

EXISTING ANNADALE STAGE 2

EXISTING STAGE 2

FUTURE STAGE 10

FUTURE STAGE 6

PROPOSED ANNADALE STAGE 3A

FOR CONTINUATION REFER TOP RIGHT

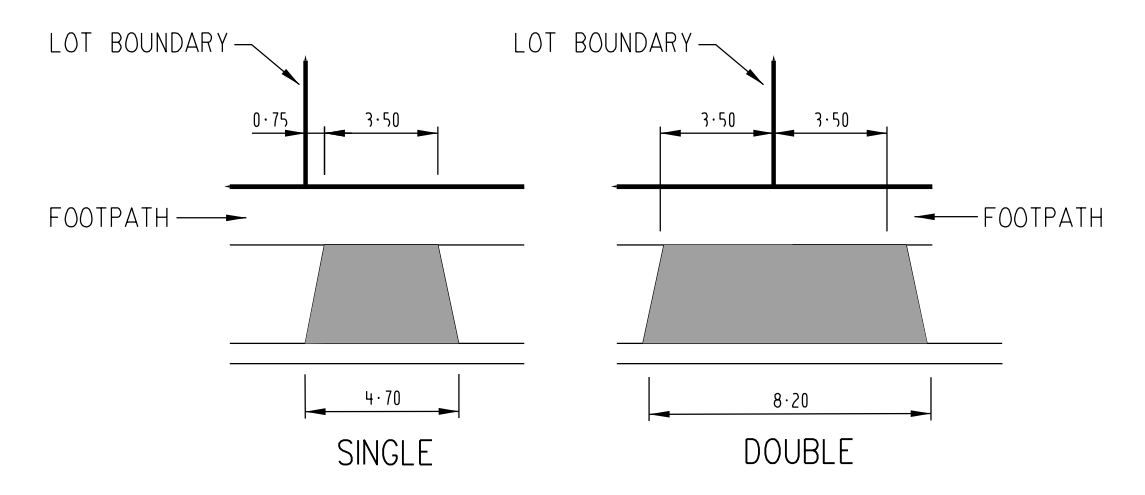
PLAN
SCALE 1:500

FOR CONTINUATION REFER BOTTOM LEFT

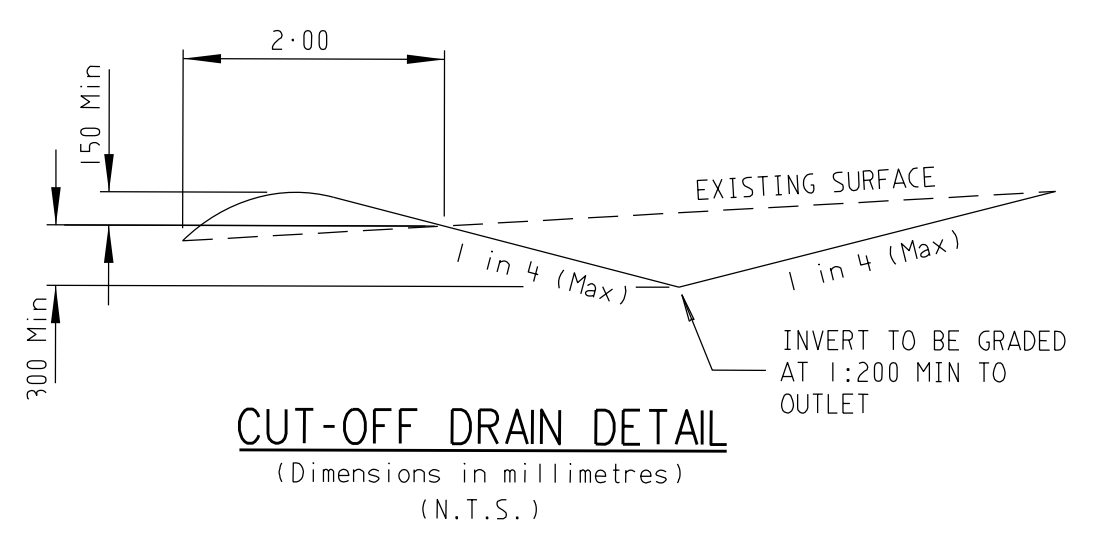
EXISTING STAGE 2

SHEET INDEX

SHT No.	VBR	DESCRIPTION
1	C	DETAIL PLAN, SHEET INDEX & SERVICES SCHEDULE
2	B	LOCALITY PLAN, TYPICAL CROSS SECTIONS, GENERAL NOTES & INTERSECTION PLAN -1
3	B	INTERSECTION PLAN -2
4	B	INTERSECTION PLAN -3
5	B	LONGITUDINAL SECTION - UPTHORPE WAY, MERSEY STREET, LANEWAY (LOT 513) & LANEWAY (LOT 527)
6	A	LONGITUDINAL SECTION - ASTBURY CRESCENT, BETHANY WAY & LANEWAY (LOT 505)
7	B	CROSS SECTIONS - UPTHORPE WAY
8	A	CROSS SECTIONS - MERSEY STREET, LANEWAY (LOT 513) & LANEWAY (LOT 527)
9	A	CROSS SECTIONS - ASTBURY CRESCENT, BETHANY WAY & LANEWAY (LOT 505)
10	B	DRAINAGE LONGITUDINAL SECTIONS-1
11	B	DRAINAGE LONGITUDINAL SECTIONS-2 & PIT SCHEDULE
12	B	PARKING PLAN
13	B	VEHICLE TURNING PLAN
14	B	SIGNAGE & LINEMARKING PLAN



DRIVEWAY PLAN
NOT TO SCALE



CUT-OFF DRAIN DETAIL
(Dimensions in millimetres)
(N.T.S.)

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

ATTENTION TO CONTRACTOR

- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
- Where concrete works about a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

SERVICES OFFSETS AND LOCATIONS

STREET/LOT NAME	Rd. RESERVE	WATER		GAS	ELECTRICITY		NBN		Bk. of KERB	JOINT TRENCHING
		DW	NDW		CABLES	POLES	NBN CABLES	NBN PITS		
UPTHORPE WAY (LOT 511-513)	16.00	3.20 N	2.70 N	2.25 N	2.50 S	1.00 BOK	1.85 S	1.85 N	4.20 N 3.90 S	G DW NDW & E NBN
UPTHORPE WAY (LOT 517-527)	16.00	3.20 W	2.70 W	2.25 W	2.50 E	1.00 BOK	1.85 E	1.85 W	4.20 E 3.90 W	G DW NDW & E NBN
UPTHORPE WAY (LOT 530-532)	16.00	3.20 S	2.70 S	2.25 S	2.50 N	1.00 BOK	1.85 N	1.85 S	4.20 S 3.90 N	G DW NDW & E NBN
ASTBURY CRESCENT (LOT 503-505)	16.00	3.20 W	2.70 W	2.25 W	2.50 E	1.00 BOK	1.85 E	1.85 W	4.20 W 3.90 E	G DW NDW & E NBN
ASTBURY CRESCENT (LOT 509-510)	16.00	3.20 S	2.70 S	2.25 S	2.50 N	1.00 BOK	1.85 N	1.85 S	4.20 S 3.90 N	G DW NDW & E NBN
BETHANY WAY	13.50/13.00	3.20S/3.00S	2.70S/2.50S	2.25S/2.10S	0.50N/0.8N	1.00 BOK	1.85S/1.80S	1.85 S	4.20S/4.35S 1.55N/1.20N	G DW NDW NBN
MERSEY STREET	16.00	3.10 N	2.60 N	2.20 N	2.30 S	1.00 BOK	1.80 S	1.80 N	4.05 S 2.00 W	G DW NDW & E NBN
LANEWAY (LOT 505)	8.00	1.70 S	1.25 S	0.8 S	-	-	-	-	2.00 N 2.00 S	G DW NDW
LANEWAY (LOT 513)	8.00	1.70 E	1.25 E	0.8 E	-	-	-	-	2.00 E 2.00 W	G DW NDW
LANEWAY (LOT 527)	8.00	1.70 S	1.25 S	0.8 S	-	-	-	-	2.00 N 2.00 S	G DW NDW

SYMBOL LEGEND

Drains	Prop	Exist	Ex/Natural/FS Level
Sewer <300	—●—	—●—	FS @ Building Line
Sewer >300	—●—	—●—	Top/Toe of Batter
Water	—●—	—●—	Top Ret. Wall Level
House Drain	—●—	—●—	100yr Flood Level
Property Inlet	—●—	—●—	Fill Prop/Ex
Street Sign	—●—	—●—	Cut Prop/Ex
PSM	—●—	—●—	Fill Prop/Ex >500mm
Retaining Wall	—●—	—●—	
Conduits 50mm	—●—	—●—	
Conduits 100mm	—●—	—●—	
Ex Gas/Elect/Tel	—●—	—●—	

breese pitt dixon pty. ltd.
land surveyors civil engineers

1/19 coto street hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF. 366-E-6

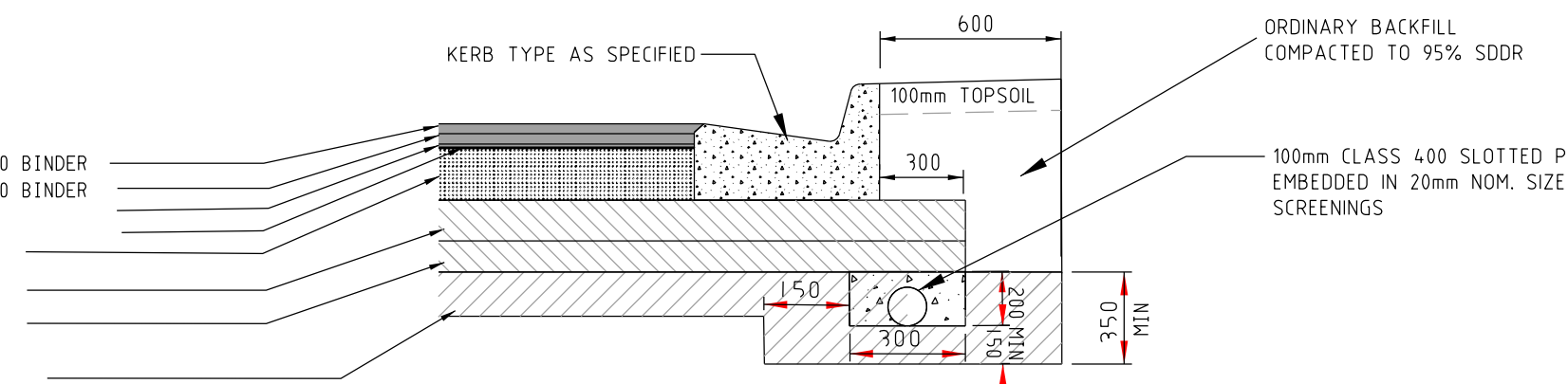
WARATAH ESTATE STAGE 5

MUNICIPALITY: HUME
REFERENCE: 8711 E/5

AMENDMENTS	DATE	REMARKS	CHECKED
C	08-06-17	G&W CONDUIT LOCATION UPDATED	SURVEY BJ
B	29-03-17	PIT COORDINATE & ROAD NAME UPDATED	DESIGN SBS
A	20-01-17	ISSUED FOR CONSTRUCTION	DRAWN SBS

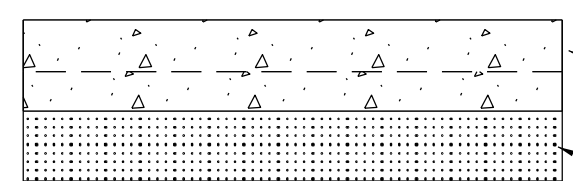
SCALE AS SHOWN DATUM AHD DATE JULY 16 SHEET 11 OF 14

- PAVEMENT TO CONSIST OF:
DEPTH (585mm)
- 10mm COMPACTED DEPTH SIZE 10 TYPE N ASPHALT WITH (170 BINDER)
 - 10mm COMPACTED DEPTH SIZE 10 TYPE N ASPHALT WITH (170 BINDER)
 - PRIME
 - 125mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 2 FCR
 - 100mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 3 FCR
 - 140mm COMPACTED DEPTH 20mm NOMINAL SIZE CLASS 4 FCR
 - 150mm COMPACTED DEPTH SELECT GRANULAR MATERIAL WITH MINIMUM SOAKED CBR OF 10% COMPACTED TO 98% SDDR.



PAVEMENT DETAILS
UPTHORPE WAY, ASTBURY CRESCENT,
BETHANY WAY, MERSEY STREET

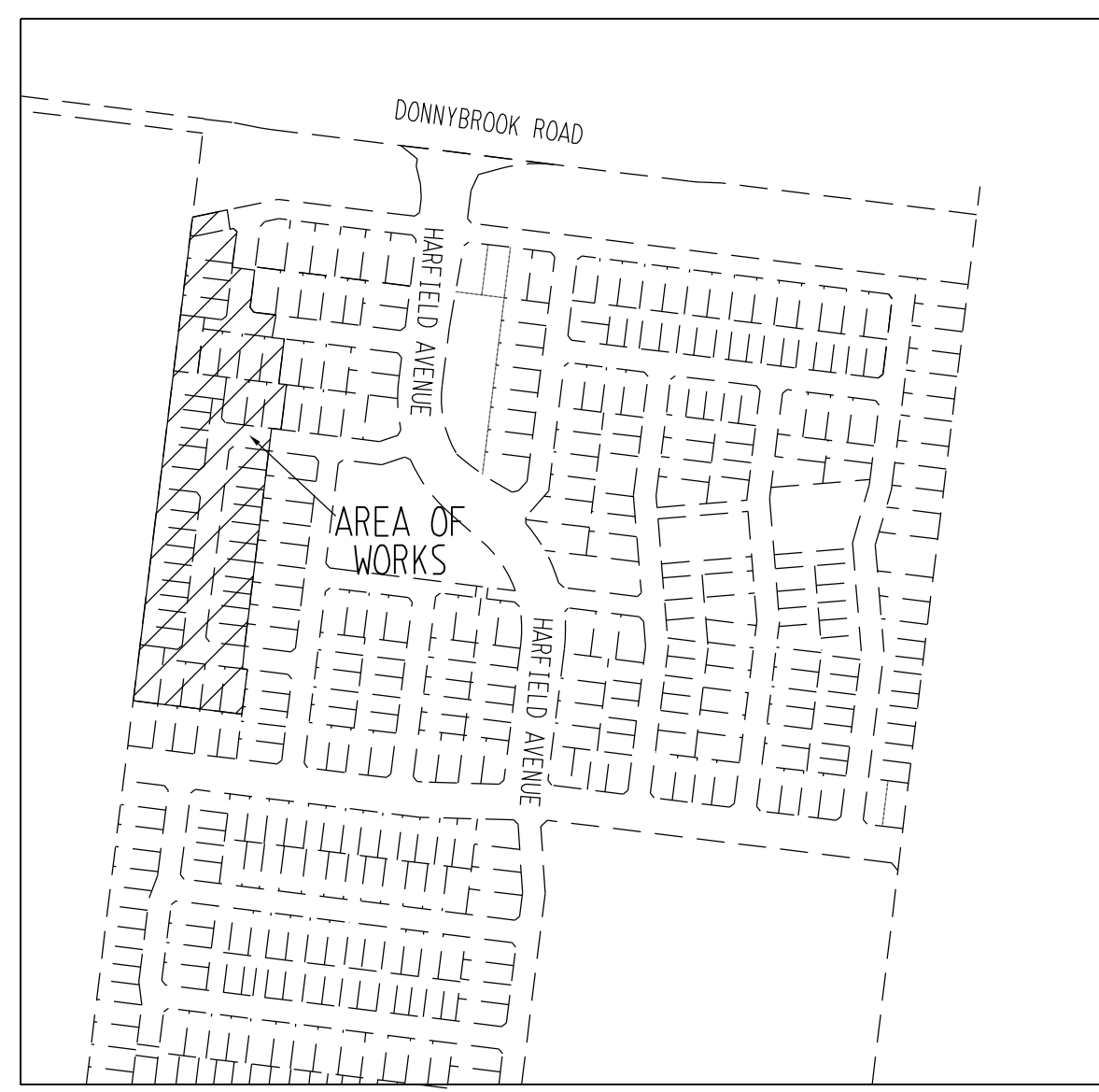
SUBGRADE
SILTY CLAY COMPACTED TO AT LEAST 100% STD DRY DENSITY RATIO (SOAKED C.B.R > 2.5%) WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.



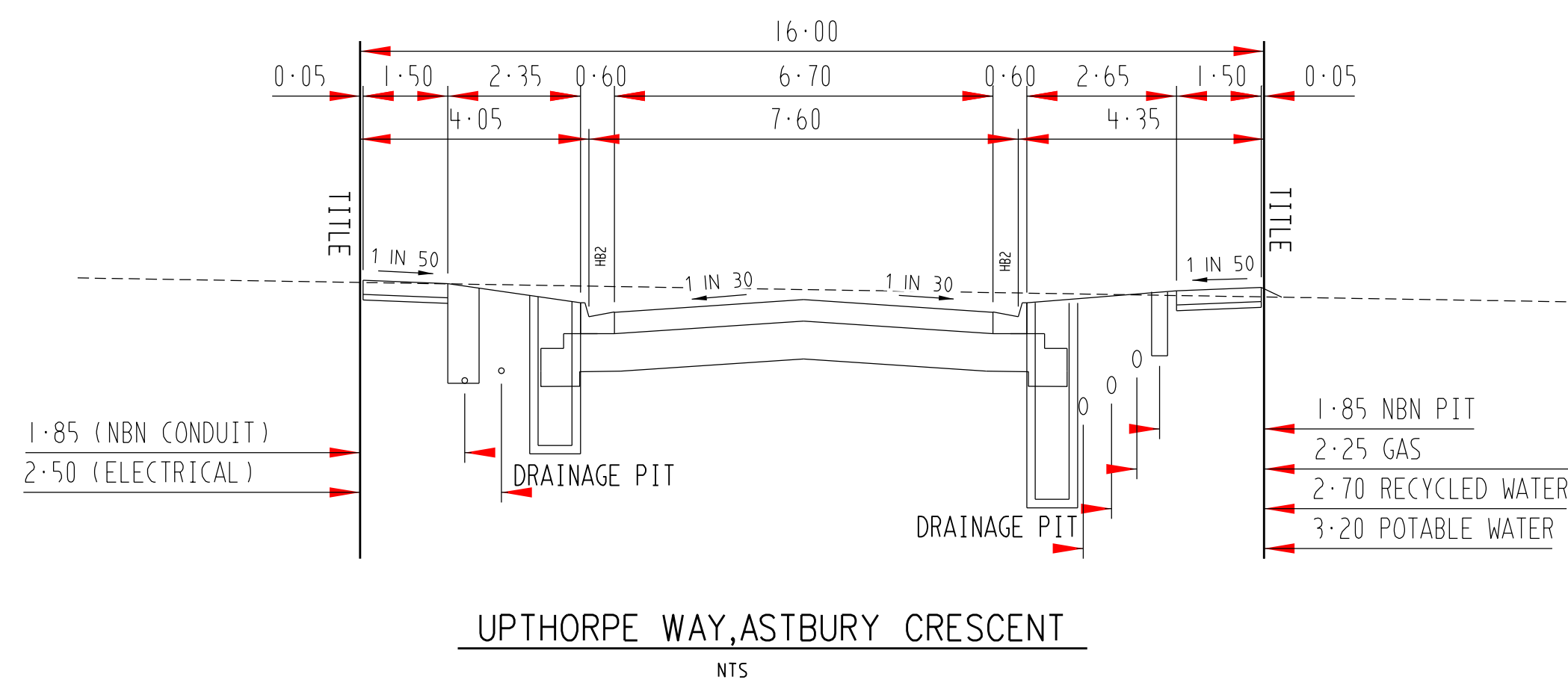
PAVEMENT DETAILS
LANE WAY

- PAVEMENT TO CONSIST OF:
DEPTH (300mm)
- 200mm DEPTH REINFORCED SLAB MESH CENTRALLY PLACED, PATTERN PRESSED COLOURED CONCRETE 32MPa, BLACK COBBLESTONE PATTERN
 - 100mm COMPACTED DEPTH CLASS 2 CRUSHED ROCK, COLOUR ABLOX BLACK 2.00% BY WEIGHT
- CONTACT SUPERVISING ENGINEER PRIOR TO COMMENCEMENT OF PATTERN PRESS STENCILING SUFFICIENT DEPTH OF SOFT GROUND MUST BE EXCAVATED & REPLACED WITH APPROVED CRAIGIEBURN SANDSTONE OR EQUIVALENT TO ACHIEVE SUBGRADE COMPACTION DENSITY OF 95% AS PER AS 1289.
- ALL JOINTING TO BE AS PER C & CA GUIDELINES.

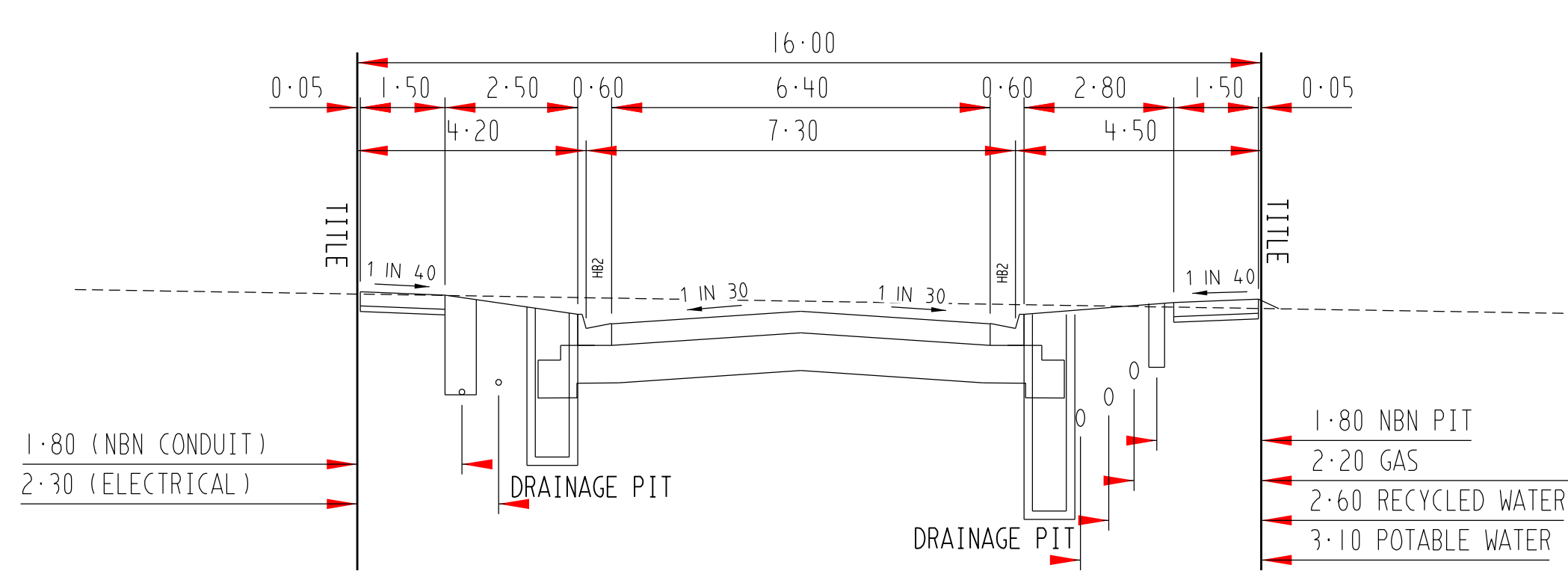
SUBGRADE
MATERIAL AS FOUND (SILTY CLAY) COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STD) AS 1289.5.1.1



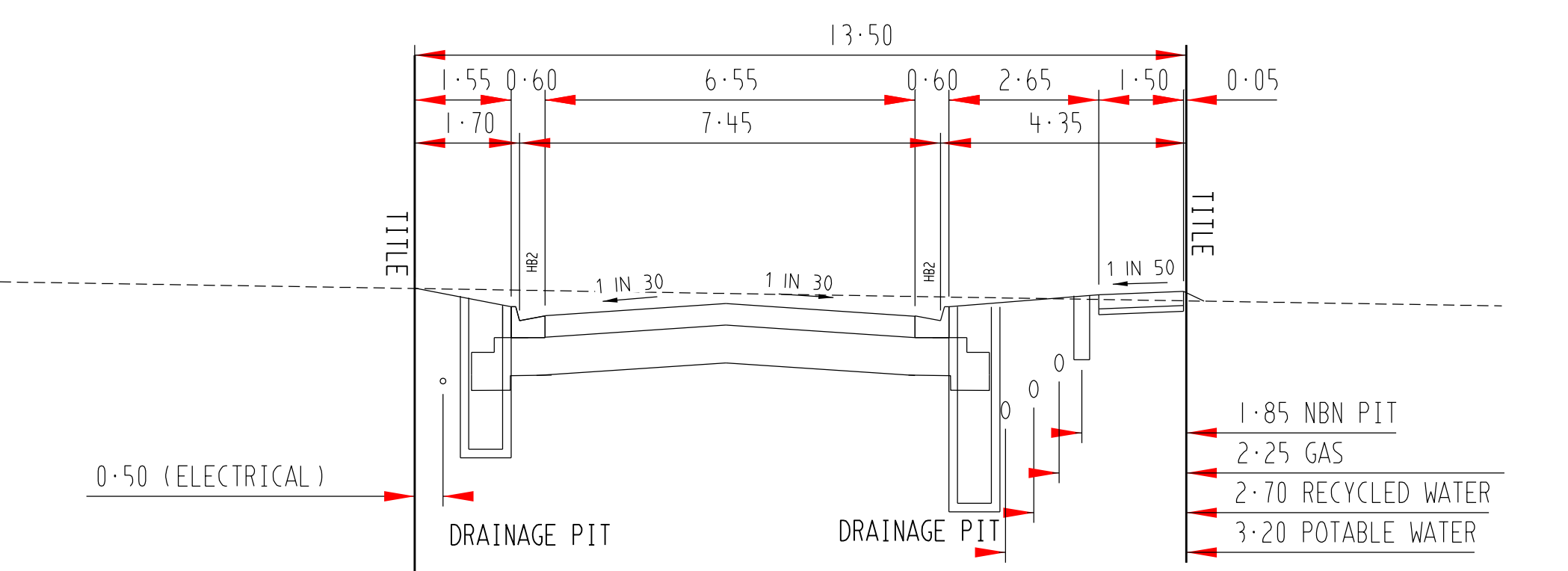
LOCALITY PLAN



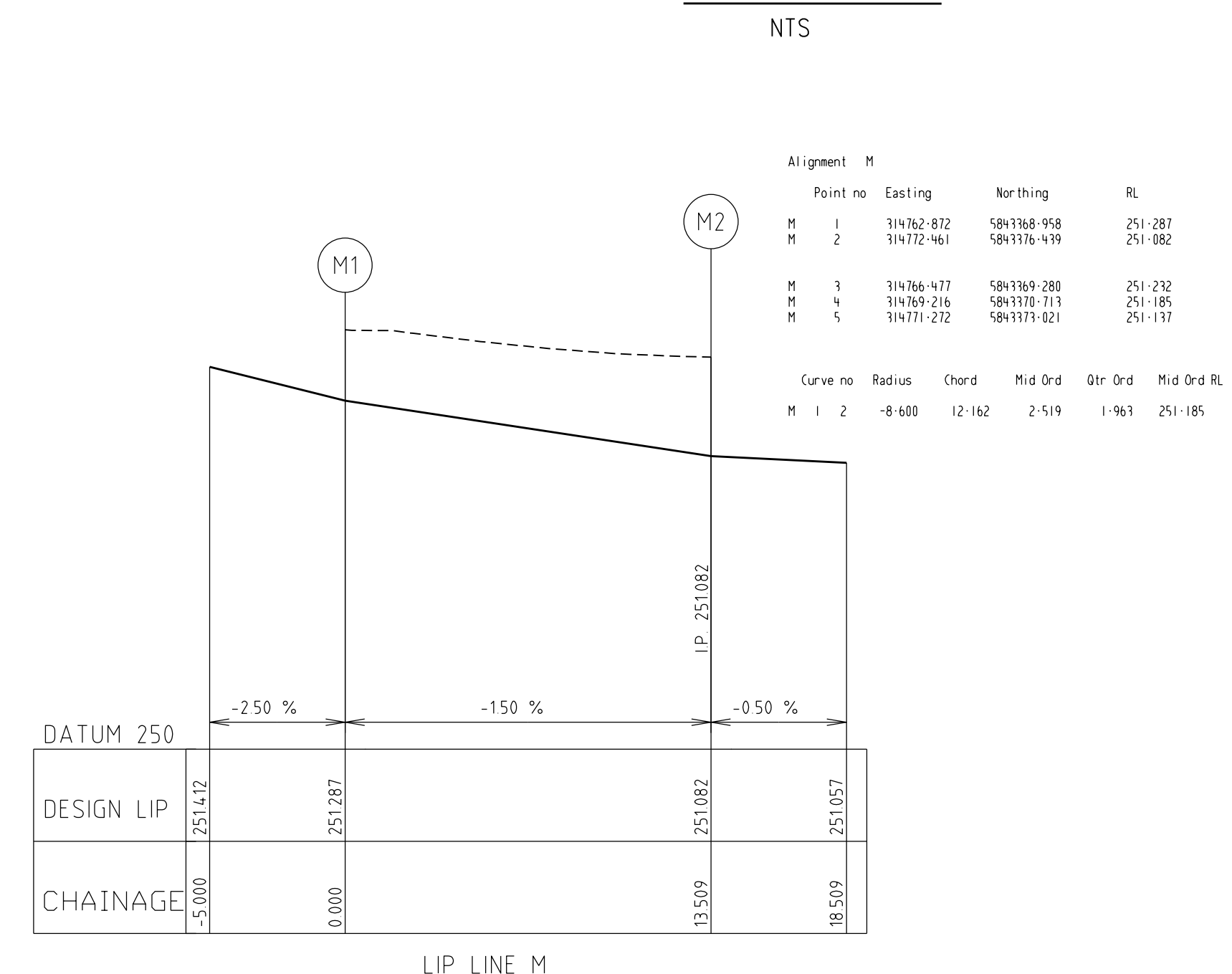
UPTHORPE WAY, ASTBURY CRESCENT
NTS



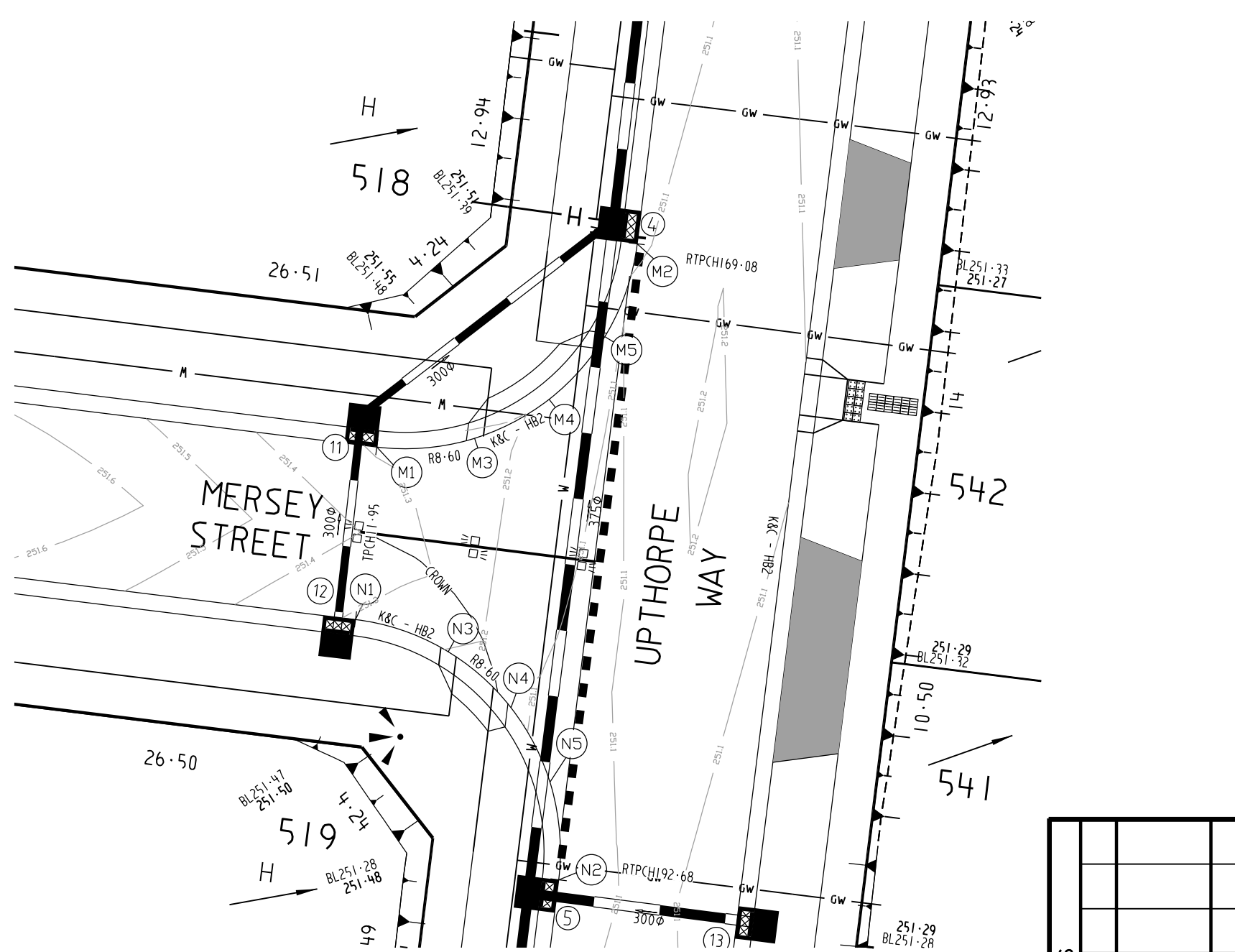
MERSEY STREET
NTS



BETHANY WAY
NTS



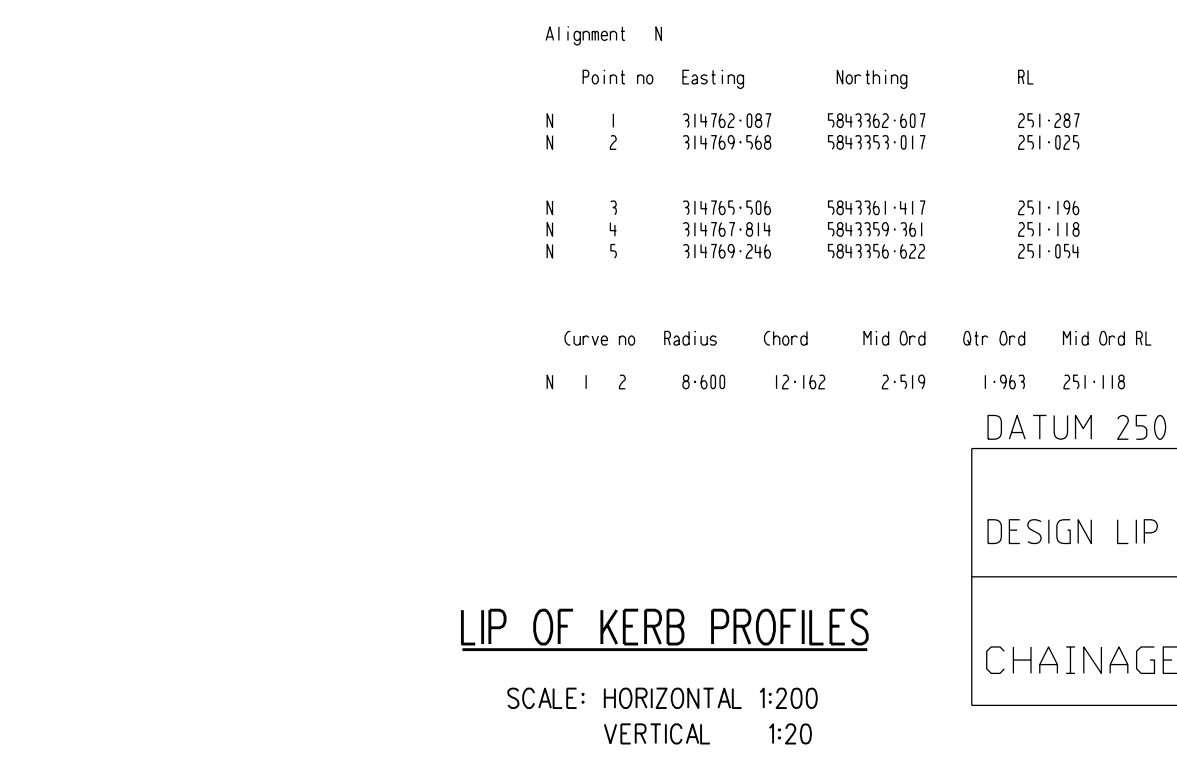
LIP LINE M



INTERSECTION DETAILS
SCALE: 1:200

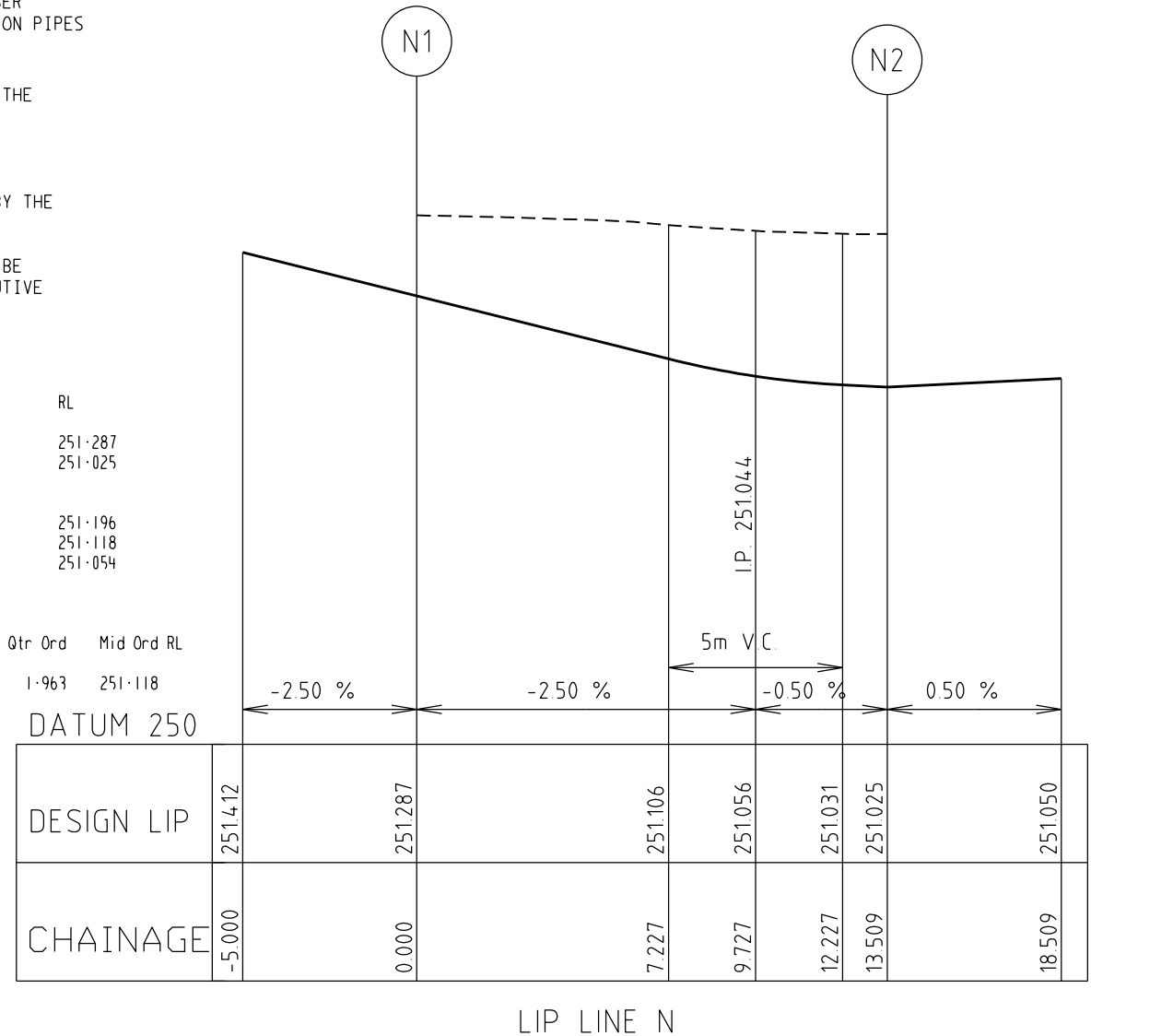
NOTES

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MPA & HUME CITY COUNCIL STANDARD DRAWINGS, SPECIFICATIONS, APPROVED PLANS AND TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.
- COUNCIL TO BE NOTIFIED SEVEN (7) CLEAR WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORKS WITH A PRECOMMENCEMENT MEETING BEING HELD BETWEEN HUME CITY COUNCIL, THE CONSULTANT AND THE CONTRACTOR BEFORE WORKS COMMENCE. A SITE MANAGEMENT PLAN IS TO BE SUBMITTED PRIOR TO COMMENCEMENT OF WORKS AND PRIOR TO AN ONSITE PRECOMMENCEMENT MEETING.
- PRIOR TO COMMENCEMENT OF THE WORKS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:
 - SOURCE OF QUARRY MATERIAL
 - N.A.I.A. APPROVED TEST RESULTS FOR THE F.C.R. THAT IS TO BE USED
 - IF THE SOURCE OF THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF THE WORKS, THEN NEW TEST RESULTS SHALL BE PROVIDED.
- PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004 AND OHS REGULATIONS 2007 HAVE BEEN AND WILL BE COMPLIED WITH.
- PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR MUST SUBMIT A SMP TO THE CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT PROTECTION AUTHORITY PUBLICATION No.275 "CONSTRUCTION TECHNIQUES FOR SEDIMENT POLLUTION CONTROL". APPROPRIATE SILTATION CONTROL IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE WORKS.
- THE DISPOSAL SITE FOR SPOIL REMOVAL FROM SITE AND TRUCK ROUTE IS TO BE SUBMITTED TO AND APPROVED BY THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE IN WRITING PRIOR TO THE COMMENCEMENT OF ANY WORKS.
- WHERE WORKS ARE IN THE VICINITY OF EXISTING SERVICES, THESE SERVICES ARE TO BE LOCATED AND EXPOSED/PROVED PRIOR TO COMMENCEMENT OF WORKS, AND THE RELEVANT AUTHORITIES NOTIFIED SEVEN (7) CLEAR DAYS PRIOR TO THE COMMENCEMENT OF THE WORKS.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
- ALL CO-ORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA).
- THE CONTRACTOR MUST ARRANGE THE REQUISITE INSPECTIONS OF THE WORKS WITH THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE AS PER THE HOLD POINTS IN THE MPA MANUAL AND HUME CITY COUNCIL SPECIFICATIONS.
- FILL AREAS TO BE STRIPPED OF TOPSOIL, FILLED AND TOPSOIL REPLACED TO OBTAIN FINAL FILL LEVELS AS SHOWN ON PLAN. FILLING IS TO BE CLEAN CLAY COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH A.S. 1289.5.1.1-2003.
- FILLING TO COMPLY WITH A.S. 3798-2007, LEVEL 1 UNLESS SPECIFIED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL IMPORTED FILL MATERIAL, INCLUDING TOPSOIL, SATISFIES THE DESCRIPTION FOR CLEAN FILL MATERIAL IN EPA BULLETIN PUBLICATION NO 448 SEPT '96 AND SUBSEQUENT REVISIONS. THE CONTRACTOR SHALL IF REQUIRED PROVIDE VERIFICATION INCLUDING TEST CERTIFICATES TO THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.
- NO TREE OR NATIVE VEGETATION IS TO BE DISTURBED OR REMOVED WITHOUT PRIOR APPROVAL FROM COUNCIL'S SUSTAINABLE ENVIRONMENT DEPARTMENT. ANY TREES REMOVED, VEGETATION OR OTHER MATERIALS ARE NOT TO BE BURNED ON SITE.
- BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5M DEEP, NOTICE OF SUCH PROPOSAL IS TO BE FORWARDED BY THE CONTRACTOR TO WORKSAFE VICTORIA.
- THE CONTRACTOR IS TO OBTAIN A BUILDING PERMIT FOR ANY STRUCTURES/FENCES AND FOR ANY RETAINING WALLS OVER 1.0M IN HEIGHT.
- ANY INFRASTRUCTURE DAMAGE DURING THE DEFECTS LIABILITY PERIOD IS THE RESPONSIBILITY OF THE DEVELOPER OR HIS REPRESENTATIVE AND IS TO BE REINSTATED TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER OR HIS REPRESENTATIVE.
- ALL DISTURBED AREAS, i.e. NATURE STRIPS, BATTERS, ALLOTMENTS & RESERVES, ARE TO BE REINSTATED TO A CLEAN, TIDY CONDITION. TOP DRESSED 1100mm LOMY TOP SOIL FREE OF CLUMPS, SODS AND CLAY LUMPS) AND SOWN WITH GRASS SEED. SEED IS TO BE A DROUGHT TOLERANT COUCH/FESCUE MIX UNLESS OTHERWISE DETAILED. BLEND IS GENERALLY AS FOLLOWS:
 - 90% DROUGHT TOLERANT PERENNIAL RYE
 - 10% KIKUYU
- NOTE: GRASS IS TO BE ESTABLISHED PRIOR TO THE END OF THE MAINTENANCE PERIOD OR UNLESS OTHERWISE AGREED.
- FOOTPATHS ARE TO BE 50mm OFFSET FROM TITLE BOUNDARIES UNLESS NOTED OTHERWISE. VEHICLE CROSSING ALIGNMENTS ARE GENERALLY TO BE PARALLEL TO THE SIDE BOUNDARY.
- ALL NEW CONCRETE WORKS SHALL BE JOINED INTO ABUTTING EXISTING CONCRETE WITH 450mm LONG Y20 DONUT BARS @ 600 CENTRES, UNLESS OTHERWISE SPECIFIED.
- ANY EXPOSED AGGREGATE CONCRETE WORKS TO BE ACHIEVED BY SAND-BLASTING ONLY. WASHING AGGREGATE OFF WITH WATER IS NOT PERMITTED.
- SERVICE CONDUITS TRENCHES UNDER DRIVEWAYS AND FOOTPATHS ARE TO BE 50MM P.V.C. LAYED 450mm DEEP AND EXTENDING 250mm EACH SIDE OF DRIVEWAYS/FOOTPATHS. ALL SERVICE CONDUITS TRENCHES UNDER ROAD PAVEMENTS ARE TO BE BACKFILLED WITH 20mm 3% CEMENT TREATED CLASS 3 CRUSHED ROCK COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE MODIFIED COMPACTION TEST IN ACCORDANCE WITH A.S. 1289.5.2.1-2003. ALL SERVICE CONDUITS TRENCHES UNDER FOOTPATH, VEHICULAR CROSSINGS, PARKING BAYS AND WITHIN 750MM OF PARKING BAYS TO BE BACKFILLED WITH CLASS 3 CRUSHED ROCK.
- ALL STORMWATER DRAINS TO BE CLASS 2 R.C. OR RIGID F.C.R. WITH ADCOL FLEXIBLE COLLARS UNLESS OTHERWISE ALL PIPES UP TO & INCLUDING 750mm DIA. ARE TO BE RUBBER RING JOINTED INTERLOCKING/FLUSH JOINTS WITH EXTERNAL BANDS CAN ONLY BE USED ON PIPES OVER 750mm DIA.
- WHERE NEW ASPHALT, CONCRETE K & C, PATHS AND DRIVEWAYS MATCH INTO EXISTING, THE EXISTING SURFACE IS TO BE SAW CUT AND MATCHED NEATLY.
- ALL REDUNDANT ASSETS ARE TO BE REMOVED AND DISPOSED OFF SITE.
- ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN OR DIRECTED BY THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.
- AT THE COMPLETION OF ALL WORKS, ALL RUBBISH, DEBRIS AND SURPLUS SPOIL SHALL BE REMOVED AND THE SITE SHALL BE CLEARED TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.



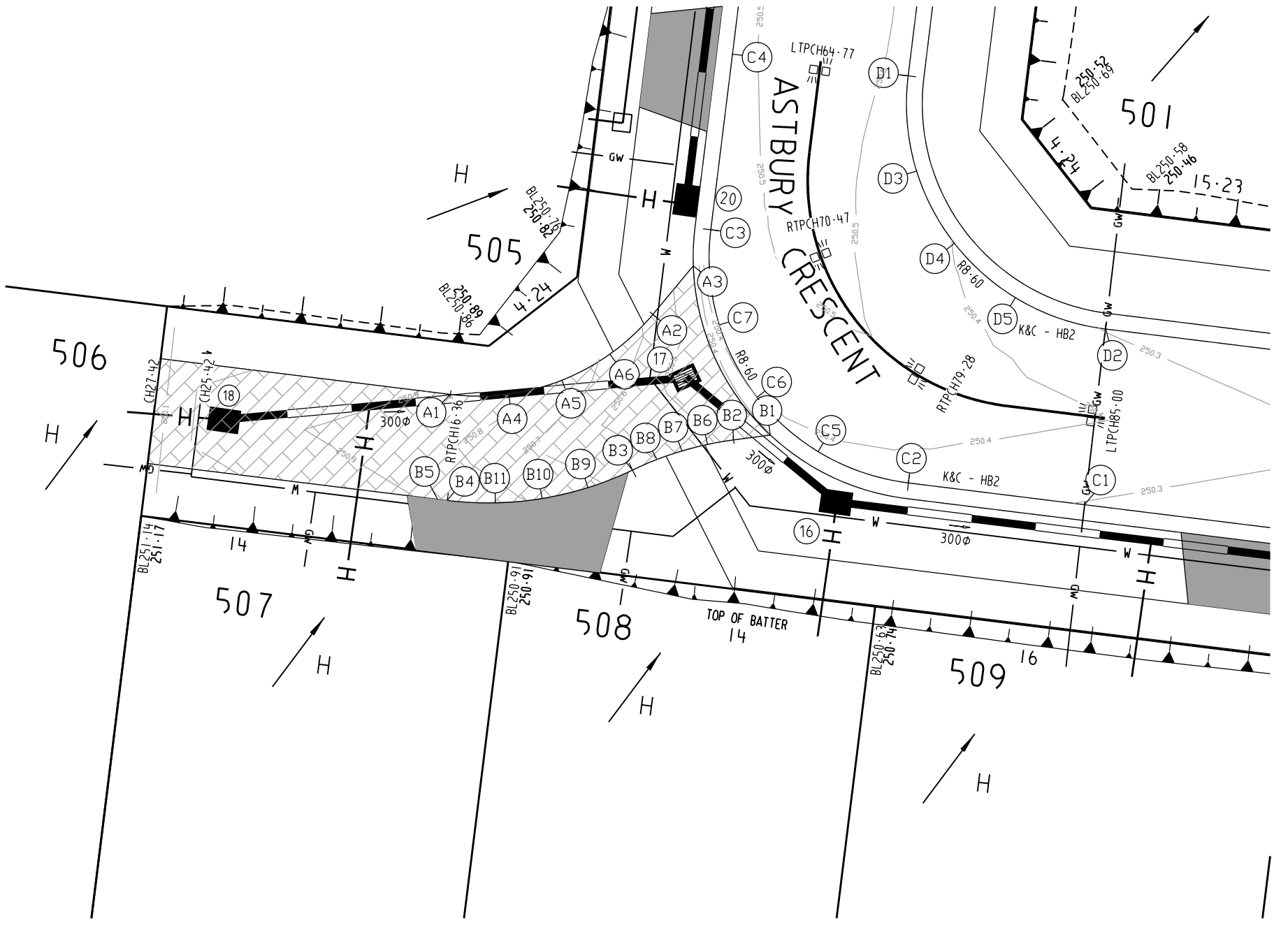
LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20



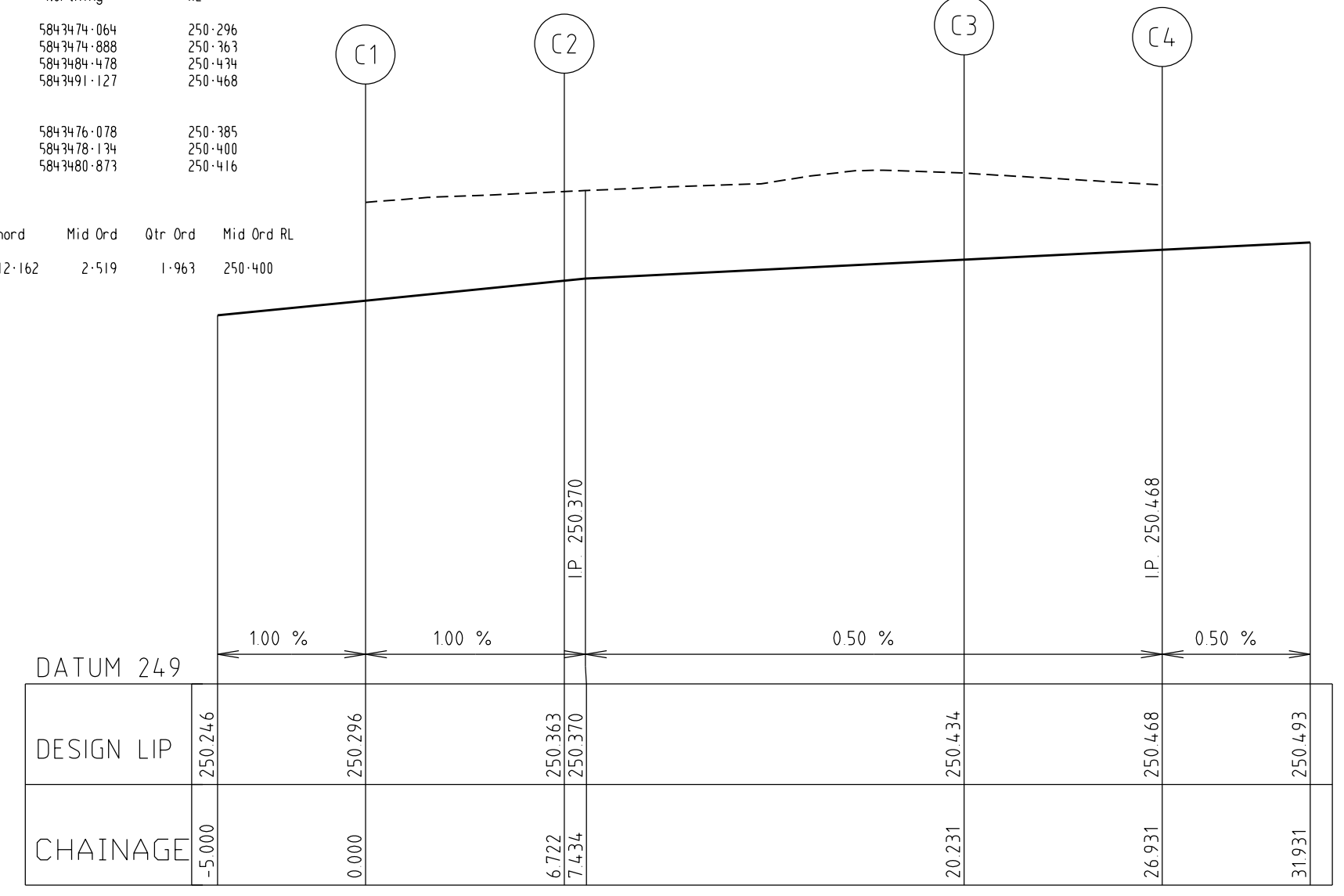
LIP LINE N

AMENDMENTS	B	29-03-17	ROAD NAME UPDATED	 breese pitt dixon pty. ltd. land surveyors civil engineers	1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310
	A	20-01-17	ISSUED FOR CONSTRUCTION		
VER	DATE	REMARKS	CHECKED	SCALE AS SHOWN	DATUM AHD
WARATAH ESTATE STAGE 5				MUNICIPALITY HUME REFERENCE 8711 E/5	
				DATE	JULY '16
				SHEET	2 OF 14



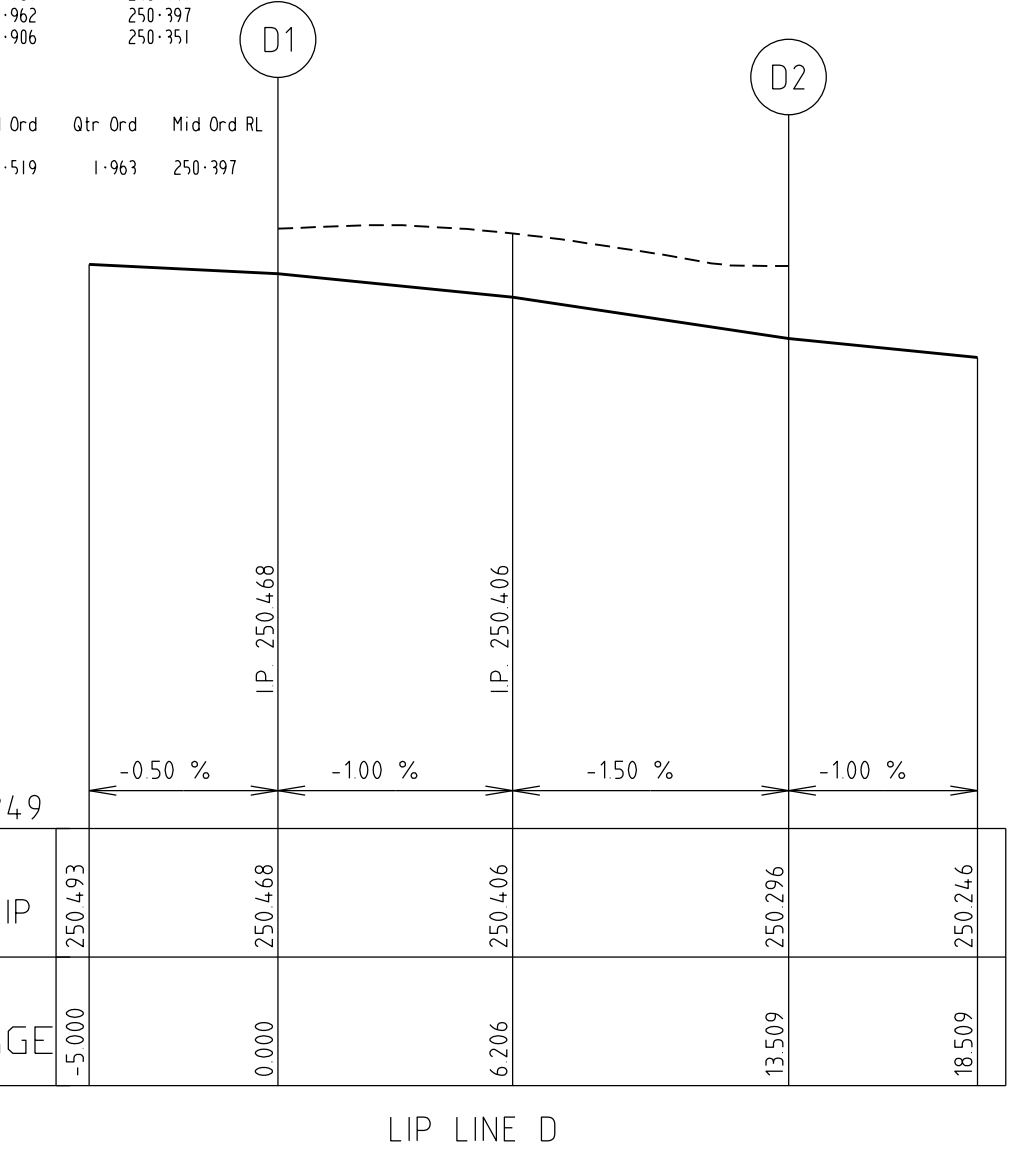
Alignment C

Point no	Easting	Northing	RL
C 1	314802.539	5849474.964	250.296
C 2	314795.868	5849474.888	250.363
C 3	314788.987	5849494.478	250.434
C 4	314789.209	5849491.127	250.468
C 5	314792.450	5849476.078	250.385
C 6	314780.142	5849481.174	250.400
C 7	314788.710	5849480.871	250.416



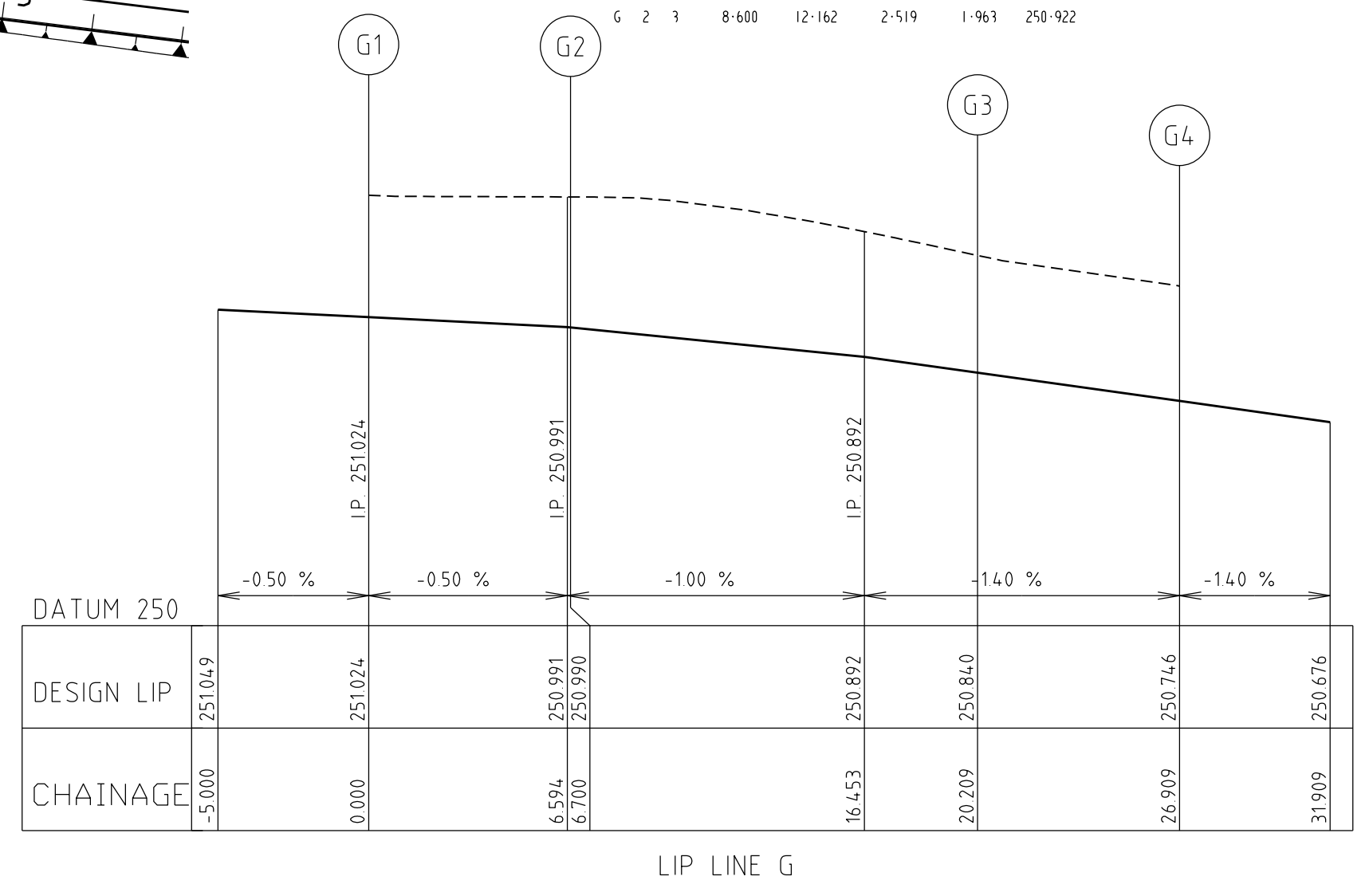
Alignment D

Point no	Easting	Northing	RL
D 1	314795.858	5849490.306	250.468
D 2	314803.139	5849480.716	250.296
D 3	314796.180	5849486.701	250.431
D 4	314797.613	5849481.962	250.397
D 5	314799.921	5849481.906	250.351



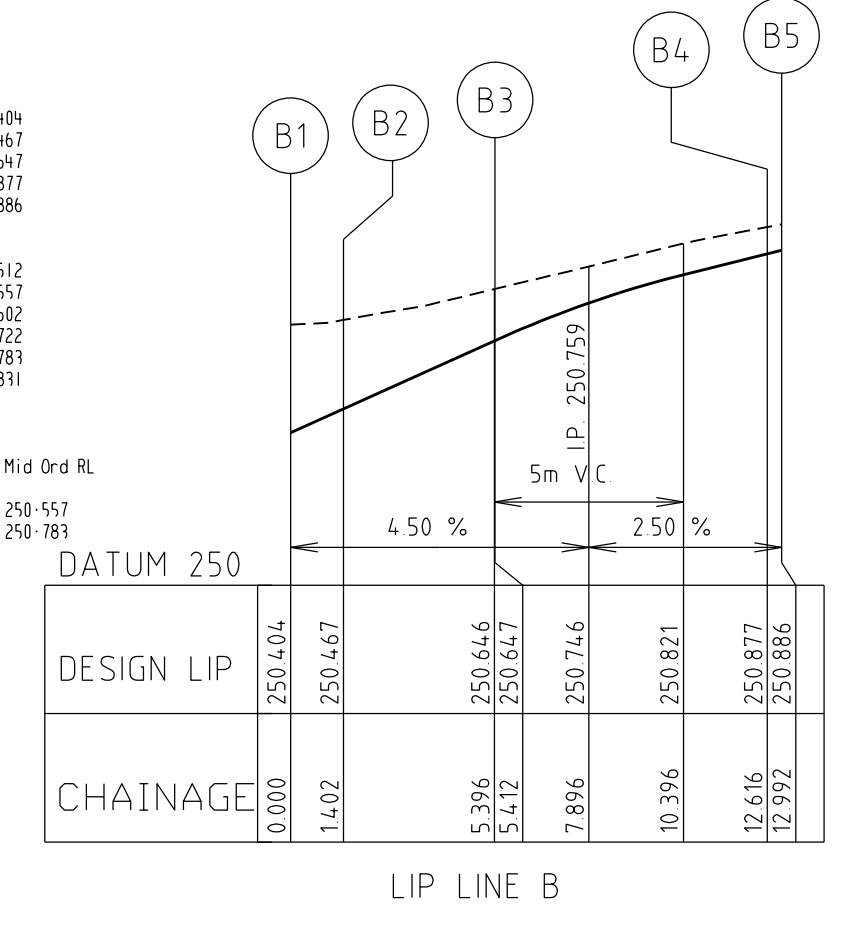
Alignment G

Point no	Easting	Northing	RL
G 1	314771.893	5849388.027	251.024
G 2	314774.714	5849394.877	250.998
G 3	314784.306	5849402.151	250.880
G 4	314790.953	5849401.336	250.746
G 5	314775.904	5849398.895	250.953
G 6	314771.969	5849400.483	250.922
G 7	314780.608	5849401.835	250.891



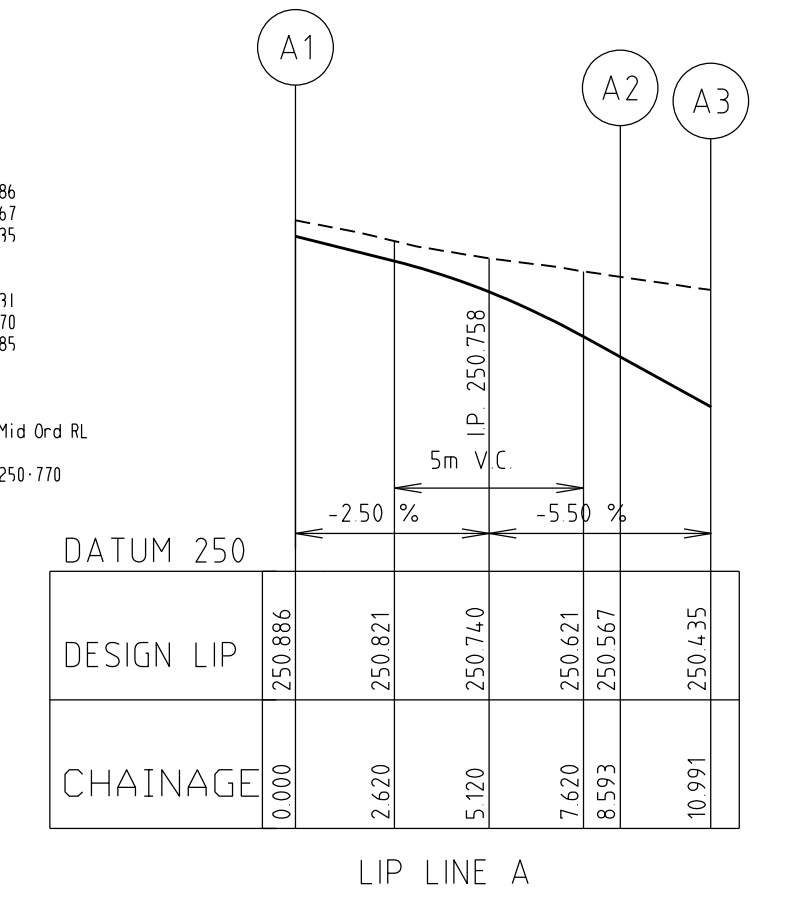
Alignment B

Point no	Easting	Northing	RL
B 1	314790.642	5849476.700	250.404
B 2	314789.253	5849476.518	250.467
B 3	314785.426	5849475.137	250.467
B 4	314778.411	5849474.223	250.877
B 5	314778.041	5849474.269	250.886
B 6	314780.262	5849476.747	250.512
B 7	314787.294	5849476.180	250.567
B 8	314786.349	5849475.776	250.682
B 9	314783.786	5849475.708	250.722
B 10	314782.001	5849474.295	250.781
B 11	314780.229	5849474.131	250.811



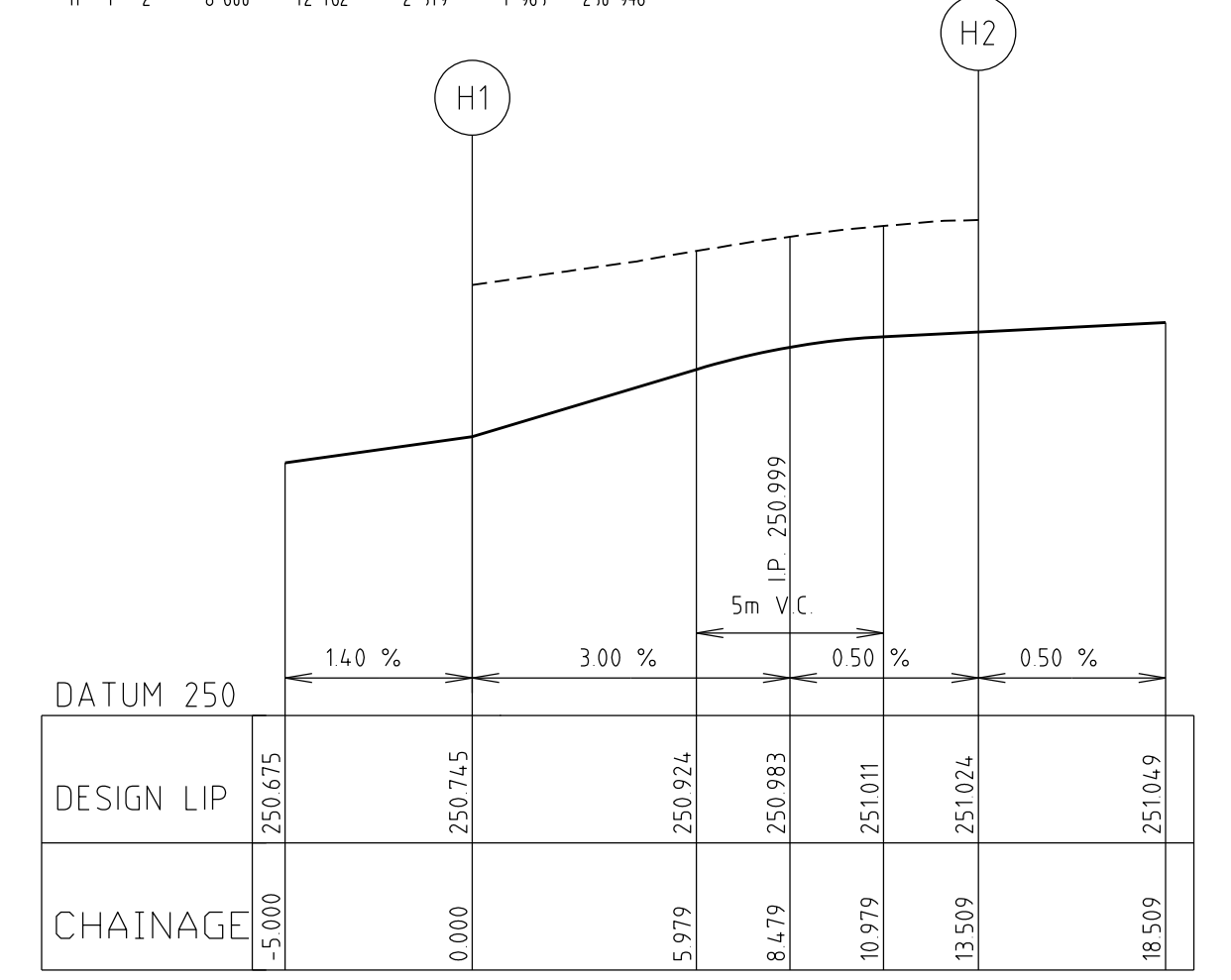
Alignment A

Point no	Easting	Northing	RL
A 1	314778.531	5849478.239	250.886
A 2	314788.193	5849481.210	250.467
A 3	314787.128	5849481.112	250.435
A 4	314780.741	5849478.252	250.811
A 5	314782.349	5849478.777	250.770
A 6	314784.572	5849479.768	250.685



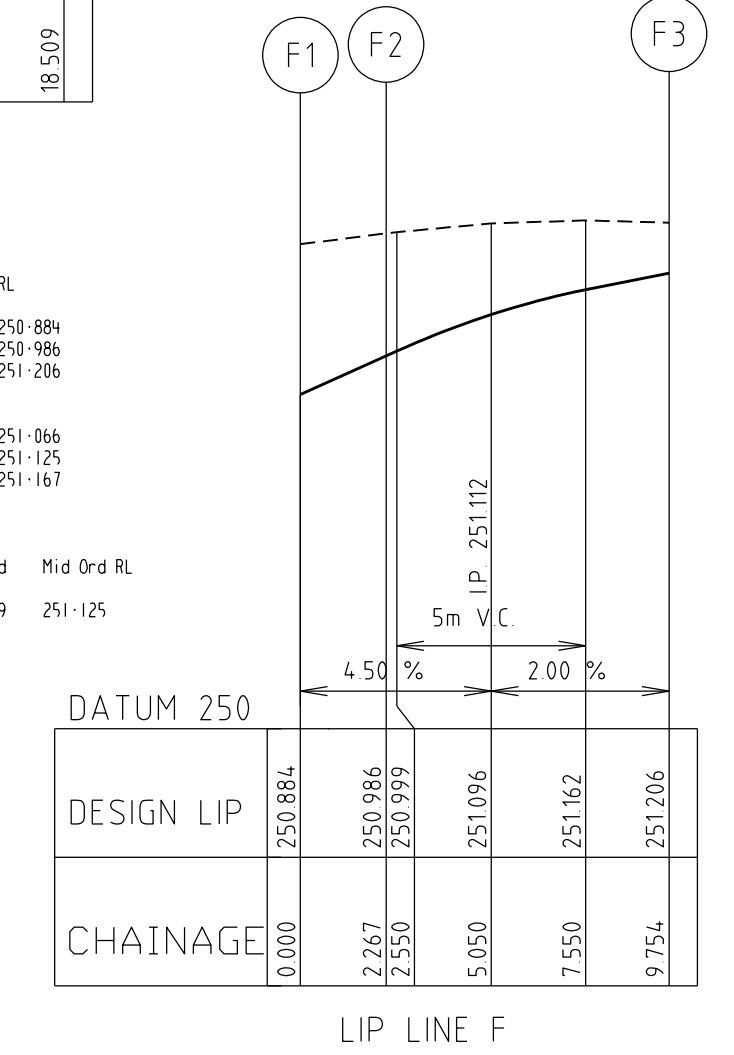
Alignment H

Point no	Easting	Northing	RL
H 1	314790.132	5849394.487	250.745
H 2	314780.542	5849387.206	251.024
H 3	314780.527	5849394.364	250.804
H 4	314781.788	5849392.432	250.944
H 5	314781.732	5849390.624	251.083



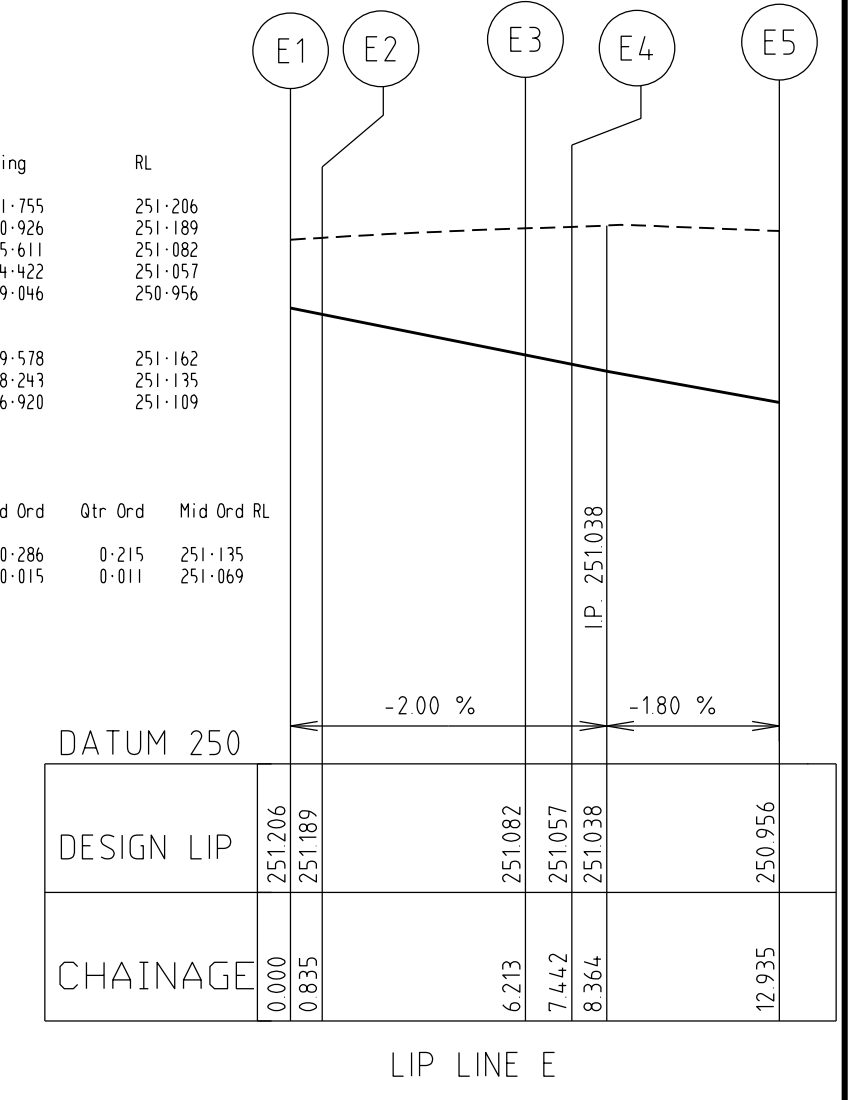
Alignment F

Point no	Easting	Northing	RL
F 1	314781.743	5849402.701	250.884
F 2	314788.202	5849404.762	250.986
F 3	314777.972	5849411.265	251.206
F 4	314779.885	5849405.901	251.066
F 5	314778.324	5849407.567	251.125
F 6	314777.950	5849409.352	251.167



Alignment E

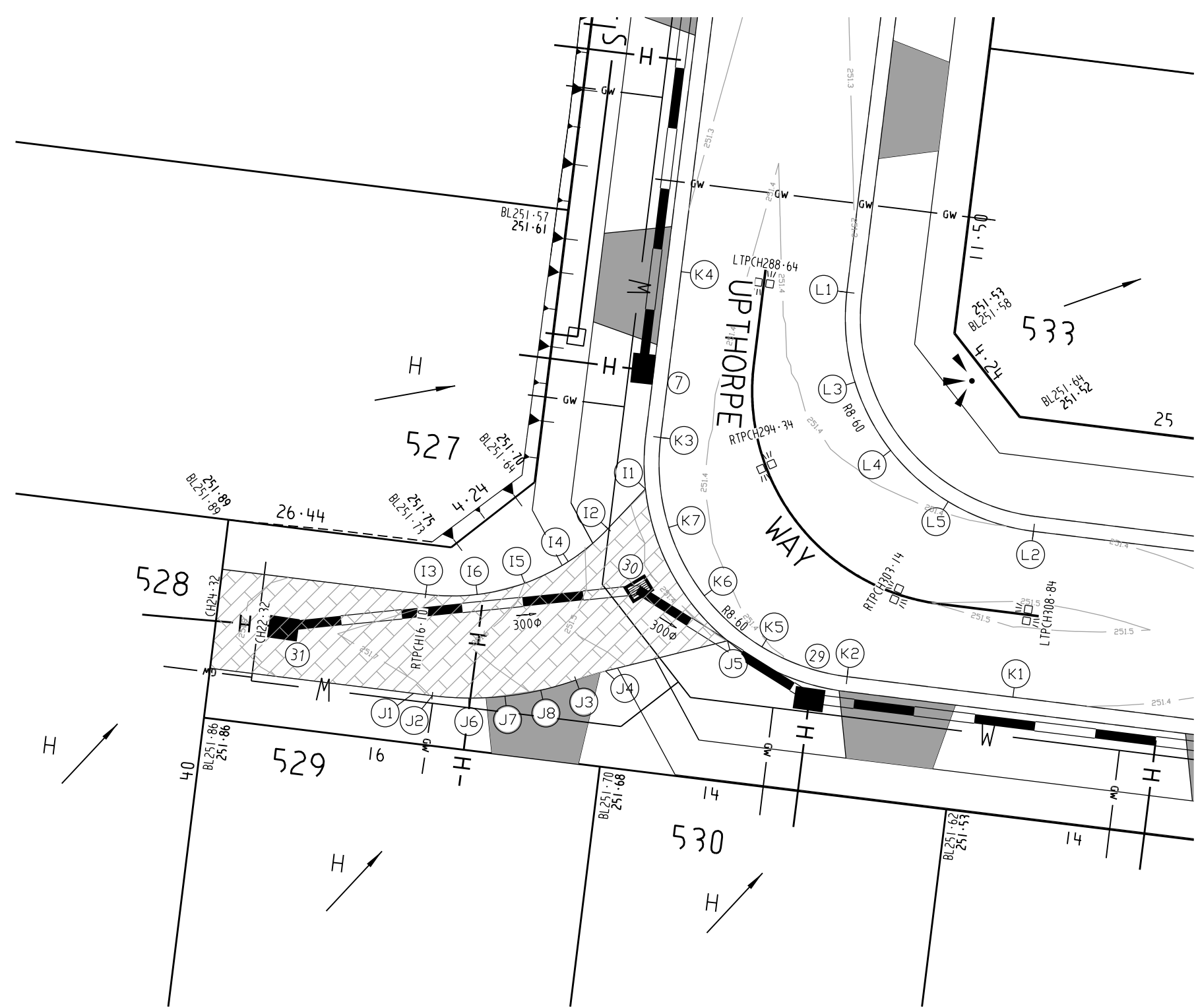
Point no	Easting	Northing	RL
E 1	314774.802	5849411.755	251.206
E 2	314773.400	5849410.926	251.189
E 3	314774.182	5849405.611	251.082
E 4	314774.682	5849404.422	251.053
E 5	314775.818	5849399.046	250.956
E 6	314773.806	5849409.578	251.162
E 7	314773.857	5849408.243	251.135
E 8	314774.048	5849406.920	251.189



INTERSECTION DETAILS SCALE 1:200
LIP OF KERB PROFILES SCALE: HORIZONTAL 1:200 VERTICAL 1:20

		breese pitt dixon pt. ltd. land surveyors civil engineers		1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
AMENDMENTS B 29-03-17 ROAD NAME UPDATED A 20-01-17 ISSUED FOR CONSTRUCTION		MELWAY REF. 766-E-6 SURVEY BJ DESIGN SBS DRAWN SBS		WARATAH ESTATE STAGE 5 MUNICIPALITY HUME REFERENCE 8711 E/5	
VER	DATE	REMARKS	CHECKED	SCALE AS SHOWN	DATUM AHD
			DATE	JULY 16	SHEET 3 OF 14

Plotter: 29/02/2017

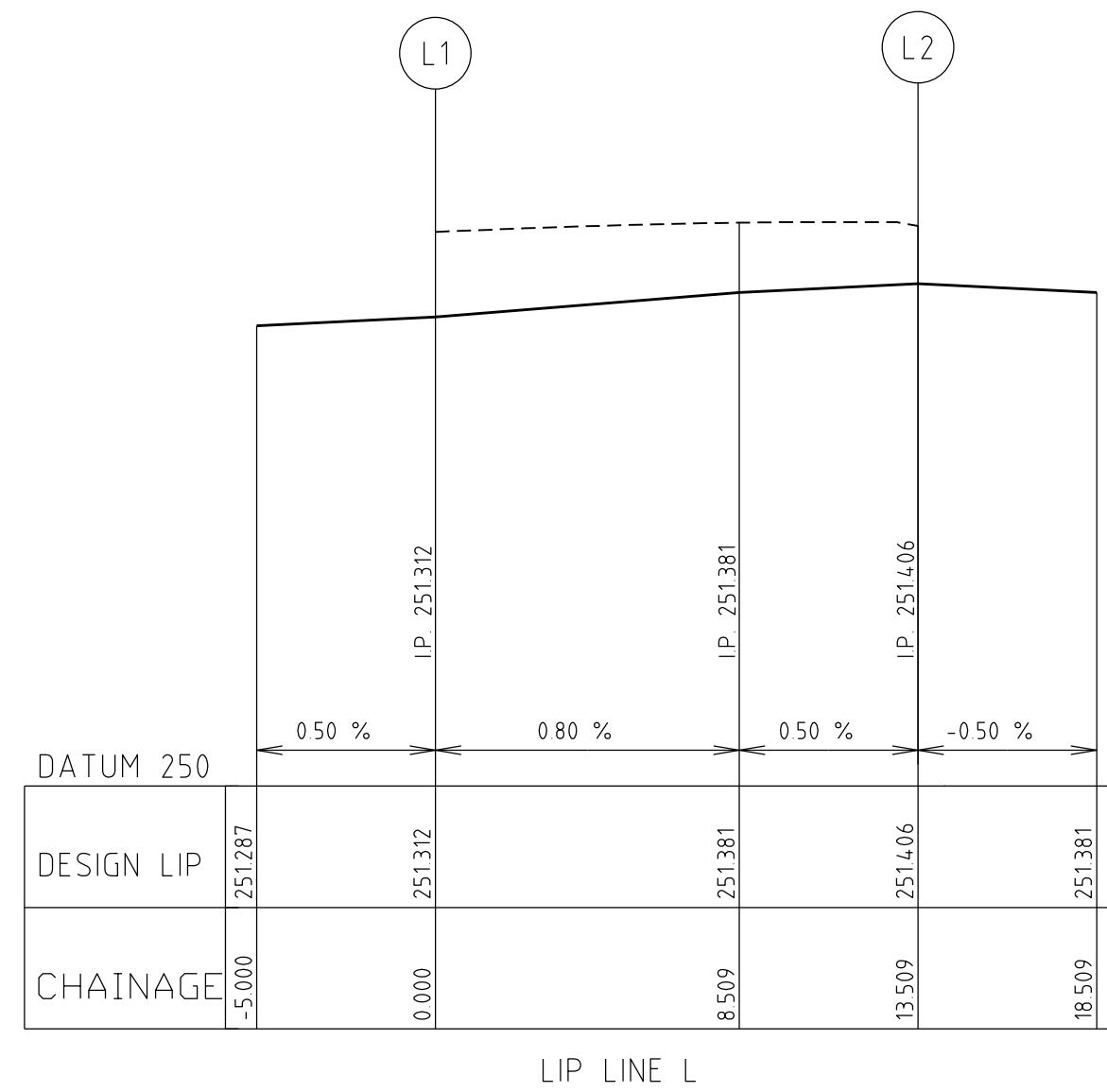
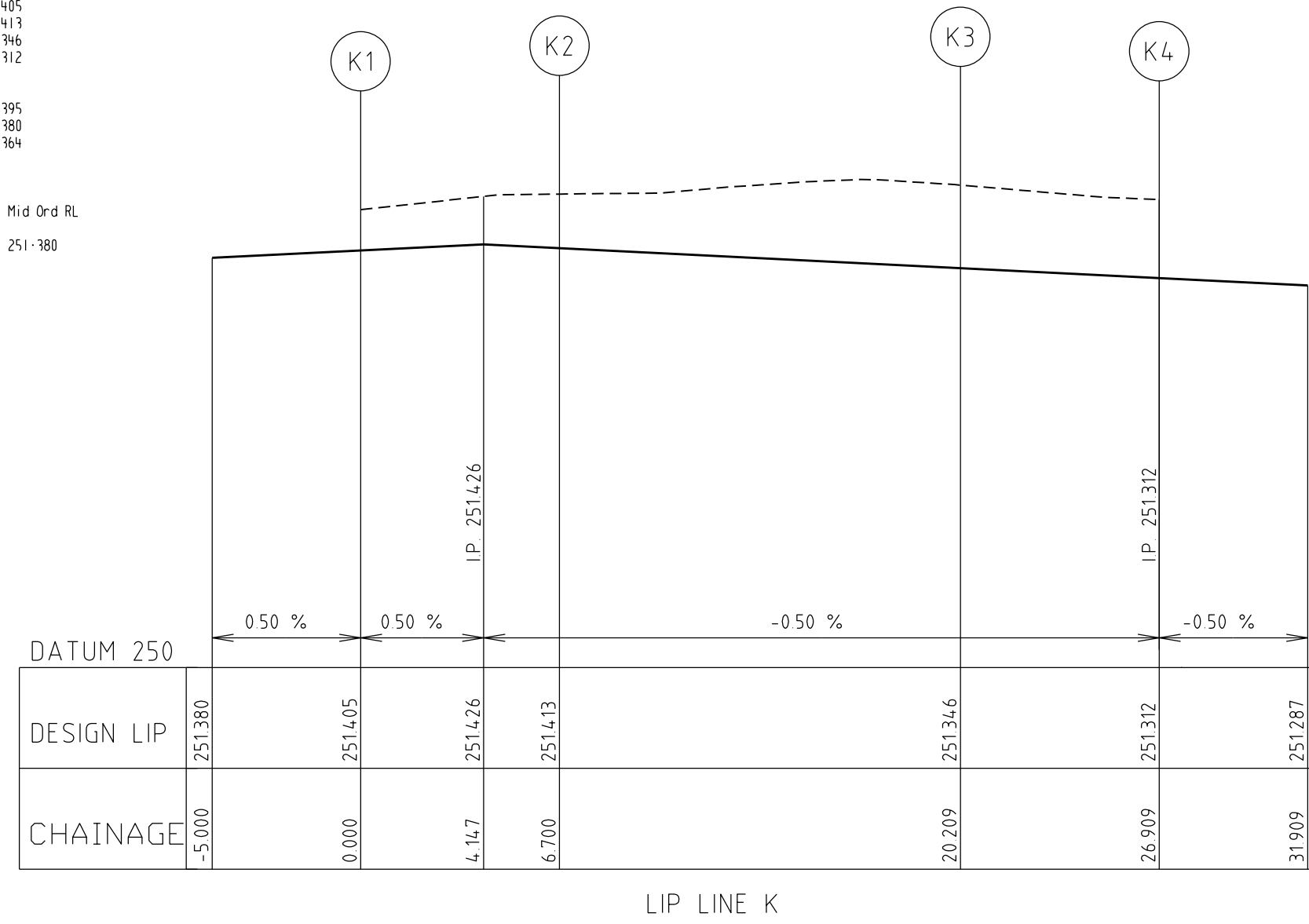


INTERSECTION DETAILS
SCALE 1:200

Alignment K

Point no	Easting	Northing	RL
K 1	314771.114	584240.728	251.405
K 2	314766.465	584241.546	251.413
K 3	314756.589	584251.139	251.346
K 4	314757.805	584257.788	251.312
K 5	314761.086	584262.739	251.395
K 6	314758.738	584244.795	251.380
K 7	314757.306	584247.534	251.364

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
K 2 3	8.600	12.162	2.519	1.961	251.388



Alignment L

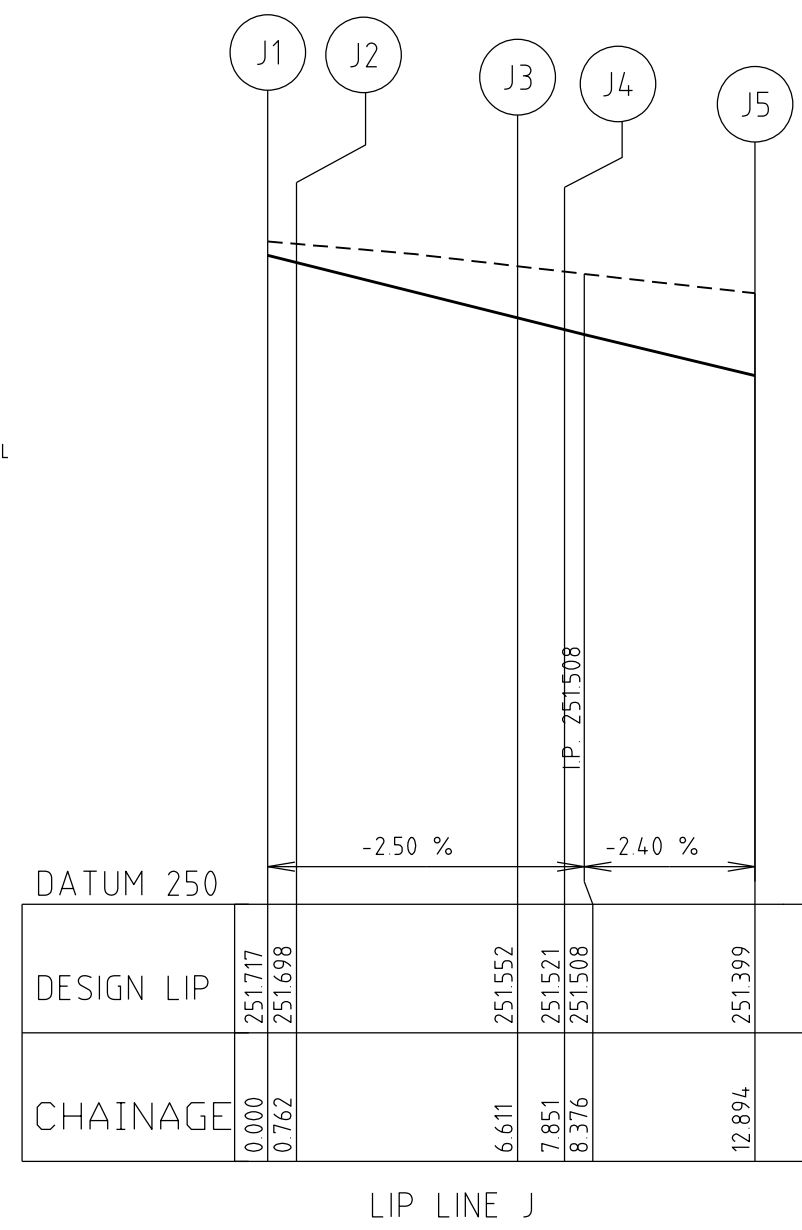
Point no	Easting	Northing	RL
L 1	314764.455	584256.967	251.312
L 2	314771.936	584247.378	251.406
L 3	314764.777	584251.362	251.342
L 4	314766.209	584250.623	251.366
L 5	314768.517	584248.567	251.387

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
L 1 2	8.600	12.162	2.519	1.961	251.366

Alignment J

Point no	Easting	Northing	RL
J 1	314747.068	584240.877	251.717
J 2	314747.825	584240.784	251.698
J 3	314753.586	584241.415	251.552
J 4	314754.773	584241.772	251.521
J 5	314759.668	584242.485	251.399
J 6	314749.293	584240.689	251.661
J 7	314750.742	584240.704	251.625
J 8	314752.173	584241.004	251.588

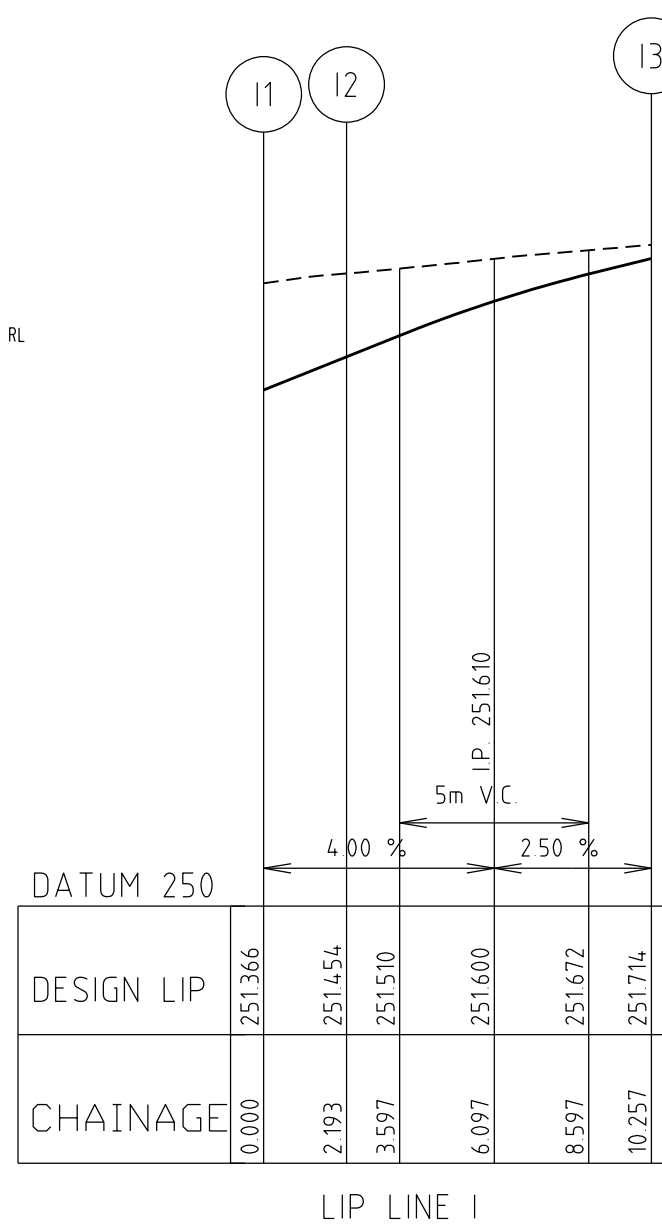
Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
J 2 3	-12.600	1.786	0.138	0.254	251.625
J 3 4	12.600	1.279	0.015	0.011	251.536



Alignment I

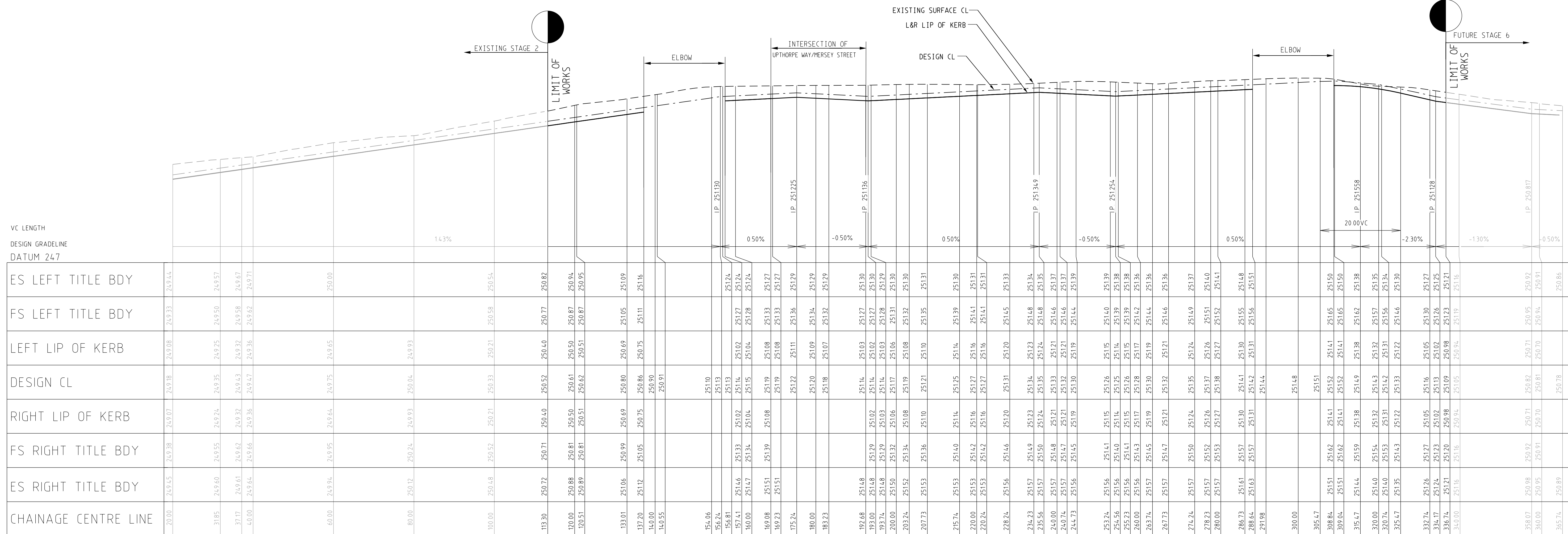
Point no	Easting	Northing	RL
I 1	314756.174	584249.078	251.366
I 2	314756.078	584247.483	251.454
I 3	314747.558	584244.847	251.714
I 4	314753.282	584246.160	251.536
I 5	314753.429	584244.282	251.685
I 6	314749.626	584244.282	251.662

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
I 2 3	8.600	7.772	0.928	0.706	251.605



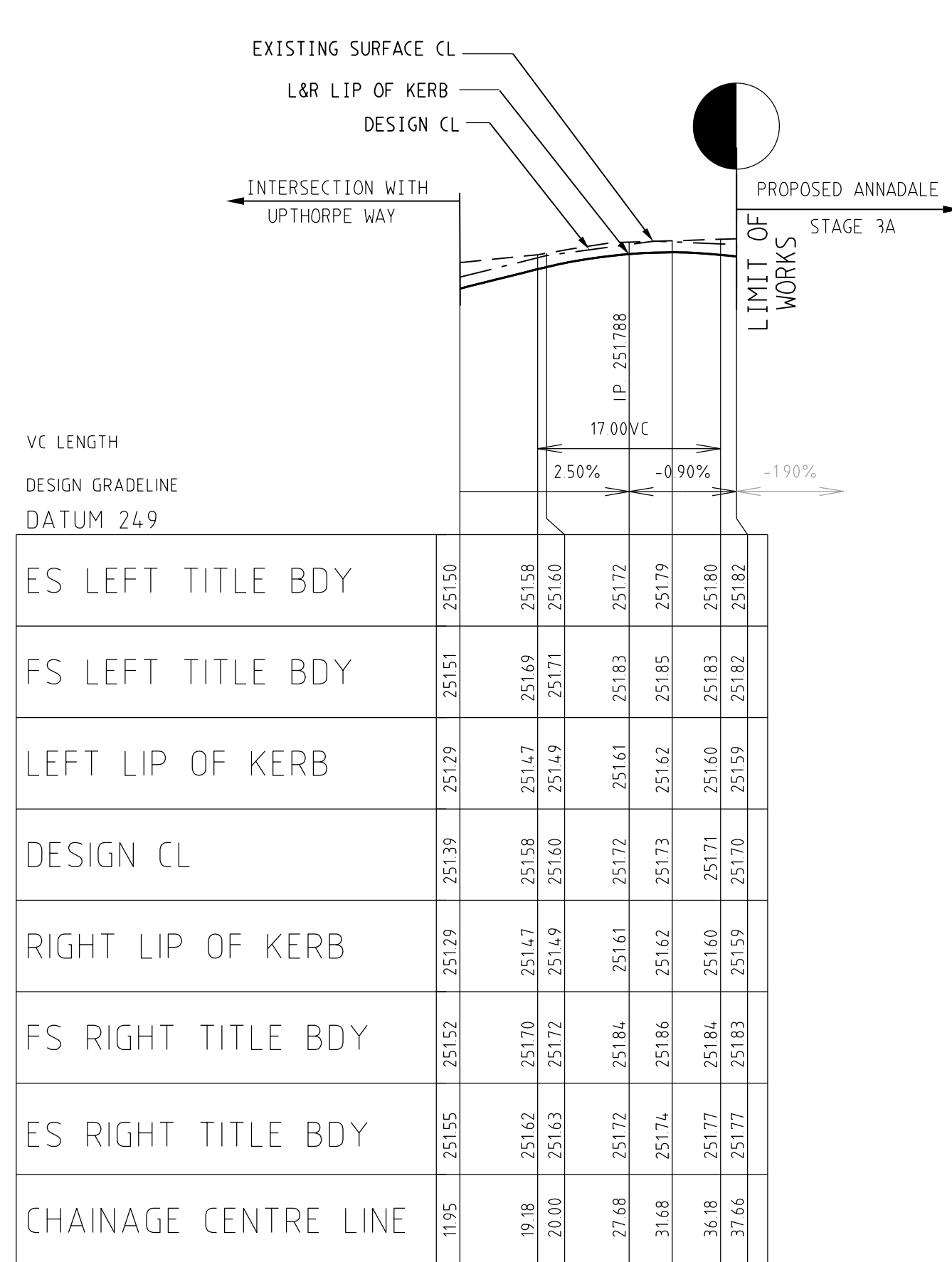
LIP OF KERB PROFILES
SCALE: HORIZONTAL 1:200
VERTICAL 1:20

		breese pitt dixon pty. ltd.		1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310			
		land surveyors		civil engineers			
MELWAY REF. 366-E-6		SURVEY BJ		MUNICIPALITY HUME			
29-03-17 ROAD NAME UPDATED		DESIGN SBS		REFERENCE 8711 E/5			
20-01-17 ISSUED FOR CONSTRUCTION		DRAWN SBS		SHEET 4 OF 14			
VER	DATE	REMARKS	CHECKED	SCALE AS SHOWN	DATUM AHD	DATE JULY '16	SHEET 4 OF 14

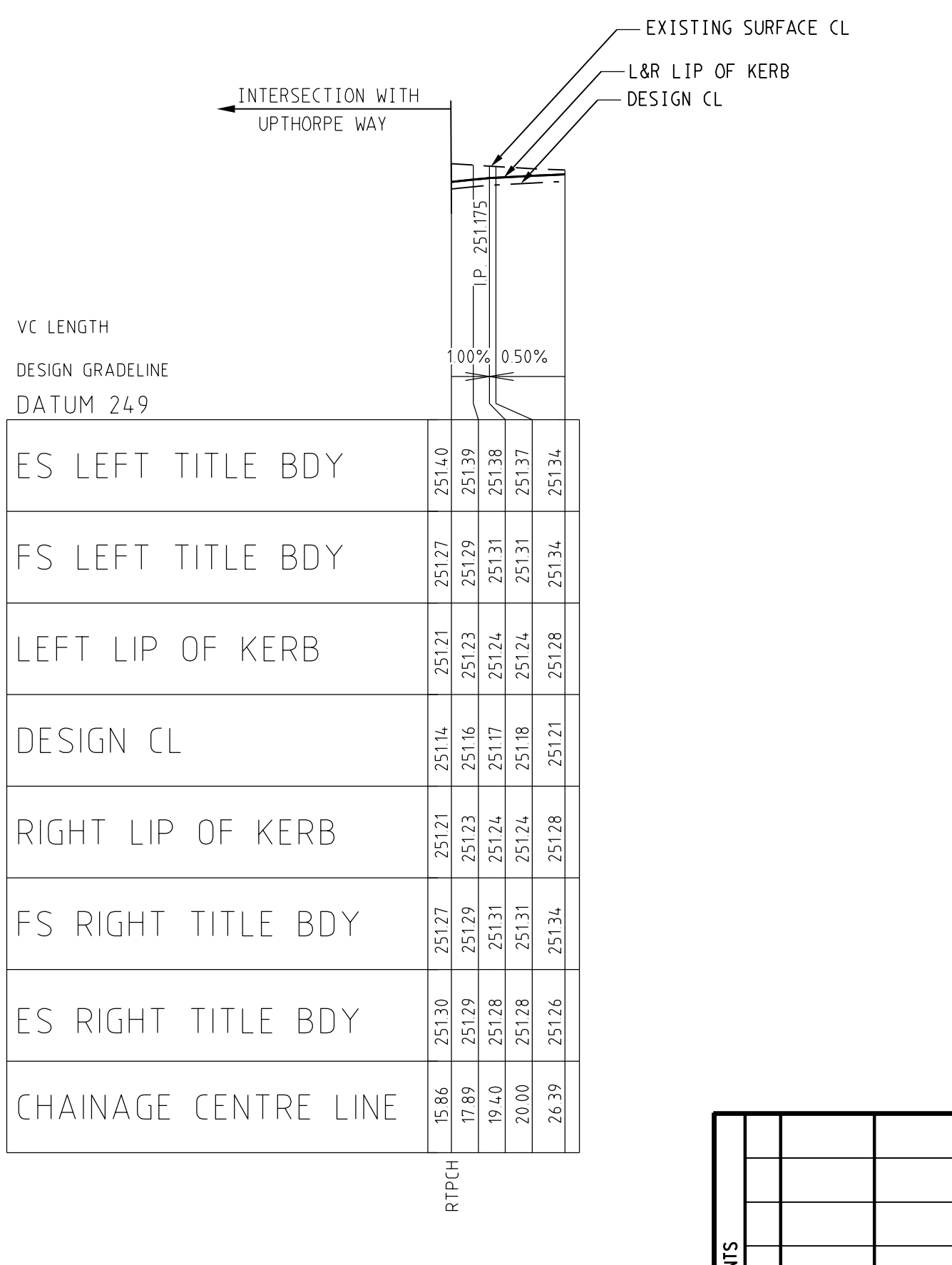


UPTHORPE WAY

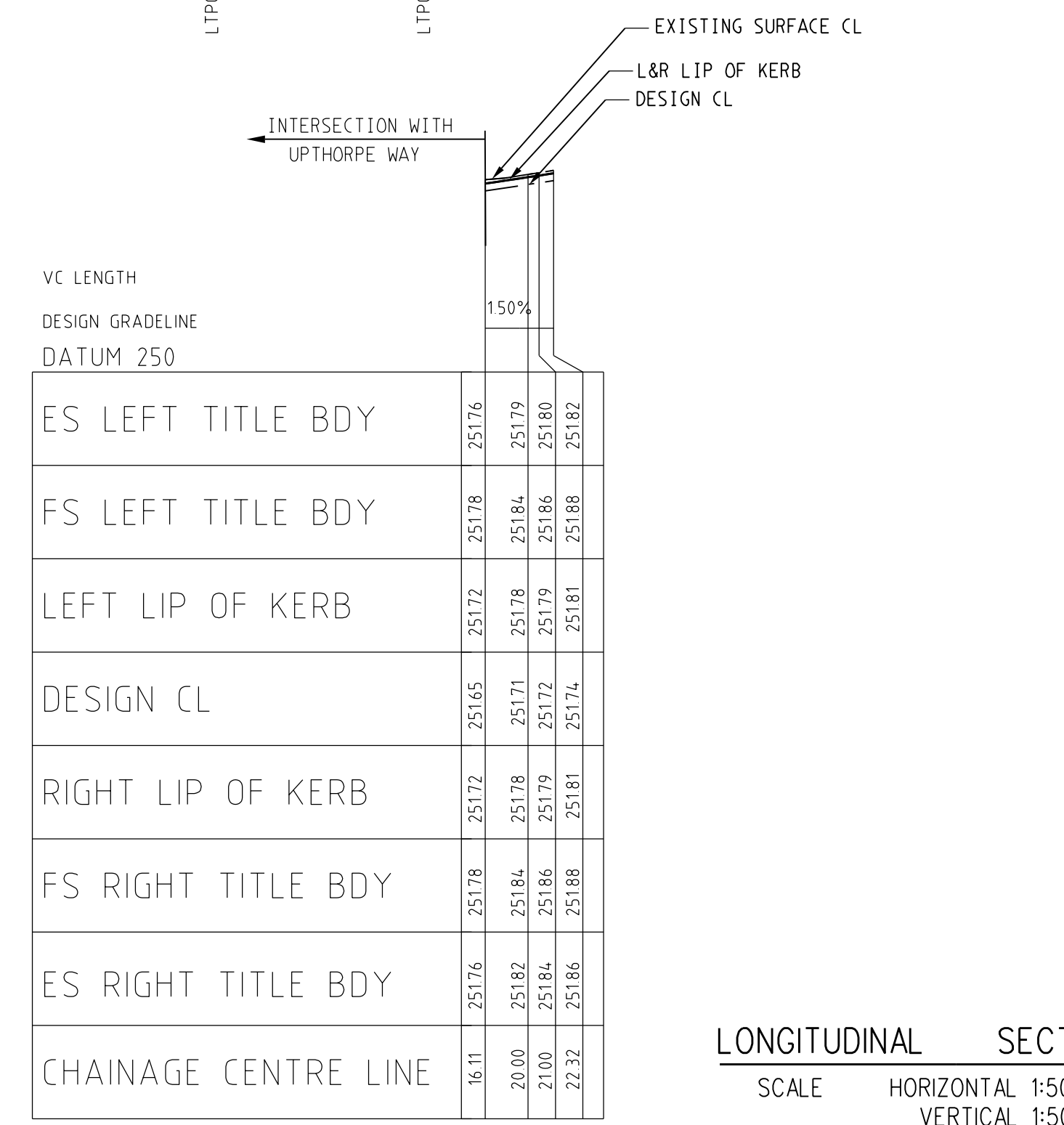
VC LENGTH	DESIGN GRADELINE	DATUM 24.7
20.00	24.945	24.938
31.85	24.960	24.955
37.17	24.961	24.962
40.00	24.964	24.966
60.00	24.994	24.995
80.00	25.012	25.024
100.00	25.048	25.052
113.30	25.072	25.071
120.00	25.088	25.081
126.51	25.089	25.081
133.01	25.106	25.099
137.20	25.112	25.105
140.00	25.112	25.105
140.55	25.112	25.105
154.06	25.110	25.110
156.24	25.113	25.113
158.81	25.114	25.114
157.41	25.133	25.102
160.00	25.147	25.134
169.08	25.151	25.139
169.23	25.151	25.139
175.24	25.151	25.139
180.00	25.153	25.140
183.23	25.153	25.140
192.68	25.148	25.148
193.00	25.148	25.148
193.74	25.148	25.148
200.00	25.150	25.152
203.24	25.152	25.154
207.73	25.153	25.155
215.74	25.153	25.155
220.00	25.153	25.155
220.24	25.153	25.155
228.24	25.156	25.158
234.23	25.157	25.159
235.56	25.157	25.159
240.00	25.157	25.159
240.74	25.157	25.159
244.73	25.156	25.158
253.24	25.156	25.158
254.56	25.156	25.158
255.23	25.156	25.158
263.74	25.157	25.159
267.73	25.157	25.159
274.24	25.157	25.159
278.23	25.157	25.159
280.00	25.157	25.159
286.73	25.161	25.163
291.98	25.164	25.167
300.00	25.164	25.167
305.47	25.151	25.152
308.84	25.151	25.152
309.04	25.151	25.152
315.47	25.144	25.138
320.00	25.140	25.132
320.74	25.140	25.132
325.47	25.135	25.122
332.74	25.126	25.117
334.17	25.124	25.115
340.00	25.116	25.109
350.07	25.098	25.092
360.00	25.095	25.091
365.74	25.089	25.083



MERSEY STREET



LANEWAY (LOT 513)



LANEWAY (LOT 527)

AMENDMENTS

VER	DATE	REMARKS
B	29-03-17	ROAD NAME UPDATED
A	20-01-17	ISSUED FOR CONSTRUCTION

MELWAY REF. 366-E-6

SURVEY BJ

DESIGN SBS

DRAWN SBS

CHECKED

WARATAH ESTATE

STAGE 5

SCALE AS SHOWN DATUM AHD

DATE JULY '16

SHEET 5 OF 14

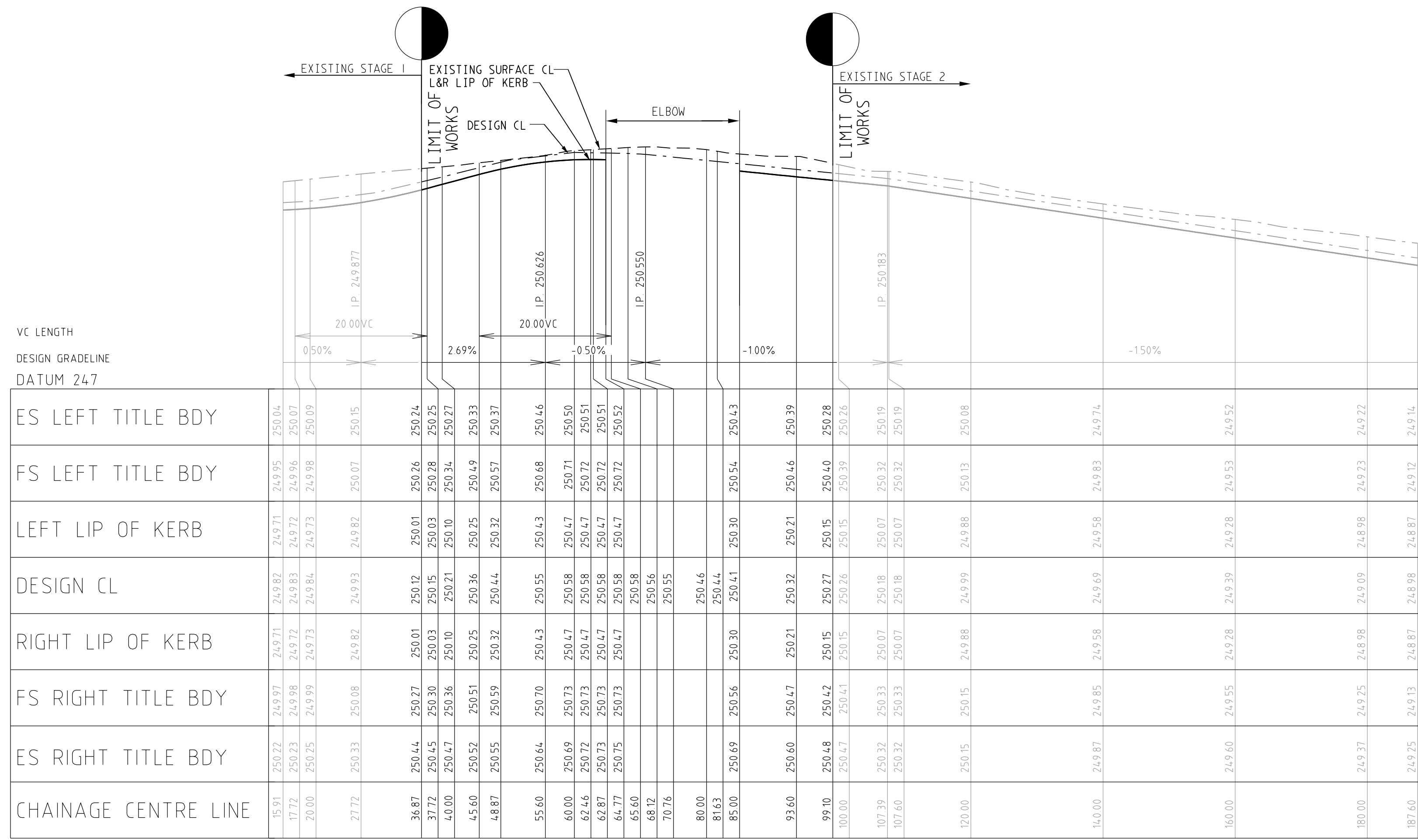
MUNICIPALITY

HUME

REFERENCE

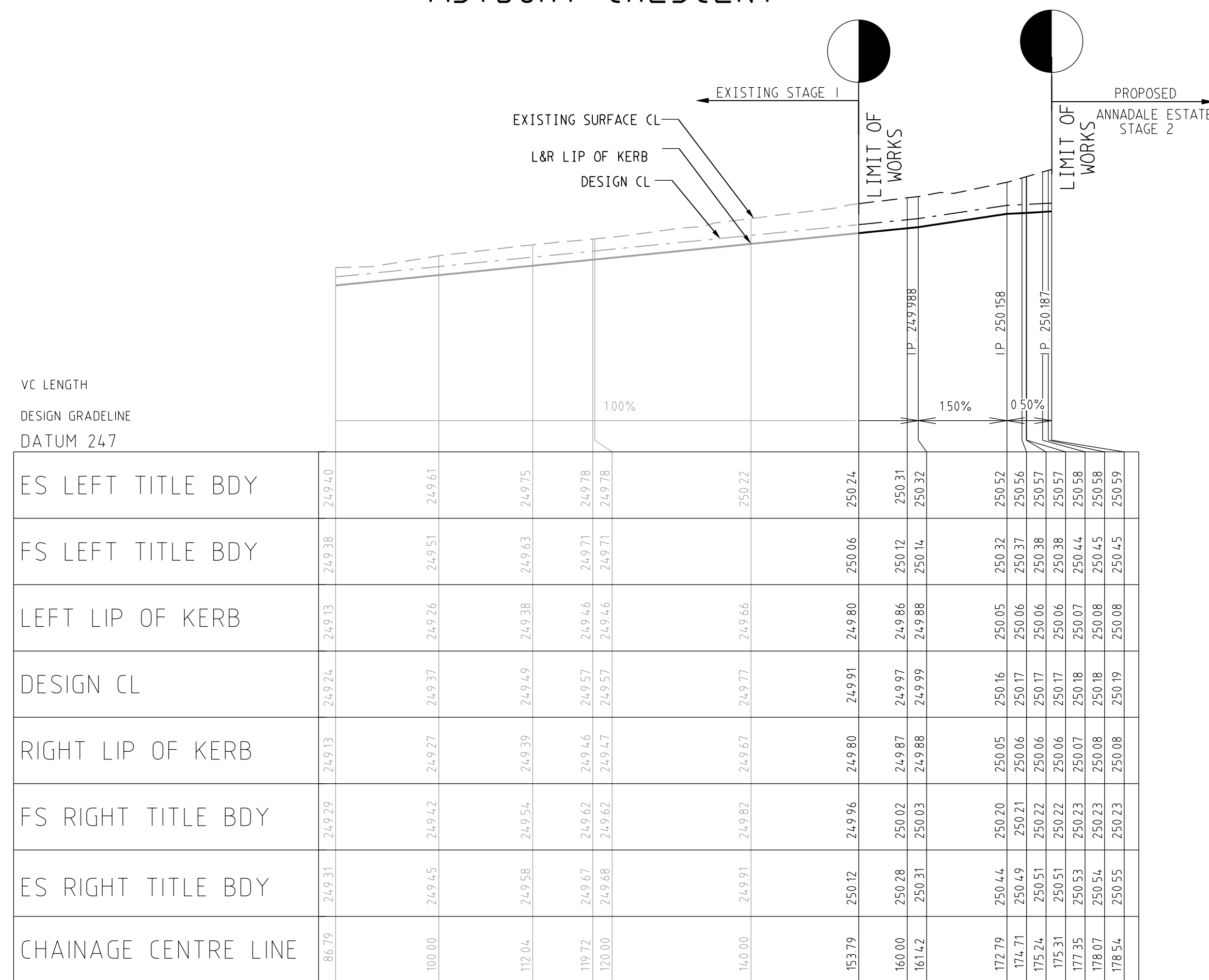
8711 E/5

breese pitt dixon pty. ltd. 1/19 coto street hawthorn east, 3123 telephone 8823 2300 land surveyors civil engineers fax no. 8823 2310



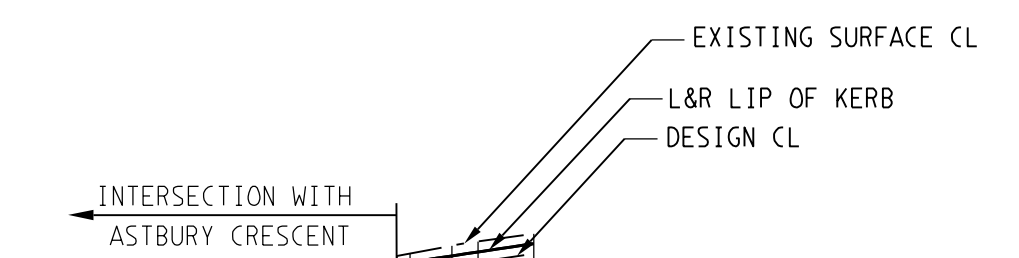
VC LENGTH	DESIGN GRADELINE	DATUM 247
ES LEFT TITLE BDY	250.04	250.07
FS LEFT TITLE BDY	249.95	249.96
LEFT LIP OF KERB	249.71	249.73
DESIGN CL	249.82	249.84
RIGHT LIP OF KERB	249.71	249.73
FS RIGHT TITLE BDY	249.97	249.98
ES RIGHT TITLE BDY	250.22	250.25
CHAINAGE CENTRE LINE	15.91	20.00
	27.72	36.87
	37.72	40.00
	45.60	48.87
	55.60	60.00
	62.66	67.71
	64.77	65.60
	70.76	80.00
	81.63	85.00
	93.60	100.00
	107.39	107.60
	120.00	140.00
	160.00	180.00
	187.60	

ASTBURY CRESCENT



VC LENGTH	DESIGN GRADELINE	DATUM 247
ES LEFT TITLE BDY	249.40	249.41
FS LEFT TITLE BDY	249.38	249.51
LEFT LIP OF KERB	249.13	249.26
DESIGN CL	249.24	249.37
RIGHT LIP OF KERB	249.13	249.27
FS RIGHT TITLE BDY	249.39	249.42
ES RIGHT TITLE BDY	249.31	249.45
CHAINAGE CENTRE LINE	80.79	100.00
	102.04	119.72
	119.72	120.00
	140.00	153.79
	160.00	161.42
	172.79	174.71
	174.71	175.24
	175.31	177.35
	178.07	178.54

BETHANY WAY

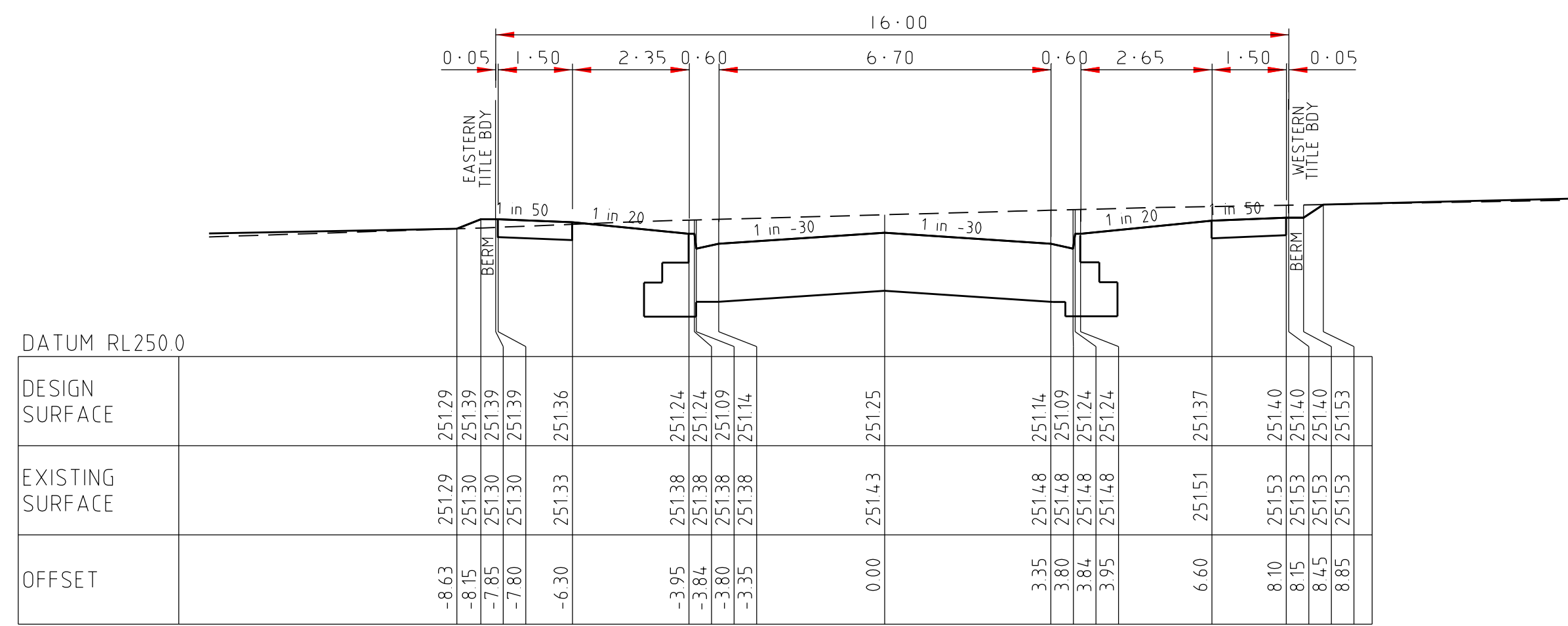


VC LENGTH	DESIGN GRADELINE	DATUM 249
ES LEFT TITLE BDY	250.97	250.98
FS LEFT TITLE BDY	250.95	250.97
LEFT LIP OF KERB	250.89	250.90
DESIGN CL	250.82	250.83
RIGHT LIP OF KERB	250.89	250.90
FS RIGHT TITLE BDY	250.95	250.97
ES RIGHT TITLE BDY	250.90	251.03
CHAINAGE CENTRE LINE	16.36	17.23
	20.00	21.73
	25.42	

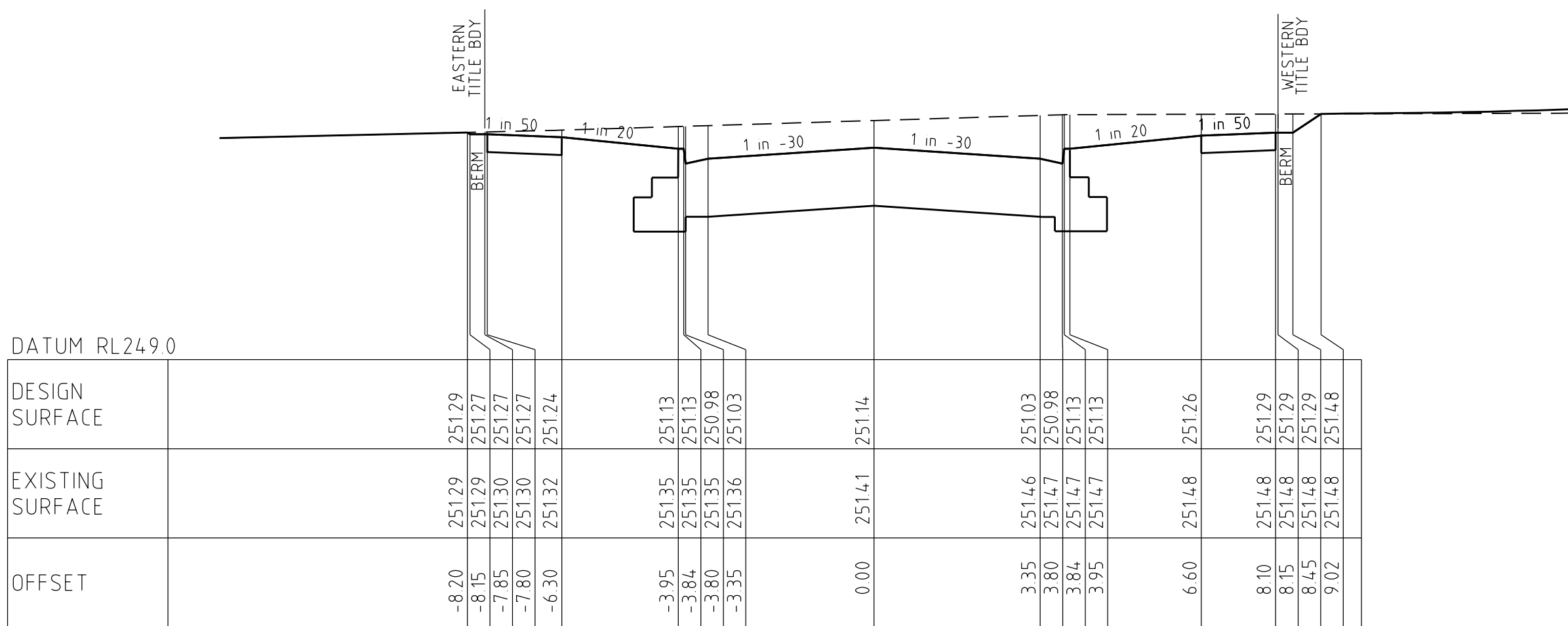
LANEWAY (LOT 505)

LONGITUDINAL SECTION
SCALE HORIZONTAL 1:500
VERTICAL 1:50

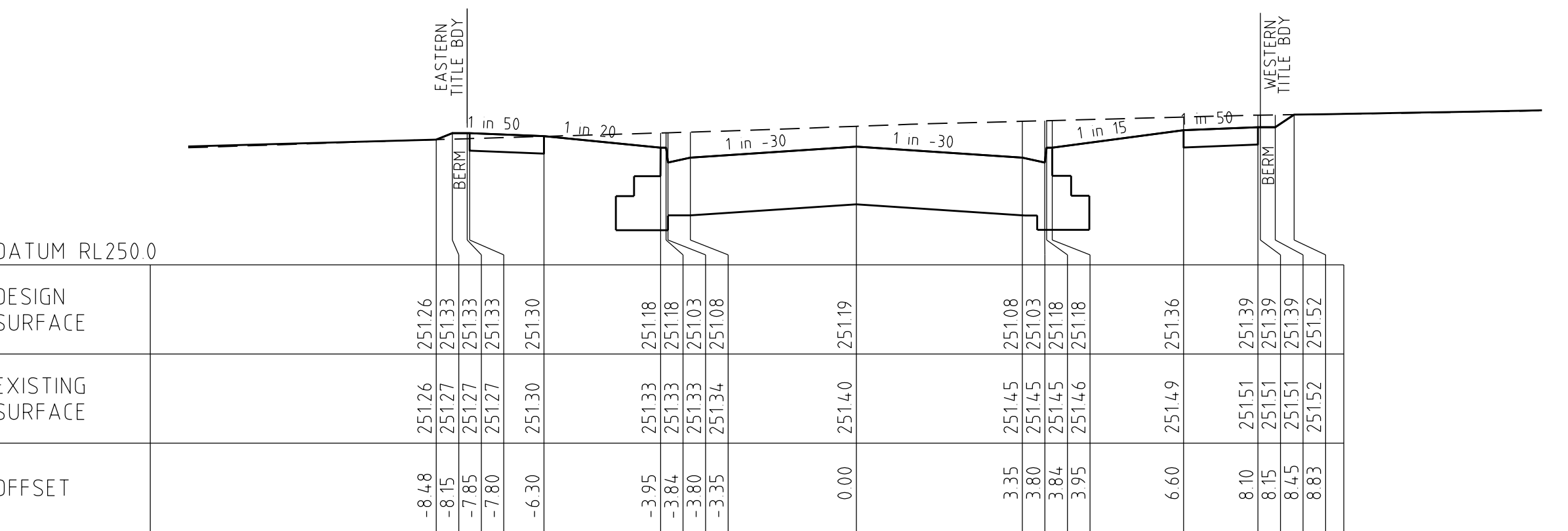
AMENDMENTS			 breese pitt dixon Pty. Ltd. land surveyors civil engineers	1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
				MUNICIPALITY	
				HUME	
				REFERENCE	
			WARATAH ESTATE STAGE 5		
			8711 E/S		
			SHEET 6 OF 14		
			DATE JULY '16		
			SCALE AS SHOWN DATUM AHD		
			CHECKED		
			DATE		
			REMARKS		
			MELWAY REF. 366-E-6		
			SURVEY BJ		
			DESIGN SBS		
			DRAWN SBS		
			ISSUED FOR CONSTRUCTION		
			DATE 20-01-17		



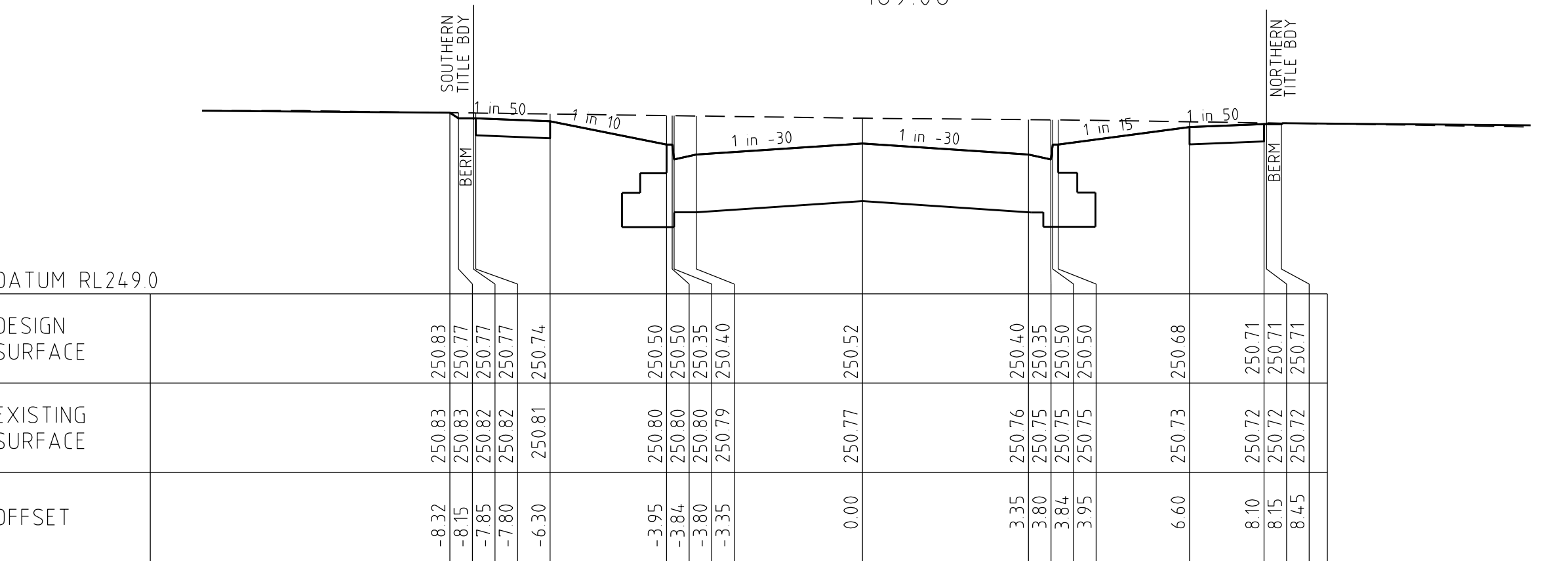
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192.68



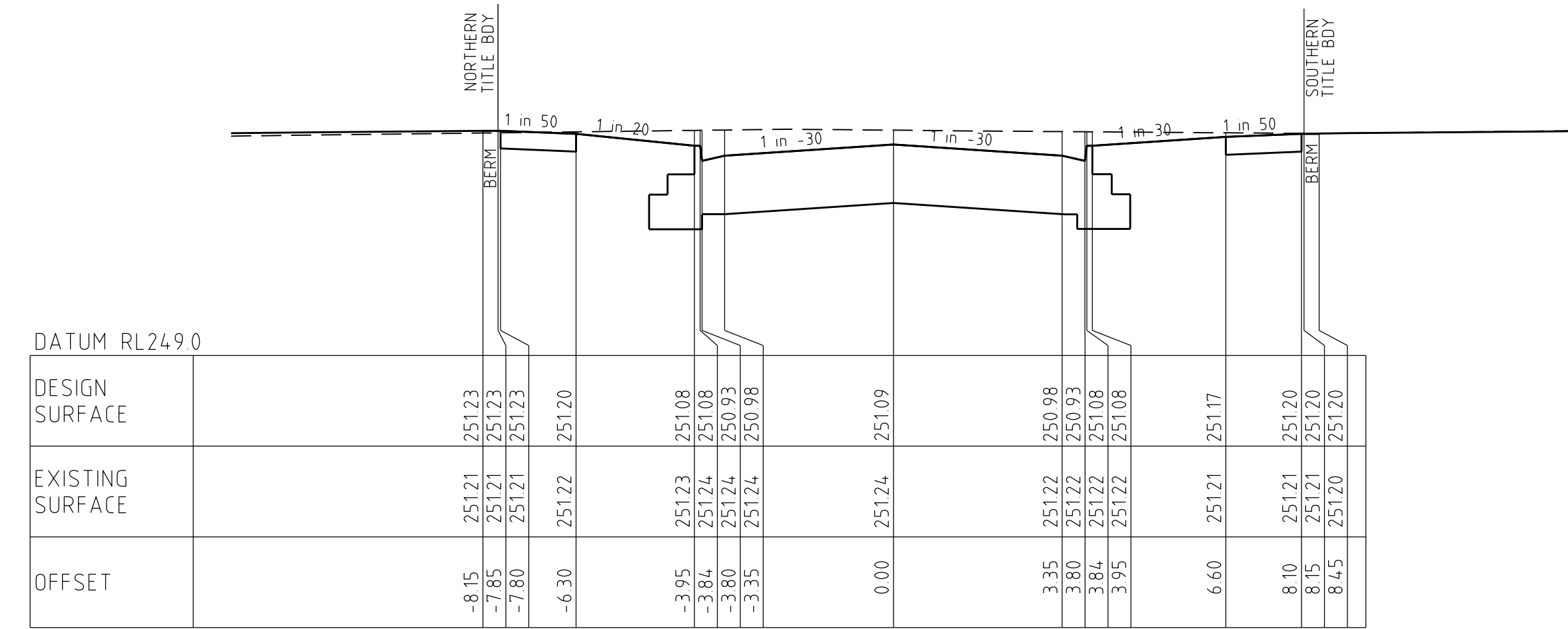
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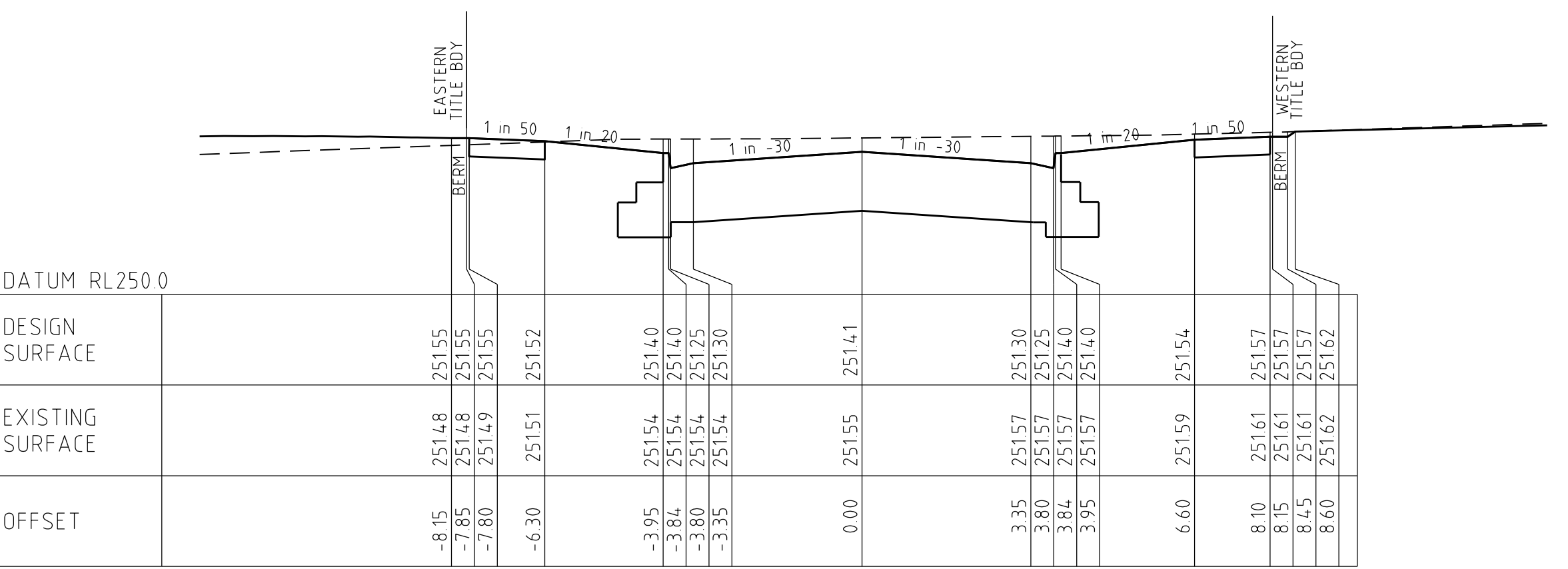
113.30

UPTHORPE WAY

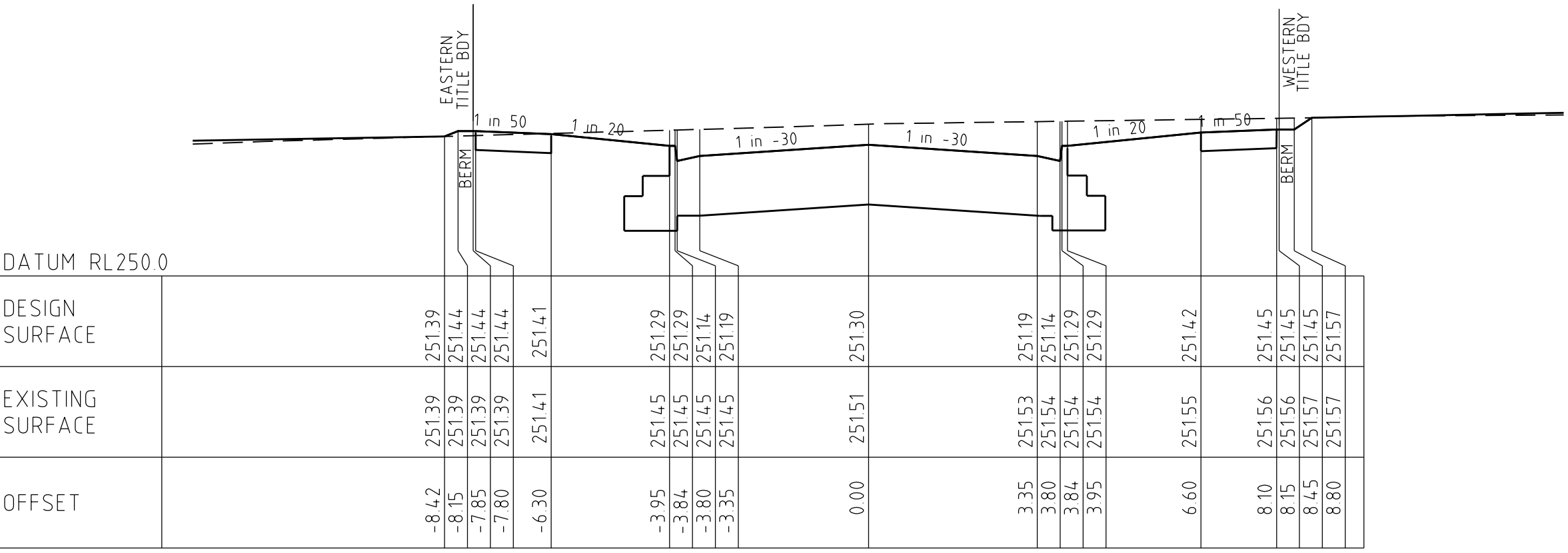
CROSS SECTIONS
SCALE HORIZONTAL 1:100
VERTICAL 1:50



336.74



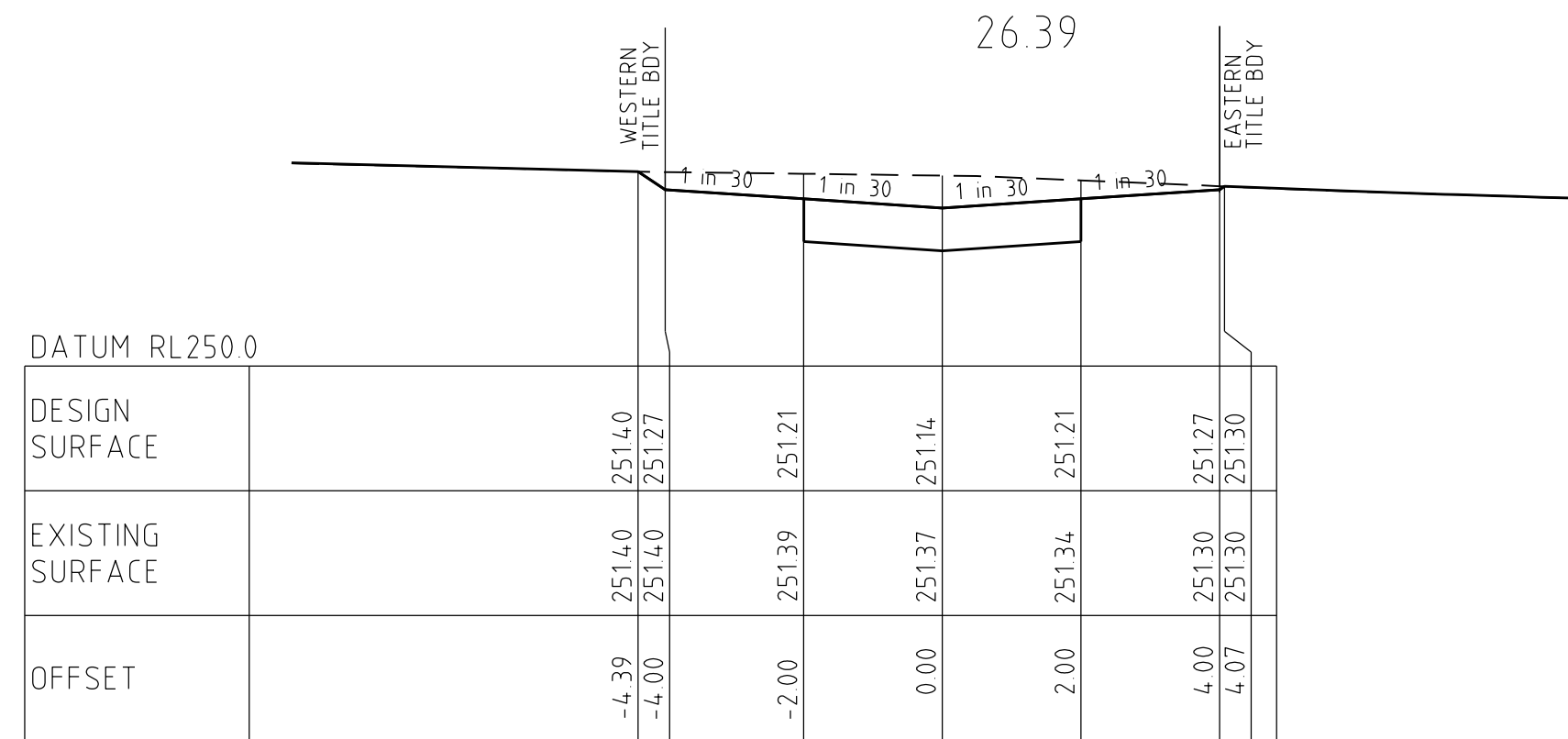
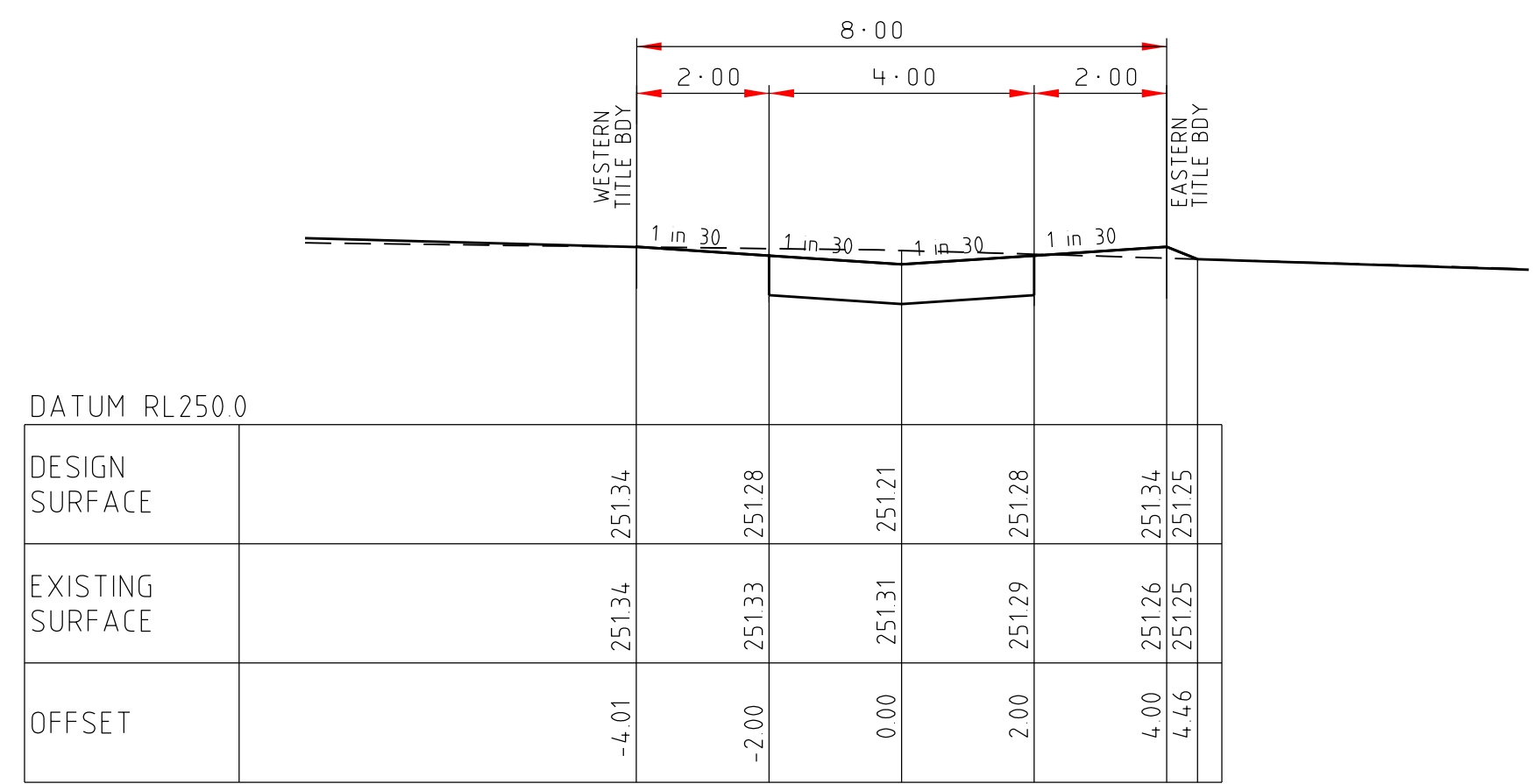
286.74



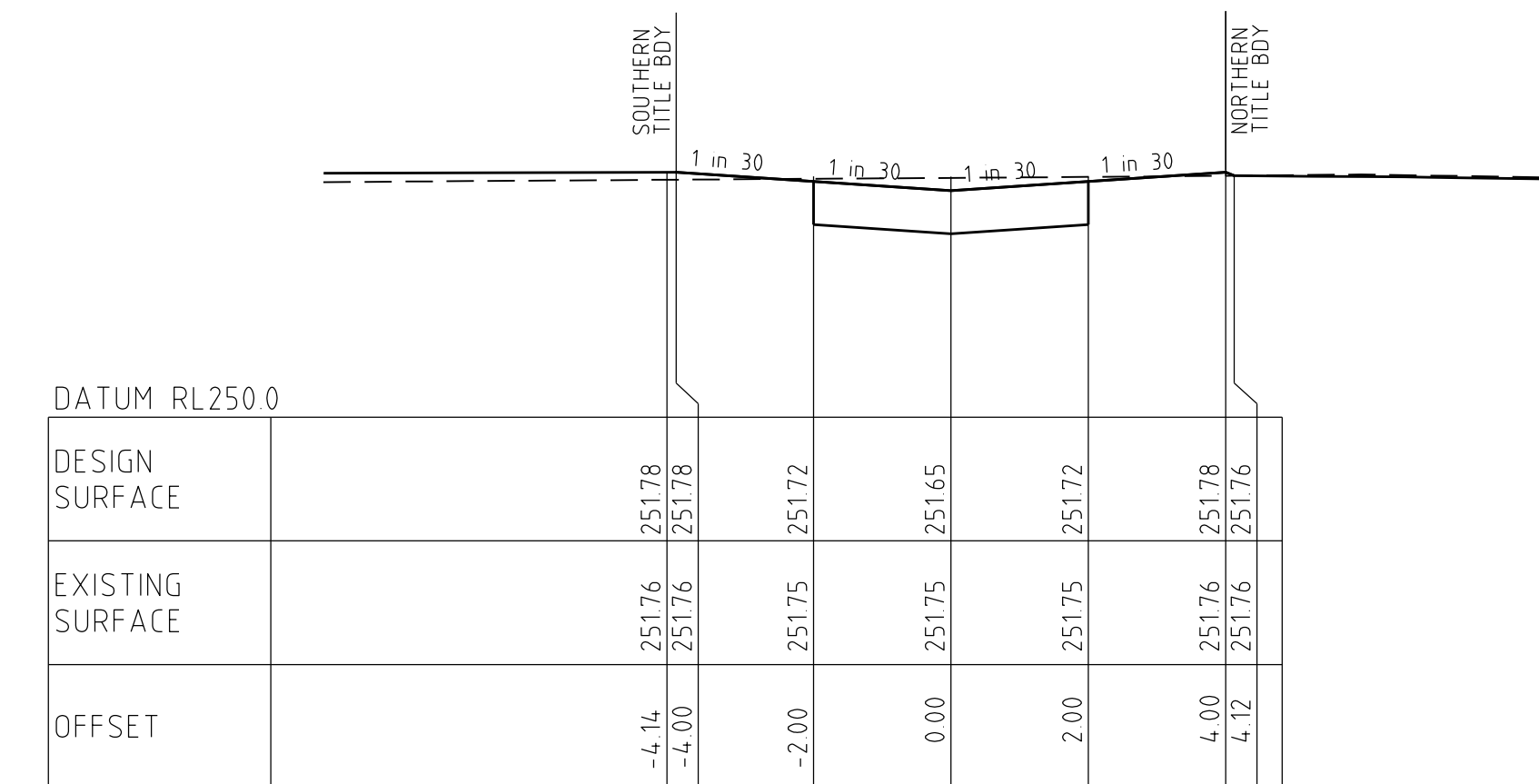
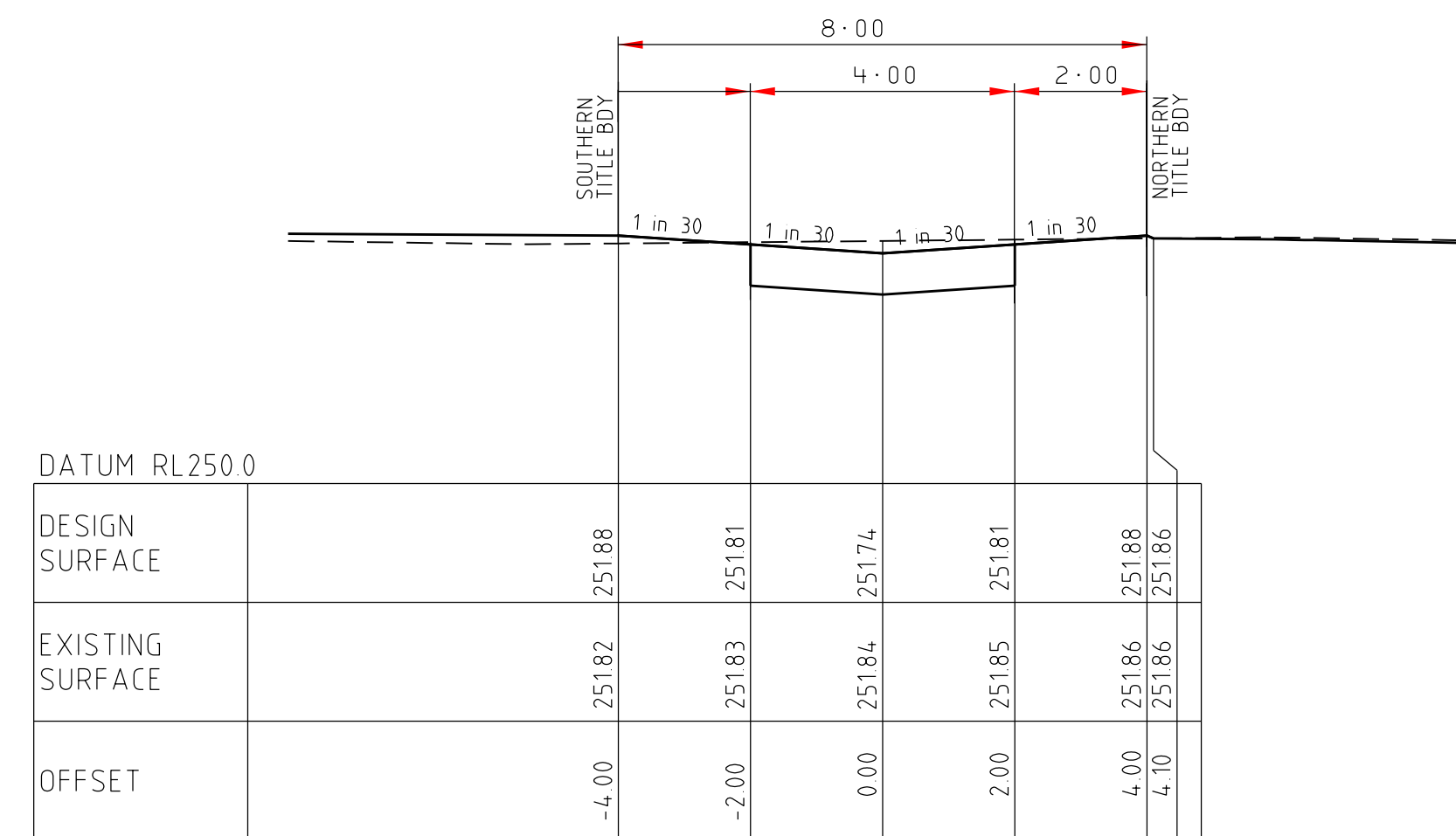
245.73

		breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 coto street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
WARATAH ESTATE STAGE 5		MUNICIPALITY HUME		REFERENCE 8711 E/5	
AMENDMENTS B 29-03-17 ROAD NAME UPDATED A 20-01-17 ISSUED FOR CONSTRUCTION	MELWAY REF. 366-E-6 SURVEY BJ DESIGN SBS DRAWN SBS	SCALE AS SHOWN DATUM AHD DATE JULY '16	SHEET 7 OF 14	B	

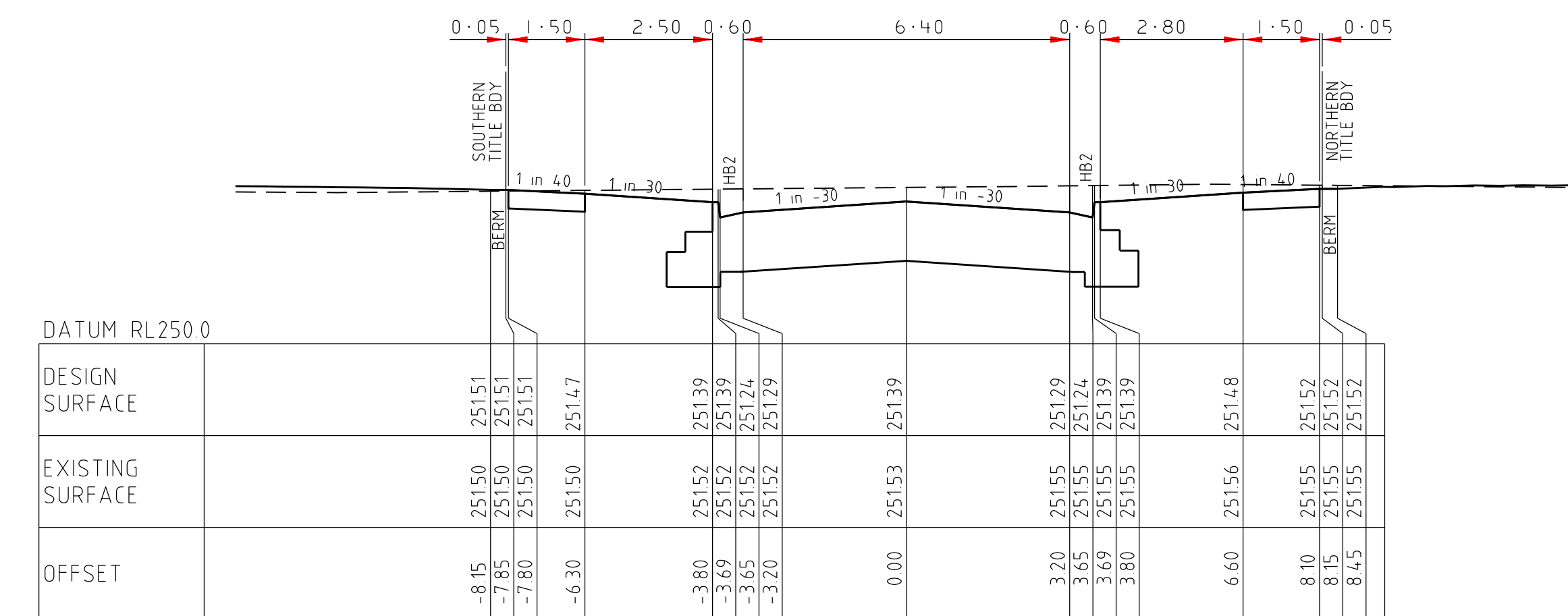
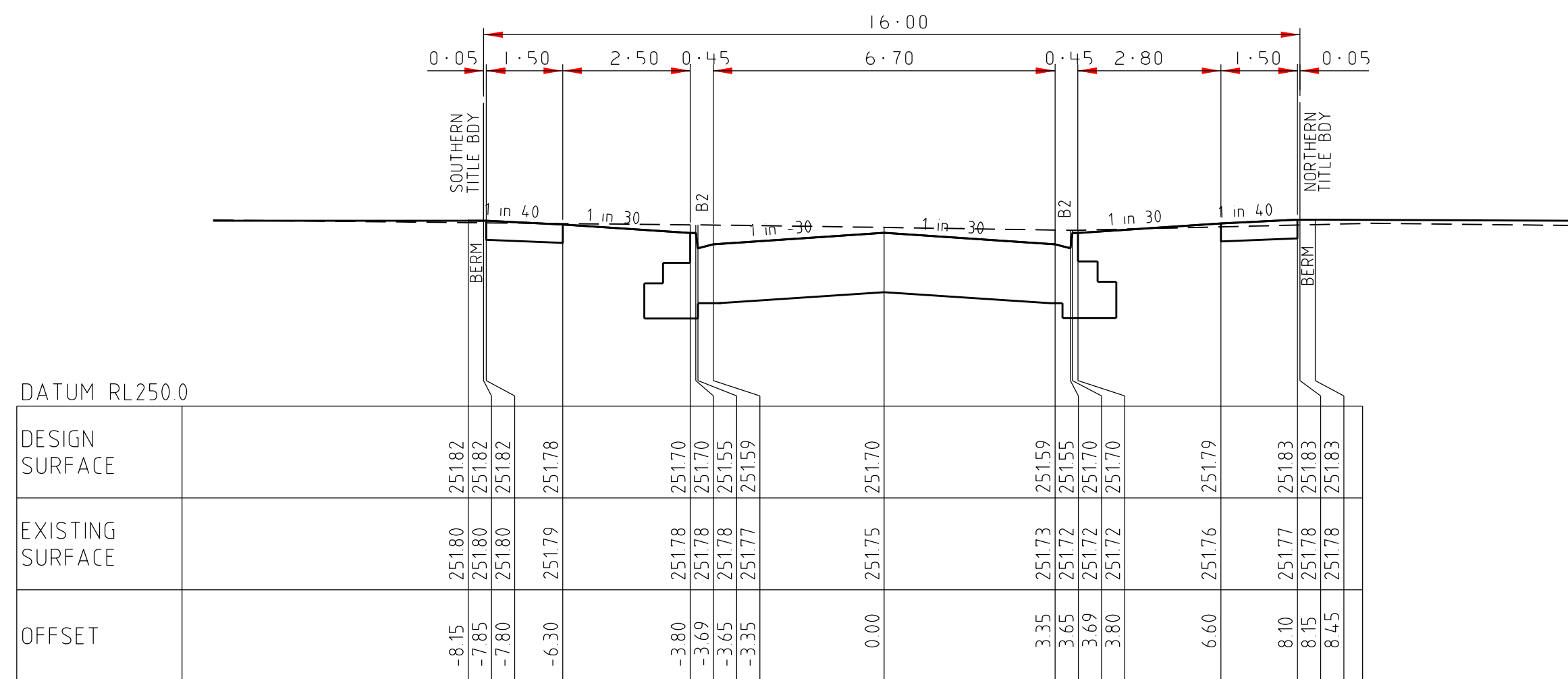
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LANEWAY (LOT 513)



LANEWAY (LOT 527)

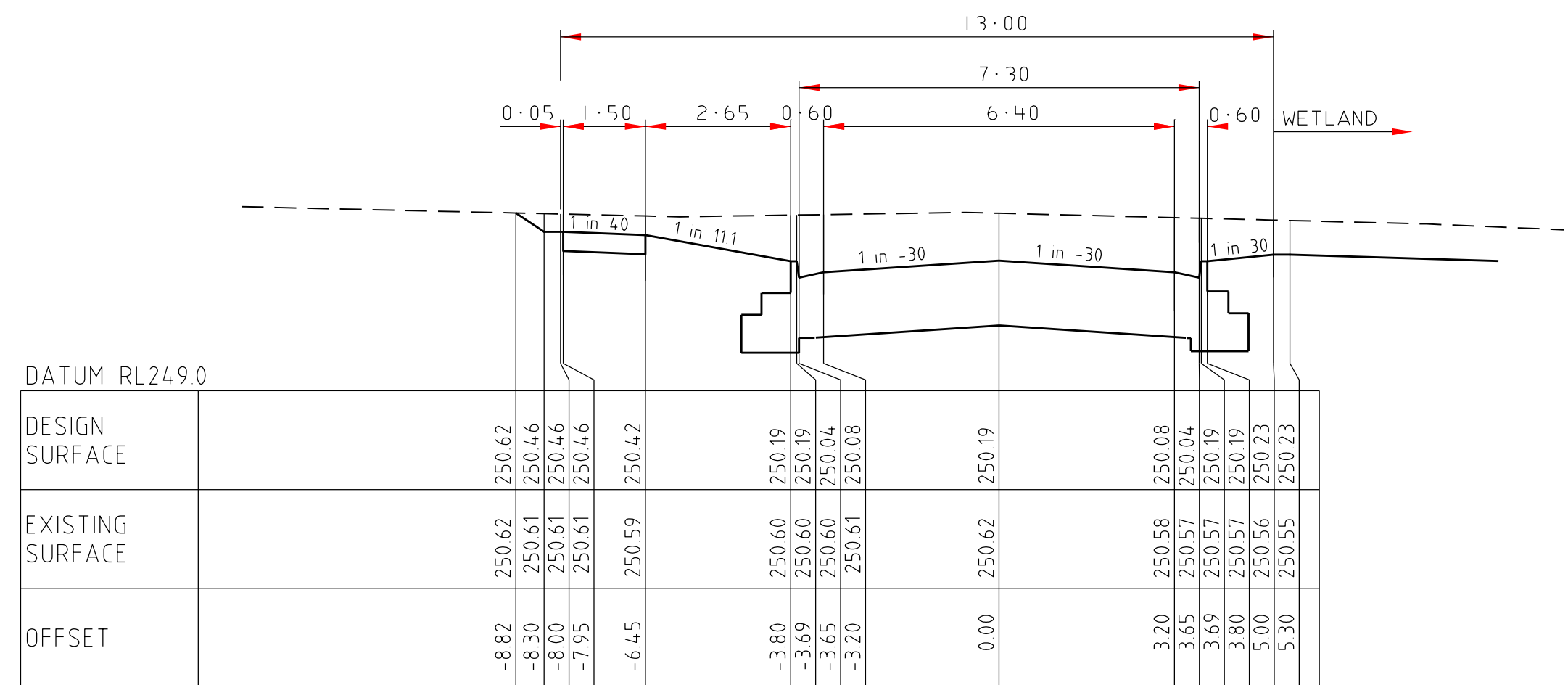


MERSEY STREET

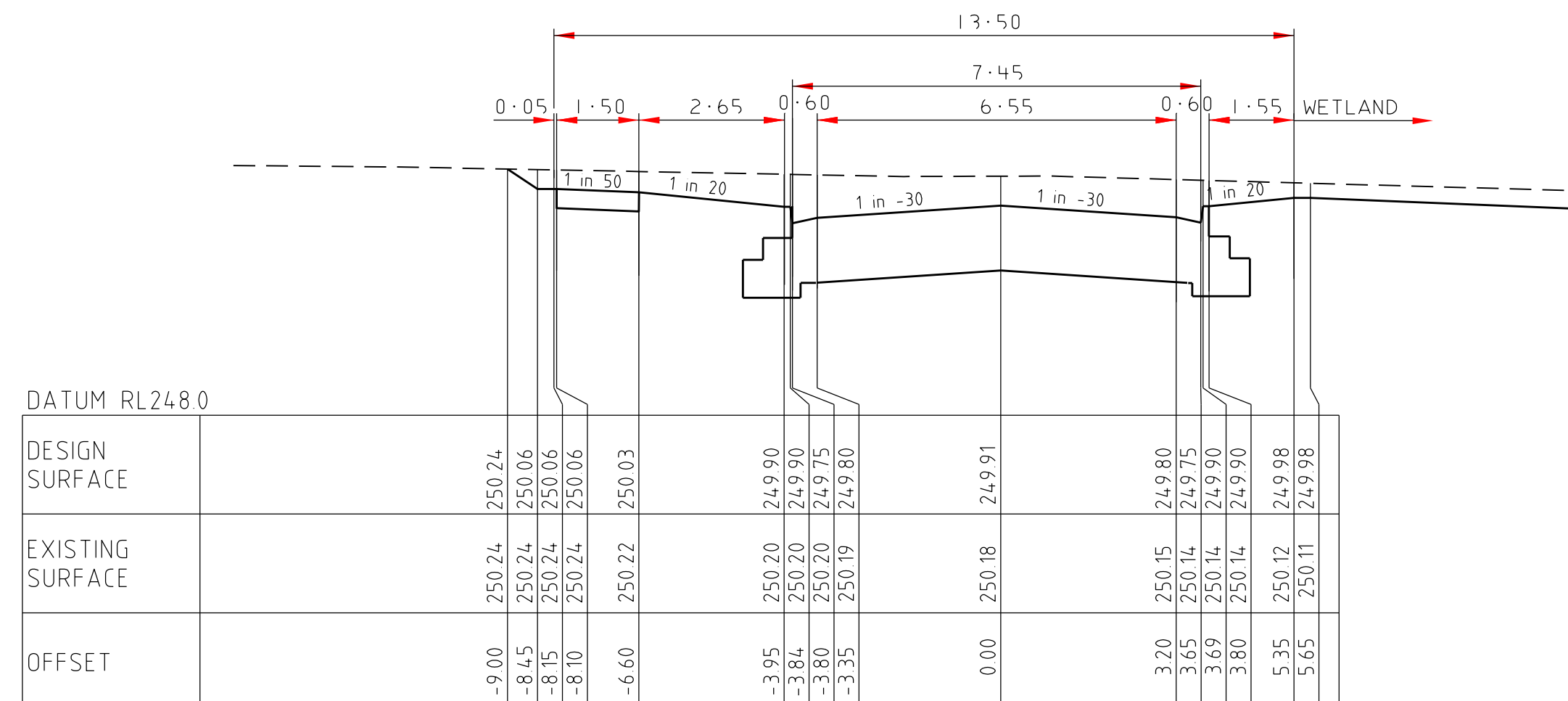
CROSS SECTIONS

SCALE HORIZONTAL 1:100
VERTICAL 1:50

AMENDMENTS				breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
MELWAY REF. 366-E-6		SURVEY BJ		DESIGN SBS		MUNICIPALITY HUME	
DRAWN SBS		CHECKED <i>[Signature]</i>		SCALE AS SHOWN		DATE JULY '16	
DATE 20-01-17		REMARKS ISSUED FOR CONSTRUCTION		DATUM AHD		SHEET 8 OF 14	
WARATAH ESTATE STAGE 5		REFERENCE 8711 E/5		DATE JULY '16		SHEET 8 OF 14	

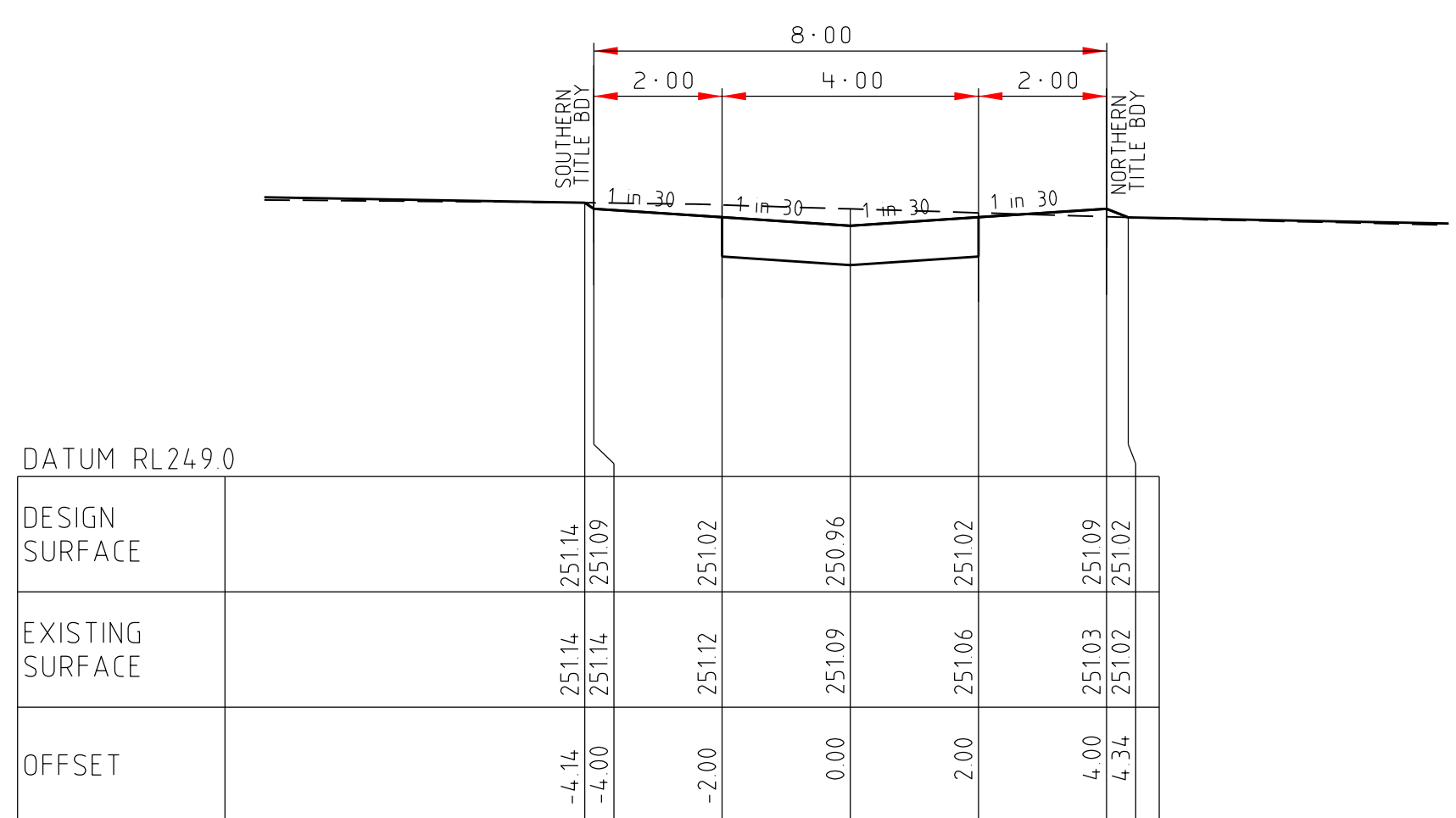


178.54

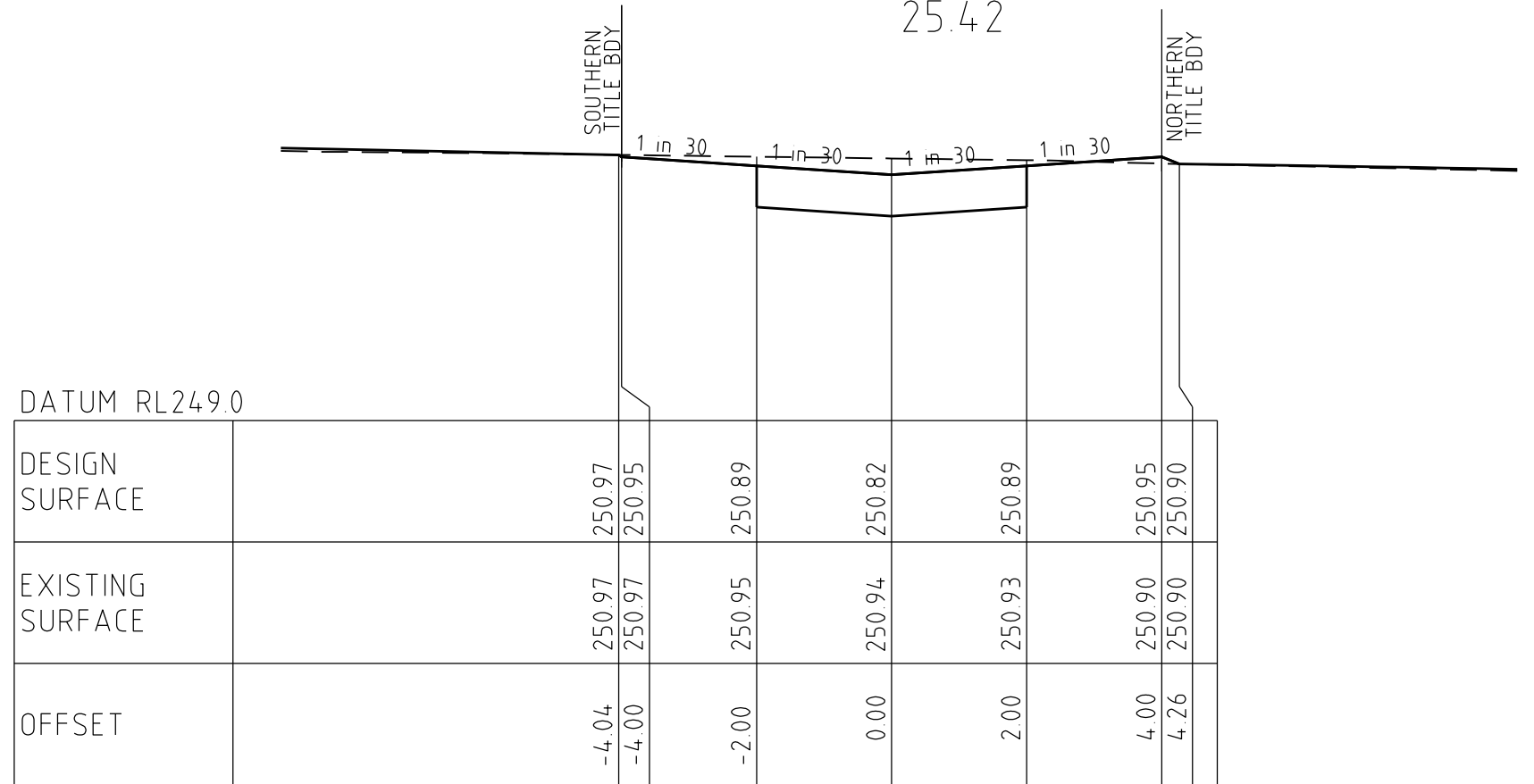


BETHANY WAY

153.79

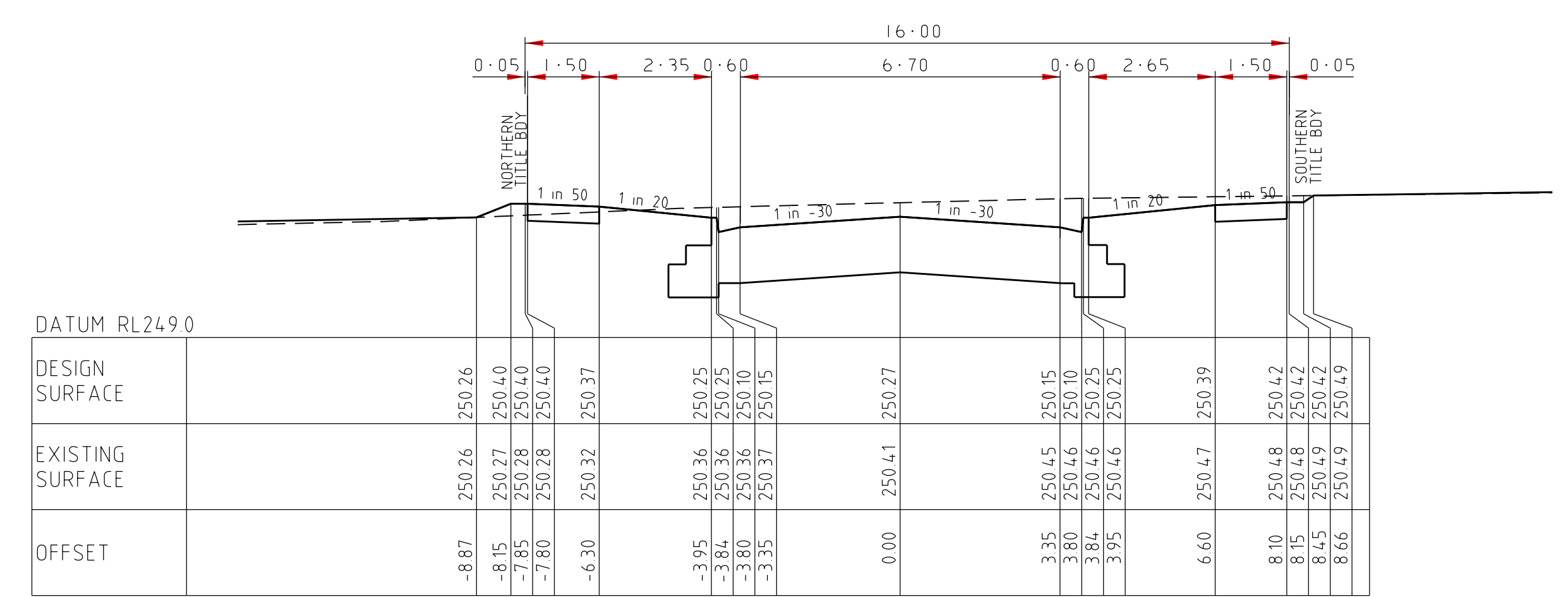


25.42

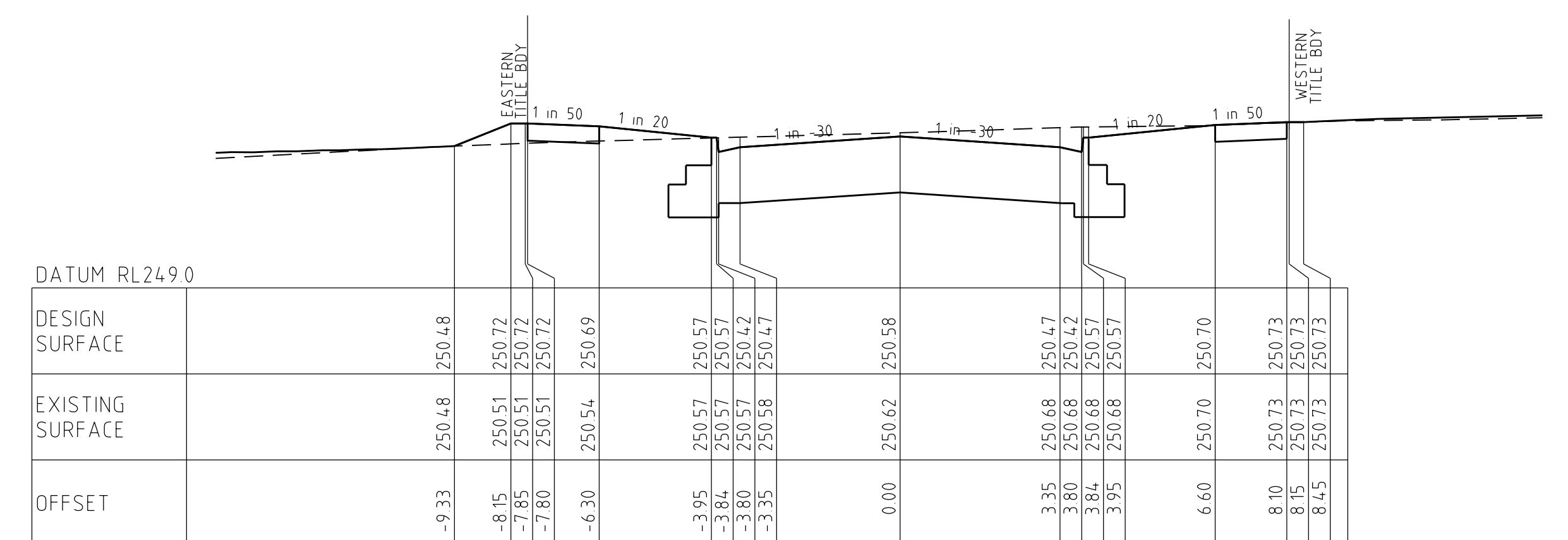


LANEWAY (LOT 505)

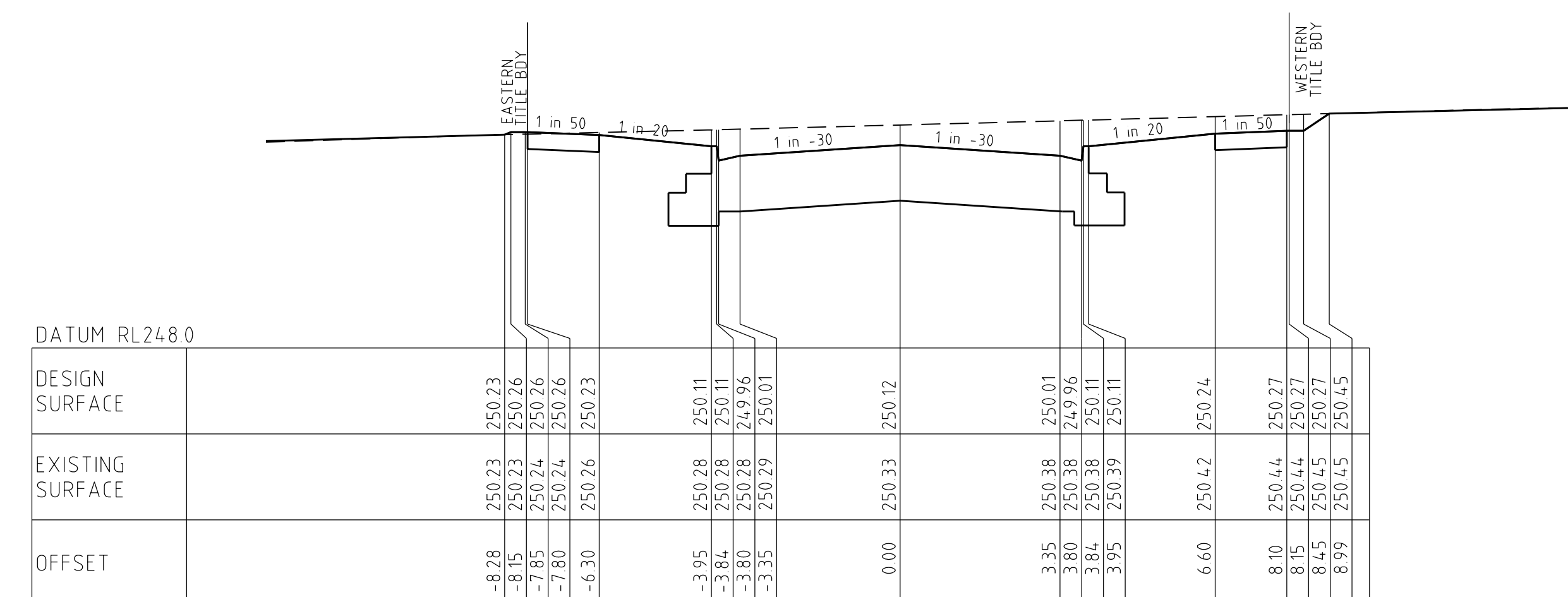
16.36



99.10



62.87



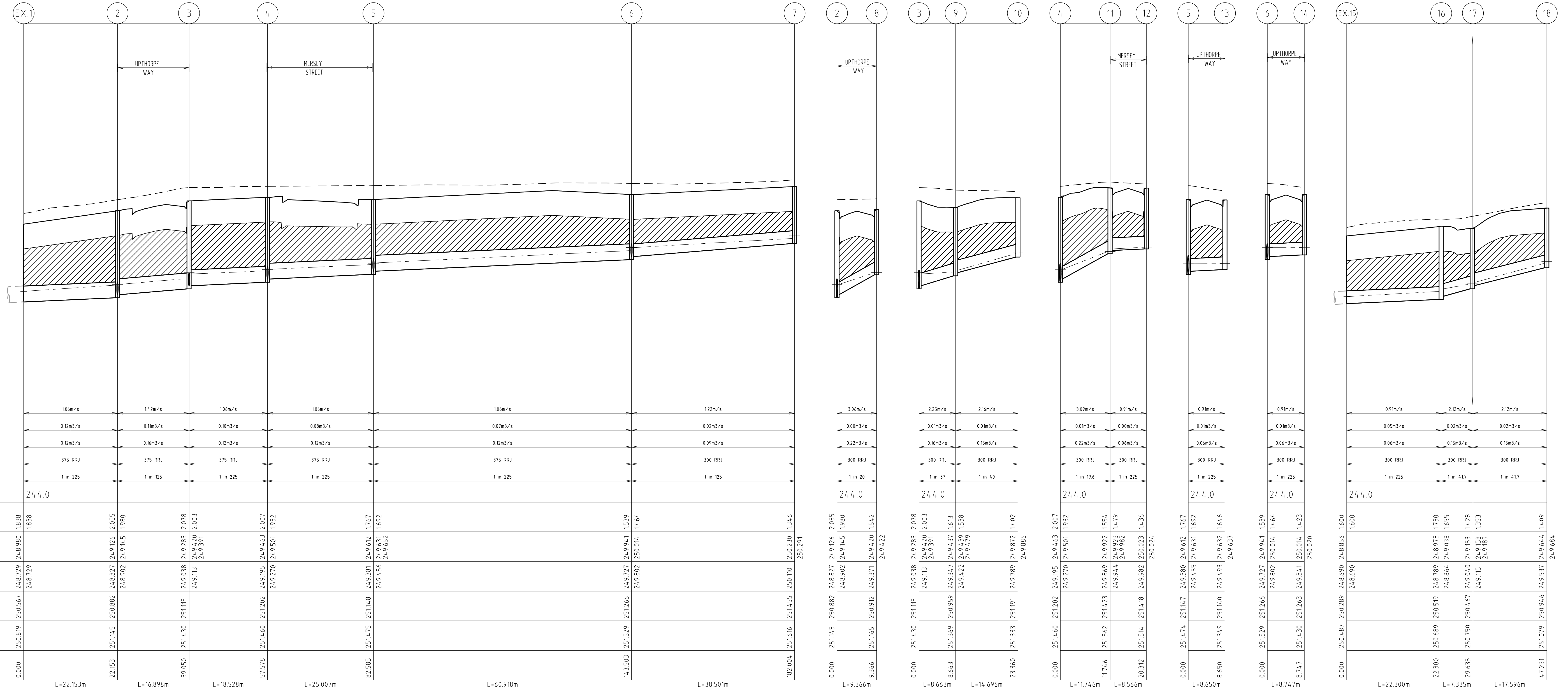
36.87

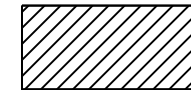
ASTBURY CRESCENT

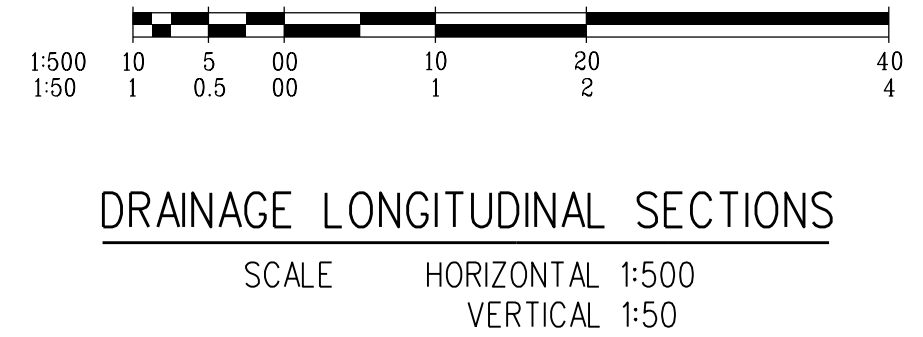
CROSS SECTIONS
SCALE HORIZONTAL 1:100
VERTICAL 1:50


		breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
AMENDMENTS A 20-01-17 ISSUED FOR CONSTRUCTION		MELWAY REF. 366-E-6 SURVEY BJ DESIGN SBS DRAWN SBS		WARATAH ESTATE STAGE 5	
VER DATE REMARKS		CHECKED <i>[Signature]</i>		MUNICIPALITY HUME REFERENCE 8711 E/5	
SCALE AS SHOWN DATUM AHD DATE JULY 16		SHEET 9 OF 14		A	

I:\WBTH\ENGIN\ST05\ES_R09.AC_BW\LW\LOT 505.1.XS.A.dgn

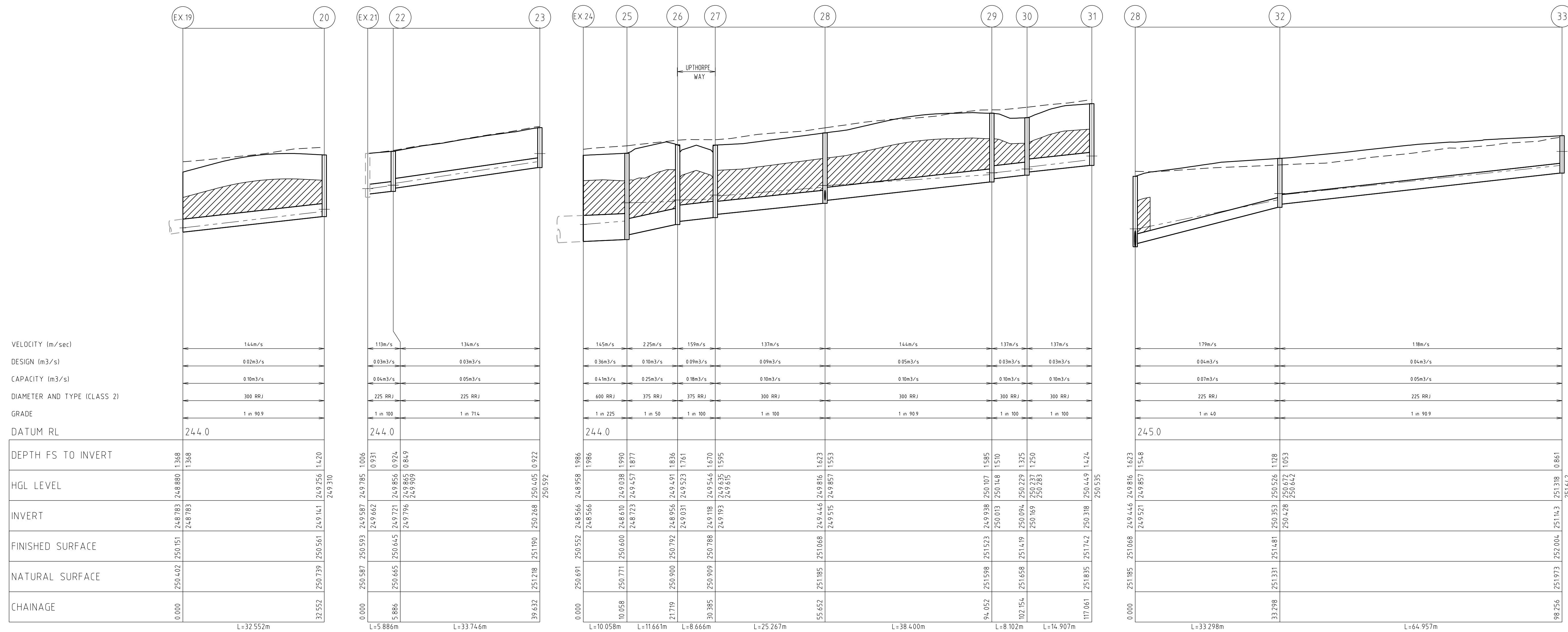


 INDICATES CRUSHED ROCK BACKFILL
 - - - - - INDICATES 5YR HGL



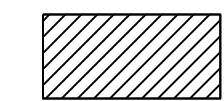
 breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 coto street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310
MELWAY REF. 366-E-6 SURVEY BJ DESIGN SBS DRAWN SBS		WARATAH ESTATE STAGE 5
AMENDMENTS B 29-03-17 ROAD NAME UPDATED A 20-01-17 ISSUED FOR CONSTRUCTION		MUNICIPALITY HUME REFERENCE 8711 E/5
VER DATE REMARKS CHECKED	SCALE AS SHOWN DATUM AHD DATE JULY '16 SHEET 10 OF 14	B

1:WB711EN010505ES.810.DLS.B.00



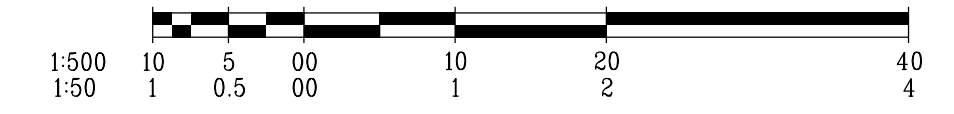
PIT SCHEDULE											
Pit No.	TYPE	INTERNAL		INLET		OUTLET		PIT		SD DRAWINGS	REMARKS
		WD	LEN	DIA	INV LEV	DIA	INV LEV	SETOUT RL	DEPTH		
Ex.1	ENDPIPE			375	248.729			250.567	1.838		CONNECT TO EXISTING END PIPE
2	GRATED ENTRY PIT(HB2)	600	900	375	248.902	375	248.827	250.882	2.055	MPA EDCM STD DWG 601	
3	JUNCTION PIT	600	900	375	249.113	375	249.038	251.115	2.078	MPA EDCM STD DWG 605	
4	GRATED ENTRY PIT(HB2)	600	900	375	249.269	375	249.194	251.201	2.007	MPA EDCM STD DWG 601	
5	GRATED ENTRY PIT(HB2)	600	900	375	249.455	375	249.380	251.147	1.767	MPA EDCM STD DWG 601	
6	GRATED ENTRY PIT(HB2)	600	900	300	249.802	375	249.727	251.266	1.539	MPA EDCM STD DWG 601	
7	JUNCTION PIT	600	900			300	250.110	251.455	1.346	MPA EDCM STD DWG 605	PROVIDE HEAVY DUTY COVER
8	GRATED ENTRY PIT(HB2)	600	900			300	249.371	250.912	1.542	MPA EDCM STD DWG 601	
9	GRATED PIT	600	900	300	249.422	300	249.347	250.959	1.613	MPA EDCM STD DWG 605	PROVIDE GRATED COVER PROVIDE HEAVY DUTY COVER
10	JUNCTION PIT	600	900			300	249.789	251.191	1.402	MPA EDCM STD DWG 605	PROVIDE HEAVY DUTY COVER
11	GRATED ENTRY PIT(HB2)	600	900	300	249.944	300	249.869	251.423	1.554	MPA EDCM STD DWG 601	
12	GRATED ENTRY PIT(HB2)	600	900			300	249.982	251.418	1.436	MPA EDCM STD DWG 601	
13	GRATED ENTRY PIT(HB2)	600	900			300	249.493	251.140	1.646	MPA EDCM STD DWG 601	
14	GRATED ENTRY PIT(HB2)	600	900			300	249.841	251.263	1.423	MPA EDCM STD DWG 601	
Ex.15	ENDPIPE			300	248.690			250.289	1.600		CONNECT TO EXISTING END PIPE
16	JUNCTION PIT	600	900	300	248.864	300	248.789	250.519	1.730	MPA EDCM STD DWG 605	
17	GRATED PIT	600	900	300	249.115	300	249.04	250.467	1.428	MPA EDCM STD DWG 605	PROVIDE GRATED COVER PROVIDE HEAVY DUTY COVER
18	JUNCTION PIT	600	900			300	249.537	250.946	1.409	MPA EDCM STD DWG 605	PROVIDE HEAVY DUTY COVER
Ex.19	ENDPIPE			300	248.783			250.151	1.368		CONNECT TO EXISTING END PIPE
20	JUNCTION PIT	600	900			300	249.141	250.561	1.420	MPA EDCM STD DWG 605	
Ex.21	JUNCTION PIT	600	900	225	249.662			250.593	1.006		CONNECT TO EXISTING PIT
22	JUNCTION PIT	600	900	225	249.796	225	249.721	250.645	0.924	MPA EDCM STD DWG 605	
23	JUNCTION PIT	600	900			225	250.268	251.190	0.922	MPA EDCM STD DWG 605	
Ex.24	ENDPIPE			600	248.566			250.552	1.986		CONNECT TO EXISTING END PIPE
25	GRATED ENTRY PIT(HB2)	900	900	375	248.723	600	248.610	250.600	1.990	MPA EDCM STD DWG 601	HAUNCHED PIT COVER TO 600X900. PROVIDE 600mm BLOCKOUT AT SOUTH WALL @IL248.660
26	GRATED ENTRY PIT(HB2)	600	900	375	249.031	375	248.956	250.792	1.836	MPA EDCM STD DWG 601	
27	GRATED ENTRY PIT(HB2)	600	900	300	249.193	375	249.118	250.788	1.670	MPA EDCM STD DWG 601	
28	JUNCTION PIT	600	900	300	249.515	300	249.446	251.068	1.623	MPA EDCM STD DWG 605	
29	JUNCTION PIT	600	900	300	249.521			251.068			
30	GRATED PIT	600	900	300	250.169	300	249.938	251.523	1.585	MPA EDCM STD DWG 605	PROVIDE GRATED COVER PROVIDE HEAVY DUTY COVER
31	JUNCTION PIT	600	900	300	250.318			251.742	1.424	MPA EDCM STD DWG 605	PROVIDE HEAVY DUTY COVER
32	JUNCTION PIT	600	900	225	250.428	225	250.353	251.481	1.128	MPA EDCM STD DWG 605	
33	JUNCTION PIT	600	900			225	251.143	252.004	0.861	MPA EDCM STD DWG 605	

PIT SCHEDULE



INDICATES CRUSHED ROCK BACKFILL

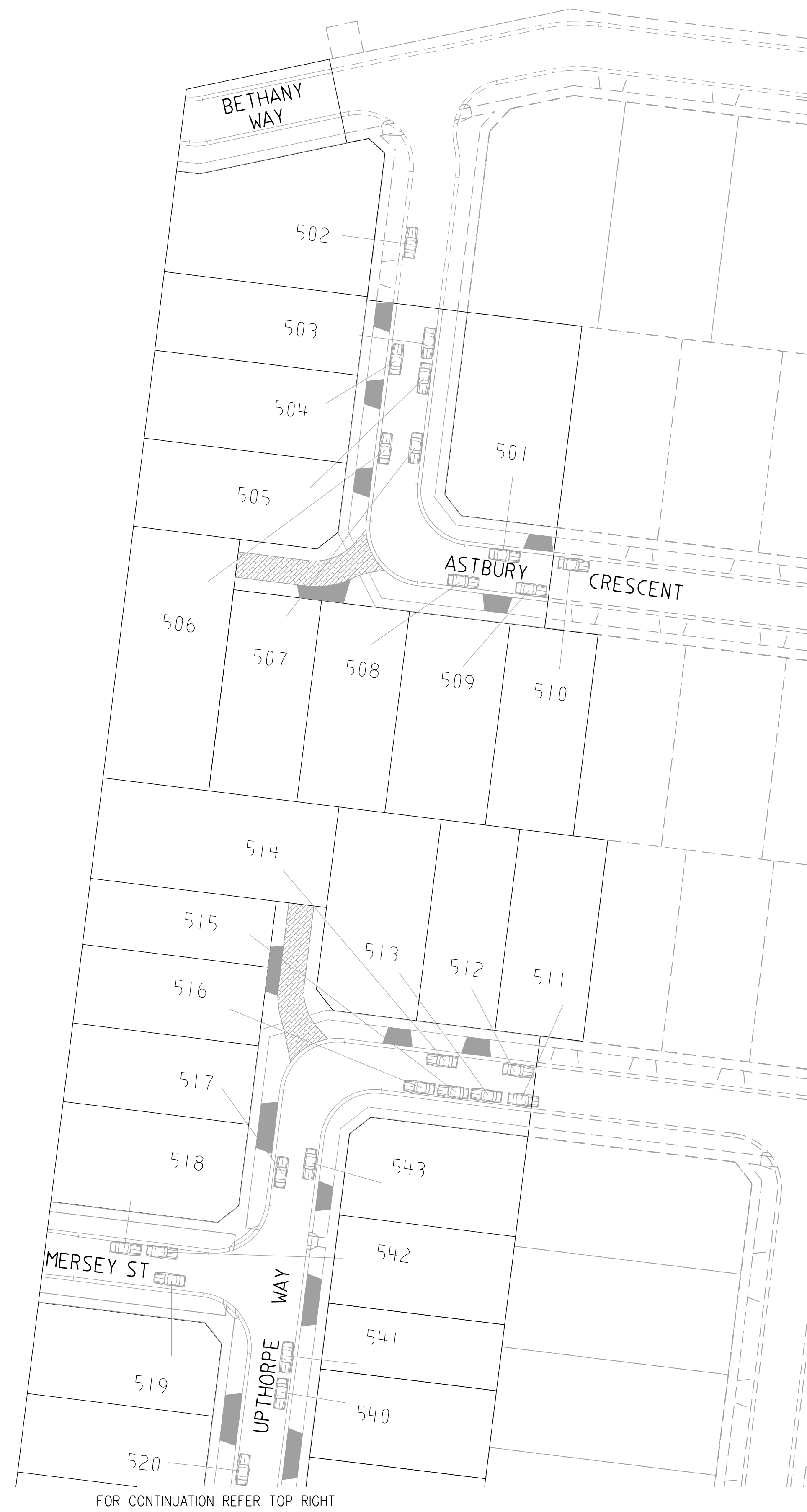
INDICATES 5YR HGL



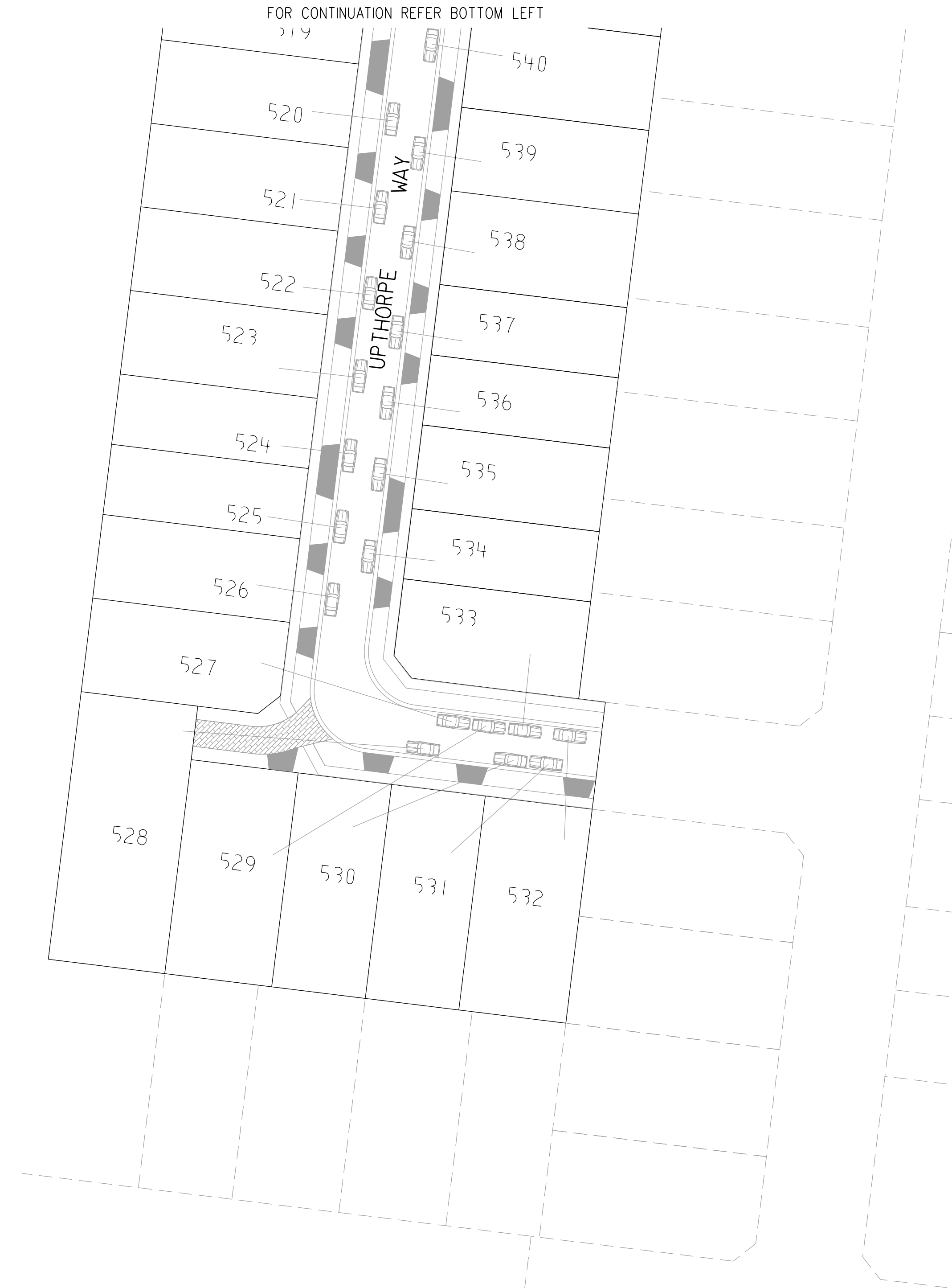
DRAINAGE LONGITUDINAL SECTIONS

SCALE HORIZONTAL 1:500
VERTICAL 1:50

AMENDMENTS				breese pitt dixon pty. ltd.		1/19 cato street	
				land surveyors		hawthorn east, 3123	telephone 8823 2300
				civil engineers		fax no. 8823 2310	
			WARATAH ESTATE STAGE 5			MUNICIPALITY HUME	
			MELWAY REF. 366-E-6			REFERENCE 8711 E/5	
			SURVEY BJ				
			DESIGN SBS				
			DRAWN SBS				
			CHECKED	SCALE AS SHOWN	DATUM AHD	DATE JULY '16	
						SHEET 11 OF 14	




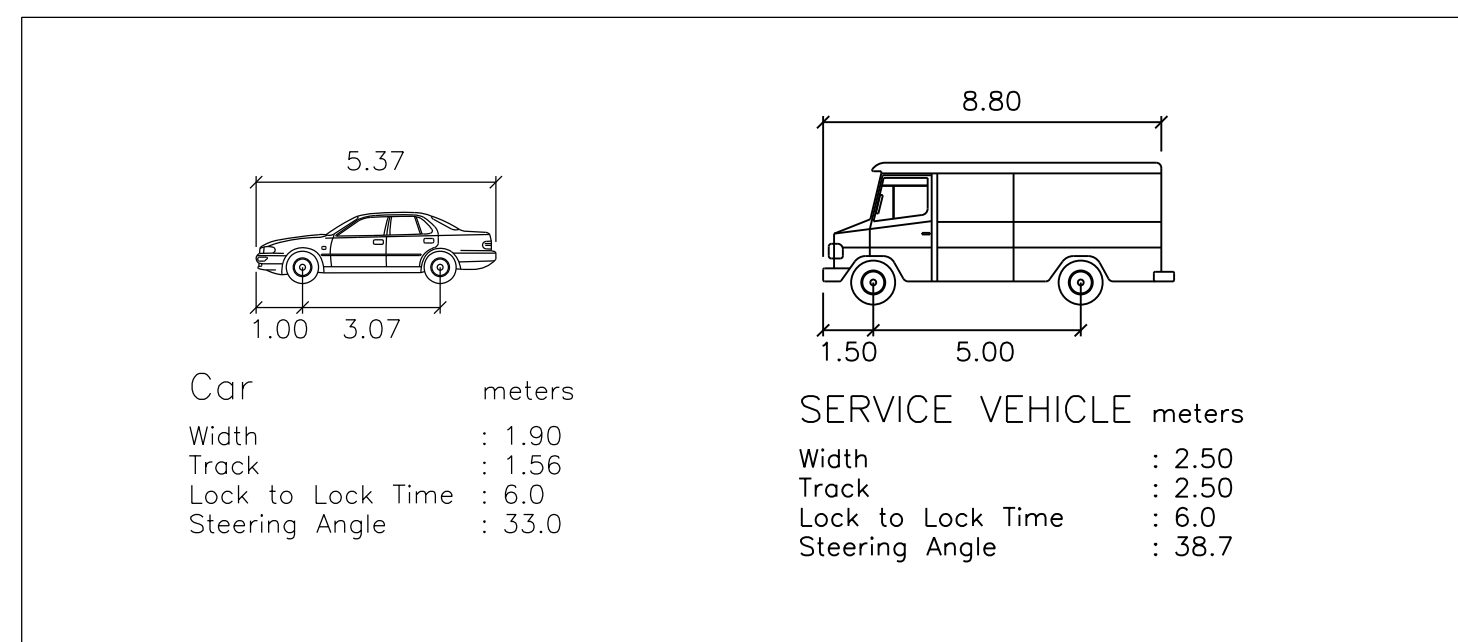
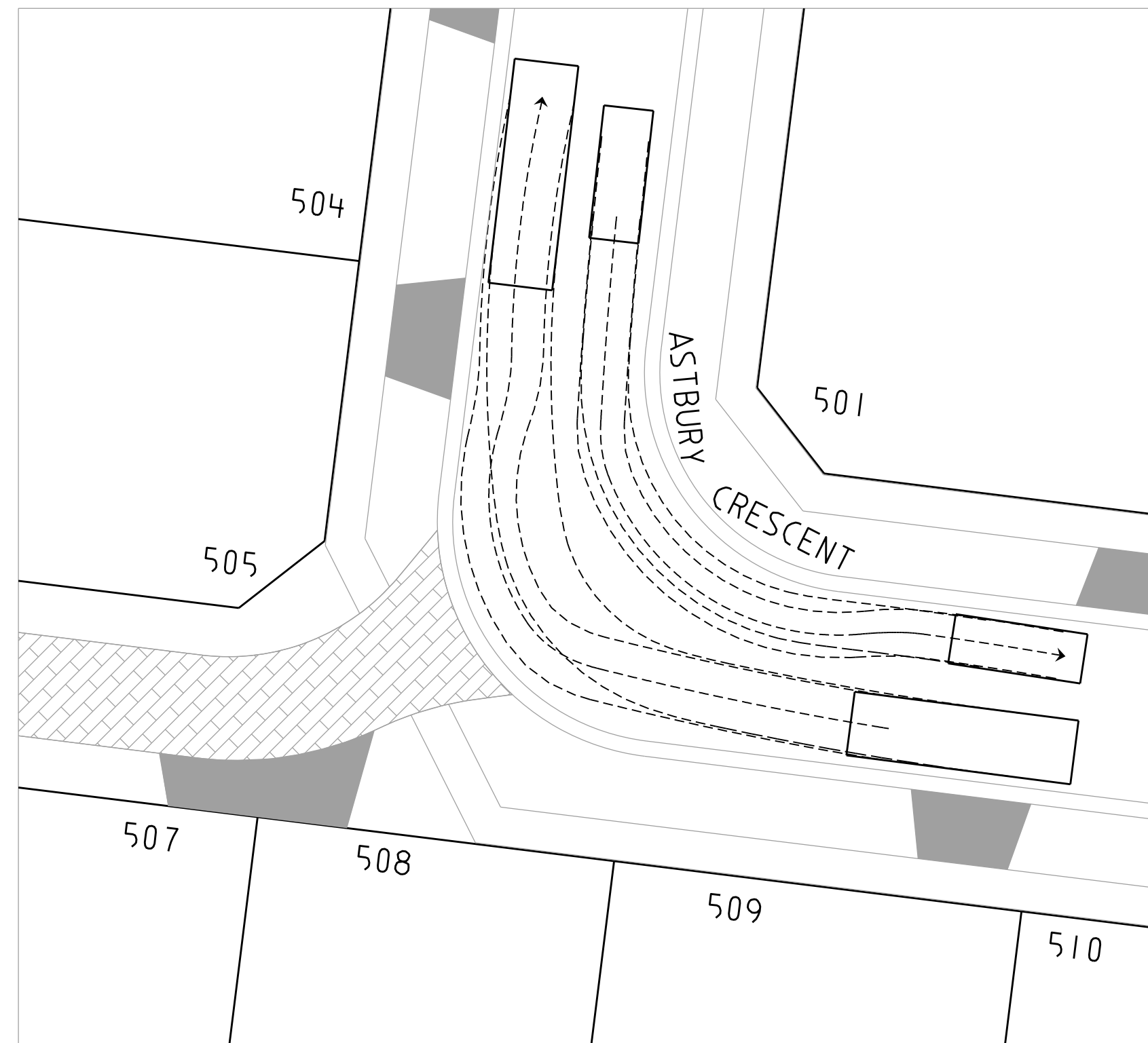
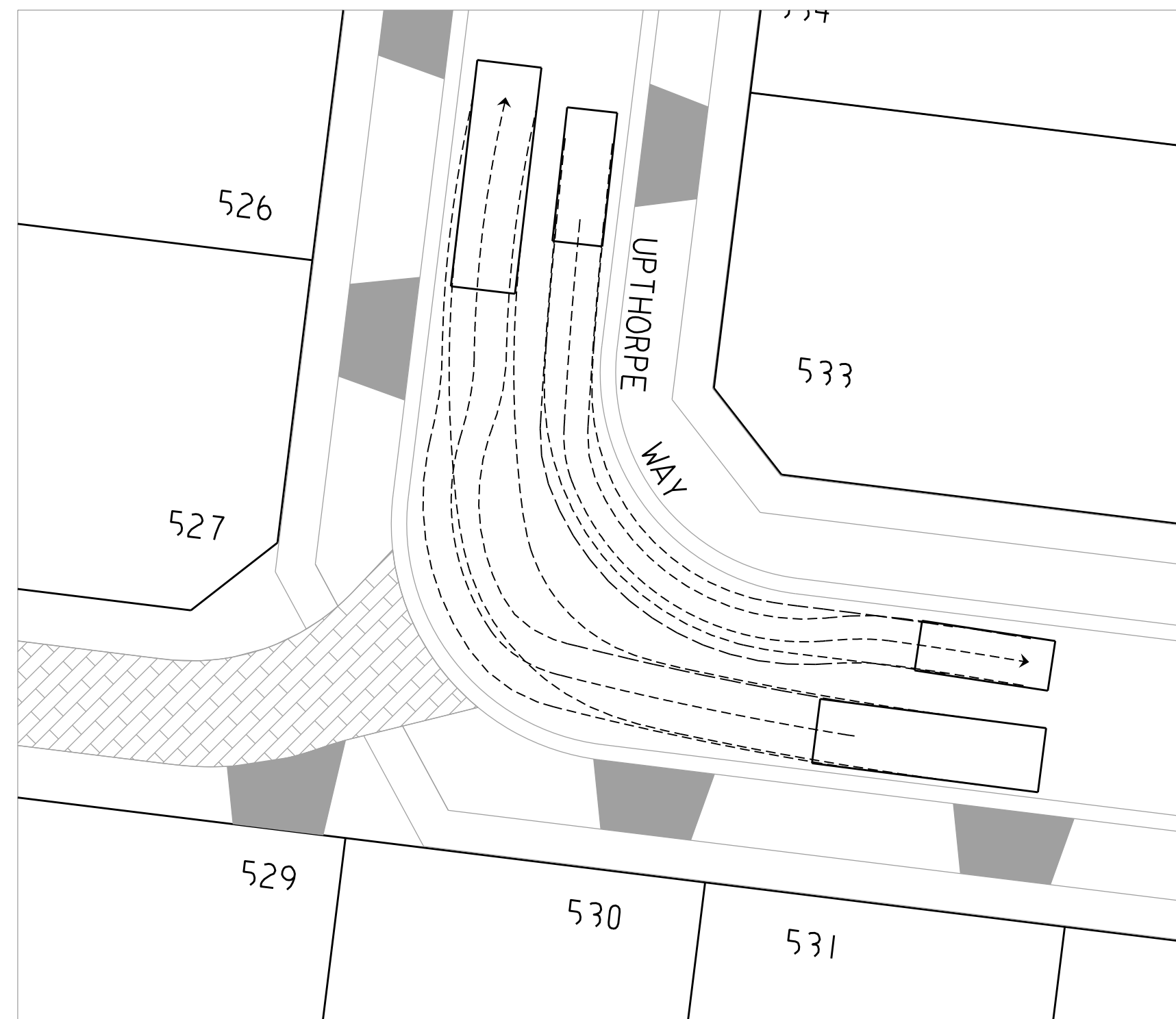
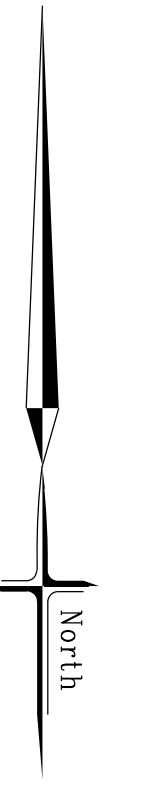
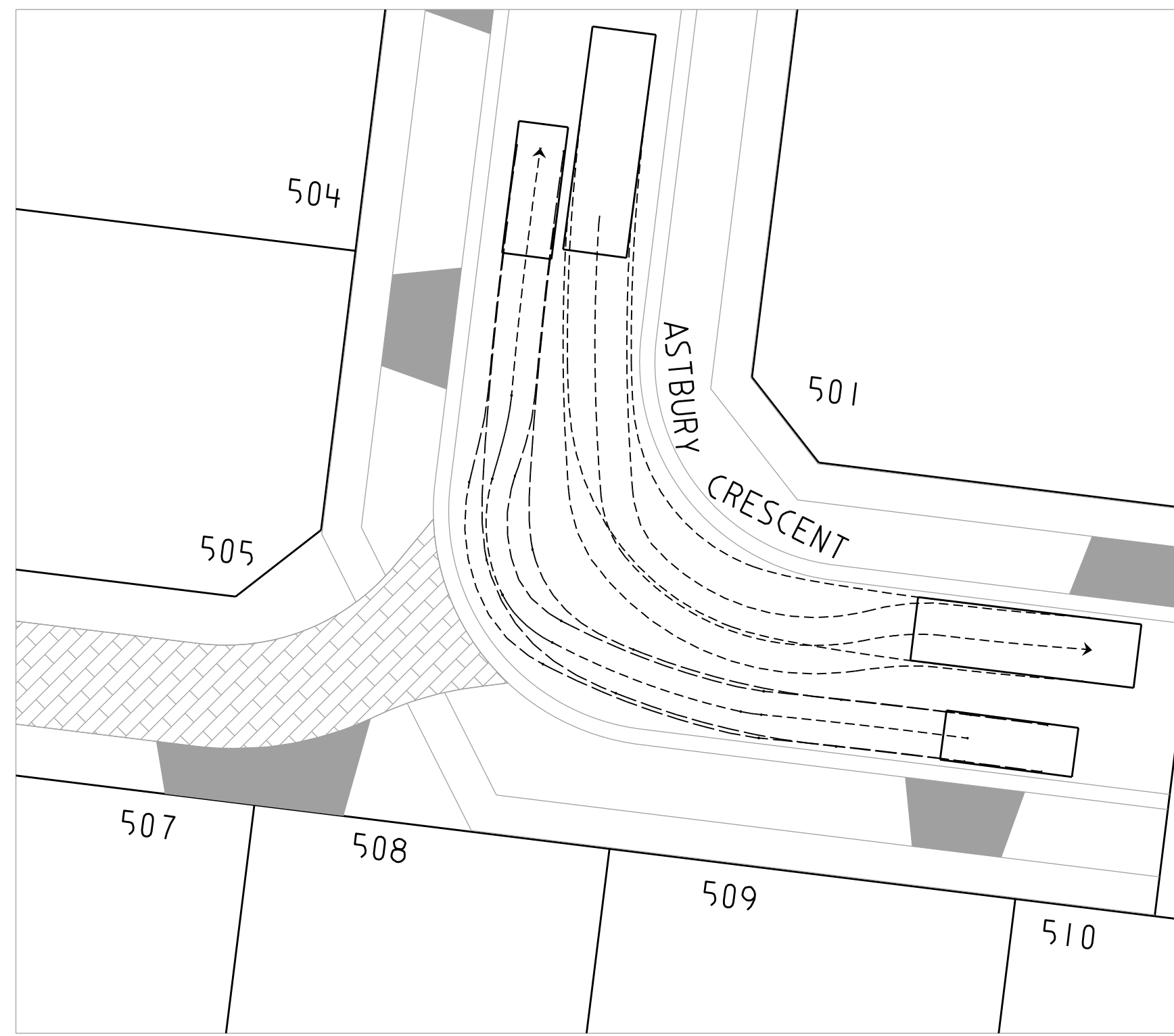
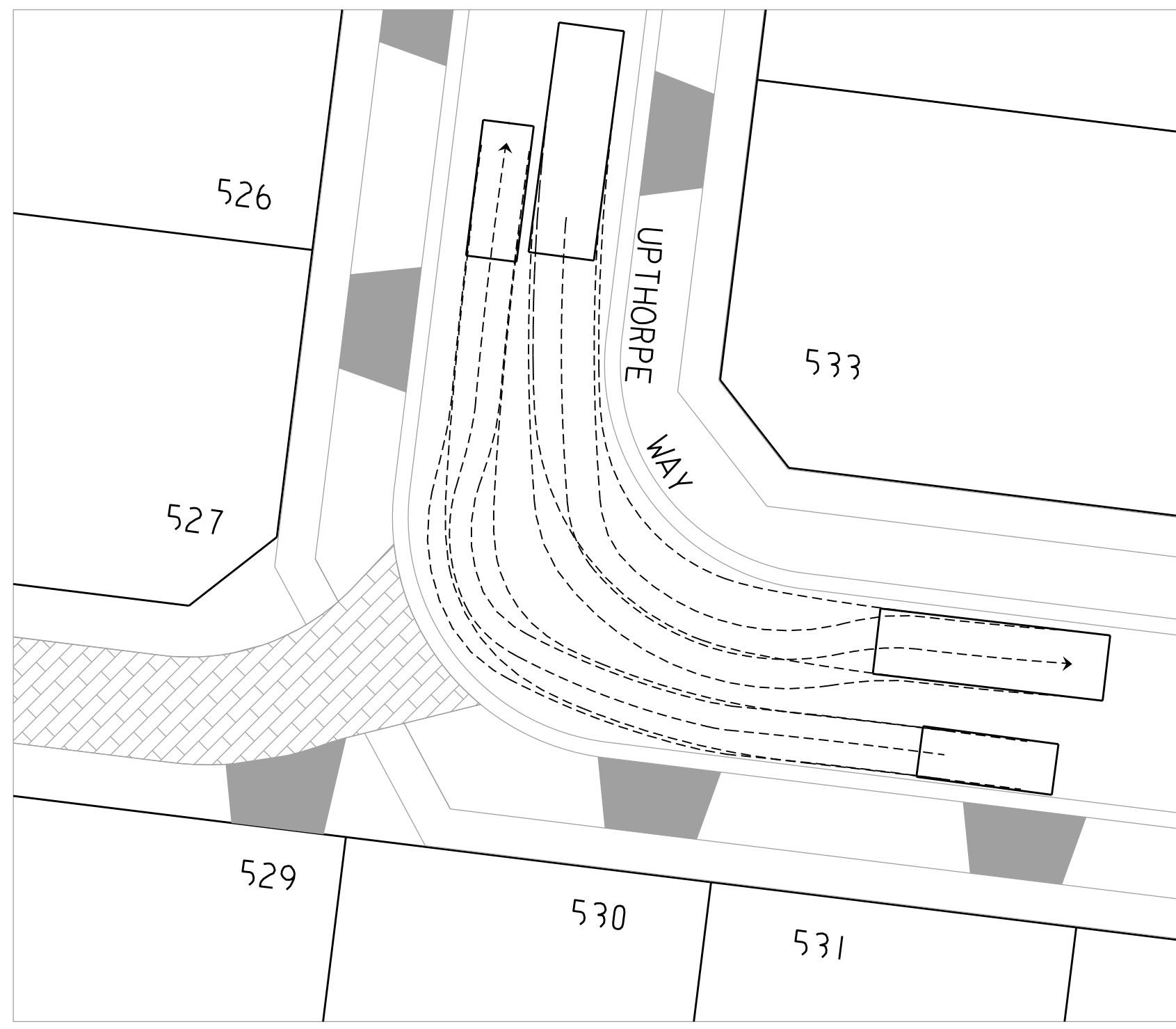
FOR CONTINUATION REFER TOP RIGHT



FOR CONTINUATION REFER BOTTOM LEFT

PARKING PLAN
SCALE 1:500

		 breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 coto street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310			
				MELWAY REF. 366-E-6		MUNICIPALITY HUME	
				SURVEY B.J.		REFERENCE 8711 E/5	
				DESIGN SBS		SHEET 12 OF 14	
				DRAWN SBS		B	
AMENDMENTS	VER	DATE	REMARKS	CHECKED	SCALE AS SHOWN	DATUM AHD	DATE JULY '16
	B	29-03-17	ROAD NAME UPDATED				
	A	20-01-17	ISSUED FOR CONSTRUCTION				

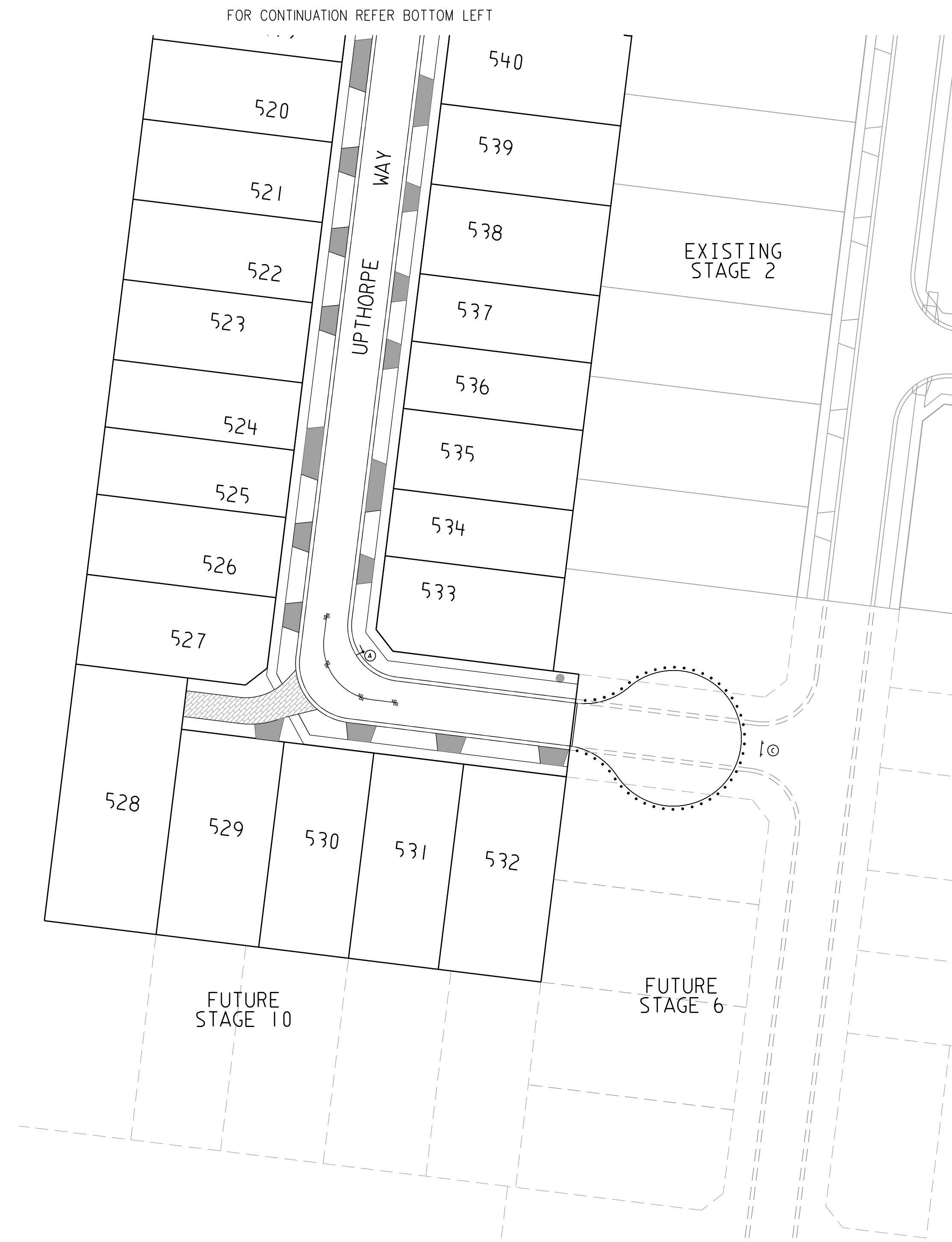
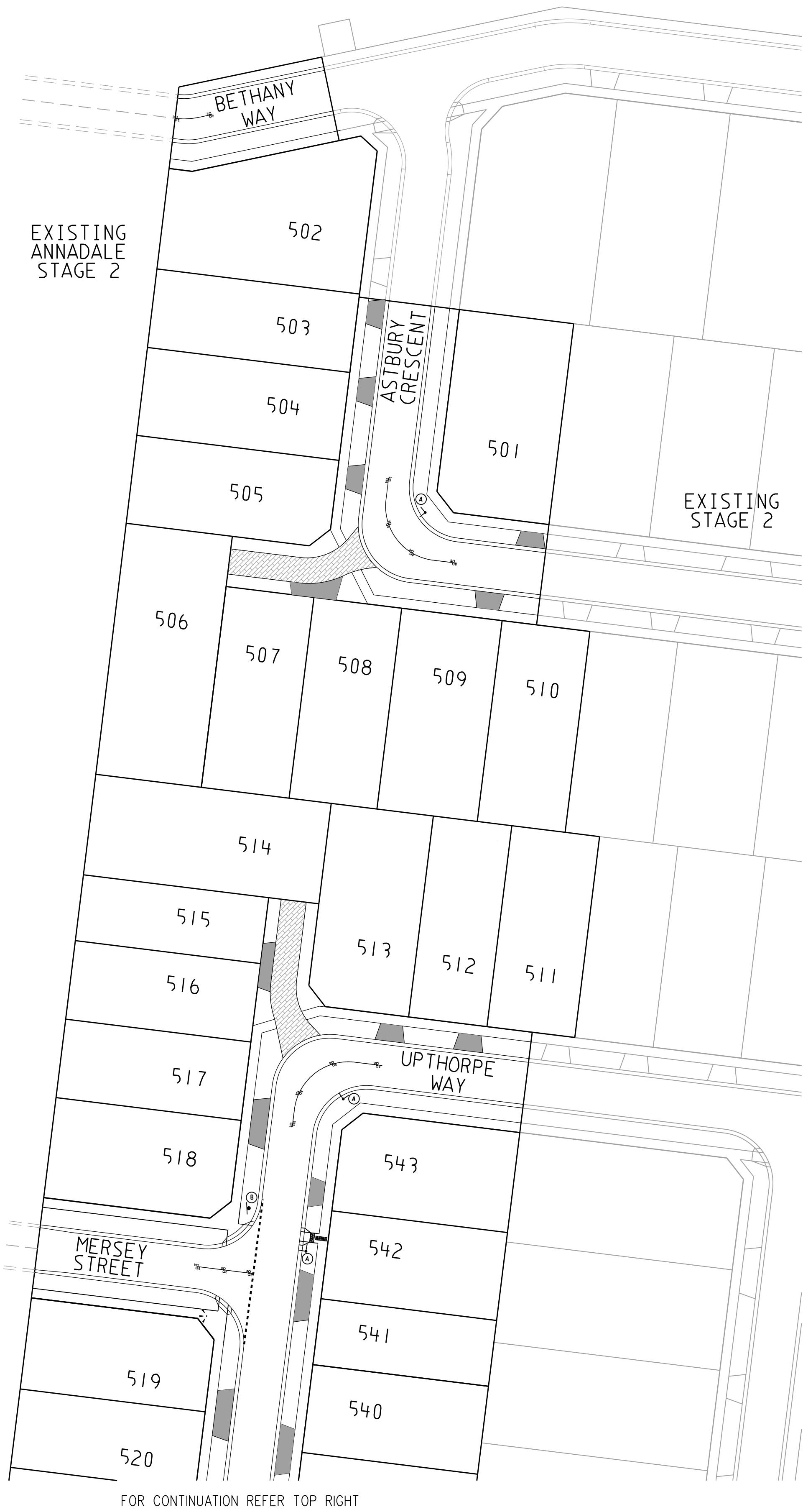
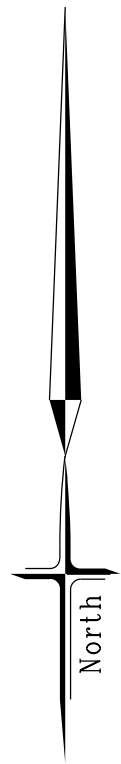


VEHICLE TURNING PLAN

SCALE 1:200

		breese pitt dixon pty. ltd. land surveyors civil engineers		1/19 coto street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310	
				WARATAH ESTATE STAGE 5	
		MELWAY REF. 366-E-6		MUNICIPALITY HUME	
		SURVEY BJ		REFERENCE 8711 E/5	
		DESIGN SBS		SHEET 13 OF 14 B	
		DRAWN SBS		DATE JULY '16	
		CHECKED		SCALE AS SHOWN DATUM AHD	
AMENDMENTS		VER DATE		REMARKS	
B		29-03-17		ROAD NAME UPDATED	
A		20-01-17		ISSUED FOR CONSTRUCTION	

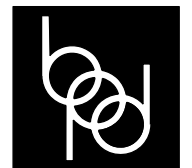
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SIGNAGE & LINEMARKING PLAN
SCALE 1:500

SIGN SCHEDULE

- (A) "STREET NAME" SIGN
- (B)  R1-2
- (C) "NO ROAD" SIGN

		breese pitt dixon pty. ltd.		1/19 coto street
		land surveyors		hawthorn east, 3123
WARATAH ESTATE STAGE 5		civil engineers		telephone 8823 2300
		REFERENCE		fax no. 8823 2310
MUNICIPALITY		HUME		
REFERENCE		8711 E/5		
VER.	DATE	REMARKS	CHECKED	SCALE AS SHOWN
				DATUM AHD
				DATE JULY '16
				SHEET 14 OF 14 B

I:\48711\ENG\ST05\ES_R014_SIGN.B.dwg