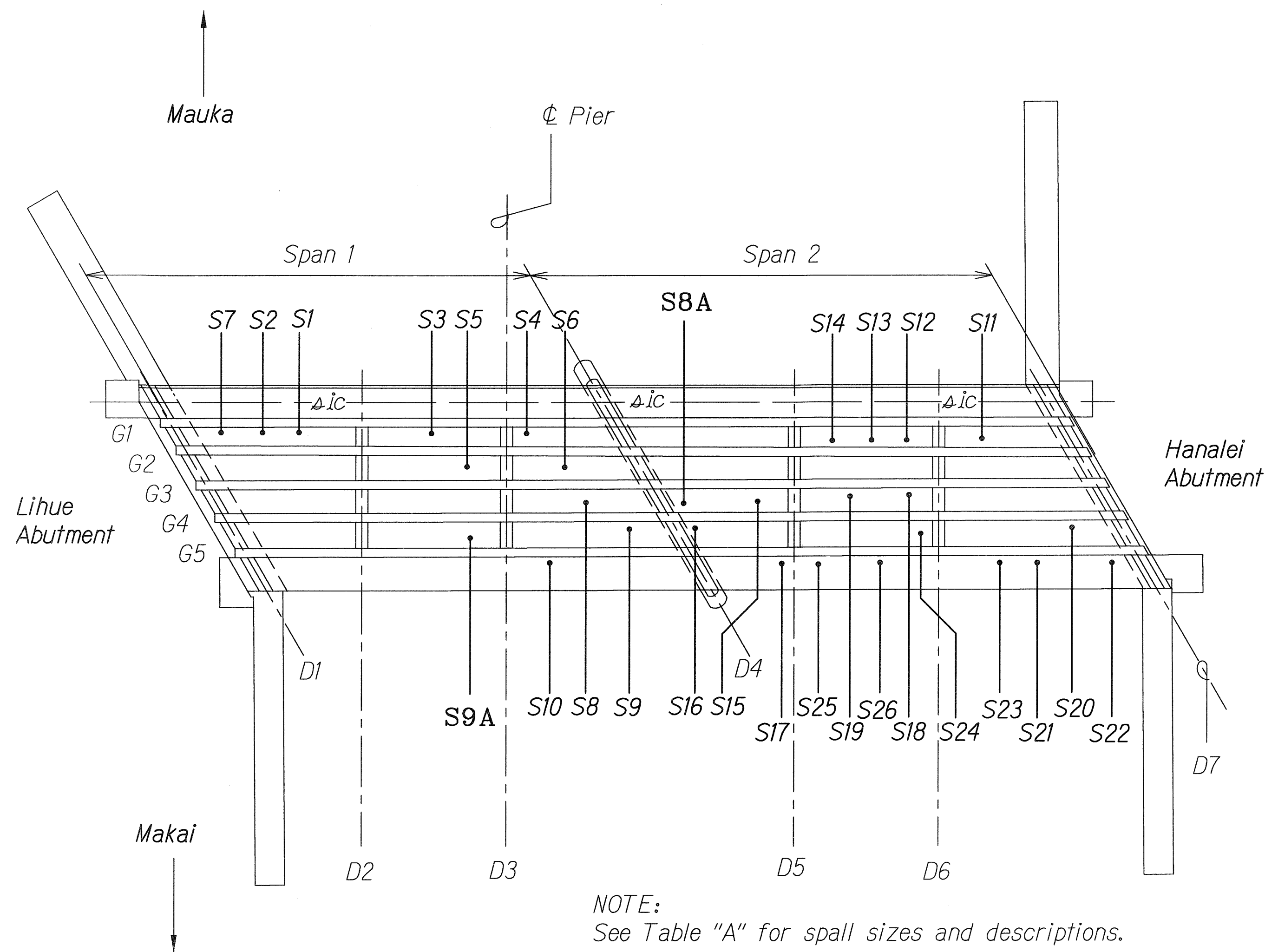


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	8	14



UNDERSIDE OF DECK (SOFFIT) SPALLS
Scale: NTS

TABLE "A"					See Sheet No. 10S-1 For Actual Measurements
Spall No.	Spall Size (ft x ft)		Area (sf)	Span	Location / Remarks
S1	1.0	3.0	3.0	1	between G1 and G2, and D1 and D2
S2	1.5	1.5	2.3	1	between G1 and G2, and D1 and D2, near drain pipe
S3	2.0	17.0	34.0	1	between G1 and G2, and D2 and D3, near drain pipe; Replace approx 6 lineal feet of corroded rebar.
S4	5.0	16.0	80.0	1	between G1 and G2, and D3 and D4
S5	2.5	2.5	6.2	1	between G2 and G3, and D2 and D3
S6	3.0	20.0	60.0	1	between G2 and G3, and D3 and D4; exposed rebar
S7	1.5	1.5	2.3	1	between G1 and G2, and D1 and D2
S8	3.0	20.0	60.0	1	between G3 and G4, and D3 and D4
S9	3.0	18.0	54.0	1	between G4 and G5, and D3 and D4; exposed rebar
S10	1.0	35.0	35.0	1	makai of G5, and between D3 and D5; exposed rebar
S11	3.0	3.0	9.0	2	between G1 and G2, and D6 and D7, near drain pipe
S12	1.5	3.0	4.5	2	between G1 and G2, and D5 and D6
S13	1.5	3.0	4.5	2	between G1 and G2, and D5 and D6
S14	3.0	3.0	9.0	2	between G1 and G2, and D5 and D6, near drain pipe
S15	1.5	1.5	2.2	2	between G3 and G4, and D4 and D5
S16	1.5	1.5	2.3	2	between G4 and G5, and D4 and D5
S17	2.0	2.0	4.0	2	makai of G5 at D5; exposed rebar
S18	1.5	1.5	2.3	2	between G3 and G4, and D5 and D6
S19	1.5	1.5	2.2	2	between G3 and G4, and D5 and D6
S20	2.5	2.5	6.3	2	between G4 and G5, and D6 and D7, near drain pipe
S21	3.0	4.0	12.0	2	makai of G5, and between D6 and D7
S22	2.0	2.0	4.0	2	makai of G5, and between D6 and D7
S23	1.5	1.5	2.2	2	makai of G5, and between D6 and D7
S24	3.0	3.0	9.0	2	between G4 and G5, and D5 and D6, near drain pipe
S25	2.5	2.5	6.3	2	makai of G5, and between D5 and D6
S26	1.5	1.5	2.3	2	makai of G5, and between D5 and D6
	Total Area		418.9 sf		

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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

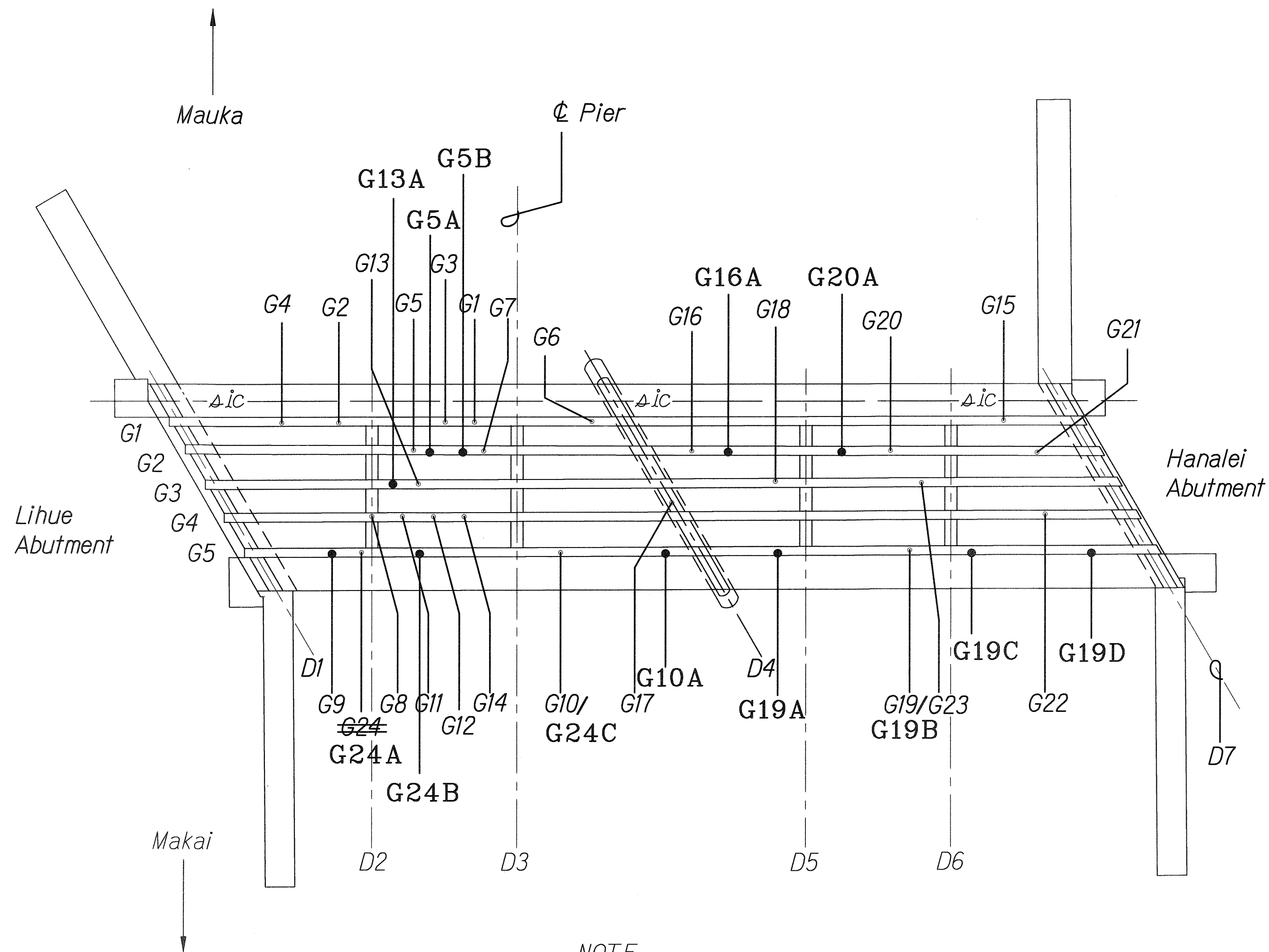
UNDERSIDE OF DECK (SOFFIT) SPALLS

KUHIO HIGHWAY
Spall Repairs at Kapaa Stream Bridge
Project No. 56B-01-06M

Scale: NTS Date: May 2006

SHEET No. 1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	9	14



NOTE:
See Table "B" for spall sizes and descriptions.

GIRDER SOFFIT SPALLS
Scale: N.T.S.

TABLE "B"						See Sheet No. 10S-2 For Actual Measurements
Spall No.	Spall Size W (ft) x L (ft)		Area (sf)	Span	Girder	Location / Remarks
G1	2.0	3.0	6.0	1	G1	between D2 and D3
G2	1.5	1.5	2.2	1	G1	between D1 and D2; exposed stirrup
G3	1.5	1.5	2.3	1	G1	between D2 and D3
G4	1.0	11.0	11.0	1	G1	between D1 and D2
G5	2.0	8.0	16.0	1	G2	between D2 and D3
G6	1.0	5.0	5.0	1	G1	between D3 and D4
G7	1.0	4.0	4.0	1	G2	between D2 and D3
G8	1.0	3.0	3.0	1	G4	at D2
G9	1.0	8.0	8.0	1	G5	between D1 and D2
G10	2.0	55.0	110.0	1	G5	from D2 to D4; exposed bot bars & stirrups
G11	1.5	1.5	2.3	1	G4	between D2 and D3
G12	1.5	1.5	2.2	1	G4	between D2 and D3
G13	1.0	5.0	5.0	1	G3	between D2 and D3
G14	1.5	1.5	2.3	1	G4	between D2 and D3
G15	2.0	12.0	24.0	2	G1	between D6 and D7
G16	1.0	4.0	4.0	2	G2	between D4 and D5; exposed bot bar
G17	3.0	1.0	3.0	2	D4	between G3 and G4
G18	1.0	5.0	5.0	2	G3	between D4 and D5; exposed bot bar
G19	2.0	80.0	160.0	2	G5	all of Span 2
G20	1.0	12.0	12.0	2	G2	between D5 and D6
G21	1.0	5.0	5.0	2	G2	between D6 and D7
G22	1.0	3.0	3.0	2	G4	between D6 and D7; exposed rebar
G23	1.0	6.0	6.0	2	G3	between D5 and D6
G24	2.0	6.0	12.0	1	G5	near D2
Total Area:			413.3 sf			

SURVEY PLOTTED BY	DATE
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QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
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LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
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Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER SOFFIT SPALLS

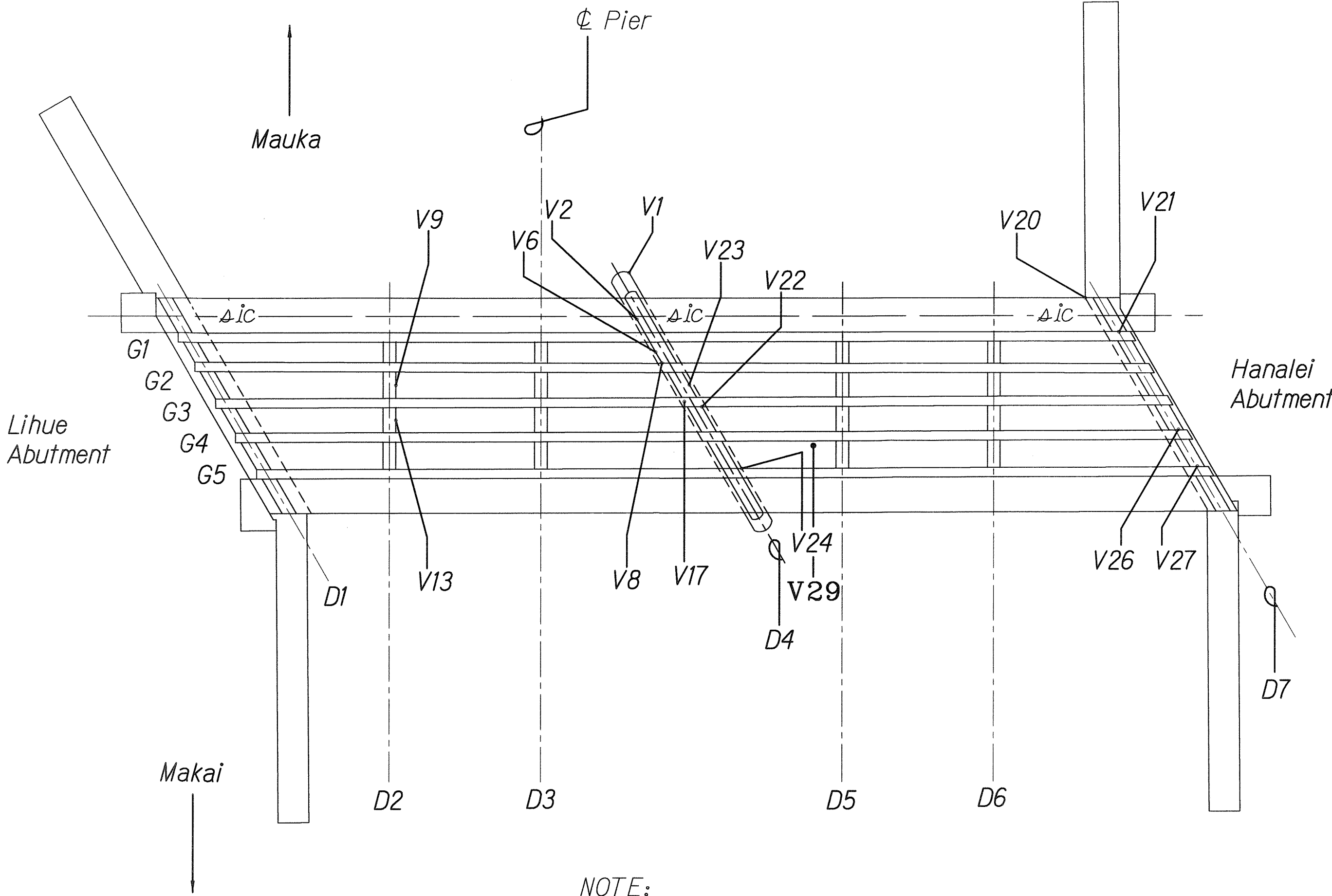
KUHIO HIGHWAY

Spall Repair at Kapaa Stream Bridge

Project No. 56B-01-06M

Scale: N.T.S. Date: May 2006

SHEET No. 2 OF 6 SHEETS



NOTE:
See Table "D" for spall sizes and descriptions.

VERTICAL SPALLS (NOT ON GIRDERS)
Scale: N.T.S.

TABLE "D" See Sheet No.10S-1 For Actual Measurements					
Sides of Diaphragm Beams					
Spall No.	Spall Size (ft x ft)		Area (sf)	Element	Location / Remarks
V6	3.0	1.0	3.0	D4	between G1 and G2
V9	1.0	9.0	9.0	D2	between G2 and G3; exposed rebar
V13	1.5	3.0	4.5	D2	between G3 and G4
V23	1.5	1.5	2.3	D4	Hanalei face between G2 and G3
Total area = 18.8 sf					
Sides of Pier					
V1	2.5	2.5	6.3	Pier	mauka face
V2	1.0	1.0	1.0	Pier	near bearing of G1, Span 1
V8	5.0	2.0	10.0	Pier	near bearing of G2, Span 1
V17	1.0	1.0	1.0	Pier	near bearing of G3, Span 1
V22	5.0	1.0	5.0	Pier	Hanalei face between G3 and G4
V24	5.0	3.0	15.0	Pier	near bearing of G5, Span 2; exposed rebar
Total area = 38.3 sf					
Rocker Bearings					
V21	1.0	2.0	2.0	Rocker	G1 Hanalei abutment
V26	2.0	1.0	2.0	Rocker	G4 Hanalei abutment
V27	2.0	1.0	2.0	Rocker	G5 Hanalei abutment
Total area = 6.0 sf					
Abutment					
V20	1.0	4.0	4.0 sf	Abutment	Hanalei abut., mauka side, adjacent to G1 rocker bearing

TABLE "C" See Sheet No.10S-1
For Actual Measurements

Sides of Girder						
Spall No.	Spall Size (ft x ft)		Area (sf)	Span	Girder	Location / Remarks
V3	3.0	4.0	12.0	1	G1	makai face between D3 and D4
V4	2.5	2.5	6.3	1	G1	makai face between D3 and D4
V5	2.0	2.0	4.0	1	G1	makai face between D3 and D4
V7	4.0	7.0	28.0	1	G2	mauka face between D3 and D4
V10	2.5	2.5	6.2	1	G3	mauka face between D3 and D4
V11	4.0	4.0	16.0	1	G3	mauka face between D3 and D4
V12	2.5	2.5	6.3	1	G3	mauka face between D3 and D4
V14	2.5	2.5	6.2	1	G4	mauka face between D3 and D4
V15	2.5	2.5	6.3	1	G4	mauka face between D3 and D4
V16	3.5	3.5	12.3	1	G4	mauka face between D3 and D4
V18	4.0	4.0	16.0	1	G5	mauka face between D3 and D4
V19	2.0	2.0	4.0	1	G5	mauka face between D3 and D4
V25	3.5	3.5	12.2	2	G5	makai face at D5; exposed rebar
V28	2.5	2.5	6.2	2	G5	makai face between D5 and D6
Total Area:			142.0 sf			

LEGEND FOR
AS-BUILT POSTINGS

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Double line for as-built deletion

Roadway Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VERTICAL SPALLS

KUHIO HIGHWAY

Spall Repairs at Kapaa Stream Bridge

Project No. 56B-01-06M

Scale: N.T.S. Date: May 2006

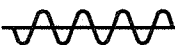
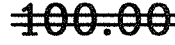
SHEET No. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	10S-1	14

Underside of Deck (Soffit) Spalls Field Measurements					
DIMENSIONS (ACTUAL)					
SPALL NO.	LENGTH (INCH)	WIDTH (INCH)	SUBTOTAL AREA (SF)	TOTAL AREA (SF)	REMARKS
S1	30	24	5.000	5.000	
S2	96	17	11.333	11.333	
S3	84	26	15.167	48.167	
	99	34	23.375		
	42	33	9.625		
S4	165	54	61.875	64.375	
	24	15	2.500		
S5	65	9	4.063	12.722	
	43	29	8.660		
S6	244	45	76.250	76.250	
S7	29	24	4.833	4.833	
S8	227	45	70.938	70.938	
S8A	30	16	3.333	3.333	NEW SPALL LOCATION
S9	181	45	56.563	64.465	
	32	29	6.444		
	21	10	1.458		
S9A	27	27	5.063	25.007	NEW SPALL LOCATION
	30	16	3.333		
	48	48	16.000		
	11	8	0.611		
S10	424	24	70.667	75.333	
	96	7	4.667		
S11	38	46	12.139	12.139	
S12	52	18	6.500	6.500	
S13	24	28	4.667	9.333	
	24	28	4.667		
S14	24	16	2.667	17.667	
	36	36	9.000		
	24	36	6.000		
S15	12	18	1.500	1.500	
S16	SEE S9 FOR DIMENSIONS				COMBINED SPALL W/S9
S17	SEE S10 FOR DIMENSIONS				COMBINED SPALL W/S10
S18	24	18	3.000	3.000	
S19	24	12	2.000	2.000	
S20	36	42	10.500	10.500	
S21/S22/S23	120	15	12.500	12.500	NEW SPALL LOCATION
S24	36	18	4.500	14.500	
	48	30	10.000		
S25/S26	30	24	5.000	12.000	
	36	24	6.000		
	12	12	1.000		
TOTAL AREA (SF)				563.396	

Note: This tracing prepared during "As-Built" posting.

VERTICAL SPALLS FIELD MEASUREMENTS					
DIMENSIONS (ACTUAL)					
SPALL NO.	LENGTH (INCH)	WIDTH (INCH)	SUBTOTAL AREA (SF)	TOTAL AREA (SF)	REMARKS
V1	NOT COMPLETED DUE TO FUND AVAILABILITY				
V2	NOT COMPLETED DUE TO FUND AVAILABILITY				
V3/V4/V5	SEE G6 FOR DIMENSIONS			COMBINED SPALL W/G6	
V6	NOT COMPLETED DUE TO FUND AVAILABILITY				
V7	84	48	28.000	28.00	
V8	60	24	10.000	12.083	
	30	10	2.083		
V9	18	51	6.375	8.757	
	10	20	1.389		
	13	11	0.993		
V10	35	31	7.535	7.535	
V11	53	49	18.035	18.035	
V11A	37	30	7.708	10.069	NEW SPALL LOCATION
	20	17	2.361		
V12	28	22	4.278	15.944	
	50	20	6.944		
	40	17	4.722		
V13	36	18	4.500	4.500	
V14	24	24	4.000	4.000	
V15	90	28	30.000	30.000	
V16	48	42	14.000	14.000	
V17	NOT COMPLETED DUE TO FUND AVAILABILITY				
V18/V19	36	7	1.750	46.208	COMBINED SPALL
	90	52	32.500		
	41	42	11.958		
V20	NOT COMPLETED DUE TO FUND AVAILABILITY				
V21	NOT COMPLETED DUE TO FUND AVAILABILITY				
V22	NOT COMPLETED DUE TO FUND AVAILABILITY				
V23	NOT COMPLETED DUE TO FUND AVAILABILITY				
V24	NOT COMPLETED DUE TO FUND AVAILABILITY				
V25	60	20	8.333	20.819	
	18	4	0.500		
	38	17	4.486		
	40	27	7.500		
V26	NOT COMPLETED DUE TO FUND AVAILABILITY				
V27	NOT COMPLETED DUE TO FUND AVAILABILITY				
V28	72	42	21.000	21.000	
*V29	60	27	11.250	11.250	NEW SPALL LOCATION
TOTAL AREA (SF)				252.201	

LEGEND FOR AS-BUILT POSTINGS	
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Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VERTICAL SPALLS

KUHIO HIGHWAY

Spall Repairs at Kapaa Stream Bridge

Project No. 56B-01-06M

Scale: N.T.S. Date: May 2006

SHEET No. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	10S-2	14

GIRDER SOFFIT SPALLS FIELD MEASUREMENTS					
DIMENSIONS (ACTUAL)					
SPALL NO.	LENGTH (INCH)	WIDTH (INCH)	SUBTOTAL AREA (SF)	TOTAL AREA (SF)	REMARKS
G1	NOT COMPLETED DUE TO FUND AVAILABILITY				
G2	NOT COMPLETED DUE TO FUND AVAILABILITY				
G3	20.000	12.000	1.667	1.667	
G4	104.000	30.000	21.667	21.667	
G5	18.000	66.000	8.250	8.250	
*G5A	11.000	11.000	0.840	0.840	
*G5B	38.000	3.000	0.792	2.903	
	38.000	8.000	2.111		
G6	92.000	32.000	20.444	25.556	
	92.000	8.000	5.111		
G7	NOT COMPLETED DUE TO FUND AVAILABILITY				
G8	38.000	6.000	1.583	11.944	
	80.000	6.000	3.333		
	38.000	20.000	5.278		
	42.000	6.000	1.750		
G9	NOT COMPLETED DUE TO FUND AVAILABILITY				
G10	SEE G24C FOR DIMENSIONS				COMBINED SPALL W/G24C
*G10A	96.000	26.000	17.333	27.500	NEW SPALL LOCATION
	84.000	4.000	2.333		
	78.000	12.000	6.500		
	24.000	8.000	1.333		
G11	SEE G8 FOR DIMENSIONS				COMBINED SPALL W/G8
G12	26.000	17.000	3.069	3.069	
G13	127.000	19.000	16.757	16.757	
G13A	36.000	10.000	2.500	2.500	
G14	82.000	20.000	11.389	16.694	
	14.000	34.000	3.306		
	8.000	36.000	2.000		
G15	69.000	42.000	20.125	52.181	
	67.000	24.000	11.167		
	12.000	12.000	1.000		
	12.000	12.000	1.000		
	136.000	20.000	18.889		
G16	18.000	20.000	2.500	2.500	
*G16A	18.000	55.000	6.875	6.875	
G17	NOT COMPLETED DUE TO FUND AVAILABILITY				
G18	109.000	28.000	21.194	21.194	
G19A	187.000	26.000	33.764	49.347	PART OF SPALL G19 WHICH WAS DONE IN FOUR SEGMENTS
	187.000	12.000	15.583		
G19B	90.000	20.000	12.500	20.000	
	90.000	12.000	7.500		
G19C	153.000	20.000	21.250	34.000	
	153.000	12.000	12.750		
G19D	264.000	20.000	36.667	58.667	
	264.000	12.000	22.000		
	TOTAL AREA (SF)			563.396	

GIRDER SOFFIT SPALLS FIELD MEASUREMENTS					
DIMENSIONS (ACTUAL)					
SPALL NO.	LENGTH (INCH)	WIDTH (INCH)	SUBTOTAL AREA (SF)	TOTAL AREA (SF)	REMARKS
G20	70.000	5.000	2.431	12.667	
	12.000	12.000	1.000		
	70.000	19.000	9.266		
*G20A	30.000	10.000	2.083	2.083	NEW SPALL LOCATION
G21	128.000	8.000	7.111	23.111	
	128.000	18.000	16.000		
G22	60.000	24.000	10.000	10.000	
G23	101.000	17.000	11.924	11.924	
*G23A	60.000	18.000	7.500	7.500	NEW SPALL LOCATION
G24A	156.000	20.000	21.667	34.667	PART OF SPALL G24 WHICH WAS DONE IN THREE SEGMENTS
	156.000	12.000	13.000		
G24B	188.000	20.000	26.111	41.778	
	188.000	12.000	15.667		
G24C	132.000	20.000	18.333	29.333	
	132.000	12.000	11.000		
	TOTAL AREA (SF)			563.396	

Note: This tracing prepared during "As-Built" posting.

SURVEY PLOTTED BY

DATE

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NOTE BOOK

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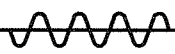
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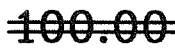
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LEGEND FOR

AS-BUILT POSTINGS

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 Double line for as-built deletion

Roadway Text for as-built posting

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

VERTICAL SPALLS

KUHIO HIGHWAY

Spall Repairs at Kapaa Stream Bridge

Project No. 56B-01-06M

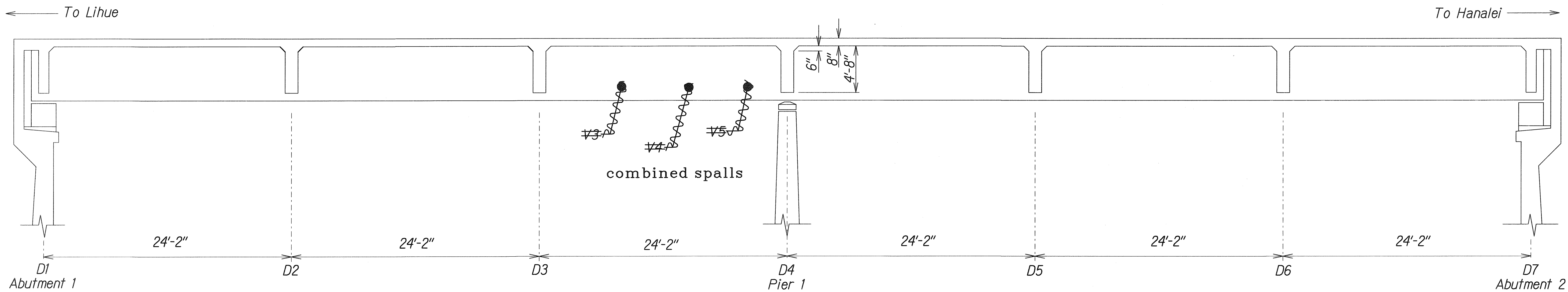
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SHEET No. 3 OF 6 SHEETS

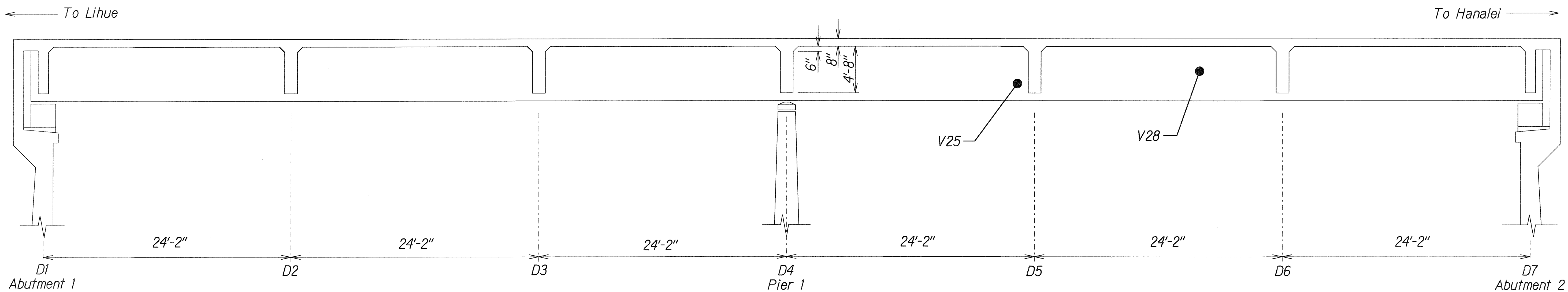
AS-BUILT

10S-2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	11	14



ELEVATION - GIRDER G1, MAKAI FACE
Scale: 1"=5'



ELEVATION - GIRDER G5, MAKAI FACE
Scale: 1"=5'

NOTES:

1. Thrie beam railing, concrete parapet, bike railing, and a.c. wearing surface not shown.
2. See Table "C" on Plan Sht. 10 for spall sizes and descriptions.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDERS G1 & G5 MAKAI FACE

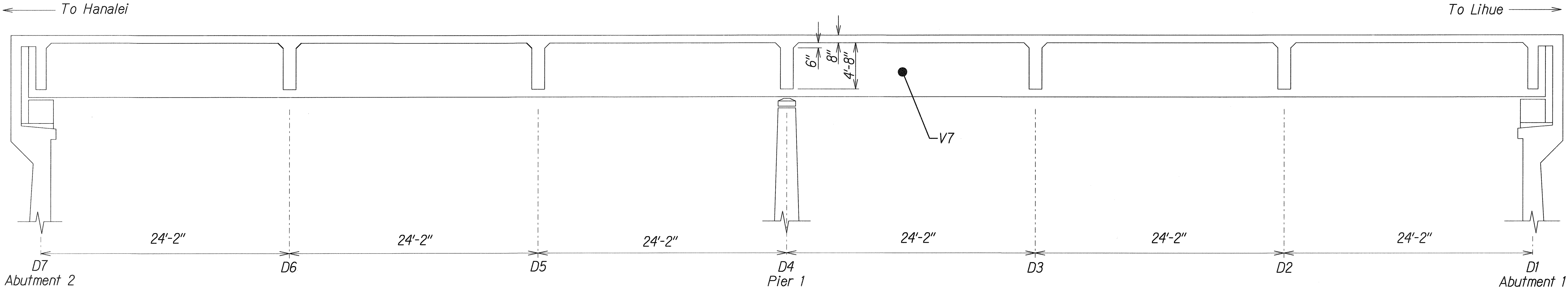
KUHIO HIGHWAY
Spall Repairs at Kapaa Stream Bridge
Project No. 56B-01-06M

Scale: 1"=5'
Date: May 2006

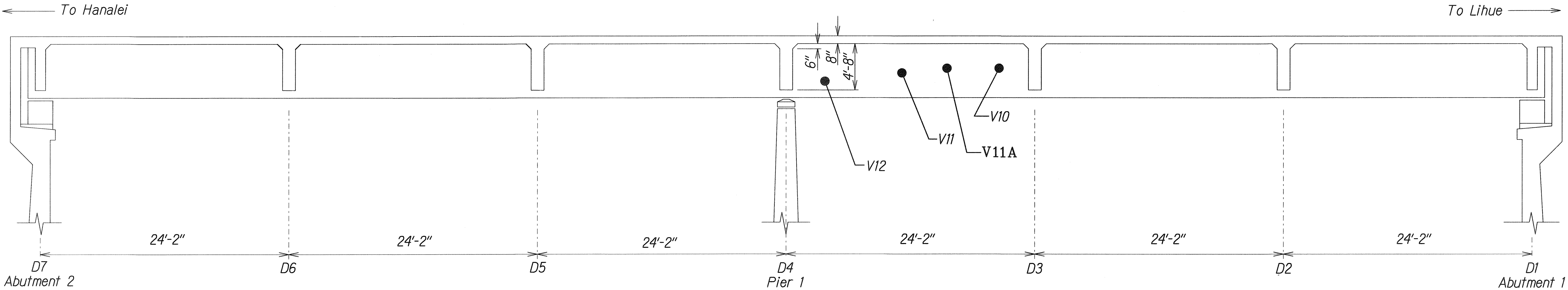
SHEET No. 4 OF 6 SHEETS

SURVEY PLOTTED BY	DATE
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ORIGINAL PLAN	
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AS-BUILT	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	12	14



ELEVATION - GIRDER G2, MAUKA FACE
Scale: 1"=5'



ELEVATION - GIRDER G3, MAUKA FACE
Scale: 1"=5'

NOTES:

1. Thrie beam railing, concrete parapet, bike railing, and a.c. wearing surface not shown.
2. See Table "C" on Plan Sht. 10 for spall sizes and descriptions.

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

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

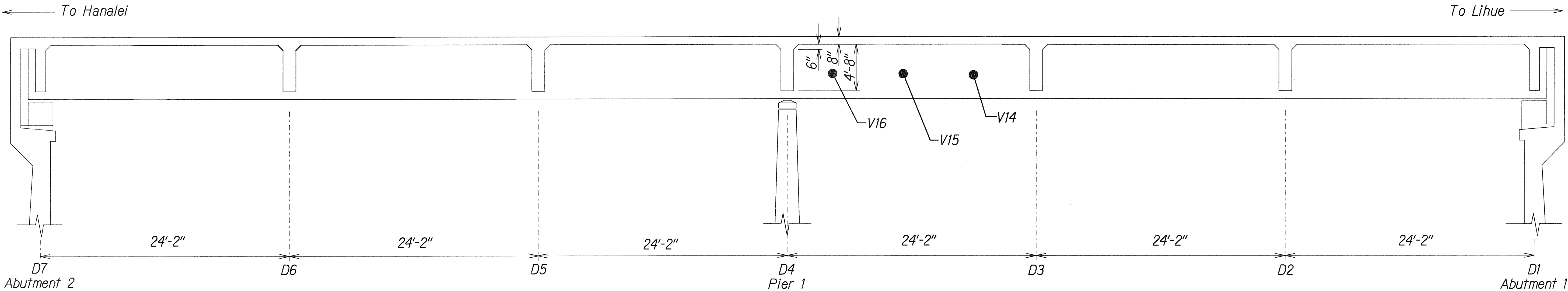
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDERS G2 & G3 MAUKA FACE

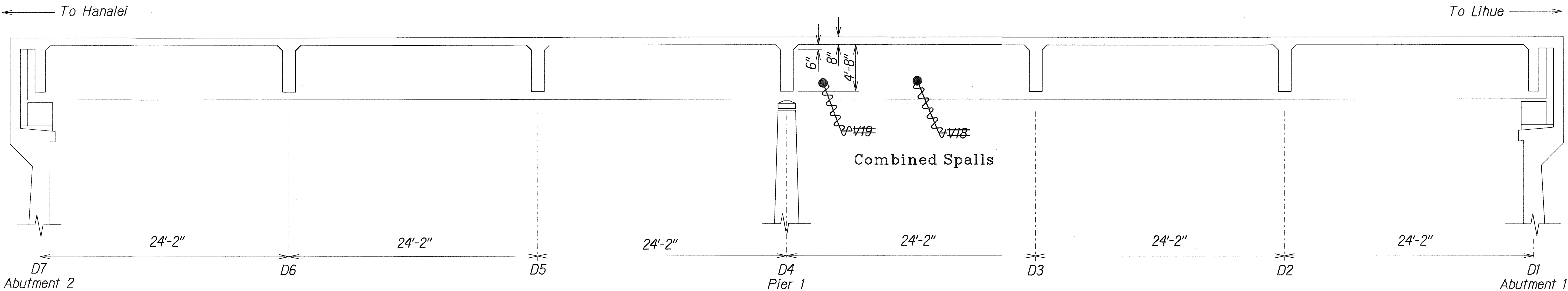
KUHIO HIGHWAY
Spall Repairs at Kapaa Stream Bridge
Project No. 56B-01-06M
Scale: 1"=5'
Date: May 2006

SHEET No. 5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56B-01-06M	2006	13	14



ELEVATION - GIRDER G4, MAUKA FACE
 Scale: 1"=5'



ELEVATION - GIRDER G5, MAUKA FACE
 Scale: 1"=5'

NOTES:

1. Thrie beam railing, concrete parapet, bike railing, and a.c. wearing surface not shown.
2. See Table "C" on Plan Sht. 10 for spall sizes and descriptions.

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

GIRDERS G4 & G5 MAUKA FACE
KUHIO HIGHWAY
Spall Repairs at Kapaa Stream Bridge
Project No. 56B-01-06M
Scale: 1"=5'
Date: May 2006

SHEET No. 6 OF 6 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
REVISIONS	
BY	
DATE	