

CROMWELL BOROUGH COUNCIL
NEIGHBOURHOOD ONE DEVELOPMENT

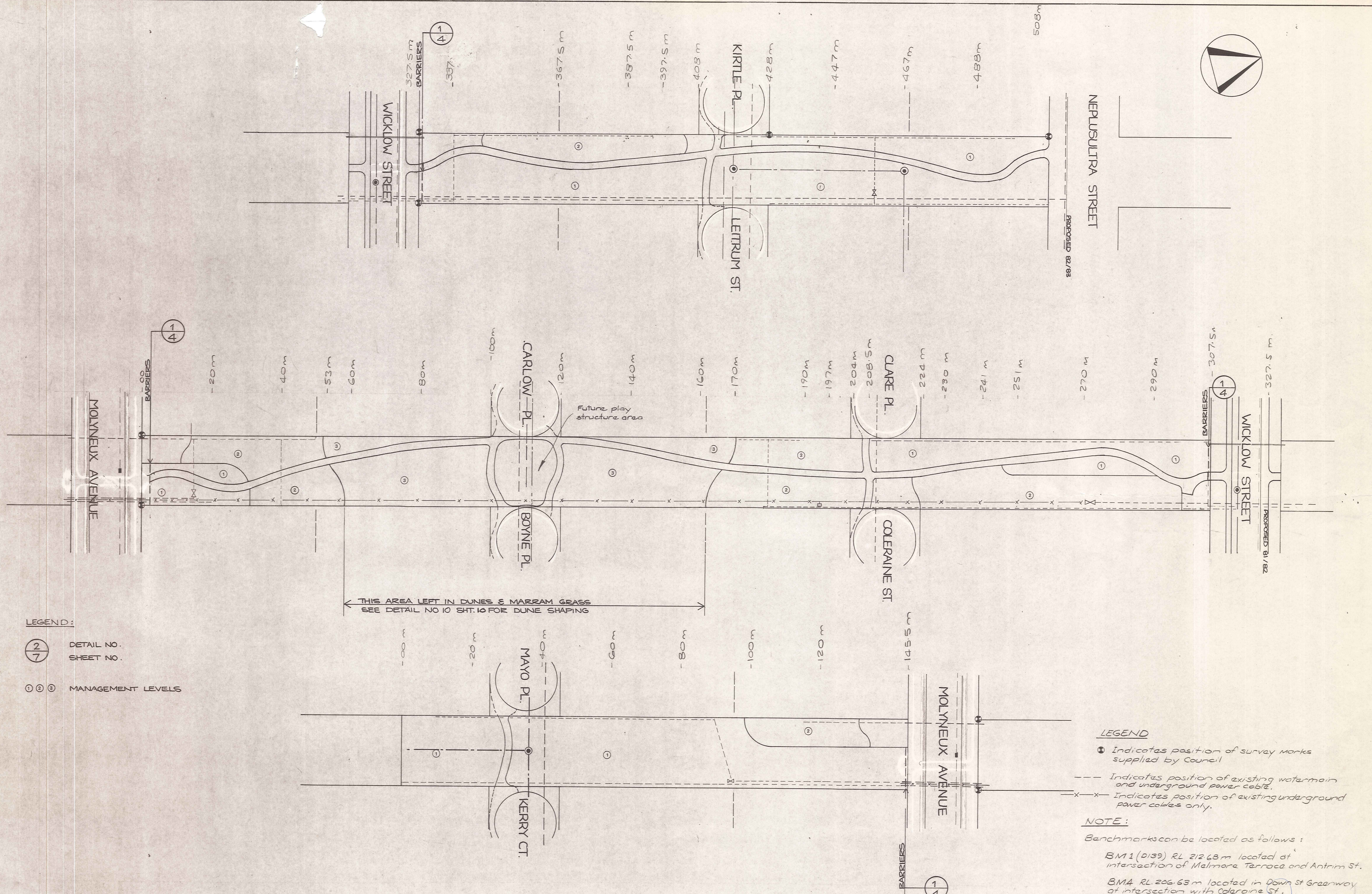


DUFFILL WATTS & KING LTD
Consulting Engineers

CONTRACT NO **11**

DOWN & BRUCE ST

Set No



← THIS AREA LEFT IN DUNES & MARRAM GRASS
SEE DETAIL NO 10 SHT. 10 FOR DUNE SHAPING →

- LEGEND:**
- 2
7 DETAIL NO.
SHEET NO.
 - ① ② ③ MANAGEMENT LEVELS

- LEGEND**
- Indicates position of survey marks supplied by Council
 - Indicates position of existing watermain and underground power cable.
 - x-x- Indicates position of existing underground power cables only.
- NOTE:**
- Benchmarks can be located as follows:
- BM1 (0139) RL 212.63m located at intersection of Melmore Terrace and Antrim St.
 - BM4 RL 206.63m located in Down St Greenway at intersection with Coleraine St.

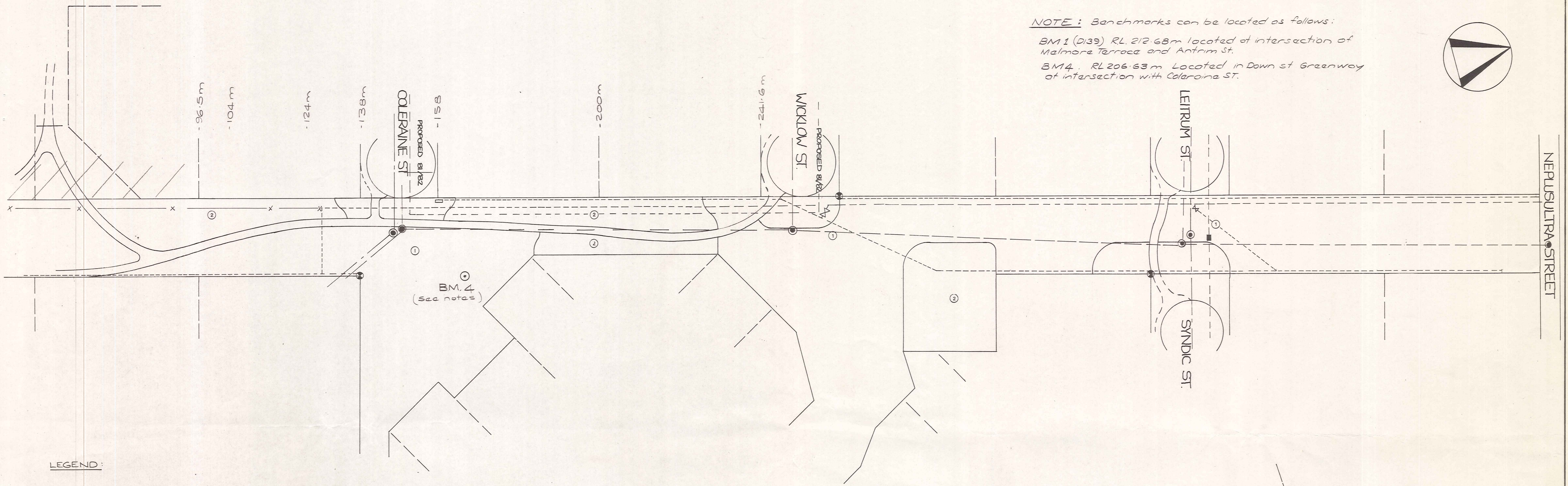
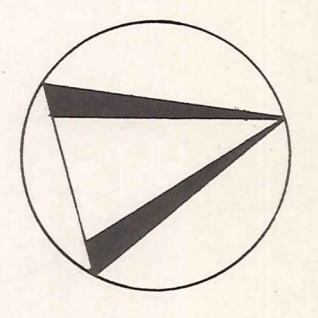
DUFFILL WATTS & KING LTD <small>CONSULTING CIVIL & STRUCTURAL ENGINEERS Dunedin PO Box 5269 Ph: 777-133 Invercargill PO Box 576 Ph: 83049 Cromwell PO Box 82 Ph: 50-391</small>	EARL H. BENNETT ANZILA <small>LANDSCAPE ARCHITECT 220 HIGH STREET CHRISTCHURCH</small>	CROMWELL <small>BOROUGH COUNCIL</small>	NEIGHBOURHOOD 1 <small>DEVELOPMENT</small>	CONTRACT No. 11 BRUCE ST. GREENWAY <small>CONSTRUCTION OF SURFACE WORKS. (Management levels, Position of barriers)</small>	AMENDMENTS		NAME DATE	JOB NO. 9869	Sheet No. 1 <small>of 10 sheets</small>
					NO.	BY			
							K.M. BH E.B K.M.	6/82 " "	
							16/6/82 Dec 82	File 9/19/12 L B 46	FB

LEGEND:

- ⊙ Indicates position of survey marks supplied by council
- Indicates position of existing watermain and underground power cables.
- x-x- Indicates position of existing underground power cables only

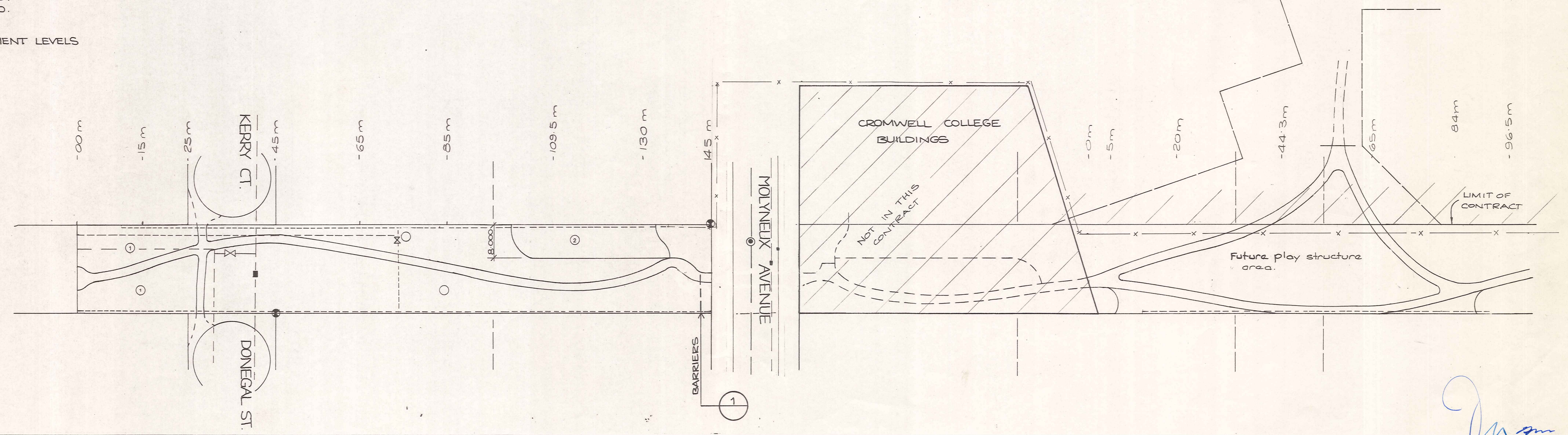
NOTE: Benchmarks can be located as follows:

BM 1 (D139) RL 212.68m located at intersection of Malmore Terrace and Antrim St.
 BM 4 RL 206.63m Located in Down St Greenway at intersection with Coleraine St.



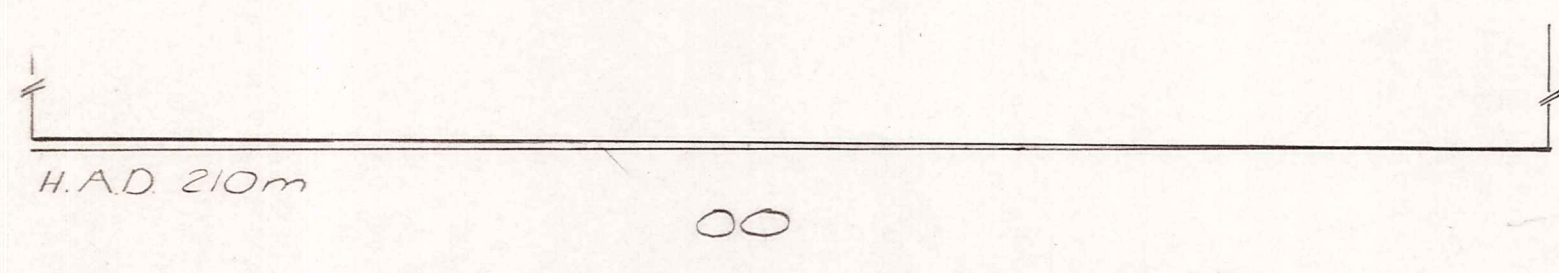
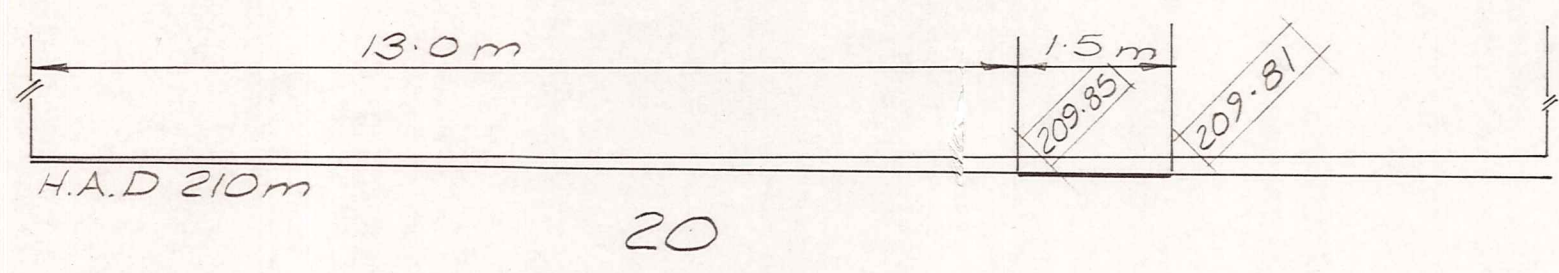
LEGEND:

- ② DETAIL NO.
- ⑦ SHEET NO.
- ① ② MANAGEMENT LEVELS

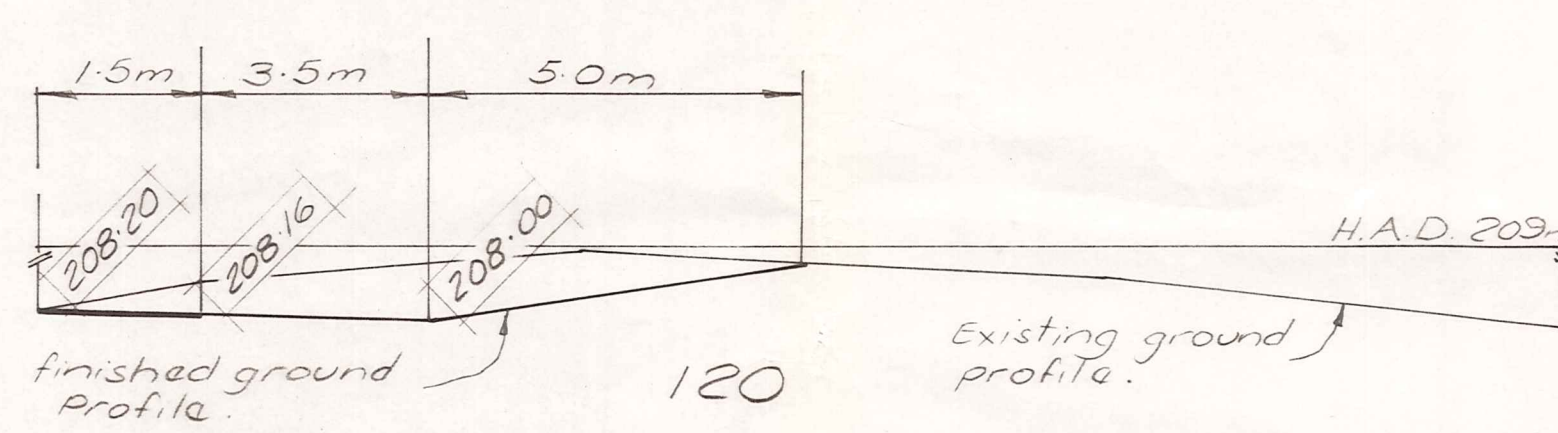
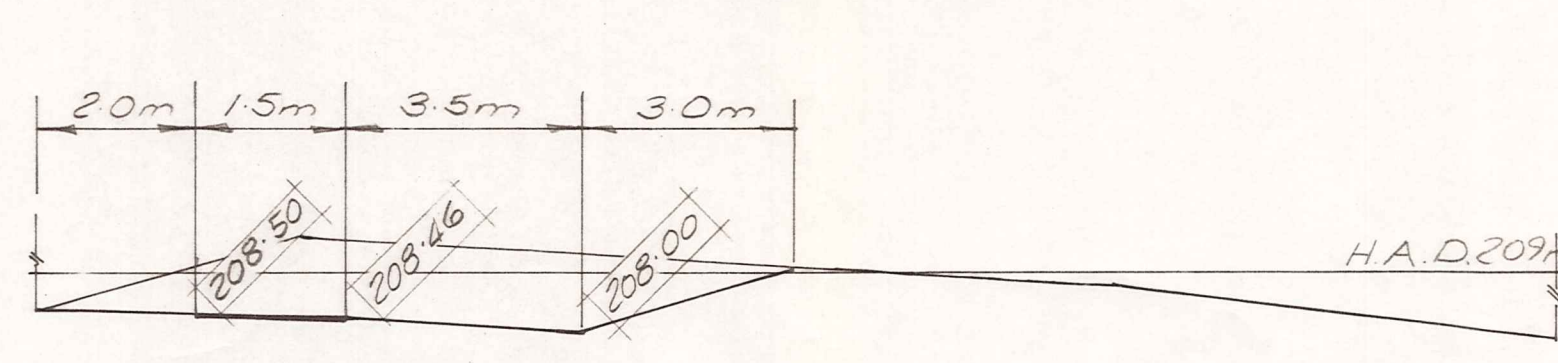
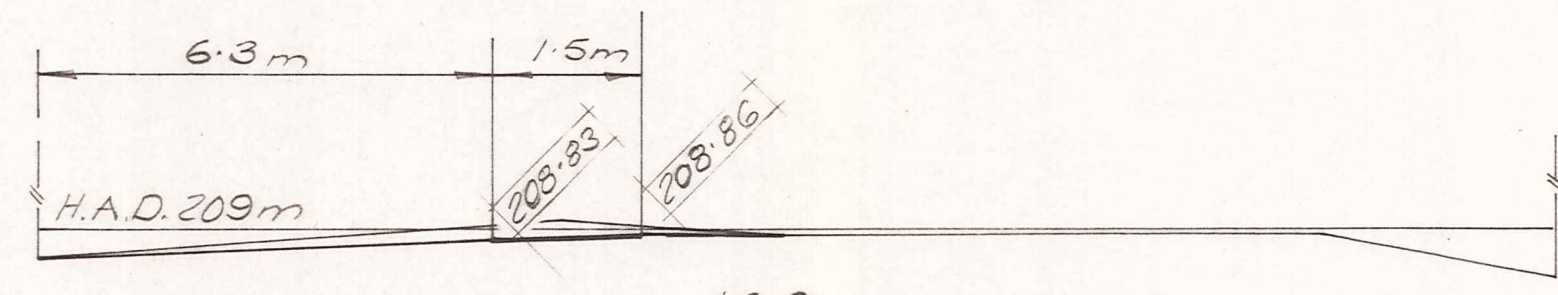
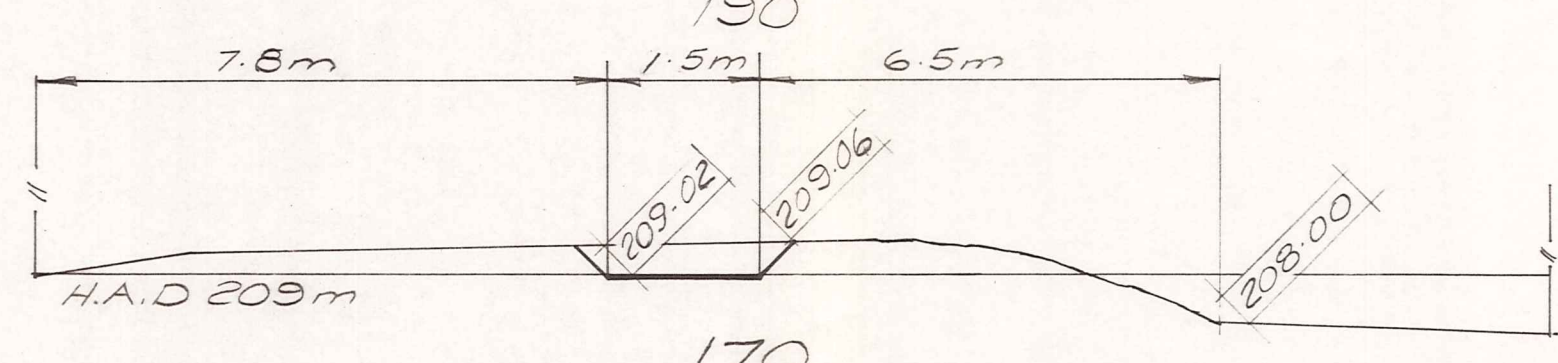
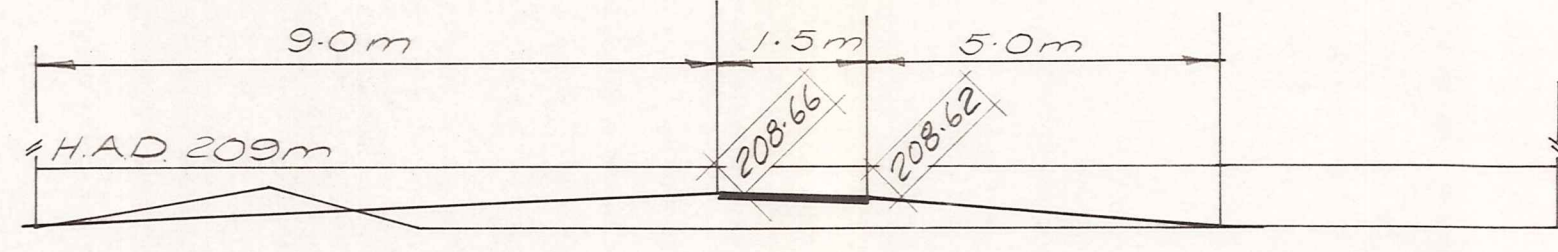
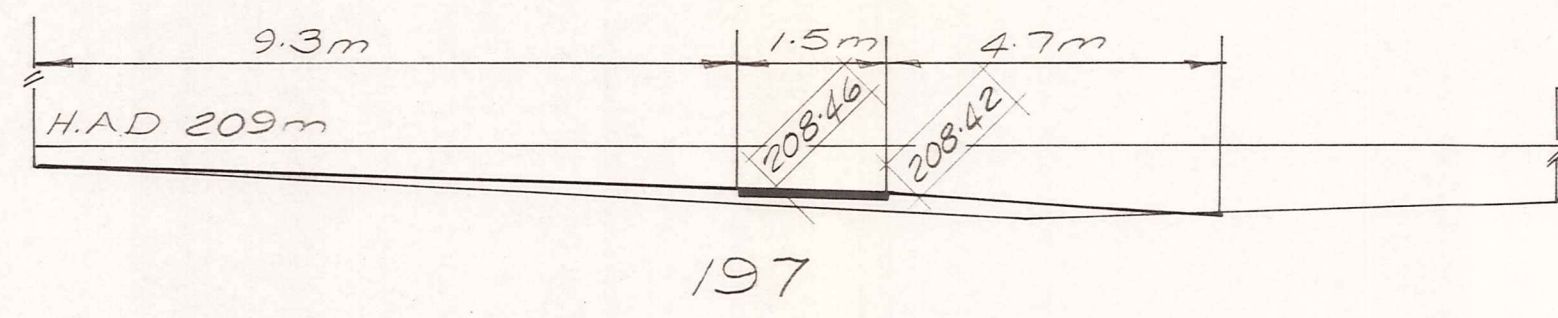
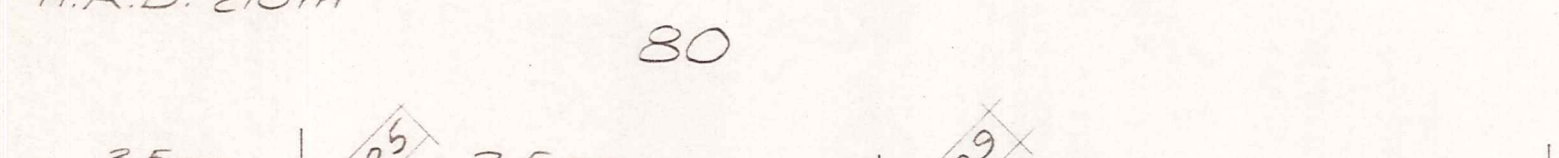
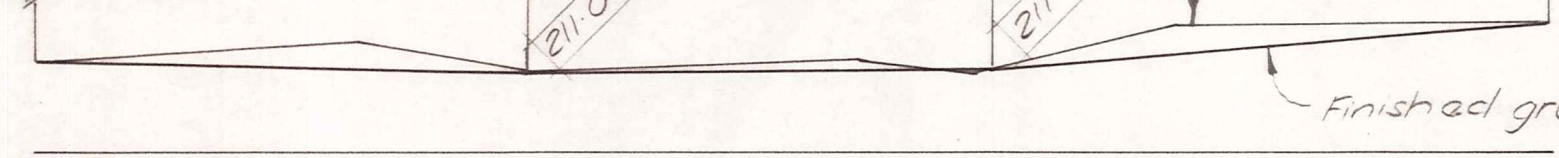
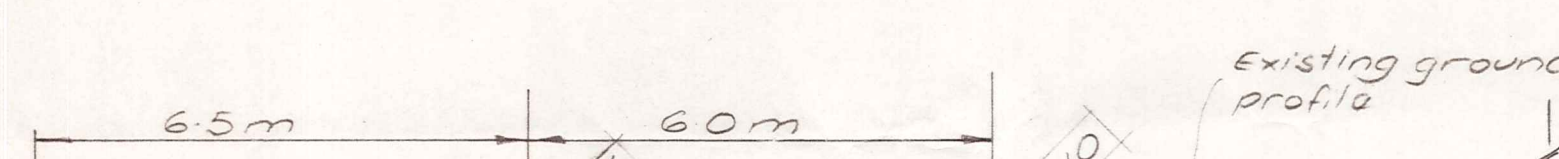
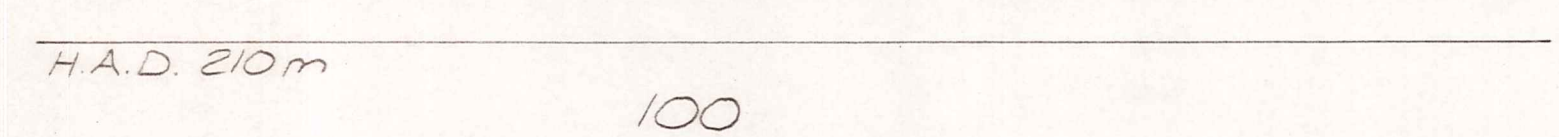
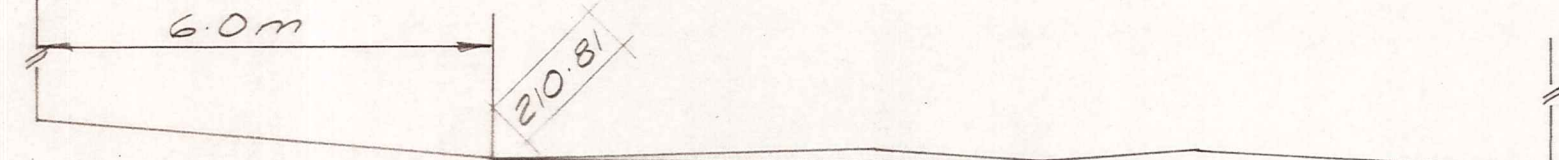
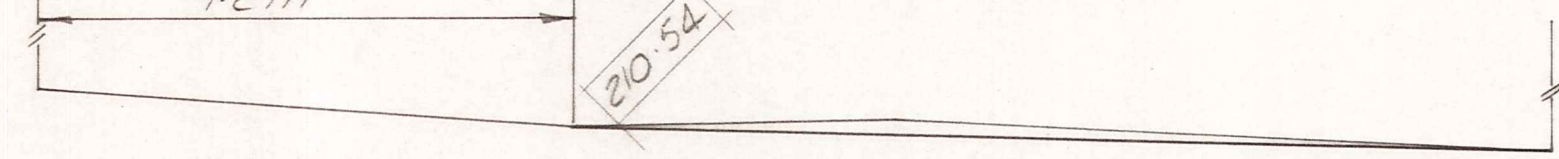
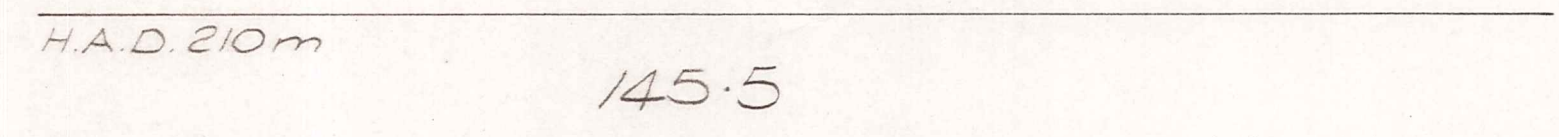
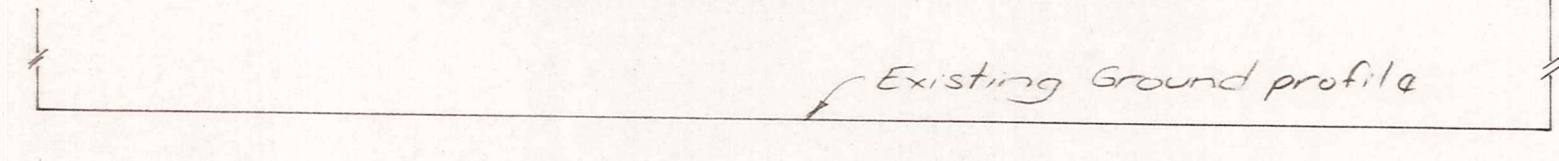


DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS <small>Dunedin PO Box 5269 Ph 777-133 Invercargill PO Box 576 Ph 83049 Cromwell PO Box 82 Ph 50391</small>	EARL H. BENNETT ANZILA LANDSCAPE ARCHITECT 220 HIGH STREET CHRISTCHURCH	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT No.11 CONSTRUCTION OF SURFACE WORKS	DOWN ST. GREENWAY (Management levels, Position of barriers)	AMENDMENTS		NAME DATE		JOB NO 9869	Sheet No. 2		
						NO	BY	DATE	Appvd			Surveyed	K.M. BH
								Traced Checked Approved		K.M. 12/6/82 12/6/82 12/6/82		File 9/19/12 LB 416	FE

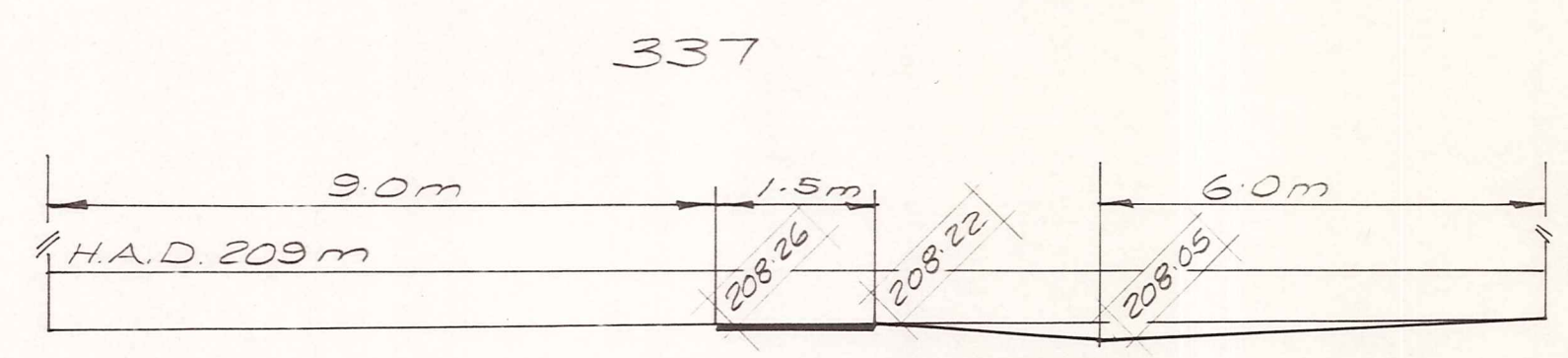
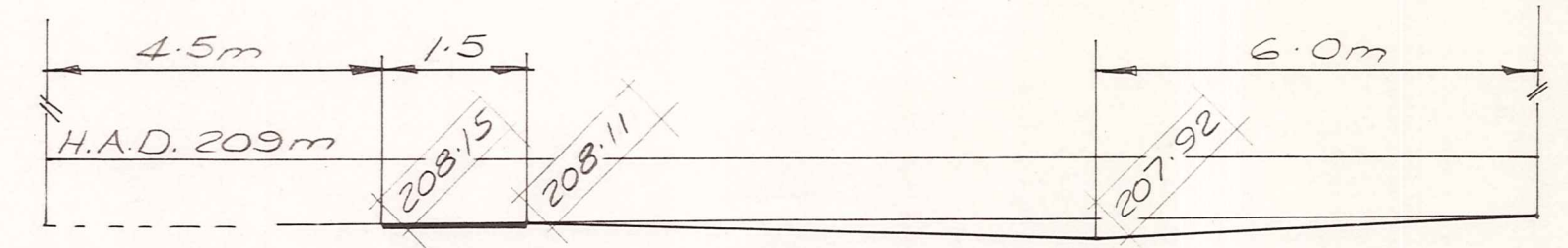
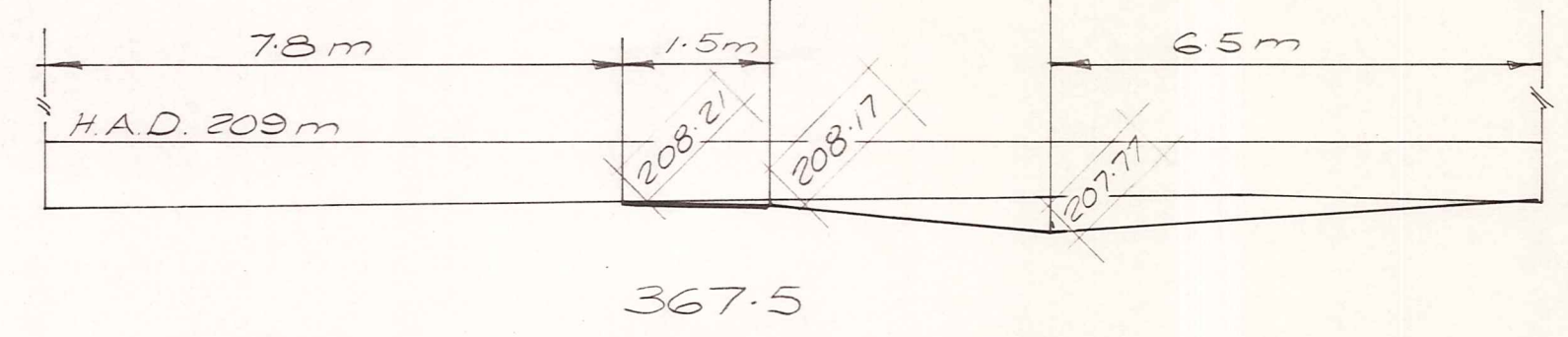
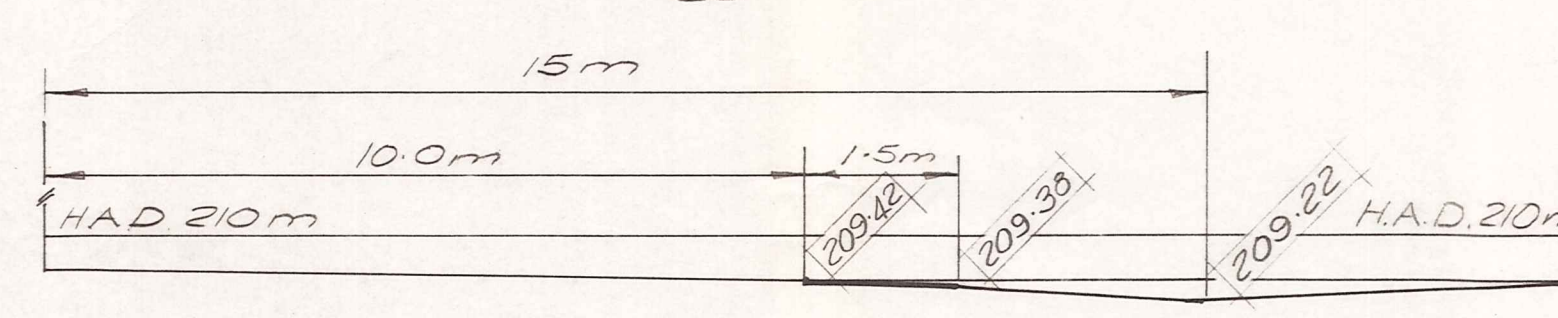
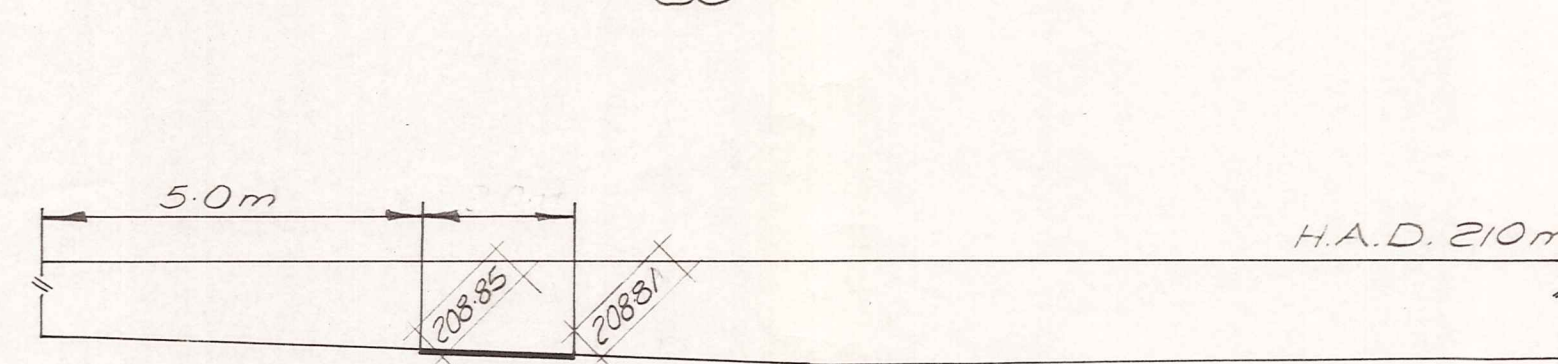
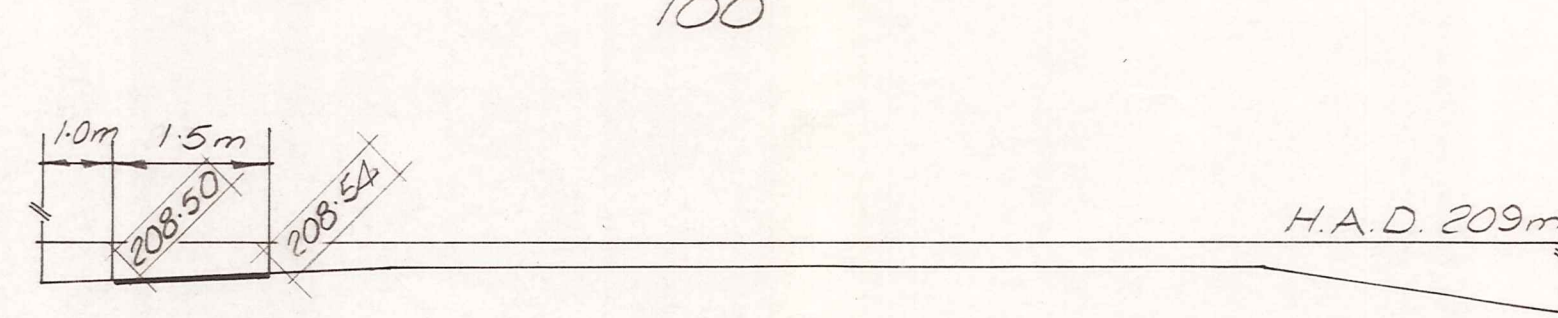
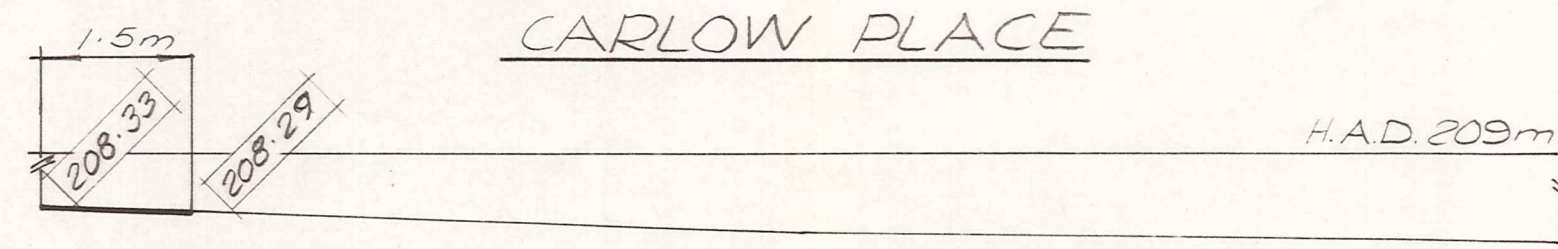
ORIGINAL SIZE
mm INCHES



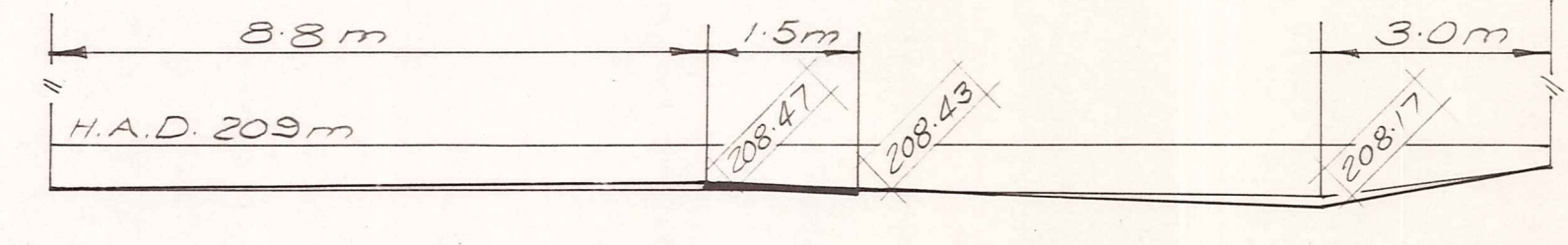
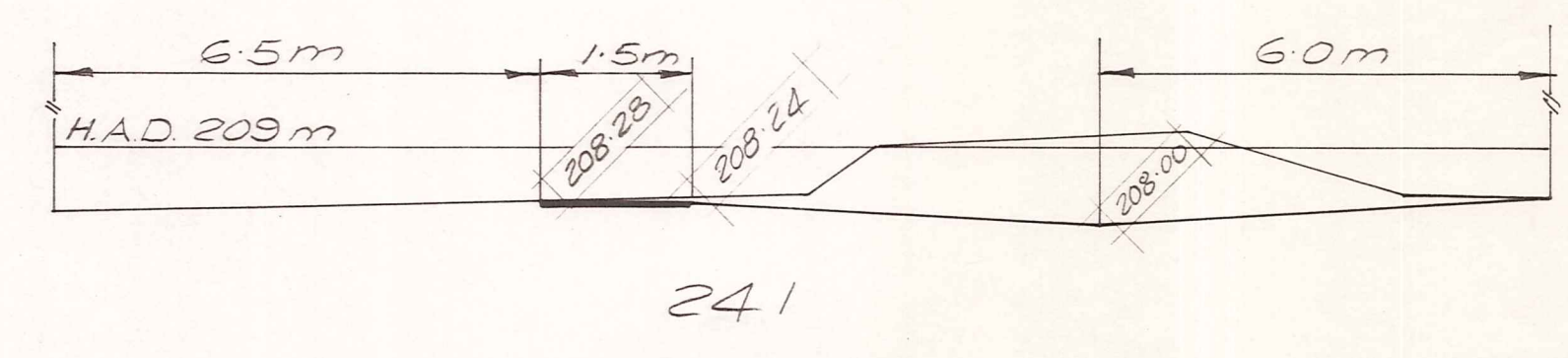
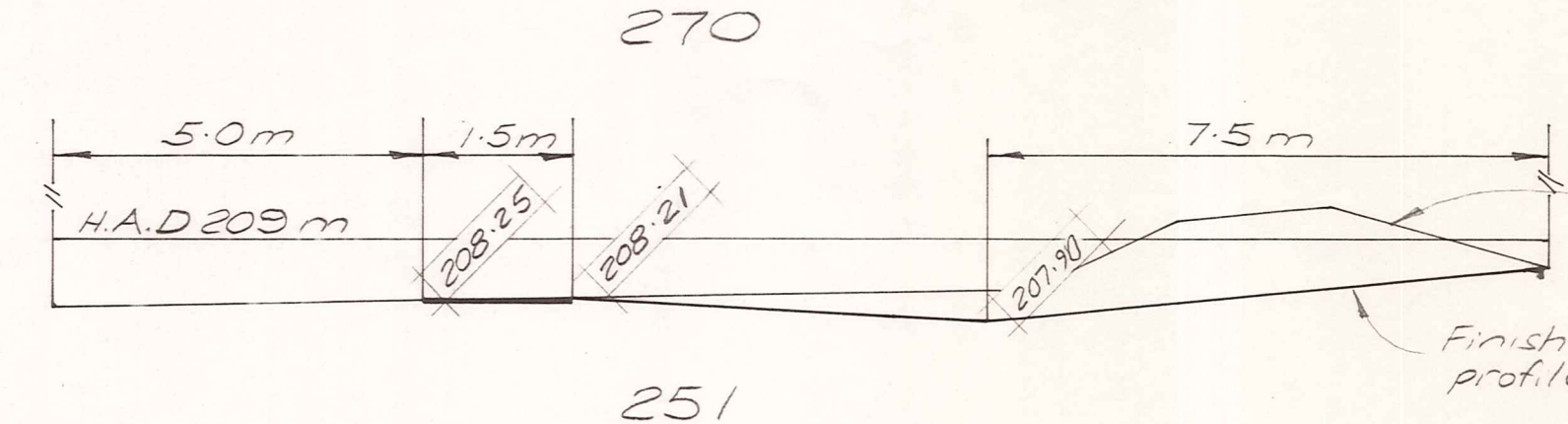
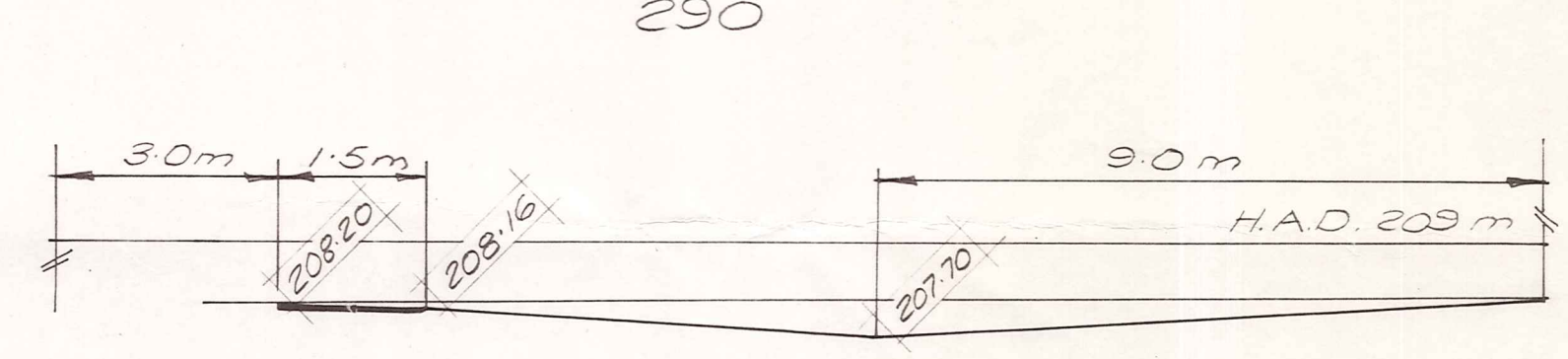
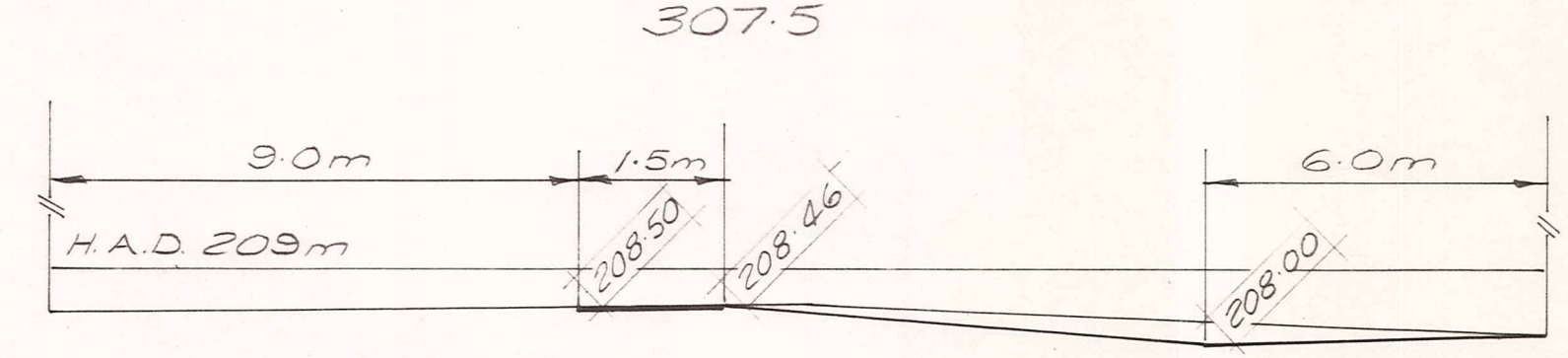
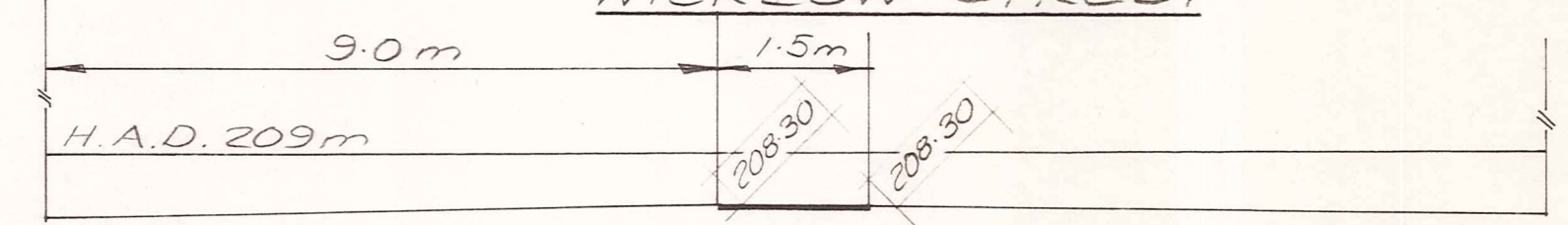
MOLYNEUX AVENUE



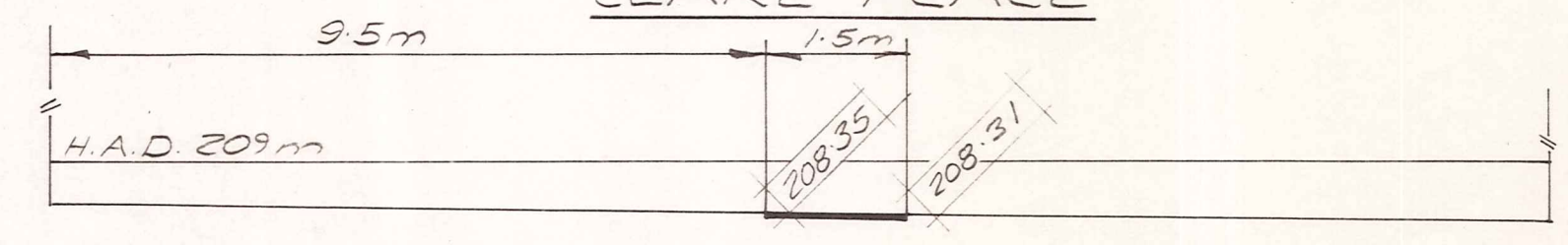
CARLOW PLACE



WICKLOW STREET



CLARE PLACE



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CONSULTING CIVIL & STRUCTURAL ENGINEERS
Dunedin PO. Box 5269 Ph. 777-133 Invercargill PO Box 576 Ph. 83-049
Cromwell PO. Box 82 Ph. 50-391

EARL H BENNETT ANZILA
LANDSCAPE ARCHITECT
220 HIGH STREET
CHRISTCHURCH

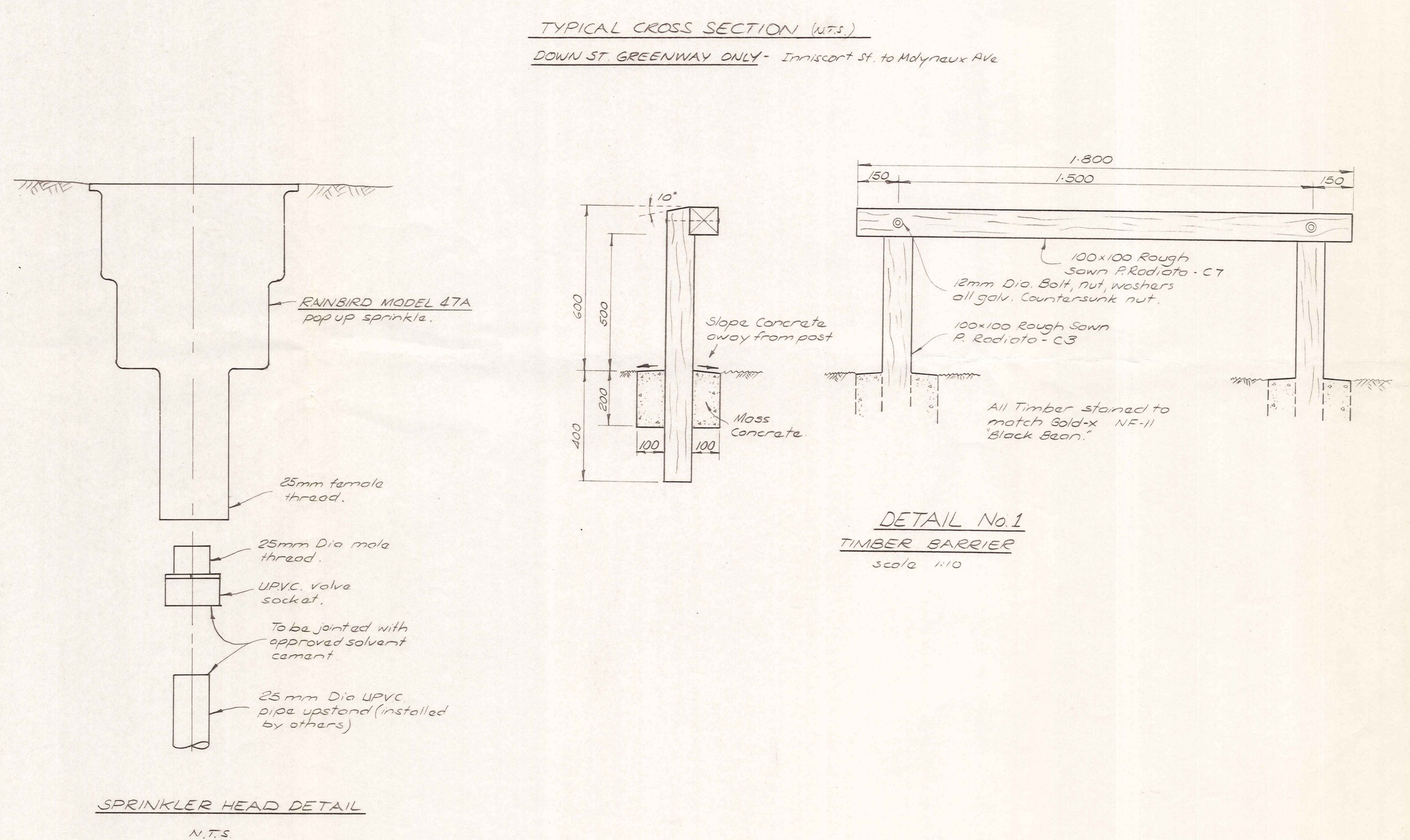
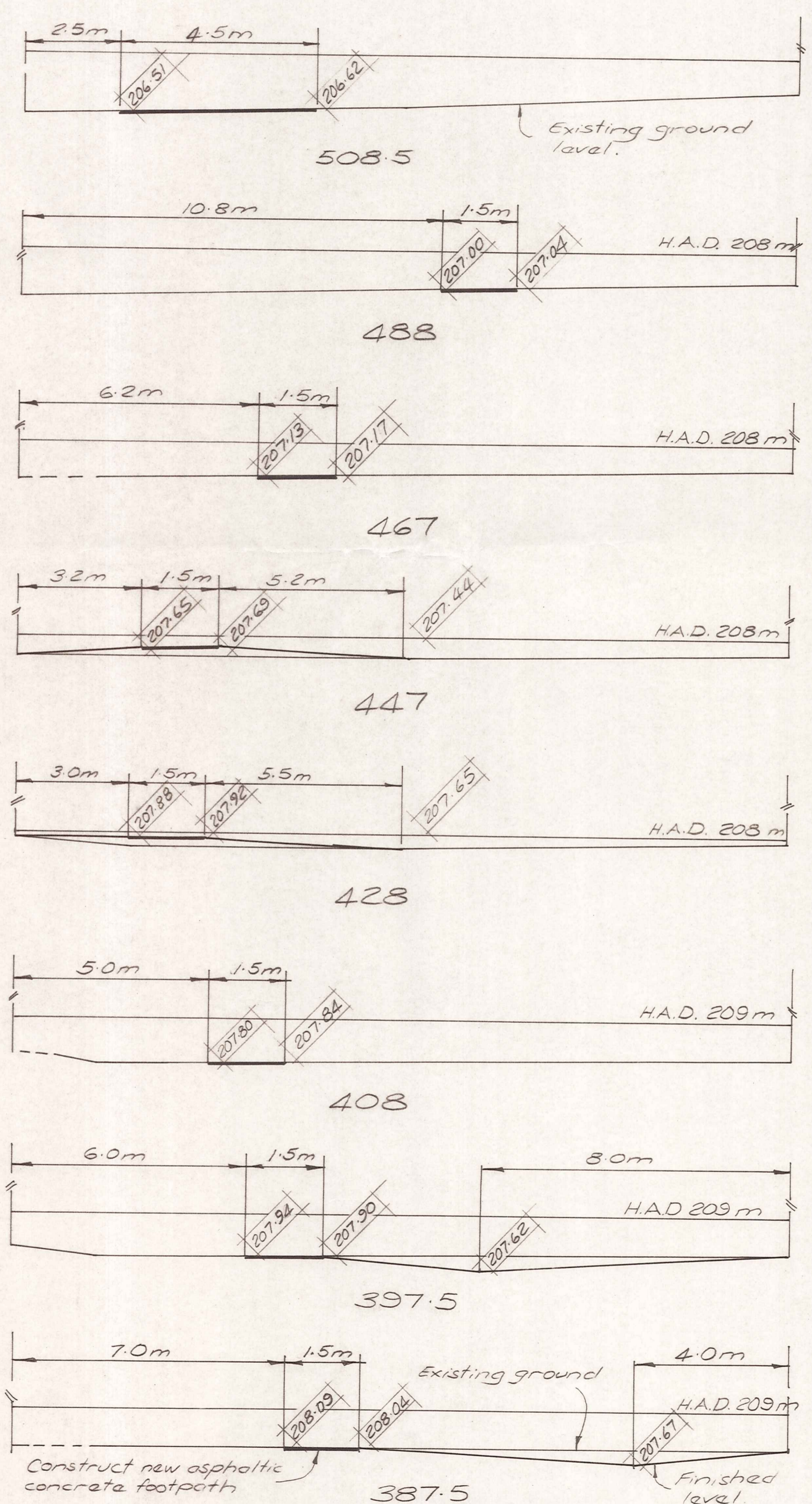
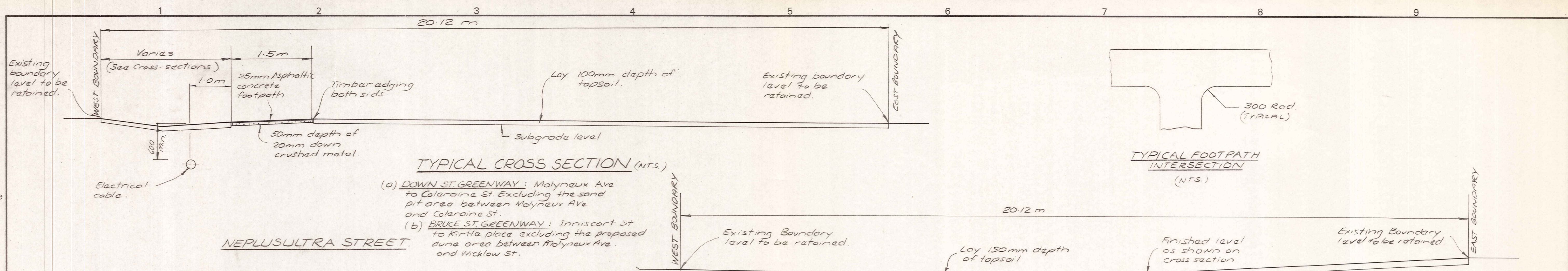
CROMWELL BOROUGH COUNCIL
NEIGHBOURHOOD DEVELOPMENT

CONTRACT No 11
CONSTRUCTION OF SURFACE WORKS

BRUCE ST. GREENWAY
(Cross sections & Setting out Details)

AMENDMENTS			NAME	DATE
NO.	BY	DATE	MC & BH	6-82
			D JACK	"
			"	"
			MC & BH	"
			"	"
			"	"
			"	"
			"	"
			"	"
			"	"

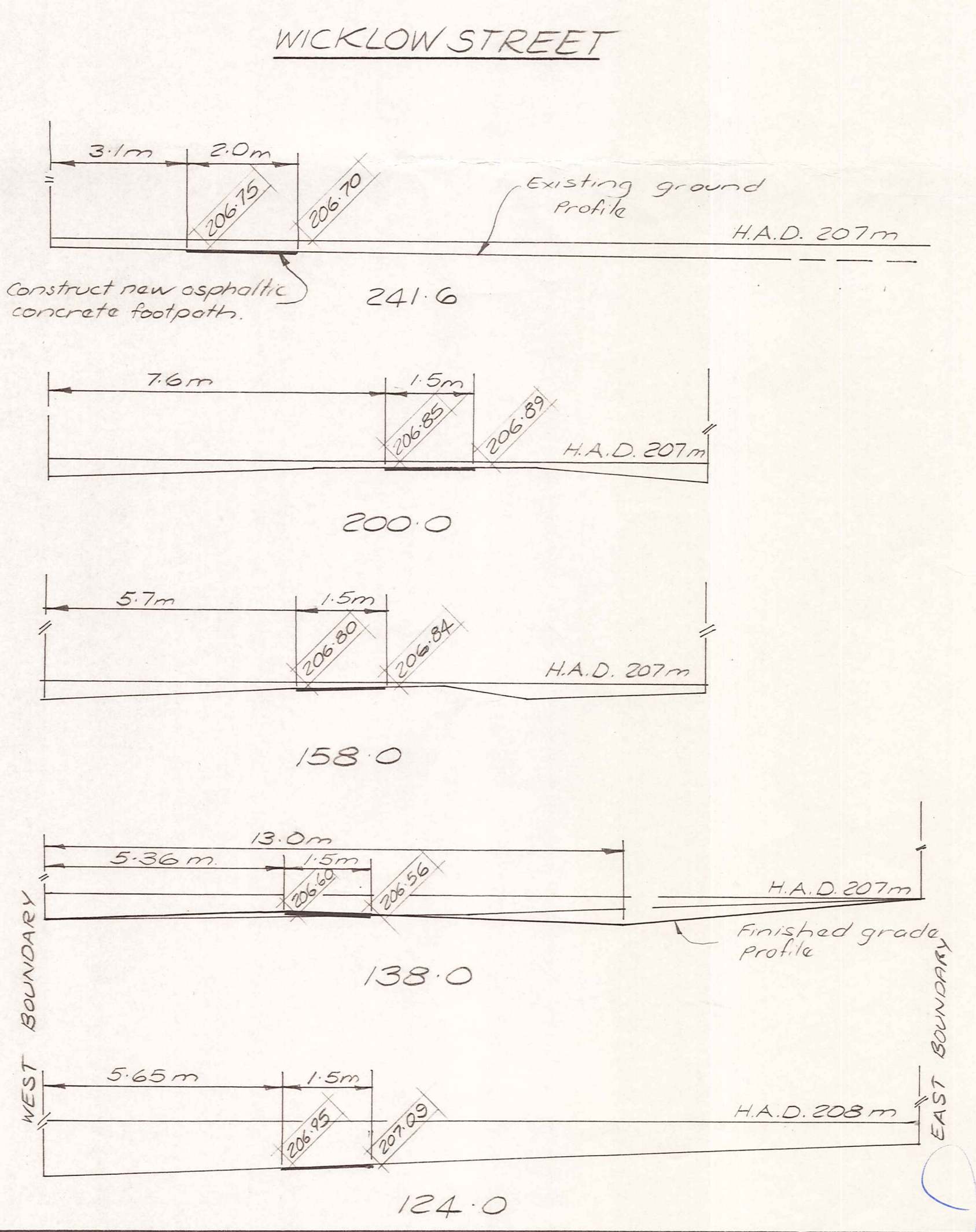
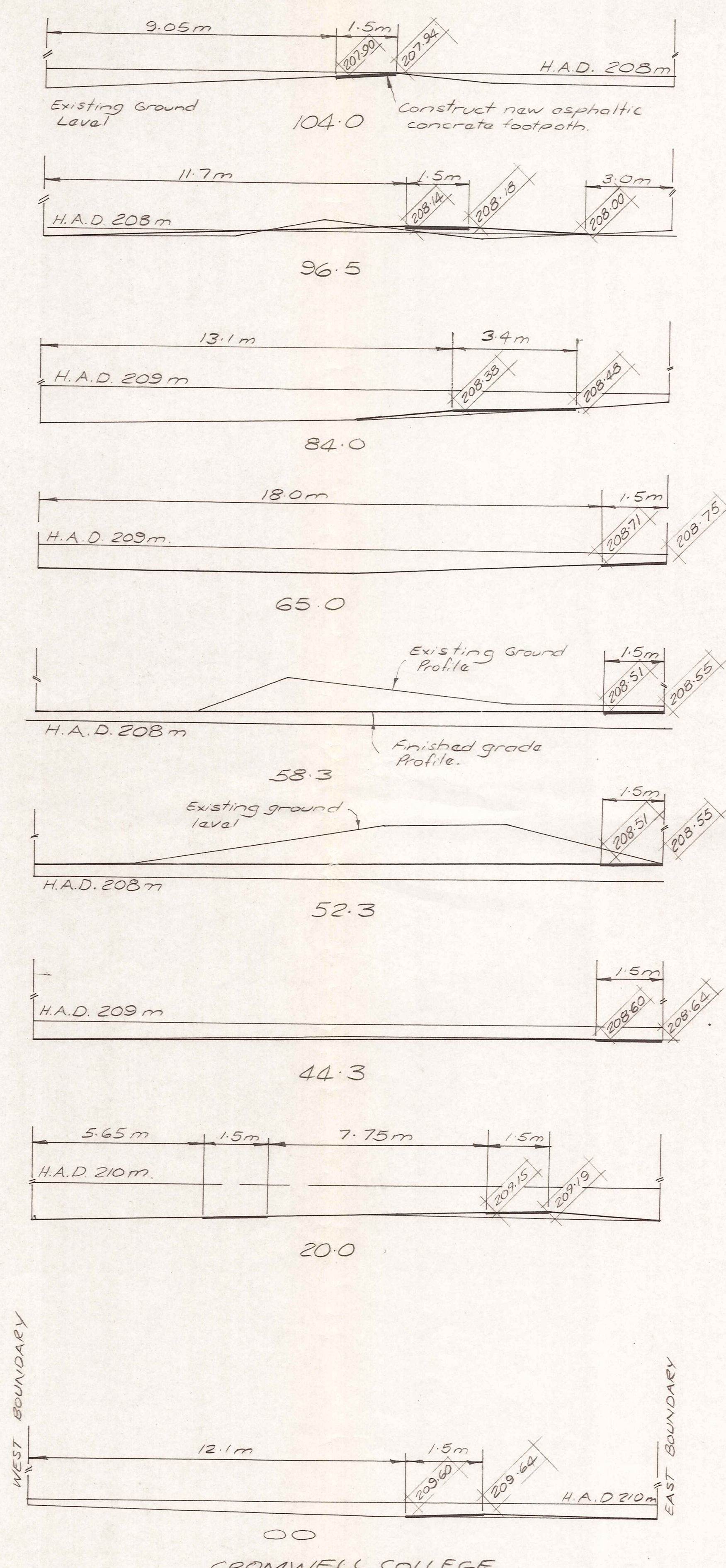
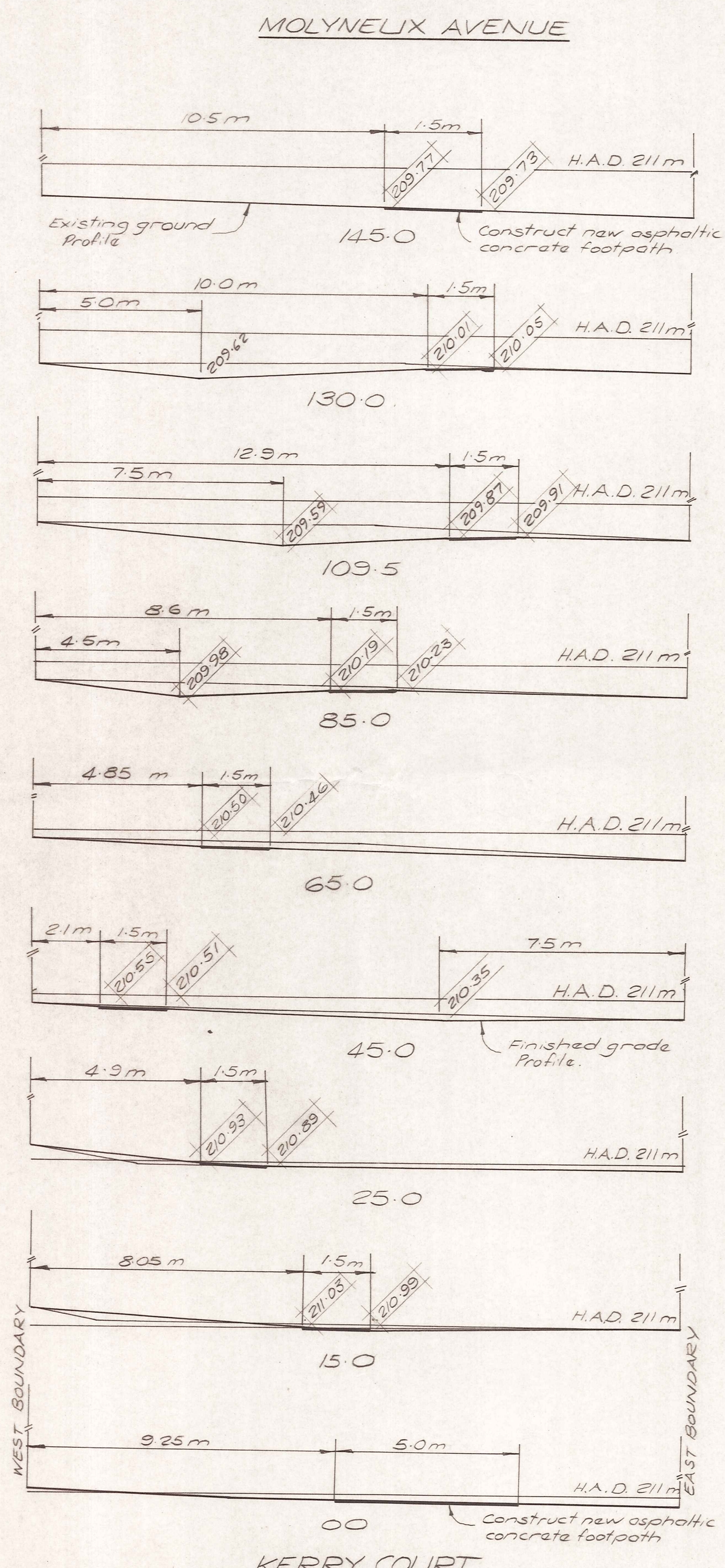
JOB NO. **9869** Sheet No **3**
of 10 shts
F.B.
File# 19/12 L.B. 4/6
16/6/92
16/6/92



ORIGINAL SIZE mm INCHES

DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS Dunedin P.O. Box 5269 Ph. 777-133 Invercargill P.O. Box 576 Ph. 83049 Cromwell P.O. Box 82 Ph. 50-391	EARL H BENNETT ANZILA LANDSCAPE ARCHITECT 220 HIGH STREET CHRISTCHURCH	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT No. 11 CONSTRUCTION OF SURFACE WORKS	BRUCE ST GREENWAY Cross sections, Down & Bruce St. Typical Cross sections,	AMENDMENTS			NAME DATE		JOB NO. 9869	Sheet No. 4 of 10 sheets										
						NO.	BY	DATE	Appvd.	Surveyed			MC & BH.	6.82	Drawn	D. JACK	-	Calculations	-	Traced	-	Checked

ORIGINAL SIZE
mm INCHES
300 12
11
10
9
8
7
6
5
4
3
2
1
0



KERRY COURT

CROMWELL COLLEGE

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CONSULTING CIVIL & STRUCTURAL ENGINEERS
Dunedin P.O. Box 5269 Ph. 777-133 Invercargill P.O. Box 576 Ph. 83049
Cromwell P.O. Box 82 Ph. 50391

EARL H. BENNETT ANZILA
LANDSCAPE ARCHITECT
220 HIGH STREET
CHRISTCHURCH

CROMWELL BOROUGH COUNCIL

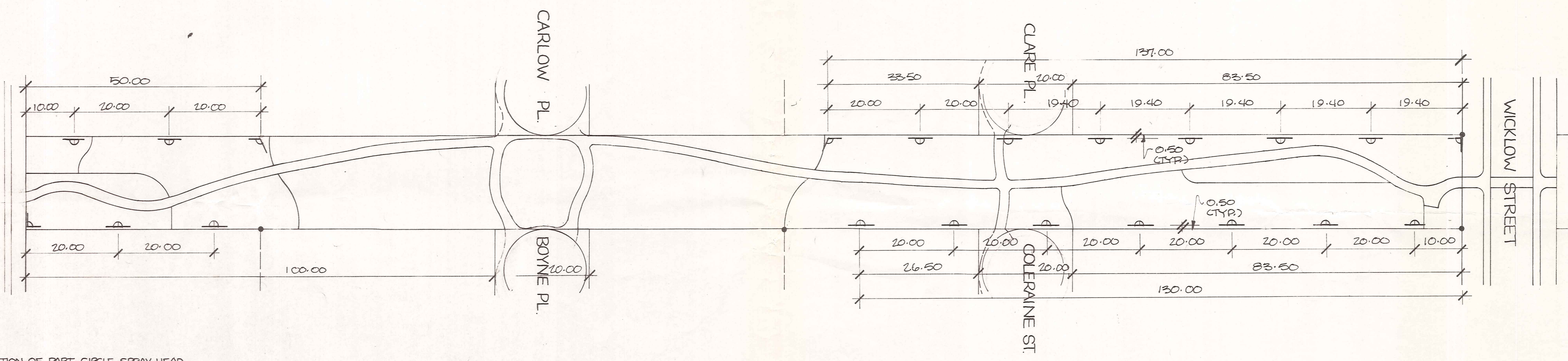
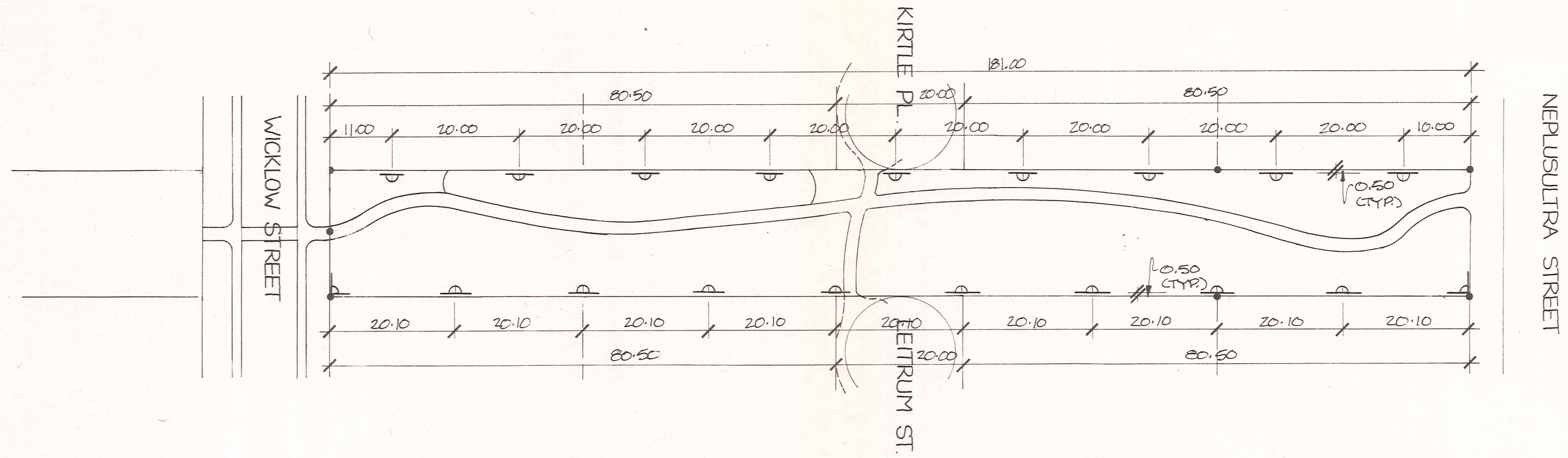
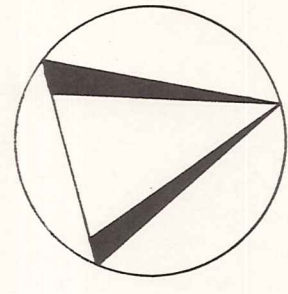
NEIGHBOURHOOD 1 DEVELOPMENT

CONTRACT No. 11
CONSTRUCTION OF SURFACE WORKS

DOWN ST. GREENWAY
(Cross sections and setting out details)

AMENDMENTS			NAME	DATE
NO	BY	DATE		
			MC. & BH	6.82
			D. J. & M. C.	" "
			D. JACK	" "
			M. C. & BH	" "
			D. J. & M. C.	14/6/82
			Checked	
			Approved	

DB NO. **9869** Sheet No. **5**
of 10 sheets
L.B. 416 F.B.

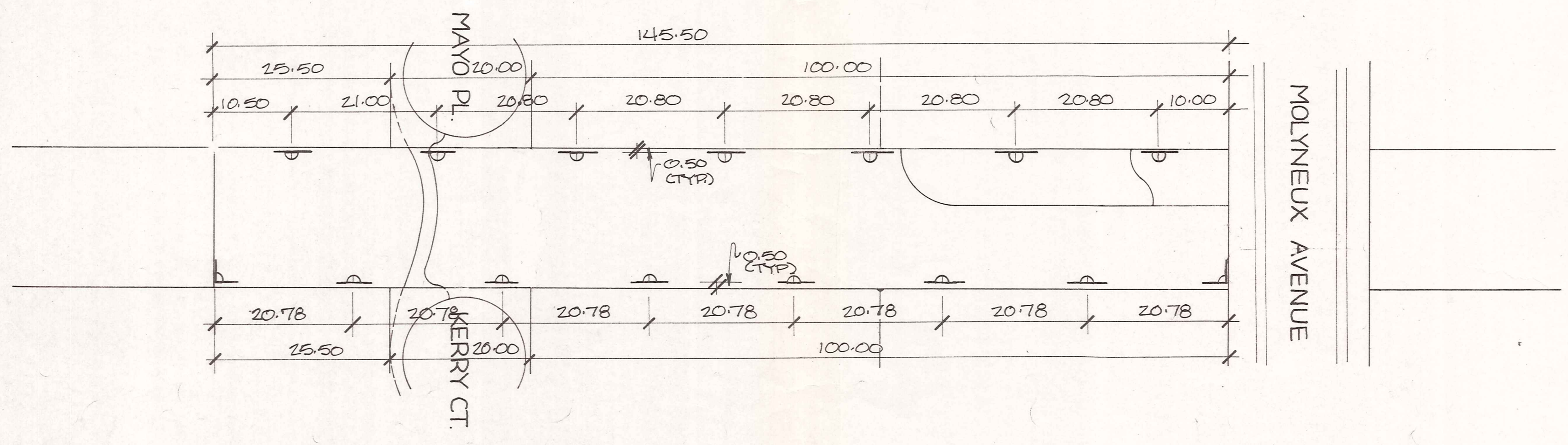


LEGEND.

- PROPOSED POSITION OF PART-CIRCLE SPRAY HEAD
- EXISTING TREE

NOTES.

1. DIMENSIONS GIVEN TO HUNDREDTHS OF A METRE
2. SEE DUFFILL, WATTS, KING (REF 9790 SHEET 2) FOR CIRCUITRY
3. HEADS ARE 0.50m TOWARD CENTRE OF GREENWAY FROM SIDE BOUNDARIES UNLESS OTHERWISE DIMENSIONED.
4. HEADS ADJACENT TO ROAD RESERVES PLACED ON BOUNDARY
5. DIMENSIONS ARE TAKEN FROM ORIGINAL SURVEY PLAN, USE MEASUREMENTS SCALED OFF THIS PLAN WITH CAUTION.



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CONSULTING CIVIL & STRUCTURAL ENGINEERS
Dunedin PO Box 5269 Ph 777-133 Invercargill PO Box 576 Ph 83-049
Balclutha PO Box 220 Ph 81-664 Cromwell PO Box 82 Ph 50-391

EARL H BENNETT ANZILA
LANDSCAPE ARCHITECT
220 HIGH STREET
CHRISTCHURCH

CROMWELL
BOROUGH COUNCIL

NEIGHBOURHOOD I
DEVELOPMENT

CONTRACT NO.11
CONSTRUCTION
OF
SURFACE
WORKS

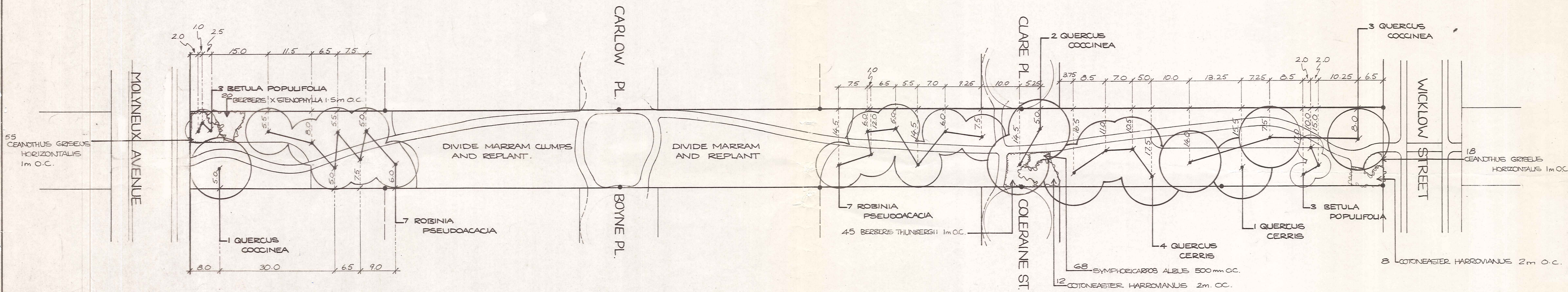
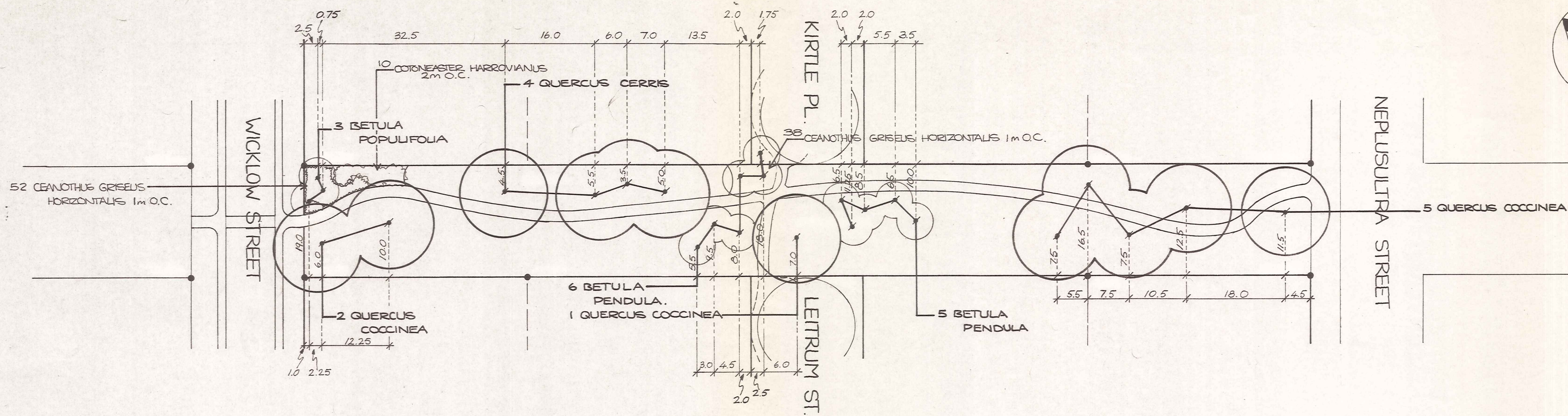
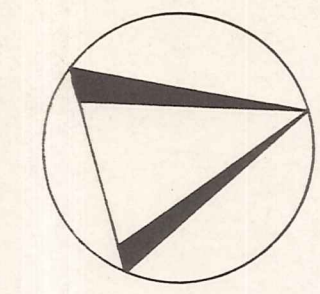
BRUCE ST. GREENWAY
(Setting-out plan,
Sprinkler heads.)

AMENDMENTS			Appvd.	NAME	DATE
NO.	BY	DATE			

Surveyed	K.M. BH	6/82
Drawn	EB	"
Calculations	K.M	"
Traced		
Checked	<i>[Signature]</i>	16/6/82
Approved	<i>[Signature]</i>	22/6/82

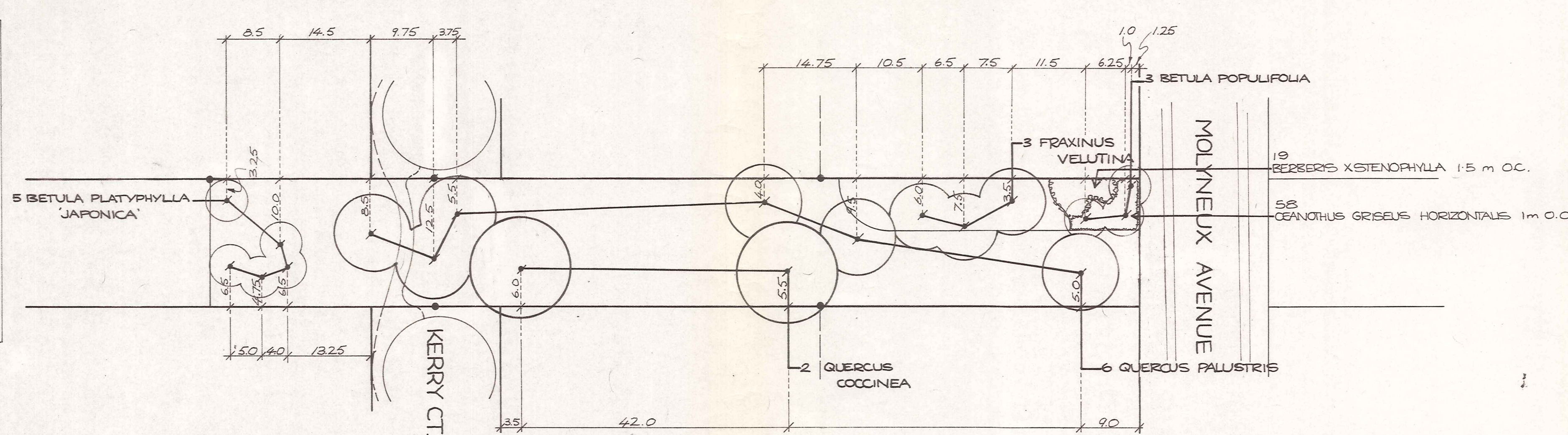
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File 9/19/82	L.B. 416	F.B.	of 10 shts.

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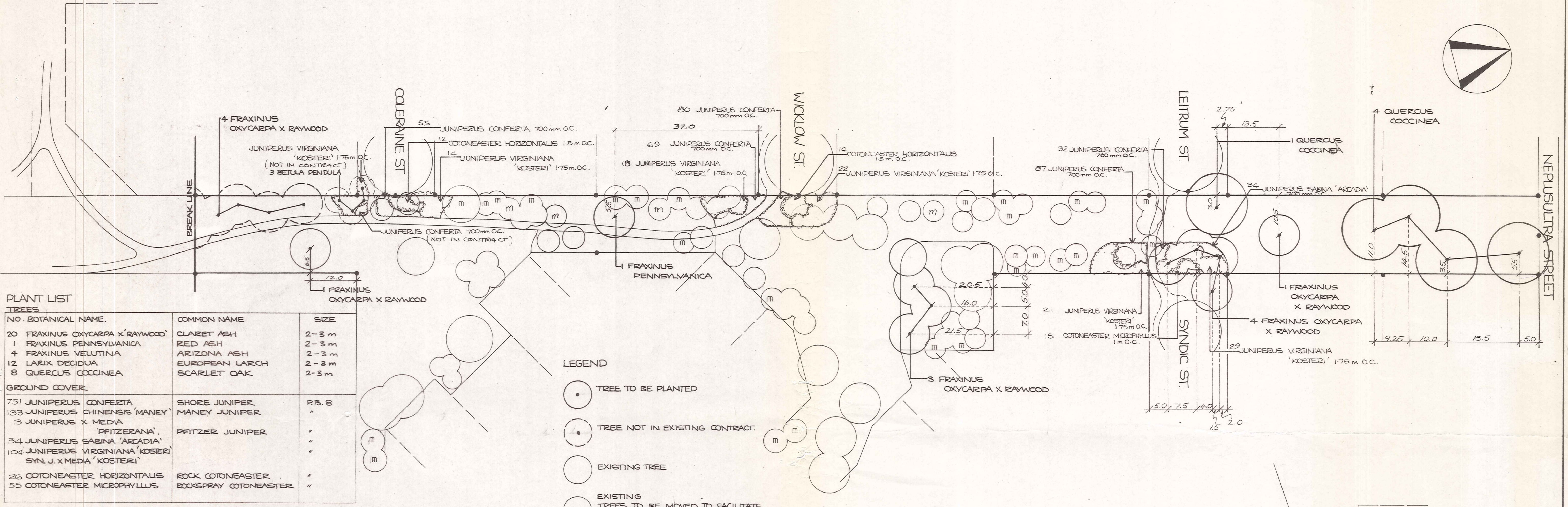
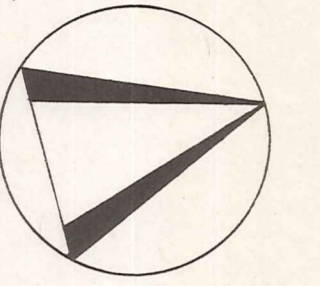
PLANT LIST

TREES		
NO.	BOTANICAL NAMES	COMMON NAMES
11	BETULA PENDULA	SILVER BIRCH
5	BETULA PLATYPHYLLA 'JAPONICA'	JAPANESE WHITE BIRCH
12	BETULA POPULIFOLIA	GREY BIRCH
3	FRAXINUS VELLUTINA	ARIZONA ASH
9	QUERCUS CERRIS	TURKEY OAK
16	QUERCUS COCCINEA	SCARLET OAK
6	QUERCUS PALUSTRIS	PIN OAK
14	ROBINIA PSEUDOACACIA	BLACK LOCUST
76	TOTAL	
GROUND COVER AREAS		
39	BERBERIS X STENOPHYLLA	P.B. 12
45	BERBERIS THUNBERGII	P.B. 12
221	CEANOTHUS GRISEUS HORIZONTALIS	CARMEL CREEPER
30	COTONEASTER HARROBIANUS	P.B. 12
68	SYMPHORICARPOS ALBUS	SNOWBERRY
		P.B. 12



PROPOSED TREE
 GROUND COVER
 NOTE. SEE DETAILS NO. 8 & 9 ON SHT. 10 FOR SHRUB & TREE PLANTING.

DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS <small>Dunedin PO Box 5269 Ph 777-133 Invercargill PO Box 576 Ph 83049 Cromwell PO Box 82 Ph 50-391</small>	EARL H. BENNETT ANZILA LANDSCAPE ARCHITECT 220 HIGH STREET CHRISTCHURCH	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD DEVELOPMENT	CONTRACT No 11 CONSTRUCTION OF SURFACE WORKS	BRUCE ST. GREENWAY (Planting plan)	AMENDMENTS			NAME	DATE	JOB NO.	Sheet No
						NO.	BY	DATE	Appvd.	Surveyed	K.M. B.H.	6-82
					Drawn	E.B.						
					Calculations	K.M.						
					Traced							
					Checked							
					Approved							
								File 9/19/12	L.B. 416	F.B.	of 10 shts	



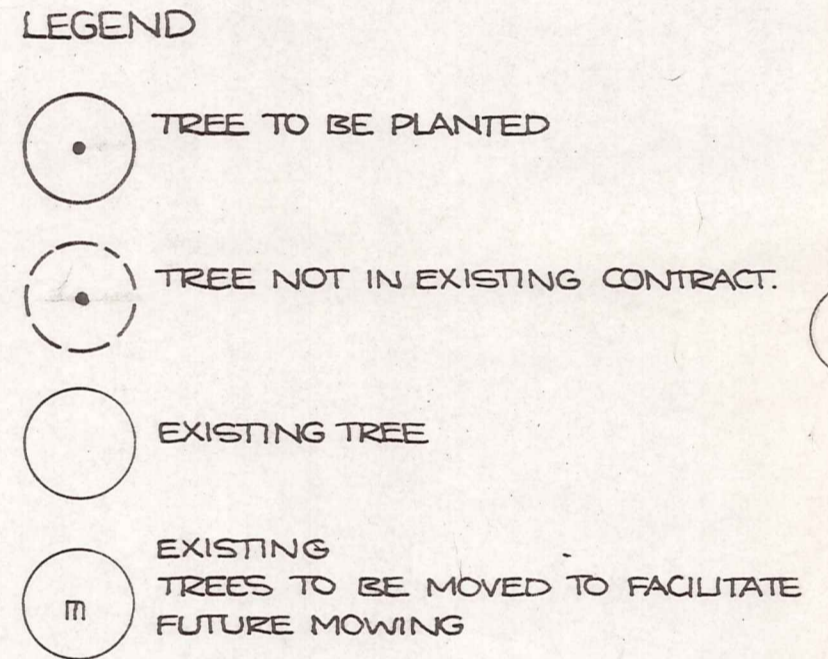
PLANT LIST

TREES

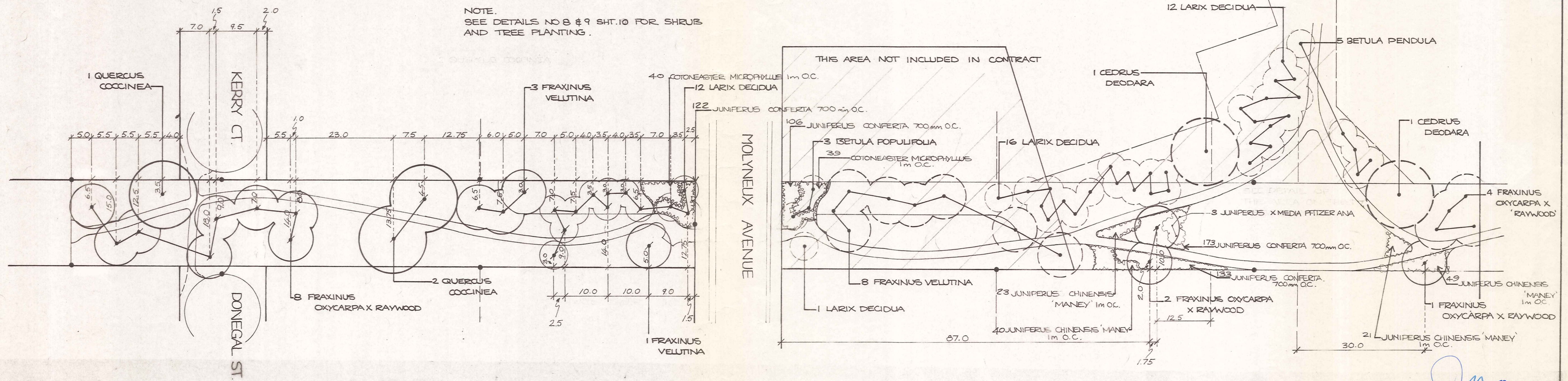
NO.	BOTANICAL NAME	COMMON NAME	SIZE
20	FRAXINUS OXYCARPA x 'RAYWOOD'	CLARET ASH	2-3 m
1	FRAXINUS PENNSYLVANICA	RED ASH	2-3 m
4	FRAXINUS VELUTINA	ARIZONA ASH	2-3 m
12	LARIX DECIDUA	EUROPEAN LARCH	2-3 m
8	QUERCUS COCCINEA	SCARLET OAK	2-3 m

GROUND COVER

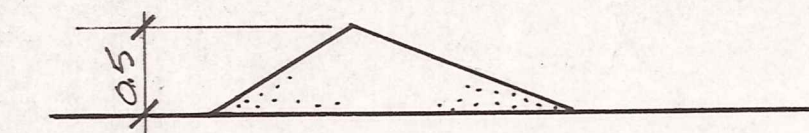
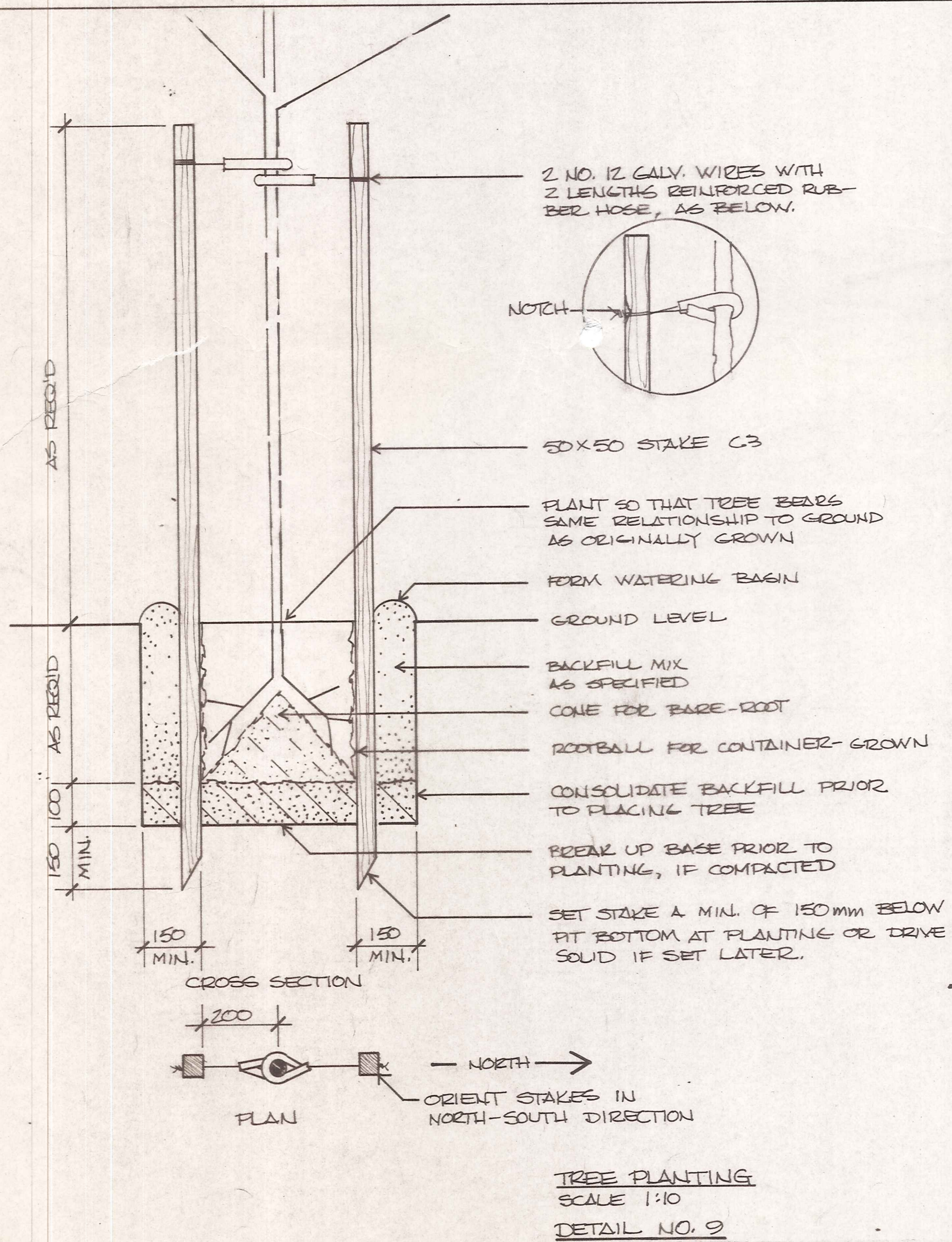
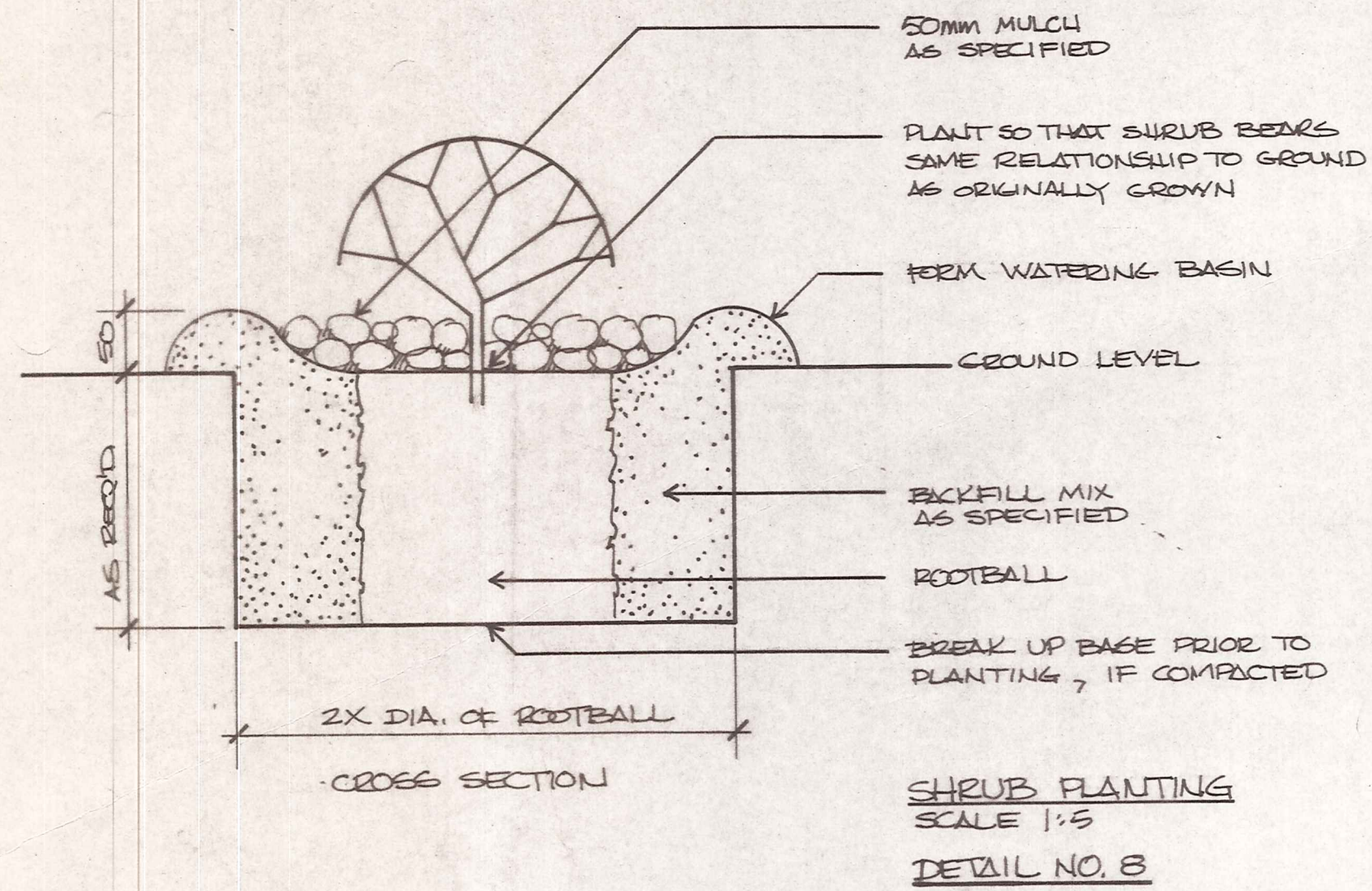
NO.	BOTANICAL NAME	COMMON NAME	SIZE
751	JUNIPERUS CONFERTA	SHORE JUNIPER	P.F.S.
133	JUNIPERUS CHINENSIS 'MANEY'	MANEY JUNIPER	"
3	JUNIPERUS x MEDIA 'PFITZERANA'	PFITZER JUNIPER	"
34	JUNIPERUS SABINA 'ARCADIA'	"	"
104	JUNIPERUS VIRGINIANA 'KOSTERI'	"	"
	SYN. J. x MEDIA 'KOSTERI'	"	"
26	COTONEASTER HORIZONTALIS	ROCK COTONEASTER	"
55	COTONEASTER MICROPHYLLUS	ROCKSPRAY COTONEASTER	"



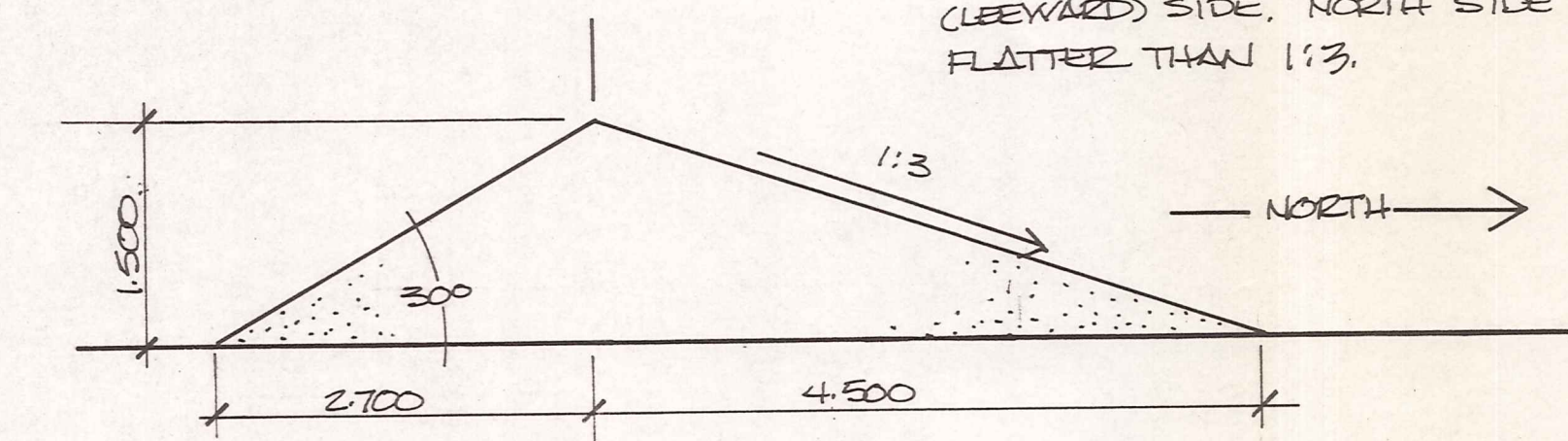
NOTE.
SEE DETAILS NO 8 & 9 SHT. 10 FOR SHRUBS AND TREE PLANTING.



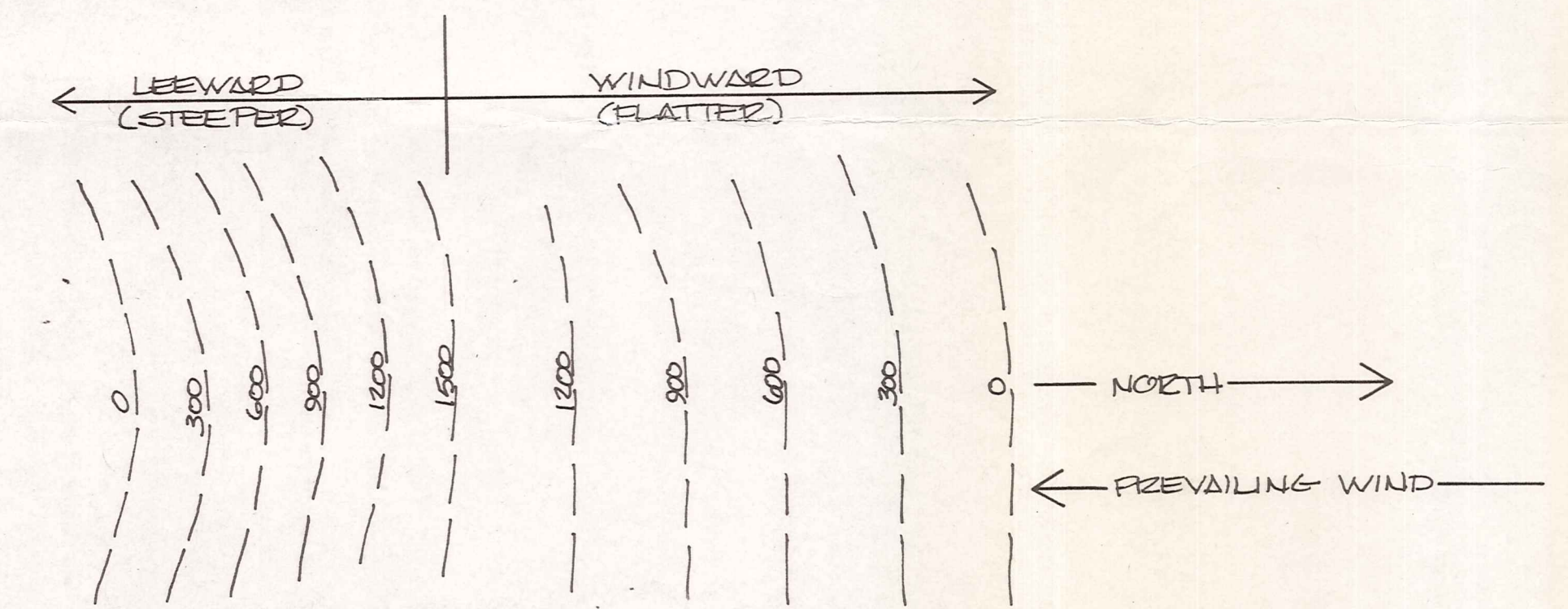
DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS <small>Dunedin PO Box 5269 Ph 777-133 Invercargill PO Box 576 Ph 83-049 Blenheim PO Box 220 Ph 81-664 Cromwell PO Box 82 Ph 50-391</small>	EARL H. BENNETT ANZILA LANDSCAPE ARCHITECT 220 HIGH STREET CHRISTCHURCH	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT No 11 CONSTRUCTION OF SURFACE WORKS	DOWN ST. GREENWAY (Planting plan)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">AMENDMENTS</th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>NO</td> <td>BY</td> <td>DATE</td> <td>Appvd</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	AMENDMENTS		NAME	DATE	NO	BY	DATE	Appvd					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>BY</th> <th>DATE</th> <th>Appvd</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO	BY	DATE	Appvd																																					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>JOB No</th> <th>Sheet No</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">9869</td> <td style="text-align: center;">9</td> </tr> <tr> <td colspan="2" style="text-align: right;">of 10 sheets</td> </tr> </tbody> </table>	JOB No	Sheet No	9869	9	of 10 sheets	
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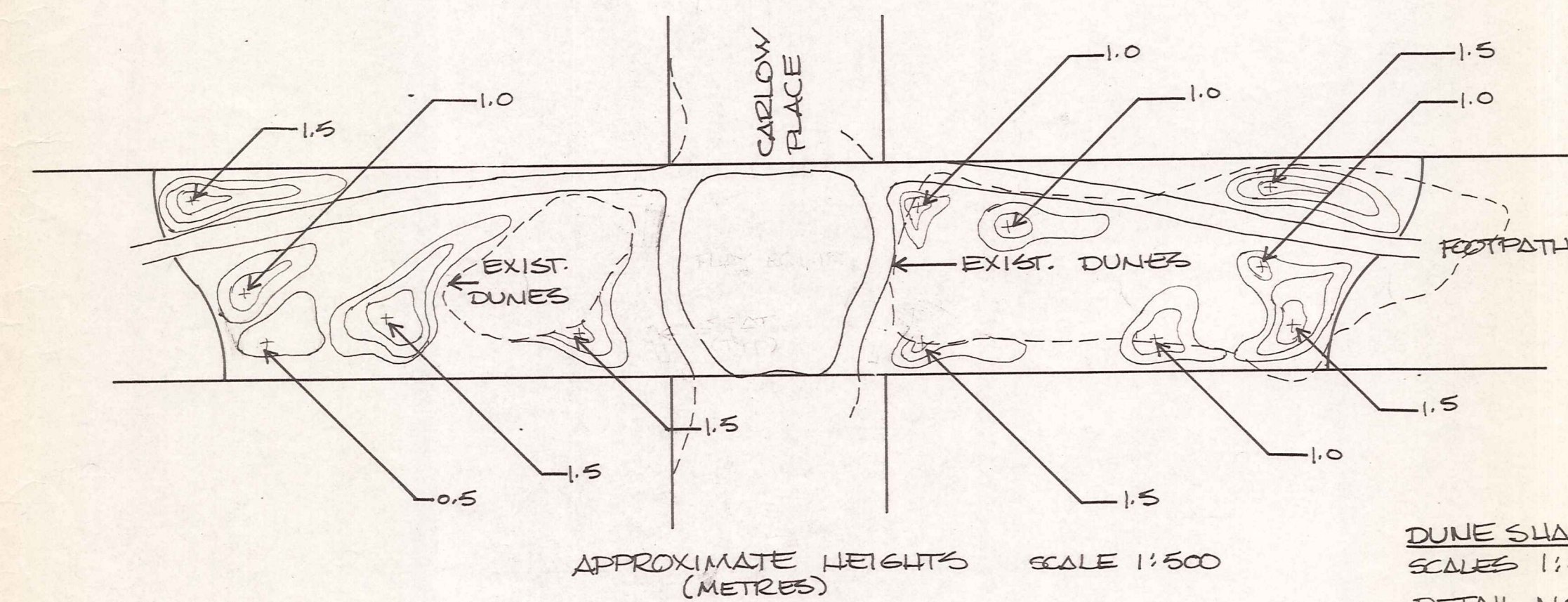
DUNES TO RANGE FROM 0.5 TO 1.5M IN HEIGHT. ALL HEIGHTS SHALL HAVE A CROSS-SECTION IN PROPORTION TO THAT SHOWN BELOW. THE 1:3 SLOPE IS TO BE ON THE NORTH (WINDWARD SIDE); THE 3:1 SLOPE IS TO BE ON THE SOUTH (LEEWARD) SIDE. NORTH SIDE MAY BE FLATTER THAN 1:3.



CROSS SECTION'S SCALE 1:50



TYPICAL CONTOURS SCALE 1:50



APPROXIMATE HEIGHTS (METRES) SCALE 1:500

DUNE SHAPING - GUIDELINES SCALES 1:50, 1:500 DETAIL NO. 10

AMENDMENTS			NAME	DATE	JOB NO. 9869	Sheet No. 10 of 10 shts
NO	BY	DATE				
			Surveyed		File 9/19/12 L.B. 416	F.B.
			Drawn	K.M. B.H. 6-82		
			Calculations	E.B.		
			Traced	K.M.		
			Checked	16/6/82		
			Approved	see '82		