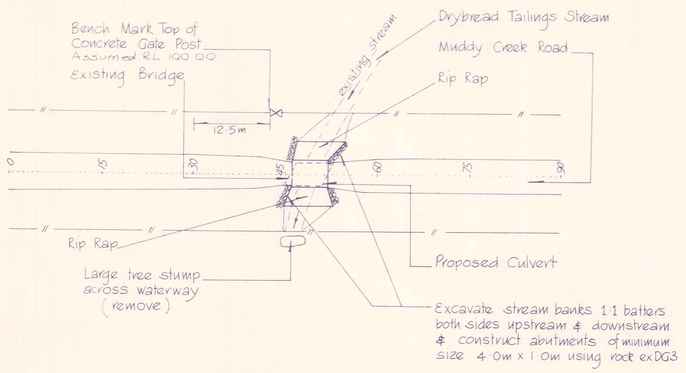
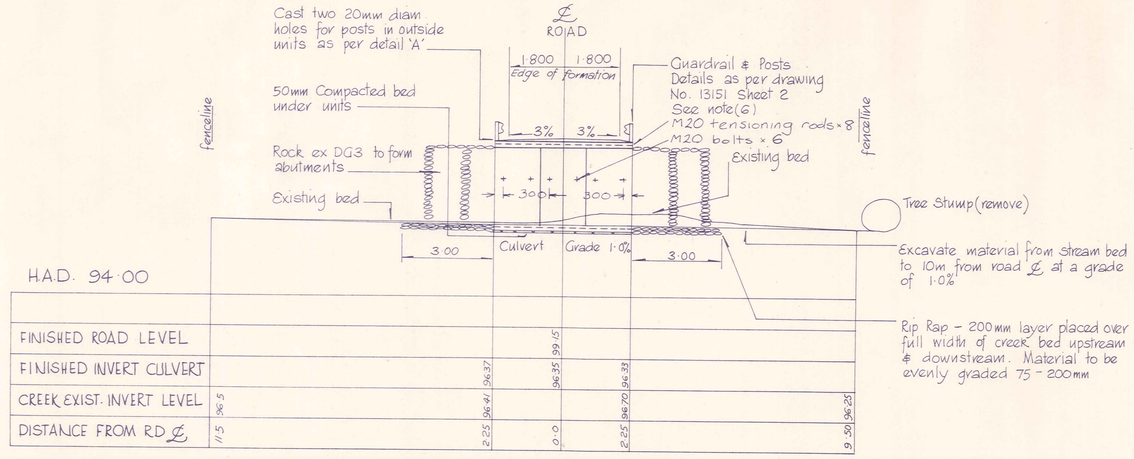


PLAN

Scale 1:500



H.A.D. 94.00						
FINISHED ROAD LEVEL			99.37	99.35	99.15	
FINISHED INVERT CULVERT			96.37	96.35	96.33	
CREEK EXIST. INVERT LEVEL	96.5	96.41			96.70	96.25
DISTANCE FROM RD ℄	11.5	2.25	0.0		2.25	9.50

SECTION ALONG STREAM BED

Scale 1:100

NOTES ----

1. Existing Bridge not shown on sections
2. Remove & dispose of existing Bridge & abutments
3. Culvert structure consists of 6 x 2.5m x 2.5m x 1.5m precast box culverts bolted together as detailed
4. Hydraulic Data ---

   Culvert Gradient = 0.01 m/m
   Area = $12.5\ m^2$
   Hydraulic Radius = 0.833
   n = 0.015

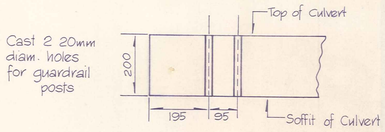
   Hence $Q = \frac{A \times R^{\frac{2}{3}} \times S^{\frac{1}{2}}}{n}$

   $= \frac{12.5 \times 0.833^{\frac{2}{3}} \times 0.01^{\frac{1}{2}}}{0.015}$

   $= 73.75\ m^3/sec$

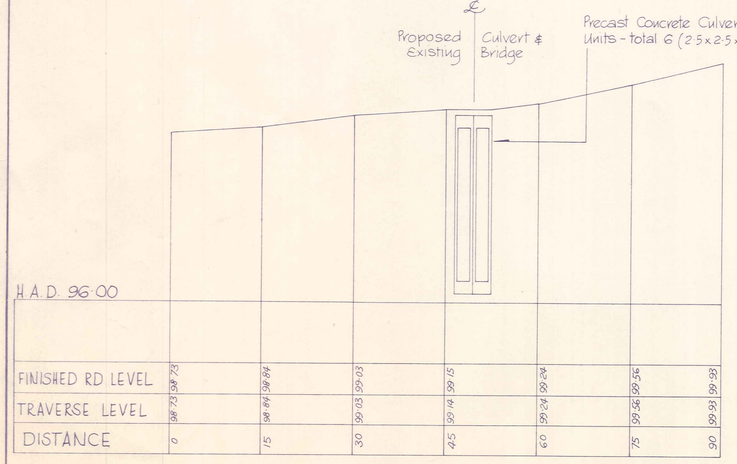
   $V = 5.9\ m/sec$

5. Map Reference S134 - 407713
6. Guardrail Posts to be 700mm above deck level.



DETAIL 'A'

SECTION on CULVERT

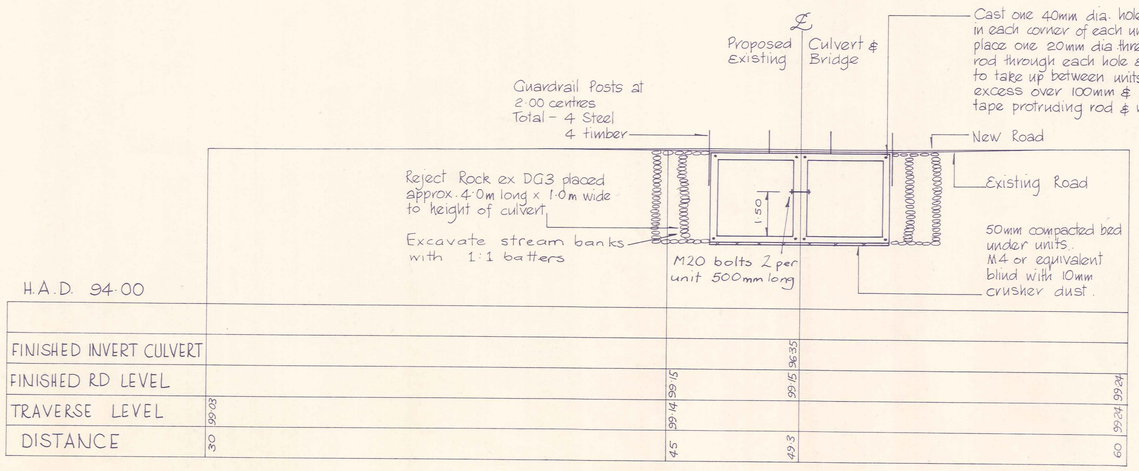


H.A.D. 96.00							
FINISHED RD LEVEL	98.73	98.84	99.03	99.15	99.24	99.56	99.33
TRAVERSE LEVEL	98.73	98.84	99.03	99.14	99.24	99.56	99.43
DISTANCE	0	15	30	45	60	75	90

LONGSECTION ℄ of ROAD

Scale

Horiz. 1:500
Vert. 1:50



H.A.D. 94.00					
FINISHED INVERT CULVERT			96.35		
FINISHED RD LEVEL		99.15	99.15	99.24	
TRAVERSE LEVEL	99.03	99.14		99.24	
DISTANCE	30	45	49.3	60	

SECTION ALONG ROAD ℄

Scale 1:100

No.	Revisions	Date	Appvd
A	Amend detail on Section along Stream bed from 2 to 3 culverts	4/86	

Designed HSDW	Date 4/86	Print Date
TRACED MJ CASSIDY Drawn H.R.D. NORDEN	APRIL '86	
Checked MJ Kelly	4/4/'86	
Approved	"	
File 4043/2/26	L.B. 603	F.B.

DUFFILL WATTS & KING LTD
Consulting Civil & Structural Engineers
Dunedin Invercargill Alexandra Queenstown

Client
VINCENT COUNTY COUNCIL

Project
MUDDY CREEK ROAD
DRYBREAD TAILINGS STREAM

Sheet Title
BRIDGE RENEWAL

Job No.	Sheet No.	Revision
13286	1 of 1 shts	

ORIGINAL SIZE mm