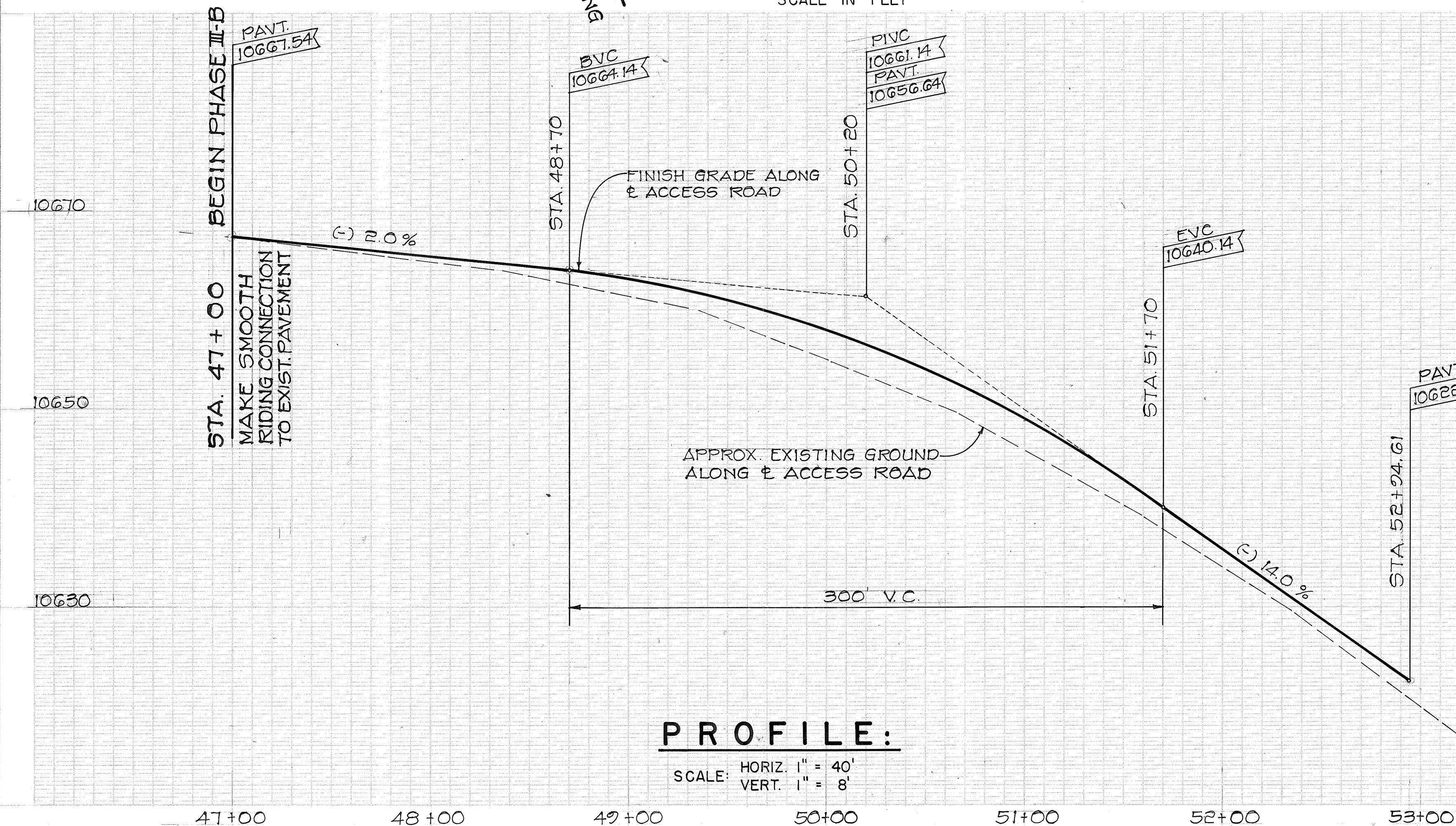
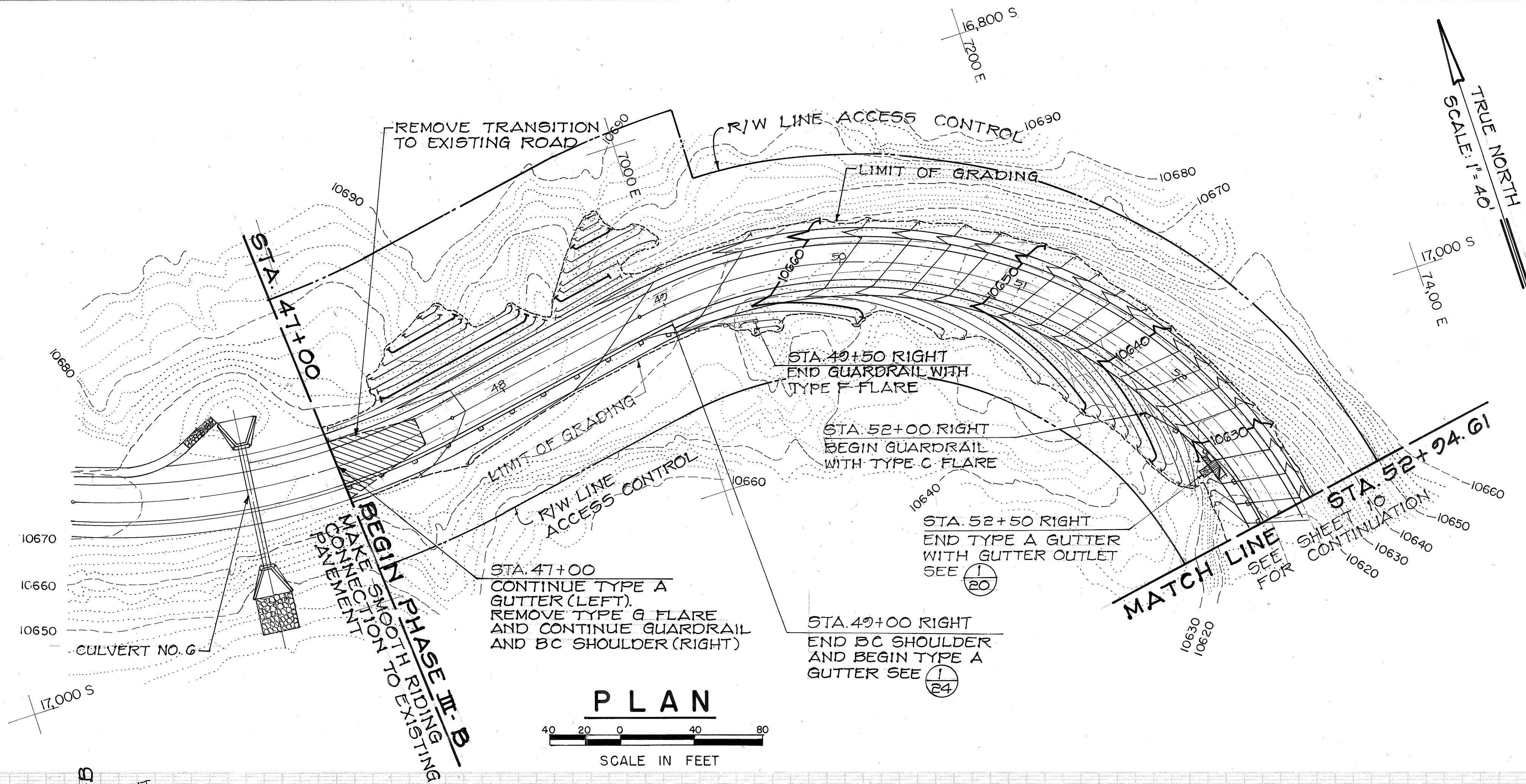
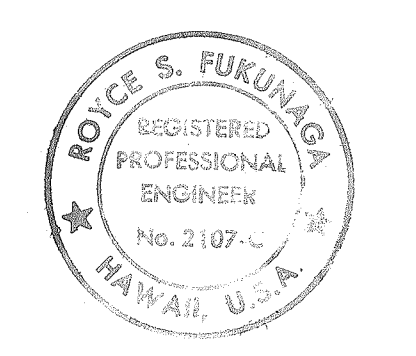


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			9	53



PROFILE:
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'



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Royce S. Fukunaga

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN, PROFILE AND GRADING

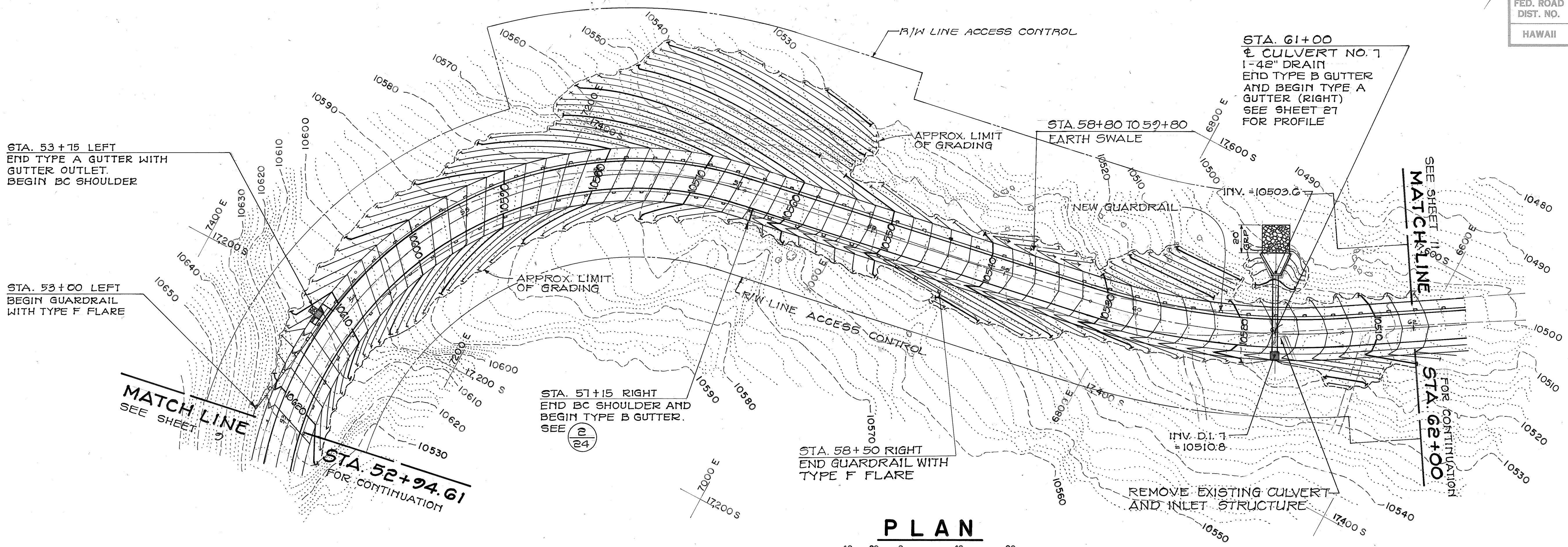
MAIN ACCESS ROAD
STA. 47+00 TO STA. 52+94.61
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III - B

PROJECT NO.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

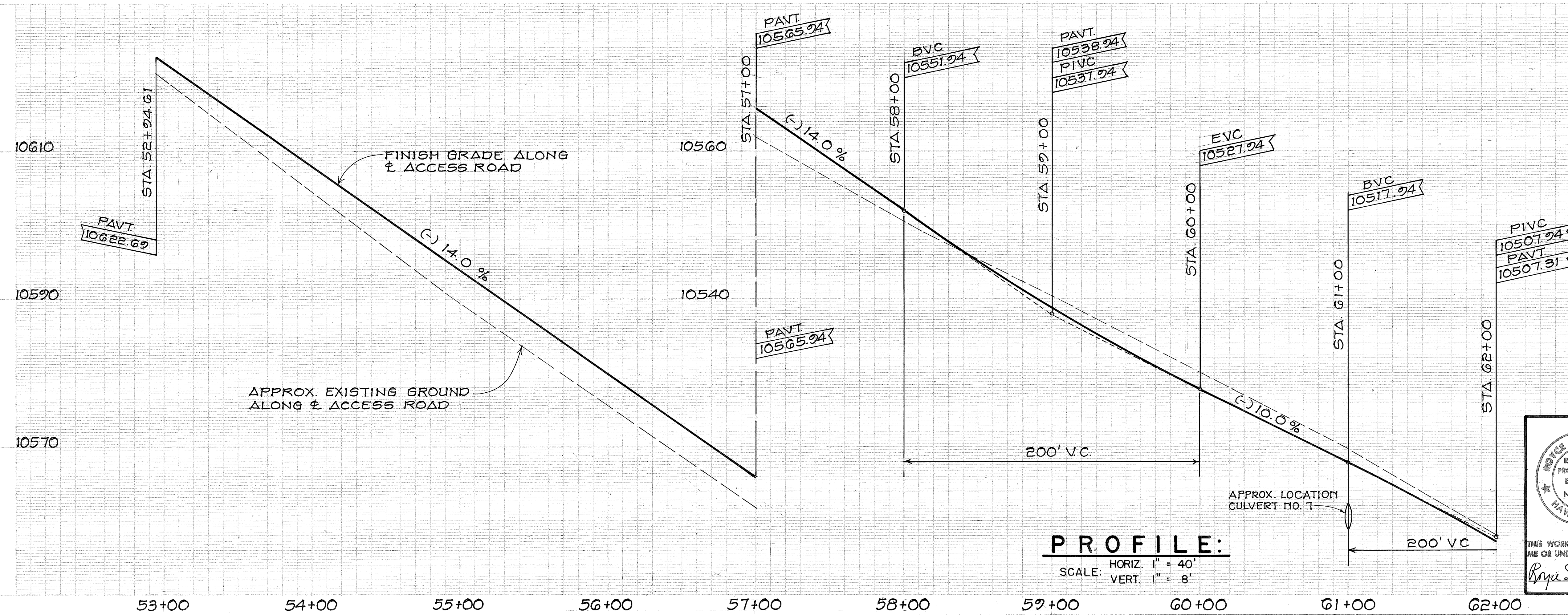
SHEET No. 1 OF 9 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			10	53



PLAN
SCALE IN FEET
40 20 0 40 80



PROFILE:
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

JOYCE S. FUKUNAGA
REGISTERED PROFESSIONAL ENGINEER
No. 2107-C
HAWAII, U.S.A.

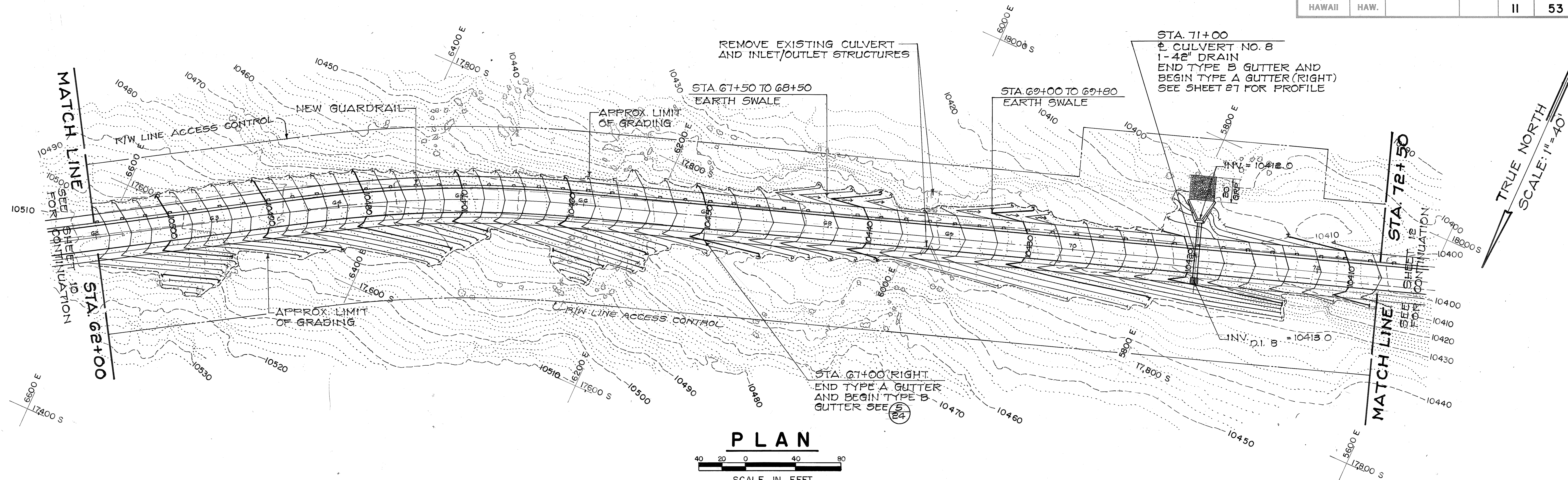
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN, PROFILE AND GRADING
MAIN ACCESS ROAD
STA. 52+94.61 TO STA. 62+00
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III-B

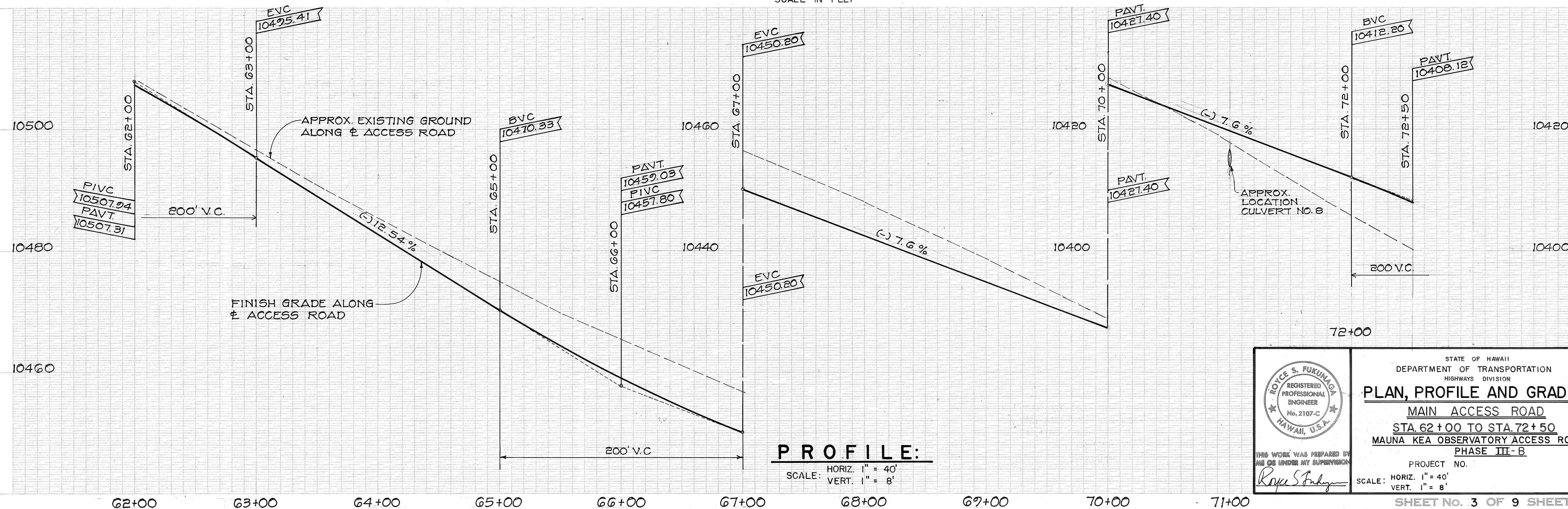
PROJECT NO.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

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Boye S. Fukunaga

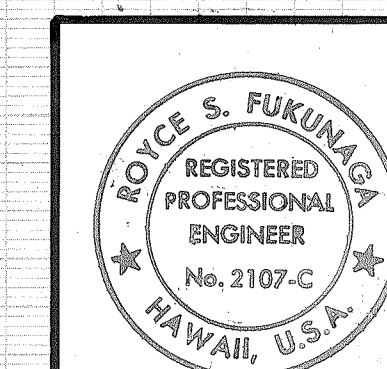
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			11	53



PLAN
SCALE IN FEET
0 20 40 80



PROFILE:
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

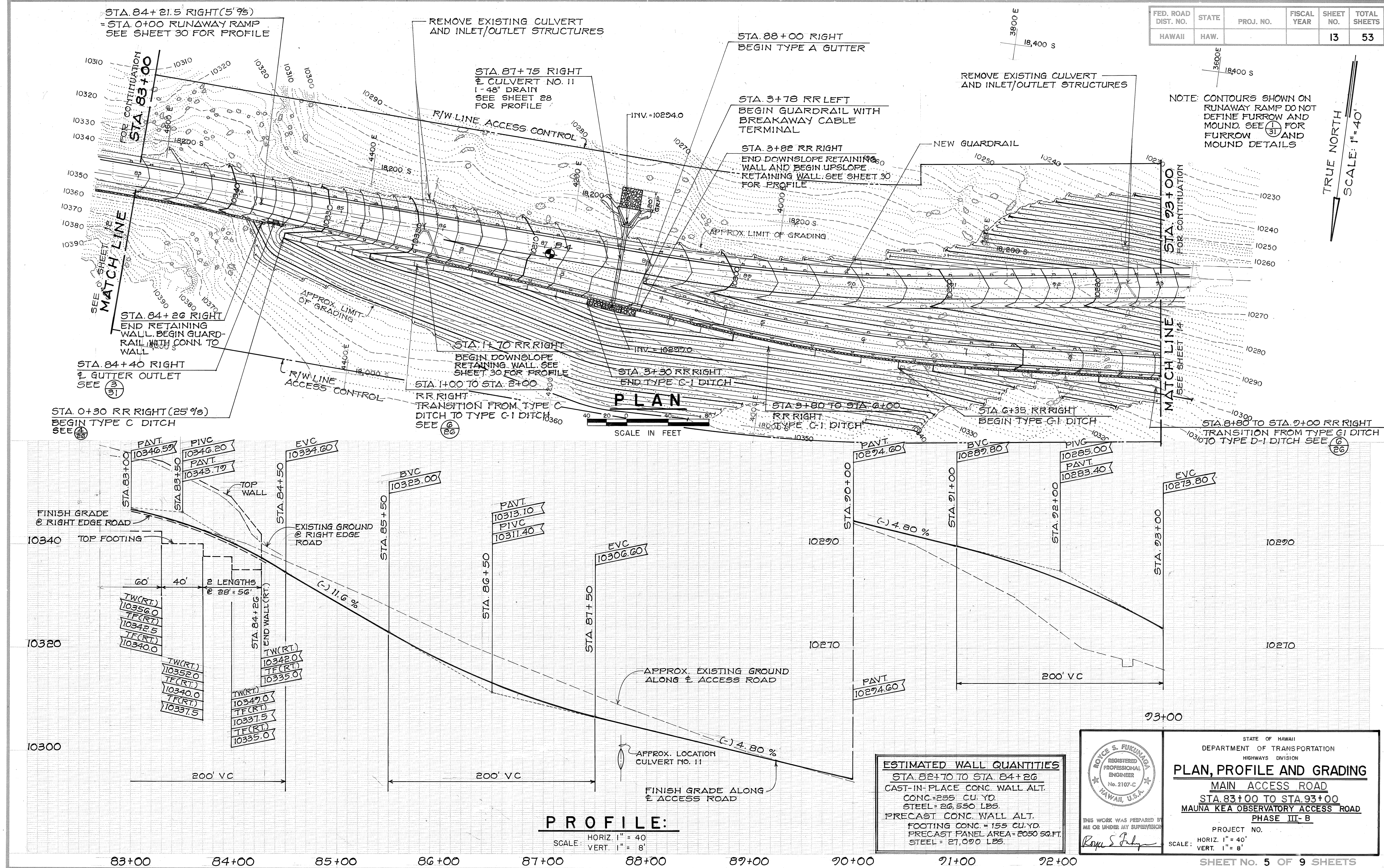


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Royce S. Fukunaga

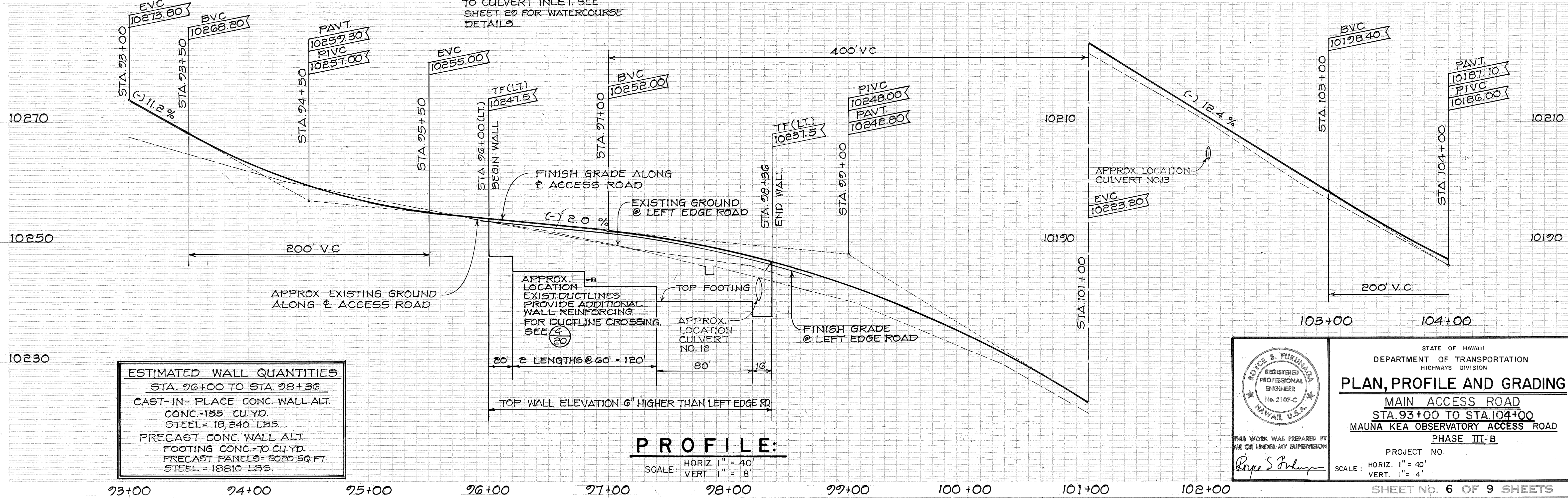
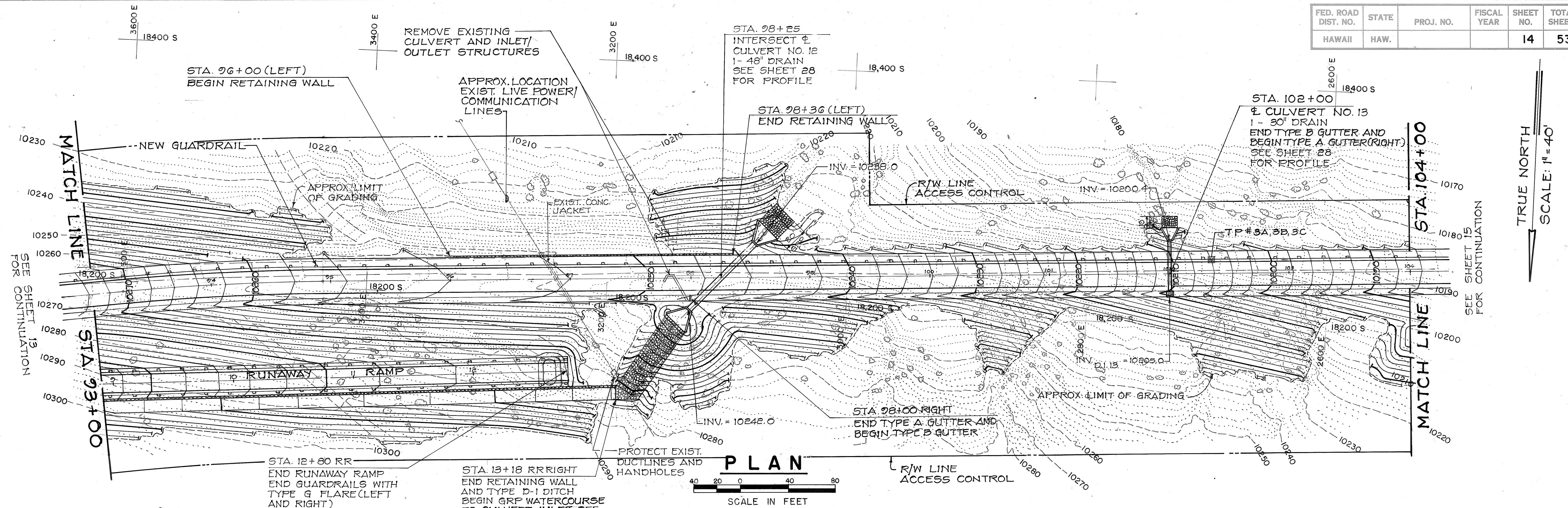
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN, PROFILE AND GRADING
MAIN ACCESS ROAD
STA. 62+00 TO STA. 72+50
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III - B
PROJECT NO.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

SHEET NO. 3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			13	53



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			14	53



ESTIMATED WALL QUANTITIES	
STA. 96+00 TO STA. 98+36	
CAST-IN-PLACE CONC. WALL ALT.	
CONC.	155 CU. YD.
STEEL	18,240 LBS.
PRECAST CONC. WALL ALT.	
FOOTING CONC.	70 CU. YD.
PRECAST PANELS	2020 SQ. FT.
STEEL	18810 LBS.

PROFILE:
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

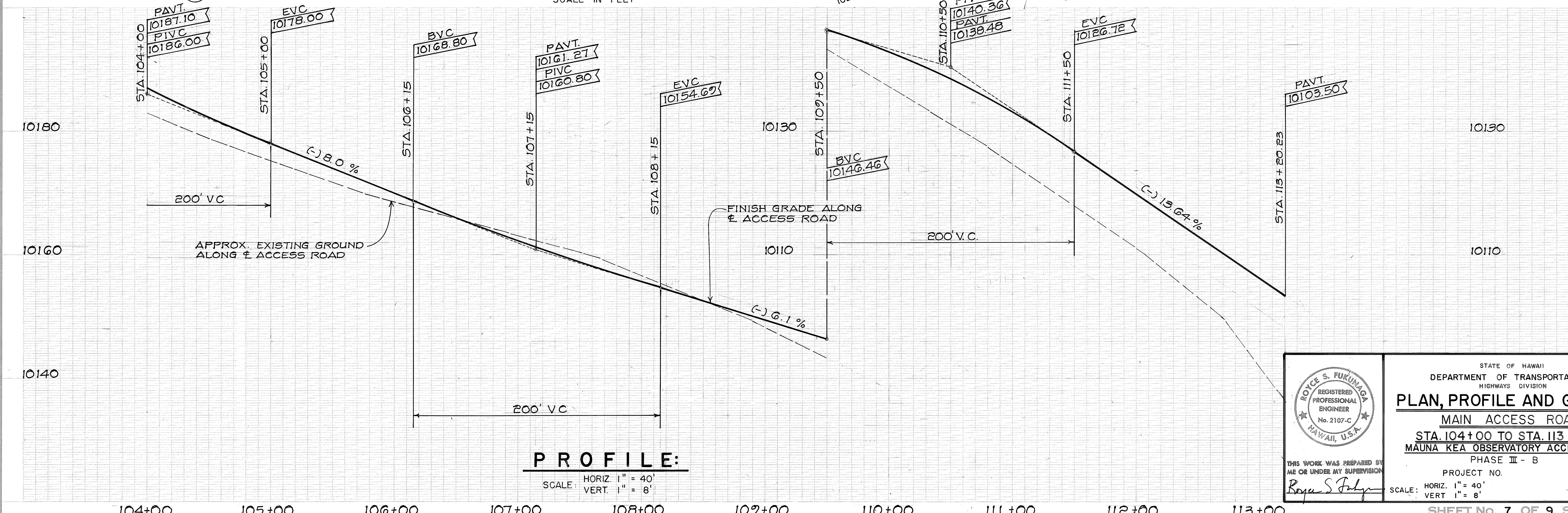
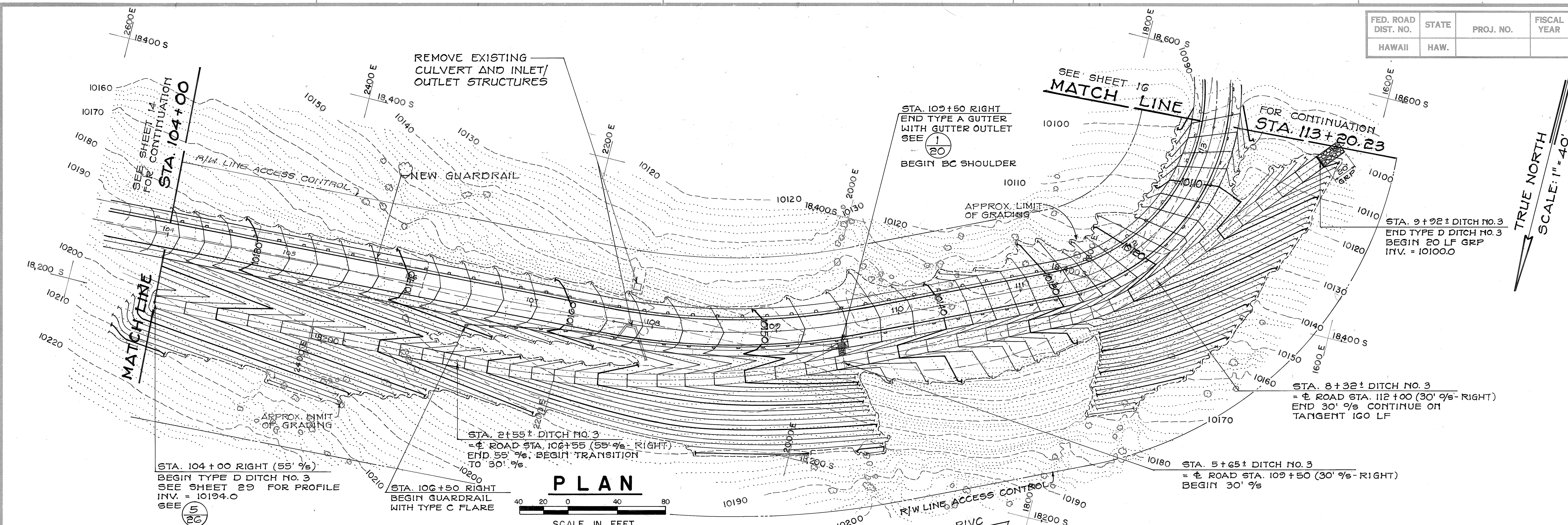
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN, PROFILE AND GRADING

MAIN ACCESS ROAD
STA. 93+00 TO STA. 104+00
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III-B

PROJECT NO.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			15	53



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN, PROFILE AND GRADING

MAIN ACCESS ROAD

STA. 104+00 TO STA. 113+20.23

MAUNA KEA OBSERVATORY ACCESS ROAD

PHASE III - B

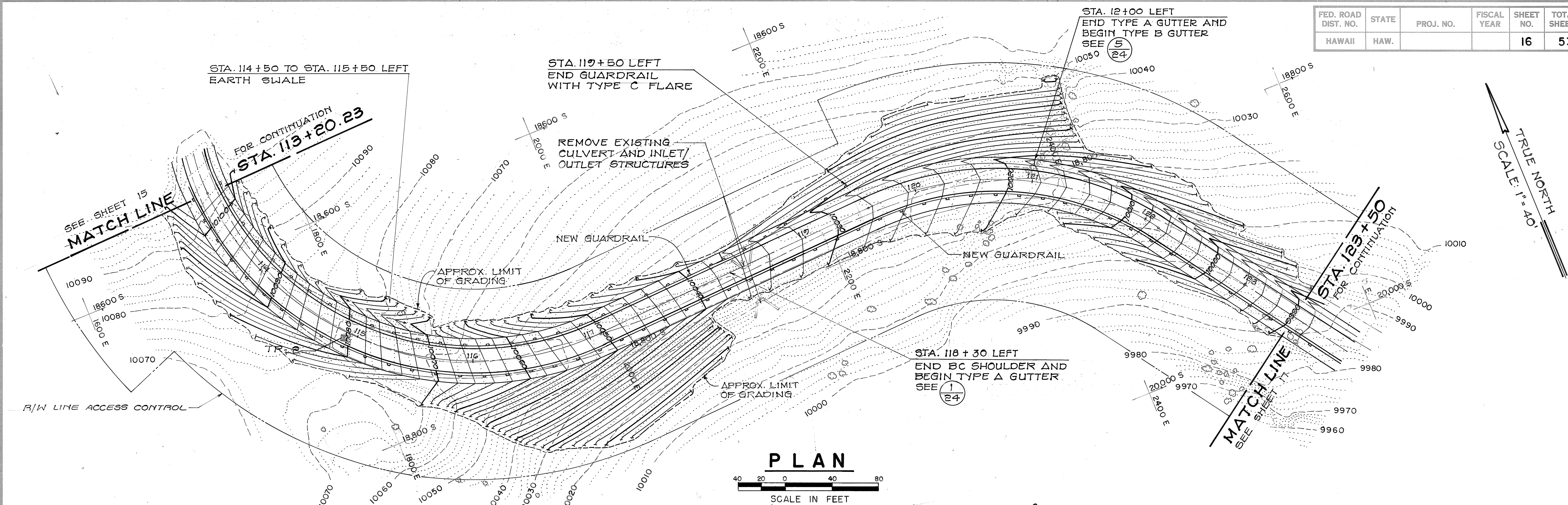
PROJECT NO.

SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

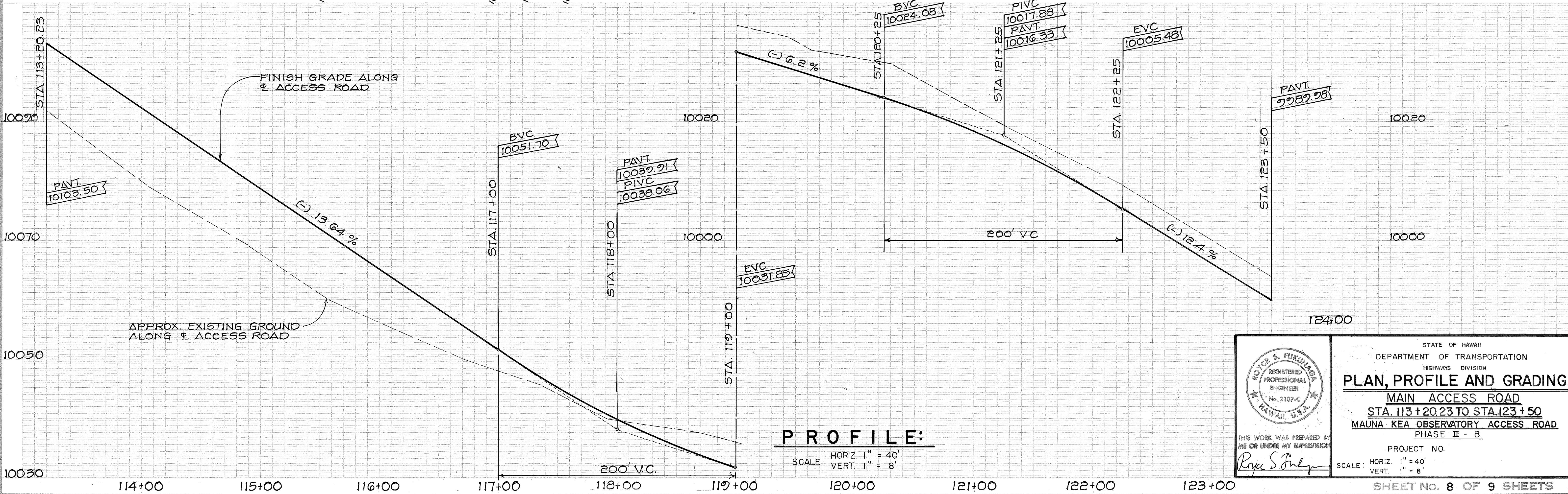
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Royce S. Fukunaga

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			16	53



PLAN
SCALE IN FEET
40 20 0 40 80



PROFILE:
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

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

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ME OR UNDER MY SUPERVISION
Royce S. Fukunaga

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

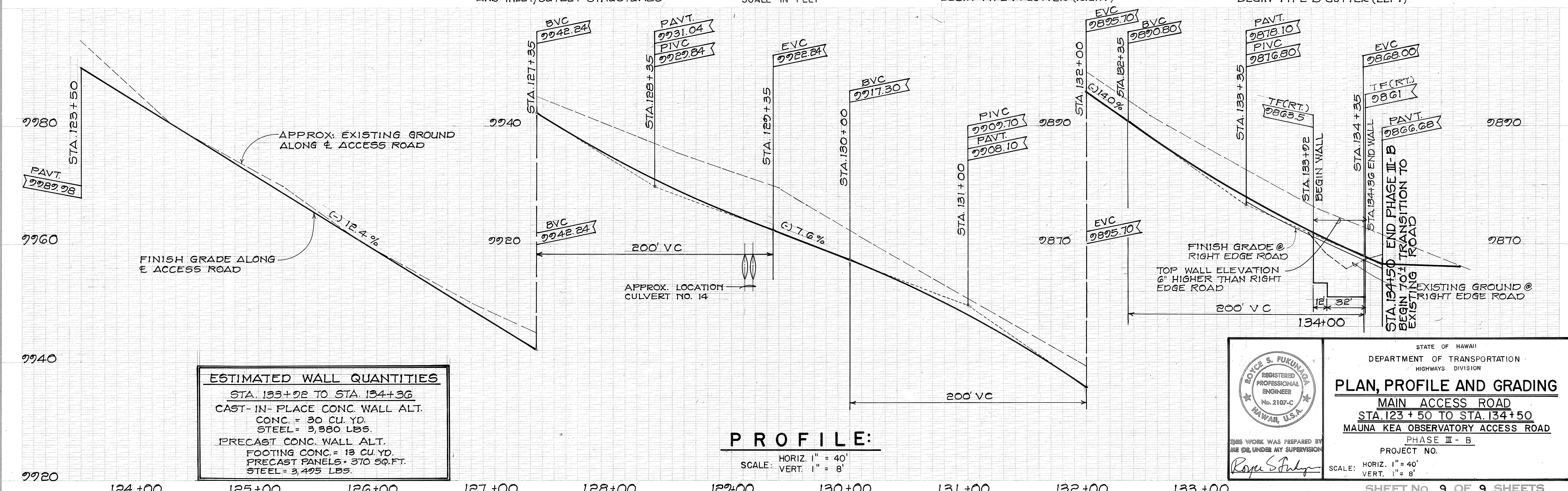
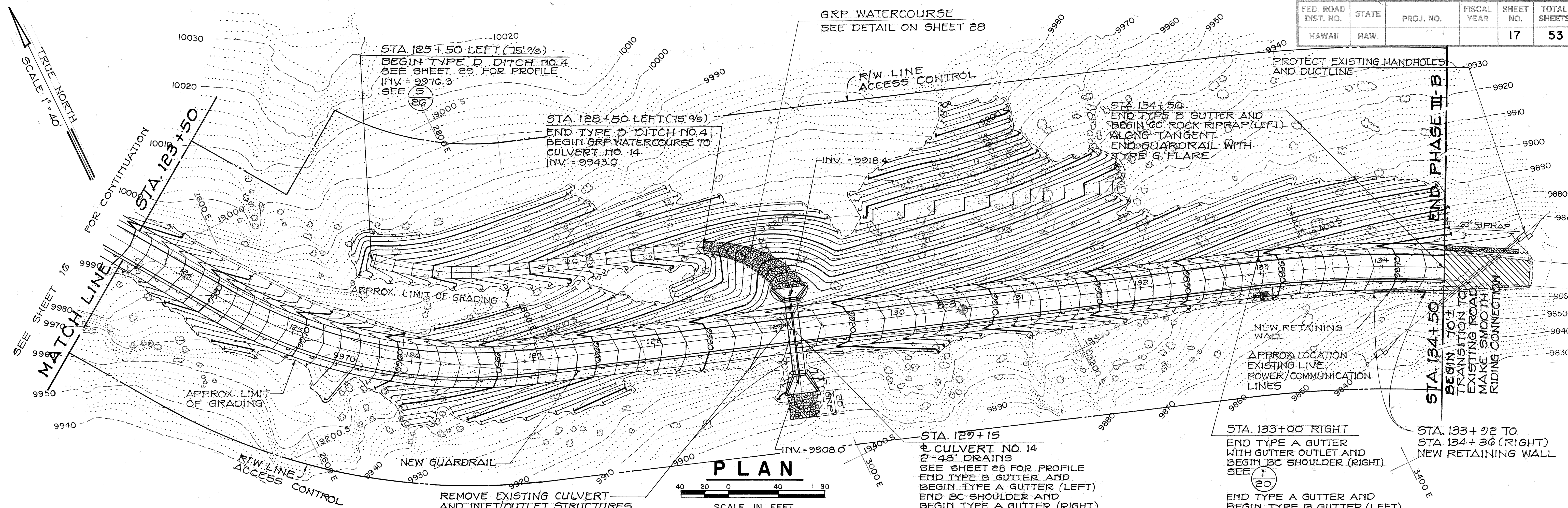
PLAN, PROFILE AND GRADING

MAIN ACCESS ROAD
STA. 113+20.23 TO STA. 123+50
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III - B

PROJECT NO.

SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			17	53



ESTIMATED WALL QUANTITIES	
STA. 133+02 TO STA. 134+36	
CAST-IN-PLACE CONC. WALL ALT.	
CONC. = 30 CU. YD.	
STEEL = 3,380 LBS.	
PRECAST CONC. WALL ALT.	
FOOTING CONC. = 13 CU. YD.	
PRECAST PANELS = 370 SQ. FT.	
STEEL = 3,425 LBS.	

PROFILE:
 SCALE: HORIZ. 1" = 40'
 VERT. 1" = 8'

JOYCE S. FUKUNAGA
 REGISTERED PROFESSIONAL ENGINEER
 No. 2107-C
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PLAN, PROFILE AND GRADING
 MAIN ACCESS ROAD
 STA. 123+50 TO STA. 134+50
 MAUNA KEA OBSERVATORY ACCESS ROAD

PHASE III - B
 PROJECT NO.

SCALE: HORIZ. 1" = 40'
 VERT. 1" = 8'