

GUARD RAIL SCHEDULE

INSTALLATION OF NEW GUARD RAIL WITH STEEL POSTS

BEGIN STATION	END STATION	GR, TYPE 3 SINGLE	END TREATMENT	EDGE OF PAV'T. TO GR FACE
137 + 60 ± LT.	139 + 25 ± LT.	167 165	G & A	8'
137 + 60 ± RT.	139 + 10 ± RT.	166 150	G & F	8'
145 + 00 ± LT.	147 + 35 ± LT.	242 235	G & A	6'
144 + 80 ± RT.	147 + 50 ± RT.	273 270	A & F	6'
197 + 75 ± RT.	205 + 00 ± RT.	725 725	C & F	6'
197 + 50 ± LT.	205 + 50 ± LT.	776 800	F & A	6'
234 + 75 ± RT.	241 + 00 ± RT.	614 705	A & F	7'
239 + 75 ± LT.	242 + 50 ± LT.	300 275	F & C	4'
248 + 00 ± RT.	250 + 75 ± RT.	304 275	C & F	4'
248 + 55 ± LT.	252 + 00 ± LT.	367 345	F & C	4'
250 + 00 ± LT.	261 + 00 ± LT.	4 200	G & C	7'
259 + 40 ± RT.	261 + 00 ± RT.	179 160	C & F	5'
262 + 80 ± RT.	263 + 80 ± RT.	104 100	C (Modif.) & F (Modif.)	4'
262 + 80 ± LT.	263 + 80 ± LT.	129 100	F (Modif.) & C (Modif.)	4'
283 + 50 ± LT.	287 + 50 ± LT.	378 400	G & A	9'
284 + 70 ± RT.	285 + 50 ± RT.	116 80	G & C	6'
288 + 25 ± RT.	289 + 50 ± RT.	128 125	C & F	7'
288 + 40 ± LT.	290 + 75 ± LT.	241 135	G & A	7'
307 + 75 ± RT.	309 + 15 ± RT.	128 140	C & F	9'
307 + 75 ± LT.	309 + 40 ± LT.	167 165	G & C	12'
312 + 30 ± RT.	314 + 20 ± RT.	130 130	C & F	9'
313 + 15 ± LT.	315 + 00 ± LT.	185 185	F & A	7'
		6134 5865		

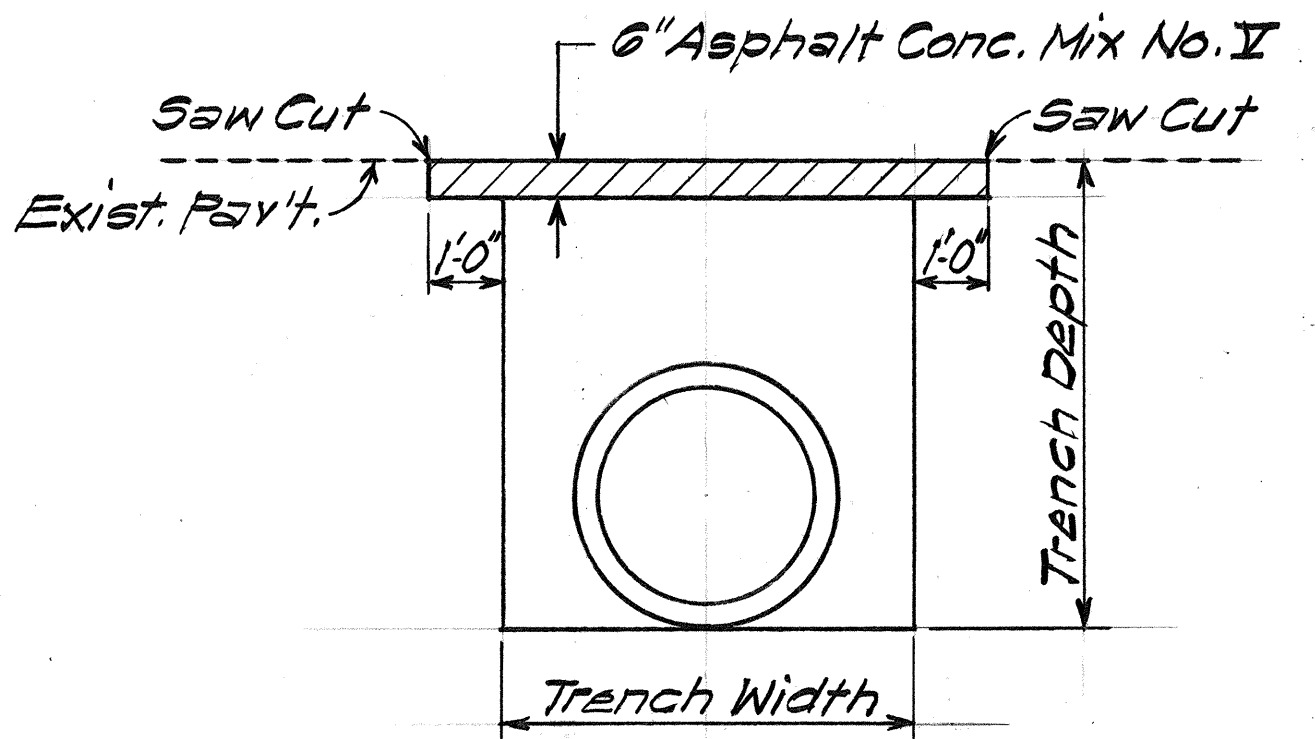
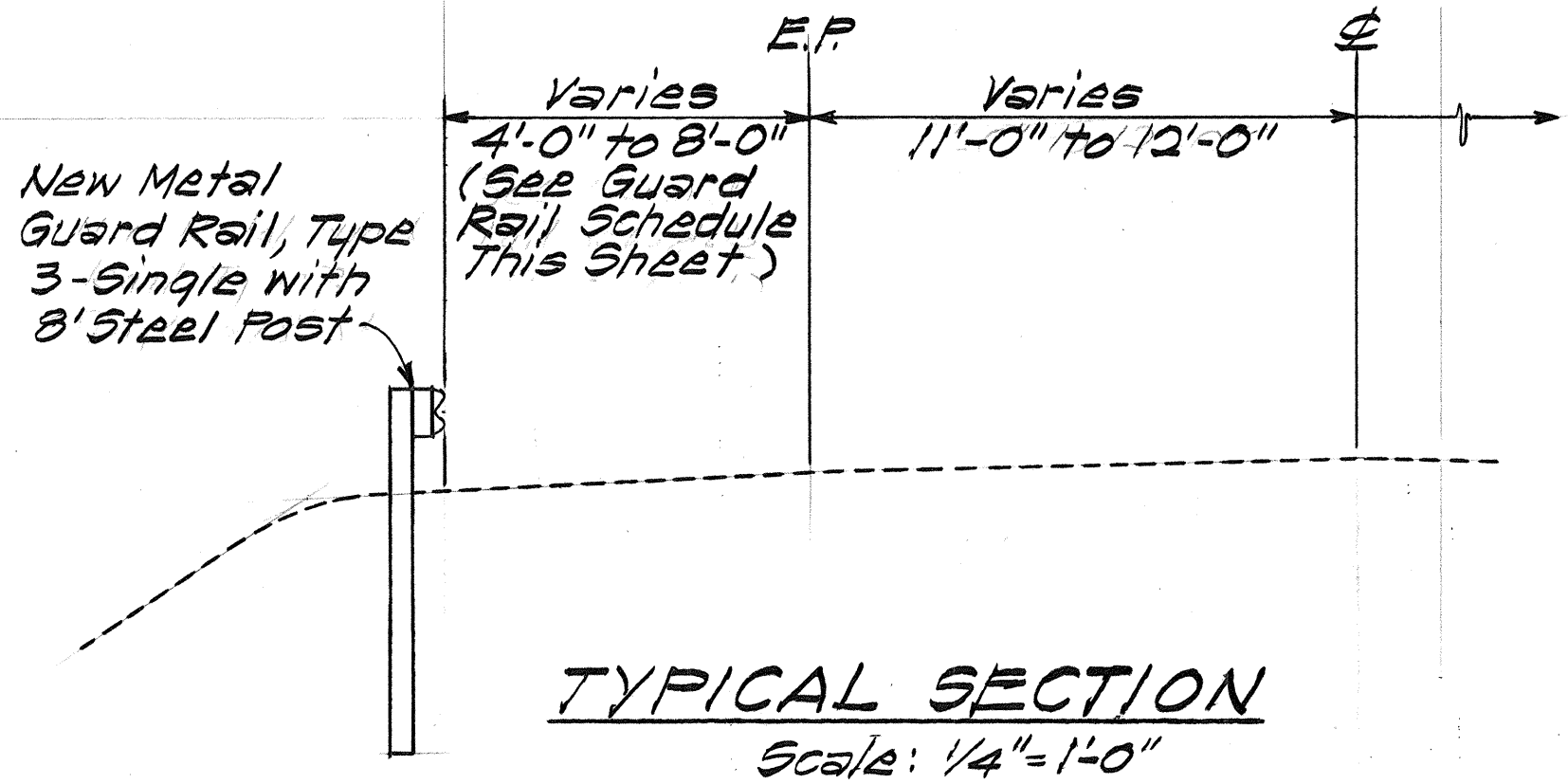
GENERAL NOTES

- Improvements consist of replacing 10 culverts, extending 1 culvert, lining 1 culvert, filling 4 existing culverts with concrete, installing guard rails, striping edge of pavement, constructing GRM headwalls and drop intakes and restoring pavement, pavement striping and lined gutters.
- Demolishing and/or removing of existing headwalls, drop intakes and culverts and restoration of lined gutters shall not be paid for but shall be considered incidental to the various contract items.
- All work related to 1-inch galvanized pipe including but not limited to cutting, plugging, restoring and replacing after installing 36-inch RCP shall not be paid for but shall be considered incidental to the various contract items.
- Final location and alignment of all culverts, headwalls and drop intakes, etc. shall be determined by the Engineer in the field.
- For details of Manhole Ring and Concrete Headwall (Standard Details), see Sheet Nos. 8H and 9H.
- Installation of guard rails shall commence no later than immediately after the culvert is completed.

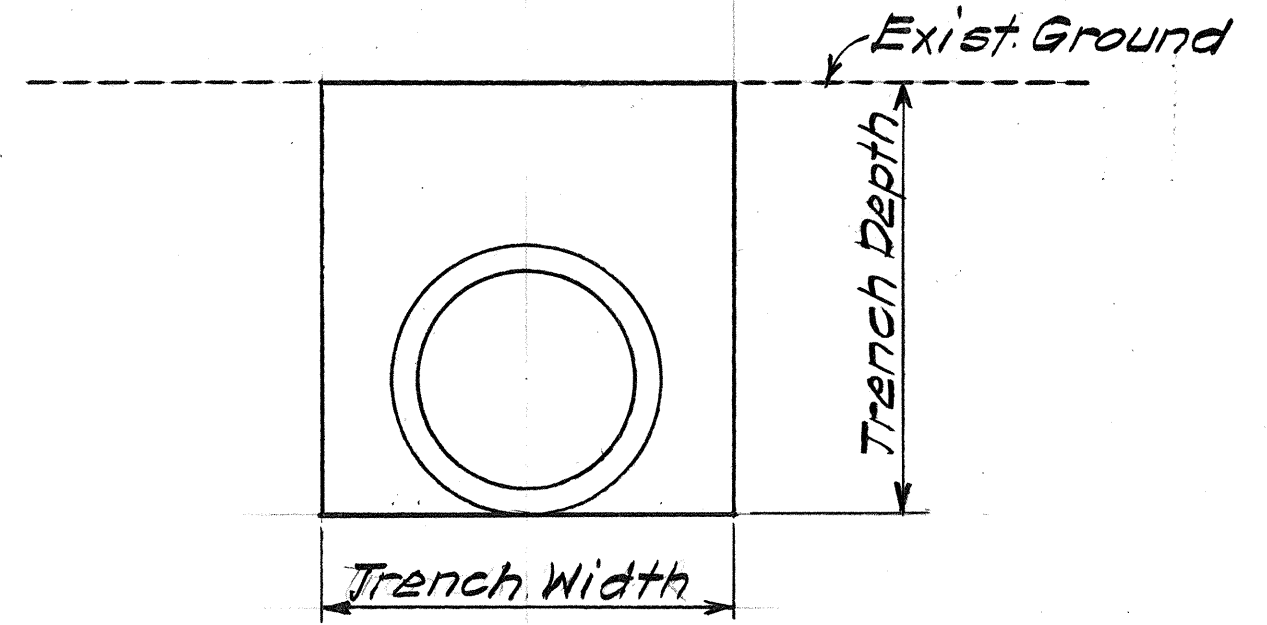
SCHEDULE FOR REMOVAL OF EXIST. WOOD GUARD RAILS & CONC. GUIDE POST

BEGIN STATION	END STATION	RAIL W/CONC. POST LINEAR FT.	CONC. GUIDE POST EACH
197 + 85 LT.	204 + 50 LT.	665	
198 + 33 RT.	204 + 10 RT.		18
235 + 75 RT.	241 + 35 RT.	560	
240 + 00 LT.	242 + 50 LT.		7
248 + 55 LT.	251 + 91 LT.		11
249 + 15 RT.	250 + 05 RT.	150	
259 + 00 LT.	260 + 80 LT.	180	
259 + 70 RT.	260 + 69 RT.		4
284 + 00 LT.	286 + 00 LT.		5
289 + 10 LT.			1
308 + 25 LT.	308 + 75 LT.		2
308 + 25 RT.	308 + 75 RT.		2
313 + 50 LT.	315 + 00 LT.		4

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0460(4)	1982	2	25



TYPICAL DETAIL AT PAVEMENT
Scale: 3/8" = 1'-0"



TYPICAL DETAIL AT SHOULDER
Scale: 3/8" = 1'-0"

- All guard rail layouts shall be done by the Contractor but shall be approved by the Engineer before construction.
- Sections where guard rails and guide posts have been removed shall not be without portable barriers during non-working hours. Portable barriers shall be installed in conformance with the U.S. Department of Transportation, FHWA, Manual on Uniform Traffic Control Devices for Streets and Highways, 1978 Edition as amended, to physically deter access of vehicles and to delineate the limits and extent of guard rails removed until new guard rails and guide posts are installed. Removal of existing guard rails and concrete guide posts shall be incidental to Item No. 606.3/10 - "Guard Rail, Type 3-Single with Steel Post."
- Contractor shall provide permanent ground cover at all roadside areas exposed or damaged by the Contractor due to his operations during construction. Ground cover shall be indigenous grass or vegetation acceptable to the Engineer. Acceptability will be based on 90% coverage of established growth satisfactory to the Engineer. This work shall not be paid for separately but shall be considered incidental to the various contract items.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
GENERAL NOTES, TYPICAL SECTIONS
& GUARD RAIL SCHEDULE
MAUNALO A HIGHWAY
Replacement of Culverts, Phase I
F.A. Proj. No. RS-0460(4)
Scale: As Shown Date: April, 1982
SHEET NO. 1 OF 1 SHEETS