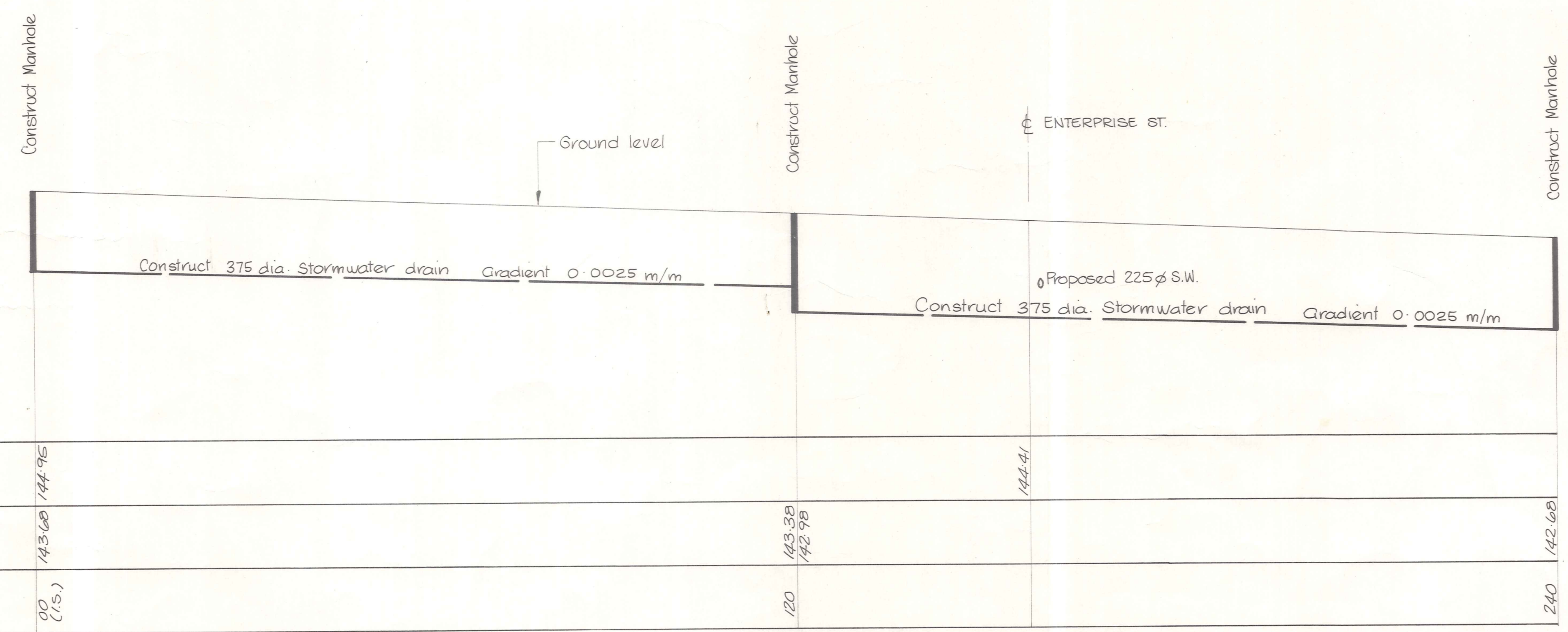


PLAN 1:500

*YMH No 15*

ORIGINAL SIZE mm



LONGITUDINAL SECTION

Horiz. 1:500  
Vert. 1:50

No.	Revisions	Date	Apprd
Designed	N. JELLEY	Date	6/88
Drawn		Date	6/88
Checked			
Approved	<i>[Signature]</i>	Date	7/88
File	4021713/2	L.B. MFG & ELDER	

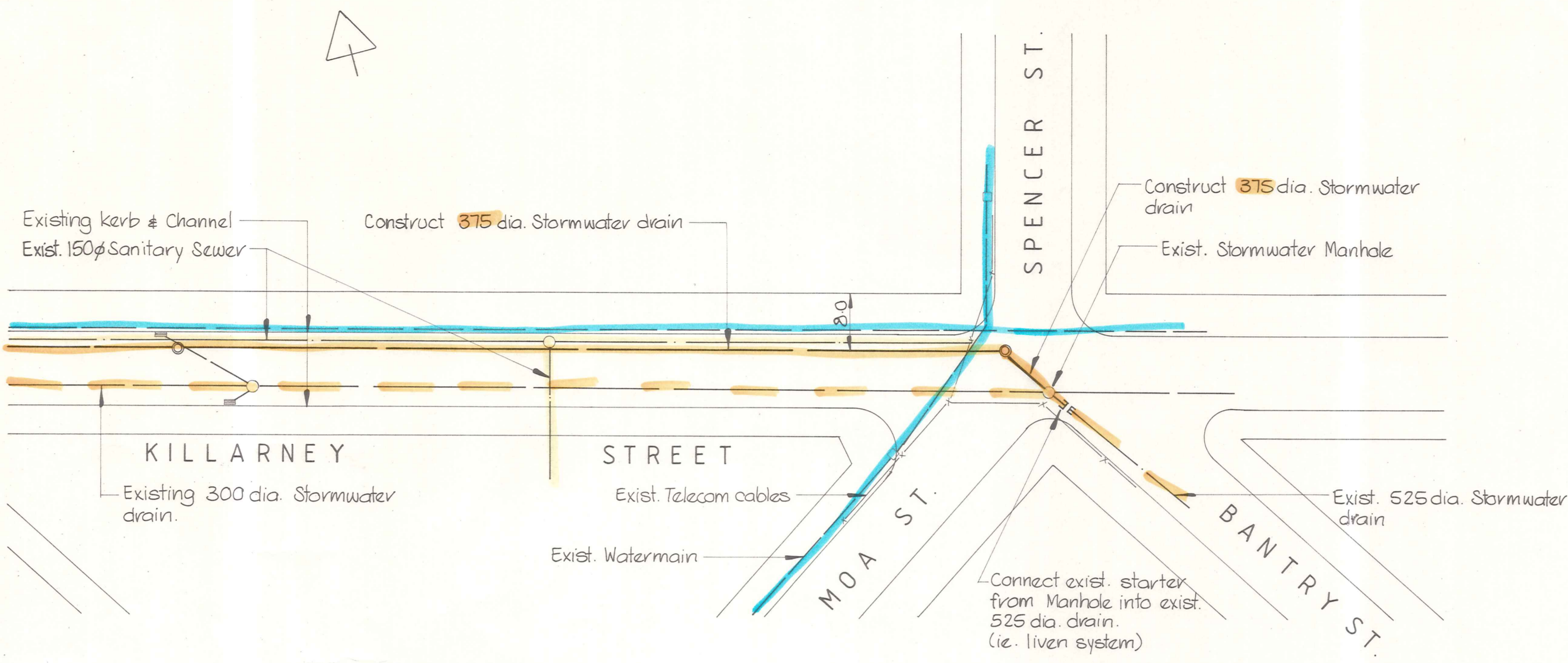
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Client  
**ALEXANDRA BOROUGH COUNCIL**

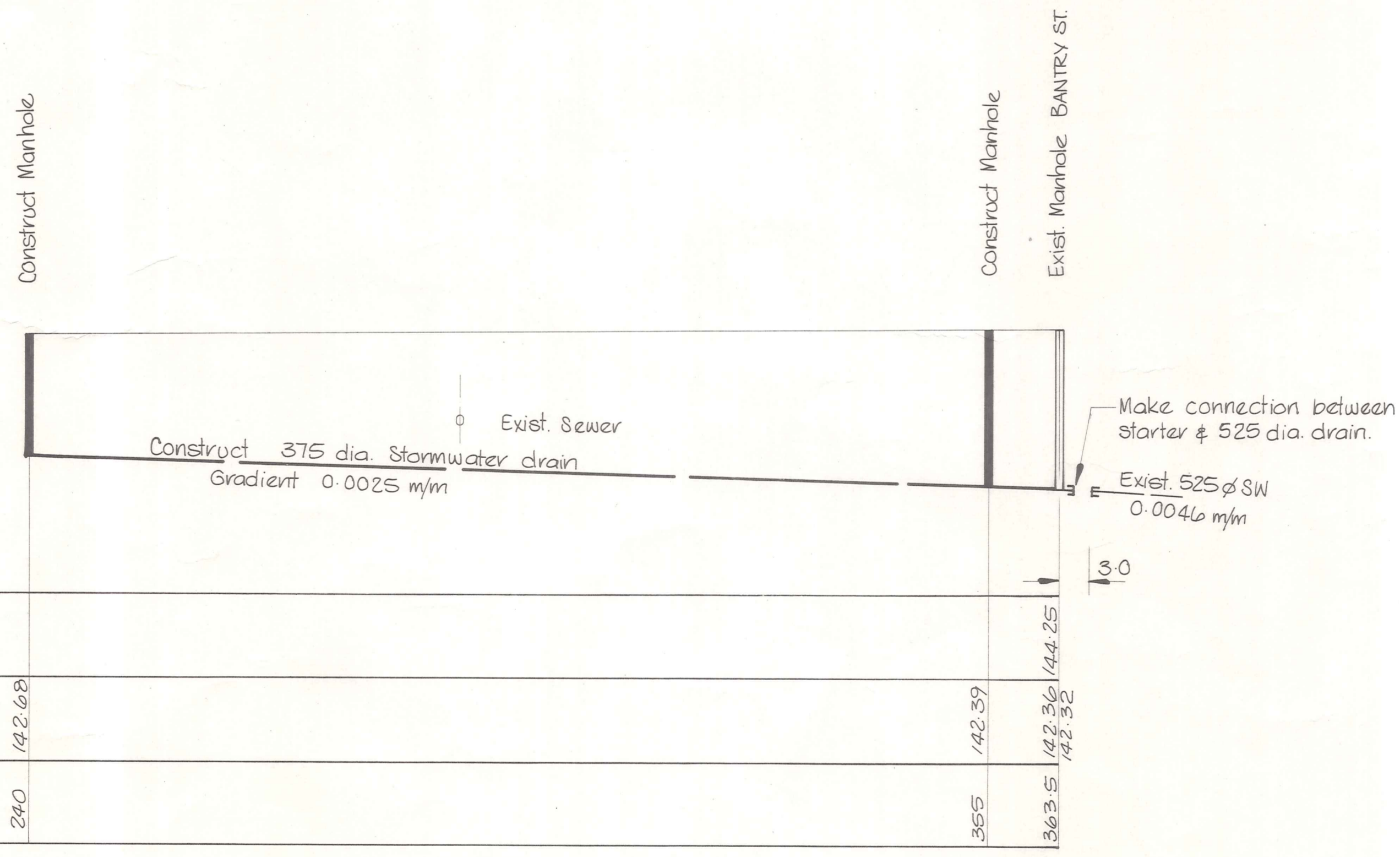
Project  
**STORMWATER UPGRADING 1988-89**

Sheet Title  
KILLARNEY STREET  
PLAN & LONG SECTION 0-240m

Job No.	Sheet No.	Revision
13533	1	
	of 21	shts



PLAN 1:500



LONGITUDINAL SECTION Horiz. 1:500 Vert. 1:50

No.	Revisions	Date	Appvd

Designed	N. JELLEY	Date	6/88	Print Date
Drawn	" "	Date	6/88	
Checked				
Approved	<i>[Signature]</i>	Date	7/88	
File	4027/13/2	L.B. MFG	* ELDER	

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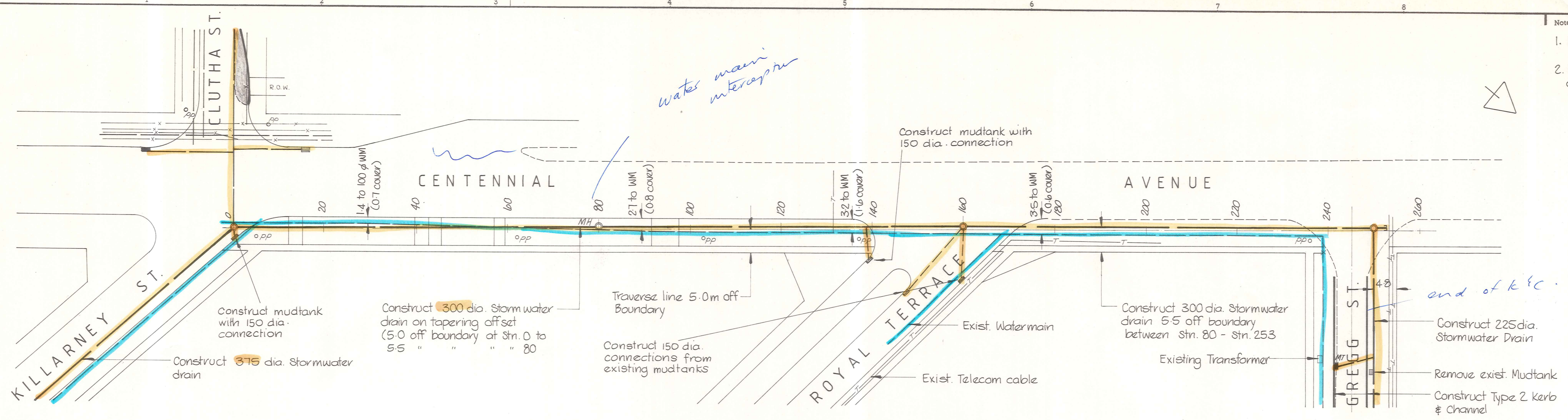
Client  
**ALEXANDRA BOROUGH COUNCIL**

Project  
**STORMWATER UPGRADING 1988-89**

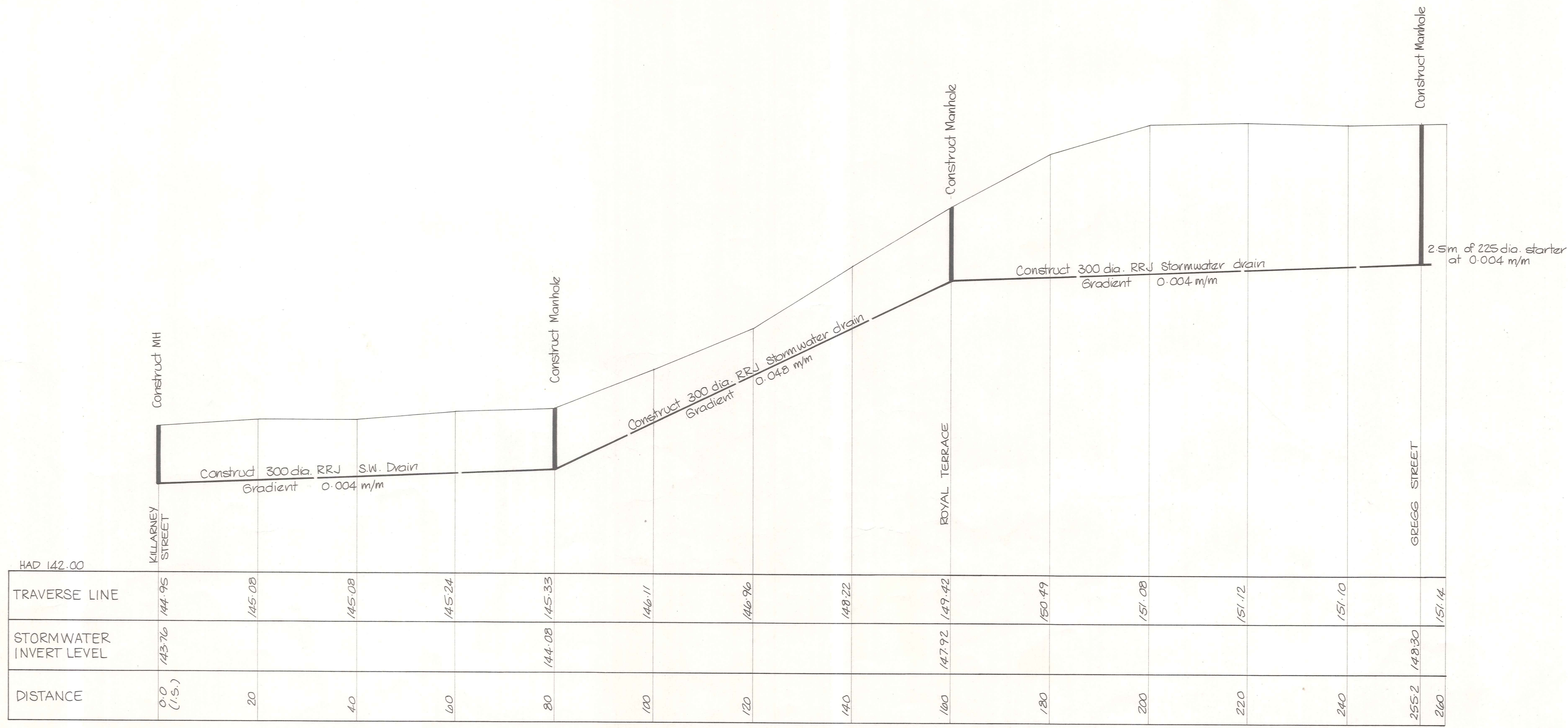
Sheet Title  
 KILLARNEY STREET  
 PLAN & LONG SECTION 240-363.5m

Job No.	Sheet No.	Revision
13533	2	
	of 21	shts

- Notes
1. Datum - M.S.L. Dunedin Datum
  2. Refer to cross sections for extent of new seal



PLAN 1:500



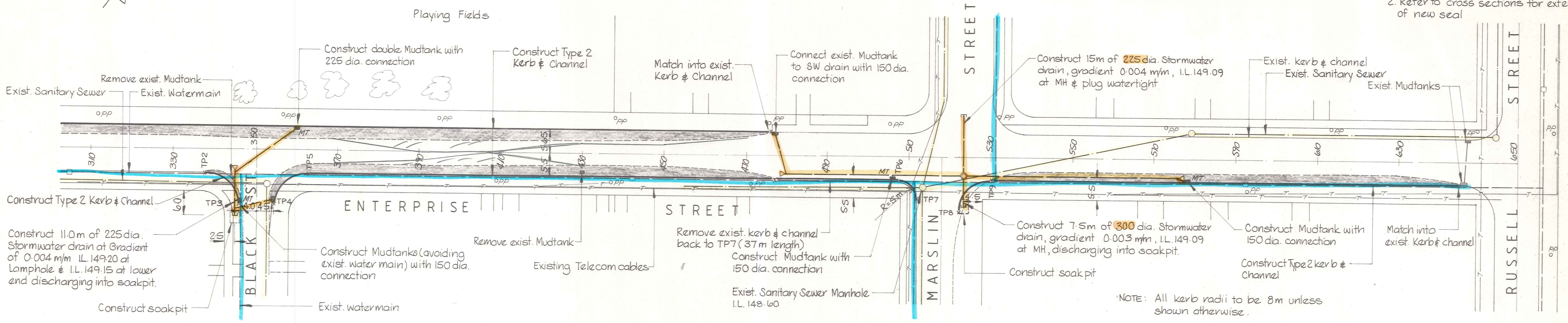
LONGITUDINAL SECTION  
Vert. 1:50  
Horiz. 1:500

No.	Revisions	Date	Appd.
Designed N. Jolley Date June 88 Print Date Drawn " / D.J.T. " Checked [Signature] 7/88 Approved [Signature] 7/88 File 4021/13/2 L.B. MCG & ELDER			
<b>DUFFILL WATTS &amp; KING LTD</b> Consulting Civil & Structural Engineers Dunedin Invercargill Alexandra Queenstown			
<b>ALEXANDRA BOROUGHCOUNCIL</b>			
Project <b>STORMWATER UPGRADING 1988-89</b>			
Sheet Title CENTENNIAL AVENUE PLAN & LONG SECTION			
Job No.	Sheet No.	Revision	
13533	3	of 21 sheets	





- Notes
1. Datum = M.S.L. Dunedin Datum
  2. Refer to cross sections for extent of new seal



PLAN 1:500

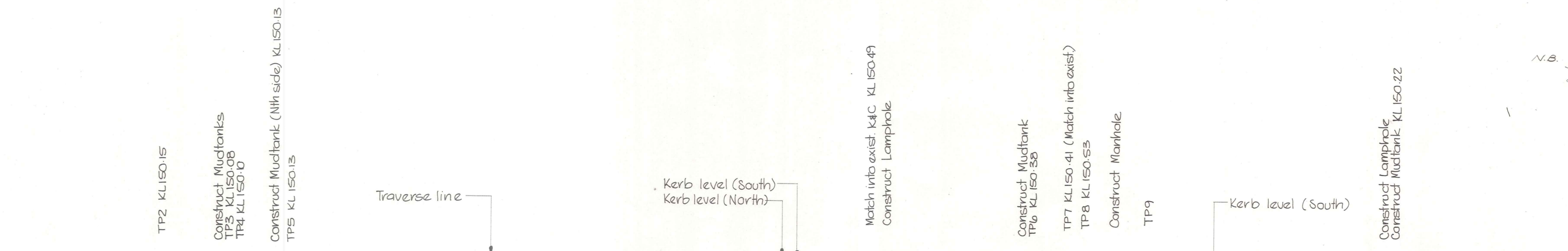
Shape correction =

20 x 2.5	50
20 x 1.5	
20 x 0.6	
20 x 1.2	
20 x 1.0	
20 x 1.5	
40 x 0.8	
20 x 1.1	
20 x 0.7	

23.4m<sup>2</sup>

NOTE: All kerb radii to be 8m unless shown otherwise.

N.B. See continuation of longitudinal section on Sheet 16.



ORIGINAL SIZE mm

	310	330	350	370	390	410	430	450	470	479	490	510	523.6	530	550	570	577	590	610
HAD	146.00																		
KERB LEVEL	150.23 150.23	150.19 150.18	150.15 150.15	150.15 150.14	150.22 150.20	150.28 150.25	150.35 150.3	150.41 150.36	150.48 150.42	150.43	150.50	150.37	150.24	150.27	150.36				
TRAVERSE LEVEL	150.25	150.27	150.21	150.22	150.37	150.44	150.39	150.44	150.52	150.56	150.60	150.60	150.44	150.33	150.37	150.39			
STORM WATER INVERT LEVEL													149.52 149.23	149.50					
DISTANCE	310	330	350	370	390	410	430	450	470	479	490	510	523.6	530	550	570	577	590	610
KERB GRADIENT NORTH		-0.20%		V.C.				+0.33%		V.C.									
KERB GRADIENT SOUTH		Existing Kerb & Channel		V.C.				+0.28%		V.C.			Existing Kerb & Channel				V.C.		+0.45%

LONGITUDINAL SECTION Vert. 1:50 Horiz. 1:500

No.	Revisions	Date	App'd
Designed	N. Jelley	Date June 88	Print Date
Drawn	" / D.J.T.	"	"
Checked			
Approved	<i>[Signature]</i>	7/88	
File	4021/13/2	L.B. MCG & ELDER	

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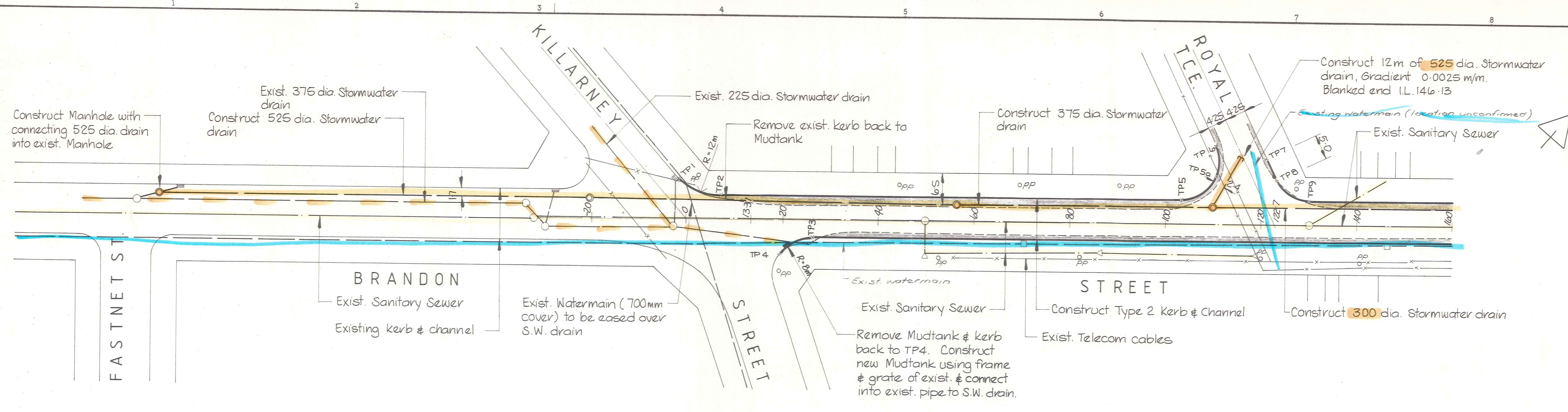
Client  
**ALEXANDRA BOROUGH COUNCIL**

Project  
**STORMWATER UPGRADING 1988-89**

Sheet Title  
**ENTERPRISE STREET PLAN & LONG SECTION 310-610m**

Job No.	Sheet No.	Revision
13533	6	
	of 21	shts

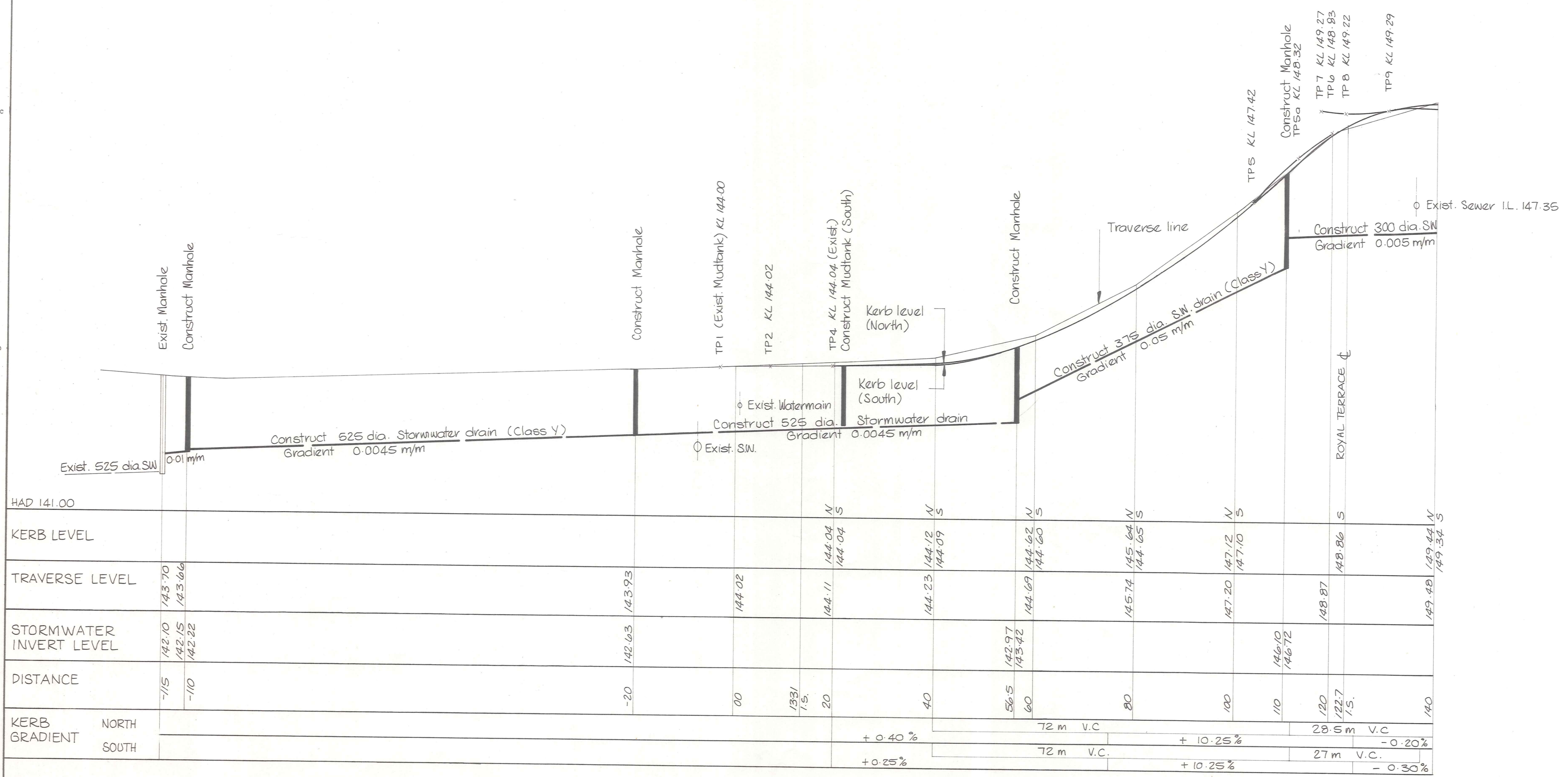




PLAN 1:500

- Notes
1. All kerb radii shall be considered as 8m unless shown otherwise.
  2. Refer to cross sections for extent of new seal.

ORIGINAL SIZE mm

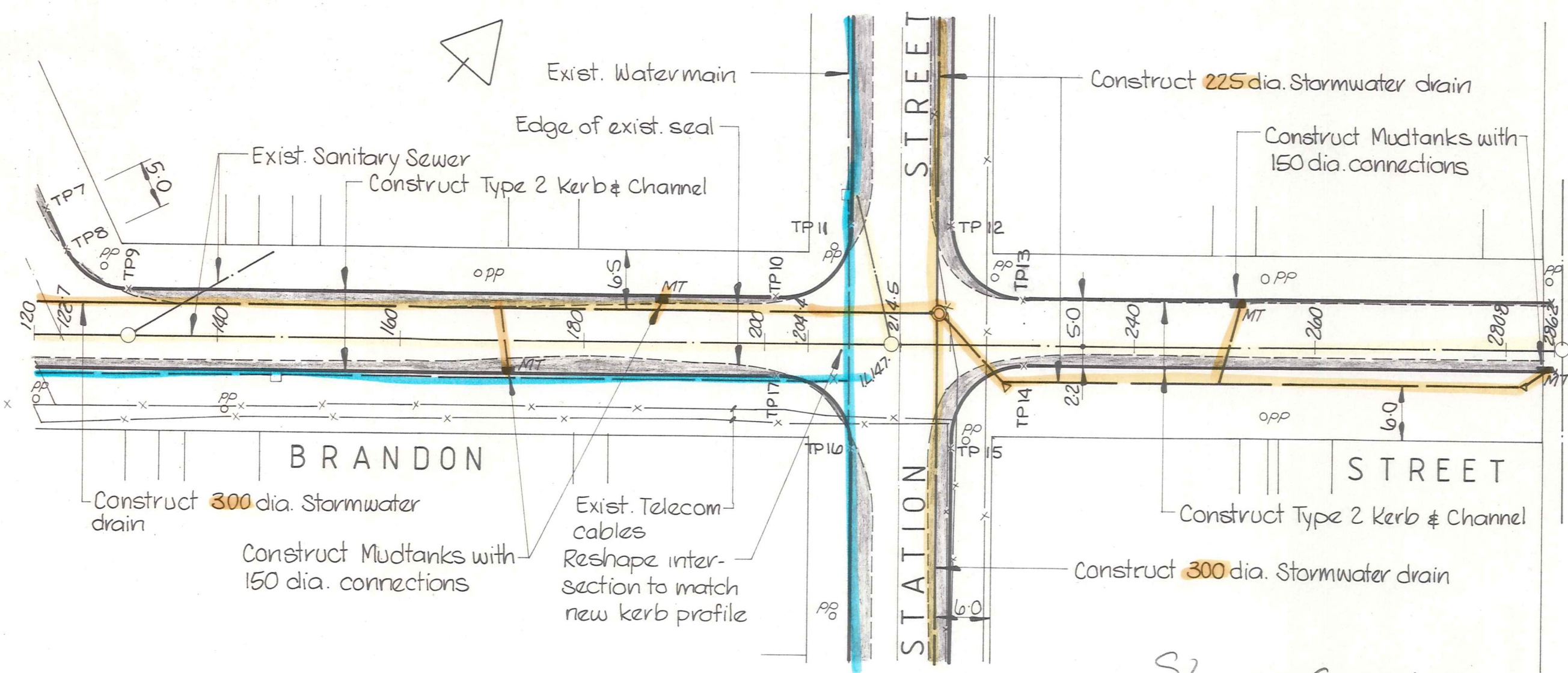


LONGITUDINAL SECTION

Horiz. 1:500  
Vert. 1:50

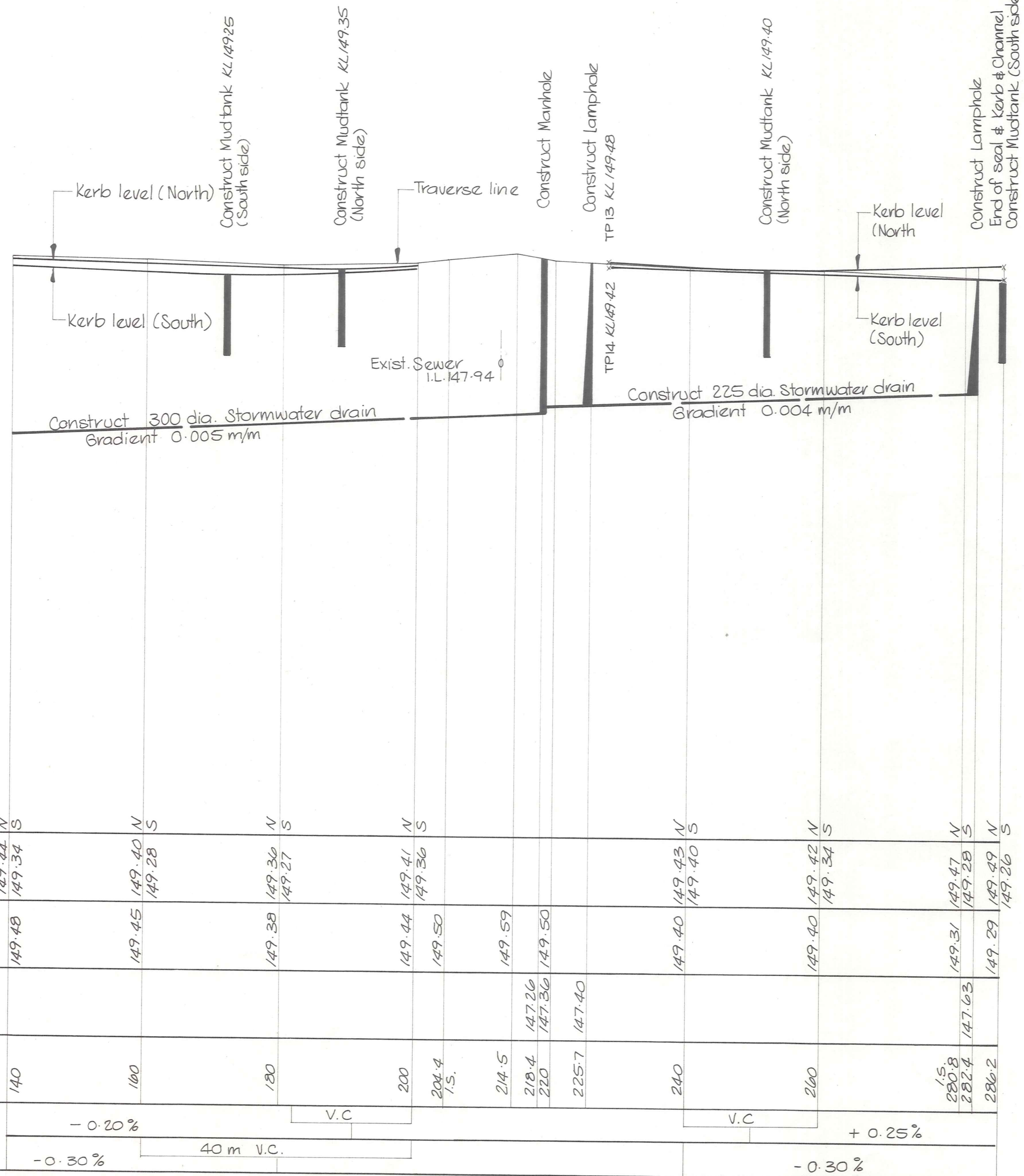
No.	Revisions	Date	Appr.
Designed N. JELLEY Date 6/88 Print Date Drawn Date 6/88 Checked Approved 7/88 File 4021/13/2 L.B. MCG. & ELDER			
<b>DUFFILL WATTS &amp; KING LTD</b> Consulting Civil & Structural Engineers Dunedin Invercargill Alexandra Queenstown			
Client <b>ALEXANDRA BOROUGH COUNCIL</b>			
Project <b>STORMWATER UPGRADING 1988-89</b>			
Sheet Title <b>BRANDON STREET PLAN &amp; LONG SECTION -115-+140m</b>			
Job No.	Sheet No.	Revision	
13533	8	of 21 sheets	





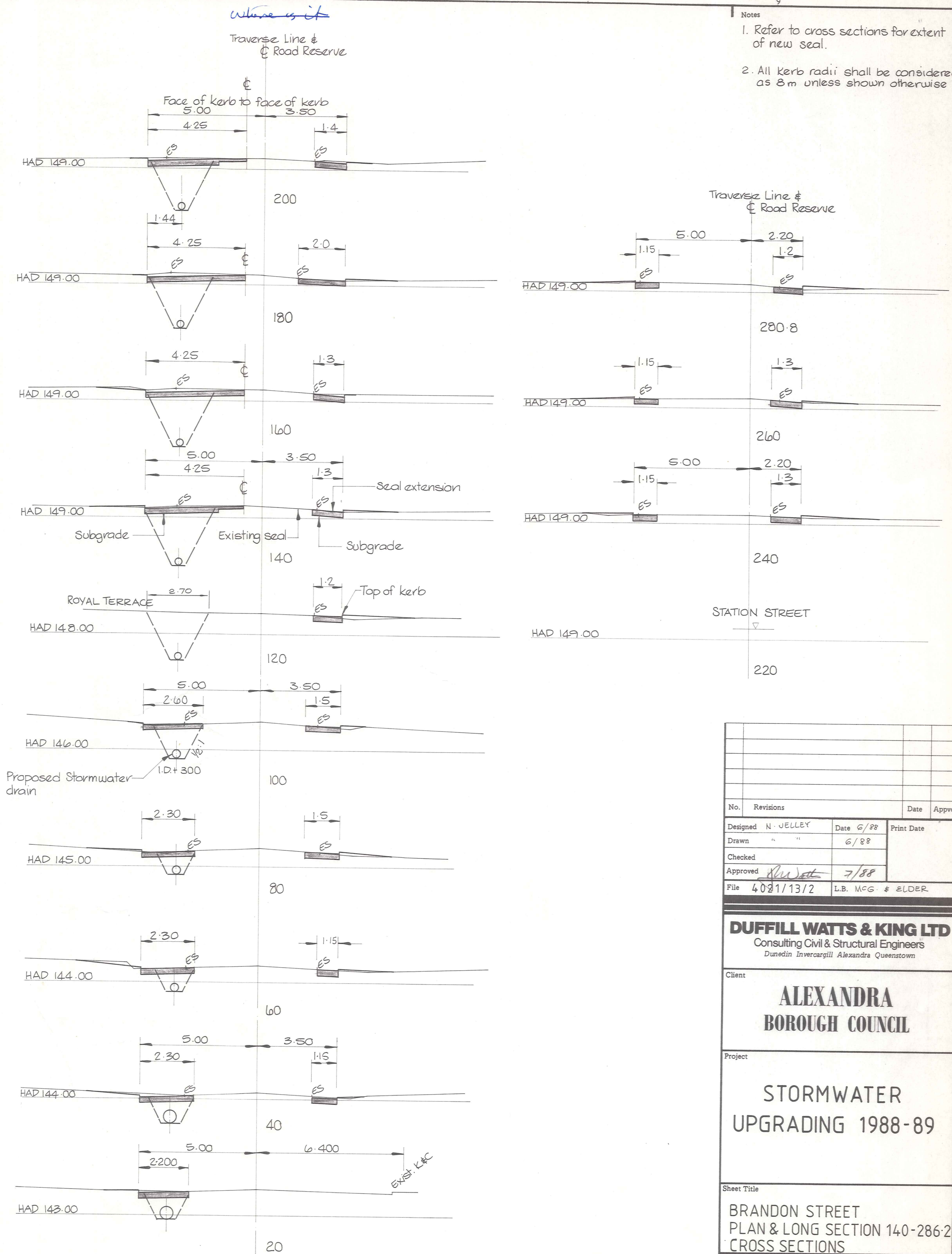
PLAN 1:500

Shape Concrete  
140 to 200  
60 x 30



LONGITUDINAL SECTION

Hori. 1:500  
Vert. 1:50



CROSS SECTIONS 1:100

- Notes
1. Refer to cross sections for extent of new seal.
  2. All kerb radii shall be considered as 8 m unless shown otherwise

No.	Revisions	Date	Appd
Designed	N. JELLEY	Date 6/88	Print Date
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Checked			
Approved	<i>[Signature]</i>	7/88	
File	4021/13/2	L.B. MCG # ELDER	

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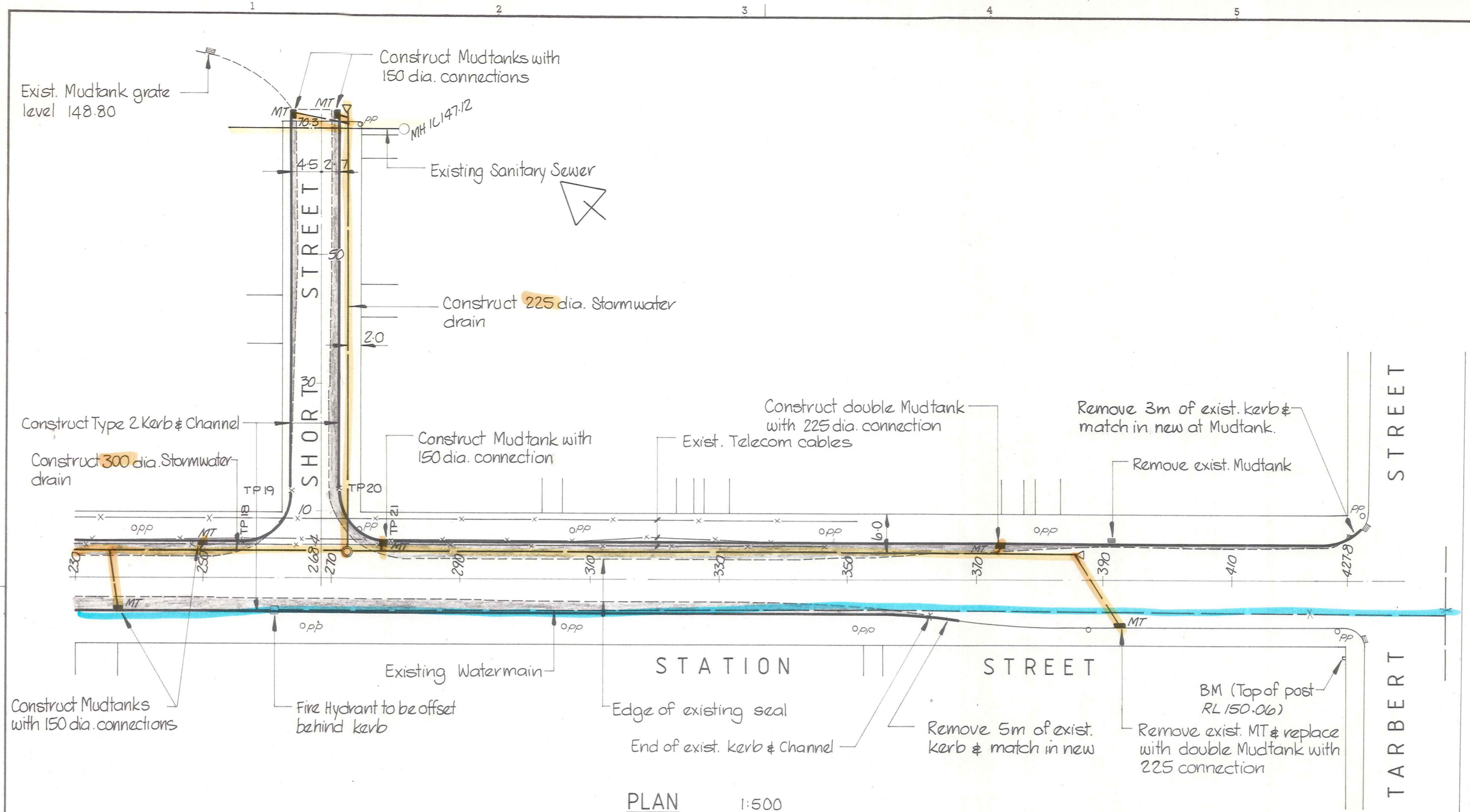
Project  
**STORMWATER UPGRADING 1988-89**

Sheet Title  
**BRANDON STREET PLAN & LONG SECTION 140-286.2 m CROSS SECTIONS**

Job No.	Sheet No.	Revision
13533	9	
	of 21 sheets	



Notes  
1. Refer to cross sections for extent of new seal



PLAN 1:500

ORIGINAL SIZE mm	250	260	270	272.4	290	300	330	350	370	386	390	410	427.8 (1.5)
Kerb level (North)	149.14	148.98	149.04	149.04	149.01	149.00	149.04	148.95	149.09	149.04	148.95	149.02	148.97
Kerb level (South)	149.04	149.05	149.04	149.04	149.00	149.00	149.01	148.97	148.97	148.87	148.87	148.96	148.86
TRANSVERSE LEVEL	149.14	149.16	149.15	149.15	149.02	148.97	148.91	148.96	148.96	148.89	148.89	149.06	149.04
STORMWATER INVERT LEVEL	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50	147.50
DISTANCE	250	260	270	272.4	290	300	330	350	370	386	390	410	427.8 (1.5)
KERB GRADIENT NORTH	V.C.		V.C.		-0.33%		V.C.		+0.65%		V.C.		
KERB GRADIENT SOUTH	V.C.		V.C.		-0.22%		V.C.		Existing Kerb & Channel		V.C.		

LONGITUDINAL SECTION - STATION STREET

ORIGINAL SIZE mm	4.0	10 (1.5)	30	50	70.3 (1.5)
Kerb level (North)	149.03	149.08	149.12	149.08	149.11
Kerb level (South)	149.03	149.08	149.08	149.08	149.11
TRANSVERSE LEVEL	149.03	149.08	149.12	149.08	149.11
STORMWATER INVERT LEVEL	147.50	147.50	147.50	147.50	147.50
DISTANCE	4.0	10 (1.5)	30	50	70.3 (1.5)
KERB GRADIENT NORTH	V.C.		-0.40%		V.C.
KERB GRADIENT SOUTH	+0.47%		V.C.		-0.50%

LONGITUDINAL SECTION - SHORT STREET

Horiz. 1:500  
Vert. 1:50

No.	Revisions	Date	Appvd

Designed N. JELLEY	Date 6/88	Print Date
Drawn " "	6/88	
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Approved <i>[Signature]</i>	7/88	
File 4021/13/2	L.B. MFG. # ELDER	

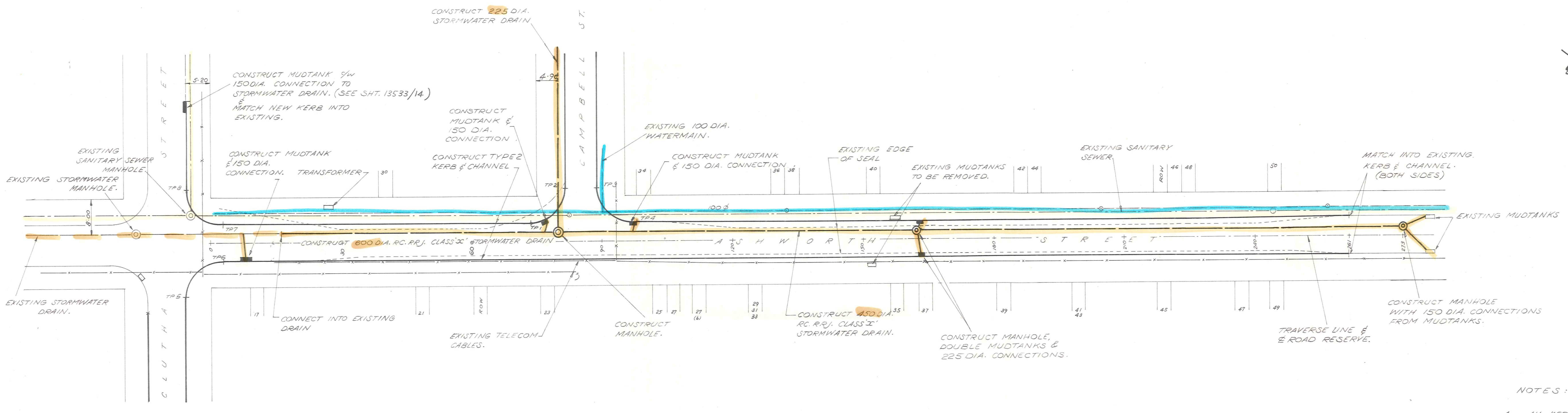
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Client  
**ALEXANDRA BOROUGH COUNCIL**

Project  
**STORMWATER UPGRADING 1988-89**

Sheet Title  
**STATION STREET PLAN & LONG SECTION 250-427.8m**  
**SHORT ST. " " 4-72.3m**

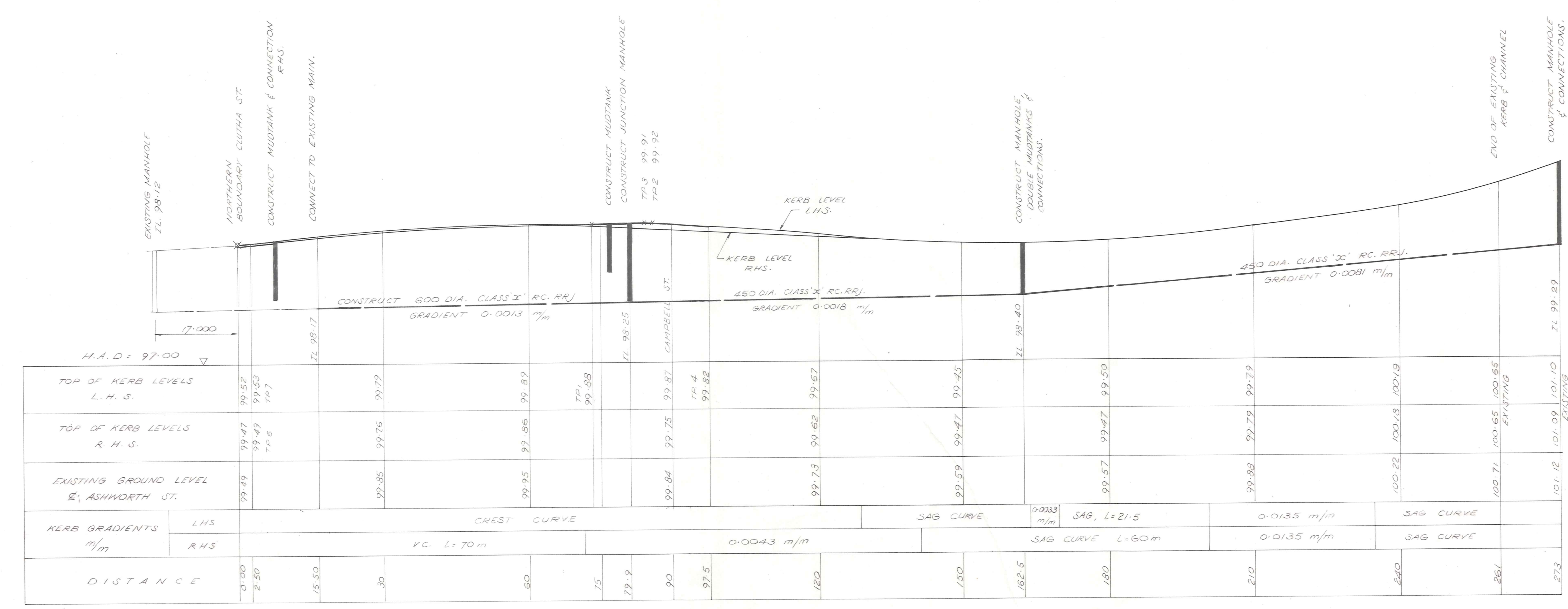
Job No.	Sheet No.	Revision
13533	11	
	of 21	shts



PLAN  
1:500

- NOTES:
1. ALL KERB RADII TO BE 3 METRES UNLESS SPECIFIED OTHERWISE.
  2. ALL TELECOM CABLES TO BE LOCATED PRIOR TO COMMENCEMENT OF EXCAVATION.
  3. REFER TO CROSS SECTIONS FOR EXTENT OF NEW SEAL.
  4. ASSUMED DATUM RL100.00 GATE POST S.W CORNER CLUTHA / ASHWORTH INTERSECTION.

ORIGINAL SIZE mm



LONGITUDINAL SECTION  
1:500 HORIZ.  
1:50 VERT.

No.	Revisions	Date	Appd

Designed	BA, NJ	Date	Print Date
Drawn	BA & NJ	6/88	
Checked			
Approved	[Signature]	7/88	
File	402/13/2	L.B. ABC	F.B.

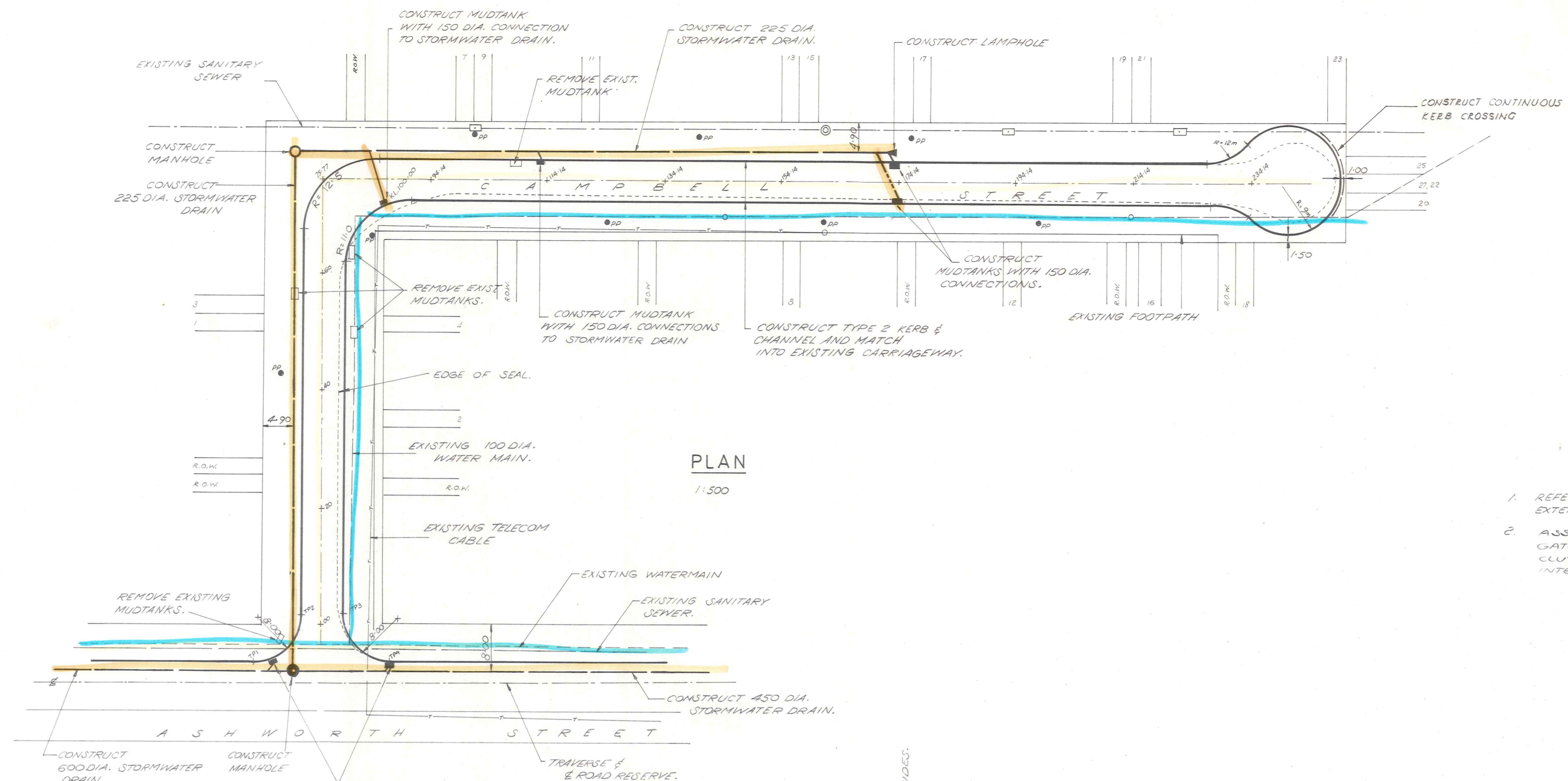
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**ALEXANDRA BOROUGH COUNCIL**

Project  
**STORMWATER UPGRADING**  
1988-89

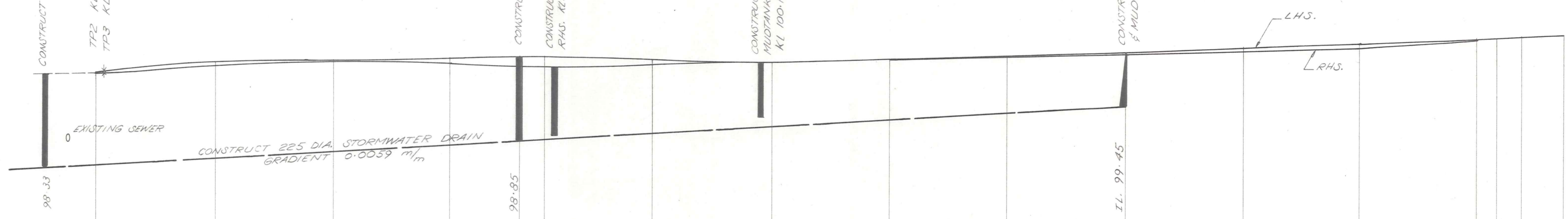
Sheet Title  
ASHWORTH ST.  
STORMWATER UPGRADING

Job No.	Sheet No.	Revision
13533	12	of 21 sheets



PLAN  
1:500

1. REFER TO CROSS SECTIONS FOR EXTENT OF NEW SEAL.
2. ASSUMED DATUM RL 100.00 GATE POST S.W. CORNER CLUTHA/ASHWORTH INTERSECTION



EXISTING GROUND LEVEL & CAMPBELL STREET		99.90	100.07	100.15	100.12	100.15	100.09	100.14	100.19	100.22	100.31	100.39	100.48	100.54	100.55	100.57	100.64	
TOP OF KERB LEVELS L.H.S.			100.09	100.13	100.17	100.22	100.16	100.11	100.18	100.23	100.29	100.40	100.48	100.54	100.55	100.57	100.64	
TOP OF KERB LEVELS R.H.S.			100.02	100.08	100.09	100.02	100.05	100.13	100.17	100.21	100.27	100.34	100.41	100.52	100.57	100.62	100.64	
KERB GRADES m/m	L.H.S.	SAG CURVE			CREST CURVE L: 15m			SAG CURVE L: 10m			SAG CURVE L: 10m			SAG CURVE L: 10m				
	R.H.S.	CREST CURVE			SAG CURVE			SAG CURVE L: 10m			SAG CURVE L: 10m			SAG CURVE L: 10m				
DISTANCE		00	20	40	60	72	75.77	94.14	118.14	134.14	154.14	174.14	194.14	214.14	234.14	237.29	241.52	248.89

LONGITUDINAL SECTION  
1: 500 HORIZ.  
1: 50 VERT.

No.	Revisions	Date	Appvd
Designed	BA, E, N.J.	Date 6/88	Print Date
Drawn	BA, E, N.J.	6/88	
Checked			
Approved	<i>[Signature]</i>	7/88	
File	4027/13/2	L.B. A.B.C.	

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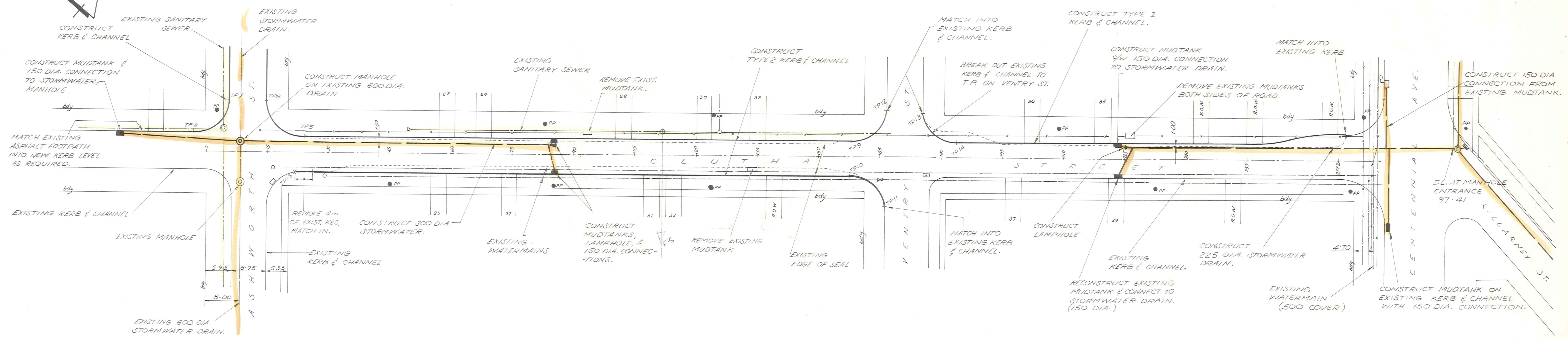
Client  
**ALEXANDRA BOROUGH COUNCIL**

Project  
**STORMWATER UPGRADING  
1988 - 89**

Sheet Title  
**CAMPBELL ST.  
STORMWATER UPGRADING**

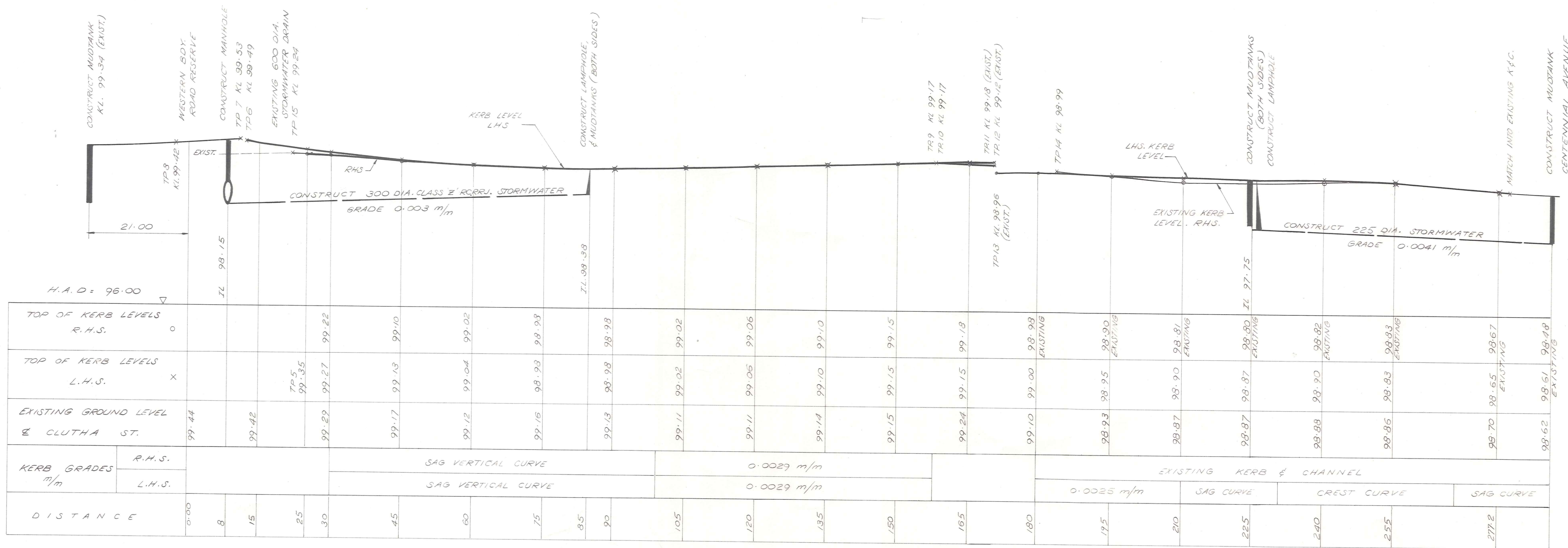
Job No.	Sheet No.	Revision
13533	13	of 21 sheets

ORIGINAL SIZE mm



PLAN  
1:500

1. ALL TELECOM CABLES TO BE LOCATED PRIOR TO COMMENCEMENT OF EXCAVATION.
2. REFER TO CROSS SECTIONS FOR EXTENT OF NEW SEAL.



DATUM  
BENCHMARK R.H. CONCRETE GATE POST  
OPPOSITE STN. 0+00 ON R.H.S.  
ASSUMED RL. = 100.00 m.

LONGITUDINAL SECTION  
1:500 HORIZ.  
1:50 VERT.

No.	Revisions	Date	Appd.

Designed	BA, N.J.	Date	6/88	Print Date	6/88
Drawn	BA & NU				
Checked					
Approved	<i>AWatt</i>		7/88		
File	2021/13/2	L.B.A.B.C.	F.B.		

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Client: **ALEXANDRA BOROUGH COUNCIL**

Project: **STORMWATER UPGRADING 1988-89**

Sheet Title: **CLUTHA ST., ASHWORTH ST., CENTENIAL AVE STORMWATER UPGRADING**

Job No.	Sheet No.	Revision
13533	14	
	of 21	shts

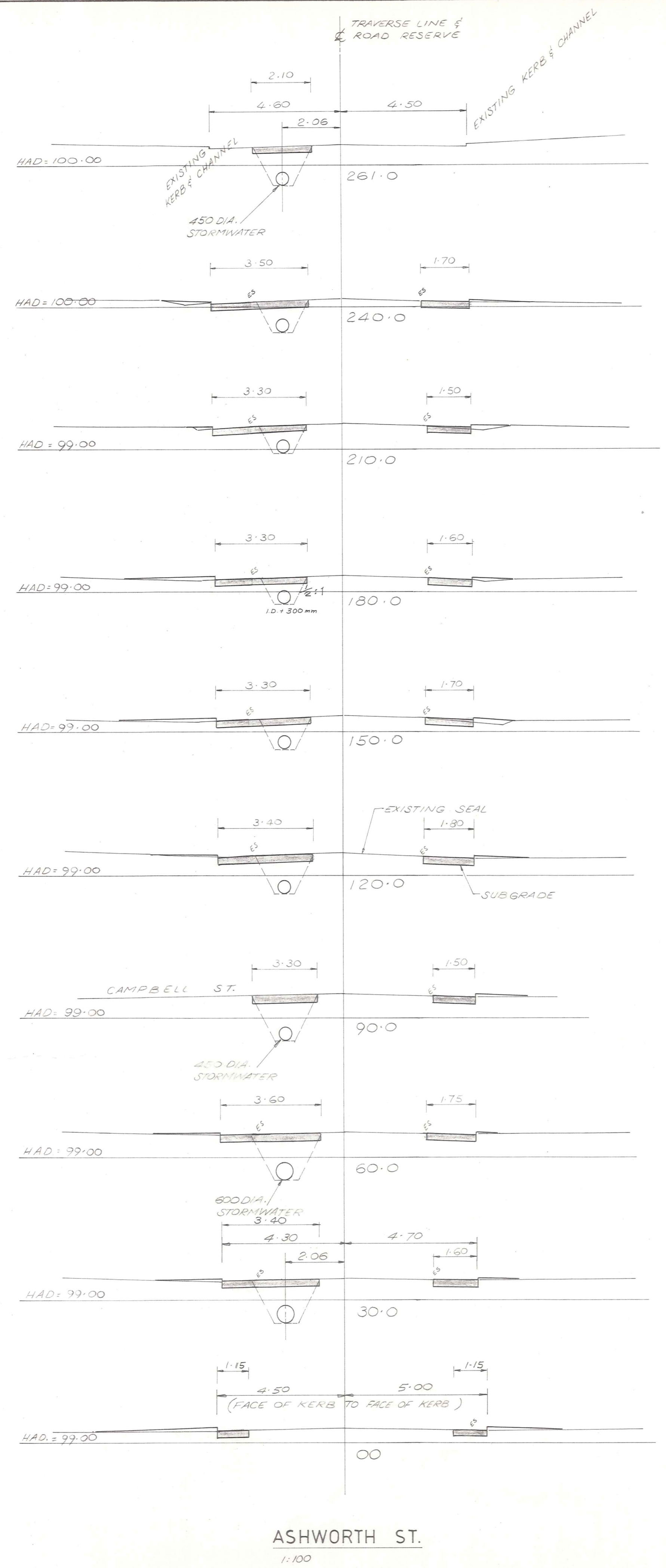




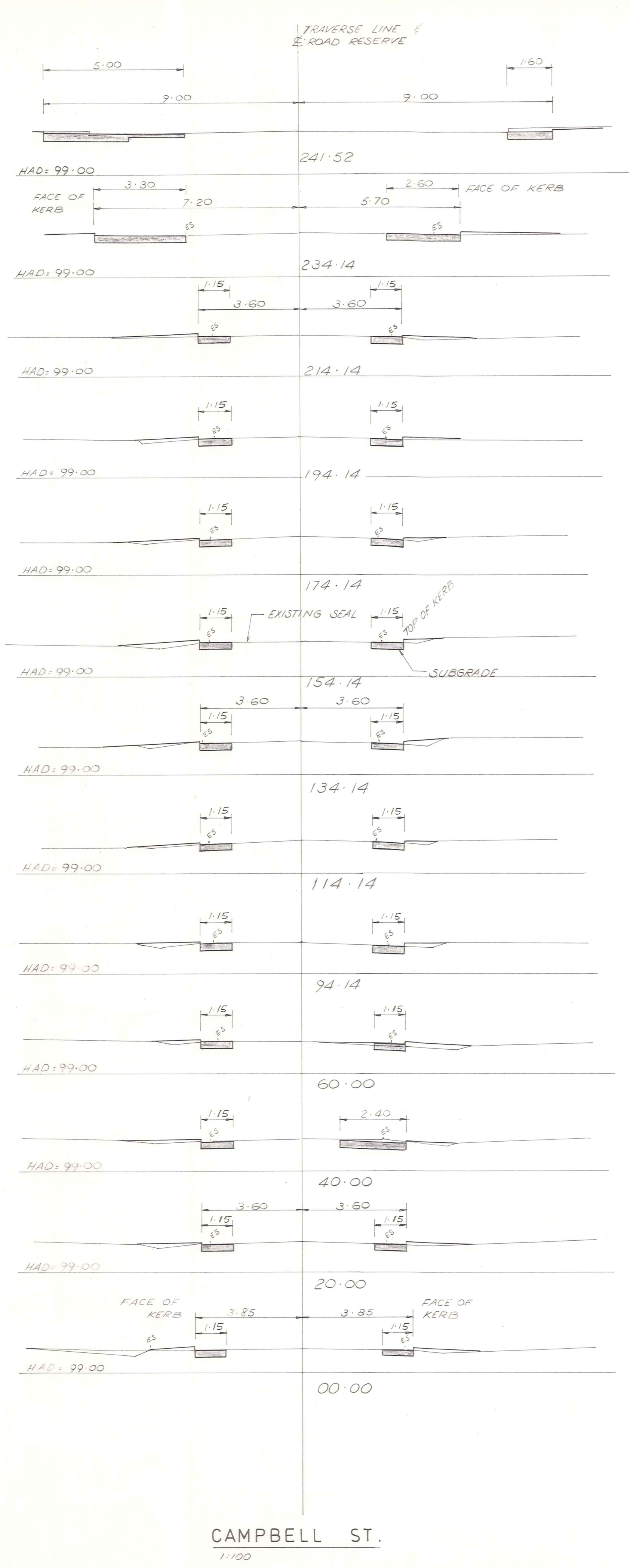








ASHWORTH ST.  
1:100



CAMPBELL ST.  
1:100

ORIGINAL SIZE: mm

No.	Revisions	Date	Appvd

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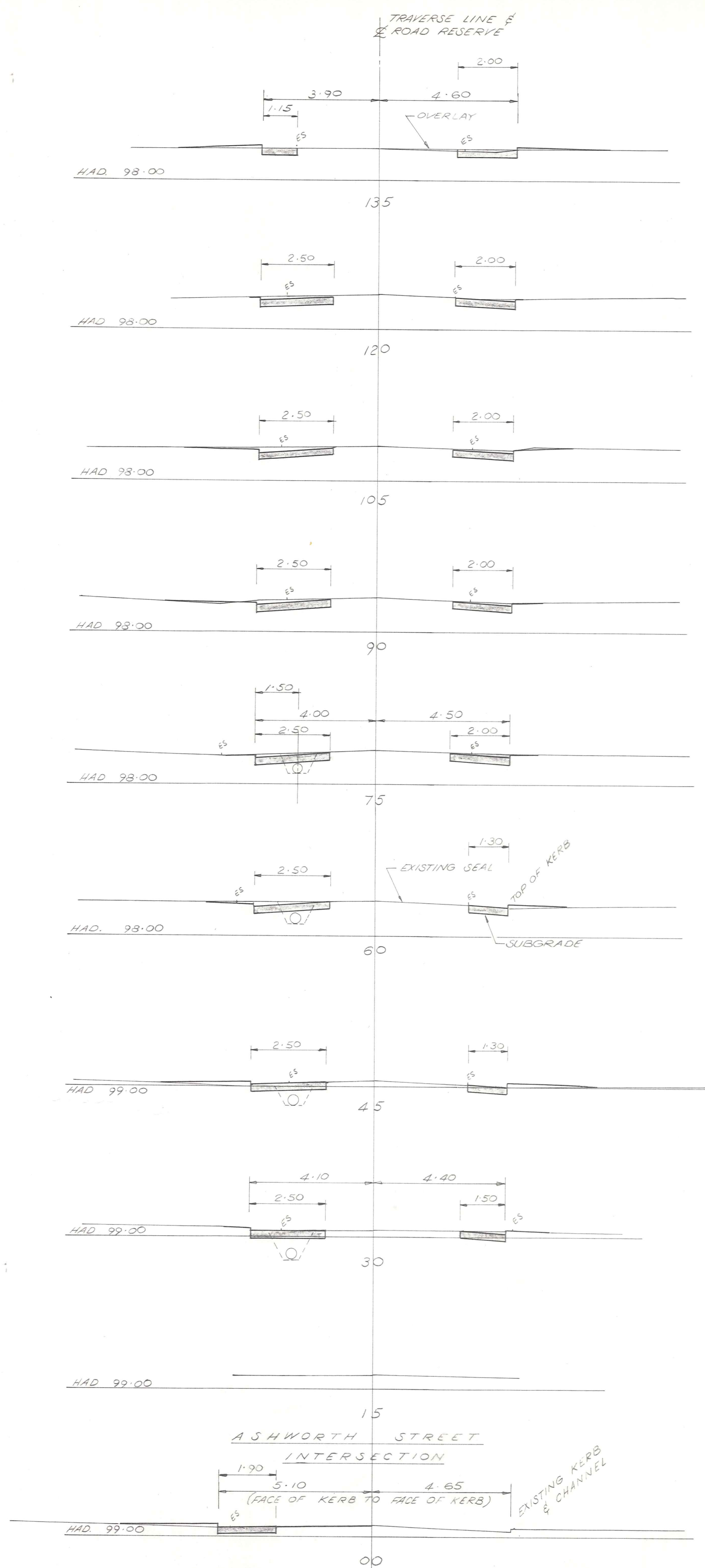
Client  
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BOROUGH COUNCIL**

Project  
**STORMWATER  
UPGRADING  
1988-89**

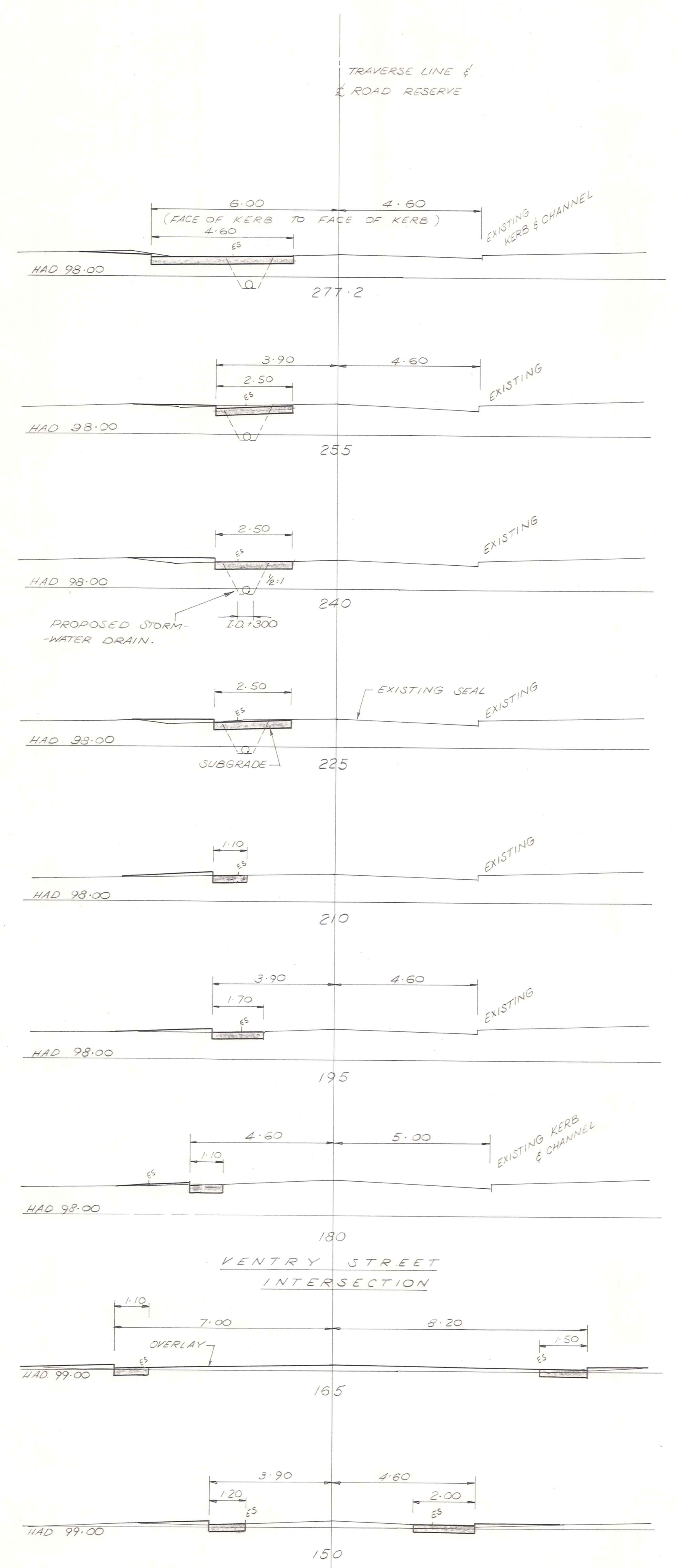
Sheet Title  
**CROSS SECTIONS  
ASHWORTH ST., CAMPBELL ST.**

Job No. <b>13533</b>	Sheet No. <b>19</b> of 21 sheets	Revision
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ORIGINAL SIZE mm



CLUTHA ST.  
(ASHWORTH ST.—CENTENNIAL AVE.)  
1:100



No.	Revisions	Date	Apprd

Designed	N. JELLEY, B.A.	Date	6/89	Print Date
Drawn	N. JELLEY & B.A.		6/89	
Checked				
Approved	<i>[Signature]</i>		7/88	
File	4021/13/2		L.B. A. B. C.	

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Project  
**STORMWATER UPGRADING 1988-89**

Sheet Title  
**CROSS SECTIONS CLUTHA ST.**

Job No.	Sheet No.	Revision
13533	20	of 21 shts