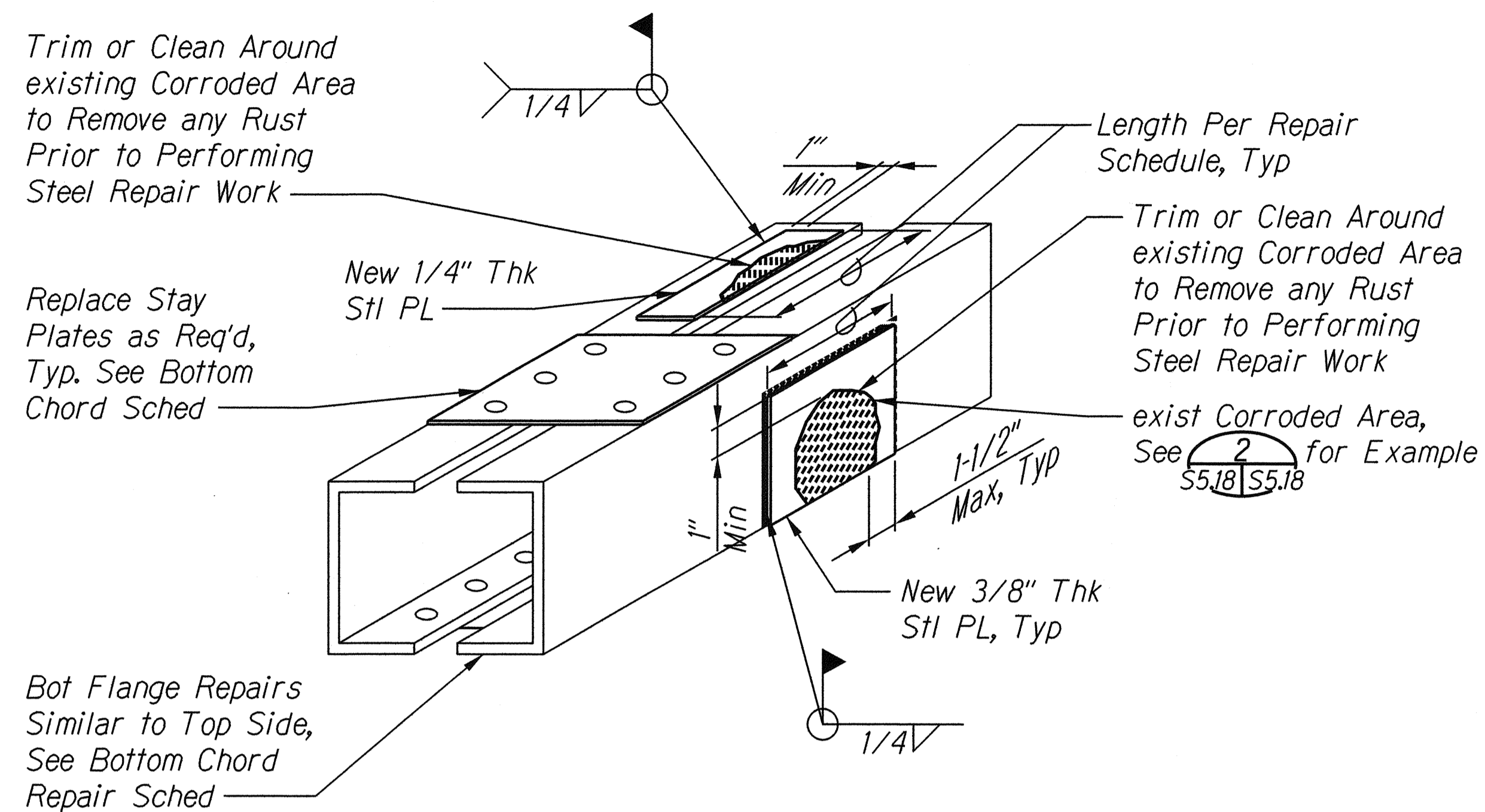
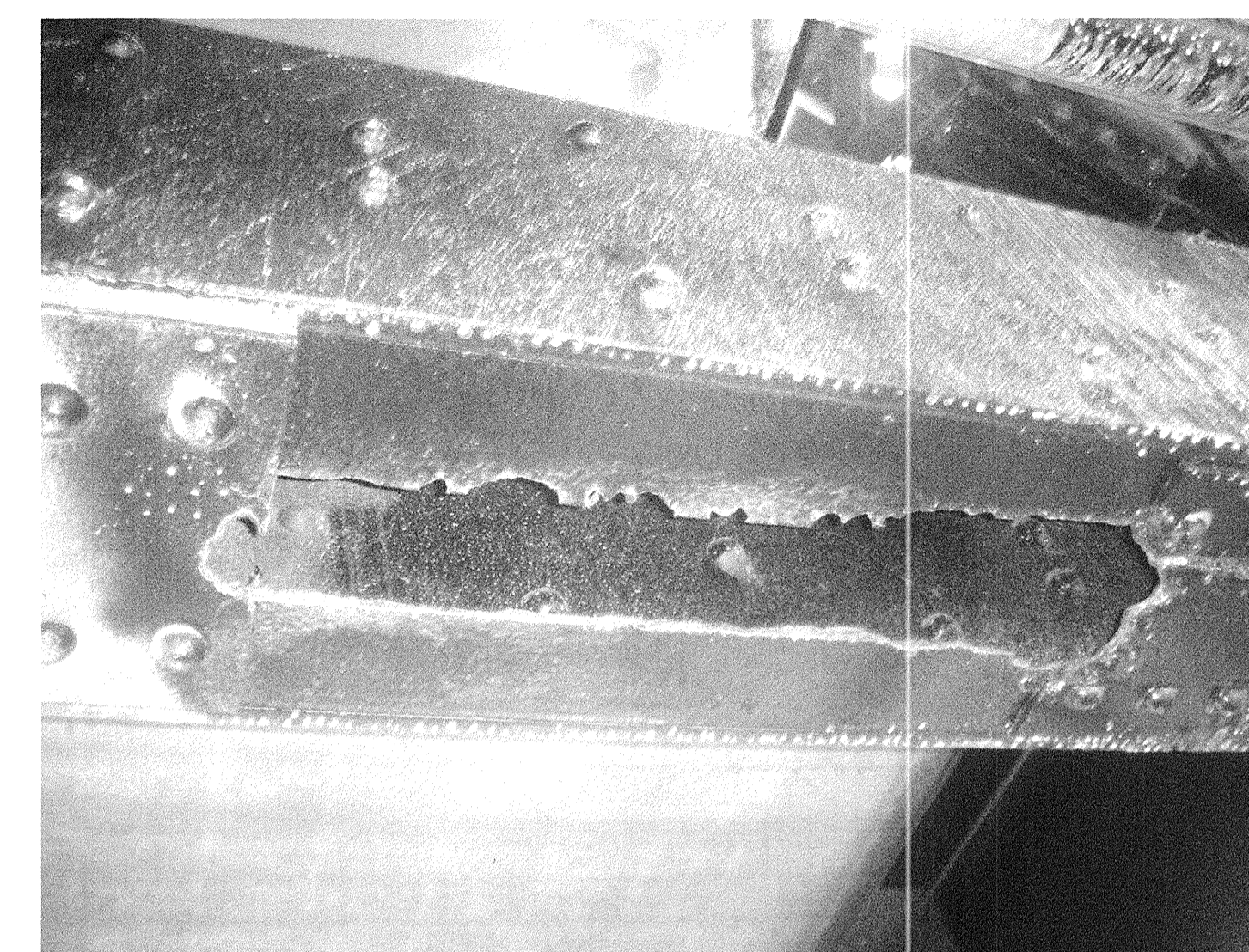


FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	57	82



1 BOTTOM CHORD TYPICAL REPAIRS
S5.1, S5.2 | S5.18 Not To Scale



2 EXAMPLE OF EXISTING BOTTOM CHORD TYPICAL DETERIORATION
S5.18 | S5.18

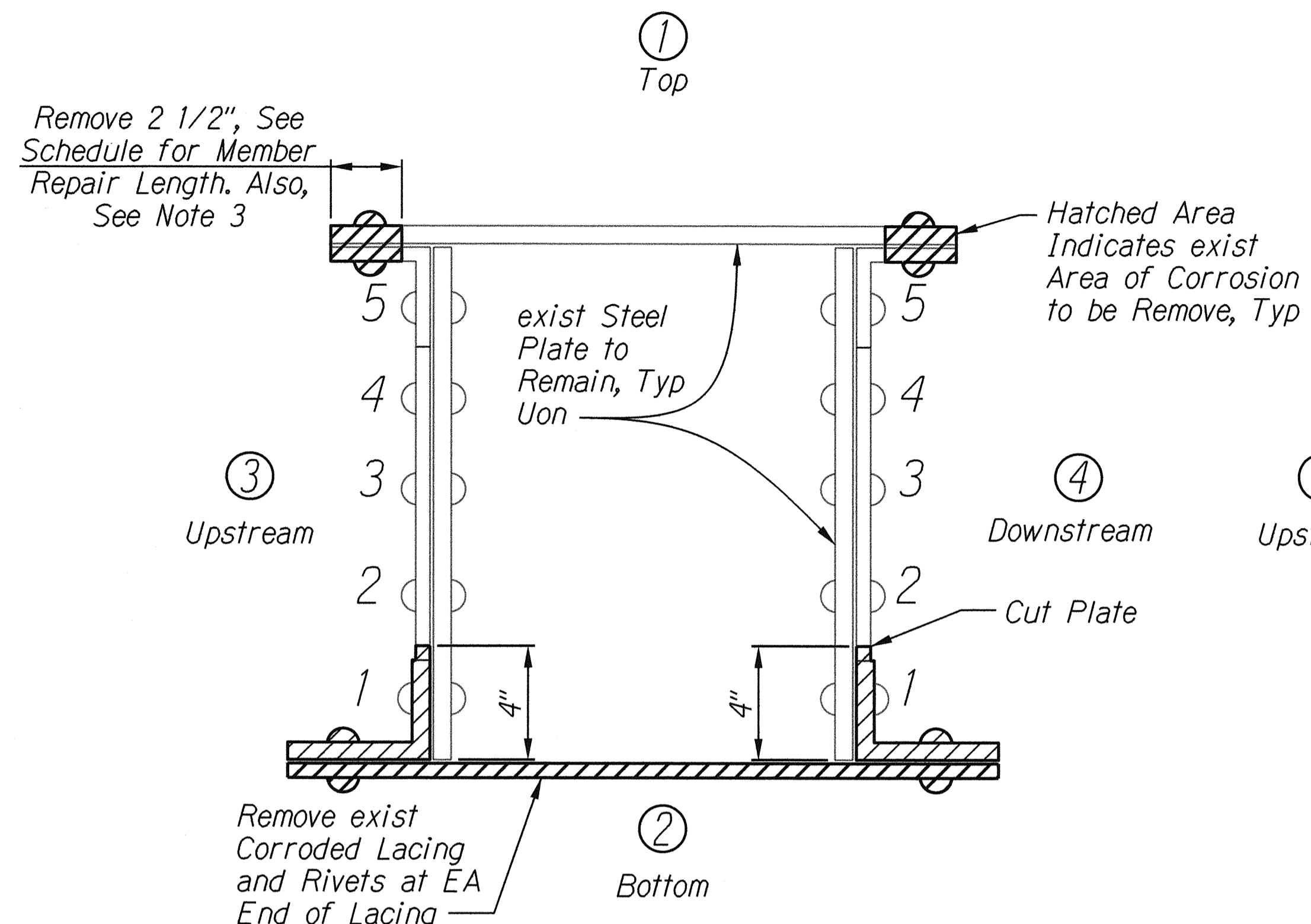
Notes:

1. Repair details show typical repairs. Verify extent of repair type and quantity with member repair schedule.
2. See Structural Notes on sheets S1.1 and S1.2 for additional information.
3. New structural steel plates, lacing, and angles shall conform to "Hawaii Standard Specifications for Road and Bridge Construction 2005," unless otherwise indicated.

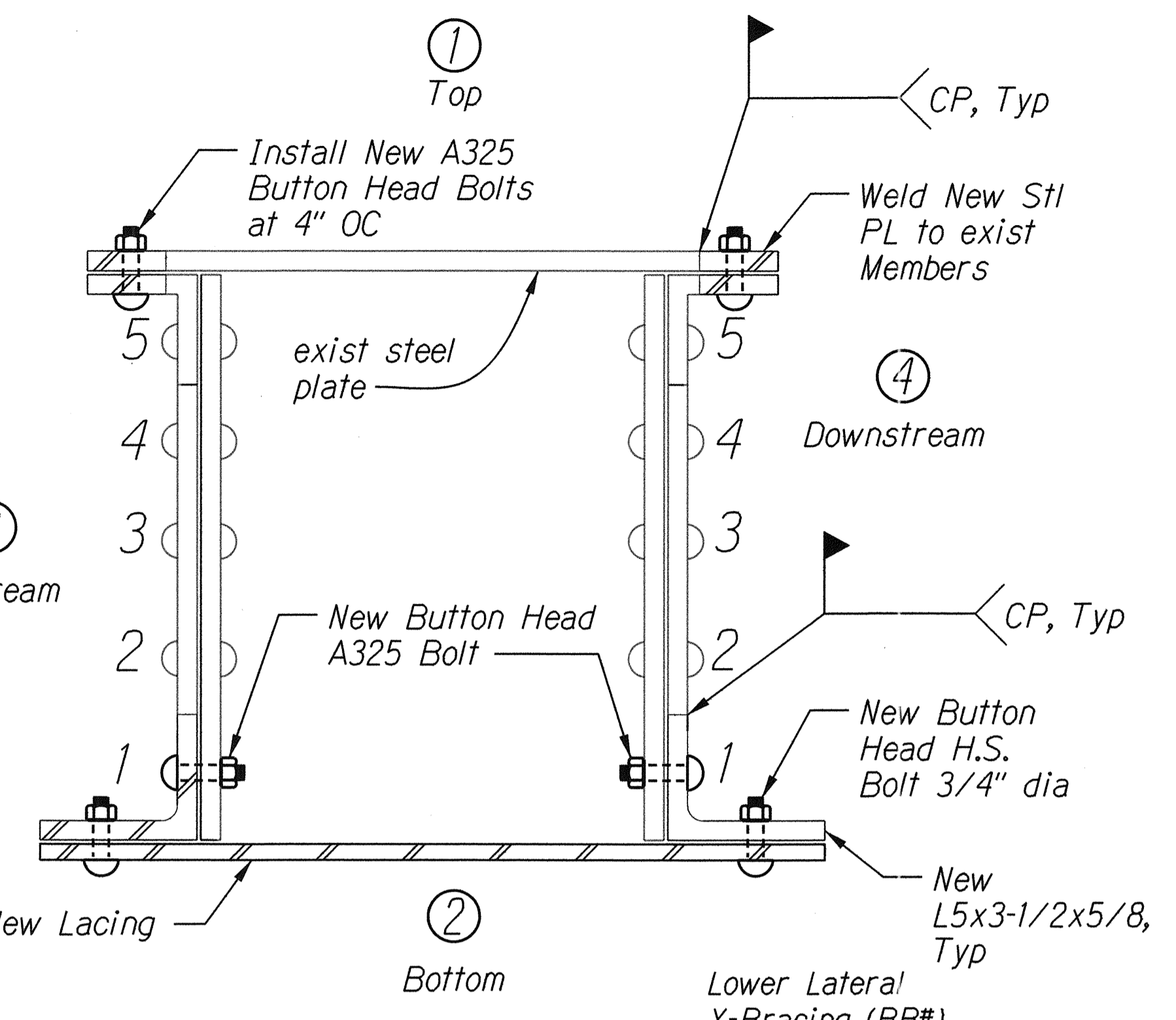
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STEEL MEMBER REPAIR DETAILS KAMEHAMEHA HIGHWAY Repair and Repaint Karsten Thot Bridge Federal Aid Project No. BR-080-1(012)
	Scale: No Scale Date: Sept 2014 SHEET No. S5.18 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	58	82



Partial Removal of Existing

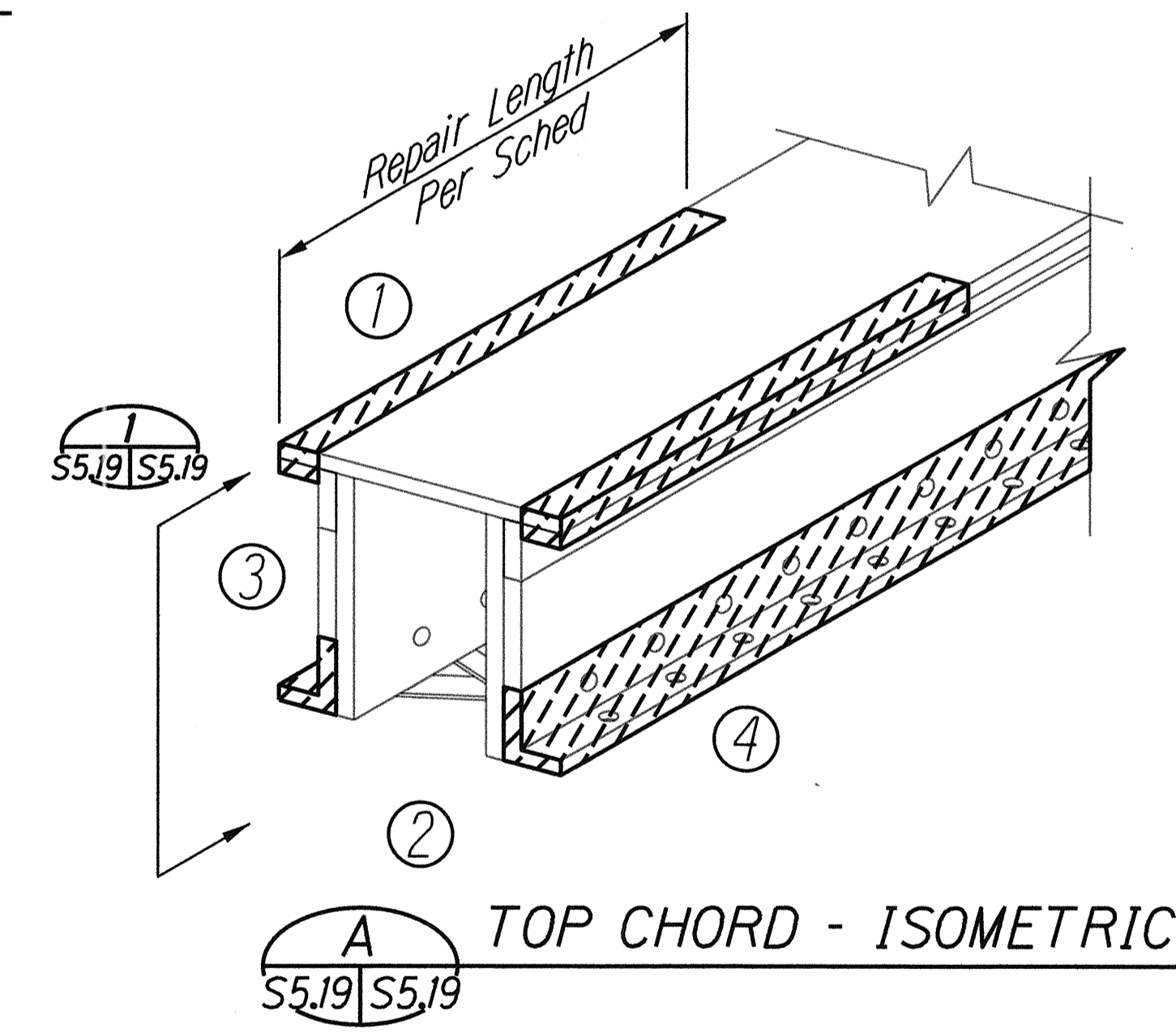


New Construction

Notes:

1. Repair details show typical repairs. Verify extent of repair type and quantity with member repair schedule.
2. Provide temporary bracing of member prior to removal of existing lacing and/or removal of existing flange section. Temporary member bracing and falsework shall be included in Contractor furnished plans and calculations as required per Standard Specifications. See Construction Notes on Sheet S1.2 for additional information.
3. Member repair length is the length along the member span where repairs are needed per repair schedule.
4. New structural steel plates, lacing, and angles shall conform to "Hawaii Standard Specifications for Road and Bridge Construction 2005," unless otherwise indicated.

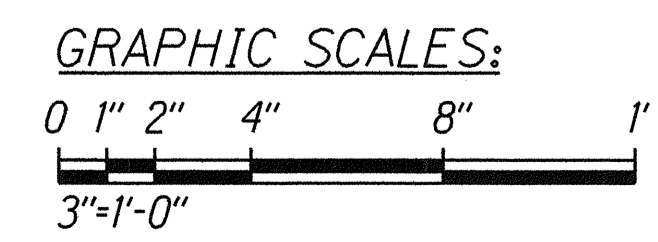
1 TOP CHORD TYPICAL REPAIRS
S5.3 - S5.8 | S5.19 SCALE: 3" = 1'-0"



A TOP CHORD - ISOMETRIC
S5.19 | S5.19

2 EXAMPLE OF EXISTING TOP CHORD DETERIORATION
S5.19 | S5.19

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DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

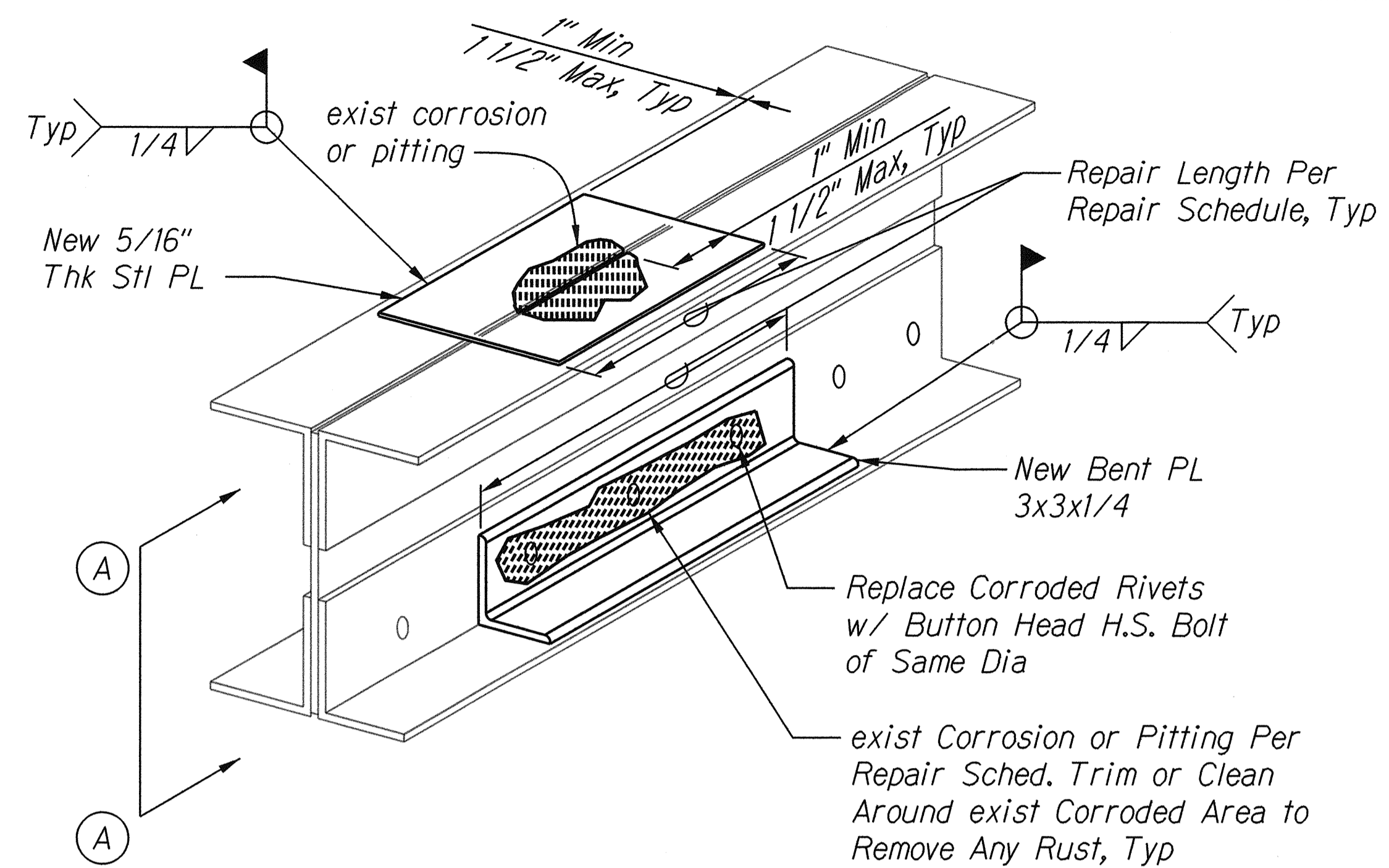


	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	STEEL MEMBER REPAIR DETAILS
	KAMEHAMEHA HIGHWAY Repair and Repair Karsten Thot Bridge Federal Aid Project No. BR-080-1(012)
	Scale: 3" = 1'-0" Date: Sept 2014

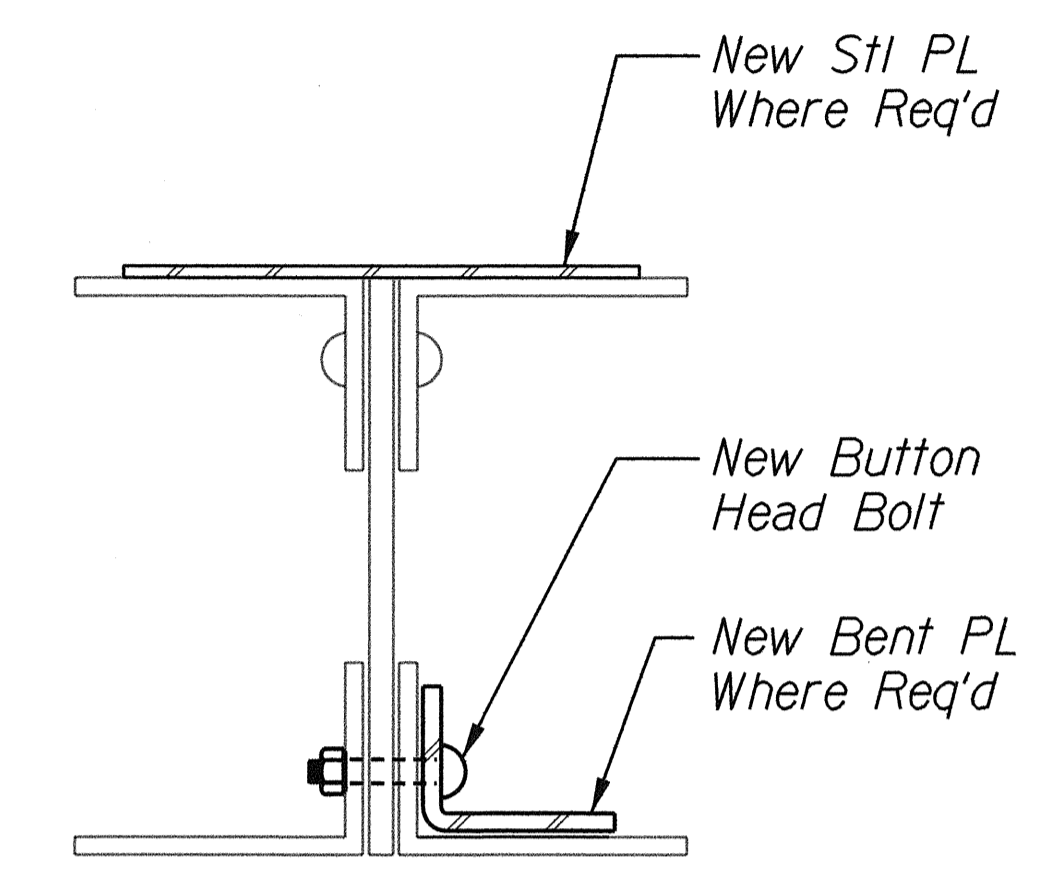
FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	59	82

Notes:

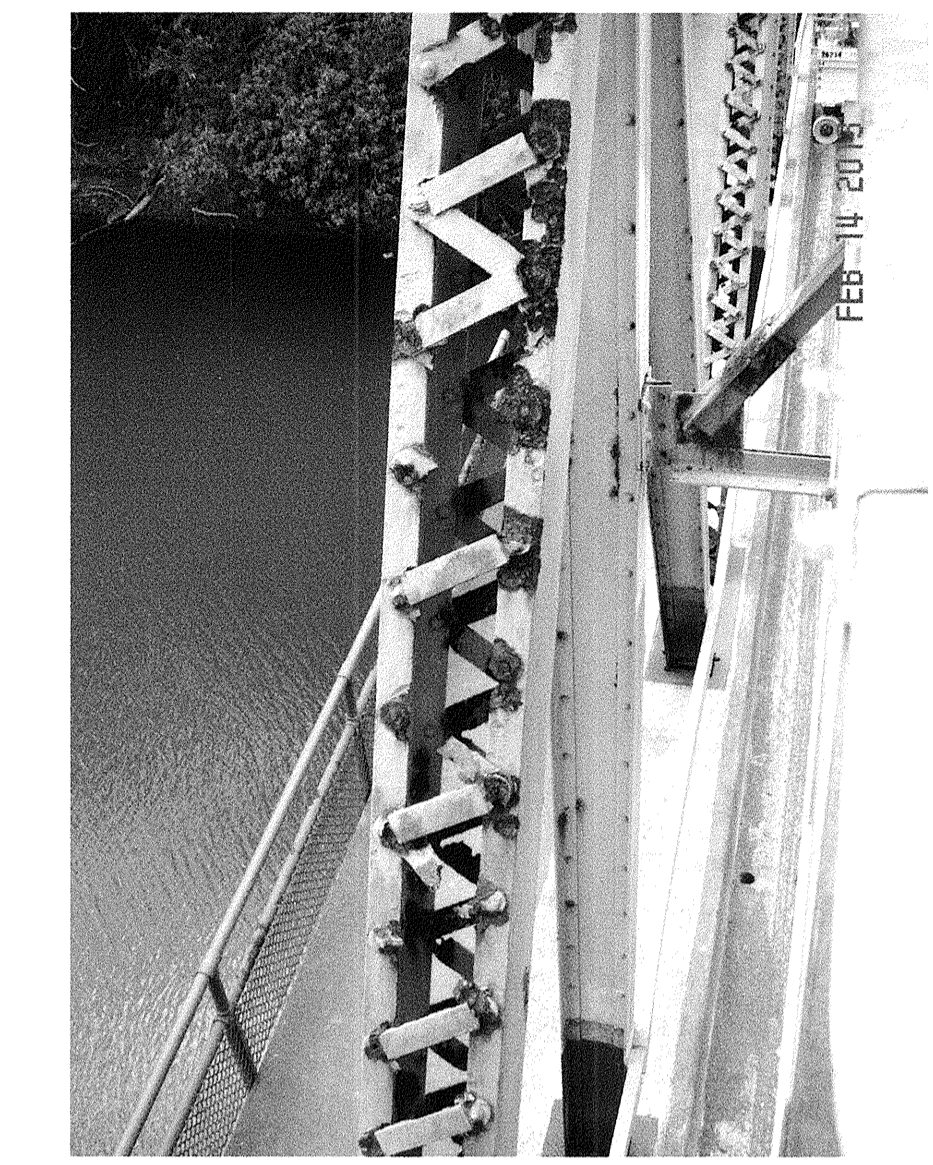
1. Repair details show typical repairs. Verify extent of repair type and quantity with member repair schedule.
2. Provide temporary bracing of member prior to removal of existing lacing and/or removal of existing flange section. Temporary member bracing and falsework shall be included in Contractor furnished plans and calculations as required per Standard Specifications. See Construction Notes on Sheet S1.2 for additional information.
3. New structural steel plates, lacing, and angles shall conform to "Hawaii Standard Specifications for Road and Bridge Construction 2005," unless otherwise indicated.



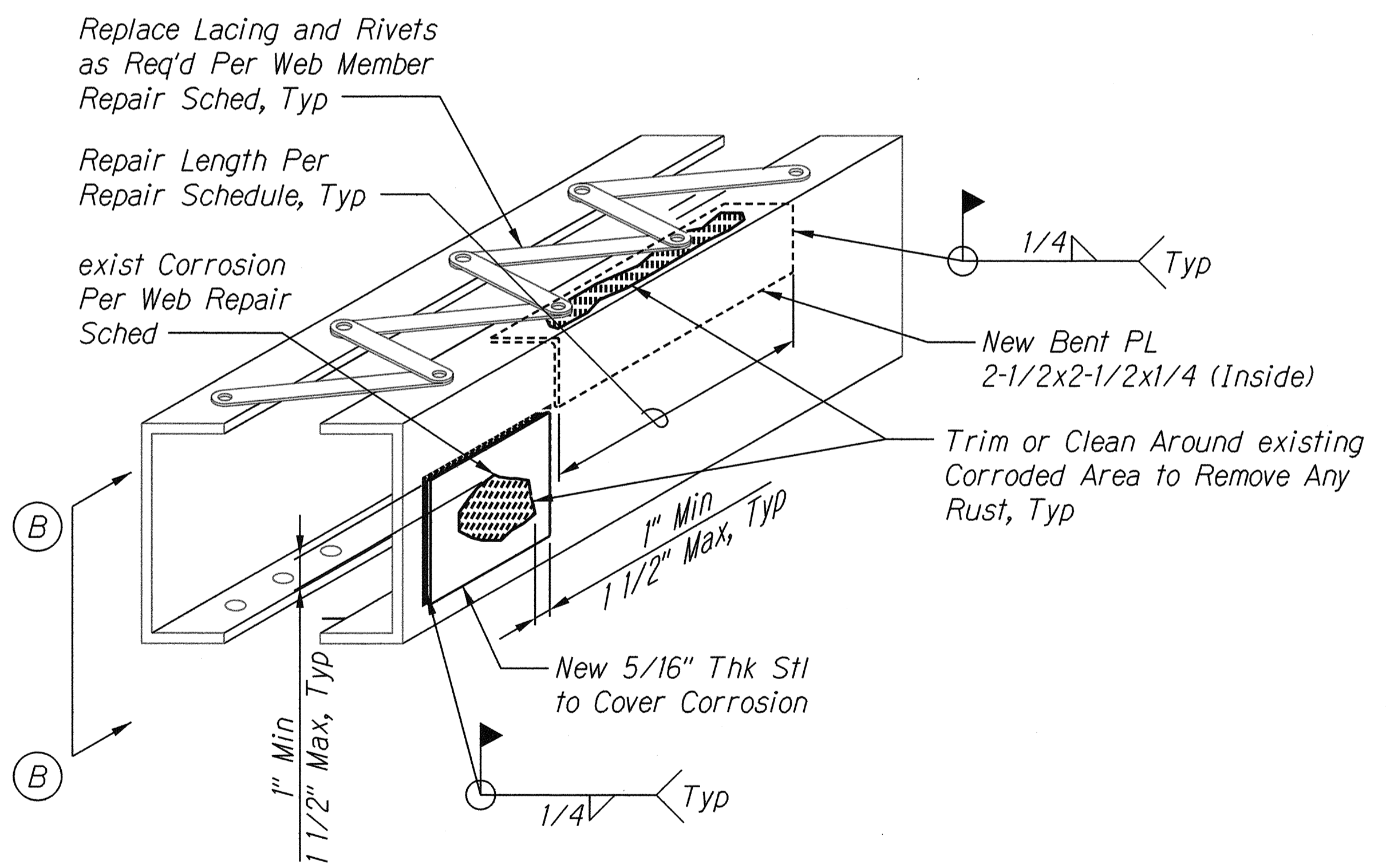
1 WEB CROSS SECTIONS W3 AND W4 TYPICAL REPAIRS
S5.9 - S5.14 | S5.20 Not To Scale



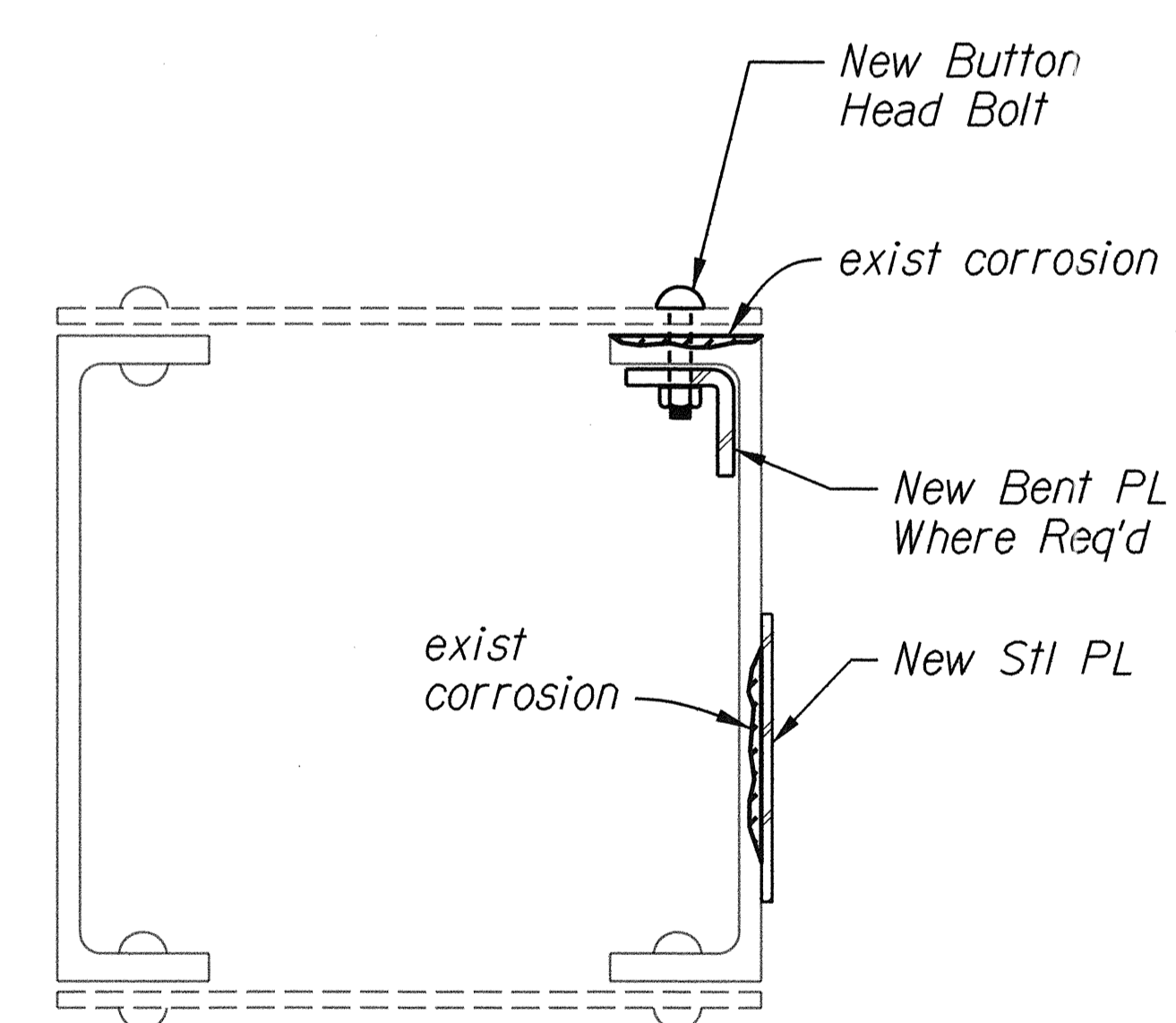
A SECTION A - A
S5.20 | S5.20 Not To Scale



3 EXISTING WEB MEMBER DETERIORATION
S5.20 | S5.20



2 WEB CROSS SECTIONS W1 AND W2 TYPICAL REPAIRS
S5.9 - S5.14 | S5.20 Not To Scale



B SECTION B - B
S5.20 | S5.20 Not To Scale



4 EXISTING WEB MEMBER DETERIORATION
S5.20 | S5.20

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LICENSE EXPIRES: 4/30/16
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**STEEL MEMBER
REPAIR DETAILS**

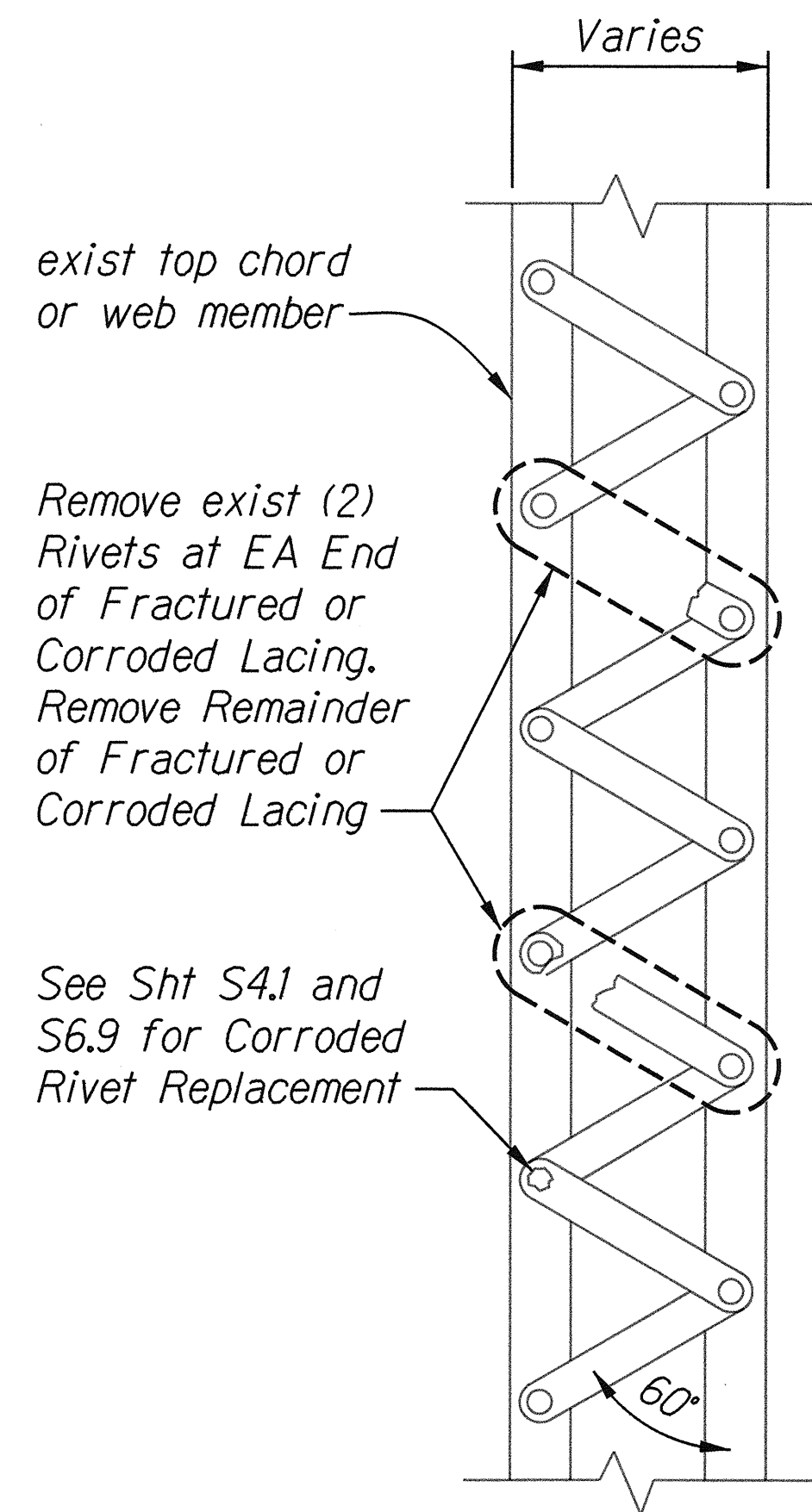
KAMEHAMEHA HIGHWAY
Repair and Repair Karsten Thot Bridge
Federal Aid Project No. BR-080-1(012)

Scale: No Scale Date: Sept 2014

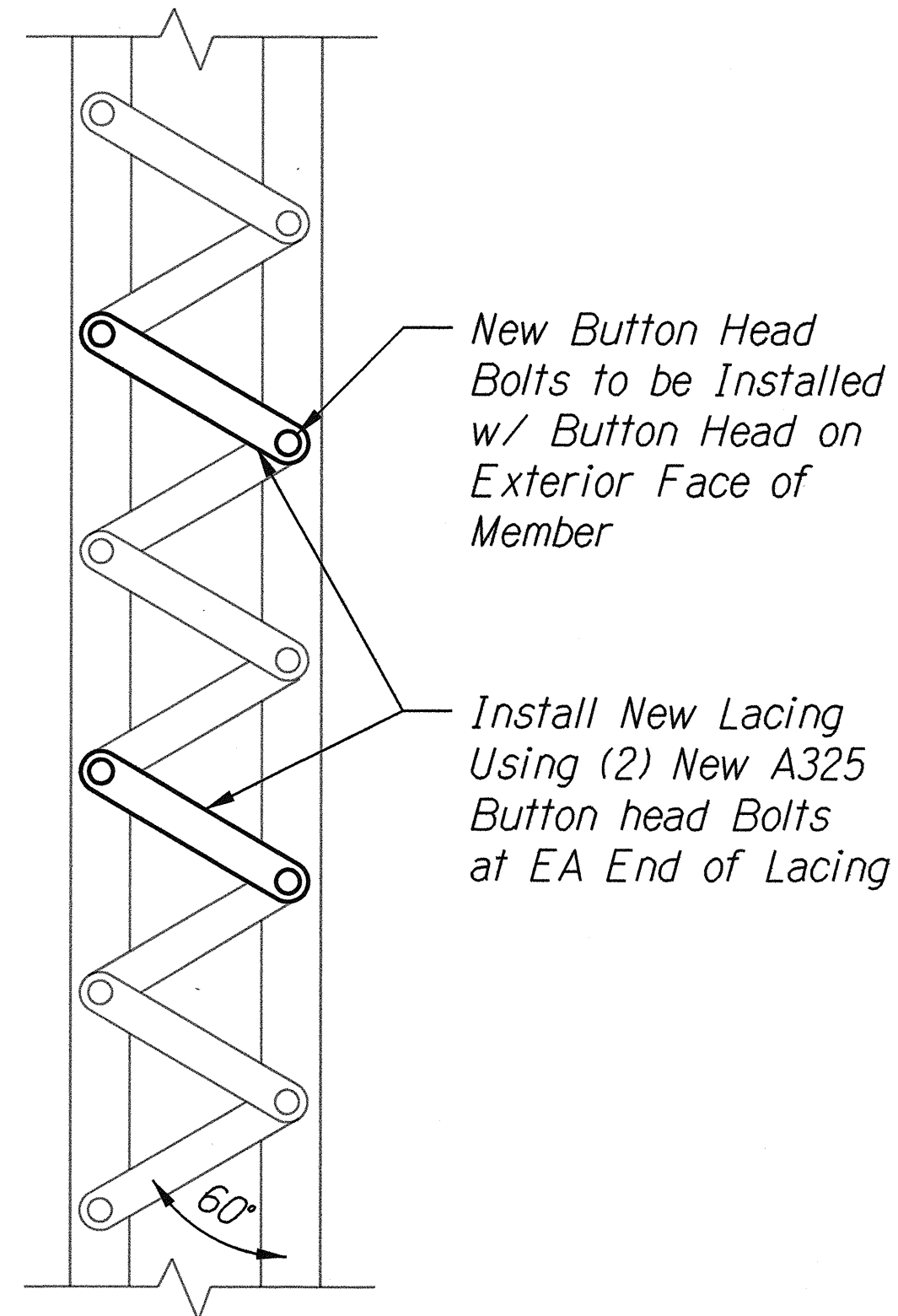
FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	60	82

Notes:

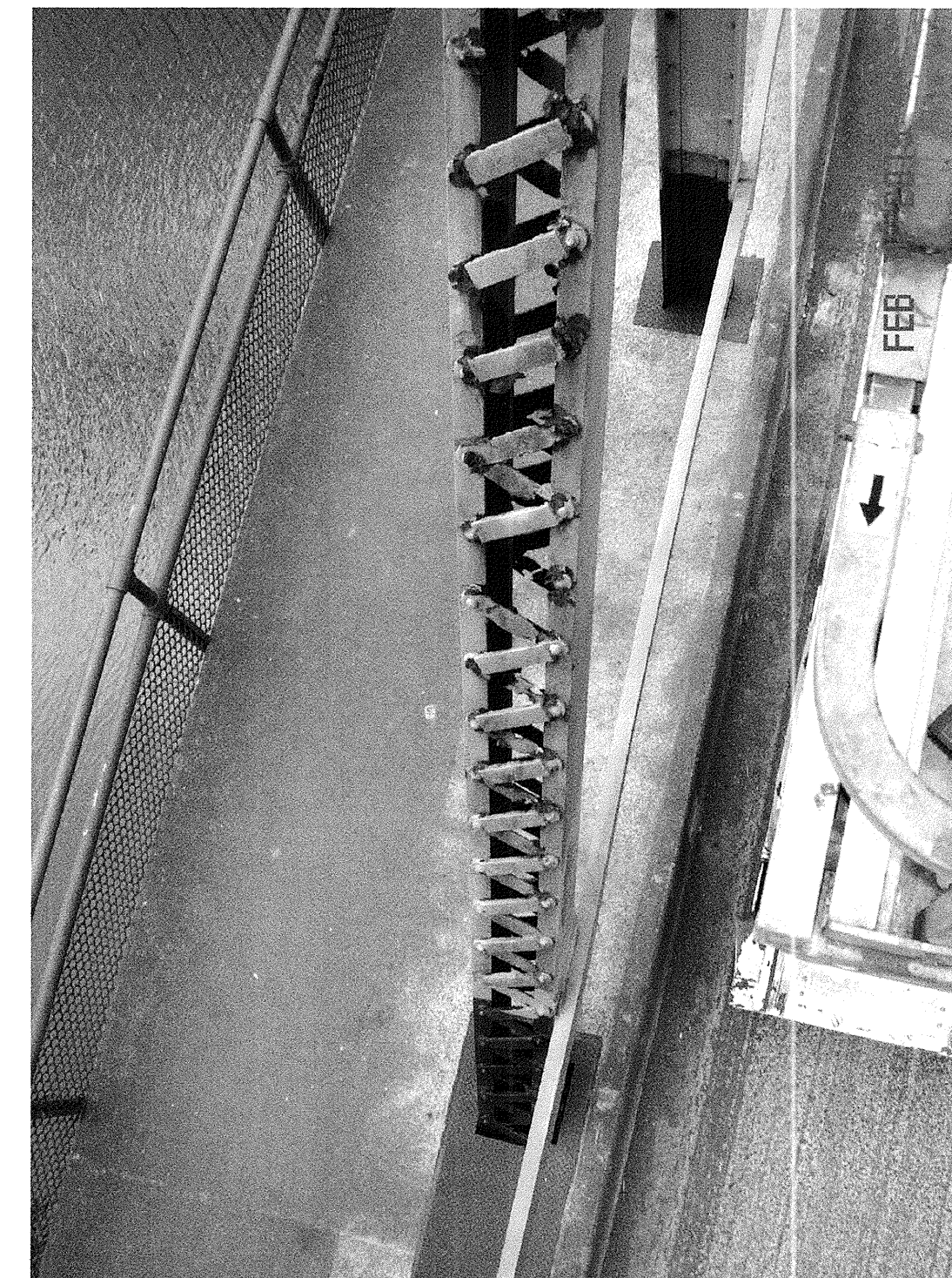
1. If consecutive lacings need replacement, remove at maximum 4'-0" segments along truss member. Replace with new lacing and button head bolts before proceeding to next section of member.
2. Provide temporary bracing of member prior to removal of existing lacing and/or removal of existing flange section. Temporary member bracing and falsework shall be included in Contractor furnished plans and calculations as required per Standard Specifications. See Construction Notes on Sheet S1.2 for additional information.
3. New structural steel plates, lacing, and angles shall conform to "Hawaii Standard Specifications for Road and Bridge Construction 2005," unless otherwise indicated.



Existing



New Construction



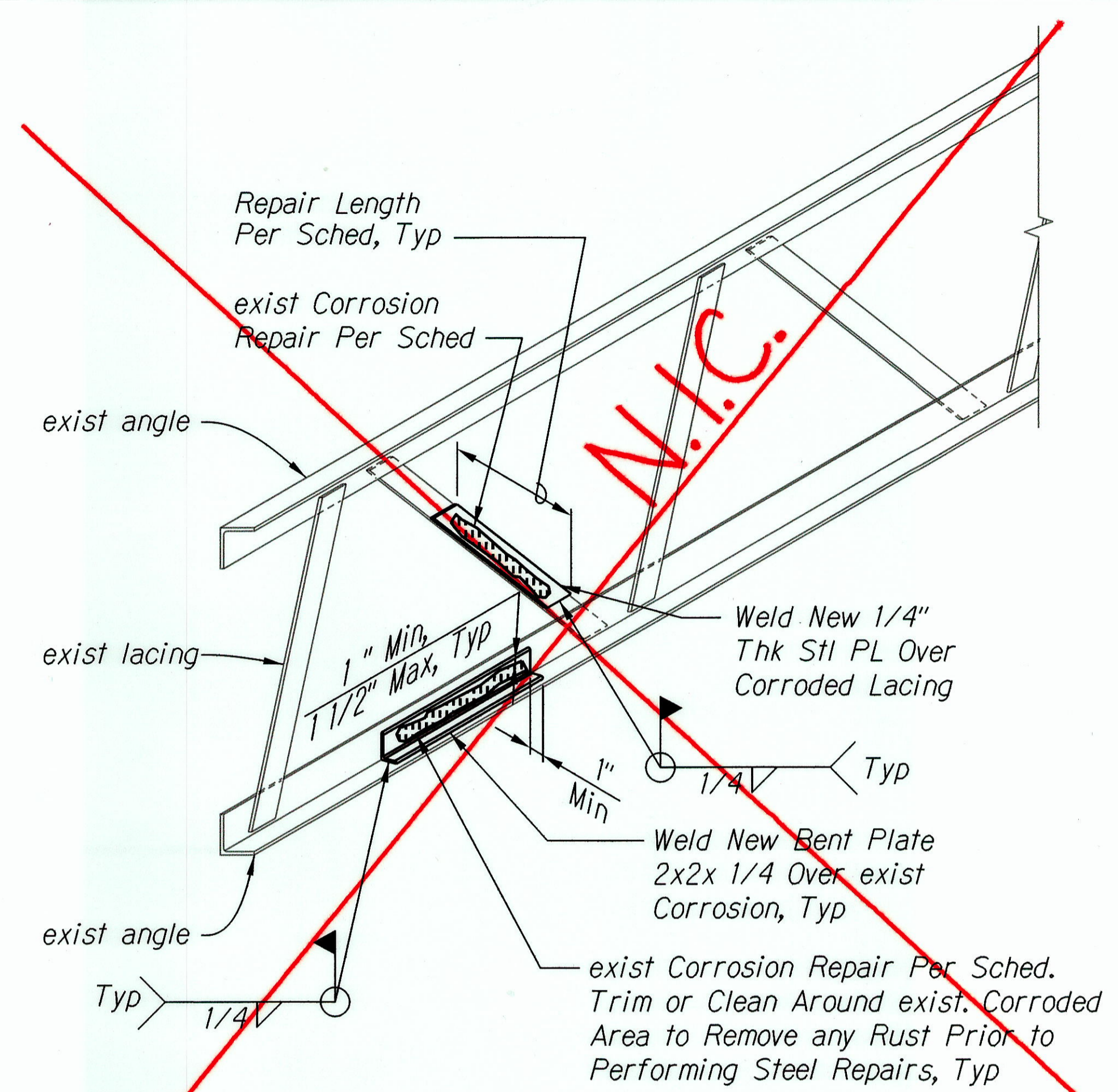
1 TRUSS WEB MEMBER LACING REPLACEMENT
S5.21 | S5.21 Not To Scale

2 EXISTING WEB LACING DETERIORATION
S5.21 | S5.21

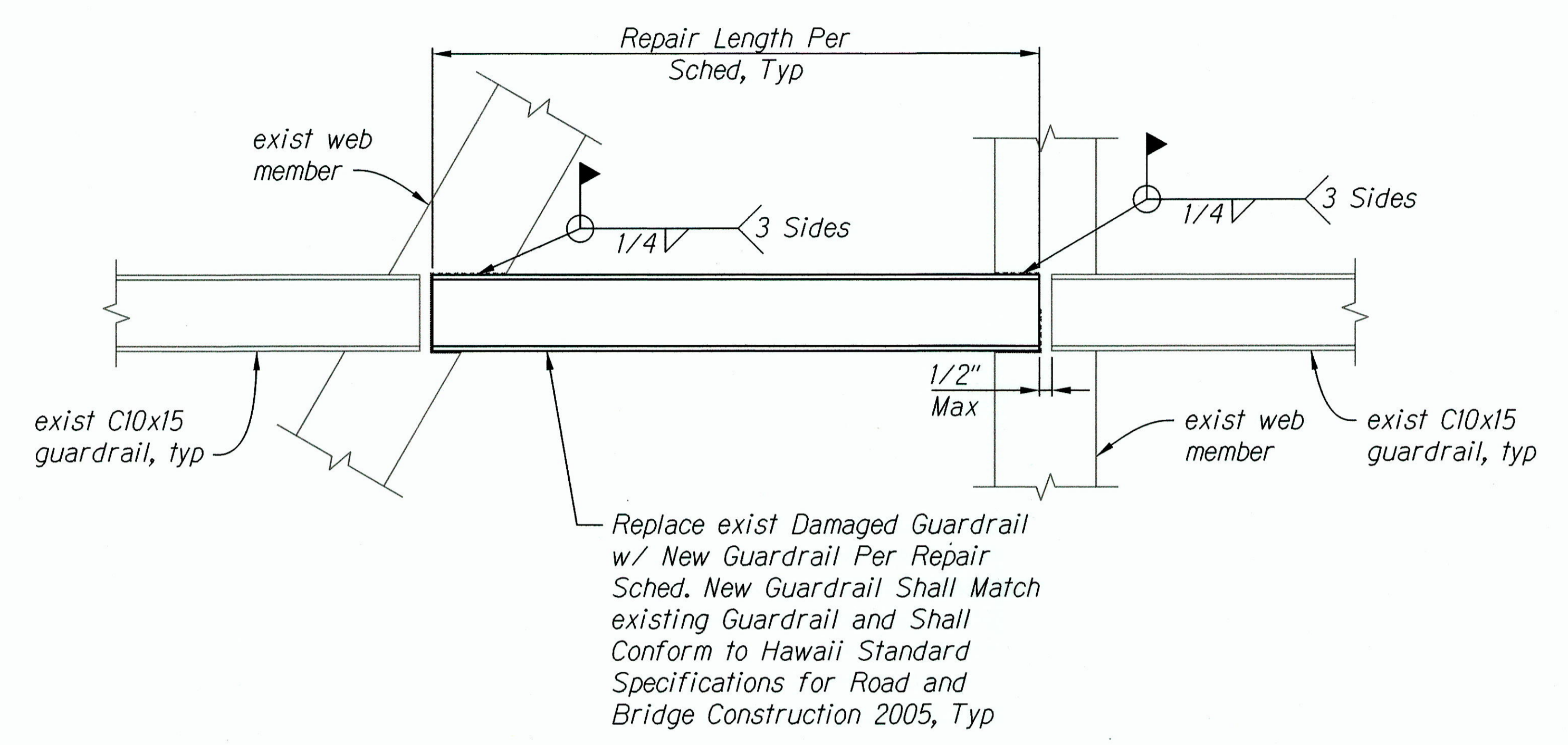
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DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRUSS WEB MEMBER LACING REPLACEMENT KAMEHAMEHA HIGHWAY Repair and Repaint Karsten Thot Bridge Federal Aid Project No. BR-080-1(012)
	LICENSE EXPIRES: 4/30/16 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION <i>Signature</i> Scale: No Scale Date: Sept 2014 SHEET No. S5.21 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	61	82



1 TOP CHORD HORIZONTAL BRACING TYPICAL REPAIRS
 S5.16 | S5.22 ISOMETRIC VIEW
 Not To Scale



2 GUARDRAIL REPAIR DETAIL ELEVATION VIEW
 S5.15 | S5.22 Not To Scale

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QUANTITIES BY	
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ORIGINAL PLAN	
NOTEBOOK	
No.	

LICENSE EXPIRES: 4/30/16
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**STEEL MEMBER
 REPAIR DETAILS**

KAMEHAMEHA HIGHWAY
 Repair and Repaint Karsten Thot Bridge
 Federal Aid Project No. BR-080-1(012)

Scale: No Scale Date: Sept 2014

"AS-BUILT"