

THORNHILL PARK ESTATE

STAGE 30A

WEL.CO GROUP

GENERAL NOTES:

- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA94) ZONE 55.
- ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES AND ARE ACCURATE TO WITHIN $\pm 0.05\text{m}$.
- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992 GENERAL CONDITIONS OF CONTRACT, THE ROAD & DRAINAGE SPECIFICATION, APPROVED MUNICIPALITY SPECIFICATIONS AND STANDARD DRAWINGS AND TO THE SATISFACTION OF THE SUPERINTENDENT AND THE MUNICIPAL ENGINEER OR HIS REPRESENTATIVE.
- ROAD CHAINAGES REFER TO ROAD CENTRELINES. CHAINAGES FOR INTERSECTIONS AND CUL-DE-SACS REFER TO THE LIP OF KERB.
- THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL LOCAL SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
- WHERE REQUIRED ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER. THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE.
- ALL EXCAVATED ROCK AND SURPLUS SPOIL TO BE REMOVED AND DISPOSED OFF SITE UNLESS NOTED OTHERWISE.
- ALL FILLING ON LOTS AND WITHIN ROAD RESERVES IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.
- FILLING MATERIAL IS TO BE IN ACCORDANCE WITH THE SPECIFICATION, AS 3798-2007 & TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT.
- ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN.
- NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE SUPERINTENDENT.
- TBM'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF T.B.M.'S THEREAFTER.
- AT LEAST 3 DAYS PRIOR TO COMMENCING WORK ON EXCAVATIONS IN EXCESS OF 150m DEEP, A NOTIFICATION FORM MUST BE SENT TO WORKSAFE. THE CONTRACTOR IS TO COMPLY WITH WORKSAFE, THE MINES (TRENCHES) REGULATION 1982, THE MINES ACT 1958 AND OCCUPATIONAL HEALTH AND SAFETY ACT 1985, 2004.
- ALL SERVICE TRENCHES UNDER DRIVEWAYS, FOOTPATHS AND PARKING BAYS TO BE BACKFILLED WITH CLASS 2 CRUSHED ROCK. SERVICE TRENCHES LESS THAN 750mm BEHIND KERB AND CHANNEL OR PAVED TRAFFIC AREAS ARE ALSO TO BE BACKFILLED WITH COMPACTED CLASS 2 CRUSHED ROCK.
- WHERE REQUIRED, ALL EXISTING DAMS, DEPRESSIONS AND DRAINS ARE TO BE BREACHED, DRAINED, DESLUDGED AND SHALL BE EXCAVATED TO A CLEAN FIRM BASE. THE SURFACE SHALL BE INSPECTED, APPROVED AND LEVELED BY THE ENGINEER PRIOR TO COMMENCEMENT OF FILLING. THE FILL SHALL BE APPROVED SELECTED ON SITE MATERIAL OR APPROVED IMPORTED MATERIAL. THE FILL SHALL BE PLACED UNDER CONTROLLED MOISTURE CONDITIONS IN ACCORDANCE WITH THE SPECIFICATION.
- NO BLASTING TO BE CARRIED OUT WITHIN THE MUNICIPALITY WITHOUT OBTAINING COUNCIL AND SUPERINTENDENT WRITTEN PERMISSION.
- GAS AND WATER CONDUITS ARE TO BE:
Ø50mm . CLASS 12 P.V.C. - SINGLE SERVICE
Ø100mm . CLASS 12 P.V.C. - DUAL SERVICE (DRINKING AND NON DRINKING WATER)

WITH THE FOLLOWING MINIMUM COVER TO FINISHED SURFACE LEVELS:
ROAD PAVEMENT - 0.80m
VERGE, FOOTPATHS - 0.45m
- ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAVEMENTS TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT MUNICIPALITY OR ROAD AUTHORITY SPECIFICATION.
- AG/SUBSOIL DRAIN TO BE LAID BEHIND KERB WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAWINGS AND CONNECTED TO UNDERGROUND DRAINAGE.
- ALL STORMWATER DRAINS ARE TO BE CLASS '2' R.C. PIPES UNLESS OTHERWISE SHOWN. ALL R.C. JOINTS ARE TO BE RUBBER RING JOINTED (R.R.J.).
- CENTRELINES OF ALL EASEMENT DRAINS ARE OFFSET 1.0m OR 2.2m (WHERE OUTSIDE OF SEWER) FROM THE PROPERTY LINE UNLESS SHOWN OTHERWISE.
- WHERE CURVED PIPE ALIGNMENTS ARE SHOWN ON THE FACE PLANS THEY ARE TO BE LAID PARALLEL TO THE BACK OF KERB, EXCEPT WHERE A RADIUS HAS BEEN SPECIFICALLY NOMINATED. CURVED PIPES ARE TO BE APPROVED BY COUNCIL AND IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
- WATER TAPPINGS TO BE LOCATED IN CENTRE OF ALLOTMENTS UNLESS OTHERWISE SHOWN.
- PAVEMENT DEPTHS MAY BE MODIFIED AS DIRECTED BY THE SUPERINTENDENT. PAVEMENT TO BE BOXED OUT TO MINIMUM DEPTH DENOTED, INSPECTED AND IF SUBGRADE IS IN QUESTION, FURTHER TESTING CARRIED OUT TO DETERMINE FINAL PAVEMENT DEPTH.
- WHERE PAVEMENT IS CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL. FILLING TO BE CONSTRUCTED IN LAYERS 150mm THICK WITH COMPACTION ACHIEVING 95% AUSTRALIAN STANDARD DENSITY.
- WHEN PAVEMENT EXCAVATION IS IN ROCK, ALL LOOSE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REMOVED. THE SUB-GRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL.
- LINEMARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS 1742 SERIES UNLESS NOTED OTHERWISE. STREET SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCIL STANDARDS.
- ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MAINTAINED IN ACCORDANCE WITH AS 1742-3.
- TACTILE GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE DISABILITY DISCRIMINATION ACT AND RELEVANT COUNCIL STANDARD DRAWINGS.
- CONTRACTOR TO PROVIDE AN ENVIRONMENTAL MANAGEMENT PLAN INCLUDING SILT AND SEDIMENT RUNOFF PROTECTION ETC. PRIOR TO THE COMMENCEMENT OF WORKS.
- ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN. IF ROAD AND DRAINAGE CONSTRUCTION NECESSITATES THEIR REMOVAL, WRITTEN PERMISSION MUST BE OBTAINED FROM THE SUPERINTENDENT.
- TREES NOT SPECIFIED FOR REMOVAL ARE TO BE PROTECTED WITH APPROPRIATE EXCLUSION FENCING PRIOR TO COMMENCEMENT OF ANY WORKS.
- THE CONTRACTOR IS REQUIRED TO OBTAIN A 'PERMIT TO WORK' FROM MELBOURNE WATER'S SURVEILLANCE OFFICER AT THE PRE-COMMENCEMENT MEETING. THE CONTRACTOR IS REQUIRED TO ENSURE THAT THE 'PERMIT TO WORK' IS KEPT UP TO DATE FOR THE DURATION OF THE CONTRACT.

DRAWING SCHEDULE

REF	DESCRIPTION	REV	SHEET No.
CR100	FACE SHEET	E	1
CR200	LAYOUT PLAN - SHEET 1 OF 2	D	2
CR201	LAYOUT PLAN - SHEET 2 OF 2	D	3
CR202	SERVICES PLAN - SHEET 1 OF 2	E	4
CR203	SERVICES PLAN - SHEET 2 OF 2	E	5
CR300	ROAD LONGITUDINAL SECTIONS - SHEET 1 OF 3	D	6
CR301	ROAD LONGITUDINAL SECTIONS - SHEET 2 OF 3	D	7
CR302	ROAD LONGITUDINAL SECTIONS - SHEET 3 OF 3	D	8
CR400	ROAD CROSS SECTIONS - SHEET 1 OF 8	D	9
CR401	ROAD CROSS SECTIONS - SHEET 2 OF 8	D	10
CR402	ROAD CROSS SECTIONS - SHEET 3 OF 8	D	11
CR403	ROAD CROSS SECTIONS - SHEET 4 OF 8	D	12
CR404	ROAD CROSS SECTIONS - SHEET 5 OF 8	D	13
CR405	ROAD CROSS SECTIONS - SHEET 6 OF 8	D	14
CR406	ROAD CROSS SECTIONS - SHEET 7 OF 8	D	15
CR407	ROAD CROSS SECTIONS - SHEET 8 OF 8	D	16
CR500	INTERSECTION DETAILS - SHEET 1 OF 6	D	17
CR501	INTERSECTION DETAILS - SHEET 2 OF 6	D	18
CR502	INTERSECTION DETAILS - SHEET 3 OF 6	D	19
CR503	INTERSECTION DETAILS - SHEET 4 OF 6	D	20
CR504	INTERSECTION DETAILS - SHEET 5 OF 6	D	21
CR505	INTERSECTION DETAILS - SHEET 6 OF 6	D	22
CR600	DRAINAGE LONG SECTIONS - SHEET 1 OF 4	D	23
CR601	DRAINAGE LONG SECTIONS - SHEET 2 OF 4	D	24
CR602	DRAINAGE LONG SECTIONS - SHEET 3 OF 4	D	25
CR603	DRAINAGE LONG SECTIONS - SHEET 4 OF 4	D	26
CR604	TEMPORARY RETARDING BASIN - PLAN & SECTIONS	C	27
CR605	TEMPORARY RETARDING BASIN - DETAILS	C	28



LOCALITY PLAN

SCALE: 1:5000

REF	DESCRIPTION	REV	SHEET No.
CR700	PAVEMENT AND TYPICAL DETAILS	D	29
CR701	WASHINGTON DRIVE SPEED HUMP	D	30
CR702	LYNWOOD DRIVE SPEED HUMP - SHEET 1 OF 2	D	31
CR703	LYNWOOD DRIVE SPEED HUMP - SHEET 2 OF 2	D	32
CR704	IWMS KERB CUT LOCATIONS - SHEET 1 OF 2	D	33
CR705	IWMS KERB CUT LOCATIONS - SHEET 2 OF 2	D	34
CR706	IWMS & TYPICAL DETAILS - SHEET 1 OF 2	D	35
CR707	IWMS & TYPICAL DETAILS - SHEET 2 OF 2	D	36
CR800	SIGNAGE AND LINEMARKING - SHEET 1 OF 2	D	37
CR801	SIGNAGE AND LINEMARKING - SHEET 2 OF 2	D	38



WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY. AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

LEGEND

DESCRIPTION

WATER MAIN, VALVE AND HYDRANT
UNDERGROUND ELECTRICITY
OVERHEAD ELECTRICITY & POLE
TELECOMMUNICATIONS & SERVICE PIT
OPTIC FIBRE
OVERHEAD TELECOMMUNICATIONS
GAS MAIN
SEWER & MAINTENANCE STRUCTURE
SEWER RISING MAIN
CENTRAL INVERT
COUNCIL STORMWATER DRAIN AND PIT
STORM WATER DRAINAGE PROPERTY INLETS
COUNCIL STORM WATER PITS
HOUSE DRAIN
AG DRAIN AND FLUSHER
MWC STORM WATER DRAIN & PIT
MWC STORM WATER PITS
STORM WATER DRAINAGE PIT NUMBER
GAS & WATER CONDUITS
CONCRETE VEHICLE CROSSING

CONCRETE HEAVY DUTY VEHICLE CROSSING

SURFACE CONTOUR MINOR
SURFACE CONTOUR MAJOR
SURFACE LEVEL
BATTER LEVEL (TOP / TOE)
EARTHWORKS GRADE
SIGN AND POST
STREET SIGN

PERMANENT SURVEY MARK

TEMPORARY BENCH MARK

BOLLARD

ROAD CHAINAGES

LOT CHAINAGES

SETOUT POINT

LIMIT OF WORKS

BATTER

EXCAVATION GREATER THAN 0.20m

FILLING GREATER THAN 0.20m

ROCK BEACHING

FENCE - VEHICLE EXCLUSION

FENCES

FOOTPATH

PAVEMENT

TACTILE GROUND SURFACE INDICATOR

TREE (& SURVEYED CANOPY) TO BE RETAINED

TREE TO BE PROTECTED

TREE TO BE REMOVED

IWMS DETAILS

EXISTING	PROPOSED

TYPE A (SINGLE TREE)	TR 99.99
TYPE B (MULTIPLE TREES)	TR 99.99
TYPE C (ROAD SURFACE RUN OFF SWALE)	TR 99.99

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Rev	Amendments	Approved	Date
E	AMENDMENTS TO SHEET CR202 & CR203	M.R	19/10/20
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20

Scale	

AS/NZS ISO 9001
AS/NZS ISO 14001
AS/NZS ISO 45001

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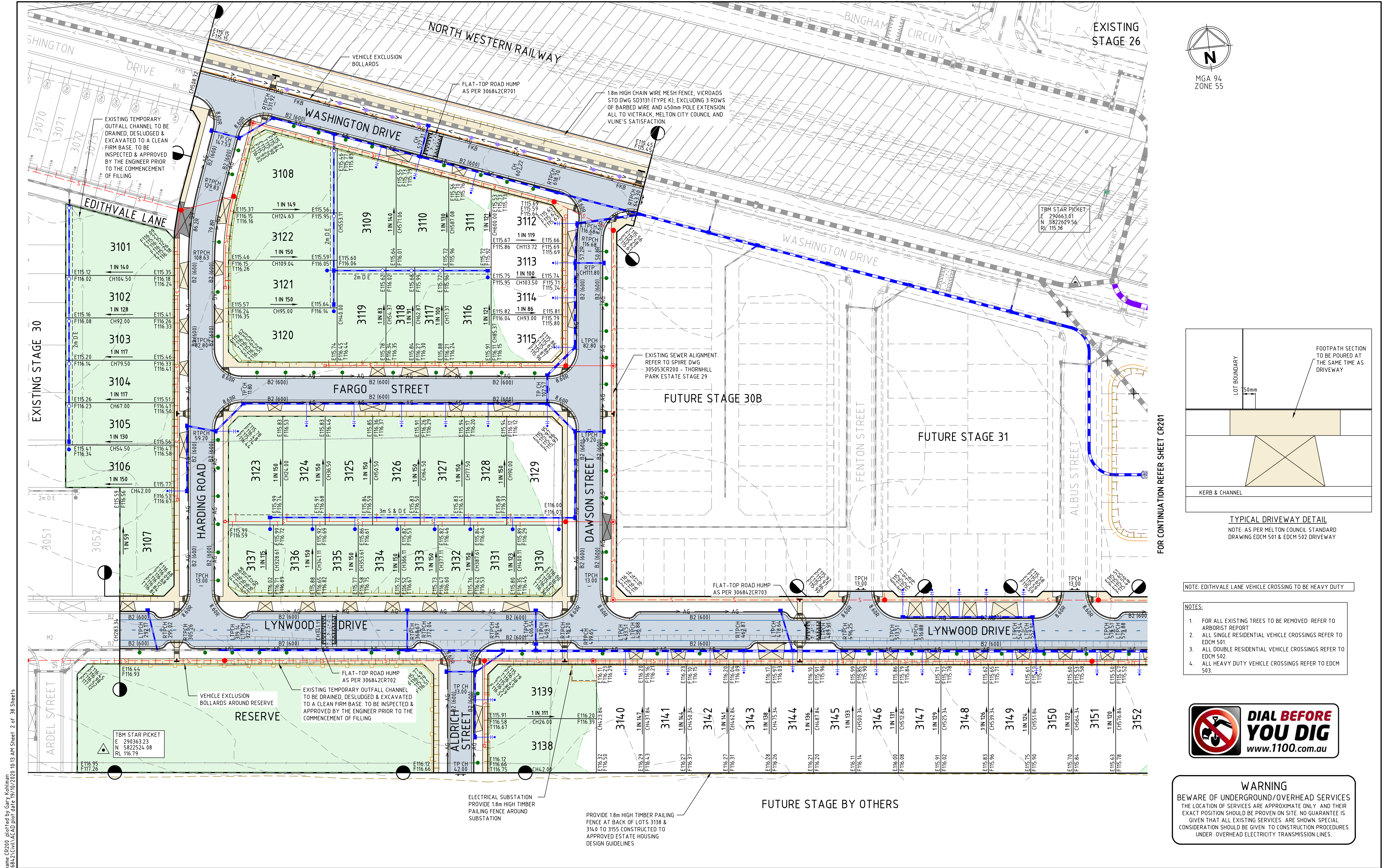
thornhill PARK

Wel.Co

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Authorised	Date
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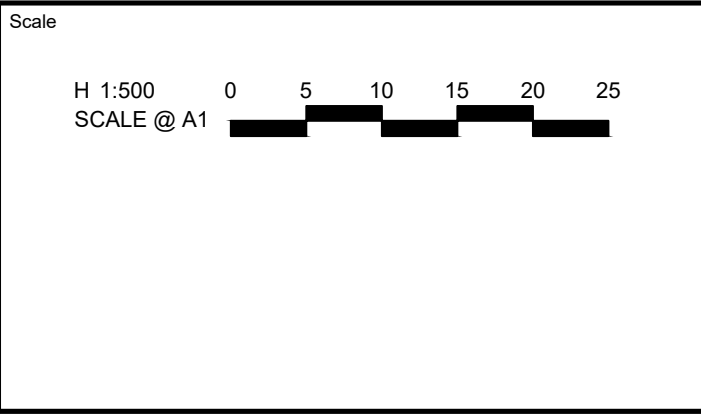
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
FACE SHEET
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No **306842CR100** Rev **E**



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D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
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PARK

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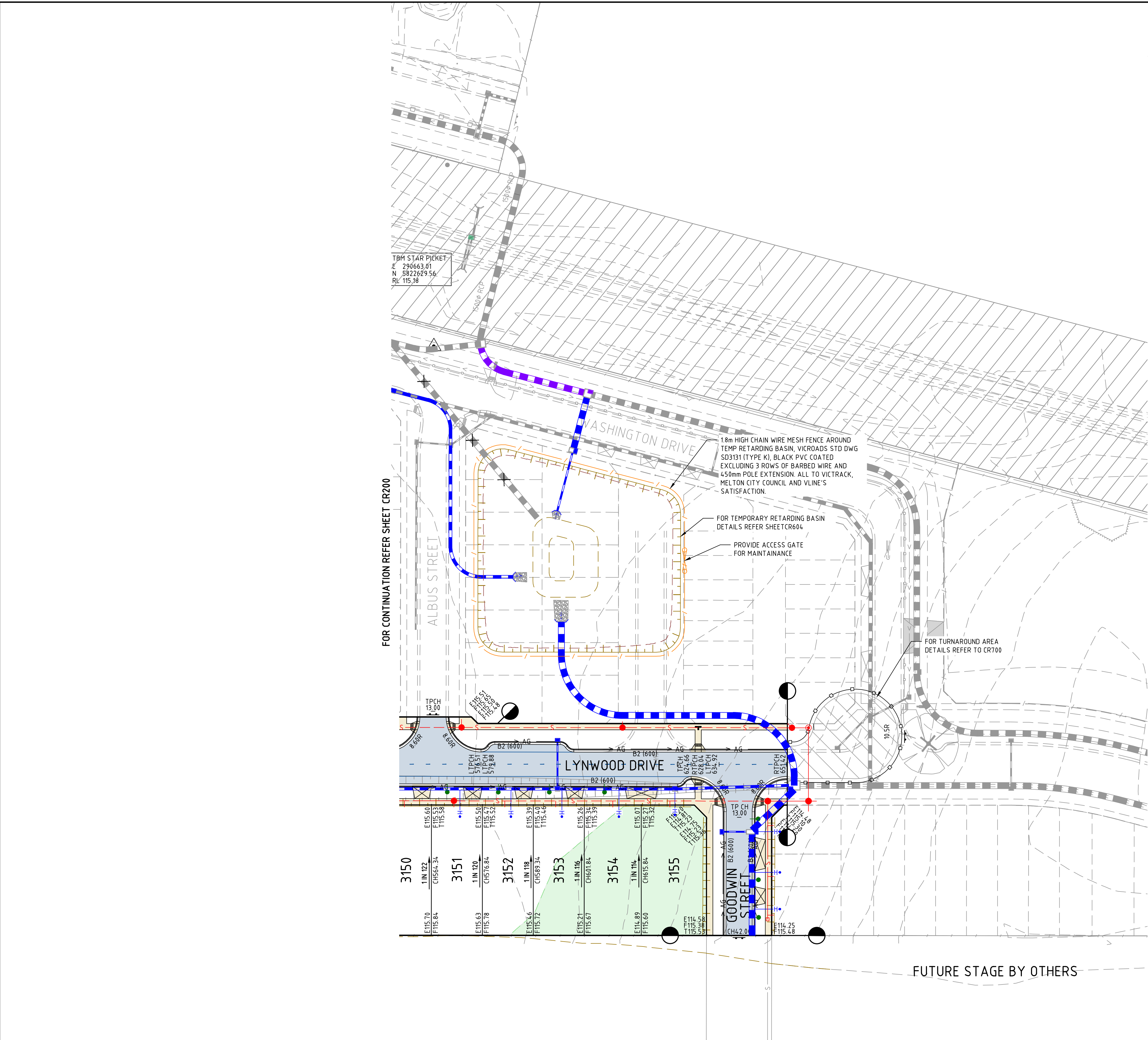
**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
LAYOUT PLAN - SHEET 1 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY

Drig No
306842CR200

Rev
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file name: 306842CR200.dwg layout: prelim CD201, plotted by: Gary Kohlen, file location: G:\30\306842\civil\ALCAD plot date: 19/10/2020 10:12 AM Sheet: 3 of 38 Sheets

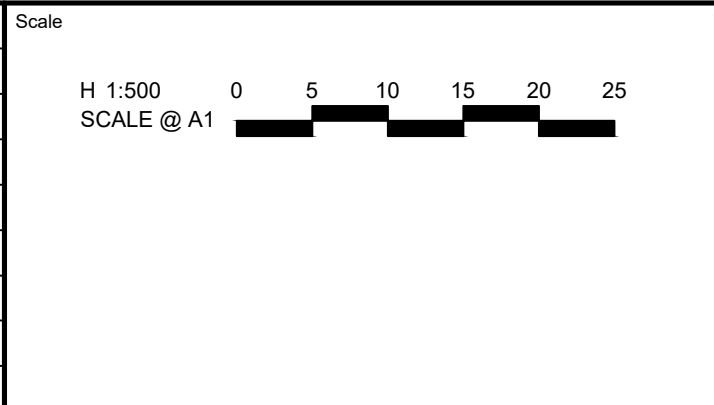


- NOTES:
1. FOR ALL ISLANDS REFER TO CITY OF MELTON STANDARD DRAWINGS MCC 305, 306, 307 AND 308.
 2. FOR ALL EXISTING TREES TO BE REMOVED REFER TO ARBORIST REPORT
 3. ALL SINGLE RESIDENTIAL VEHICLE CROSSINGS REFER TO EDCM 501.
 4. ALL DOUBLE RESIDENTIAL VEHICLE CROSSINGS REFER TO EDCM 502.
 5. ALL HEAVY DUTY VEHICLE CROSSINGS REFER TO EDCM 503.



WARNING
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PARK
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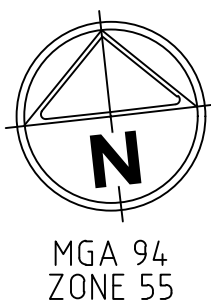
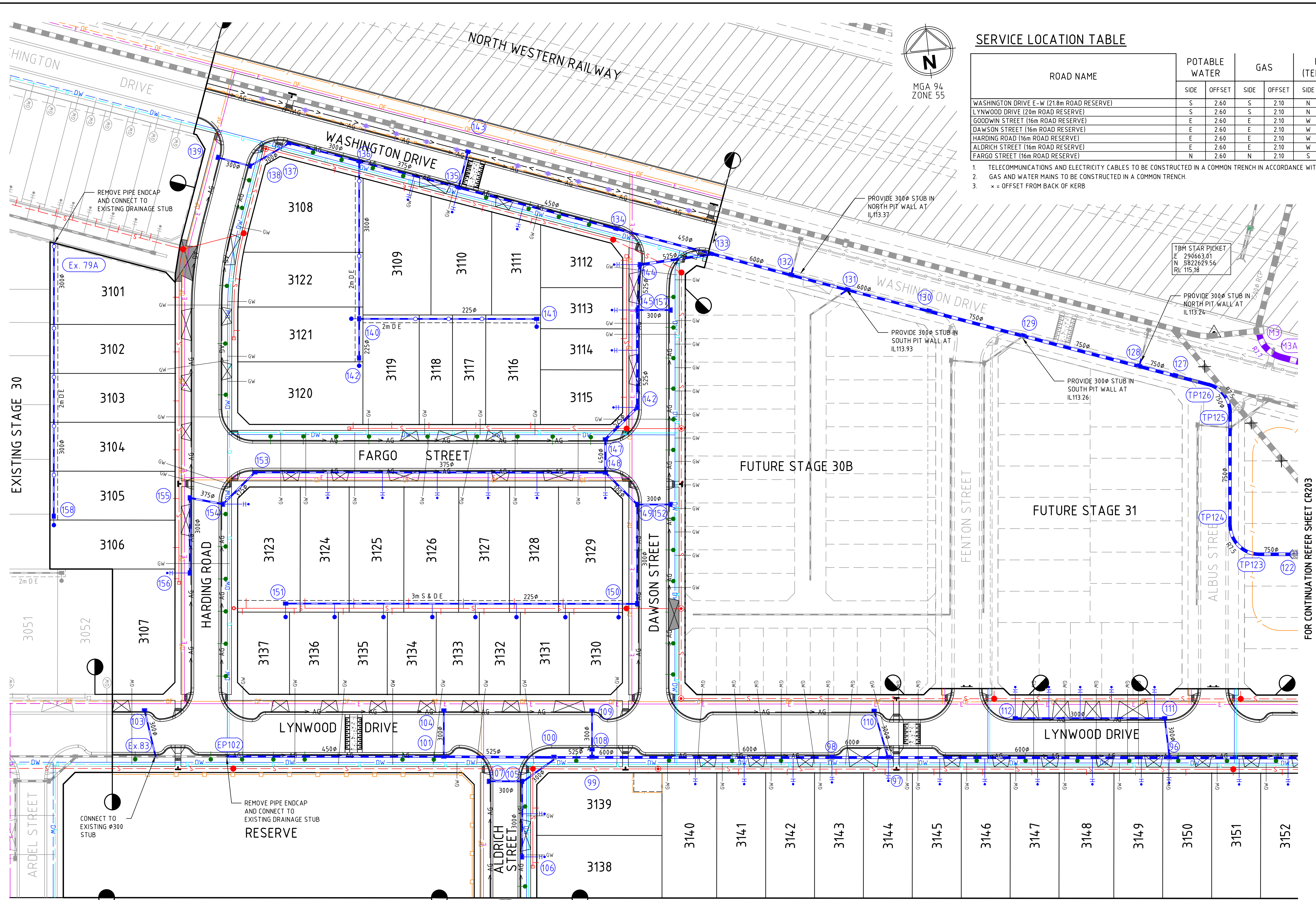
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**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
LAYOUT PLAN - SHEET 2 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP**
PRELIMINARY Drg No **306842CR201** Rev **D**

file name: 30684CR2020.dwg, layout name: CR202, plotted by: Gary Kohler,
file location: G:\30\3068421\civil\ALAD plot date: 19/10/2020 10:13 AM Sheet: 4 of 38 Sheets



SERVICE LOCATION TABLE

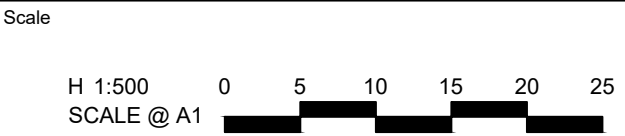
ROAD NAME	POTABLE WATER		GAS		NBN (TELECOM)		ELECTRICITY		SRM	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE SIDE	U/G CABLE SIDE	POLE SIDE	OFFSET
WASHINGTON DRIVE E-W (21.8m ROAD RESERVE)	S	2.60	S	2.10	N	2.90	N	0.90x	N	3.50
LYNWOOD DRIVE (20m ROAD RESERVE)	S	2.60	S	2.10	N	1.80	N	0.90x	N	2.40
GOODWIN STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40
DAWSON STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40
HARDING ROAD (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40
ALDRICH STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40
FARGO STREET (16m ROAD RESERVE)	N	2.60	N	2.10	S	1.80	S	0.90x	S	2.40

1. TELECOMMUNICATIONS AND ELECTRICITY CABLES TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRG'S.
2. GAS AND WATER MAINS TO BE CONSTRUCTED IN A COMMON TRENCH.
3. x = OFFSET FROM BACK OF KERB



WARNING
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E	PIT NUMBERING AMENDED	M.R.	19/10/20
D	ISSUED TO COUNCIL	M.R.	08/10/20
C	ISSUED FOR TENDER	M.R.	22/09/20
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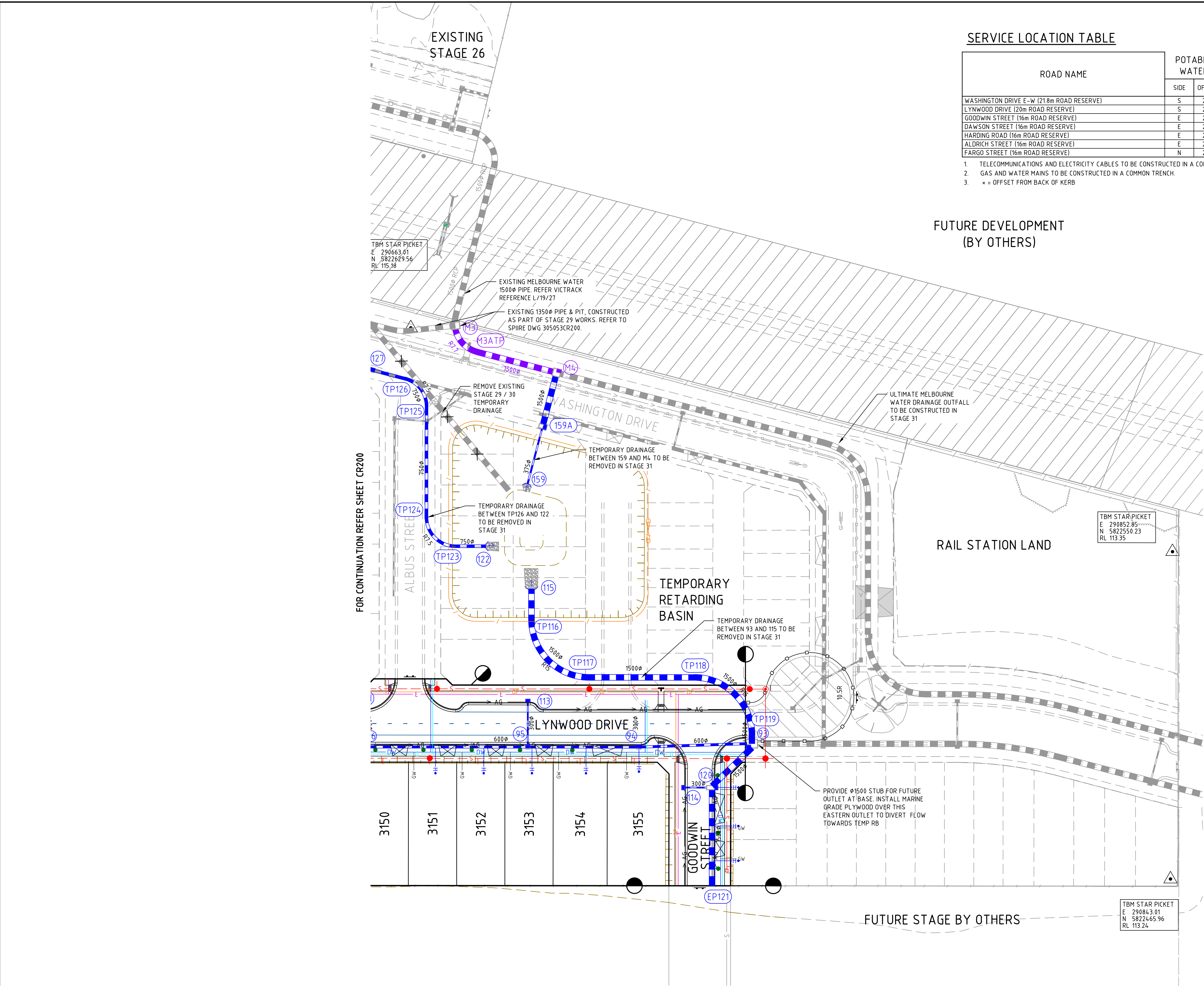
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**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
SERVICES PLAN - SHEET 1 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No 306842CR202 Rev E

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SERVICE LOCATION TABLE

ROAD NAME	POTABLE WATER		GAS		NBN (TELECOM)		ELECTRICITY				SRM	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE		U/G CABLE		SIDE	OFFSET
WASHINGTON DRIVE E-W (21.8m ROAD RESERVE)	S	2.60	S	2.10	N	2.90	N	0.90x	N	3.50	-	-
LYNWOOD DRIVE (20m ROAD RESERVE)	S	2.60	S	2.10	N	1.80	N	0.90x	N	2.40	N	3.10
GOODWIN STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40	-	-
DAWSON STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40	-	-
HARDING ROAD (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40	-	-
ALDRICH STREET (16m ROAD RESERVE)	E	2.60	E	2.10	W	1.80	W	0.90x	W	2.40	-	-
FARGO STREET (16m ROAD RESERVE)	N	2.60	N	2.10	S	1.80	S	0.90x	S	2.40	-	-

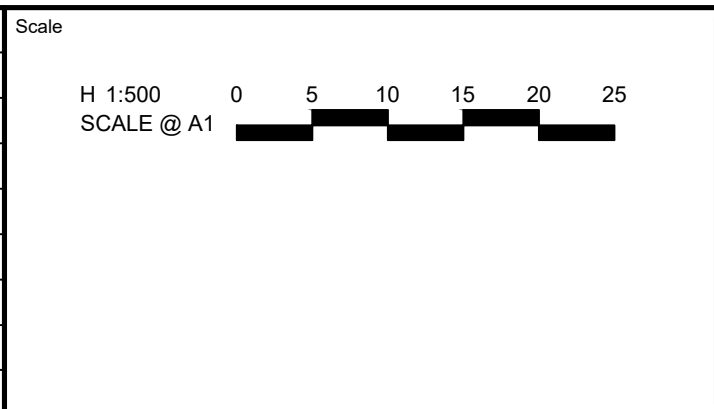
1. TELECOMMUNICATIONS AND ELECTRICITY CABLES TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRG's.
2. GAS AND WATER MAINS TO BE CONSTRUCTED IN A COMMON TRENCH.
3. x = OFFSET FROM BACK OF KERB

FUTURE DEVELOPMENT
(BY OTHERS)



WARNING
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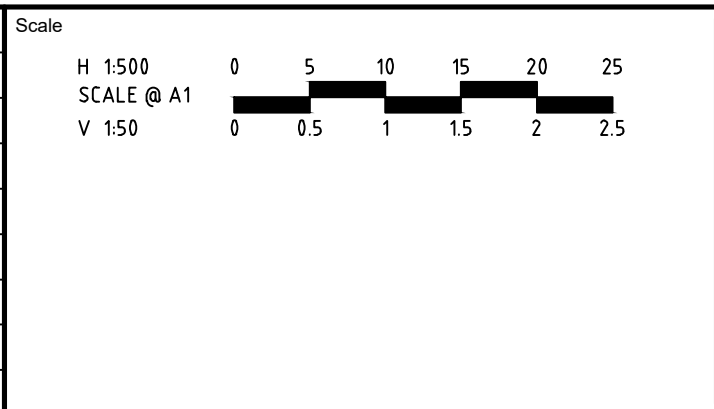
**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
SERVICES PLAN - SHEET 2 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No **306842CR203** Rev **E**

WASHINGTON DRIVE

ALDRICH STREET

DAWSON STREET



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414 LA TROBE STREET PO BOX 16084 MELBOURNE
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spiire.com.au ABN 55 050 029 635

Designed

Authorised

Checked

Date

PRELIMINARY Drg No **306842CR300**

Rev

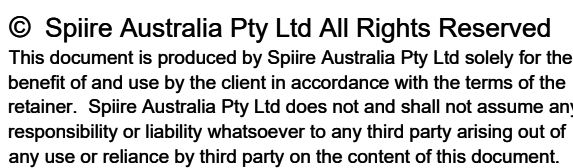


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PRELIMINARY Drg No **306842CR301**

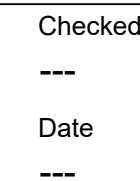
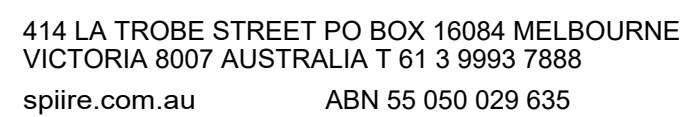
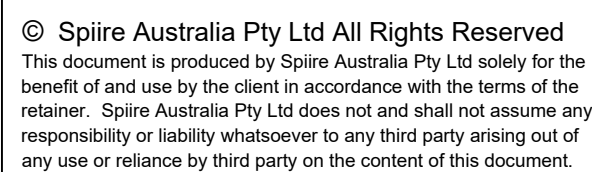
Rev



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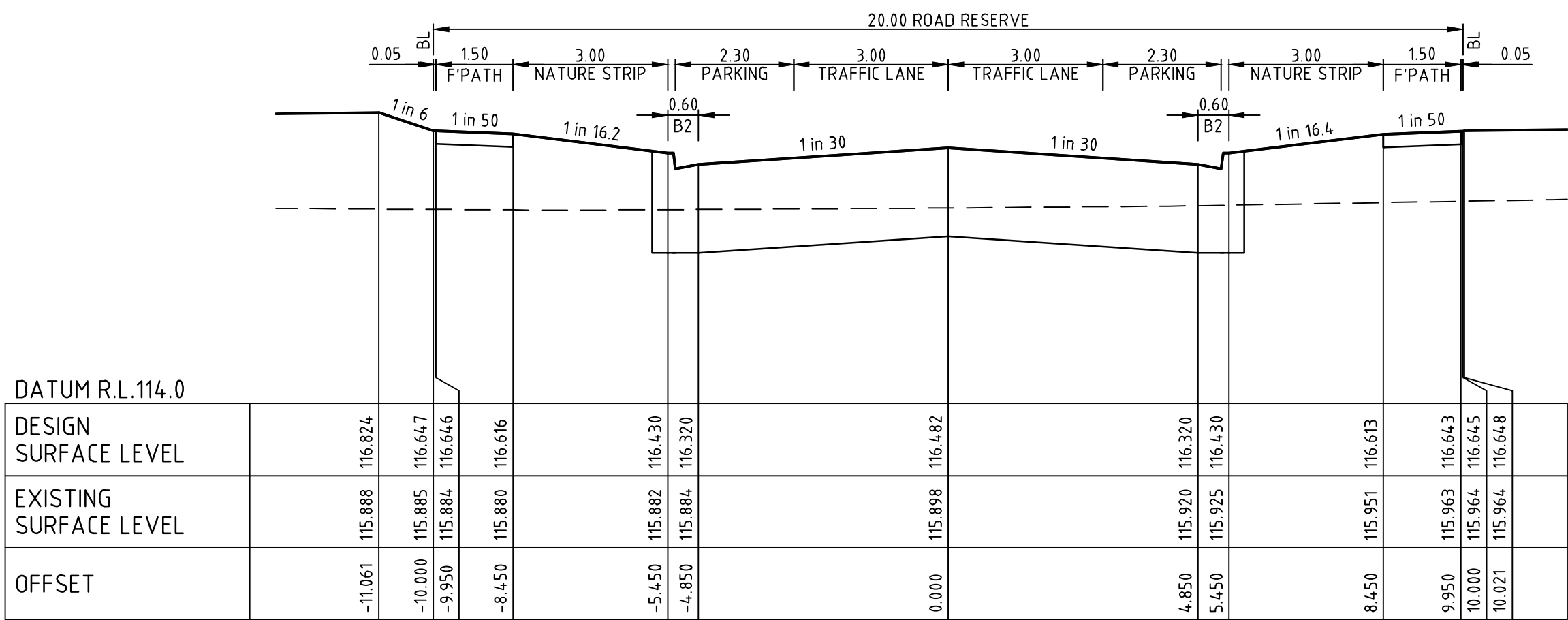
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PRELIMINARY Drg No 306842CR302

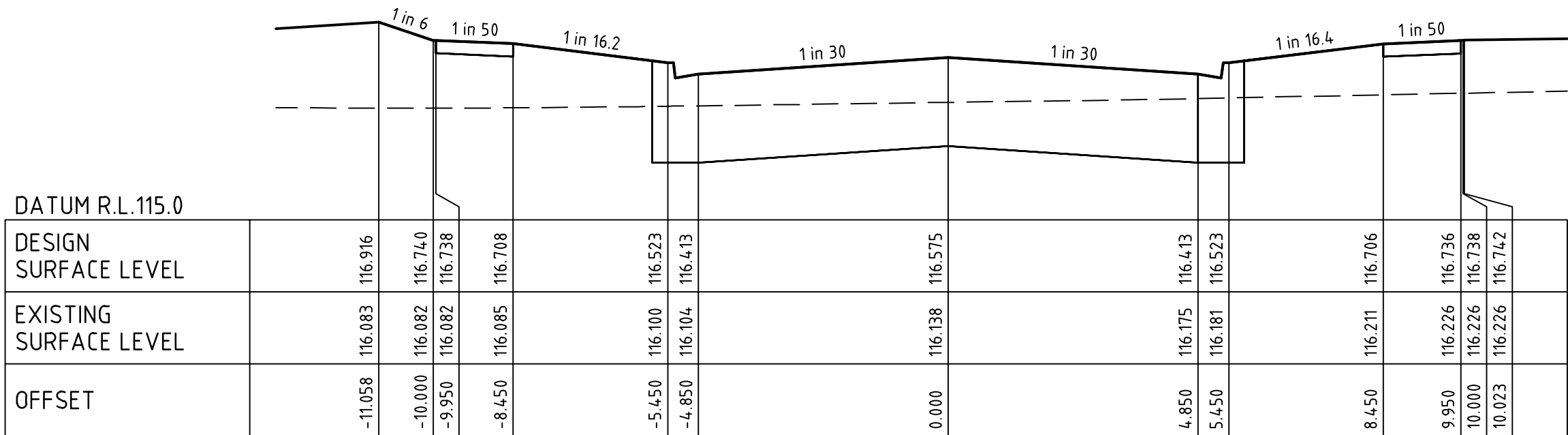
Rev

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file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 10:14 AM Sheet: 9 of 38 Sheets



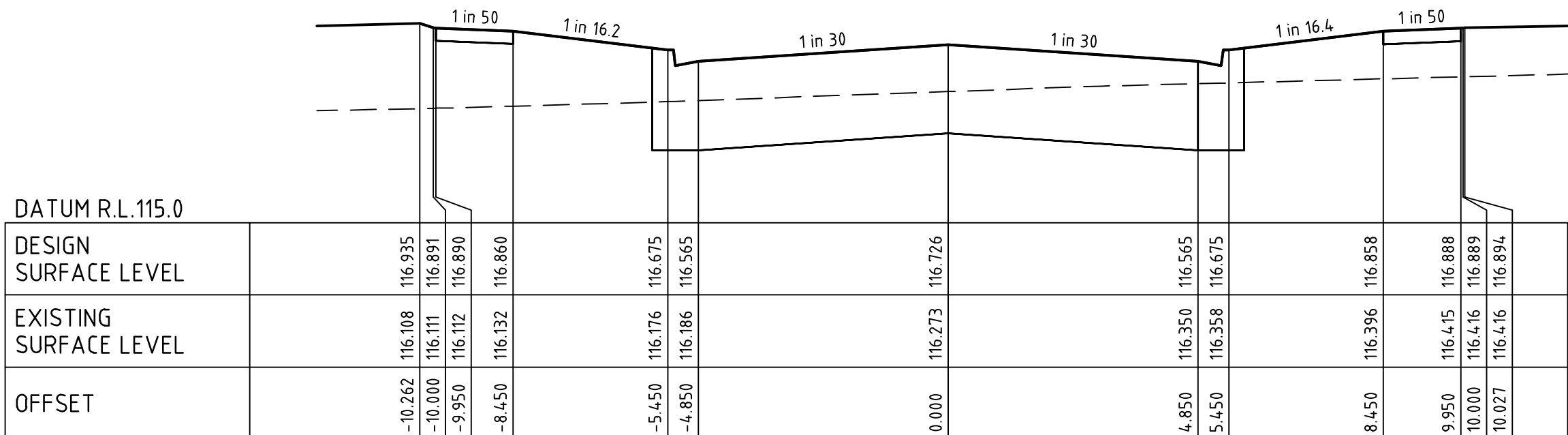
LYNWOOD DRIVE

CH 341.11



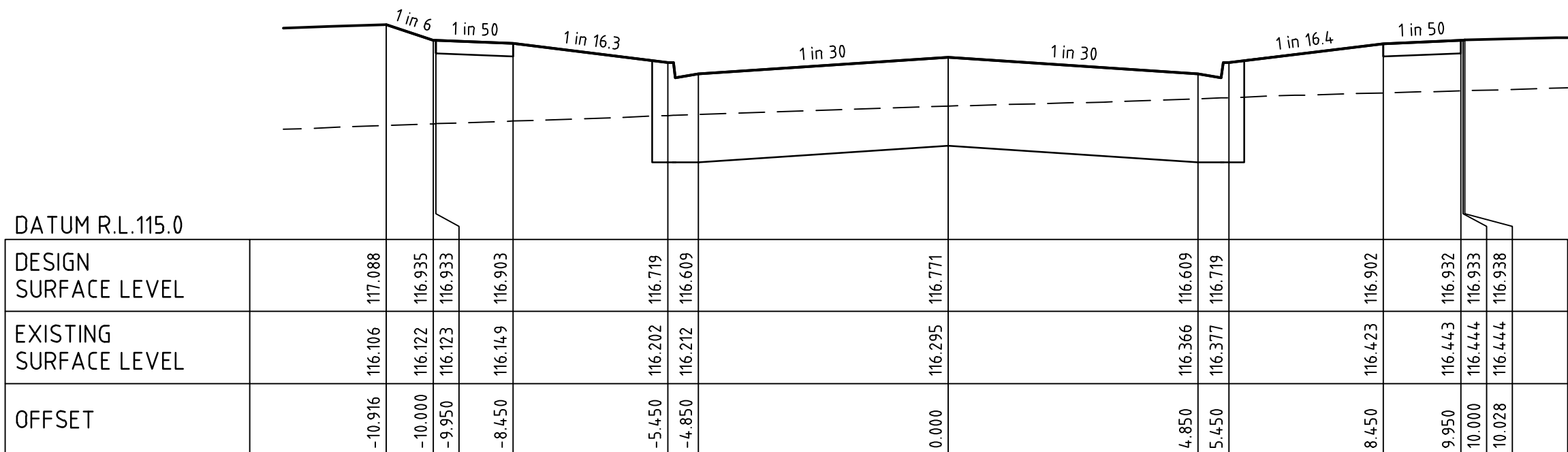
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CH 322.51



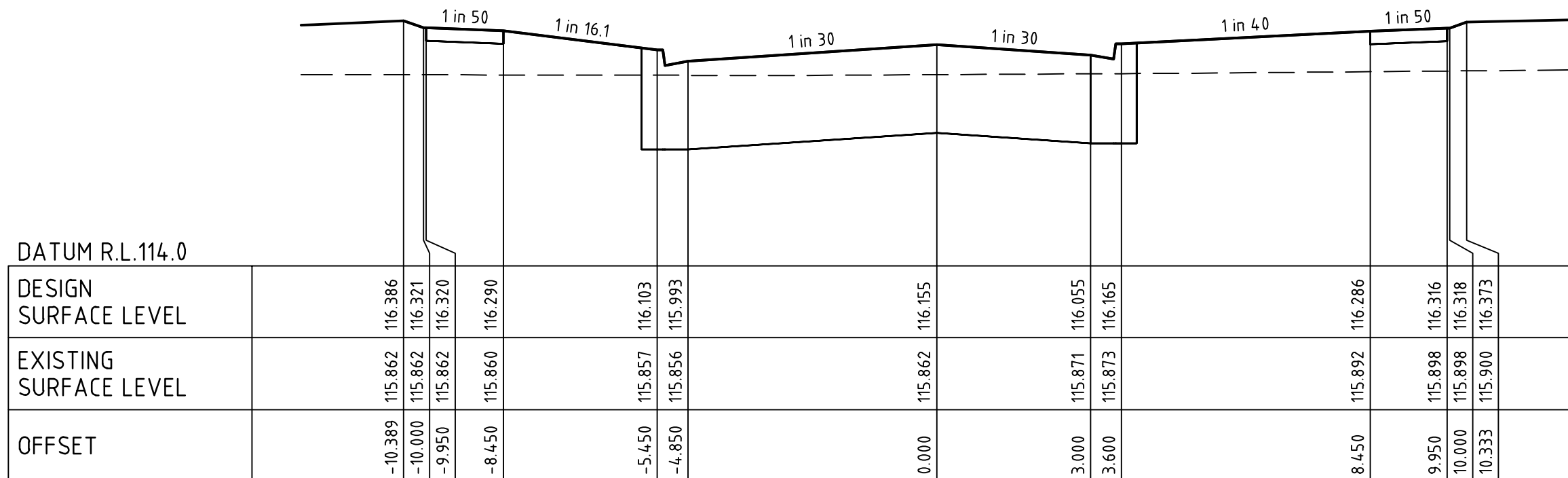
LYNWOOD DRIVE

CH 292.17



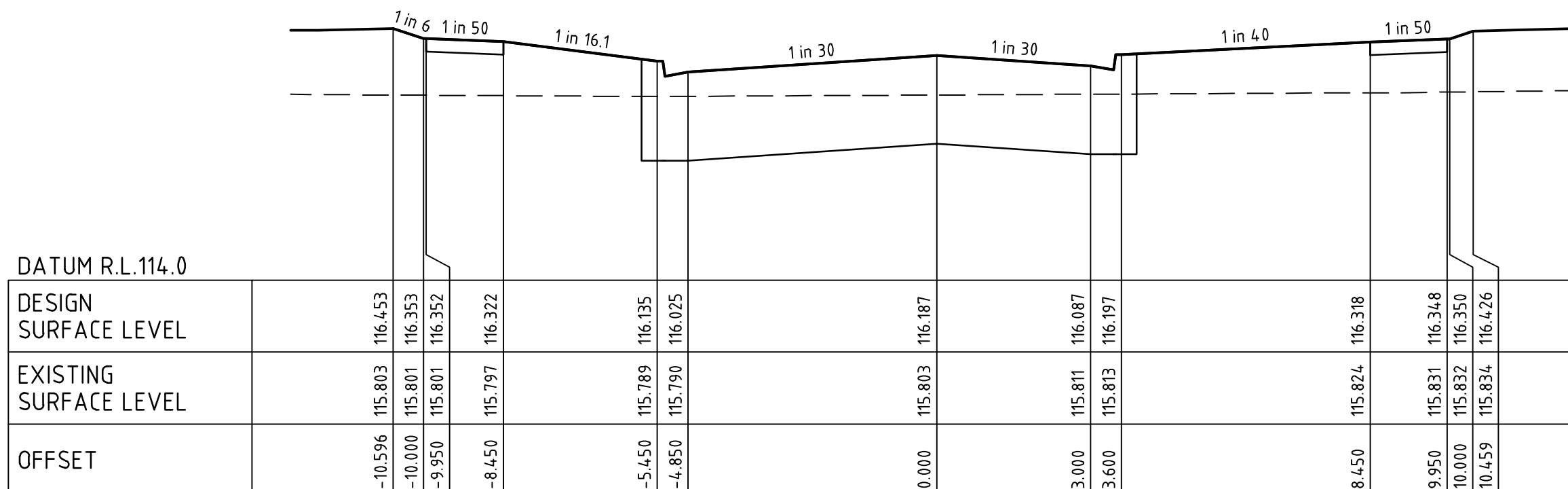
LYNWOOD DRIVE

CH 283.34



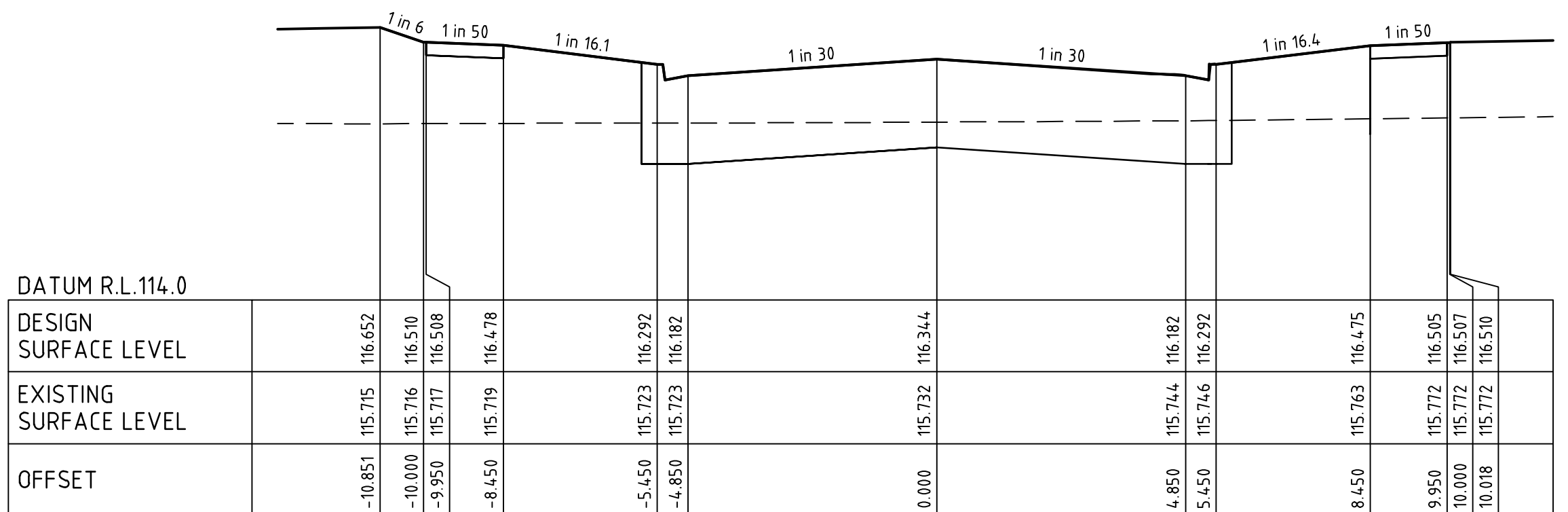
LYNWOOD DRIVE

CH 406.54



LYNWOOD DRIVE

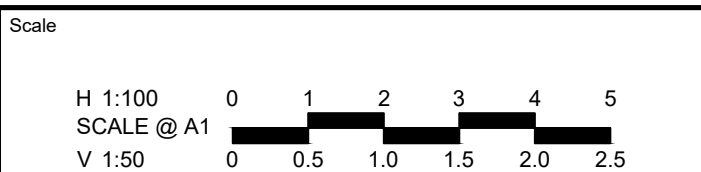
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LYNWOOD DRIVE

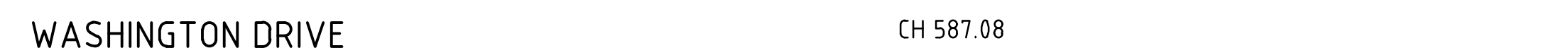
CH 368.67

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 1 OF 8
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No **306842CR400** Rev **D**

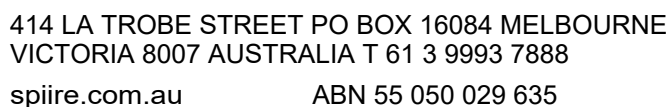
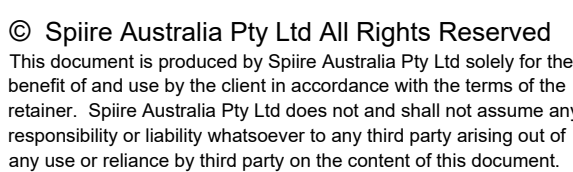


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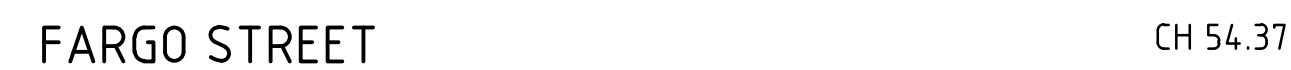
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PRELIMINARY Drg No
306842CR403

Rev

I



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C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20
Rev	Amendments	Approved	Date



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Designed

Authorised

Wel.Co

Checked

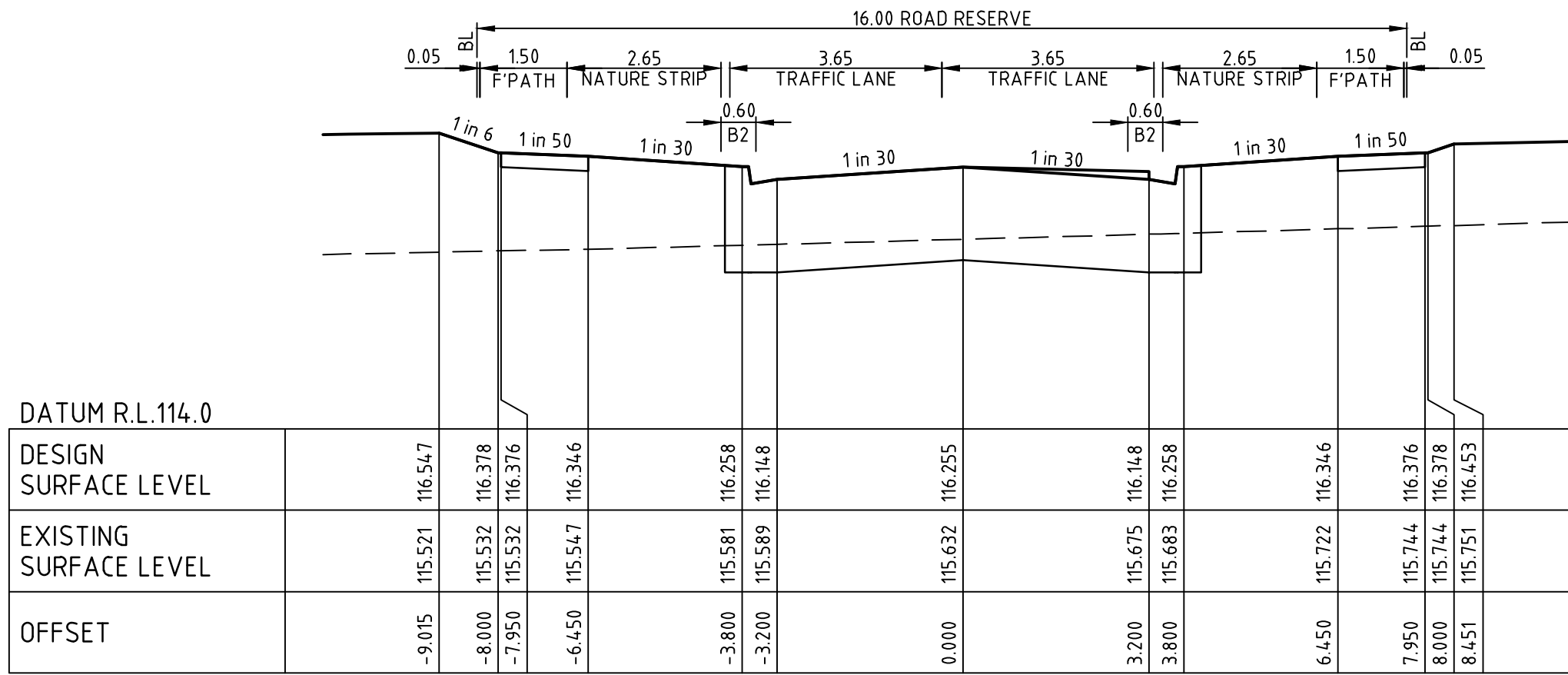
Date

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 5 OF 8
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No **306842CR404**

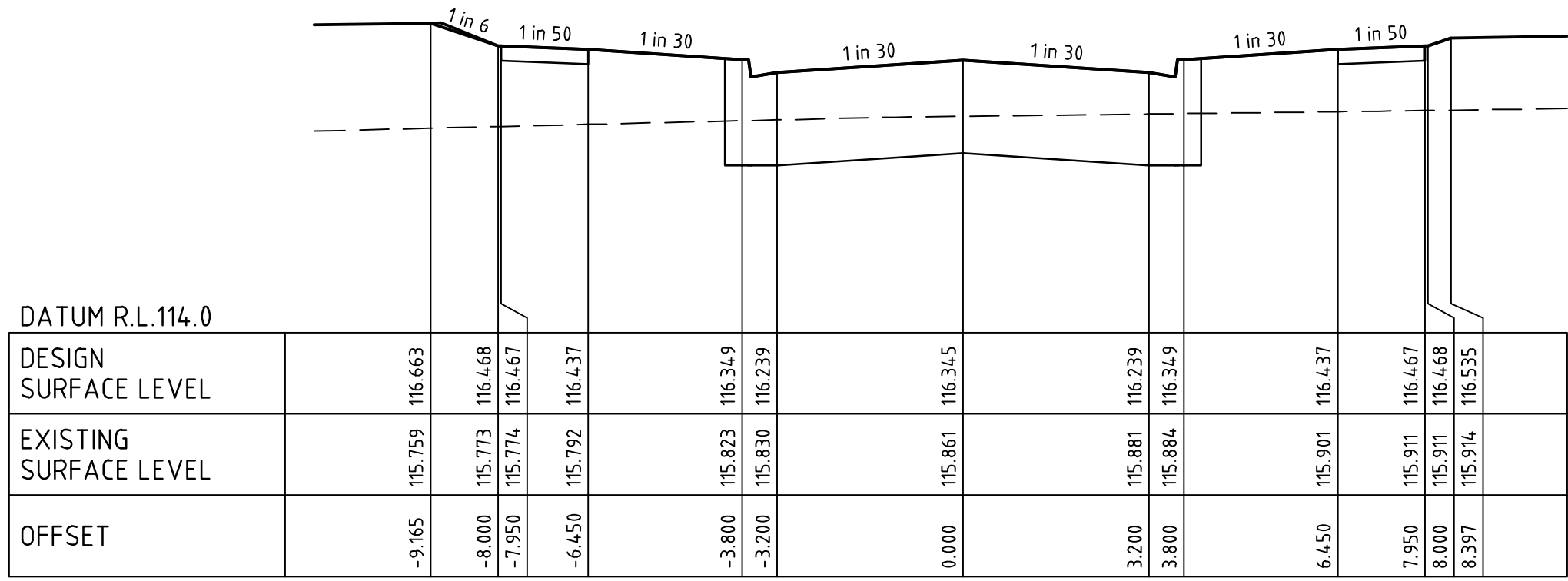
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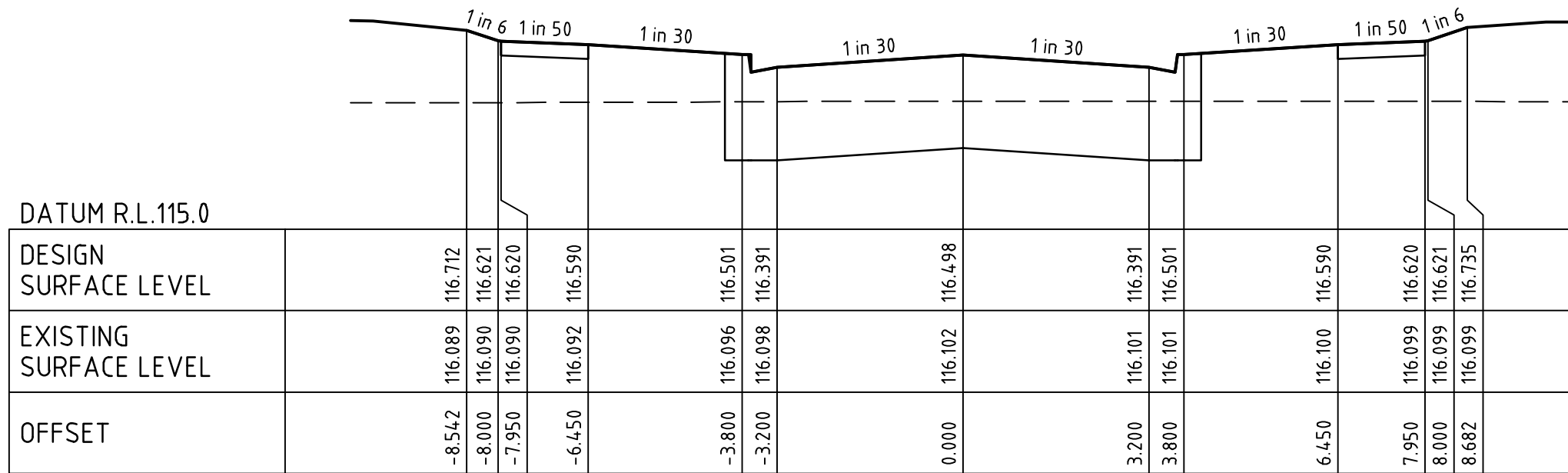
HARDING ROAD

CH 59.20



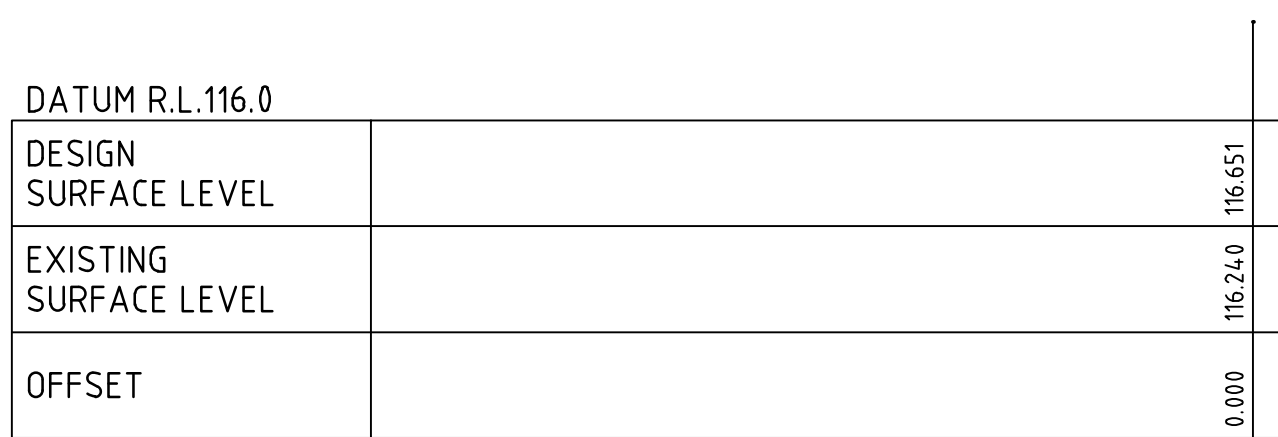
HARDING ROAD

CH 42.00



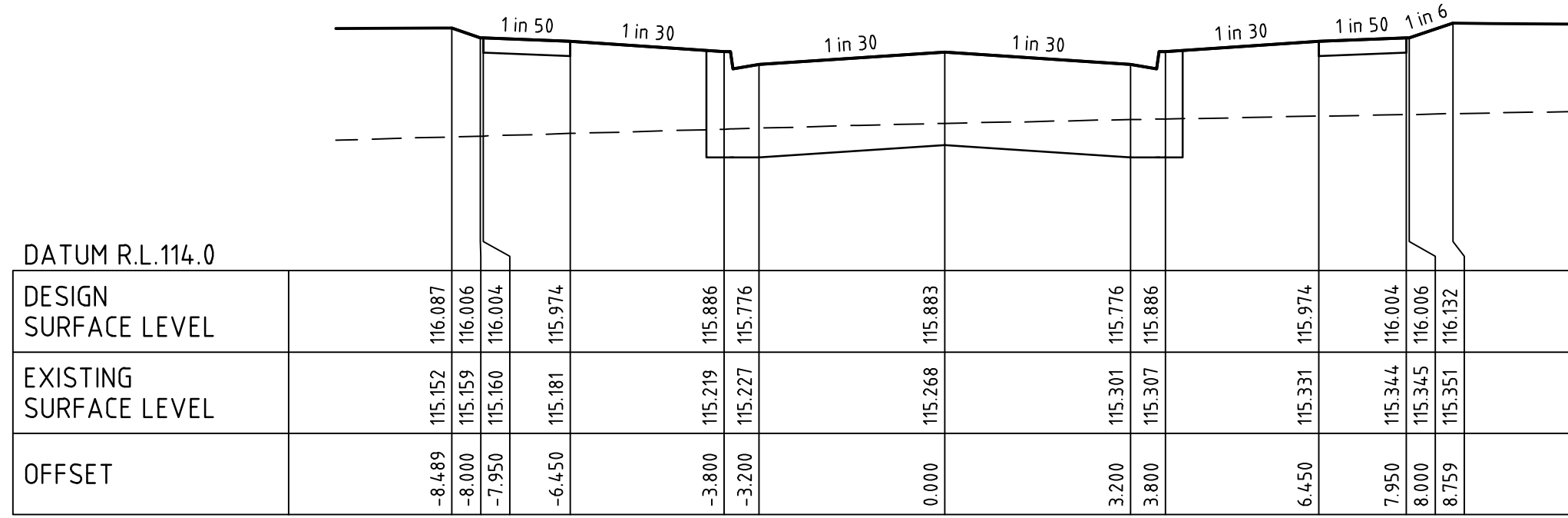
HARDING ROAD

CH 13.00



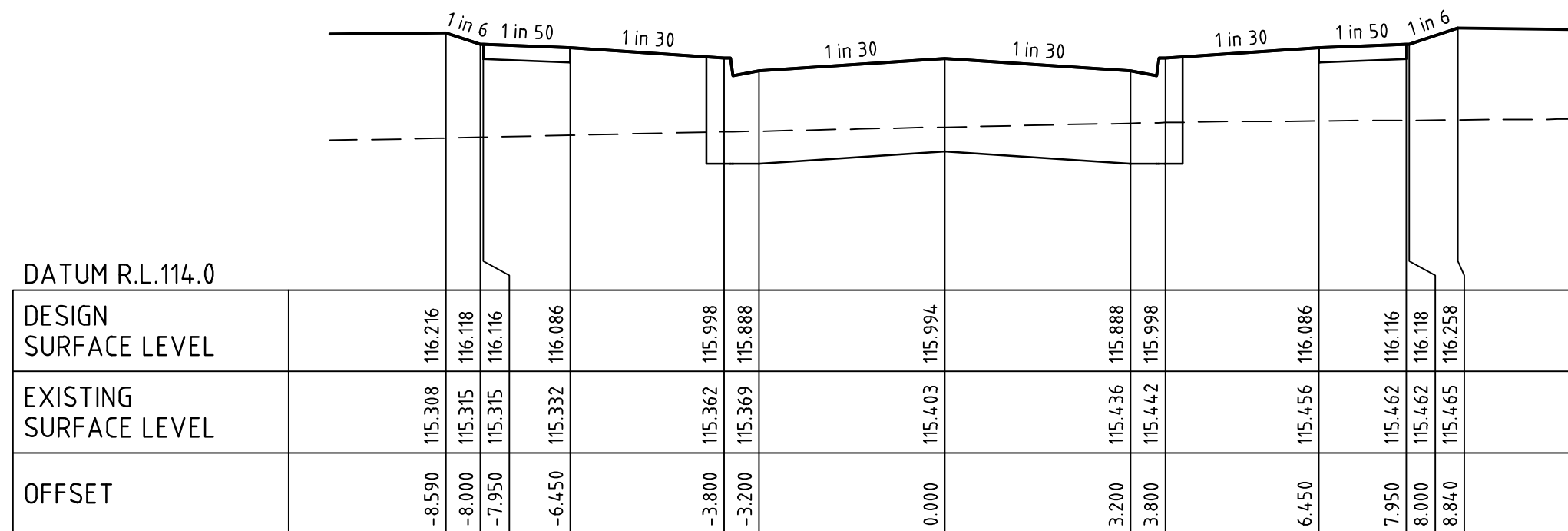
HARDING ROAD

CH 0.00



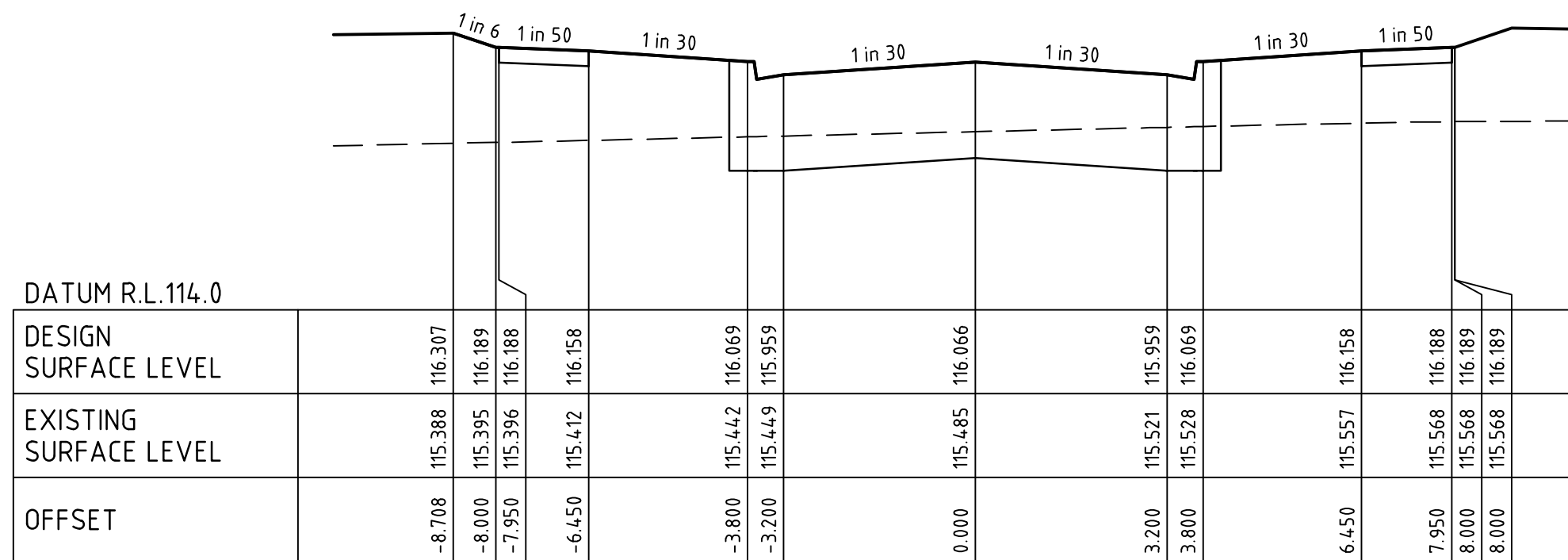
HARDING ROAD

CH 129.83



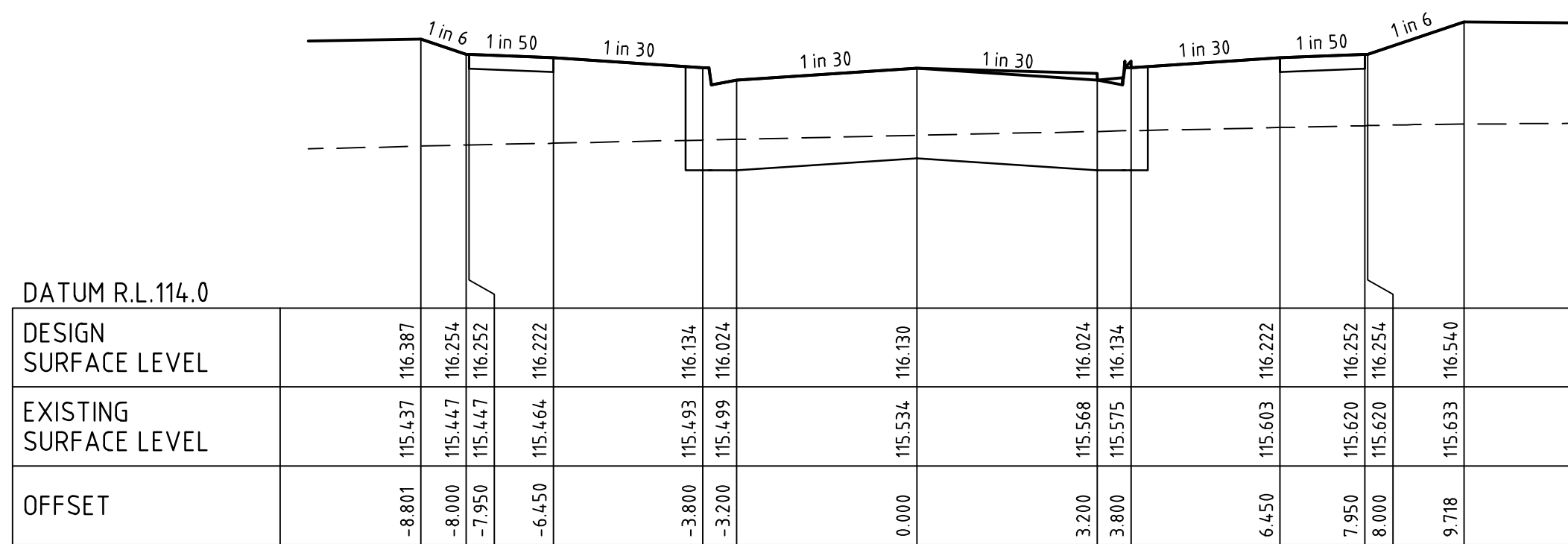
HARDING ROAD

CH 108.63



HARDING ROAD

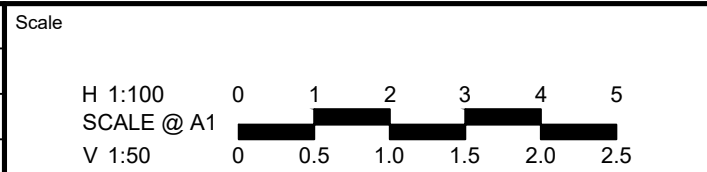
CH 95.00



HARDING ROAD

CH 82.80

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



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thornhill
PARK

Designed

Authorised

Wel.Co

Checked

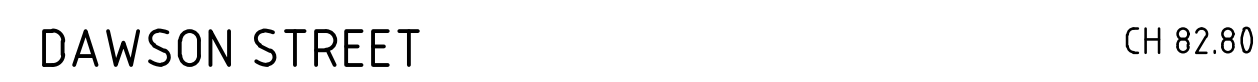
Date

**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 6 OF 8
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY

Org No
306842CR405

Rev
D



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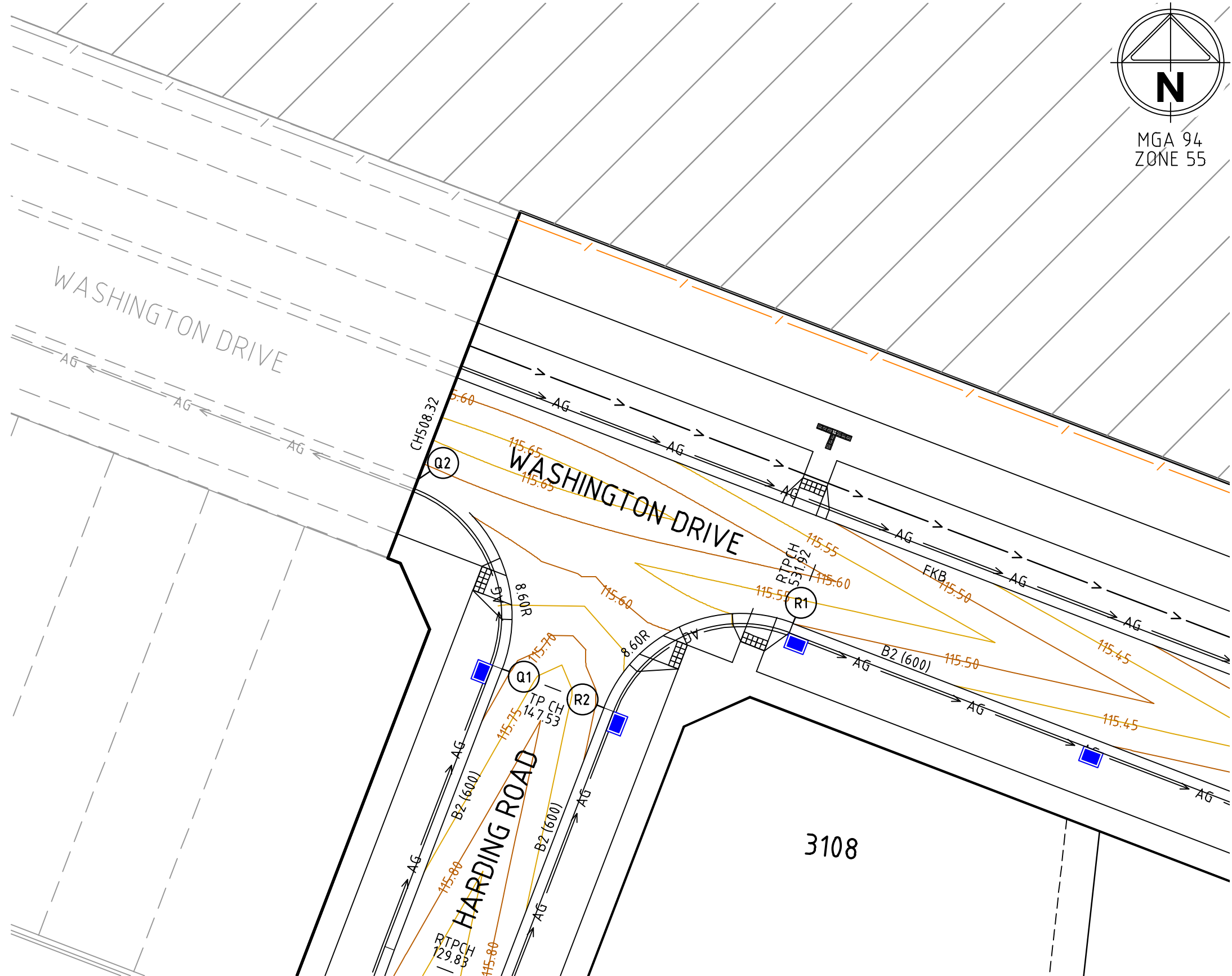


THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 7 OF 8
MELTON CITY COUNCIL
WEL.CO GROUP

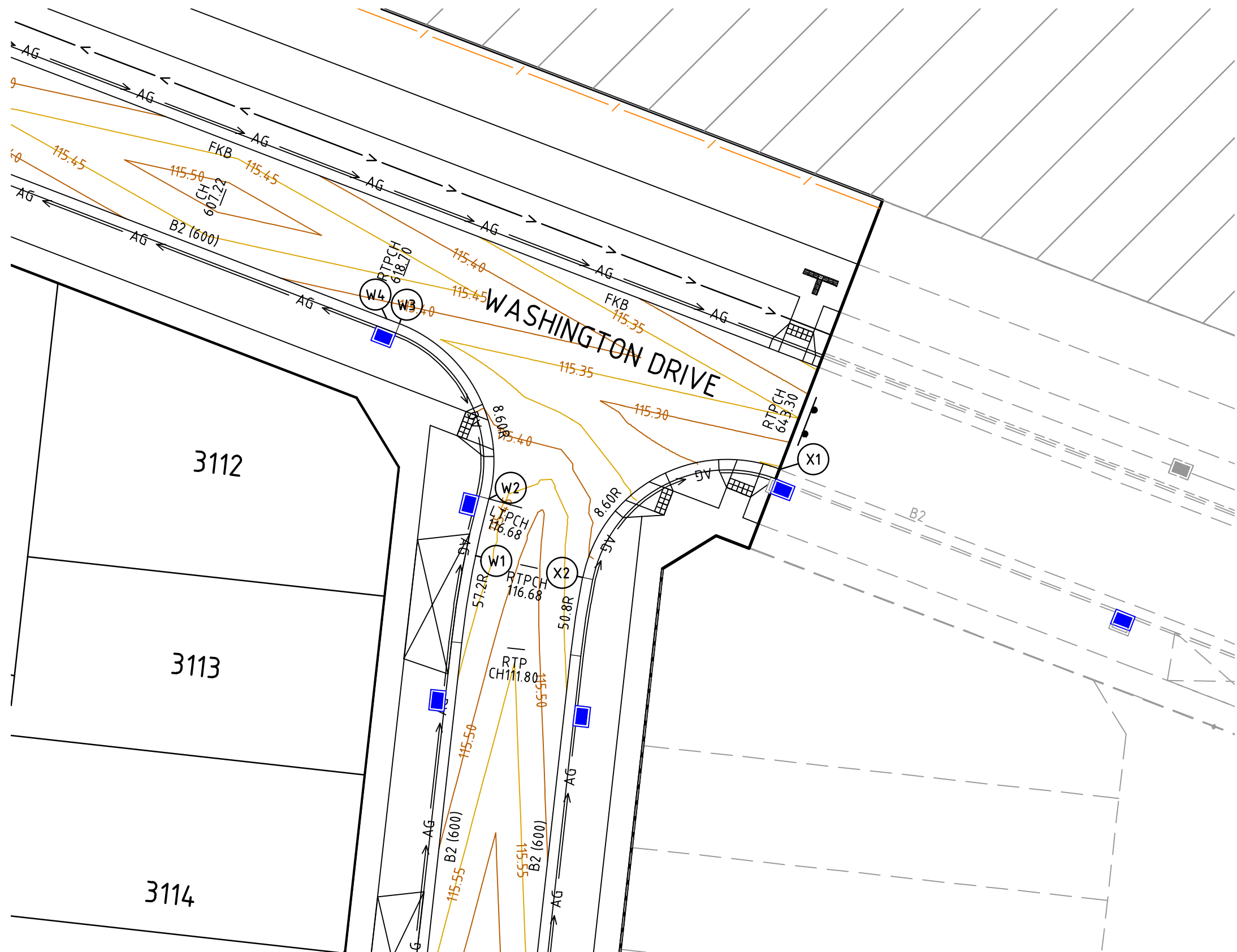
PRELIMINARY **306842CR406** **D**

Orig No Rev

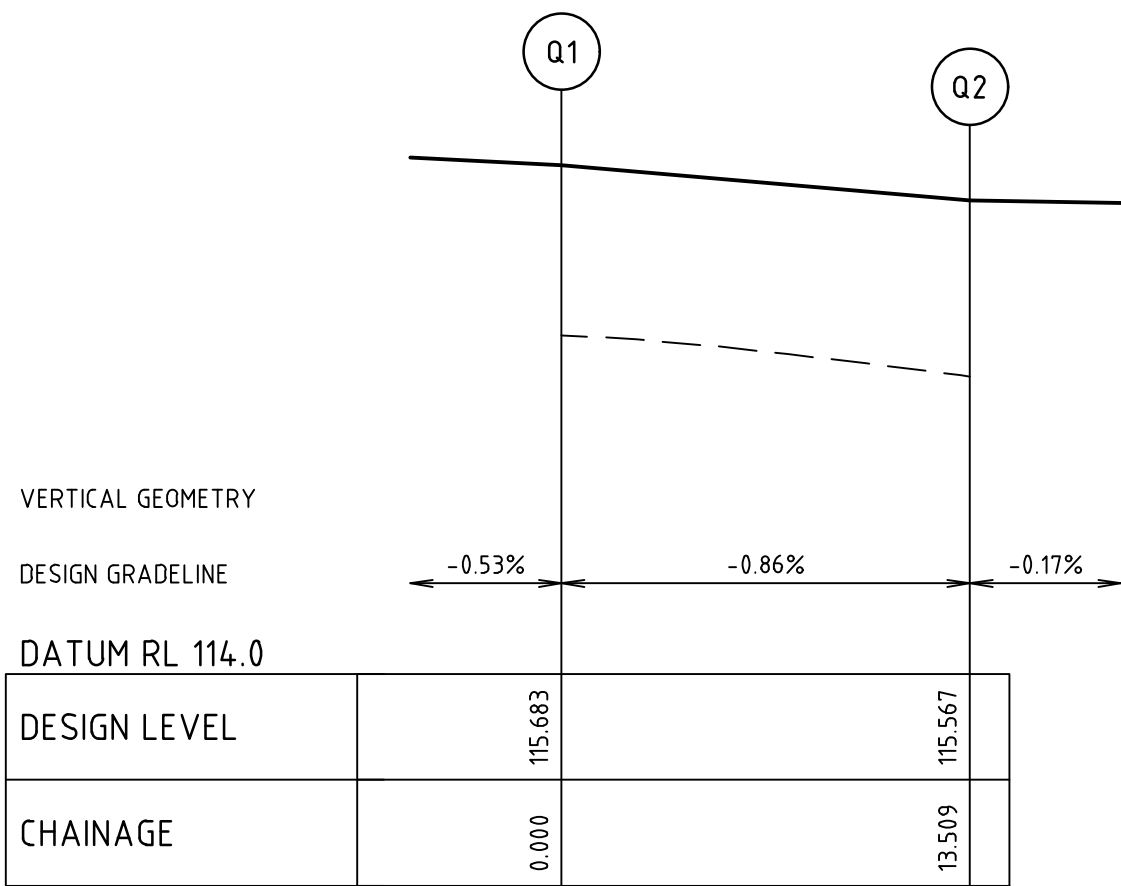
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INTERSECTION OF WASHINGTON DRIVE AND HARDING ROAD



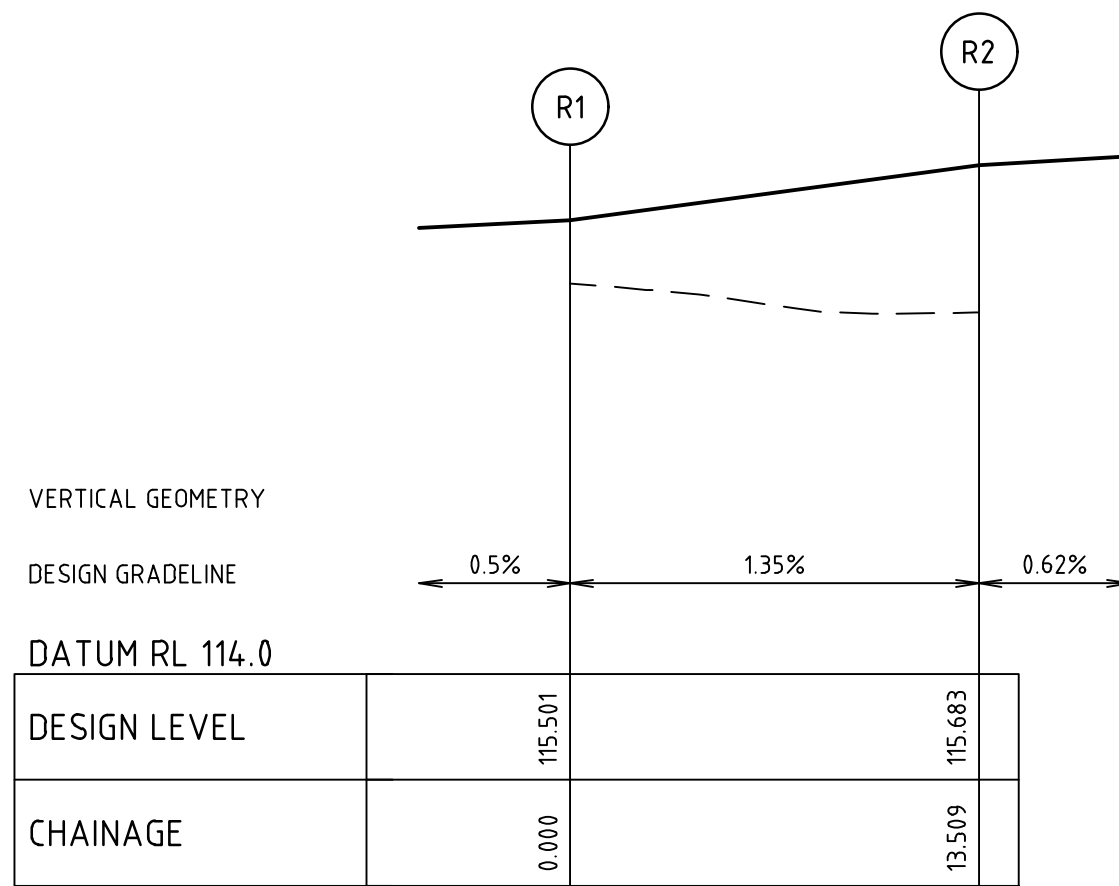
INTERSECTION OF WASHINGTON DRIVE AND DAWSON STREET



ALIGNMENT Q

POINT NO	EASTING	NORTHING	RL
Q1	290416.096	5822702.268	115.683
1/4	290416.663	5822705.575	115.654
1/2	290415.922	5822708.848	115.625
3/4	290413.984	5822711.587	115.596
Q2	290411.145	5822713.377	115.567

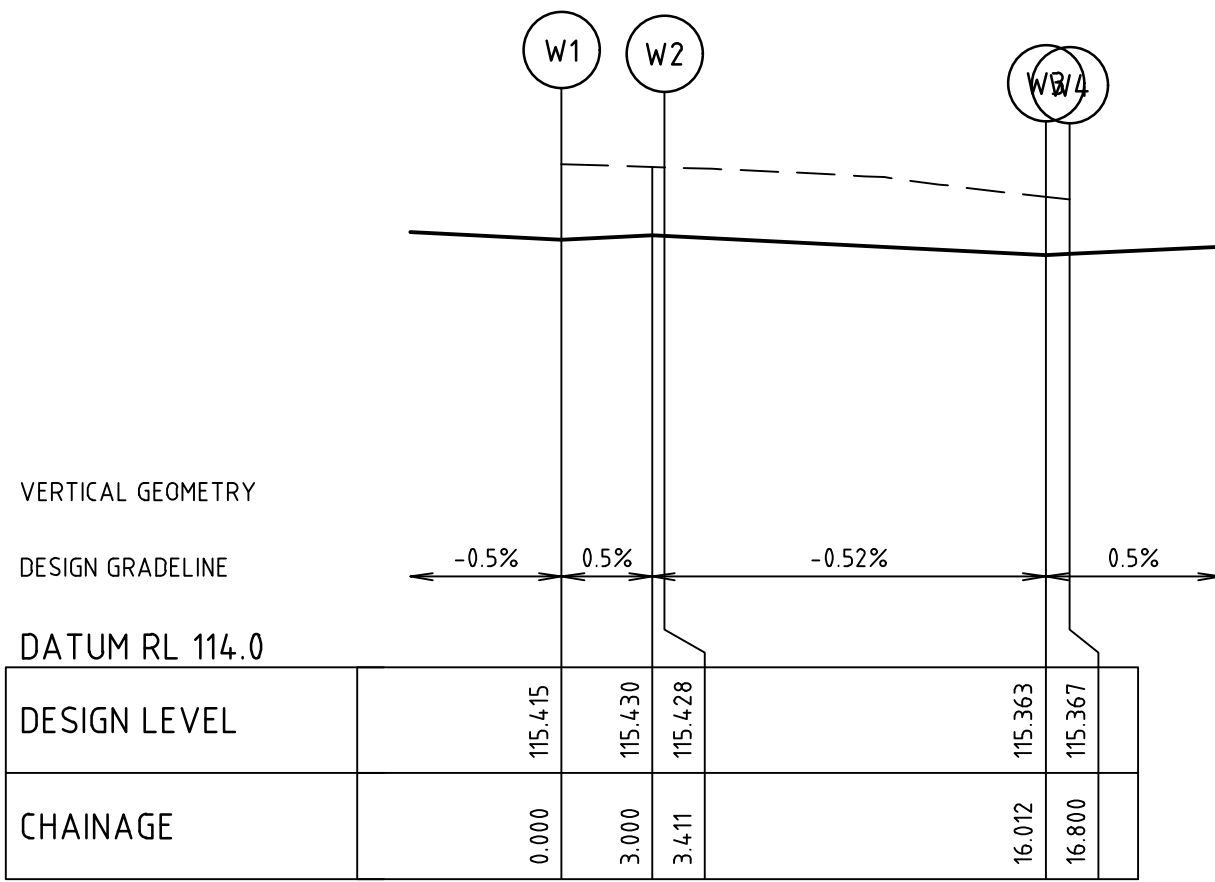
CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
Q1-Q2	8.600	13.509	12.162	2.519	-0.655



ALIGNMENT R

POINT NO	EASTING	NORTHING	RL
R1	290433.181	5822704.928	115.501
1/4	290429.874	5822705.495	115.546
1/2	290426.601	5822704.753	115.592
3/4	290423.862	5822702.815	115.637
R2	290422.072	5822699.977	115.683

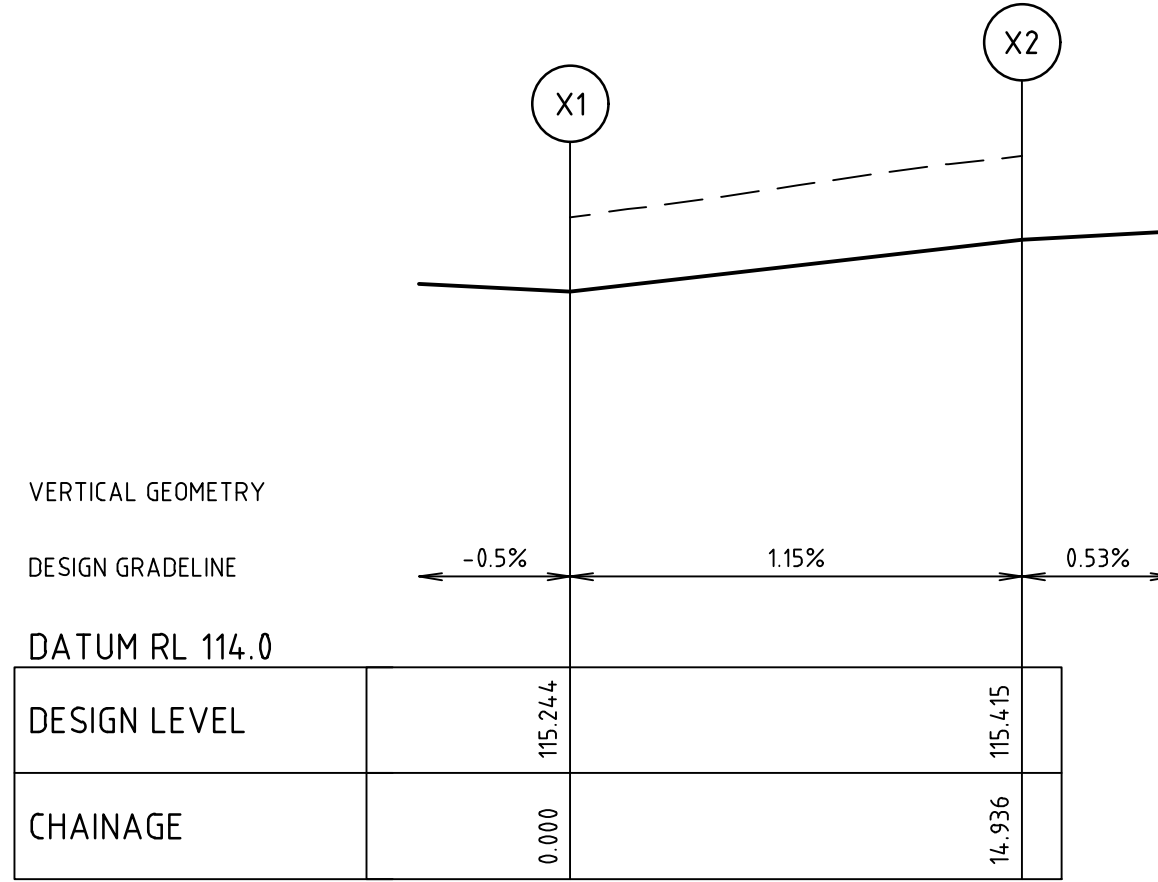
CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
R1-R2	8.600	13.509	12.162	2.519	-0.655



ALIGNMENT W

POINT NO	EASTING	NORTHING	RL
W1	290519.396	5822660.012	115.415
1/4	290519.572	5822660.846	115.419
1/2	290519.761	5822661.678	115.423
3/4	290519.963	5822662.506	115.428
W2	290520.176	5822663.332	115.428
1/4	290520.418	5822666.455	115.412
1/2	290519.526	5822669.458	115.395
3/4	290517.617	5822671.942	115.379
W3	290514.945	5822673.578	115.363
W4	290514.210	5822673.860	115.367

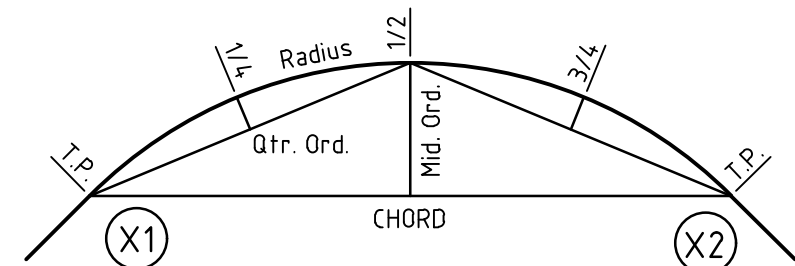
CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
W1-W2	57.200	3.411	3.410	0.025	0.006
W2-W3	8.600	12.601	11.504	2.207	-0.571



ALIGNMENT X

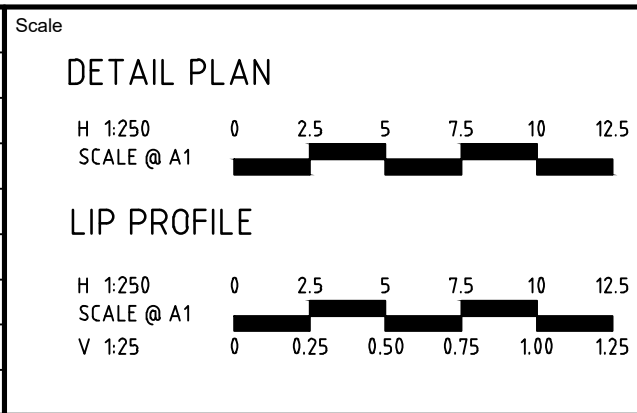
POINT NO	EASTING	NORTHING	RL
X1	290537.174	5822665.055	115.244
1/4	290533.511	5822665.605	115.287
1/2	290529.955	5822664.563	115.329
3/4	290527.169	5822662.122	115.372
X2	290525.667	5822658.735	115.415

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
X1-X2	8.600	14.936	13.128	3.044	-0.798



KERB RETURN SETOUT DETAIL

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R.	08/10/20
C	ISSUED FOR TENDER	M.R.	22/09/20
B	ISSUED TO COUNCIL	M.R.	31/08/20
A	ISSUED FOR TENDER	M.R.	10/01/20



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Designed

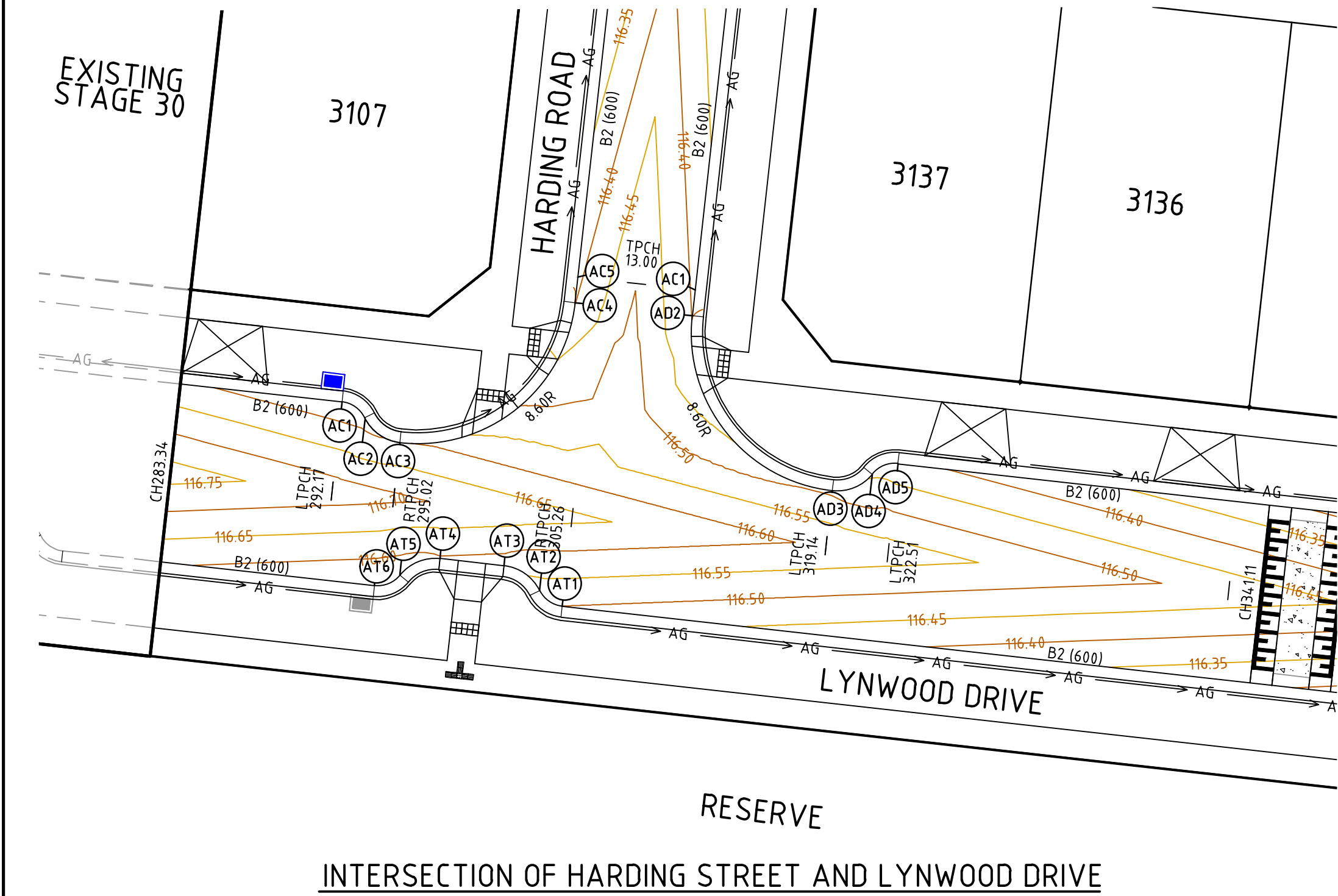
Checked

Date

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
INTERSECTION DETAILS - SHEET 1 OF 6
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR500 Rev D

file name: 306842CR500.dwg layout name: CR501, plotted by: Gary Kohman,
file location: G:\30\306842\civil\ALAD plot date: 19/10/2020 10:12 AM Sheet: 18 of 38 Sheets



INTERSECTION OF HARDING STREET AND LYNWOOD DRIVE



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 115.0

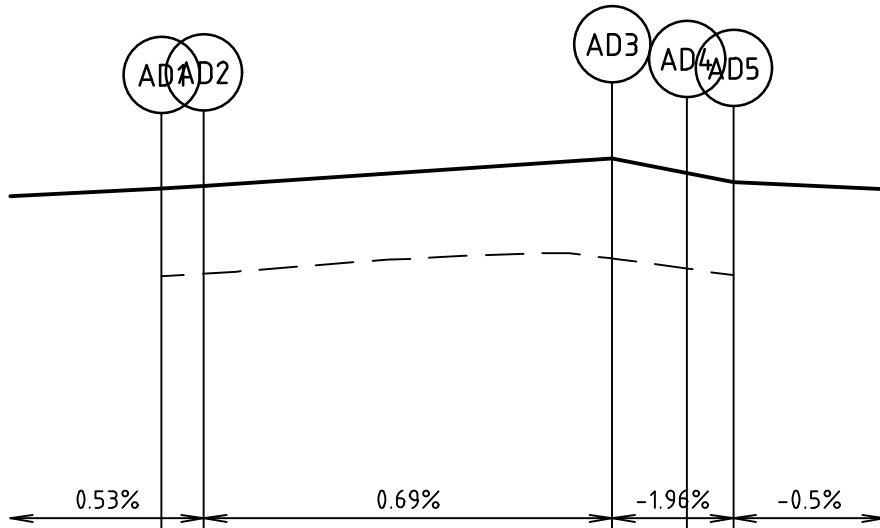
DESIGN LEVEL	116.565	116.582	116.610	116.399	116.391
CHAINAGE	0.000	1.555	4.03	17.522	18.922

ALIGNMENT AC

ALIGNMENT AC

POINT NO	EASTING	NORTHING	RL
AC1	290381.208	5822562.587	116.565
1/4	290381.585	5822562.497	116.569
1/2	290381.928	5822562.315	116.573
3/4	290382.215	5822562.054	116.578
AC2	290382.428	5822561.731	116.582
1/4	290382.765	5822561.219	116.589
1/2	290383.219	5822560.806	116.596
3/4	290383.760	5822560.519	116.603
AC3	290384.356	5822560.376	116.610
1/4	290387.700	5822560.663	116.557
1/2	290390.679	5822562.208	116.504
3/4	290392.840	5822564.775	116.451
AC4	290393.854	5822567.973	116.399
AC5	290394.009	5822569.365	116.391

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AC1-AC2	1.550	1.555	1.491	0.191	0.049
AC2-AC3	2.450	2.458	2.356	0.302	-0.077
AC3-AC4	8.600	13.509	12.162	2.519	-0.655



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 115.0

DESIGN LEVEL	116.391	116.399	116.492	116.444	116.413
CHAINAGE	0.000	1.000	14.909	17.366	18.920

ALIGNMENT AD

ALIGNMENT AD

POINT NO	EASTING	NORTHING	RL
AD1	290400.369	5822568.657	116.391
AD2	290400.215	5822567.266	116.399
1/4	290400.502	5822563.923	116.422
1/2	290402.046	5822560.944	116.445
3/4	290404.613	5822558.782	116.468
AD3	290407.812	5822557.768	116.492
1/4	290408.424	5822557.777	116.480
1/2	290409.016	5822557.938	116.468
3/4	290409.549	5822558.240	116.456
AD4	290409.990	5822558.666	116.444
1/4	290410.269	5822558.934	116.436
1/2	290410.606	5822559.126	116.428
3/4	290410.980	5822559.227	116.421
AD5	290411.367	5822559.233	116.413

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AD2-AD3	8.600	13.509	12.162	2.519	-0.655
AD3-AD4	2.450	2.457	2.356	0.302	-0.077
AD4-AD5	1.550	1.554	1.490	0.191	0.048

VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 115.0

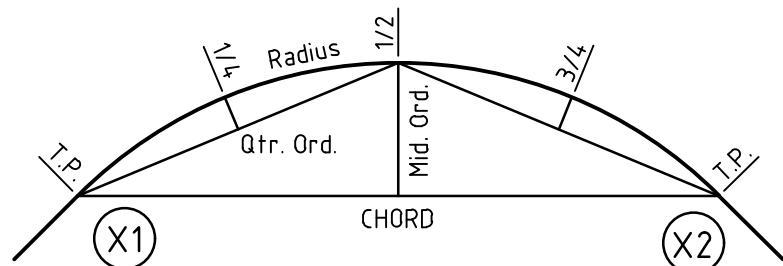
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ALIGNMENT AT

ALIGNMENT AT

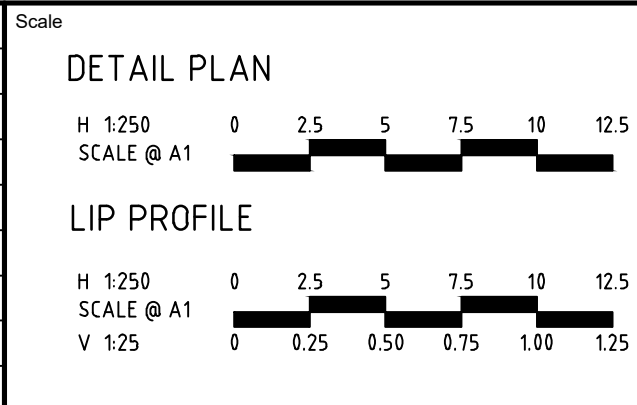
POINT NO	EASTING	NORTHING	RL
AT1	290393.152	5822551.499	116.499
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1/2	290392.433	5822551.772	116.515
3/4	290392.146	5822552.033	116.522
AT2	290391.932	5822552.356	116.530
1/4	290391.595	5822552.868	116.542
1/2	290391.142	5822553.281	116.554
3/4	290390.600	5822553.567	116.566
AT3	290390.004	5822553.711	116.578
AT4	290386.526	5822554.098	116.595
1/4	290385.913	5822554.089	116.588
1/2	290385.321	5822553.928	116.582
3/4	290384.788	5822553.625	116.575
AT5	290384.347	5822553.200	116.568
1/4	290384.068	5822552.931	116.564
1/2	290383.731	5822552.739	116.559
3/4	290383.357	5822552.638	116.555
AT6	290382.969	5822552.632	116.551

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AT1-AT2	1.550	1.555	1.491	0.191	0.049
AT2-AT3	2.450	2.458	2.356	0.302	-0.077
AT4-AT5	2.450	2.458	2.356	0.302	-0.077
AT5-AT6	1.550	1.555	1.491	0.191	0.049



KERB RETURN SETOUT DETAIL

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



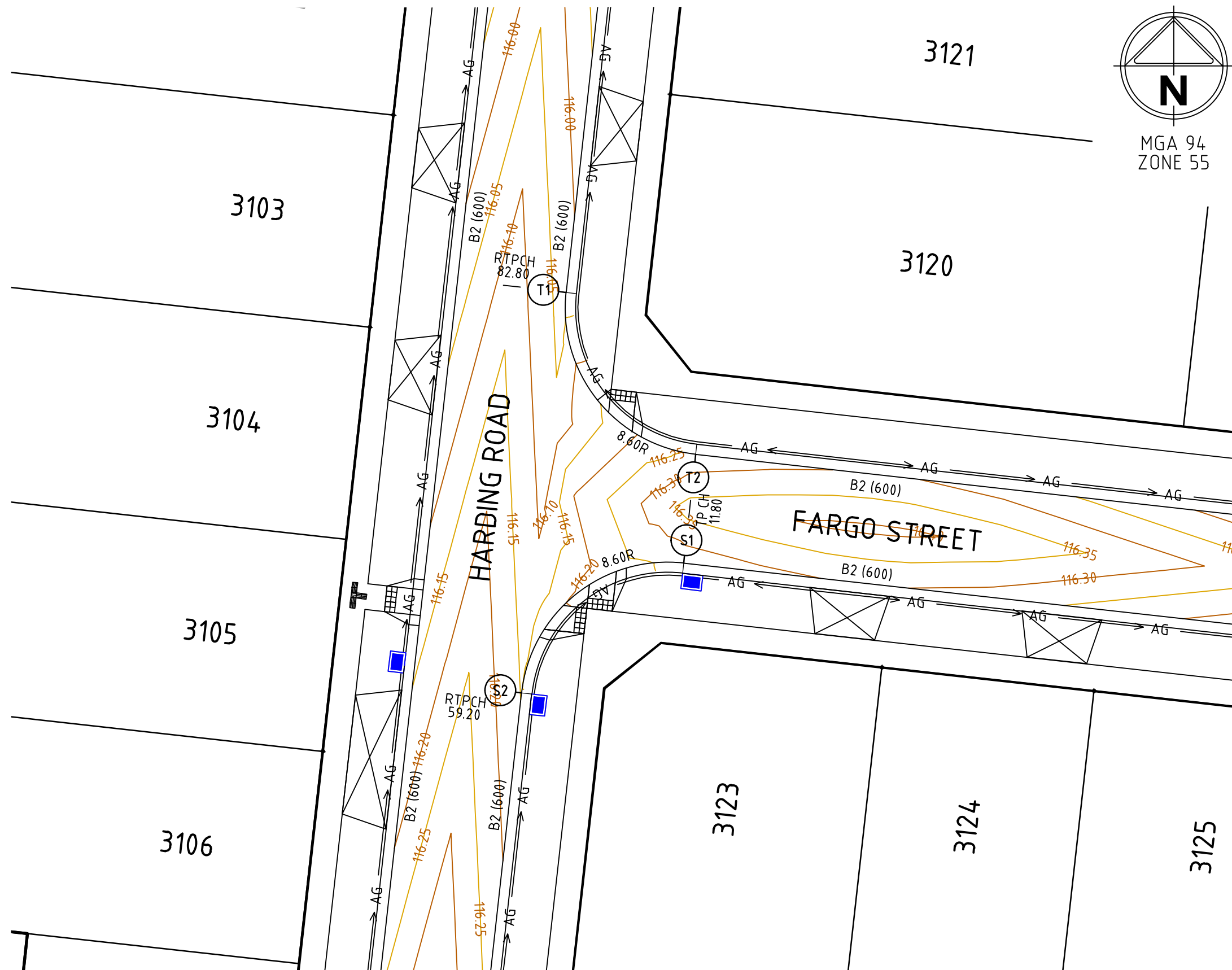
414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
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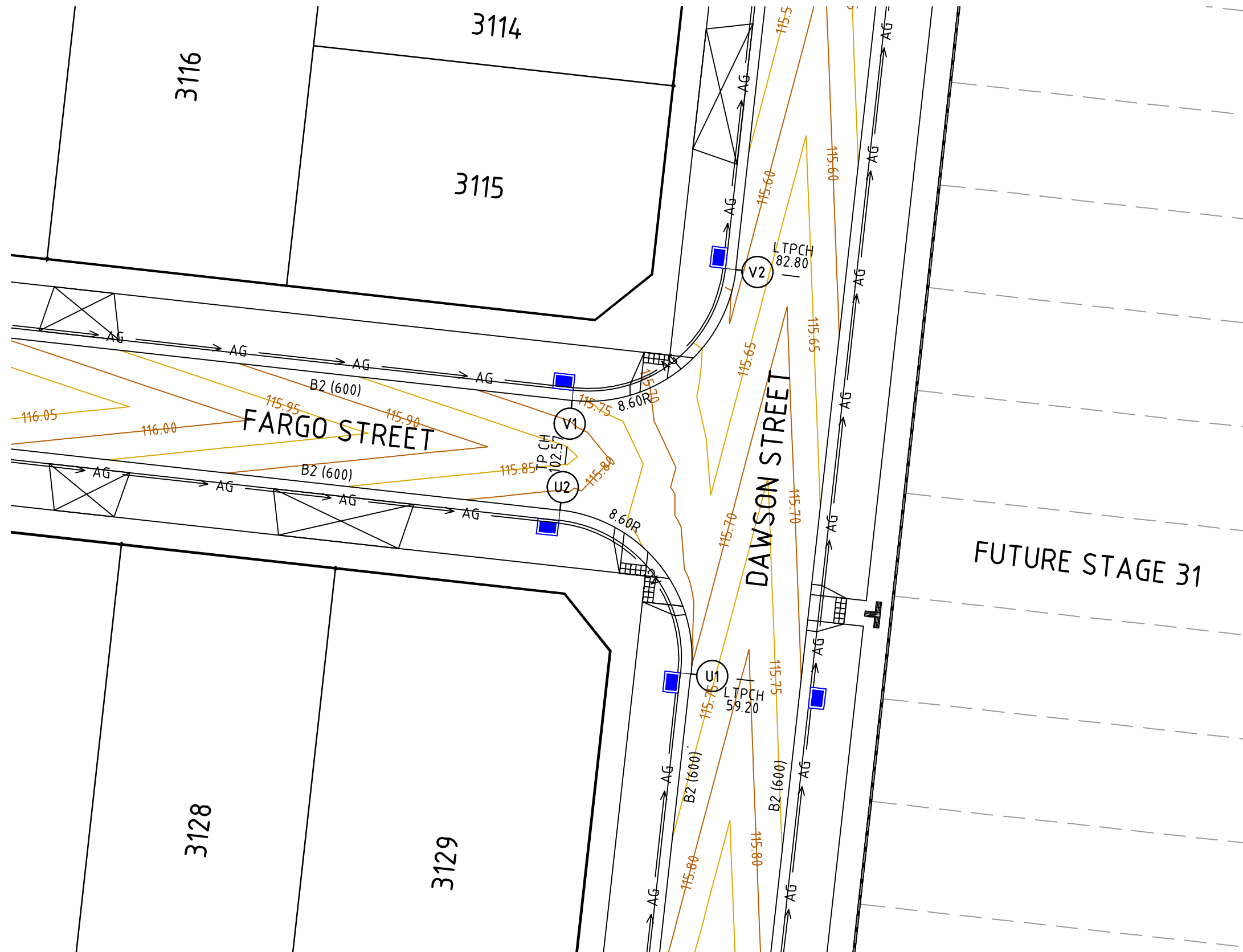
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
INTERSECTION DETAILS - SHEET 2 OF 6
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR501 Rev D

file name: 306842CR500.dwg, layout name: CR502, plotted by: Gary Kohonen, file location: G:\30\306842\306842.dwg, ALAD plot date: 19/10/2020 10:15 AM, Sheet: 19 of 38 Sheets



INTERSECTION OF HARDING STREET AND FARGO STREET



INTERSECTION OF DAWSON STREET AND FARGO STREET

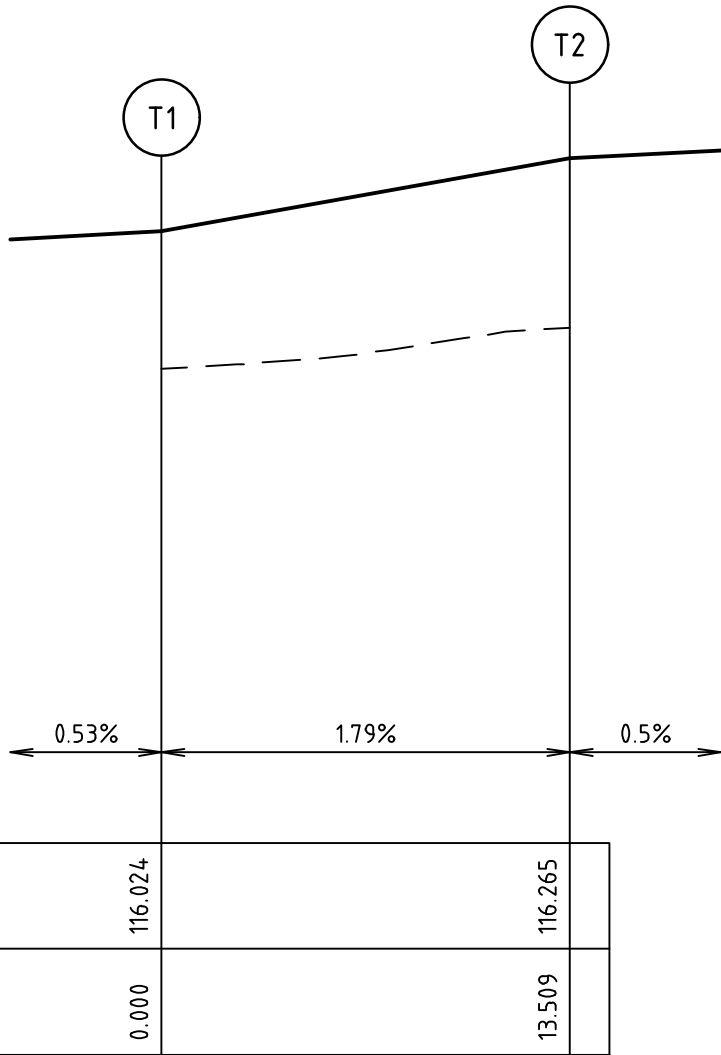
VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

DESIGN LEVEL

CHAINAGE



ALIGNMENT T

ALIGNMENT T

POINT NO	EASTING	NORTHING	RL
T1	290408.083	5822638.030	116.024
1/4	290408.370	5822634.687	116.084
1/2	290409.914	5822631.708	116.144
3/4	290412.481	5822629.546	116.205
T2	290415.679	5822628.532	116.265

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
T1-T2	8.600	13.509	12.162	2.519	-0.655

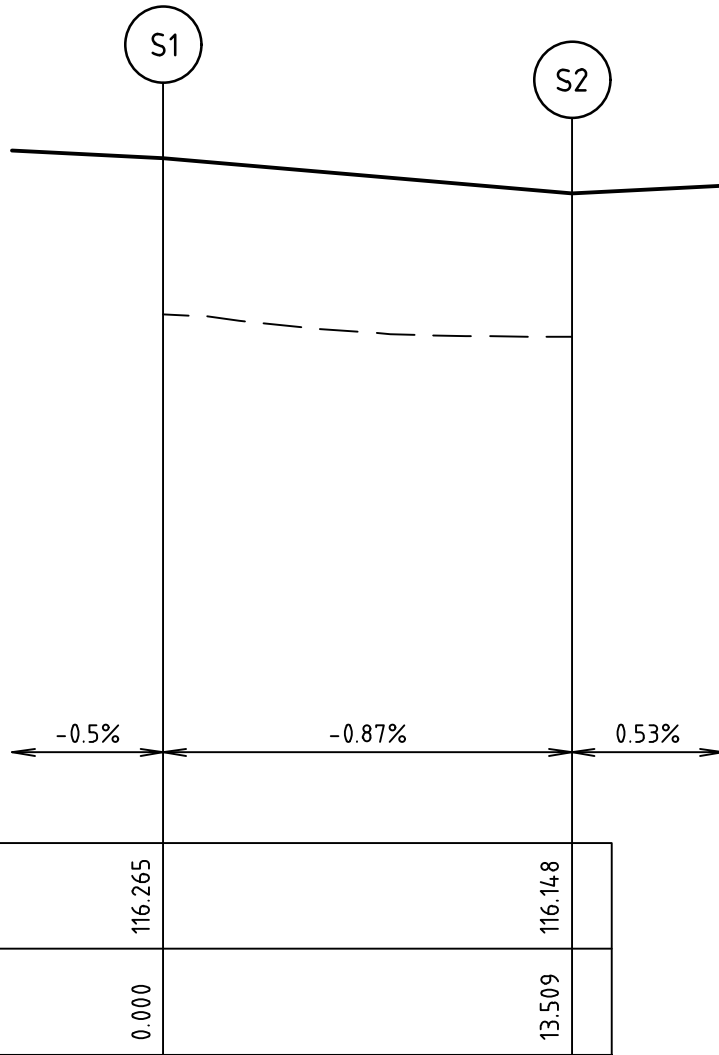
VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

DESIGN LEVEL

CHAINAGE



ALIGNMENT S

ALIGNMENT S

POINT NO	EASTING	NORTHING	RL
S1	290414.972	5822622.171	116.265
1/4	290411.629	5822621.884	116.236
1/2	290408.650	5822620.340	116.207
3/4	290406.489	5822617.773	116.177
S2	290405.475	5822614.574	116.148

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
S1-S2	8.600	13.509	12.162	2.519	-0.655

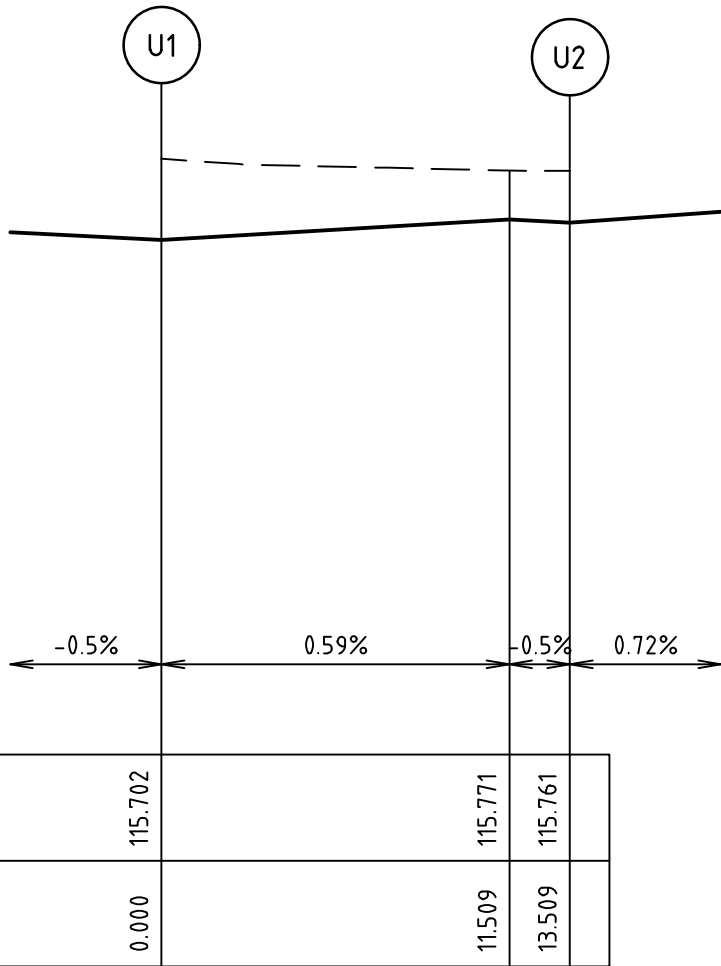
VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

DESIGN LEVEL

CHAINAGE



ALIGNMENT U

ALIGNMENT U

POINT NO	EASTING	NORTHING	RL
U1	290512.784	5822602.643	115.702
1/4	290512.497	5822605.986	115.722
1/2	290510.952	5822608.965	115.742
3/4	290508.385	5822611.126	115.763
U2	290505.187	5822612.141	115.761

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
U1-U2	8.600	13.509	12.162	2.519	-0.655

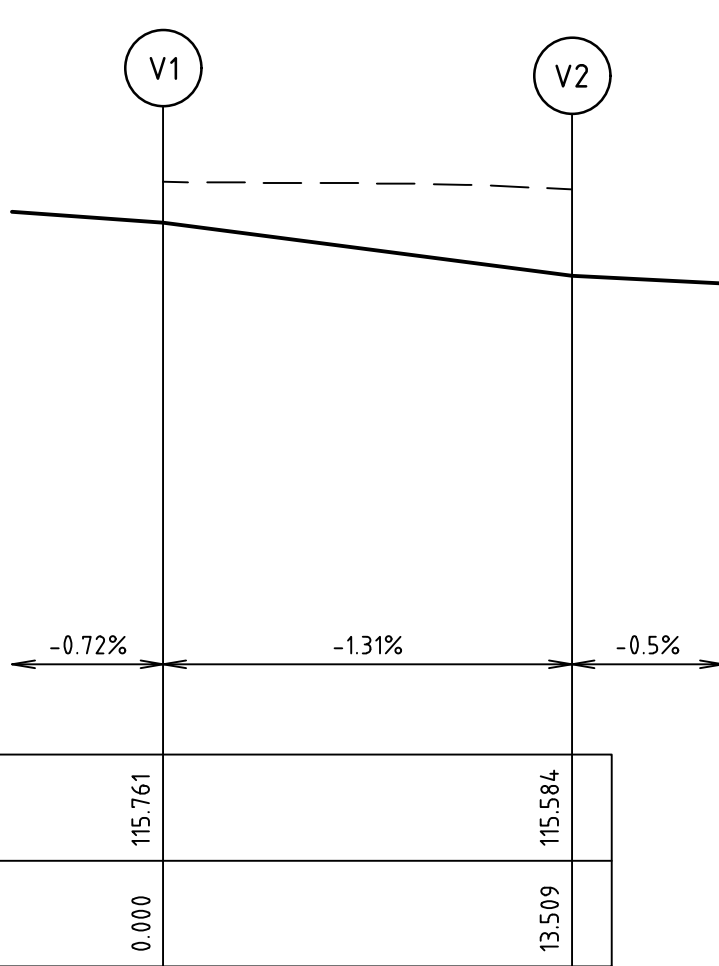
VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

DESIGN LEVEL

CHAINAGE

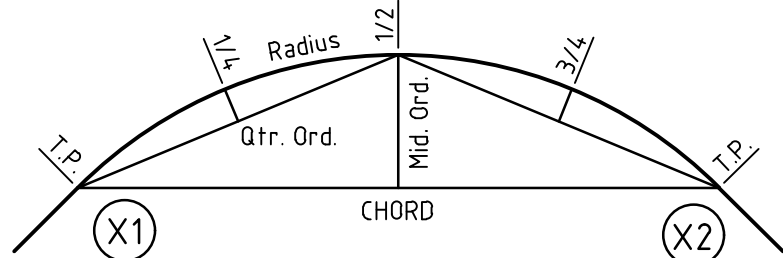


ALIGNMENT V

ALIGNMENT V

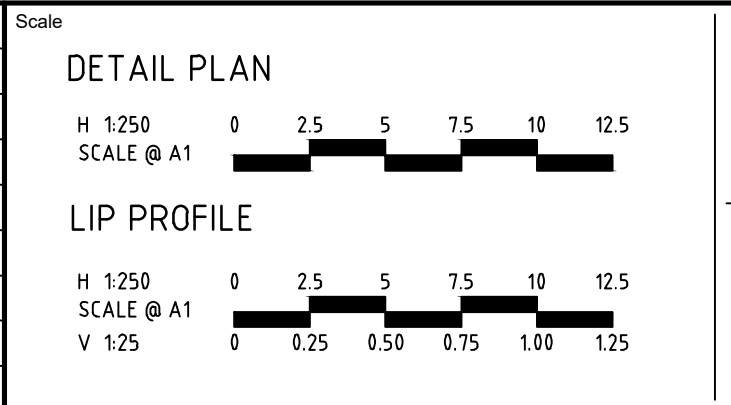
POINT NO	EASTING	NORTHING	RL
V1	290505.894	5822618.502	115.761
1/4	290509.237	5822618.708	115.717
1/2	290512.216	5822620.333	115.672
3/4	290514.377	5822622.900	115.628
V2	290515.391	5822626.098	115.584

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
V1-V2	8.600	13.509	12.162	2.519	-0.655



KERB RETURN SETOUT DETAIL

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



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Designed

Authorised



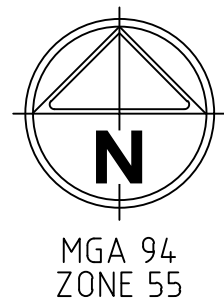
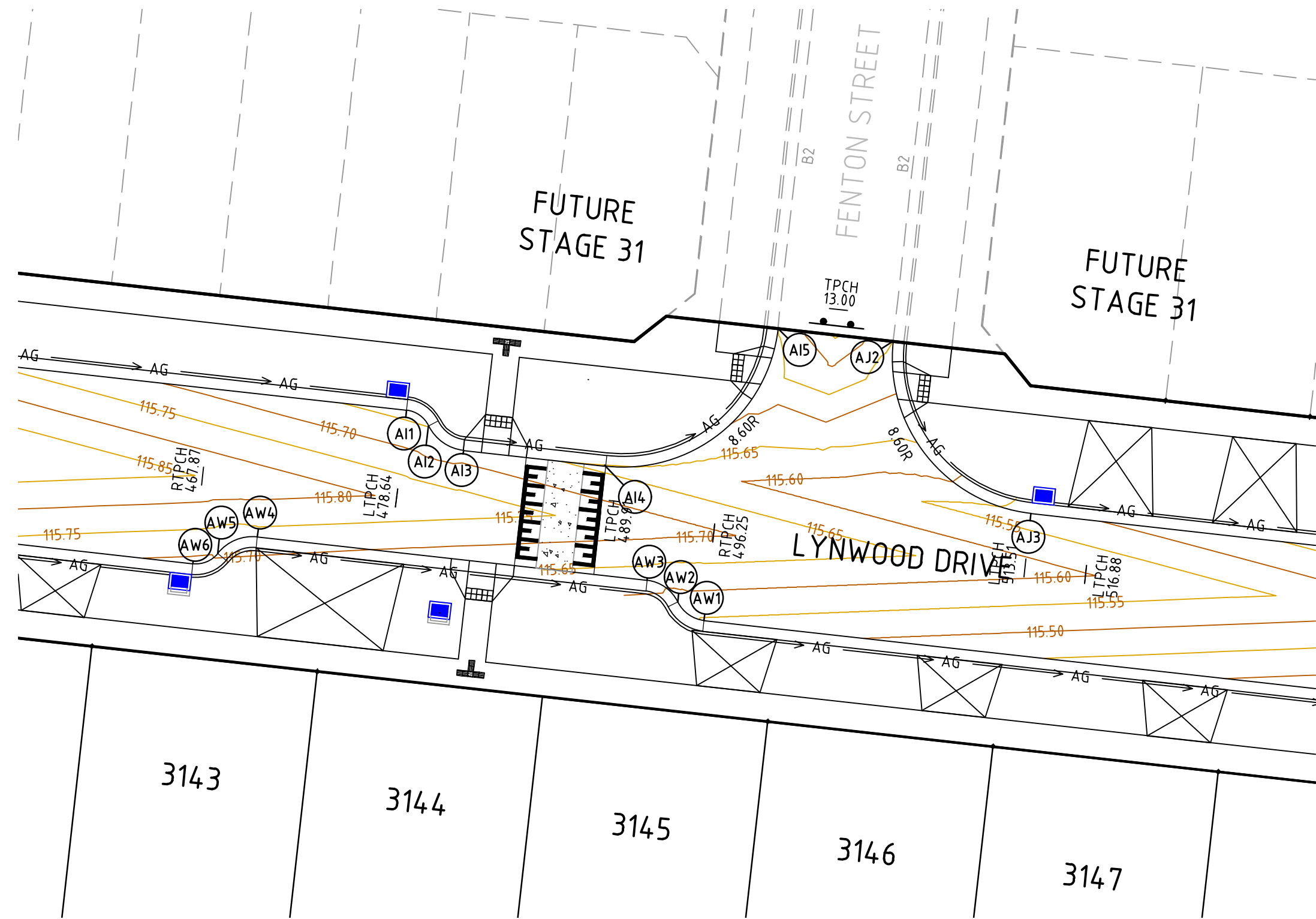
Checked

Date

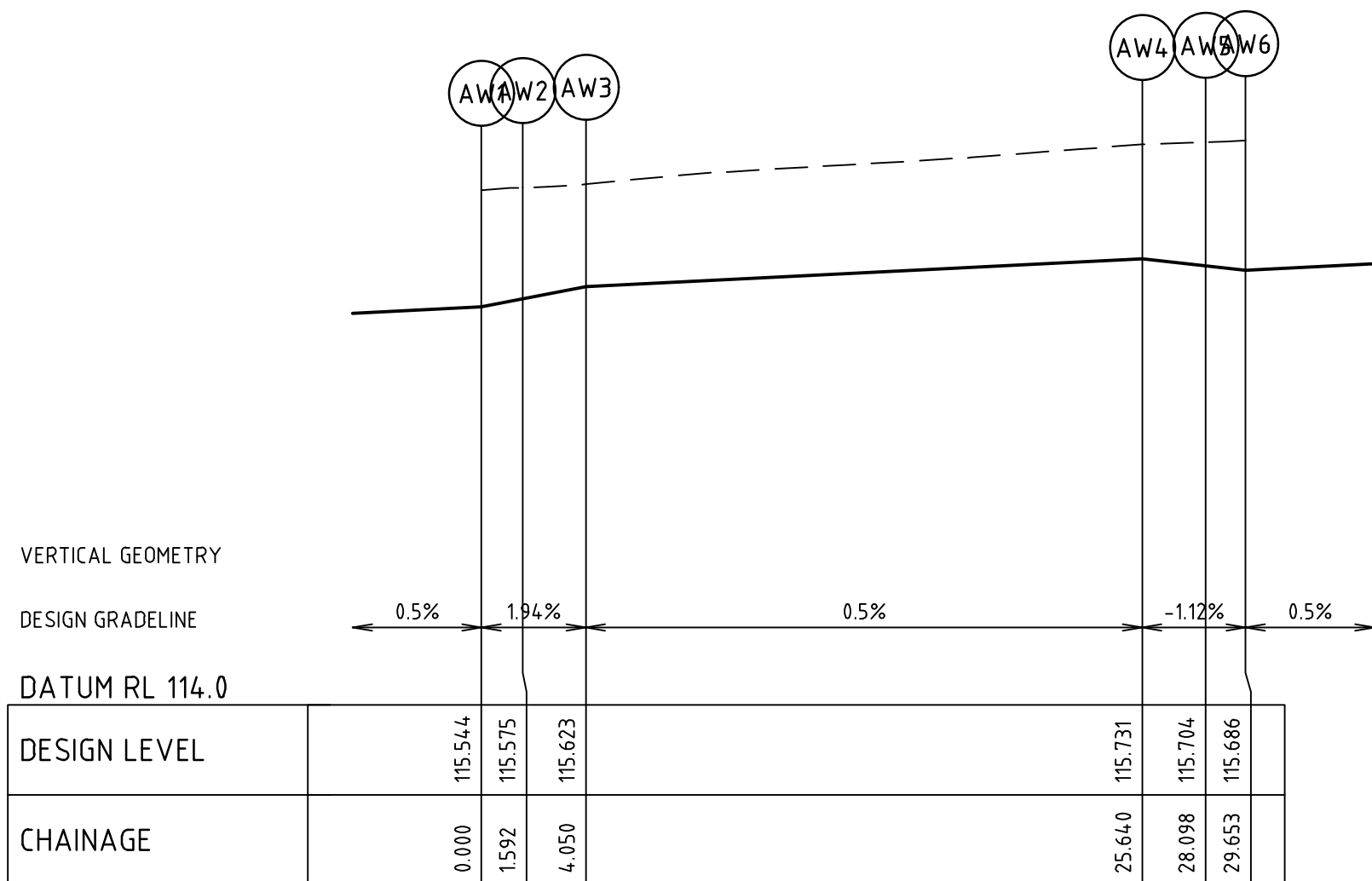
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
INTERSECTION DETAILS - SHEET 3 OF 6
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR502 Rev D

file name: 306842CR500.dwg, layout name: CR504, plotted by: Gary Kohler, file location: G:\30\306842\civil\ALCAD\plot date: 19/10/2020 10:16 AM, Sheet: 21 of 38 Sheets



INTERSECTION OF LYNWOOD DRIVE AND FENTON STREET

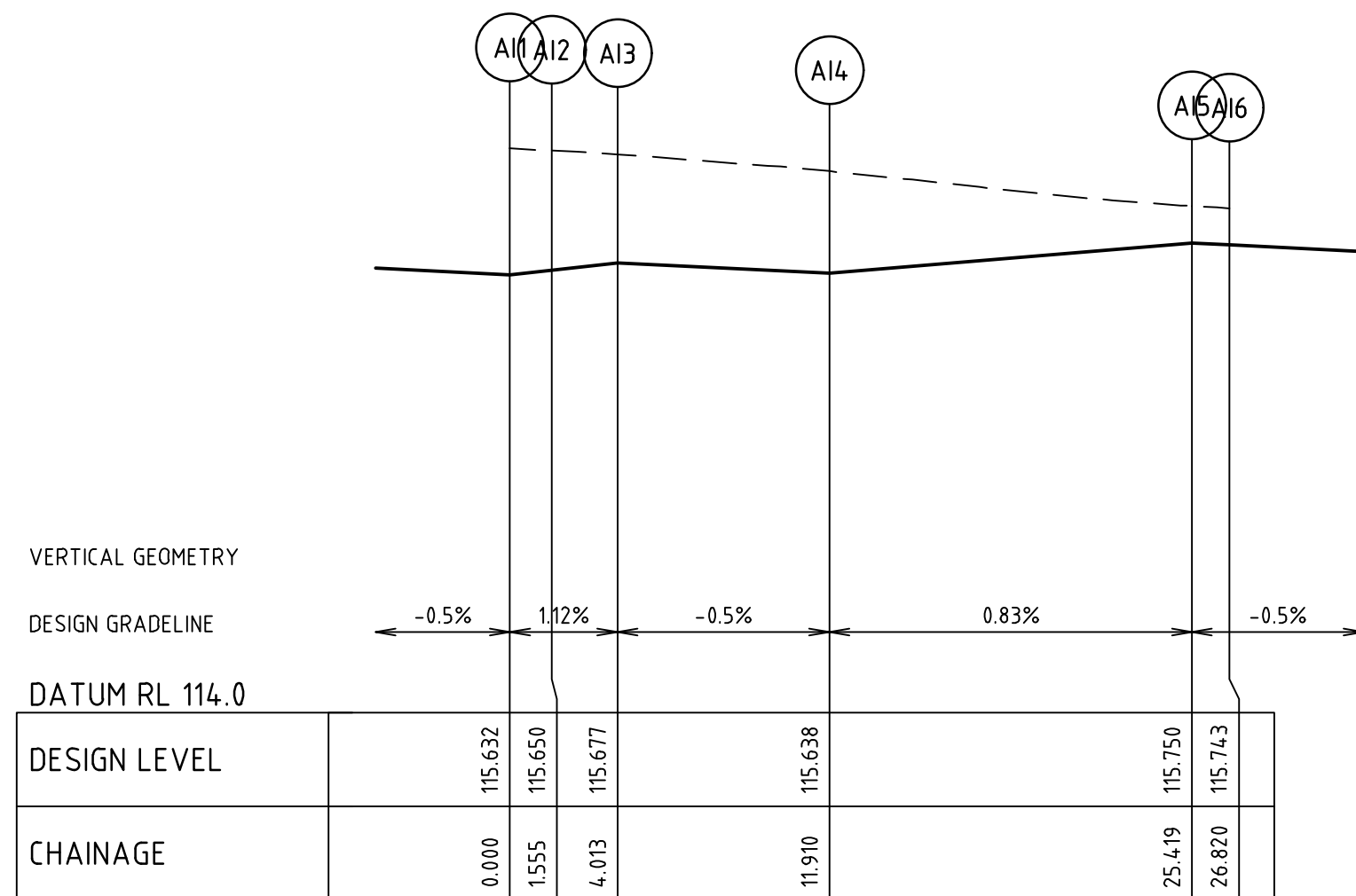


ALIGNMENT AW

ALIGNMENT AW

POINT NO	EASTING	NORTHING	RL
AW1	290582.963	5822530.395	115.544
1/4	290582.576	5822530.480	115.552
1/2	290582.222	5822530.661	115.560
3/4	290581.926	5822530.925	115.568
AW2	290581.707	5822531.256	115.575
1/4	290581.370	5822531.768	115.587
1/2	290580.917	5822532.180	115.599
3/4	290580.375	5822532.467	115.611
AW3	290579.779	5822532.611	115.623
AW4	290558.322	5822534.996	115.731
1/4	290557.709	5822534.987	115.724
1/2	290557.117	5822534.827	115.717
3/4	290556.584	5822534.524	115.710
AW5	290556.143	5822534.099	115.704
1/4	290555.864	5822533.829	115.699
1/2	290555.527	5822533.638	115.695
3/4	290555.153	5822533.536	115.691
AW6	290554.765	5822533.531	115.686

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AW1-AW2	1.550	1.592	1.523	0.200	0.051
AW2-AW3	2.450	2.458	2.357	0.302	-0.077
AW4-AW5	2.450	2.458	2.356	0.302	-0.077
AW5-AW6	1.550	1.555	1.491	0.191	0.049

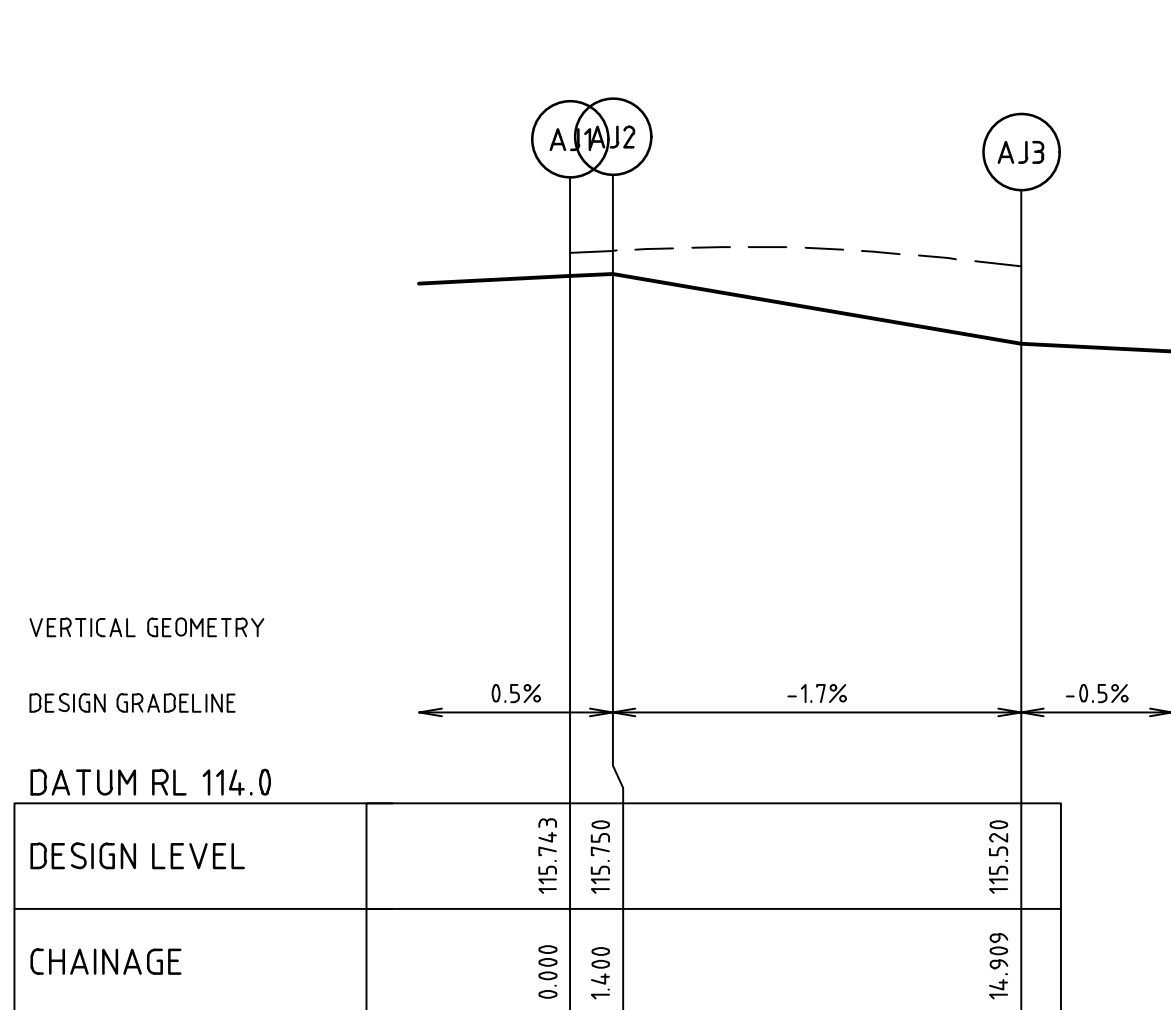


ALIGNMENT AI

ALIGNMENT AI

POINT NO	EASTING	NORTHING	RL
AI1	290566.539	5822541.981	115.632
1/4	290566.916	5822541.891	115.637
1/2	290567.259	5822541.709	115.641
3/4	290567.546	5822541.448	115.645
AI2	290567.759	5822541.124	115.650
1/4	290568.096	5822540.612	115.657
1/2	290568.549	5822540.200	115.664
3/4	290569.091	5822539.913	115.670
AI3	290569.687	5822539.770	115.677
AI4	290577.535	5822538.897	115.638
1/4	290580.879	5822539.184	115.666
1/2	290583.858	5822540.728	115.694
3/4	290586.019	5822543.295	115.722
AI5	290587.033	5822546.494	115.750
AI6	290587.188	5822547.886	115.743

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AI1-AI2	1.550	1.555	1.491	0.191	0.049
AI2-AI3	2.450	2.458	2.356	0.302	-0.077
AI4-AI5	8.600	13.509	12.163	2.519	-0.655

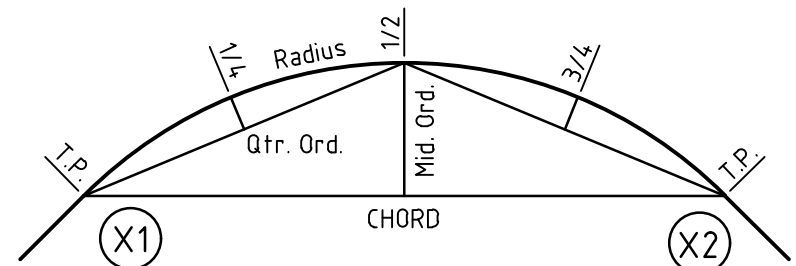


ALIGNMENT AJ

ALIGNMENT AJ

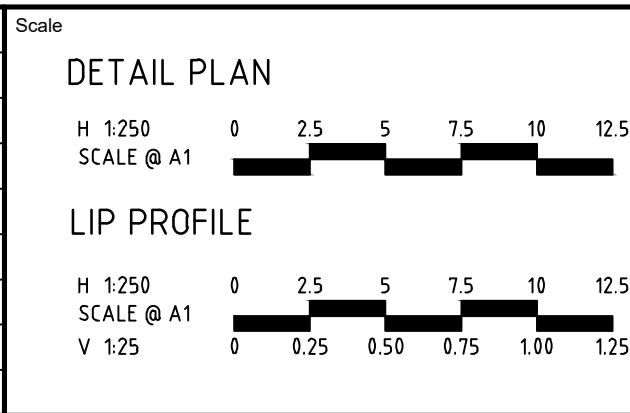
POINT NO	EASTING	NORTHING	RL
AJ1	290593.549	5822547.178	115.743
AJ2	290593.394	5822545.787	115.750
1/4	290593.681	5822542.444	115.692
1/2	290595.226	5822539.465	115.635
3/4	290597.793	5822537.304	115.577
AJ3	290600.991	5822536.289	115.520

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AJ2-AJ3	8.600	13.508	12.162	2.519	-0.655



KERB RETURN SETOUT DETAIL

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



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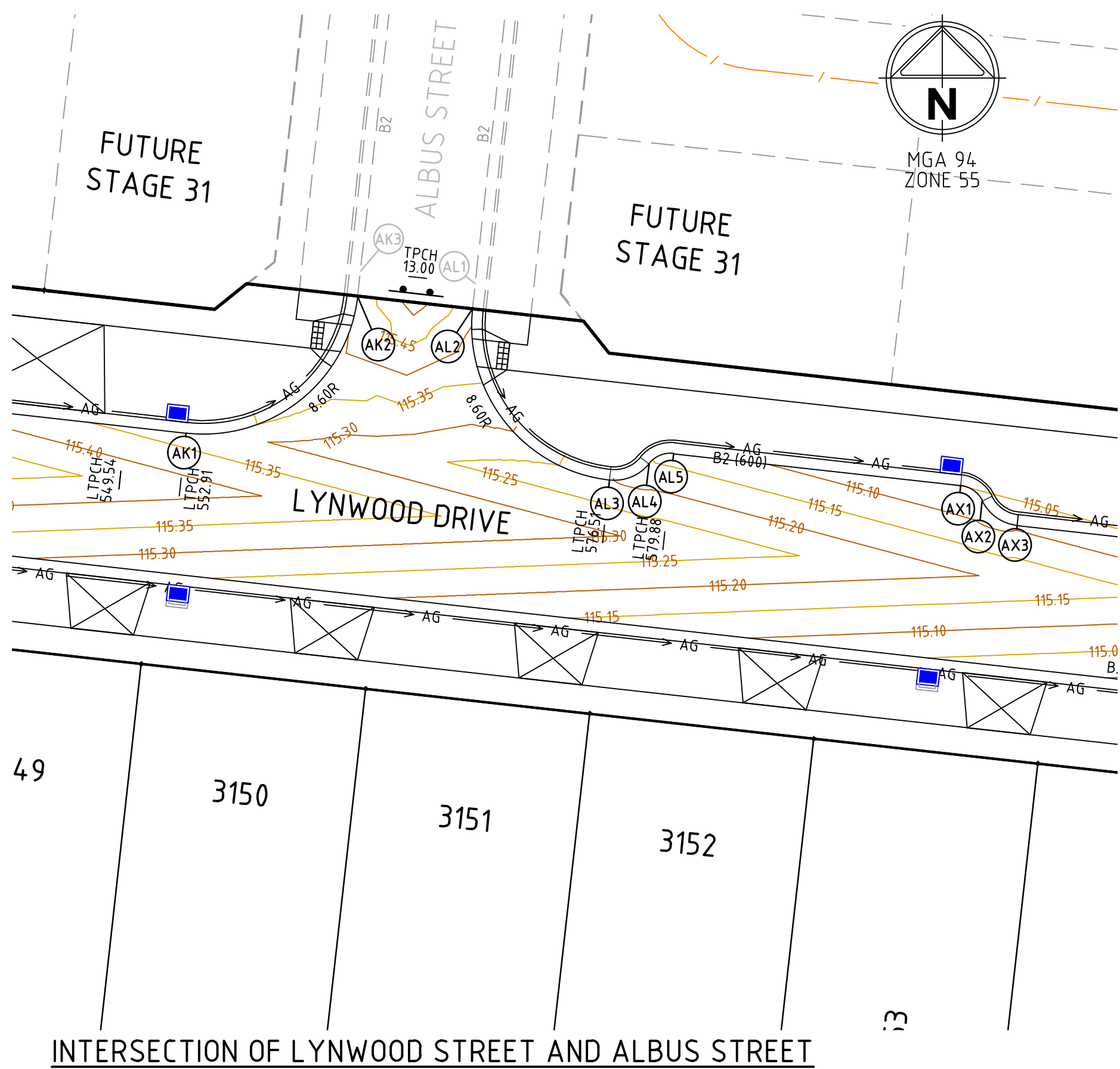
Checked

Date

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
INTERSECTION DETAILS - SHEET 5 OF 6
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR504 Rev D

file name: 306842CR505.dwg layout name: CR505, created by: Gary Kohler, file location: G:\30\306842\civil\ACAD\plot date: 19/10/2020 00:16 AM Sheet: 22 of 38 Sheets



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

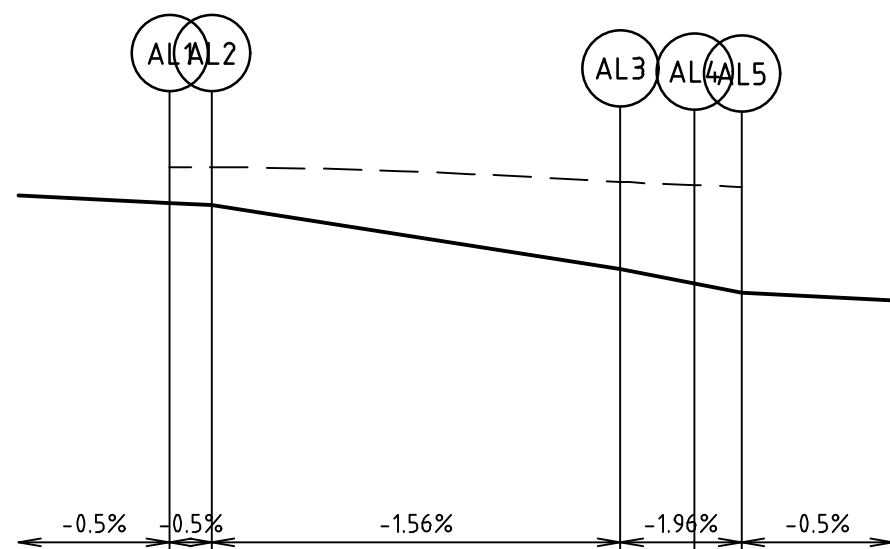
DESIGN LEVEL

CHAINAGE

ALIGNMENT AL
ALIGNMENT AL

POINT NO	EASTING	NORTHING	RL
AL1	290656.163	5822540.217	115.422
AL2	290656.008	5822538.826	115.415
1/4	290656.295	5822535.482	115.362
1/2	290657.840	5822532.503	115.310
3/4	290660.407	5822530.342	115.257
AL3	290663.605	5822529.327	115.205
1/4	290664.218	5822529.336	115.193
1/2	290664.810	5822529.497	115.181
3/4	290665.343	5822529.800	115.169
AL4	290665.784	5822530.225	115.157
1/4	290666.063	5822530.494	115.149
1/2	290666.400	5822530.686	115.141
3/4	290666.774	5822530.788	115.134
AL5	290667.162	5822530.793	115.126

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AL2-AL3	8.600	13.509	12.163	2.519	-0.655
AL3-AL4	2.450	2.458	2.356	0.302	-0.077
AL4-AL5	1.550	1.555	1.491	0.191	0.049



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

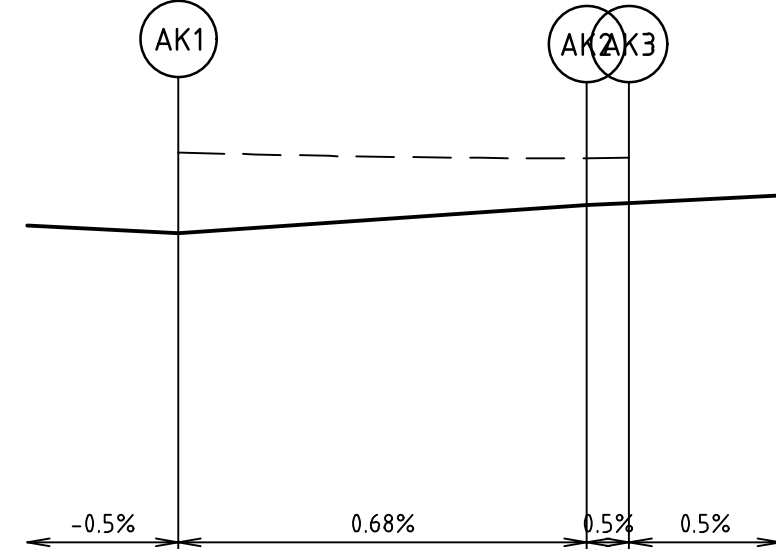
DESIGN LEVEL

CHAINAGE

ALIGNMENT AK
ALIGNMENT AK

POINT NO	EASTING	NORTHING	RL
AK1	290640.150	5822531.935	115.323
1/4	290643.493	5822532.222	115.346
1/2	290646.472	5822533.767	115.369
3/4	290648.633	5822536.333	115.392
AK2	290649.648	5822539.532	115.415
AK3	290649.802	5822540.924	115.422

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AK1-AK2	8.600	13.508	12.162	2.519	-0.655



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 113.0

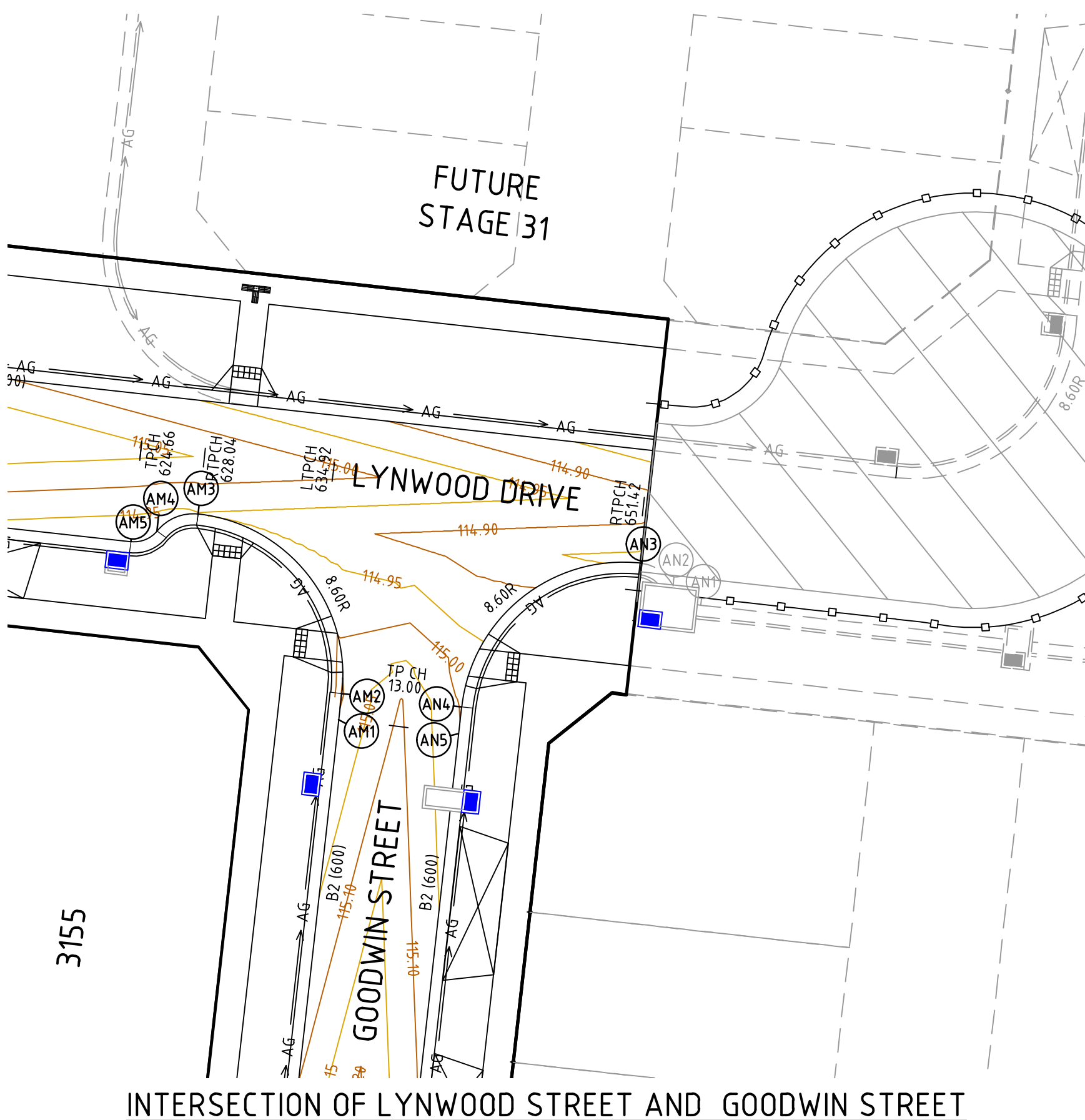
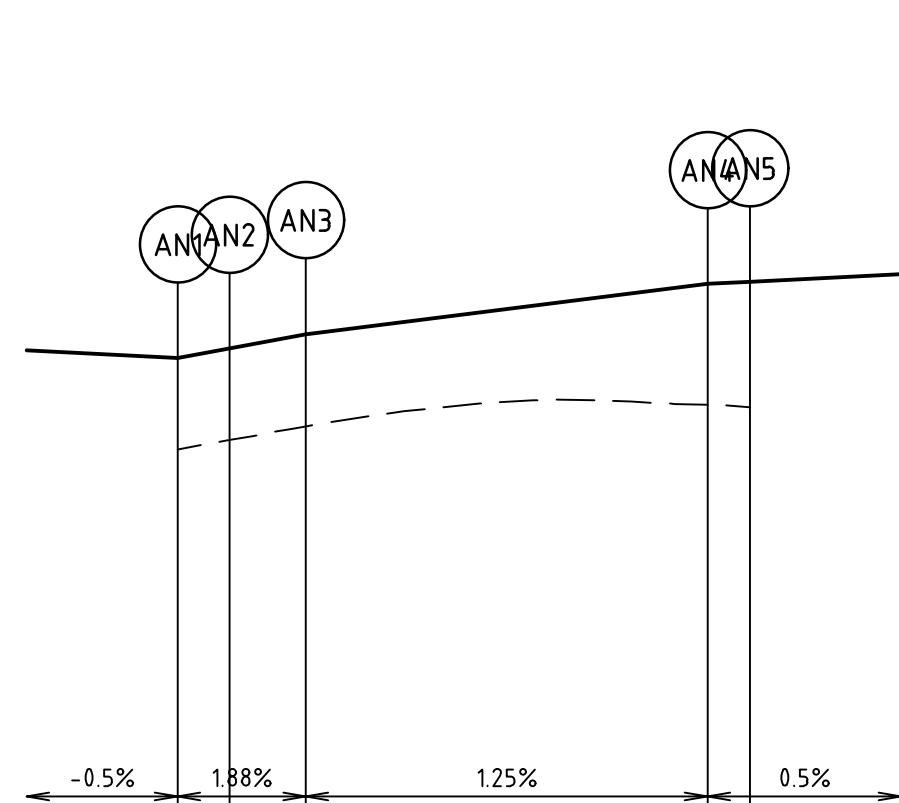
DESIGN LEVEL

CHAINAGE

ALIGNMENT AN
ALIGNMENT AN

POINT NO	EASTING	NORTHING	RL
AN1	290740.762	5822512.850	114.751
1/4	290740.341	5822512.914	114.759
1/2	290739.952	5822513.090	114.767
3/4	290739.627	5822513.365	114.775
AN2	290739.389	5822513.719	114.783
1/4	290739.042	5822514.244	114.795
1/2	290738.572	5822514.663	114.806
3/4	290738.012	5822514.949	114.818
AN3	290737.397	5822515.083	114.830
1/4	290734.114	5822514.728	114.872
1/2	290731.207	5822513.161	114.913
3/4	290729.105	5822510.615	114.954
AN4	290728.117	5822507.465	114.996
AN5	290727.962	5822506.073	115.003

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AN1-AN2	1.550	1.711	1.625	0.230	0.059
AN2-AN3	2.450	2.524	2.414	0.318	-0.081
AN3-AN4	8.600	13.290	12.007	2.442	-0.634



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 113.0

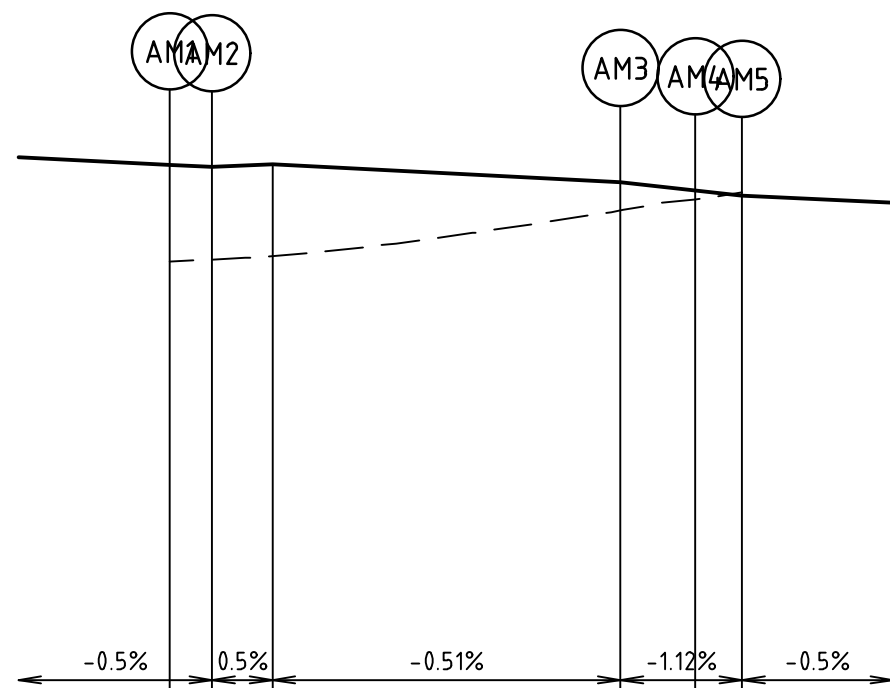
DESIGN LEVEL

CHAINAGE

ALIGNMENT AM
ALIGNMENT AM

POINT NO	EASTING	NORTHING	RL
AM1	290721.601	5822506.781	115.003
AM2	290721.756	5822508.172	114.996
1/4	290721.469	5822511.515	114.999
1/2	290719.924	5822514.494	114.982
3/4	290717.357	5822516.655	114.964
AM3	290714.159	5822517.670	114.947
1/4	290713.546	5822517.661	114.940
1/2	290712.954	5822517.500	114.933
3/4	290712.421	5822517.197	114.927
AM4	290711.980	5822516.772	114.920
1/4	290711.701	5822516.503	114.915
1/2	290711.364	5822516.311	114.911
3/4	290710.990	5822516.209	114.907
AM5	290710.602	5822516.204	114.902

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AM2-AM3	8.600	13.509	12.162	2.519	-0.655
AM3-AM4	2.450	2.458	2.356	0.302	-0.077
AM4-AM5	1.550	1.555	1.491	0.191	0.049



VERTICAL GEOMETRY

DESIGN GRADELINE

DATUM RL 114.0

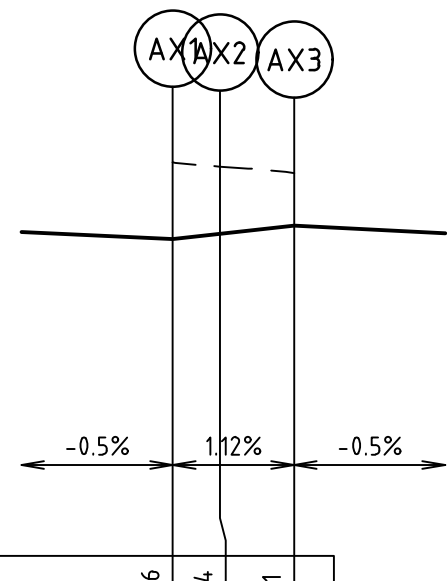
DESIGN LEVEL

CHAINAGE

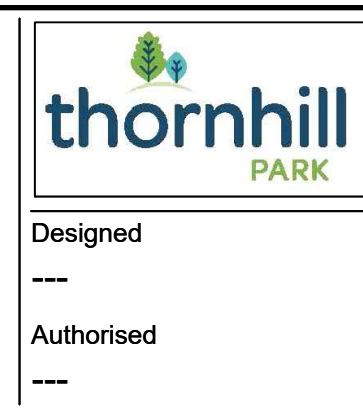
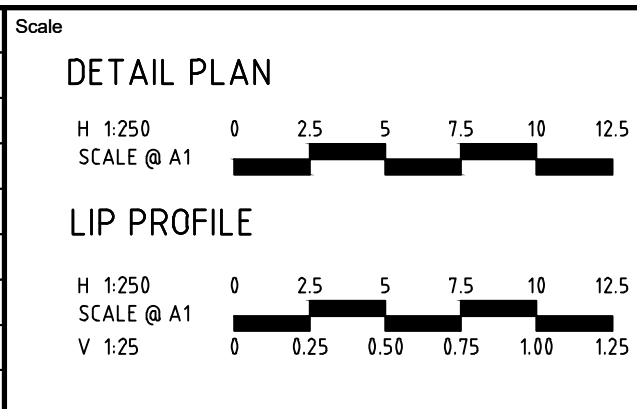
ALIGNMENT AX
ALIGNMENT AX

POINT NO	EASTING	NORTHING	RL
AX1	290683.052	5822529.027	115.046
1/4	290683.429	5822528.936	115.051
1/2	290683.771	5822528.754	115.055
3/4	290684.058	5822528.494	115.059
AX2	290684.272	5822528.170	115.064
1/4	290684.609	5822527.658	115.070
1/2	290685.062	5822527.246	115.077
3/4	290685.604	5822526.959	115.084
AX3	290686.200	5822526.815	115.091

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
AX1-AX2	1.550	1.555	1.491	0.191	0.049
AX2-AX3	2.449	2.458	2.356	0.302	-0.077



Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20

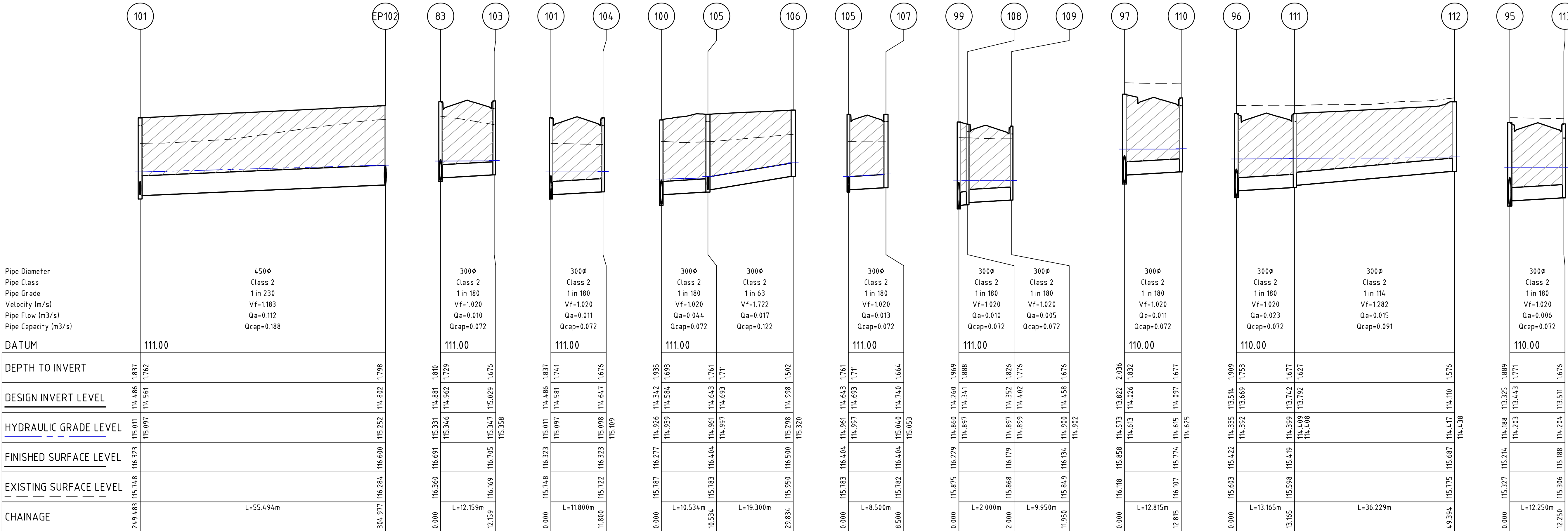
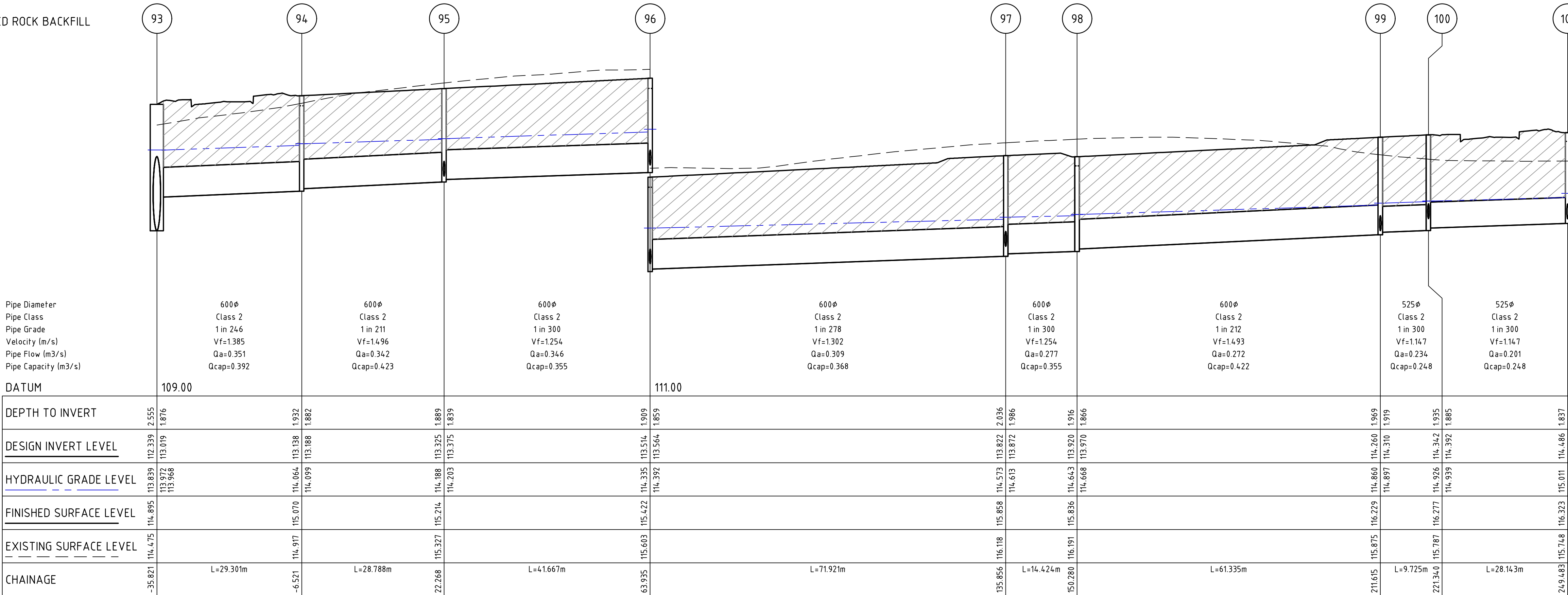


**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
INTERSECTION DETAILS - SHEET 6 OF 6**
MELTON CITY COUNCIL
WEL.CO GROUP

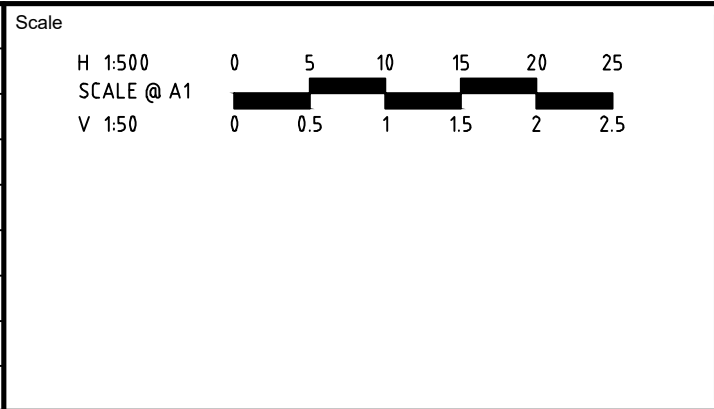
PRELIMINARY Drg No **306842CR505** Rev **D**

file name: 306842CR600.dwg, layout name: CR600, plotted by: Gary Kohler, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 10:16 AM Sheet: 23 of 38 Sheets

CRUSHED ROCK BACKFILL



Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20



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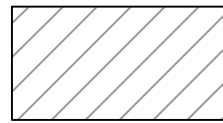
Authorised

Wel.Co
Checked

Date

**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 1 OF 4
MELTON CITY COUNCIL
WEL.CO GROUP**
PRELIMINARY Drg No **306842CR600** Rev **D**

file name: 306842CR601.dwg, layout name: CR601, plotted by: Gary, Kishan,
file location: G:\30\306842\civil\ACAD\plot date: 19/10/2020 10:12 AM Sheet: 24 of 38 Sheets



CRUSHED ROCK BACKFILL

Pipe Diameter
Pipe Class
Pipe Grade
Velocity (m/s)
Pipe Flow (m³/s)
Pipe Capacity (m³/s)

300Ø
Class 2
1 in 78
Vf=1.546
Qa=0.013
Qcap=0.109

DATUM

109.00

DEPTH TO INVERT

2.650
112.371
113.330

DESIGN INVERT LEVEL

112.171
112.171
112.171

HYDRAULIC GRADE LEVEL

114.082
114.081
114.081

FINISHED SURFACE LEVEL

115.021
115.021
115.021

EXISTING SURFACE LEVEL

114.557
114.557
114.557

CHAINAGE

0.000
L=7.450m
7.450

1500Ø
Class 2
1 in 500
Vf=1.797
Qa=3.577
Qcap=3.175

1500Ø
Class 2
1 in 500
Vf=1.790
Qa=3.598
Qcap=3.163

1500Ø
Class 2
1 in 500
Vf=1.790
Qa=3.623
Qcap=3.163

1500Ø
Class 2
1 in 500
Vf=1.790
Qa=3.644
Qcap=3.163

1500Ø
Class 2
1 in 500
Vf=1.790
Qa=3.399
Qcap=3.163

1500Ø
Class 2
1 in 500
Vf=1.790
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Qcap=3.163

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Class 2
1 in 500
Vf=1.790
Qa=3.406
Qcap=3.163

1500Ø
Class 2
1 in 500
Vf=1.790
Qa=3.406
Qcap=3.163

750Ø
Class 2
1 in 500
Vf=1.132
Qa=0.412
Qcap=0.500

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.415
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.423
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.426
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.429
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.432
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.418
Qcap=0.498

750Ø
Class 2
1 in 500
Vf=1.127
Qa=0.338
Qcap=0.498

600Ø
Class 2
1 in 300
Vf=1.254
Qa=0.343
Qcap=0.355

600Ø
Class 2
1 in 300
Vf=1.254
Qa=0.305
Qcap=0.355

Pipe Diameter
Pipe Class
Pipe Grade
Velocity (m/s)
Pipe Flow (m³/s)
Pipe Capacity (m³/s)

600Ø
Class 2
1 in 300
Vf=1.254
Qa=0.286
Qcap=0.355

DATUM

110.00

DEPTH TO INVERT

2.213
113.069
113.069

DESIGN INVERT LEVEL

113.751
113.751
113.751

HYDRAULIC GRADE LEVEL

115.282
115.282
115.282

FINISHED SURFACE LEVEL

115.654
115.654
115.654

EXISTING SURFACE LEVEL

115.490
115.490
115.490

CHAINAGE

35.124
L=23.382m
58.505

450Ø
Class 2
1 in 300
Vf=1.035
Qa=0.117
Qcap=0.165

450Ø
Class 2
1 in 300
Vf=1.035
Qa=0.118
Qcap=0.165

375Ø
Class 2
1 in 200
Vf=1.123
Qa=0.095
Qcap=0.124

300Ø
Class 2
1 in 180
Vf=1.020
Qa=0.023
Qcap=0.072

300Ø
Class 2
1 in 71
Vf=1.619
Qa=0.023
Qcap=0.114

300Ø
Class 2
1 in 47
Vf=1.993
Qa=0.010
Qcap=0.141

300Ø
Class 2
1 in 84
Vf=1.494
Qa=0.053
Qcap=0.106

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
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Qcap=0.041

225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

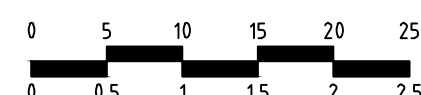
225Ø
Class 2
1 in 120
Vf=1.031
Qa=0.022
Qcap=0.041

Scale

H 1500

SCALE @ A1

V 150



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Authorised

Wel.Co

Checked

Date

**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 2 OF 4
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No **306842CR601**

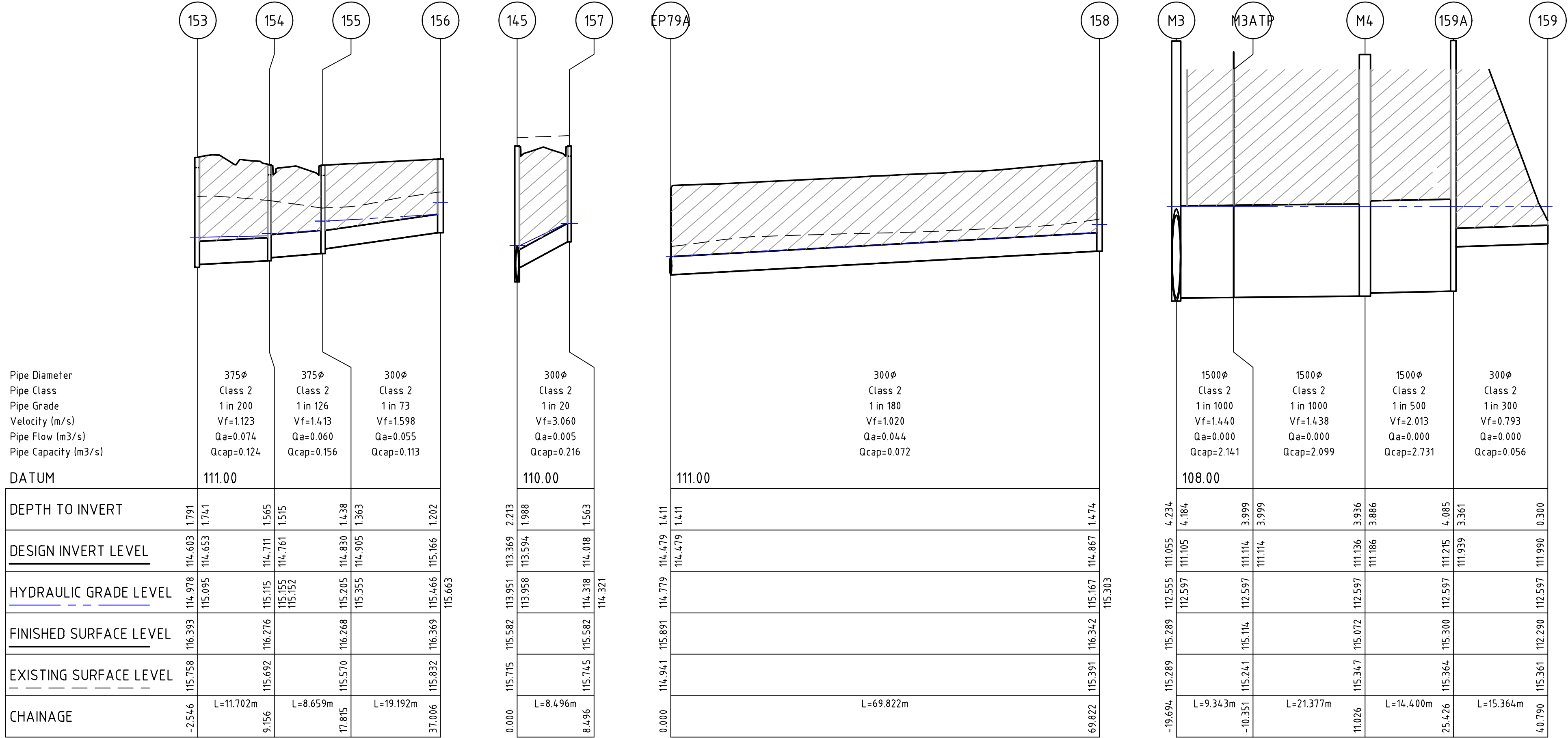
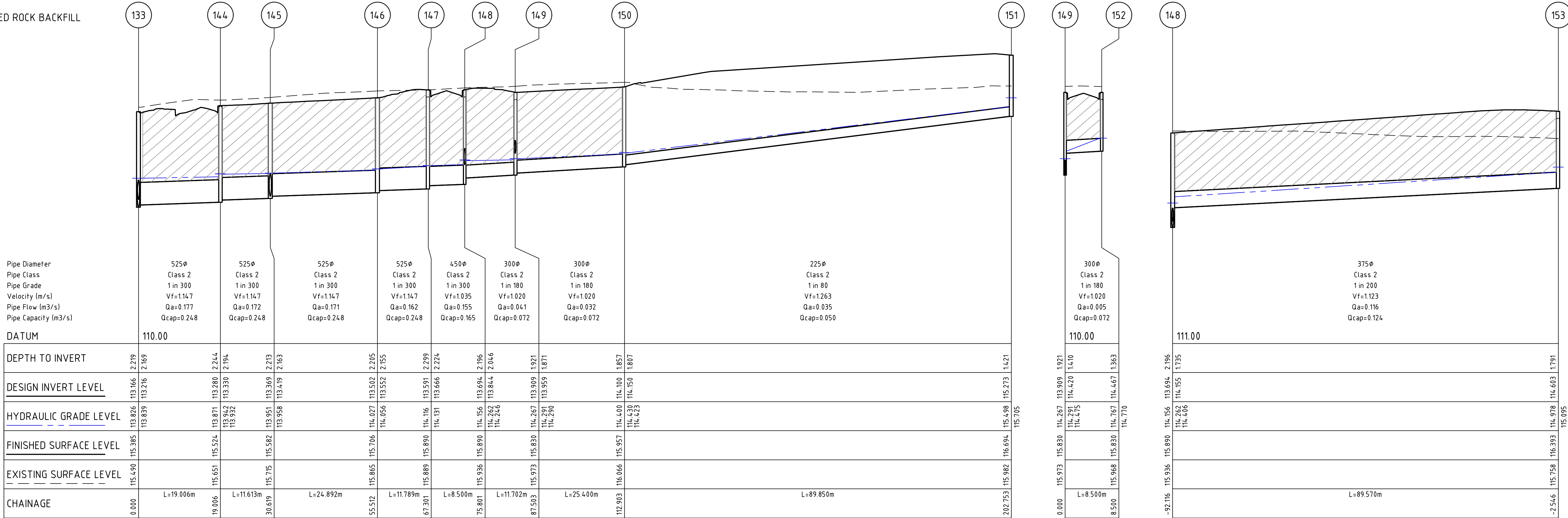
Rev **D**

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20

file name: 306842CR600.dwg, layout name: CR602, plotted by: Gary Kohler, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 10:16 AM Sheet: 25 of 38 Sheets

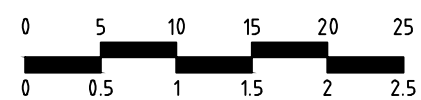


CRUSHED ROCK BACKFILL



Scale

H 1:500
SCALE @ A1
V 1:50



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**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 3 OF 4
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No **306842CR602** Rev **D**

file name: 306842CR603.dwg, layout name: CR603, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 06:16 AM Sheet: 26 of 38 Sheets

DRAINAGE PIT SCHEDULE

PIT		INTERNAL		INLET		OUTLET		PIT		REMARKS
NAME	TYPE	WIDTH	LENGTH	DIA	INV LEVEL	DIA	INV LEVEL	FS LEVEL	DEPTH	
M3ATP	TANGENT POINT	0	0	1500	111.114	1500	111.114	115.114	3.999	MAIN CHAMBER PIT, REFER TO MELBOURNE WATER DRAWING 7251/08/408 & 7251/08/409. REFER TO VICROADS STANDARD DRAWING SD1023.
M4	JUNCTION PIT	1800	1800	1500	111.186	1500	111.136	115.072	3.936	
93	JUNCTION PIT	2700	2100	1500	112.339	1500	112.339	114.895	2.555	
				600	113.019					
94	GRATED SIDE ENTRY PIT	900	900	600	113.188	600	113.138	115.070	1.932	
95	JUNCTION PIT	900	900	600	113.375	600	113.325	115.214	1.889	
				300	113.443					
96	GRATED SIDE ENTRY PIT	900	900	600	113.564	600	113.514	115.422	1.909	
				300	113.712					
97	JUNCTION PIT	900	900	600	113.872	600	113.822	115.858	2.036	
				300	114.026					
98	GRATED SIDE ENTRY PIT	900	900	600	113.970	600	113.920	115.836	1.916	
99	JUNCTION PIT	750	900	525	114.310	600	114.260	116.229	1.969	
				300	114.341					
100	JUNCTION PIT	750	900	525	114.392	525	114.342	116.277	1.935	
				300	114.584					
101	GRATED SIDE ENTRY PIT	750	900	450	114.561	525	114.486	116.323	1.837	
				300	114.581					
EP102	ENDPIPE	0	0			450	114.802	116.600	1.798	
				450	114.802					
103	GRATED SIDE ENTRY PIT	600	900			300	115.029	116.705	1.676	
104	GRATED SIDE ENTRY PIT	600	900			300	114.647	116.323	1.676	
105	GRATED SIDE ENTRY PIT	600	900	300	114.693	300	114.643	116.404	1.761	
				300	114.693					
106	JUNCTION PIT	600	900			300	114.998	116.500	1.502	
107	GRATED SIDE ENTRY PIT	600	900			300	114.740	116.404	1.664	
108	GRATED SIDE ENTRY PIT	600	900	300	114.402	300	114.352	116.179	1.826	
109	GRATED SIDE ENTRY PIT	600	900			300	114.458	116.134	1.676	
110	GRATED SIDE ENTRY PIT	600	900			300	114.097	115.774	1.677	
111	GRATED SIDE ENTRY PIT	600	900	300	113.868	300	113.818	115.513	1.695	
112	JUNCTION PIT	600	900			300	114.192	115.699	1.507	
113	GRATED SIDE ENTRY PIT	600	900			300	113.511	115.188	1.676	
114	GRATED SIDE ENTRY PIT	600	900			300	113.785	115.146	1.360	
115	ENDWALL	0	0	1500	112.171			113.671	1.500	
TP116	TANGENT POINT	0	0	1500	112.187	1500	112.187	115.353	3.166	
TP117	TANGENT POINT	0	0	1500	112.234	1500	112.234	115.368	3.134	
TP118	TANGENT POINT	0	0	1500	112.288	1500	112.288	115.218	2.930	
TP119	TANGENT POINT	0	0	1500	112.335	1500	112.335	114.815	2.480	
120	GRATED SIDE ENTRY PIT	2700	900	1500	112.371	1500	112.371	115.021	2.650	
				300	113.690					
EP121	ENDPIPE	0	0			1500	112.422	115.145	2.723	
				1500	112.422					
122	ENDWALL	0	0	750	112.561			113.311	0.750	
TP123	TANGENT POINT	0	0	750	112.577	750	112.577	115.409	2.832	
TP124	TANGENT POINT	0	0	750	112.601	750	112.601	115.442	2.841	
TP125	TANGENT POINT	0	0	750	112.658	750	112.658	115.171	2.513	
TP126	TANGENT POINT	0	0	750	112.678	750	112.678	115.088	2.411	PROVIDE DIA 300 BLANKED OFF STUB FOR FUTURE CONNECTION
127	JUNCTION PIT	1050	900	750	112.717	750	112.697	115.167	2.470	
128	GRATED SIDE ENTRY PIT	1050	900	750	112.754	750	112.734	115.132	2.397	PROVIDE DIA 300 BLANKED OFF STUB FOR FUTURE CONNECTION
				300	113.184					
129	JUNCTION PIT	1050	900	750	112.835	750	112.815	115.278	2.463	PROVIDE DIA 300 BLANKED OFF STUB FOR FUTURE CONNECTION
				300	113.265					
130	JUNCTION PIT	900	900	600	112.907	750	112.887	115.383	2.496	
131	JUNCTION PIT	900	900	600	113.026	600	112.976	115.349	2.373	
				300	113.939					
132	GRATED SIDE ENTRY PIT	900	900	600	113.095	600	113.075	115.290	2.215	PROVIDE DIA 300 BLANKED OFF STUB FOR FUTURE CONNECTION
				300	113.375					
133	JUNCTION PIT	900	1350	450	113.347	600	113.166	115.385	2.219	
				525	113.216					
134	JUNCTION PIT	600	900	450	113.481	450	113.431	115.498	2.067	
135	GRATED SIDE ENTRY PIT	600	900	375	113.694	450	113.619	115.433	1.814	
				300	113.769					
136	JUNCTION PIT	600	900	300	113.901	375	113.826	115.550	1.725	
				300	113.901					
137	JUNCTION PIT	600	900	300	114.054	300	114.004	115.636	1.632	
138	GRATED SIDE ENTRY PIT	600	900	300	114.267	300	114.217	115.811	1.593	
139	GRATED SIDE ENTRY PIT	600	900			300	114.448	115.811	1.363	
140	JUNCTION PIT	600	900	225	114.430	300	114.380	116.074	1.694	
				225	114.929					
141	JUNCTION PIT	600	900			225	114.808	115.932	1.124	
142	JUNCTION PIT	600	900			225	115.013	116.141	1.128	
143	GRATED ENTRY PIT	600	900			300	114.002	115.206	1.204	REFER MELTON STANDARD DRAWING EDCM605 OR EDCM606 WITH V SHAPED GRATED LID
144	GRATED SIDE ENTRY PIT	750	900	525	113.330	525	113.280	115.524	2.244	
145	JUNCTION PIT	750	900	525	113.419	525	113.369	115.582	2.213	
				300	113.594					
146	JUNCTION PIT	600	900	525	113.552	525	113.502	115.706	2.205	
147	GRATED SIDE ENTRY PIT	600	900	450	113.666	525	113.591	115.890	2.299	
148	GRATED SIDE ENTRY PIT	600	900	300	113.844	450	113.694	115.890	2.196	

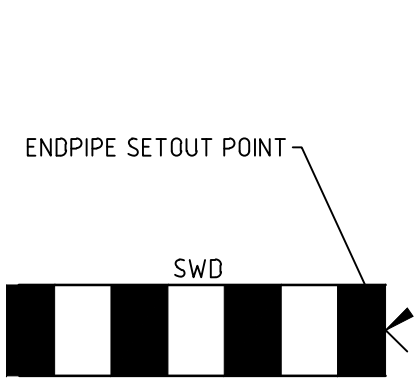
				375	114.155					
149	GRATED SIDE ENTRY PIT	600	900	300	113.959	300	113.909	115.830	1.921	
				300	114.420					
150	JUNCTION PIT	600	900	225	114.150	300	114.100	115.957	1.857	
151	JUNCTION PIT	600	900			225	115.273	116.694	1.421	
152	GRATED SIDE ENTRY PIT	600	900			300	114.467	115.830	1.363	
153	GRATED SIDE ENTRY PIT	600	900	375	114.653	375	114.603	116.393	1.791	
154	GRATED SIDE ENTRY PIT	600	900	375	114.761	375	114.711	116.276	1.565	
155	GRATED SIDE ENTRY PIT	600	900	300	114.905	375	114.830	116.268	1.438	
156	JUNCTION PIT	600	900			300	115.166	116.369	1.202	
157	GRATED SIDE ENTRY PIT	600	1200			300	114.018	115.582	1.563	
158	JUNCTION PIT	600	900			300	114.867	116.342	1.474	
159A	JUNCTION PIT	1800	900	375	111.939	1500	111.215	115.300	4.085	
159	ENDWALL	0	0			375	111.990	112.365	0.375	

NOTES:

- ALL GRATED SIDE ENTRY PITS ARE TO BE IN ACCORDANCE WITH MELTON STANDARD DRAWINGS EDCM601 AND EDCM605 OR EDCM606 (UNLESS NOTED OTHERWISE)
- ALL JUNCTION PITS ARE TO BE IN ACCORDANCE WITH MELTON STANDARD DRAWING EDCM605 OR EDCM606 (UNLESS NOTED OTHERWISE)
- ALL PITS WITH A WIDTH GREATER THAN 600mm ARE TO BE HAUNCHED PITS IN ACCORDANCE WITH MELTON STANDARD DRAWING EDCM607 OR EDCM608 (UNLESS NOTED OTHERWISE)
- ALL GRATED ENTRY ARE TO BE IN ACCORDANCE WITH MELTON STANDARD DRAWING EDCM605 OR EDCM606 WITH "BIKE-SAFE" HOT DIP GALVANIZED CLASS D GRATING & FRAME TO SUIT (UNLESS NOTED OTHERWISE)
- ENDWALL TO BE STANDARD ROCHLA HEADWALL (OR APPROVED EQUIVALENT)

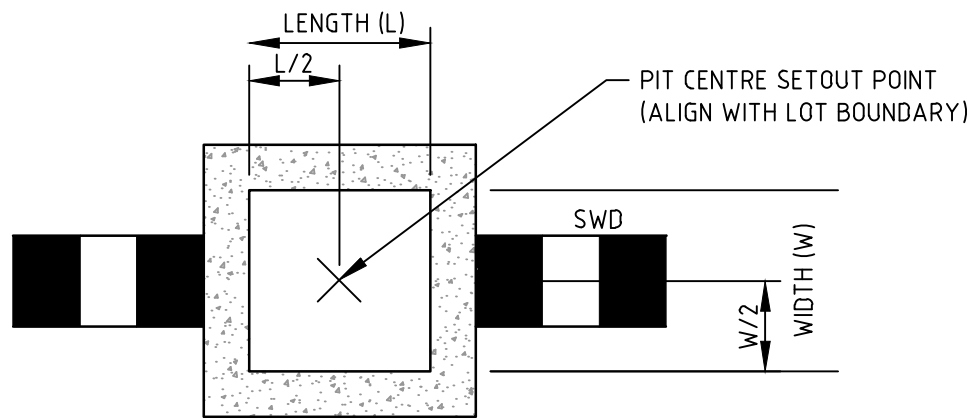
DRAINAGE PIT SETOUT

PIT NAME	POINT	COORDINATES	
		EASTING	NORTHING
M3ATP	POINT A	290679.376	5822621.510
M4	POINT B	290699.336	5822613.857
93	POINT B	290739.068	5822512.737
97	POINT B	290568.369	5822530.811
100	POINT B	290483.412	5822540.257
108	POINT B	290493.077	5822539.182
112	POINT B	290600.517	5822539.260
115	POINT A	290686.687	5822558.833
TP116	POINT A	290685.817	5822551.006
TP117	POINT A	290699.068	5822534.440
TP118	POINT A	290726.055	5822531.439
TP119	POINT A	290739.306	5822514.874
120	POINT B	290727.570	5822502.550
122	POINT A	290676.140	5822571.177
TP123	POINT A	290668.305	5822572.048
TP124	POINT A	290661.680	5822580.331
TP125	POINT A	290664.847	5822608.816
TP126	POINT A	290660.077	5822616.648
127	POINT B	290651.954	5822619.762
128	POINT B	290643.083	5822623.162
129	POINT B	290614.507	5822634.119
130	POINT B	290591.159	5822643.076
131	POINT B	290571.092	5822650.770
132	POINT B	290559.138	5822655.349
133	POINT B	290537.219	5822663.913
143	POINT B	290478.576	5822696.545
155	POINT B	290398.180	5822616.383
159	POINT A	290688.687	5822586.083
159A	POINT B	290694.181	5822600.411



TYPICAL DRAINAGE SETOUT POINT 'A'

ENDPIPE
NOT TO SCALE



TYPICAL DRAINAGE PIT SETOUT POINT 'B'

JUNCTION PIT/ EASEMENT PIT/GRATED ENTRY PIT
NOT TO SCALE



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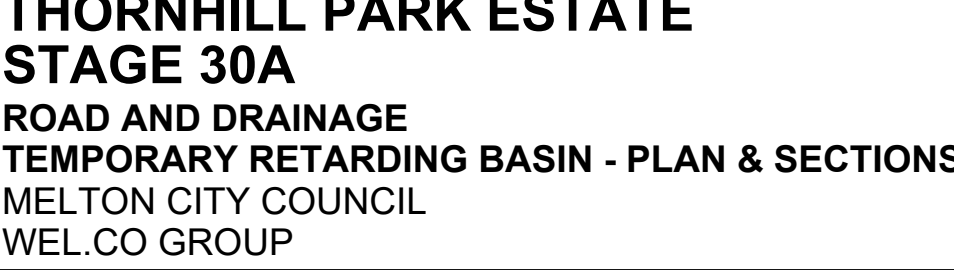
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 4 OF 4
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR603 Rev D

Scale



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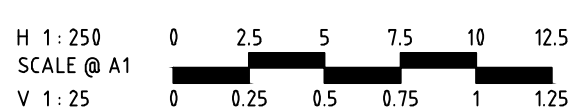


PRELIMINARY Drg No **306842CR604**

DATUM RL 108.5

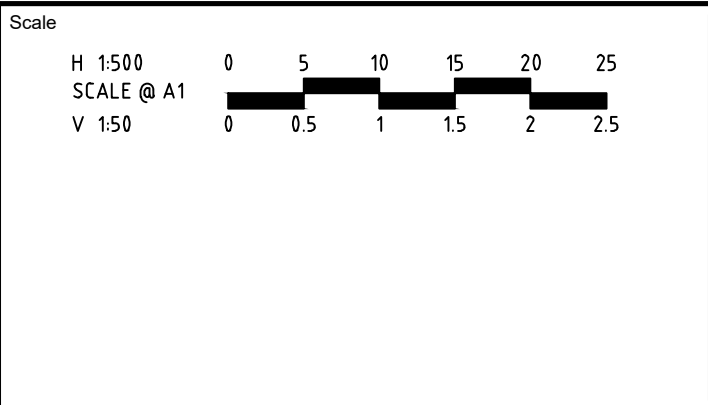
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SECTION D



file name: 306842CR605.dwg layout name: CR605 file location: G:\30\306842\civil\CAD plot date: 19/10/2020 10:16 AM Sheet: 28 of 38 Sheets

C	ISSUED TO COUNCIL	M.R	08/10/20	
B	ISSUED FOR TENDER	M.R	22/09/20	
A	ISSUED TO COUNCIL	M.R	31/08/20	
Rev	Amendments	Approved	Date	






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THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
TEMPORARY RETARDING BASIN - DETAILS
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY

Dwg No
306842CR605

Rev
C

PAVEMENT DETAILS

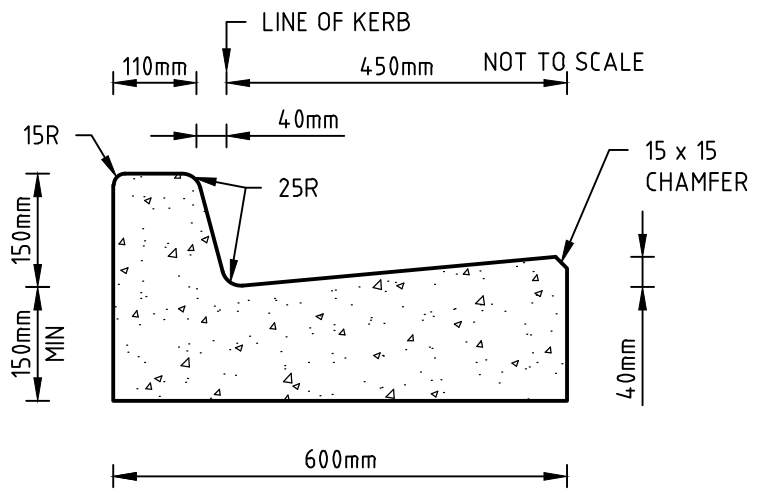
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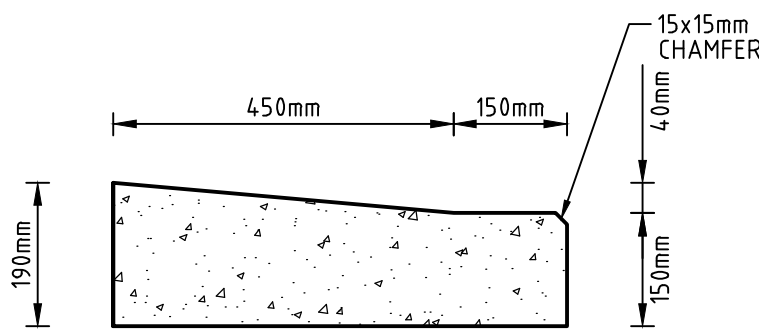
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ROAD NAME	PAVEMENT TYPE	CLASSIFICATION
LYNWOOD DRIVE	A	ACCESS STREET LEVEL 2
WASHINGTON DRIVE	B	ACCESS STREET LEVEL 1U
HARDING ROAD	C	ACCESS STREET LEVEL 1L
FARGO STREET	C	ACCESS STREET LEVEL 1L
DAWSON STREET	C	ACCESS STREET LEVEL 1L
ALDRICH STREET	C	ACCESS STREET LEVEL 1L
ALDEN STREET	C	ACCESS STREET LEVEL 1L
ALBUS STREET	C	ACCESS STREET LEVEL 1L
FENTON STREET	C	ACCESS STREET LEVEL 1L



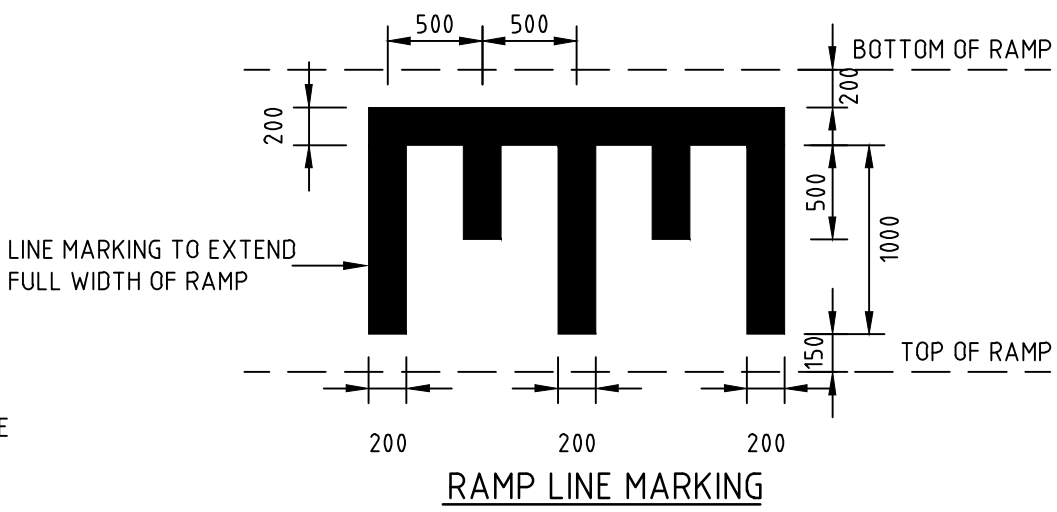
600 B2



FLAT KERB PROFILE (FKB) (600)

STANDARD KERB PROFILES

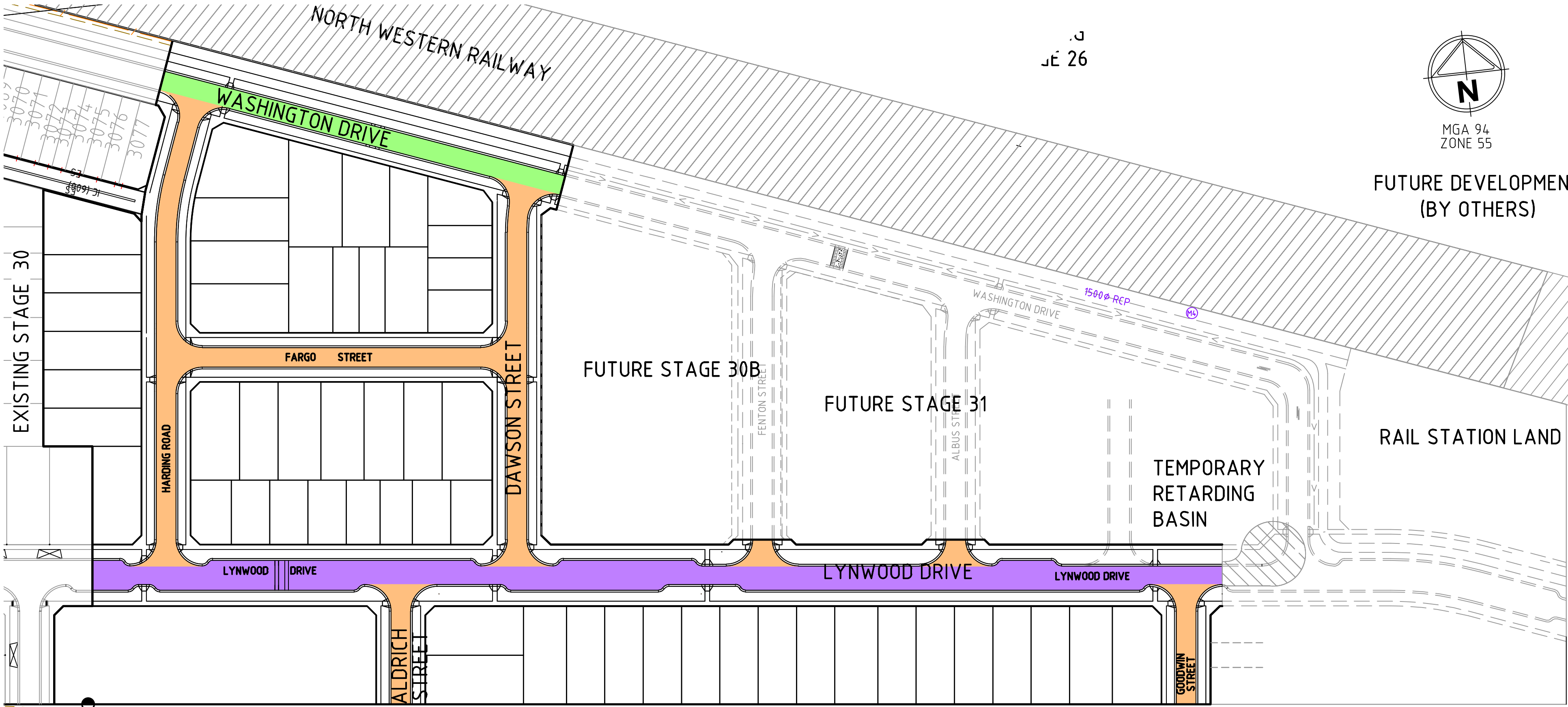
- NOTES:
- ALL KERBS AND KERB & CHANNEL TO BE REINFORCED IN ACCORDANCE WITH MUNICIPALITY STD DRAWINGS.
 - ALL KERBS AND KERB & CHANNEL TO HAVE 150mm DEPTH OF CONCRETE BELOW TOP OF PAVEMENT LEVEL.
 - B2 INDICATES 600 B2 TYPE KERB AS PER MPA STANDARD DRAWINGS.



RAMP LINE MARKING

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)	DEPTH (mm)	DEPTH (mm)
ASPHALT WEARING COURSE	SIZE 10mm TYPE N CLASS (CLASS 320 BINDER)	A	B	C
ASPHALT BASE COURSE	SIZE 14mm TYPE N CLASS (CLASS 320 BINDER)	40	30	30
	SIZE 10mm TYPE N CLASS (CLASS 320 BINDER)		30	30
	SIZE 14mm TYPE HP CLASS (CLASS A10E BINDER)	40		
SAMI	SIZE 10 SAMI SEAL (S18RF, MINIMUM BINDER RATE 1.8L/m ²) WITH PRIME	10	10	10
BASE COURSE	SIZE 20mm CLASS 2 CRUSHED ROCK OR CLASS CC2 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	110	130	130
	UPPER PAVEMENT TOTAL	200	200	200
UPPER BASE	SIZE 20 CLASS 3 CRUSHED ROCK OR CLASS CC3 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	150	150	150
LOWER BASE	SIZE 20 CLASS 3 CRUSHED ROCK OR CLASS CC3 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	210	170	
	SIZE 20 CLASS 4 CRUSHED ROCK OR CLASS CC4 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1			150
CAPPING LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY K ≤ 1 x 10 ⁻⁹ m/s. COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150	150
CONSTRUCTION LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY K ≤ 1 x 10 ⁻⁹ m/s. COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150	150
TOTAL PAVEMENT DEPTH		860	820	800

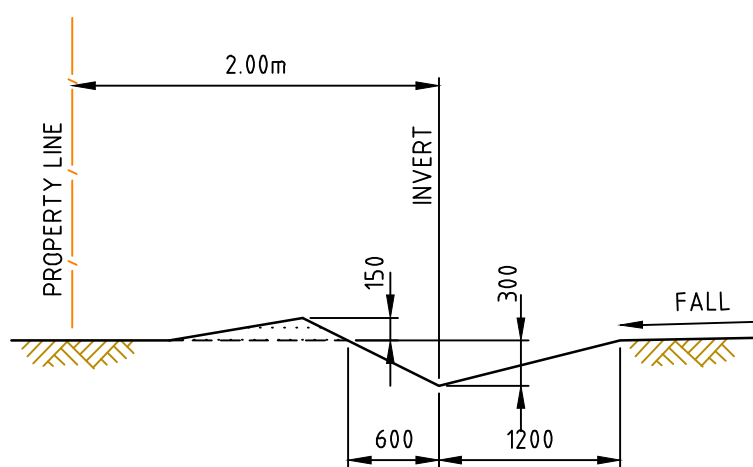
- NOTES:
- SUBGRADE FOR ALL PROFILES TO HAVE A CBR 3.0% (PREPARED CLAY 98% AUSTRALIAN STANDARD COMPACTION)



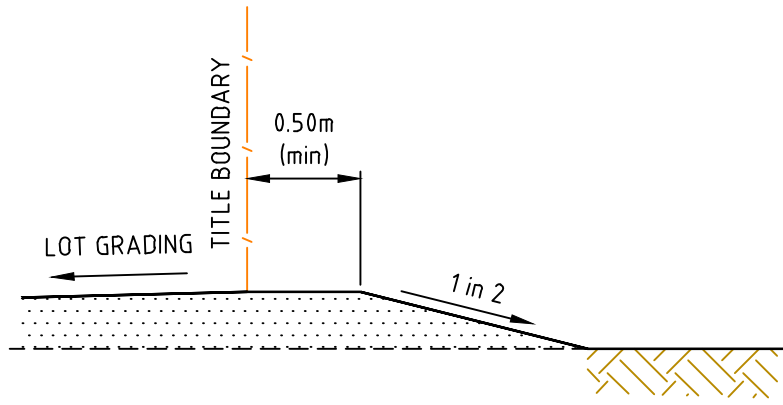
FUTURE STAGE BY OTHERS

PAVEMENT PLAN

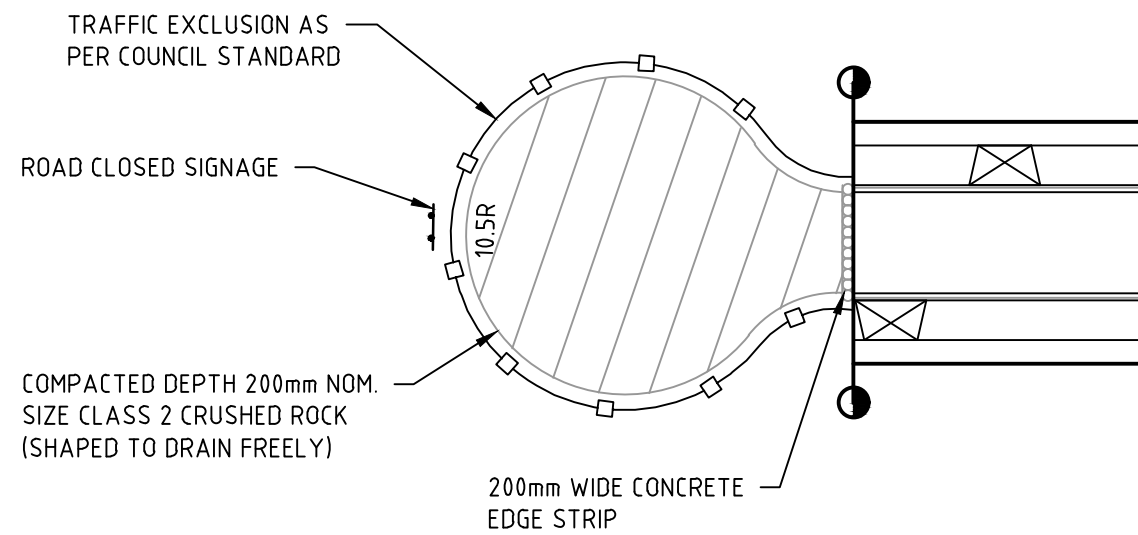
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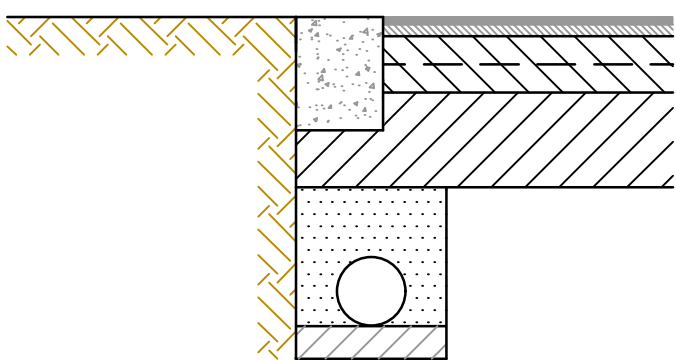
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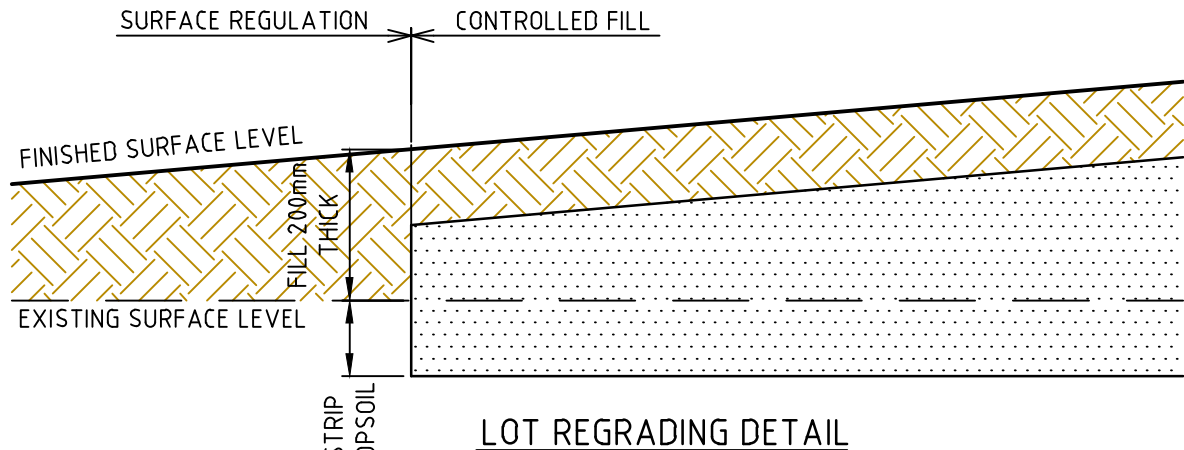
LOT FILLING AT STAGE BOUNDARY



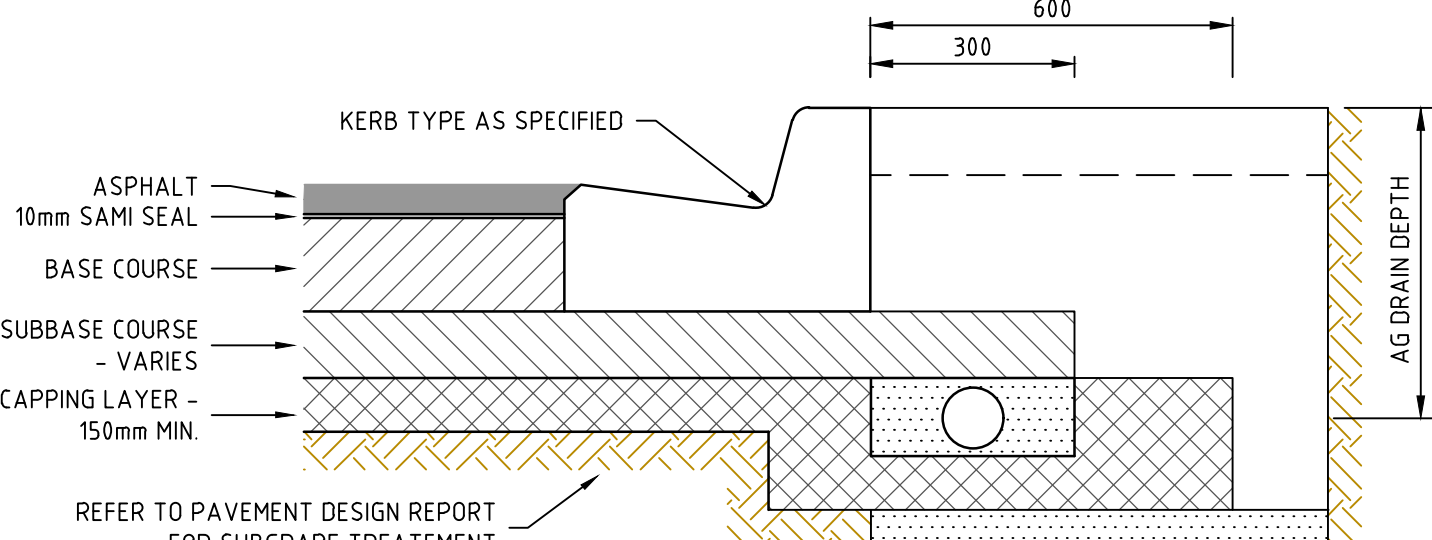
TEMPORARY TURNING AREA DETAIL



LIMIT OF WORKS CONCRETE EDGE STRIP & PAVEMENT INTERFACE - DETAIL



LOT REGRAIDING DETAIL



TYPICAL PAVEMENT DETAIL

file name: 306842CR700.dwg, layout name: CD100, created by: Gary Kohlman, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 10:46 AM Sheet: 29 of 38 Sheets

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R.	08/10/20
C	ISSUED FOR TENDER	M.R.	22/09/20
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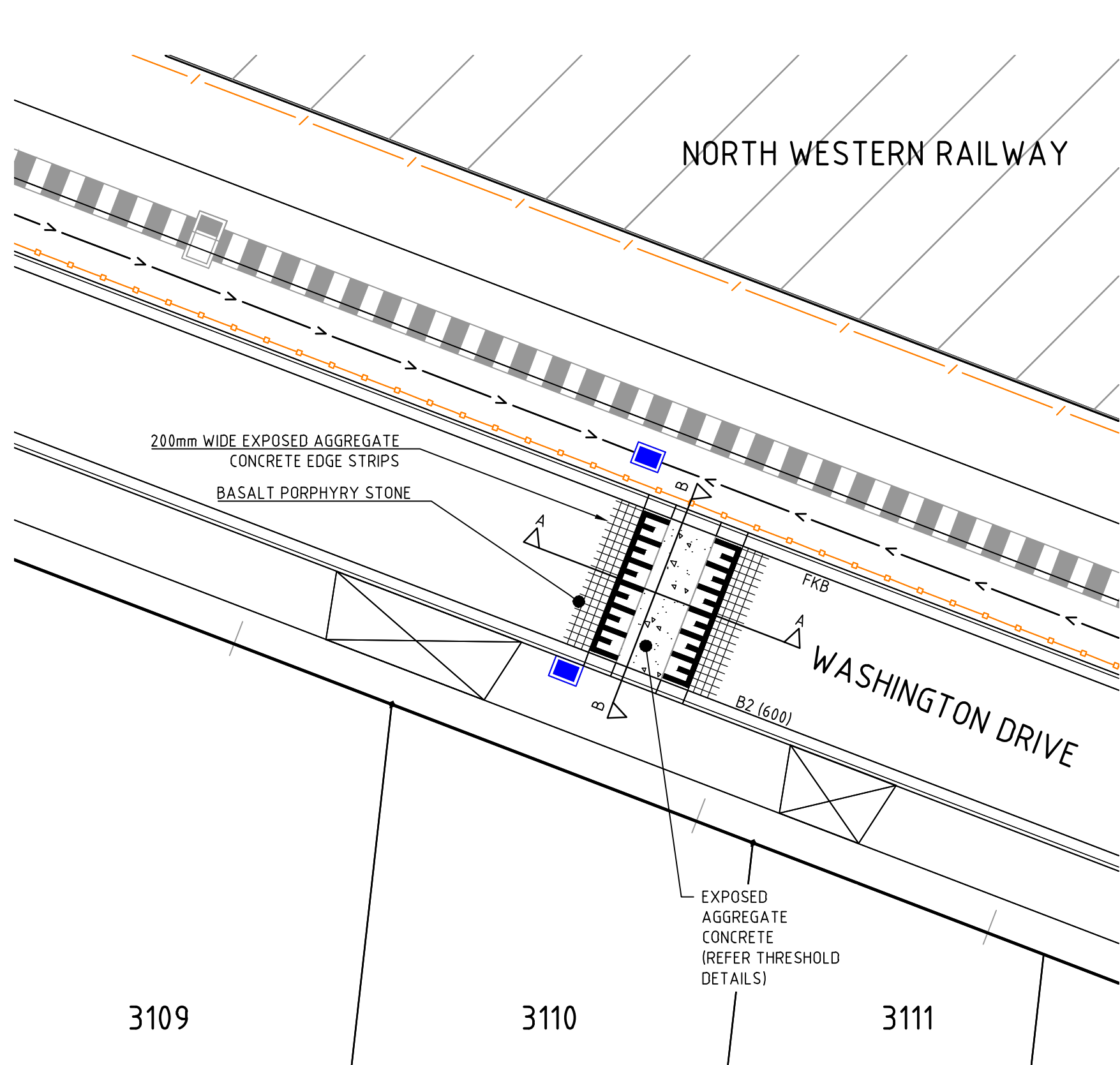


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Date
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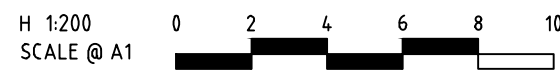
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
PAVEMENT AND TYPICAL DETAILS
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR700 Rev D

file name: 306842CR700.dwg, layout name: CD101, plotted by: Gary Kohlmann, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 00:16 AM Sheet: 30 of 38 Sheets

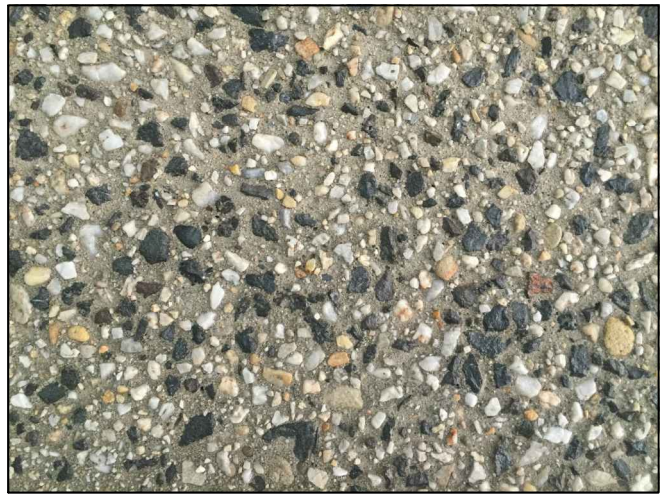


WASHINGTON DRIVE SPEED HUMP



THRESHOLD DETAILS

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)	
		PORPHYRY STONE	EXPOSED AGGREGATE
BASALT PORPHYRY STONE	90mm X 90mm BASALT PORPHYRY STONE (AS PER PHOTO) 10mm - 15mm MORTAR JOINTS	60	-
MORTAR BED	GREY COLOURED MORTAR	45	-
EXPOSED AGGREGATE	KEABLA MIDWAY MINI MIX CONCRETE (AS PER PHOTO) OR 14mm-20mm BLUE METAL (60%), 10mm-14mm QUARTZ (30%), 7mm-10mm YELLOW CHIP / PEBBLE (10%), FINISH = WATER WASHED MEDIUM EXPOSED (2mm). CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	-	300
CONCRETE BASE COURSE	CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	195	-
DE-BONDING TREATMENT	BITUMEN SPRAYED SEAL WITH 5mm-7mm AGGREGATE	Y	Y
UPPER PAVEMENT TOTAL		300	300
SUB BASE	SIZE 20 CLASS 3 CRUSHED ROCK OR CLASS CC3 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	220	220
CAPPING LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY K ≤ 1 X 10 ⁻⁹ m/s, COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
CONSTRUCTION LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY K ≤ 1 X 10 ⁻⁹ m/s, COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
TOTAL PAVEMENT DEPTH		820	820

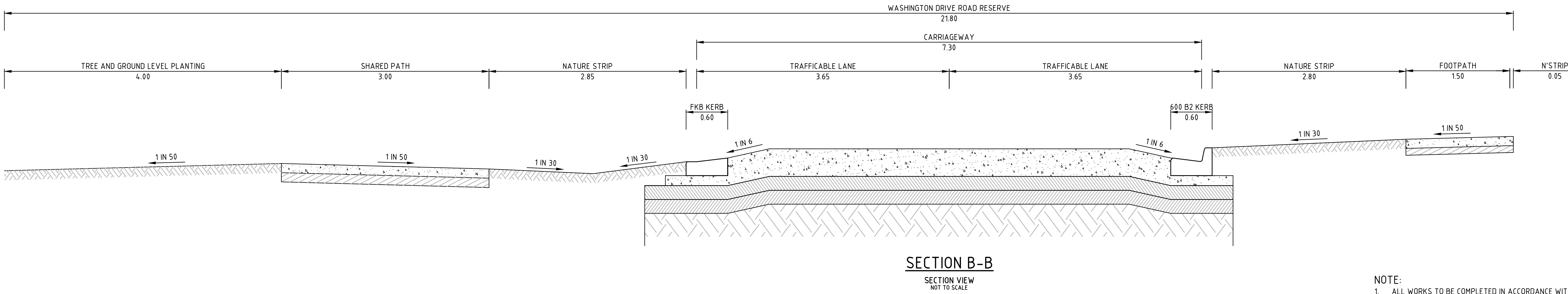
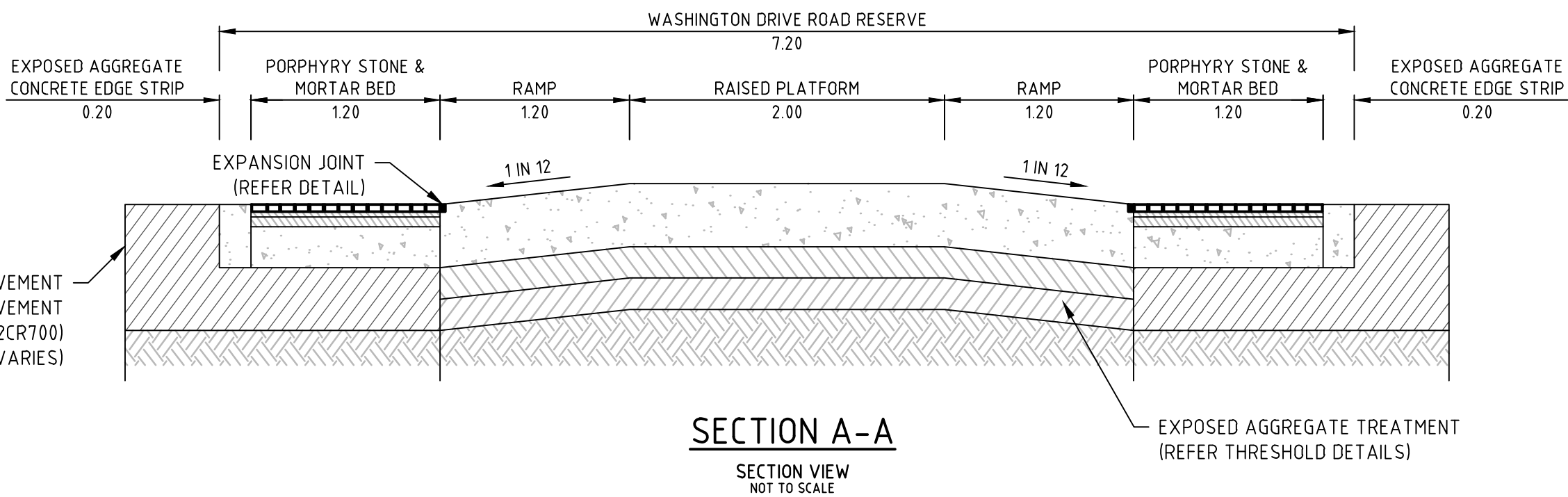


GREY CONCRETE EXPOSED AGGREGATE
KEABLA (MIDWAY MINI MIX CONCRETE) OR SIMILAR APPROVED MIX.



BASALT PORPHYRY STONE
(90X90mm WITH 10-15mm MORTAR GAP)

NOTE:
CONTRACTOR TO PROVIDE 1m SQUARE SAMPLE OF BOTH SURFACES TO SUPER INTENDENT FOR APPROVAL BEFORE CONSTRUCTION WORK CAN COMMENCE



NOTE:
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D	ISSUED TO COUNCIL	M.R.	08/10/20
C	ISSUED FOR TENDER	M.R.	22/09/20
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Scale	



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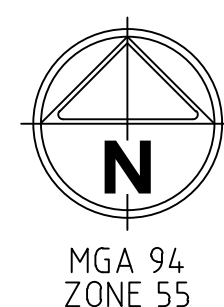


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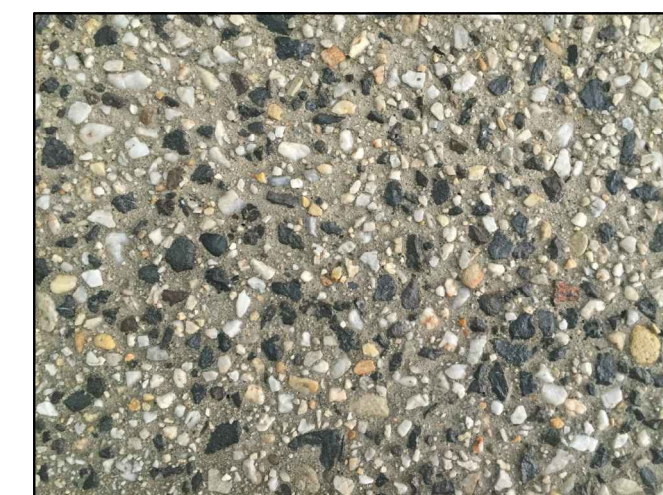
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
WASHINGTON DRIVE SPEED HUMP
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR701

Rev D

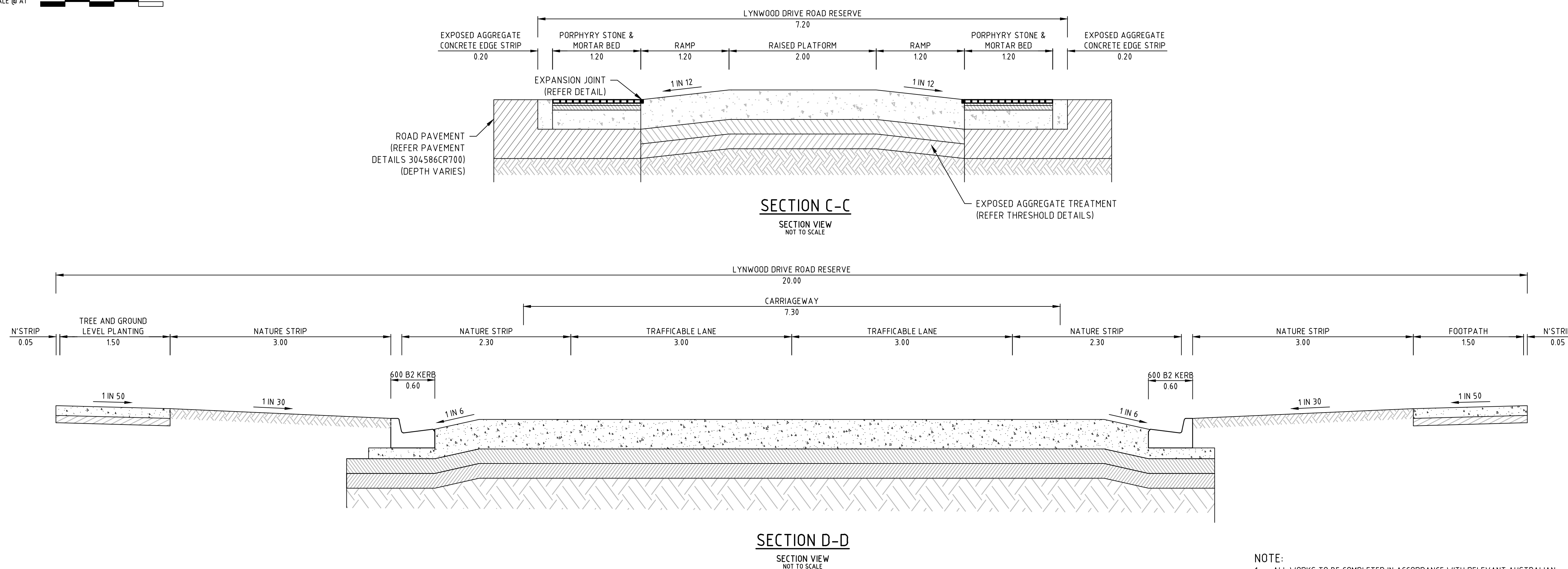


PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)	
		PORPHYRY STONE	EXPOSED AGGREGATE
BASALT PORPHYRY STONE	90mm X 90mm BASALT PORPHYRY STONE (AS PER PHOTO) 10mm – 15mm MORTAR JOINTS	60	-
MORTAR BED	GREY COLOURED MORTAR	45	-
EXPOSED AGGREGATE	KEABLA MIDWAY MINI MIX CONCRETE (AS PER PHOTO) OR 14mm-20mm BLUE METAL (60%), 10mm-14mm QUARTZ (30%), 7mm-10mm YELLOW CHIP / PEBBLE (10%), FINISH = WATER WASHED MEDIUM EXPOSED (2mm). CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	-	300
CONCRETE BASE COURSE	CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	195	-
DE-BONDING TREATMENT	BITUMEN SPRAYED SEAL WITH 5mm-7mm AGGREGATE	Y	Y
UPPER PAVEMENT TOTAL		300	300
SUB BASE	SIZE 20 CLASS 3 CRUSHED ROCK OR CLASS CC3 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	260	260
CAPPING LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY $K \leq 1 \times 10^{-9}$ m/s. COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
CONSTRUCTION LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 15%, PERMEABILITY $K \leq 1 \times 10^{-9}$ m/s. COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
TOTAL PAVEMENT DEPTH		860	860



NOTE:
CONTRACTOR TO PROVIDE 1m SQUARE SAMPLE OF BOTH SURFACES TO SUPER INTENDENT
FOR APPROVAL BEFORE CONSTRUCTION WORK CAN COMMENCE

H 1:200
SCALE @ A1



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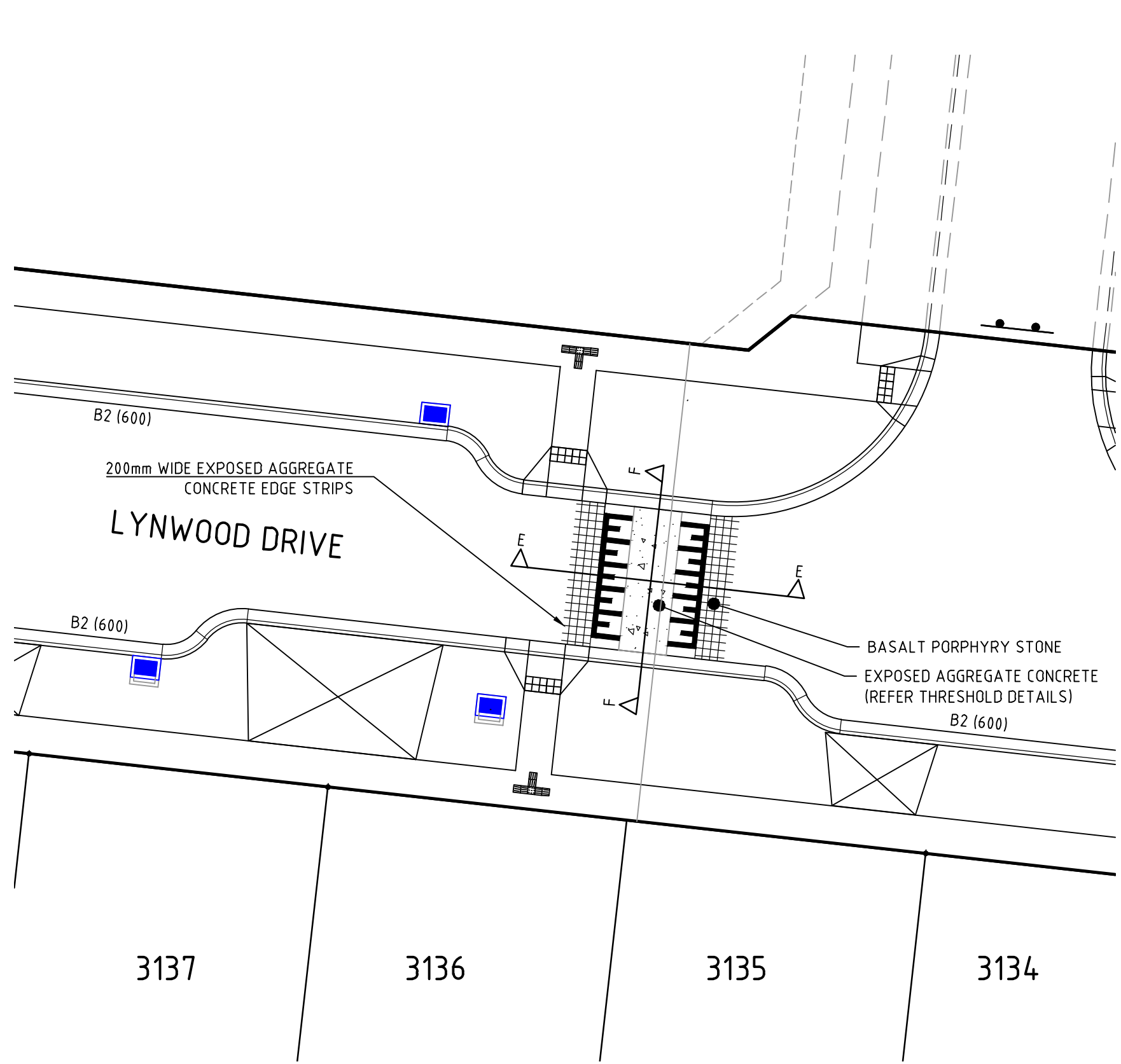
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THORNHILL PARK ESTATE
STAGE 30A
 ROAD AND DRAINAGE
 LYNWOOD DRIVE SPEED HUMP - SHEET 1 OF 2
 MELTON CITY COUNCIL
 WEL.CO GROUP

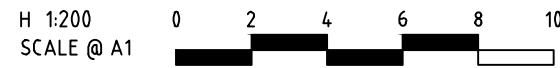
PRELIMINARY Drg No 306842CR702

Rev

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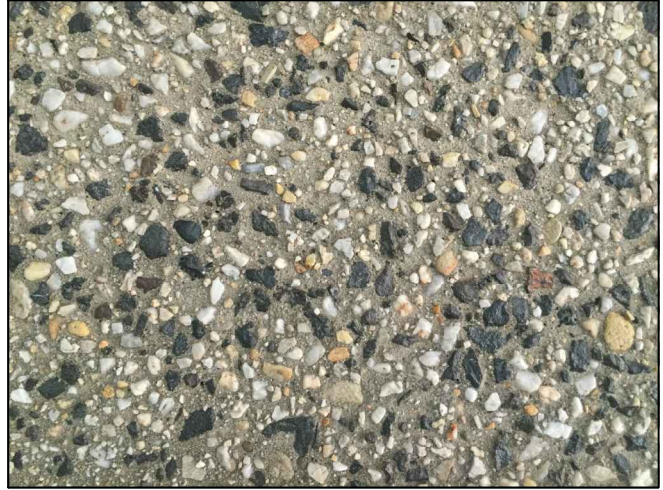


LYNWOOD DRIVE SPEED HUMP



THRESHOLD DETAILS

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)	
		PORPHYRY STONE	EXPOSED AGGREGATE
BASALT PORPHYRY STONE	90mm X 90mm BASALT PORPHYRY STONE (AS PER PHOTO) 10mm - 15mm MORTAR JOINTS	60	-
MORTAR BED	GREY COLOURED MORTAR	45	-
EXPOSED AGGREGATE	KEABLA MIDWAY MINI MIX CONCRETE (AS PER PHOTO) OR 14mm-20mm BLUE METAL (60%), 10mm-14mm QUARTZ (30%), 7mm-10mm YELLOW CHIP / PEBBLE (10%), FINISH = WATER WASHED MEDIUM EXPOSED (2mm), CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	-	300
CONCRETE BASE COURSE	CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	195	-
DE-BONDING TREATMENT	BITUMEN SPRAYED SEAL WITH 5mm-7mm AGGREGATE	Y	Y
UPPER PAVEMENT TOTAL		300	300
SUB BASE	SIZE 20 CLASS 3 CRUSHED ROCK OR CLASS CC3 CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF 98% (MODIFIED) AS1289, 5.2.1	260	260
CAPPING LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 1.5%, PERMEABILITY K ≤ 1 X 10 ⁻⁹ m/s, COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
CONSTRUCTION LAYER	SELECT FILL OR STABILISED CLAY MEETING THE FOLLOWING MATERIAL PROPERTIES: CBR ≥ 8%, SWELL ≤ 1.5%, PERMEABILITY K ≤ 1 X 10 ⁻⁹ m/s, COMPACTED TO A MINIMUM DENSITY OF RATIO 98% (STANDARD) AS1289, 5.1.1	150	150
TOTAL PAVEMENT DEPTH		860	860

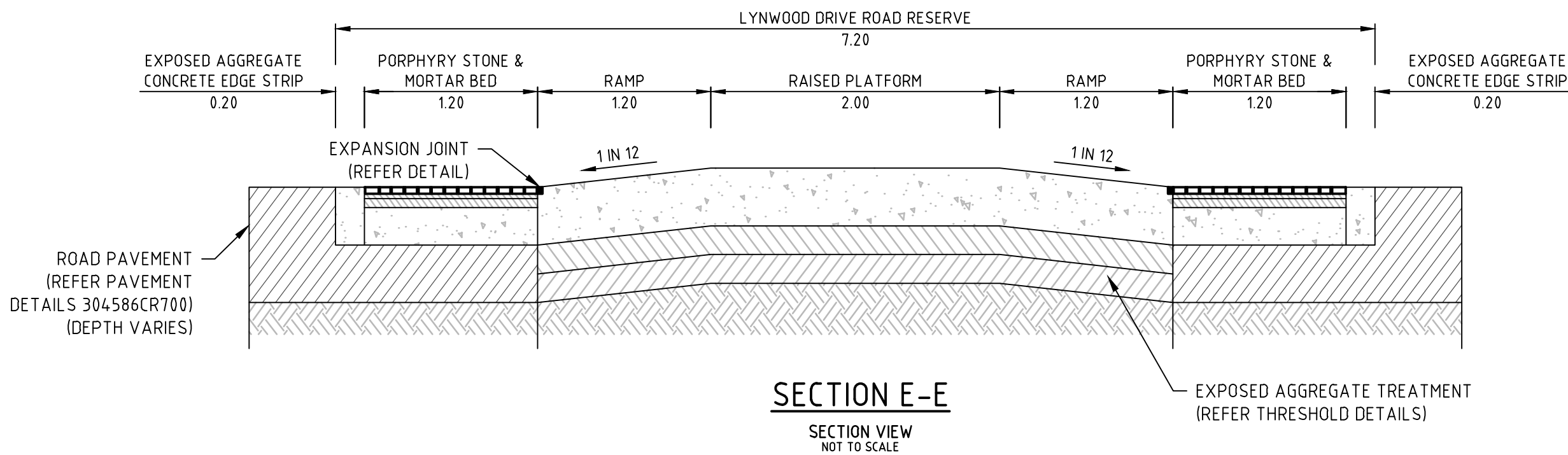


GREY CONCRETE EXPOSED AGGREGATE
KEABLA (MIDWAY MINI MIX CONCRETE) OR SIMILAR APPROVED MIX.



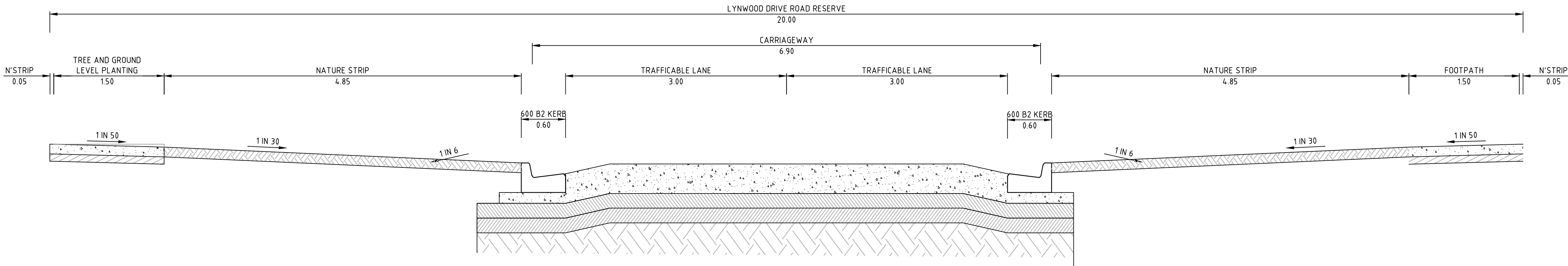
BASALT PORPHYRY STONE
(90X90mm WITH 10-15mm MORTAR GAP)

NOTE:
CONTRACTOR TO PROVIDE 1m SQUARE SAMPLE OF BOTH SURFACES TO SUPER INTENDENT FOR APPROVAL BEFORE CONSTRUCTION WORK CAN COMMENCE



SECTION E-E

SECTION VIEW
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SECTION F-F

SECTION VIEW
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C	ISSUED FOR TENDER	M.R	22/09/20
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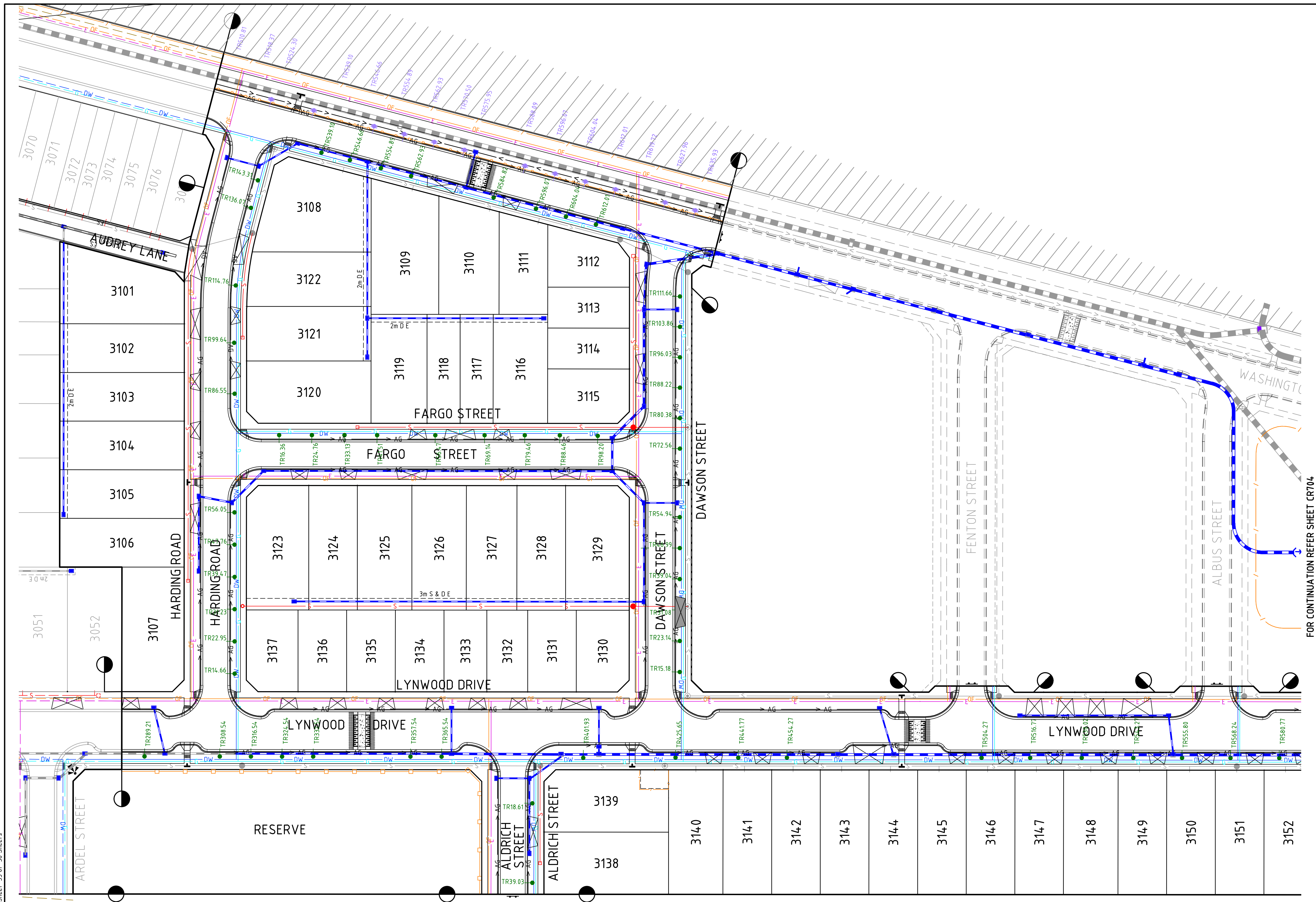
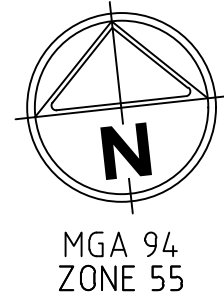
Designed
G. KOHLMAN
Authorised
M. READMAN



Checked
M. MCVICAR
Date
FEB 2020

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
LYNWOOD DRIVE SPEED HUMP - SHEET 2 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR703 Rev D



FOR CONTINUATION REFER SHEET CR704

INTEGRATED WATER MANAGEMENT SYSTEM
SHOWN AS:

- TYPE A (SINGLE TREE) ●
- TYPE B (MULTIPLE TREES) ●
- TYPE C (ROAD SURFACE RUN OFF SWALE) ●

FOR DETAILS REFER DRAWING CR701 & CR702.

NOTE: REFER TO LANDSCAPE PLANS FOR ALL
TREE LOCATIONS.

file name 306842CR700.dwg layout name CR704 plotted by Gery Kohlmann
file location G:\30\306842\civil\ALCAD plot date 19/10/2020 10:16 AM Sheet 33 of 38 Sheets

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D	ISSUED TO COUNCIL	M.R	08/10/20
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M. READMAN



Checked
M. MCVICAR
Date
FEB 2020

**THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
IWMS KERB CUT LOCATIONS - SHEET 1 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP**

PRELIMINARY Drg No 306842CR704 Rev D

file name: 306842CR705.dwg layout name: CR705, plotted by: Gary Kohlman, file location: G:\30\306842\civil\ACAD plot date: 19/10/2020 10:46 AM Sheet: 34 of 38 Sheets

D	ISSUED TO COUNCIL	M.R	08/10/20	
C	ISSUED FOR TENDER	M.R	22/09/20	
B	ISSUED TO COUNCIL	M.R	31/08/20	
A	ADDED IWMS PLAN	M.R	----	
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THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
IWMS KERB CUT LOCATIONS - SHEET 2 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY

Drwg No
306842CR705

Rev
D

The diagram is a detailed site plan for Stage 30A of Thornhill Park Estate. It shows a road network including Washington Drive, Albus Street, and Goodwin Street. To the north is the North Western Railway. The plan includes property boundaries for lots 3151 through 3155. A drainage system is shown with various pipe types (e.g., TR568.24, TR580.77, TR593.27, TR606.62, TR13.37, TR283.00, TR37.50) and manholes. A blue dashed line indicates a proposed road or boundary. A north arrow is located in the upper right, labeled 'MGA 94 ZONE 55'. A note on the left side of the plan reads 'FOR CONTINUATION REFER SHEET CR703'. A note at the bottom right of the plan area reads 'FUTURE STAGE BY OTHERS'.

INTEGRATED WATER MANAGEMENT SYSTEM
SHOWN AS:

TYPE A (SINGLE TREE)

TYPE B (MULTIPLE TREES)

TYPE C (ROAD SURFACE RUN OFF SWALE)

FOR DETAILS REFER DRAWING CR701 & CR702.

NOTE: REFER TO LANDSCAPE PLANS FOR ALL
TREE LOCATIONS.



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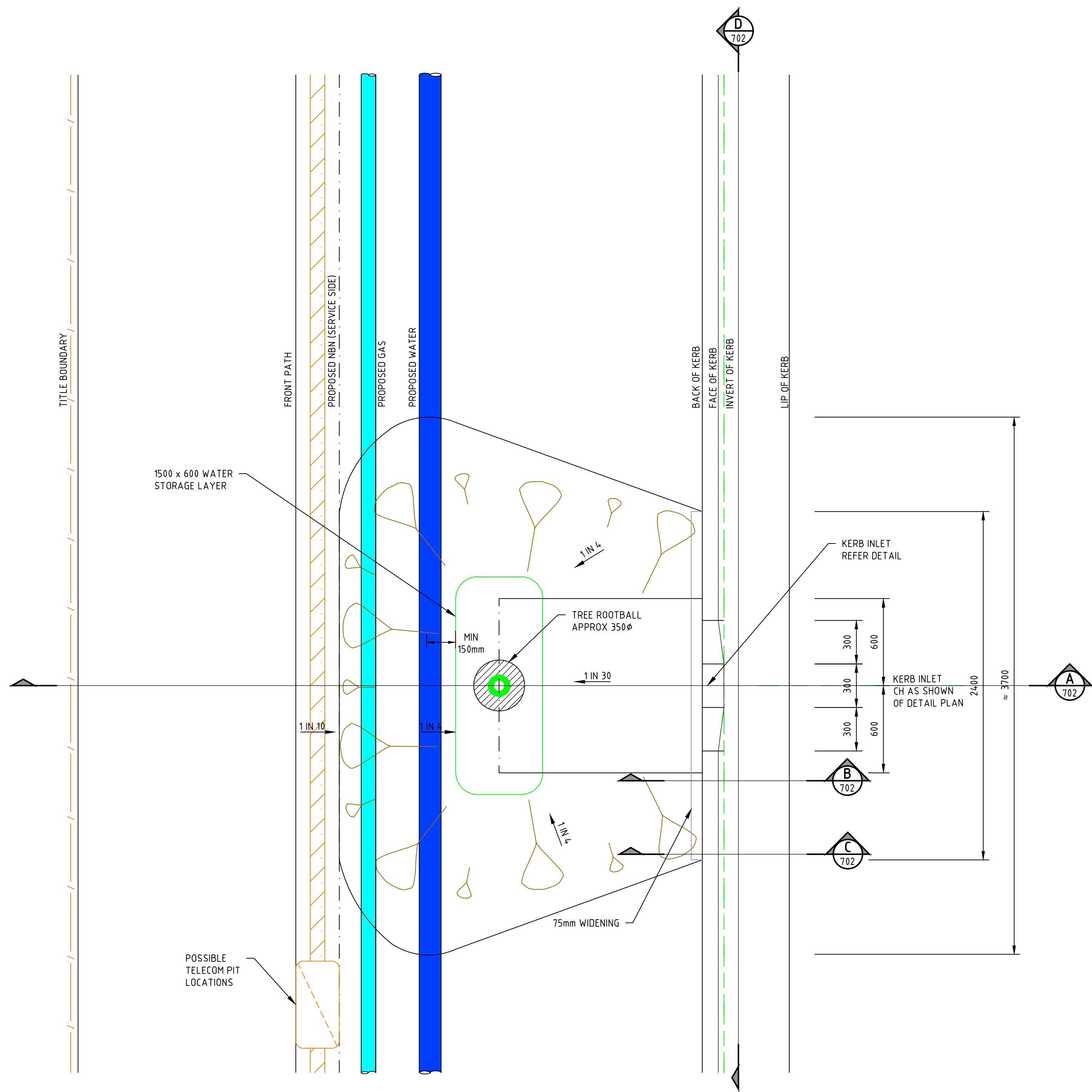
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FEB 2020

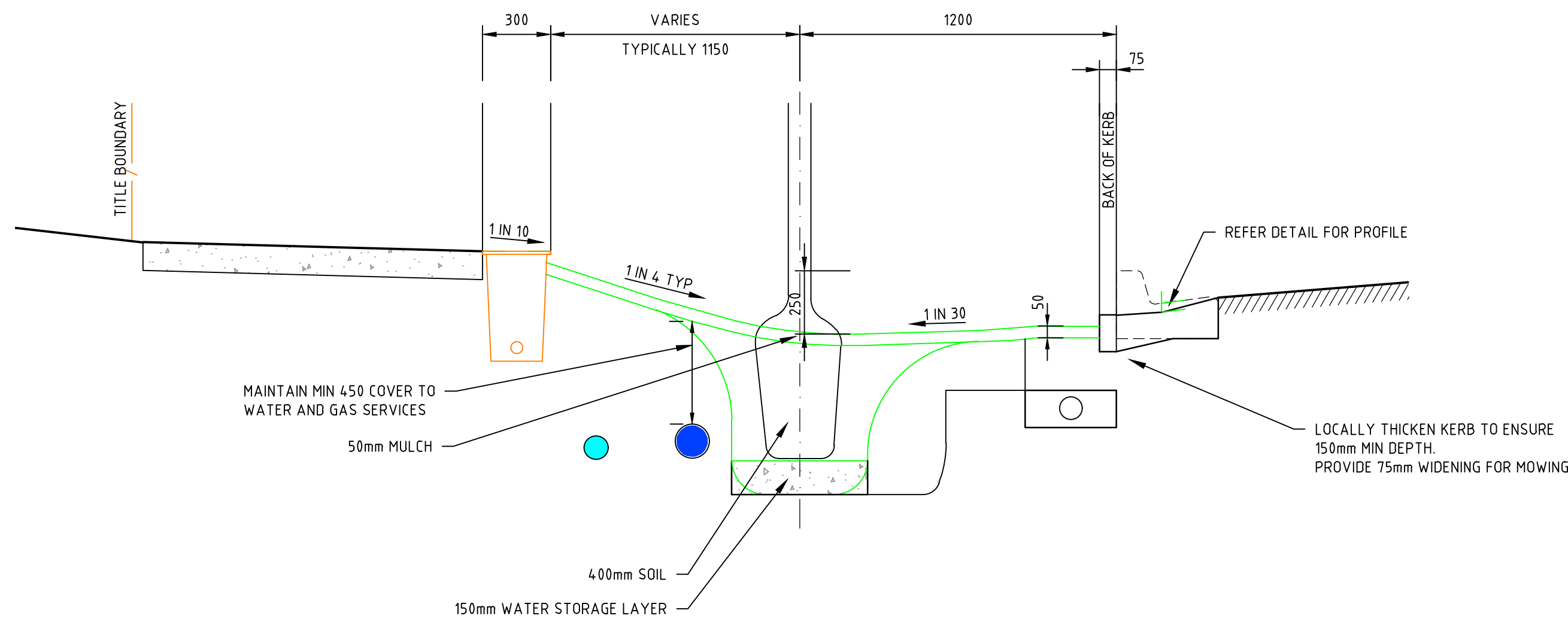
THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
PAVEMENT AND TYPICAL DETAILS - IWMS & TYPICAL DETAILS - SHEET
MELTON CITY COUNCIL
WEL.CO GROUP

Orig No	Rev
PRELIMINARY 306842CR706	D

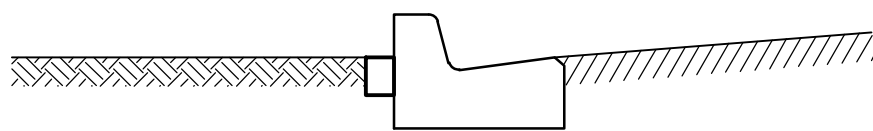
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file location G:\30 306842\civil\ACAD\plot date 19/10/2020 10:16 AM Sheet 36 of 38 Sheets



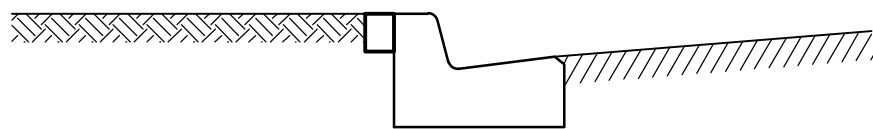
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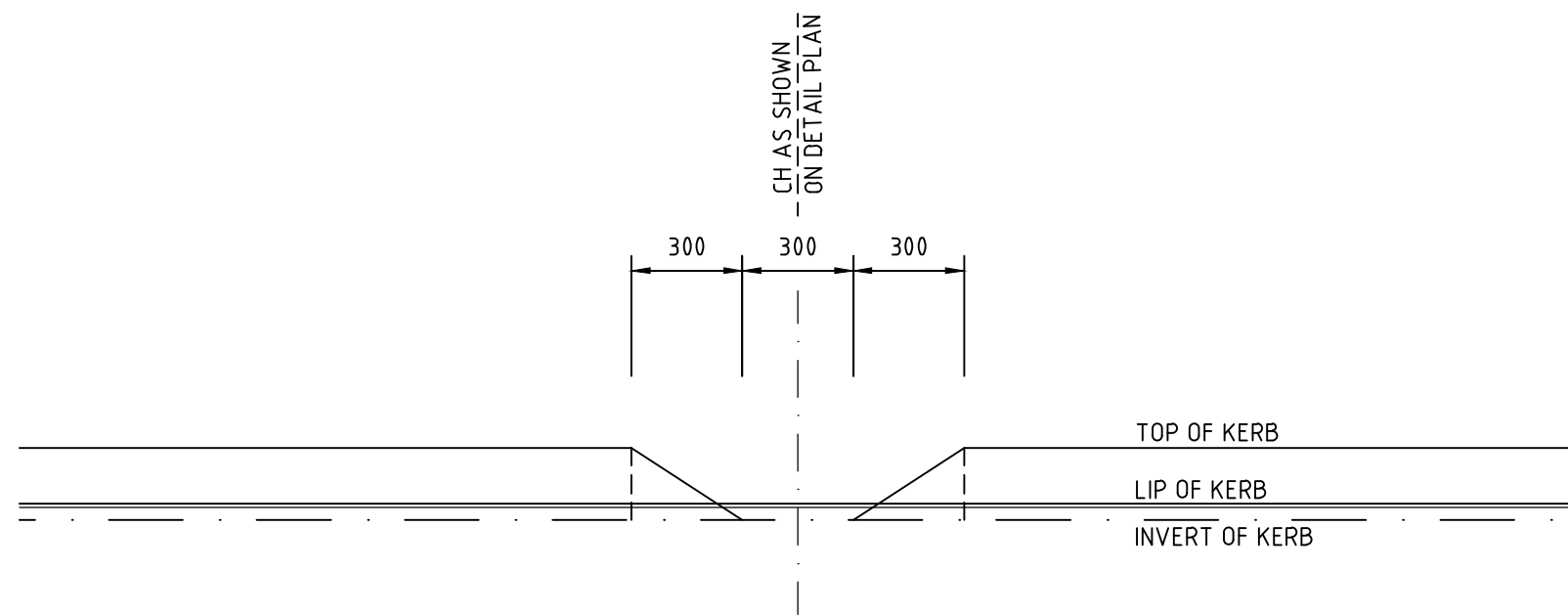
SECTION A-A



SECTION B-B



SECTION C-C



ELEVATION D-D

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ADDED IWMS DETAILS	M.R	----

Scale



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Designed
G. KOHLMAN
Authorised
M. READMAN

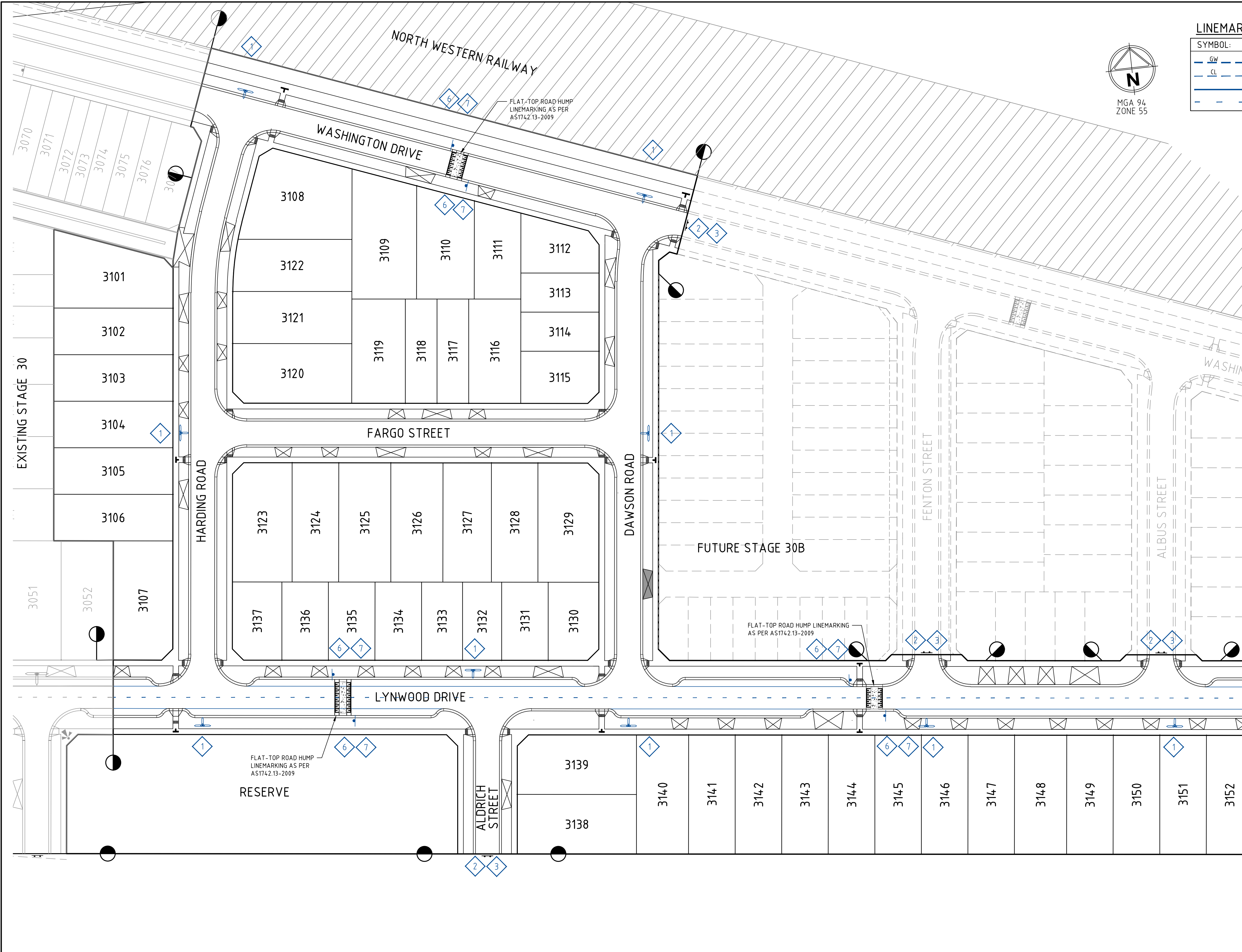
Wel.Co

Checked
M. MCVICAR
Date
FEB 2020

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
PAVEMENT AND TYPICAL DETAILS - IWMS & TYPICAL DETAILS - SHEET 2
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR707 Rev D

file name: 305055CR800.dwg, layout name: CR800, plotted by: Gary Kohler, file location: G:\30\305055\21\civil\ALCAD\plot date: 19/10/2020 10:16 AM Sheet 42 of 43 Sheets



LINEMARKING LEGEND:

SYMBOL:	DESCRIPTION:	REMARK:
	HOLDING LINE (GIVEWAY)	600mm LINE, 600mm GAP, 300mm WIDE
	CONTINUITY LINE (STATCON)	600mm LINE, 600mm GAP, 150mm WIDE
	CONTINUOUS LANE LINE	150mm WIDE
	CONTINUITY LINE (STANDARD)	1000mm LINE, 3000mm GAP, 150mm WIDE

- NOTE:
- FOR SPLITTER ISLANDS REFER MELTON STANDARD DRAWING MCC 307
 - FOR SPLITTER ISLANDS LOCATED ON BEND REFER MELTON STANDARD DRAWING MCC 308
 - STREET NAME PLATES TO INCLUDE "NO THROUGH ROAD" NOMINATION WHERE APPLICABLE
 - REFER TO MELTON CITY COUNCIL STANDARD DRAWING MCC 205 FOR INSTALLATION OF SIGNS. POLES TO BE BOLTED AND SECURELY FIXED TO THE SLEEVE

SIGNAGE SCHEDULE

REFERENCE NO.	SIGN	COMMENTS
		STREET NAME PLATES TO BE IN ACCORDANCE WITH MELTON CITY COUNCIL STANDARD
		G9-20
		D4-5
		R1-2
		W5-10
		W8-2
		TACTILE GROUND SURFACE INDICATORS (TGS) LOCATIONS ARE INDICATIVE ONLY AND INSTALLATIONS TO BE TO COUNCIL STANDARDS.
		BI-DIRECTIONAL RRPM
		UNI-DIRECTIONAL RRPM

FOR CONTINUATION REFER SHEET CR801

Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	
A	ISSUED TO COUNCIL	M.C	18-12-18

H 1:500
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Designed

Authorised

Wel.Co

Checked





Date

**THORNHILL PARK ESTATE
STAGE 31
ROAD AND DRAINAGE
SIGNAGE AND LINEMARKING - SHEET 1 OF 2
MELTON CITY COUNCIL
WELSH DEVELOPMENTS PTY LTD**

PRELIMINARY Drg No **305055CR800** Rev **D**

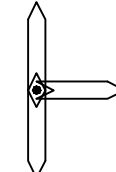









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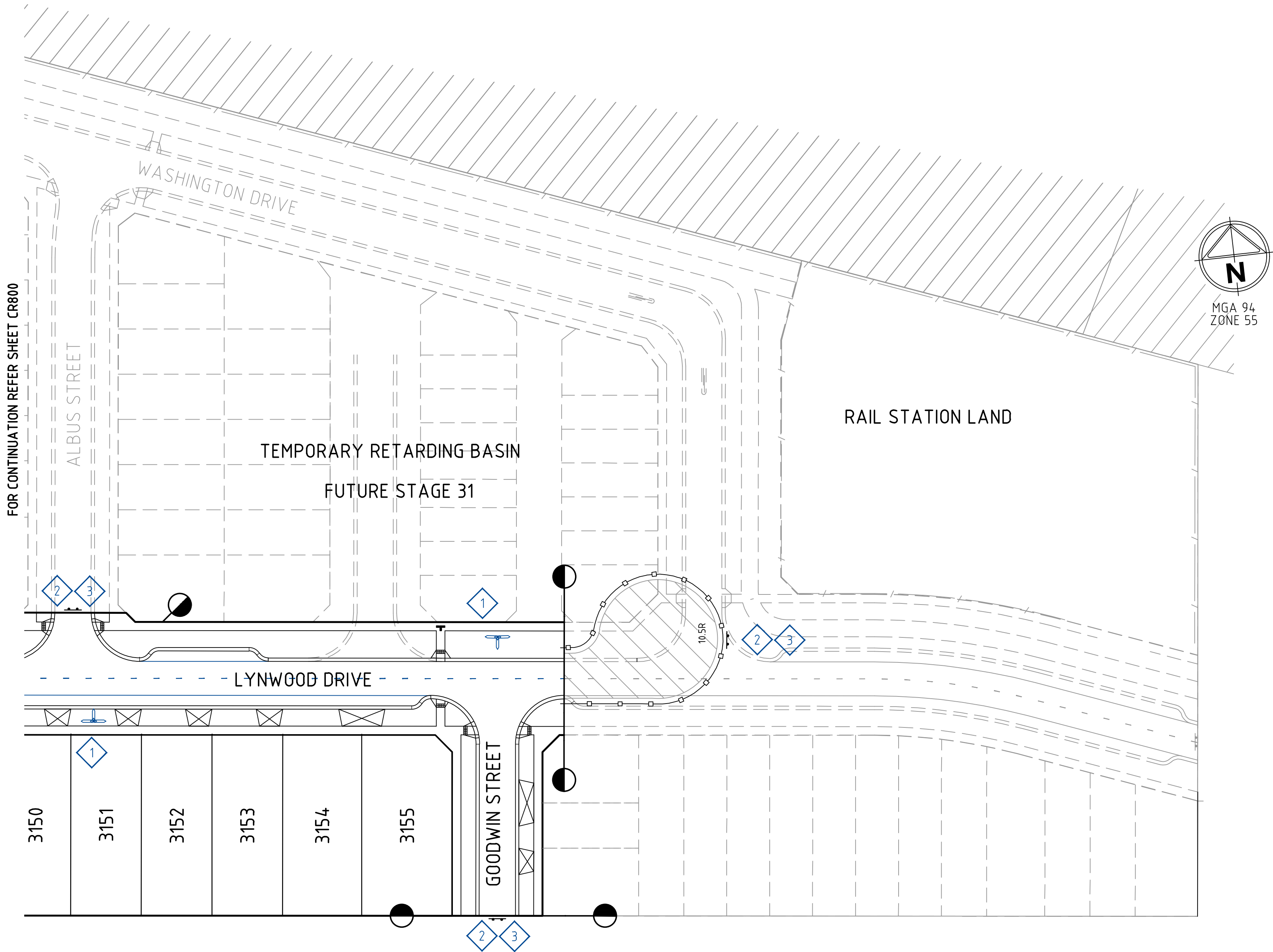
LINEMARKING LEGEND:

SYMBOL:	DESCRIPTION:	REMARK:
	HOLDING LINE (GIVEWAY)	600mm LINE, 600mm GAP, 300mm WIDE
	CONTINUITY LINE (STATCON)	600mm LINE, 600mm GAP, 150mm WIDE
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 - FOR SPLITTER ISLANDS LOCATED ON BEND REFER MELTON STANDARD DRAWING MCC 308
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 - REFER TO MELTON CITY COUNCIL STANDARD DRAWING MCC 205 FOR INSTALLATION OF SIGNS. *POLES TO BE BOLTED AND SECURELY FIXED TO THE SLEEVE'

SIGNAGE SCHEDULE

REFERENCE NO.	SIGN	COMMENTS
1		STREET NAME PLATES TO BE IN ACCORDANCE WITH MELTON CITY COUNCIL STANDARD
2		G9-20
3		D4-5
4		R1-2
5		W3-4
6		W5-10
7		W8-2
8		R8-2
		TACTILE GROUND SURFACE INDICATORS (TGS) LOCATIONS ARE INDICATIVE ONLY AND INSTALLATIONS TO BE TO COUNCIL STANDARDS).
		BI-DIRECTIONAL RRPM UNI-DIRECTIONAL RRPM



Rev	Amendments	Approved	Date
D	ISSUED TO COUNCIL	M.R	08/10/20
C	ISSUED FOR TENDER	M.R	22/09/20
B	ISSUED TO COUNCIL	M.R	31/08/20
A	ISSUED FOR TENDER	M.R	10/01/20

H 1500
SCALE @ A1



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spiire.com.au ABN 55 050 029 635



Designed

Authorised

Wel.Co

Checked

Date

THORNHILL PARK ESTATE
STAGE 30A
ROAD AND DRAINAGE
SIGNAGE AND LINEMARKING - SHEET 2 OF 2
MELTON CITY COUNCIL
WEL.CO GROUP

PRELIMINARY Drg No 306842CR801 Rev D