	65



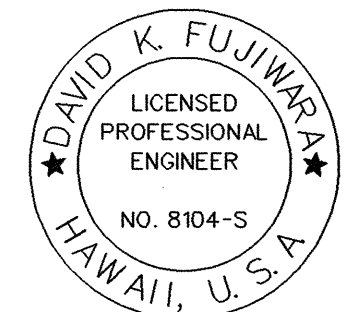
PIERS NO. 1 AND NO. 2 - CAP PLAN
 Scale: 1/2" = 1'-0"

Detail 1 at Pier Cap No. 1
 Detail 2 at Pier Cap No. 2

NOTES:

1. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
2. Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations are Subject to the Approval of the Engineer.

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

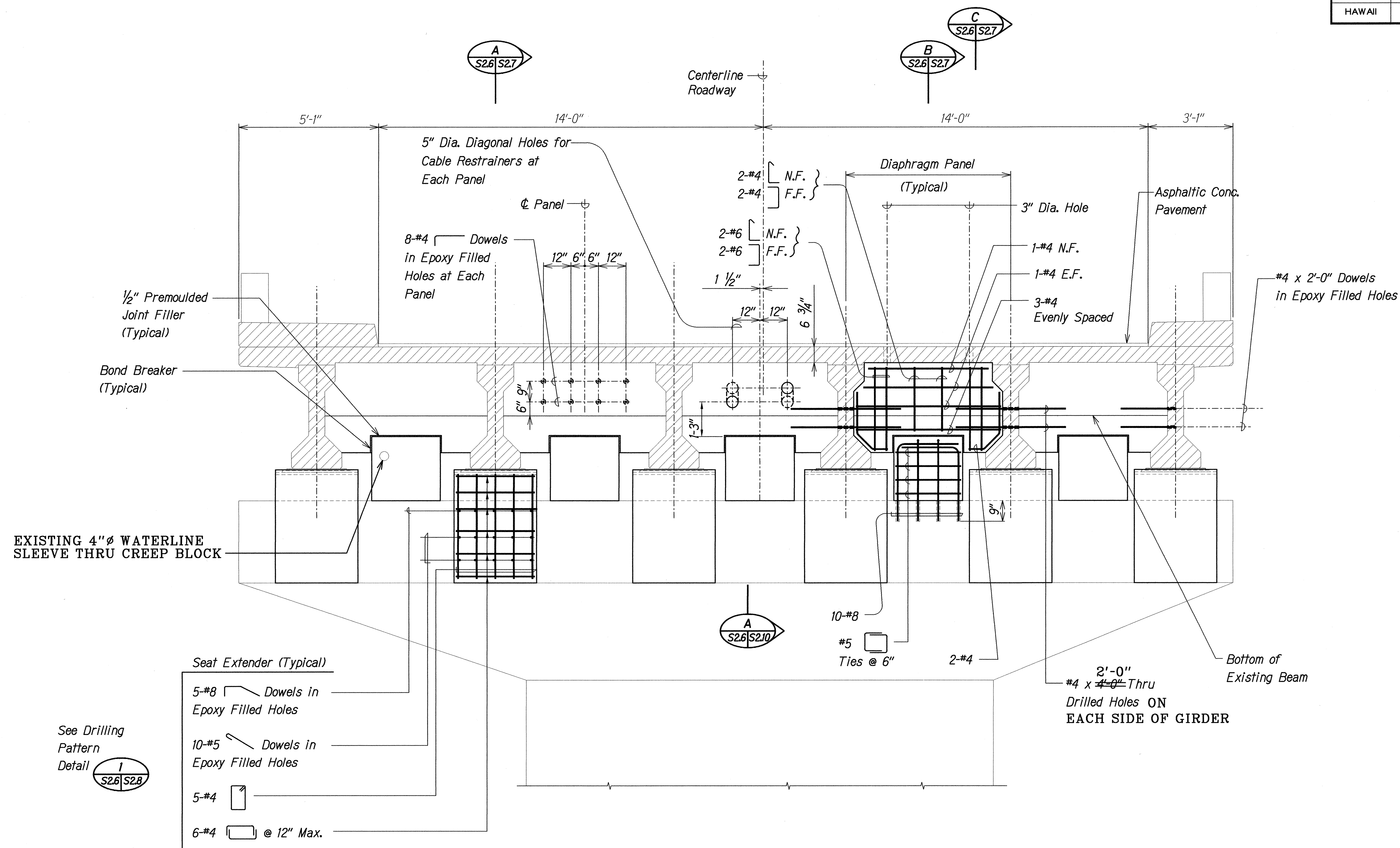


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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
KAIEIE BRIDGE
PIER NO. 1 AND NO. 2 CAP PLAN
 HAWAII BELT ROAD
 SEISMIC RETROFIT OF VARIOUS BRIDGES
 VICINITY OF PAPAIKOUL, HAWAII
 Project No. BR-019-2(43)
 Scale: As Noted Date: August 12, 1999

SHEET No. S25 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	21	65



NOTES:

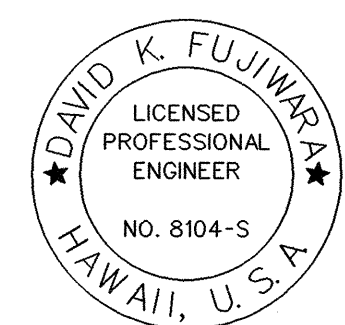
1. The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
2. Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations are Subject to the Approval of the Engineer.

PIERS NO. 1 AND NO. 2 - CAP ELEVATION

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

A
S2.5 S2.6
S2.1

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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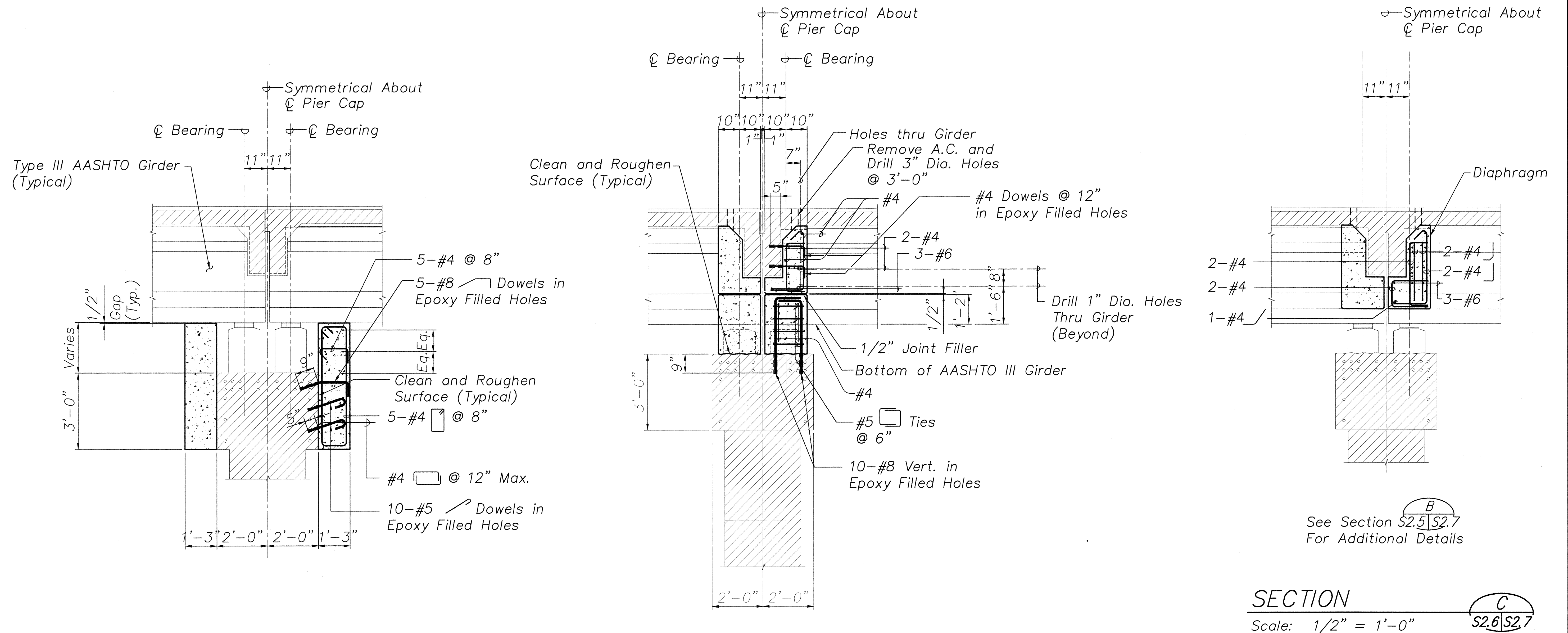
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE
PIER NO. 1 AND NO. 2 CAP ELEVATION
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOLOU, HAWAII
Project No. BR-019-2(43)
Scale: As Noted Date: August 12, 1999
SHEET No. S2.6 OF 59 SHEETS

"AS-BUILT" 21

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

FILE: 7008526.DGN
PLOT: 1/2" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	22	65



SECTION A
Scale: 1/2" = 1'-0"
S2.6 S2.5 S2.7

SECTION B
Scale: 1/2" = 1'-0"
S2.6, S2.9 S2.5 S2.7

NOTES:

- The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
- Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations are Subject to the Approval of the Engineer.
- When Pouring Concrete Thru 3" Diameter Holes There Shall Be No Void Spaces, Entrapped Air, or Entrapped Water.
- After Pouring Concrete to Top of Deck, A.C. shall be Replaced to Original Elevation. Do not Place A.C. Until Concrete has Sufficiently Hardened.
- For Lane Closures, see Specifications.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE

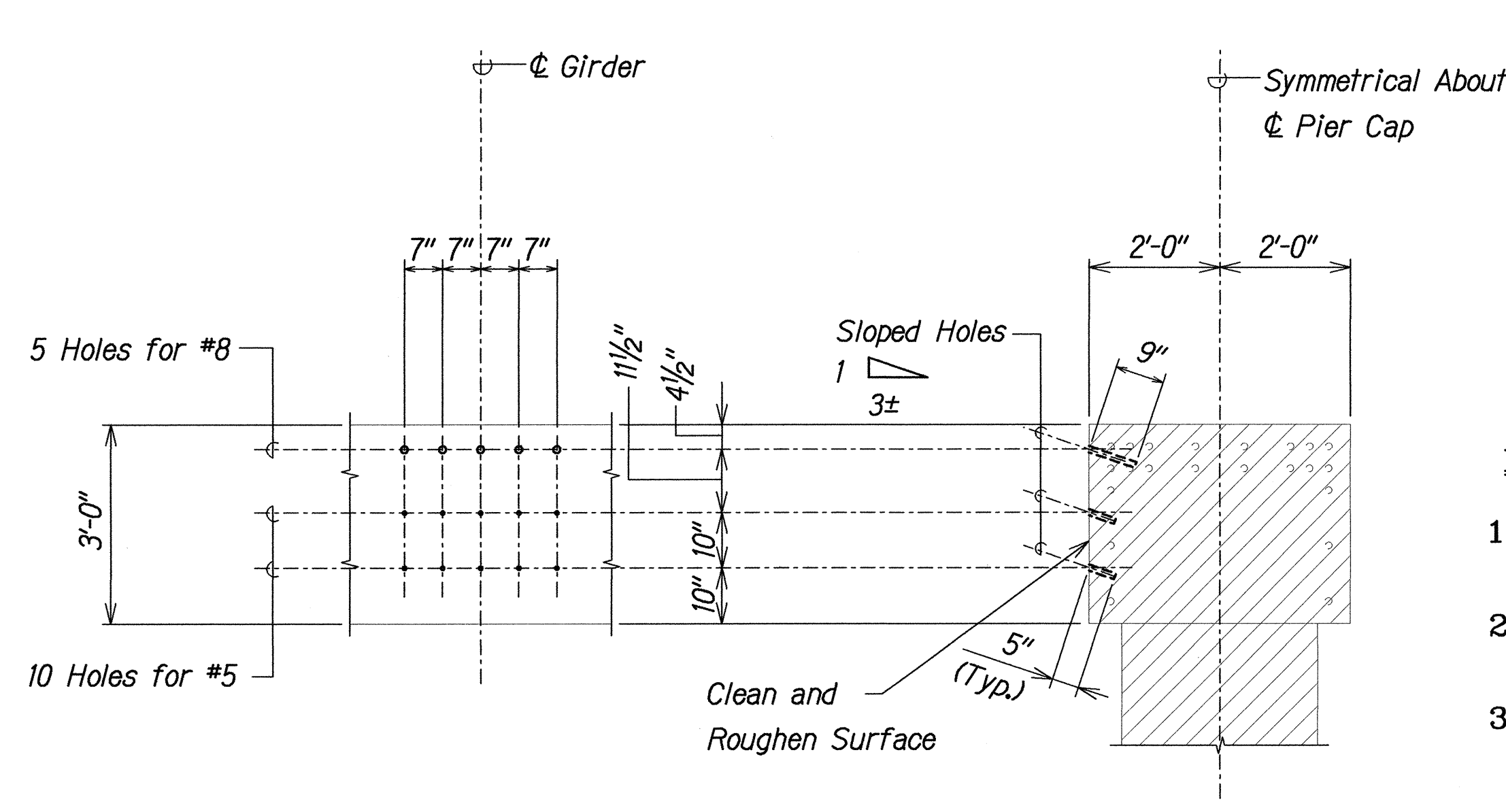
PIER CAP SECTIONS

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. S2.7 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	23	65



ELEVATION

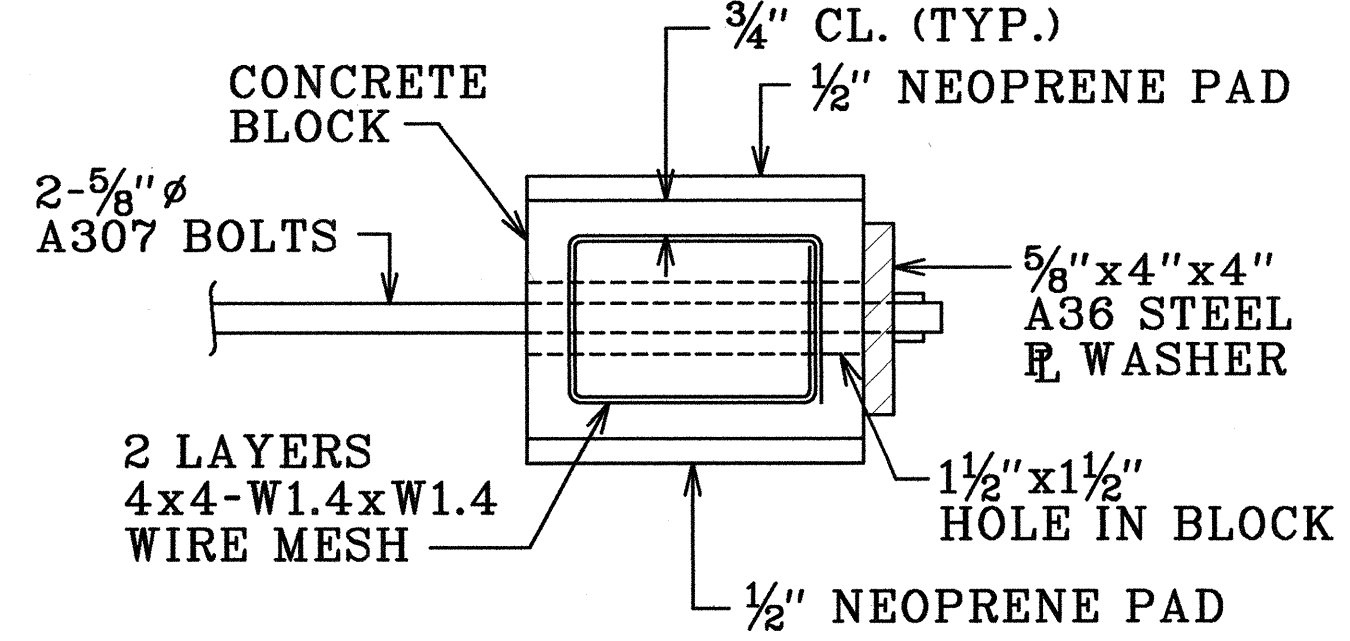
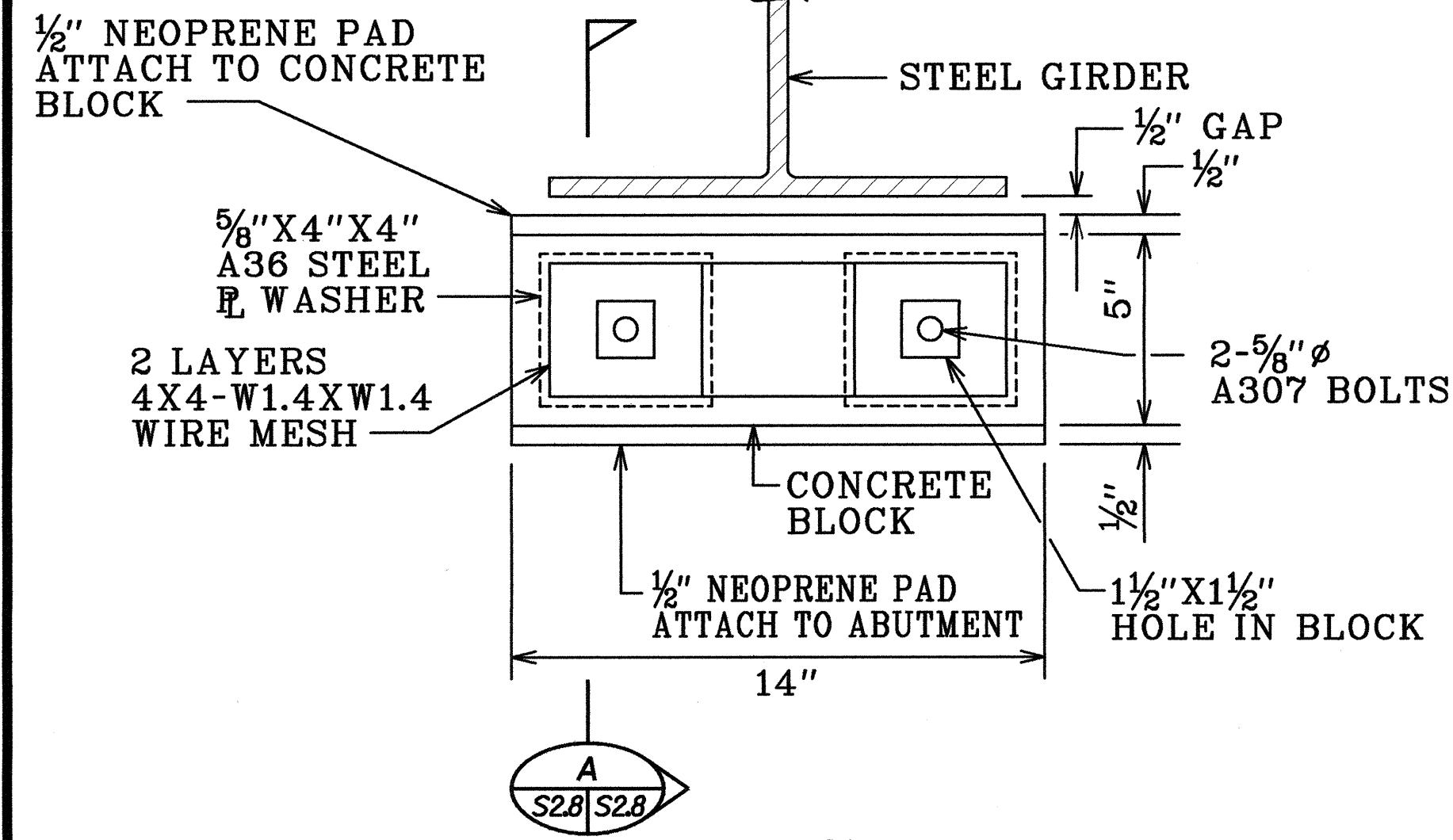
SECTION

TYPICAL DRILLING PATTERN AT EACH SEAT EXTENDER

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

NOTES:

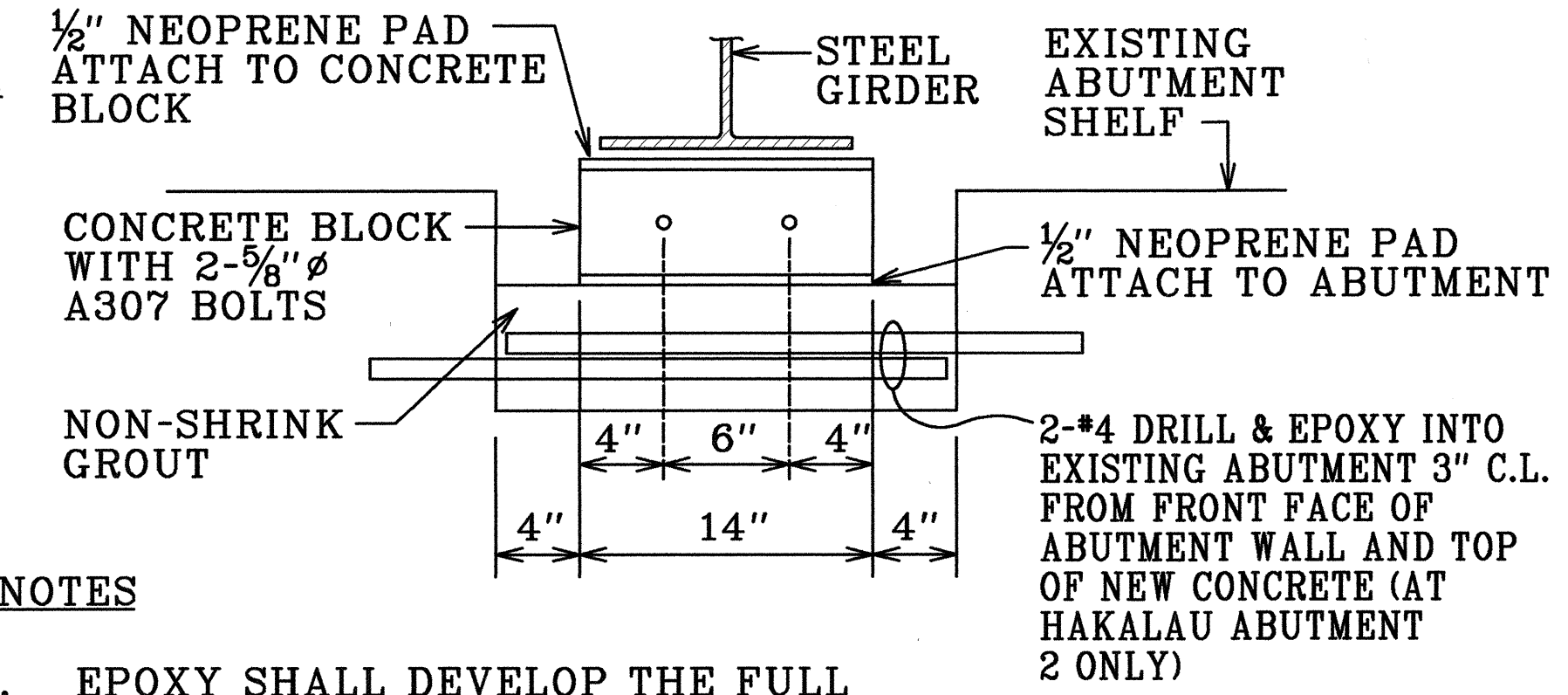
- The Contractor Shall Verify All Controlling Field Dimensions Before Ordering or Fabricating Material.
- Location of Drilled Dowel Holes Shown in Plans are Approximate. Prior to Placing Holes in Concrete, the Contractor Shall Locate All Reinforcing Steel and Adjust the Location of the Holes to Clear All Reinforcing Bars. Final Hole Locations ar Subject to the Approval of the Engineer.



A
S2.8 S2.8

SECTION

Scale: 3" = 1'-0"



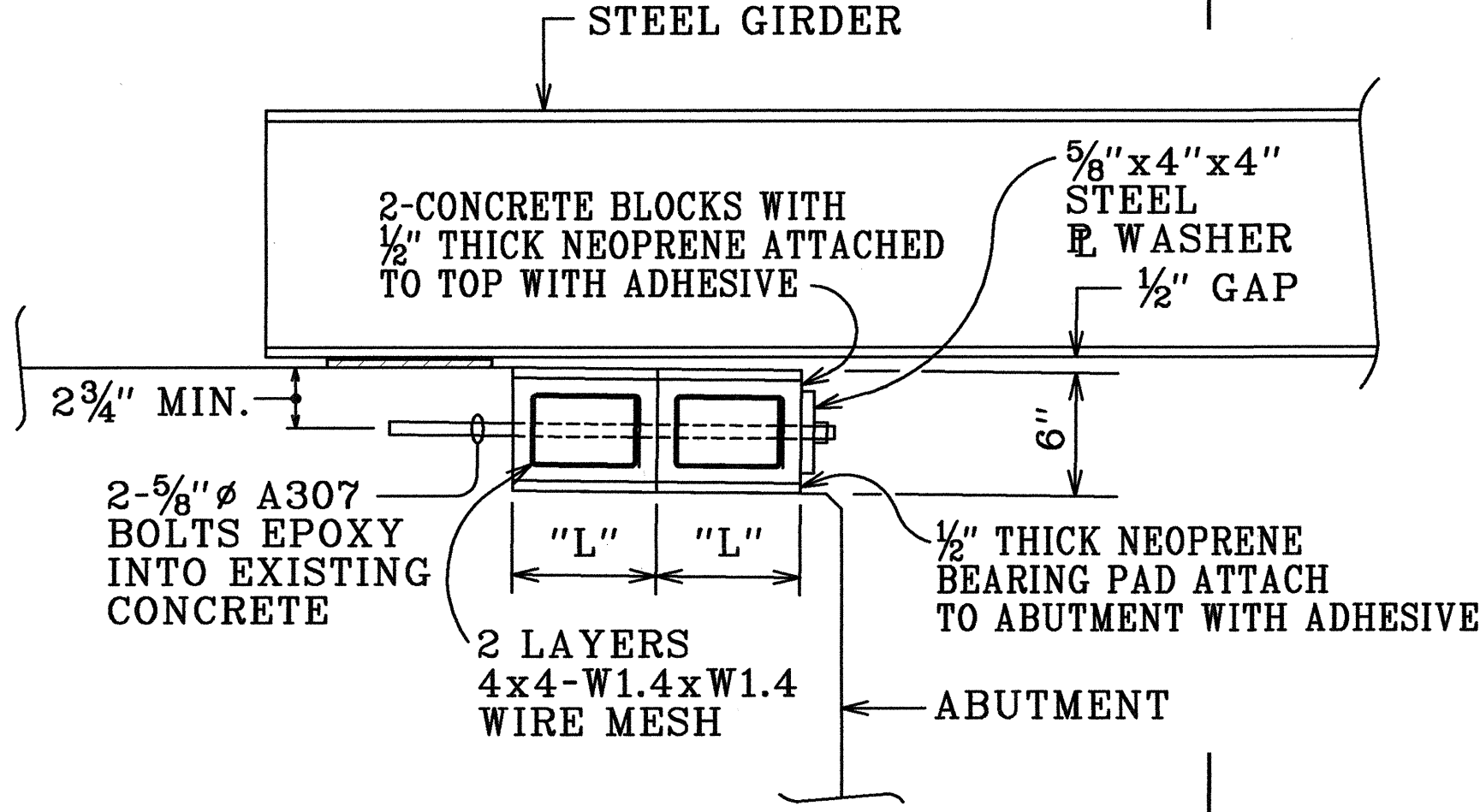
NOTES

- EPOXY SHALL DEVELOP THE FULL STRENGTH OF THE REINFORCING BARS.
- FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE EPOXY.
- ALL BOLTS, PLATES, STEEL MEMBERS, ETC. SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SECTION

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

B
S2.8 S2.8



HAKALAU

ABUTMENT

	"L"
1	7"
2	6"

KAPUE

ABUTMENT

	"L"
1	8"
2	7"

NOTE:

- EPOXY SHALL DEVELOP THE STRENGTH OF THE BOLT, FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE EPOXY.
- THE CONCRETE BLOCK SHALL BEAR ON THE ABUTMENT SHELF NOT CARRIED VERTICALLY BY THE BOLTS.
- CONCRETE COVER OVER REINFORCING STEEL IN CONCRETE BLOCKS SHALL BE 3/4".

B
S2.8 S2.8

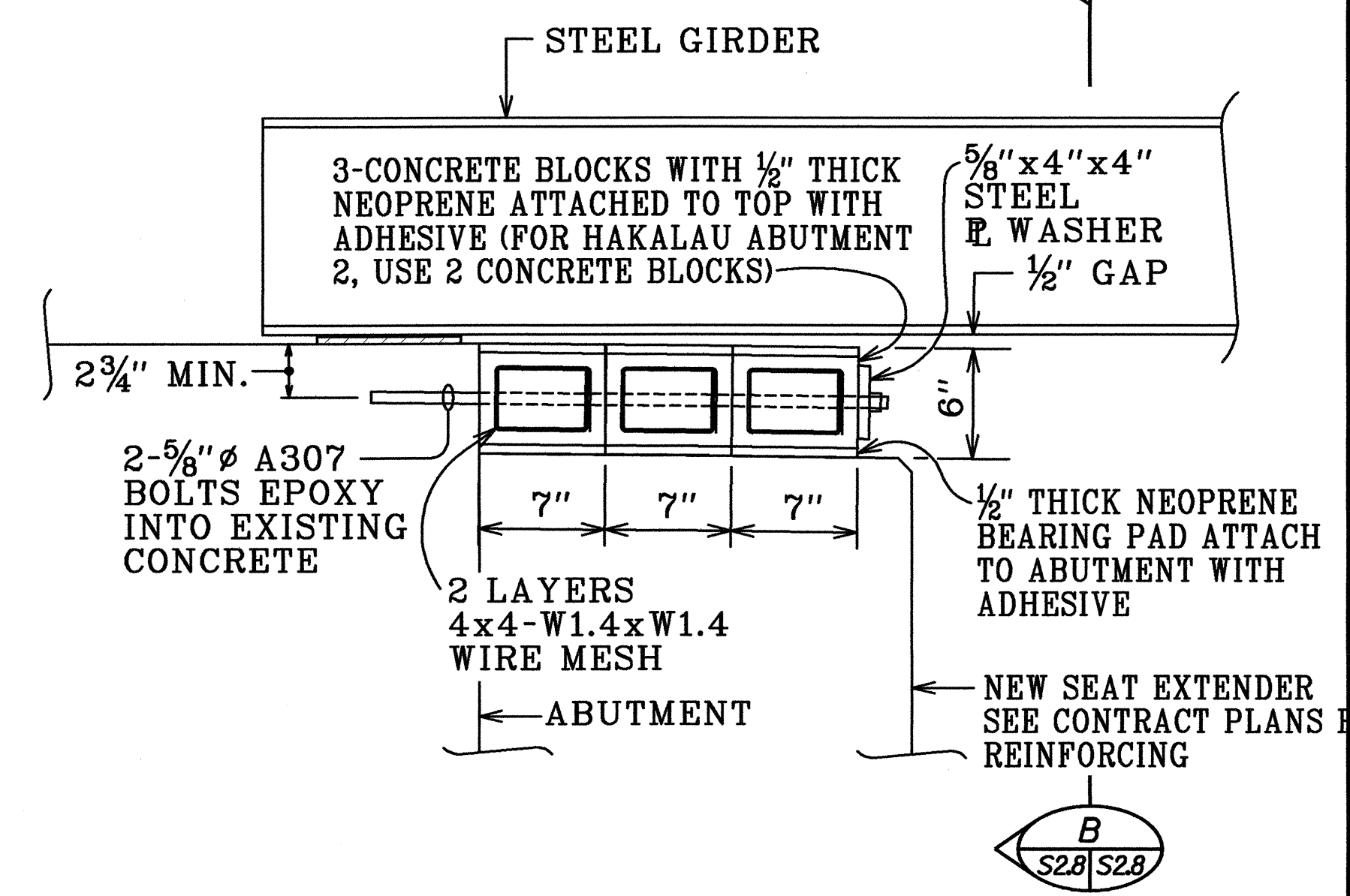
ELEVATION INTERIOR GIRDERS

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

C
S2.8 XXX

LEGEND FOR AS-BUILT POSTINGS

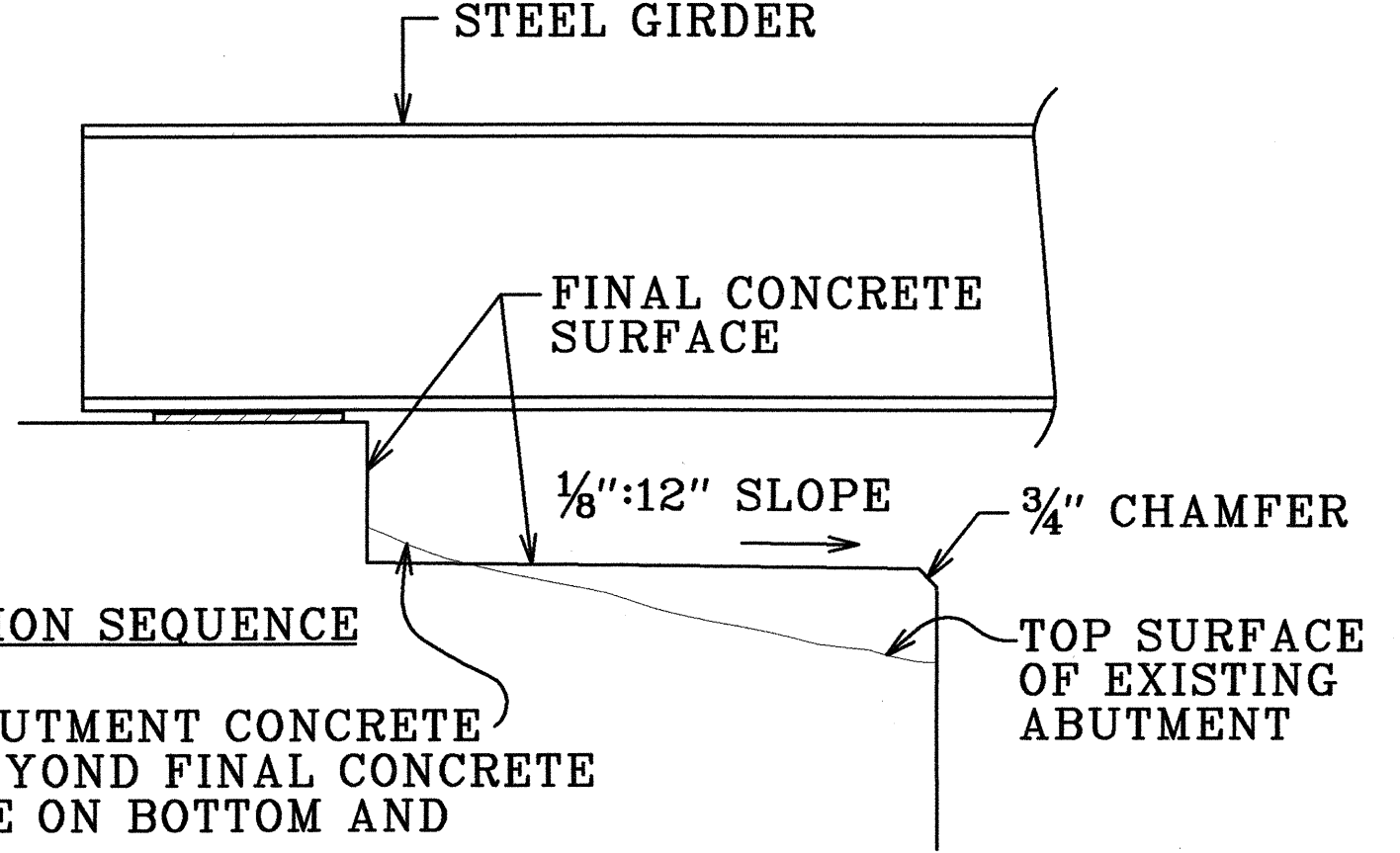
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting



ELEVATION EXTERIOR GIRDERS

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

D
S2.8 S2.8



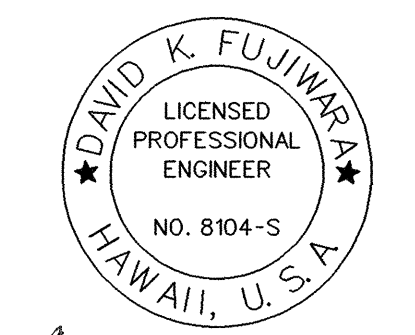
CONSTRUCTION SEQUENCE

- CHIP ABUTMENT CONCRETE TO 1" BEYOND FINAL CONCRETE SURFACE ON BOTTOM AND SIDES.
- CLEAN AND ROUGHEN SURFACE.
- APPLY EPOXY BINDING AGENT AND POUR 4000PSI NON-SHRINK GROUT TO REQUIRED LOCATION ON BOTTOM AND SIDES.

SEAT SURFACE PREPARATION

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

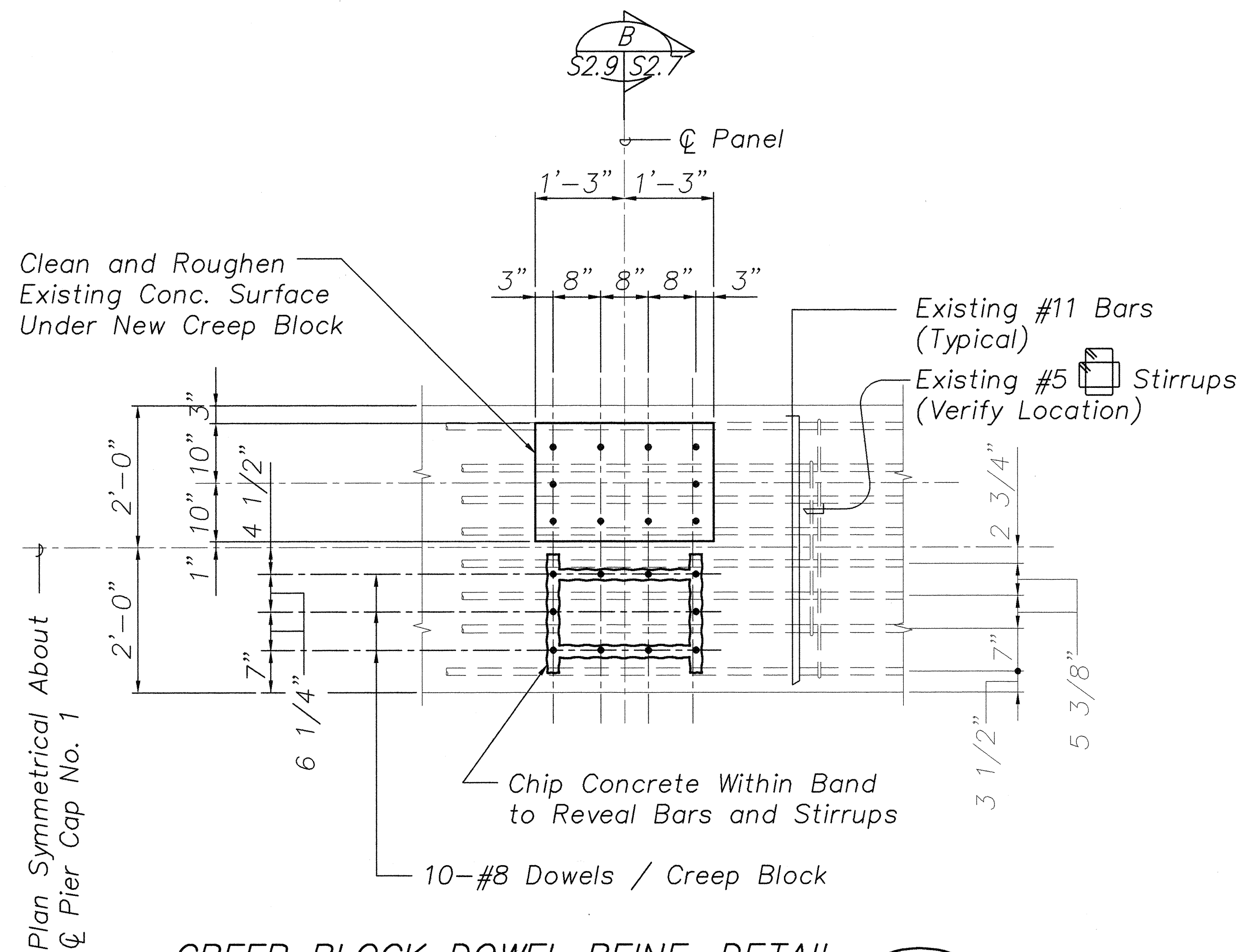
E
S2.8 S2.8



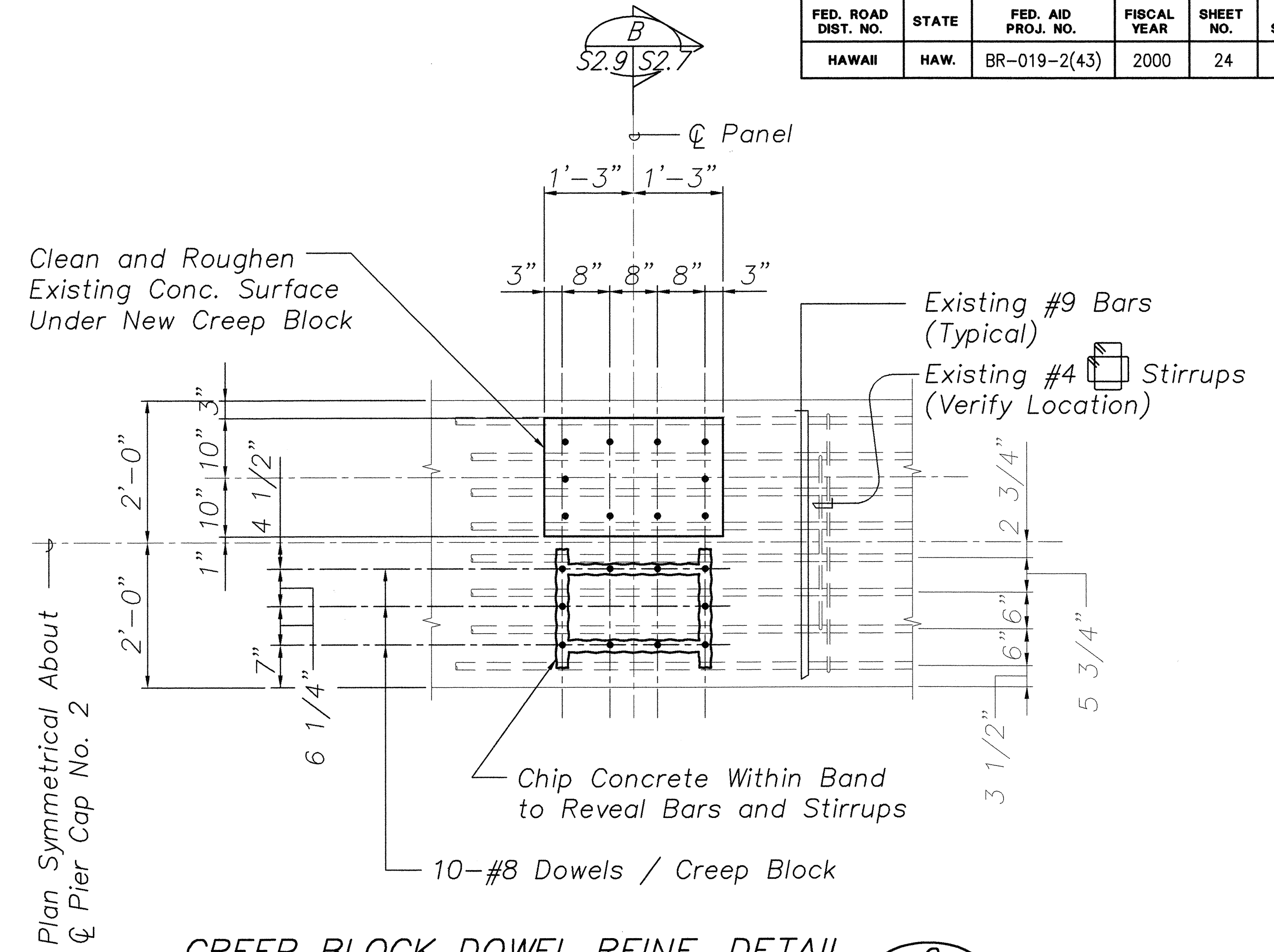
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEE BRIDGE
DETAILS
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPAIOLOU, HAWAII
Project No. BR-019-2(43)
Scale: As Noted Date: August 12, 1999
SHEET No. S2.8 OF 59 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	24	65



CREEP BLOCK DOWEL REINF. DETAIL 1
Scale: $3/4" = 1'-0"$ S2.5 S2.9

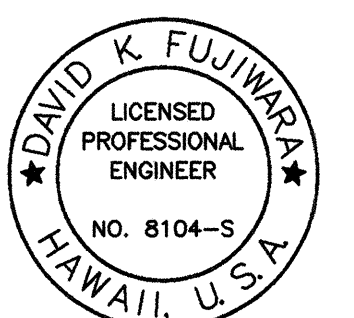


CREEP BLOCK DOWEL REINF. DETAIL 2
Scale: $3/4" = 1'-0"$ S2.5 S2.9

WORK SEQUENCE

1. Chip Surface Concrete to Reveal Location of Top Bars and Stirrups. Existing Reinforcing Shall Remain Intact.
2. Notify Engineer Before Proceeding. He Will Make Necessary Adjustments to the Exact Location of the Dowels.
3. Drill Holes, Apply Epoxy Adhesive and Insert Dowels According to Manufacturer's Recommendations. The Full Strength of the Bars Shall be Developed.
4. Remove Excess Adhesive from Concrete Surface and Proceed with Remaining Work.

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

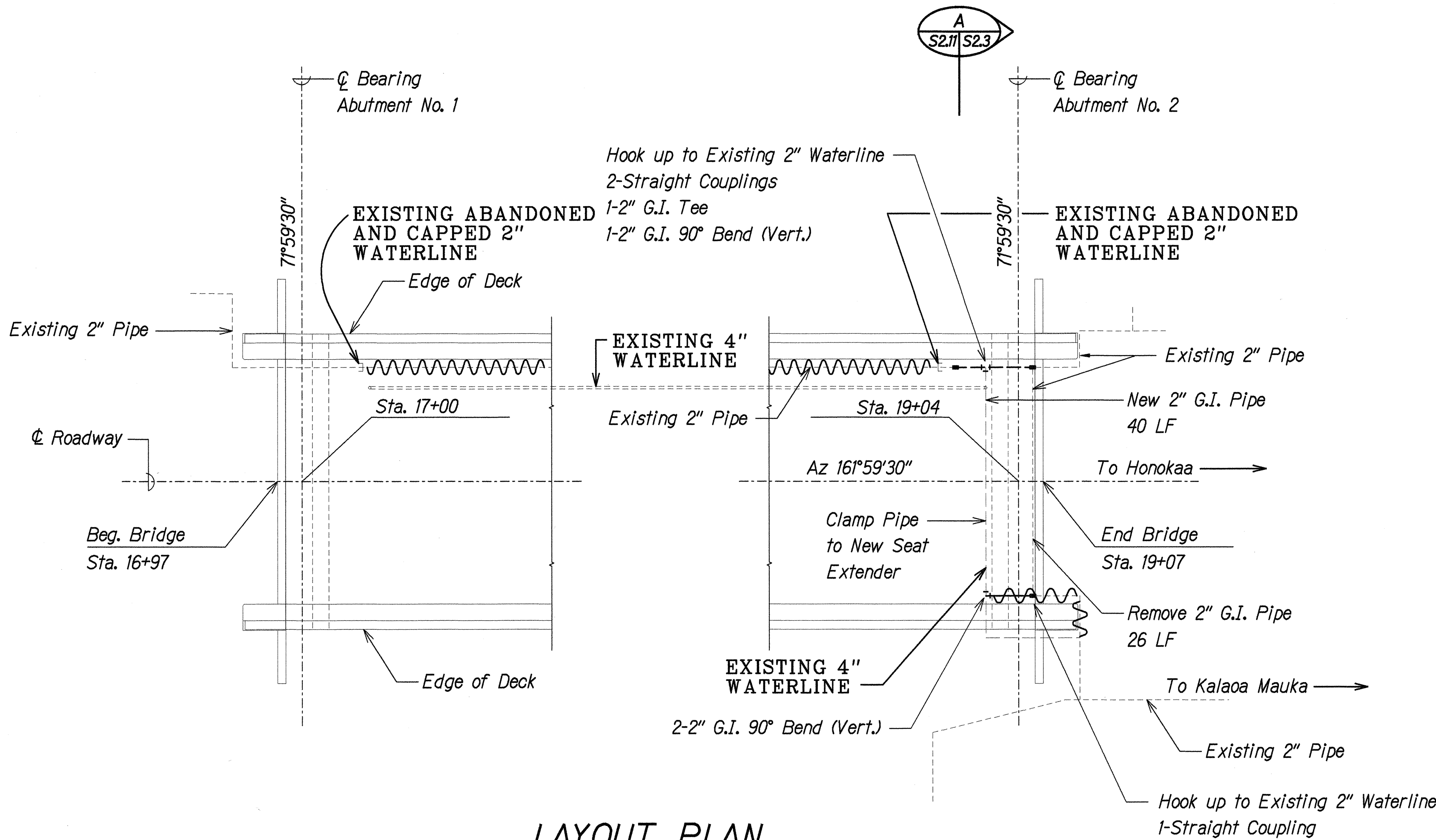


David K. Fujiwara

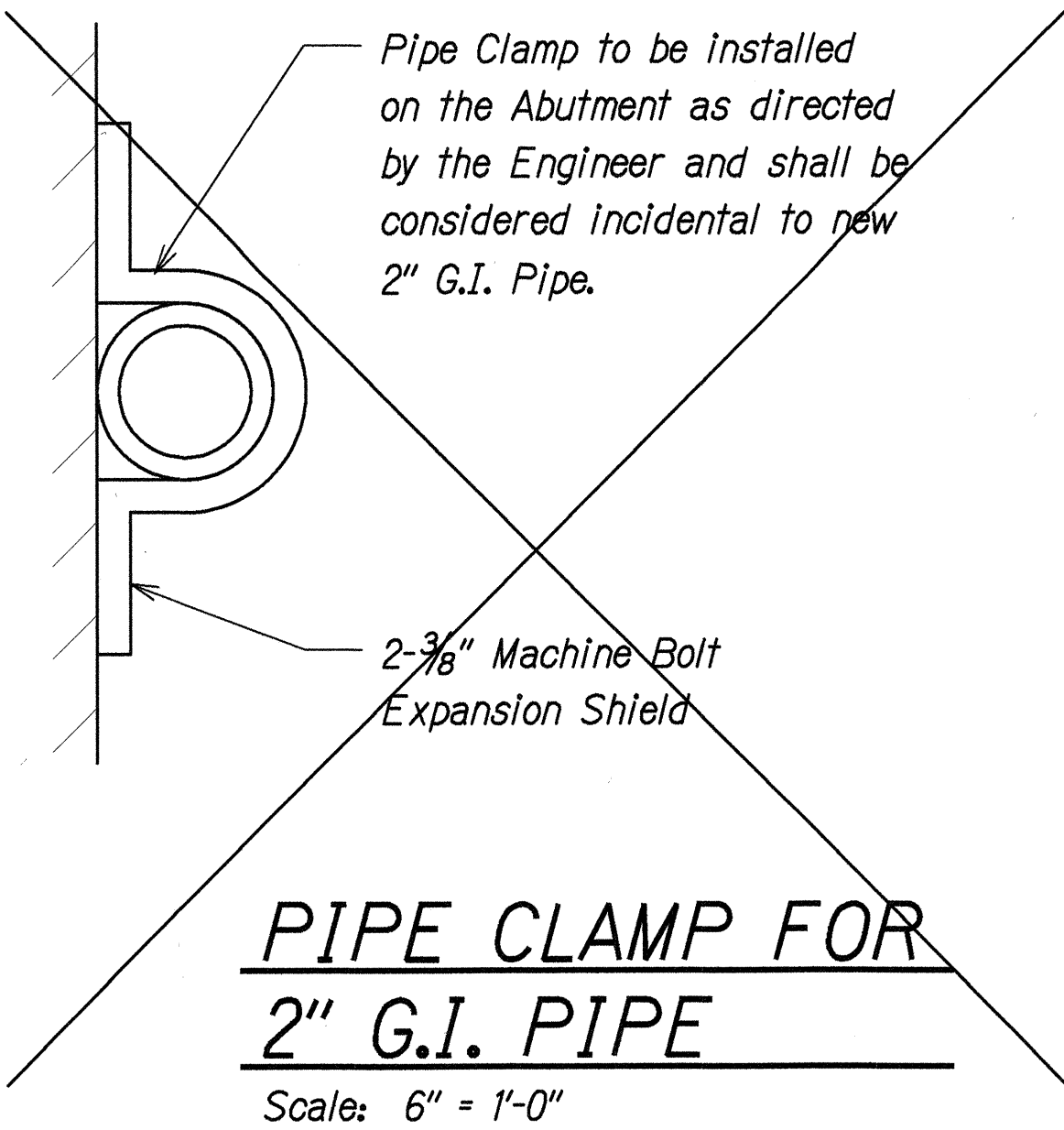
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION KAIEIE BRIDGE
DETAILS
HAWAII BELT ROAD SEISMIC RETROFIT OF VARIOUS BRIDGES VICINITY OF PAPAIKOU, HAWAII PROJECT NO. BR-019-2(43)
SCALE: AS NOTED DATE: August 12, 1999
SHEET No. S2.9 OF 59 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(43)	2000	26	65

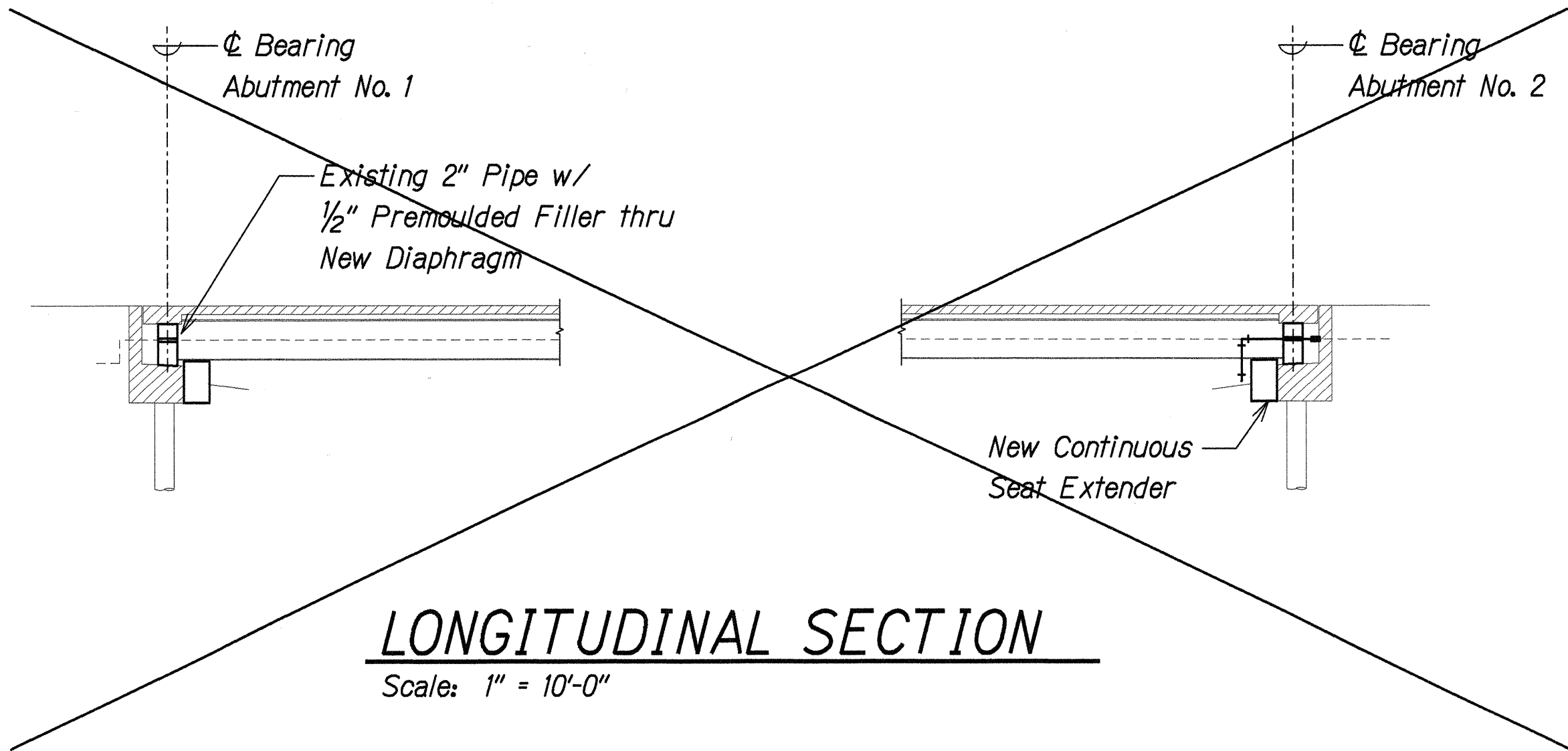


LAYOUT PLAN
Scale: 1" = 10'-0"



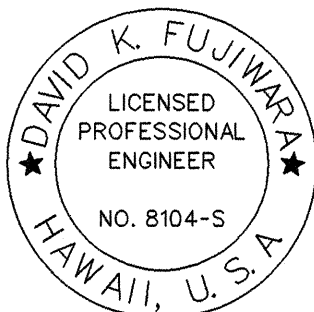
- WATERLINE NOTES:**
- 2" G.I. pipes, straight couplings, bends, pipe clamps and other items required to realign the pipeline shall be furnished and installed by the Contractor.
 - Connections to existing main shall be made as directed by the Board of Water Supply Engineer.
 - Chlorination for all new pipes and by-pass line shall be done by the Board of Water Supply.

- NOTE:**
- ALL WATERLINE WORK WAS DELETED AND NOT COMPLETED.



LONGITUDINAL SECTION
Scale: 1" = 10'-0"

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

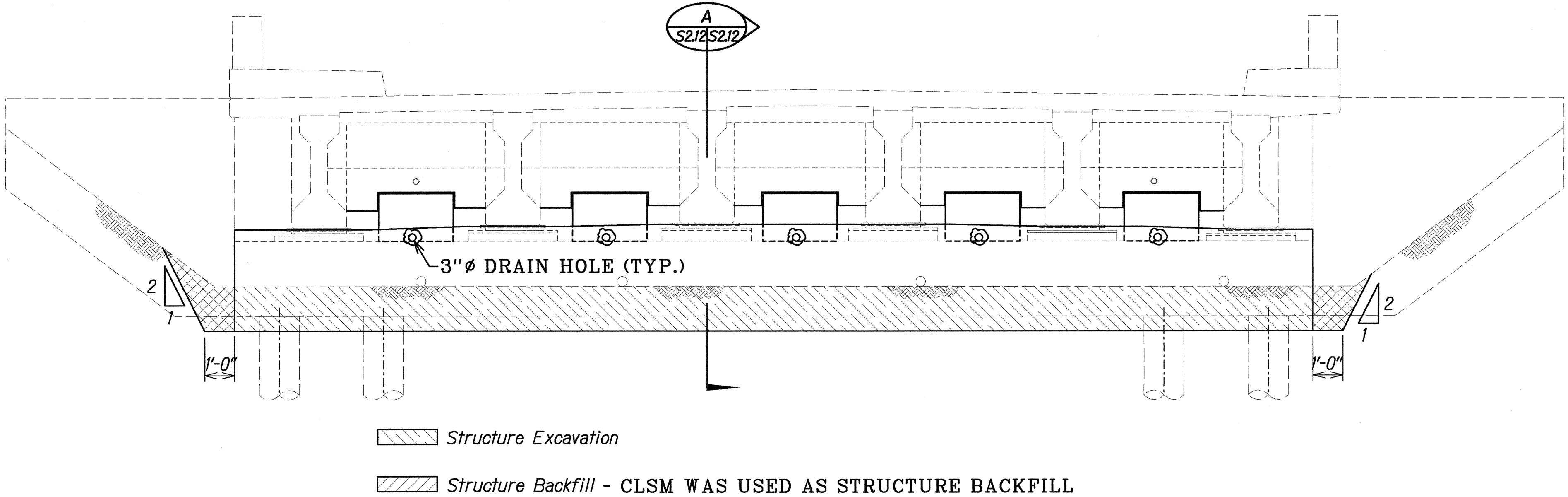


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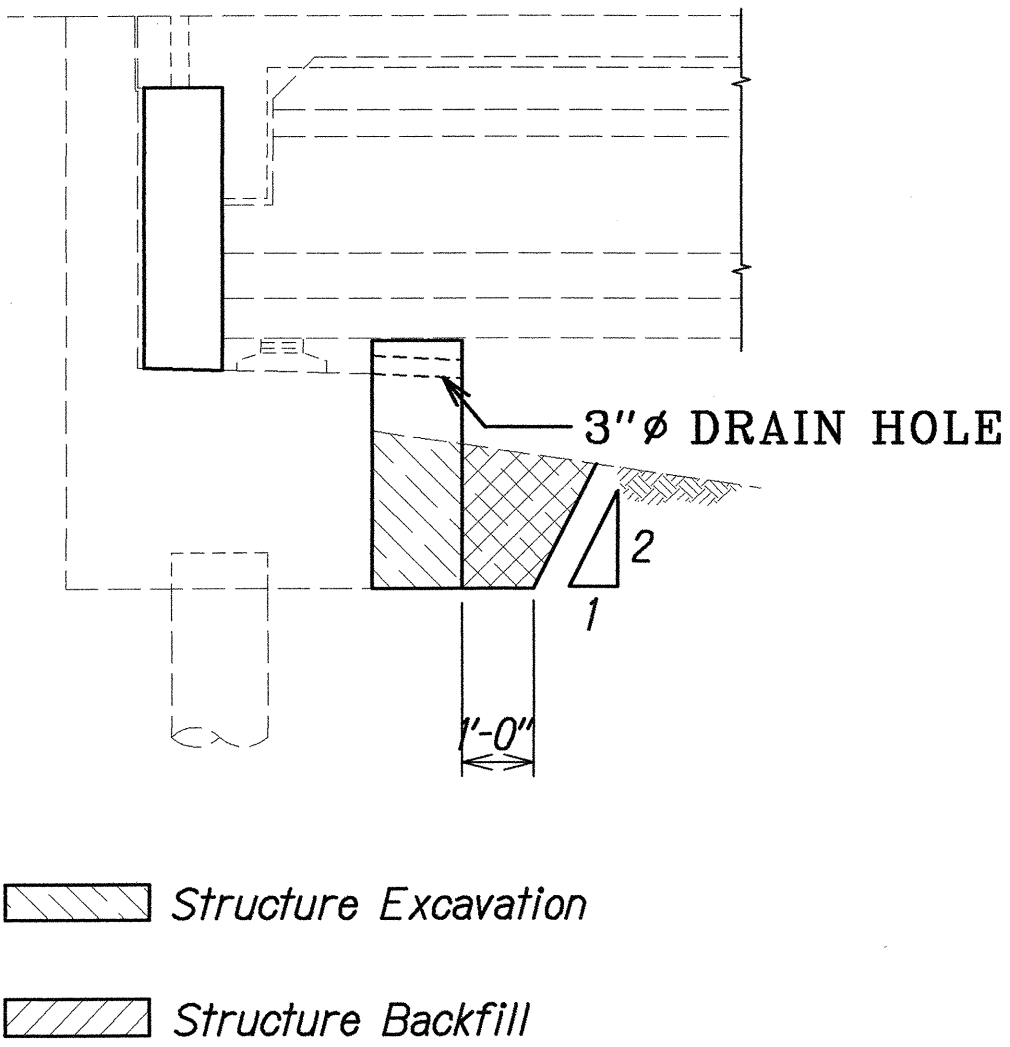
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAIEIE BRIDGE
WATERLINE RE-ALIGNMENT
AT ABUTMENT
HAWAII BELT ROAD
SEISMIC RETROFIT OF VARIOUS BRIDGES
VICINITY OF PAPA'IKOU, HAWAII
Project No. BR-019-2(43)
Scale: As Noted
Date: August 12, 1999

SHEET No. S211 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	27	65



ELEVATION - ABUTMENT



SECTION

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

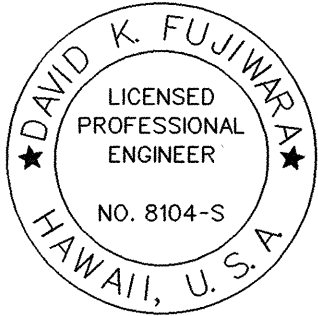
STRUCTURE EXCAVATION / BACKFILL PAY LIMITS

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

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

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
KAIEIE BRIDGE
STRUCTURE EXC./BACKFILL
PAY LIMITS - ABUTMENT
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. S212 OF 59 SHEETS