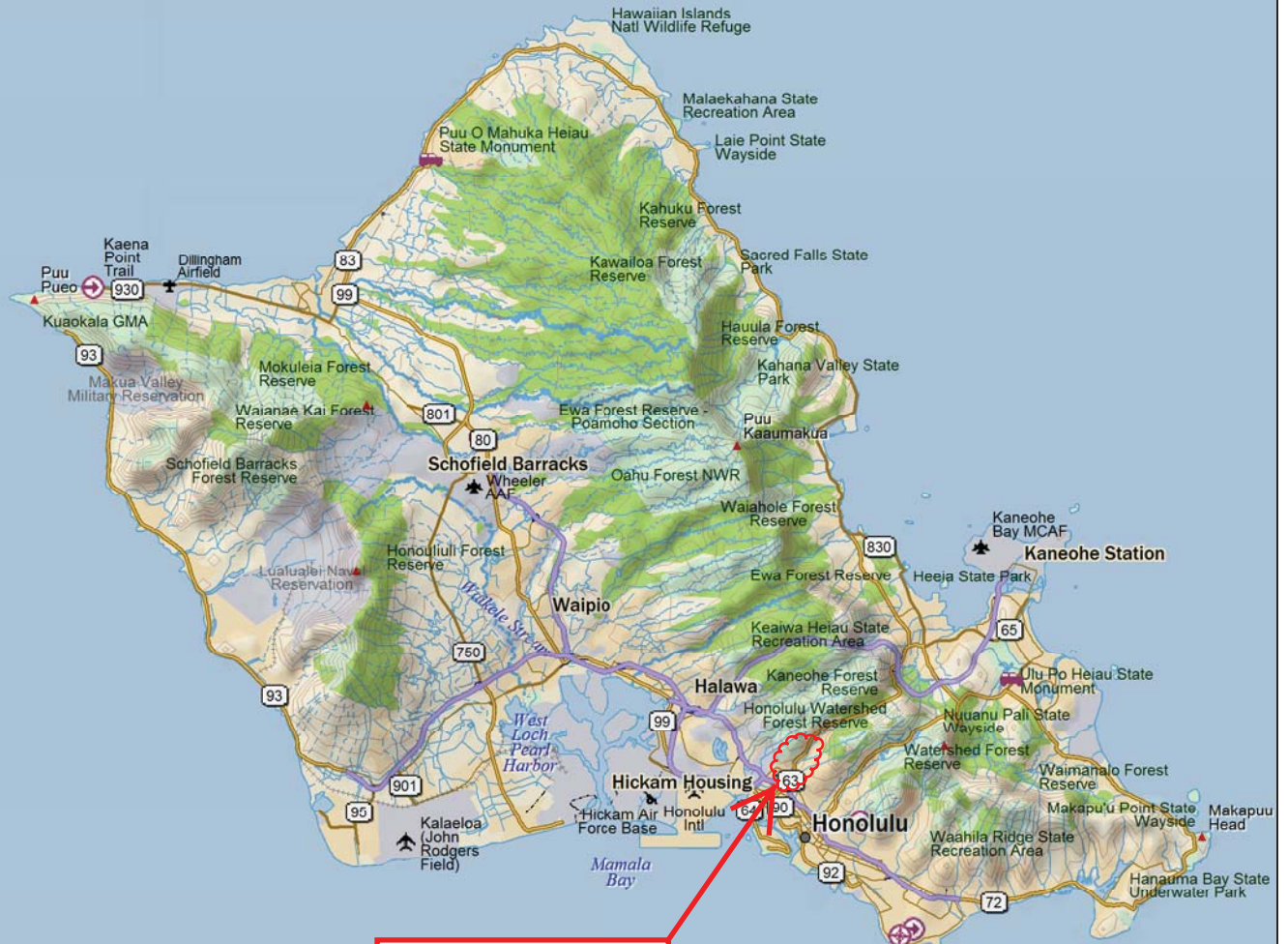
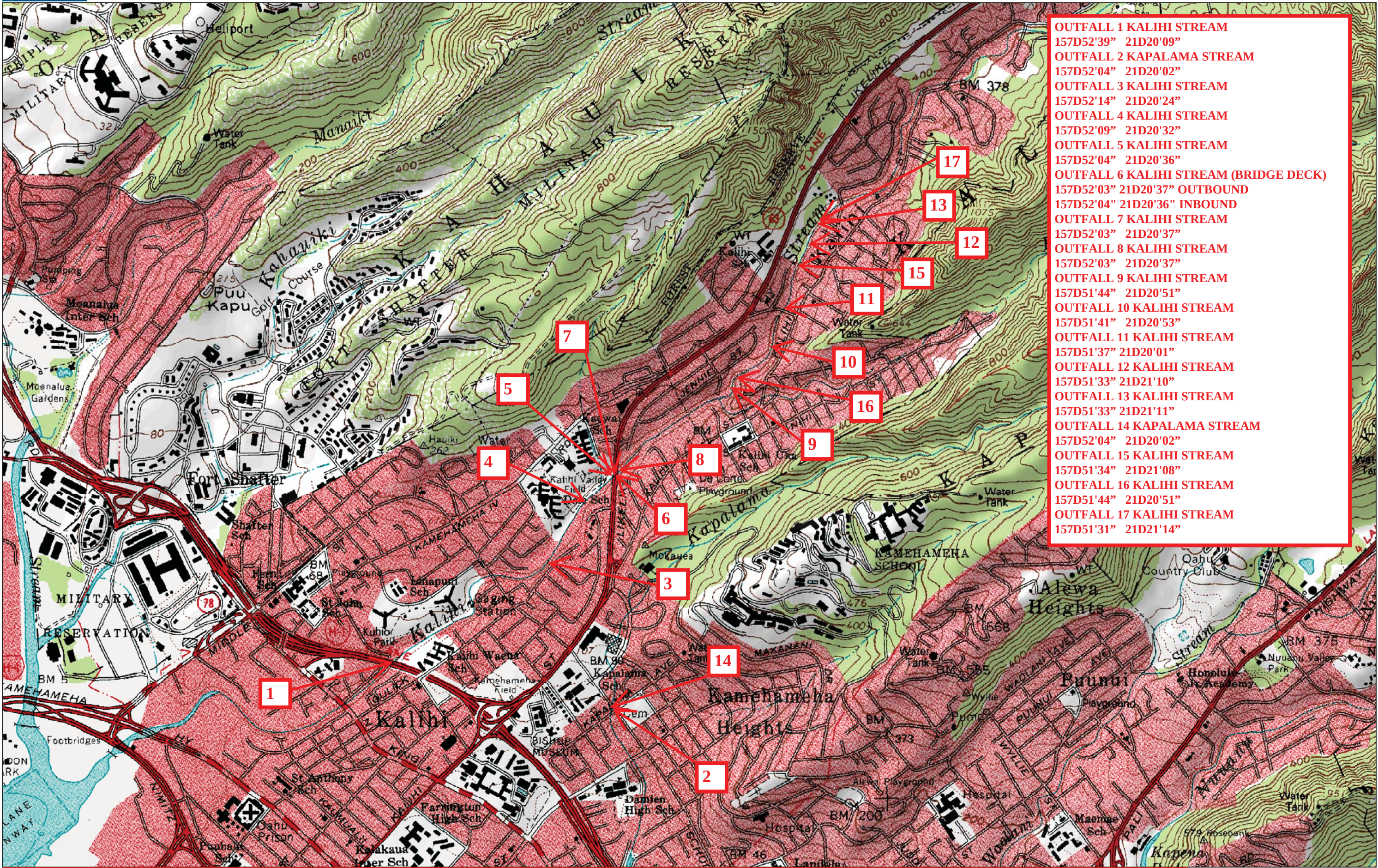


Attachment A-1
Location, Outfall, and BMP Maps



**PROJECT
LOCATION**

LOCATION MAP



- OUTFALL 1 KALIHI STREAM
157D52'39" 21D20'09"
- OUTFALL 2 KAPALAMA STREAM
157D52'04" 21D20'02"
- OUTFALL 3 KALIHI STREAM
157D52'14" 21D20'24"
- OUTFALL 4 KALIHI STREAM
157D52'09" 21D20'32"
- OUTFALL 5 KALIHI STREAM
157D52'04" 21D20'36"
- OUTFALL 6 KALIHI STREAM (BRIDGE DECK)
157D52'03" 21D20'37" OUTBOUND
157D52'04" 21D20'36" INBOUND
- OUTFALL 7 KALIHI STREAM
157D52'03" 21D20'37"
- OUTFALL 8 KALIHI STREAM
157D52'03" 21D20'37"
- OUTFALL 9 KALIHI STREAM
157D51'44" 21D20'51"
- OUTFALL 10 KALIHI STREAM
157D51'41" 21D20'53"
- OUTFALL 11 KALIHI STREAM
157D51'37" 21D20'01"
- OUTFALL 12 KALIHI STREAM
157D51'33" 21D21'10"
- OUTFALL 13 KALIHI STREAM
157D51'33" 21D21'11"
- OUTFALL 14 KAPALAMA STREAM
157D52'04" 21D20'02"
- OUTFALL 15 KALIHI STREAM
157D51'34" 21D21'08"
- OUTFALL 16 KALIHI STREAM
157D51'44" 21D20'51"
- OUTFALL 17 KALIHI STREAM
157D51'31" 21D21'14"

OUTFALL MAP

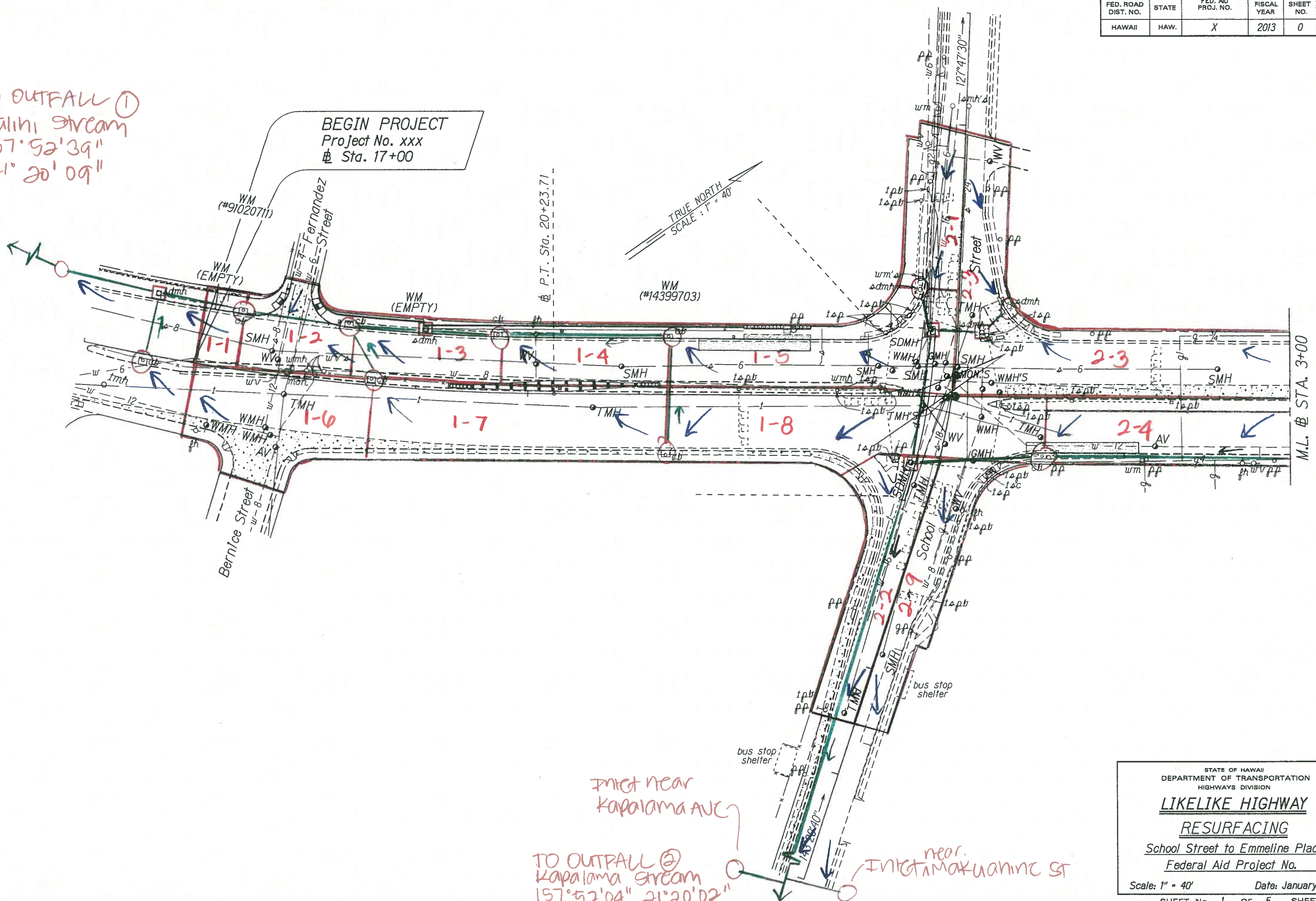
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0

TO OUTFALL ①
Kalihi Stream
157°52'39"
21°20'09"

BEGIN PROJECT
Project No. xxx
Sta. 17+00

P.T. Sta. 20+23.71

TRUE NORTH
SCALE: 1" = 40'



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INLET near
KAPALAMA AVE

TO OUTFALL ②
KAPALAMA Stream
157°52'04"
21°20'02"

INLET near
School St

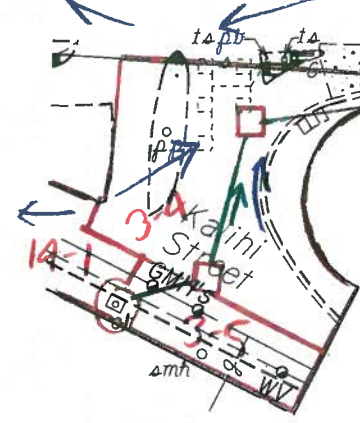
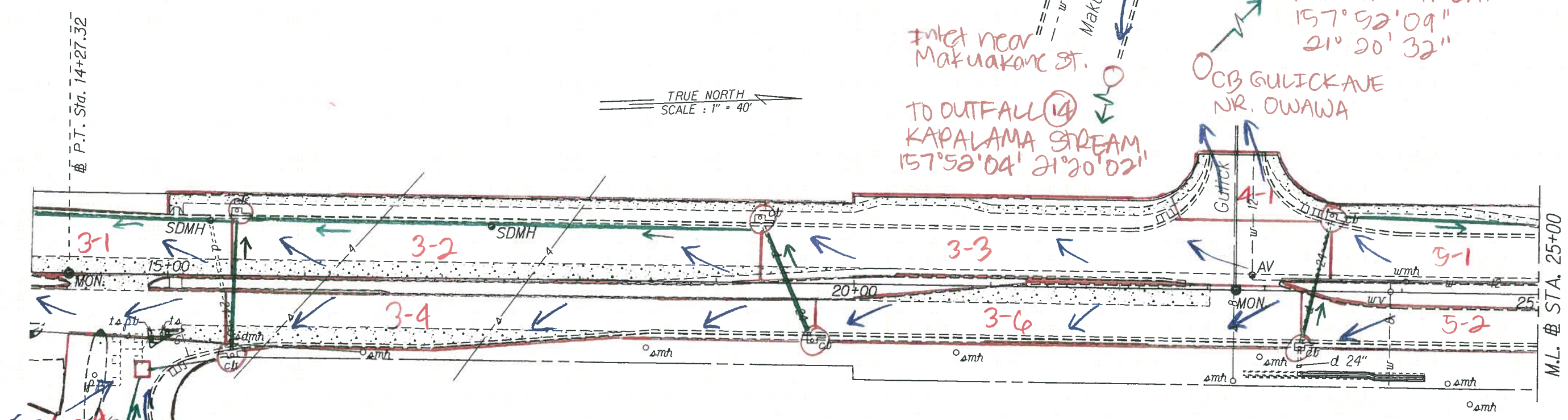
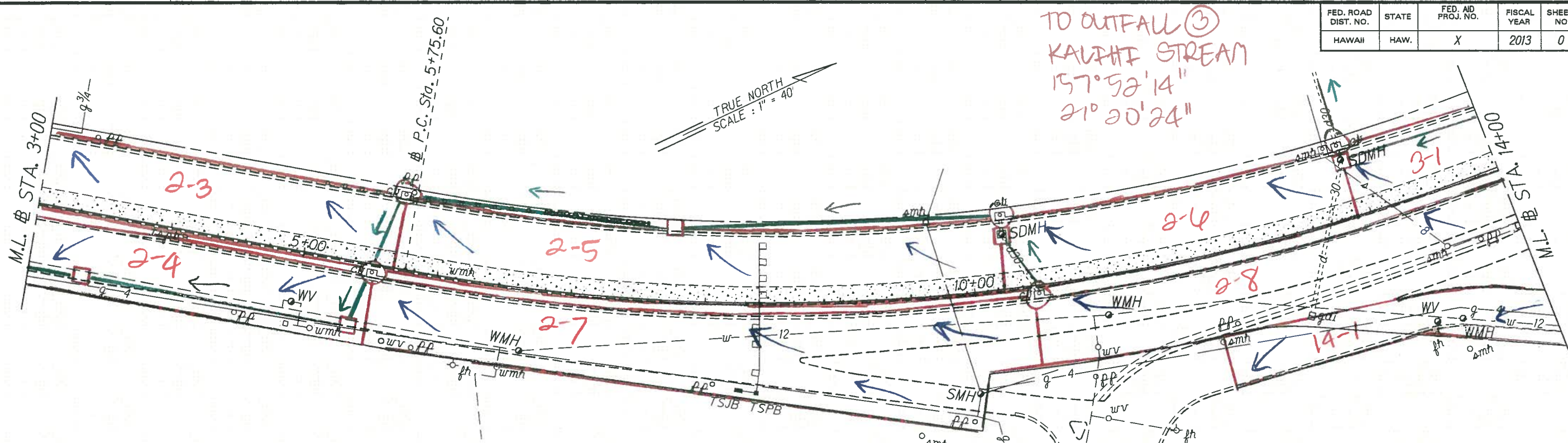
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELINE HIGHWAY
RESURFACING
School Street to Emmeline Place
Federal Aid Project No.

Scale: 1" = 40' Date: January, 2013

SHEET No. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



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HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING

School Street to Emmeline Place
Federal Aid Project No.

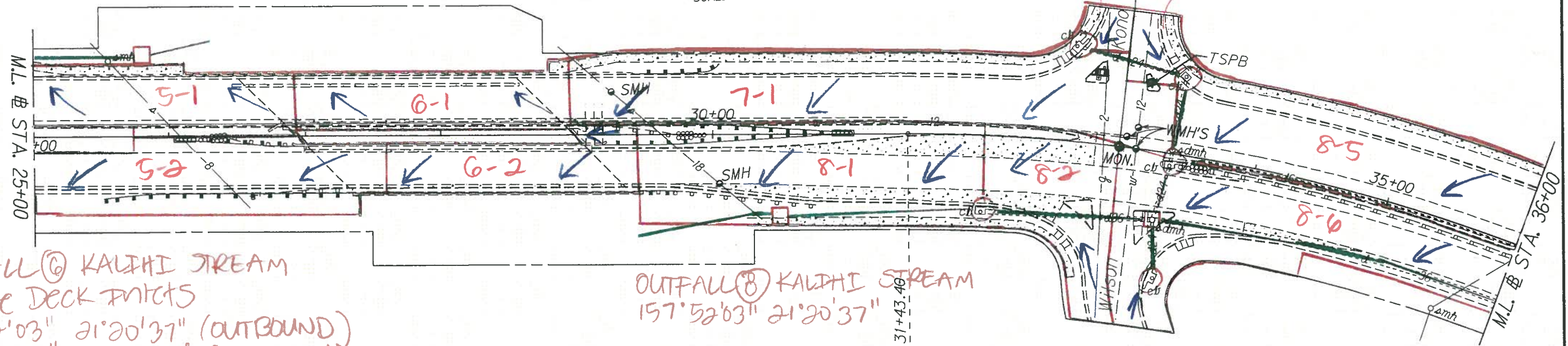
Scale: 1" = 40' Date: January, 2013

SHEET No. 2 OF 5 SHEETS

OUTFALL 5 KALIHI STREAM
 $157^{\circ}52'04''$ $21^{\circ}20'36''$

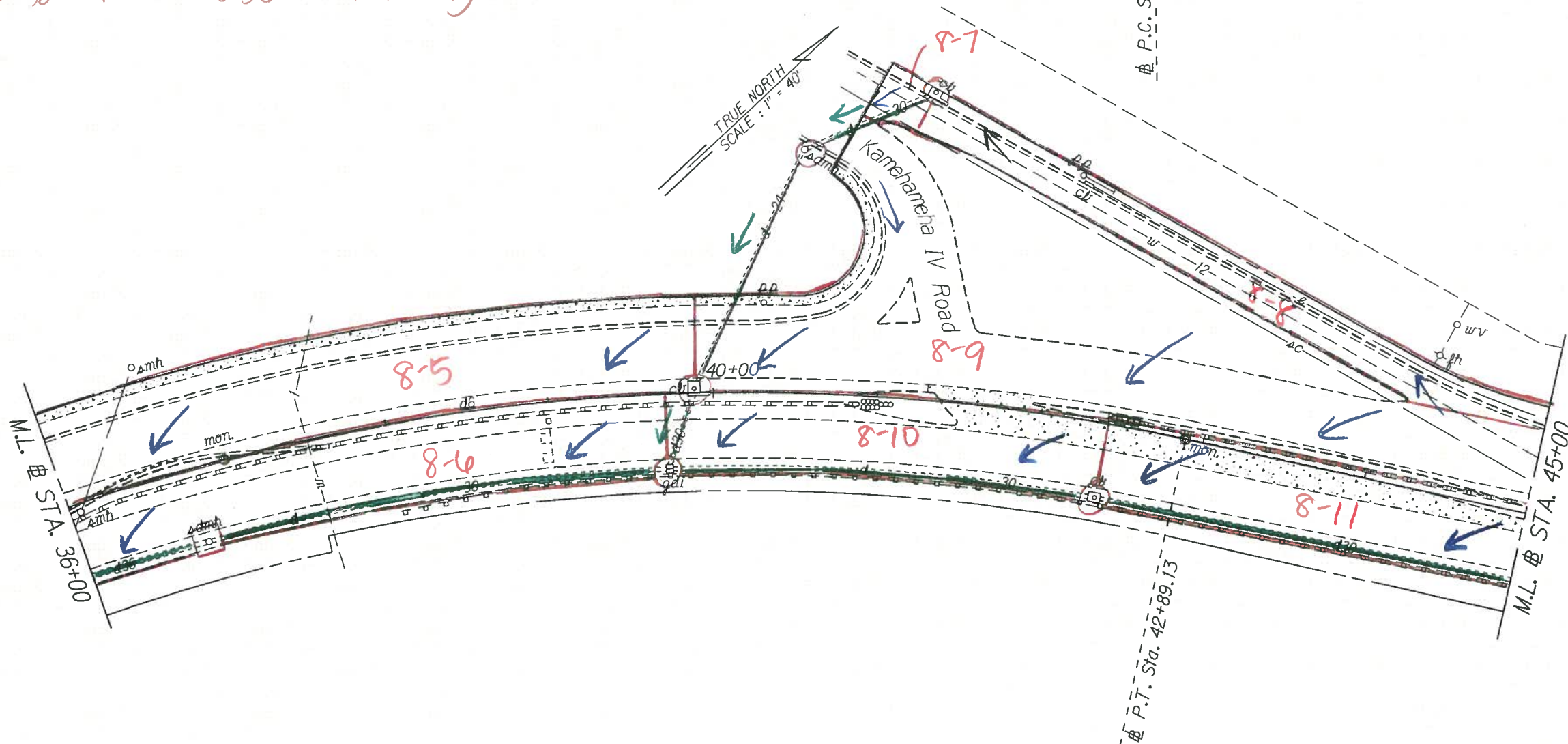
OUTFALL 7 KALIHI STREAM
 $157^{\circ}52'03''$ $21^{\circ}20'37''$

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



OUTFALL 6 KALIHI STREAM
 Bridge Deck Intcts
 $157^{\circ}52'03''$ $21^{\circ}20'37''$ (OUTBOUND)
 $157^{\circ}52'04''$ $21^{\circ}20'36''$ (INBOUND)

OUTFALL 8 KALIHI STREAM
 $157^{\circ}52'03''$ $21^{\circ}20'37''$



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CHECKED BY	

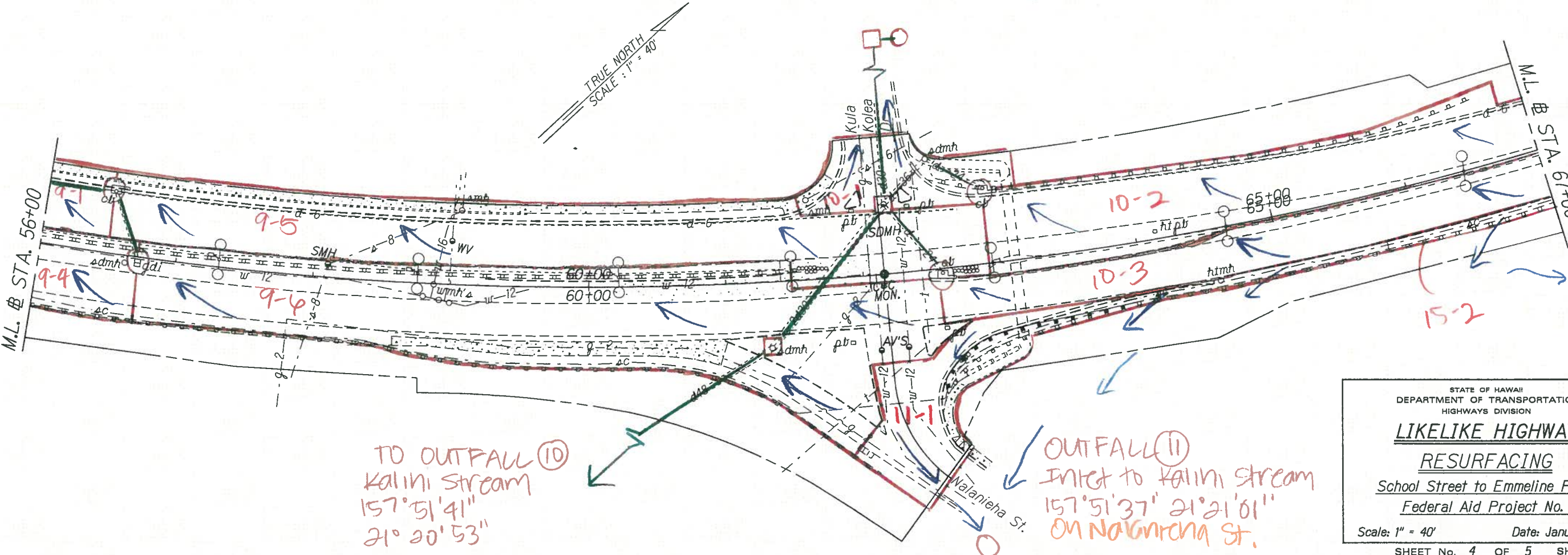
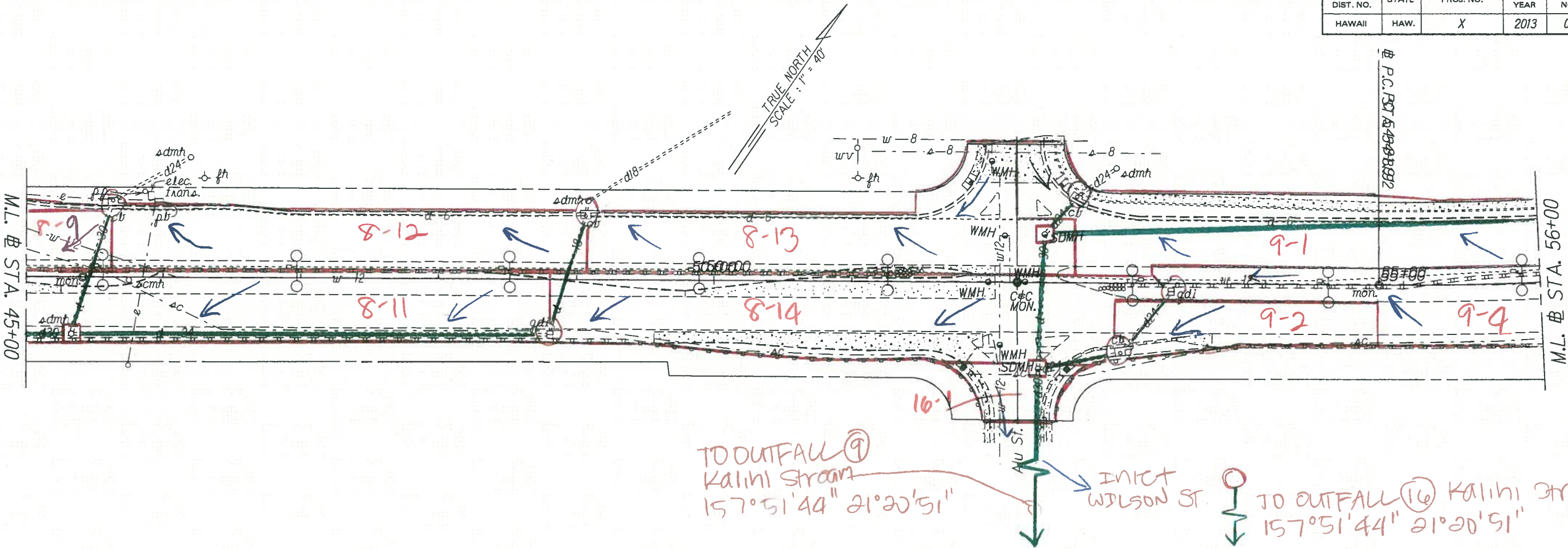
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING
 School Street to Emmeline Place
 Federal Aid Project No.

Scale: 1" = 40' Date: January, 2013

SHEET No. 3 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



SURVEY PLOTTED BY	DATE
DRAWN BY	
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QUANTITIES BY	
CHECKED BY	

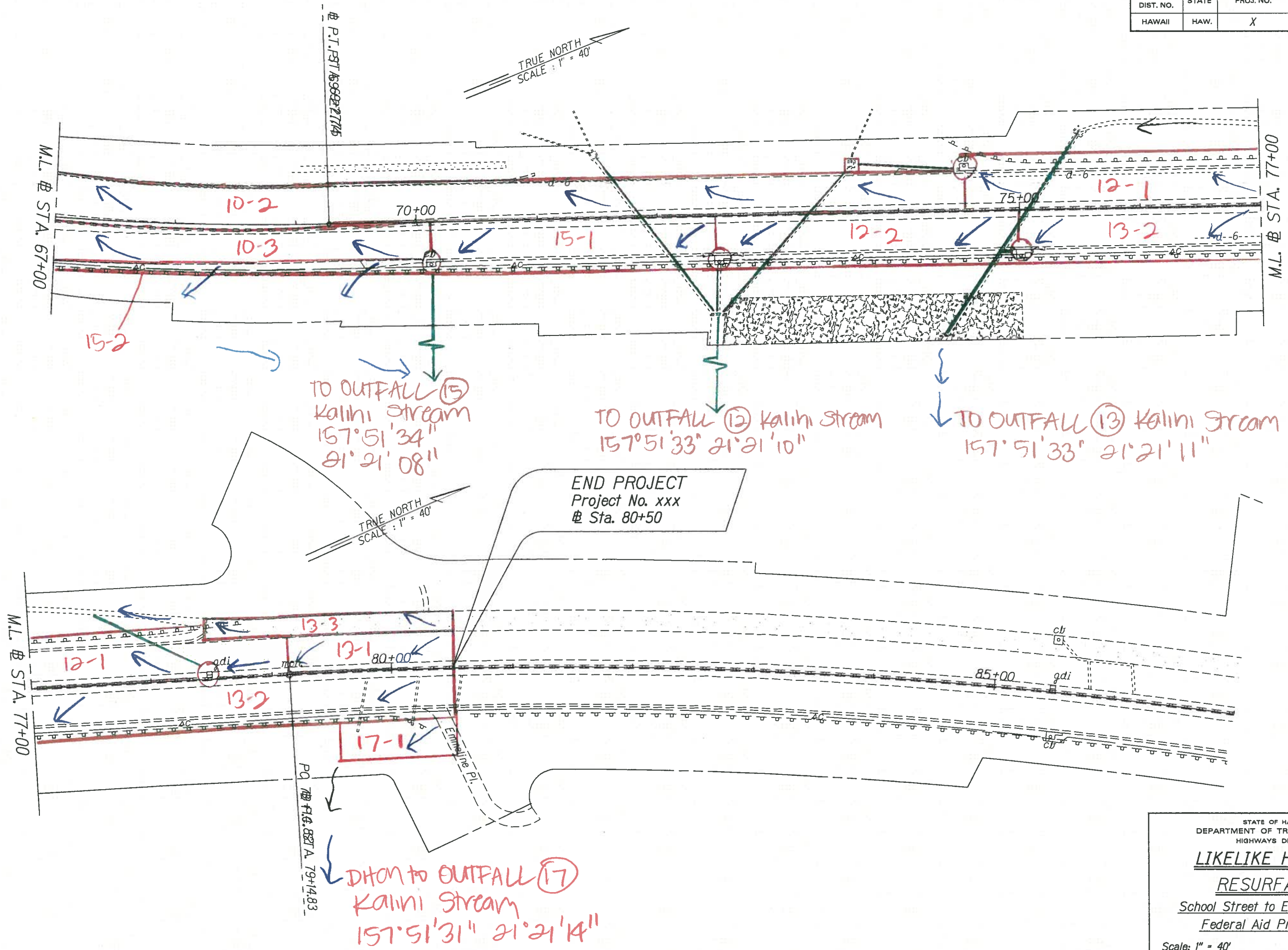
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING
School Street to Emmeline Place
Federal Aid Project No.

Scale: 1" = 40'
SHEET No. 4 OF 5 SHEETS

Date: January, 2013

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



SURVEY PLOTTED BY	DATE
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QUANTITIES BY	
CHECKED BY	
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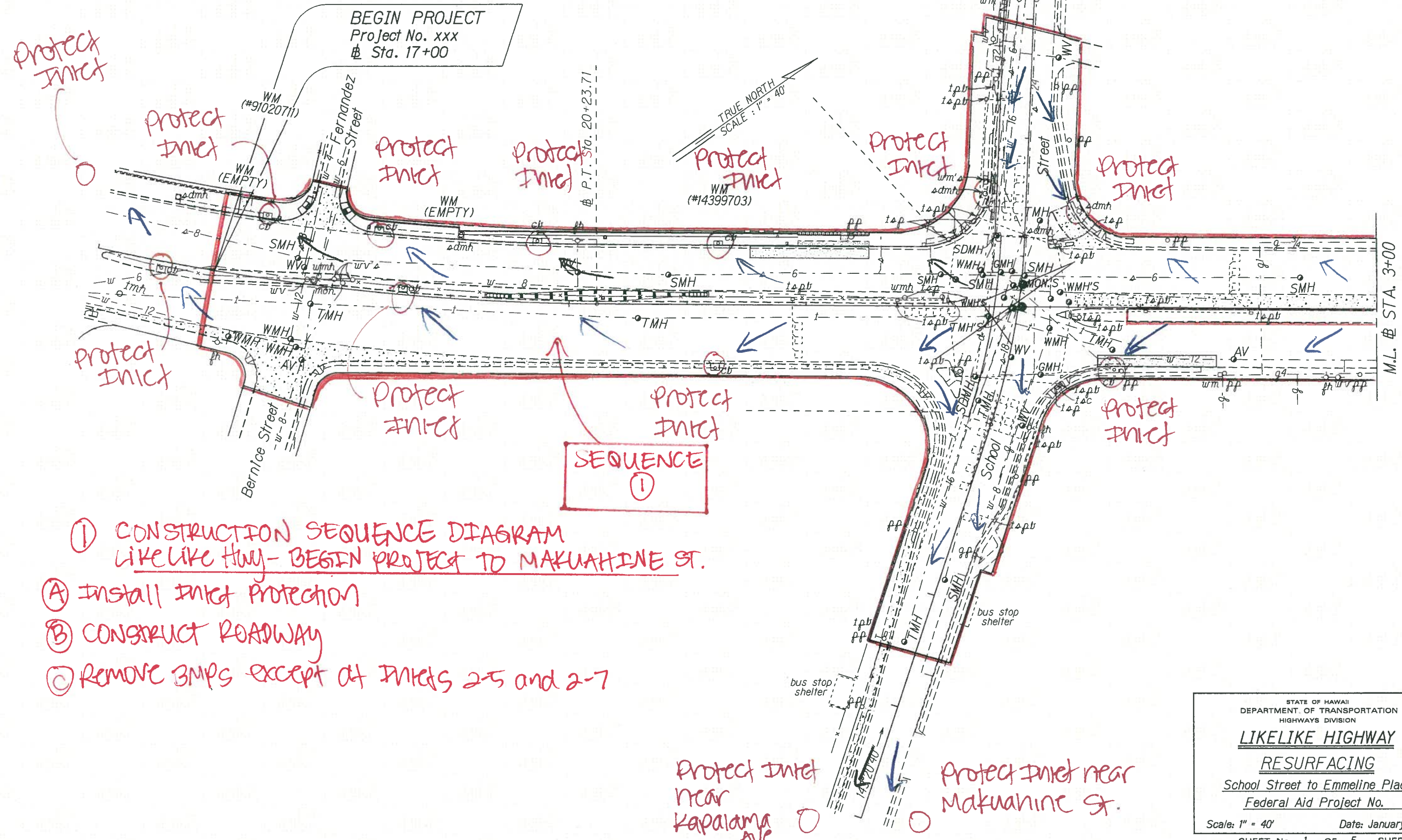
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING
School Street to Emmeline Place
Federal Aid Project No. _____

Scale: 1" = 40'
Date: January, 2013

SHEET No. 5 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



① CONSTRUCTION SEQUENCE DIAGRAM
 LIKE LIKE HWY- BEGIN PROJECT TO MAKUAHINE ST.

- Ⓐ INSTALL INLET PROTECTION
- Ⓑ CONSTRUCT ROADWAY
- Ⓒ REMOVE BMPs EXCEPT AT INLETS 2-5 AND 2-7

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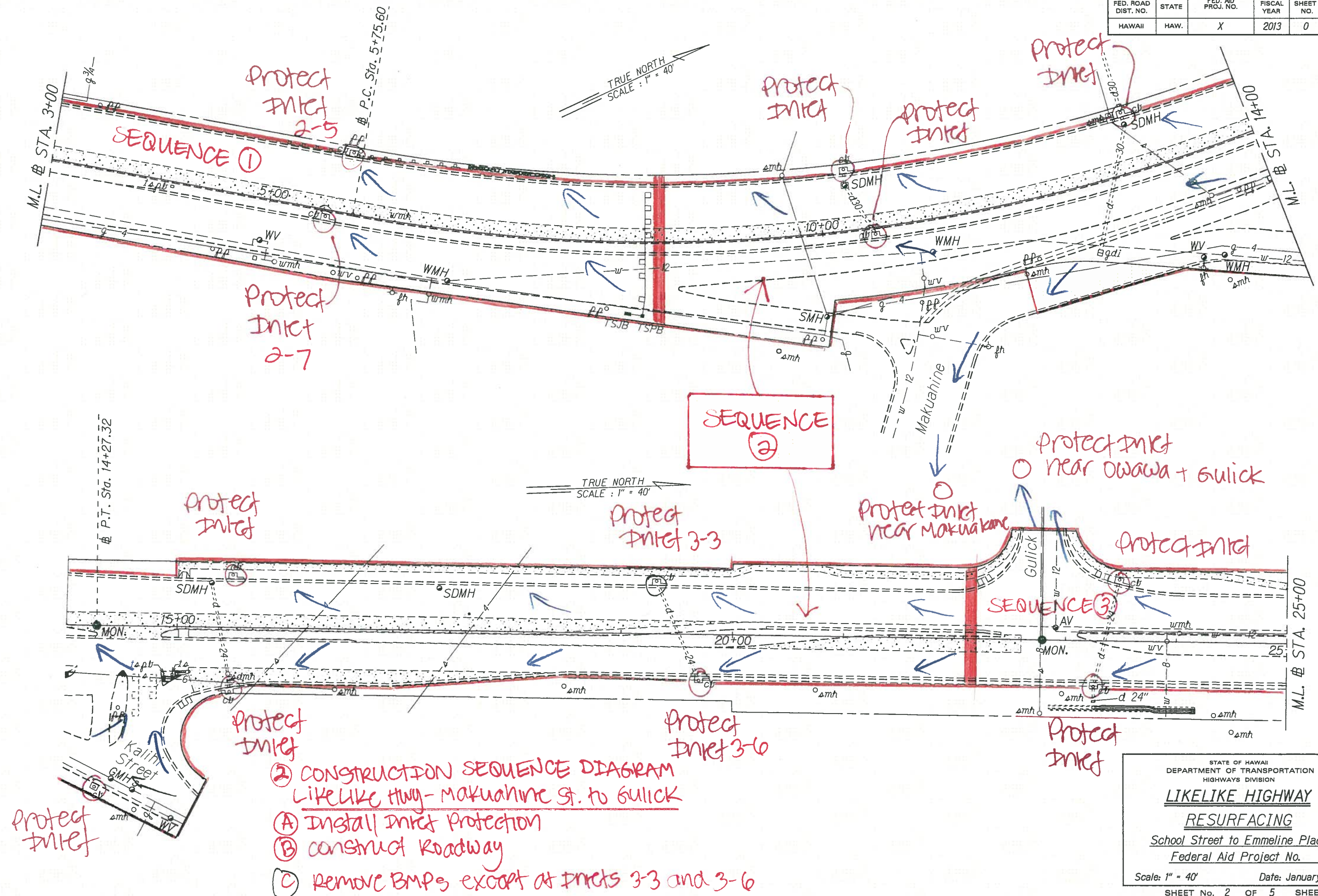
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING
 School Street to Emmeline Place
 Federal Aid Project No.

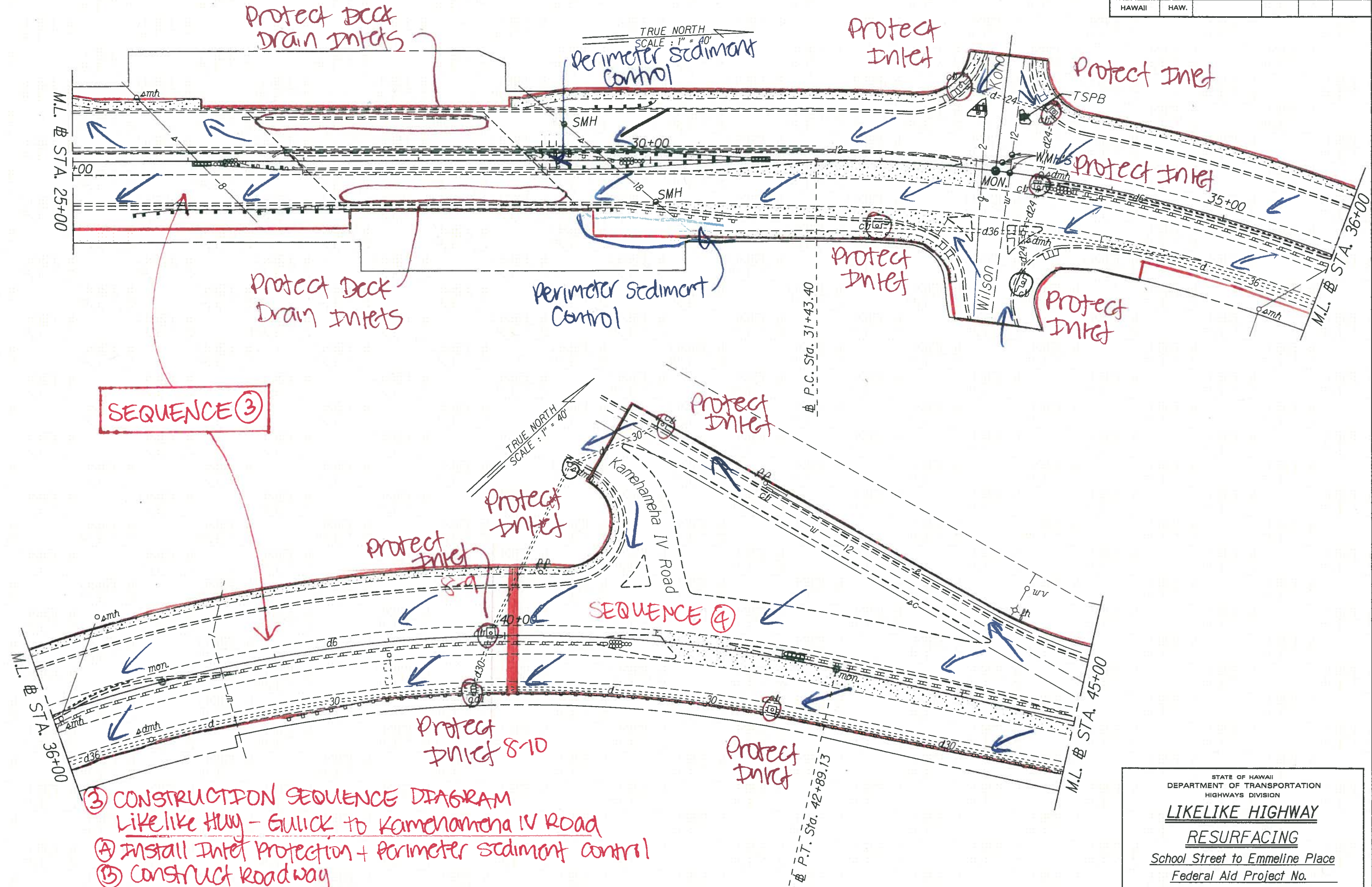
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SHEET No. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



- ③ CONSTRUCTION SEQUENCE DIAGRAM
Likeline Hwy - Gulick to Kamehameha IV Road
- ④ Install Inlet Protection + Perimeter Sediment Control
- ⑤ Construct Roadway
- ⑥ Remove BMPs except at Inlets 8-9 and 8-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELINE HIGHWAY
RESURFACING

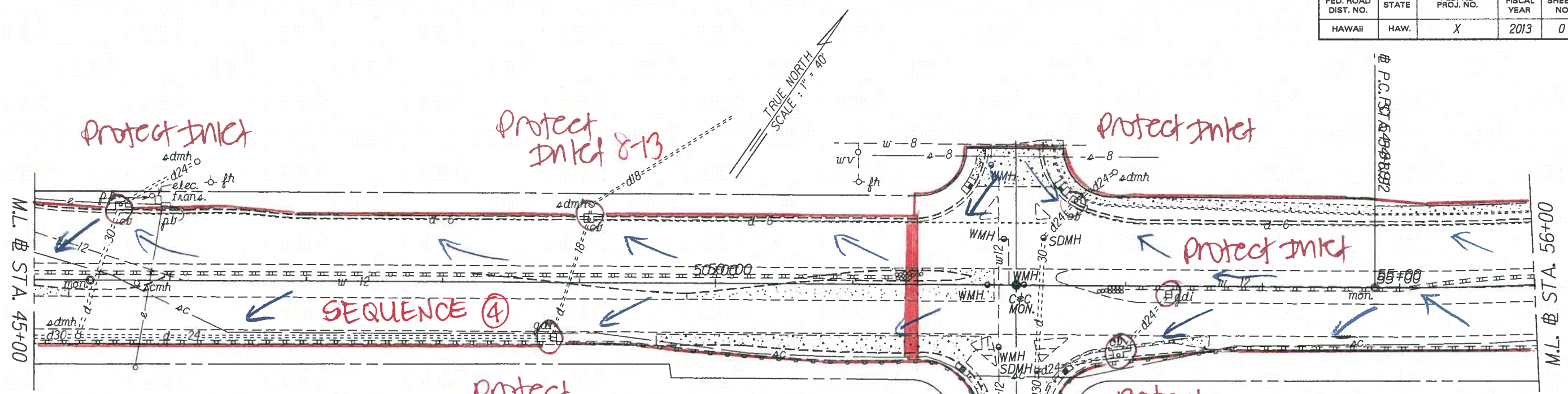
School Street to Emmeline Place
Federal Aid Project No.

Scale: 1" = 40' Date: January, 2013

SHEET No. 3 OF 5 SHEETS

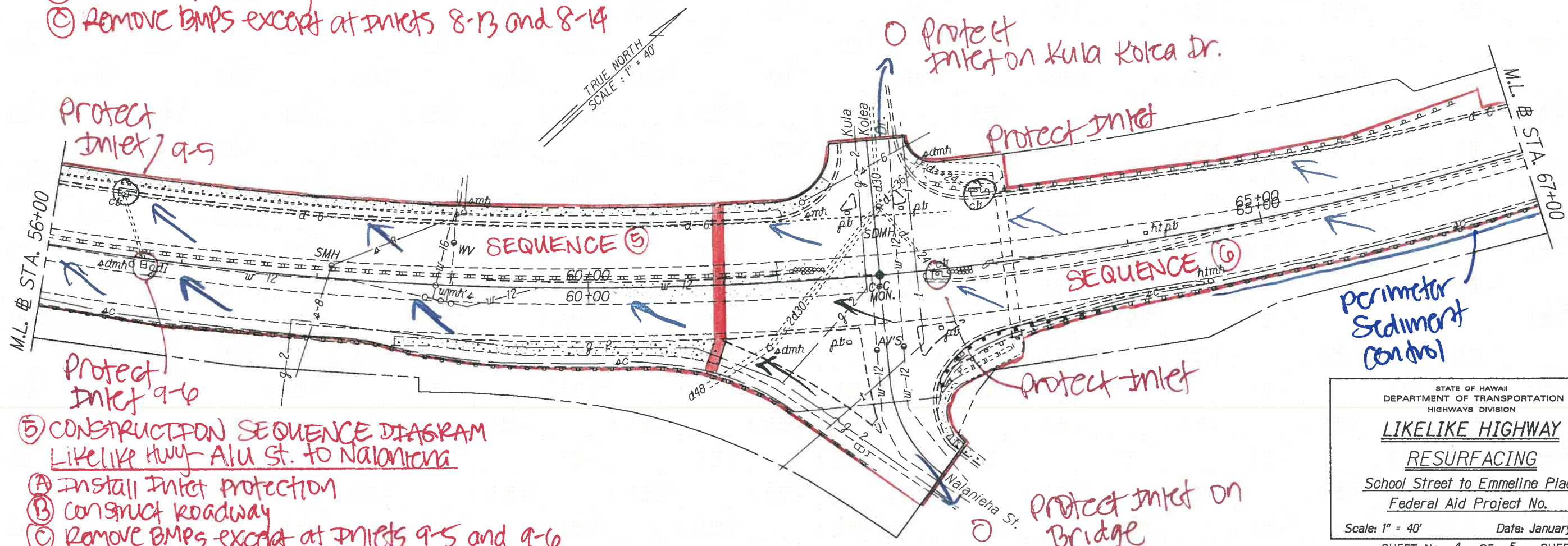
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QUANTITIES BY	
ORIGINAL PLAN	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



④ CONSTRUCTION SEQUENCE DIAGRAM
Like Like Hwy - Kamenahewa Rd to Alu St.

- ① Install Inlet Protection
- ② Construct Roadway
- ③ Remove BMPs except at inlets 8-13 and 8-14



⑤ CONSTRUCTION SEQUENCE DIAGRAM
Like Like Hwy - Alu St. to Nalantana

- ① Install Inlet Protection
- ② Construct Roadway
- ③ Remove BMPs except at inlets 9-5 and 9-6

STATE OF HAWAII
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HIGHWAYS DIVISION

LIKELIKE HIGHWAY

RESURFACING

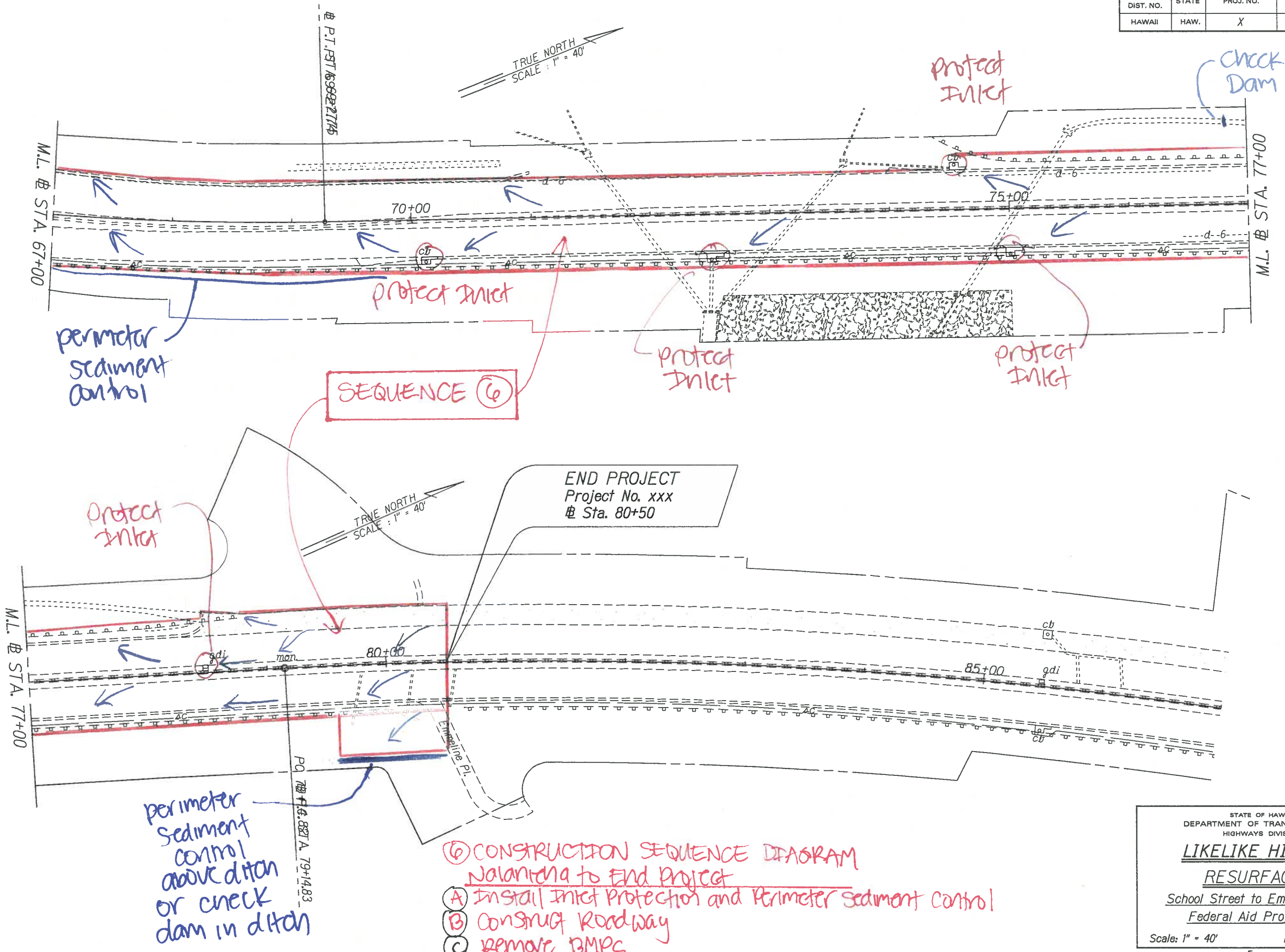
School Street to Emmeline Place
Federal Aid Project No. _____

Scale: 1" = 40' Date: January, 2013

SHEET No. 4 OF 5 SHEETS

SURVEY PLOTTED BY	DATE
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DATE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



- ⑥ CONSTRUCTION SEQUENCE DIAGRAM
Nalanika to End Project
- A Install Inlet Protection and Perimeter Sediment Control
 - B Construct Roadway
 - C Remove BMPs

STATE OF HAWAII
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HIGHWAYS DIVISION

LIKELIKE HIGHWAY

RESURFACING

School Street to Emmeline Place

Federal Aid Project No.

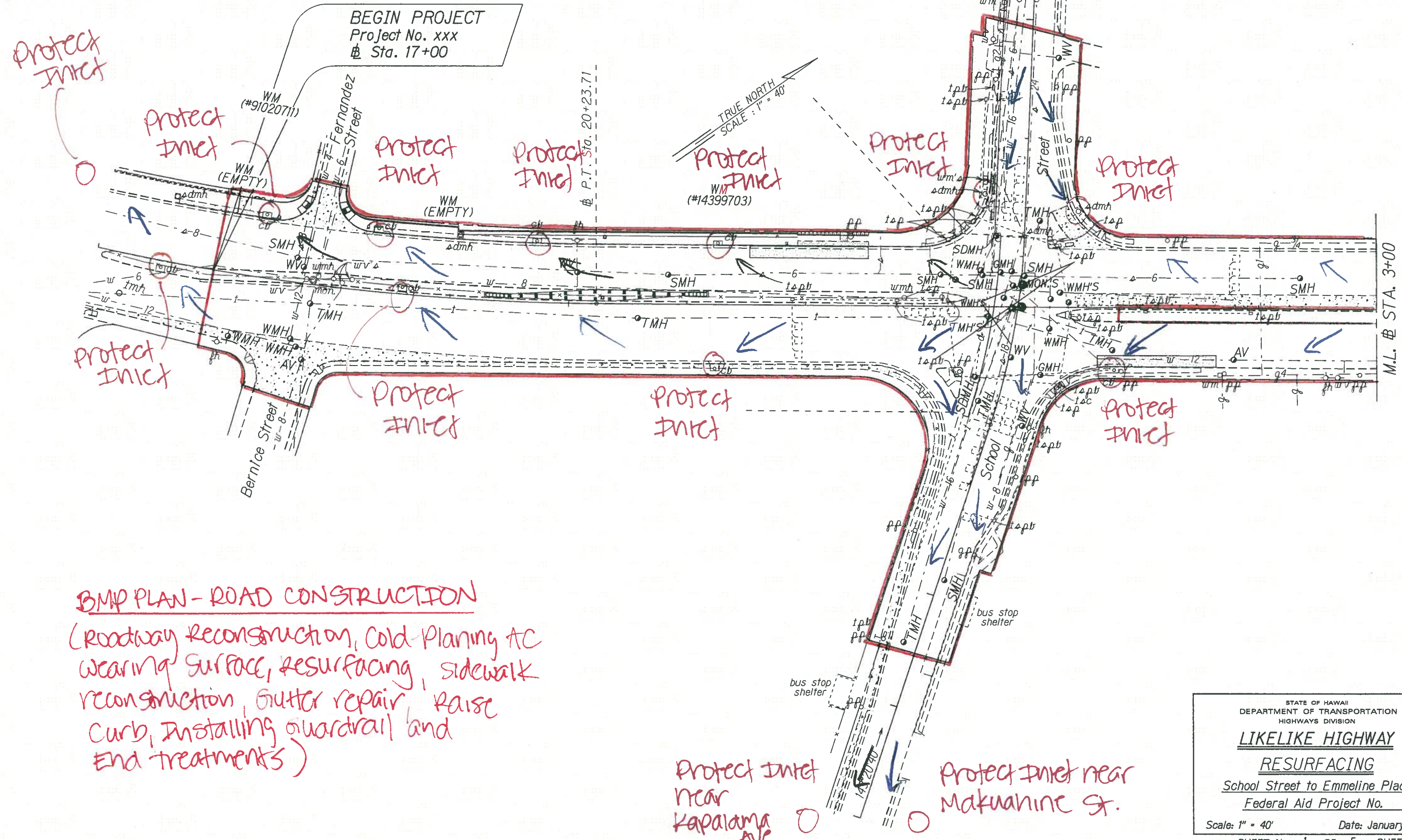
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Date: January, 2013

SHEET No. 5 OF 5 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



BMP PLAN - ROAD CONSTRUCTION

(Roadway Reconstruction, Cold Planing AC wearing surface, resurfacing, sidewalk reconstruction, gutter repair, raise curb, installing guardrail and end treatments)

Protect Inlet near Kapalama Ave

Protect Inlet near Makuahine St.

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LIKELIKE HIGHWAY

RESURFACING

School Street to Emmeline Place

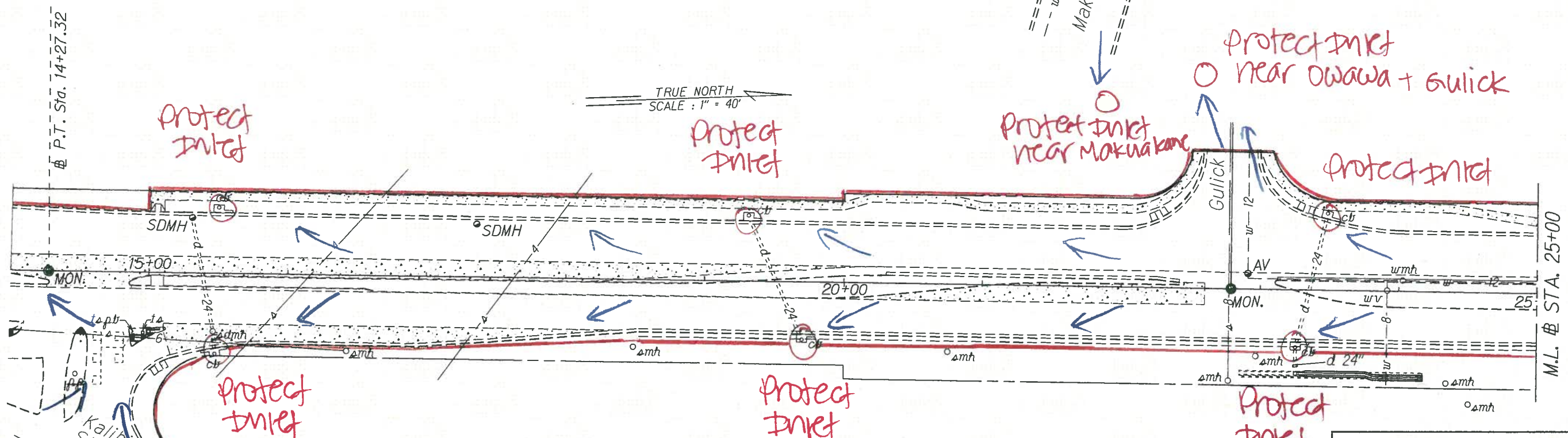
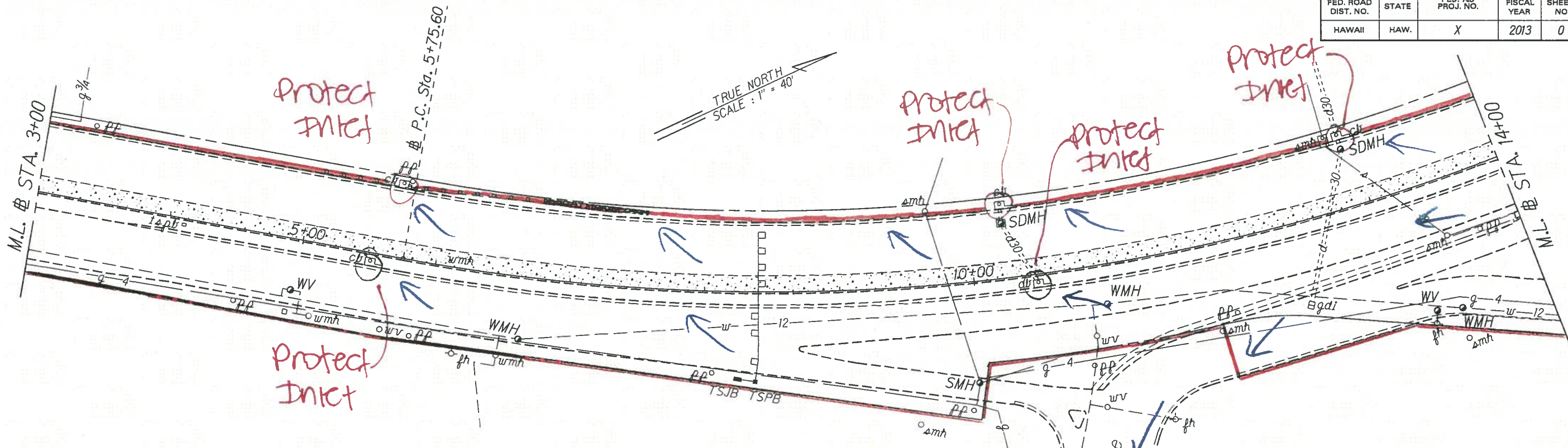
Federal Aid Project No.

Scale: 1" = 40'

Date: January, 2013

SHEET No. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



BMP PLAN - ROAD CONSTRUCTION
(Roadway Reconstruction, Cold Planing AC Wearing Surface, Resurfacing, Sidewalk reconstruction, Gutter repair, Raise curb, Installing guardrail and end treatments)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELIKE HIGHWAY
RESURFACING
School Street to Emmeline Place
Federal Aid Project No. _____

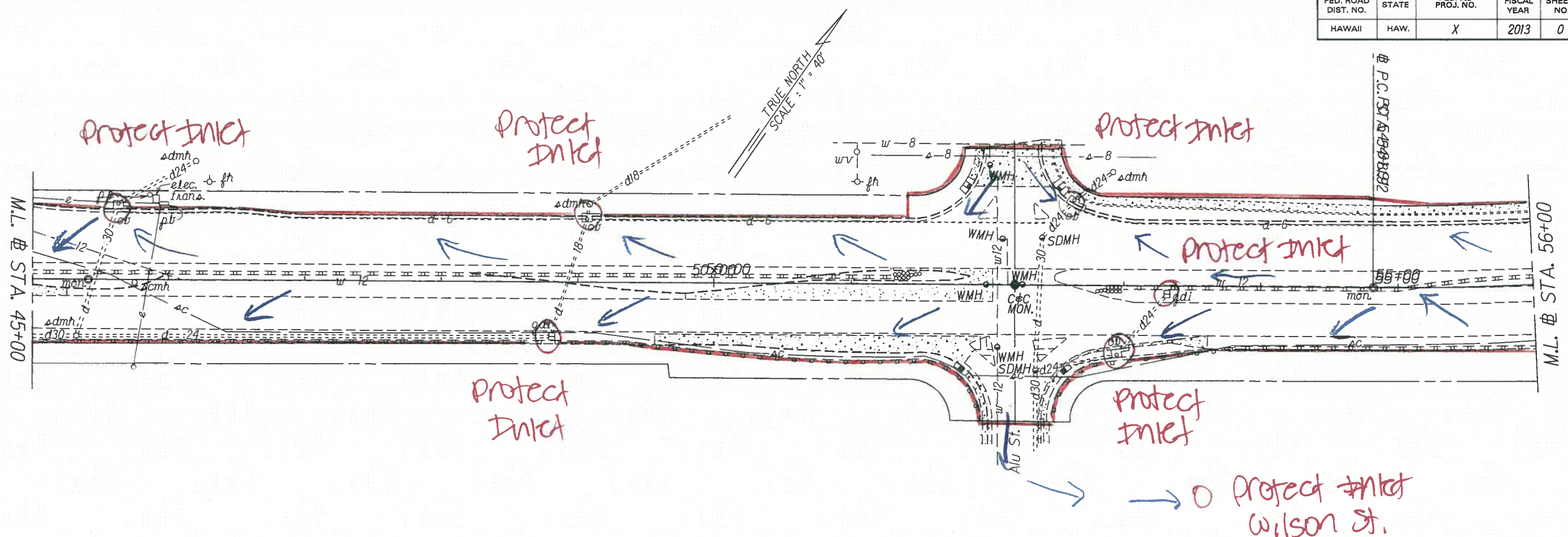
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SHEET No. 2 OF 5 SHEETS

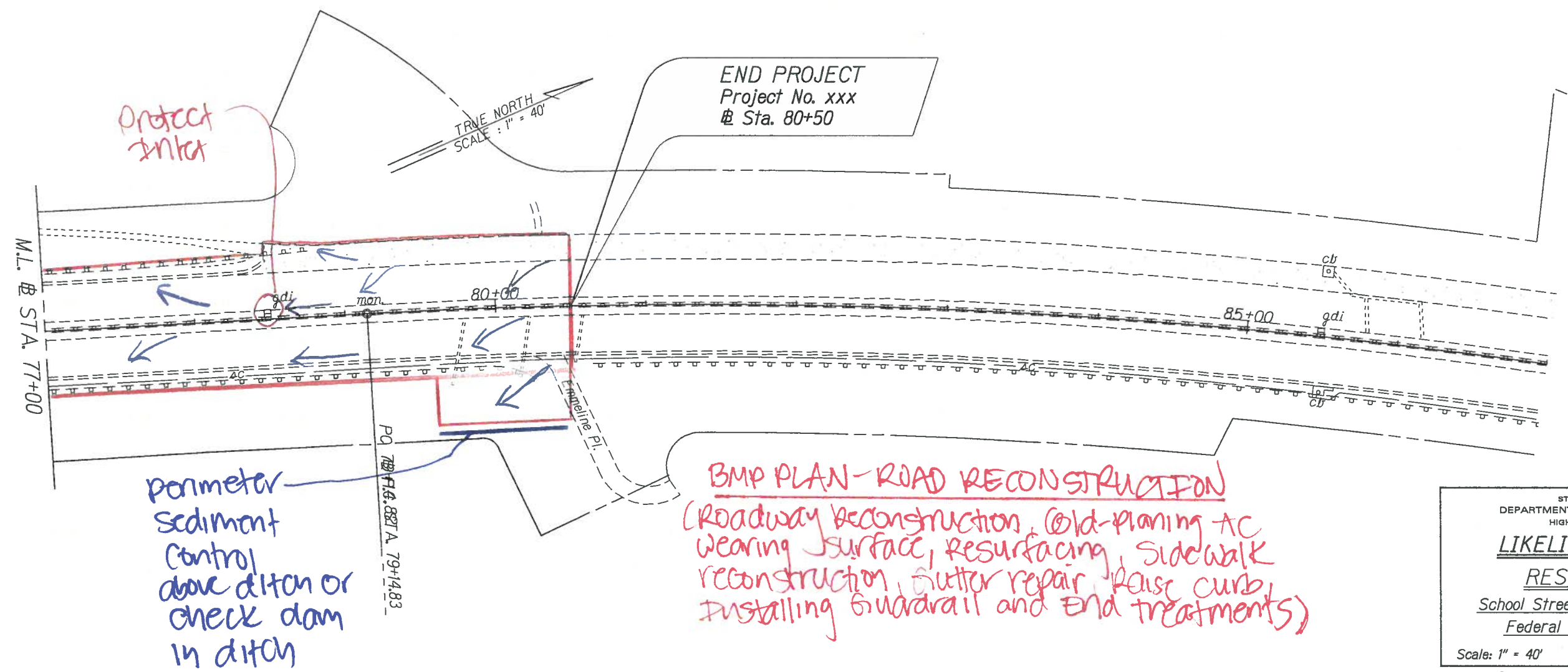
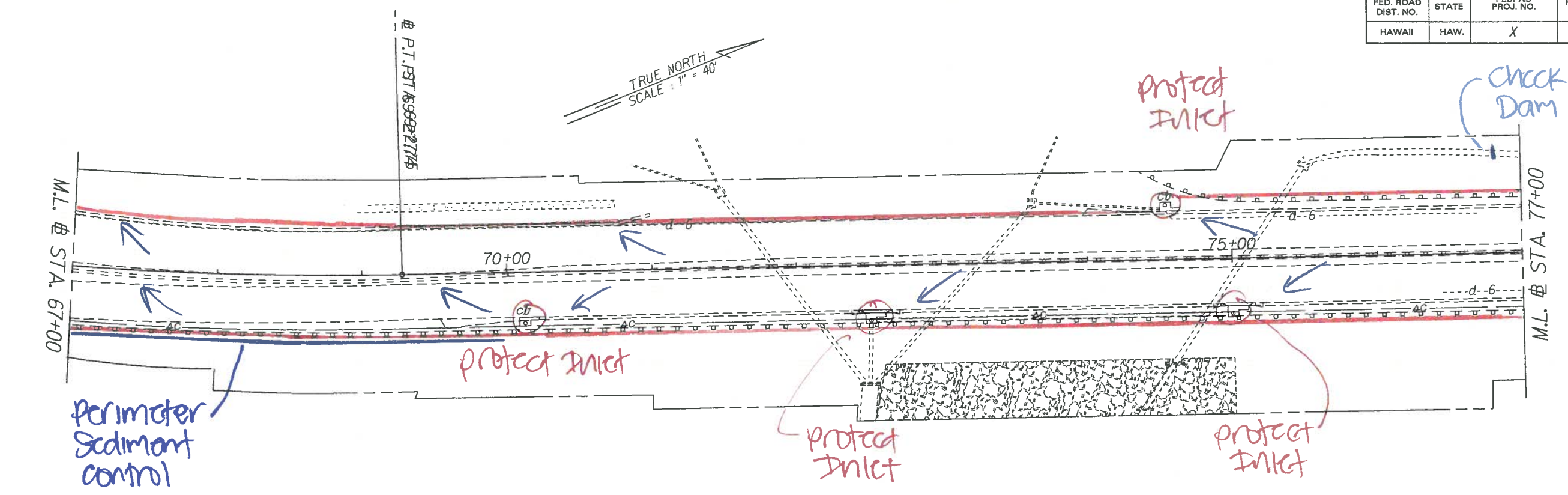
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	X	2013	0	0



BMP PLAN - ROAD RECONSTRUCTION
 (Roadway Reconstruction, Cold-planing AC Wearing Surface, Resurfacing, Sidewalk reconstruction, gutter repair, raise curb, installing guardrail and end treatments)

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIKELIKE HIGHWAY

RESURFACING

School Street to Emmeline Place
Federal Aid Project No. _____

Scale: 1" = 40' Date: January, 2013

SHEET No. 5 OF 5 SHEETS