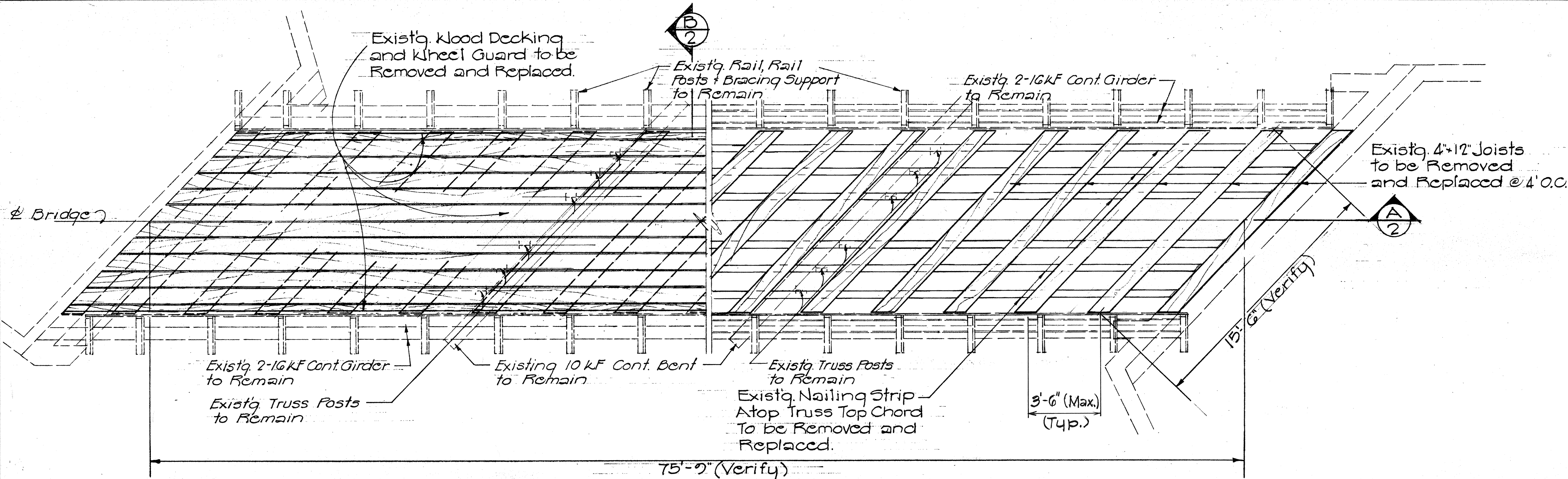


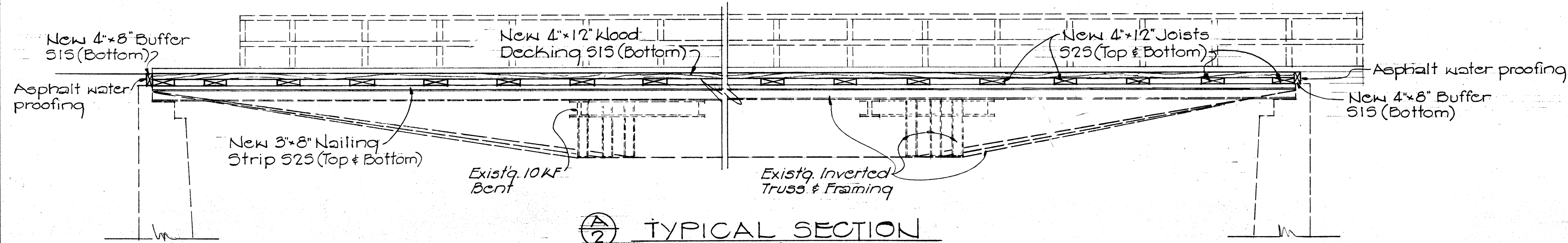
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56D-02-83M	1983	2	8

GENERAL NOTES:

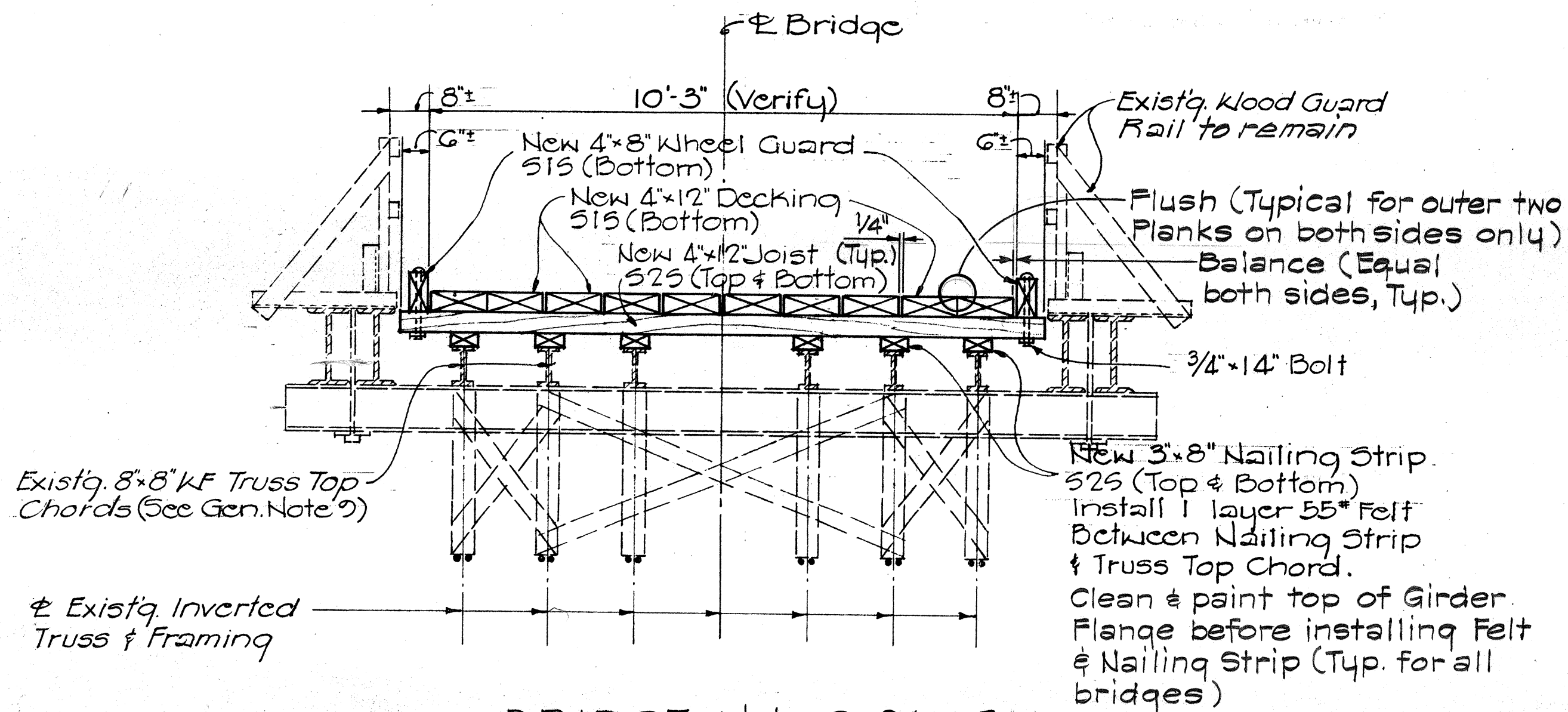
- 1- Materials Removed: shall become the property of the Contractor.
- 2- Project Structures: may be closed to vehicular traffic between the night hours of 10:00 P.M. and 6:00 A.M. on week days only, providing sufficient notice is given through the local newspaper and radio stations to warn the travelling public to the satisfaction of the Engineer.
- 3- Bridge Loading: Maximum gross vehicle loading on existing bridges shall be limited as follows:
Hanalei Bridge - 12 tons Waikoko Bridge - 8 tons
Waioli Bridge - 10 tons Wainiha Bridges - 8 tons
Waipa Bridge - 8 tons
- 4- Dimensions: All dimensions of the existing structures indicated on the Plans shall be verified in the field by the contractor.
- 5- The Intent: is to replace and secure all wooden decking, wheel guards, Joists, nailing strips and buffers for Bridge Nos. 1, 2, 3A & B with new material; to replace and secure the existing railings on Bridge No. 1 with new material.
- 6- Timber: Except Otherwise Specified, lumber shall be Douglas Fir #1 or Better, surfacing according to grading & dressing rules of the American Lumber Standard and shall be creosote treated in accordance with the current AWPA Standard Specifications for Preservative Treatment by Pressure Process. 4"x12" Wood Decking shall be Douglas Fir Select Structural Grade.
- 7- Galvanizing: All washers, nuts, bolts and spikes shall be galvanized after fabrication in accordance with the requirements of the A.S.T.M. Designation: A153.
- 8- Nailing strips shall be secured to girder flange by 1/2" & Carriage bolt at 4' o.c., staggered on each side of web or at existing holes on girder flanges.
- 9- To secure decking to joists, use 80 d spikes (3/8"x8") and to secure Joists to nailing strip use 60 d spikes and 20 d toenail. The number of spikes required to secure the construction will be determined by the Engineer in the field.
- 10- Bridges 1, 2, 3A & B are considered Wainiha Bridges for Bridge Loading. See General Note No. 3.
- 11- All hardware including structural steel with felt along with painting shall be incidental to lumber.



PLAN ~ BRIDGE No. 2
Scale: 1/4" = 1'-0"



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



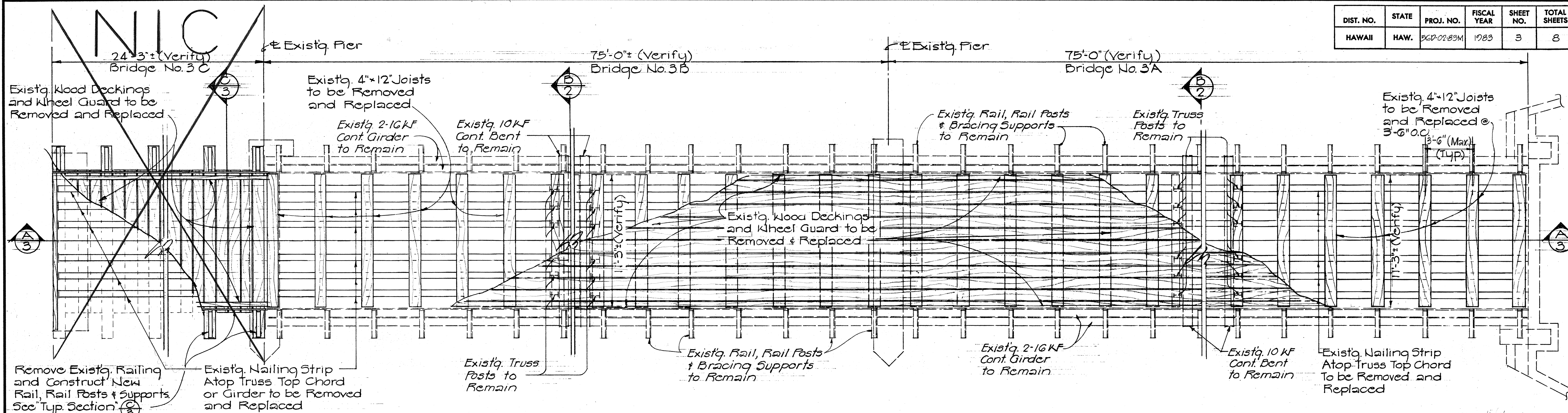
BRIDGE No's 2, 3A & B
NORMAL SECTION
Scale: 1/2" = 1'-0"

5/31/83	Added General Note No. 11.
DATE	REVISION

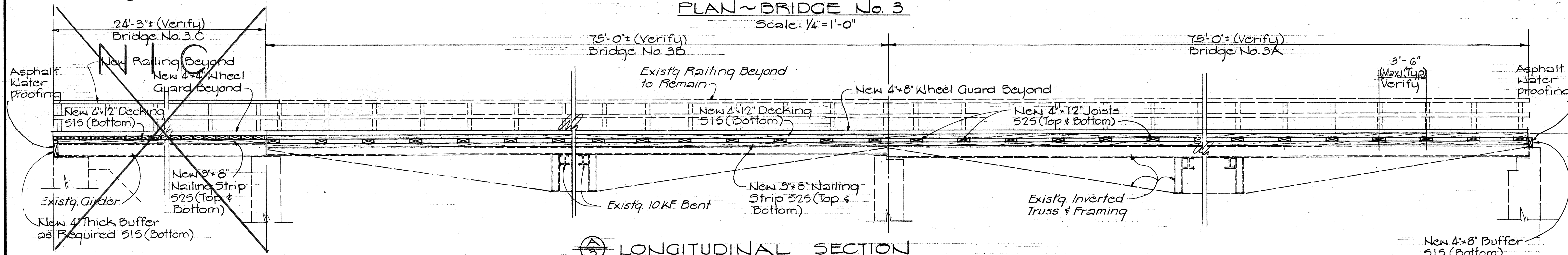
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
KUHIO HIGHWAY, REPLACE TIMBER DECKING, WAINIHA BRIDGES No. 1, 2 AND 3	
PROJECT No. 56D-02-83M	
PLAN AND SECTIONS, BRIDGE No. 2	
Scale: As Shown	Sept 1982
SHEET No. 1 OF 1 SHEETS	

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

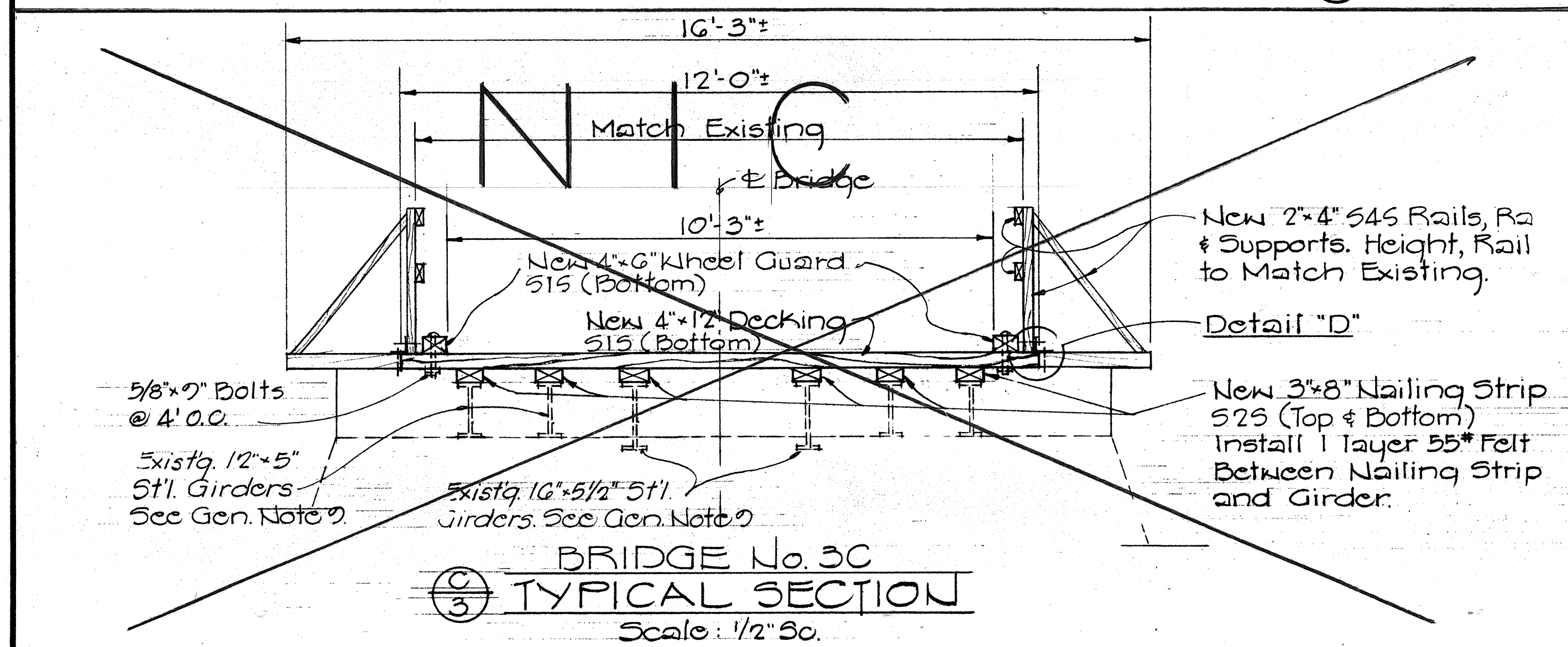
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	SGD-02-83M	1983	3	8



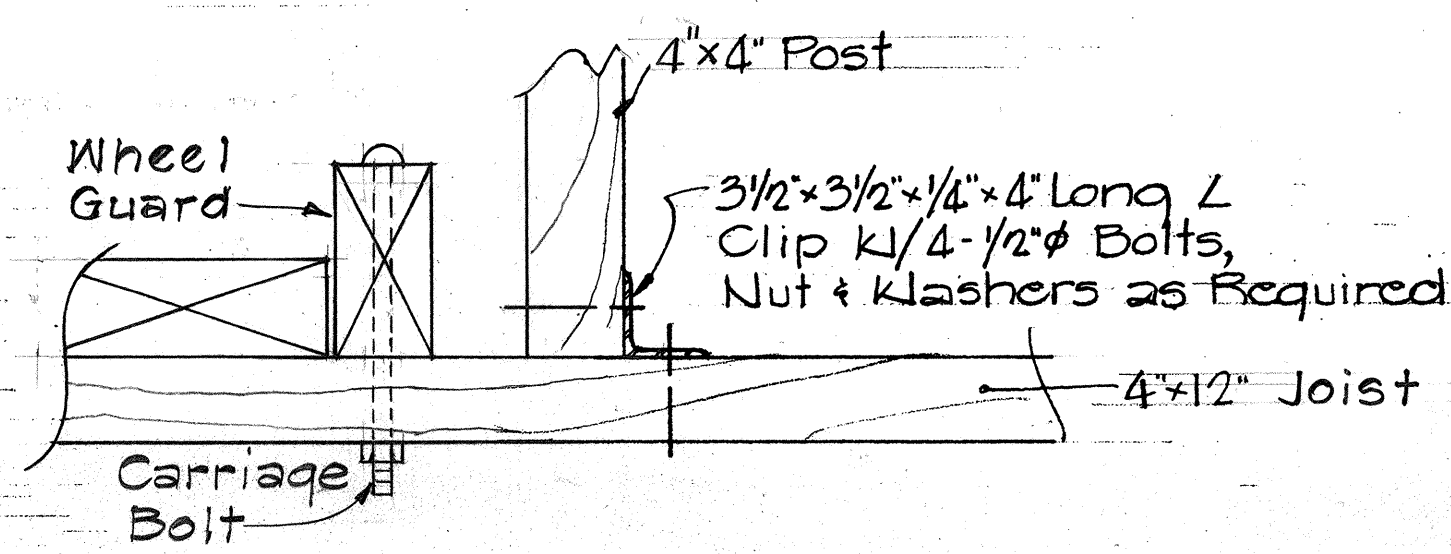
PLAN ~ BRIDGE No. 3
Scale: 1/4" = 1'-0"



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



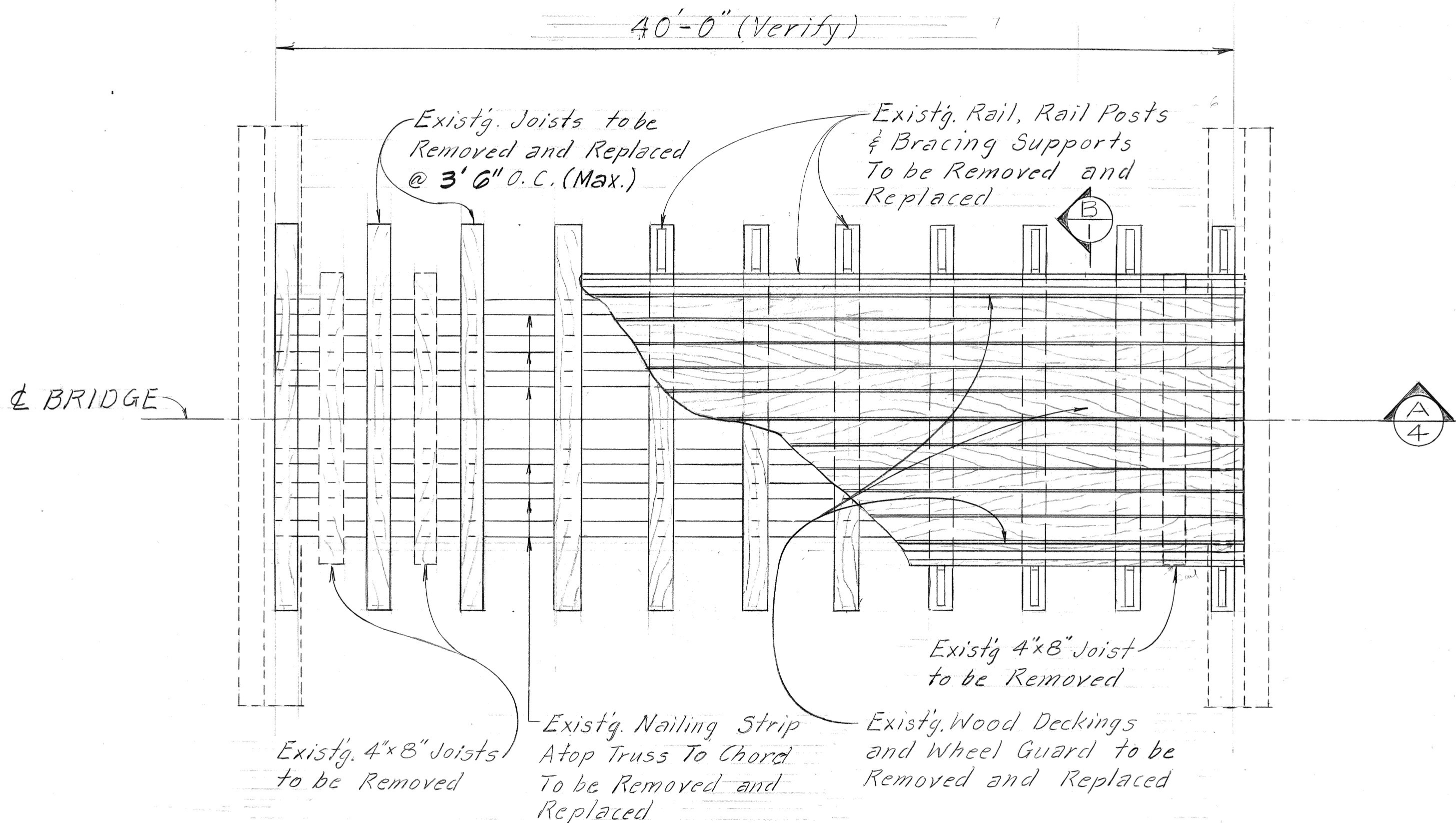
BRIDGE No. 3C
TYPICAL SECTION
Scale: 1/2" = 1'-0"



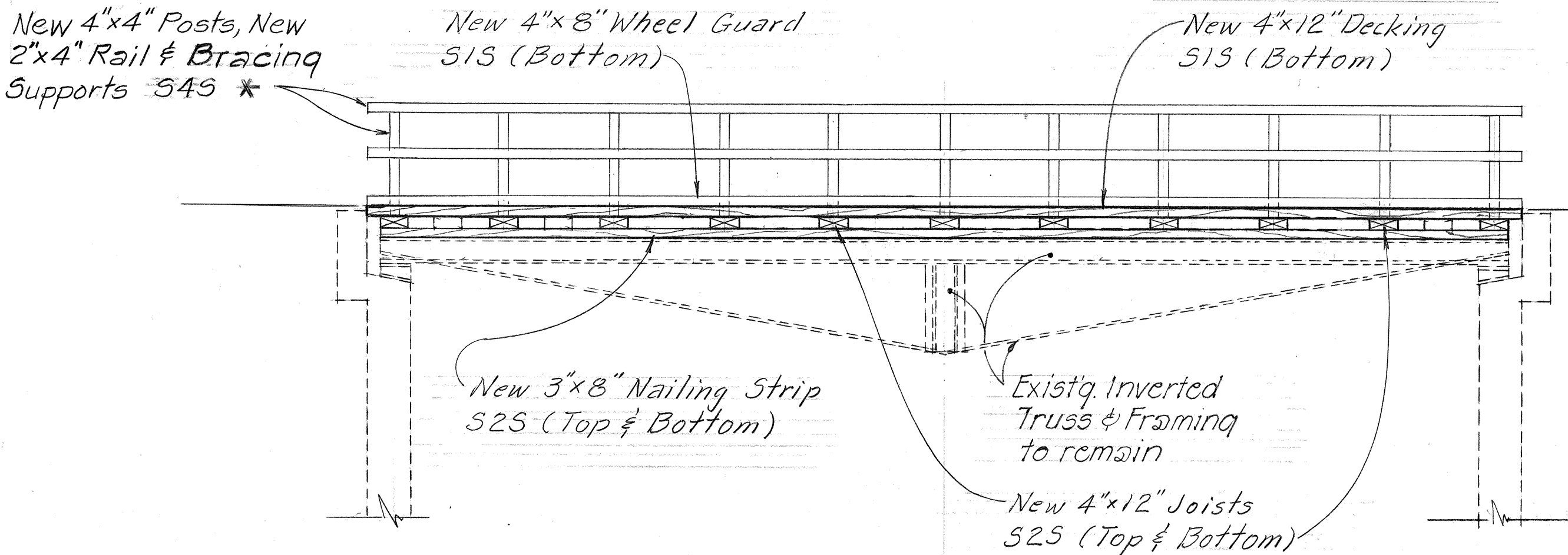
DETAIL "D"
Scale: 1/2" = 1'-0"

5/31/83	Revised DETAIL "D"
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION KUHIO HIGHWAY, REPLACE TIMBER DECKING, WAINIHA BRIDGES No. 1, 2 AND 3 PROJECT No. SGD-02-83M	
PLAN AND SECTIONS, BRIDGE No. 3	
Scale: As Shown	Sept. 1982
SHEET No. 1 OF 1 SHEETS	

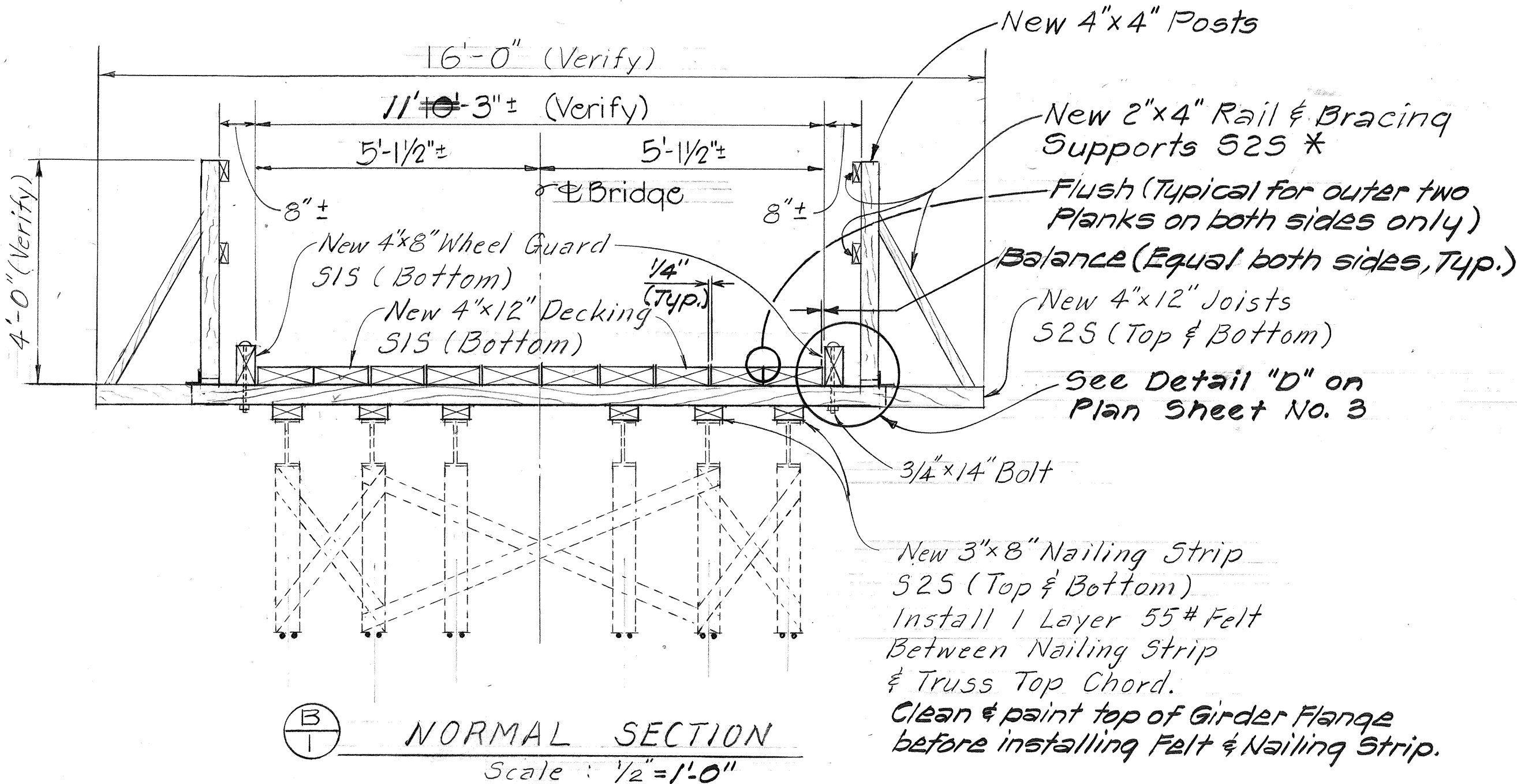
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	SGD-02-83M	1983	4	8



PLAN ~ BRIDGE No. 1
Scale : 1/4" = 1'-0"



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



ESTIMATED QUANTITIES

MATERIAL **	BRIDGE No.1	BRIDGE No.2	BRIDGE No.3A & B	TOTAL
4"x8" D.F. #1 or Better Grade	300 B.F.	480 B.F.	860 B.F.	1640 B.F.
3"x8" D.F. #1 or Better Grade	490 B.F.	920 B.F.	1830 B.F.	3240 B.F.
4"x12" D.F. Select Structural #1 or Better Gr.	2390 B.F.	4320 B.F.	8000 B.F.	14710 B.F.
2"x4" & 4"x4" D.F. Select *	310 B.F.	0	0	310 B.F.
1/2" x 2 1/2" Carriage Bolt w/Washer & Nut	50 ea.	0	0	50 ea.
1/2" x 4" Carriage Bolt w/Washer & Nut	70 ea.	120 ea.	240 ea.	430 ea.
1/2" x 5" Carriage Bolt w/Washer & Nut	50 ea.	0	0	50 ea.
5/8" x 9" Carriage Bolt w/Washer & Nut	30 ea.	0	0	30 ea.
5/8" x 13" Carriage Bolt w/Washer & Nut	30 ea.	40 ea.	80 ea.	120 ea.
3 1/2" x 3 1/2" x 1/4" ANGLE	10 L.F.	0	0	10 L.F.
60d. Spike	15 lbs.	25 lbs.	50 lbs.	90 lbs.
80d. Spike	80 lbs.	150 lbs.	300 lbs.	530 lbs.
20d. Spike	10 lbs.	20 lbs.	30 lbs.	60 lbs.
55lbs. Felt	220 sq.	400 sq.	800 sq.	1420 sq.
Paint (Red Lead, Type II)	160 gal.	310 gal.	600 gal.	1070 gal.
Paint (White Enamel)	2 gal.	0	0	2 gal.

Note

* Lumber shall be wolmanized

** All Materials including Structural Steel with Felt shall be incidental to Treated Timber and Hardware.

5/31/83	Changed 2"x4" Posts to 4"x4" Posts. Revised Estimated Quantities Table.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
KUHIO HIGHWAY, REPLACE TIMBER
DECKING, WAINIHA BRIDGES No. 1, 2 AND 3
PROJECT No. SGD-02-83M

PLAN AND SECTIONS, BRIDGE No. 1
Scale: As Shown
SHEET NO. 1 OF 1 SHEETS
Sept. 1982

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