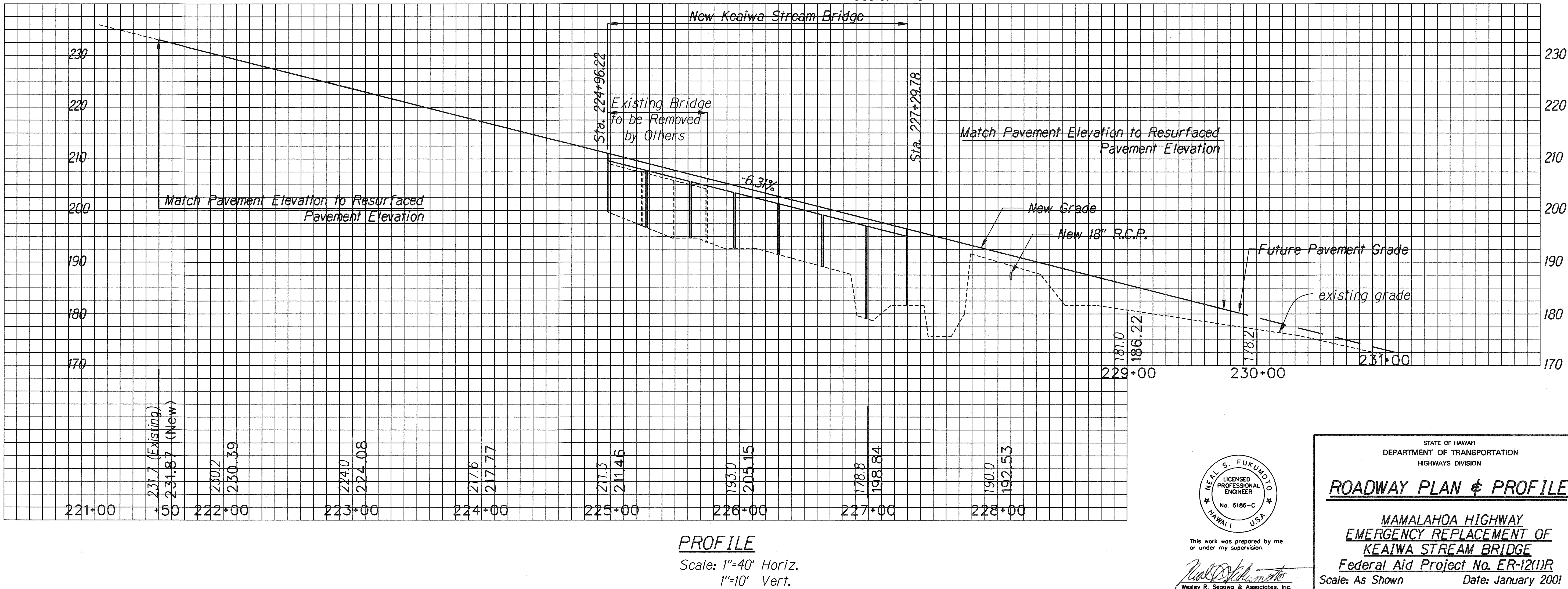
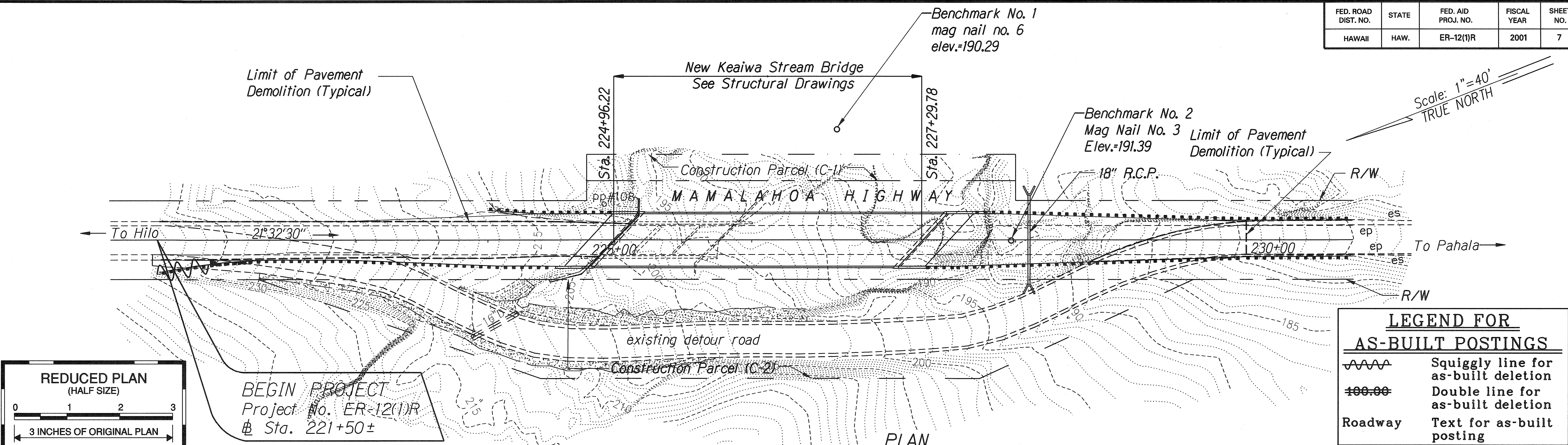
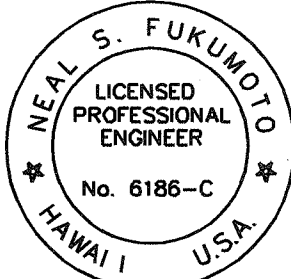


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-12(1)R	2001	7	77



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BOOK	DRAWN BY	JAN 01
100000/20	DESIGNED BY	JAN 01
NSF	QUANTITIES BY	
	CHECKED BY	



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or under my supervision.

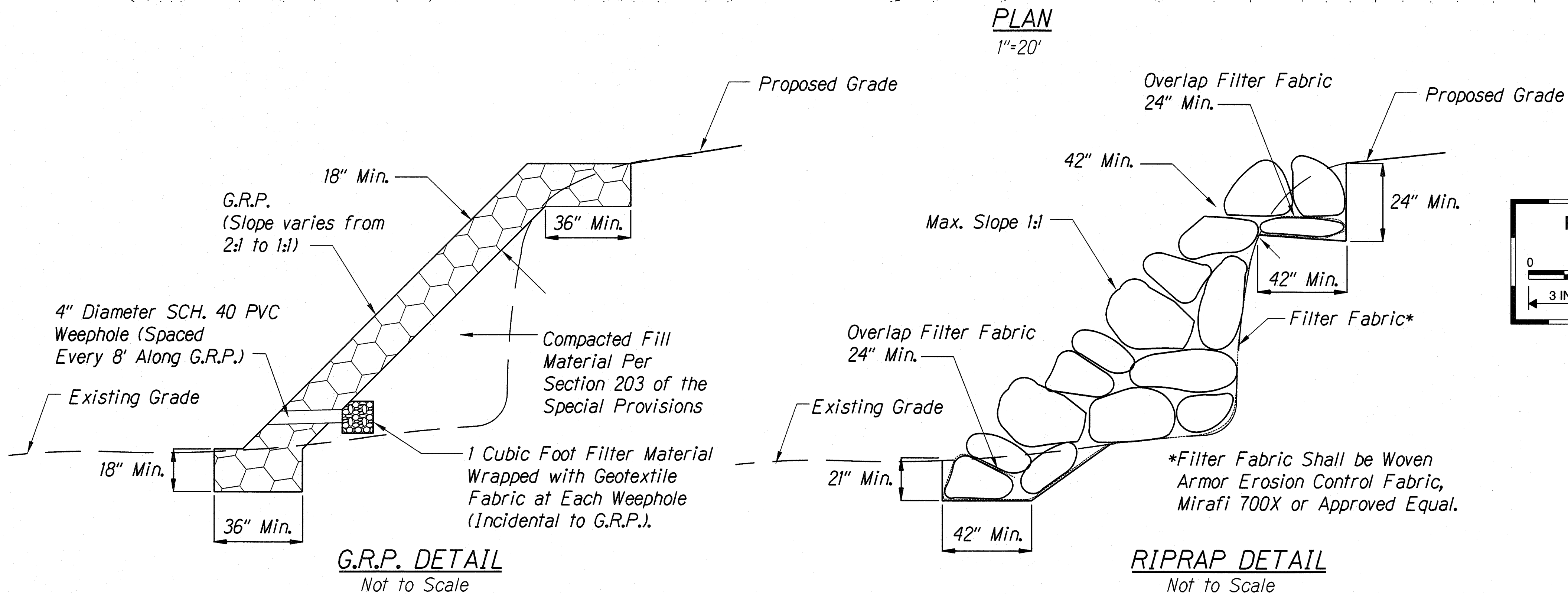
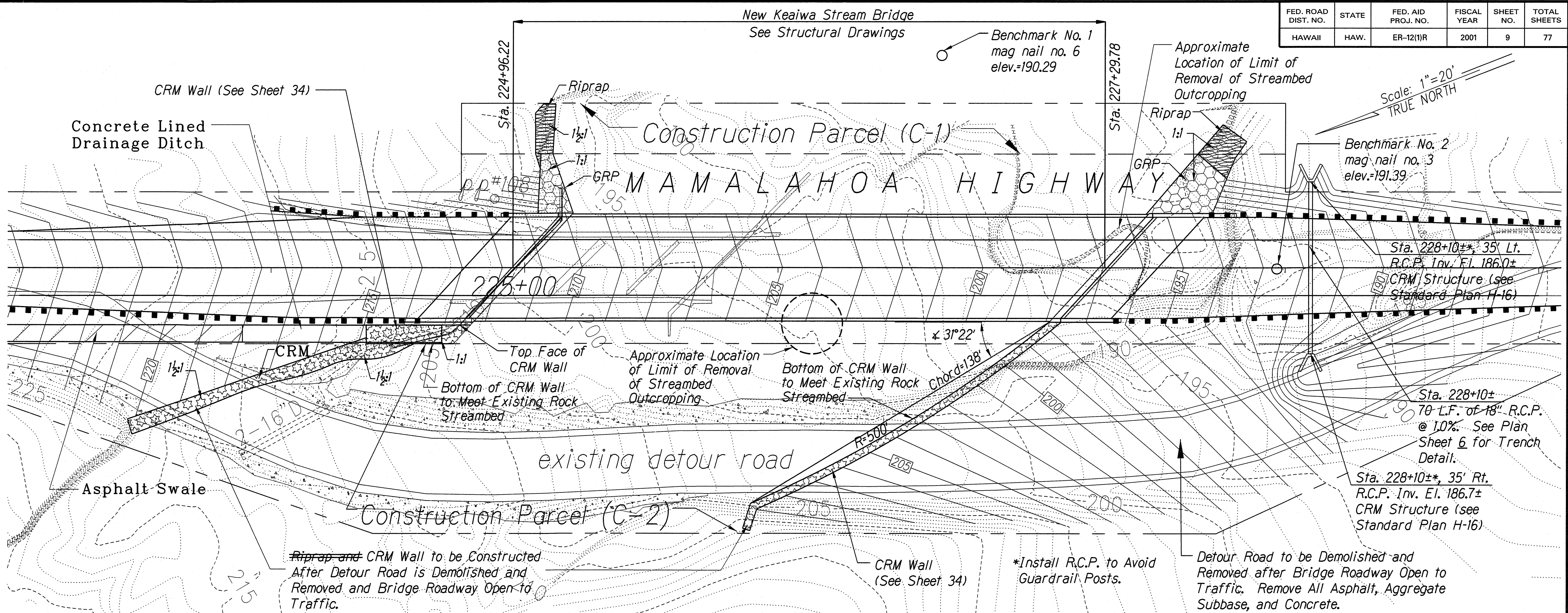
Neal S. Fukumoto
Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

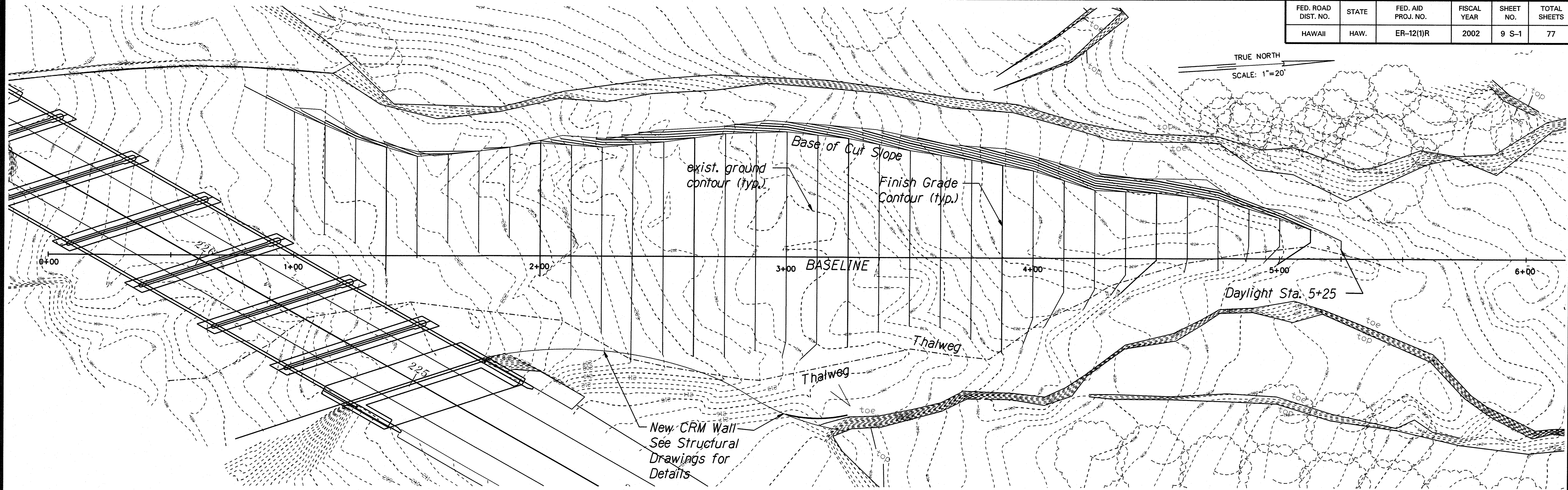
ROADWAY PLAN & PROFILE
MAMALAHOA HIGHWAY
EMERGENCY REPLACEMENT OF
KEAIWA STREAM BRIDGE
Federal Aid Project No. ER-12(1)R
Scale: As Shown Date: January 2001

SHEET No. 1 OF 3 SHEETS

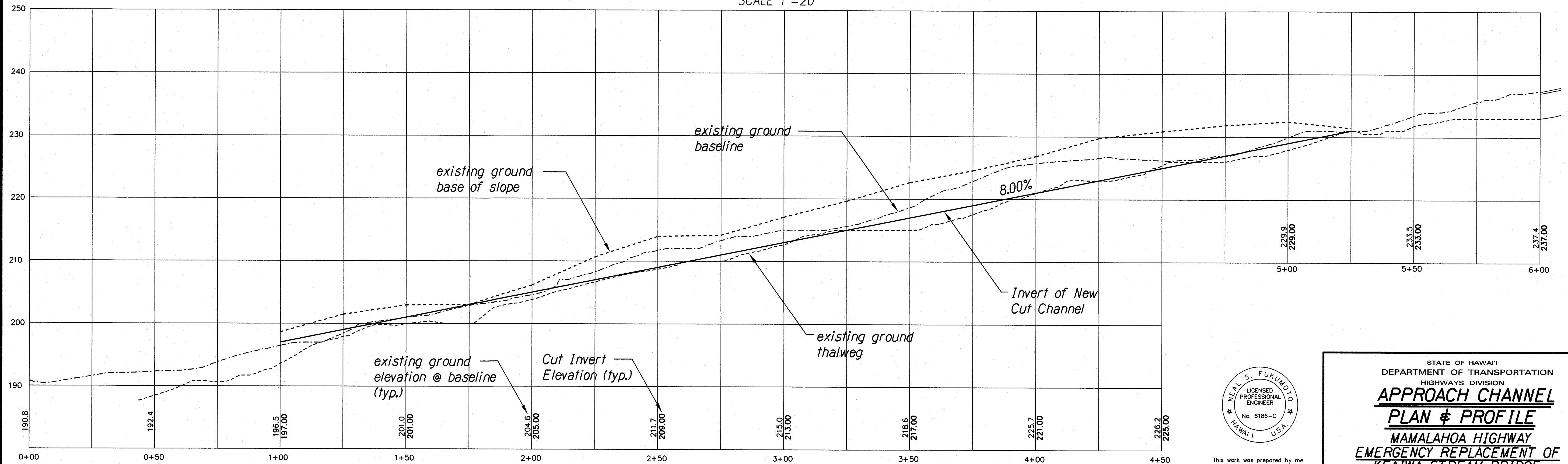
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HAWAII	HAW.	ER-12(1)R	2001	9	77



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-12(1)R	2002	9 S-1	77

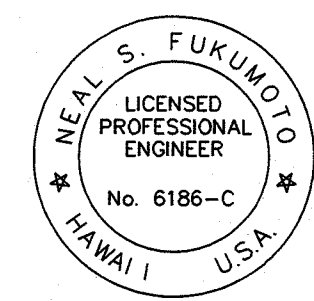


PLAN
SCALE 1"=20'



PROFILE
SCALE: 1"=10' HORIZ.
1"=4' VERT.

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



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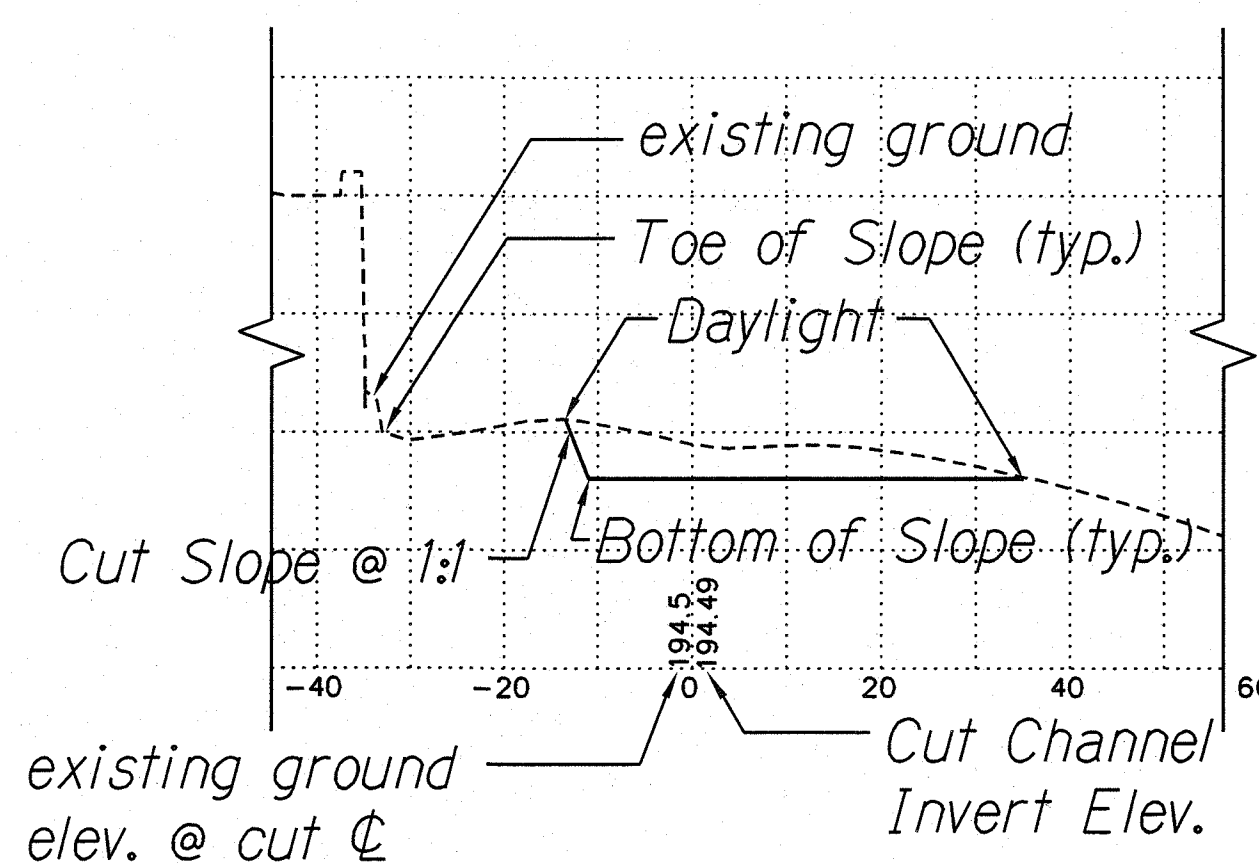
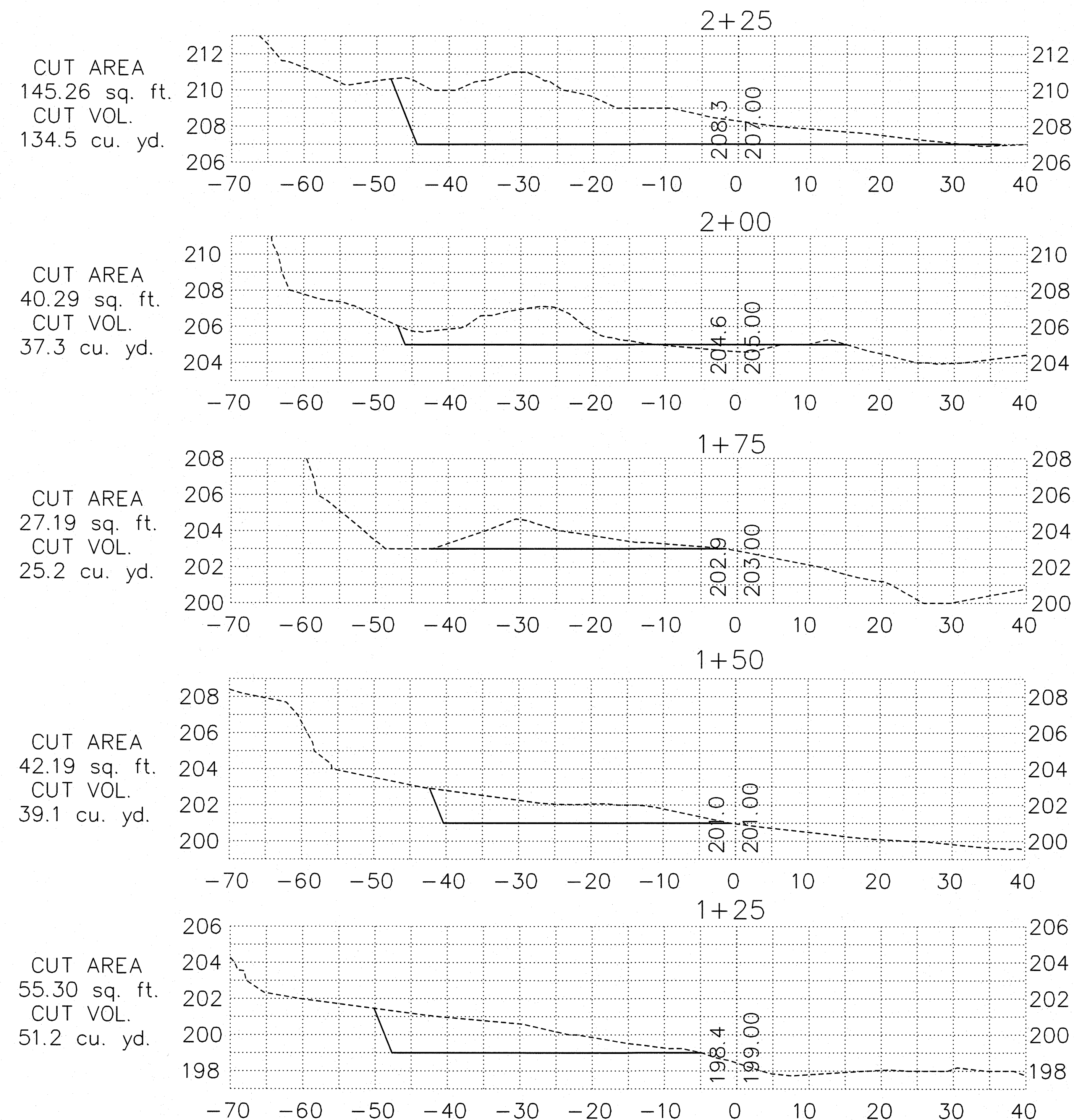
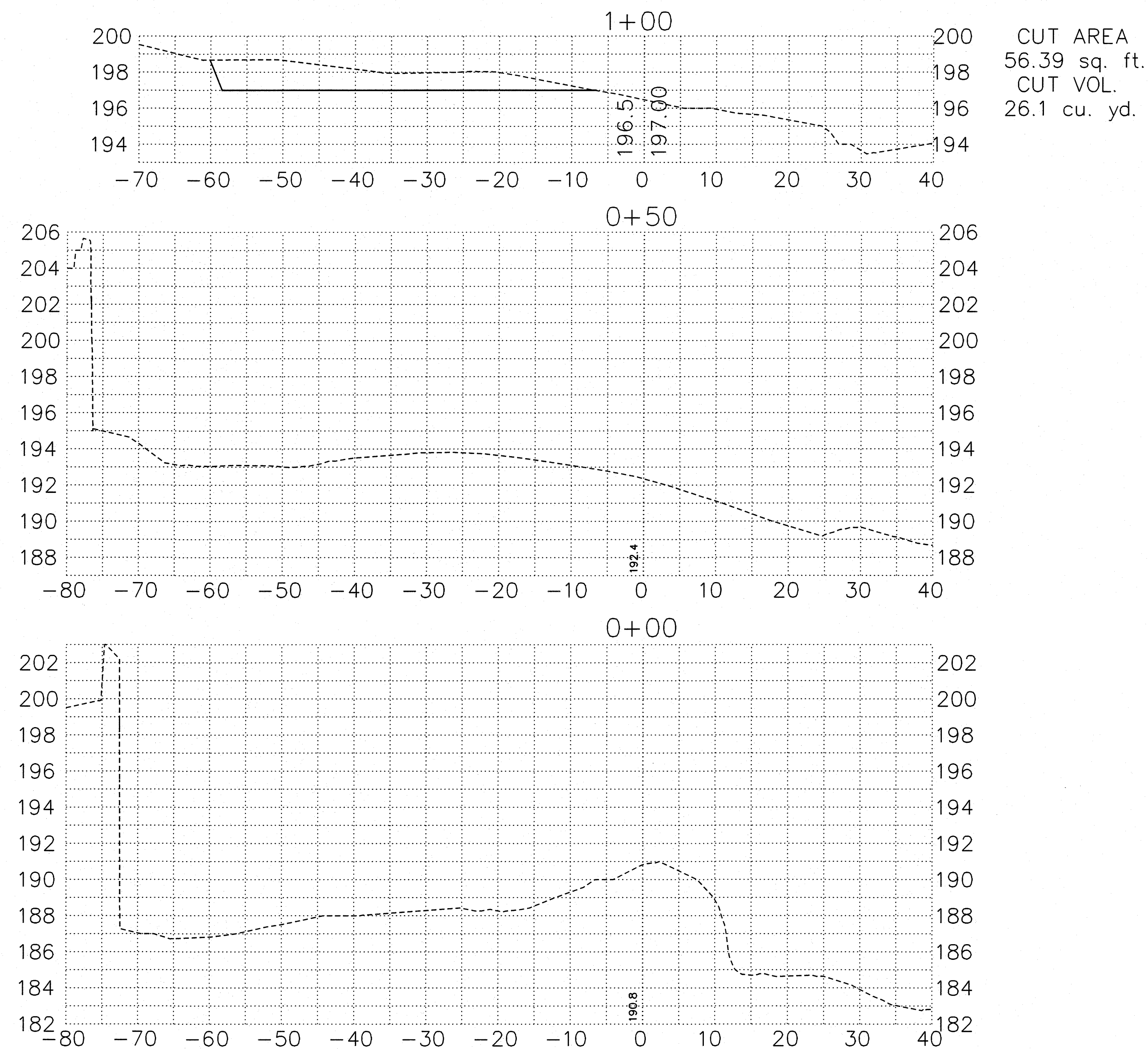
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**APPROACH CHANNEL
PLAN & PROFILE**

MAMALAHOA HIGHWAY
EMERGENCY REPLACEMENT OF
KEAIWA STREAM BRIDGE
Federal Aid Project No. ER-12(1)R

Scale: As Shown Date: July 2002

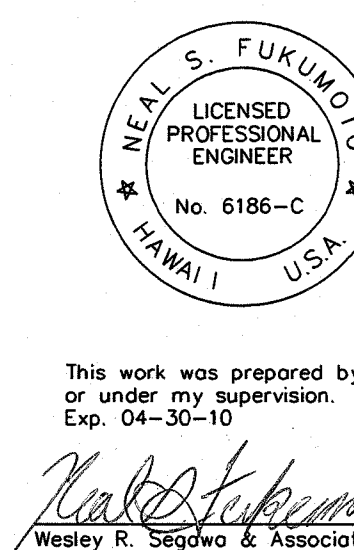
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HAWAII	HAW.	ER-12(1)R	2002	9 S-2	77



TYPICAL SECTION
(LOOKING UPSTREAM)
BOTTOM WIDTH VARIES 10-95'

SUMMARY
MAX. CUT DIMENSIONS
LENGTH = 425ft. WIDTH = 95ft.
DEPTH = 6ft.
TOTAL EXCAVATION VOLUME = 2190 cy.

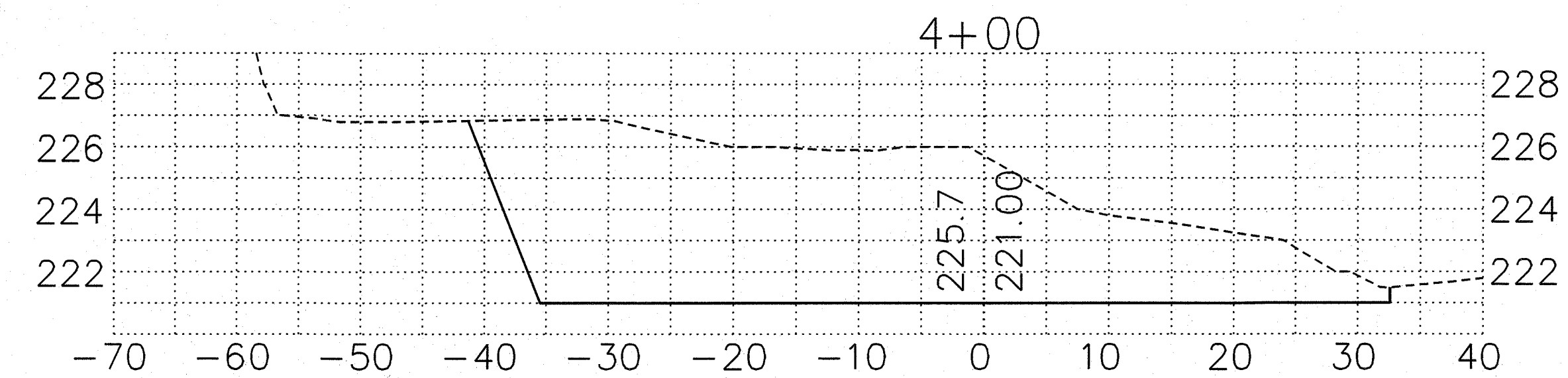
PROFILE
SCALE: 1"=10' HORIZ.
1"=4' VERT.



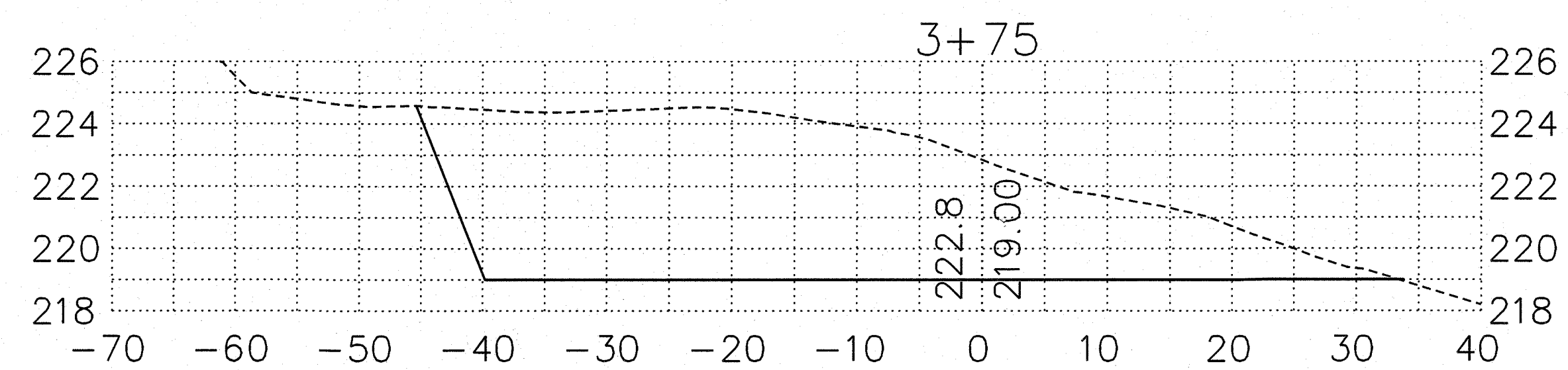
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**APPROACH CHANNEL
CROSS SECTIONS**
MAMALAHOA HIGHWAY
EMERGENCY REPLACEMENT OF
KEAIIA STREAM BRIDGE
Federal Aid Project No. ER-12(1)R
Scale: As Shown Date: July 2002

SHEET No. 2 OF 3 SHEETS

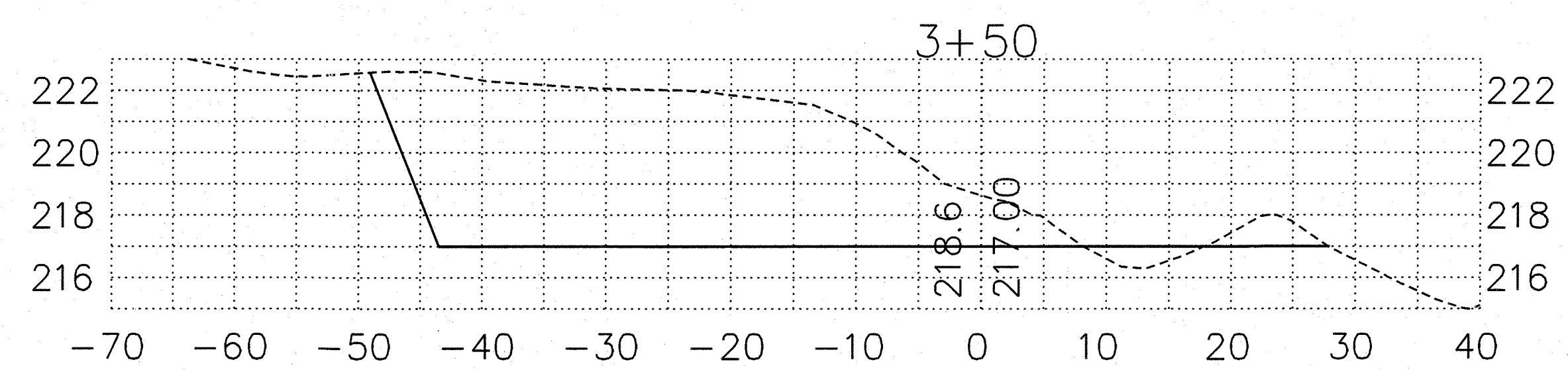
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-12(1)R	2002	9 S-3	77



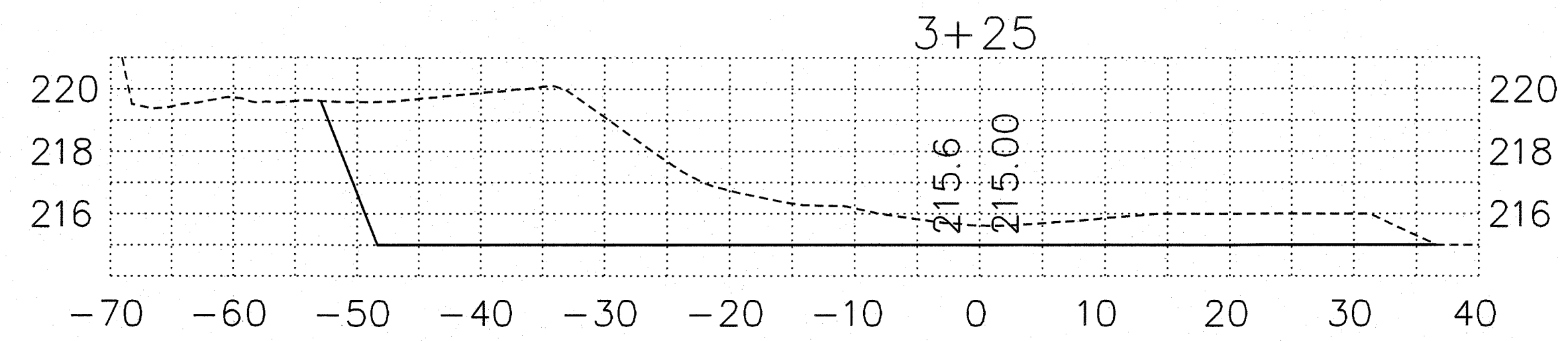
CUT AREA
282.44 sq. ft.
CUT VOL.
261.5 cu. yd.



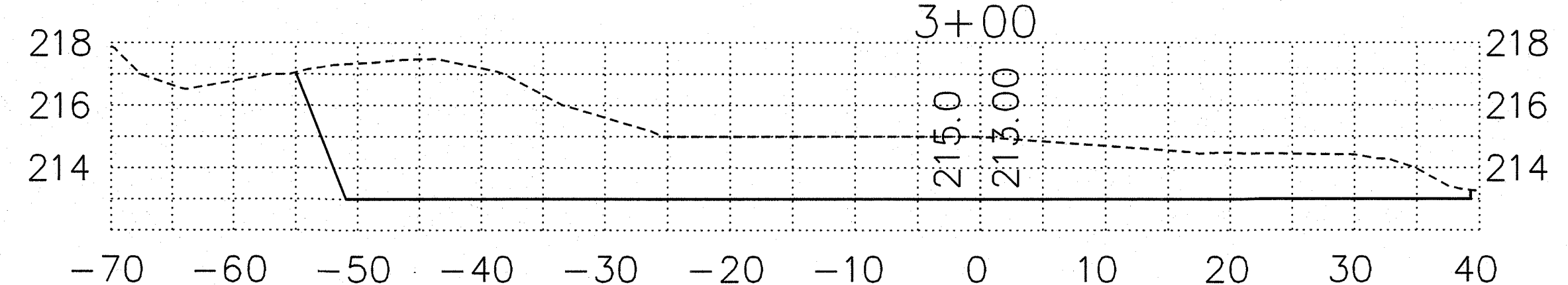
CUT AREA
284.77 sq. ft.
CUT VOL.
263.7 cu. yd.



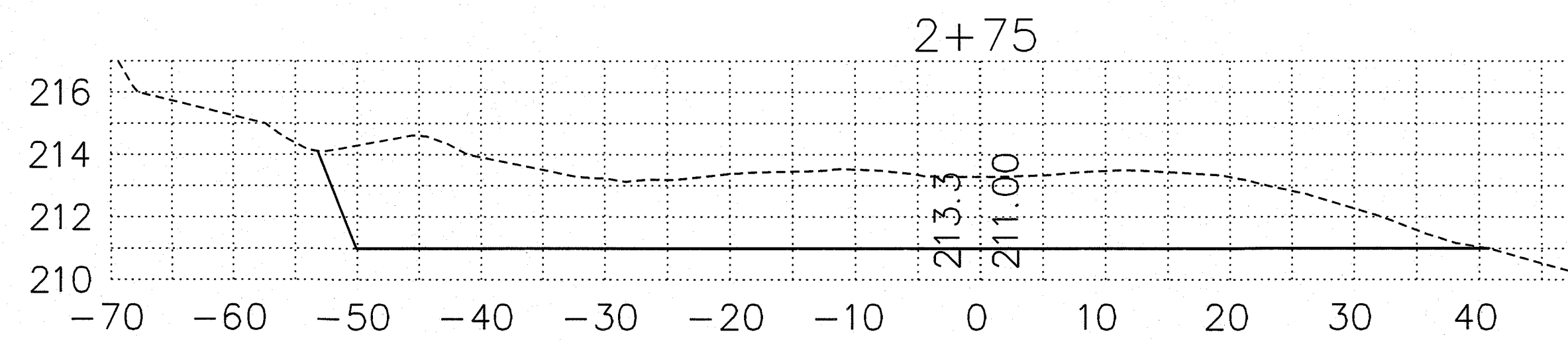
CUT AREA
221.99 sq. ft.
CUT VOL.
205.5 cu. yd.



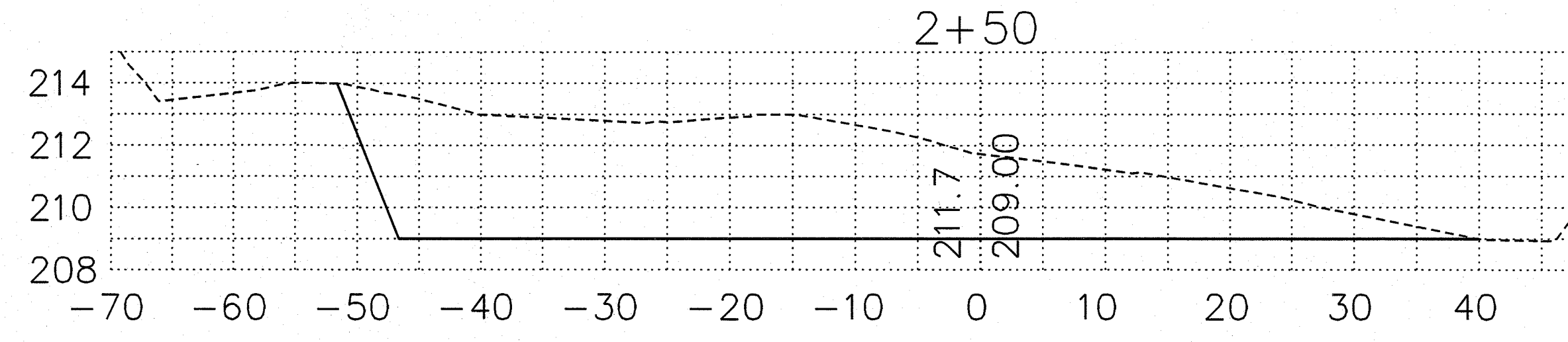
CUT AREA
219.61 sq. ft.
CUT VOL.
203.3 cu. yd.



CUT AREA
209.29 sq. ft.
CUT VOL.
193.8 cu. yd.

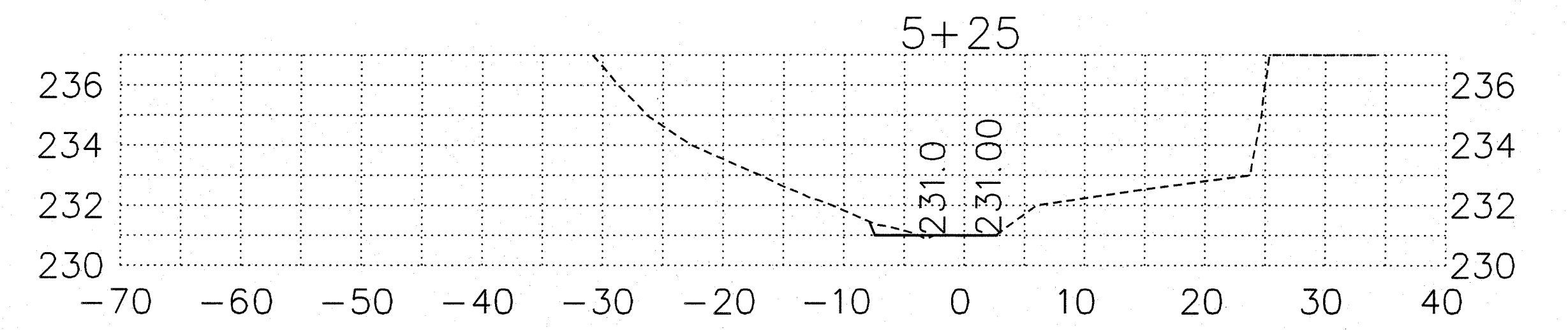


CUT AREA
207.17 sq. ft.
CUT VOL.
191.8 cu. yd.

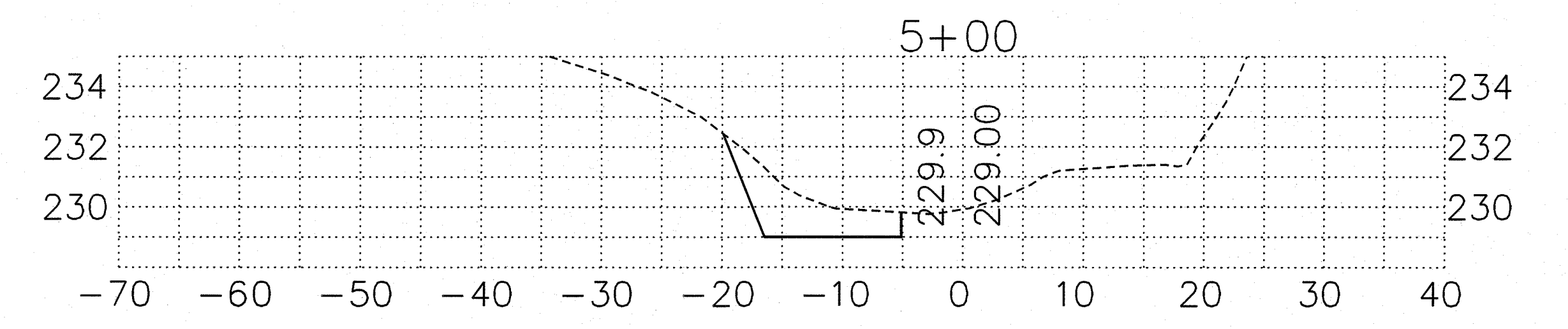


CUT AREA
248.80 sq. ft.
CUT VOL.
230.4 cu. yd.

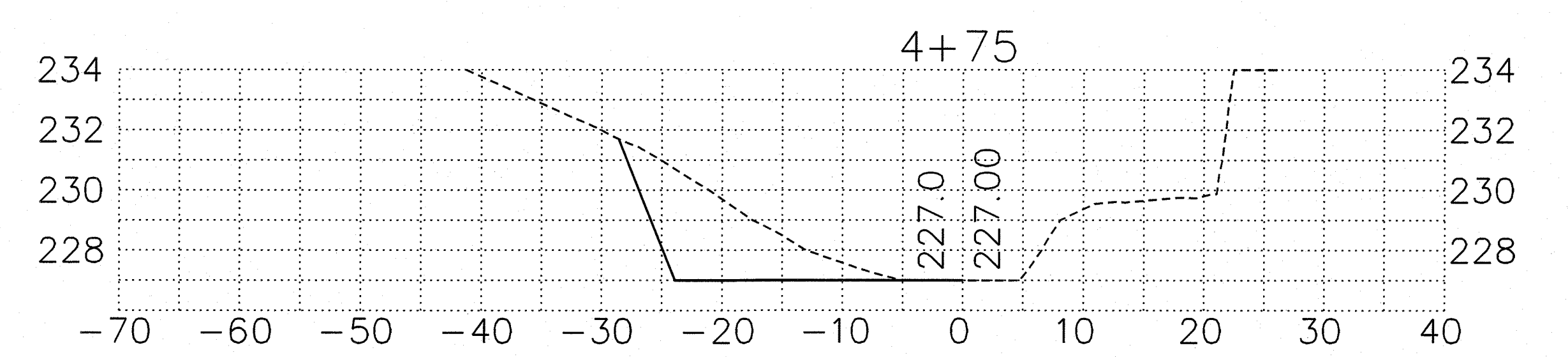
CUT AREA
0.85 sq. ft.
CUT VOL.
0.8 cu. yd.



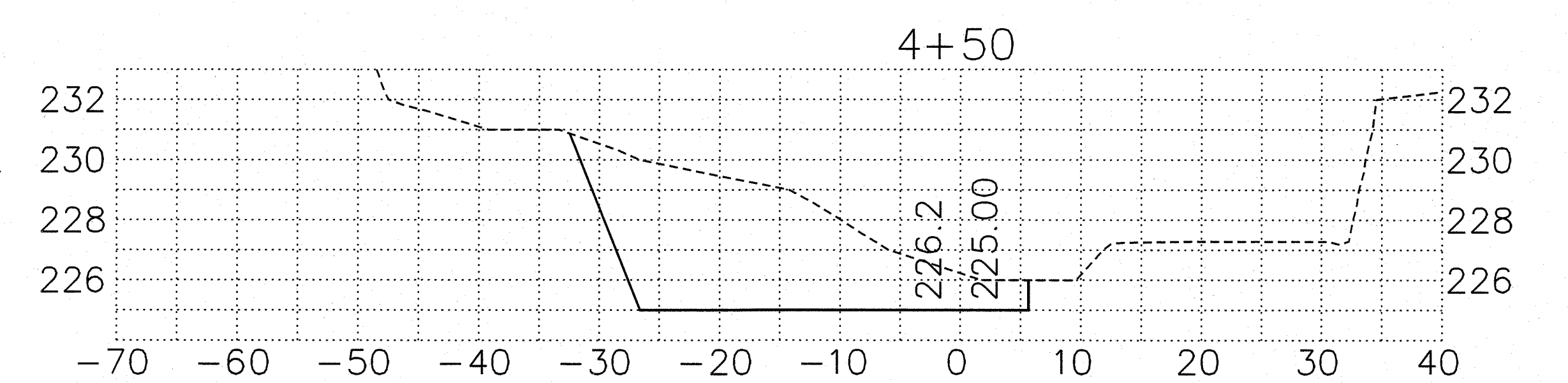
CUT AREA
17.46 sq. ft.
CUT VOL.
16.2 cu. yd.



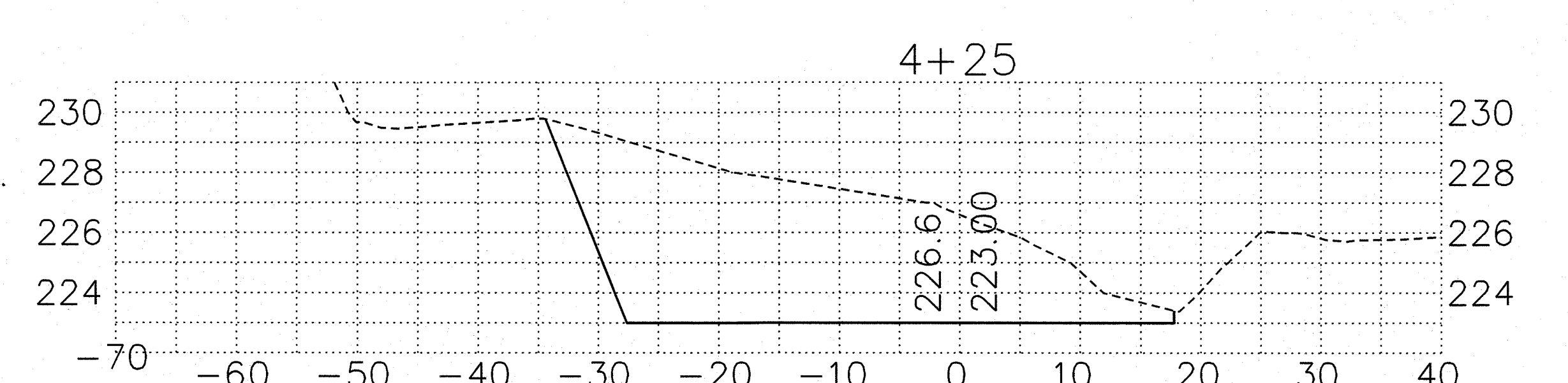
CUT AREA
37.82 sq. ft.
CUT VOL.
35.0 cu. yd.



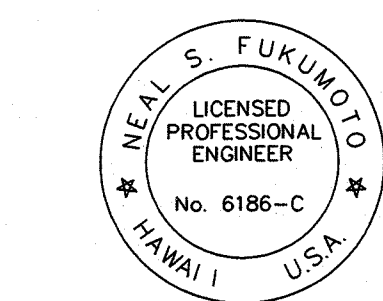
CUT AREA
110.86 sq. ft.
CUT VOL.
102.6 cu. yd.



CUT AREA
186.49 sq. ft.
CUT VOL.
172.7 cu. yd.



PROFILE
SCALE: 1"=10' HORIZ.
1"=4' VERT.



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Exp. 04-30-10
Wesley R. Sego & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**APPROACH CHANNEL
CROSS SECTIONS**
MAMALAHOA HIGHWAY
EMERGENCY REPLACEMENT OF
KEATWA STREAM BRIDGE
Federal Aid Project No. ER-12(1)R
Scale: As Shown Date: July 2002
SHEET No. 3 OF 3 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
CHECKED BY	
NOTED BY	