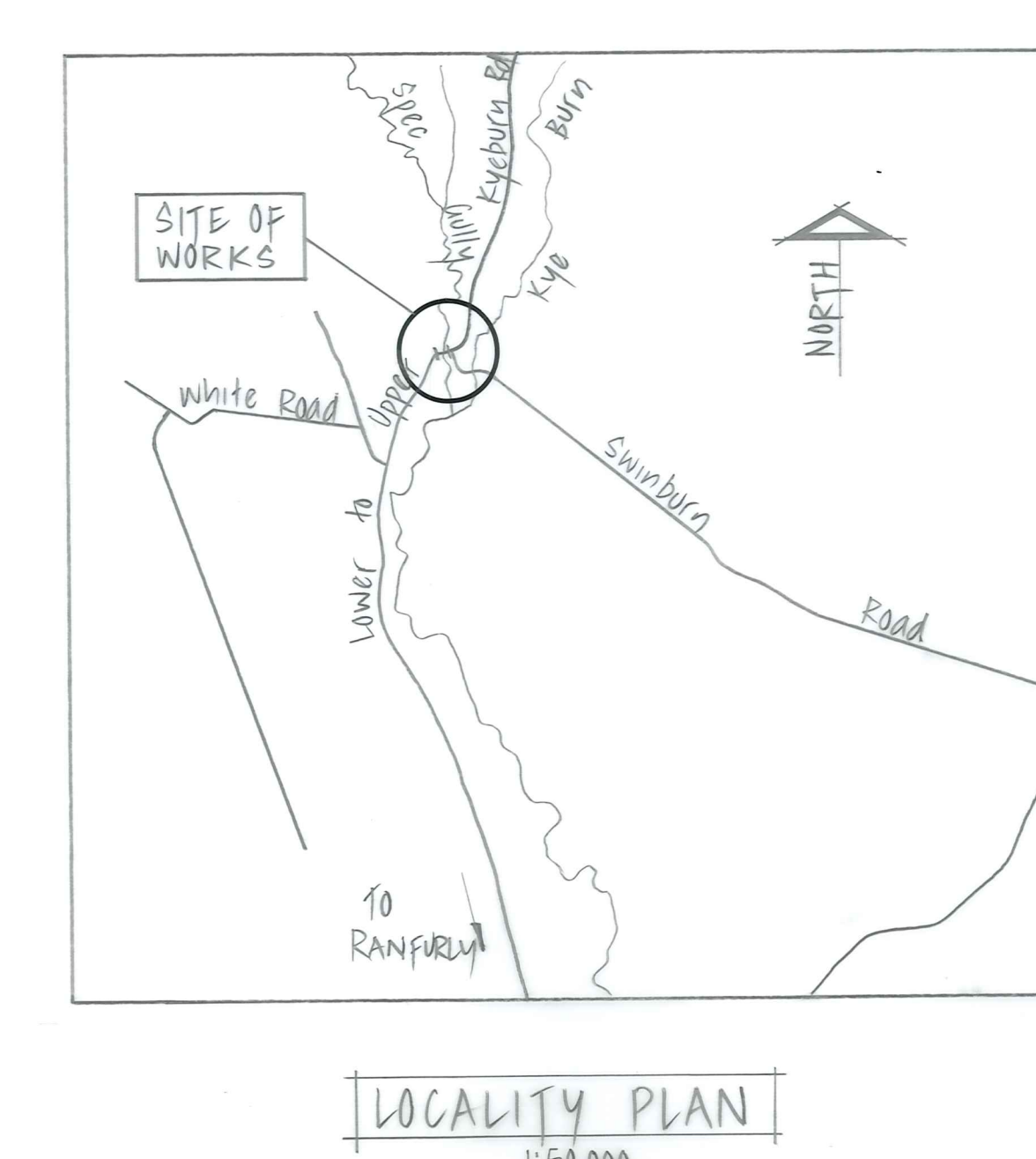
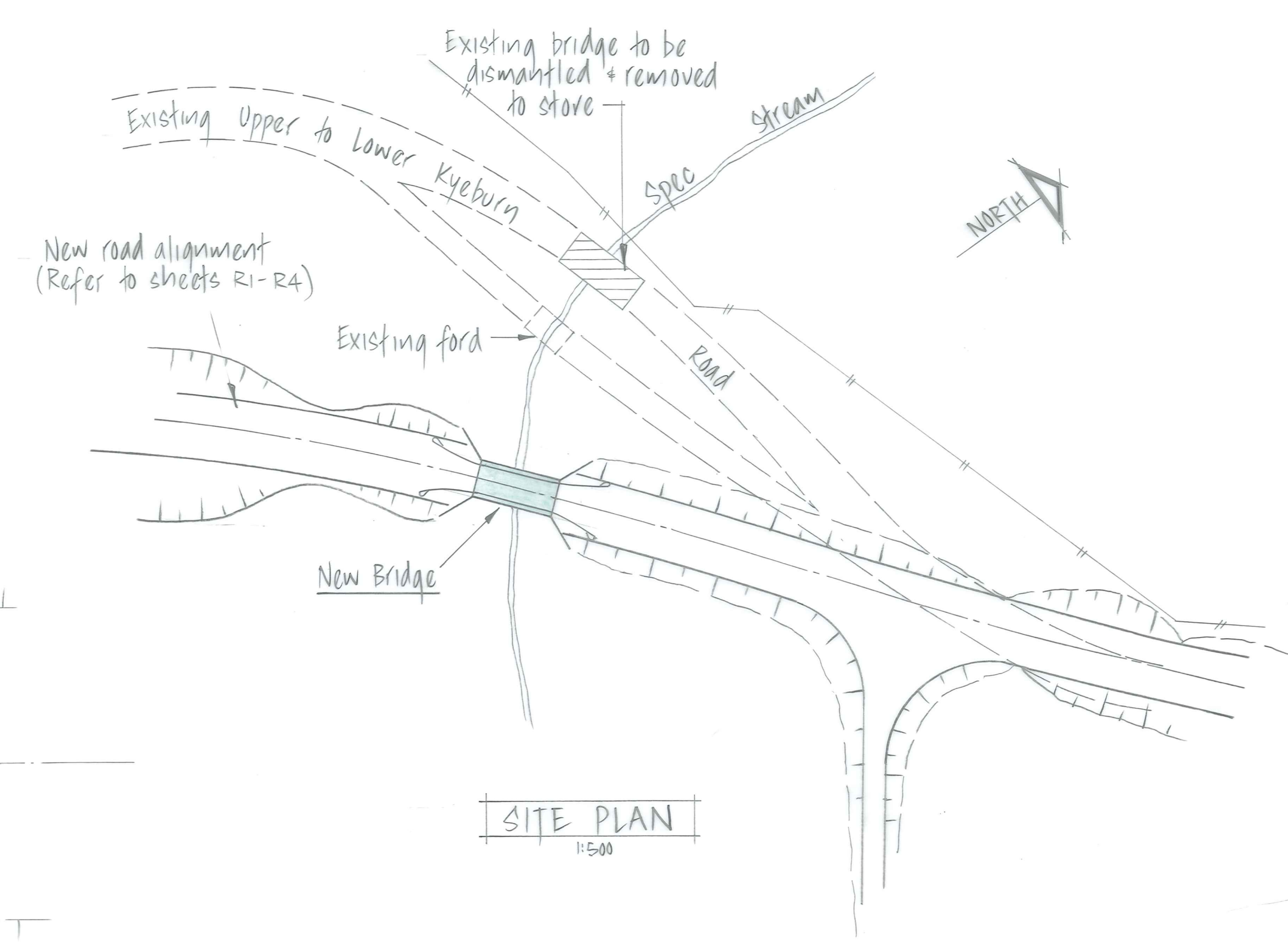
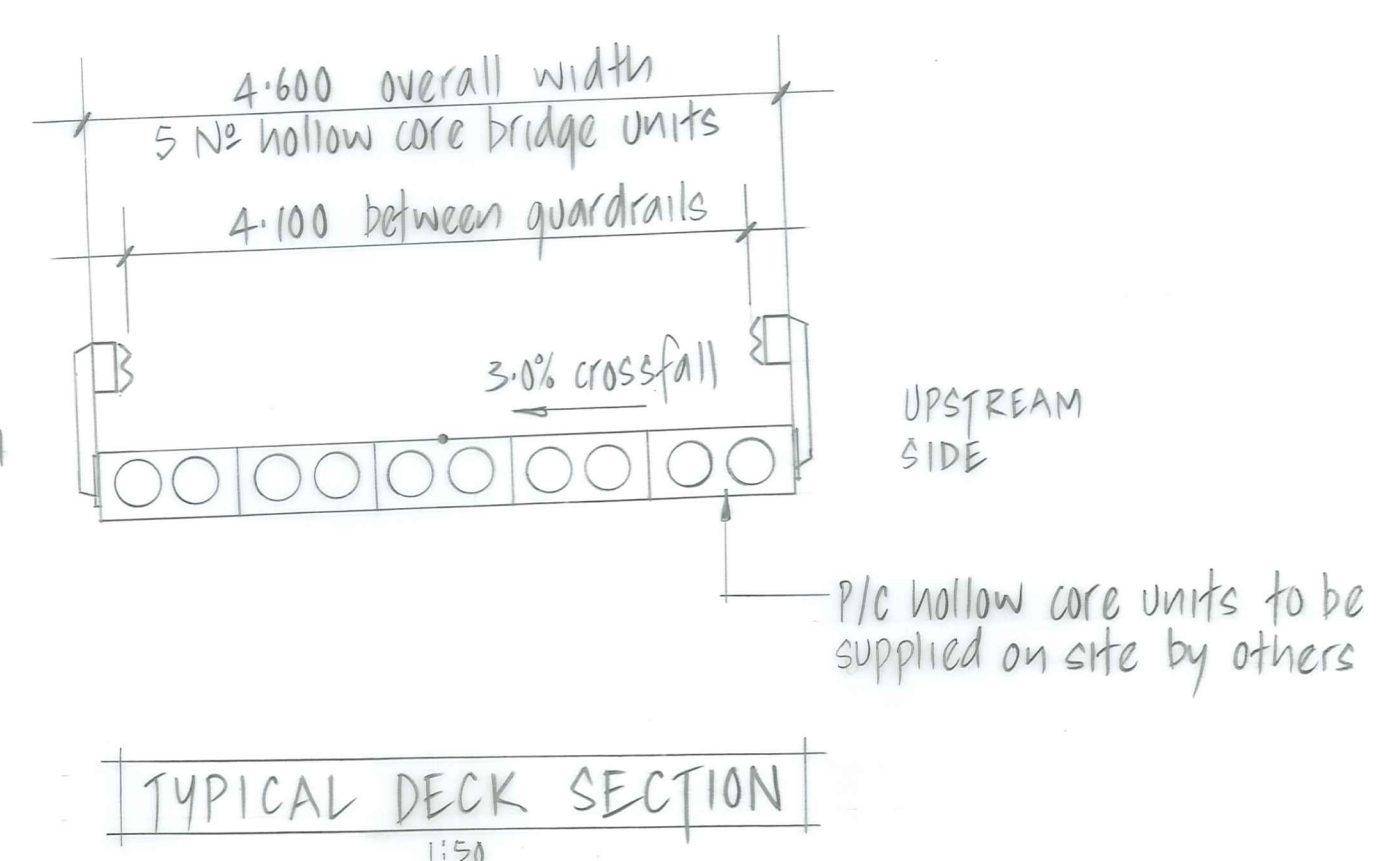
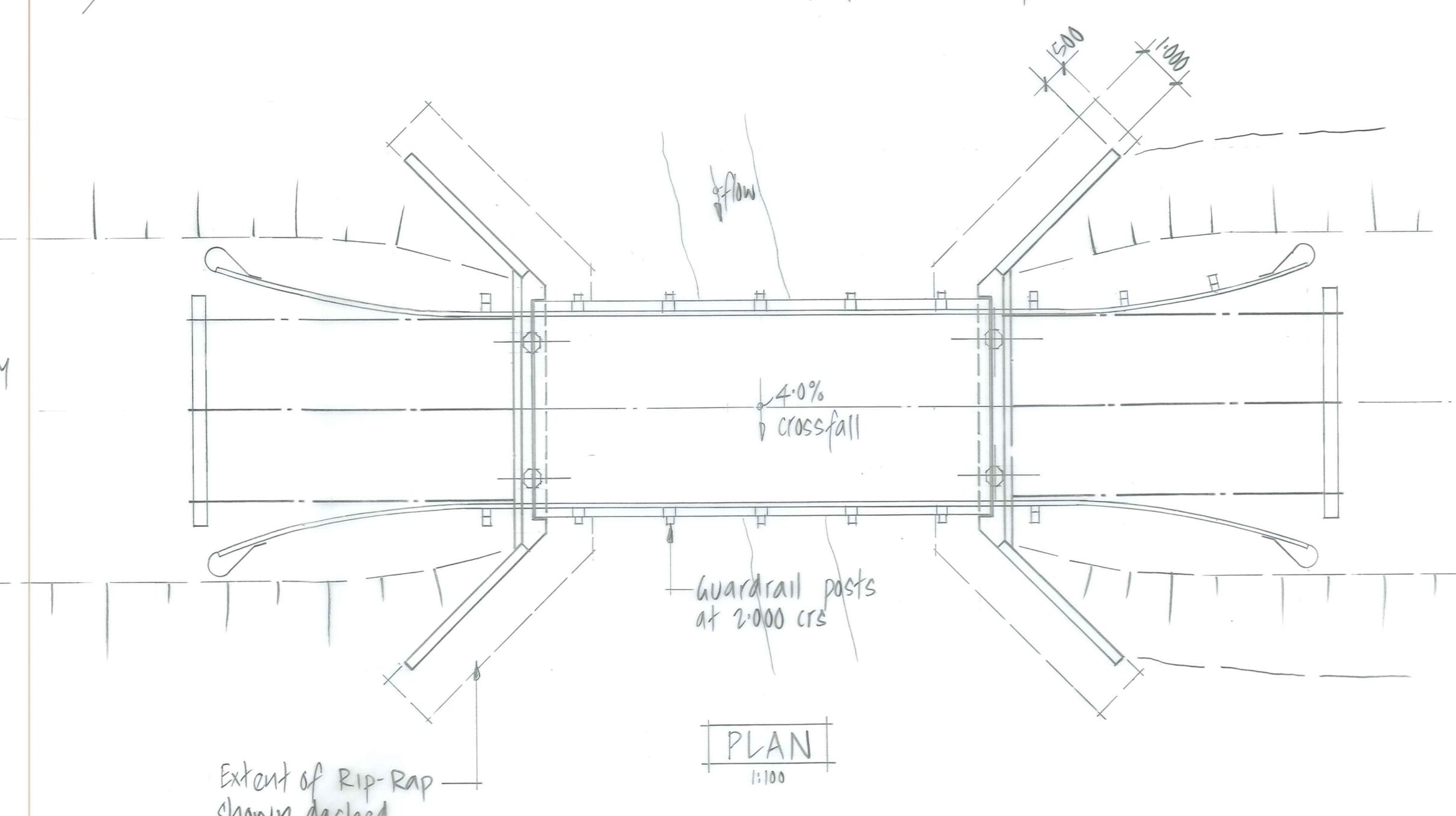
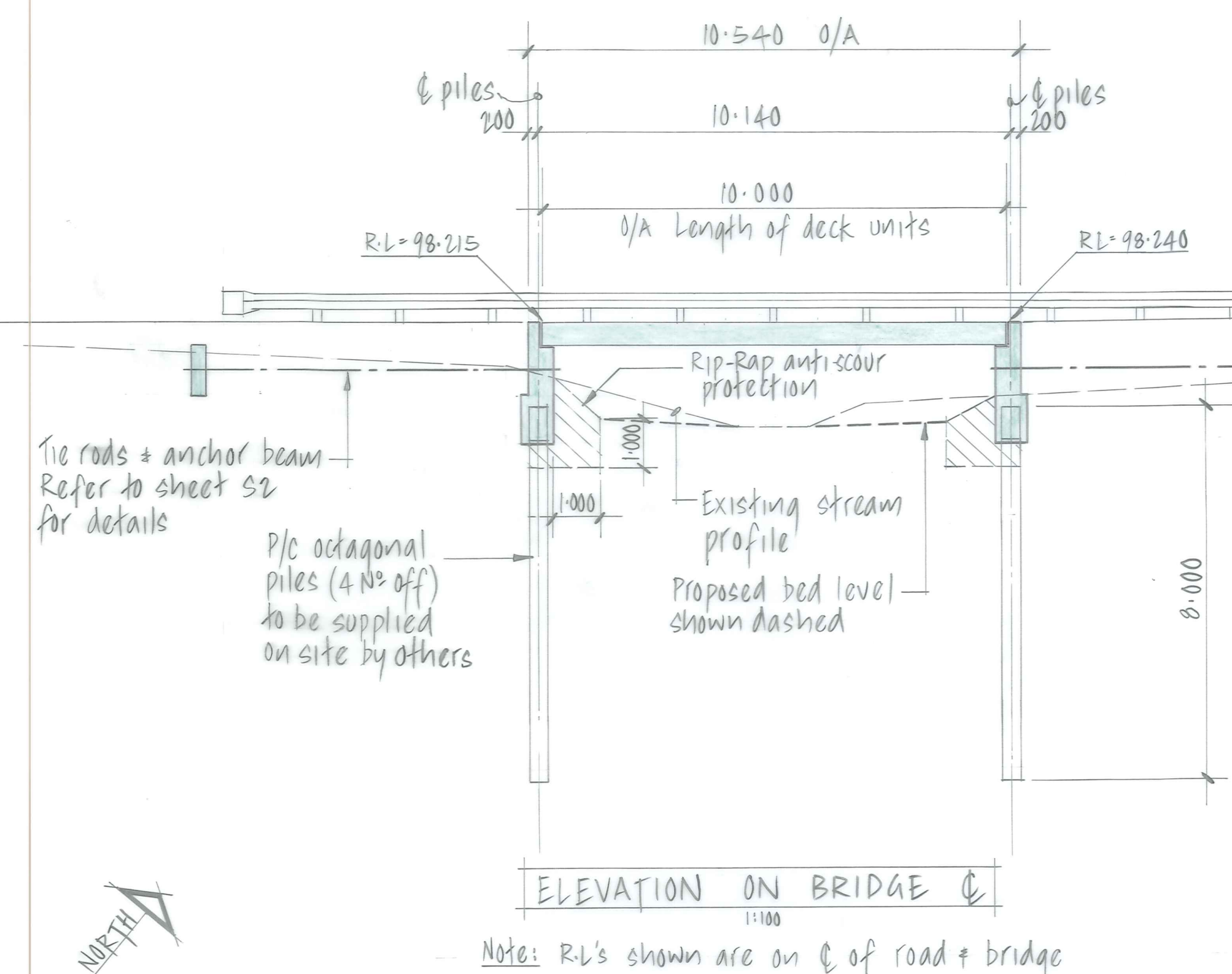


300  
200  
150  
100  
50  
10  
0  
ORIGINAL SIZE mm

Notes



No.	Revisions	Date	Appvd
Designed	P.E. BEALING	Date APRIL 91	Print Date
Drawn	J. KNOX	" "	" "
Checked	Paul Bealing	30-4-91	
Approved	Bealing	30-4-91	
File	225/16/6/2	Ref	

Client  
CENTRAL OTAGO DISTRICT COUNCIL

Project  
**SPEC GULLY N<sup>o</sup>2 BRIDGE REPLACEMENT**

Sheet Title  
GENERAL ARRANGEMENT

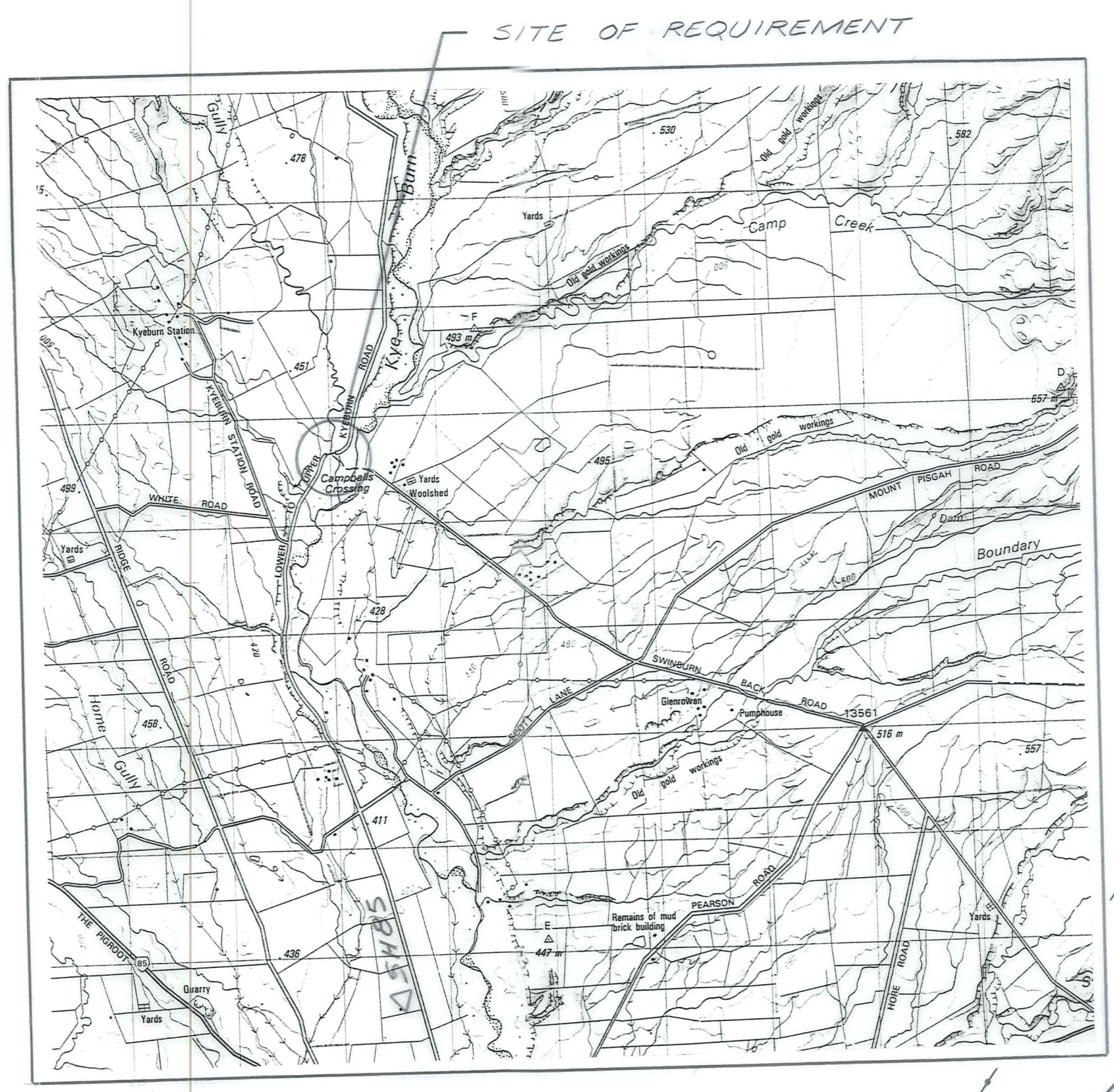
Job No. 12693  
Sheet No. S1  
Revision of shts

**Duffill Watts & King Ltd**  
CONSULTING ENGINEERS

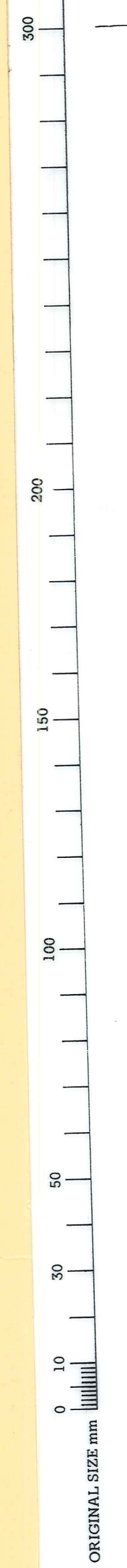
REQUIREMENT PLAN  
 Re-Order Filemaster 'D'  
 SELF-ADHESIVE PLAN HANGER  
 Patent Number 127841

Notes

- BOUNDARIES & AREAS ARE APPROXIMATE & SUBJECT TO SURVEY
- EXISTING FENCE TO REMAIN SHOWN
- EXISTING FENCE TO BE REMOVED SHOWN
- NEW FENCE SHOWN ON NEW PROPOSED LEGAL BOUNDARY



LOCALITY PLAN  
1:50000



- ROAD TO BE STOPPED
- AREA TO BE DESIGNATED ROAD

SCHEDULE		
No	APPROX. AREA	REQUIRED FOR
A	400m <sup>2</sup>	ROAD
B	2450m <sup>2</sup>	ROAD TO BE STOPPED
C	4000m <sup>2</sup>	ROAD
D	160m <sup>2</sup>	ROAD
E	60m <sup>2</sup>	ROAD

1 EXISTING FEATURES ADDED		24/11/91	1/1/91
No.	Revisions	Date	Appvd
Designed	RJM	Date	Print Date
Drawn	RJM	16/4/91	
Checked	m/10/91	17/4/91	
Approved			
File	225/116/12	Ref	LB 575 & 585



Client  
 CENTRAL OTAGO DISTRICT COUNCIL

Project  
 SPEC GULLY No. 2  
 BRIDGE REPLACEMENT &  
 REALIGNMENT

Sheet Title  
 LAND REQUIREMENT PLAN

Job No. 12693	Sheet No. 2L of 2 SHS	Revision R1
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SCALE 1:500

Notes  
 1. UNDERGROUND SERVICES ARE KNOWN TO EXIST IN THE AREA. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN EXACT NATURE & LOCATION PRIOR TO EXCAVATION.

- KEY**
- TOPSOIL & GRASS.
  - APPROXIMATE LOCATION OF EXISTING LEGAL BOUNDARY
  - EXISTING FENCE TO REMAIN
  - EXISTING FENCE TO BE REMOVED
  - NEW FENCE ON PROPOSED LEGAL BOUNDARY
  - FIRST COAT SEALING FOR SEALING OF MAIN CARRIAGEWAY SEE TYPICAL CROSS SECTION.

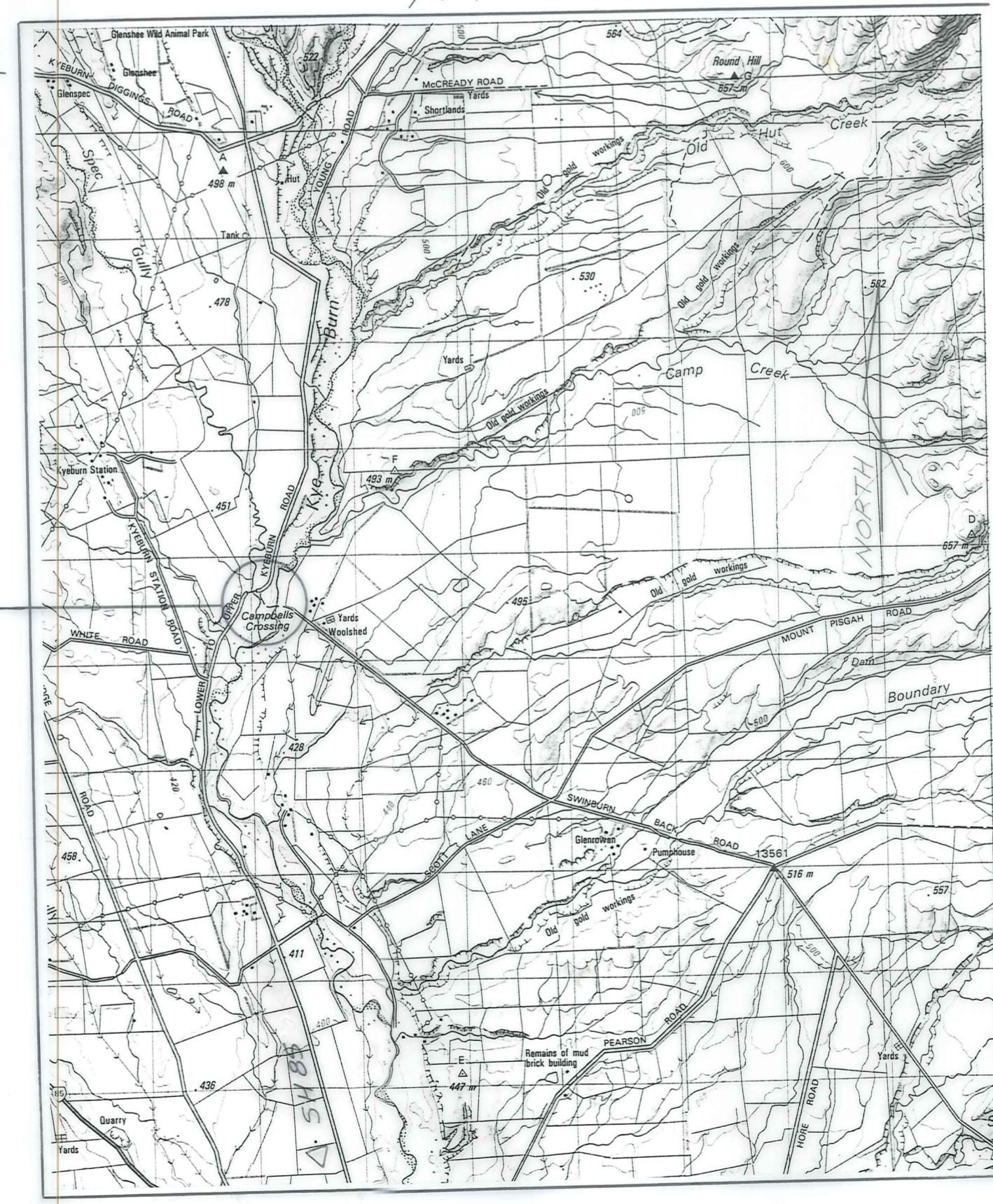
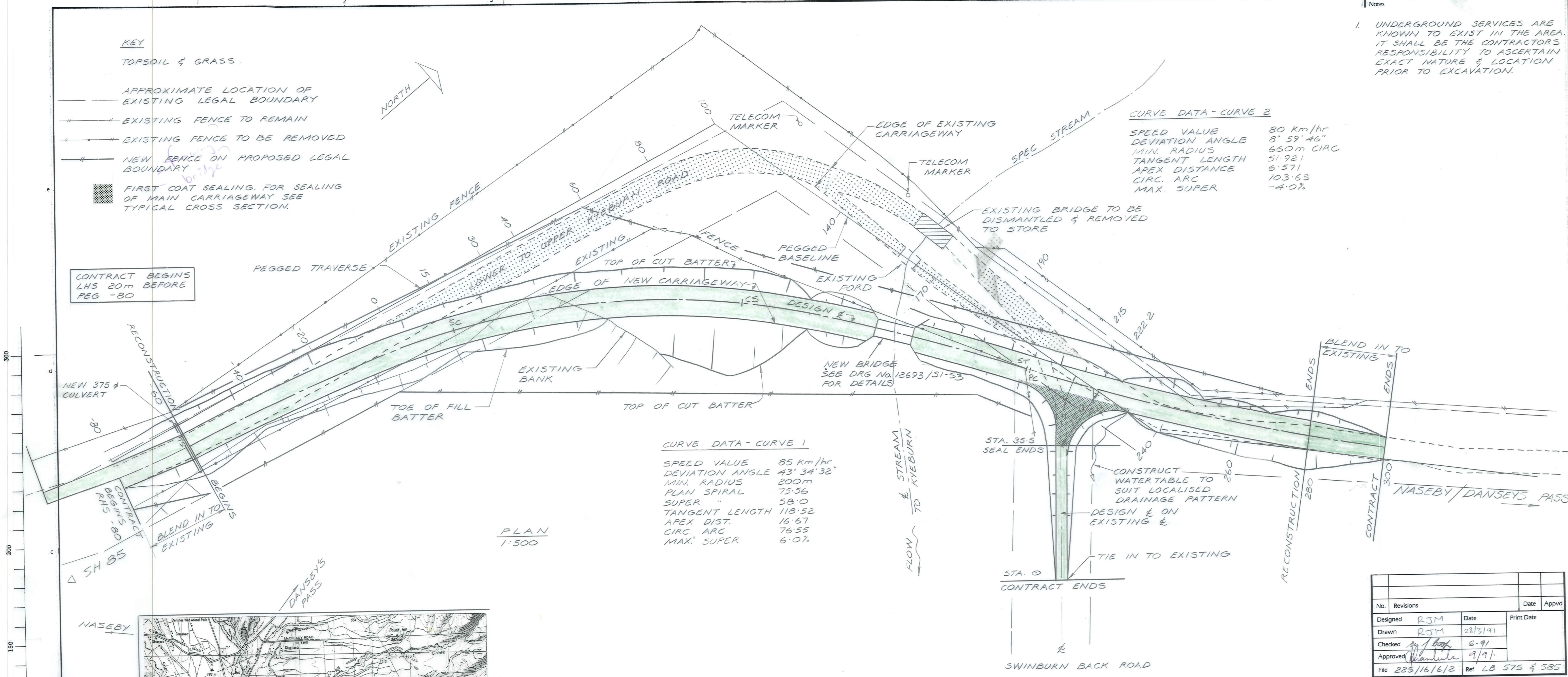
**CURVE DATA - CURVE 2**

SPEED VALUE	80 km/hr
DEVIATION ANGLE	8° 59' 46"
MIN. RADIUS	660m CIRC
TANGENT LENGTH	51.921
APEX DISTANCE	6.571
CIRC. ARC	103.63
MAX. SUPER	-4.0%

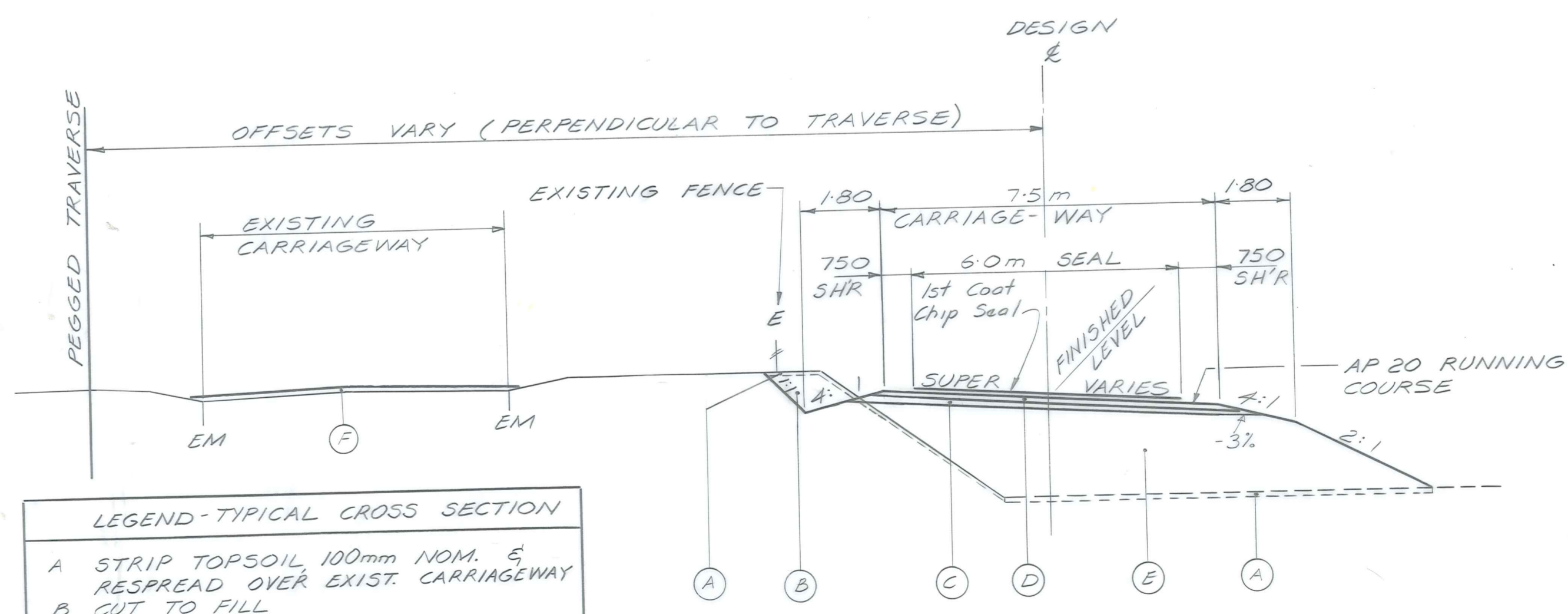
**CURVE DATA - CURVE 1**

SPEED VALUE	85 km/hr
DEVIATION ANGLE	43° 34' 32"
MIN. RADIUS	200m
PLAN SPIRAL	75.56
SUPER	58.0
TANGENT LENGTH	118.52
APEX DIST.	16.67
CIRC. ARC	76.55
MAX. SUPER	6.0%

PLAN  
1:500



LOCALITY PLAN  
1:50000



- LEGEND - TYPICAL CROSS SECTION**
- A STRIP TOPSOIL 100mm NOM. & RESPREAD OVER EXIST. CARRIAGEWAY
  - B CUT TO FILL
  - C 150mm AP65 SUB-BASECOURSE
  - D 100mm CRUSHED M4 AP40 BASECOURSE
  - E SELECTED FILL
  - F TOPSOIL (100mm MIN.) & GRASS

TYPICAL CROSS SECTION (STA. -80 TO 300)  
1:100

No.	Revisions	Date	Appvd
Designed	RJM	Date	Print Date
Drawn	RJM	28/3/91	
Checked	Ap/Boop	6-91	
Approved	Wanville	9/91	
File	225/16/6/2	Ref	LB 575 & 585

Client  
**CENTRAL OTAGO DISTRICT COUNCIL**

Project  
 SPEC GULLY No 2  
 BRIDGE REPLACEMENT &  
 REALIGNMENT  
 CONTRACT 90/127

Sheet Title  
 LOCALITY PLAN, PLAN &  
 TYPICAL CROSS SECTION

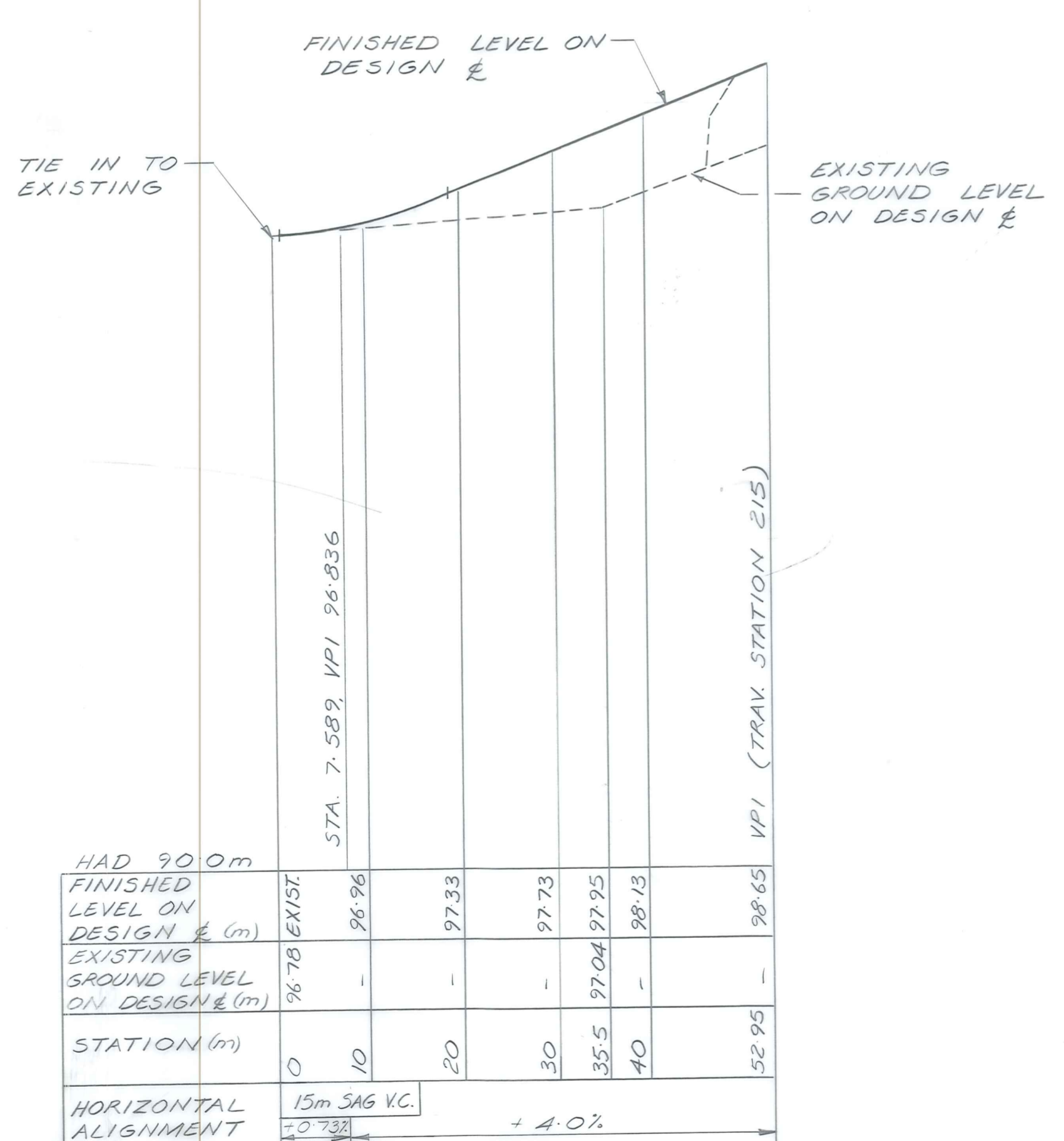
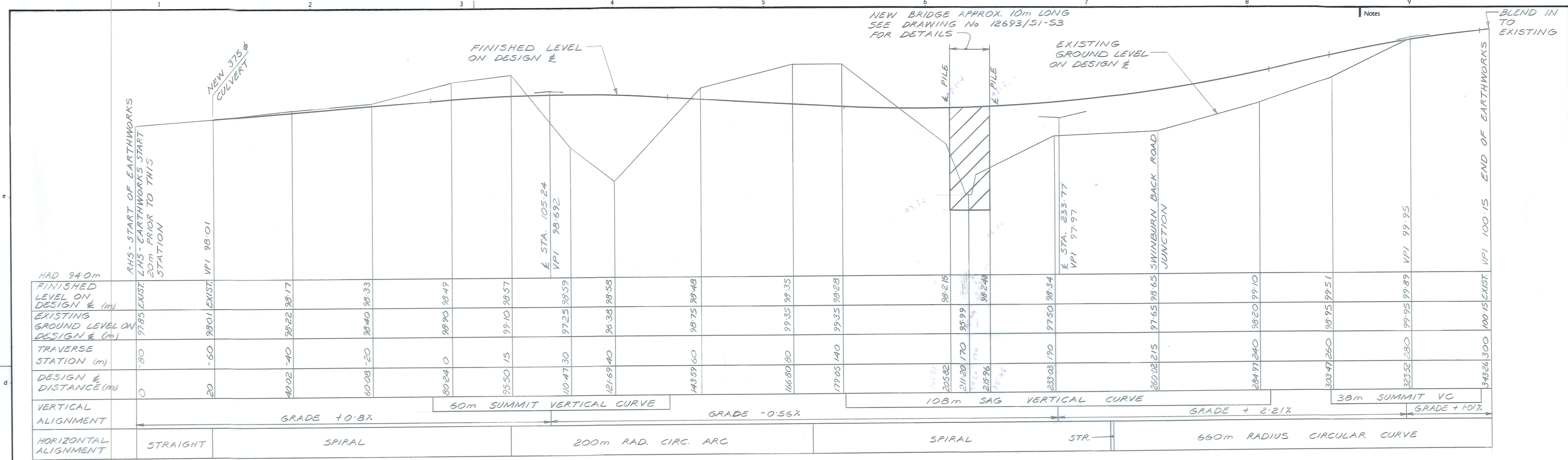
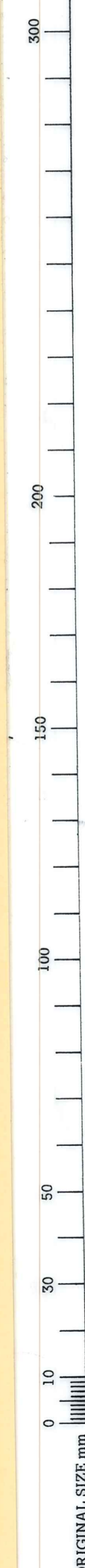
Job No. 12693	Sheet No. R1 of 4 sheets	Revision
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**Duffill Watts & King Ltd**  
 CONSULTING ENGINEERS

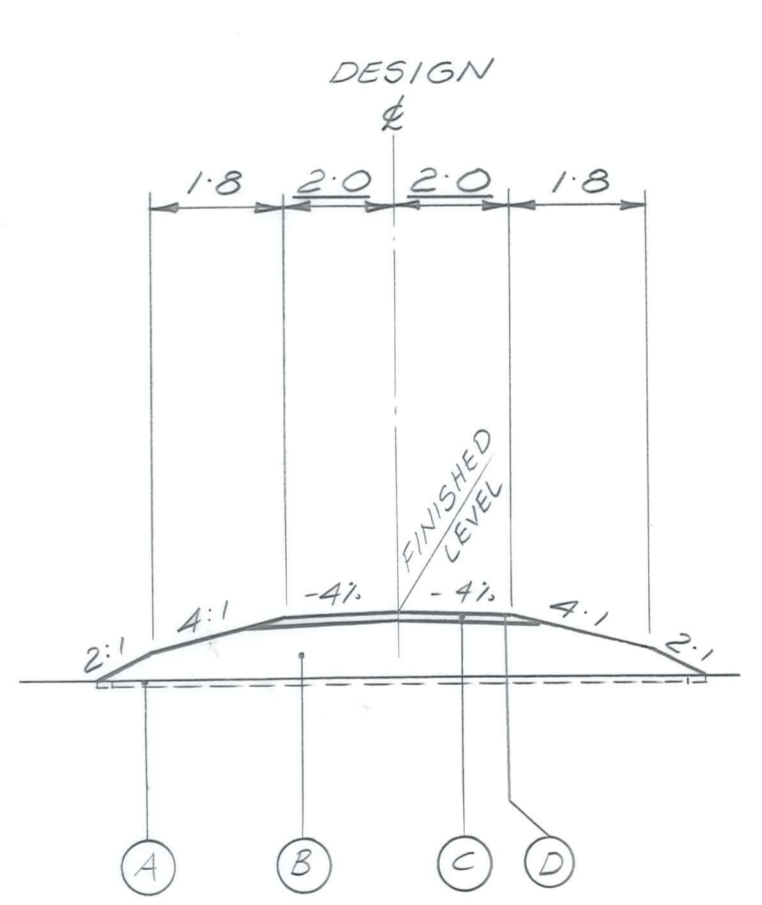
Cont. 90/127  
 Re-Order Filemaster "D"  
 SELF-ADHESIVE PLAN HANGER  
 Patent Number 137841  
 - Locality Plan, Plan & Typical Cross Section.

CODE

Cont. 90/127  
 -Profile Trav. Sta. -80 to 300 to Swinburn Back Rd.  
 SELF-ADHESIVE PLAN HANGER  
 Register Number 137841



PROFILE : TRAV. STA. -80 TO 300  
 H:1:500 V:1:50



TYPICAL CROSS SECTION  
 SWINBURN BACK ROAD  
 1:100

- LEGEND - TYPICAL CROSS SECTION
- A STRIP TOPSOIL 100mm NOM. & RESPREAD OVER EXISTING CARRIAGEWAY
  - B SELECTED FILL
  - C 100mm M/4 AP40 BASECOURSE (CRUSHED) 150mm AP65 SUB-BASECOURSE
  - D AP20 RUNNING COURSE

NOTE  
 REFER TO SHEET 1 FOR EXTENT OF FIRST COAT GRADE & CHIP SEAL AT INTERSECTION WITH KYEBURN ROAD

PROFILE : SWINBURN BACK ROAD  
 H 1:500 V 1:50

No.	Revisions	Date	Appvd
Designed	RJM	Date	Print Date
Drawn	RJM	3/91	
Checked	A/B	6-91	
Approved	[Signature]	9/91	
File	223/16/6/2	Ref	LB 575 & 585

Client  
**CENTRAL OTAGO DISTRICT COUNCIL**

Project  
 SPEC GULLY No 2  
 BRIDGE REPLACEMENT &  
 REALIGNMENT  
 CONTRACT 90/127

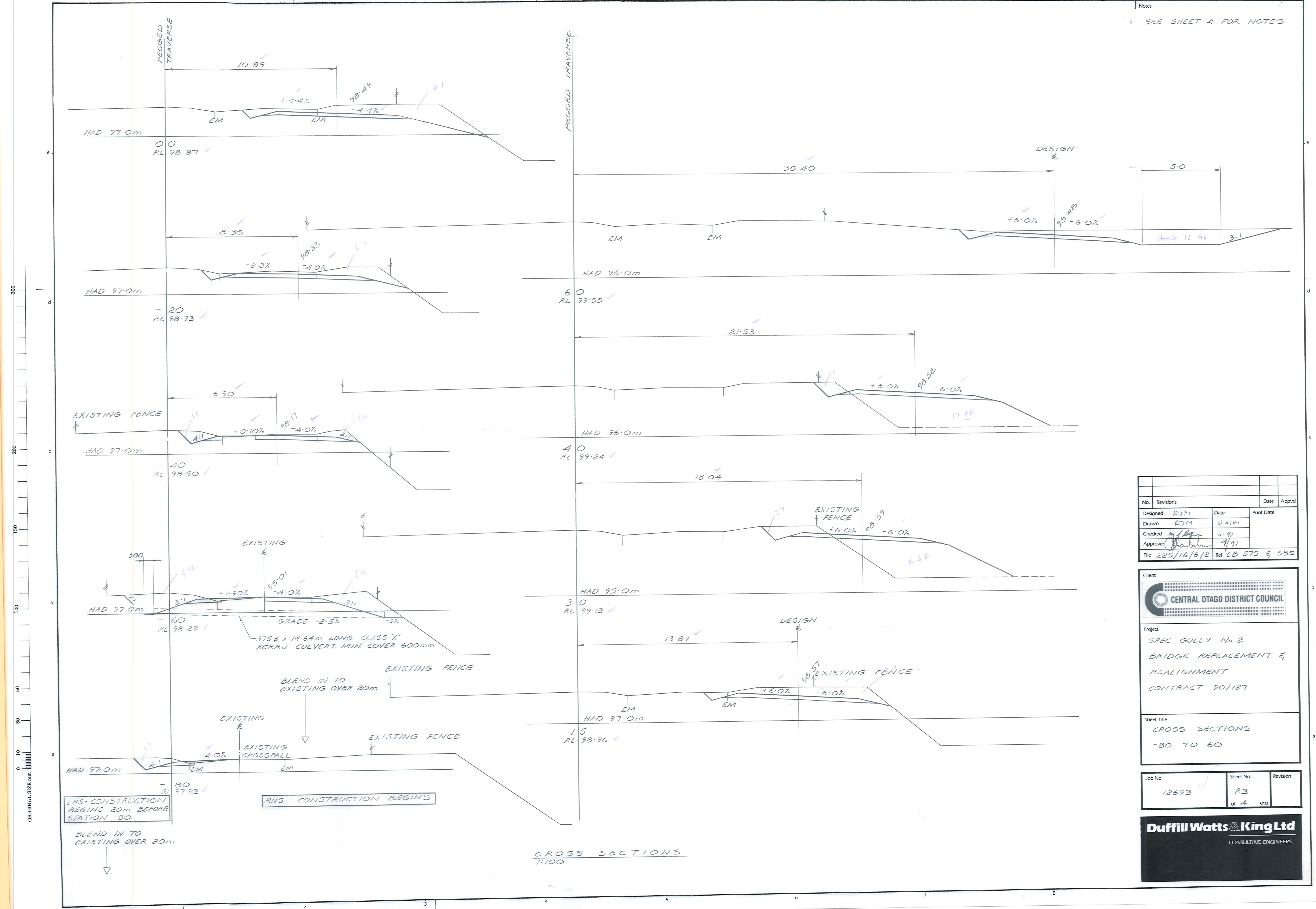
Sheet Title  
 PROFILE TRAV. STA. -80 TO  
 300 & SWINBURN BACK  
 ROAD

Job No. 12693	Sheet No. R2 of 4 shs	Revision
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**Duffill Watts & King Ltd**  
 CONSULTING ENGINEERS

Re-alignment Cont. 90/127  
 Re-Order Filemaster 'D'  
 SELF-ADHESIVE PLAN HANGER  
 Patent Number 137841  
 Cross Sections - 80 to 60

Notes  
 1. SEE SHEET 4 FOR NOTES



No.	Revisions	Date	Appvd



Client  
 CENTRAL OTAGO DISTRICT COUNCIL

Project  
 SPEC GULLY No 2  
 BRIDGE REPLACEMENT &  
 REALIGNMENT  
 CONTRACT 90/127

Sheet Title  
 CROSS SECTIONS  
 -80 TO 60

Job No.	Sheet No.	Revision
12693	R3	of 4 shts

**Duffill Watts & King Ltd**  
 CONSULTING ENGINEERS

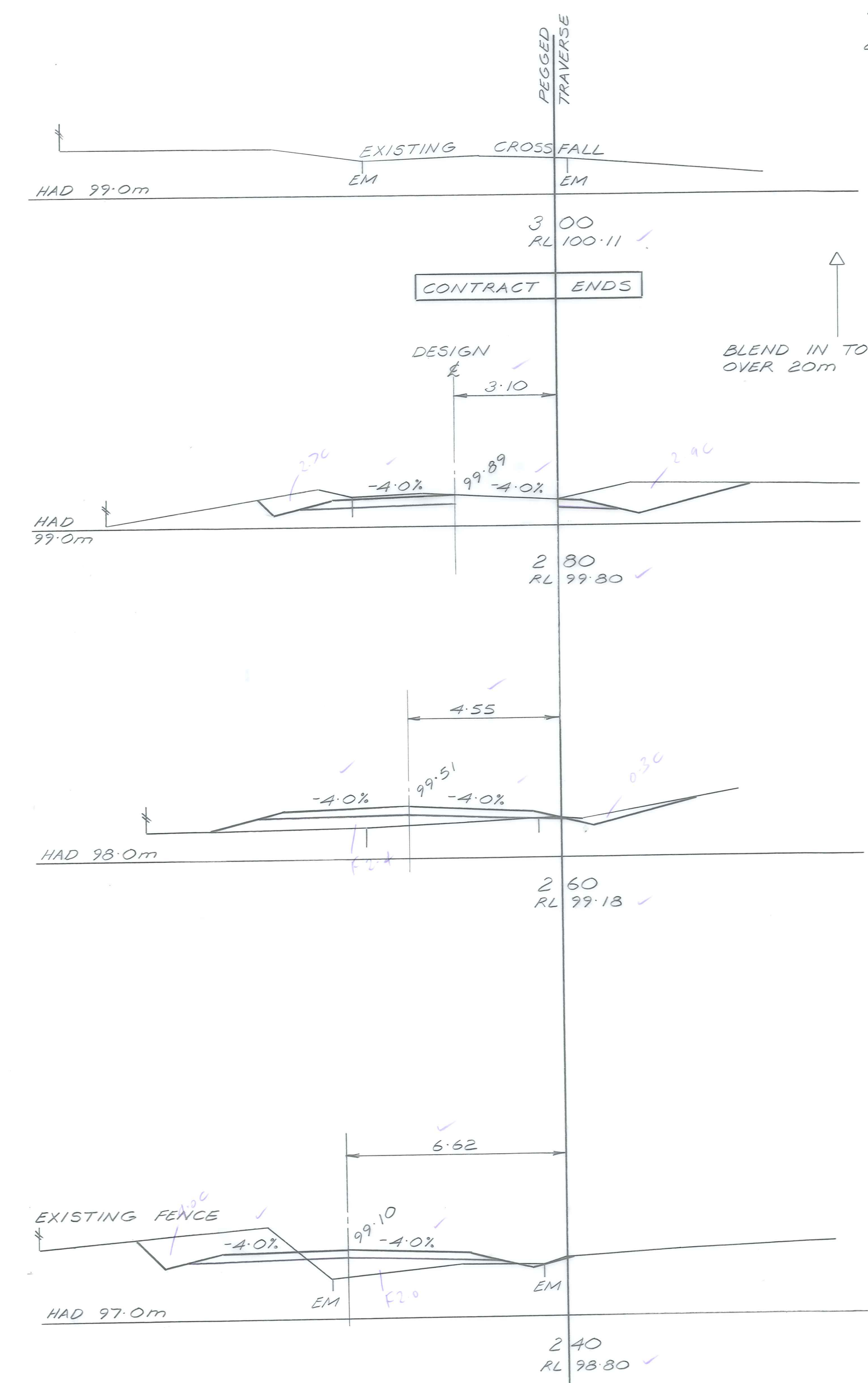
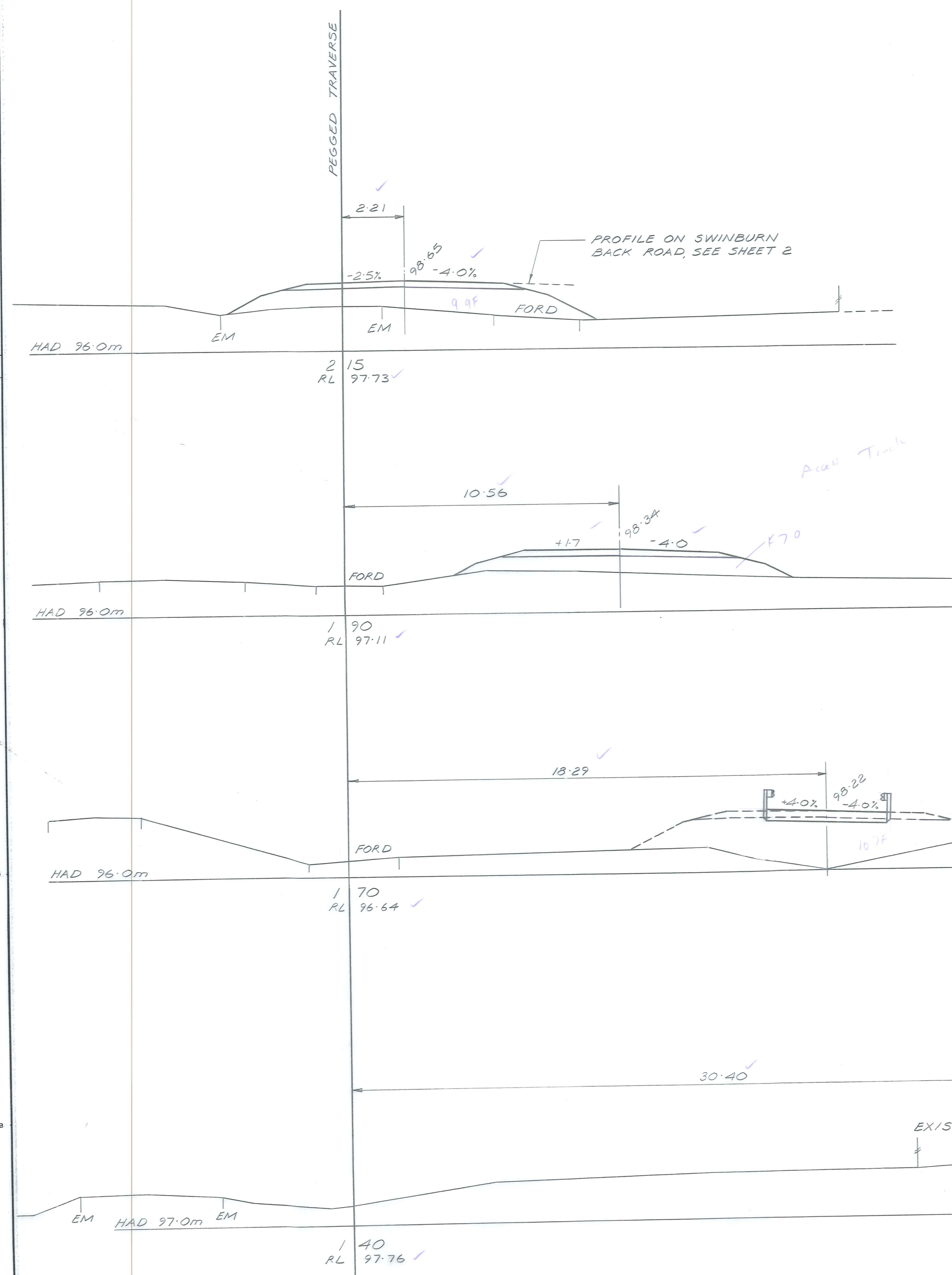
CROSS SECTIONS  
 1:100

Note: Slope of section  
- Design normal to  $\epsilon$   
- Datum Assumed

- Notes
1. LEVEL DATUM ASSUMED
  2. NATURAL GROUND CROSS SECTIONS ARE DRAWN PERPENDICULAR TO PEGGED TRAVERSE. DESIGN CROSS SECTIONS ARE DRAWN PERPENDICULAR TO DESIGN CENTRELINE.

ORIGINAL SIZE mm

0 10 30 50 70 90 110 130 150 170 190 210 230 250 270 290 310



CROSS SECTIONS  
1:100

No.	Revisions	Date	Appvd
Designed	RJM	Date	Print Date
Drawn	RJM	3/4/91	
Checked	J. [Signature]	6-91	
Approved	[Signature]	9/91	
File	223/16/6/2	Ref	LB 575 & 585



Client

Project

SPEC GULLY No 2  
BRIDGE REPLACEMENT &  
REALIGNMENT  
CONTRACT 90/127

Sheet Title

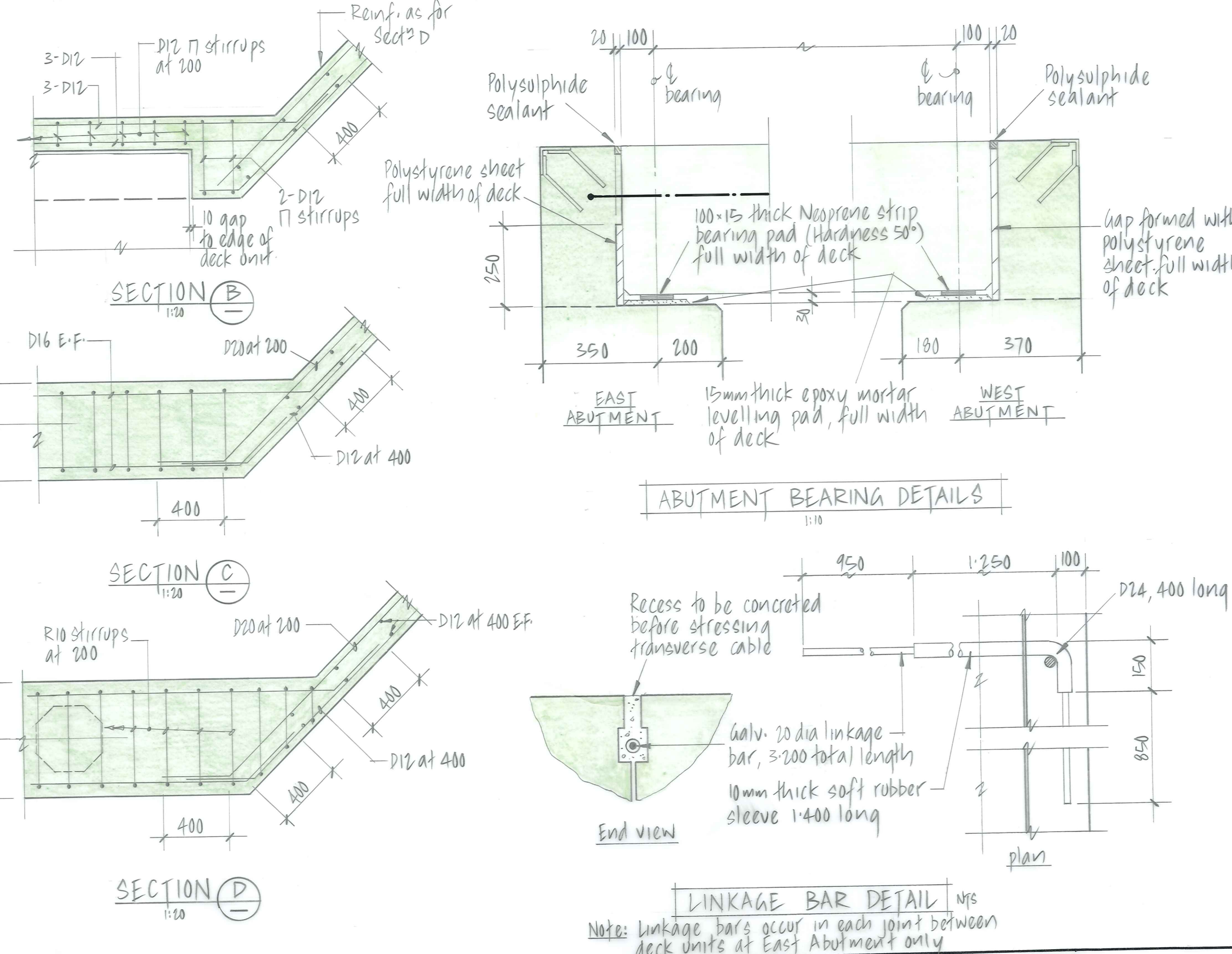
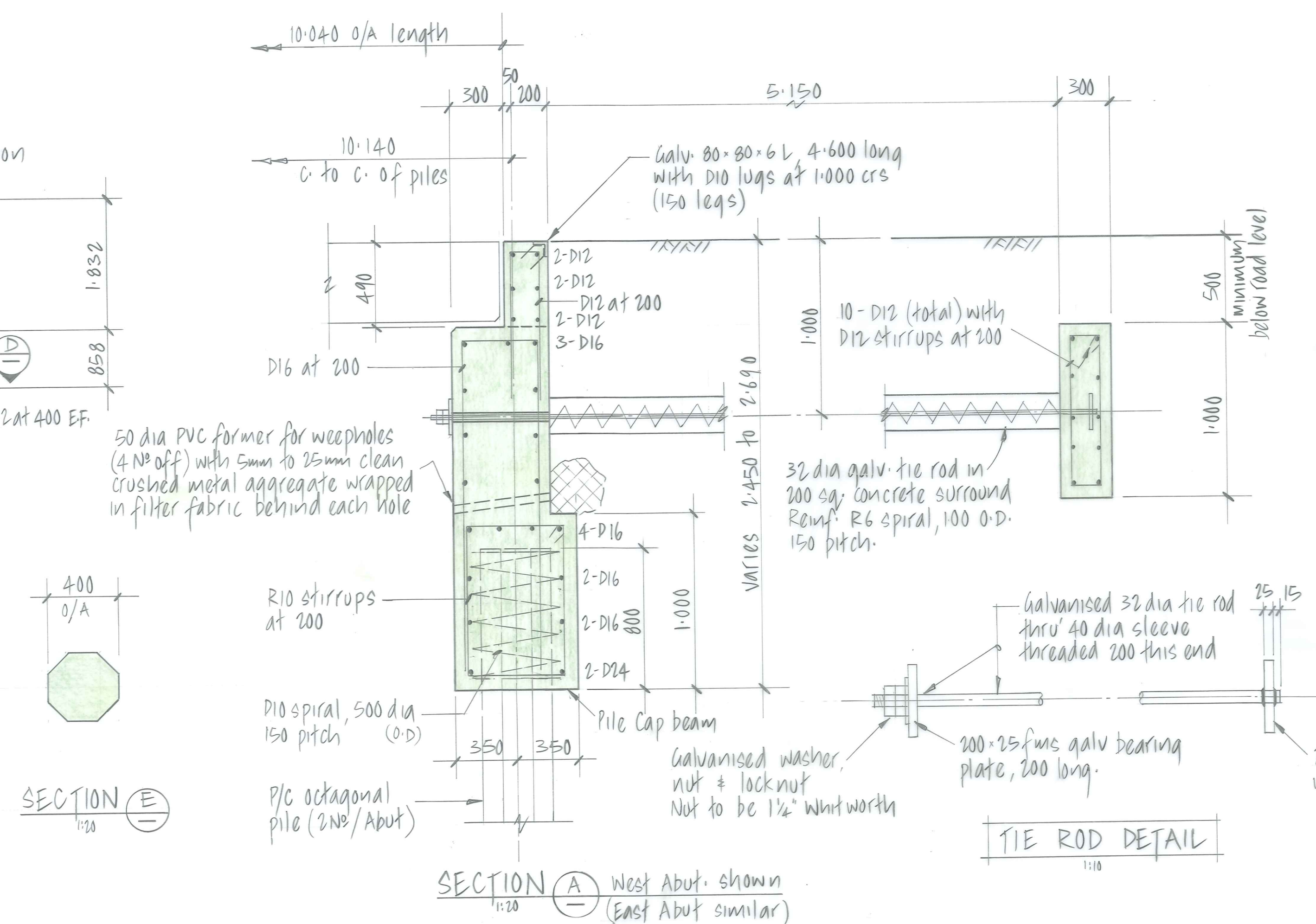
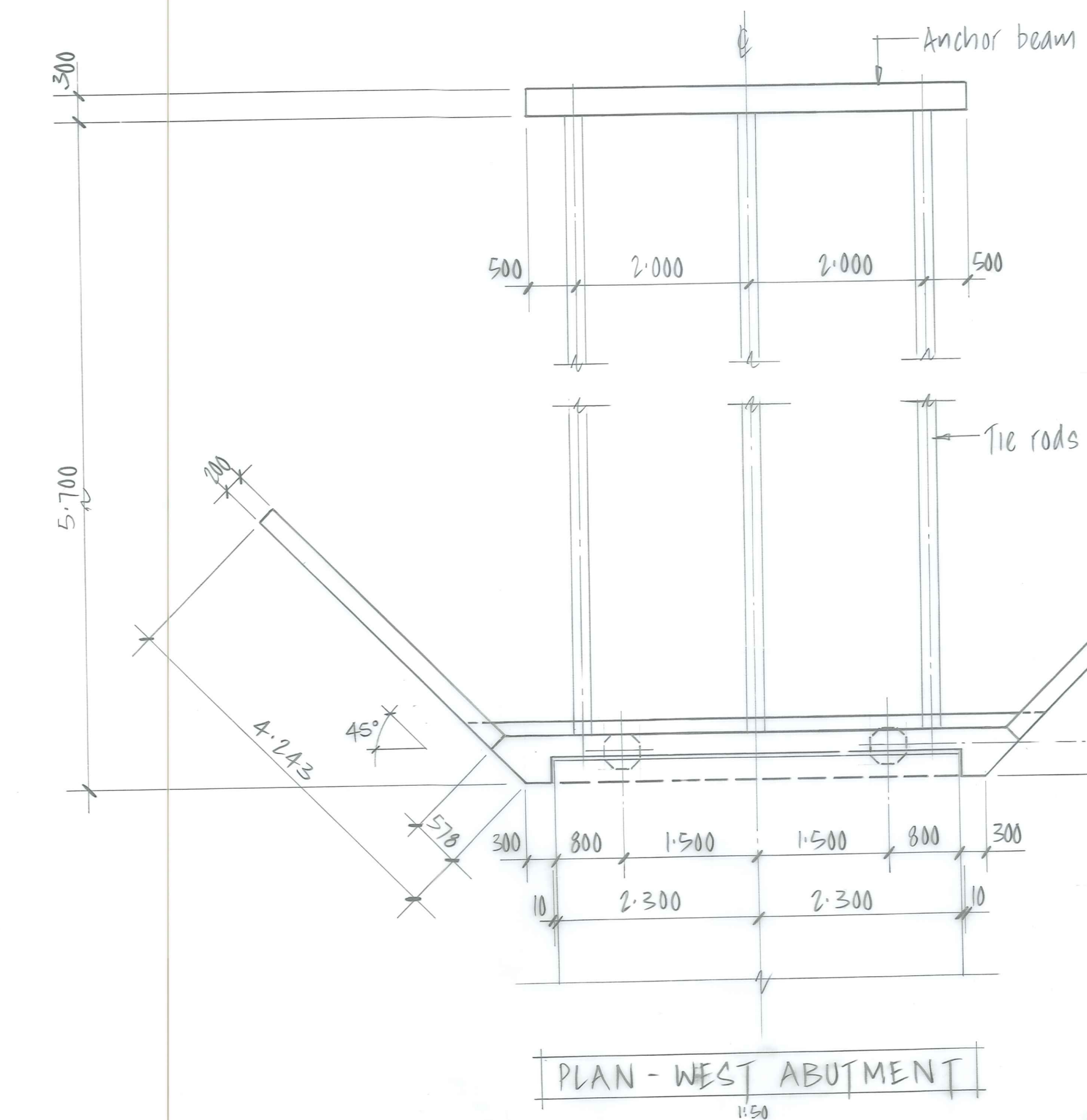
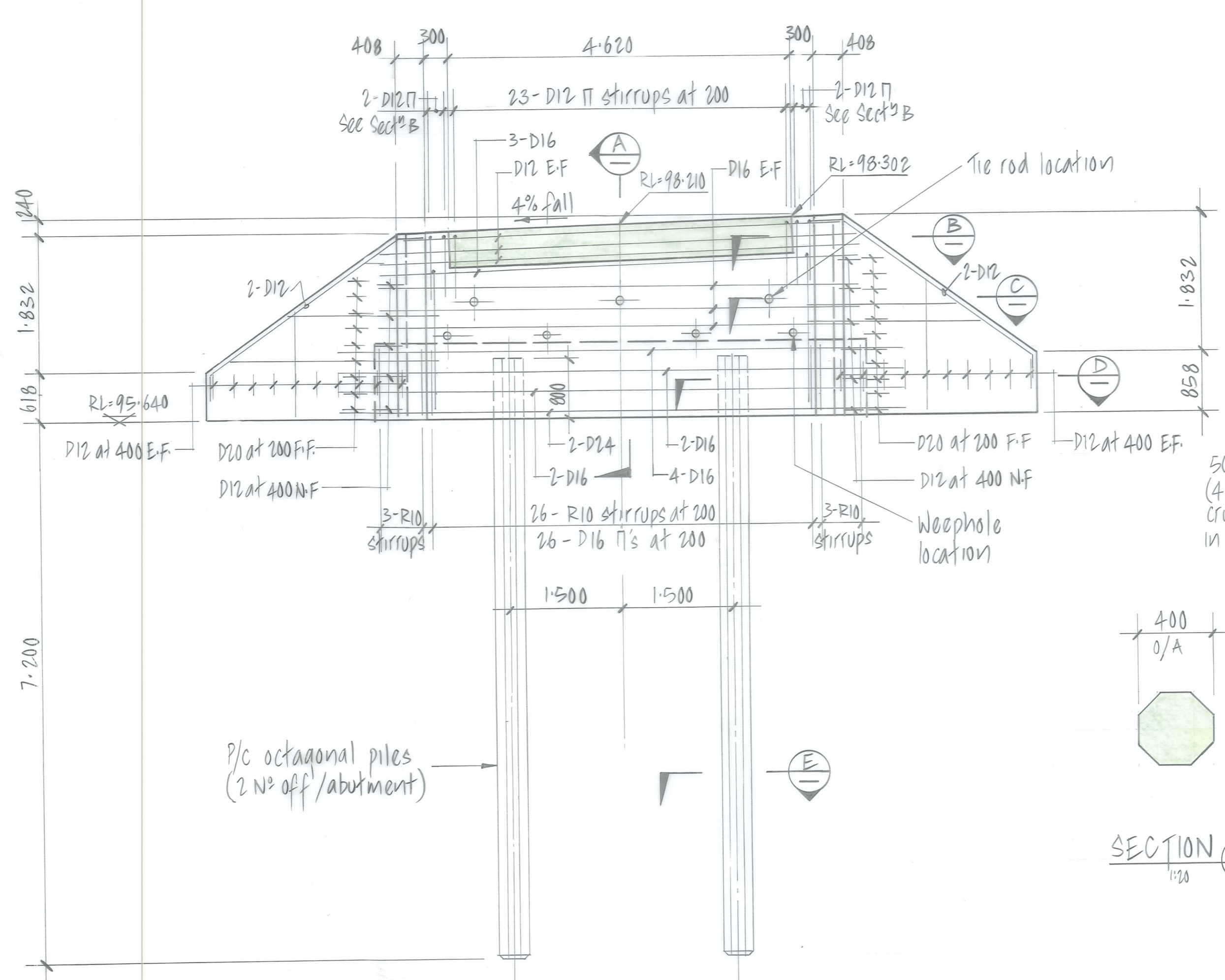
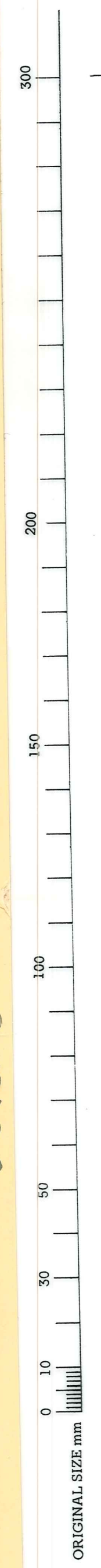
CROSS SECTIONS  
140 - 300

Job No.	Sheet No.	Revision
12693	R4	
	of 4	shts

**Duffill Watts & King Ltd**  
CONSULTING ENGINEERS

Re-Order Filemaster "D" SELF-ADHESIVE PLAN HANGER  
Patent Number 137841  
Cross Sections 140-300

Re-Order Filemaster "D" SELF-ADHESIVE PLAN HANGER  
 Patent Number 137841  
 -Abutment Elevation & Details



- Notes
- Concrete shall have a 28 day compressive strength of 25 Mpa except for precast deck units and piles
  - Clear cover to reinforcement shall be 50mm unless otherwise shown
  - Unless otherwise shown all corners shall be chamfered 20mm and all re-entrant angles shall be filletted 20mm
  - Backwall nibs to be constructed only when backfill is up to beam seat level and deck units have been installed and stressed transversely.
  - Do not scale this drawing
  - All exposed concrete surfaces shall be F4 finish where formed and U2 finish where unformed

No.	Revisions	Date	Appvd
Designed	P.E. BEALING	APRIL '11	Print Date
Drawn	J. KNOX	" "	" "
Checked	Paul Bealing	June '11	" "
Approved	Paul Bealing	July '11	" "
File	225/16/6/2	Ref	

Client  
**CENTRAL OTAGO DISTRICT COUNCIL**

Project  
**SPEC GULLY N°2 BRIDGE REPLACEMENT**

Sheet Title  
**ABUTMENT ELEVATION & DETAILS**

Job No.  
**12693**

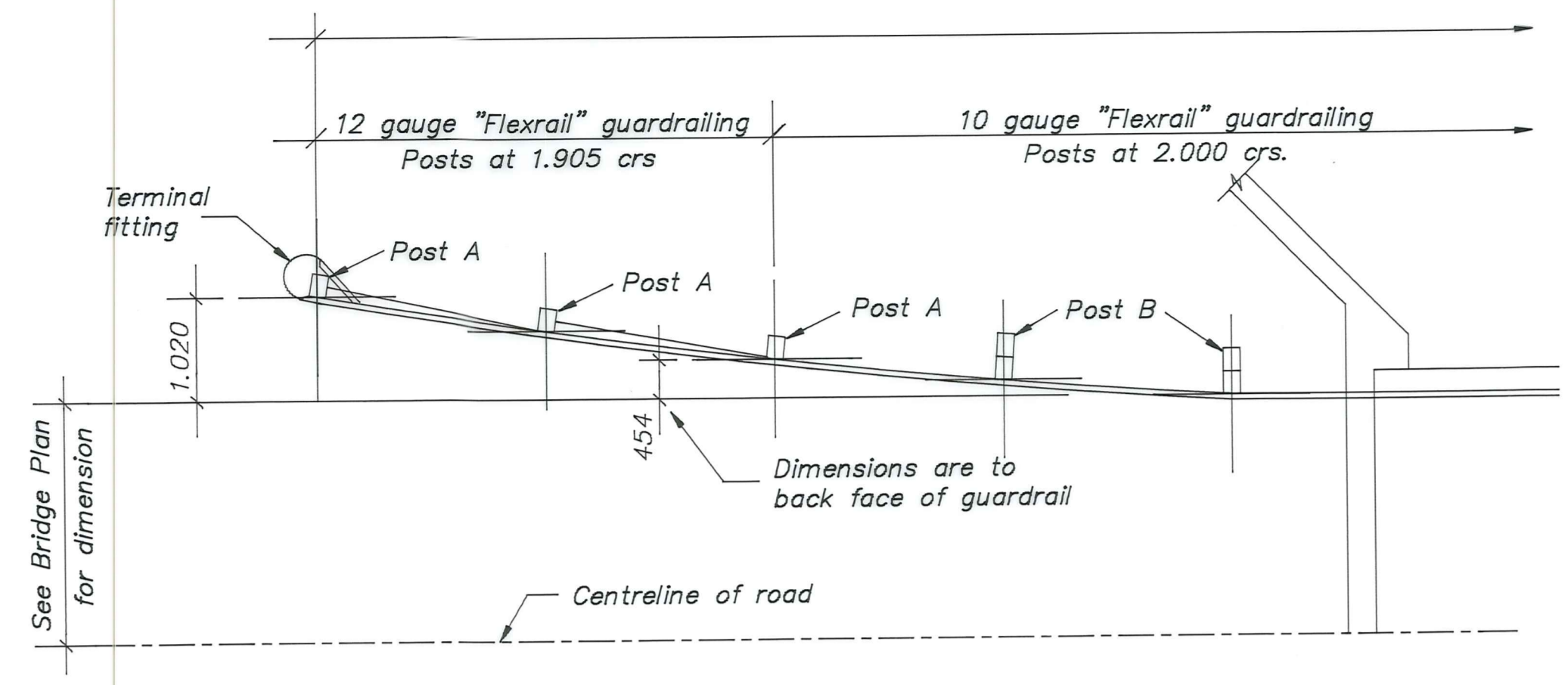
Sheet No.  
**S2**

Revision  
 of stps

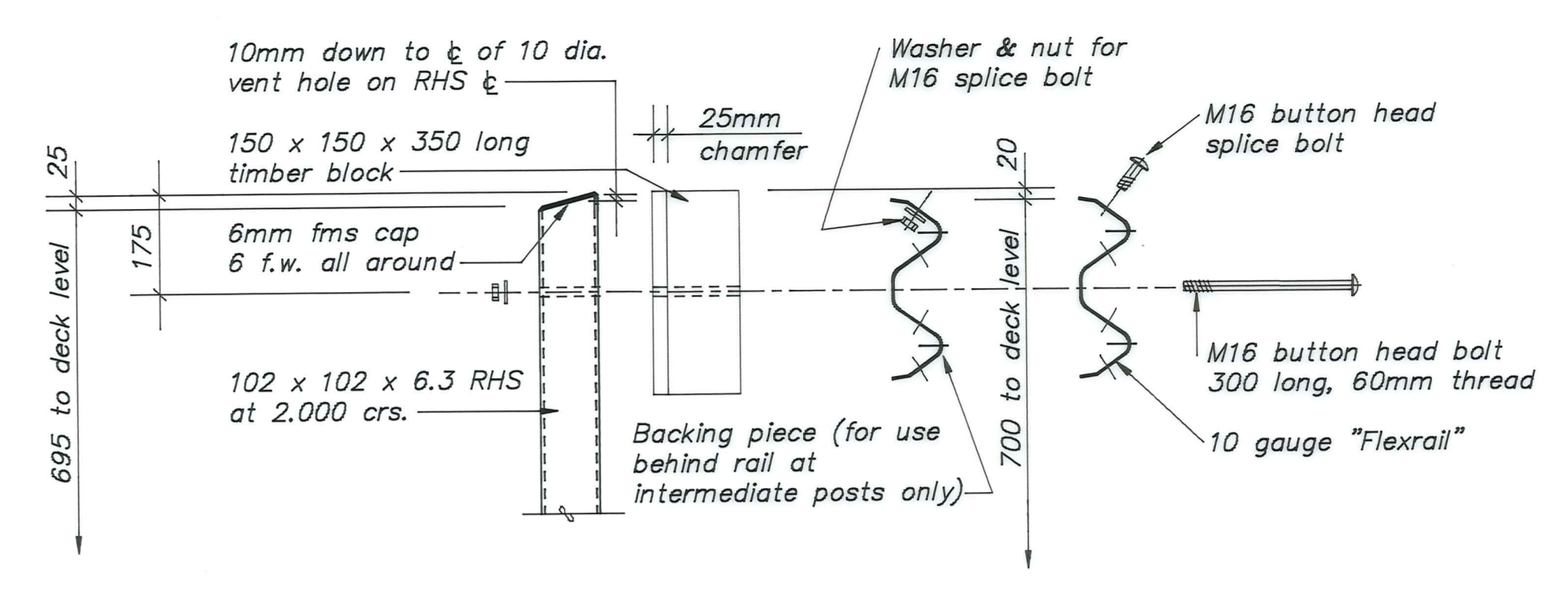
**Duffill Watts & King Ltd**  
 CONSULTING ENGINEERS

Re-Order Filemaster "D" SELF-ADHESIVE PLAN HANGER  
 Patent Number 137841  
 Guardrail Details

ORIGINAL SIZE mm  
 0 10 30 50 100 150 200 300

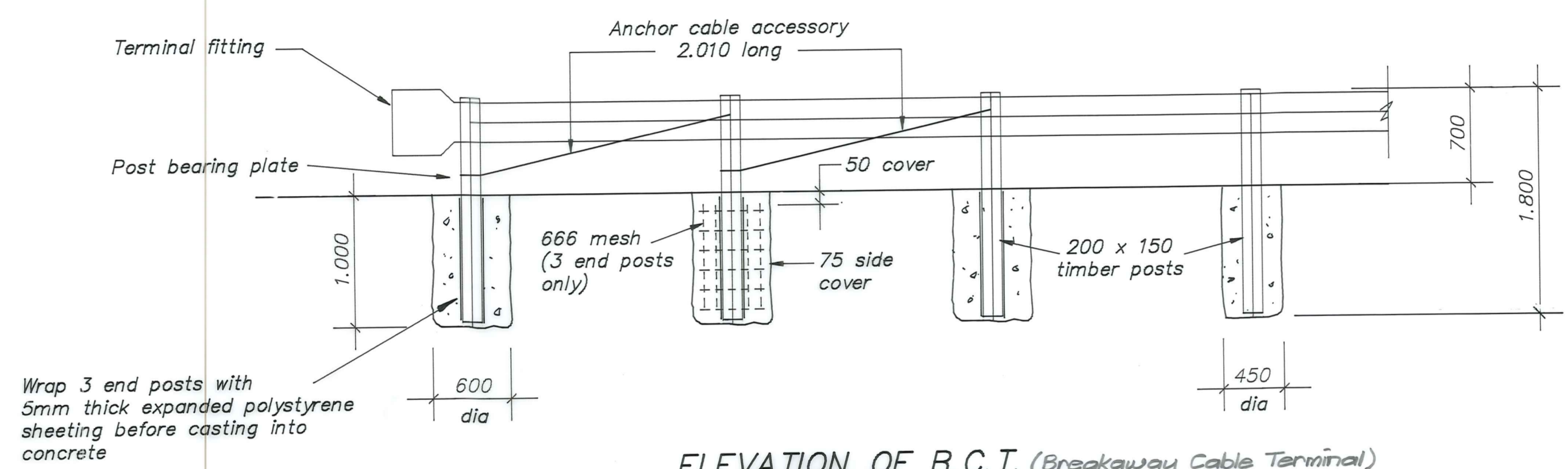


TYPICAL GUARDRAIL LAYOUT PLAN  
 1:50

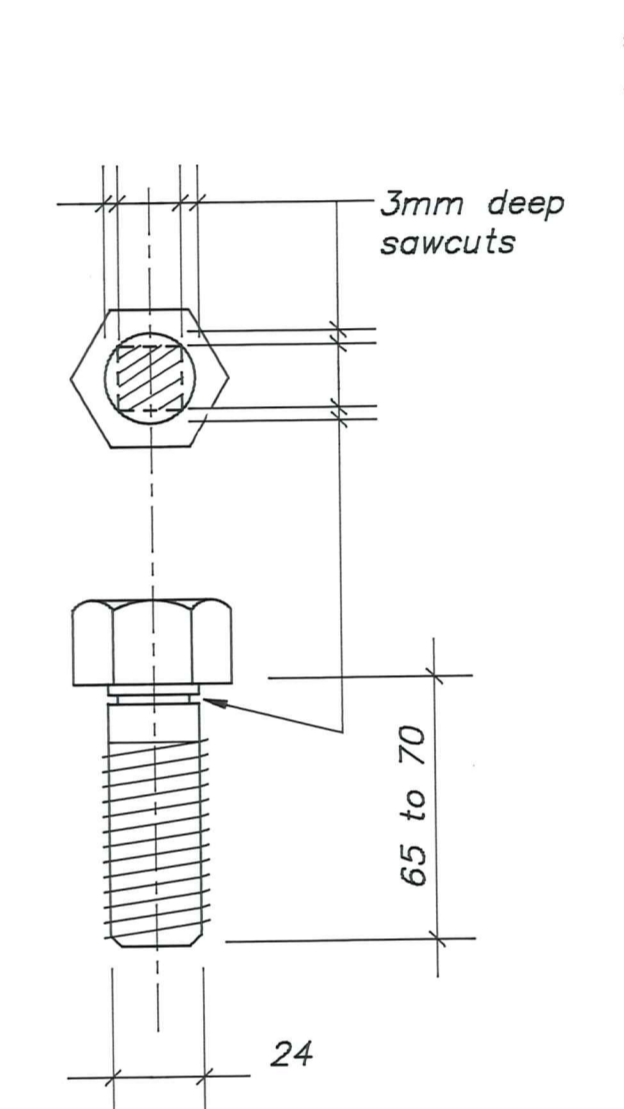


BRIDGE GUARDRAIL FIXING DETAILS  
 1:10

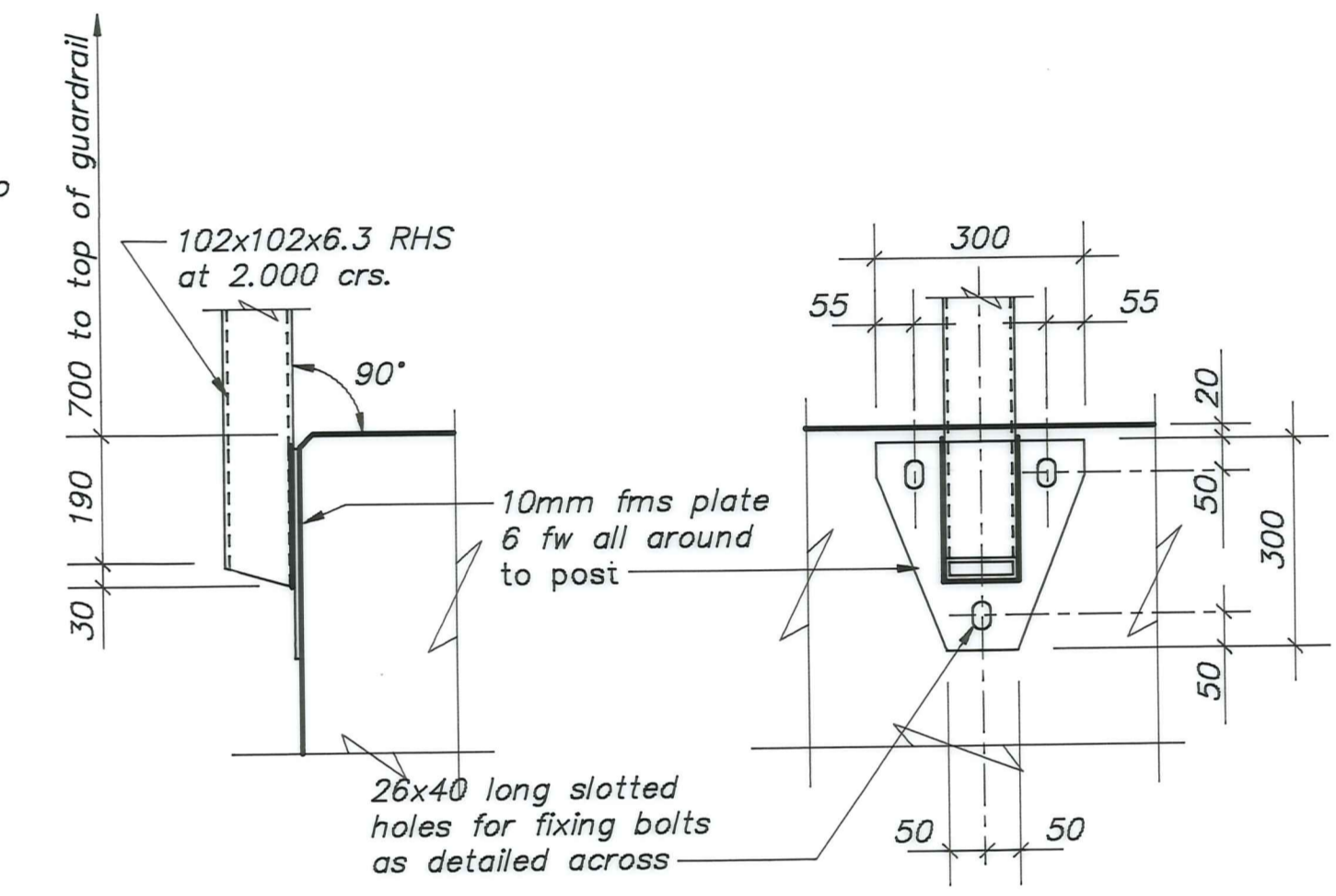
Notes  
 All steelwork to be hot dipped galvanised after fabrication including guardrail, bolts, nuts & washers.  
 All timber posts & blocks to be Pinus Radiata merchantable grade cut to size, drilled & then preservative to the Timber Preservation Authority Specification H4.



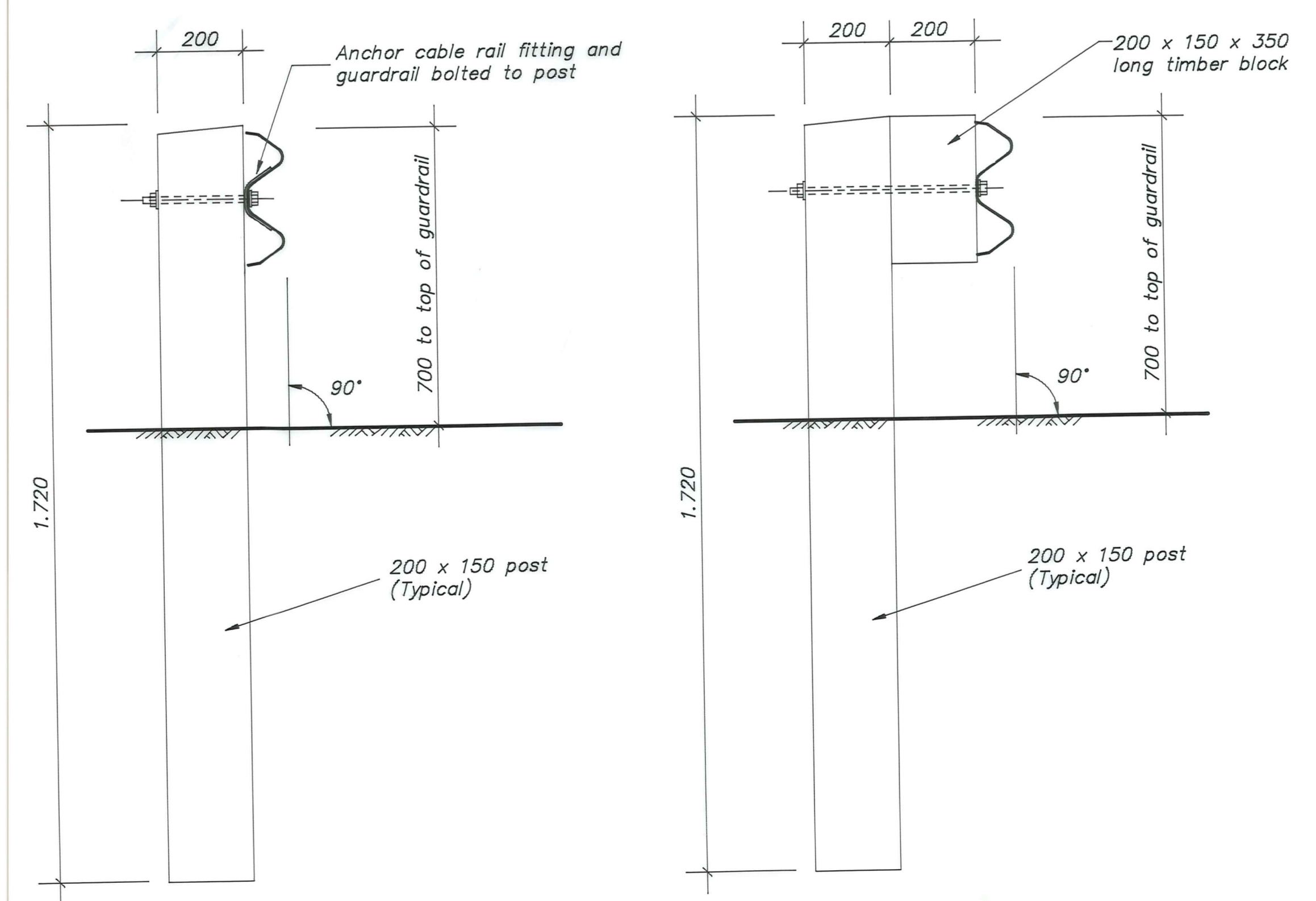
ELEVATION OF B.C.T. (Breakaway Cable Terminal)  
 N.T.S.



BOLT DETAIL  
 1:10

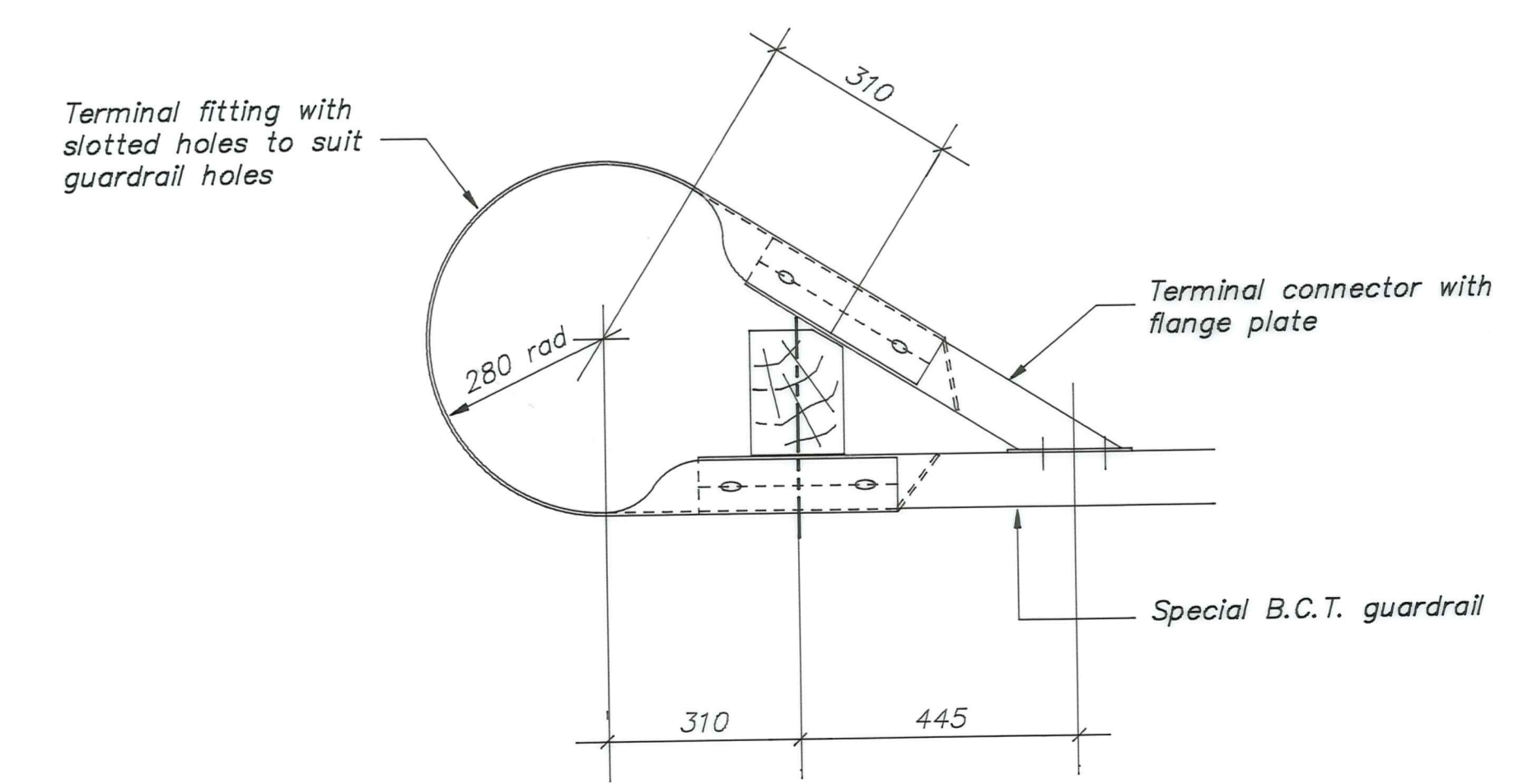


GUARDRAIL POST FIXING DETAILS  
 1:10



POST A  
 1:10

POST B  
 1:10



TERMINAL FITTING AND CONNECTOR  
 DETAIL FOR B.C.T. (Breakaway Cable Terminal)  
 1:10

No.	Revisions	Date	Appvd
Designed	J. KNOX	MAY '91	Print Date
Checked	Paul Selby	June '91	
Approved	Paul Selby	July '91	
File	215/16/6/2	Ref	bBRC--P-



Project  
**SPEC GULLY N°2  
 BRIDGE  
 REPLACEMENT**

Sheet Title  
**GUARDRAIL DETAILS**

Job No.	12693	Sheet No.	S3	Revision	
		of	shs		

**Duffill Watts & King Ltd**  
 CONSULTING ENGINEERS